

An Integrated Theory for the Accumulation of Mentally Ill Offenders and the Effect of Realignment in California

Part 2 of 2 • Appendices

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Thesis for the Degree of Philosophiae Doctor (PhD)
University of Bergen, Norway
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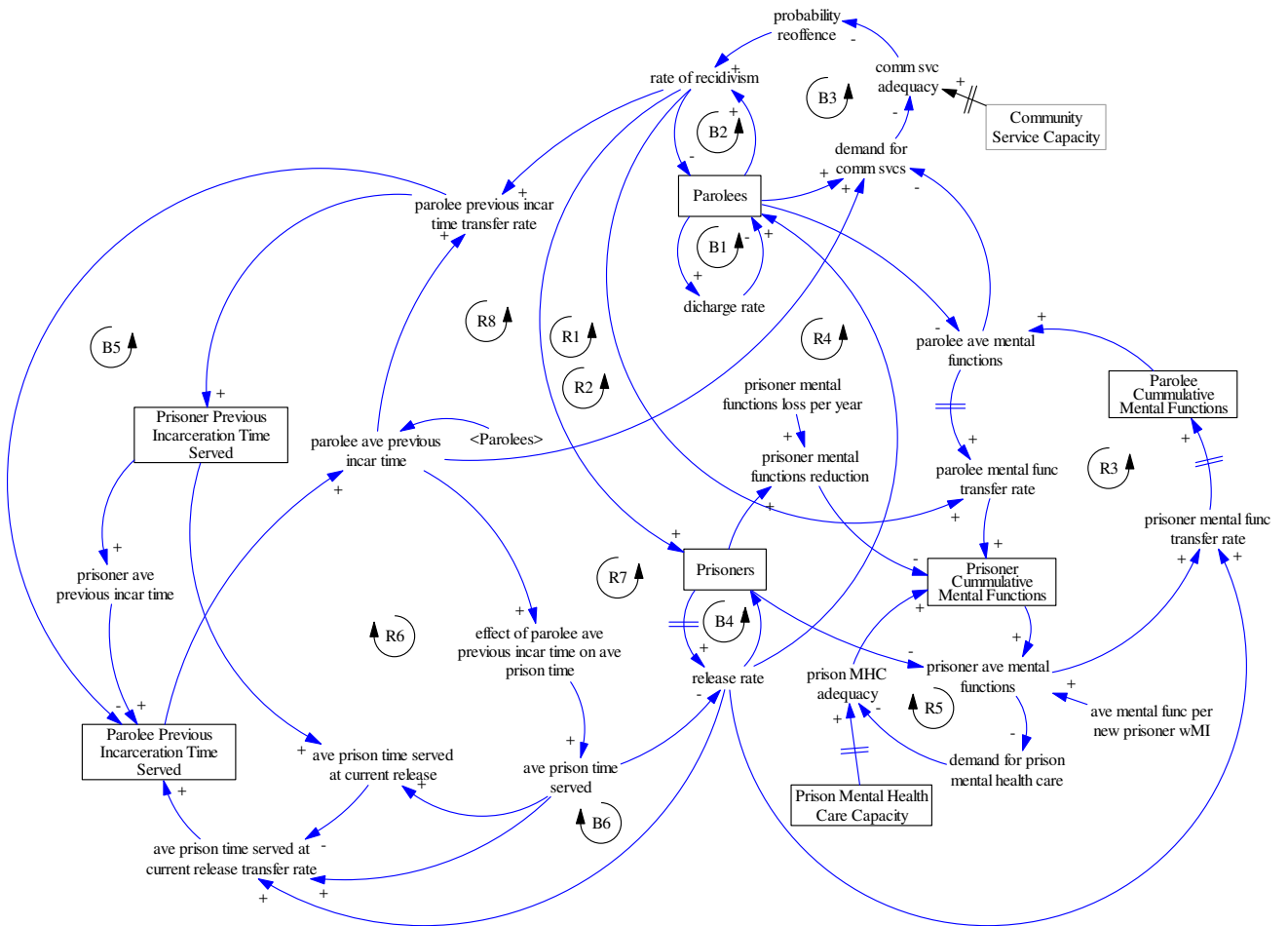
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Appendices

Appendix A – Causal Loop Diagram (Major Loops)



Appendix B

– Calculation for the Prevalence Data (1992) Obtained from the Scarlett Carp Report

		SMI	MMI	SMI	MMI
Prevalence in 1992		0.1107	0.0947	0.1521	0.0903
Male Inmates	102749	11374	9730		
Female Inmates	5973			908	539
Total					22552
Ave Prevalence					0.207 (22552 / 102749)

In this report, SMI and MMI refer to severe mental impairments and moderate mental impairments respectively.

Appendix C – Timeline of Diagnostic and Statistical Manual of Mental Disorders Criteria (DSM) Development

DSM-I (1952)

- Homosexuality was included until 1974
- 106 mental disorders

DSM-II (1968)

- Many challenges of MI definitions
- 182 mental disorders

DSM-II (7th printing) (1974)

- Homosexuality was replaced by “sexual orientation disturbance”

DSM-III (1980)

- Abandoned psychodynamic/physiologic view in favor of a regulatory/legislative model
- Attempted to make the nomenclature consistent w/ ICD (International Statistical Classification of Diseases & Related Health Problem)
- 256 diagnostic criteria
- “may led to the medication of 20-30% of population who may not have had any serious mental problem”

DSM-III-R (1987)

- A revision of DSM III
- Categories were renamed & reorganized, significant changes in criteria were made
- 6 categories were deleted
- 292 diagnoses

DSM-IV (1994)

- 297 disorders
- Major change: inclusion of a clinical significance criterion to almost half of all the categories, which required that symptoms caused “clinically significant distress/impairment in social, occupational, or other important areas of function”

DSM-IV-TR (2000)

- A text revision of DSM-IV
- Text sections give extra information on each diagnosis
- Characterizes a mental disorder as “clinically significant behavioral/psychological syndrome/pattern that occurs in an individual [which] is associated with present distress...or disability...or with a significant increased risk of suffering”
- “no definition adequately specifies precise boundaries for the concept of mental disorder...different situations call for different definitions”
- “there’s no assumption that each category of mental disorder is a completely discrete entity with absolute boundaries dividing it from other mental disorders or from no mental disorder”

DSM-5 (2013)

- Extensively revised diagnoses
- 1st major revision of the manual in 20 years
- Deletion of the subtypes of schizophrenia (paranoid, disorganized, catatonic, undifferentiated, residual)
- Deletion of the subsets of autistic spectrum disorder (Asperger’s Syndrome, classic autism, Rett Syndrome, Childhood Disintegrative Disorder, pervasive developmental disorder not otherwise specified)
- Intensity (mild, moderate, severe) were added to the diagnosis of autistic spectrum disorder

Appendix D – Global Assessment of Functioning (GAF) Scale

(From DSM-IV-TR, p. 34.)

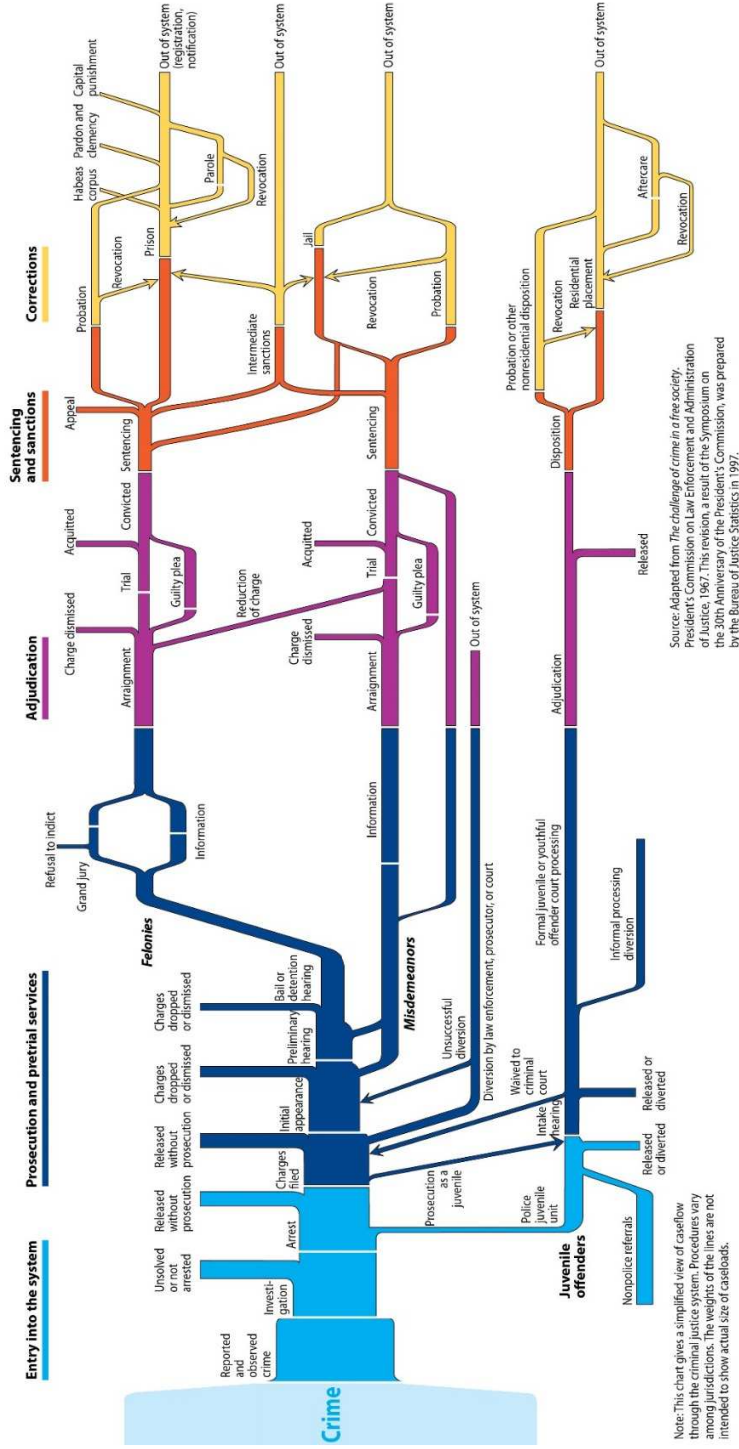
Consider psychological, social, and occupational functioning on a hypothetical continuum of mental health-illness. Do not include impairment in functioning due to physical (or environmental) limitations.

Code	(Note: Use intermediate codes when appropriate, e.g., 45, 68, 72.)
100 91	Superior functioning in a wide range of activities, life's problems never seem to get out of hand, is sought out by others because of his or her many positive qualities. No symptoms.
90 81	Absent or minimal symptoms (e.g., mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities. socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g. an occasional argument with family members).
80 71	If symptoms are present, they are transient and expectable reactions to psychosocial stressors (e.g., difficulty concentrating after family argument); no more than slight impairment in social, occupational or school functioning (e.g., temporarily failing behind in schoolwork).
70 61	Some mild symptoms (e.g. depressed mood and mild insomnia) OR some difficulty in social, occupational, or school functioning (e.g., occasional truancy, or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.
60 51	Moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks) OR moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts with peers or co-workers).
50 41	Serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) OR any serious impairment in social, occupational, or school functioning (e.g., no friends, unable to keep a job).
40 31	Some impairment in reality testing or communication (e.g., speech is at times illogical, obscure, or irrelevant) OR major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood (e.g., depressed man avoids friends, neglects family, and is unable to work; child frequently beats up younger children, is defiant at home, and is failing at school).
30 21	Behavior is considerably influenced by delusions or hallucinations OR serious impairment in communication or judgment (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) OR inability to function in almost all areas (e.g., stays in bed all day; no job, home, or friends).
20 11	Some danger of hurting self or others (e.g., suicide attempts without clear expectation of death; frequently violent; manic excitement) OR occasionally fails to maintain minimal personal hygiene (e.g., smears feces) OR gross impairment in communication (e.g., largely incoherent or mute).
10 1 0	Persistent danger of severely hurting self or others (e.g., recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death. Inadequate information.

Adapted from Aas (2011).

Appendix E – A Simplified View of the Case Flow within the Criminal Justice System

What is the sequence of events in the criminal justice system?



Source: Bureau of Justice Statistics,
<https://www.bjs.gov/content/justsys.cfm#>

Appendix F – Calculation of Ex-convict Population

Data for ex-convict population is not publicly available to estimate the initial values for the ex-convict stocks. Hence, we have to estimate the initial values to based on the estimated ex-convict population by Schmitt et al. (2011). The authors estimate that in 2008, the population size for ex-prisoners and ex-felons to be 6,094,000 and 13,851,000 under the low recidivism scenario. The population size for ex-prisoners and ex-felons would be 5,427,000 and 12,333,000 under the high recidivism scenario. Three-year low recidivism rates for age groups between 18 to 64 range between 46% and 57%; the high recidivism rates range between 51% and 62%. The ex-prisoners refer to ex-convicts who have served prison sentence while the ex-felons, which are ex-estimated from ex-prisoners. Ex-felon population comprises ex-convicts who have served federal prison sentence, state prison sentence, jail sentence, and probation. More than half of the ex-felon population served jail and probation sentence.

We take the estimated population size reported by Schmitt and colleague and the multiply with the historical total state prisoners growth rate from 1987 to 2015 in order to estimate the initial values for the ex-convict stocks in our model. This linear projection assumes that the demographics of the population and criminal justice policies remain constant. Given this crude calculation, we choose to be conservative and take the values under the low recidivism scenario. The “ex-prisoners” value in 1987 will be used as the initial values for the stocks of prison ex-convicts whereas the discrepancy between “ex-felons” and “ex-prisoners” is used to populate the stocks of jail ex-convicts.

Year	Total State Prisoners Growth Rate	Population Size			
		Low Recidivism		High Recidivism	
		Ex-Prisoners	Ex-Felons	Ex-Prisoners	Ex-Felons
1987		2,170,148	4,932,510	1,932,621	4,391,931
1988	0.14	2,170,148	4,932,510	1,932,621	4,391,931
1989	0.15	2,515,544	5,717,559	2,240,213	5,090,943
1990	0.11	2,945,830	6,695,552	2,623,403	5,961,753
1991	0.05	3,327,452	7,562,937	2,963,256	6,734,077
1992	0.08	3,488,752	7,929,553	3,106,901	7,060,514
1993	0.10	3,773,723	8,577,263	3,360,682	7,637,238
1994	0.05	4,172,086	9,482,699	3,715,443	8,443,442
1995	0.08	4,378,469	9,951,785	3,899,237	8,861,119
1996	0.08	4,737,869	10,768,662	4,219,300	9,588,471
1997	0.07	5,134,221	11,669,526	4,572,270	10,390,605

1998	0.03	5,501,221	12,503,677	4,899,102	11,133,337
1999	0.01	5,657,416	12,858,692	5,038,201	11,449,444
2000	0.00	5,697,551	12,949,914	5,073,943	11,530,668
2001	-0.02	5,696,416	12,947,336	5,072,933	11,528,373
2002	0.02	5,574,520	12,670,278	4,964,378	11,281,679
2003	0.01	5,666,582	12,879,525	5,046,363	11,467,993
2004	0.01	5,741,726	13,050,320	5,113,283	11,620,070
2005	0.02	5,819,203	13,226,416	5,182,280	11,776,867
2006	0.03	5,968,321	13,565,345	5,315,077	12,078,651
2007	-0.01	6,132,289	13,938,026	5,461,098	12,410,489
2008	0.00	6,094,000	13,851,000	5,427,000	12,333,000
2009	-0.01	6,013,678	13,668,436	5,355,469	12,170,444
2010	-0.04	5,799,639	13,181,949	5,164,857	11,737,273
2011	-0.09	5,256,687	11,947,879	4,681,333	10,638,451
2012	-0.10	4,735,108	10,762,385	4,216,841	9,582,882
2013	0.01	4,785,118	10,876,053	4,261,377	9,684,092
2014	0.01	4,825,902	10,968,752	4,297,698	9,766,632
2015	-0.05	4,591,382	10,435,713	4,088,846	9,292,011

The distribution of ex-prisoners by the mental health status is as the following.

Assuming that the mental illness prevalence of ex-convicts are same as the parolees, i.e. MI prevalence equals to 0.10, the distribution of prison and jail ex-convicts by mental health status are:

Ex-prisoners wMI → 2,170,148 person * 0.10 = 217,015 person

Ex-prisoners wo MI → 2,170,148 person * 0.90 = 1,953,133 person

Ex-jail offenders wMI → (4,932,510 - 2,170,148) person * 0.10 = 276,236 person

Ex-jail offenders wo MI → (4,932,510 - 2,170,148) * 0.90 = 2,486,126 person

To further estimate the initial values for high-risk, low-risk, and desisting ex-convicts, we use the average times these ex-convicts stay in the respective stock to calculate the distribution. For example, the average times for high-risk, low-risk, and desisting prison ex-convicts wMI are 2.5 years, 7 years, and 167 years (average ex-convict mortality rate is 0.006 1/year) respectively. Hence, the total average time is the sum of these three average time parameters, which equals to 176.5. Thus,

Prison Ex-Convicts wMI

Hi Risk Prison ExConv wMI = 217,015 person * 2.5/176.5 = 3,074 person

Lo Risk Prison ExConv wMI = 217,015 person * 7/176.5 = 8,607 person

Desisting Prison ExConv wMI = 217,015 person * 167/176.5 = 205,334 person

Prison Ex-Convicts wo MI

Hi Risk Prison ExConv wo MI = 1,953,133 person * 2.0/176 = 22,195 person

Lo Risk Prison ExConv wo MI = 1,953,133 person * 7/176 = 77,681 person

Desisting Prison ExConv wo MI = 1,953,133 person * 167/176 = 1,853,257 person

Jail Ex-Convicts wMI

Hi Risk Jail ExConv wMI = 276,236 person * 2/172.5 = 3,203 person

Lo Risk Jail ExConv wMI = 276,236 person * 3.5/172.5 = 5,605 person

Desisting Jail ExConv wMI = 276,236 person * 167/172.5 = 267,429 person

Jail Ex-Convicts wo MI

Hi Risk Jail ExConv wo MI = 2,486,126 person * 1.5/172 = 21,681 person

Lo Risk Jail ExConv wo MI = 2,486,126 person * 3.5/172 = 50,590 person

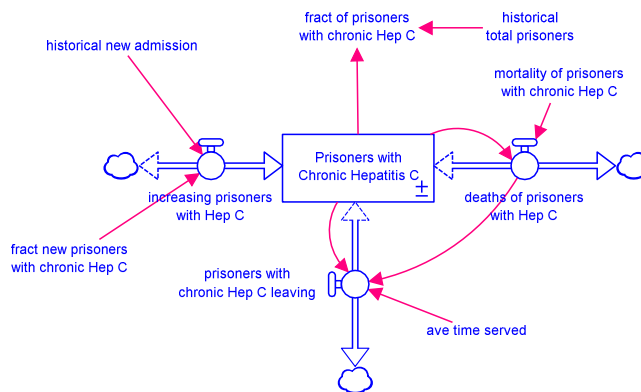
Desisting Jail ExConv wo MI = 2,486,126 person * 167/172 = 2,413,855 person

Appendix G – Calculations to Estimate the Prevalence of Infectious Disease in Prison

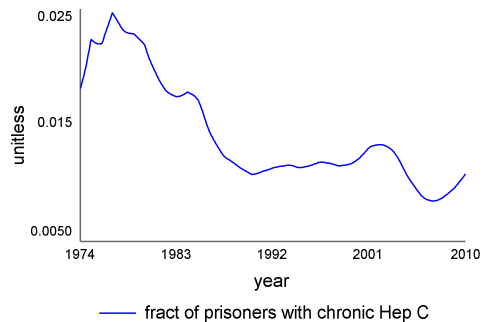
Estimation of the Prevalence of HIV/AIDS in Prison	
Prison Population in 1998	159563 persons
HIV/AIDS Prisoners	5,000 – 8,000 persons
Fraction of HIV/AIDS Prisoners (using the average of 5,000 to 8,000)	0.04

Estimation of the Prevalence of Hepatitis C in Prison

Estimation with an system dynamics model



Estimated Prevalence of Hepatitis C in Prison Over Time



Equations:

Top-Level Model:

$$\text{Prisoners_with_Chronic_Hepatitis_C}(t) = \text{Prisoners_with_Chronic_Hepatitis_C}(t - dt) + (\text{increasing_prisoners_with_Hep_C} - \text{deaths_of_prisoners_with_Hep_C} - \text{prisoners_with_chronic_Hep_C_leaving}) * dt$$

$$\text{INIT Prisoners_with_Chronic_Hepatitis_C} = 22486 * 0.02$$

INFLOWS:

$$\text{increasing_prisoners_with_Hep_C} = \text{historical_new_admission} * \text{fract_new_prisoners_with_chronic_Hep_C}$$

OUTFLOWS:

$$\text{deaths_of_prisoners_with_Hep_C} = \text{Prisoners_with_Chronic_Hepatitis_C} * \text{mortality_of_prisoners_with_chronic_Hep_C}$$

$$\text{prisoners_with_chronic_Hep_C_leaving} = (\text{Prisoners_with_Chronic_Hepatitis_C} - \text{deaths_of_prisoners_with_Hep_C} * DT) / \text{ave_time_served}$$

$$\text{ave_time_served} = \text{GRAPH}(\text{TIME})$$

$$(1974.00, 2.83), (1975.00, 2.83), (1976.00, 2.83), (1977.00, 2.5), (1978.00, 2.17), (1979.00, 2.08), (1980.00, 2.0), (1981.00, 2.0), (1982.00, 1.83), (1983.00, 1.83), (1984.00, 1.92), (1985.00, 1.83), (1986.00, 1.58), (1987.00, 1.42), (1988.00, 1.5), (1989.00,$$

```

1.42), (1990.00, 1.33), (1991.00, 1.33), (1992.00, 1.33), (1993.00, 1.33), (1994.00, 1.33), (1995.00, 1.5), (1996.00, 1.58),
(1997.00, 1.58), (1998.00, 1.43), (1999.00, 1.43), (2000.00, 1.55), (2001.00, 1.65), (2002.00, 1.61), (2003.00, 1.56), (2004.00,
1.3), (2005.00, 1.28), (2006.00, 1.22), (2007.00, 1.24), (2008.00, 1.28), (2009.00, 1.3), (2010.00, 1.38)
fract_new_prisoners_with_chronic_Hep_C = 0.03
fract_of_prisoners_with_chronic_Hep_C = Prisoners_with_Chronic_Hepatitis_C / historical_total_prisoners
historical_new_admission = GRAPH(TIME)
(1974.00, 5359.0), (1975.16666667, 5765.0), (1976.33333333, 6910.0), (1977.50, 7558.0), (1978.66666667, 9325.0),
(1979.83333333, 9874.0), (1981.00, 11347.0), (1982.16666667, 13932.0), (1983.33333333, 15932.0), (1984.50, 18391.0),
(1985.66666667, 17602.0), (1986.83333333, 20543.0), (1988.00, 23588.0), (1989.16666667, 26515.0), (1990.33333333,
29579.0), (1991.50, 34226.0), (1992.66666667, 39272.0), (1993.83333333, 38252.0), (1995.00, 40158.0), (1996.16666667,
43149.0), (1997.33333333, 41580.0), (1998.50, 45459.0), (1999.66666667, 46487.0), (2000.83333333, 46823.0), (2002.00,
46589.0), (2003.16666667, 42936.0), (2004.33333333, 40276.0), (2005.50, 37932.0), (2006.66666667, 38662.0),
(2007.83333333, 43422.0), (2009.00, 46798.0), (2010.16666667, 48609.0), (2011.33333333, 48639.0), (2012.50, 46987.0),
(2013.66666667, 46380.0), (2014.83333333, 45016.0), (2016.00, 41521.0)
historical_total_prisoners = GRAPH(TIME)
(1974.00, 24741.0), (1975.00, 20028.0), (1976.00, 21008.0), (1977.00, 19623.0), (1978.00, 21325.0), (1979.00, 22632.0),
(1980.00, 24569.0), (1981.00, 29202.0), (1982.00, 34640.0), (1983.00, 39373.0), (1984.00, 43328.0), (1985.00, 50111.0),
(1986.00, 59484.0), (1987.00, 66975.0), (1988.00, 76171.0), (1989.00, 87297.0), (1990.00, 97309.0), (1991.00, 101808.0),
(1992.00, 109496.0), (1993.00, 119951.0), (1994.00, 125605.0), (1995.00, 135133.0), (1996.00, 145565.0), (1997.00, 155276.0),
(1998.00, 159563.0), (1999.00, 160687.0), (2000.00, 160655.0), (2001.00, 157142.0), (2002.00, 159695.0), (2003.00, 161785.0),
(2004.00, 163939.0), (2005.00, 168035.0), (2006.00, 172528.0), (2007.00, 171444.0), (2008.00, 171085.0), (2009.00, 168830.0),
(2010.00, 162821.0), (2011.00, 147578.0), (2012.00, 132935.0), (2013.00, 134339.0), (2014.00, 135484.0), (2015.00, 128900.0),
(2016.00, 117319.0)
mortality_of_prisoners_with_chronic_Hep_C = 0.02
{ The model has 10 (10) variables (array expansion in parens).
In 1 Modules with 0 Sectors.
Stocks: 1 (1) Flows: 3 (3) Converters: 6 (6)
Constants: 2 (2) Equations: 7 (7) Graphicals: 3 (3)
}

```


Appendix H – Calculation of Treatment Cost per Mental Function Improved

This is a calculation to estimate the treatment cost for mental illness by severity.

Mental Functions Discrepancy

Number of prisoners in 1987 – 66,975 person

Average GAF score per prisoner – 57 score/person

Desired GAP score per prisoner – 100 score/person

MI Prevalence in 1987 – 0.14

Mental Functions of Prisoners wMI – $66,975 * 0.14 * 57 = 247,990$ score

Desired Mental Functions of Prisoners wMI - $66,975 * 0.14 * 100 = 937,650$ score

Discrepancy in Mental Functions of Prisoners wMI – $937,650$ score – $247,990$ score = $689,660$ score

Treatment Cost of the MI Prisoners

Costs are adapted from "Corrections Criminal Justice and the Mental Illness Observations about Costs in California" (Izumi, Schiller & Hayward, 1996)

CCCM costs $\$880/\text{person} * 10,595$ prisoners wMI (1996-97) = $\$9,323,600$

EOP costs $\$9,600/\text{person} * 1,896$ prisoners wMI (1996-97) = $\$18,201,600$

$\$9,323,600 + \$18,201,600 = \$27,525,200$

Consumer Price Index base year in 2009 – 59.935

Adjusted Cost of treatment of Prisoners wMI in 1987 - $\$27,525,200 / *59.935 / 100 = \$ 16,497,228$

MHC cost per discrepancy - $\$ 16,497,228 / 689,660$ score = $\$23.92 / \text{score}$

Appendix I – California Parole Population Caseloads and Supervision Requirements

LEVEL OF SUPERVISION	SELECTED PAROLE CONTACT AND TESTING REQUIREMENTS
<p>High Control Parolees who were convicted of violent felonies in Penal Code 667.5(c), must register as sex offenders, are validated gang members, or high-notoriety cases.</p>	<ul style="list-style-type: none"> ▪ 2 face-to-face contacts per month (one must be at residence) ▪ First home visit within 6 days of release ▪ 1 drug test per month, if required ▪ 2 collaterals per quarter
<p>High Service Refers to parolees who have special service needs (severe addiction problems) or behavioral patterns (severe mental illness).</p>	<ul style="list-style-type: none"> ▪ 2 face-to-face contacts per month (one must be at residence) ▪ 1 drug test per month, if required (Civil addicts may have weekly testing) ▪ 2 collaterals per quarter
<p>Control Service Require active supervision. Refers to parolees who do not meet the criteria for High Control or High Services</p>	<ul style="list-style-type: none"> ▪ 1 face-to-face in residence every other month ▪ 2 drug tests per quarter ▪ 1 collateral every 90 days ▪ Most CS cases drop to MS automatically at 180 days
<p>High Risk Caseloads <i>Second Striker</i> Parolees with at least two prior convictions for serious or violent offenses. Ideal ratio of 40:1</p>	<ul style="list-style-type: none"> ▪ 2 face-to-face per month; 4 per quarter in home ▪ 1 drug tests per month ▪ 2 collaterals per month
<p><i>High Risk Sex Offender</i> Defined by the CA Dept of Justice, uses criteria set forth under PC 290(n)(1), PC 667.5 and 667.6. Ideal ratio of 40:1.</p>	<ul style="list-style-type: none"> ▪ 2 face-to-face per month; 4 per quarter in home ▪ 1 drug test per month ▪ 2 collaterals per month ▪ Quarterly meeting with person who knows parolee well.
<p>Minimum Service (MS) This classification refers to parolees who are on monthly mail-in, and these are counted as ‘contacts.’ These individuals need to make only two to three face to face or collateral contacts with their parole officer each year</p>	<ul style="list-style-type: none"> ▪ 1 home visit within 30 days of being assigned to MS ▪ 1 face-to-face or collateral every 4 months ▪ 1 monthly report turned in by 5th of every month. ▪ Face-to-face contact 30 days prior to discharge ▪ Drug testing waived

Adapted from “Parole Violations and Revocations in California” (Grattet et al., 2008) (pp. 51)

Appendix J – Definitions and Scope of CDCR Medical Services

Services Delivered and/or Coordinated by the Primary Care Team and Associated Standards in IMSP&P	
Service Type	Applicable Standards
Initial and Ongoing Health Risk Assessment	<ul style="list-style-type: none"> • Reception Health Care (IMSP&P Volume 4, Chapter 2) • Health Care Transfer Process (IMSP&P Volume 4, Chapter 3) • Comprehensive Accommodation (IMSP&P Volume 4, Chapter 23) • Medical Classification System (IMSP&P Volume 4, Chapter 29) • Care Team and Patient Panel (IMSP&P Volume 4, Chapter 1.2) • Scheduling and Access to Care (IMSP&P Volume 4, Chapter 1.3) • Population and Care Management Services (IMSP&P Volume 4, Chapter 1.4)
Preventive Services	<ul style="list-style-type: none"> • Public Health and Infection Control (IMSP&P Volume 10) • Patient Health Care Education (IMSP&P Volume 4, Chapter 6.1) • Patient Care During Pregnancy and Childbirth (IMSP&P Volume 4, Chapter 24) • Inmate Dental Services Program Policies and Procedures
Diagnosis and Treatment of Acute and Chronic Illness	<ul style="list-style-type: none"> • Scheduling and Access to Care (IMSP&P Volume 4, Chapter 1.3) • Medication Management (IMSP&P Volume 4, Chapter 11) • Clinical Guidelines (IMSP&P Volume 3, Chapter 5) • Gender Dysphoria Management (IMSP&P Volume 4, Chapter 26) • Hepatitis C Management (IMSP&P Volume 4, Chapter 31) • Nursing Services/Protocols (IMSP&P Volume 5) • Inmate Dental Services Program Policies and Procedures • Mental Health Services Delivery System Program Guide
Allied Health Services	<ul style="list-style-type: none"> • Diagnostic Services (IMSP&P Volume 4, Chapter 10) • Medical Imaging Services and Radiology (IMSP&P Volume 4, Chapter 30) • Outpatient Dietary Intervention (IMSP&P Volume 4, Chapter 20) • Durable Medical Equipment and Medical Supply (IMSP&P Volume 4, Chapter 32) • Pharmacy Services (IMSP&P Volume 9)
Emergency Response	<ul style="list-style-type: none"> • Emergency Medical Response System (IMSP&P Volume 4, Chapter 12)
Specialty Referrals and Follow-Up	<ul style="list-style-type: none"> • Outpatient-Specialty Services (IMSP&P Volume 4 Chapter 8) • Utilization Management Program (IMSP&P Volume 4 Chapter 34) • Physician Orders for Life-Sustaining Treatment (IMSP&P Volume 1, Chapter 18)
End-of-Life Planning and Treatment	<ul style="list-style-type: none"> • Palliative Care and Treatment (IMSP&P Volume 4, Chapter 21) • Advance Directive for Health Care (IMSP&P Volume 1, Chapter 17) • Physician Orders for Life Sustaining Treatment (IMSP&P Volume 1, Chapter 18)
Referrals to Higher Levels of Care and Follow-Up	<ul style="list-style-type: none"> • Health Care Transfer Process (IMSP&P Volume 4, Chapter 3) • Outpatient Housing Unit (IMSP&P Volume 4, Chapter 14) • Correctional Treatment Center (IMSP&P Volume 4, Chapter 15)
Handoffs Between Providers in Different Health Settings / Between Care Teams	<ul style="list-style-type: none"> • Health Care Transfer Process (IMSP&P Volume 4, Chapter 3)

Adapted from California Correctional Health Care Services (2017) (Attachment A)

Appendix K – Data Sources

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
1	Age Profiles	Constant	init age per arrestee	28.1488558 657 year	CA Prisoners 1971; Estimation and calibration	Median age for male felon in 1971 was 30.4. So we estimated the arrestees have a lower median age because arrestees includes the first-time arrestees and recidivists.
2	Age Profiles	Constant	init age per county parolee wMI violated condition	37.5 year	Estimation	
3	Age Profiles	Constant	init age per county parolee wo MI violated condition	37 year	Estimation	
4	Age Profiles	Constant	init age per county parolees wMI	37.5 year	Estimation	
5	Age Profiles	Constant	init age per county parolees wo MI	37 year	Estimation	
6	Age Profiles	Constant	init age per defendant in comm being trialed	28.1488558 657 year	Calibration	
7	Age Profiles	Constant	init age per defendant in comm waiting for sentence	28.1488558 657 year	Estimation	
8	Age Profiles	Constant	int age per defendant in custody being trialed	30.4326964 511 year	Calibration	
9	Age Profiles	Constant	init age per defendant in custody waiting for sentence	30.4326964 551 year	Calibration	
10	Age Profiles	Constant	init age per desisting jail exConv wMI	39 year	Estimation	
11	Age Profiles	Constant	init age per desisting prison exConv wMI	45 year	Estimation	
12	Age Profiles	Constant	init age per desisting jail exConv wo MI	42.8 year	Estimation	
13	Age Profiles	Constant	init age per hi risk jail exConv wMI	30.0868696 905 year	Calibration	
14	Age Profiles	Constant	init age per hi risk jail exConv wo MI	29.7104055 345 year	Calibration	
15	Age Profiles	Constant	init age per hi risk prison exConv wMI	34.9867305 247 year	Calibration	
16	Age Profiles	Constant	init age per hi risk prison exConv wo MI	34.3744137 966 year	Calibration	
17	Age Profiles	Constant	init age per jail offender wMI	28.5671128 516 year	Calibration	
18	Age Profiles	Constant	init age per jail offender wo MI	28.5671128 516 year	Calibration	

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
19	Age Profiles	Constant	init age per lo risk jail exConv wMI	35.5513505 648 year	Calibration	
20	Age Profiles	Constant	init age per lo risk jail exConv wo MI	34.1701961 644 year	Calibration	
21	Age Profiles	Constant	init age per lo risk prison exConv wMI	40.8395733 342 year	Calibration	
22	Age Profiles	Constant	init age per lo risk prison exConv wo MI	40.5911100 666 year	Calibration	
23	Age Profiles	Constant	init age per pretrial suspect in comm	28.1488558 657 year	Calibration	
24	Age Profiles	Constant	init age per prison parolee wMI	33.2064558 091 year	Calibration	
25	Age Profiles	Constant	init age per prison parolee wo MI	32.5647693 529 year	Calibration	
26	Age Profiles	Constant	init age per prison parolee wMI violated condition	34.5763188 228 year	Calibration	
27	Age Profiles	Constant	init age per prison parolee wo MI violated condition	33.9346323 666 year	Calibration	
28	Age Profiles	Constant	init age per prisoner wMI	30.9607125 619 year	Calibration	
29	Age Profiles	Constant	init age per prisoner wo MI	30.3187295 177 year	Calibration	
30	Age Profiles	Constant	init age per probationer	31.7007956 908 year	Calibration	
31	Age Profiles	Constant	init age per reparaoled prison parole violator wMI	34.5763188 228 year	Calibration	
32	Age Profiles	Constant	init age per reparaoled prison parole violator wo MI	33.9346323 666 year	Calibration	
33	Age Profiles	Constant	init age per reprinted county parole violator wMI	38 year	Estimation	
34	Age Profiles	Constant	init age per reprinted county parole violator wo MI	37.5 year	Estimation	
35	Age Profiles	Constant	init age per reprinted prison parole violator wMI	34.5763188 228 year	Calibration	
36	Age Profiles	Constant	init age per reprinted prison parole violator wo MI	33.9346323 666 year	Calibration	
37	Age Profiles	Constant	init age per suspect in comm with cases filed	28.1488558 657 year	Calibration	

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
38	Age Profiles	Constant	init age per suspect in custody	30.4326964 551 year	Calibration	
39	Age Profiles	Constant	init age per suspect in custody with cases filed	30.4326964 551 year	Calibration	
40	Age Profiles	Constant	init age per desisting jail exConv wo MI	38.5 year	Estimation	
41	Age Profiles	Constant	max ave age	90 year	By default	
42	Age Profiles	Constant	min ave age	18 year	By default	
43	Age Profiles	Constant	prisoner life expectancy	65 year	Williams et al., 2014	Due to the pre-condition of prisoners' socio-economic status and the harsh prison environment, prisoners' life expectancy is 10-15 years shorter than the general population. The life expectancy at birth for California population has been increasing from 76 to 81 between 1990 and 2009. Thus, prisoner's life expectancy at birth is assumed to be 65 years old.
44	Age Profiles	Constant	min remaining years of life life	1 year	By default	
45	Age Profiles	Constant	ref mortality rate	0.003 1/year	By default	To initialize the model.
46	Community Services	Stock	Community Service Capacity for Parolees wMI	1058 person	CDCR's Prisoners and Parolees (1987-2010); Parole Pop Reports (2011-2012); CDCR Monthly Pop Reports (2014-2015); LAO (2000b); Williams et al. (2000); Calculation	Total Parolees in 1987 is 42,298 persons. 10% of them are mentally ill (LAO, 2000b). Only 40% of parolees are supported with employment in the first year post release (Williams et al., 2000). Considering the lack of community services to support parolees wMI, we assume the fraction of employed parolees wMI to be 0.25 only.
47	Community Services	Stock	Community Service Capacity for Parolees wo MI	15227 person	Parolees (1987-2010); Parole Pop Reports (2011-2012); CDCR Monthly Pop Reports (2014-2015); LAO (2000b); Williams et al. (2000); Calculation	Total Parolees in 1987 is 42,298 persons. 10% of them are mentally ill (LAO, 2000b). Only 40% of parolees are supported with employment in the first year post release (Williams et al., 2000).
48	Community Services	Stock	correctional Fund to Community Services	116550998.793 dollar/year	Estimation	
49	Community Services	Table Function	CA pop annual growth rate	1/year	Calculation; Pop data is obtained from the Demographic Research Unit of the Dept of Finance of California	
50	Community Services	Constant	comm svc capacity adj time delay	10 year	Estimation	A long delay is used to reflect the irresponsiveness of the community service capacity in meeting the needs of parolees.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
51	Community Services	Constant	community supervision cost	4438 dollar/person	Grattet (2015)	The local governments bear this additional cost post-Realignment
52	Community Services	Constant	correctional comm svc fund averaging time	10 year	Estimation	A long delay is used to reflect the irresponsiveness of the communitiy service capacity in meeting the needs of parolees.
53	Community Services	Constant	desired comm svc for parolees capacity adj time	3 year	3 year	Time taken to observe, collect, report, assess, and recruit.
54	Community Services	Constant	desired fract parolee work	0.6 unitless	U.S. Dept of Labor (https://data.bls.gov)	
55	Community Services	Constant	funded comm services capacity for county parolees wMI preRealignment	0 person	By default	To initialize the stock. Realignment was introduced in 2012.
56	Community Services	Constant	funded comm services capacity for county parolees wo MI preRealignment	0 person	By default	To initialize the stock. Realignment was introduced in 2012.
57	Community Services	Constant	init comm svc for parolees capacity adj time	20 year	Estimation	Based on the assumption that community service capacity show little sign of increasing. This long delay symbolizes slow change in responding to the increasing needs of parolees.
58	Community Services	Constant	init comm svcs cost per county parolee	0 dollar/person	By default	To introduce the county parole cost after Realignment was introduced in 2012.To introduce the county parole cost after Realignment was introduced in 2012.
59	Community Services	Constant	min comm svc capacity for parolees	1 person	By default	To formulate "effect of min comm svc capacity for parolees wMI multiple on adjustment" in order to protect the stock from becoming negative.
60	Community Services	Constant	probability of employed parolee fail parole	0.4 unitless	Estimation	If 60% of the parolees are employed, 40% of them are unemployed. The assumption is that these 40% will likely fail parole supervision.
61	Community Services	Constant	ref comm svc cost per parolee wMI	18600 dollar/person	Romano (2017); Simerman (2009); North Carolina Department of Public Safety (2011)	CMHC - \$7,900 per person per year (Romano, 2017); Housing subsidiy - \$10,200 per person per year (Simerman, 2009); Work Comm Svc - \$500 per person per year (NCDPS, 2011)
62	Community Services	Constant	ref comm svc cost per parolee wo MI	10700 dollar/person	Simerman (2009); North Carolina Department of Public Safety (2011)	Housing subsidiy - \$10,200 per person per year (Simerman, 2009); Work Comm Svc - \$500 per person per year (NCDPS, 2011)
63	Community Services	Constant	time to adjust correction fund for comm svcs	3 year	California Dept of Finance	California adopts budget change adjustment process. It takes two years at the state level to modify budget. An additional year is expected for the local government to observe, collect, and report budget request.
64	Community Services	Constant	weighted strength of comm svcs claim	0.55 unitless	Bird et al. (2014)	55% of the counties adopt the reentry-focused approach while 45% take the enforcement-focused approach.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
65	Community Services	Constant	weighted strength of local enforcement claim	0.45 unitless	Bird et al. (2014)	55% of the counties adopt the reentry-focused approach while 45% take the enforcement-focused approach.
66	Incarceration Year Served	Stock	Current Prison Time Served by Prisoners wSMI in Alternative Facility	0 year	By default	To initialize the model. This stock is the new recommended policy structure. So it will only start to accumulate when the policy structure is activated.
67	Incarceration Year Served	Constant	init current jail time served per jail offender wMI	0.25 year	U.S. Department of Justice, 1992-2006; Calibration	Before Realignment, jail offenders served an average of six months of jail time. After Realignment, the convicts sentenced to jail consists of offenders with more serious felony convictions, and thus the average jail time served jail offender increases accordingly.
68	Incarceration Year Served	Constant	init current jail time served per jail offender wo MI	0.25 year	U.S. Department of Justice, 1992-2006; Calibration	Before Realignment, jail offenders served an average of six months of jail time. After Realignment, the convicts sentenced to jail consists of offenders with more serious felony convictions, and thus the average jail time served jail offender increases accordingly.
69	Incarceration Year Served	Constant	init current prison time served per prisoner wMI	1.8 year	CDCR Annual Time Served On Prison Sentence Report from 1998 to 2012 Felony Sentences in State Courts (Bureau of Justices Statistics, 1986-2006)	Represents the actual time served by prisoners from the first day of admission to the prison to the day of their first release to parole. The average prison time served has been relatively stable from 1998 to 2009; it ranges between 1.63 and 1.73 year per prisoner. However, it starts to climb to 3.99 in 2012. So, we adjusted the prison time served by prisoner wMI upward because prisoners wMI tend to serve longer sentences than the prisoners wo MI.
70	Incarceration Year Served	Constant	init current prison time served per prisoner wo MI	1.4 year	CDCR Annual Time Served On Prison Sentence Report from 1998 to 2012 Felony Sentences in State Courts (Bureau of Justices Statistics, 1986-2006)	Represents the actual time served by prisoners from the first day of admission to the prison to the day of their first release to parole. The average prison time served has been relatively stable from 1998 to 2009; it ranges between 1.63 and 1.73 year per prisoner. However, it starts to climb to 3.99 in 2012. So, we adjusted the prison time served by prisoner wo MI downward because prisoners wMI tend to serve longer sentences than the prisoners wo MI.
71	Incarceration Year Served	Constant	init previous incar time served per arrestee	0.0217718188998 year	Calibration	
72	Incarceration Year Served	Constant	init previous incar time served per convicted offender to prison	1.5 year	Estimation	

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
73	Incarceration Year Served	Constant	init previous incar time served per county parole violator wMI	3.2 year	Estimation	
74	Incarceration Year Served	Constant	init previous incar time served per county parole violator wo MI	2.8 year	Estimation	
75	Incarceration Year Served	Constant	init previous incar time served per county parolee wMI	2.98 year	Estimation	
76	Incarceration Year Served	Constant	init previous incar time served per county parolee wo MI	2.05 year	Estimation	
77	Incarceration Year Served	Constant	init previous incar time served per defendant in comm being trialed	0.0217718188998 year	Calibration	
78	Incarceration Year Served	Constant	init previous incar time served per defendant in custody being trialed	0.155418255726 year	Calibration	
79	Incarceration Year Served	Constant	init previous incar time served per desisting jail exConv wMI	0.281622560959 year	Calibration	
80	Incarceration Year Served	Constant	init previous incar time served per desisting jail exConv wo MI	0.241117535893 year	Calibration	
81	Incarceration Year Served	Constant	init previous incar time served per desisting prison exConv wMI	2.434682890053 year	Calibration	
82	Incarceration Year Served	Constant	init previous incar time served per desisting prison exConv wo MI	1.45 year	Estimation	
83	Incarceration Year Served	Constant	init previous incar time served per hi risk jail exConv wMI	0.281622560959 year	Calibration	
84	Incarceration Year Served	Constant	init previous incar time served per hi risk jail exConv wMI	0.281622560959 year	Calibration	
85	Incarceration Year Served	Constant	init previous incar time per hi risk prison exConv wMI	2.31 year	Estimation	
86	Incarceration Year Served	Constant	init previous incar time per hi risk prison exConv wo MI	1.2 year	Estimation	

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
87	Incarceration Year Served	Constant	init previous incarceration time served per jail offender wMI	0.109 year	Calibration	
88	Incarceration Year Served	Constant	init previous incarceration time served per jail offender wo MI	0.109 year	Calibration	
89	Incarceration Year Served	Constant	init previous incarceration time served per low risk jail exConv wMI	0.281622560959 year	Calibration	
90	Incarceration Year Served	Constant	init previous incarceration time served per low risk jail exConv wo MI	0.241117535893 year	Calibration	
91	Incarceration Year Served	Constant	init previous incarceration time served per low risk prison exConv wMI	2.43468289005 year	Calibration	
92	Incarceration Year Served	Constant	init previous incarceration time served per low risk prison exConv wo MI	1.45 year	Estimation	
93	Incarceration Year Served	Constant	init previous incarceration time served per preSentencing defendant in comm	0.0217718188998 year	Calibration	
94	Incarceration Year Served	Constant	init previous incarceration time served per preSentencing defendant in custody	0.155418255726 year	Calibration	
95	Incarceration Year Served	Constant	init previous incarceration time served per pretrial suspect in comm	0.0217718188998 year	Calibration	
96	Incarceration Year Served	Constant	init previous incarceration time served per prison parole violator wMI	2.08 year	Estimation	
97	Incarceration Year Served	Constant	init previous incarceration time served per prison parole violator wo MI	1.45 year	Estimation	
98	Incarceration Year Served	Constant	init previous incarceration time served per prison parolee wMI	2.19 year	Estimation	
99	Incarceration Year Served	Constant	init previous incarceration time served per prison parolee wo MI	1.45 year	Estimation	
100	Incarceration Year Served	Constant	init previous incarceration time served per prisoner wMI	0.0346828900489 year	Calibration	
101	Incarceration Year Served	Constant	init previous incarceration time served per prisoner wo MI	0.0346828900489 year	Calibration	

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
102	Incarceration Year Served	Constant	init previous incar time served per probationer	0.229622473257 year	Calibration	
103	Incarceration Year Served	Constant	init previous incar time served per reprimed county parole violator fr prison wMI	3.7 year	Estimation	
104	Incarceration Year Served	Constant	init previous incar time served per reprimed county parole violator fr prison wo MI	3.2	Estimation	
105	Incarceration Year Served	Constant	init previous incar time served per reprimed prison parole violator wMI	0.0346828900489 year	Calibration	
106	Incarceration Year Served	Constant	init previous incar time served per reprimed prison parole violator wo MI	1.45 year	Estimation	
107	Incarceration Year Served	Constant	init previous incar time served per suspect in comm case filed	0.0217718188998 year	Calibration	
108	Incarceration Year Served	Constant	init previous incar time served per suspect in custody	0.155418255726 year	Calibration	
109	Incarceration Year Served	Constant	init previous incar time served per suspect in custody case filed	0.155418255726 year	Calibration	
110	Incarceration Year Served	Constant	multiplier of ave incar time served y prisoner to county parolee	0.9 unitless	Estimation	To characterize that prisoners who are placed in county parole supervision are those with lower-than-the average previous incarceration year served than those who are placed in CDCR parole supervision.
111	Incarceration Year Served	Constant	prison year gained per year	1 year/person/year	By default	For every year that each prisoner remained imprisoned, each of them will gain one previous incarceration year served upon their release.
112	Incarceration Year Served	Constant	ref jail time served in split sentence wMI	1.5 year	Estimation	Split sentence is a kind of sentence which is split into two parts. The first part is served by incarceration, usually jail time, and the second part is served by community supervision, such as probation.
113	Incarceration Year Served	Constant	ref jail time served in split sentence wo MI	1.5 year	Estimation	Split sentence is a kind of sentence which is split into two parts. The first part is served by incarceration, usually jail time, and the second part is served by community supervision, such as probation.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
114	Incarceration Year Served	Constant	weight for hi risk exConv recidivism	0.09 unitless		Fraction of recivism of the high-risk prison ex-convicts wMI as the sum of recidivism by prison parolees wMI, high risk prison parolees wMI, and low risk prison parolees wMI. To calculate the "ave previous time served per recidivist".
115	Incarceration Year Served	Constant	weight for lo risk exConv recidivism	0.03 unitless		Fraction of recivism of the high-risk prison ex-convicts wMI as the sum of recidivism by prison parolees wMI, high risk prison parolees wMI, and low risk prison parolees wMI. To calculate the "ave previous time served per recidivist".
116	Incarceration Year Served	Constant	weight for parolee recidivism	0.88 unitless		Fraction of recivism of the high-risk prison ex-convicts wMI as the sum of recidivism by prison parolees wMI, high risk prison parolees wMI, and low risk prison parolees wMI. To calculate the "ave previous time served per recidivist".
117	Individuals with Criminal History	Stock	Arrestees	17876 person	Calibration	
118	Individuals with Criminal History	Stock	County Parolee wMI Violated Condition	0 person	By default	To initialize the stock.
119	Individuals with Criminal History	Stock	County Parolee wo MI Violated Condition	0 person	By default	To initialize the stock.
120	Individuals with Criminal History	Stock	County Parolees wMI	0 person	By default	To initialize the stock.
121	Individuals with Criminal History	Stock	County Parolees wo MI	0 person	By default	To initialize the stock.
122	Individuals with Criminal History	Stock	Defendants in Comm Being Tried	2430 person	Calibration	
123	Individuals with Criminal History	Stock	Defendants in Custody Being Tried	12.9 person	Calibration	
124	Individuals with Criminal History	Stock	Desisting Jail ExConvicts wMI	267429 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
125	Individuals with Criminal History	Stock	Desisting Jail ExConvicts wo MI	2413855 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
126	Individuals with Criminal History	Stock	Desisting Prison ExConvicts wMI	205334 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
127	Individuals with Criminal History	Stock	Desisting Prison ExConvicts wo MI	1853257 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
128	Individuals with Criminal History	Stock	Hi Risk Jail ExConvicts wMI	3203 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
129	Individuals with Criminal History	Stock	Hi Risk Jail ExConvicts wo MI	21681 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
130	Individuals with Criminal History	Stock	Hi Risk Prison ExConvicts wMI	3074 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
131	Individuals with Criminal History	Stock	Hi Risk Prison ExConvicts wo MI	22195 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
132	Individuals with Criminal History	Stock	Jail Offenders wMI	12738.1137 513 person	CA Board of Corrections, Jail Profiles (1987-2015); Calibration	The number of convicted jail offenders in 1987 was 32,274. MI prevalence in prison was 14% in 1987. But this number might be underestimated due to the lack of diagnosis capacity in the prison. After calibration, the MI prevalence in jail in 1987 was estimated to be closed to 40%
133	Individuals with Criminal History	Stock	Jail Offenders wo MI	15281.5477 543 person	CA Board of Corrections, Jail Profiles (1987-2015); Calibration	The number of convicted jail offenders in 1987 was 32,274. MI prevalence in prison was 14% in 1987. But this number might be underestimated due to the lack of diagnosis capacity in the prison. After calibration, the MI prevalence in jail in 1987 was estimated to be closed to 40%. Hence, the remaining 60% is estimated to be non-mentally ill jail offenders.
134	Individuals with Criminal History	Stock	Lo Risk Jail ExConvicts wMI	5605 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
135	Individuals with Criminal History	Stock	Lo Risk Jail ExConvicts wo MI	50590 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
136	Individuals with Criminal History	Stock	Lo Risk Prison ExConvicts wMI	8607 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
137	Individuals with Criminal History	Stock	Lo Risk Prison ExConvicts wo MI	77681 person	Schmitt et al. (2010); Estimation	Refer to Appendix F for detailed calculation.
138	Individuals with Criminal History	Stock	New Prisoners at Reception Center for Medical Screening	26515 person	CDCR Historical Trends Institution and Parole Pop 1976 - 1996	New admission in 1987

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
139	Individuals with Criminal History	Stock	PreSentencing Convicts fr Comm in Custody	1291.44880 971 person	Calibration	
140	Individuals with Criminal History	Stock	PreSentencing Convicts in Custody	3550 person	Calibration	
141	Individuals with Criminal History	Stock	Pretrial Suspects in Community	5200 person	Calibration	
142	Individuals with Criminal History	Stock	Prison Parolees wMI	4194 person	CDCR Annual Prisoners and Parolees Reports (1998 -2010); Parolee Census Data (Dec 2012 - Dec 2013); The Sterling Report (1986); LAO (2000b); Estimation	Total Parolees in 1987 is 42,298 persons. 10% of them are mentally ill (LAO, 2000b) and 70% have not violated condition. The number of parolees wMI is thus $42,298 * 0.1 * 0.7 = 2,961$ person. Calibrated to 4149 persons.
143	Individuals with Criminal History	Stock	Prison Parolees wMI Violated Condition	876.713748 597 person	Shield (2003); Estimation	A total of 94% of the mentally ill parolees were returned to prisons as compared to 65% of non-mentally ill parolees statewide. As return-to-prison rate due to parole violation is tracked for three years. So, 0.94 divided by 3 equals 0.3 (after rounding up). This leads to $4,230 * 0.3 = 1,269$ parolees wMI who have violated parole condition. The fractions parolees wMI being reprimed and reparaed are estimated to be 0.23 and 0.5 . Thus, the parolees who have violated condition but not reprimed and reparaed equals to $1,269 * (1 - 0.23 - 0.5) = 343$ person. Calibrated to 876.713748597 persons.
144	Individuals with Criminal History	Stock	Prison Parolees wo MI	29101 person	CDCR Annual Prisoners and Parolees Reports (1998 -2010); Parolee Census Data (Dec 2012 - Dec 2013); The Sterling Report (1986); LAO (2000b); Estimation	Total Parolees in 1987 is 42,298 persons. 90% of them are mentally ill (LAO, 2000b) and 80% have not violated condition. The number of parolees wo MI is thus $42,298 * 0.9 * 0.8 = 30,454$ person. Calibrated to 29101 persons.
45	Individuals with Criminal History	Stock	Prison Parolees wo MI Violated Condition	2327 person	Shield (2003); Estimation	A total of 94% of the mentally ill parolees were returned to prisons as compared to 65% of non-mentally ill parolees statewide. As return-to-prison rate due to parole violation is tracked for three years. So, 0.65 divided by 3 equals 0.2 (after rounding up). This leads to $38,068 * 0.2 = 7,614$ parolees wo MI who have violated parole condition. The fractions parolees wo MI being reprimed and reparaed are estimated to be 0.18 and 0.5 . Thus, the parolees wo MI who have violated condition but not reprimed and reparaed equals to $7,614 * (1 - 0.18 - 0.5) = 2,437$ person. Calibrated to 2327 persons.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
146	Individuals with Criminal History	Stock	Prisoners wMI	9136 person	Sterling Report commissioned by California state government for the Coleman v. Wilson lawsuit (1986); Estimation	The Sterling Report commissioned by California state government for the Coleman v. Wilson lawsuit reports that the prevalence of severe mental disorder in 1987 was 0.14. Thus, 0.86 of the total prisoners is assumed to be mentally fit. In 1987, the total number of prisoners was 66,975. Assuming that the reported 0.14 MI prevalence in 1987 was accurate, the stock of prisoners wMI is 9,136 after minus the reprimed parolees. $(66,975 - 1,663) * 0.14 = 9,144$. Calibrated to 9136 persons.
147	Individuals with Criminal History	Stock	Prisoners wo MI	56121 person	Sterling Report (1986); Estimation	0.86 of the total prisoners is assumed to be mentally fit. In 1987, the total number of prisoners was 66,975. Minus the reprimed parolees, the initial value for the stock of prisoners without MI is $(66,975 - 1,663) * 0.86 = 56,168$. Calibrated to 56121 persons.
148	Individuals with Criminal History	Stock	Prisoners wSMI in Alternative Facility	0 person	By default	To initialize the stock.
149	Individuals with Criminal History	Stock	Probationers	242529 person	California Department of Justice	
150	Individuals with Criminal History	Stock	Reparoled Prison Parolees wMI	886 person	Estimation	A total of 94% of the mentally ill parolees were returned to prisons as compared to 65% of non-mentally ill parolees statewide. As return-to-prison rate due to parole violation is tracked for three years. So, 0.94 divided by 3 equals 0.3 (after rounding up). This leads to $4,230 * 0.3 = 1,269$ parolees wMI who have violated parole condition. The fraction parolees wMI being reparaoled are estimated to be 0.5. Thus, the parolees wMI reparaoled equals to $1,269 * 0.5 = 635$ person
151	Individuals with Criminal History	Stock	Reparoled Prison Parolees wo MI	3638 person	Estimation	A total of 94% of the mentally ill parolees were returned to prisons as compared to 65% of non-mentally ill parolees statewide. As return-to-prison rate due to parole violation is tracked for three years. So, 0.65 divided by 3 equals 0.2 (after rounding up). This leads to $38,068 * 0.2 = 7,614$ parolees wo MI who have violated parole condition. The fraction parolees wo MI being reparaoled are estimated to be 0.5. Thus, the parolees wo MI reparaoled equals to $7,614 * 0.5 = 3,807$ person. Calibrated to 3638 persons.
152	Individuals with Criminal History	Stock	Reprimed County Parole Violators wMI	0 person	By default	To initialize the stock.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
153	Individuals with Criminal History	Stock	Reprisoned County Parole Violators wo MI	0 person	By default	To initialize the stock.
154	Individuals with Criminal History	Stock	Reprisoned Prison Parole Violators wMI	408 person	Estimation	A total of 94% of the mentally ill parolees were returned to prisons as compared to 65% of non-mentally ill parolees statewide. As return-to-prison rate due to parole violation is tracked for three years. So, 0.94 divided by 3 equals 0.3 (after rounding up). This leads to 4,230 * 0.3 = 1,269 parolees wMI who have violated parole condition. The fraction parolees wMI being reprisoned are estimated to be 0.23. Thus, the parolees wMI reparaoled equals to 1,269 * 0.23 = 292 person. Calibrated to 408 persons.
155	Individuals with Criminal History	Stock	Reprisoned Prison Parole Violators wo MI	1310 person	Estimation	A total of 94% of the mentally ill parolees were returned to prisons as compared to 65% of non-mentally ill parolees statewide. As return-to-prison rate due to parole violation is tracked for three years. So, 0.65 divided by 3 equals 0.2 (after rounding up). This leads to 38,068 * 0.2 = 7,614 parolees wo MI who have violated parole condition. The fraction parolees wo MI being reparaoled are estimated to be 0.18. Thus, the parolees woMI reparaoled equals to 7,614 * 0.18 = 1,371 person. Calibrated to 1310 persons.
156	Individuals with Criminal History	Stock	Suspects in Comm with Cases Filed	21000 person	Calibration	
157	Individuals with Criminal History	Stock	Suspects in Custody	167.250955 903 person	Calibration	
158	Individuals with Criminal History	Stock	Suspects in Custody with Cases Filed	256 person	Calibration	
159	Individuals with Criminal History	Constant	ave time stay in reception center	1 year	By default	To initialize the stock.
160	Individuals with Criminal History	Constant	ave time to determine sentence for convict in comm	0.003 year	California Court (2017); Calibration	About 1 - 12 months. Considering that suspects from the community are usually involved in less serious crimes or may not have criminal background. We assume that it takes less time to decide on the sentence.
161	Individuals with Criminal History	Constant	ave time to determine sentence for convict in custody	0.74 year	California Court (2017); Calibration	About 1 - 12 months. Considering that suspects held in custody are usually involved in more serious crimes or have criminal history.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
162	Individuals with Criminal History	Constant	county parole duration	1 year	California Courts (2011); Estimation	Under the Post Release Community Supervision Act of 2011, the maximum confinement for county parole violation should not exceed 180 days. Hence, we assume the average county parole duration falls between the maximum confinement duration and the average prison parole duration. The average prison parole duration for parolees wMI and parolees wo MI are three and 2.5 years.
163	Individuals with Criminal History	Constant	county parole reprobation time	0.5 year	California Courts (2011); Estimation	
164	Individuals with Criminal History	Constant	exConv mortality rate	0.006 year	California Department of Public Health	The crude mortality rate for California population has been decreasing from 700 to 620 per 100,000 between 1990 and 2015. Thus, we set the mortality rate of ex-convicts as a constant at 600/100,000, which equals to 0.006 per year.
165	Individuals with Criminal History	Table Function	fract innocent pop arrested		Office of Attorney General, California Department of Justice (http://ag.ca.gov/cjs/c/publications/cand/cd05/tabs/2005Table16.pdf). Total Arrest 1952-2005 (data 1987 - 1999); Calculation	Pop data is obtained from the Demographic Research Unit of the Dept of Finance of California.
166	Individuals with Criminal History	Constant	fract jail offender serving split sentence	0.65 unitless	Office of the Attorney General	The fraction of convicts serving split-sentence decreases from 0.63 in 1987 to 0.58 in 2009. As such, we set the "fract jail offender serving split sentence" as a constant at 0.65.
167	Individuals with Criminal History	Constant	fract jail offender wMI	0.46 unitless	Estimation	
168	Individuals with Criminal History	Constant	fract parolees realigned wMI	0.7 unitless	CPOC (2012); Loftstrom et al. (2012)	After the Realignment in 2011, about 30,000 prisoners are released per year to post-release community supervision.
169	Individuals with Criminal History	Constant	fract prison parolee reoffend	0.2 1/year	CA Male Prisoners Released on Parole 1946 - 1949; CA Prisoners 1953 - 1986; Prisoners and Parolees 1987-2010; Prison Movement 2011 - 2012. Estimation	Data for 1996-2010 were updated with data for Prisoners and Parolees 2010. The rest were obtained from the reports of the respective years. The fractions range between 0.25 and 0.14 (1987 - 2010). So 0.2 per year is used as a constant.
170	Individuals with Criminal History	Constant	fract probation violator sent to jail for hearing	0.15 1/year	Nieto (1996)	About 15% of the probationers have their probation revoked.
171	Individuals with Criminal History	Constant	hearing duration for defendants in comm	0.04 year	California Court (2017); Calibration	14 days/365 days ; most of the trials take less than 2 weeks.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
172	Individuals with Criminal History	Constant	hearing duration for defendants in custody	0.16 year	California Court (2017); Calibration	50 days/365 days; most of the trials take less than 2 weeks.
173	Individuals with Criminal History	Constant	hi risk prison exConv wMI recidivism rate	0.08 1/year	Durose et al. (2014)	The return-to-prison rates of ex-convicts in fourth and fifth year post release were less than 3%. We assign 0.08 and 0.05 to the fractions of high risk ex-convicts wMI and low risk ex-convicts wMI recidivism respectively.
174	Individuals with Criminal History	Constant	hi risk prison exConv wo MI recidivism rate	0.03 1/year	Durose et al. (2014)	The return-to-prison rates of ex-convicts in fourth and fifth year post release were less than 3%. We assign 0.03 and 0.05 to the fractions of high risk ex-convicts wo MI and low risk ex-convicts wo MI recidivism respectively.
175	Individuals with Criminal History	Constant	lo risk prison exConv wMI recidivism rate	0.05 1/year	Durose et al. (2014)	The return-to-prison rates of ex-convicts in fourth and fifth year post release were less than 3%. We assign 0.08 and 0.05 to the fractions of high risk ex-convicts wMI and low risk ex-convicts wMI recidivism respectively.
176	Individuals with Criminal History	Constant	lo risk prison exConv wo MI recidivism rate	0.05 1/year	Durose et al. (2014)	The return-to-prison rates of ex-convicts in fourth and fifth year post release were less than 3%. We assign 0.03 and 0.05 to the fractions of high risk ex-convicts wo MI and low risk ex-convicts wo MI recidivism respectively.
177	Individuals with Criminal History	Table Function	prison sentence conviction reduction post realignment		Estimation	The Realignment policy diverts some offenders to jail sentence. So, after 2012, fewer and fewer offenders receive prison sentence.
178	Individuals with Criminal History	Constant	prisoner parole duration wMI	2.5 year	Calculation; CDCR's Institution and Parole Population Reports (1986 - 2006); CDCR's Prisoners and Parolees (1992 - 2010); Grattet et al. (2008)	Parolee residence time is calculated by dividing the stock of parolees by the discharge rate. The trend for the calculated residence time from 1987 to 2013 ranges between 6 to less 1. For most of the years, the residence time for parolees hover around 4 and 2. So we define the prison parole duration for wMI and wo MI as 2.5 and 2 years respectively.
179	Individuals with Criminal History	Table Function	ref arrest rate		Office of Attorney General, California Department of Justice (http://ag.ca.gov/cjs/c/publications/candd/cd05/tabs/2005Table16.pdf). Total Arrest 1952-2005 (data 1987 - 1999)	
180	Individuals with Criminal History	Constant	ref ave jail time served at current release wMI	0.25 year	Board of Corrections (1987-1994 & 2004-2015)	

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
181	Individuals with Criminal History	Constant	ref ave jail time served at current release wo MI	0.25 year	Board of Corrections (1987-1994 & 2004-2015)	
182	Individuals with Criminal History	Constant	ref ave prison time served at current release wMI	2.5 year	CDCR Annual Time Served On Prison Sentence Report from 1998 to 2012; Felony Sentences in State Courts (Bureau of Justices Statistics, 1986-2006); Ditton (1999)	On average, mentally ill prisoners serve 15% longer prison sentence than the non-mentally ill (Ditton, 1999).
183	Individuals with Criminal History	Constant	ref ave prison time served at current release wo MI	1.7 year	CDCR Annual Time Served On Prison Sentence Report from 1998 to 2012; Felony Sentences in State Courts (Bureau of Justices Statistics, 1986-2006); Ditton (1999)	
184	Individuals with Criminal History	Constant	ref ave probation duration	6 year	Watts (2014); Calibration	The most common length of felony probation is five years, but a maximum probation term that matches maximum felony incarceration may be imposed in California if the felony probationers violate probation condition.
185	Individuals with Criminal History	Constant	ref ave time served in alt facility	3 year	Estimation	Prisoners wSMI may have longer previous incarceration history. So, it is estimated that the average prison time to be longer than the prisoners wMI, which is 2.5 years.
186	Individuals with Criminal History	Table Function	ref complaint dismissed after arraignment	person/year	Crime in California-Adult Felony Arrest Dispositions 1975-2005; Crime in California 2006-2015	
187	Individuals with Criminal History	Table Function	ref complaint dismissed before arraignment	person/year	Crime in California-Adult Felony Arrest Dispositions 1975-2005; Crime in California 2006-2015	
188	Individuals with Criminal History	Table Function	ref convicted jail inmates	person	CA Board of Corrections, Jail Profiles (1987-2015)	
189	Individuals with Criminal History	Table Function	ref conviction rate	person/year	Office of the Attorney General (http://ag.ca.gov/); Calibration	
190	Individuals with Criminal History	Table Function	ref conviction to jail	person/year	Office of the Attorney General (http://ag.ca.gov/); Calibration	

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
191	Individuals with Criminal History	Table Function	ref conviction to probation	person/year	Office of the Attorney General (http://ag.ca.gov/); Calibration	
192	Individuals with Criminal History	Constant	ref county parolees wMI RTJ rate	0.05 1/year	Estimation	Considering that the probable profiles of county parolees, we estimate the RTJ rate to be significantly lower than the RTP rate. So we assign a smaller value to RTJ of county parolees wMI.
193	Individuals with Criminal History	Constant	ref county parolees wo MI RTJ rate	0.01 1/year	Estimation	Considering that the probable profiles of county parolees, we estimate the RTJ rate to be significantly lower than the RTP rate. So we assign a smaller value to RTJ of county parolees wo MI.
194	Individuals with Criminal History	Table Function	ref disposition rate		Crime in California-Adult Felony Arrest Dispositions 1975-2005; Crime in California 2006-2015	
195	Individuals with Criminal History	Constant	ref fract being held in custody	0.018 1/year	Estimation and Calibration	
196	Individuals with Criminal History	Constant	ref fract complaints on defendant in comm dismissed after trial	0.5 1/year	Office of the Attorney General (http://ag.ca.gov/); California Department of Justice (1975 - 2005 & 1996-2015); Calibration	30 - 40% of the defendants are released without conviction after trials.
197	Individuals with Criminal History	Constant	ref fract complaints on defendant in custody dismissed after filling	0.48 1/year	Office of the Attorney General (http://ag.ca.gov/); Calibration	30 - 40% of the defendants are released without conviction after trials.
198	Individuals with Criminal History	Constant	ref fract complaints on recidivating defendant in custody dismissed after trial	0.25 1/year	Office of the Attorney General (http://ag.ca.gov/); Calibration	30 - 40% of the defendants are released without conviction after trials.
199	Individuals with Criminal History	Constant	ref fract complaints on suspect in comm dismissed after filling	0.4 1/year	Office of the Attorney General (http://ag.ca.gov/); Calibration	30 - 40% of the defendants are released without conviction after trials.
200	Individuals with Criminal History	Constant	ref fract convicts in comm convict to prison sentence	0.29 1/year	Office of the Attorney General (http://ag.ca.gov/)	The fraction hovers around 0.2. We calibrate this fraction to be lower than the fraction convicts in custody convicted to prison sentence because those who have convicted felony are more likely to be detained in the jail.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
201	Individuals with Criminal History	Constant	ref fract convicts in custody convict to prison sentence	0.38 1/year	Office of the Attorney General (http://ag.ca.gov/)	The fraction hovers around 0.2. We calibrate this fraction to be lower than the fraction convicts in custody convicted to prison sentence because those who have convicted felony are more likely to be detained in the jail.
202	Individuals with Criminal History	Constant	ref fract county parolee wMI violate condition	0.3 1/year	Estimation	Due to the lack of public data, we assign the same value for fraction of prison parolees wMI violate condition to this parameter.
203	Individuals with Criminal History	Constant	ref fract county parolee wo MI violate condition	0.25 1/year	Estimation	Due to the lack of public data, we assign the same value for fraction of prison parolees wMI violate condition to this parameter.
204	Individuals with Criminal History	Constant	ref fract defendant in comm wait for trial	0.1 unitless	Calibration	
205	Individuals with Criminal History	Constant	ref fract first time arrestee release wo MI charges	0.83 1/year	Source: Crime in California (1975-2015) - Adult Felony Arrest Dispositions; Calculation	
206	Individuals with Criminal History	Constant	ref fract incoming prisoners wSMI diverted	0.05 unitless	Estimation	Estimated for policy recommendation.
207	Individuals with Criminal History	Constant	ref fract jail offenders devMI	0.01 1/year	Estimation	With the absence of reported data, we estimate the value of this parameter with "ref fract prisoners devMI". As the average jail time for jail offenders is shorter, we lower the value for this parameter.
208	Individuals with Criminal History	Constant	ref fract prison convicts wMI	0.32 unitless	Nieto (1998) and calibration	Nieto reveals that between 10 – 18 percent of incoming offenders, which was more than 20,000 each year, are in need of mental health attention. Considering the impact of “war on drugs” policy in 1980s and the reduction in mental hospitals from mid-1970s to 1980s, this fraction is estimated to be higher than the number reported in 1998.
209	Individuals with Criminal History	Constant	ref fract prison parolee wMI violate condition	0.3 1/year	CDCR's Prisoners and Parolees Reports (1987 - 2010); Estimation	The reported RTP due to parole violation for 1987 is 0.25. The reported RTP rate due to parole violation for 1987 is 0.25. We estimate the this fraction is higher for parolees wMI.
210	Individuals with Criminal History	Constant	ref fract prison parolee wo MI violate condition	0.25 1/year	CDCR's Prisoners and Parolees Reports (1987 - 2010)	The reported RTP rate due to parole violation for 1987 is 0.25.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
211	Individuals with Criminal History	Constant	ref fract prisoners devMI	0.02 1/year	James et al. (2006)	It has been reported that 7% of the state prisoners in the U.S. had a recent history of mental problem without any prior symptoms. This information is used as a proxy to estimate the fraction of prisoners develop MI. As the study was conducted in 2006, but our model is initialized at 1987 during which the prison utilization was 160% over the design capacity as compared to 190% in 2006, we adjusted the fraction of prisoners develop MI through calibration and find that a fraction higher than 2% yields an exceptionally high MI prevalence. In the absence of more accurate data, we take a value of less than 2% as the fraction of prisoners develop MI.
212	Individuals with Criminal History	Table Function	ref fract striker pop	person	Austin et al. (2000); LAO (1996); LAO (1997); LAO (1999); LAO (1999b); CDCR Second and Third Striker Felons in the Adult Institution Population December Reports (2000-2016)	
213	Individuals with Criminal History	Constant	ref hi risk jail exConv wMI recidivism rate	0.25 1/year	Estimation	As jail offenders do not serve parole and are released to the Hi Risk Jail ExConvicts wMI stock directly, the fraction of jail exConv reoffend is assumed to be higher than the prison parolees. This is based on the premise that the reoffend rate is the highest during the first year post-release. So, we adopt a value that is higher than the recidivism of high-risk ex-convicts wMI but lower than the recidivism of prison parolees wMI.
214	Individuals with Criminal History	Constant	ref hi risk jail exConv wo MI recidivism rate	0.2 1/year	Estimation	As jail offenders do not serve parole and are released to the Hi Risk Jail ExConvicts wMI stock directly, the fraction of jail exConv reoffend is assumed to be higher than the prison parolees. This is based on the premise that the reoffend rate is the highest during the first year post-release. So, we adopt a value that is higher than the recidivism of high-risk ex-convicts wMI but lower than the recidivism of prison parolees wMI.
215	Individuals with Criminal History	Table Function	ref jail ADP	person	California Board of State and Community Corrections (1987-2015)	
216	Individuals with Criminal History	Table Function	ref jail inmate	person	Jail Profile Data Summary (Board of Corrections --Jail Planning and Construction Division)	

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
217	Individuals with Criminal History	Table Function	ref MI prev	unitless	Various sources	1987—From the Sterling Report published at the request of California state government in 1986 for the Coleman v. Wilson lawsuit. This ratio represents serious mental disorder prevalence.1992—The Scarlett Carp Report published at the request of California state government in 1992 for the Coleman v. Wilson lawsuit. The reported prevalence were: male SMI (0.1107), male MMI (0.0947); female SMI (0.1521); female MMI (0.0903). We average these ratios to 0.21. See Appendix B for calculation.2000—Allen J. Beck & Laura M. Maruschak, Bureau of Justice Statistics, U.S. Dept. of Justice, Mental Health Treatment in State Prisons (2001) (reporting 2000 data). These figures are for enrollment in programs, not overall demand. Given the staffing problems in California prisons, the figures are likely to underestimate demand.2003—Human Rights Watch states the population of California state prisoners with mental illness at 23,439 as of 2003. Human Rights Watch, Ill-Equipped: U.S. Prisons and Offenders with Mental Illness 18 (2003).2007—California Department of Corrections and Rehabilitation (CDCR) 2009—Opinion and Order by the Three-Judge Court on Plata v. Schwarzenegger court case (p. 22)2011—The Future of California Corrections (2012) by CDCR (p. 29 – 30)2012—An Update to the Future of California Corrections (2016) by CDCR (p.12-13)2014—CA Governor's Budget Report: Entire Corrections and Rehab Budget; MH Program-The pop of inmates requiring MH treatment is projected to be 33480 in 2013-2014 and 34,118 in 2014-2015 2015— An Update to the Future of California Corrections (2016) by CDCR (p.12-13)
218	Individuals with Criminal History	Table Function	ref parolees	person	CDCR Annual Prisoners and Parolees Report (1998 - 2010); Parolee Census Data (Dec 2012 - Dec 2013)	
219	Individuals with Criminal History	Table Function	ref prison admission	person/year	Historical Trends Institution and Parole Pop 1976 - 1996; Prisoners and Parolees 1987-2010	
220	Individuals with Criminal History	Constant	ref prison parolee wMI RTP rate	0.23 1/year	Estimation	
221	Individuals with Criminal History	Constant	ref prison parolee wMI RTP rate	0.18 1/year	Estimation	

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
222	Individuals with Criminal History	Table Function	ref prison recidivism	person/year	Historical Trends Institution and Parole Pop 1976 - 1996; Prisoners and Parolees 1987-2010	Refer to RTP-PV (parole violation).
223	Individuals with Criminal History	Table Function	ref prison time served	year	CDCR Annual Time Served on Prison Sentence Reports (1998-2012); Felony Sentences in State Courts (Bureau of Justice Statistics, 1986 - 2006)	
224	Individuals with Criminal History	Table Function	ref prisoners	person	CDCR Annual Prisoners and Parolees Report 1987-2010; CDCR Monthly Population Reports 2011-2016	
225	Individuals with Criminal History	Table Function	ref probationers	person	California Department of Justice	
226	Individuals with Criminal History	Table Function	ref PV-RTC stock	person	Prisoners and Parolees 1987-2010; Prison Movement 2011 - 2012	PV-WNT 1996-2010 were updated with data fr Prisoners and Parolees 2010 . The rest were obtained from the reports of the respective years.
227	Individuals with Criminal History	Table Function	ref release wo trial	person/year	Office of the Attorney General (http://ag.ca.gov/); Calibration	
228	Individuals with Criminal History	Table Function	ref suspects in custody	person	CA Board of Corrections, Jail Profiles (1987-2015)	
229	Individuals with Criminal History	Constant	ref time to recover fr MI in prison	10 year	Davidson et al. (2007); Estimation	
230	Individuals with Criminal History	Constant	reprise time served	0.5 year	Grattet et al. (2008)	Ave 4 - 5 months
231	Individuals with Criminal History	Constant	time for arriangment	0.013 year	California Court (2017); Calibration	Suspects must be arraigned within 48 hours of workdays. Here we consider a 5-day workweek.
232	Individuals with Criminal History	Constant	time for jail exConv wMI to become lo risk	2 year	Kurlychek et al. (2012); Denny et al. (2014), Jeffrey (1959); Laub et al. (2001); Estimation	After 2 years, high-risk ex-convicts wMI become low-risk ex-convicts if they do not commit new crimes. In comparison to ex-convicts wo MI, ex-convicts wMI have a higher risk to reoffend, so the time that high-risk and low-risk ex-convicts remain in the respective stock are longer than those without MI. After 3.5 years, the low-risk ex-convicts wMI become desisting ex-convicts if they do not recidivate.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
233	Individuals with Criminal History	Constant	time for jail exConv wMI to cease criminal behavior	3.5 year	Kurlychek et al. (2012); Denny et al. (2014), Jeffrey (1959); Laub et al. (2001); Estimation	After 3.5 years, high-risk ex-convicts wMI become low-risk ex-convicts if they do not commit new crimes. In comparison to ex-convicts wo MI, ex-convicts wMI have a higher risk to reoffend, so the time that high-risk and low-risk ex-convicts remain in the respective stock are longer than those without MI. After 3.5 years, the low-risk ex-convicts wMI become desisting ex-convicts if they do not recidivate.
234	Individuals with Criminal History	Constant	time for jail exConv wo MI to become lo risk	1.5 year	Kurlychek et al. (2012); Denny et al. (2014), Jeffrey (1959); Laub et al. (2001); Estimation	After 1.5 years, high-risk ex-convicts wMI become low-risk ex-convicts if they do not commit new crimes. In comparison to ex-convicts wo MI, ex-convicts wMI have a higher risk to reoffend, so the time that high-risk and low-risk ex-convicts remain in the respective stock are longer than those without MI. After 3.5 years, the low-risk ex-convicts wMI become desisting ex-convicts if they do not recidivate.
235	Individuals with Criminal History	Constant	time for jail exConv wo MI to cease criminal behavior	3.5 year	Kurlychek et al. (2012); Denny et al. (2014), Jeffrey (1959); Laub et al. (2001); Estimation	After 1.5 years, high-risk ex-convicts wMI become low-risk ex-convicts if they do not commit new crimes. In comparison to ex-convicts wo MI, ex-convicts wMI have a higher risk to reoffend, so the time that high-risk and low-risk ex-convicts remain in the respective stock are longer than those without MI. After 3.5 years, the low-risk ex-convicts wMI become desisting ex-convicts if they do not recidivate.
236	Individuals with Criminal History	Constant	time for prison exConv wMI to become lo risk	2.5 year	Kurlychek et al. (2012); Denny et al. (2014), Jeffrey (1959); Laub et al. (2001); Estimation	Combining the theoretical perspective and empirical findings, we model desistance as a gradual transformation process. The ex-convicts transit from the parole stock to high-risk ex-convict stock if they do not reoffend. "Time for prison exConv wMI to become lo risk" is set as two years. Given the long tail in reoffending time, we define the residence time for the low-risk ex-convicts to remain in the stock as seven years before they become desisting ex-convicts.
237	Individuals with Criminal History	Constant	time for prison exConv wMI to cease criminal behavior	7 year	Kurlychek et al. (2012); Denny et al. (2014), Jeffrey (1959); Laub et al. (2001); Estimation	Combining the theoretical perspective and empirical findings, we model desistance as a gradual transformation process. The ex-convicts transit from the parole stock to high-risk ex-convict stock if they do not reoffend. "Time for prison exConv wMI to become lo risk" is set as two years. Given the long tail in reoffending time, we define the residence time for the low-risk ex-convicts to remain in the stock as seven years before they become desisting ex-convicts.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
238	Individuals with Criminal History	Constant	time for prison exConv wo MI to become lo risk	2 year	Kurlychek et al. (2012); Denny et al. (2014), Jeffrey (1959); Laub et al. (2001); Estimation	Combining the theoretical perspective and empirical findings, we model desistance as a gradual transformation process. The ex-convicts transit from the parole stock to high-risk ex-convict stock if they do not reoffend. "Time for prison exConv wMI to become lo risk" is set as two years. Given the long tail in reoffending time, we define the residence time for the low-risk ex-convicts to remain in the stock as seven years before they become desisting ex-convicts.
239	Individuals with Criminal History	Constant	time for prison exConv wo MI to cease criminal behavior	7 year	Kurlychek et al. (2012); Denny et al. (2014), Jeffrey (1959); Laub et al. (2001); Estimation	Combining the theoretical perspective and empirical findings, we model desistance as a gradual transformation process. The ex-convicts transit from the parole stock to high-risk ex-convict stock if they do not reoffend. "Time for prison exConv wMI to become lo risk" is set as two years. Given the long tail in reoffending time, we define the residence time for the low-risk ex-convicts to remain in the stock as seven years before they become desisting ex-convicts.
240	Individuals with Criminal History	Constant	time to adj MI recovery time in prison	5 year	California Correctional Health Care Services (2013); Estimation	The reform for prison HC was initiated in 2008. By 2013, prison health care still carries on. Thus, we estimate the time for MHC to effectively reduce recovery time is 5 years.
241	Individuals with Criminal History	Constant	time to file case for suspect in comm	0.02 year	California Court (2017); Calibration	7 days /365 days = 0.02; about a week
242	Individuals with Criminal History	Constant	time to file case for suspect in custody	0.0274 year	California Court (2017); Calibration	13 days/365 days = 0.036; more than a week considering that suspects held in custody are usually involved in more serious crimes or have criminal background.
243	Individuals with Criminal History	Constant	wait time for trial suspect in comm	0.07 year	California Court (2017); Calibration	27 days/365 days = 0.07
244	Individuals with Criminal History	Constant	wait time for trial suspect in custody	0.03 year	California Court (2017); Calibration	10 days/365 days = 0.03
245	Individuals with Criminal History	Constant	year to day conversion	365 days/year		
246	Individuals with Criminal History	Constant	fract parolees realigned wo MI	0.85 unitless	CPOC (2012); Loftstrom et al. (2012)	After the Realignment in 2011, about 30,000 prisoners are released per year to post-release community supervision.
247	Jail Capacity	Stock	Jail Capacity	63842 person	Jail Pop Survey (1994); American Jail Association (https://members.ajaa.org/About/StatisticsOfNote.aspx)	Statewide jails are operating at 105% of the rated capacity. The ADP of jail in 1987 was 60,802.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
248	Jail Capacity	Stock	Jail Capacity fr Special Fund for Realignment	0 person	By default	To initialize the stock. The first Special Realignment fund, \$1.2 billion, was allocated for jail capacity expansion took place in 2007.
249	Jail Capacity	Stock	PreRealignment New Jail Construction Fund	0 dollar/year	By default	To initialize the stock. The first Special Realignment fund, \$1.2 billion, was allocated for jail capacity expansion took place in 2007.
250	Jail Capacity	Constant	ave jail lifetime	40 years	O'Connor (2004)	The average lifetime of public property in the U.S. is 60 years. Given that jail is a smaller facility with lower security requirement, we adjust the average jail time downward.
251	Jail Capacity	Constant	construction cost of jail bed	160000 dollar/person	Martin et al. (2014); Lin et al. (2014); Calculation and calibration	Calculation by averaging the construction cost per jail bed under the Pre-Realignment and SB 100 Funds.
252	Jail Capacity	Constant	fract of Realignment resources spent on jail expansion	0.2 unitless	Bird et al. (2014)	Half of the counties allocated 0% to 20% of the Realignment fund to jail expansion.
253	Jail Capacity	Constant	PreRealignment New Jail Construction Fund in 2008	1586000000 dollar/year	Lin et al. (2014)	
254	Jail Capacity	Constant	SB 1022 New Jail Construction Fund in 2015	500000000 dollar/year	Lin et al. (2014)	
255	Jail Capacity	Constant	time to adjust jail capacity	6 year	Martin et al. (2014)	It takes 5 - 7 years to construct a jail.
256	Jail Capacity	Constant	time to appropriate PreRealignment new jail construction fund	1 year	California Dept of Finance (www.dof.ca.gov/budget/Budget_P rocess/index.html)	California adopts the budget change proposal process . Under this budgetary process, the department prepares a proposal for budget change in the end of the year. This proposal will undergo a review process within CDCR before getting an approval from the overseeing agency. Then, the proposal will be submitted to the Department of Finance, followed by committee review and Legislative Analyst Office's. Then the final budget will be announced in the mid-year. In the following year, prison health care capacity can be adjusted with new appropriated fund.
257	Mental Profiles	Stock	Mental Functions of Prisoners wSMI in Alternative Facility	0 person	By default	To initialize the model.
258	Mental Profiles	Constant	init ave mental func of all parolees wMI	68.1 score/person	Calibration	To formulate the "effect of mental func per prison parolee and violator wMI on comm svc cost".
259	Mental Profiles	Constant	init mental func per arrestee	65 score/person	Estimation	
260	Mental Profiles	Constant	init mental func per county parolee wMI	59 score/person	Estimation	
261	Mental Profiles	Constant	init mental func per county parolee wo MI	63 score/person	Estimation	

262	Mental Profiles	Constant	init mental func per defendant in comm being trialed	65 score/person	Estimation	
263	Mental Profiles	Constant	init mental func per defendant in custody being trialed	63 score/person	Estimation	
264	Mental Profiles	Constant	init mental func per desisting jail exConv wMI	68 score/person	Estimation	
265	Mental Profiles	Constant	init mental func per desisting jail exConv wo MI	70 score/person	Estimation	
266	Mental Profiles	Constant	init mental func per desisting prison exConv wMI	67 score/person	Estimation	
267	Mental Profiles	Constant	init mental func per desisting prison exConv wo MI	70 score/person	Estimation	
268	Mental Profiles	Constant	init mental func per hi risk exConv wMI	61 score/person	Estimation	
269	Mental Profiles	Constant	init mental func per hi risk exConv wo MI	64 score/person	Estimation	
270	Mental Profiles	Constant	init mental func per hi risk jail exConv wMI	62 score/person	Estimation	
271	Mental Profiles	Constant	init mental func per hi risk jail exConv wo MI	65 score/person	Estimation	
272	Mental Profiles	Constant	init mental func per jail offender wo MI	64.7 score/person	Estimation	
273	Mental Profiles	Constant	init mental func per jail offender wMI	60 score/person	Estimation	
274	Mental Profiles	Constant	init mental func per lo risk exConv wMI	65 score/person	Estimation	
275	Mental Profiles	Constant	init mental func per lo risk exConv wo MI	67 score/person	Estimation	
276	Mental Profiles	Constant	init mental func per lo risk jail exConv wMI	65 score/person	Estimation	
277	Mental Profiles	Constant	init mental func per lo risk jail exConv wo MI	67 score/person	Estimation	
278	Mental Profiles	Constant	init mental func per parole violator wMI	59 score/person	Estimation	
279	Mental Profiles	Constant	init mental func per parole violator wo MI	63 score/person	Estimation	
280	Mental Profiles	Constant	init mental func per preSentencing convict in comm	65 score/person	Estimation	

281	Mental Profiles	Constant	init mental func per preSentencing convict in custody	66 score/person	Estimation	
282	Mental Profiles	Constant	init mental func per pretrial suspect in comm	65 score/person	Estimation	
283	Mental Profiles	Constant	init mental func per prison parolee wMI	59 score/person	Estimation	
284	Mental Profiles	Constant	init mental func per prison parolee wMI violated condition	59 score/person	Estimation	
285	Mental Profiles	Constant	init mental func per prison parolee wo MI	63 score/person	Estimation	
286	Mental Profiles	Constant	init mental func per prison parolee wo MI violated condition	63 score/person	Estimation	
287	Mental Profiles	Constant	init mental func per prisoner wMI	57 score/person	Estimation	
288	Mental Profiles	Constant	init mental func per prisoner wo MI	63.1 score/person	Estimation	
289	Mental Profiles	Constant	init mental func per probationer	70 score/person	Estimation	
290	Mental Profiles	Constant	init mental func per reprimed county parole violator wMI	58 score/person	Estimation	
291	Mental Profiles	Constant	init mental func per reprimed county parole violator wo MI	62 score/person	Estimation	
292	Mental Profiles	Constant	init mental func per suspect in comm with case filed	65 score/person	Estimation	
293	Mental Profiles	Constant	init mental func per suspect in custody	65 score/person	Estimation	
294	Mental Profiles	Constant	init mental func per suspect in custody with case filed	65 score/person	Estimation	
295	Mental Profiles	Constant	jail mental func chg per year	1.5 score/person /year	Estimation	This is the estimation of mental function loss per jail offender per year. It is slightly lower than the mental function loss per prisoner because jail sentence is shorter than prison sentence. On average, jail sentence is less than a year.
296	Mental Profiles	Constant	max cut off point for SMI	50 score/person	Aas (2011)	GAF Guideline
297	Mental Profiles	Constant	mental func gain	2 score/person /year		Represents the mental functions gained in the alternative facility. It is assumed that the rehabilitation programs specifically designed for prisoners wSMI in the alternative facility is effective. Hence, each prisoners wSMI gains 2 score/person/year.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
298	Mental Profiles	Constant	mental function per first time arrestee	65 score/person /year	Trestman et al. (2007)	GAF score of incoming jail offenders who had history of MI is about 57 on average while those without MI is 72. So, we set a value of 65 score/person/year for this constant.
299	Mental Profiles	Constant	min mental func per person	20 score/person /year	By default	To protect the stock from becoming negative. Also, according to GAF Guideline, the individuals with the score below 21 are usually hospitalized.
300	Mental Profiles	Constant	multiplier of ave mental func of prisoner to county parolee	1.1 unitless	Estimation	To characterize that prisoners who are placed in county parole supervision are those with higher-than-the- average mental functions of those who are placed in CDCR parole supervision.
301	Mental Profiles	Constant	parolee wMI mental func gain per year	1 score/person /year	Estimation	In the prison, the prisoners lose two score per year per person in the absence of mental health care. On the contrary, the parolees wMI gain mental functions if community service capacity is adequate. Inadequate community service capacity has a harmful effect on parolees wMI's ability to regain mental functions.
302	Mental Profiles	Constant	prisoner wMI mental func loss per year	2 score/person /year	Estimation	In the prison, the prisoners wMI lose two score per year per person in the absence of mental health care. On the contrary, the parolees wMI gain mental functions if community service capacity is adequate. Inadequate community service capacity has a harmful effect on parolees wMI's ability to regain mental functions.
303	Mental Profiles	Constant	prisoner wMI mental func loss per year	0.5 score/person /year	Estimation	In the prison, the prisoners wMI lose two score per year per person in the absence of mental health care. It is assumed that the prisoners wo MI also lose mental functions due to the high density of prisoners and harsh environment.
304	Mental Profiles	Constant	weight for hi risk recidivism for ave mental func calculation	0.27 unitless	Estimation	Fraction of recivism of the hi risk prison ex-convicts wMI as the sum of recidivism by prison parolees wMI, high risk prison parolees wMI, and low risk prison parolees wMI. To calculate the "ave mental func per recidivist".
305	Mental Profiles	Constant	weight for lo risk recidivism for ave mental function calculation	0.06 unitless	Estimation	Fraction of recivism of the hi risk prison ex-convicts wMI as the sum of recidivism by prison parolees wMI, high risk prison parolees wMI, and low risk prison parolees wMI. To calculate the "ave mental func per recidivist".

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
306	Mental Profiles	Constant	weight for parolee recidivism for ave mental func calculation	0.97 unitless	Estimation	Fraction of recivism of the hi risk prison ex-convicts wMI as the sum of recidivism by prison parolees wMI, high risk prison parolees wMI, and low risk prison parolees wMI. To calculate the "ave mental func per recidivist".
307	Population	Stock	Innocent Pop	22410000 person	Historical data and estimation; Pop data is obtained from the Demographic Research Unit of the Dept of Finance of California	The Pop Initial Contact with Criminal Justice System, Unrecovered Pop with Criminal History, and Recovered Pop with Criminal History makes up about 17% of California's population. Therefore, 83% of the population is innocent.
308	Population	Table Function	adjusted historical pop growth rate	1/year	Calculation; Pop data is obtained from the Demographic Research Unit of the Dept of Finance of California	
309	Population	Constant	mortality rate	0.006 1/year	Calculation; CA Dept of Public Health (https://archive.cdph.ca.gov/data/statistics/Pages/DeathStatisticalDataTables.aspx)	Between 1987 and 2012, California's mortality rates range declined from about 0.0072 to 0.006.
310	Prison Capacity	Stock	Prison Capacity	36465 person	CDCR Annual Prisoners and Parolees Report 1987-2010; CDCR Monthly Population Reports 2011-2016	Design bed capacity in 1987 was 36465.
311	Prison Capacity	Constant	ave prison lifetime	60 years	O'Connor (2004)	
312	Prison Capacity	Table Function	ref design bed capacity		CDCR Annual Prisoners and Parolees Report 1987-2010; CDCR Monthly Population Reports 2011-2016	
313	Prison Capacity	Constant	time to adjust prison capacity	12 years	Martin et al. (2014)	It takes 5 - 7 years to construct a jail. Given the size and security requirements for prison, we set the adjustment time for prison capacity as 12 years.
314	Prison HC Resource Allocation	Stock	CD Tmnt Cost per Prisoner	1990 dollar/person	Kinsella (2004)	The cost to care for elderly prisoners is nearly three times of the cost of the younger prisoners . Given that the fraction of elderly prisoners is only 2%. We define the initial value for this stock with the same value as in the Ave HC Cost per Prisoner stock.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
315	Prison HC Resource Allocation	Stock	CD Treatment Capacity Fund	0 dollar/person	By default	This stock is only established after Realignment.
316	Prison HC Resource Allocation	Stock	ID Tmnt Cost per Prisoner	20000 dollar/person	California Dept of Finance Enacted Budget (2007-2016)	
317	Prison HC Resource Allocation	Stock	ID Treatment Capacity Fund	339507151.949 dollar/year	California Dept of Finance Enacted Budget (2007-2016)	
318	Prison HC Resource Allocation	Stock	Infectious Diseases Treatment Capacity	2530.62356631 person	Estimation	Given the high prison budget pressure and the surge in the prison population, the initial value of this stock is estimated to be 70% of the needs for ID treatment.
319	Prison HC Resource Allocation	Stock	MHC Capacity Fund	0 dollar/ year	By default	This stock is only established after Realignment.
320	Prison HC Resource Allocation	Stock	MHC Cost per Mental Function Improvement	24 dollar/score	Izumi et al. (1996); Calculation	Refer to Appendix H for detailed calculation.
321	Prison HC Resource Allocation	Stock	New Time to Perceive MHC Needs	4 year	Estimation	MI is a less visible disease. We assume it takes longer to observe the needs for treatment compared to the other two treatment capacities.
322	Prison HC Resource Allocation	Stock	Prison HC Fund	63925844.4 dollar/year	California Dept of Finance Enacted Budget (2000-2016); Calibration	
323	Prison HC Resource Allocation	Constant	averaging time to estimate prisoners growth rate	5 year	Estimation	
324	Prison HC Resource Allocation	Constant	averaging time to observe chg in needs for CD tmnt	2 year	Estimation	Due to budget pressure, the time taken to observe the change in needs for CD treatment is set to be longer than that for ID treatment.
325	Prison HC Resource Allocation	Constant	averaging time to observe chg in needs for ID tmnt	1 year	Estimation	Minimum time needed to average and estimate needs for ID treatment for the next fiscal year.
326	Prison HC Resource Allocation	Constant	averaging time to perceive indicated total HC fund	15 year	Estimation	Due to a long high budget pressure and lack of systematic reporting system, the time taken to realize "indicated total HC fund" is set as 15 years.
327	Prison HC Resource Allocation	Constant	desired adj time for medical screening adj time	2 year	Estimation	As the Receiver aims to boost up the screening capacity at the Reception Center, we estimate the desired time to adjust the medical screening capacity to be relatively short.
328	Prison HC Resource Allocation	Constant	desired new CD capacity adjustment time	1 year	Estimation	As the Receiver aims to boost up prison HC system's response to needs, we estimate the desired capacity adjustment time to be relatively short.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
329	Prison HC Resource Allocation	Constant	desired new ID capacity adjustment time	1 year	Estimation	As the Receiver aims to boost up prison HC system's response to needs, we estimate the desired capacity adjustment time to be relatively short.
330	Prison HC Resource Allocation	Constant	desired new MHC capacity adjustment time	1 year	Estimation	As the Receiver aims to boost up prison HC system's response to needs, we estimate the desired capacity adjustment time to be relatively short.
331	Prison HC Resource Allocation	Constant	desired perception delay in MHC needs	2 year	Estimation	As the Receiver aims to boost up prison HC system's response to needs, we estimate the desired capacity adjustment time to be relatively short.
332	Prison HC Resource Allocation	Constant	fract prison HC fund on ID CD and MHC tmnt	0.9 unitless	Estimation	Correctional health care costs also consist of dental care, ancillary health care, and relevant management expenditures.
333	Prison HC Resource Allocation	Constant	growth rate of ave HC cost	0.05 1/year	Aon Hewitt (2016)	The reported growth rate is 4% pe year. We adjusted the growth rate slightly upward to match historical average HC cost per prisoner.
334	Prison HC Resource Allocation	Constant	init medical screening adj time	20 year	Estimation	After the lawsuit file against CA state government, MHC had not improved until the Receiver took over. Hence, we set a large value for this parameter.
335	Prison HC Resource Allocation	Constant	init medical screening time per person	7 min/person	Nieto (1998)	
336	Prison HC Resource Allocation	Constant	min medical screening time per person	20 min/person	Nieto (1998)	
337	Prison HC Resource Allocation	Constant	min CD tmnt capacity	20 person	By default	To protect the stock from becoming negative.
338	Prison HC Resource Allocation	Constant	min ID tmnt capacity	10 person	By default	To protect the stock from becoming negative.
339	Prison HC Resource Allocation	Constant	min MHC capacity	100 score	By default	To protect the stock from becoming negative.
340	Prison HC Resource Allocation	Constant	perception delay in CD tmnt needs	2 year	Estimation	Information is reported on annual basis if data is collected in a timely and organized manner. Based on these assumptions, we set the "perception delay in CD tmnt needs" as two years.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
341	Prison HC Resource Allocation	Constant	perception delay in ID tmnt needs	1 year	Estimation	Information is reported on annual basis if data is collected in a timely and organized manner. Based on these assumptions, we set the "perception delay in DD tmnt needs" as one year because infectious diseases are acute. Hence, the response to budget adjustment request is assumed to be faster than other CD and MHC budget adjustment request.
342	Prison HC Resource Allocation	Constant	ref CD capacity adjustment time	4 year	Kelso (2008); California Correctional Health Care Services (2013)	As CDCR has tight budget constraint, we expect that the authority take a longer time to respond to the changing needs. The perception delay symbolizes the delay in perceiving actual needs due to inadequate screening, diagnosing, tracking, and follow-ups.
343	Prison HC Resource Allocation	Constant	ref ID capacity adjustment time	4 year	Kelso (2008); California Correctional Health Care Services (2013)	As CDCR has tight budget constraint, we expect that the authority take a longer time to respond to the changing needs. The perception delay symbolizes the delay in perceiving actual needs due to inadequate screening, diagnosing, tracking, and follow-ups.
344	Prison HC Resource Allocation	Constant	ref MHC capacity adjustment time	4 year	Kelso (2008); Estimation	The Receiver presented his plan to reform MHC for the next few years without giving a fixed date. As the capacity for prison HC is still being built in 2013, we assume the adjustment time for MHC capacity to be 4 years.
345	Prison HC Resource Allocation	Constant	ref perception delay in MHC needs	4 year	Kelso (2008); Estimation	The Receiver presented his plan to reform MHC for the next few years without giving a fixed date. As the capacity for prison HC is still being built in 2013, we assume the perception delay in MHC needs to be 4 years.
346	Prison HC Resource Allocation	Constant	time to adjust medical screening adj time	5 year	Estimation	
347	Prison HC Resource Allocation	Constant	time to adjust total HC fund	2 year	California Dept of Finance (www.dof.ca.gov/budget/Budget_Process/index.html)	California adopts the budget change proposal process. Under this budgetary process, the department prepares a proposal for budget change in the end of the year. This proposal will undergo a review process within CDCR before getting an approval from the overseeing agency. Then, the proposal will be submitted to the Department of Finance, followed by committee review and Legislative Analyst Office's. Then the final budget will be announced in the mid-year. In the following year, prison health care capacity can be adjusted with new appropriated fund.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
348	Prisoner Health Care Needs	Constant	desired mental func per prisoner	70 score/person	Davidson et al. (2007); Defined by author	We define the acceptable level in "desired mental function per person" as 70 score, which characterizes as mild symptom of mental illness.
349	Prisoner Health Care Needs	Constant	init fract prisoners need CD tmnt	0.02 unitless	CDCR's Prisoners and Parolees (1987 - 2010); Offenders Info (2011-2013)	
350	Prisoner Health Care Needs	Constant	ref fract prisoners wID	0.03 unitless	Calculation	See Appendix G for detailed calculation.
351	Social Capital	Constant	annual parolee wMI SC loss per person	2 score/person /year	Walker et al., 2014; Volker et al., 2016; Estimation	After imprisonment, some individuals' networks shrink through losing their friendships and only rely on family ties after release. It is a significant challenge for the prisoners to continue investing in maintaining or reproducing social ties. Both prisoners wMI and prisoners wo MI are expected to lose two scores of SC per person. Per year because they are unlikely to build their networks while being isolated from the community.
352	Social Capital	Constant	annual parolee wo MI SC loss per person	2 score/person /year	Walker et al., 2014; Volker et al., 2016; Estimation	After imprisonment, some individuals' networks shrink through losing their friendships and only rely on family ties after release. It is a significant challenge for the prisoners to continue investing in maintaining or reproducing social ties. Both prisoners wMI and prisoners wo MI are expected to lose two scores of SC per person.
353	Social Capital	Constant	annual prisoner SC loss per prisoner in alt facility	1.5 score/person /year	Walker et al., 2014; Volker et al., 2016; Estimation	After imprisonment, some individuals' networks shrink through losing their friendships and only rely on family ties after release. It is a significant challenge for the prisoners to continue investing in maintaining or reproducing social ties. Both prisoners wMI and prisoners wo MI are expected to lose two scores of SC per person. This constant is part of the new policy structured. It is based on the assumption that the rehabilitation program in the alternative facility is effective in reducing the annual social capital loss of prisoners wSMI.
354	Social Capital	Constant	ave social capital per new arrestee	70 score/person	Estimation	A first-time arrestee is an individual without criminal history from the "Innocent Pop" stock, the "SC per new arrestee" is expected to be higher than the recidivists. A normal SC per individual is defined as 90 score per person while the "SC per new arrestee" is set at 70 score per person. This comparison highlights that on average a new suspect possess one-third less SC than a normal person.
355	Social Capital	Constant	init SC per arrestee	70 score/person	Estimation	
356	Social Capital	Constant	init SC per county parolee wMI	62 score/person	Estimation	

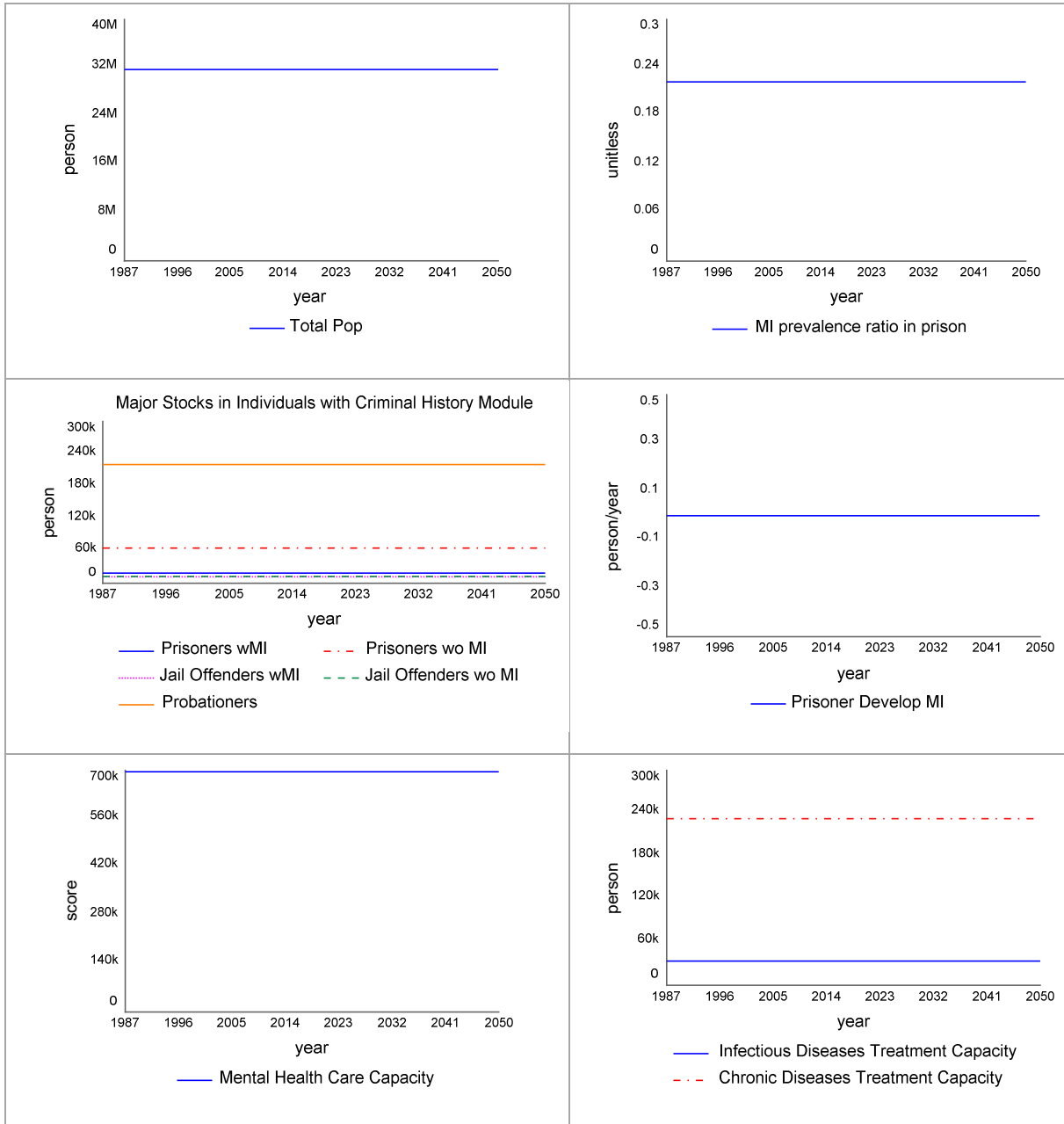
ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
357	Social Capital	Constant	init SC per county parolee wo MI	67 score/person	Estimation	
358	Social Capital	Constant	init SC per county parolee wMI violated condition	62 score/person	Estimation	
359	Social Capital	Constant	init SC per county parolee wo MI violated condition	67 score/person	Estimation	
360	Social Capital	Constant	init SC per defendant in comm being trialed	70.63389025 27 score/person	Calibration	
361	Social Capital	Constant	init SC per defendant in custody being trialed	70.63389025 27 score/person	Calibration	
362	Social Capital	Constant	init SC per hi risk jail exConv wMI	70.63389025 27 score/person	Calibration	
363	Social Capital	Constant	init SC per hi risk jail exConv wo MI	70.63389025 27 score/person	Calibration	
364	Social Capital	Constant	init SC per hi risk prison exConv wMI	67.55851405 7 score/person	Calibration	
365	Social Capital	Constant	init SC per hi risk prison exConv wo MI	66.73525477 5 score/person	Calibration	
366	Social Capital	Constant	init SC per jail offender wMI	70.63389025 27 score/person	Calibration	
367	Social Capital	Constant	init SC per jail offender wo MI	70.63389025 27 score/person	Calibration	
368	Social Capital	Constant	init SC per lo risk jail exConv wMI	70.63389025 27 score/person	Calibration	
369	Social Capital	Constant	init SC per lo risk jail exConv wo MI	70.63389025 27 score/person	Calibration	
370	Social Capital	Constant	init SC per lo risk prison exConv wMI	67.55851405 7 score/person	Calibration	
371	Social Capital	Constant	init SC per lo risk prison exConv wo MI	66.73525477 5 score/person	Calibration	
372	Social Capital	Constant	init SC per PreSentencing defendants in comm	70.63389025 27 score/person	Calibration	
373	Social Capital	Constant	init SC per PreSentencing defendants in custody	70.63389025 27 score/person	Calibration	
374	Social Capital	Constant	init SC per prison parolee wMI	59.7 score/person	Calibration	
375	Social Capital	Constant	init SC per prison parolee wo MI	67.55851405 7 score/person	Calibration	

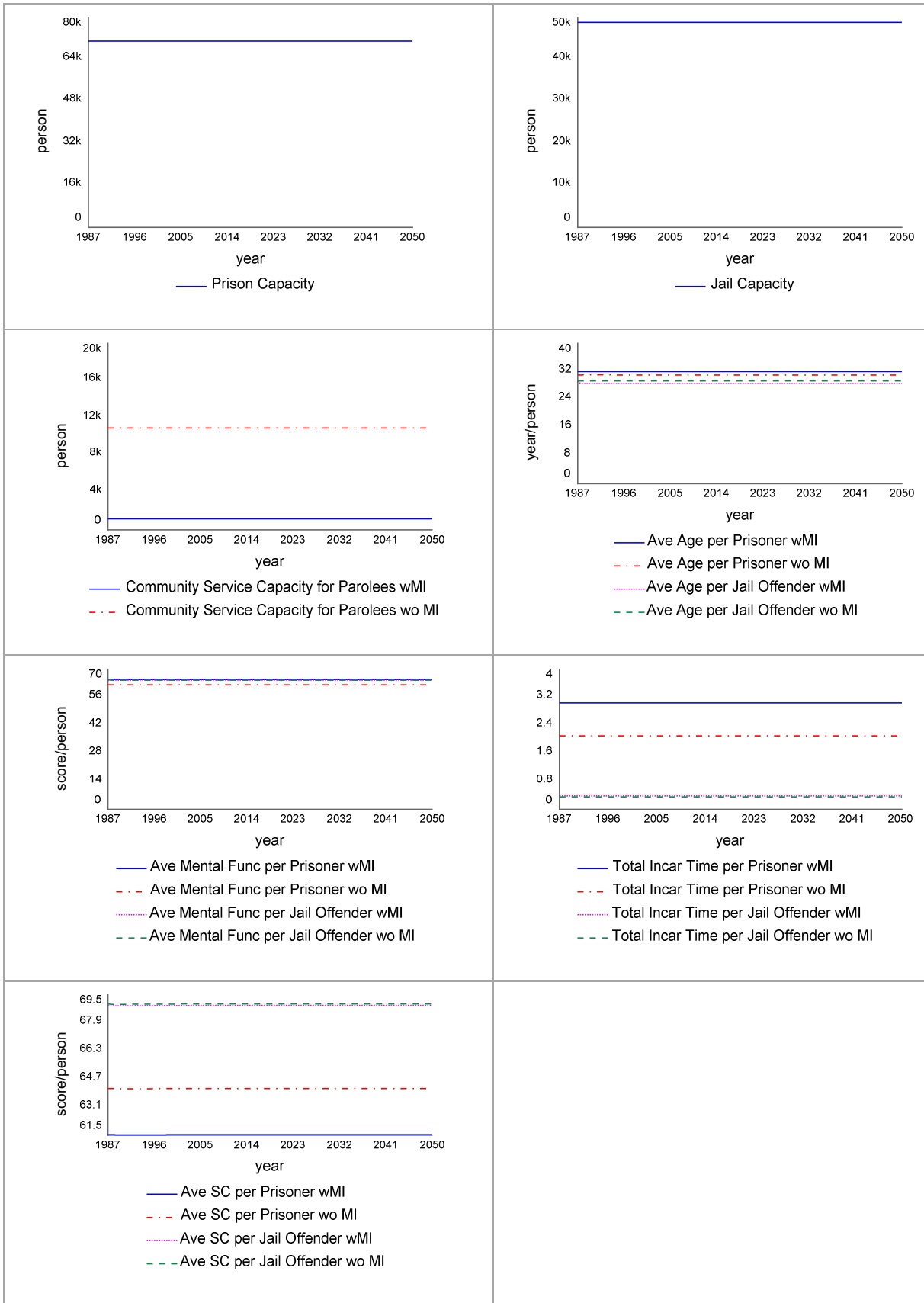
ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
376	Social Capital	Constant	init SC per prison parolee wo MI	66.735254775 score/person	Calibration	
377	Social Capital	Constant	init SC per prison parolee wMI violated condition	67.558514057 score/person	Calibration	
378	Social Capital	Constant	init SC per prison parolee wo MI violatied condition	66.735254775 score/person	Calibration	
379	Social Capital	Constant	init SC per prisoner wMI	64.4512886869 score/person	Calibration	
380	Social Capital	Constant	init SC per prisoner wo MI	66.735254775 score/person	Calibration	
381	Social Capital	Constant	init SC per probationer	70.6338902527 score/person	Calibration	
382	Social Capital	Constant	init SC per reprisoned county parolee violator wMI	62 score/person	Estimation	
383	Social Capital	Constant	init SC per reprisoned county parolee violator wo MI	67 score/person	Estimation	
384	Social Capital	Constant	init SC per reprisoned prison parolee violator wMI	67.558514057 score/person	Calibration	
385	Social Capital	Constant	init SC per reprisoned prison parolee violator wo MI	66.7352547751 score/person	Calibration	
386	Social Capital	Constant	init SC per suspect in comm	70.6338902527 score/person	Calibration	
387	Social Capital	Constant	init SC per suspect in custody	70.6338902527 score/person	Calibration	
388	Social Capital	Constant	init SC per suspect in comm with case filed	70.6338902527 score/person	Calibration	
389	Social Capital	Constant	init SC per suspect in custody with case filed	70.6338902527 score/person	Calibration	
390	Social Capital	Constant	max SC per person	90 score/person	Defined by the author	
391	Social Capital	Constant	min SC per person	0 score/person	By default	
392	Social Capital	Constant	min SC stock	0.1 score	Set by the author	To formulate "effect of indicated min prisoner wMI multiple on outflow" so that "indicated min SC prisoner wMI multiple" will not become indefinitely large.

ID	Module	Element	Parameter Name	Parametric Value	Data Source	Note
393	Social Capital	Constant	multiplier of ave SC per prisoner to county parole	1.1 unitless	Estimation	To characterize that prisoners who are placed in county parole supervision are those with higher-than-the- average social capital of those who are placed in CDCR parole supervision.
394	Social Capital	Constant	ref annual jail offender SC loss per person	2 score/person/year	Walker et al., 2014; Volker et al., 2016; Estimation	After imprisonment, some individuals' networks shrink through losing their friendships and only rely on family ties after release. It is a significant challenge for the prisoners to continue investing in maintaining or reproducing social ties. Both prisoners wMI and prisoners wo MI are expected to lose two scores of SC per person. Per year because they are unlikely to build their networks while being isolated from the community.
395	Social Capital	Constant	ref annual parolee SC gain	2 score/person/year	Estimation	It is assumed that parolees are able to grow their networks if they are employed and are leading normal lives
396	Social Capital	Constant	ref annual prisoner SC loss per person	2 score/person/year	Walker et al., 2014; Volker et al., 2016; Estimation	After imprisonment, some individuals' networks shrink through losing their friendships and only rely on family ties after release. It is a significant challenge for the prisoners to continue investing in maintaining or reproducing social ties. Both prisoners wMI and prisoners wo MI are expected to lose two scores of SC per person. Per year because they are unlikely to build their networks while being isolated from the community.
397	Social Capital	Constant	ref SC per normal person	90 score/person	Defined by the author	This is an average.

Appendix L – Test Results of the Full Model

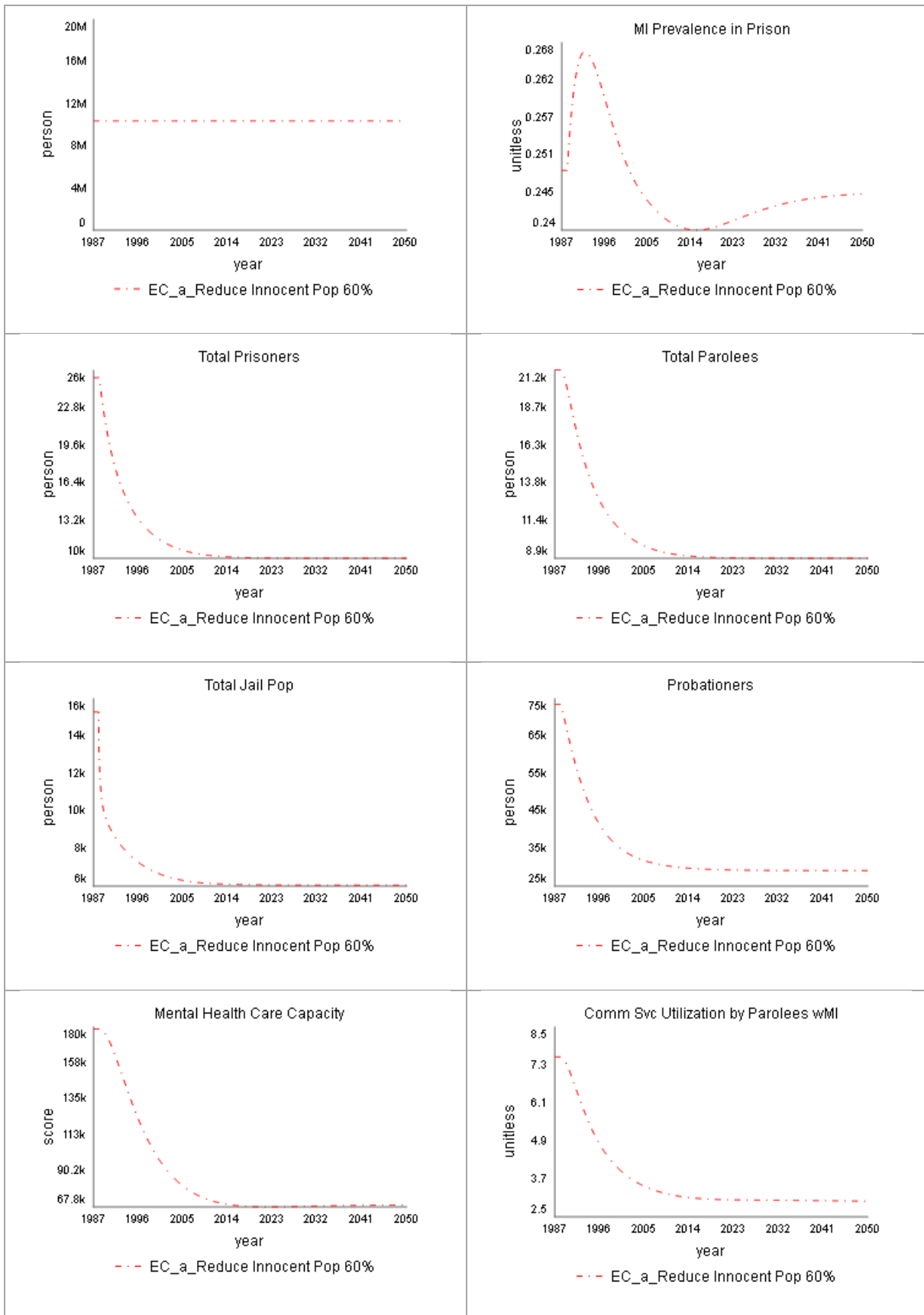
Equilibrium Test – Pre-Realignment

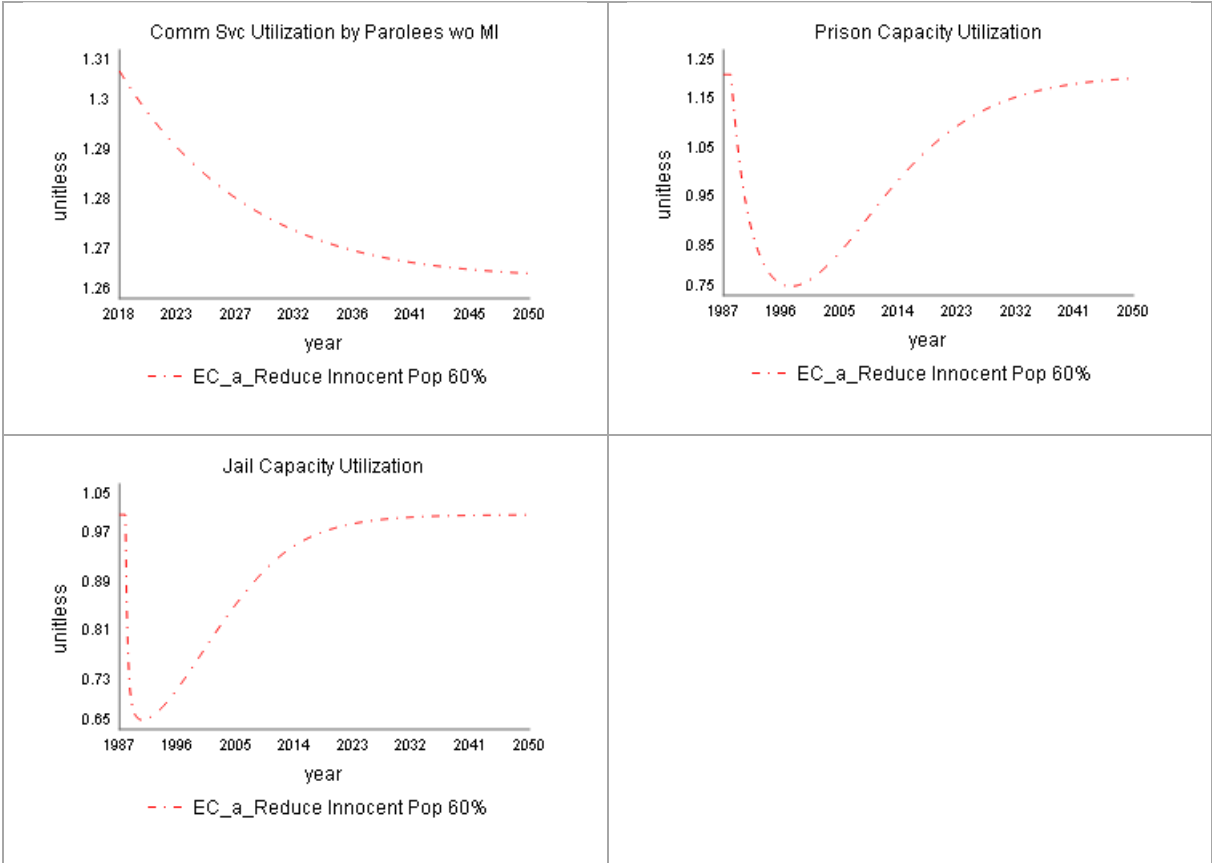




Extreme Condition Test 1a – Reduce Innocent Population 60%

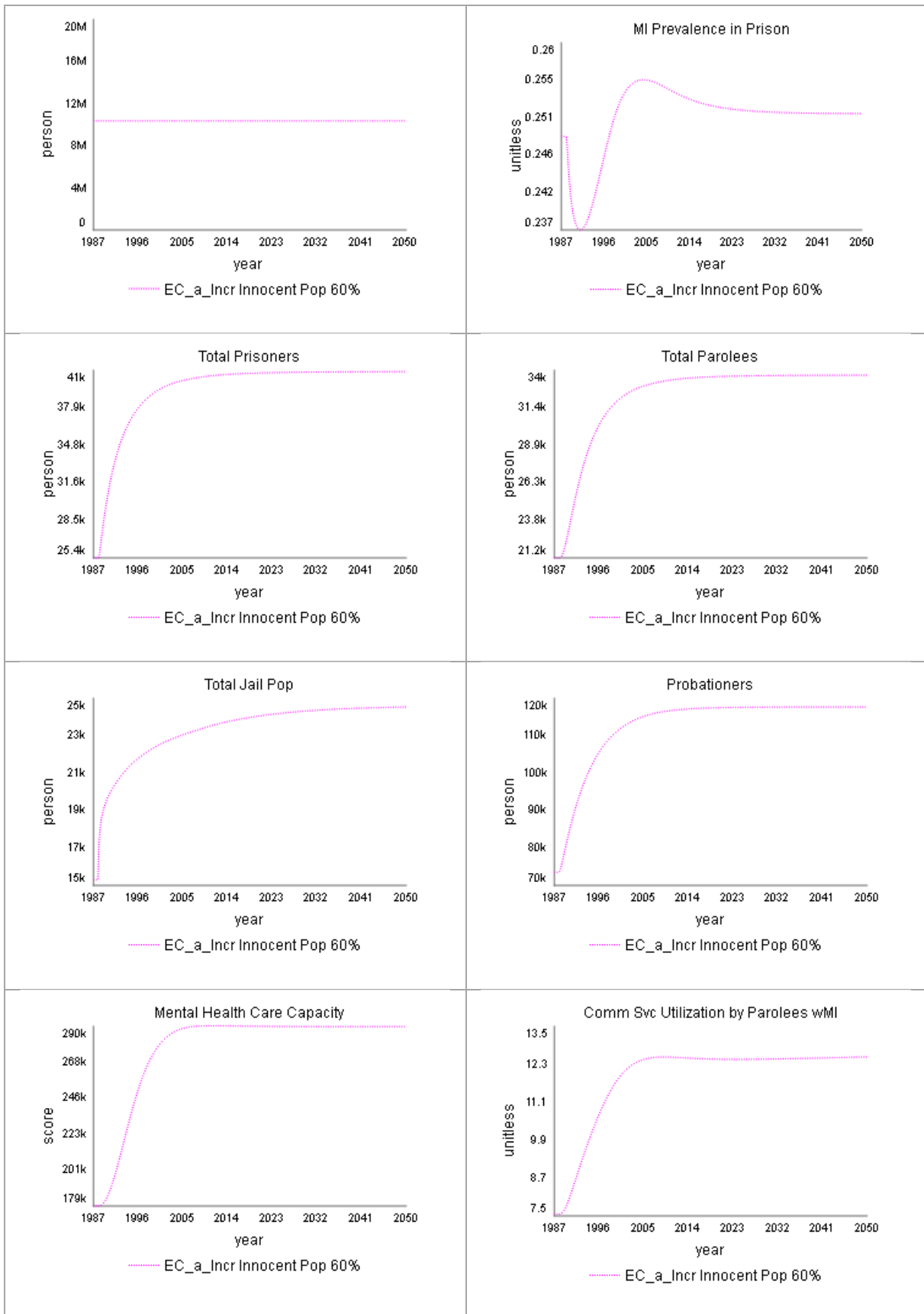
In this test, the innocent population reduces 60% from 1988 to 2050.

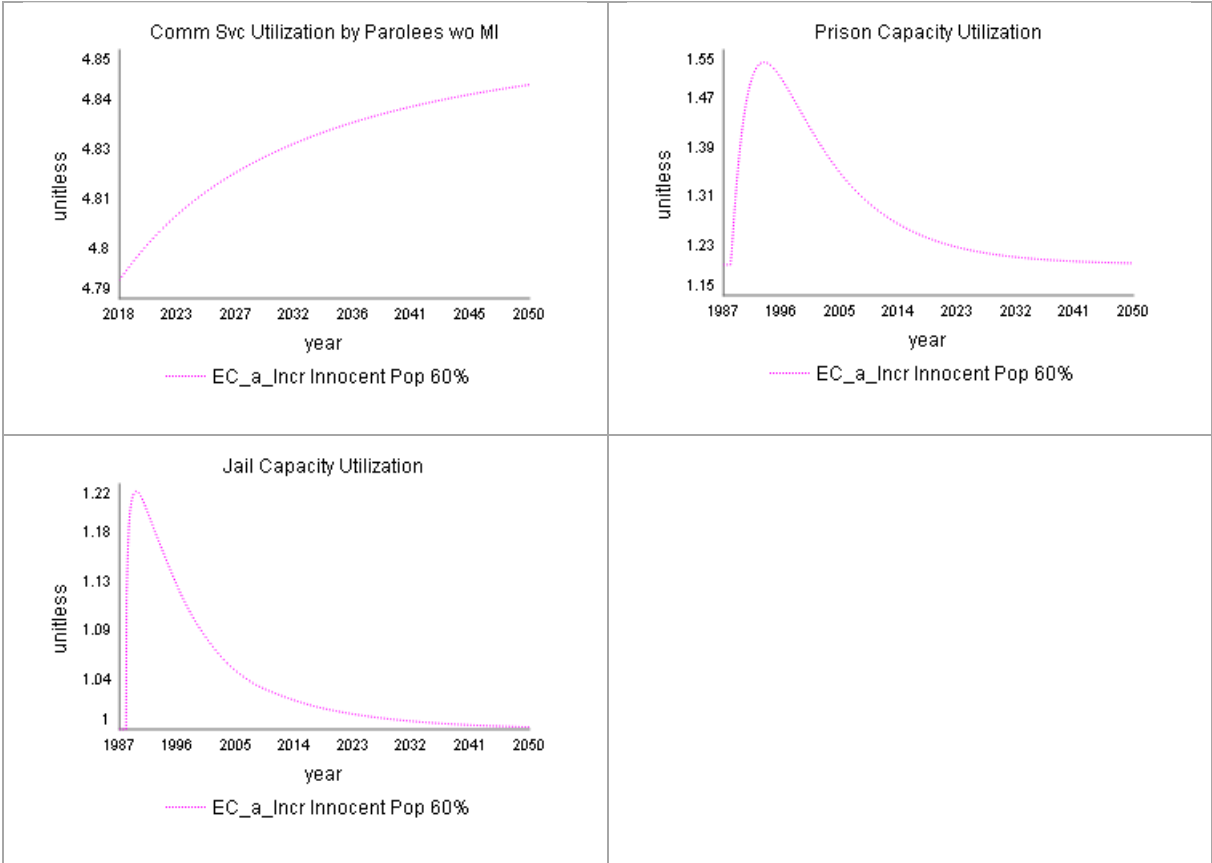




Extreme Condition Test 2a – Increase Innocent Population 60%

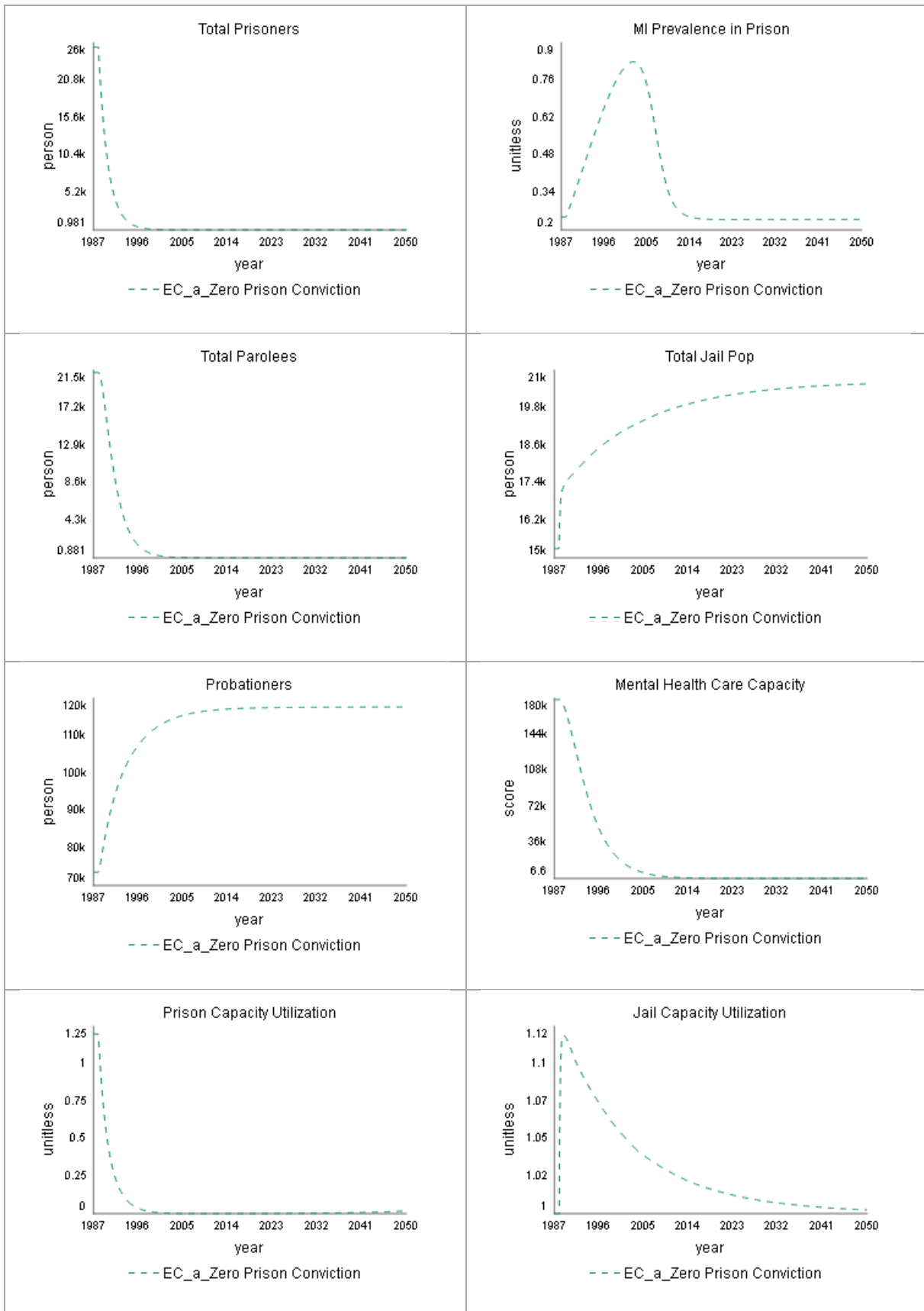
In this test, the innocent population increases 60% from 1988 to 2050.

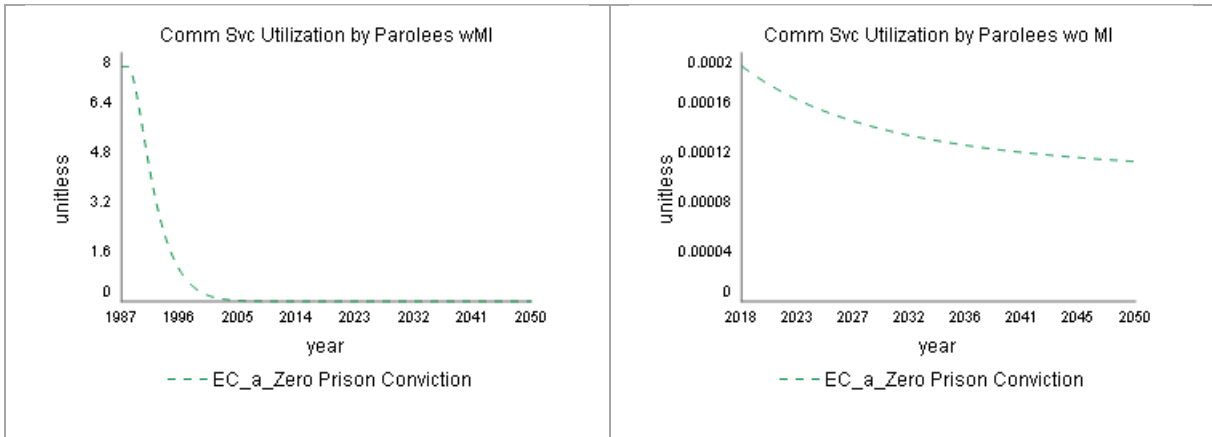




Extreme Condition Test 3a – Zero Fraction of Convicts with Prison Conviction

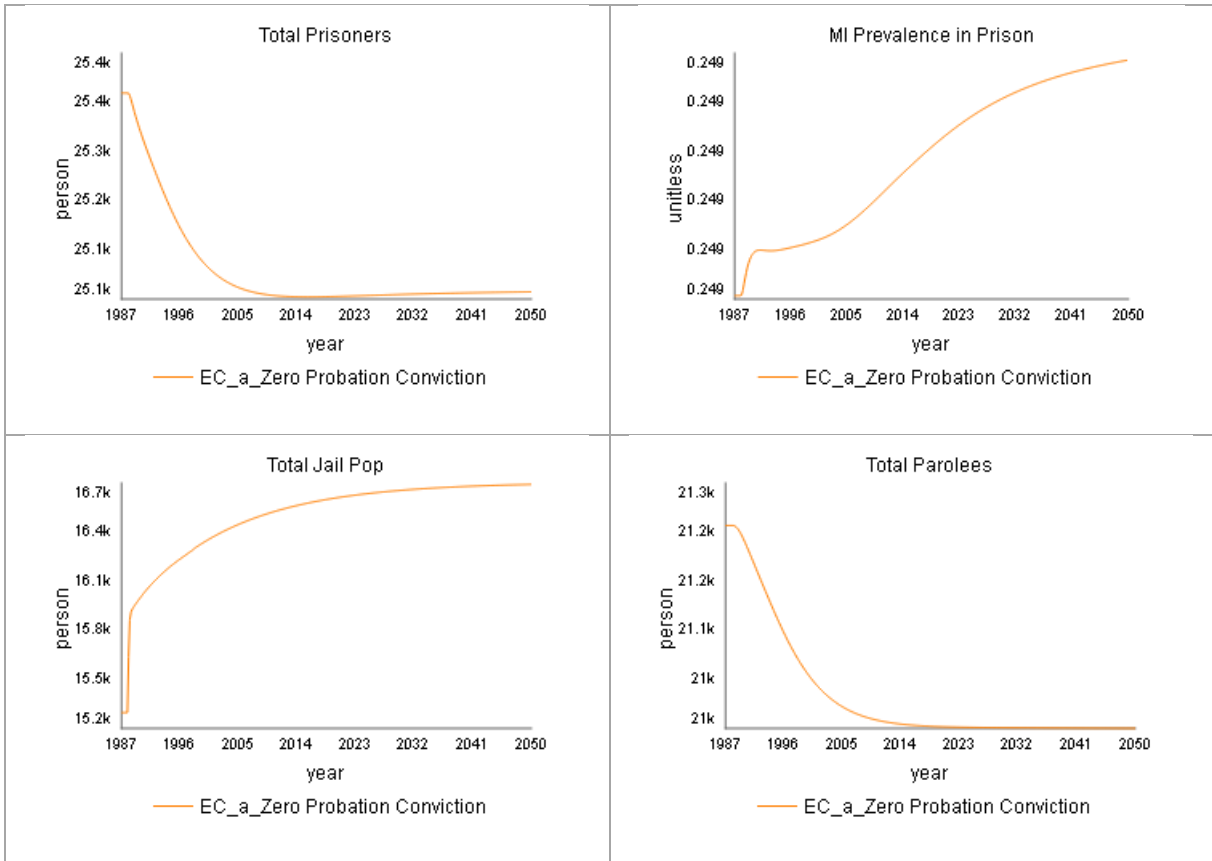
In this test, the fraction of convicts being convicted to prison sentence is reduced to zero from 1988.

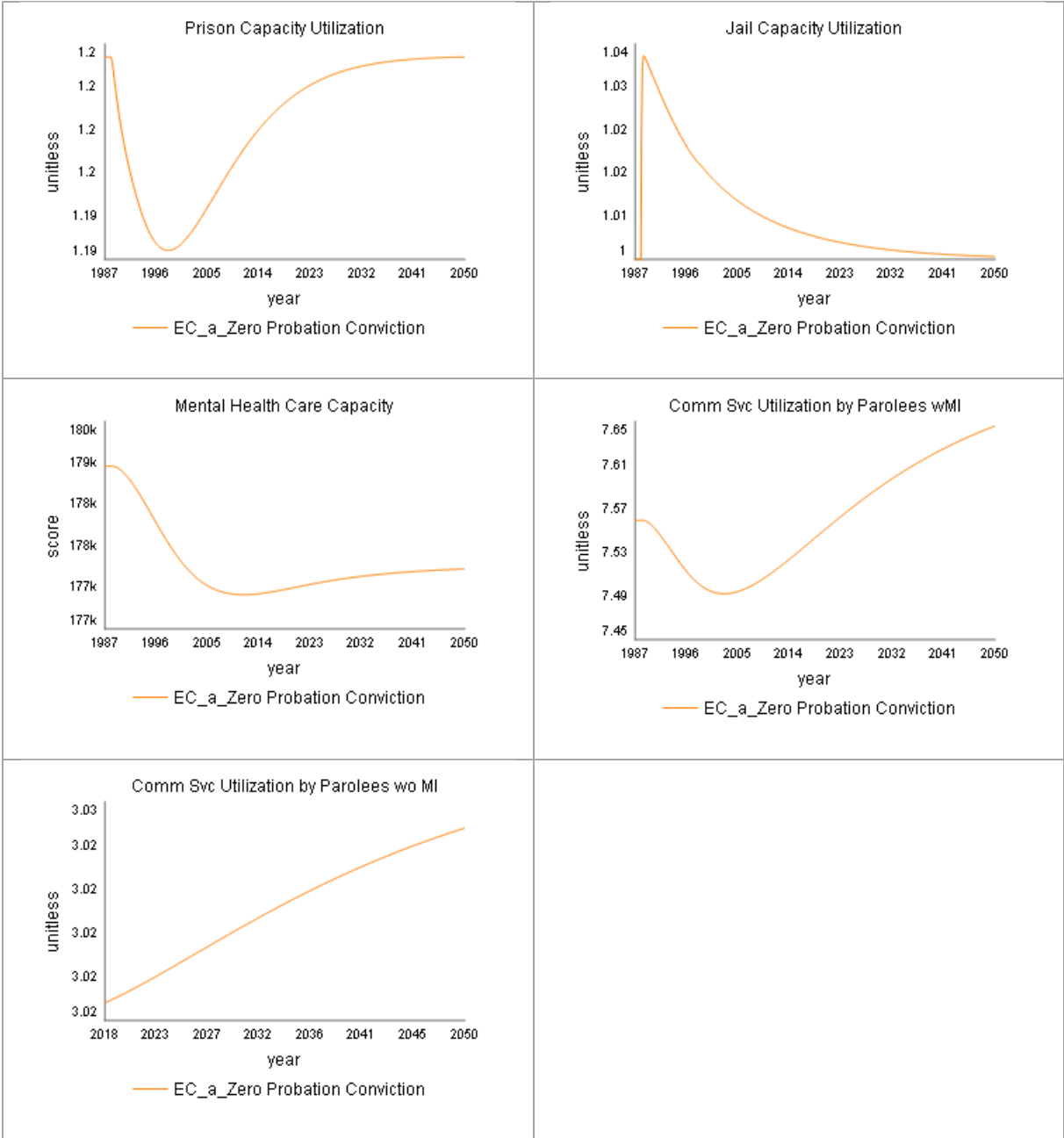




Extreme Condition Test 4a – Zero Fraction of Convicts with Probation Conviction

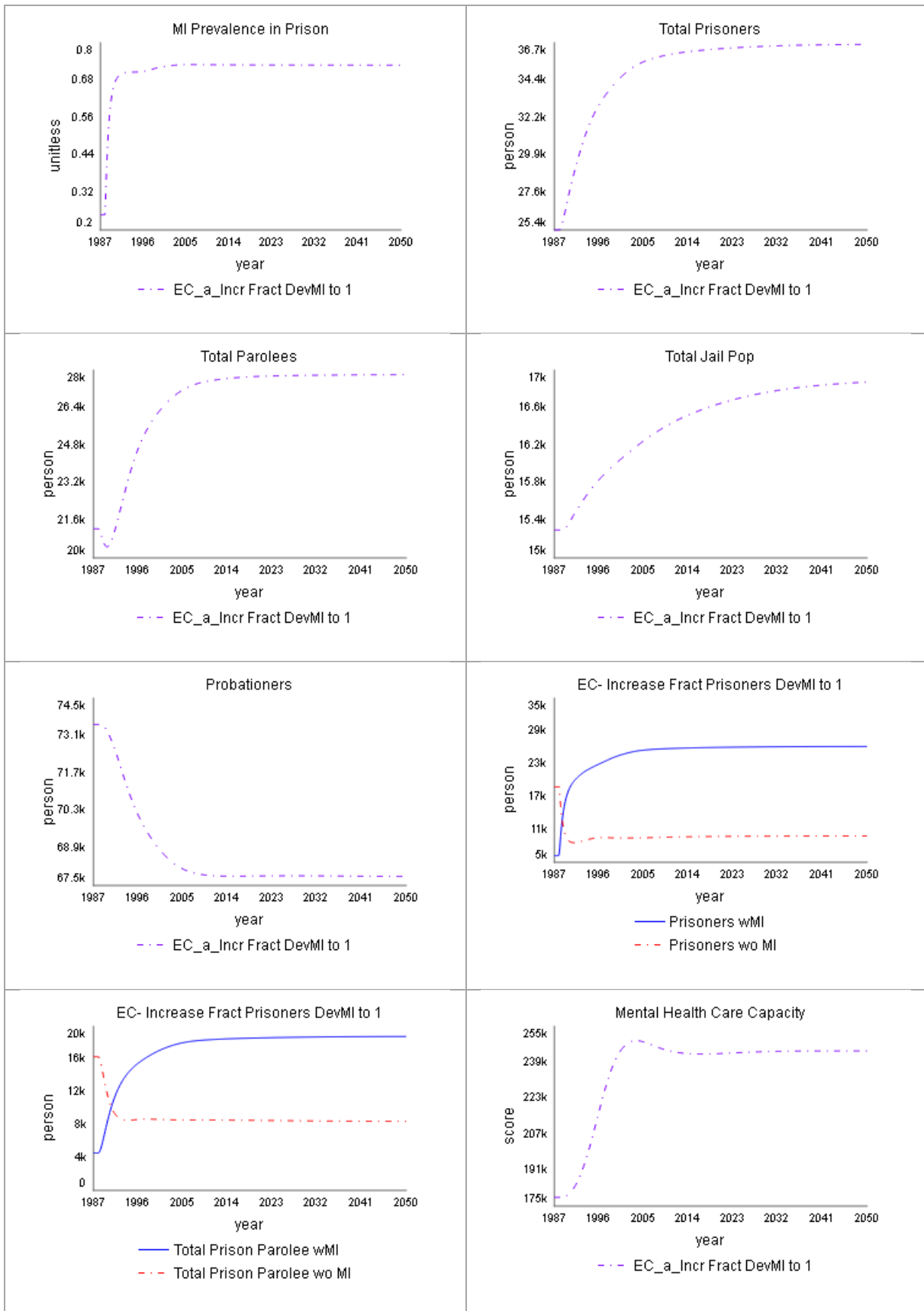
In this test, the fraction of convicts being convicted to probation sentence is reduced to zero from 1988.

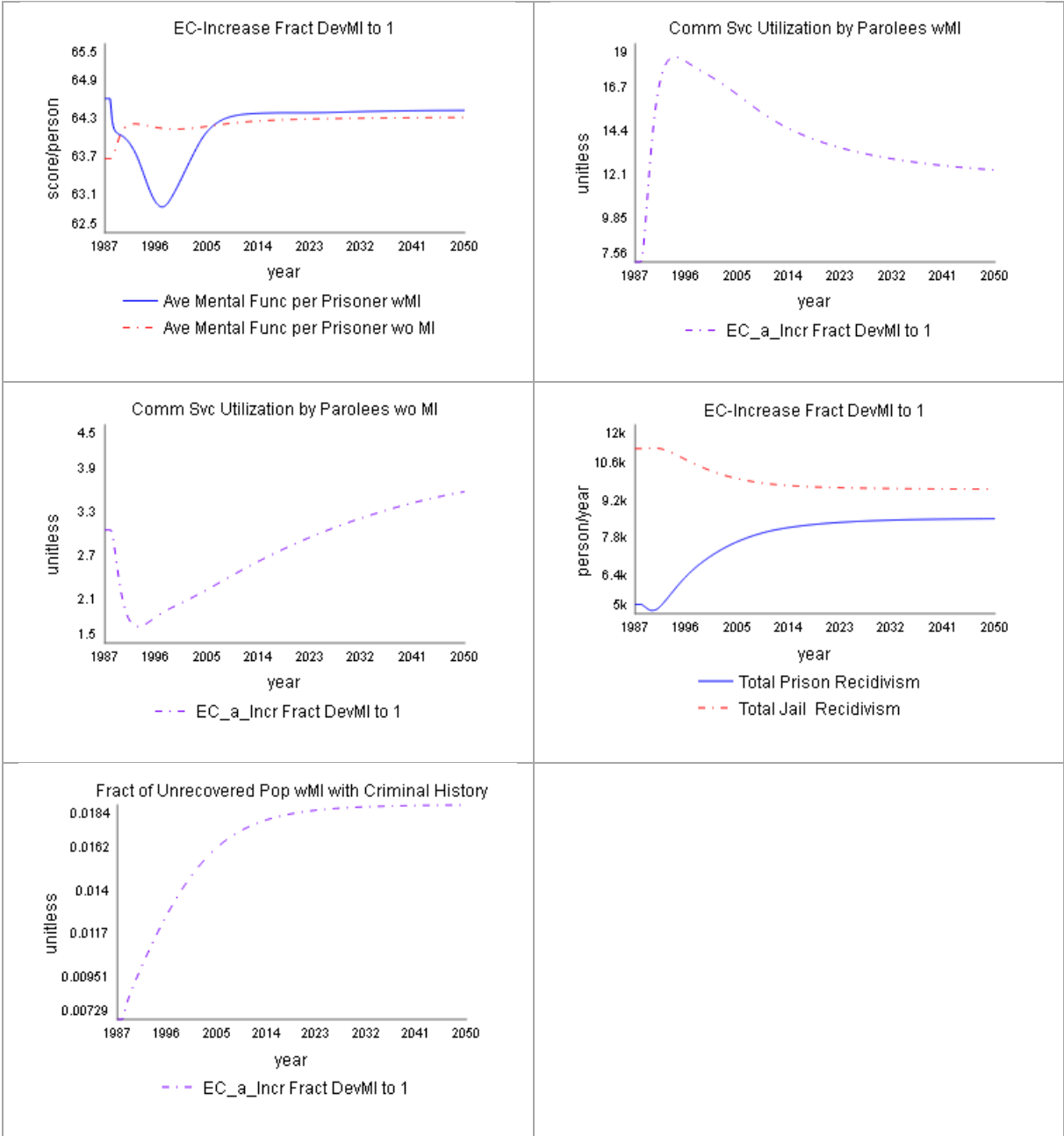




Extreme Condition Test 5a – Increase Fraction of Prisoners wo MI Develop MI to 1

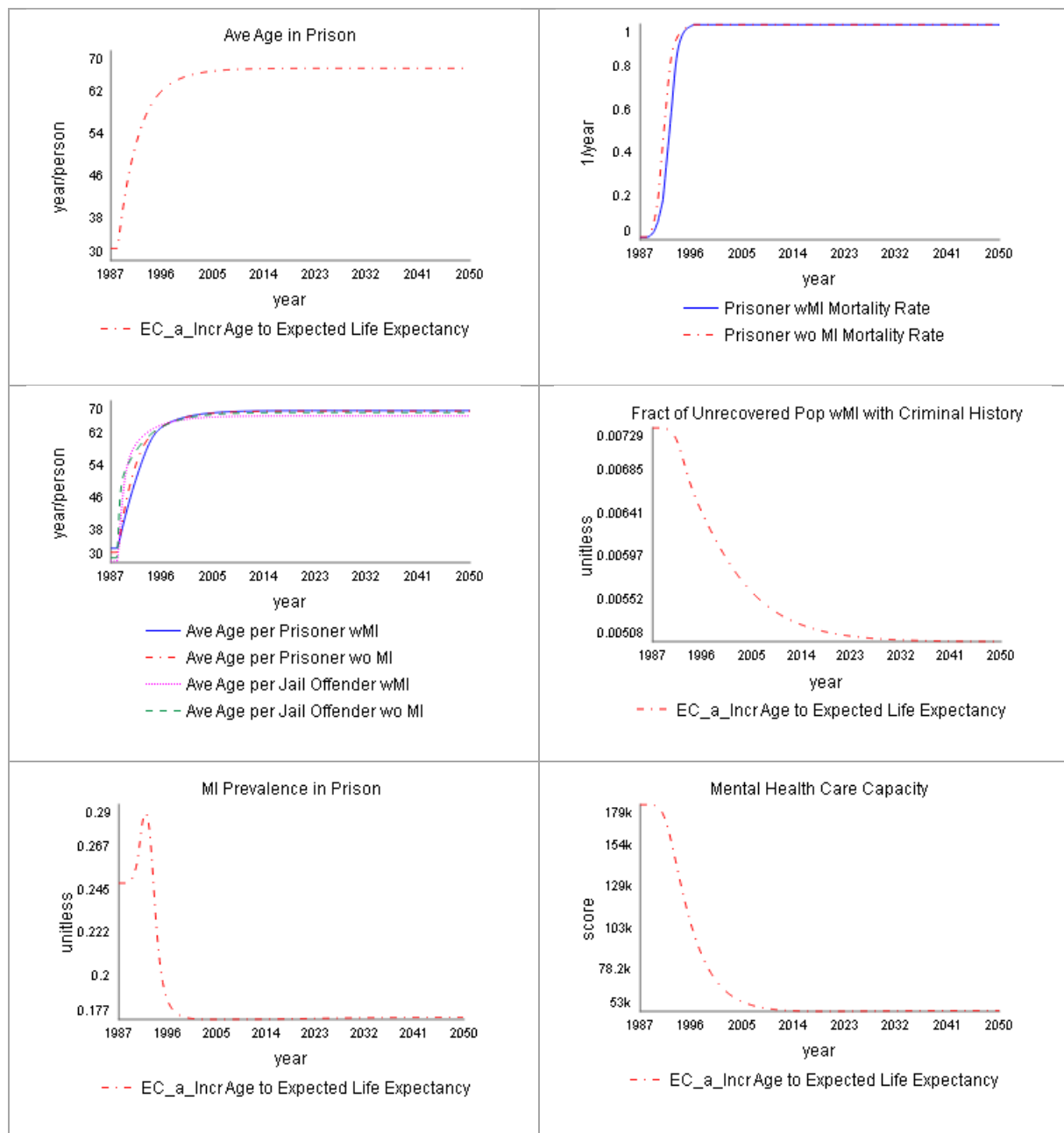
In this test, “fract prisoners devMI” increases from 0.02 per year to 1 per year from 1988 onwards.

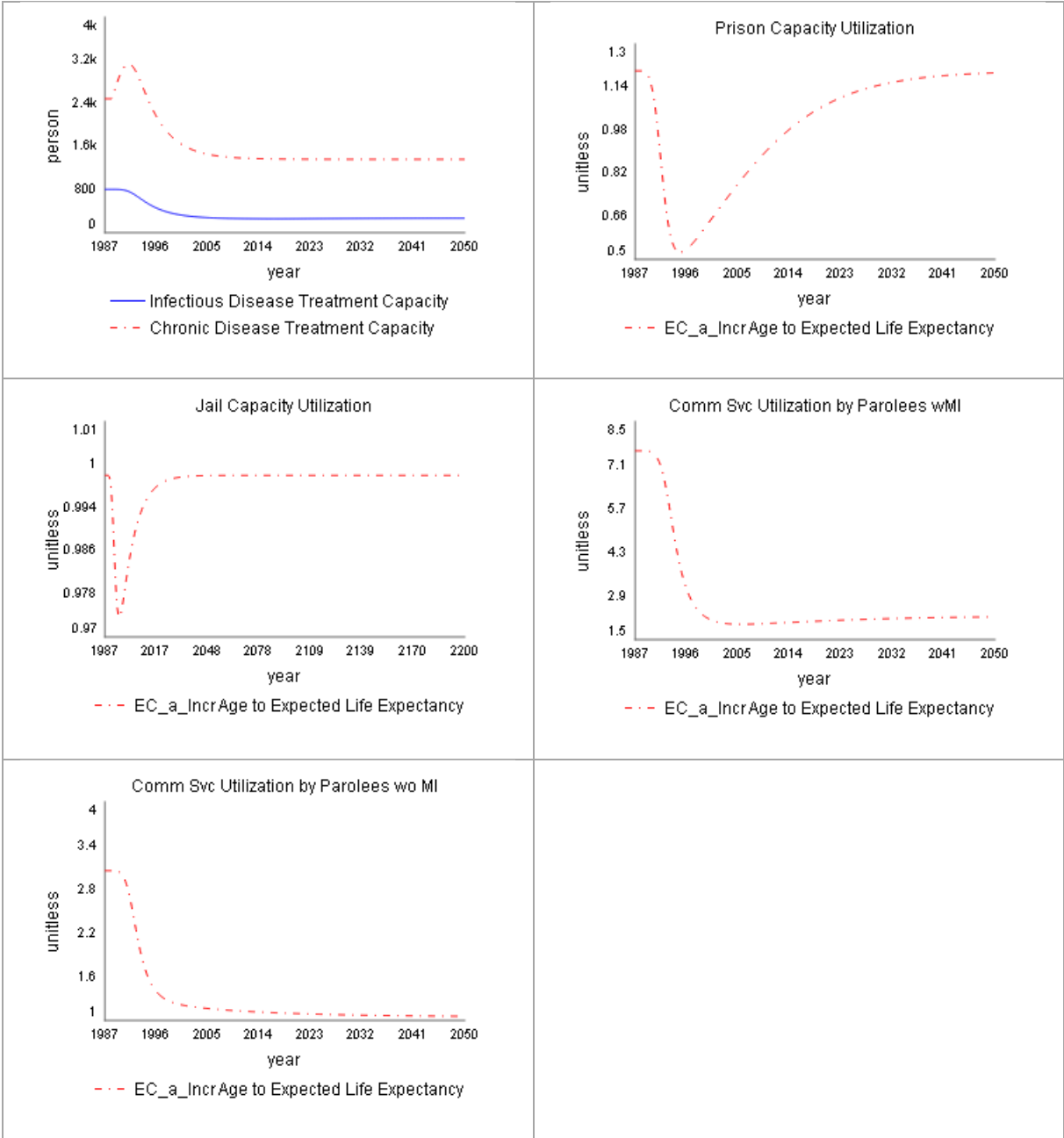




Extreme Condition Test 6a – Increase Initial Age at First Commitment to the Expected Life Expectancy of Prisoners

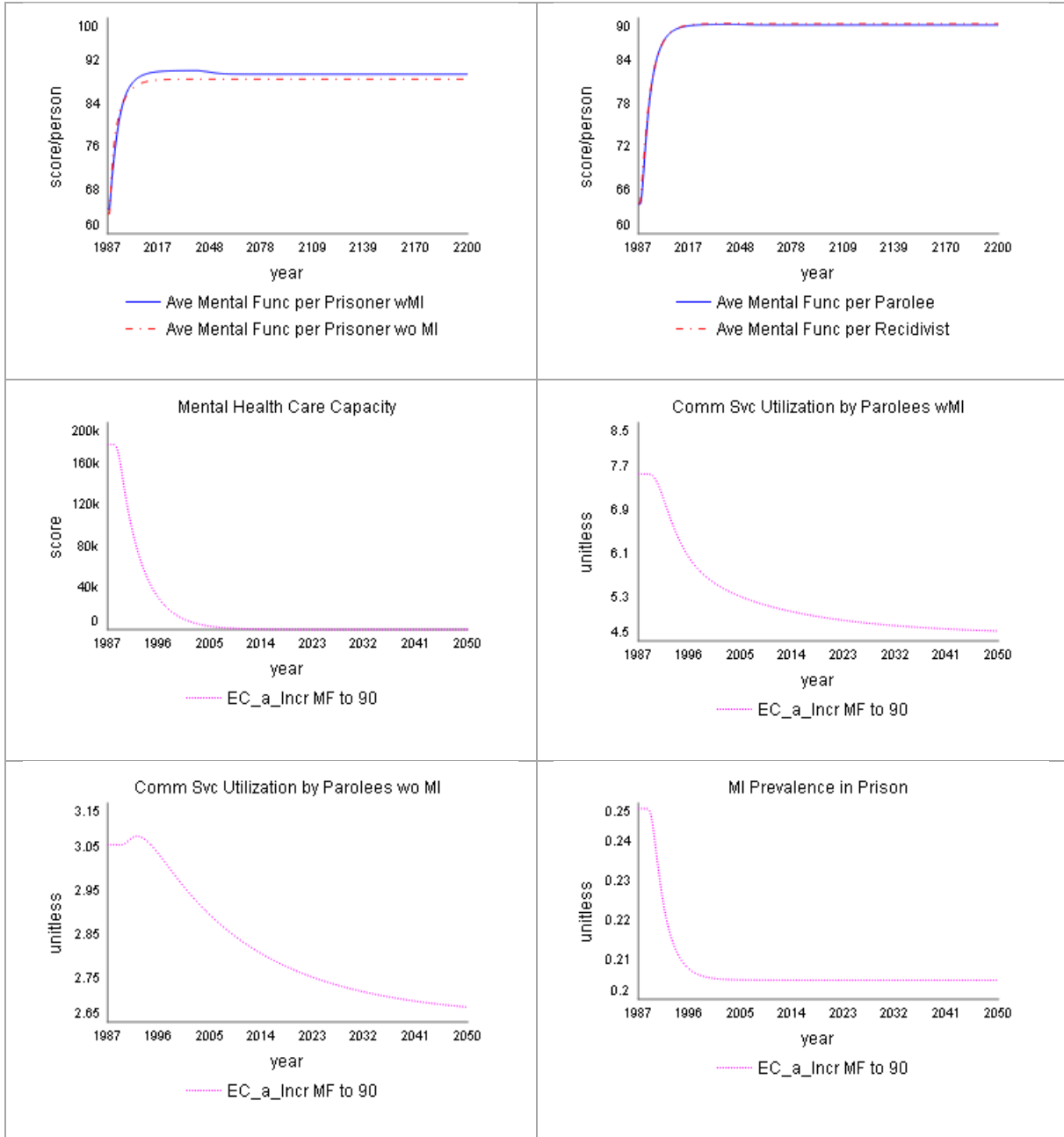
In this test, the initial age at first commitment increases from 28 to 65 from 1988.

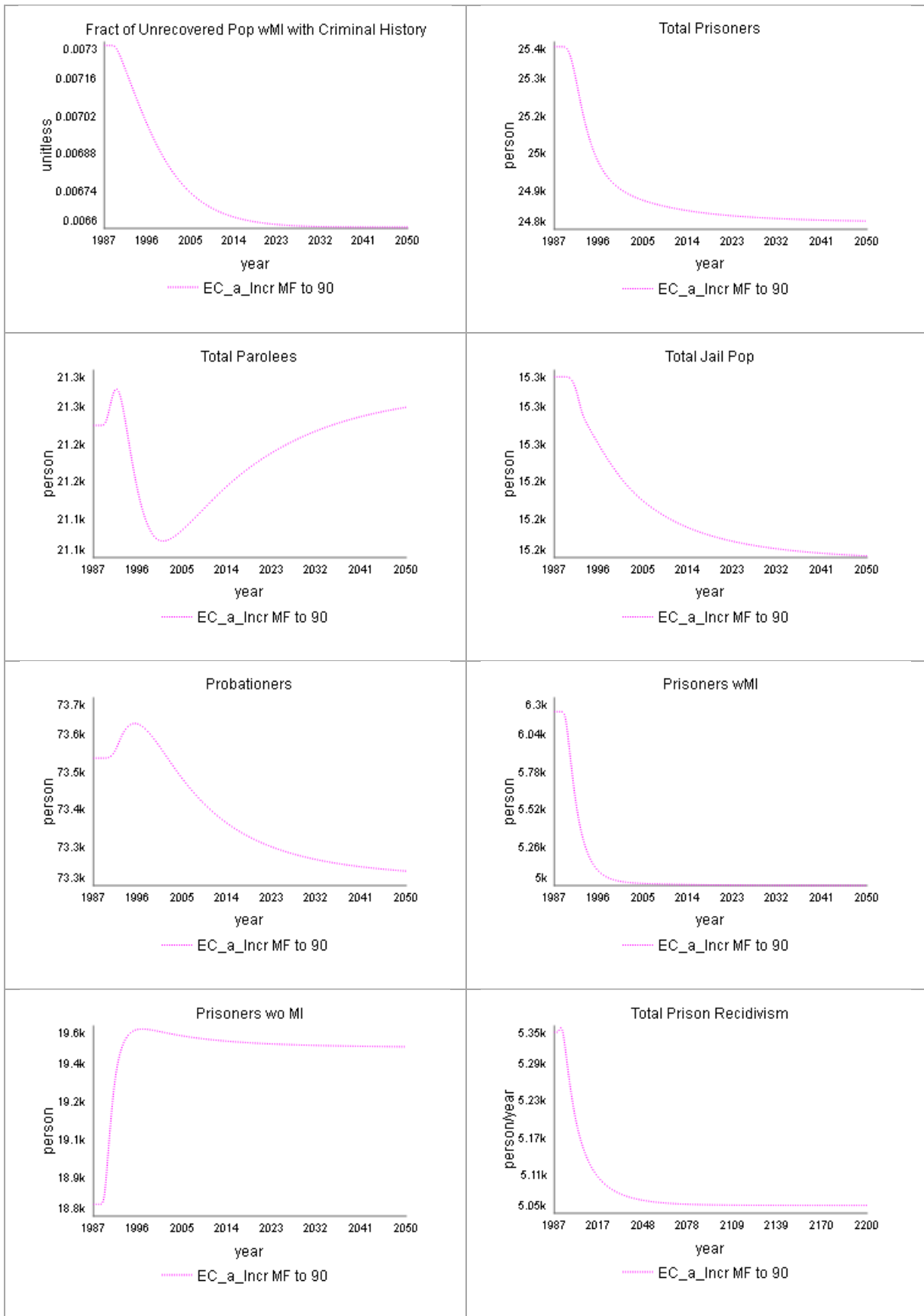




Extreme Condition Test 7a – Increase Average Mental Functions per New Arrestee to 90

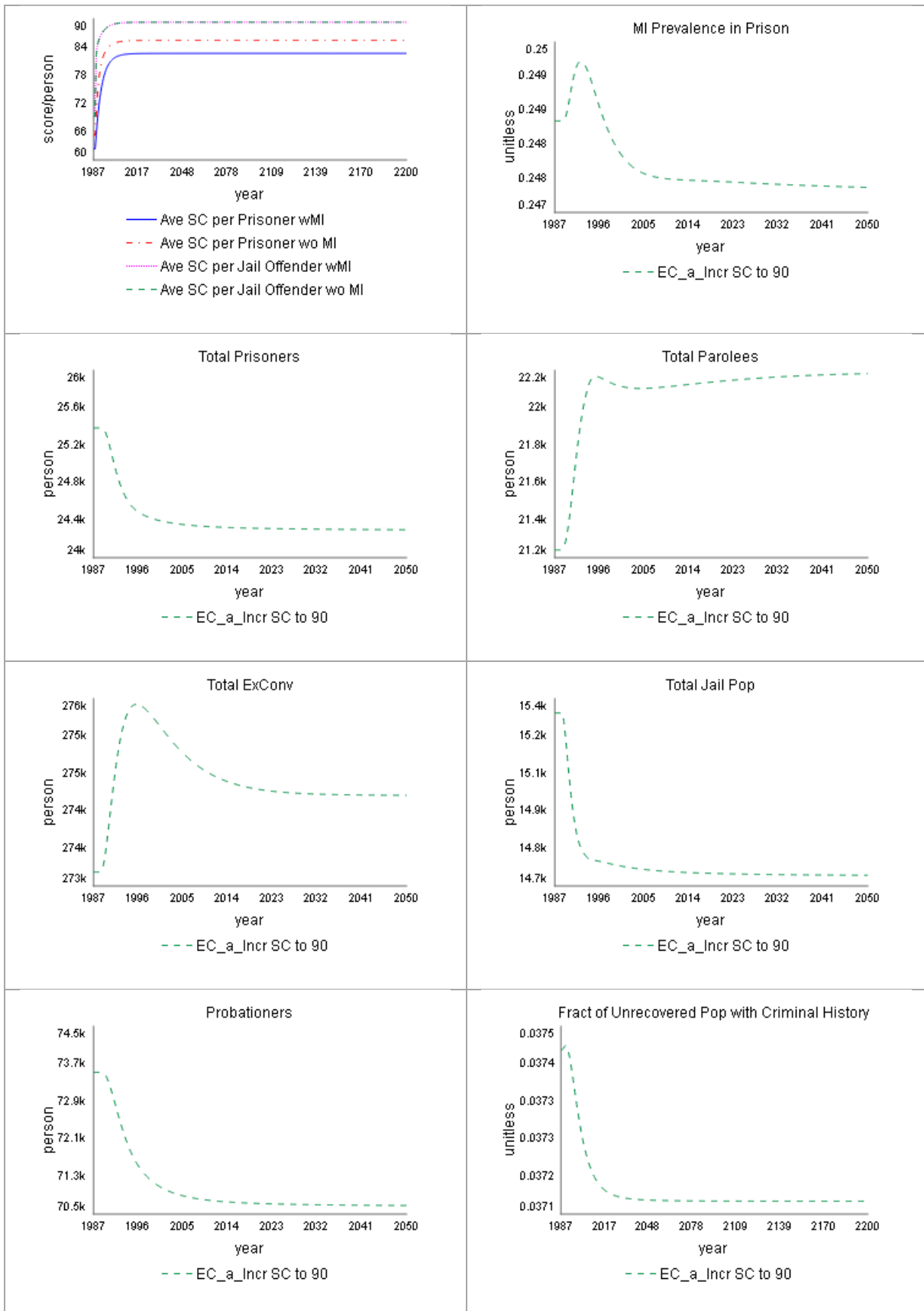
In this test, the average mental functions per new arrestee increases from 65 score/person to 90 score/person from 1988.

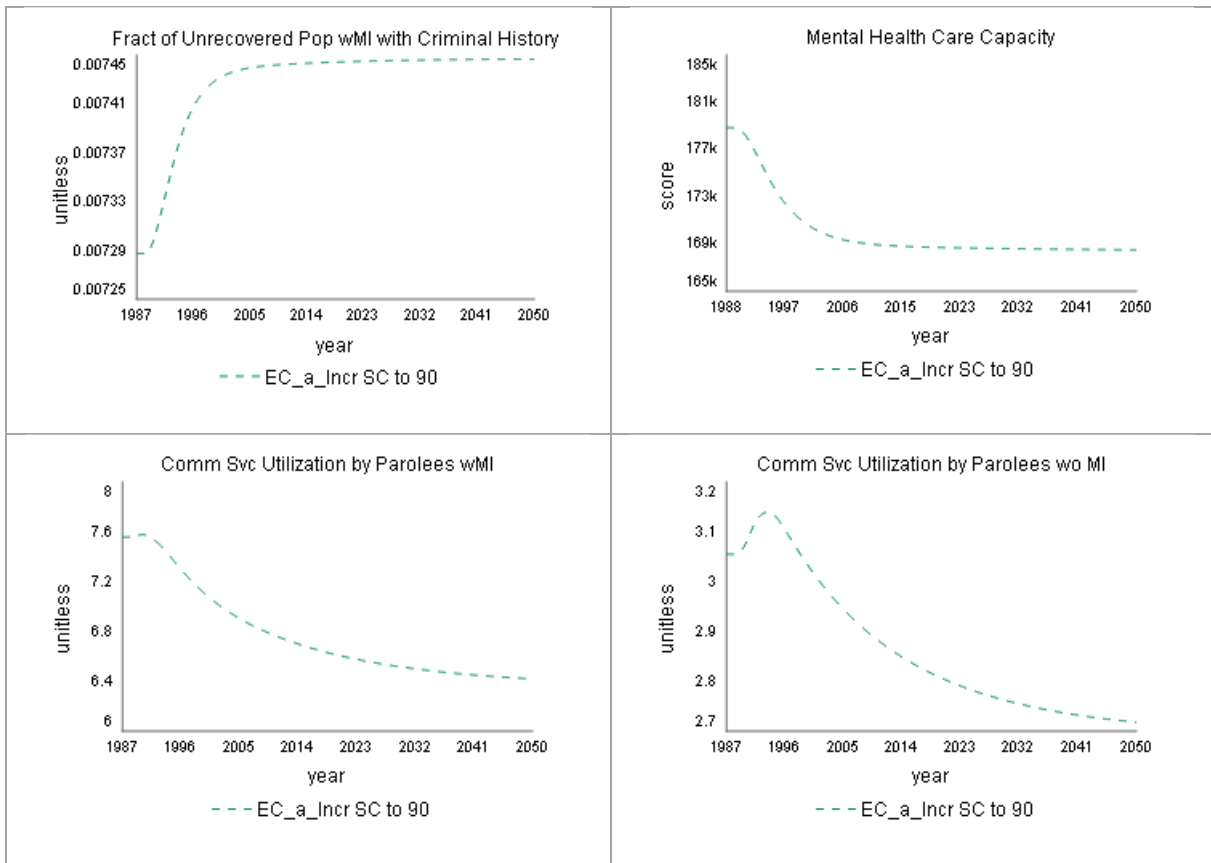




Extreme Condition Test 8a – Increase Social Capital per New Arrestee to 90

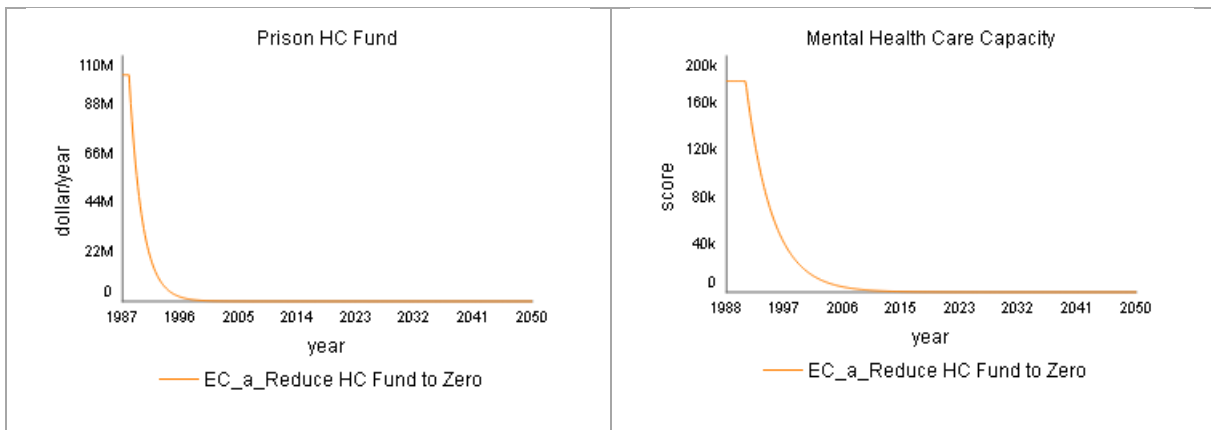
In this test, the average mental functions per new arrestee increases from 70 score/person to 90 score/person from 1988.

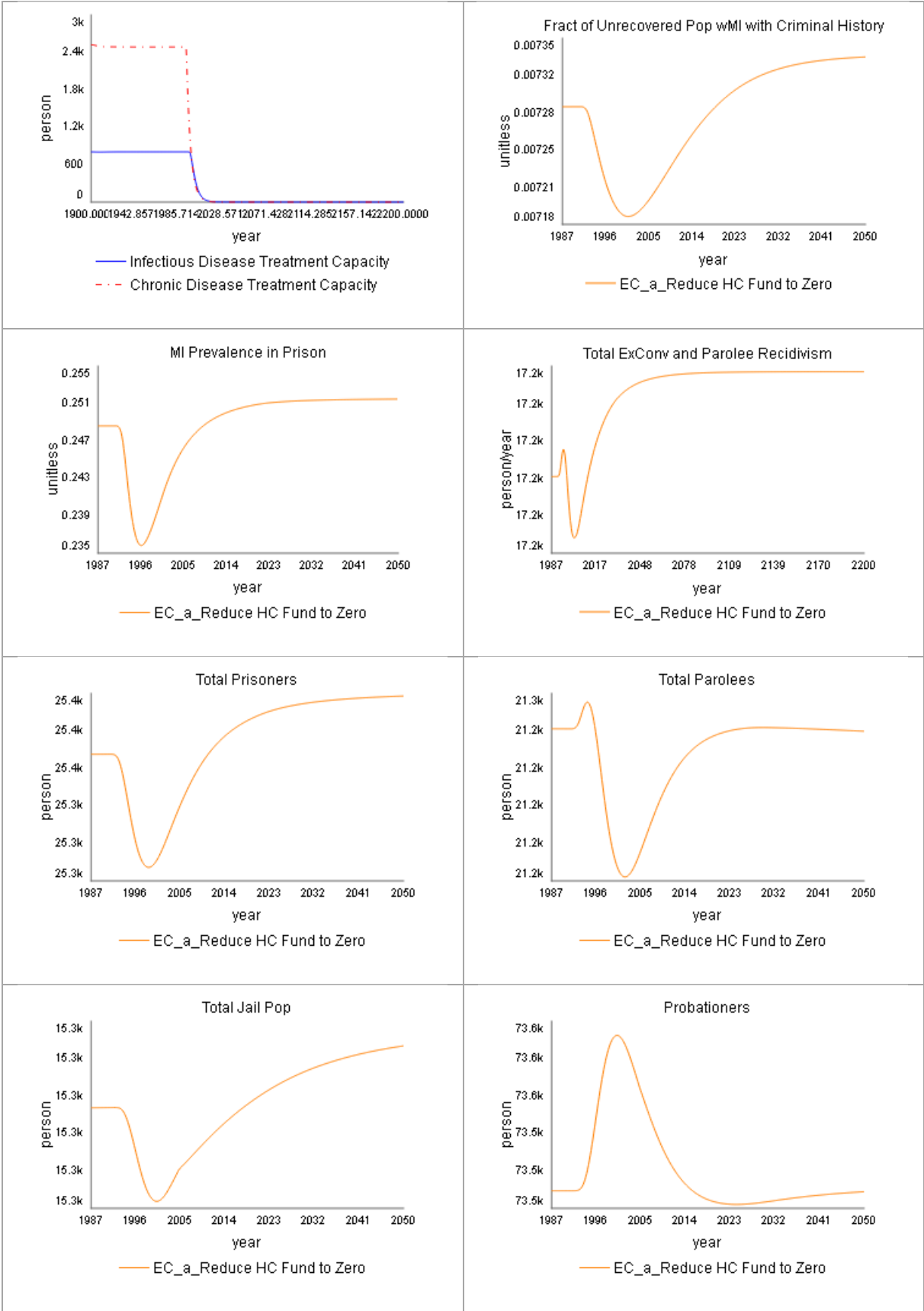


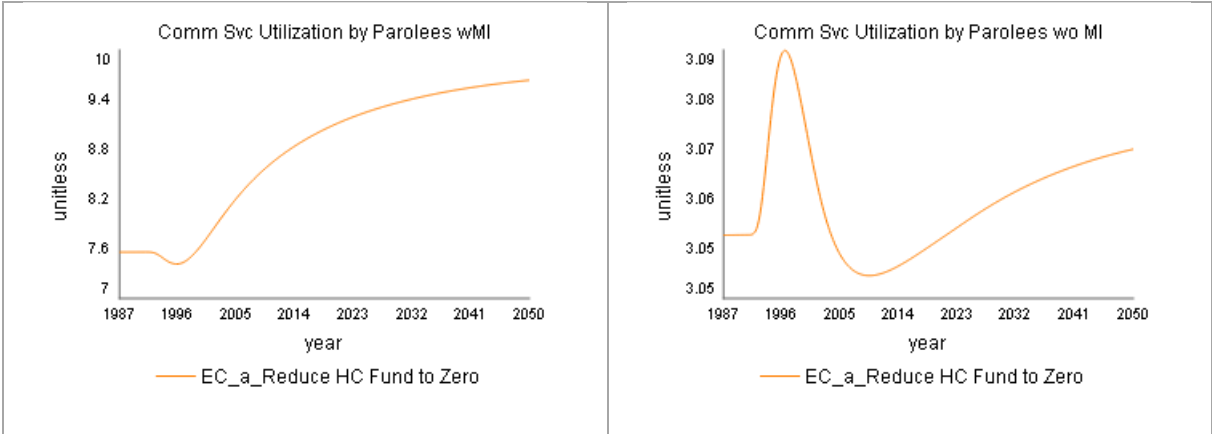


Extreme Condition Test 9a – Reduce Prison Health Care Fund to Zero

In this test, the prison health care budget decreases to zero from 1988.

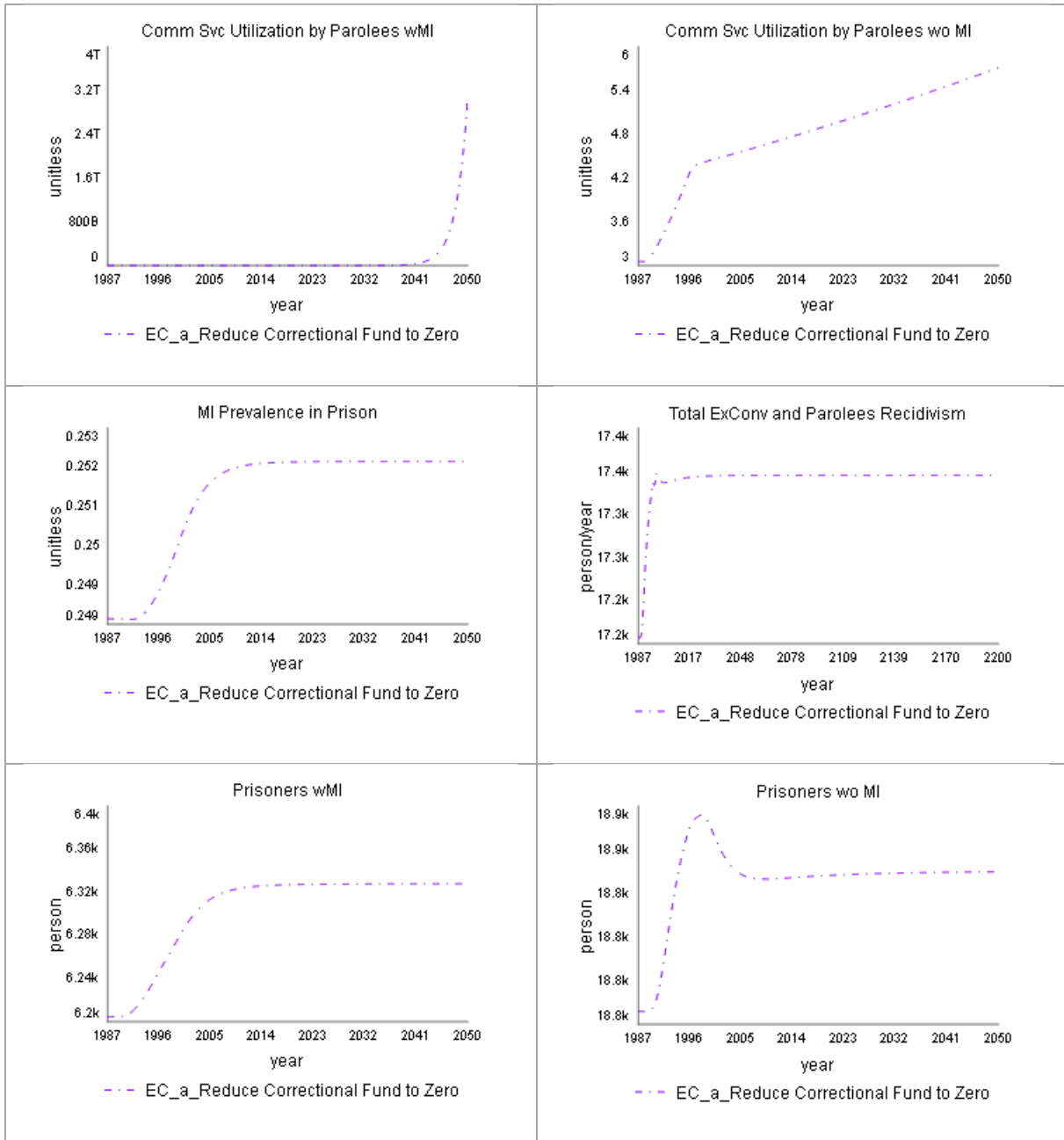


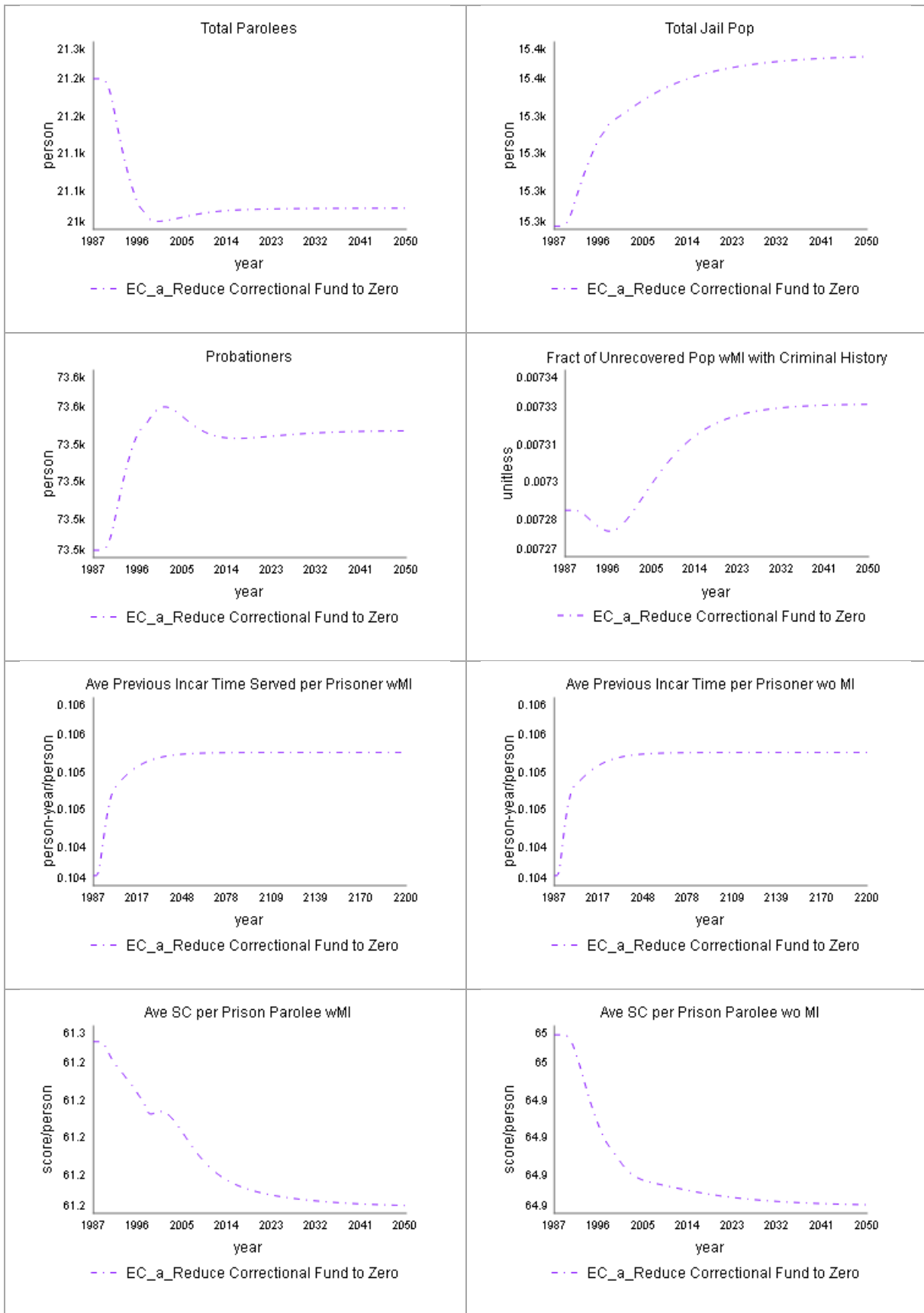


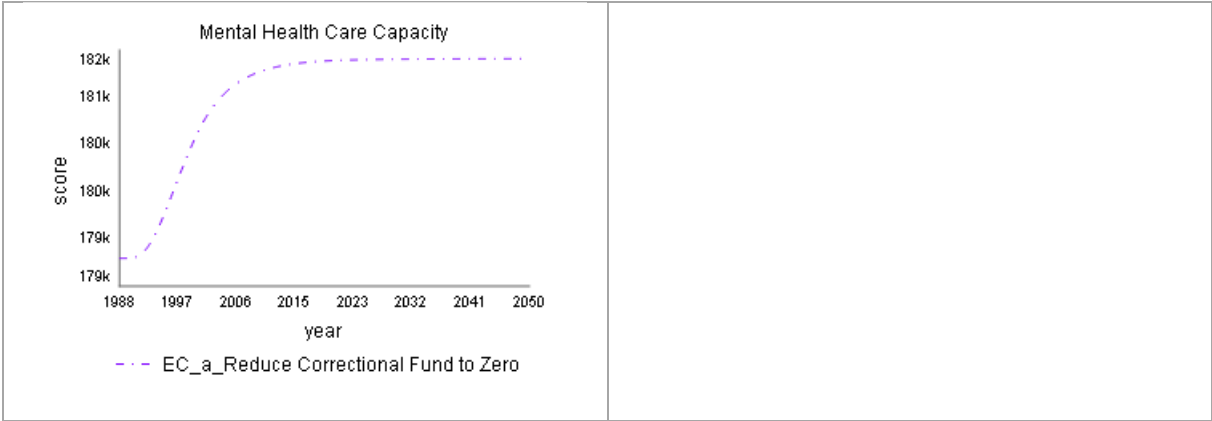


Extreme Condition Test 10a – Reduce Correctional Fund to Community Services to Zero

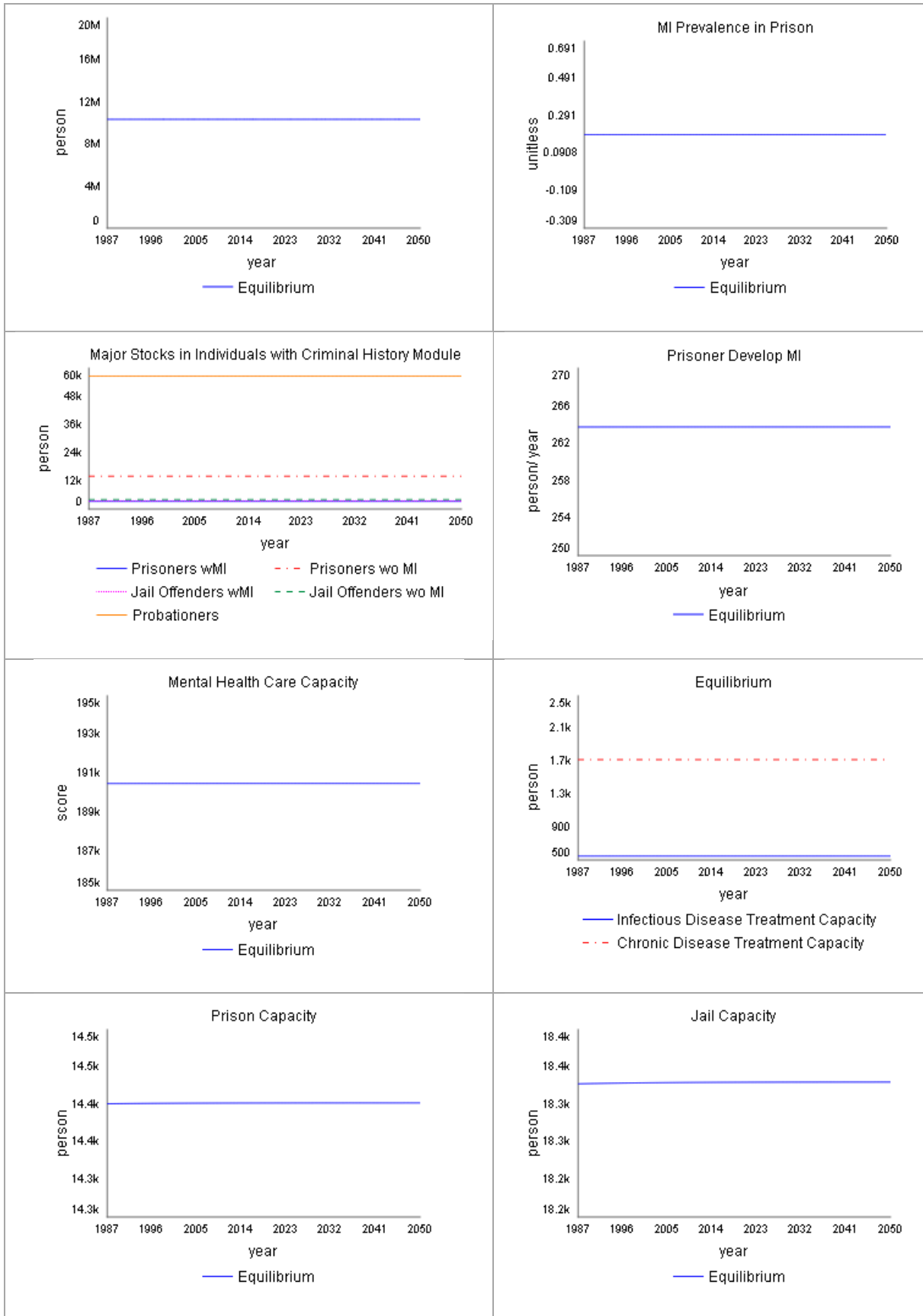
In this test, the correctional community service budget decreases to zero from 1988.

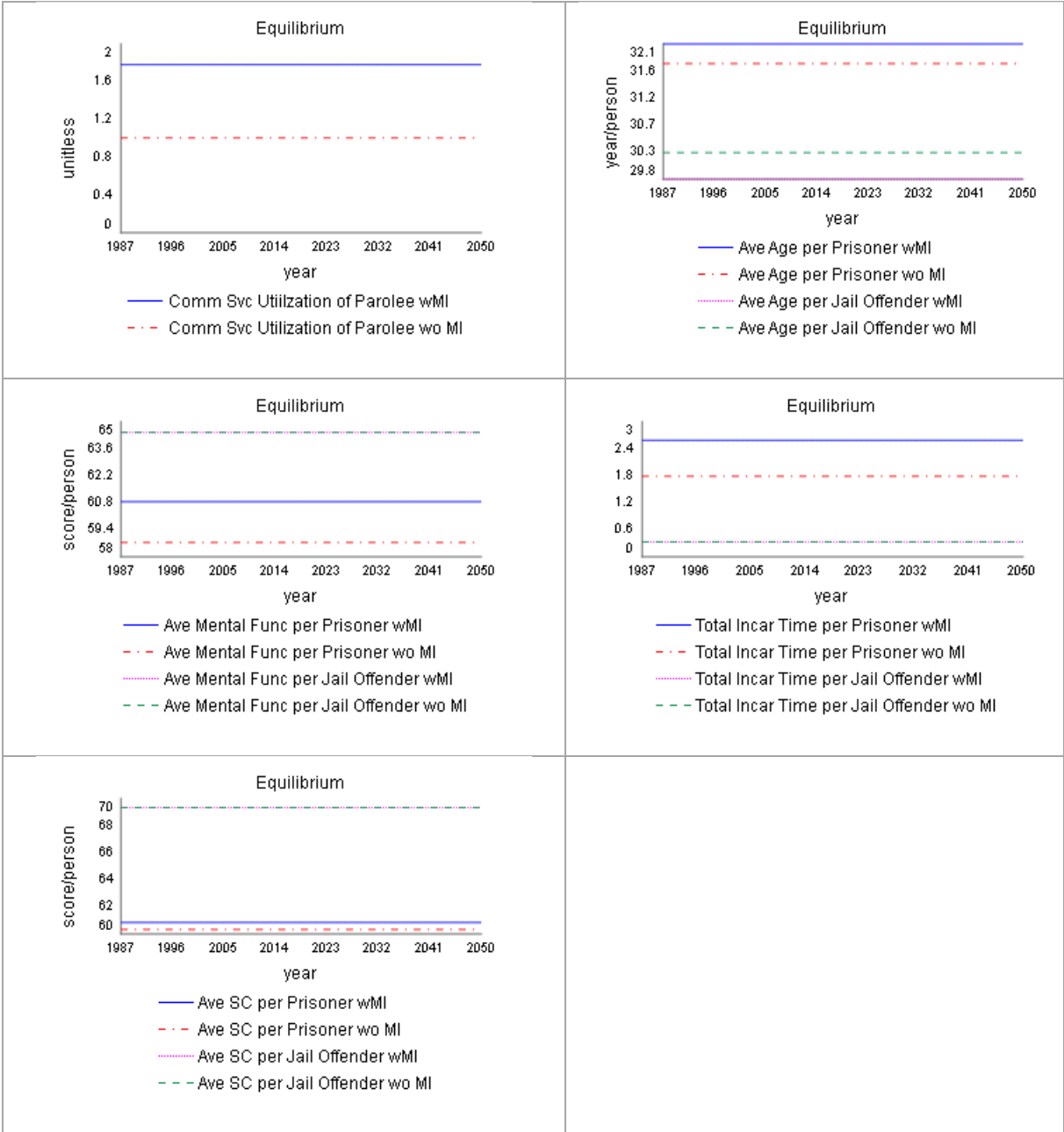






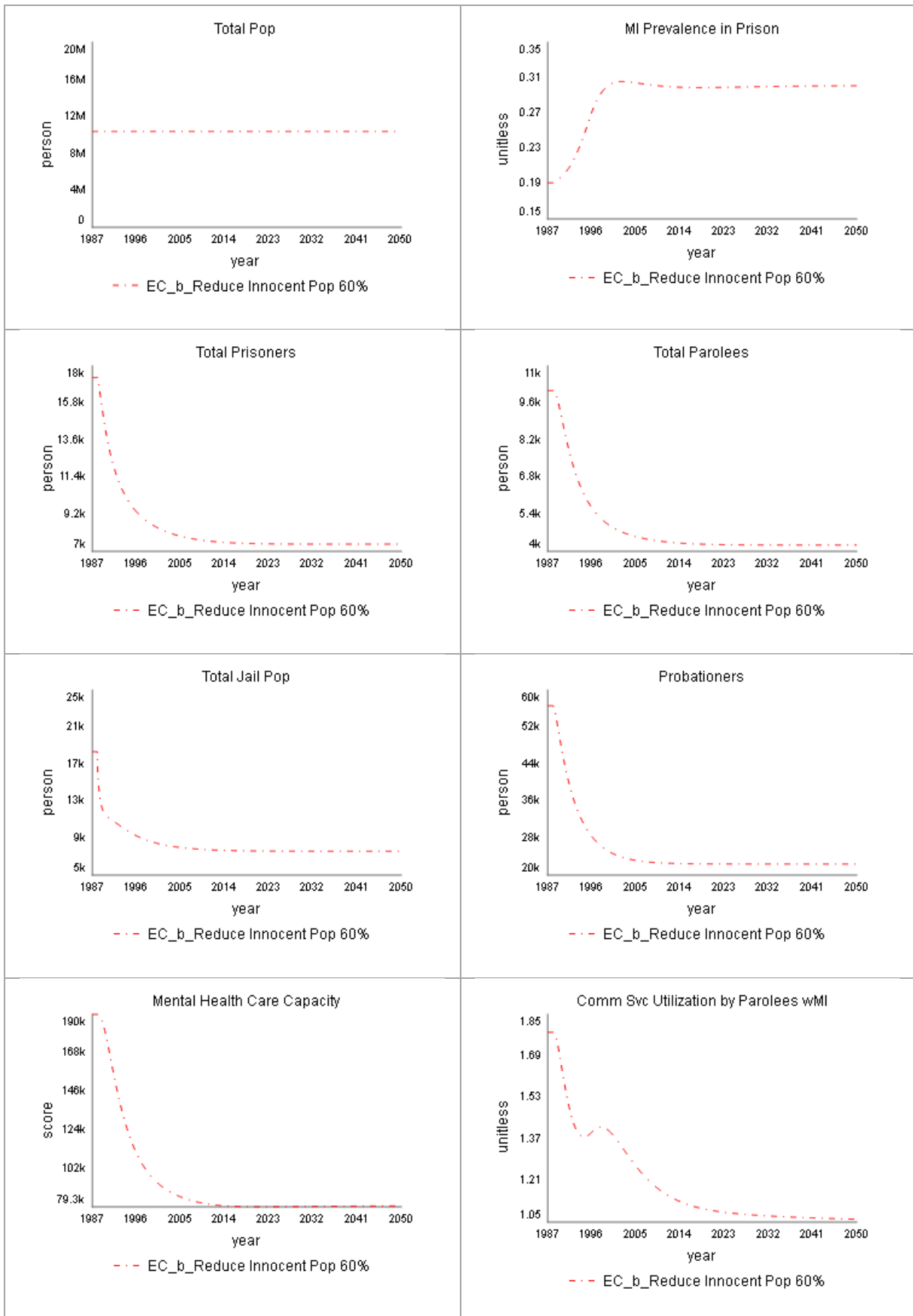
Equilibrium Test – Post-Realignment

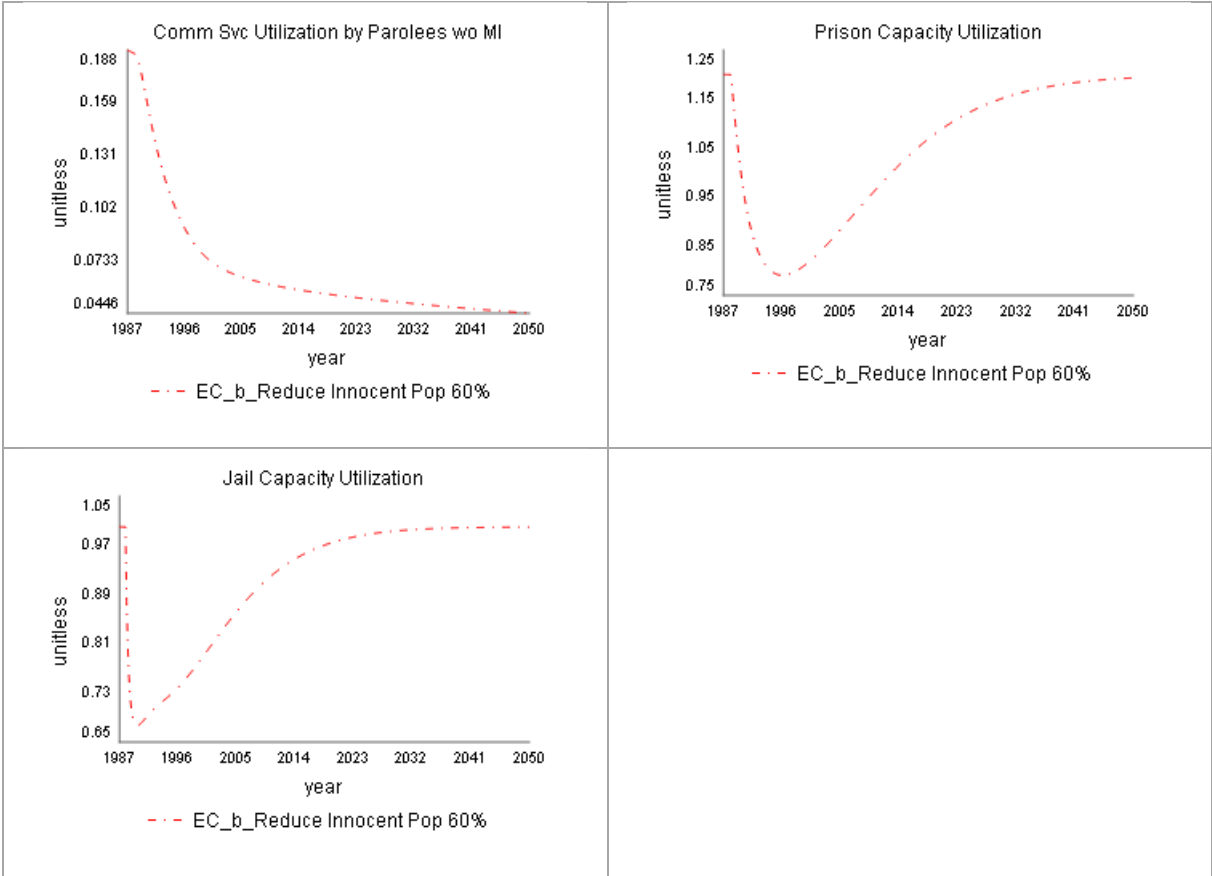




Extreme Condition Test 1b – Reduce Innocent Population 60%

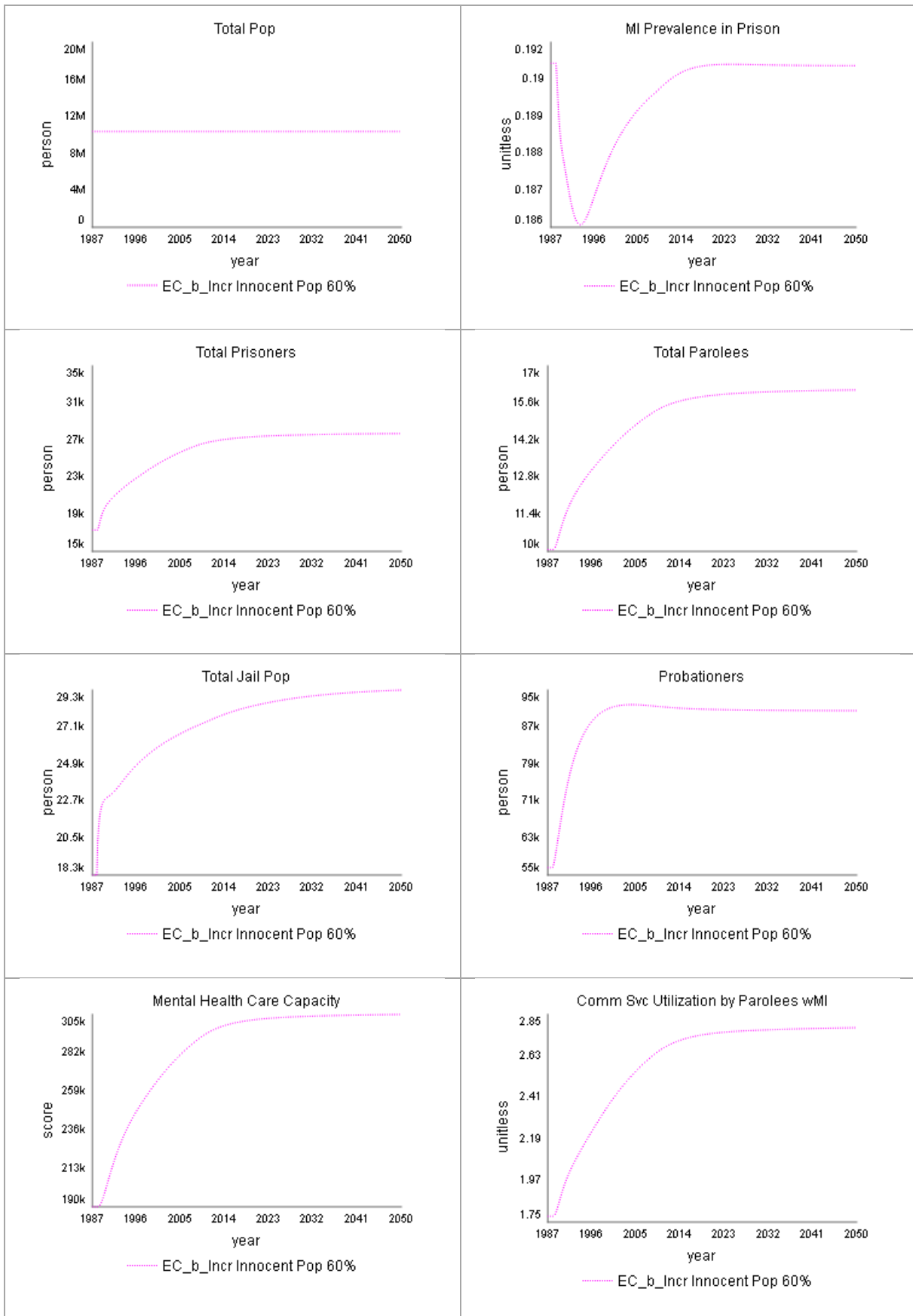
In this test, the innocent population reduces 60% from 1988 to 2050.

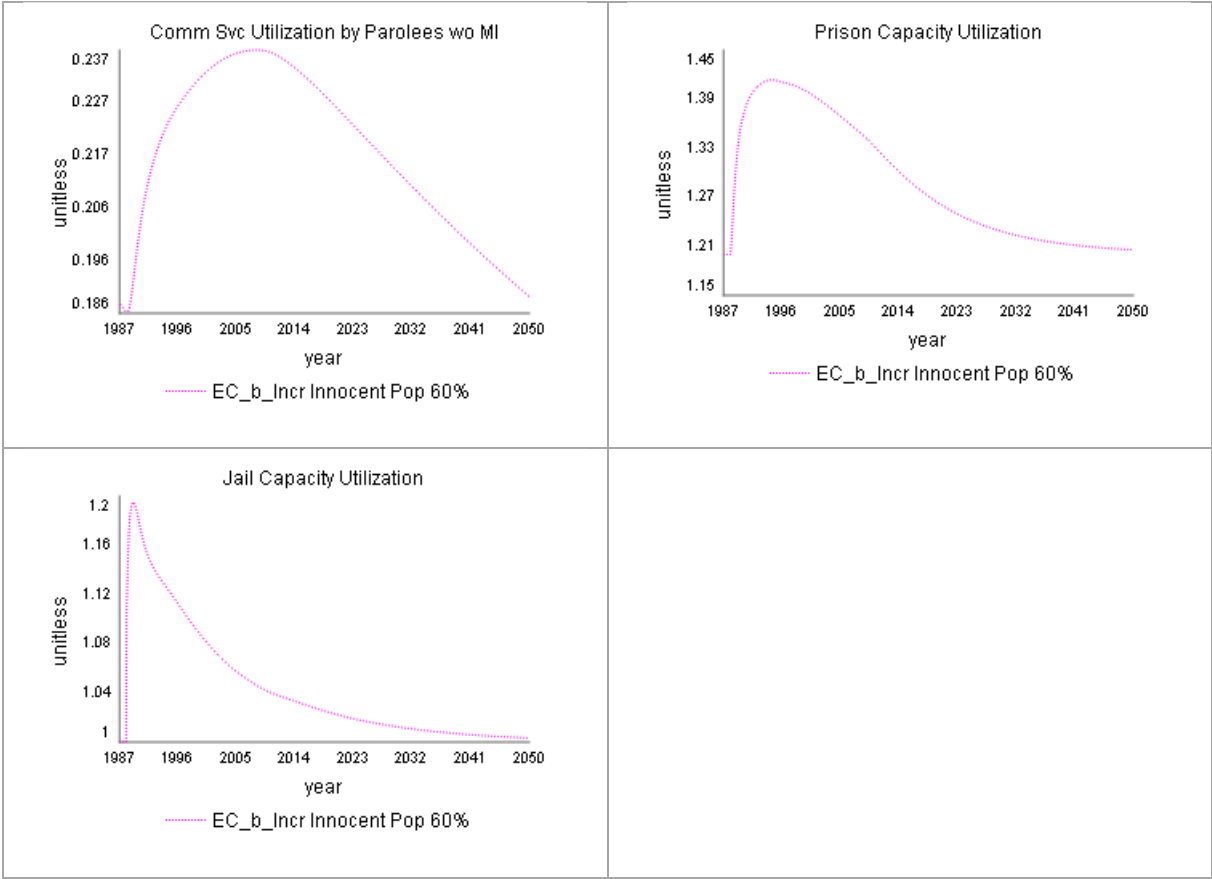




Extreme Condition Test 2b – Increase Innocent Population 60%

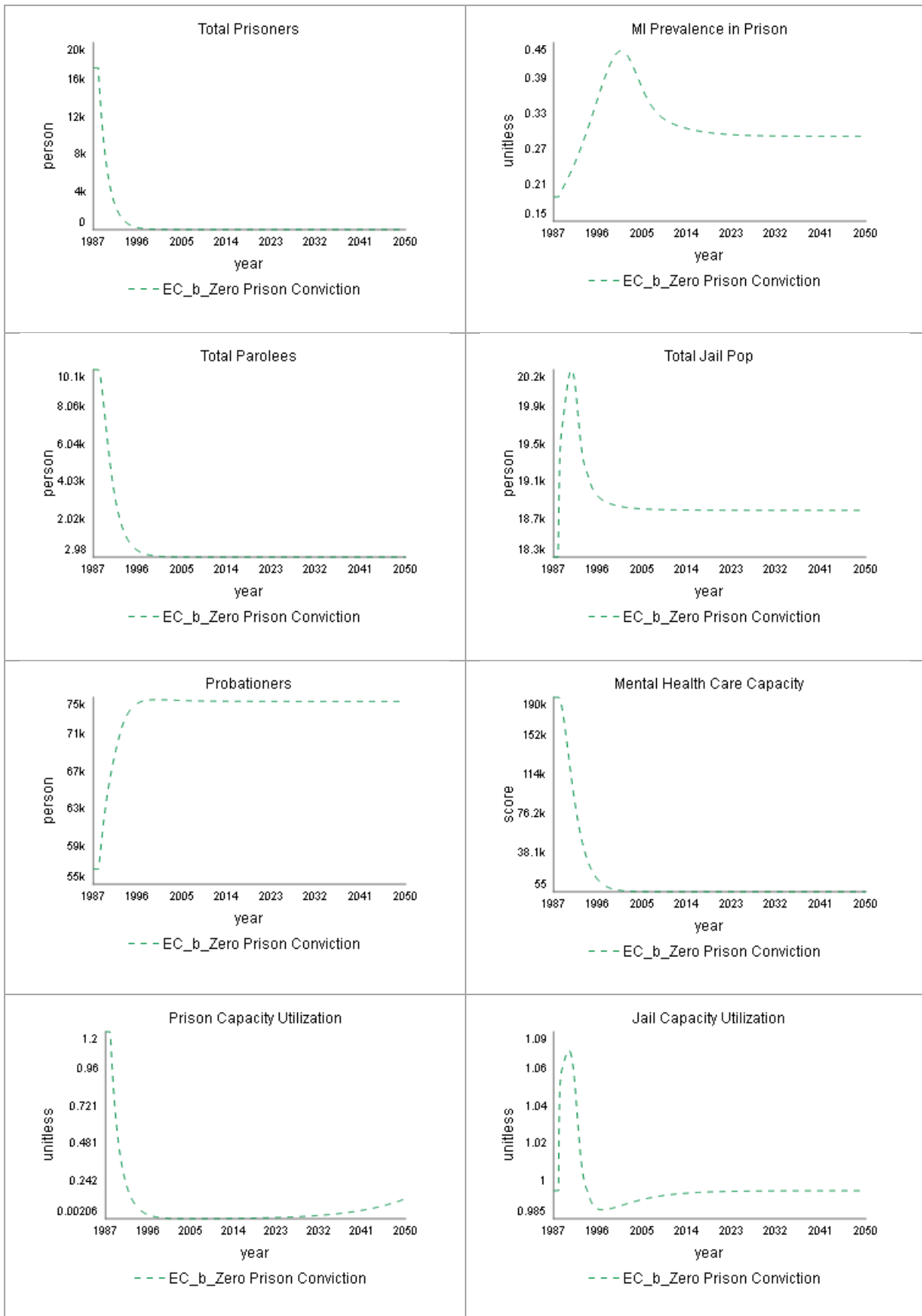
In this test, the innocent population increases 60% from 1988 to 2050.

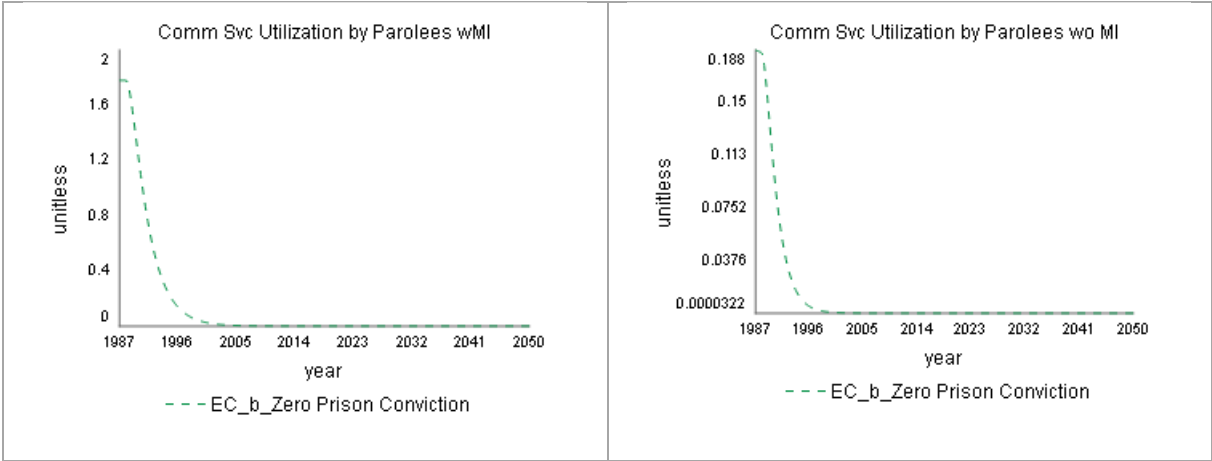




Extreme Condition Test 3b – Zero Fraction of Convicts with Prison Conviction

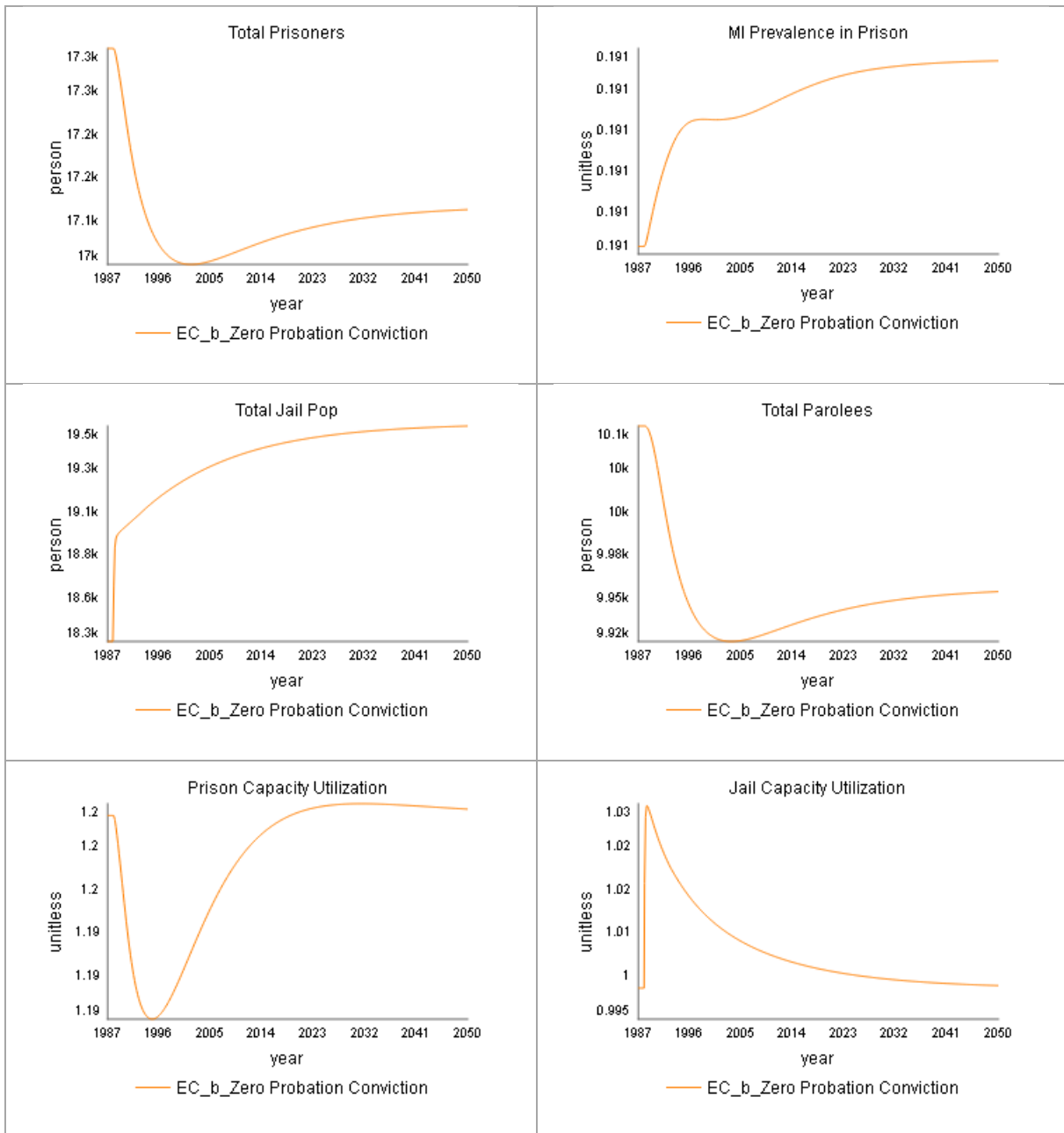
In this test, the fraction of convicts being convicted to prison sentence is reduced to zero from 1988.

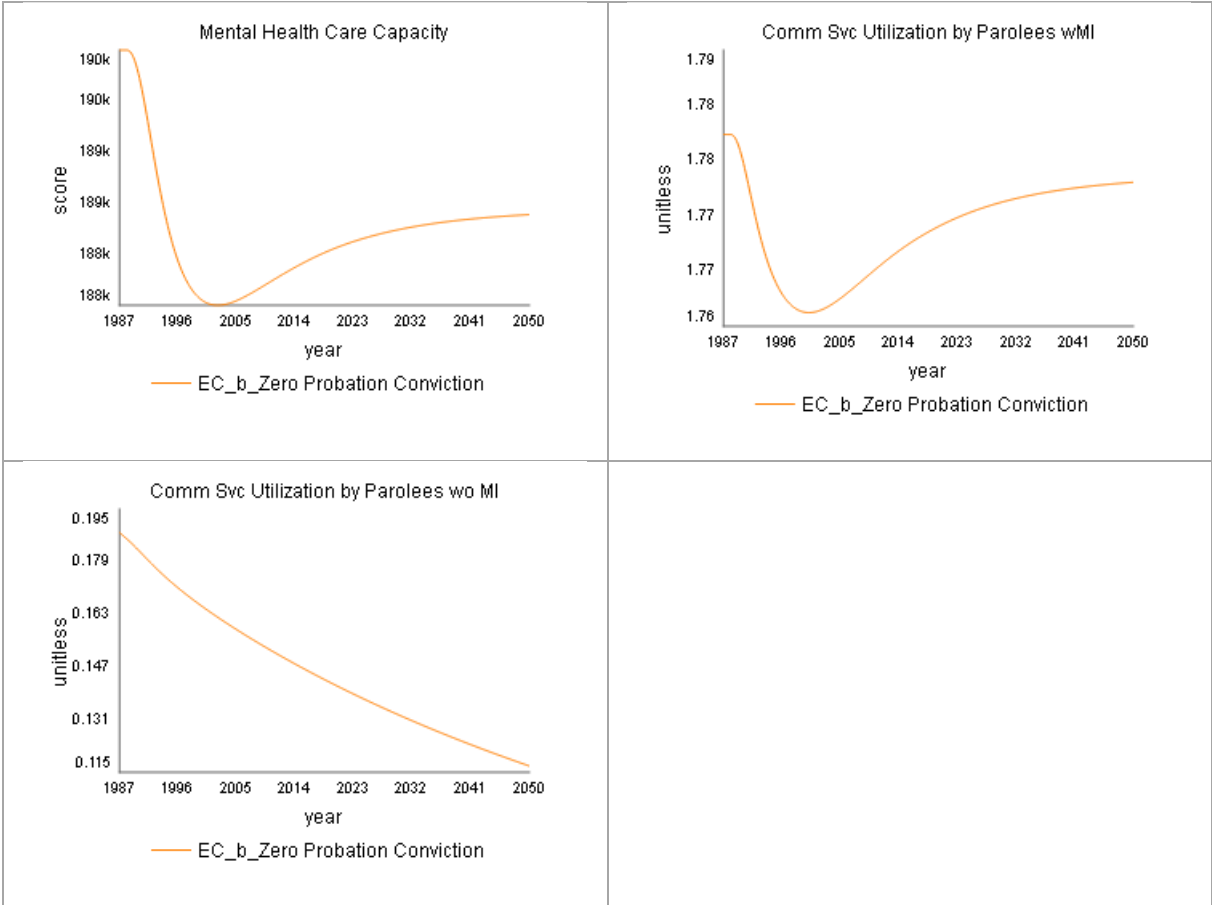




Extreme Condition Test 4b – Zero Fraction of Convicts with Probation Conviction

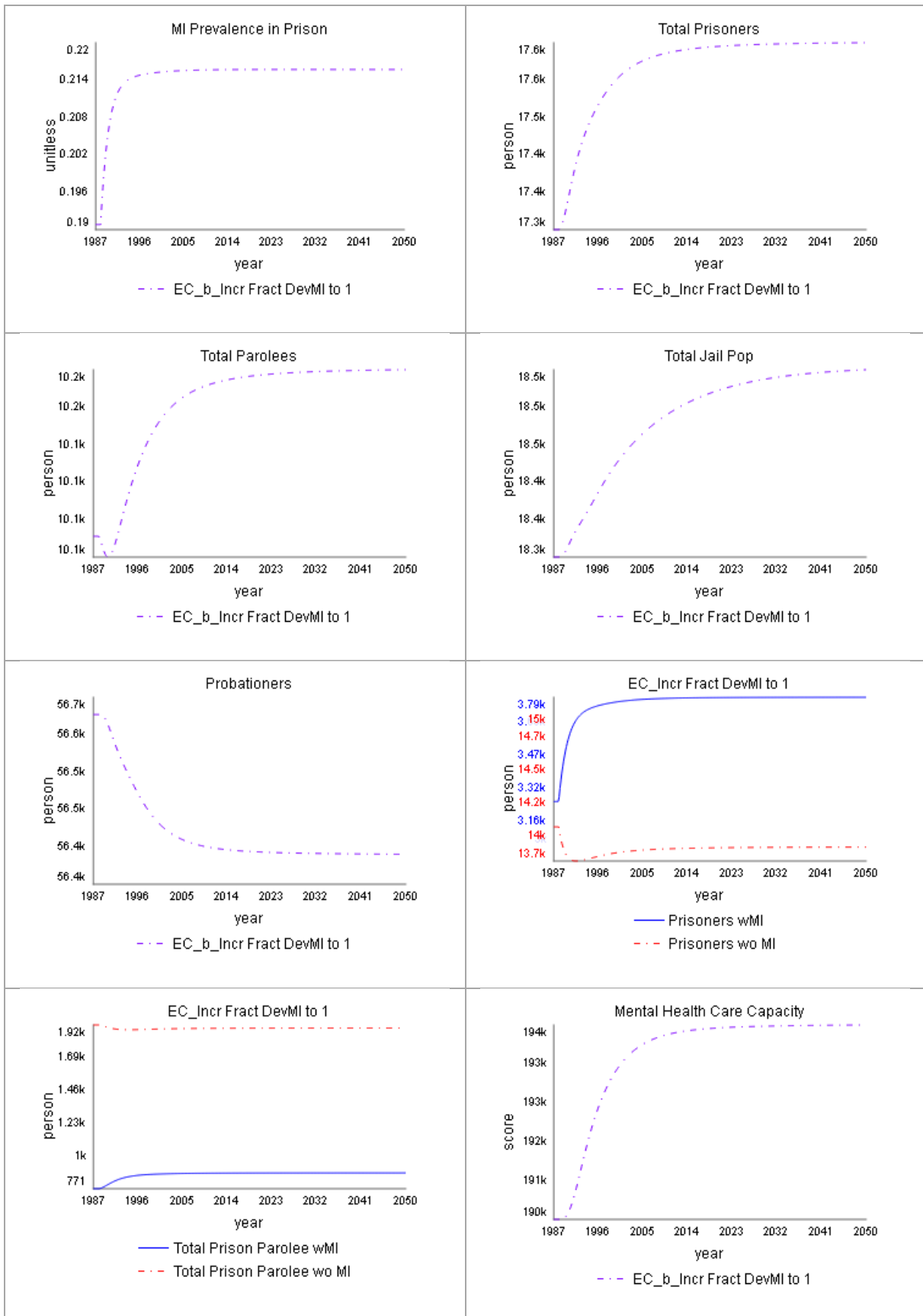
In this test, the fraction of convicts being convicted to probation sentence is reduced to zero from 1988.

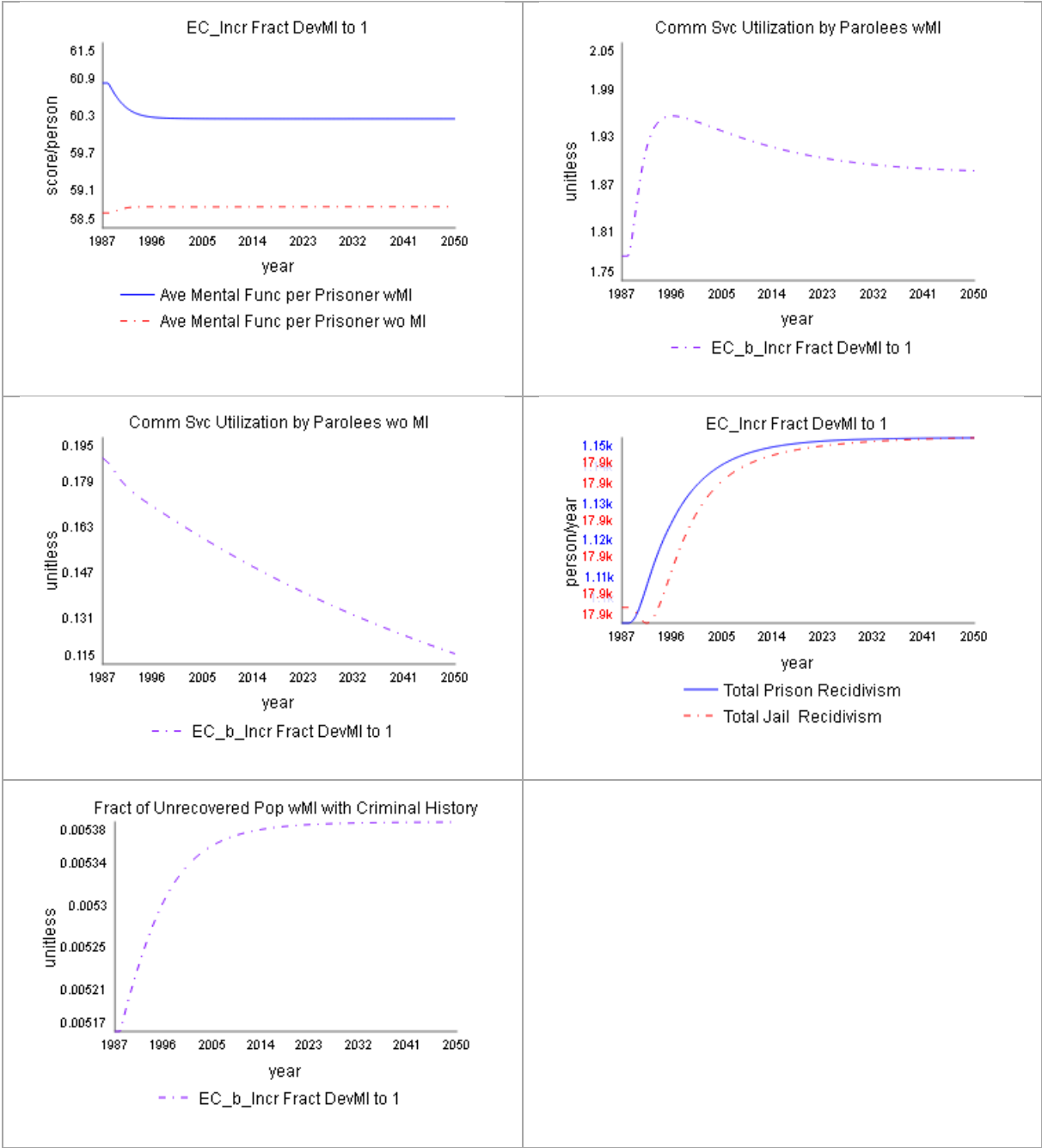




Extreme Condition Test 5b – Increase Fraction of Prisoners wo MI Develop MI to 1

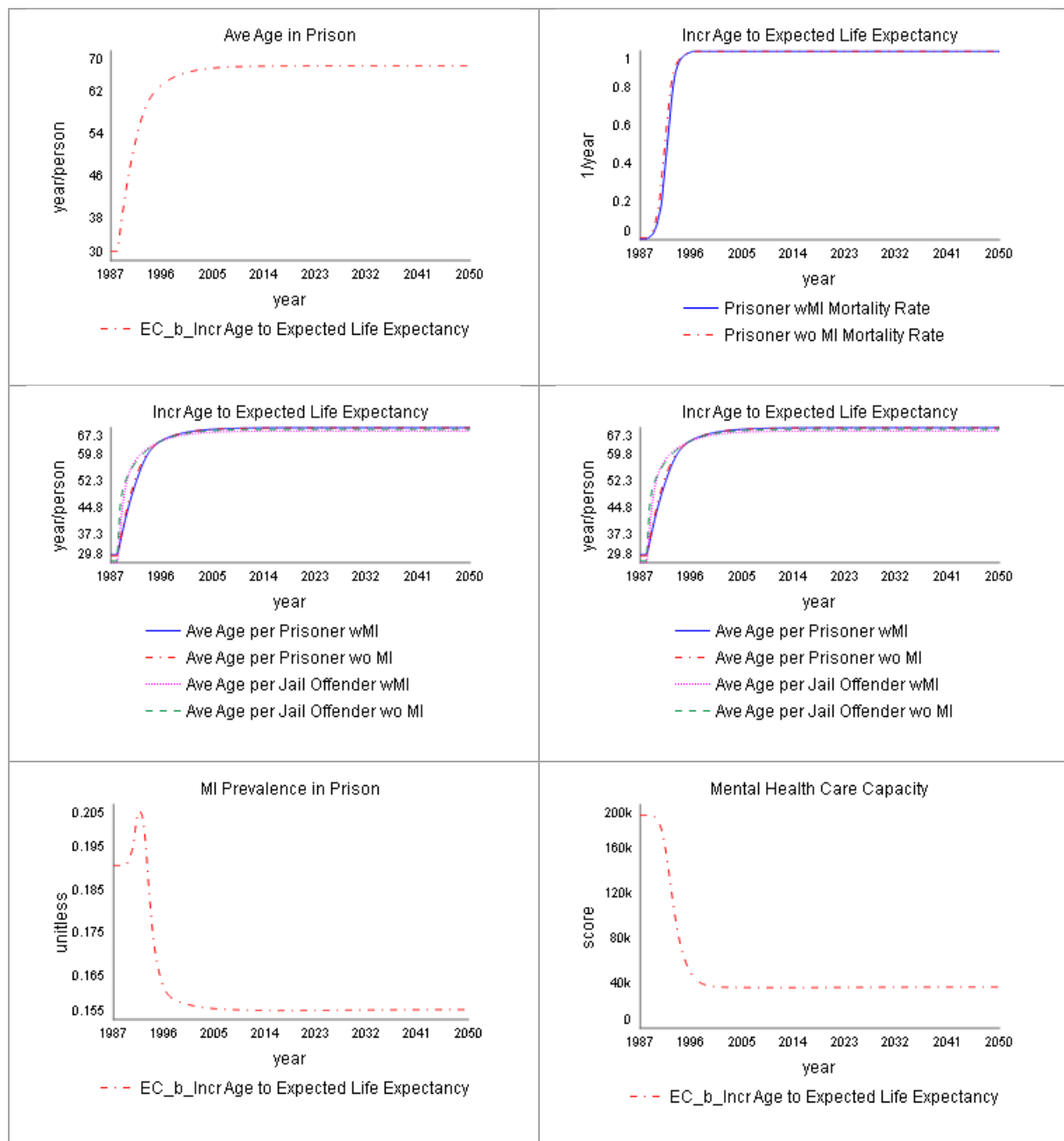
In this test, “fract prisoners devMI” increases from 0.02 per year to 1 per year from 1988 onwards.

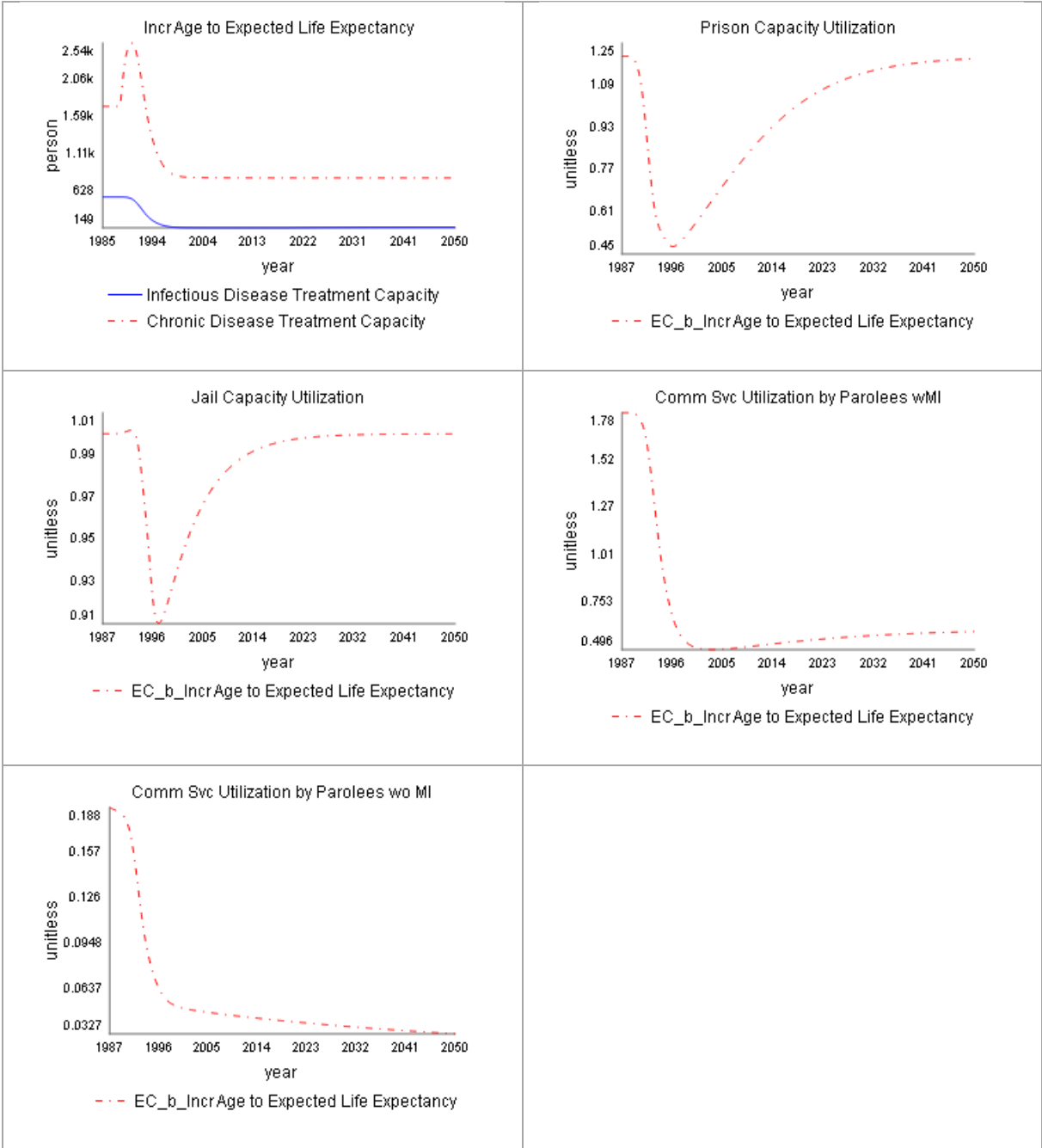




Extreme Condition Test 6b – Increase Initial Age at First Commitment to the Expected Life Expectancy of Prisoners

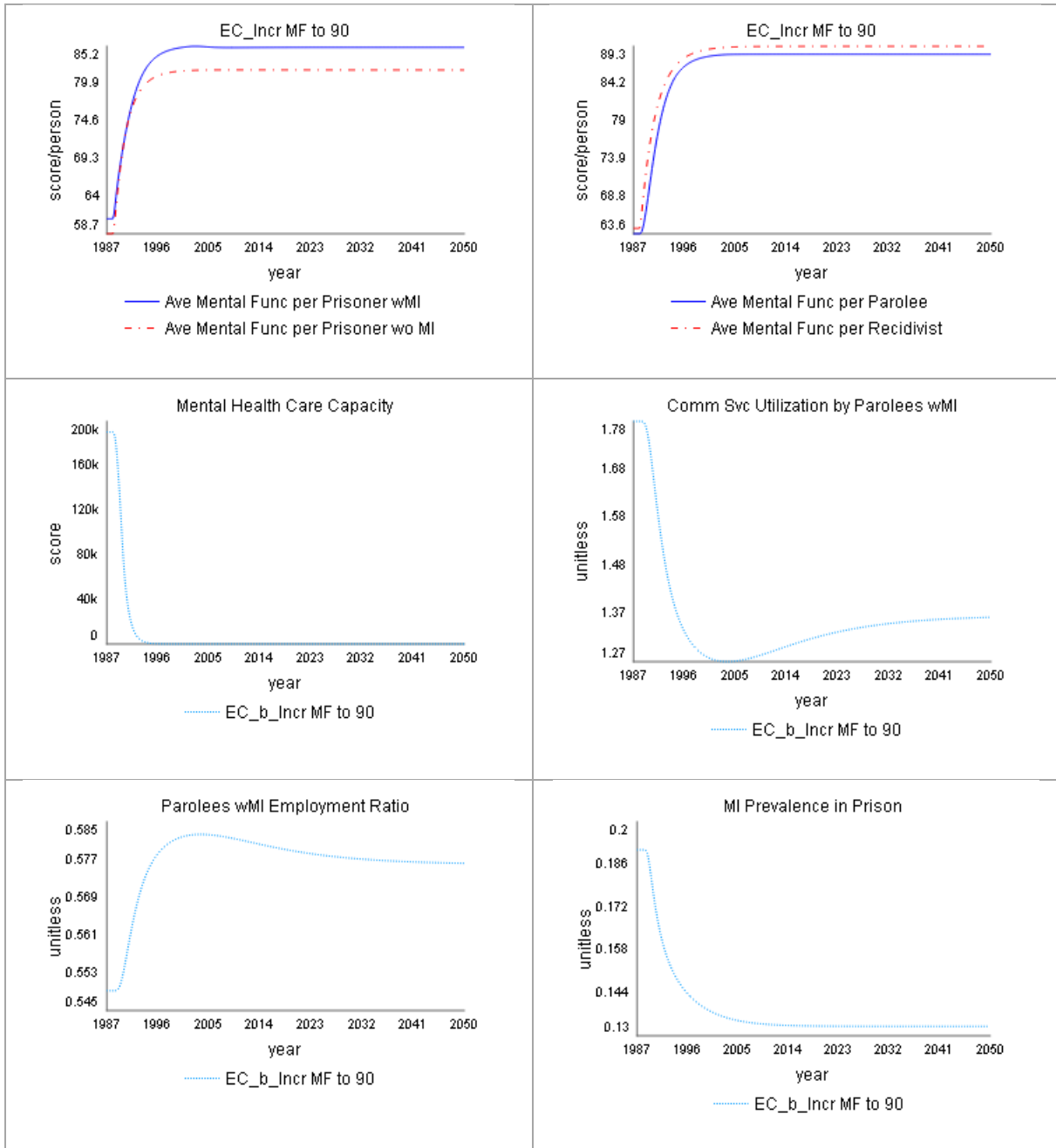
In this test, the initial age at first commitment increases from 28 to 65 from 1988.

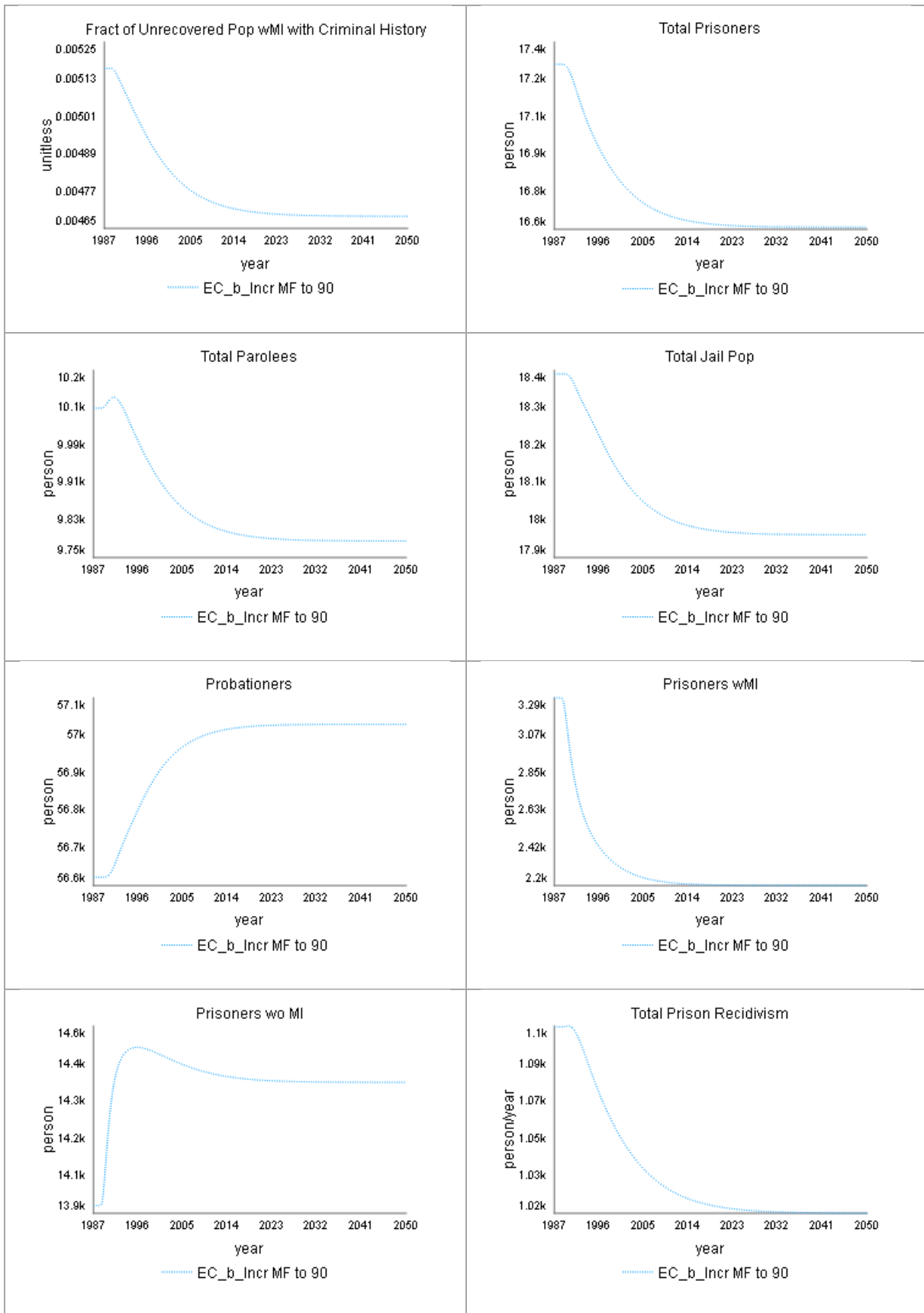




Extreme Condition Test 7b – Increase Average Mental Functions per New Arrestee to 90

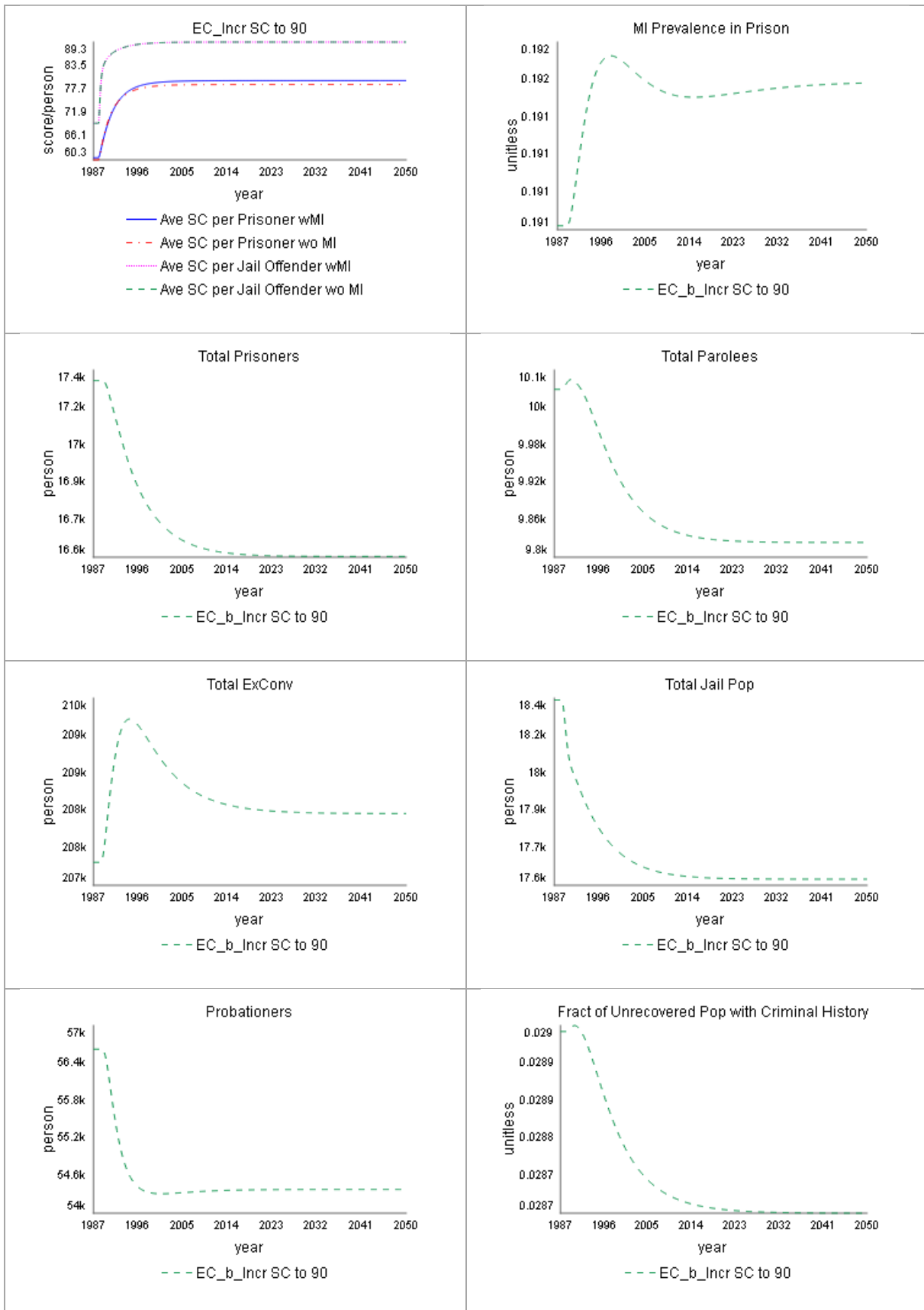
In this test, the average mental functions per new arrestee increases from 65 score/person to 90 score/person from 1988.

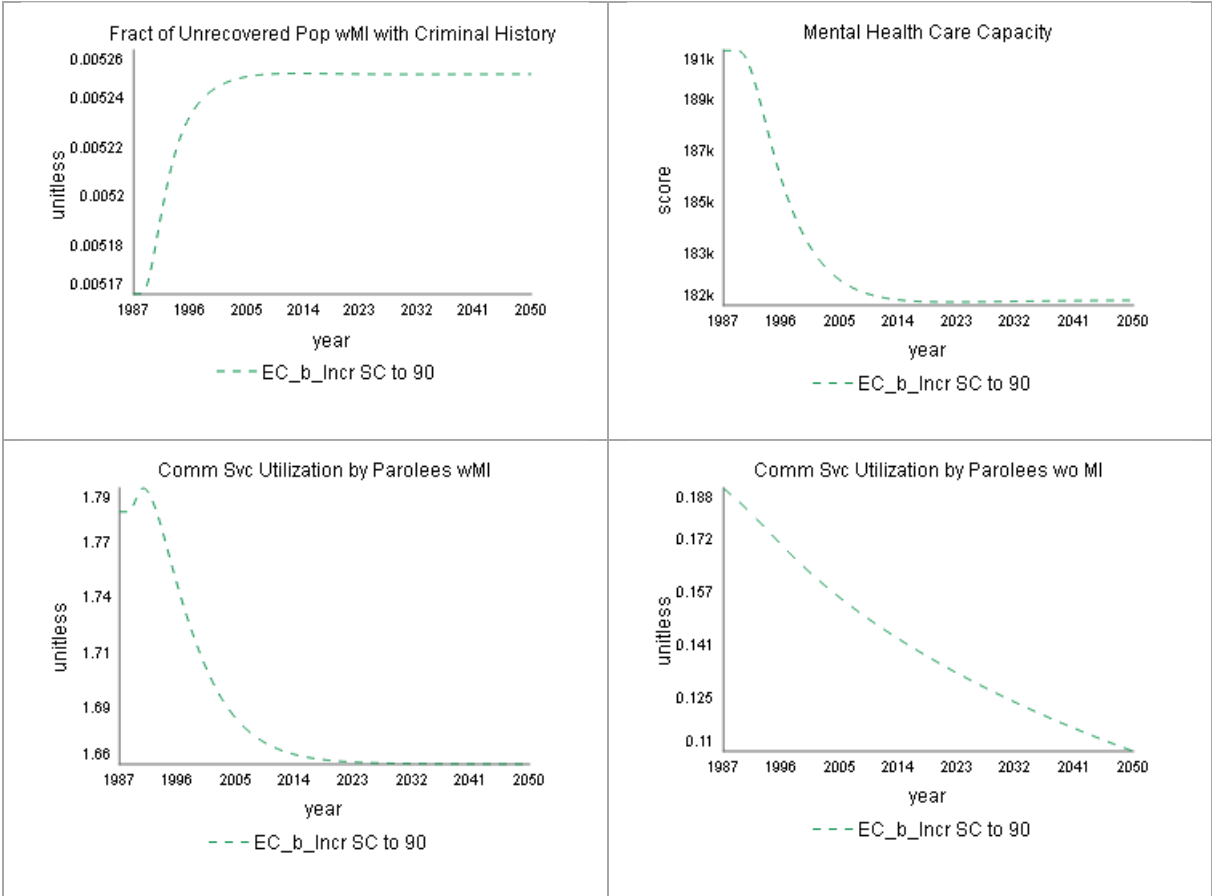




Extreme Condition Test 8b – Increase Social Capital per New Arrestee to 90

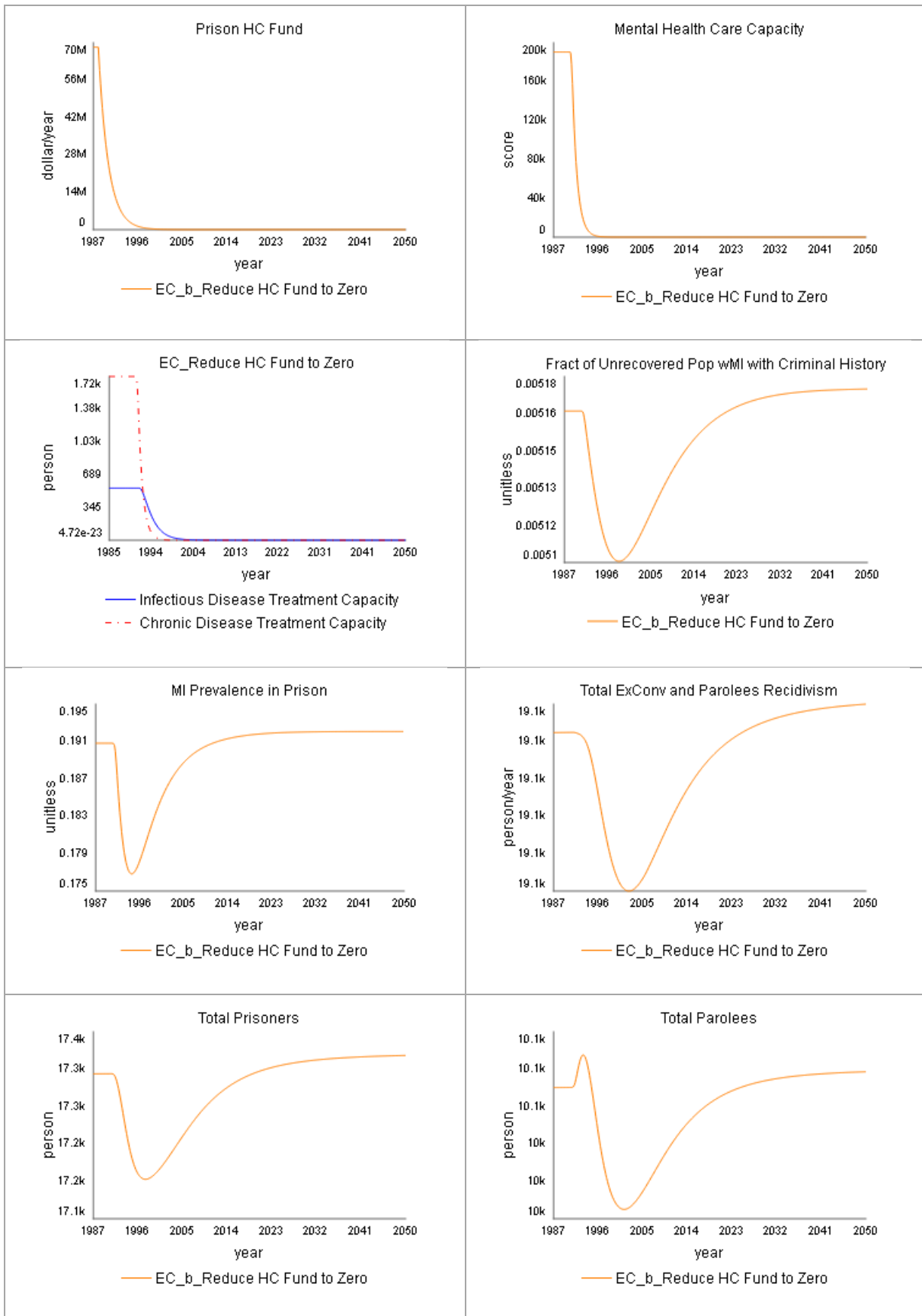
In this test, the average mental functions per new arrestee increases from 70 score/person to 90 score/person from 1988.

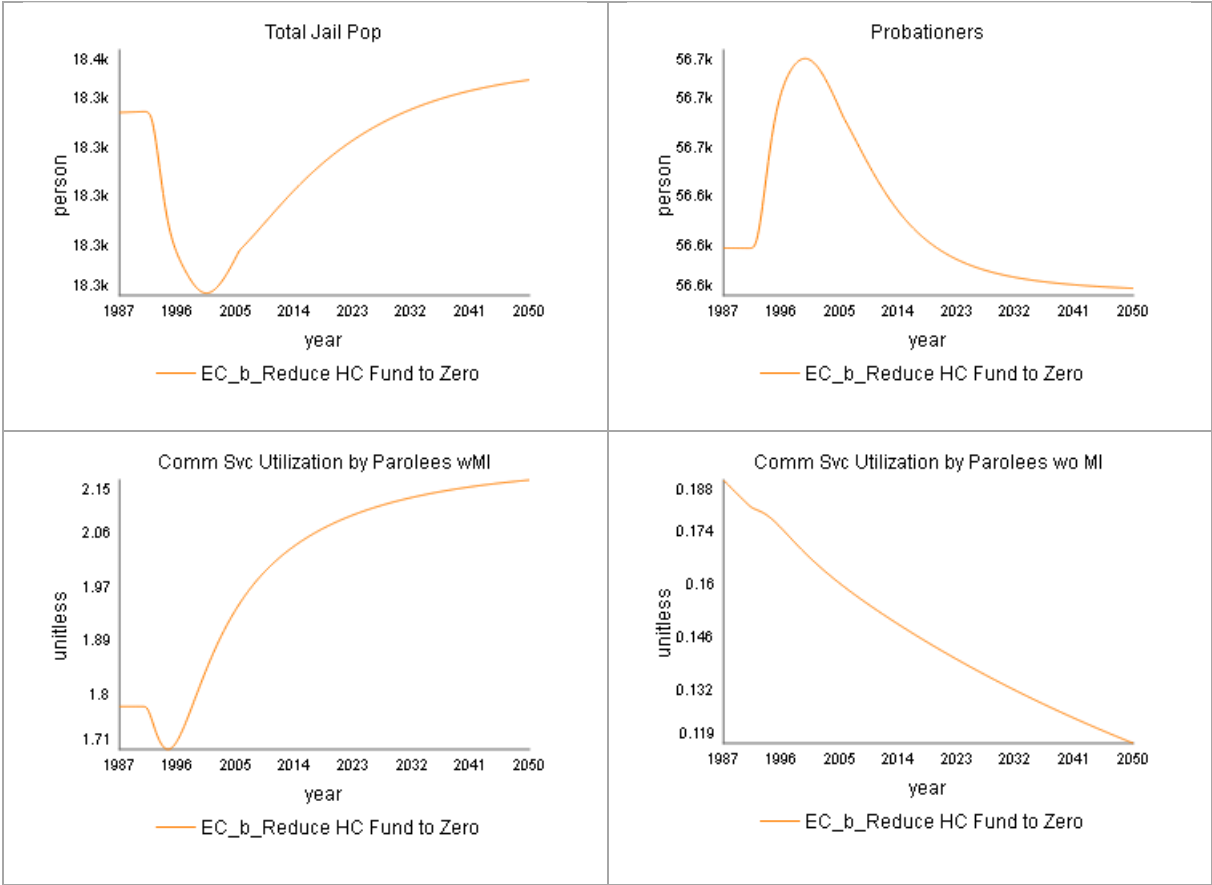




Extreme Condition Test 9b – Reduce Prison Health Care Fund to Zero

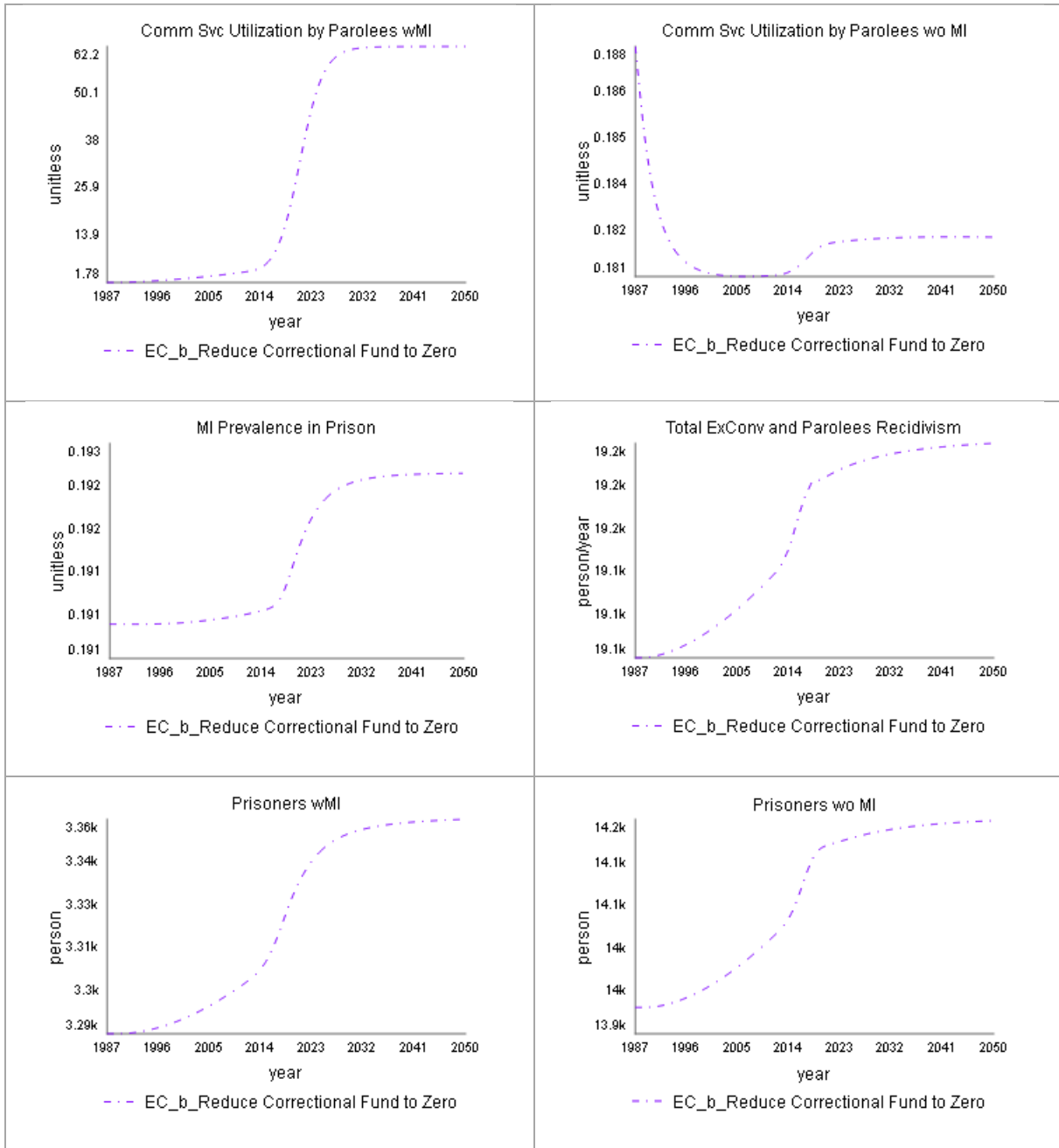
In this test, the prison health care budget decreases to zero from 1988.

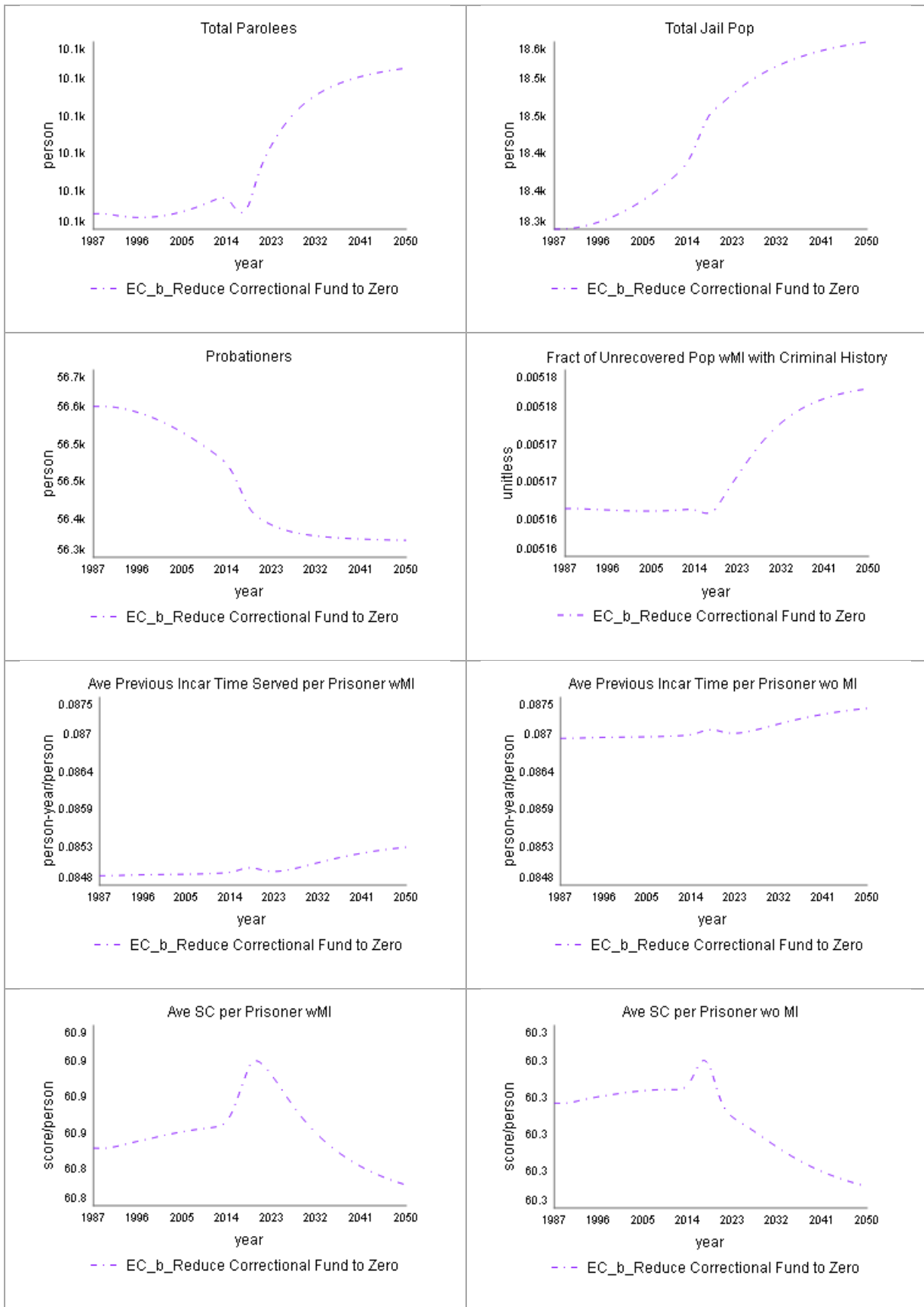


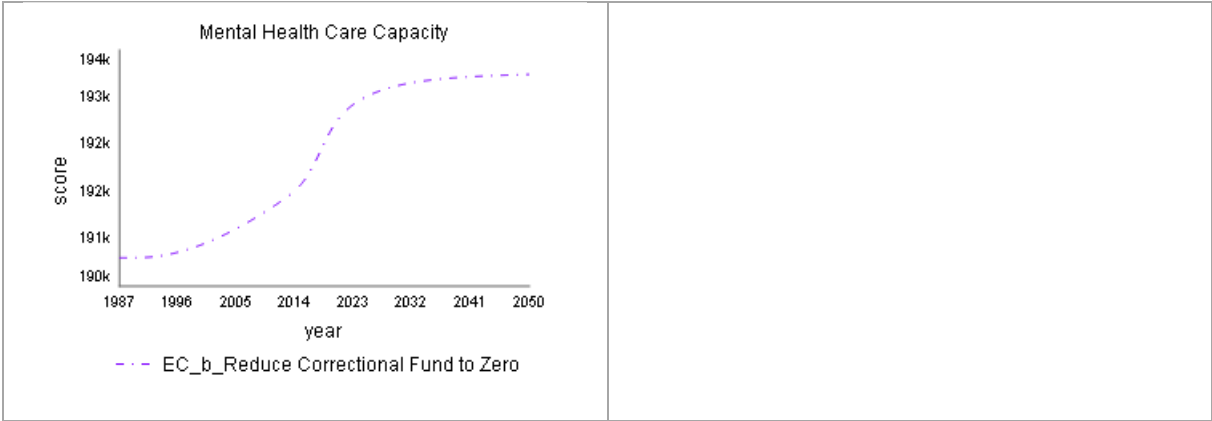


Extreme Condition Test 10b – Reduce Correctional Fund to Community Services to Zero

In this test, the correctional community service budget decreases to zero from 1988.





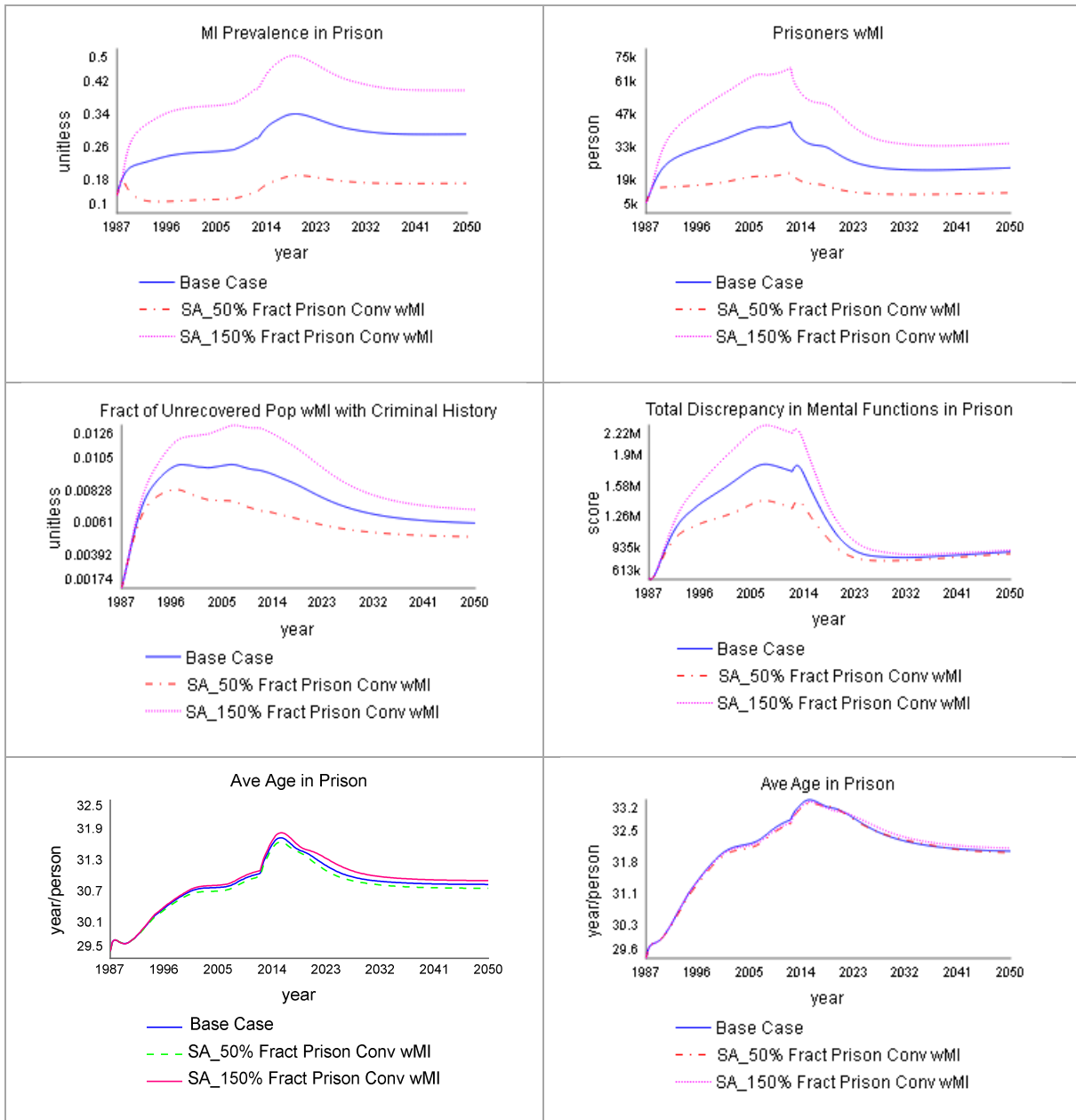


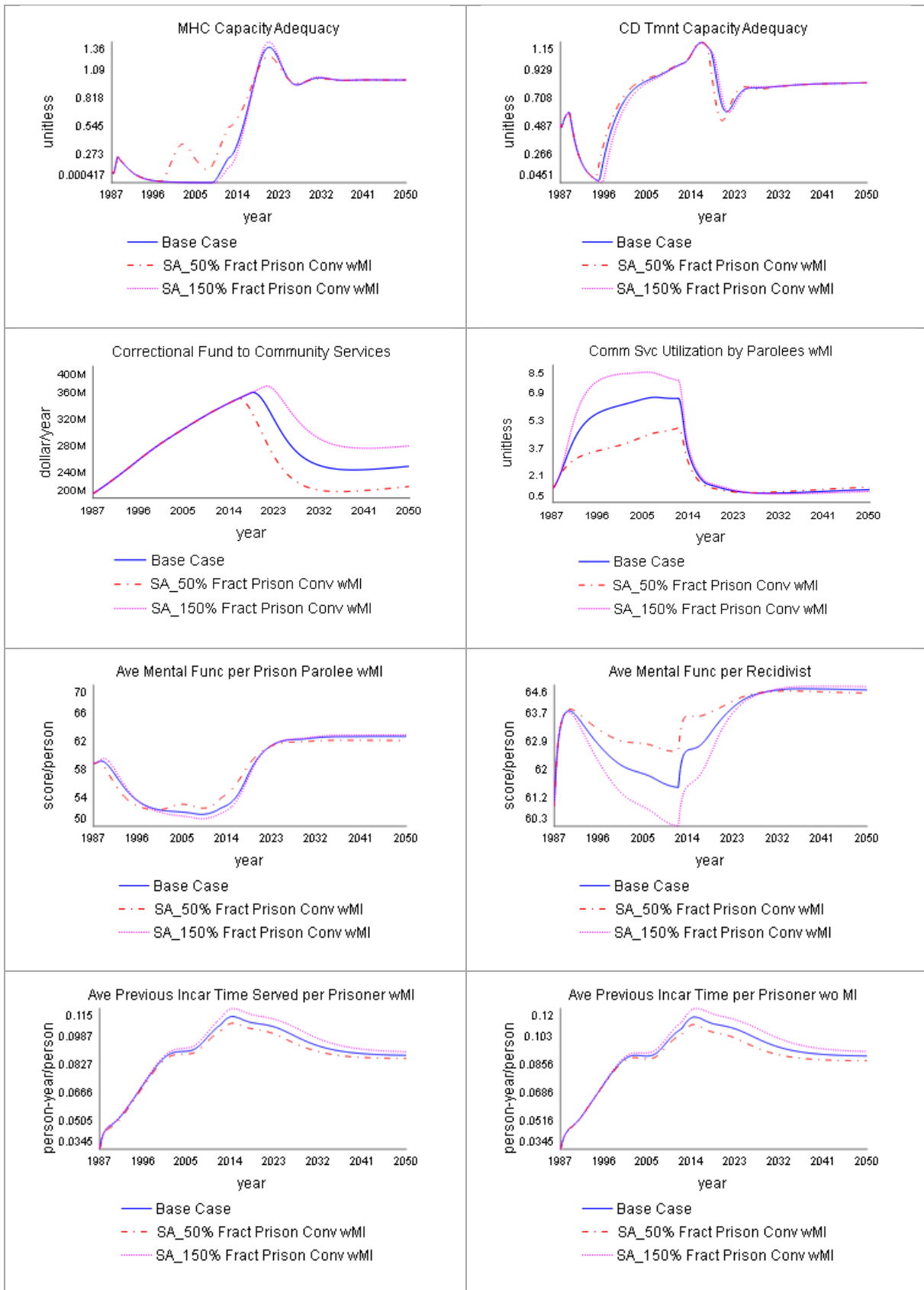
Appendix M – Sensitivity Analysis Results for the Full Model

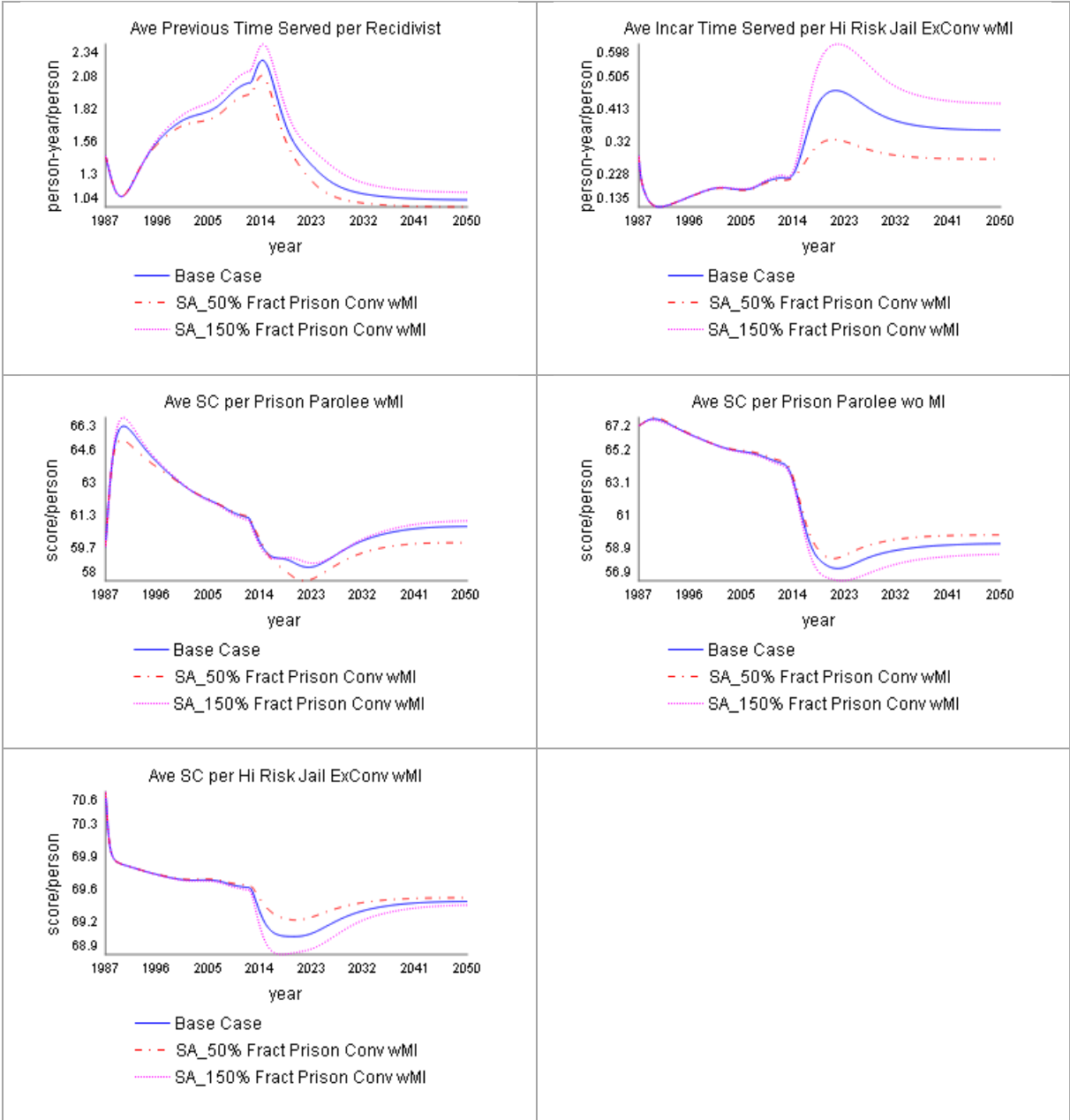
Sensitivity Analysis Test 1 – Fraction of Prison Convicts with Mental Illness

In this test, the “ref fract prison convicts wMI” parameter is varied between 50% and 150% of the constant value, which is 0.32, from 1988 onwards.

Selected Results



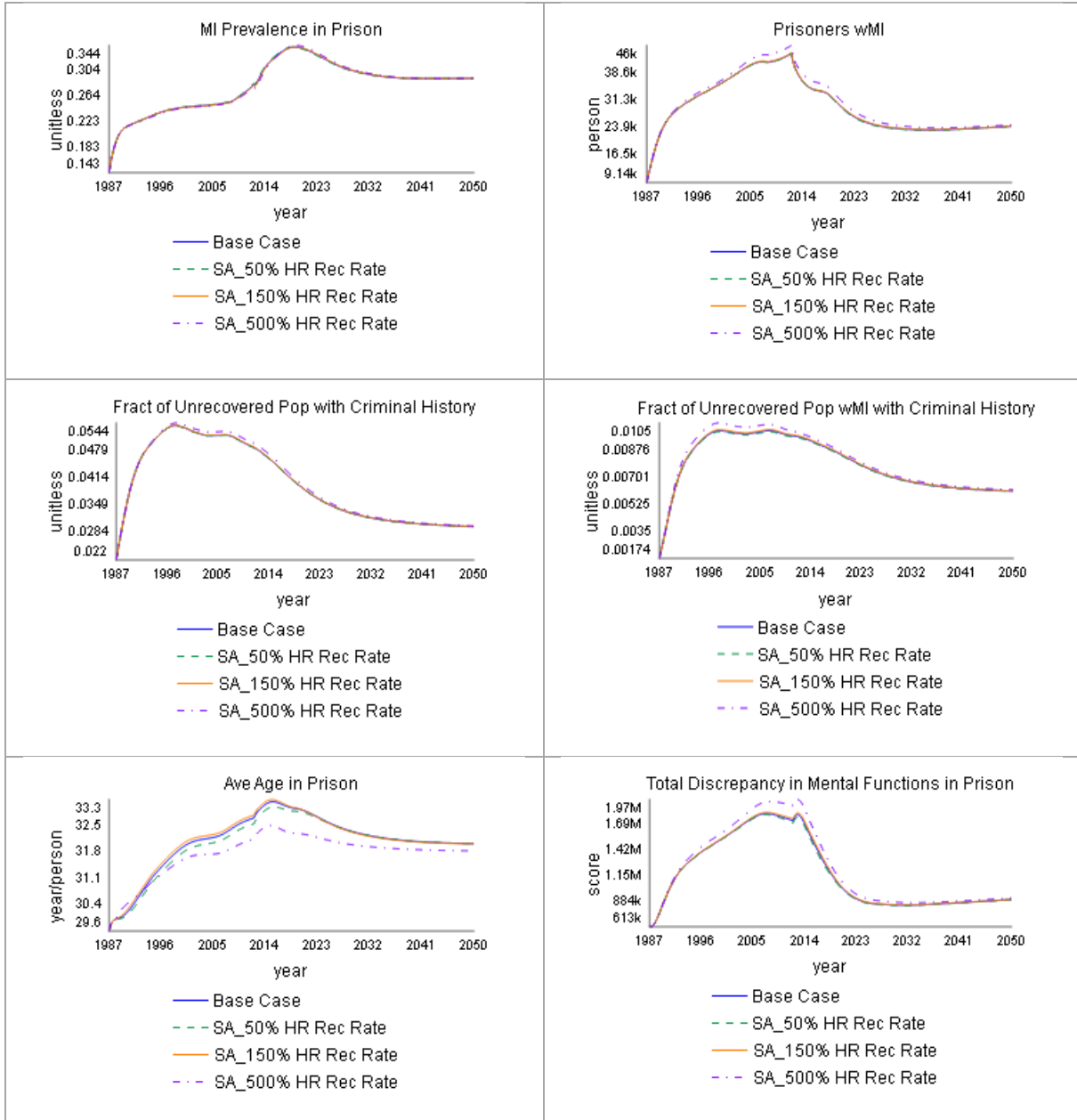


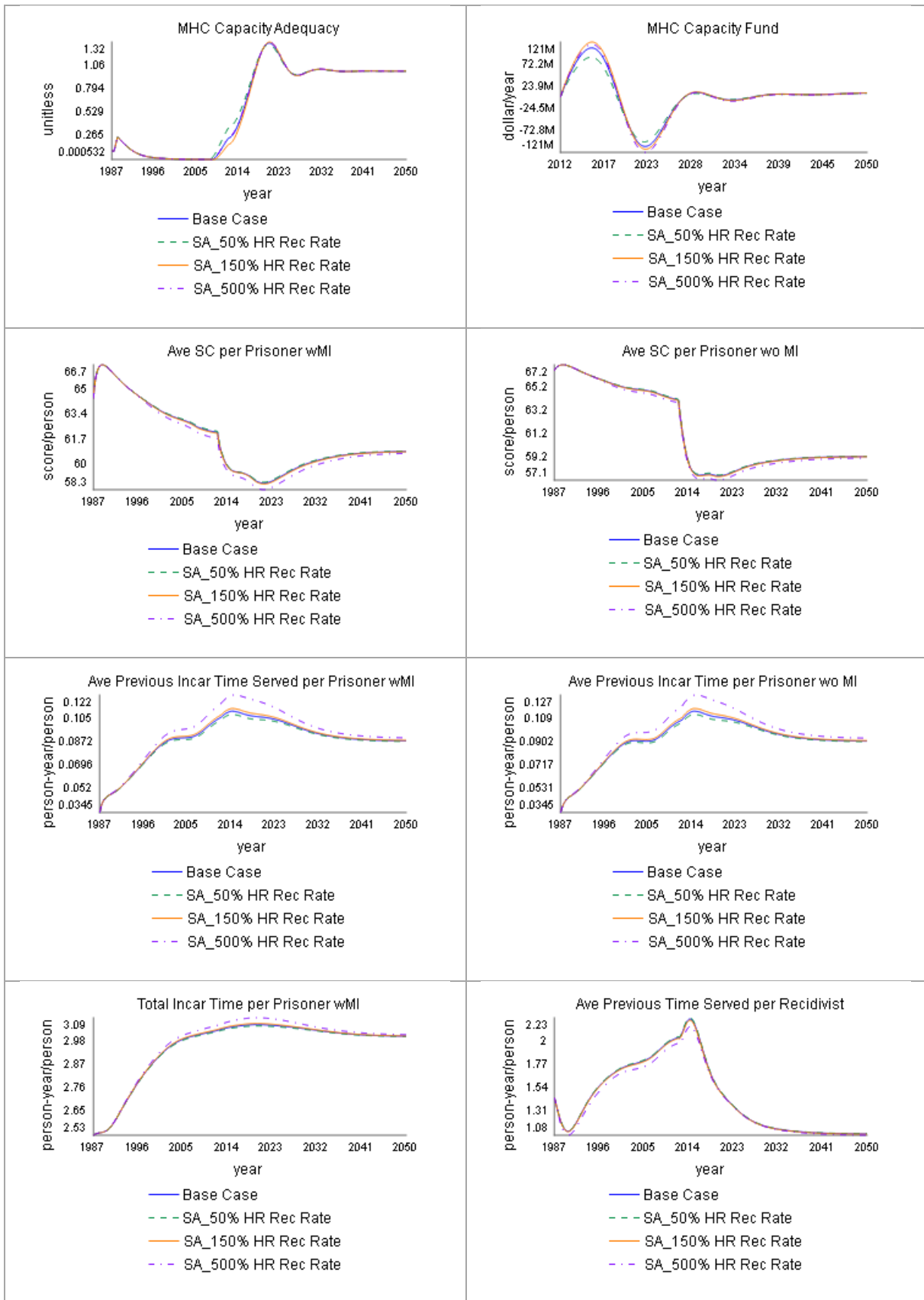


Sensitivity Analysis Test 2 – High Risk Prison Ex-convict wMI Recidivism Rate

In this test, the “hi risk exConv wMI recidivism rate” parameter is varied between 50%, 150%, and 500% of the constant value, which is 0.04, from 1988 onwards.

Selected Results

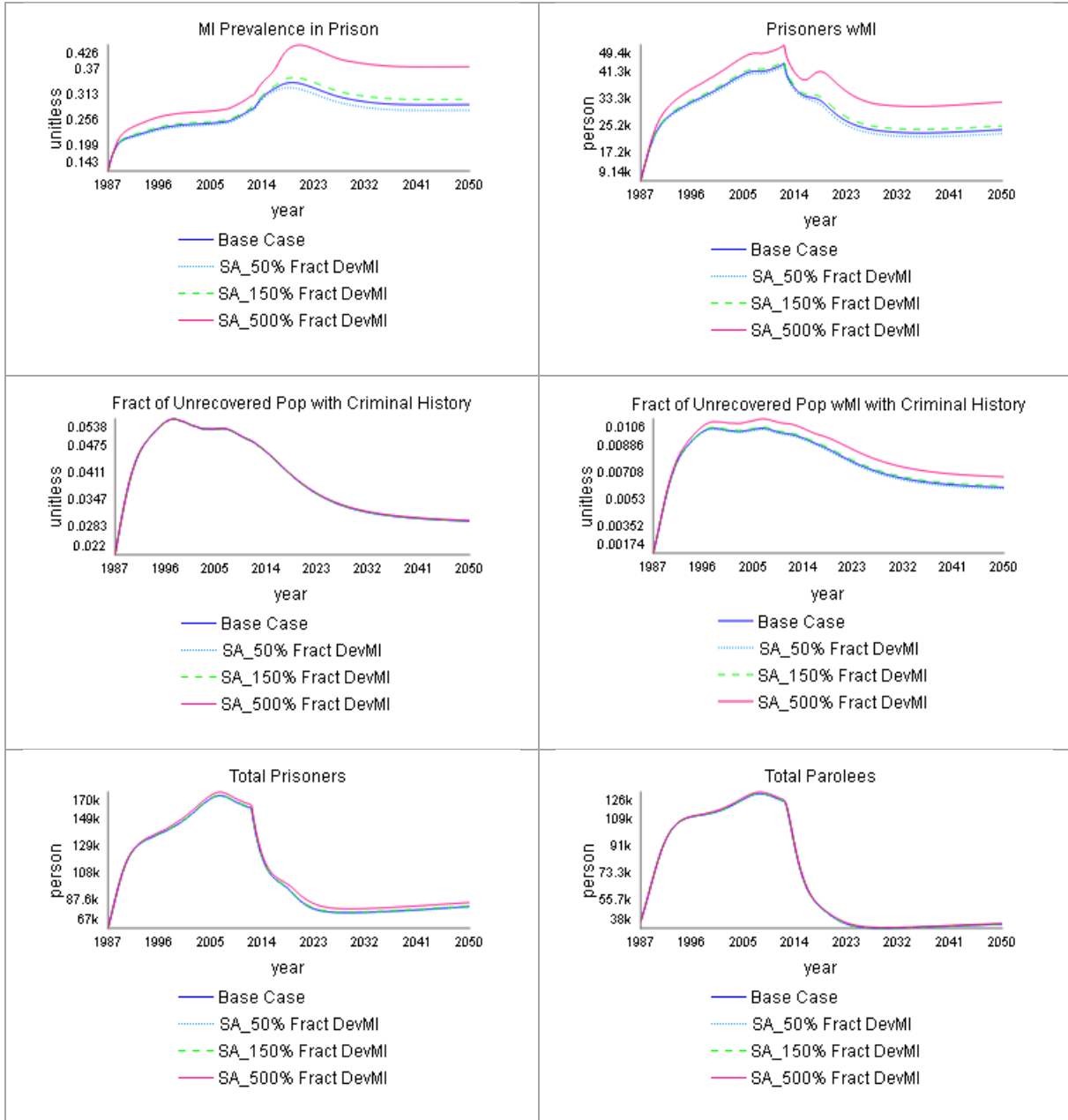


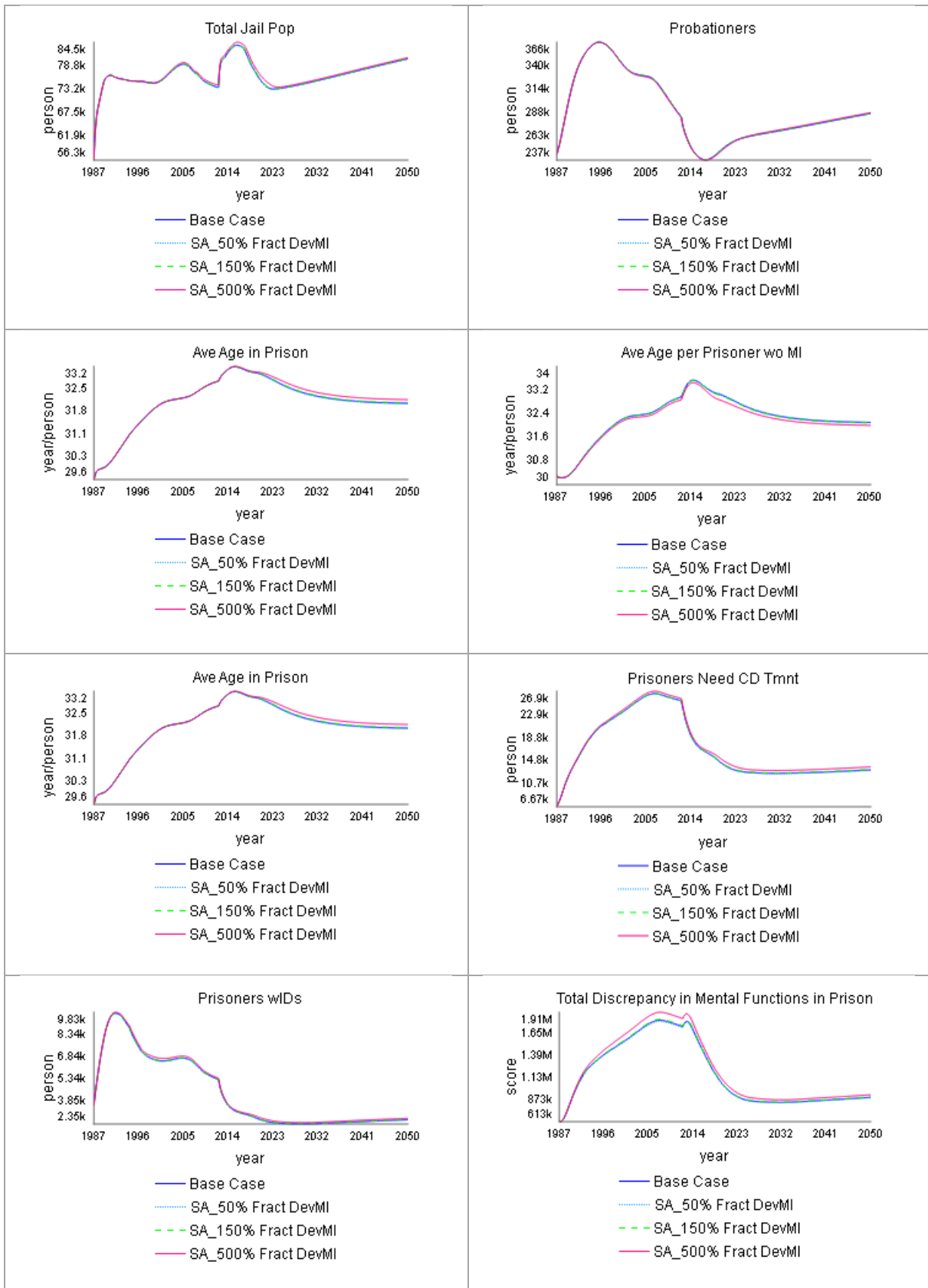


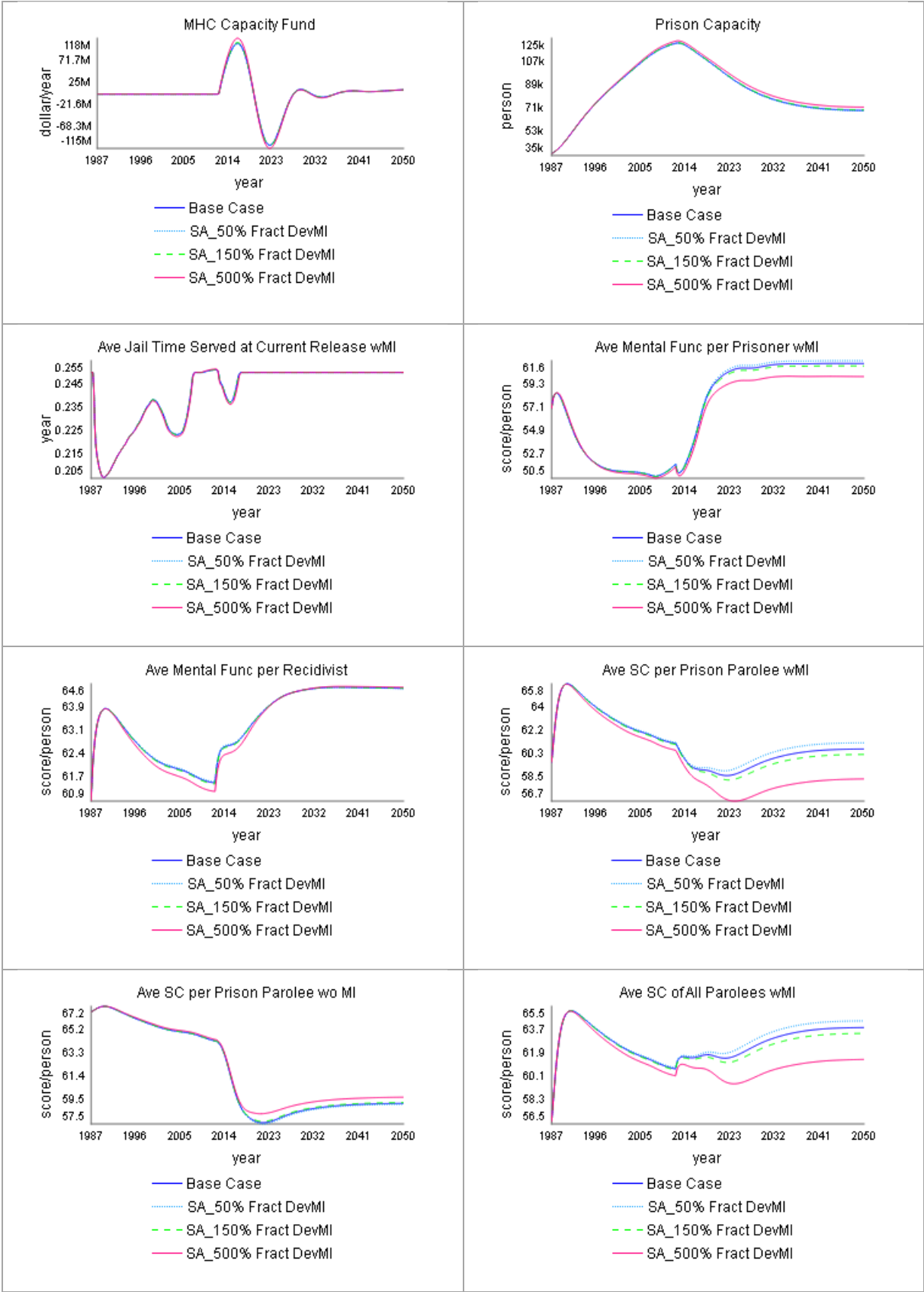
Sensitivity Analysis Test 3 – Fraction of Prisoners Develop Mental Illness

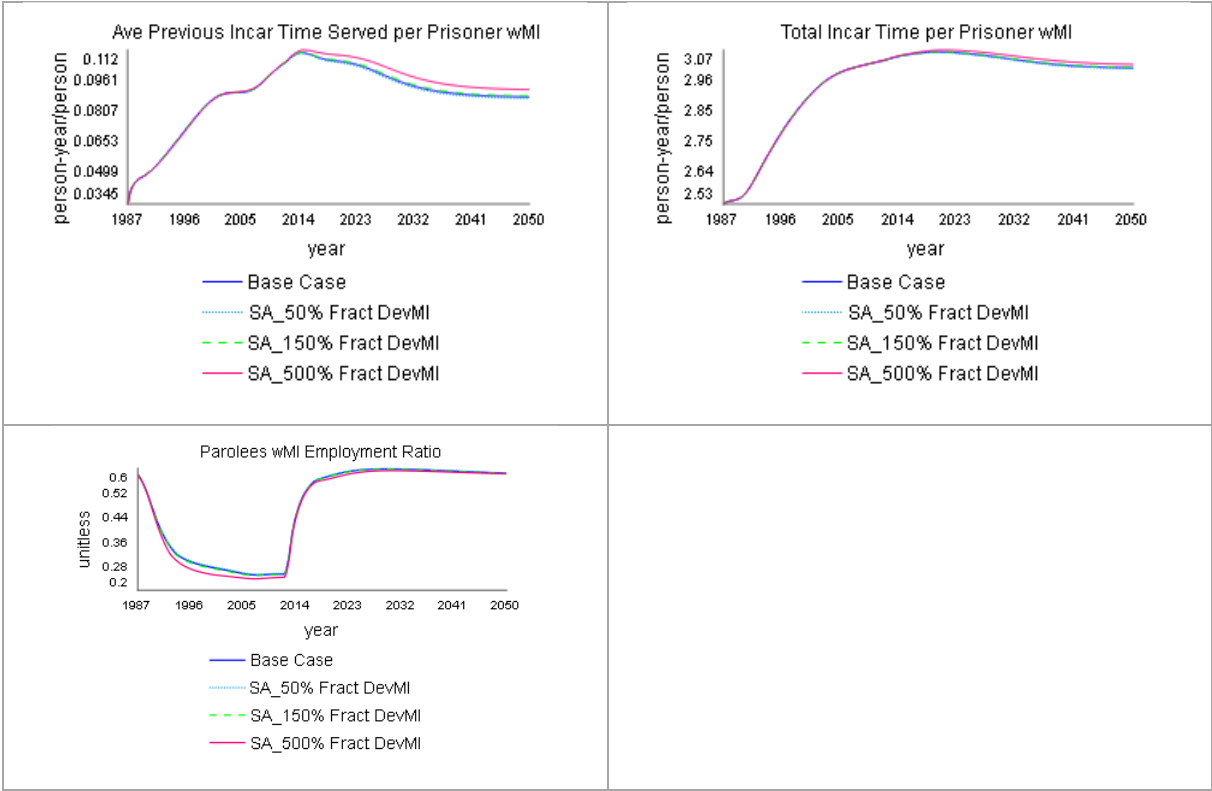
In this test, the “ref fract prisoners devMI” parameter is varied between 50%, 150%, and 500% of the constant value, which is 0.02, from 1988 onwards.

Selected Results





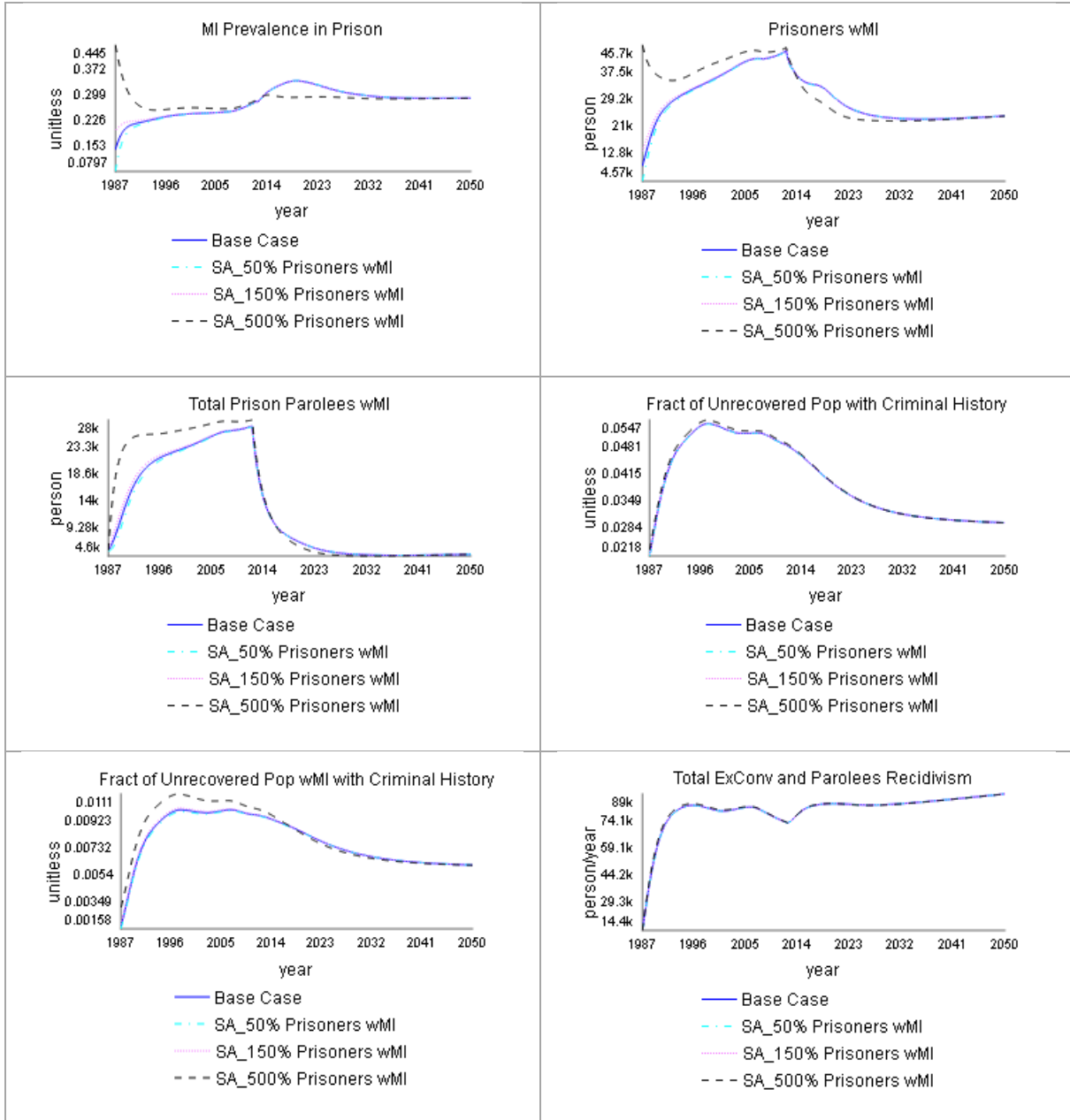


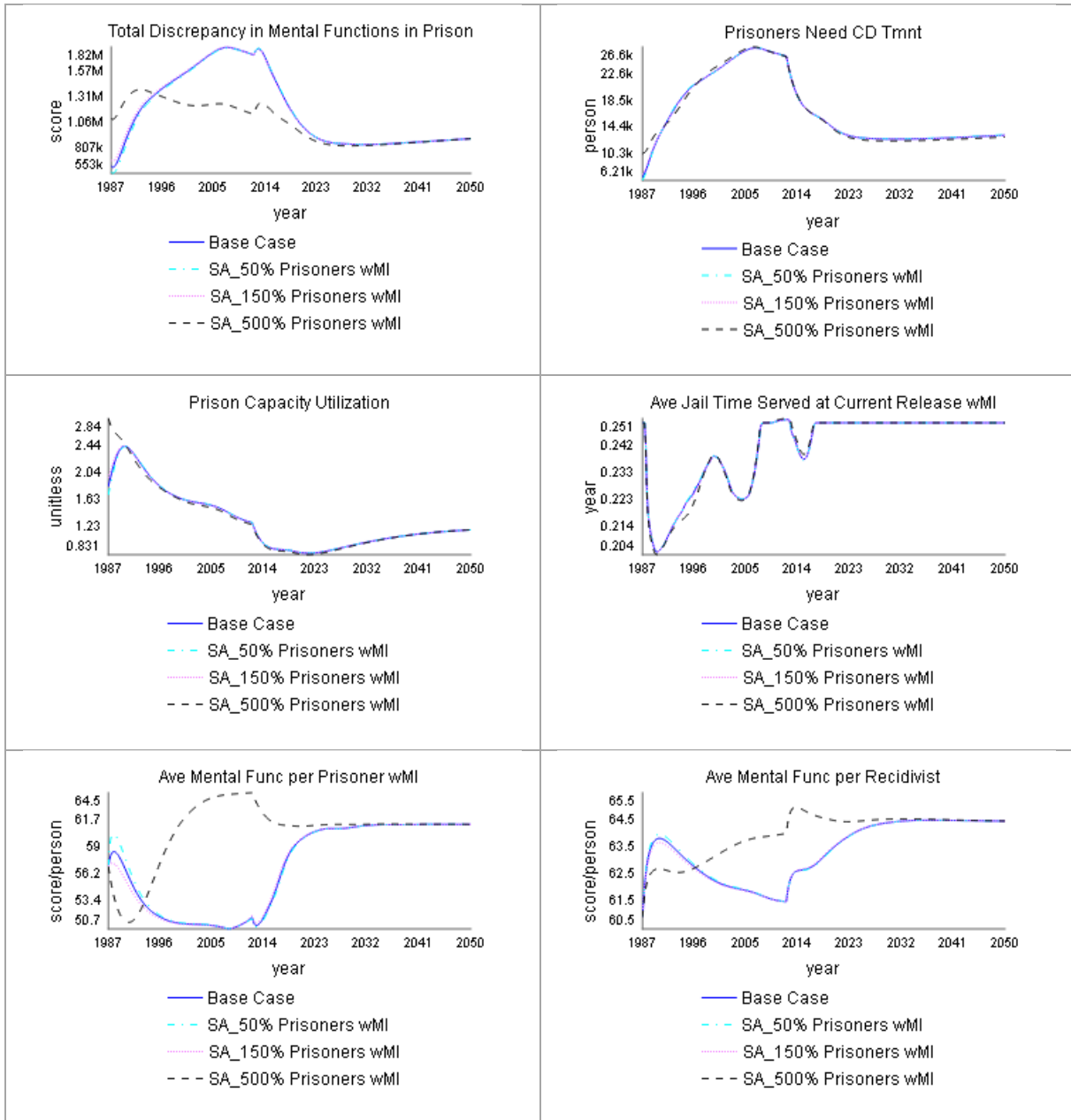


Sensitivity Analysis Test 4 – Initial Value of Prisoners with Mental Illness

In this test, the initial value for the Prisoners wMI stock is varied between 50%, 150%, and 500% of the constant value, which is 8,018, from 1987 onwards.

Selected Results

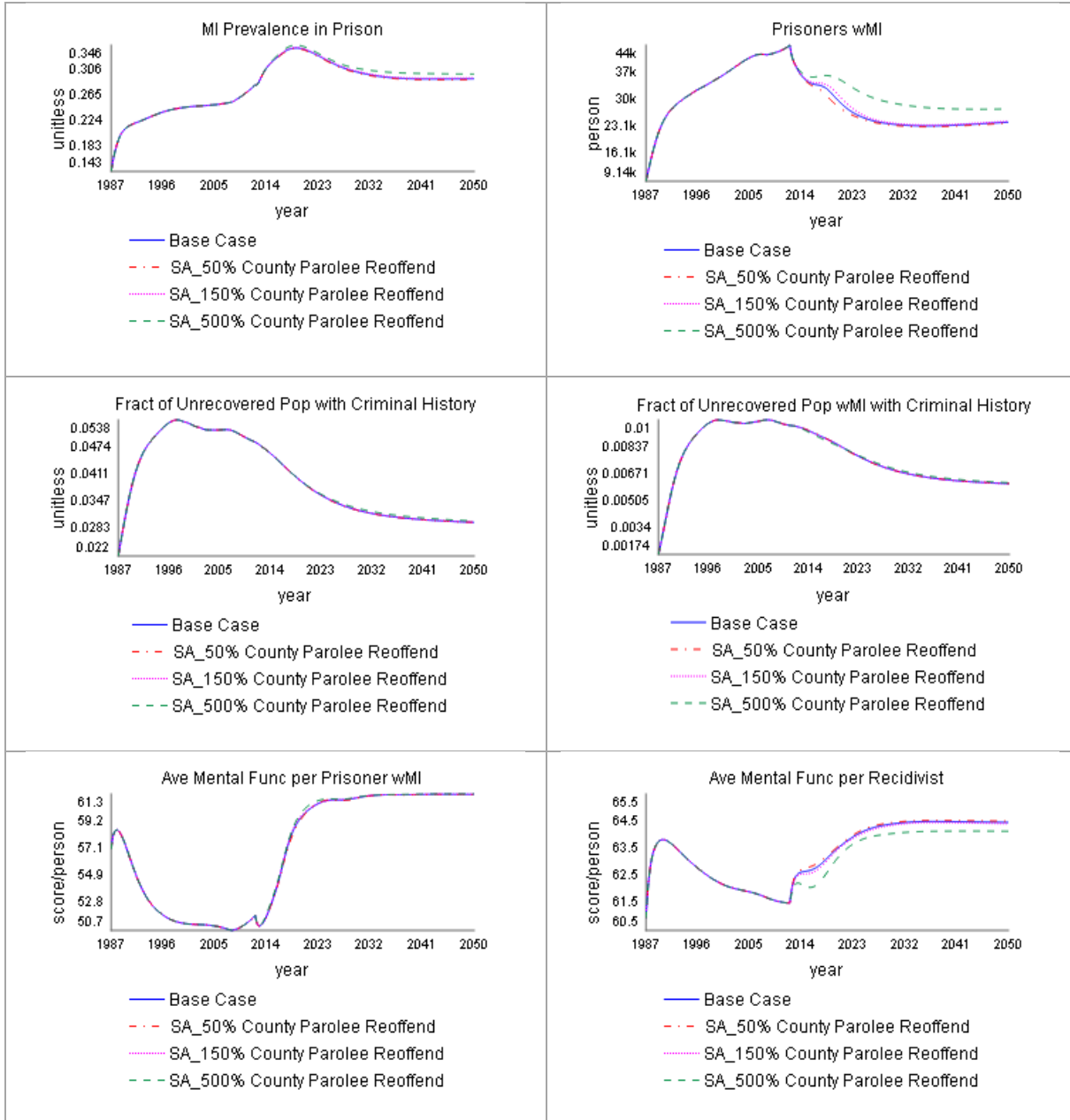


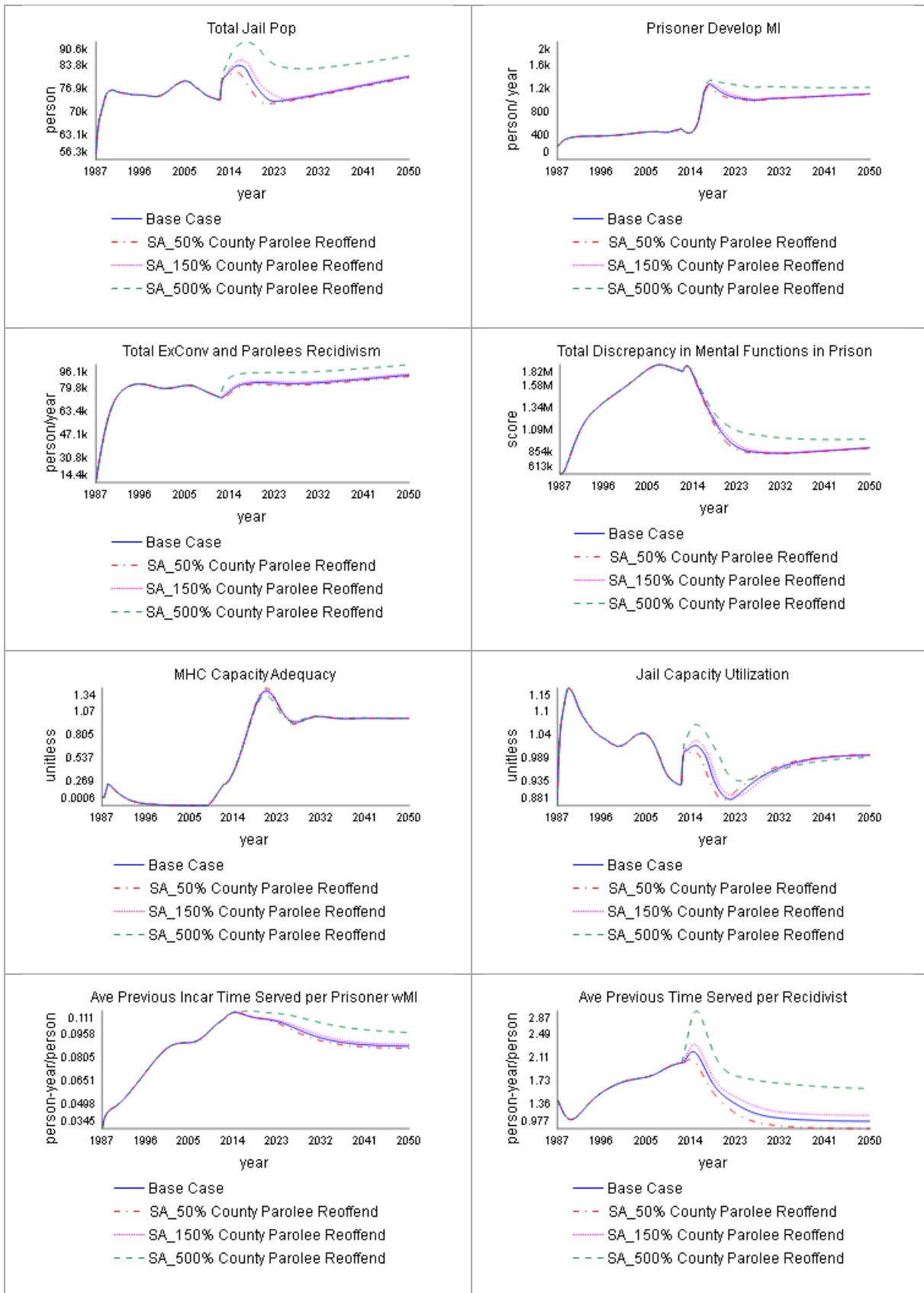


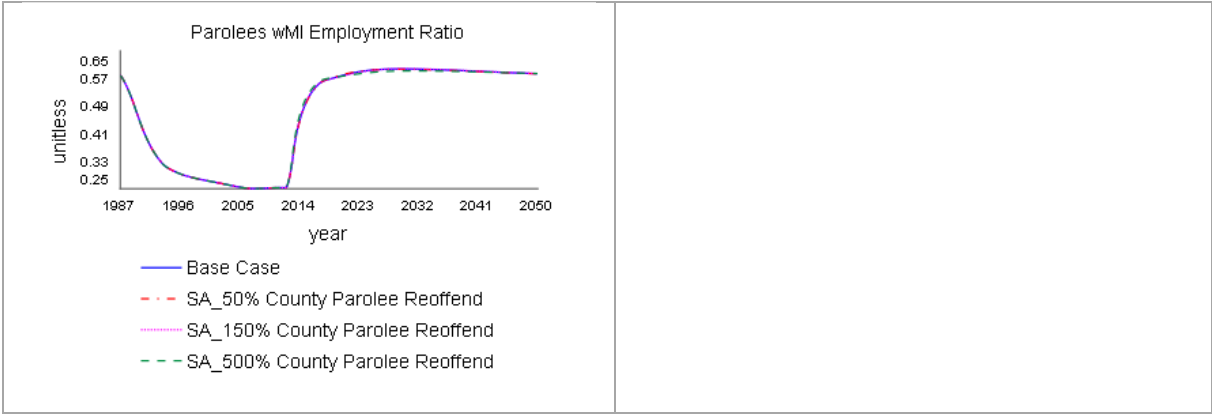
Sensitivity Analysis Test 5 – Fraction of County Parolees Reoffend

In this test, the “fract county parolee reoffend” parameter is varied between 50%, 150%, and 500% of the constant value, which is 0.15, from 2012 onwards.

Selected Results



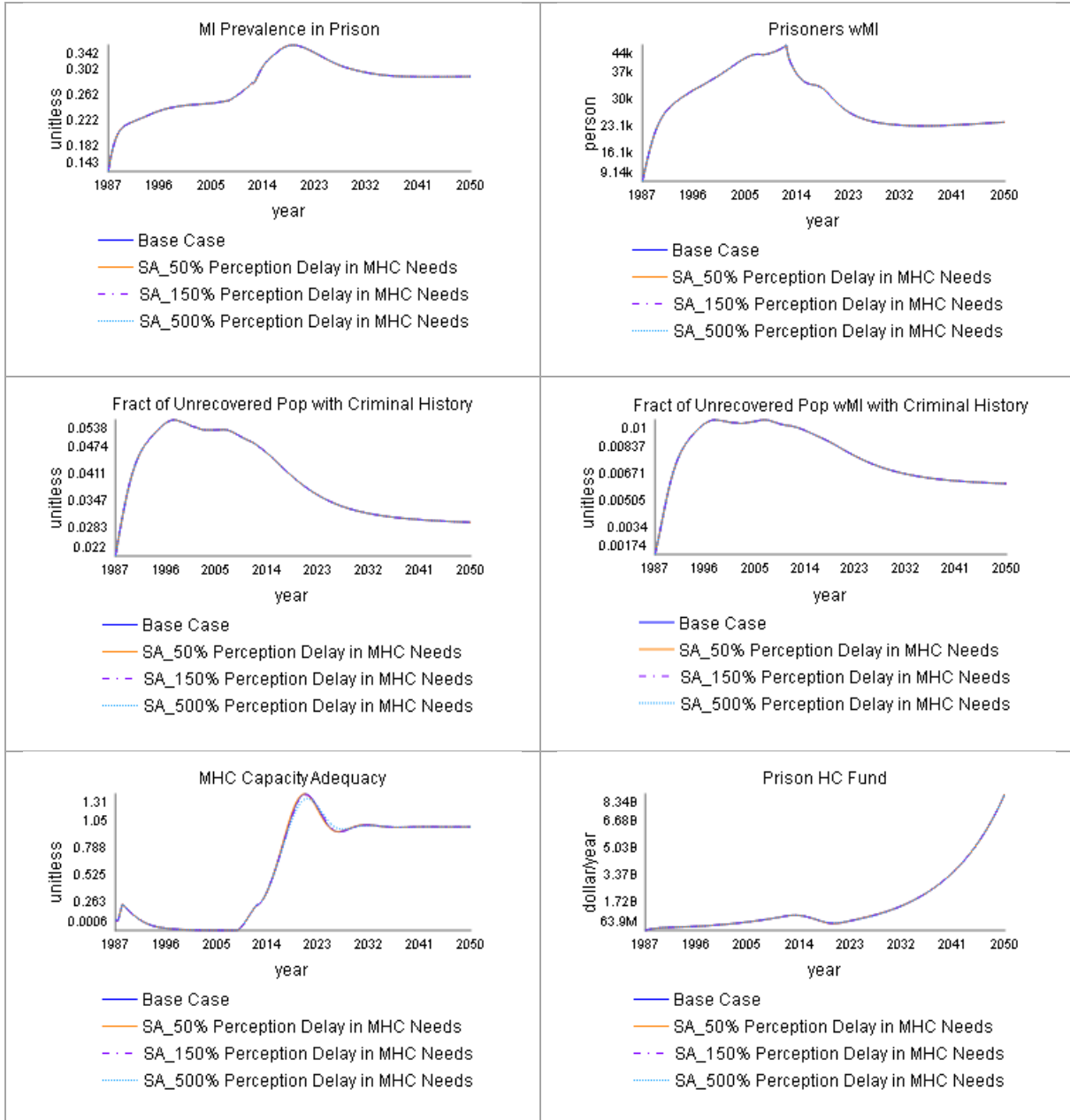


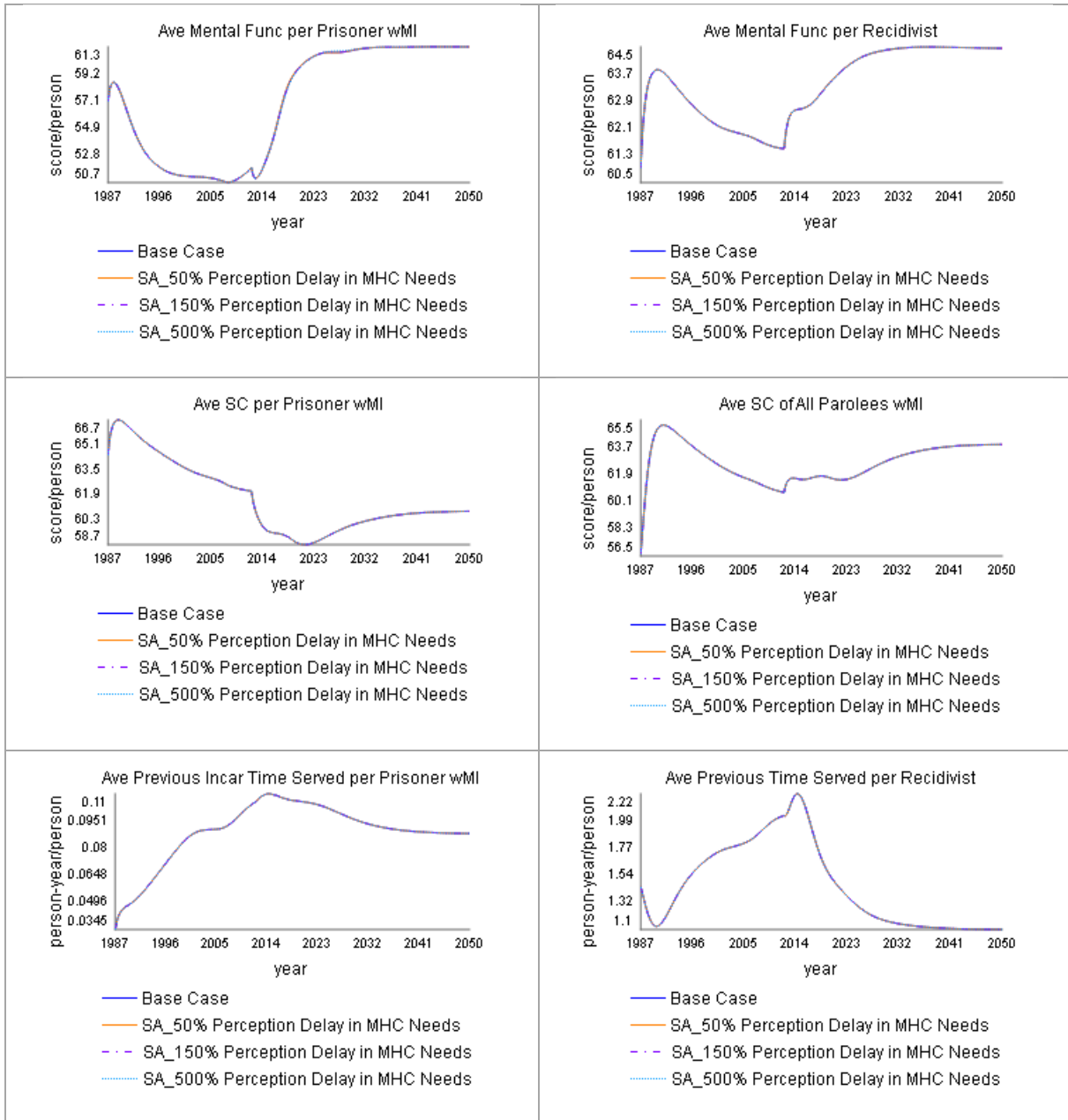


Sensitivity Analysis Test 6 – New Time to Perceive Mental Health Care Needs

In this test, the “ref perception delay in MHC needs” parameter is varied between 50%, 150%, and 500% of the constant value, which is 4 years, from 2012 onwards.

Selected Results

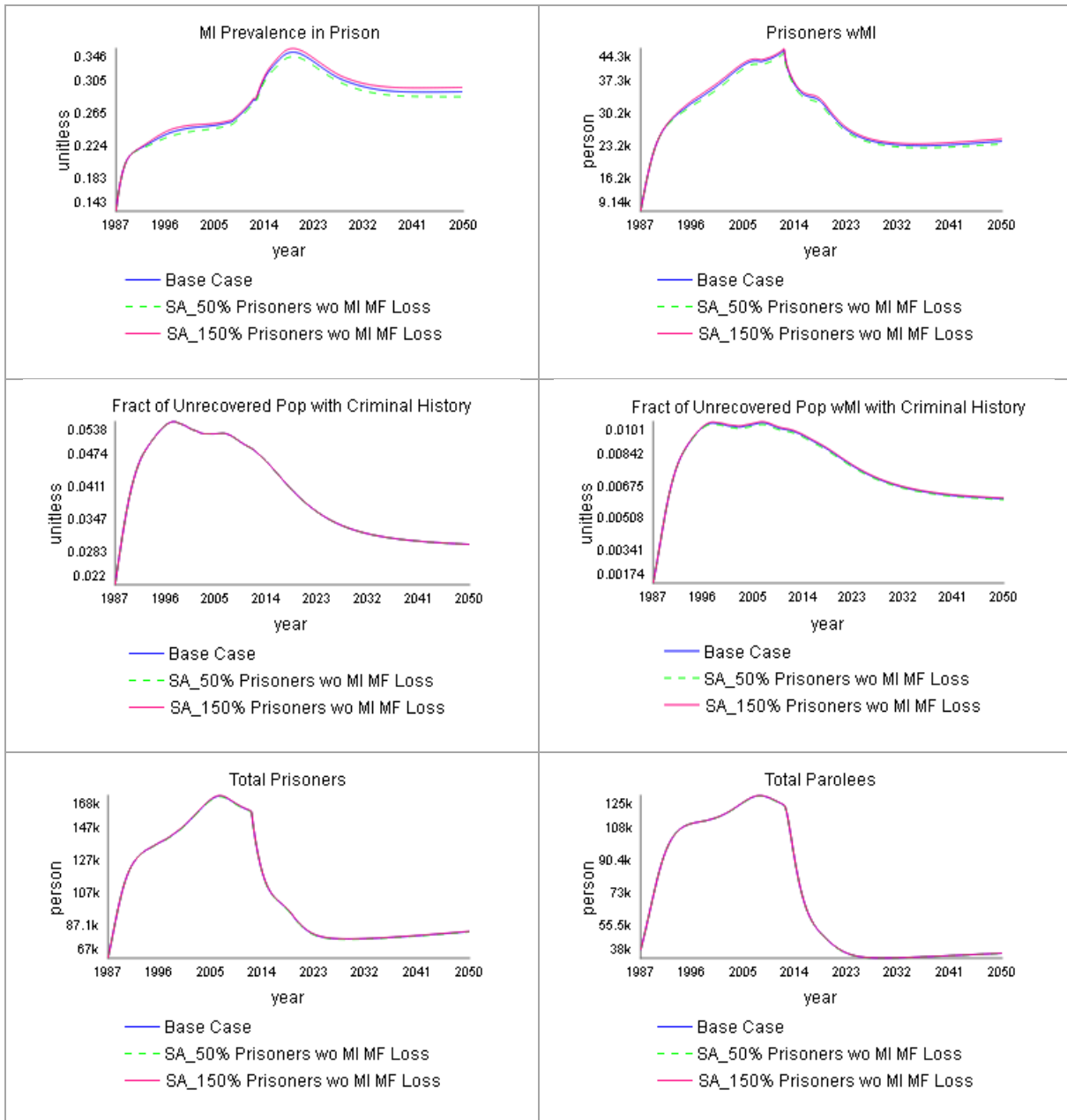


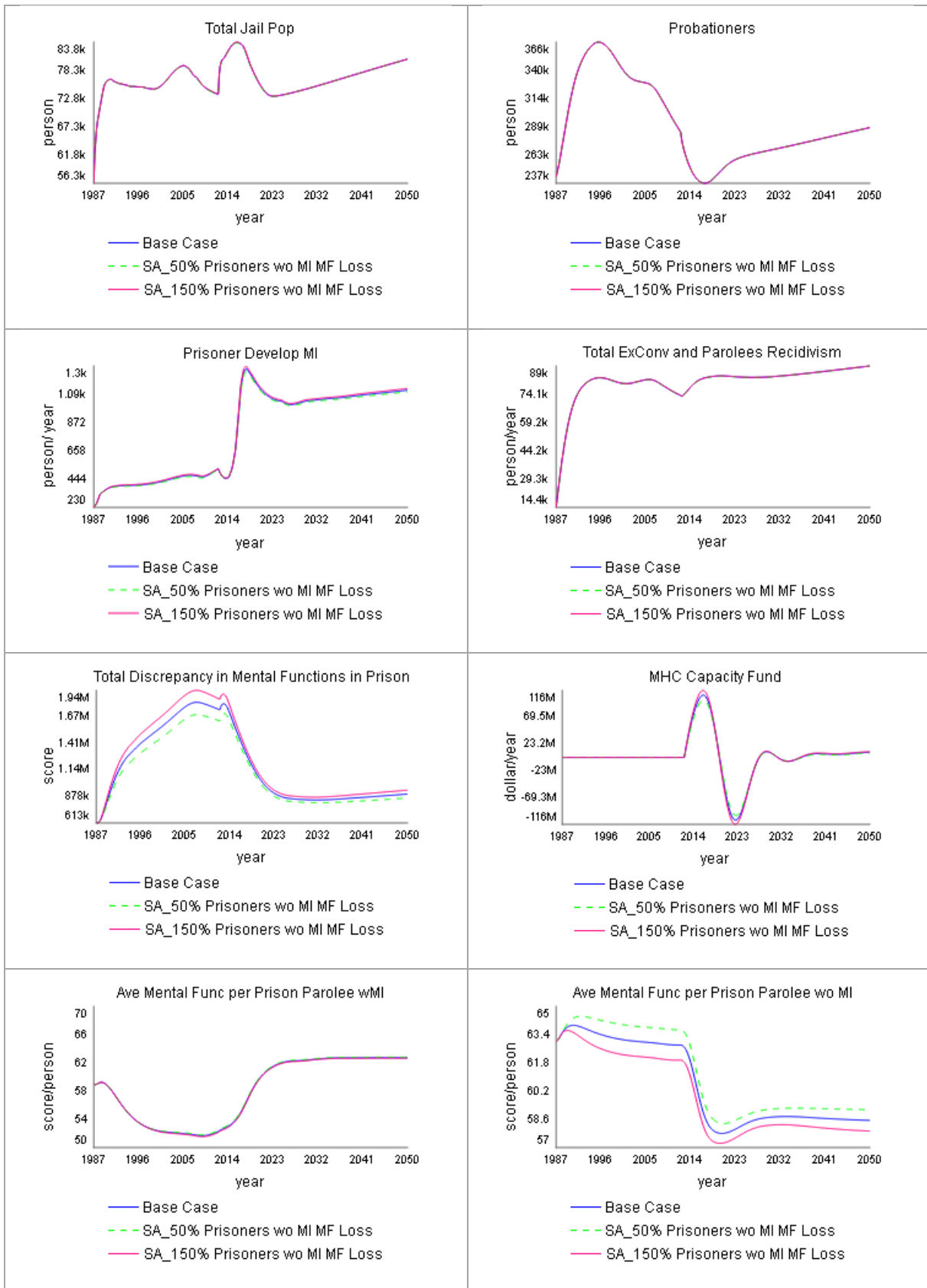


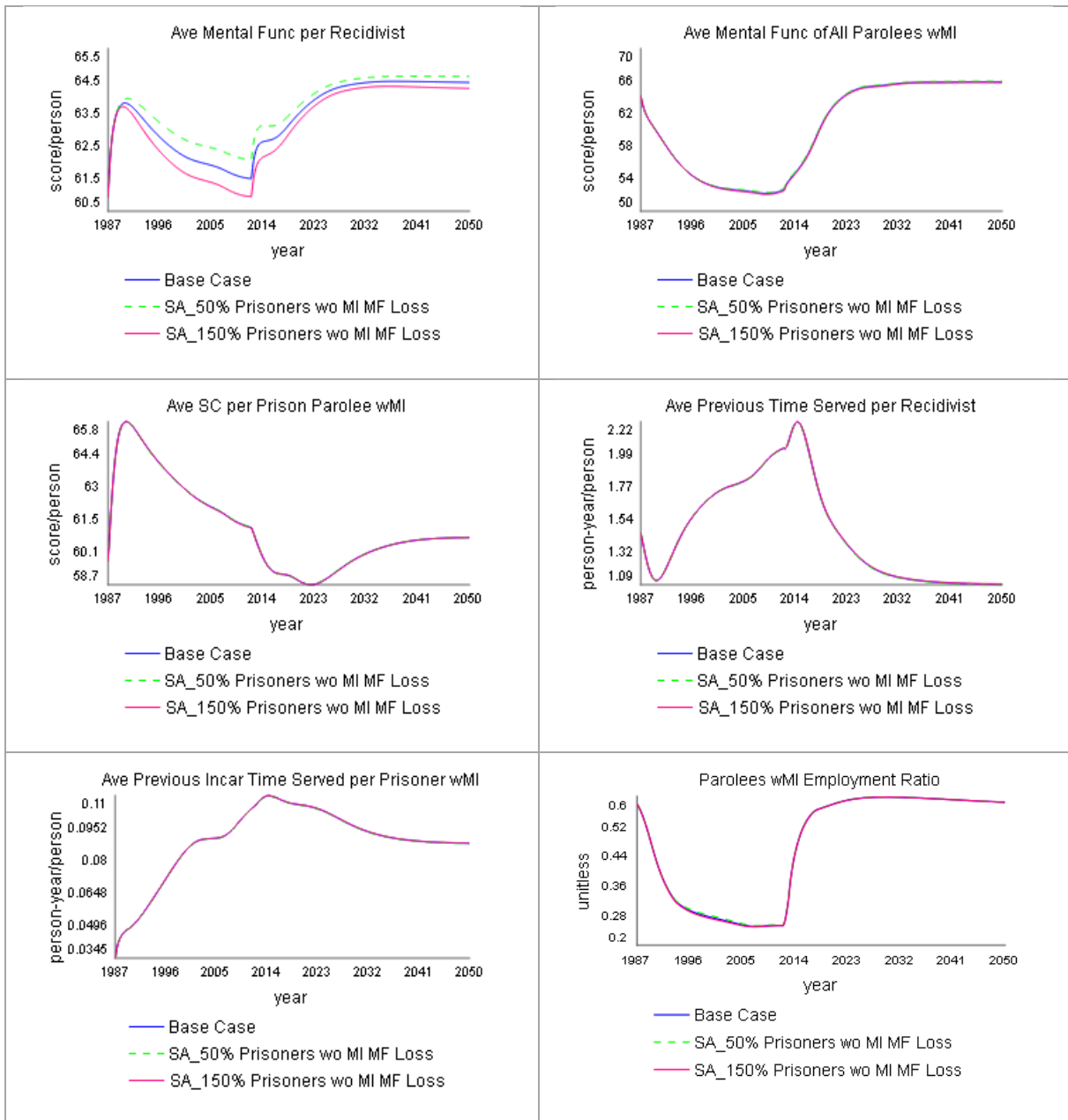
Sensitivity Analysis Test 7 – Prisoners without Mental Illness’ Mental Functions Loss per Year

In this test, the “prisoner wo MI mental func loss per year” parameter is varied between 50% and 150% of the constant value, which is two score per person per year, from 1988 onwards.

Selected Results



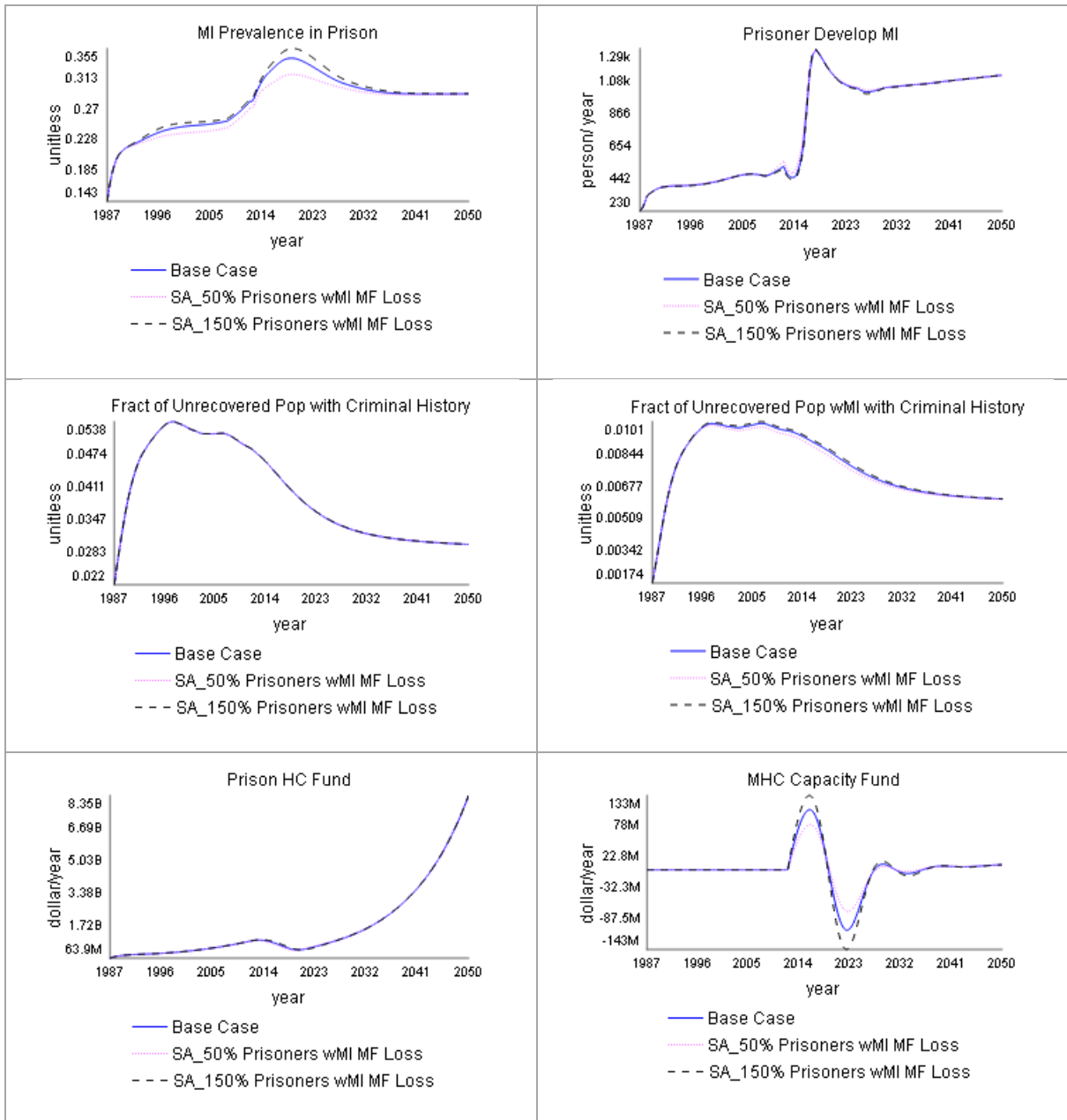


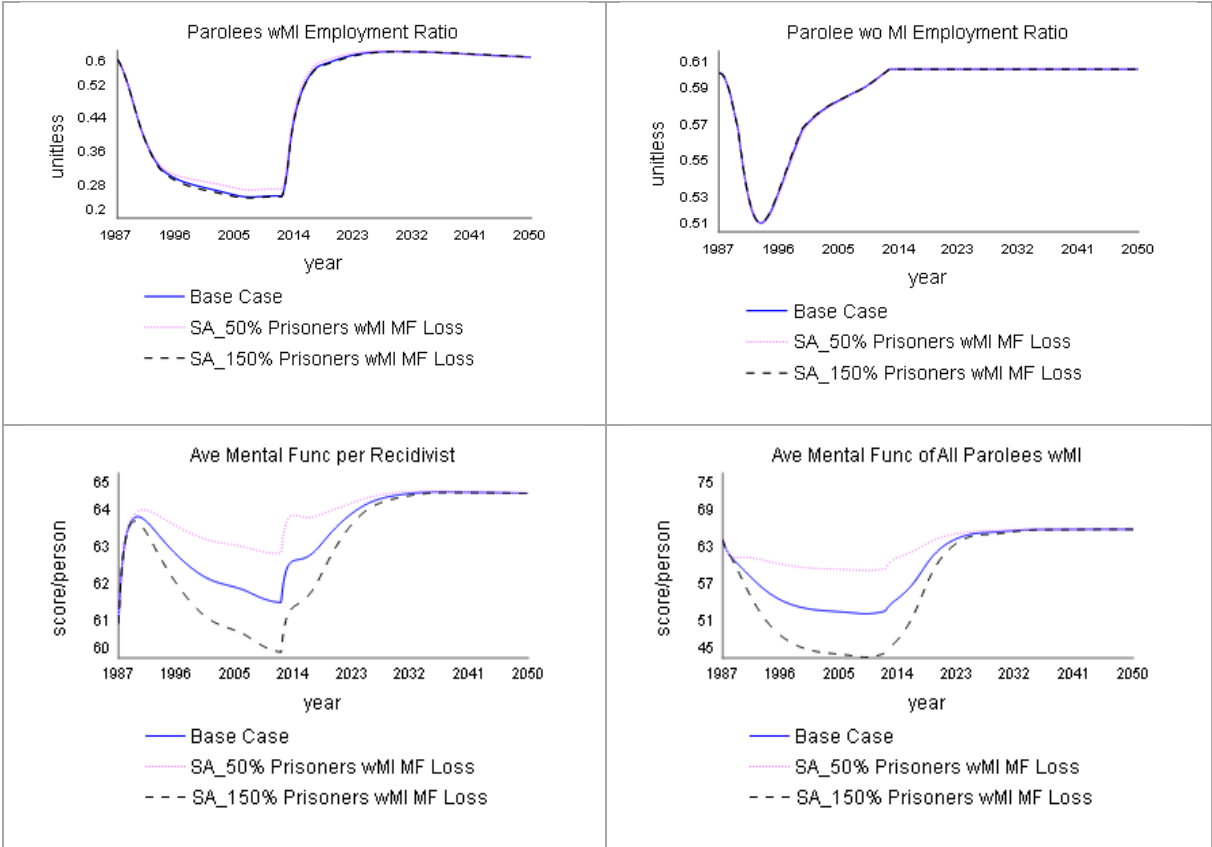


Sensitivity Analysis Test 8 – Prisoners with Mental Illness’ Mental Functions Loss per Year

In this test, the “prisoner wMI mental func loss per year” parameter is varied between 50% and 150% of the constant value, which is two score per person per year, from 1988 onwards.

Selected Results

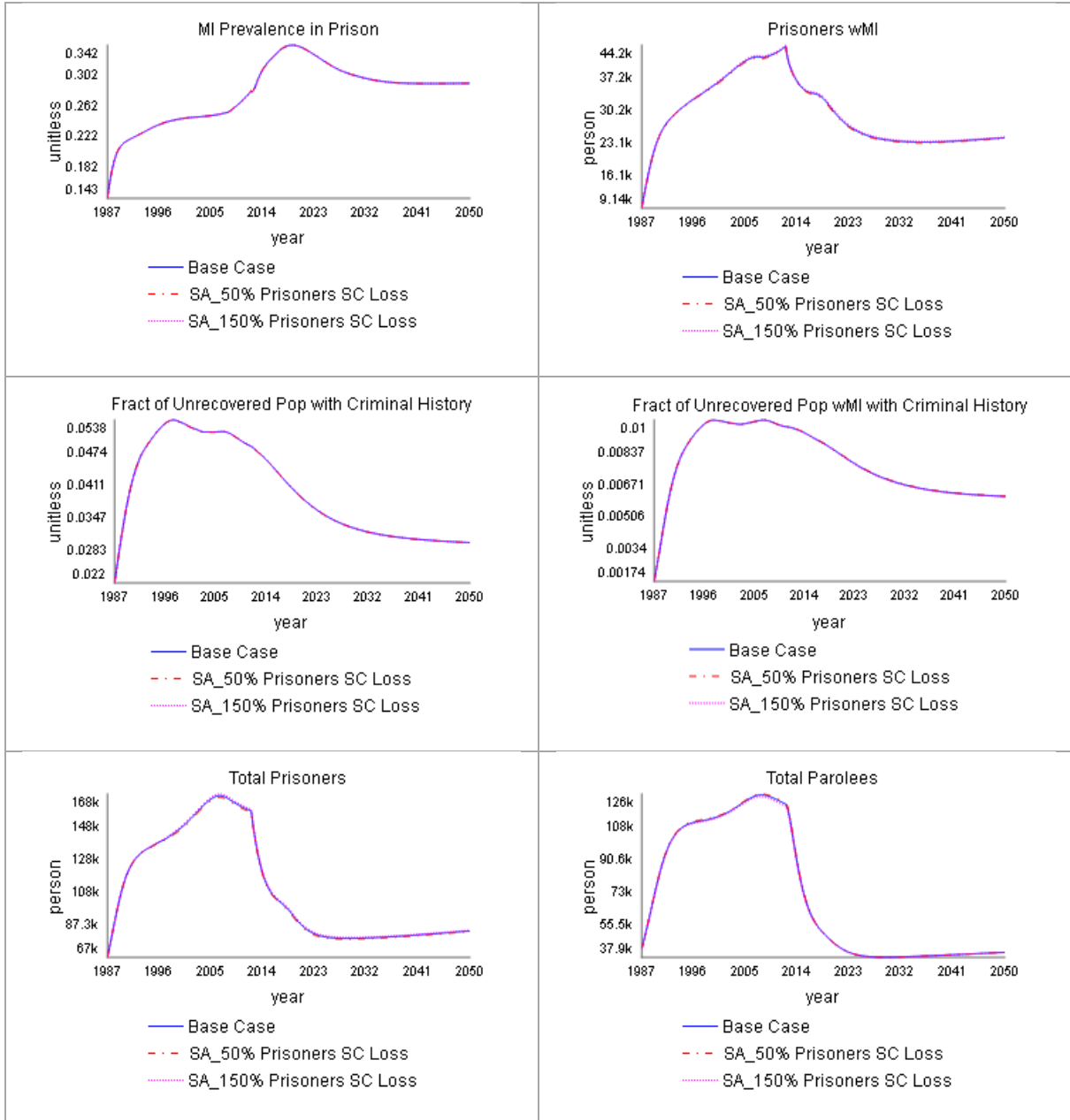


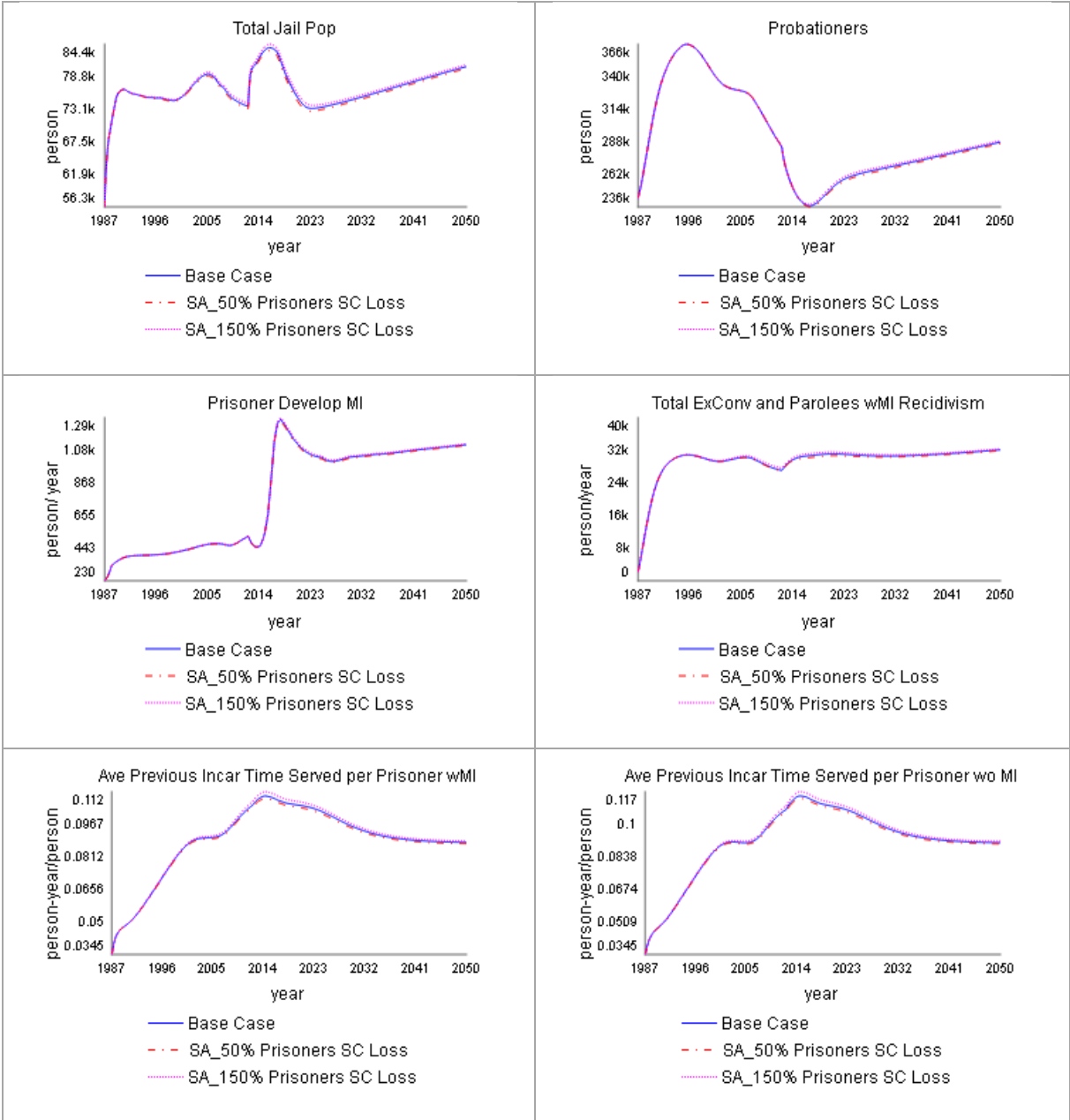


Sensitivity Analysis Test 9– Annual Prisoner’s Social Capital Loss per Year

In this test, the “ref annual prisoner SC loss per person” parameter is varied between 50% and 150% of the constant value, which is two score per person per year, from 1988 onwards.

Selected Results

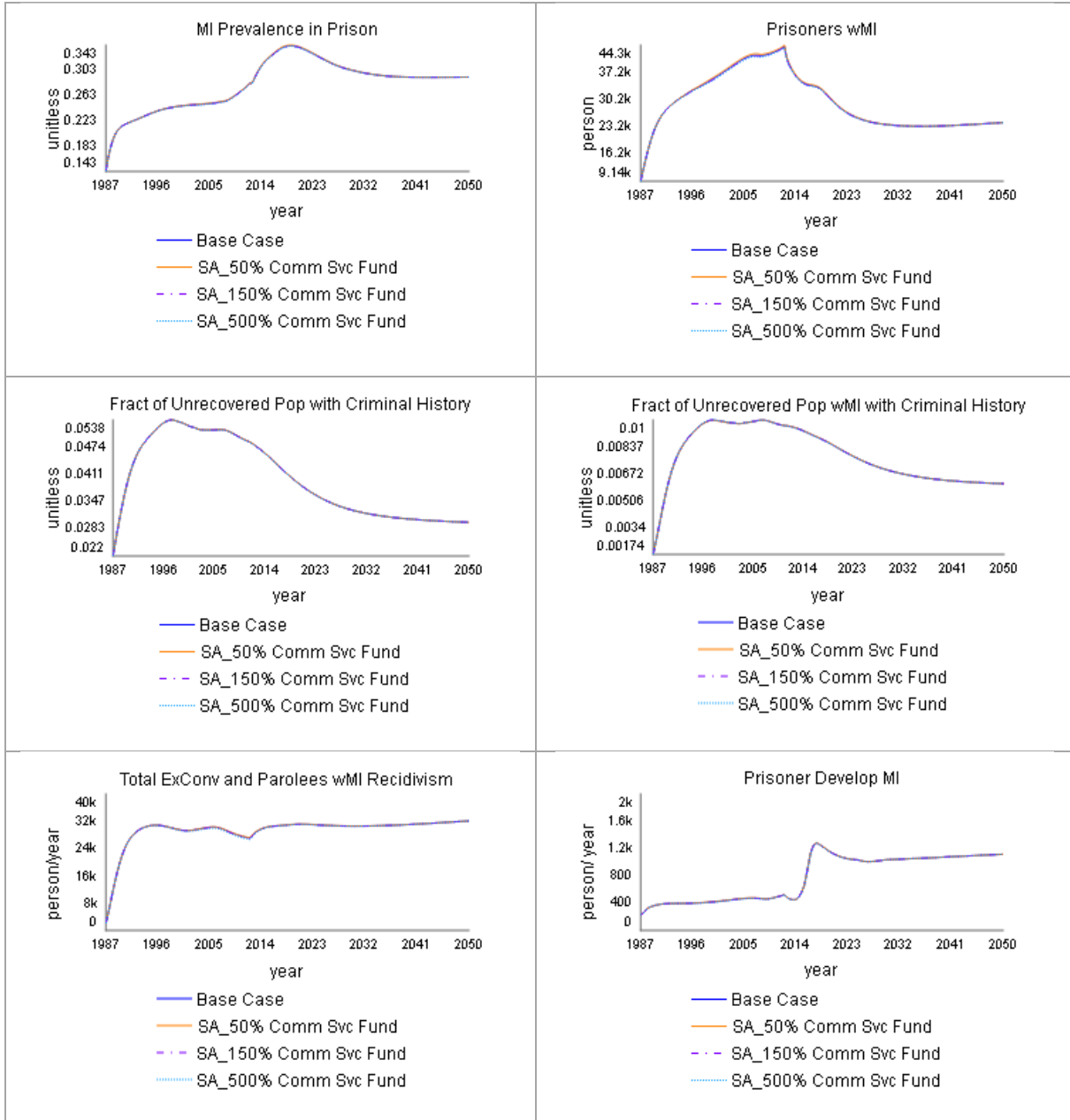


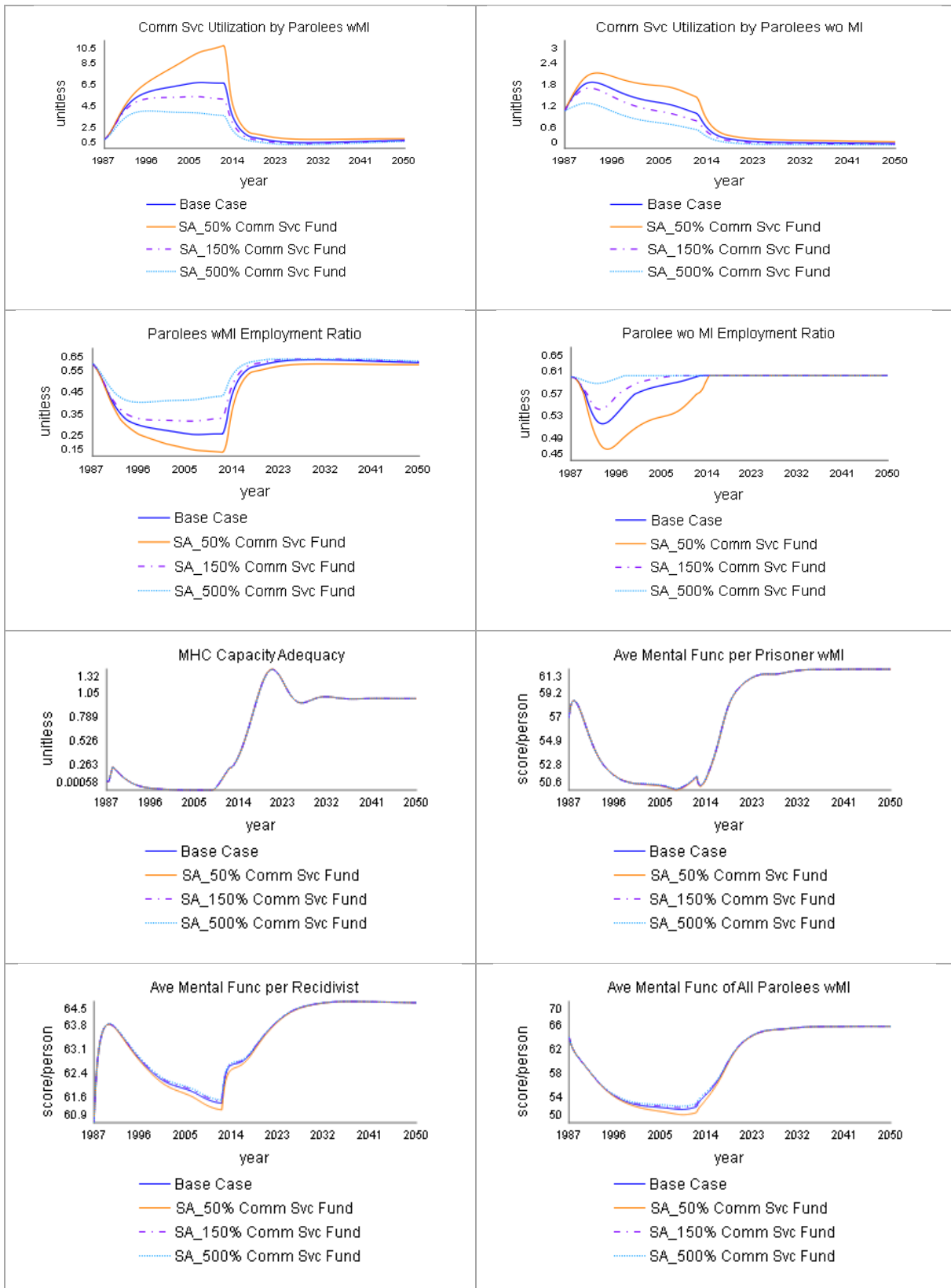


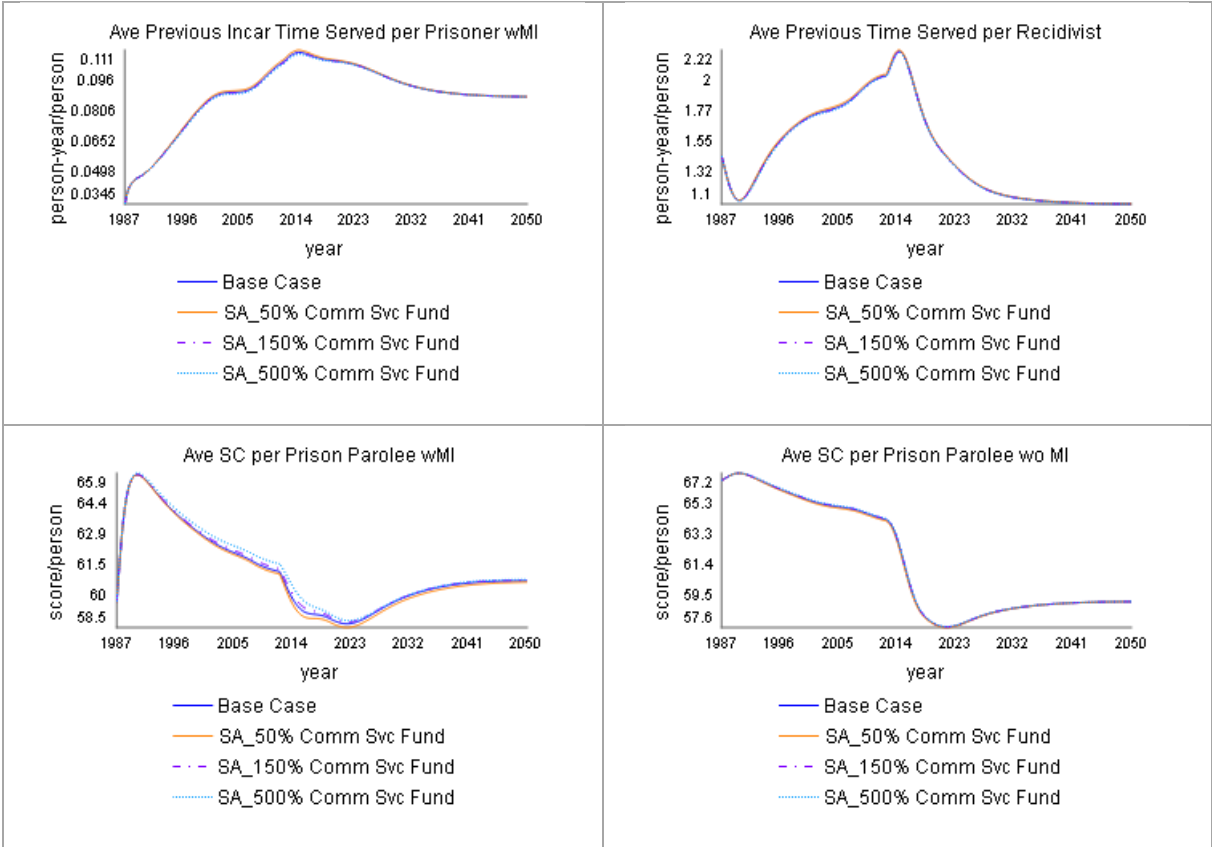
Sensitivity Analysis Test 10– Initial Value of Correctional Fund to Community Services

In this test, the initial value for the Correctional Fund to Community Services stock is varied between 50%, 150%, and 500% of the constant value, which is 8,018, from 1987 onwards.

Selected Results

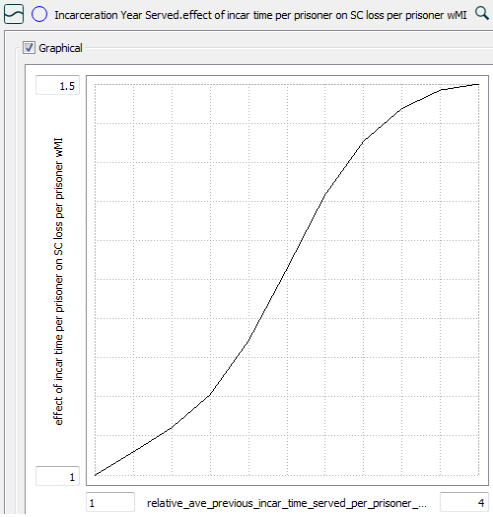
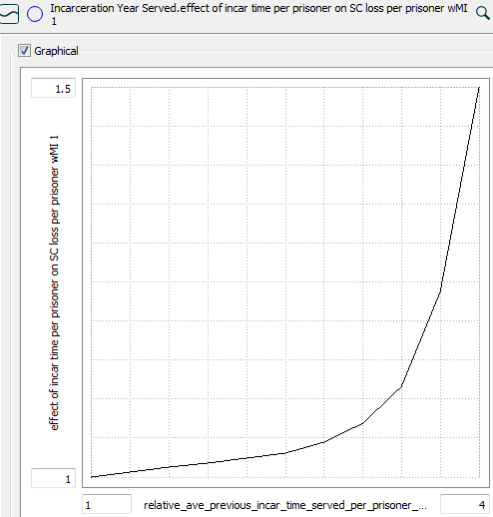
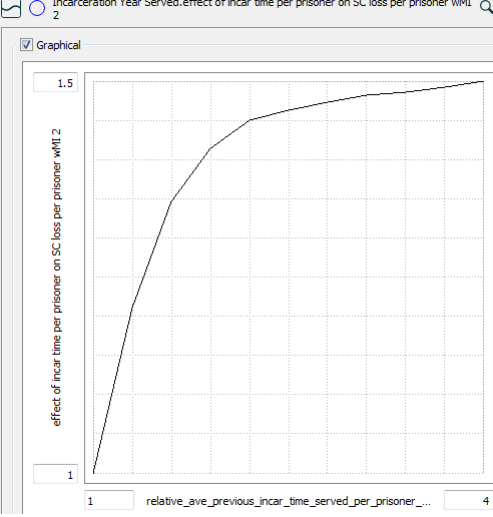




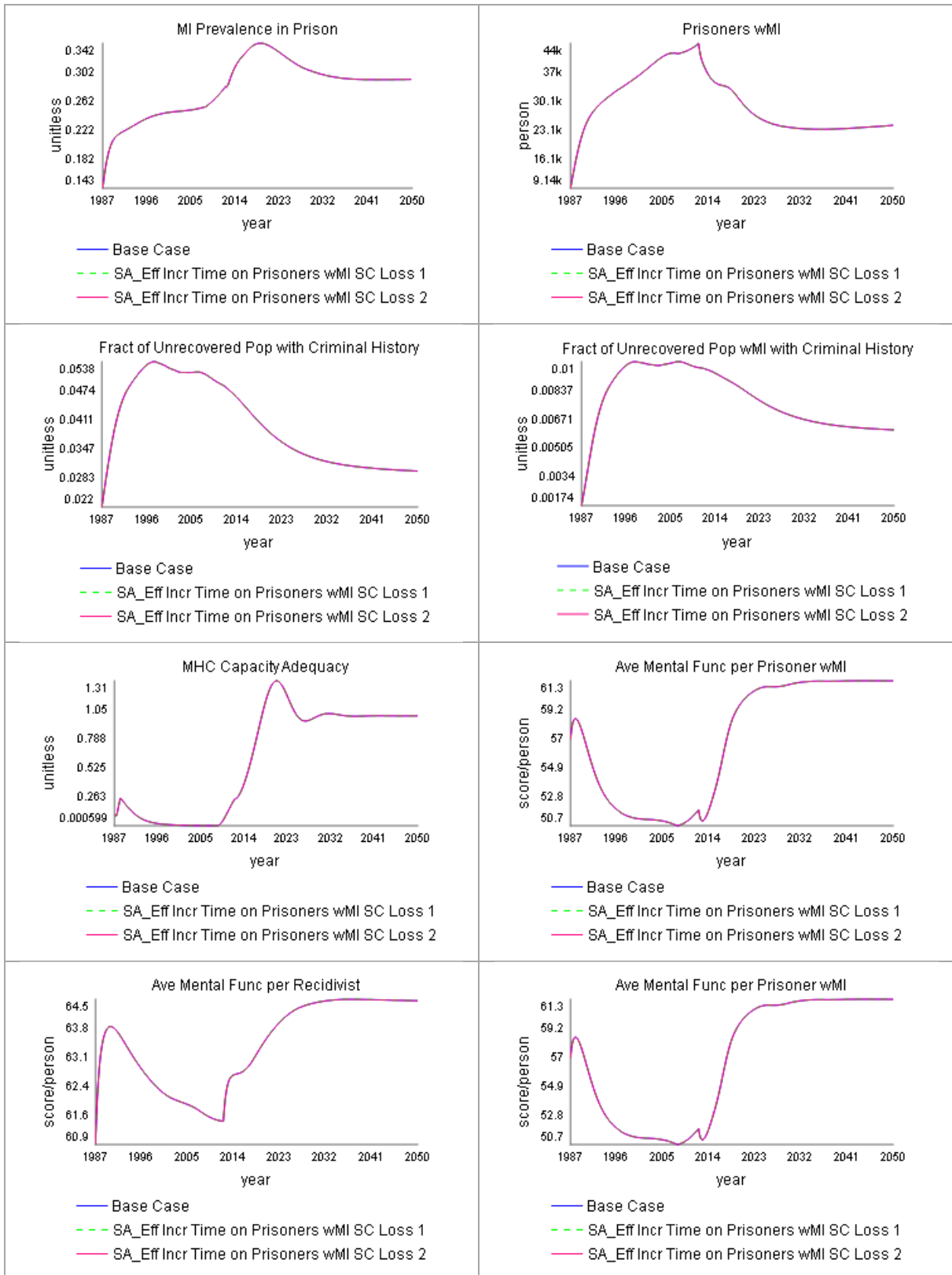


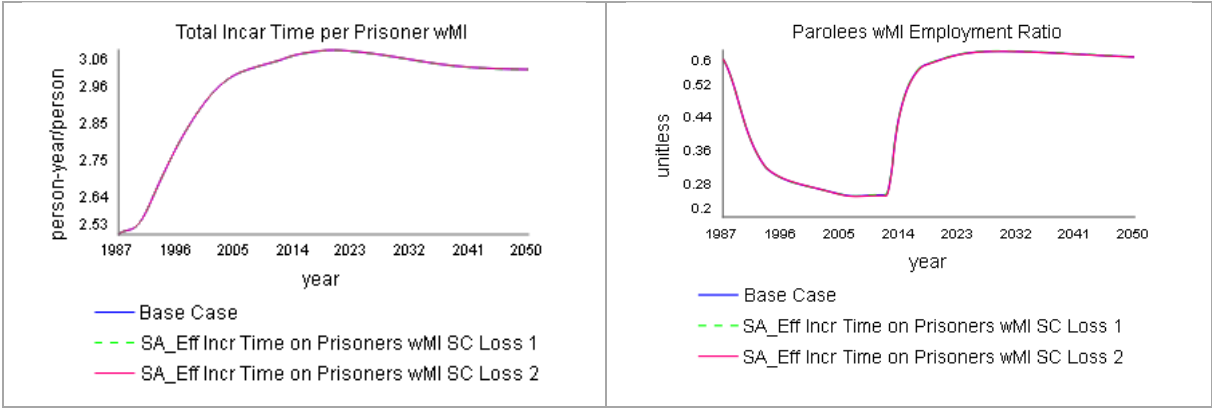
Sensitivity Analysis Test 11 – Effect of Incarceration Time Served by Prisoners on Social Capital Loss per Prisoner with Mental Illness

In this test, the relationship between “relative ave previous incar time served per prisoner wMI” in the **Incarceration Year Served** module and “annual prisoner SC loss per prisoner wMI” in the **Social Capital** module is modified through changing the steepness of the graph in the table function in “effect of incar time per prisoner on SC loss per prisoner wMI” to assess the impact on selected parameters. The steepness of the table function is varied to characterize the delay in the effect of the input parameter. The following graphs show the altered table functions. As the structure for the SC loss of prisoners wMI is similar, hence only the “effect of incar time per prisoner on SC loss per prisoner wMI” is tested.

	
<p>Original - “effect of incar time per prisoner on SC loss per prisoner wMI”</p>	<p>Longer Delay in Effect - “effect of incar time per prisoner on SC loss per prisoner wMI 1”</p>
	
<p>Shorter Delay in Effect - “effect of incar time per prisoner on SC loss per prisoner wMI 2”</p>	

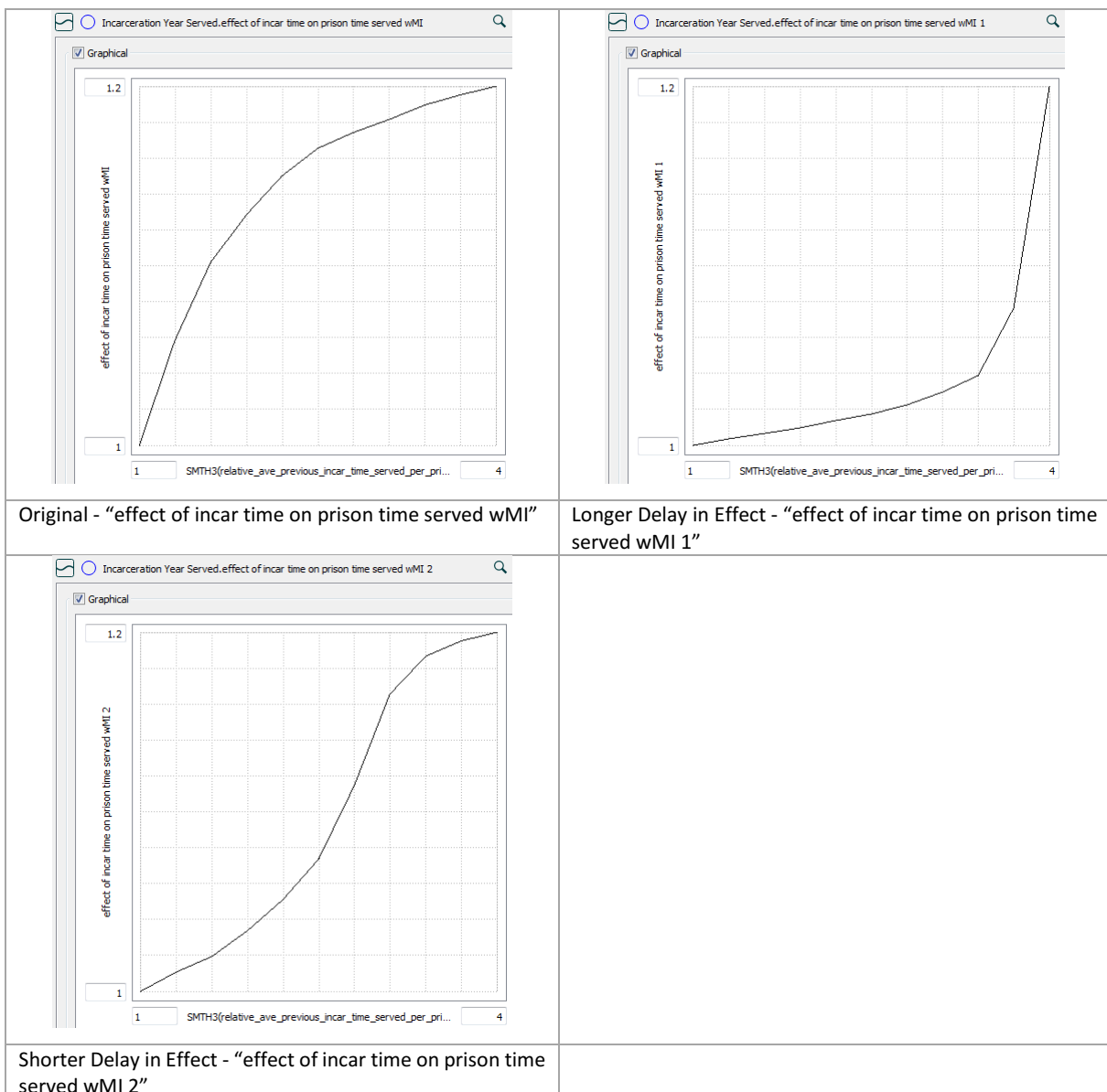
Selected Results



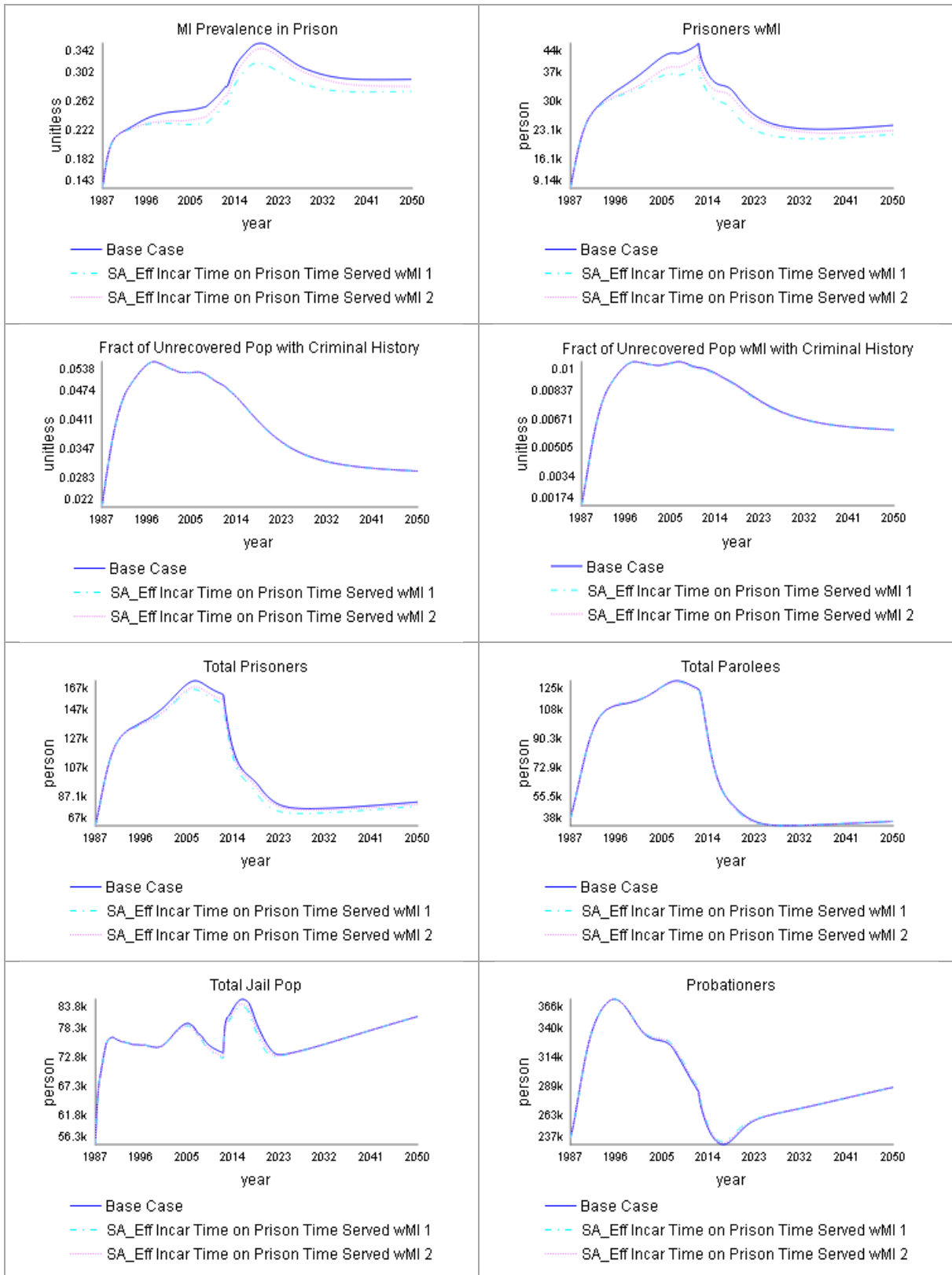


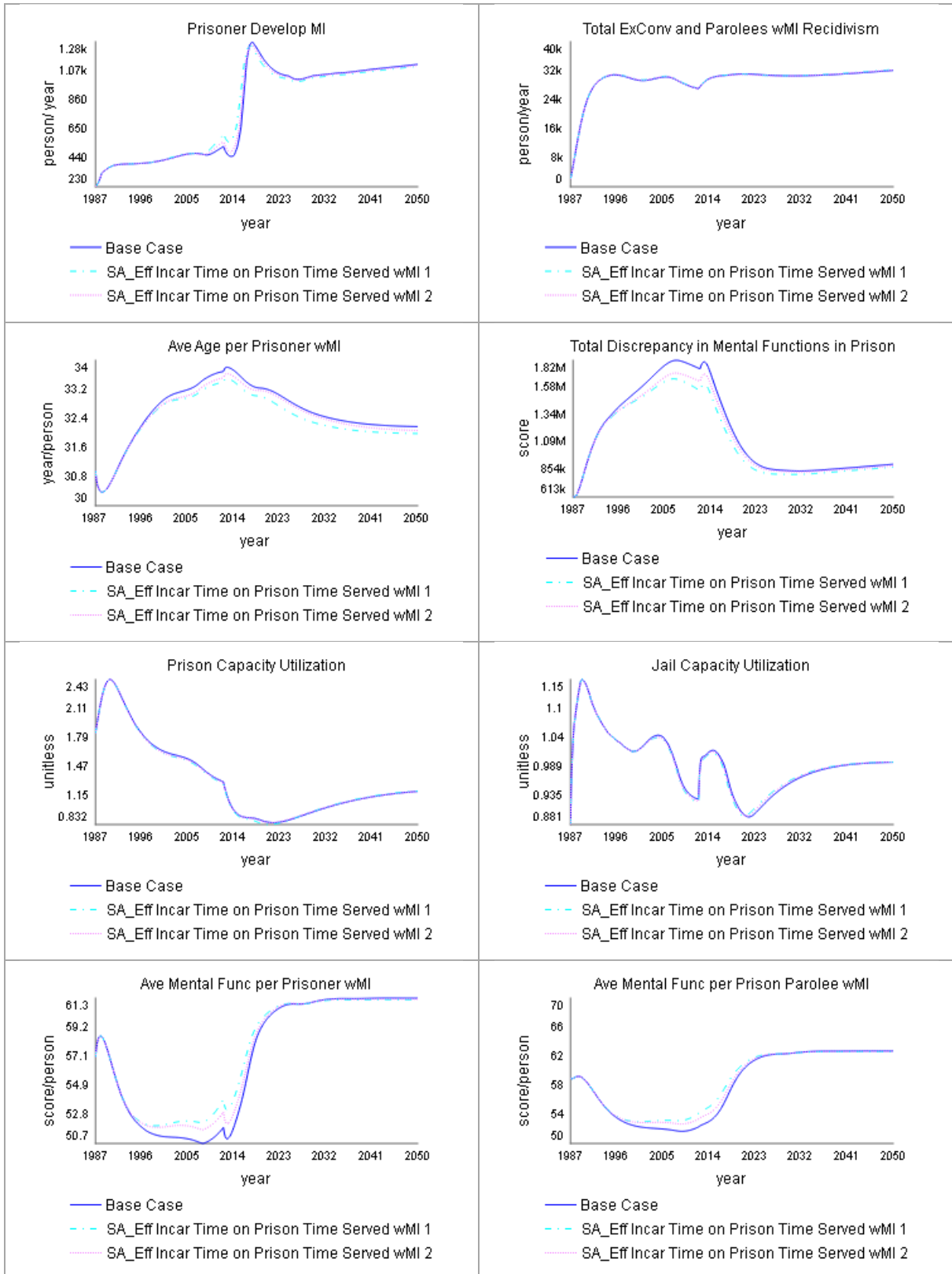
Sensitivity Analysis Test 12 – Effect of Incarceration Time Served on Prison Time Served by Prisoners with Mental Illness

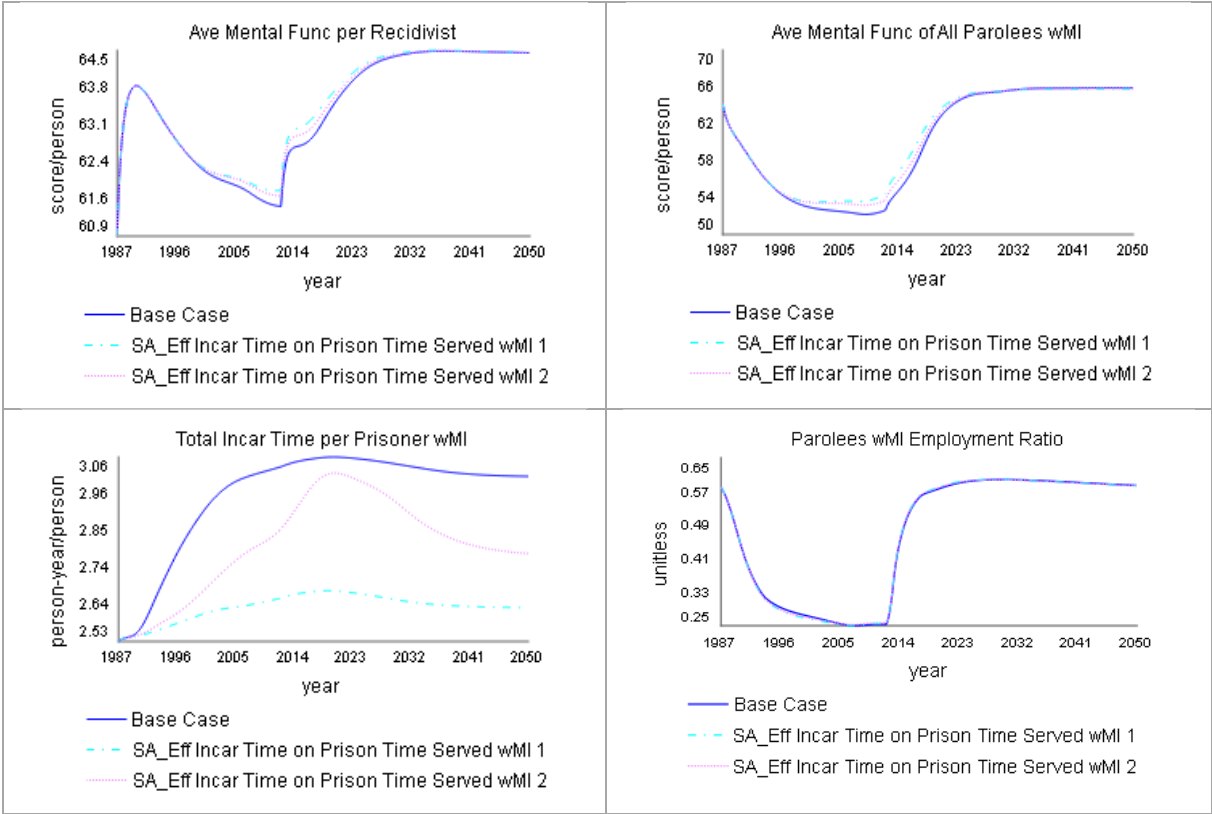
In this test, the relationship between “relative ave previous incar time served per prisoner wMI” in the **Incarceration Year Served** module and “ave prison time served at current release wMI” in the **Individuals with Criminal History** module is modified through changing the steepness of the graph in the table function in “effect of incar time on prison time served wMI” to assess the impact on selected parameters. The steepness of the table function is varied to characterize the delay in the effect of the input parameter. The following graphs show the altered table functions. As the structure for the average time served on prisoners wo MI is similar, only the “effect of incar time on prison time served wMI” is tested.



Selected Results

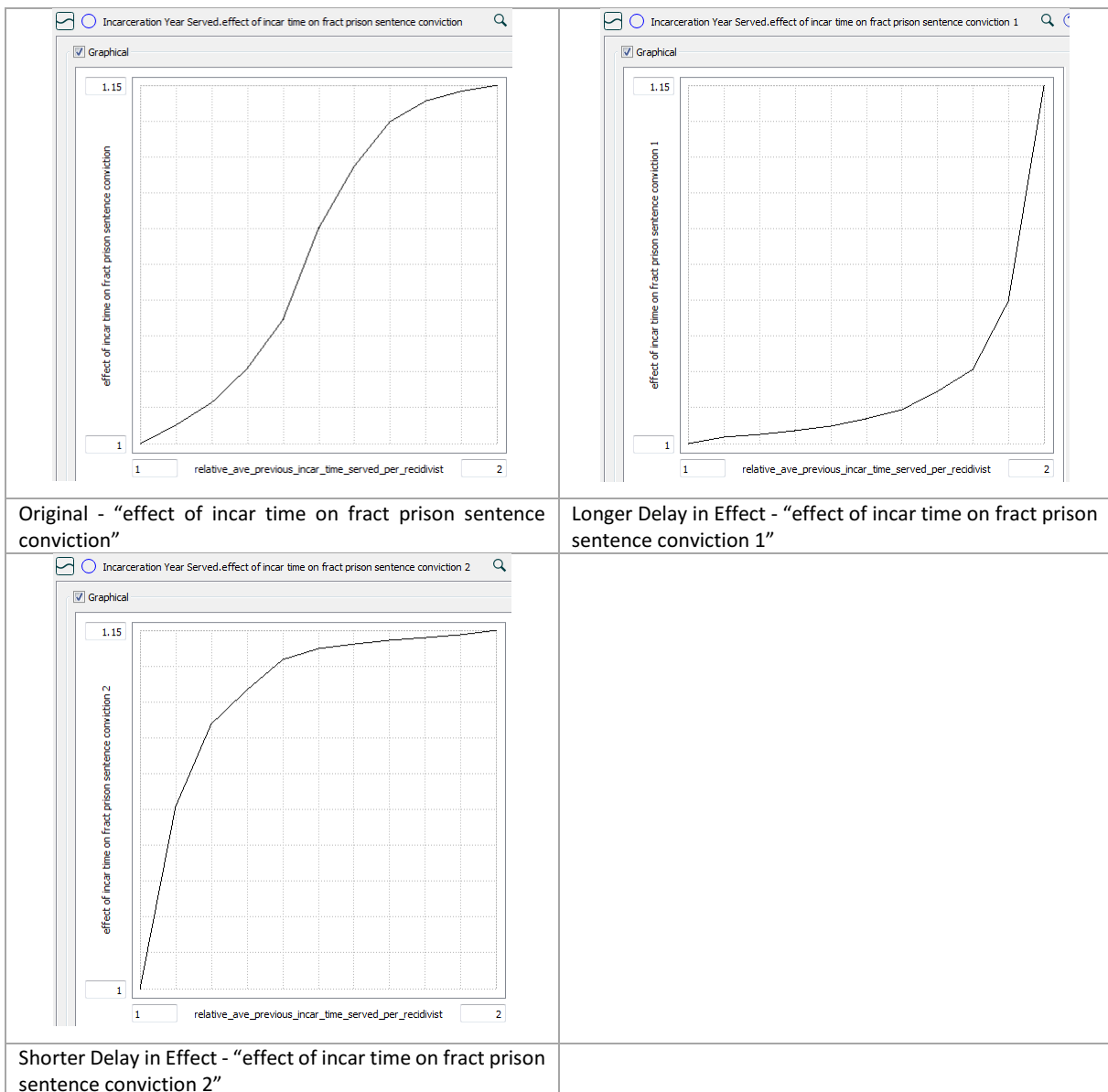




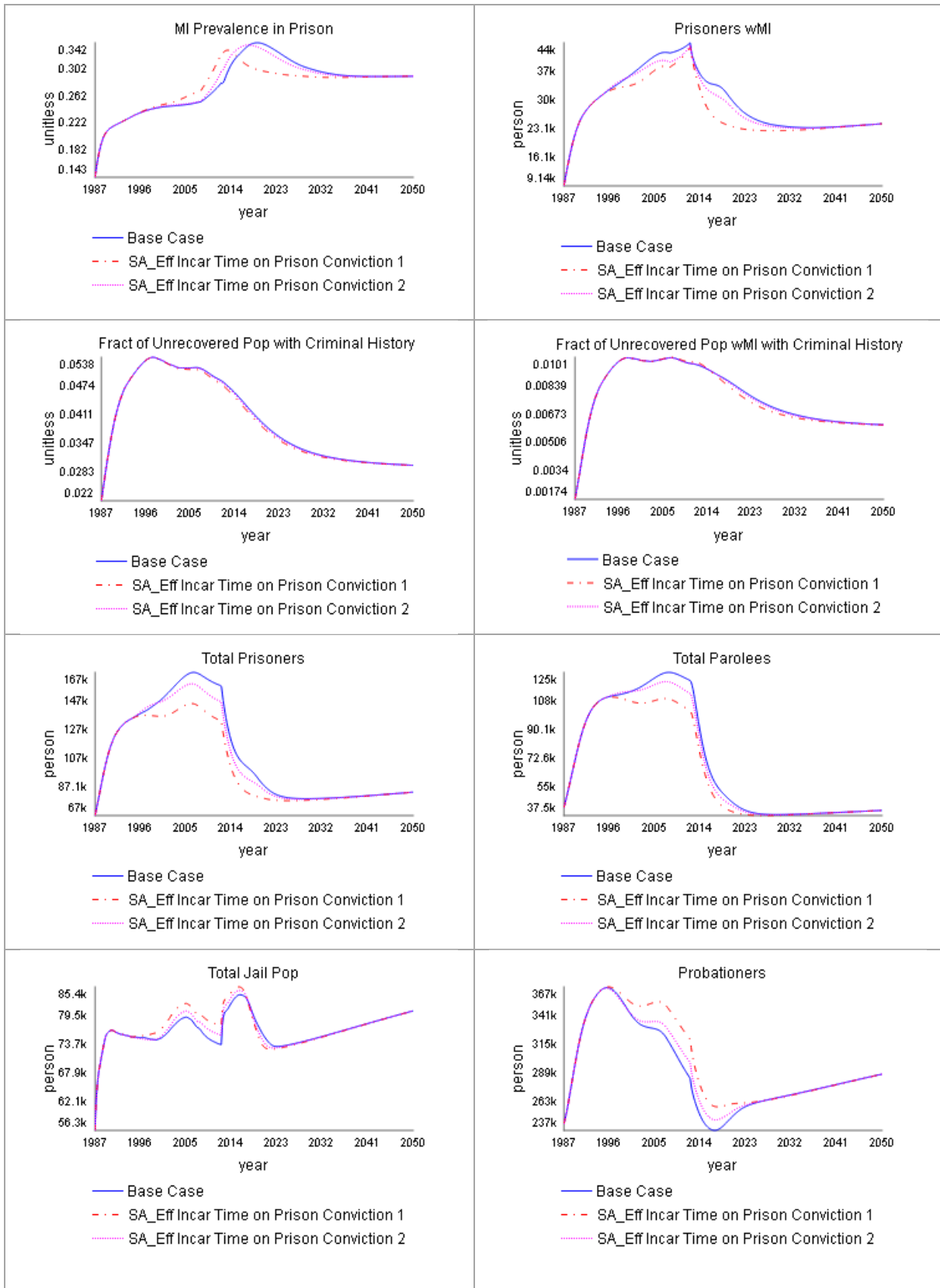


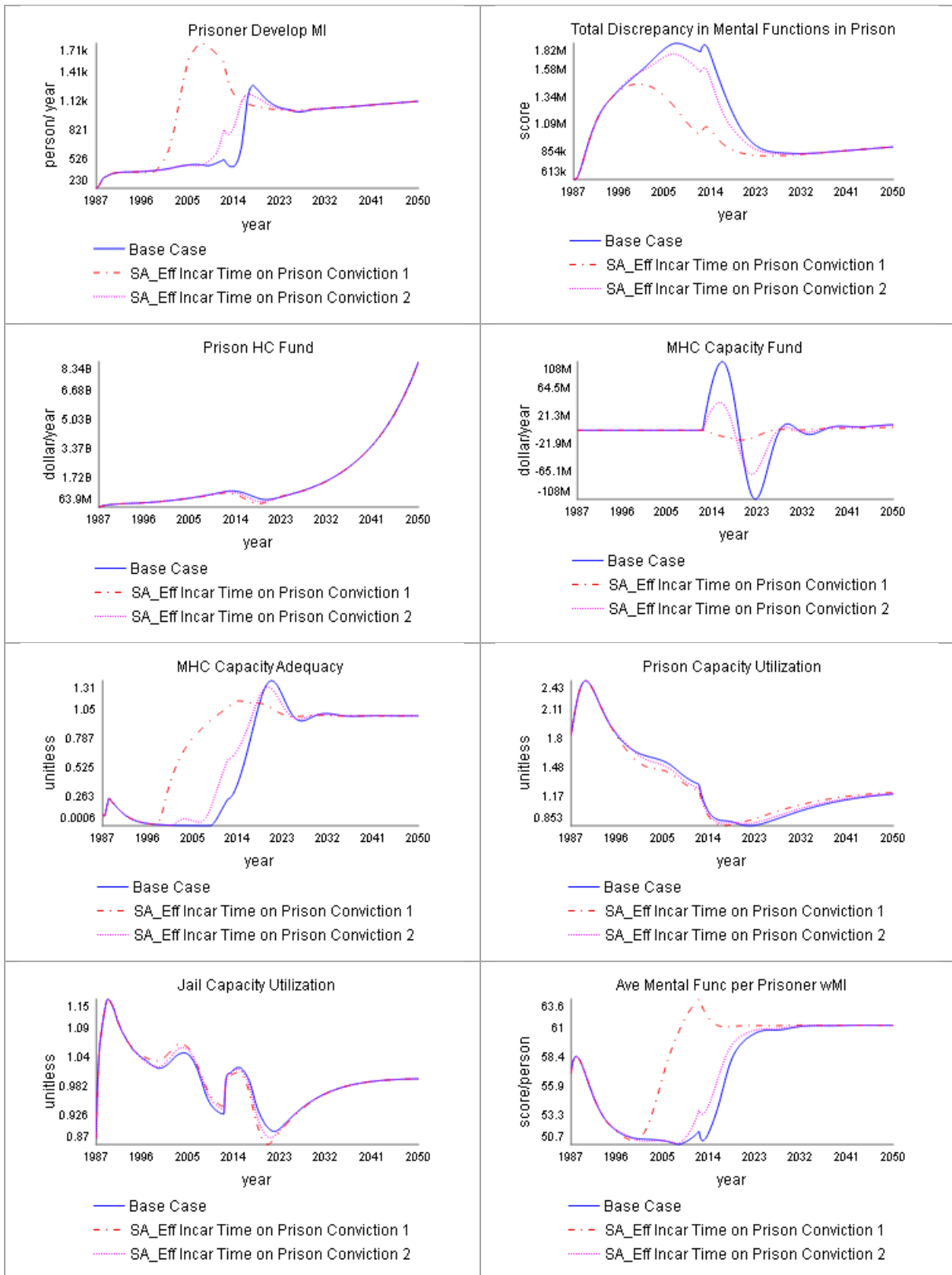
Sensitivity Analysis Test 13 – Effect of Incarceration Time Served on Prison Sentence Conviction

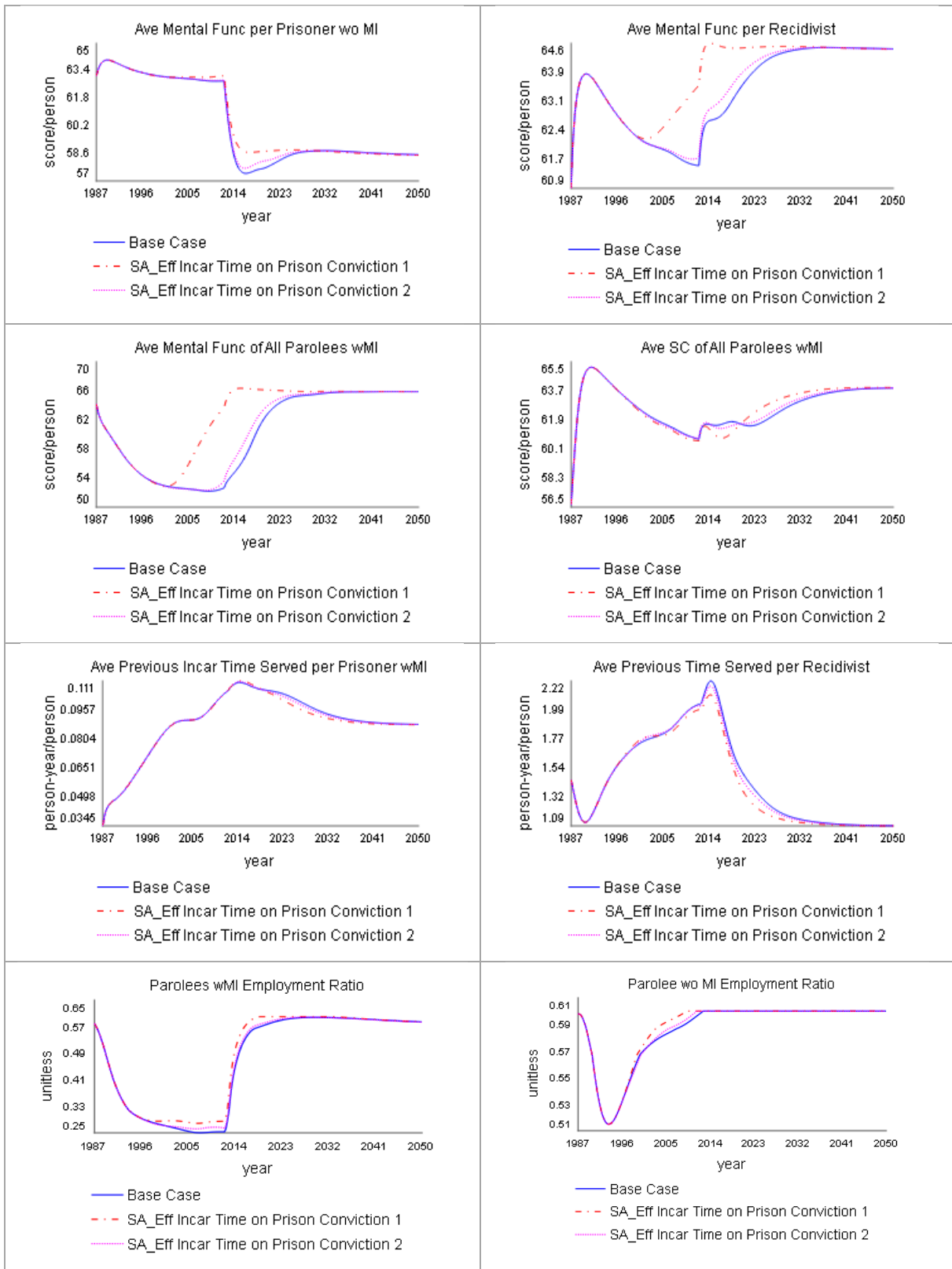
In this test, the relationship between “relative ave previous incar time served per recidivist” in the **Incarceration Year Served** module and “fract convicts in custody convicted to prison sentence” in the **Individuals with Criminal History** module is modified through changing the steepness of the graph in the table function in “effect of incar time on fract prison sentence conviction” to assess the impact on selected parameters. The steepness of the table function is varied to characterize the delay in the effect of the input parameter. The following graphs show the altered table functions. This effect also influence the fraction convicts in community convicted to prison sentence.



Selected Results

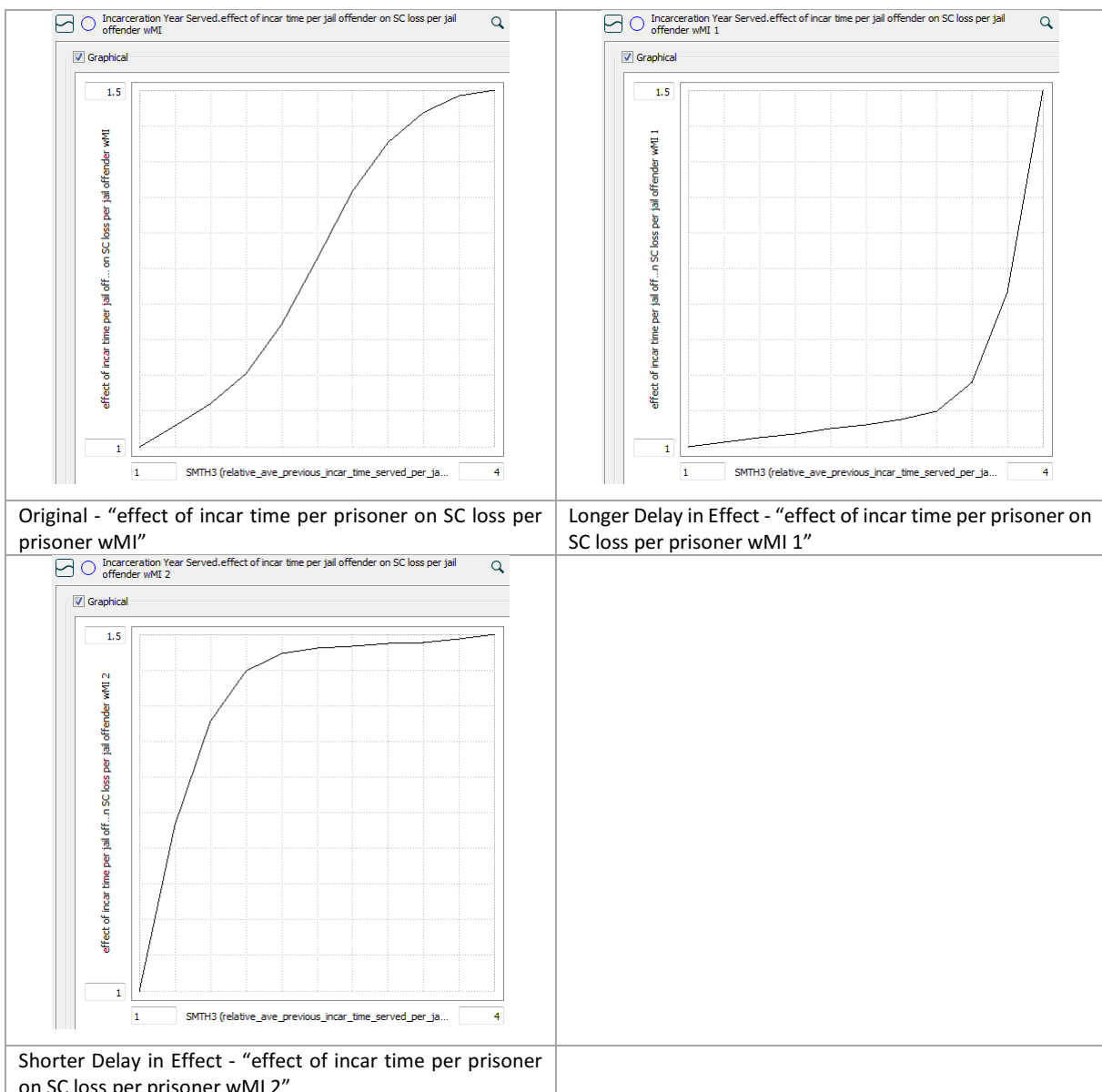




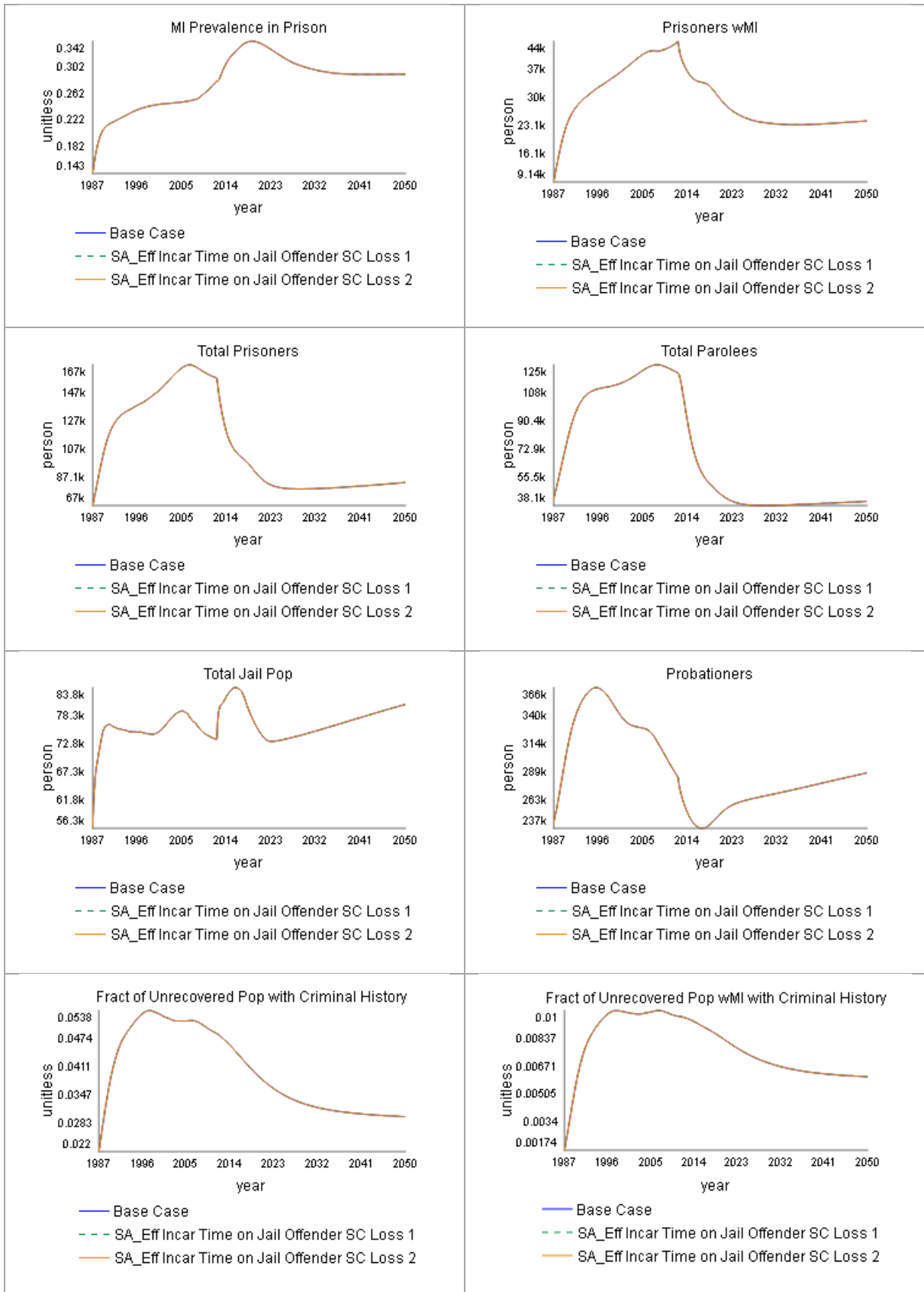


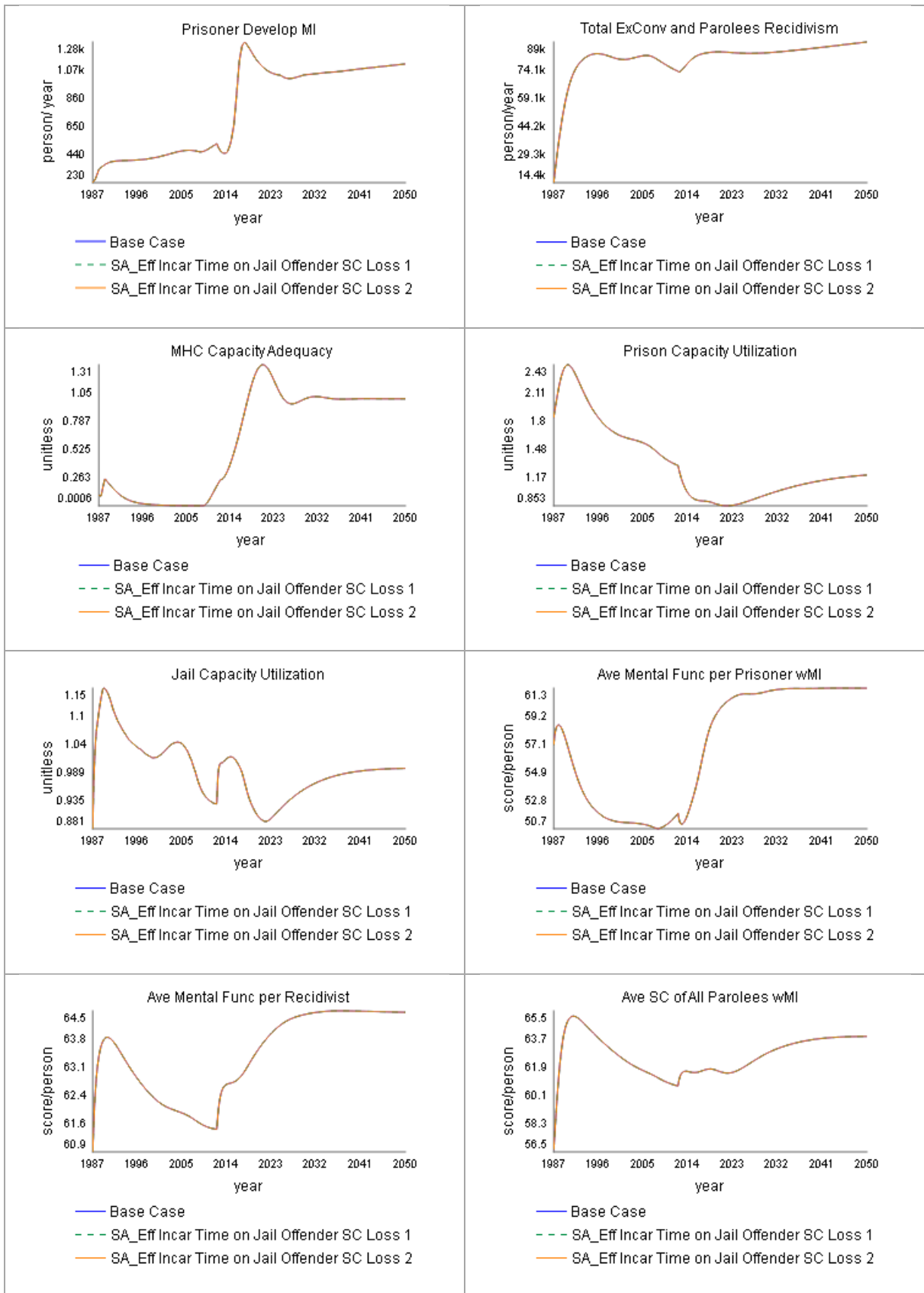
Sensitivity Analysis Test 14 – Effect of Incarceration Time Served of Jail Offenders on Social Capital Loss

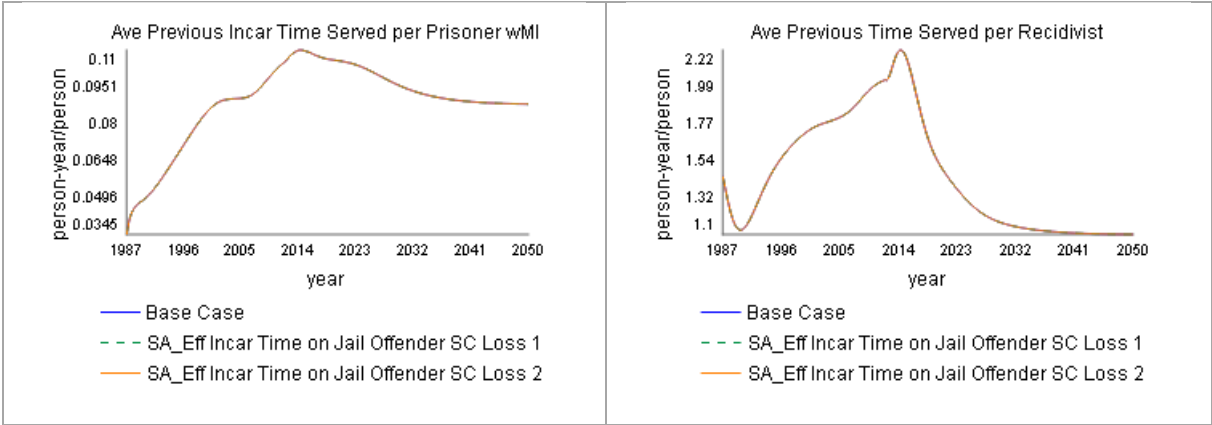
In this test, the relationship between “relative ave previous incar time served per jail offender wMI” in the **Incarceration Year Served** module and “losing SC in jail wMI” outflow in the **Social Capital** module is modified through changing the steepness of the graph in the table function in “effect of incar time per jail offender on SC loss per jail offender wMI” to assess the impact on selected parameters. The steepness of the table function is varied to characterize the delay in the effect of the input parameter. The following graphs show the altered table functions. As the structure for the SC loss of prisoners wMI is similar, hence only the “effect of incar time per prisoner on SC loss per prisoner wMI” is tested.



Selected Results

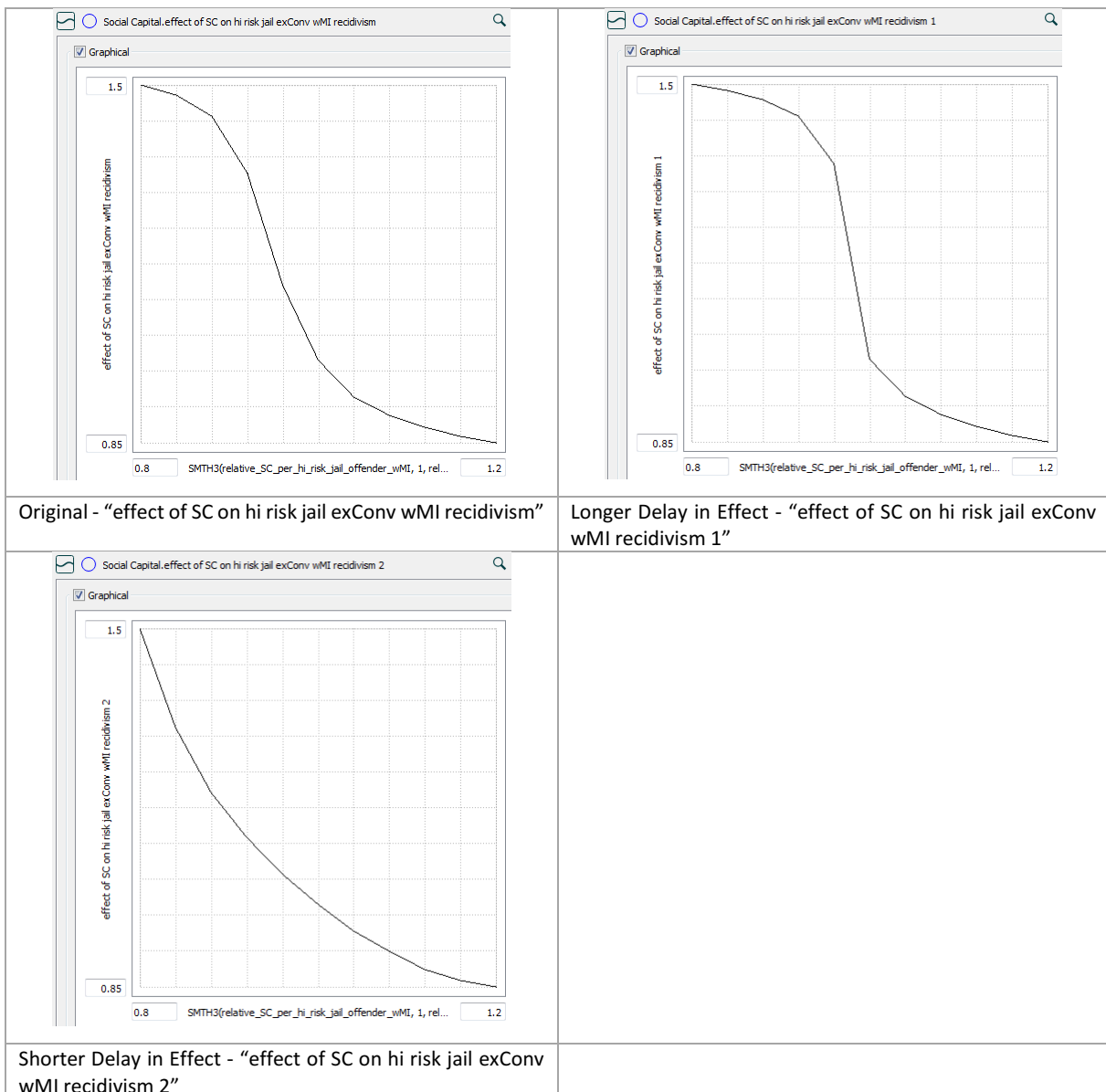




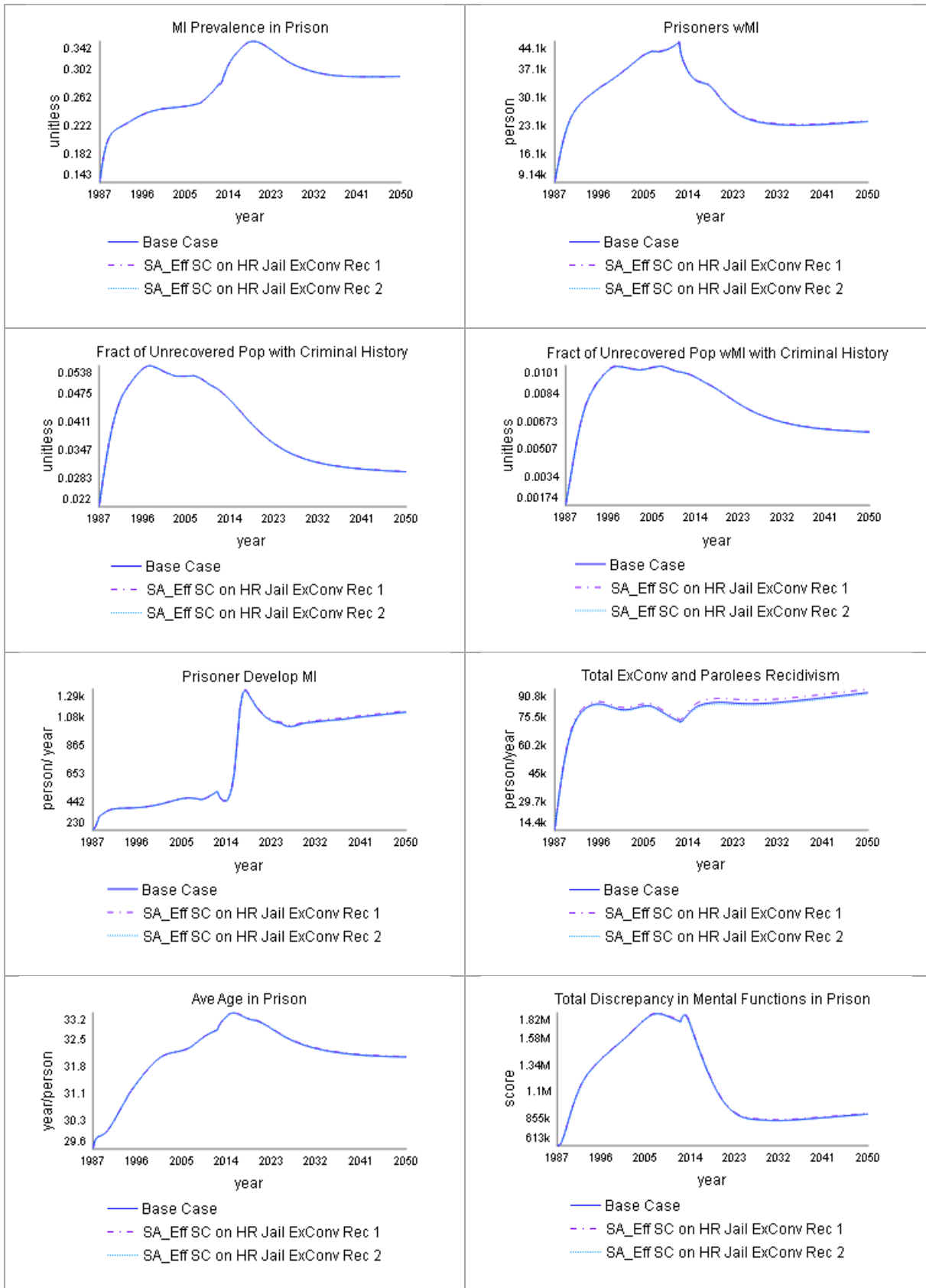


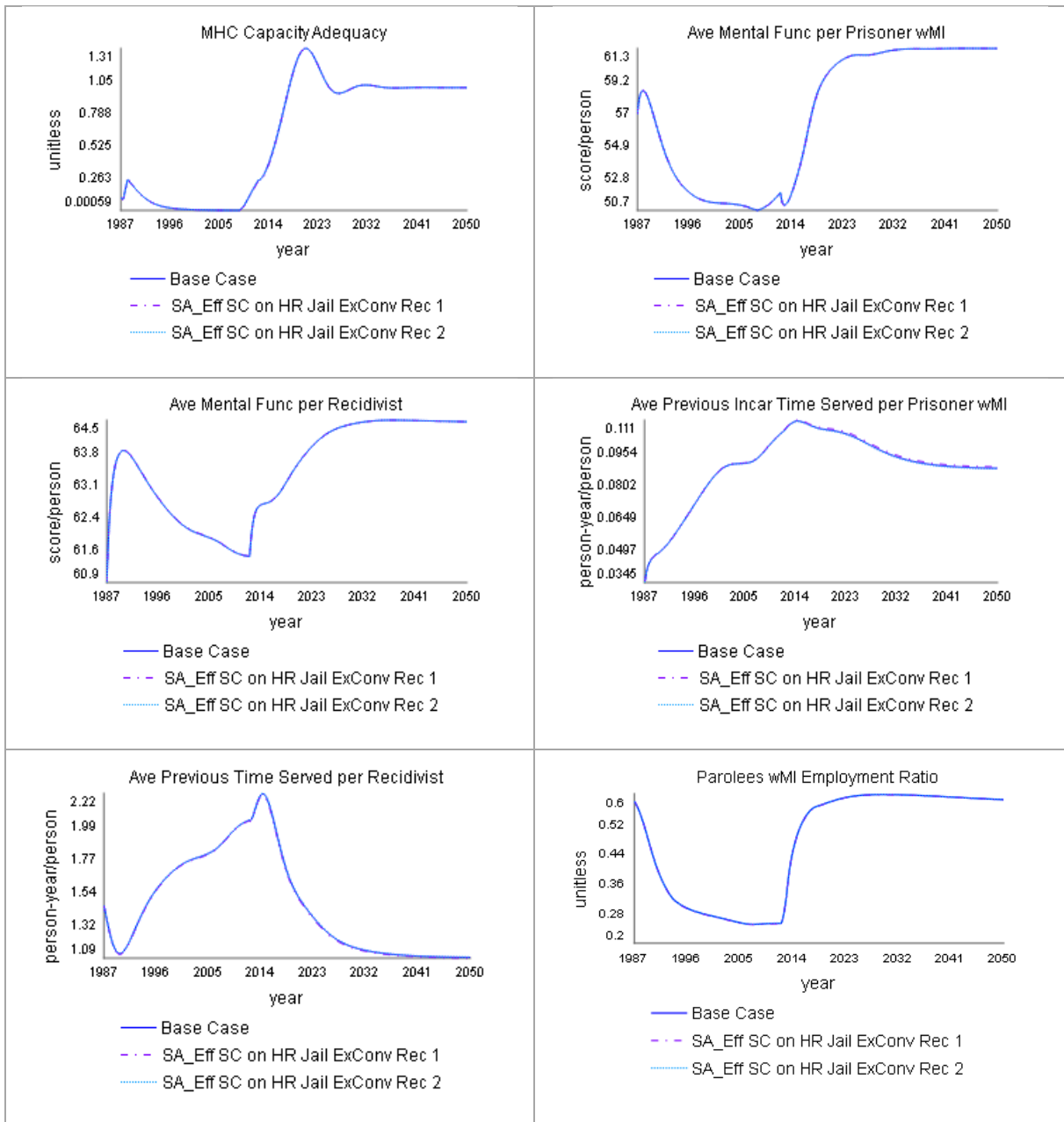
Sensitivity Analysis Test 15 – Effect of Social Capital on Recidivism by High Risk Jail Ex-convicts with Mental Illness

In this test, the relationship between “relative SC per hi risk jail offender wMI” in the **Social Capital** module and “high risk jail exConv wMI recidivism rate” in the **Individuals with Criminal History** module is modified through changing the steepness of the graph in the table function in “effect of SC on hi risk jail exConv wMI recidivism” to assess the impact on selected parameters. The steepness of the table function is varied to characterize the delay in the effect of the input parameter. The following graphs show the altered table functions. As the structure for the recidivism by jail offender wo MI is similar, hence only the “effect of SC on hi risk jail exConv wMI recidivism” is tested.



Selected Results



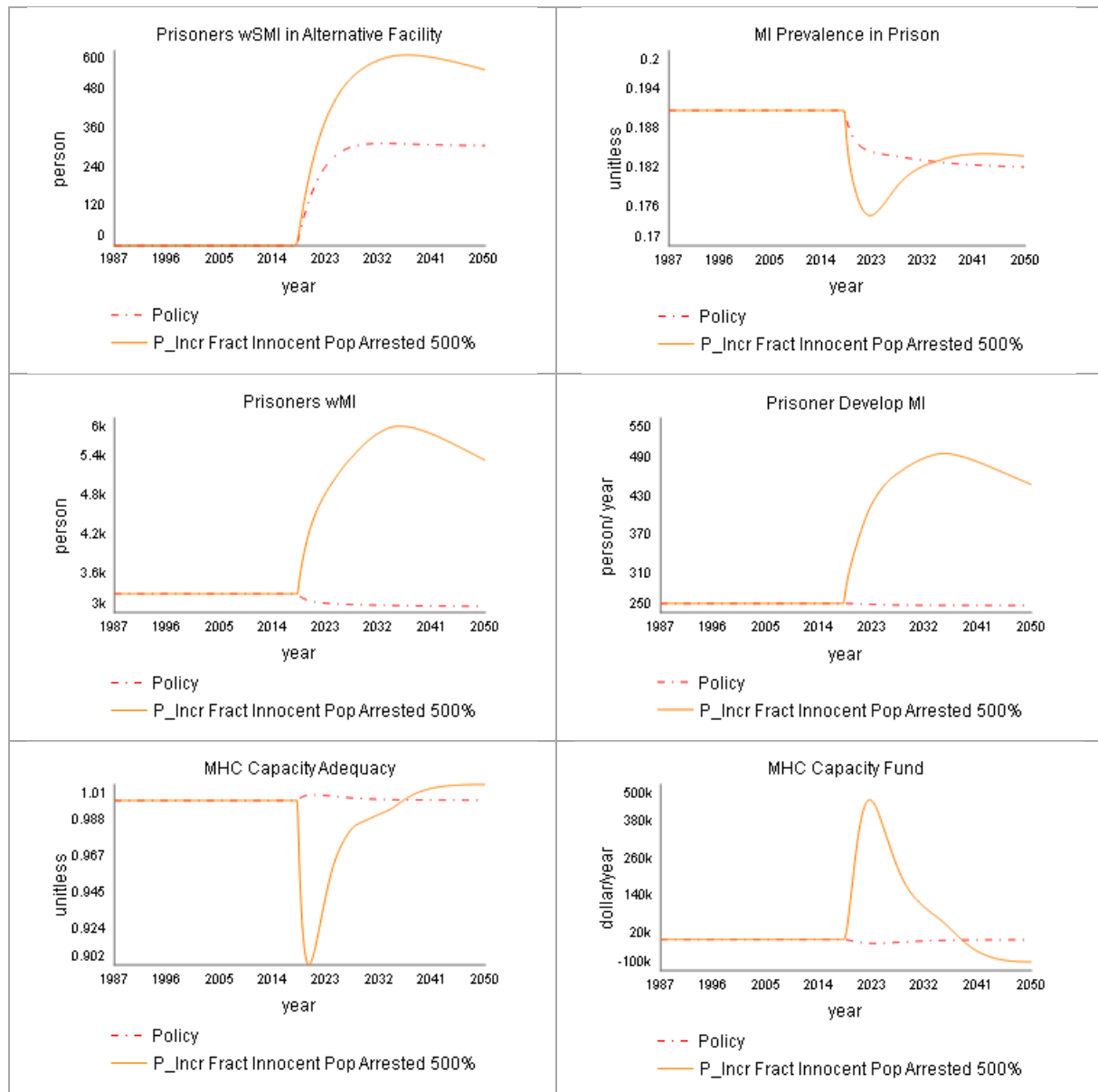


Appendix N – Test Results of the Full Model with Our Recommended Policy

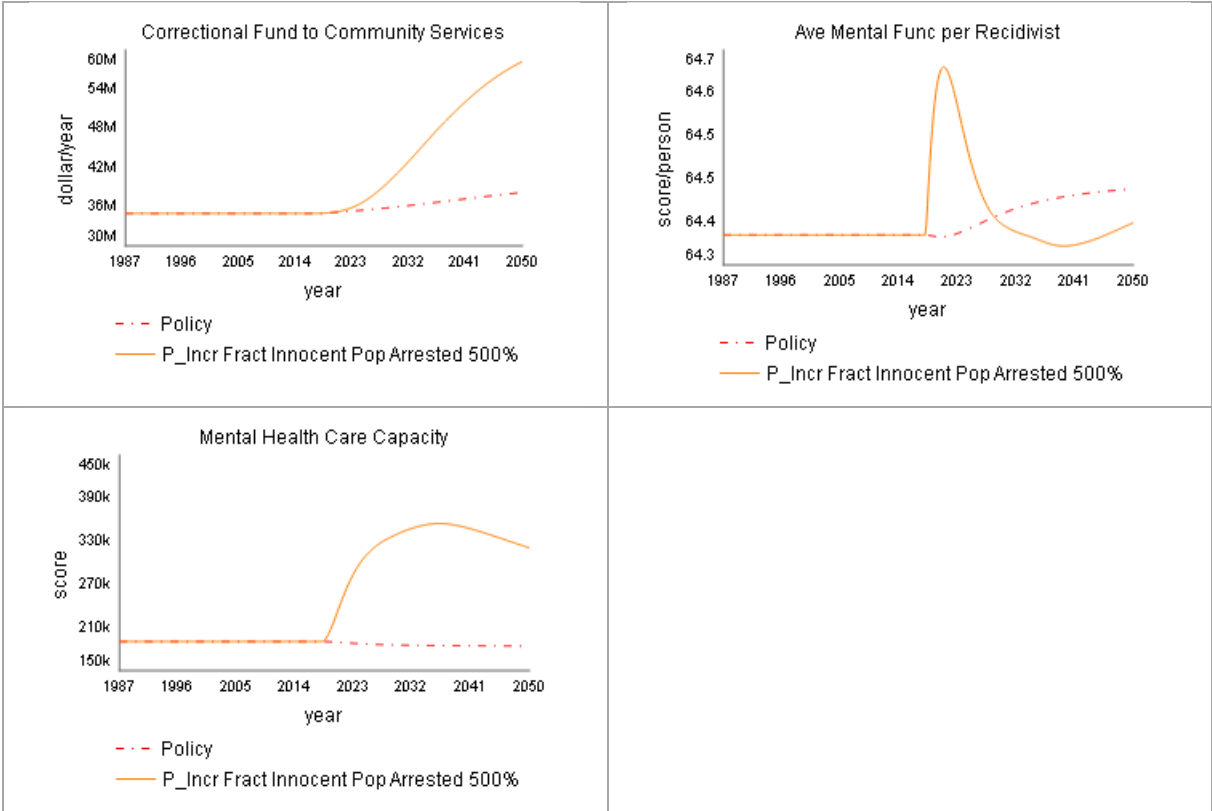
Extreme Condition Test 1 – Increase Fraction of Innocent Population Arrested

In this test, the “fract innocent pop” parameter in the **Individuals with Criminal History** module increases from 0.0315 to five times to 0.17 from 2018 onwards.

Selected Results



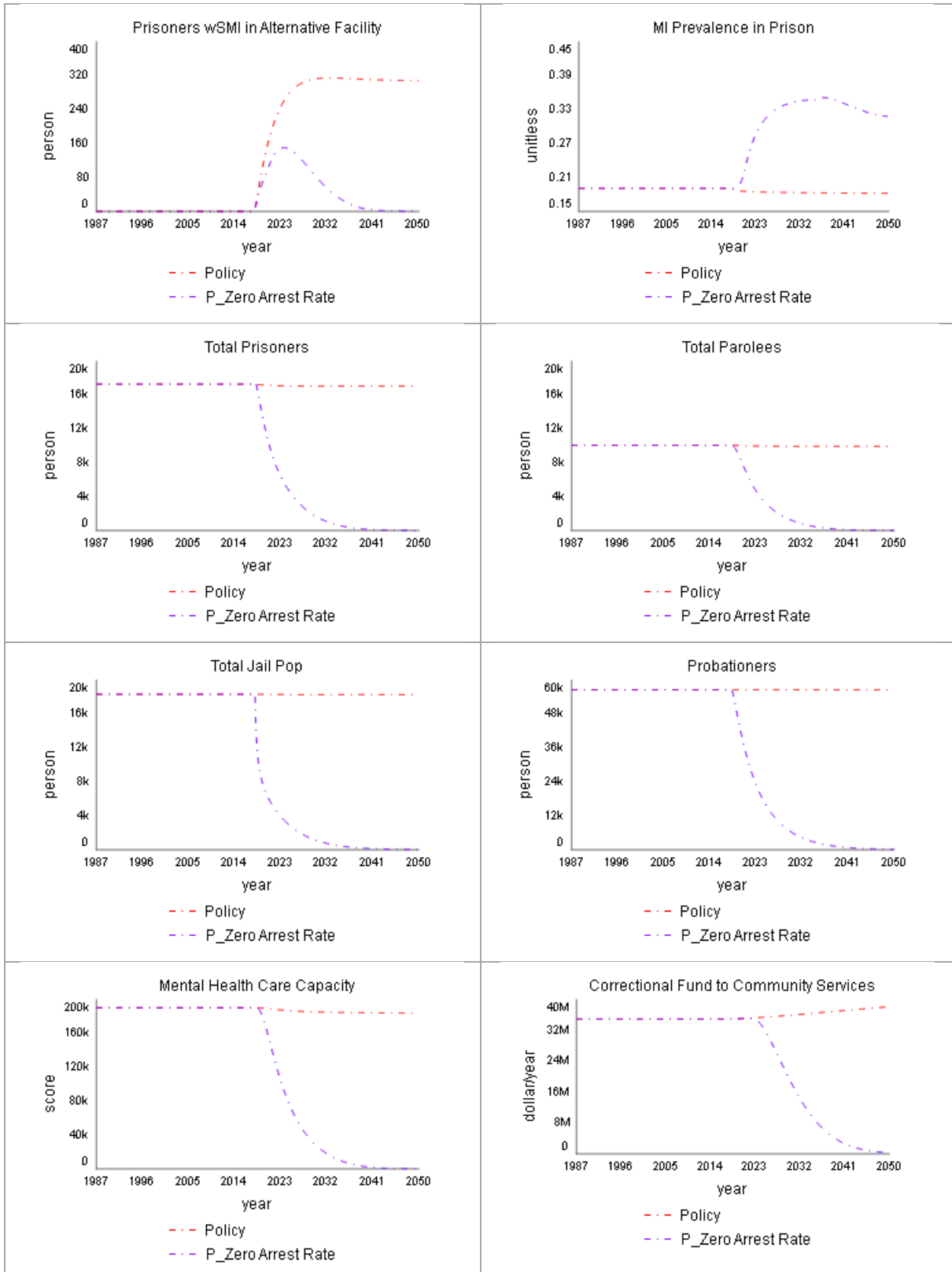


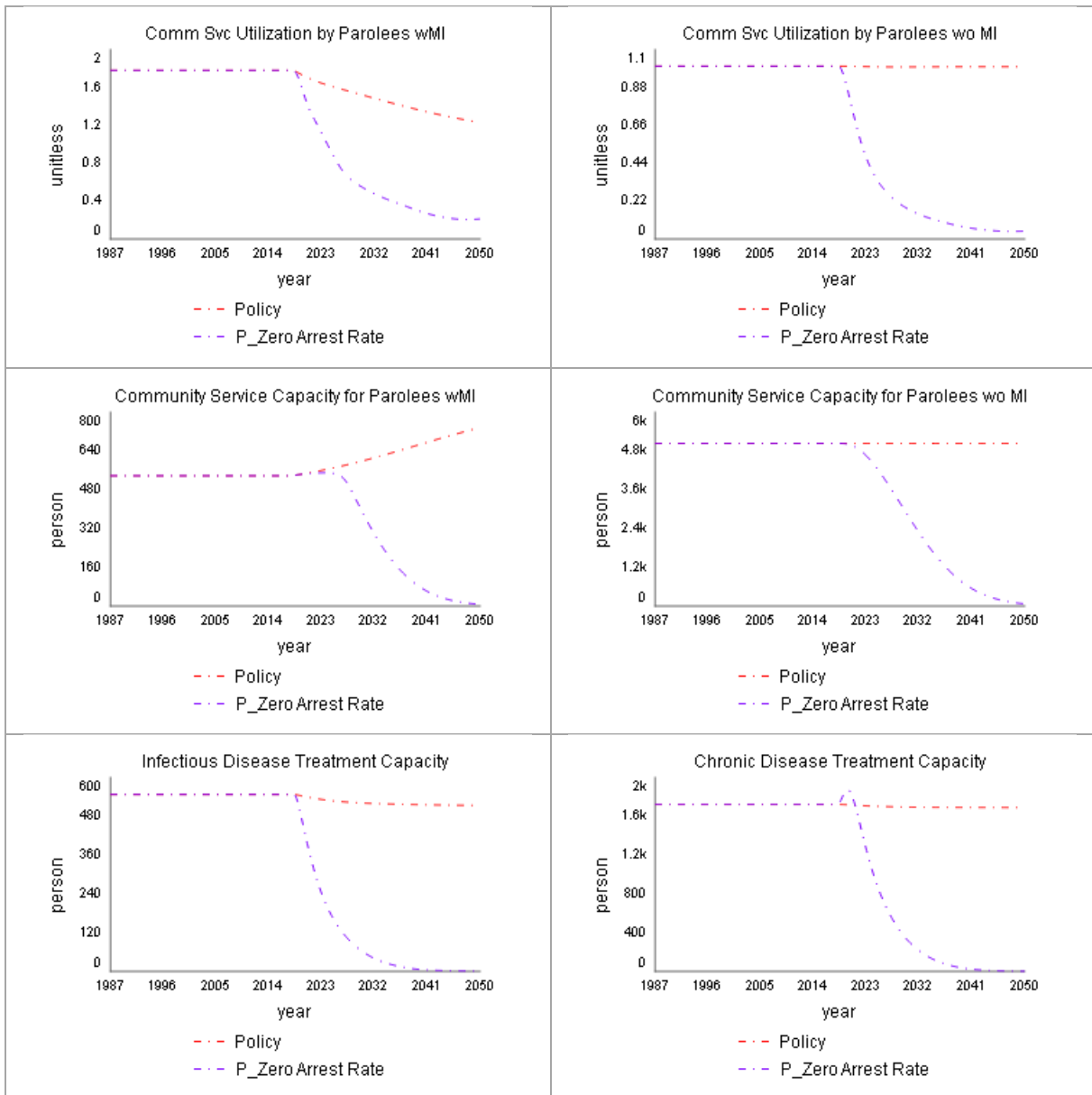


Extreme Condition Test 2 – Decrease Fraction of Innocent Population Arrested to Zero

In this test, the “fract innocent pop” parameter in the **Individuals with Criminal History** module decreases from 0.03338 to zero from 2018 onwards.

Selected Results

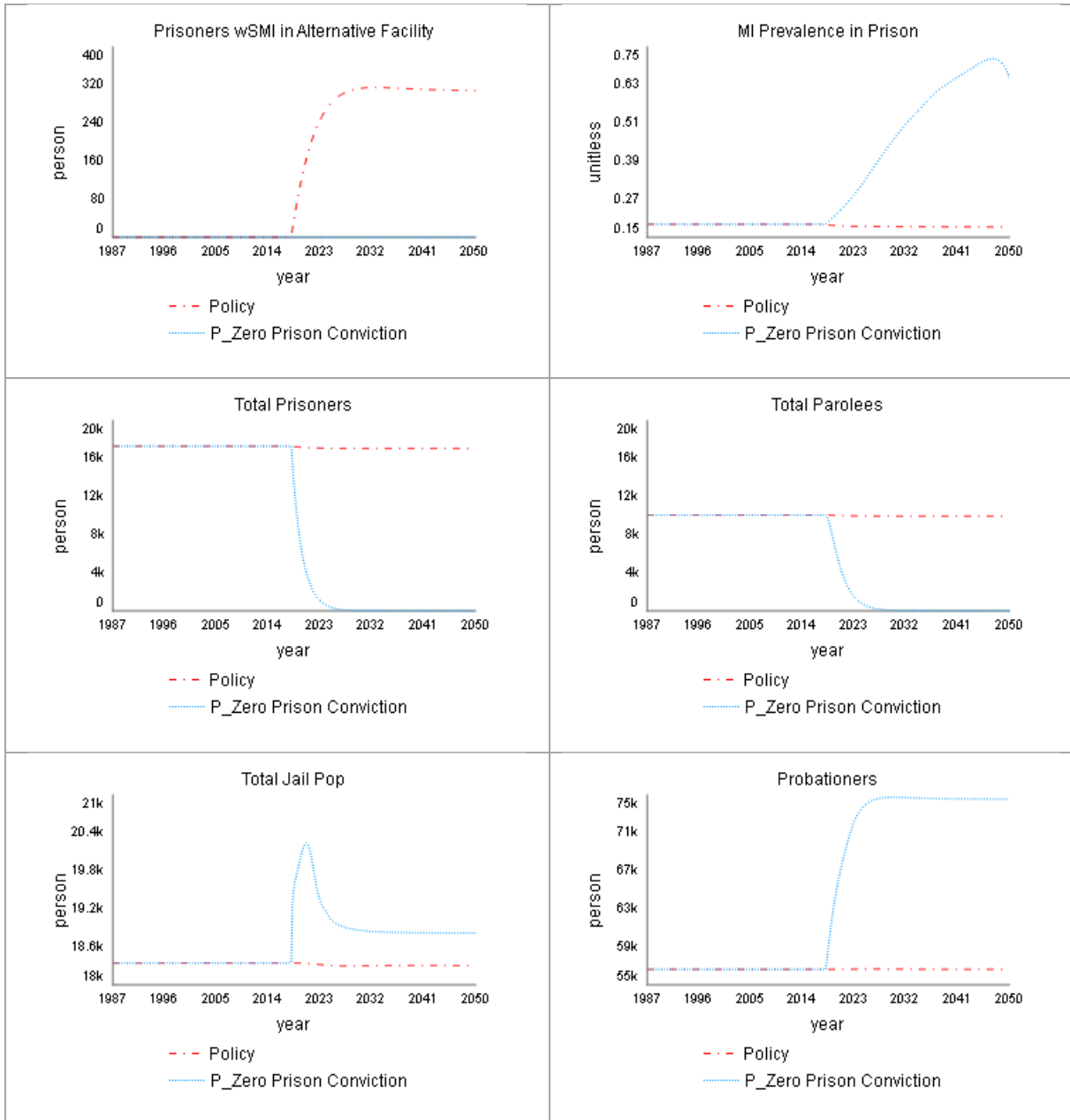


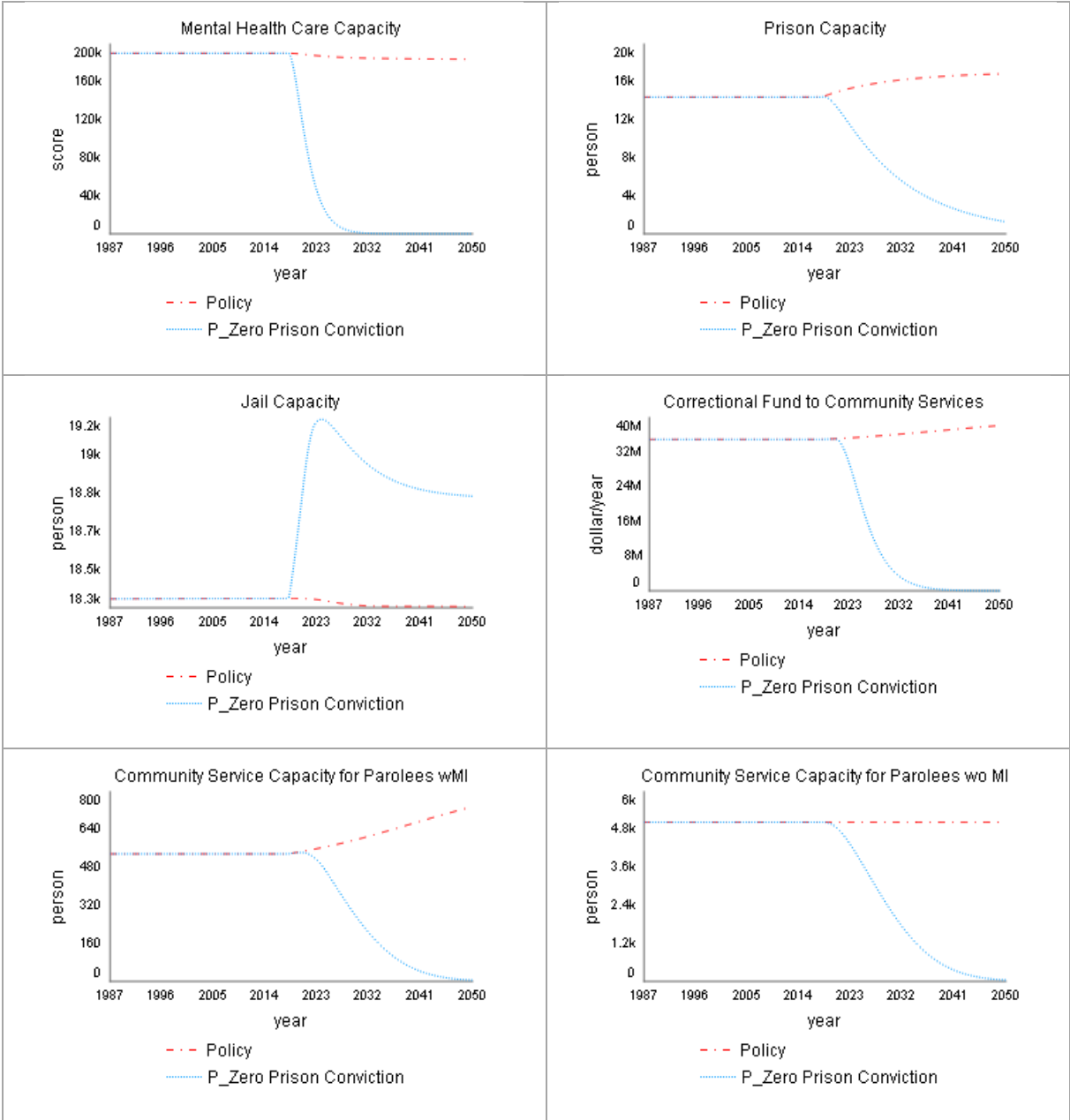


Extreme Condition Test 3 – Zero Prison Conviction

In this test, both the “ref fract convicts in custody convict to prison sentence” and “ref fract convicts in comm convict to prison sentence” parameter in the **Individuals with Criminal History** module to zeros from 2018 onwards.

Selected Results

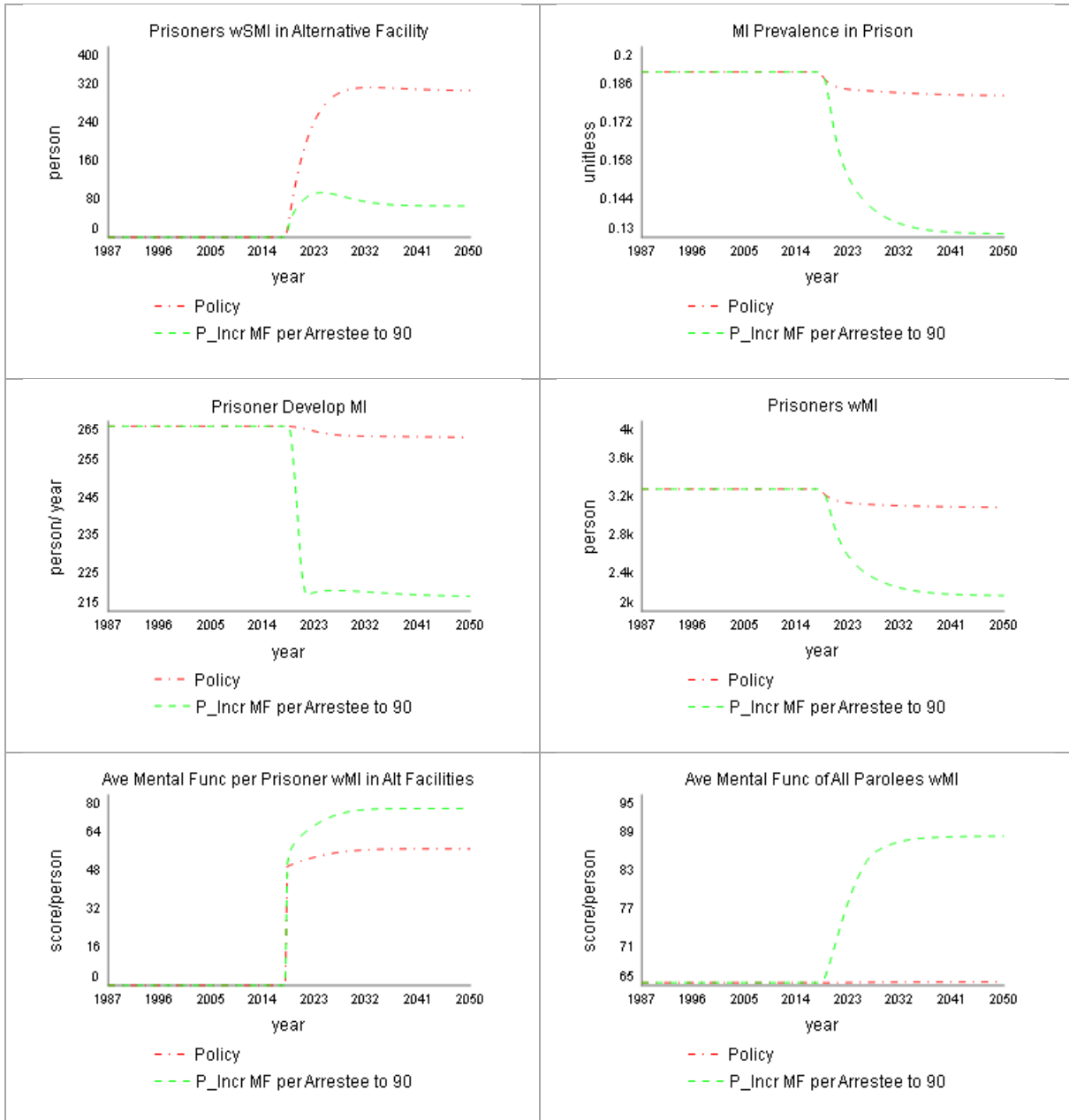


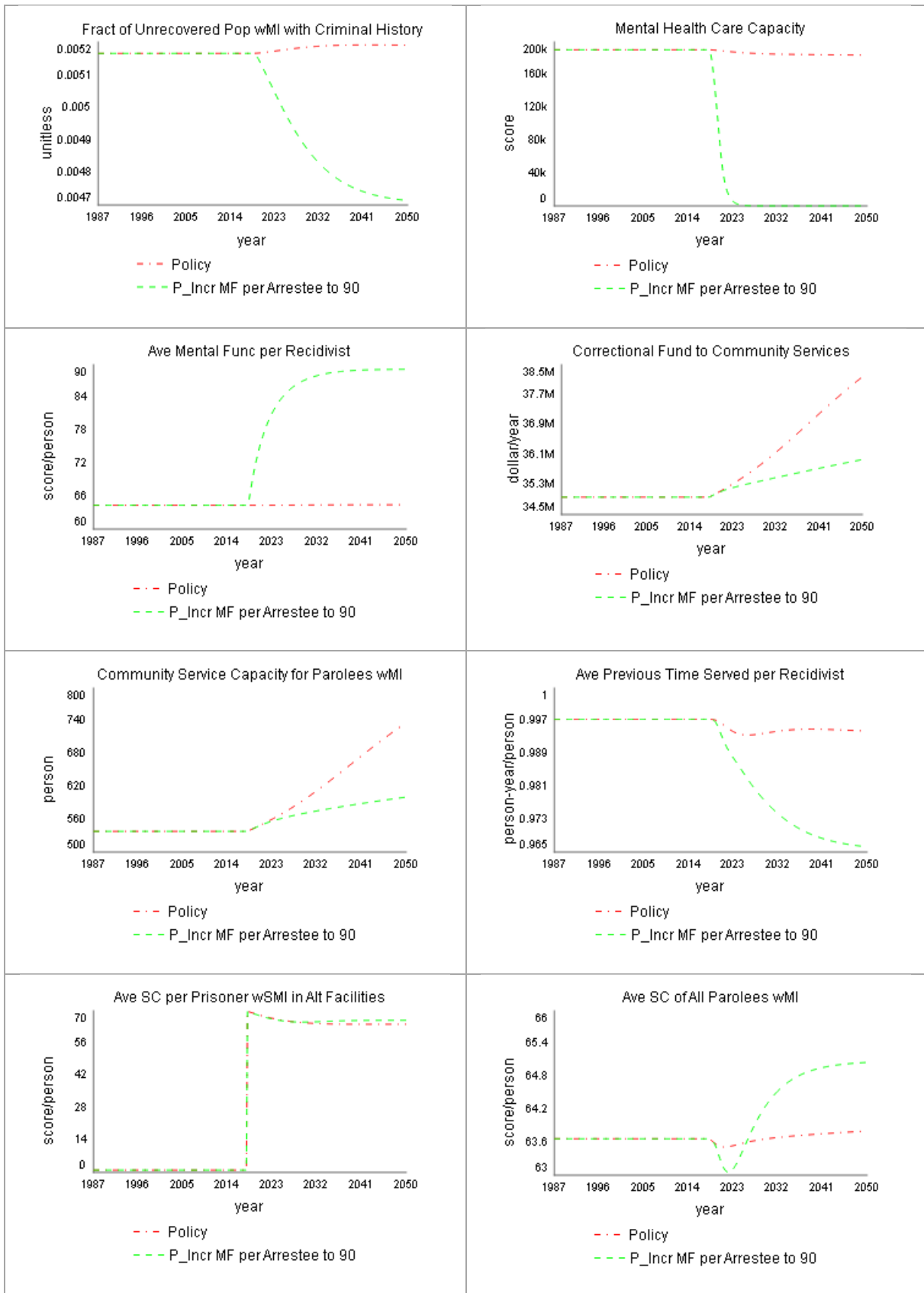


Extreme Condition Test 4 – Increase Mental Function per Arrestee

In this test, the “mental func per arrestee” parameter in the **Mental Profiles** module increases from 65 to 90 from 2018 onwards.

Selected Results

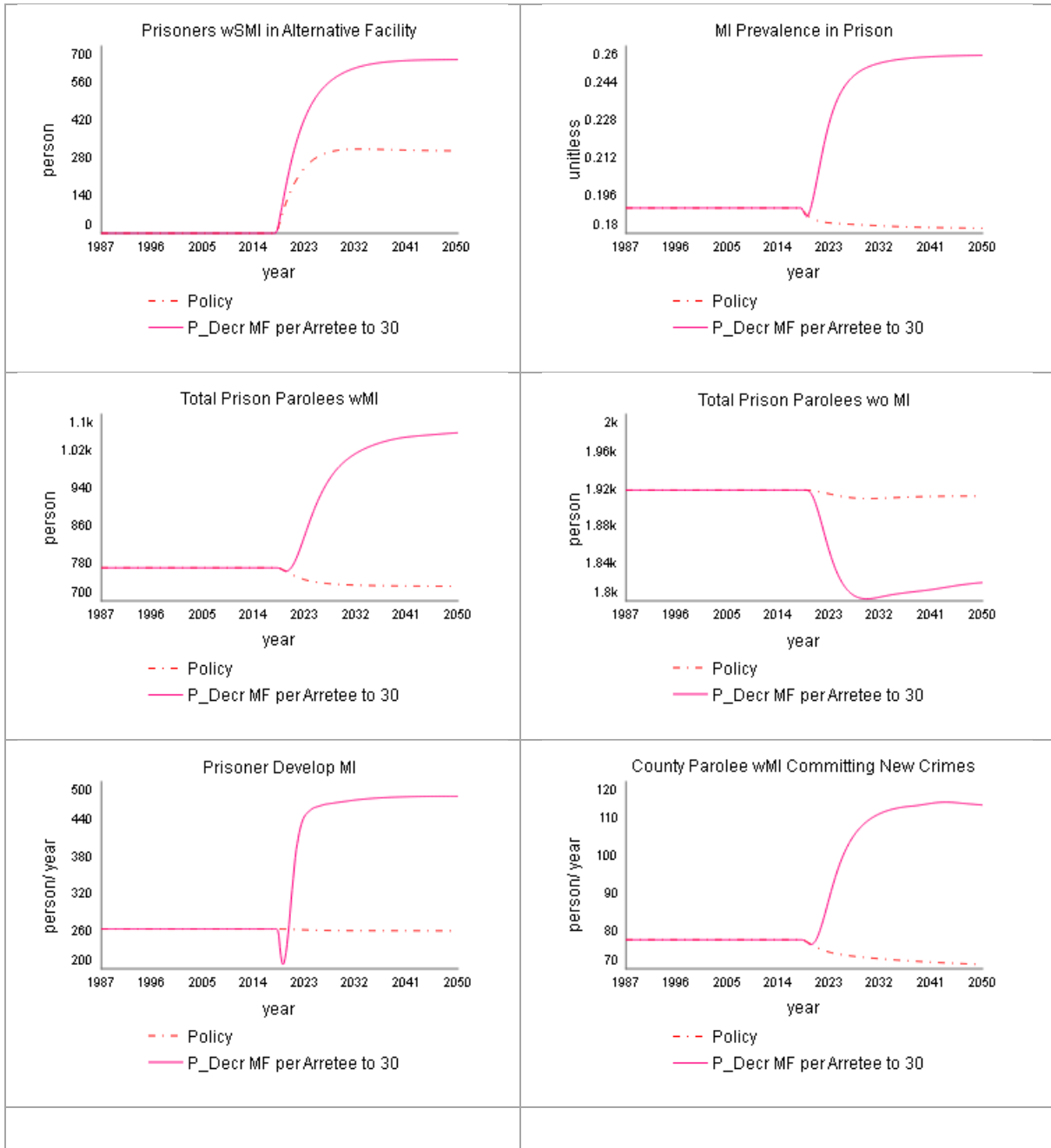


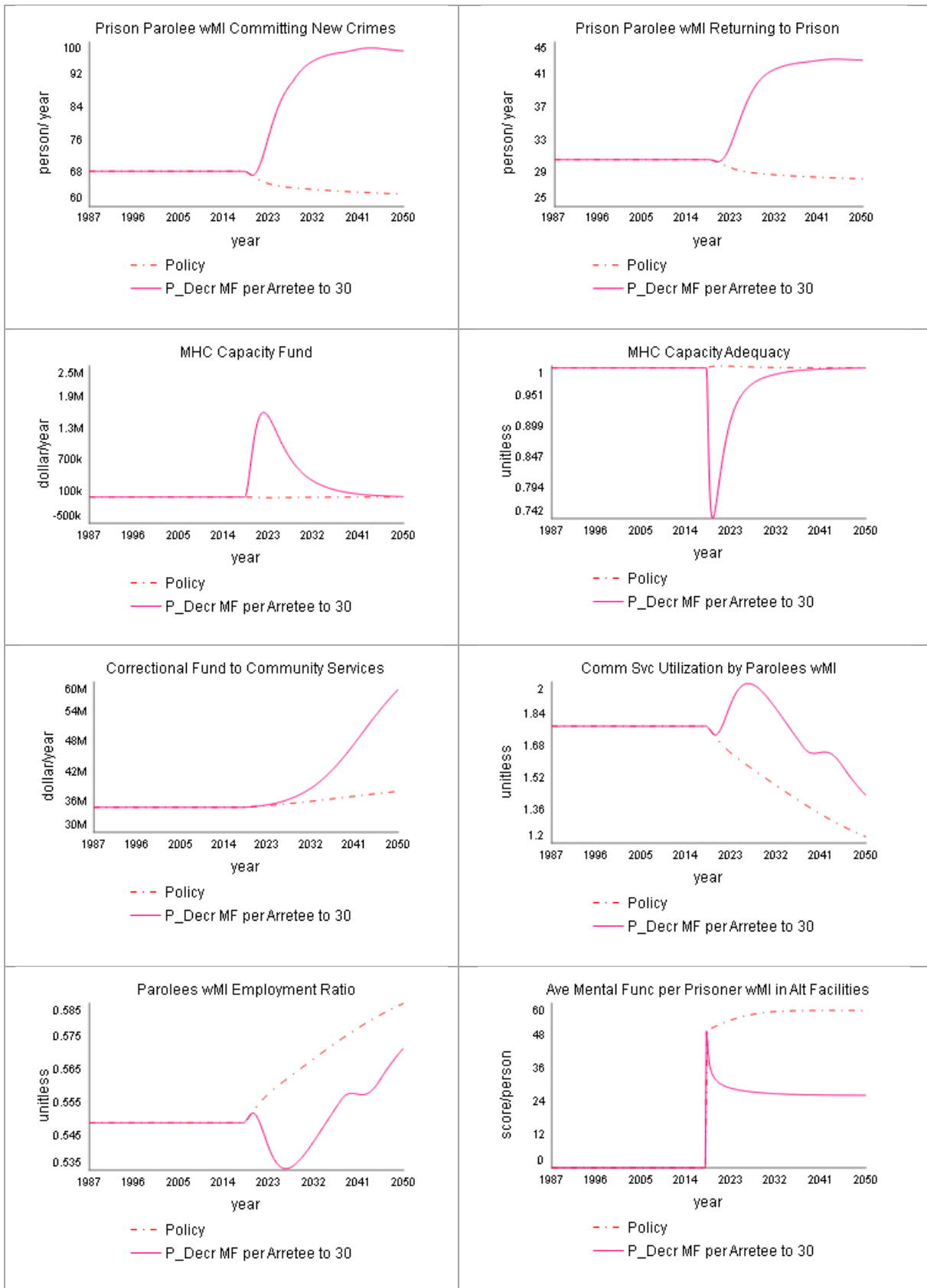


Extreme Condition Test 5 – Decrease Mental Function per Arrestee

In this test, the “mental func per arrestee” parameter in the **Mental Profiles** module decreases from 65 to 30 from 2018 onwards.

Selected Results

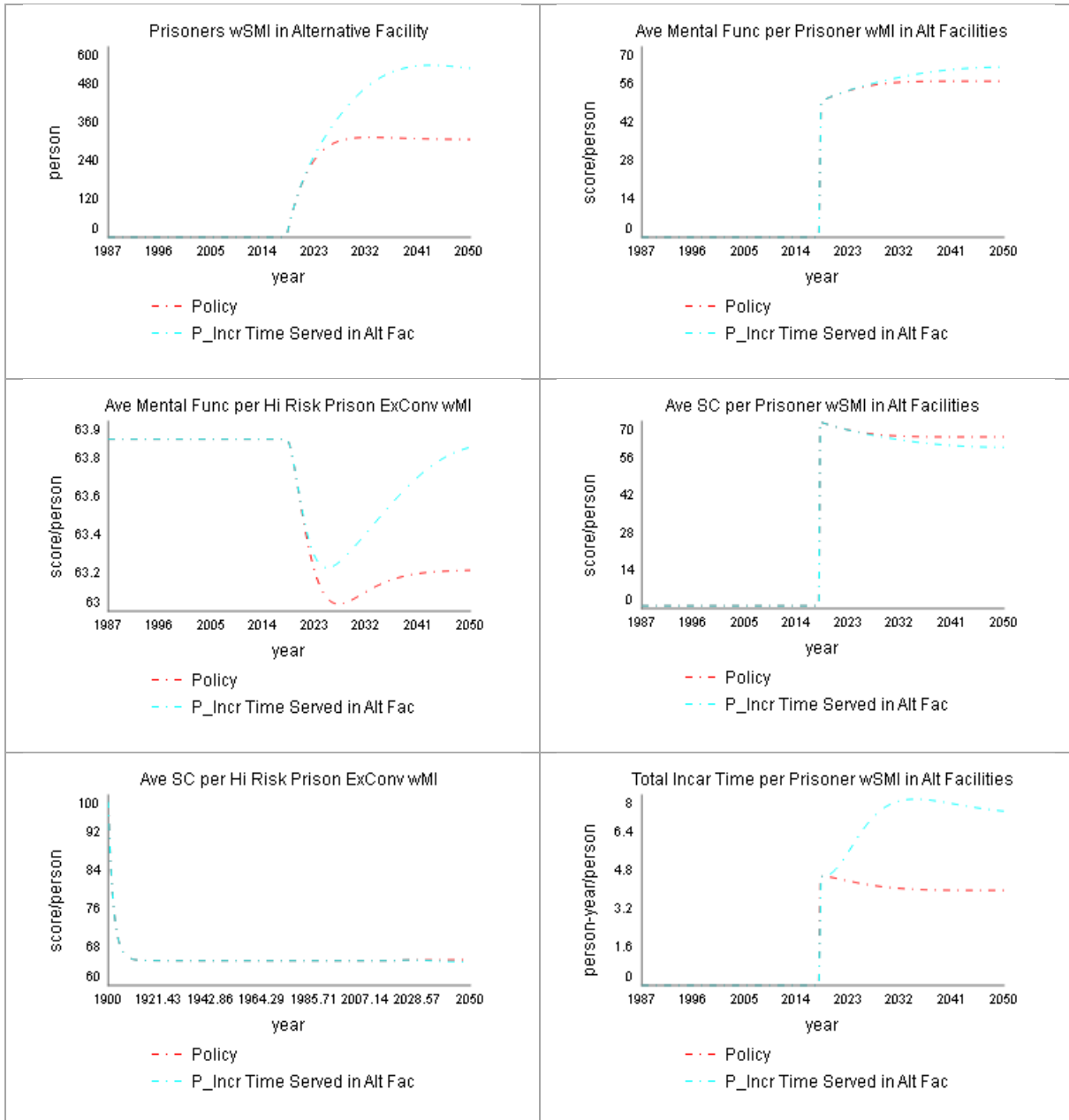




Extreme Condition Test 6 – Increase Time Served in Alternative Facility

In this test, the “ref ave time served in alt facility” parameter in the **Individuals with Criminal History** module increases from 3 to 6 years from 2018 onwards.

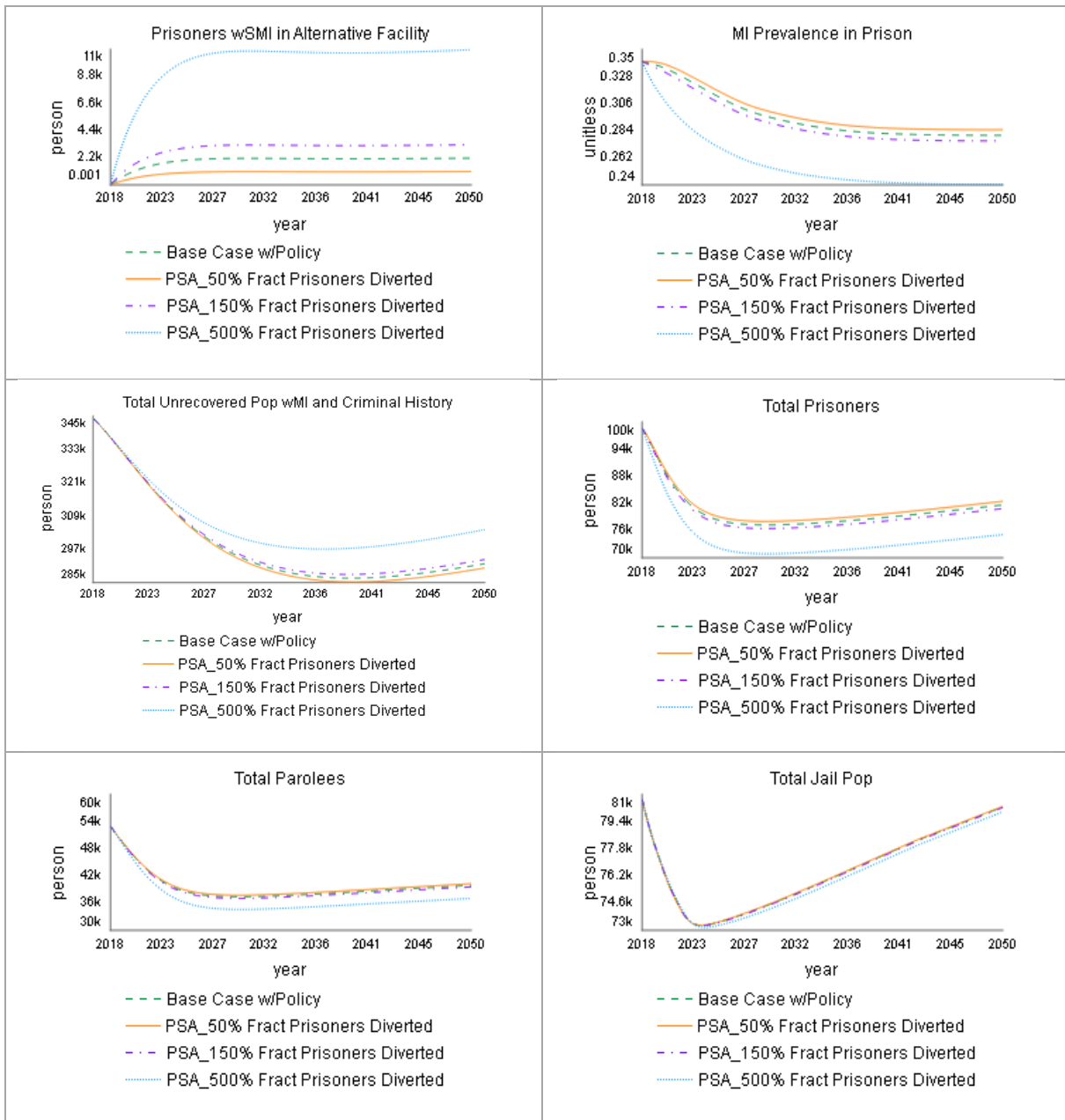
Selected Results

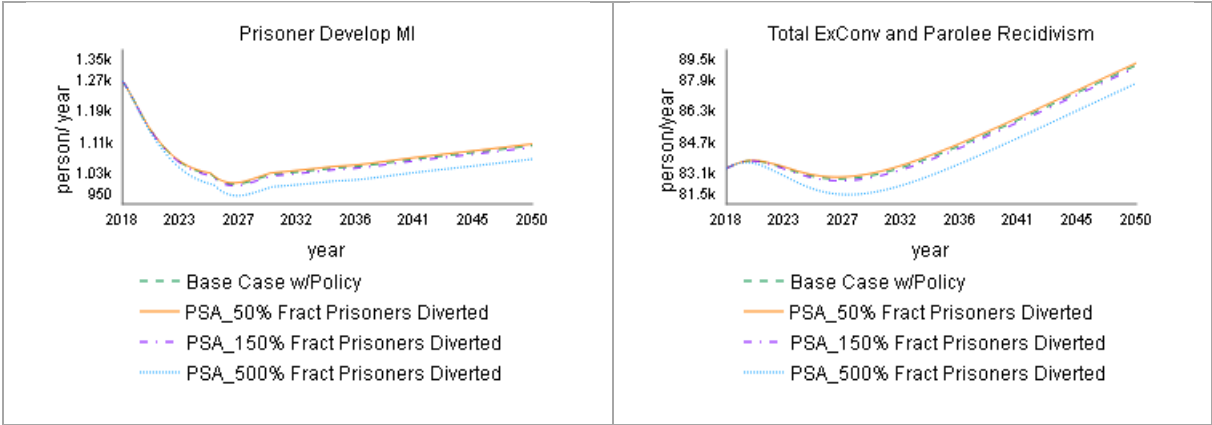


Sensitivity Analysis Test 1 – Fraction Incoming Prisoners wSMI Diverted

In this test, the “ref fract incoming prisoners wSMI diverted” in the **Individuals with Criminal History** module is tested by varying the parameter with a STEP function to lower the constant by 50% lower and increase the constant by 150% and 500% from 2018 onwards. The initial value for “ref fract incoming prisoners wSMI diverted” is 0.05.

Selected Results

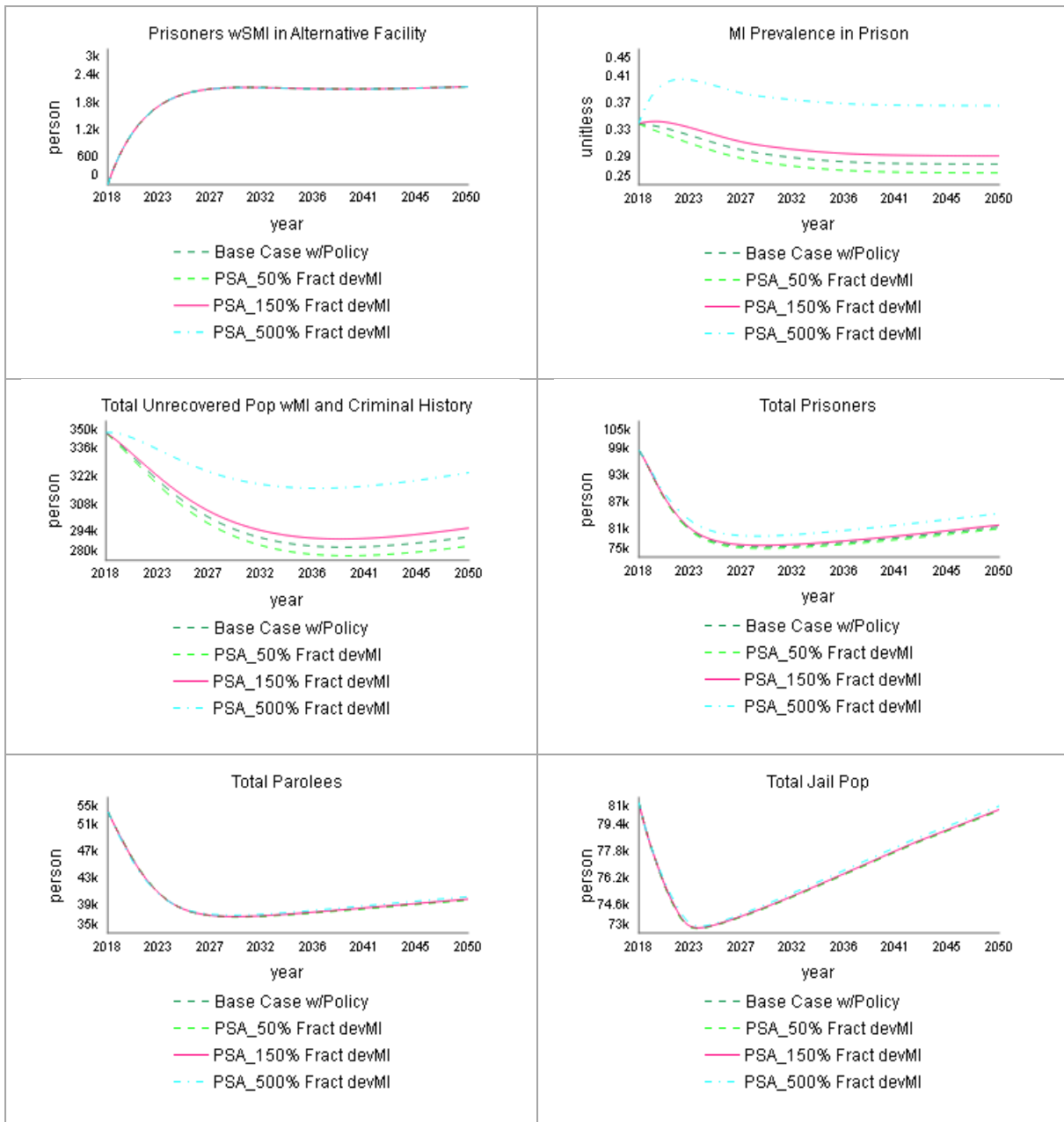


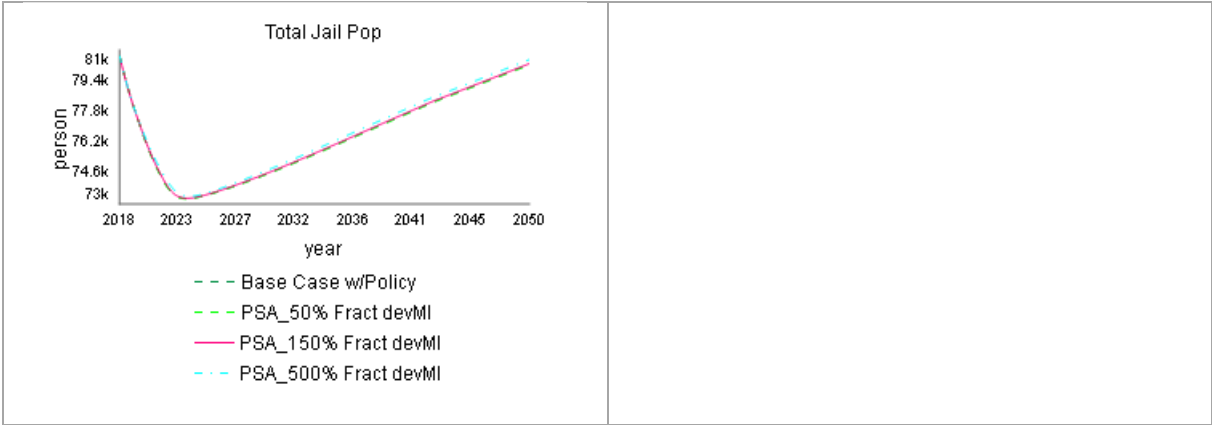


Sensitivity Analysis Test 2 – Fraction of Prisoners Develop Mental Illness

In this test, the “ref fract prisoners devMI” in the **Individuals with Criminal History** module is tested by varying the parameter with a STEP function to lower the constant by 50% lower and increase the constant by 150% and 500% from 2018 onwards. The initial value for “ref fract prisoners devMI” is 0.02.

Selected Results

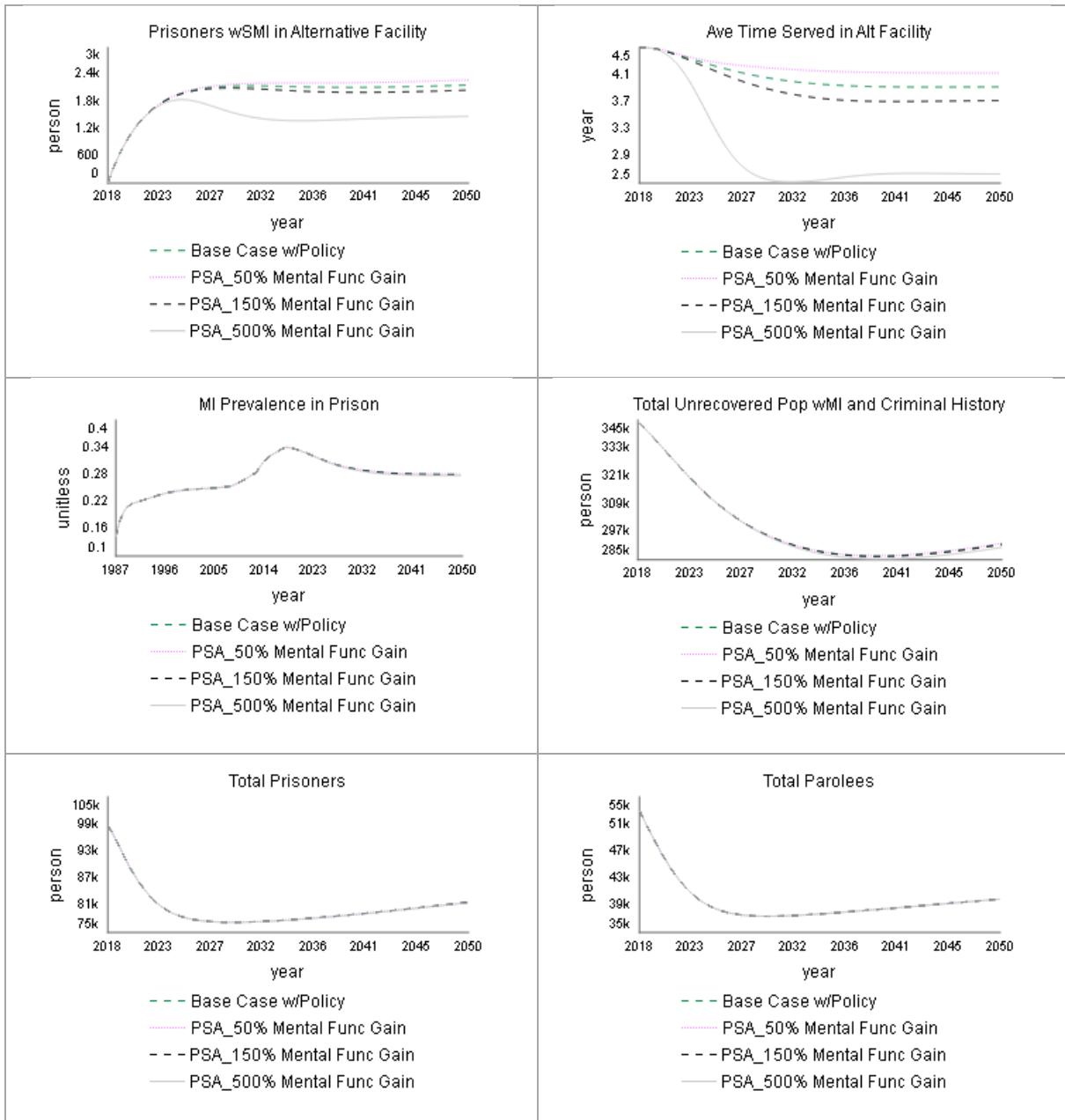


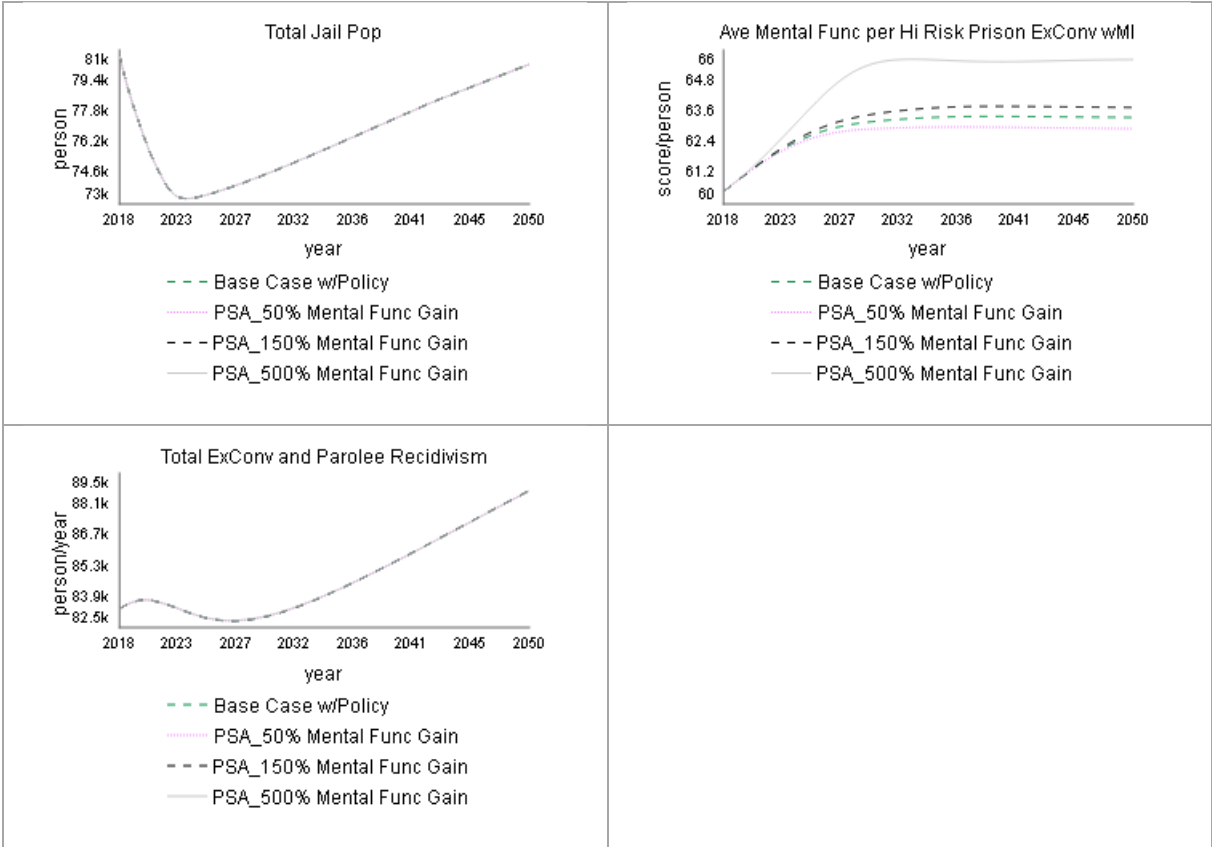


Sensitivity Analysis Test 3 – Mental Function Gain in Alternative Facility

In this test, the “mental func gain” in the **Mental Profiles** module is tested by varying the parameter with a STEP function to lower the constant by 50% lower and increase the constant by 150% and 500% from 2018 onwards. The initial value for “mental func gain” is two score per year per person.

Selected Results

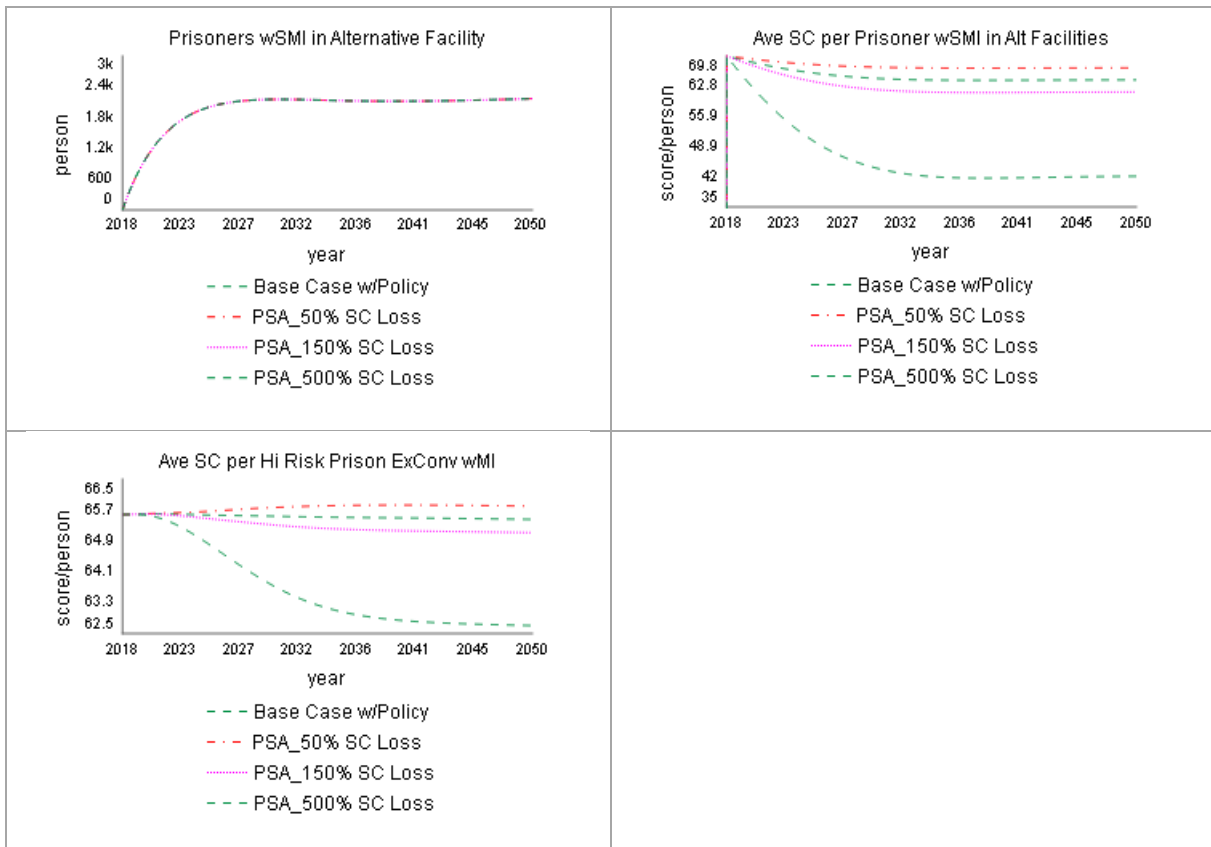




Sensitivity Analysis Test 4 – Annual Prisoner Social Capital Loss in Alternative Facility

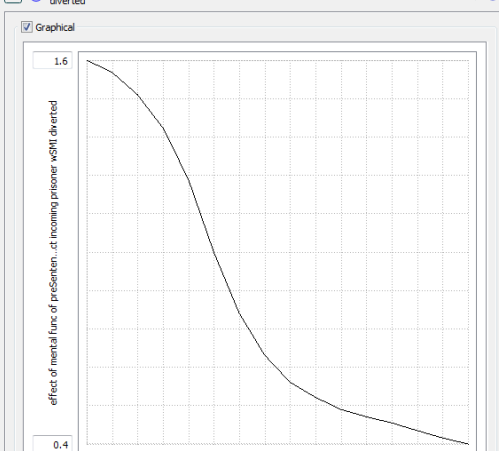
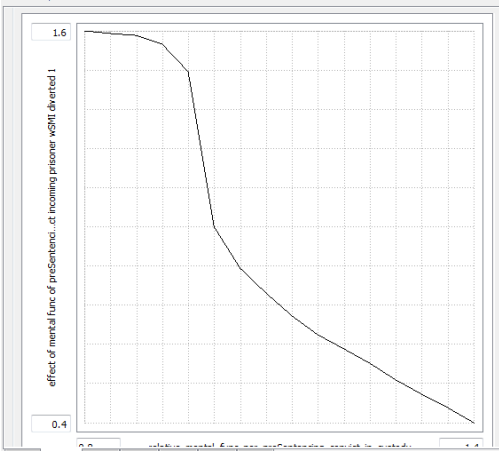
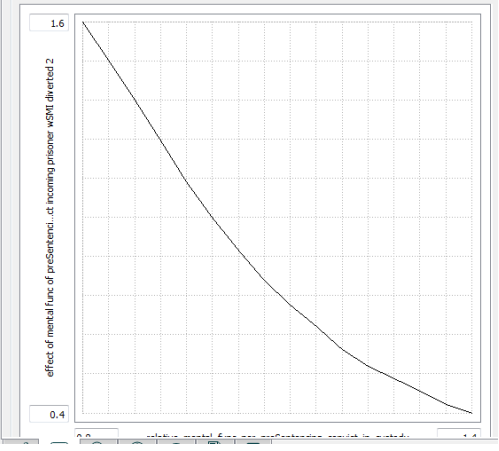
In this test, the “annual prisoner SC loss per prisoner in alt facility” in the **Social Capital** module is tested by varying the parameter with a STEP function to lower the constant by 50% lower and increase the constant by 150% and 500% from 2018 onwards. The initial value for “annual prisoner SC loss per prisoner in alt facility” is 1.5 score per year per person.

Selected Results

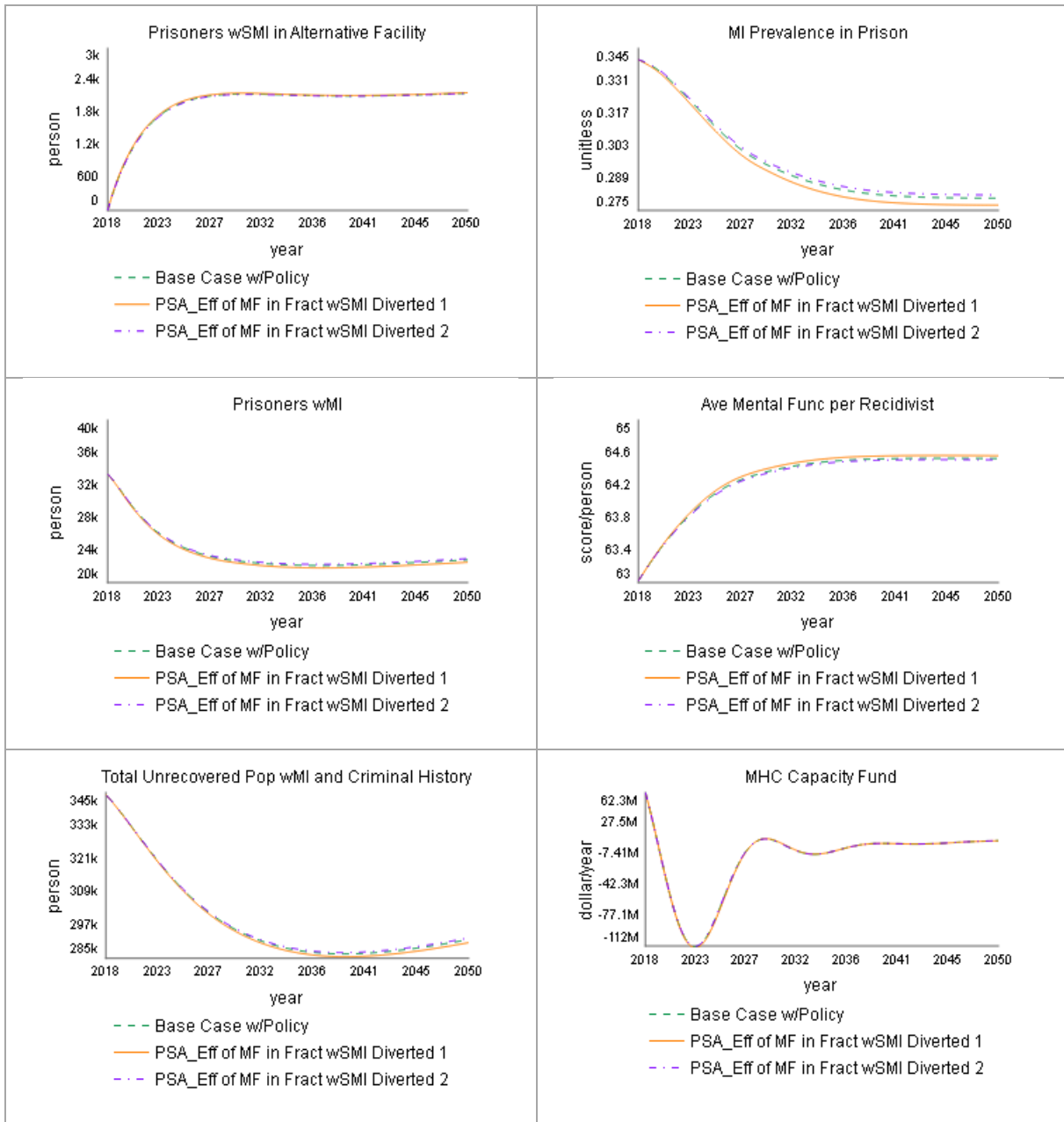


Sensitivity Analysis Test 5 – Effect of Mental Function of Pre-Sentencing Convict on Fraction of Prisoners wSMI Diverted

In this test, the relationship between “mental func of preSentencing convict in custody” in the **Mental Profiles** module and “fract incoming prisoners wSMI diverted” in the **Individuals with Criminal History** module is modified through changing the steepness of the graph in the table function in “effect of mental function of presentencing convict in custody on fract incoming prisoners wSMI diverted” to assess the impact on selected parameters with varying implicit delay in the effect of the input parameter. The following graphs are the altered steepness tested. As the structure for the pre-sentencing convict in community is similar to those in custody, hence only the “effect of mental function of presentencing convict in custody on fract incoming prisoners wSMI diverted” is tested.

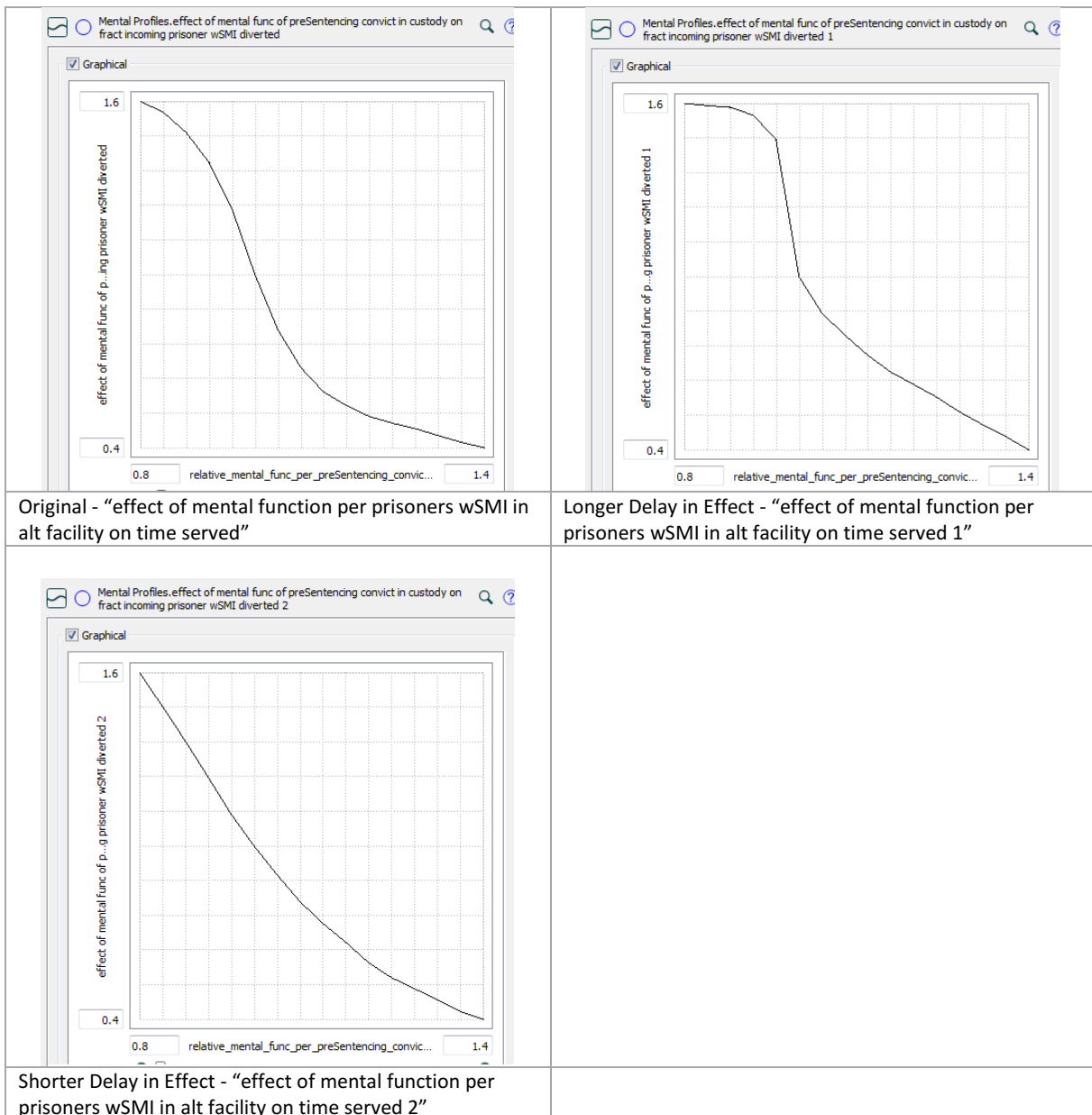
	
<p>Original - “effect of mental function of presentencing convict in custody on fract incoming prisoners wSMI diverted”</p>	<p>Longer Delay in Effect - “effect of mental function of presentencing convict in custody on fract incoming prisoners wSMI diverted 1”</p>
	
<p>Shorter Delay in Effect - “effect of mental function of presentencing convict in custody on fract incoming prisoners wSMI diverted 2”</p>	

Selected Results

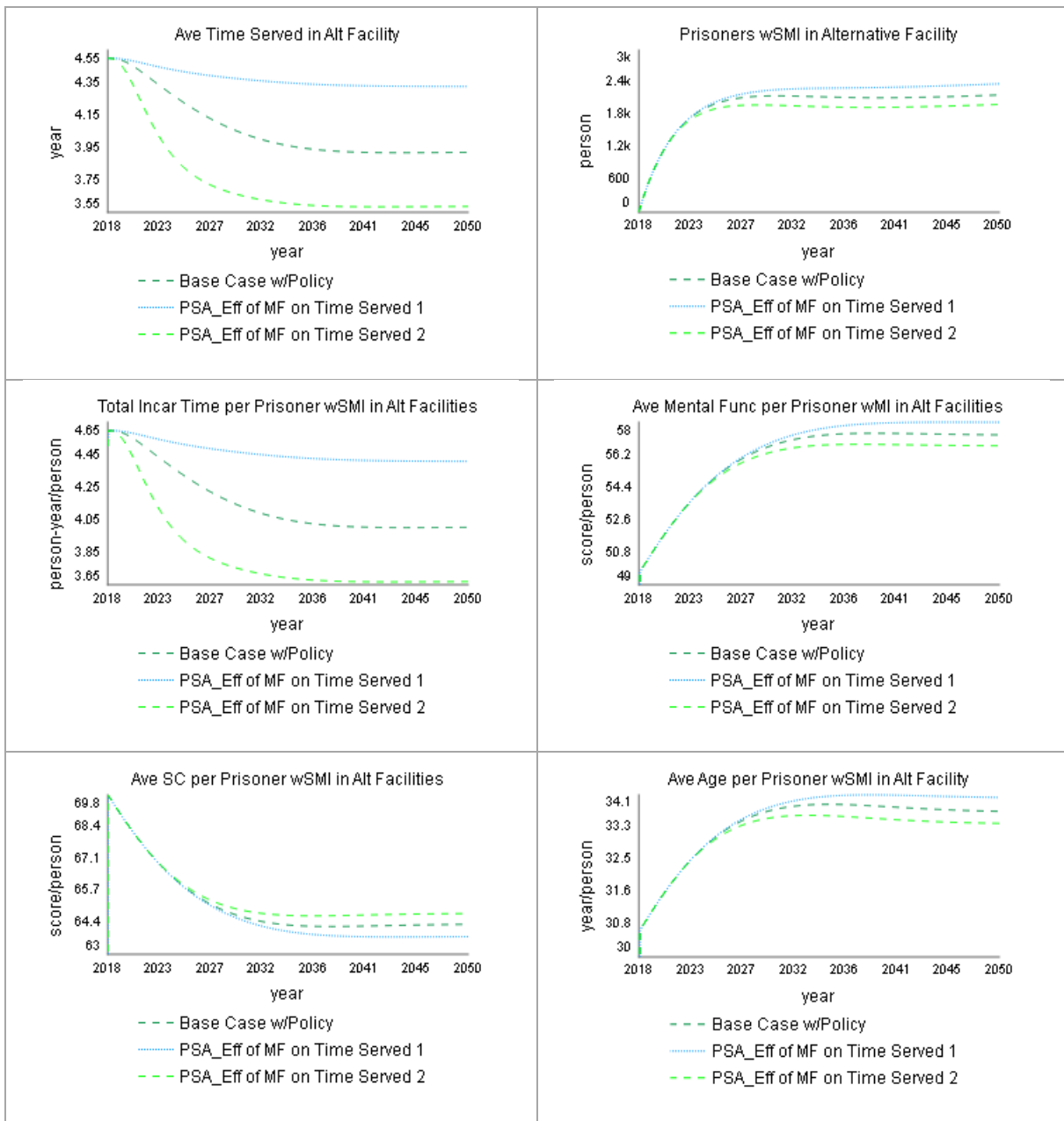


Sensitivity Analysis Test 6 – Effect of Mental Function per Prisoner wSMI on Time Served in Alternative Facility

In this test, the relationship between “mental func per prisoner wSMI in alt facility on time served” in the **Mental Profiles** module and “ave time served in alt facility” in the **Individuals with Criminal History** module is modified through changing the steepness of the graph in the table function in “effect of mental function per prisoners wSMI in alt facility on time served” to assess the impact on selected parameters with varying implicit delay in the effect of the input parameter. The following graphs are the altered steepness tested.

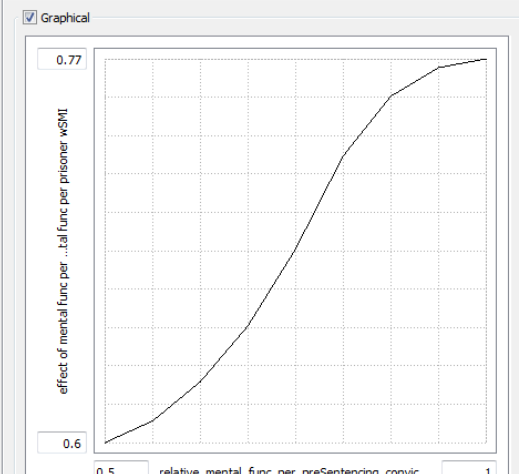
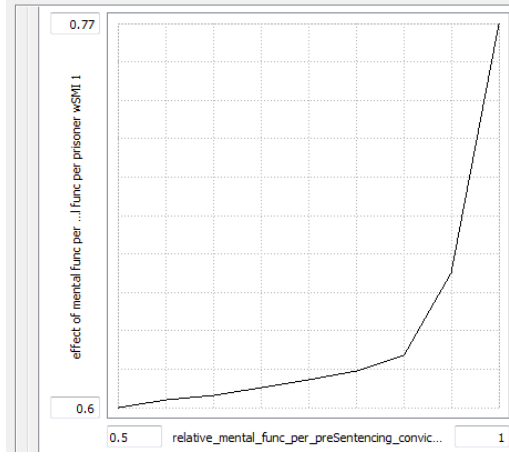
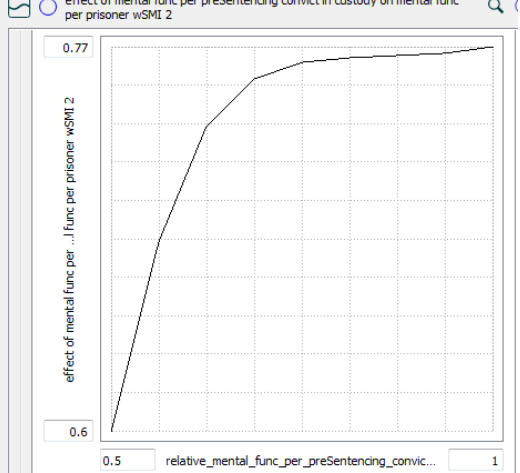


Selected Results

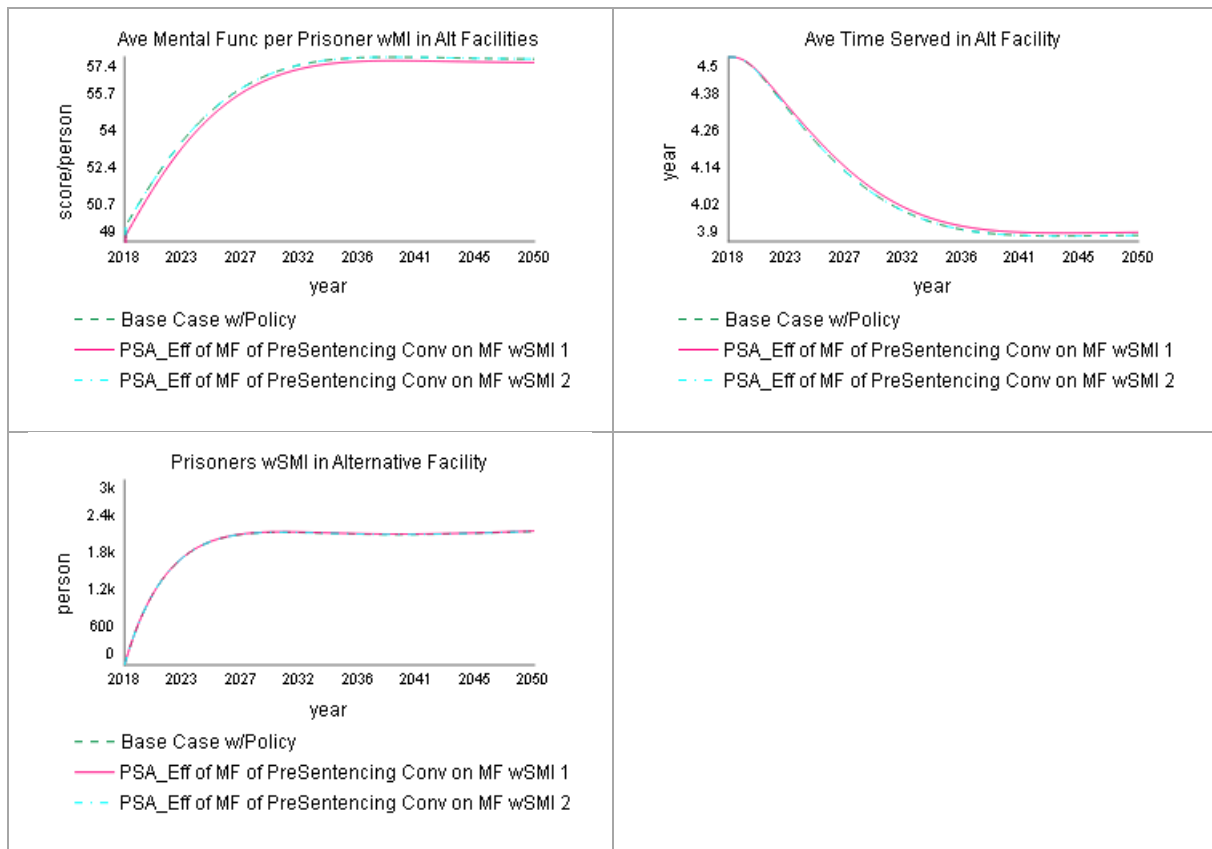


Sensitivity Analysis Test 7 – Effect of Mental Function per Pre-Sentencing Convict on Mental Functions per Prisoner wSMI

In this test, the relationship between “mental func per presentencing convict in custody” and “ave mental func per diverted prison convict in custody wSMI” in the **Mental Profiles** module is modified through changing the steepness of the graph in the table function in “effect of mental function per preSentencing convict in custody on mental func per prisoner wSMI” to assess the impact on selected parameters with varying implicit delay in the effect of the input parameter. The following graphs are the altered steepness tested. As the structure for the pre-sentencing convict in community is similar to those in custody, hence only the “effect of mental function per preSentencing convict in custody on mental func per prisoner wSMI” is tested.

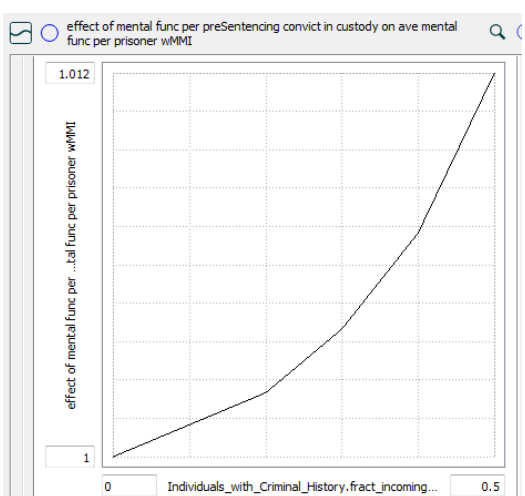
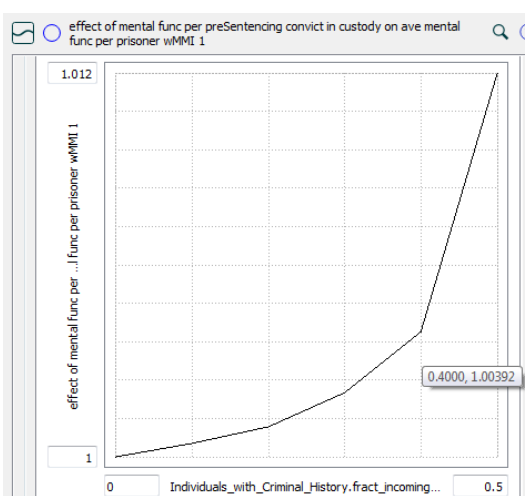
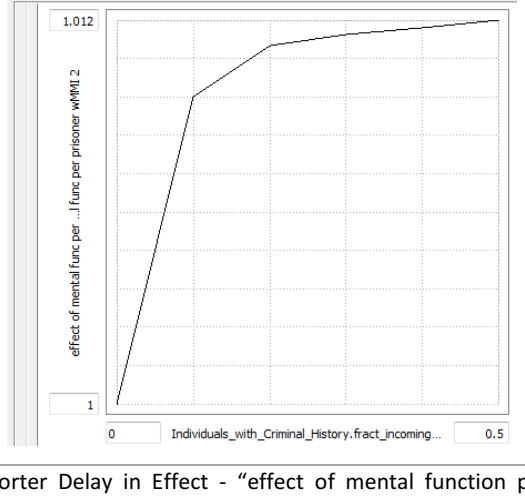
	
<p>Original - “effect of mental function per preSentencing convict in custody on mental func per prisoner wSMI”</p>	<p>Longer Delay in Effect - “effect of mental function per preSentencing convict in custody on mental func per prisoner wSMI 1”</p>
	
<p>Shorter Delay in Effect - “effect of mental function per preSentencing convict in custody on mental func per prisoner wSMI 2”</p>	

Selected Results

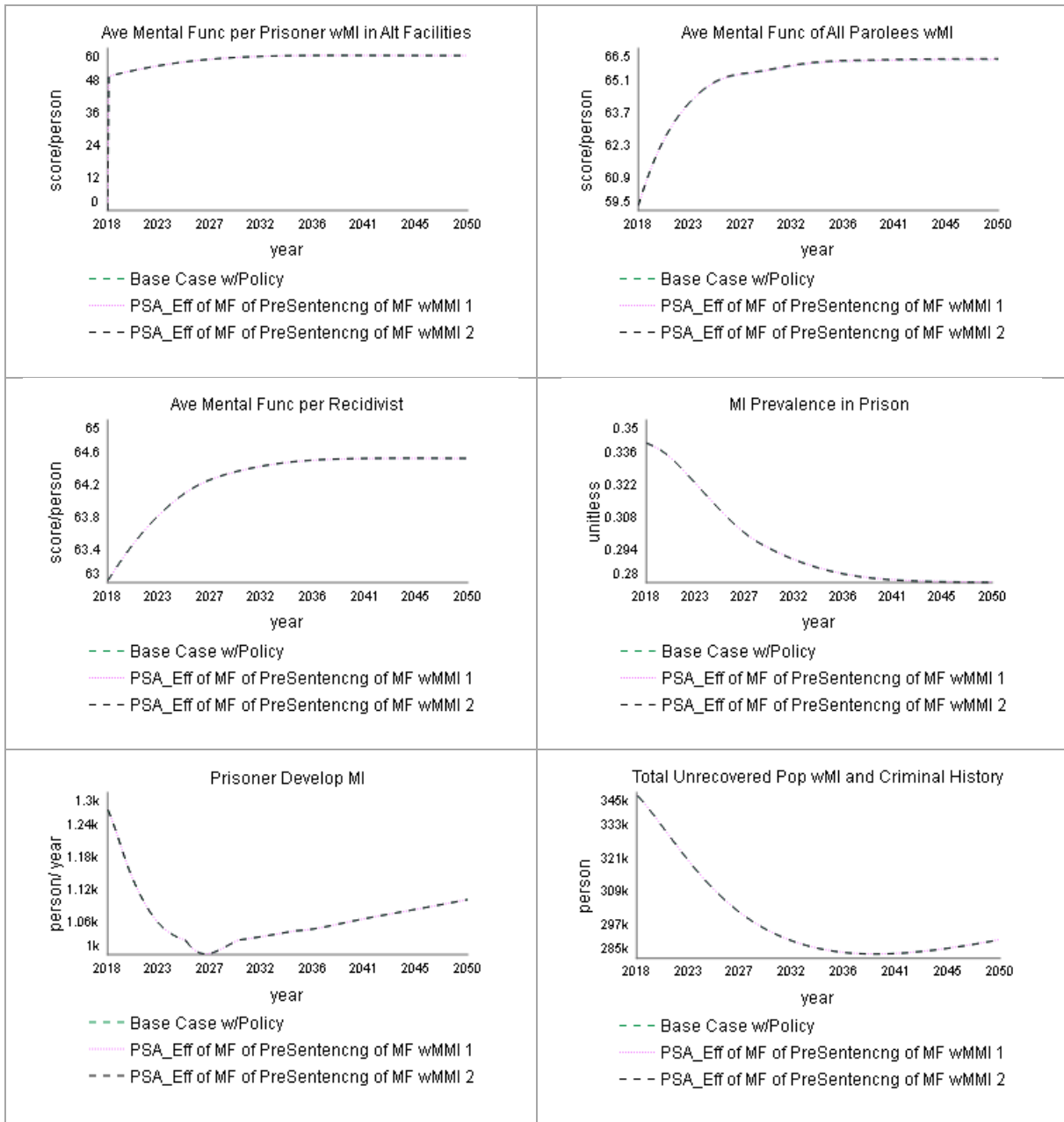


Sensitivity Analysis Test 8 – Effect of Mental Function per Pre-Sentencing Convict on Average Mental Functions per Prisoner with Mild/Moderate Mental Illness

In this test, the relationship between “mental func per presentencing convict in custody” and “ave mental func per incoming prisoner in custody wMI” in the **Mental Profiles** module is modified through changing the steepness of the graph in the table function in “effect of mental function per preSentencing convict in custody on mental func per prisoner wMMI” to assess the impact on selected parameters with varying implicit delay in the effect of the input parameter. The following graphs are the altered steepness tested. As the structure for the pre-sentencing convict in community is similar to those in custody, hence only the “effect of mental function per preSentencing convict in custody on mental func per prisoner wMMI” is tested.

	
<p>Original - “effect of mental function per preSentencing convict in custody on mental func per prisoner wMMI”</p>	<p>Longer Delay in Effect - “effect of mental function per preSentencing convict in custody on mental func per prisoner wMMI 1”</p>
	
<p>Shorter Delay in Effect - “effect of mental function per preSentencing convict in custody on mental func per prisoner wMMI 2”</p>	

Selected Results



Appendix O – Test Results of Concept Model

Equilibrium Test

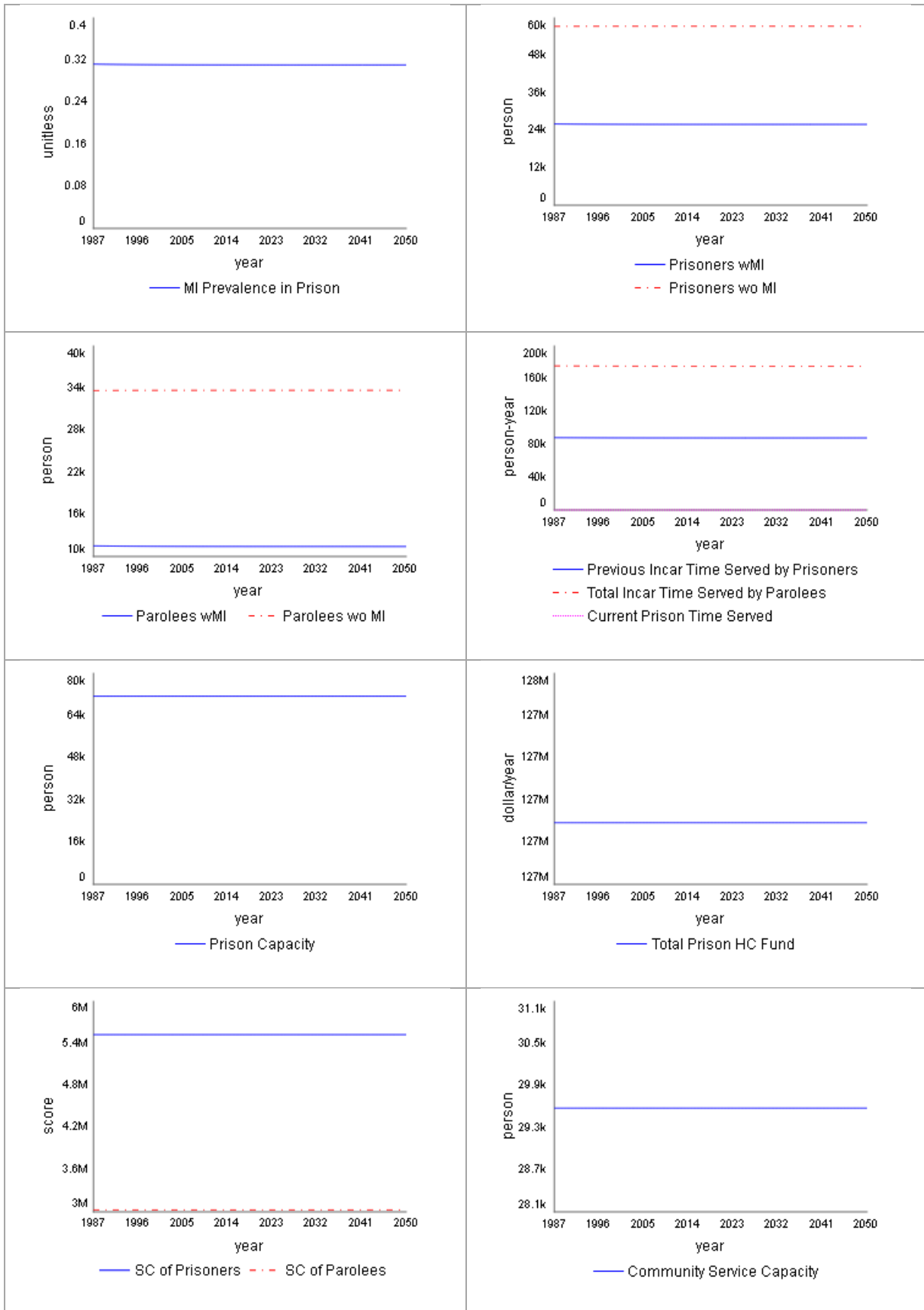
The simulated behaviors of the equilibrium test are achieved by setting the following parameters with modified values and equations:

Values in Stocks and Constants	
Prisoners wMI	25883.1033736
Parolees wMI	11425.1001423
Desisting ExConv wMI	$\text{Parolees_wMI}/(\text{ave_parole_length_wMI}*\text{mortality_rate})$
Prisoners wo MI	57380.6627633
Parolees wo MI	33687.7403324
Desisting ExConv wo MI	$\text{Parolees_wo_MI}/(\text{ave_parole_length_wo_MI}*\text{mortality_rate})$
Previous Incarceration Year Served by Prisoners	87978.441284
Total Incar Time Served by Parolees	175412.337232
Current Prison Time Served	0
Total Incar Time Served by Parolees	175412.337232
Prison Capacity	71368.9388246
Total Prison HC Budget	$\text{Non_MHC_Capacity_in_Prison}*\text{cost_per_non_MHC_tmnt} + \text{MHC_Capacity_in_Prison}*\text{cost_per_MHC_tmnt}$
Non MHC Capacity in Prison	2497.91250287
MHC Capacity in Prison	7163.60564183
SC of Prisoners	5527272.52285
SC of Parolees	3027475.76392
Community Service Capacity	29578.7110944

The following flows are also modified to initialize the model in equilibrium. The purpose of modifying the flows is to keep the bi-flows that depends on the stocks and constant growth rates.

Equations in Flows	
being admitted wMI	INIT (new_prison_admission) * fract_new_prisoners_wMI
being admitted wo MI	INIT(new_prison_admission) * (1-fract_new_prisoners_wMI)
chg in HC budget	((Non_MHC_capacity_in_Prison * cost_per_non_MHC_tmnt + MHC_capacity_in_Prison * cost_per_MHC_tmnt) - Total_Prison_HC_Budget) / budget_adjustment_time
transferring current prison time thru release	increasing_curret_prison_time_served

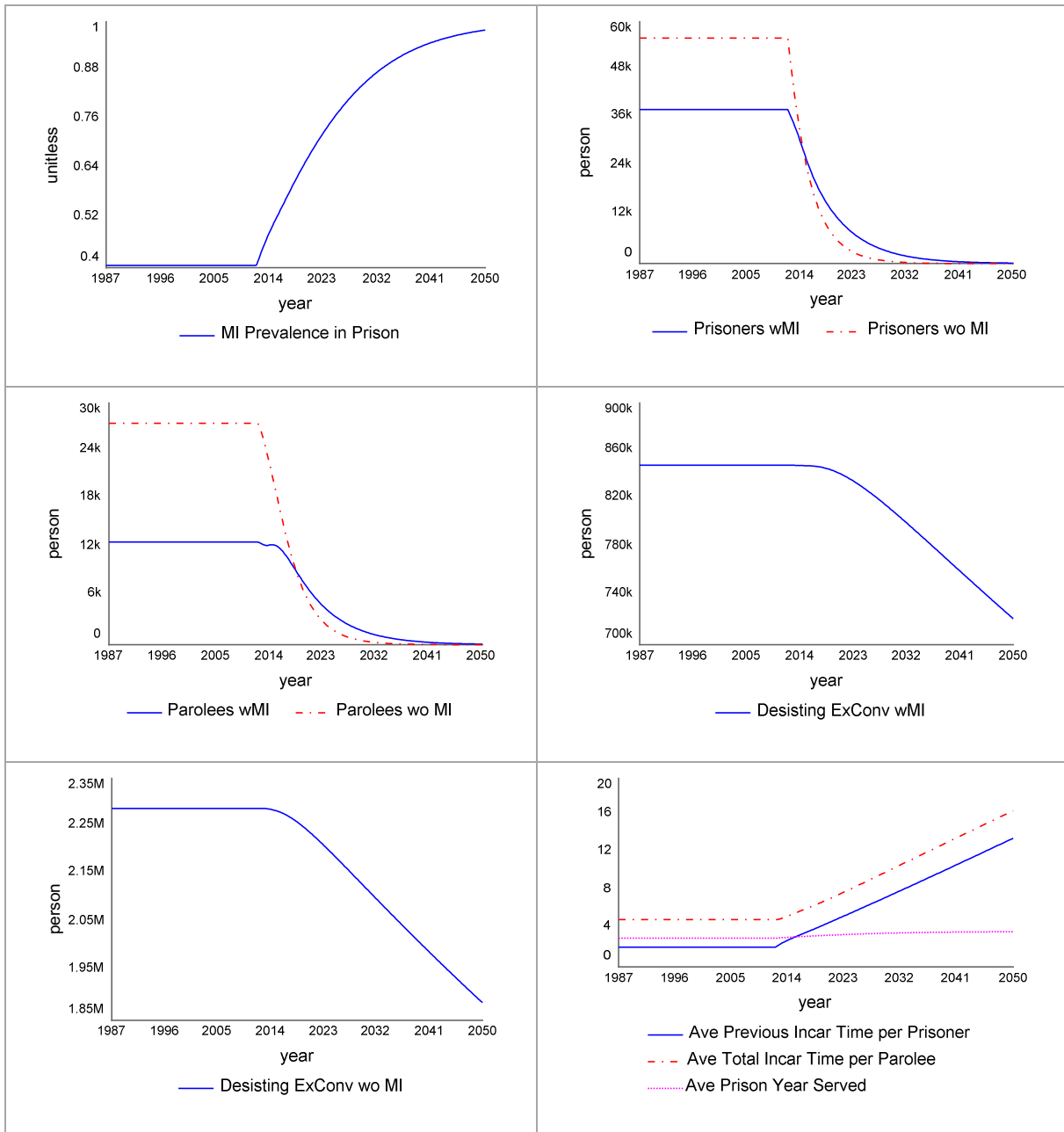
Selected Results

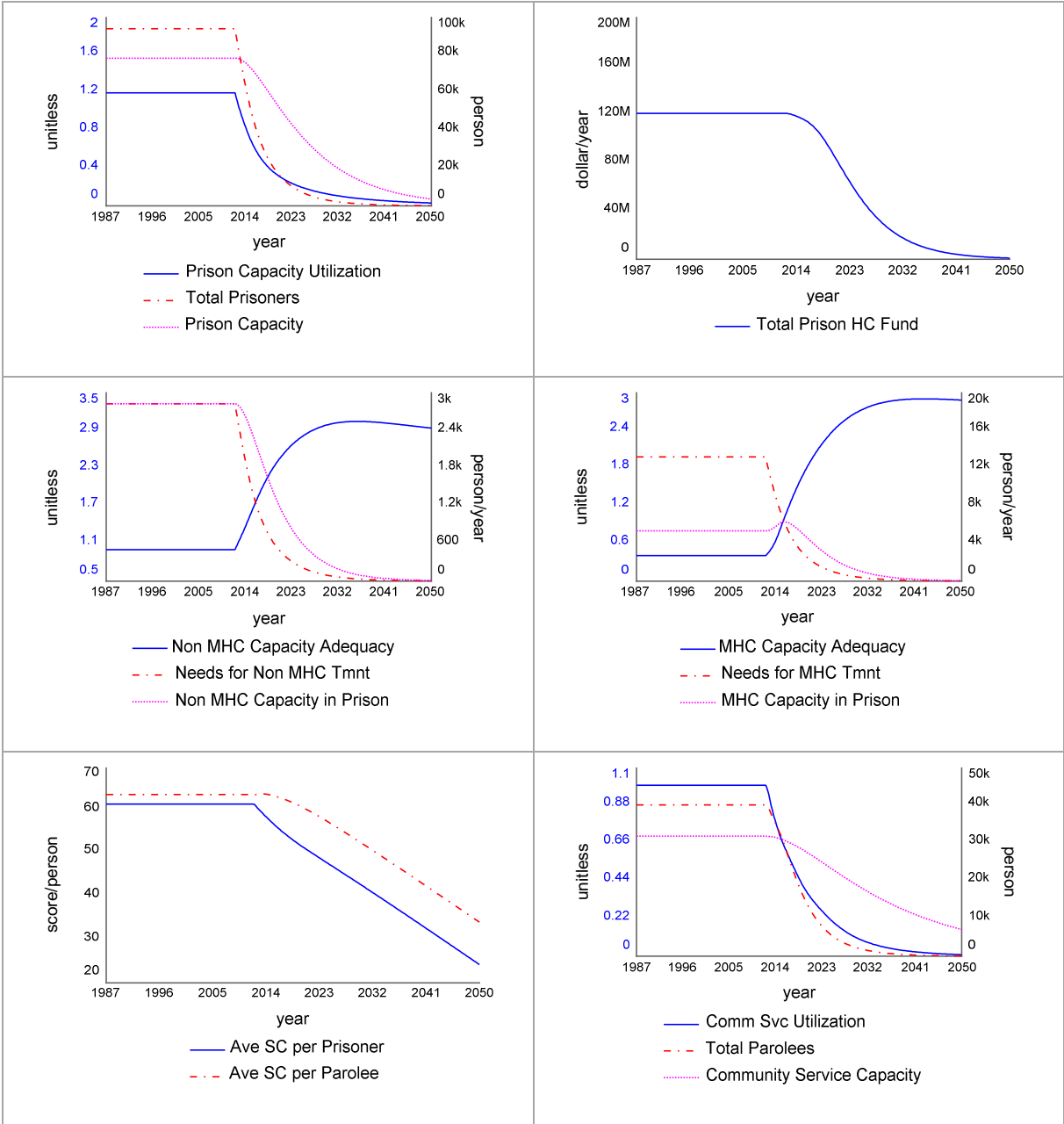


Extreme Condition Test 1 – Zero New Prison Admission

In this test, the “new prison admission” is set as zero from 2012 onwards.

Selected Results

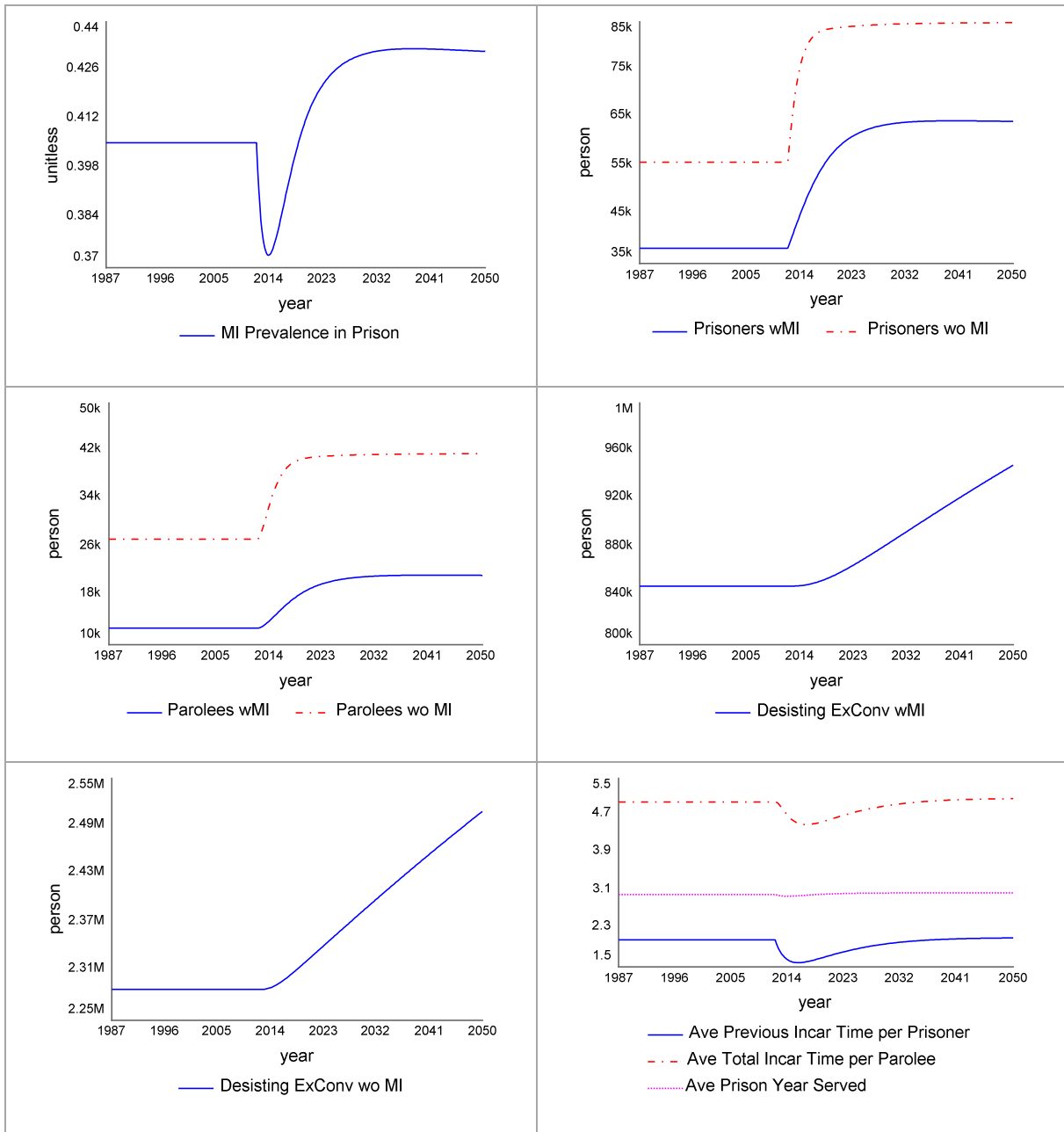


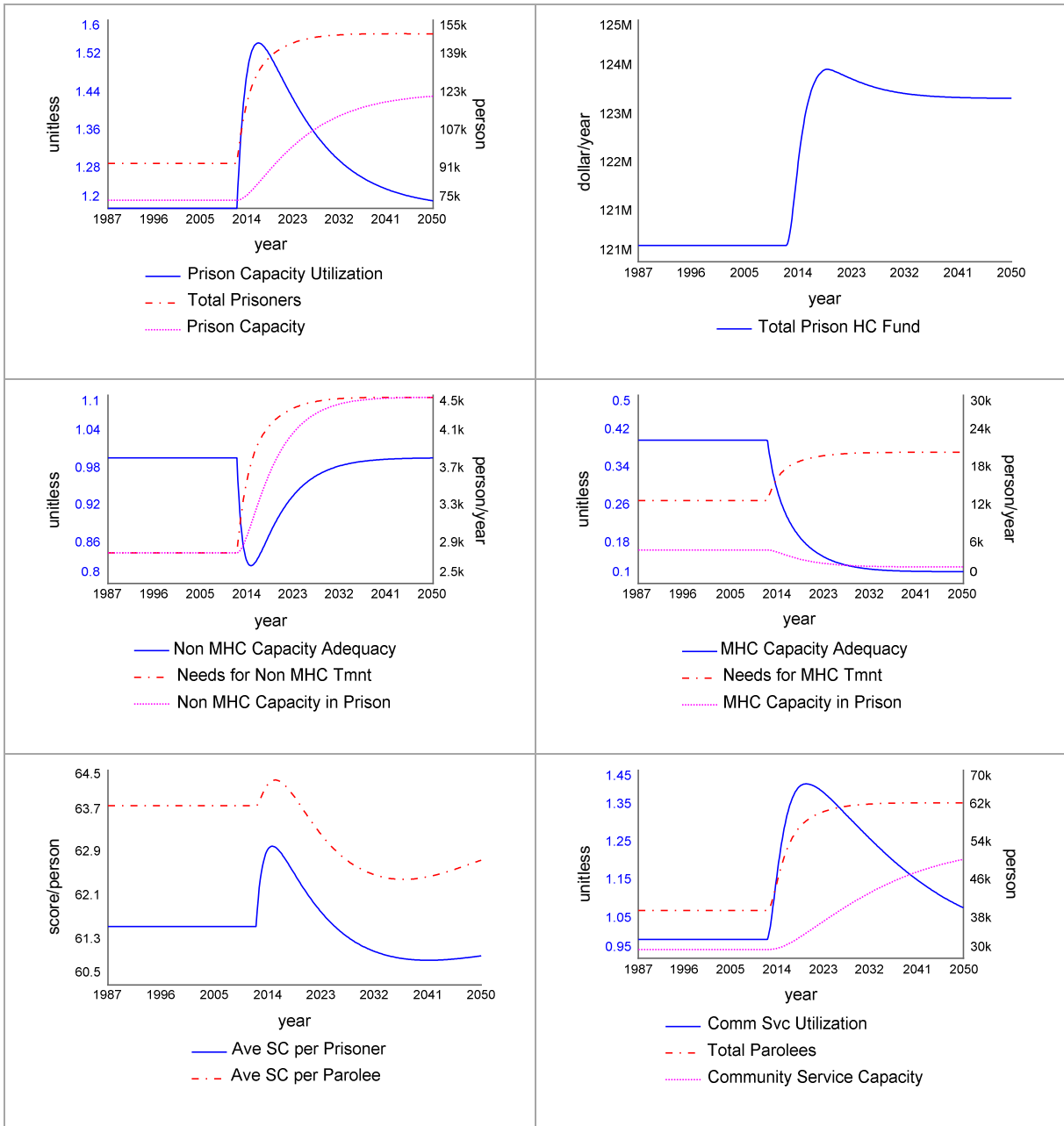


Extreme Condition Test 2 – Double New Prison Admission

In this test, the “new prison admission” is set as double from the initial value from 2012 onwards.

Selected Results

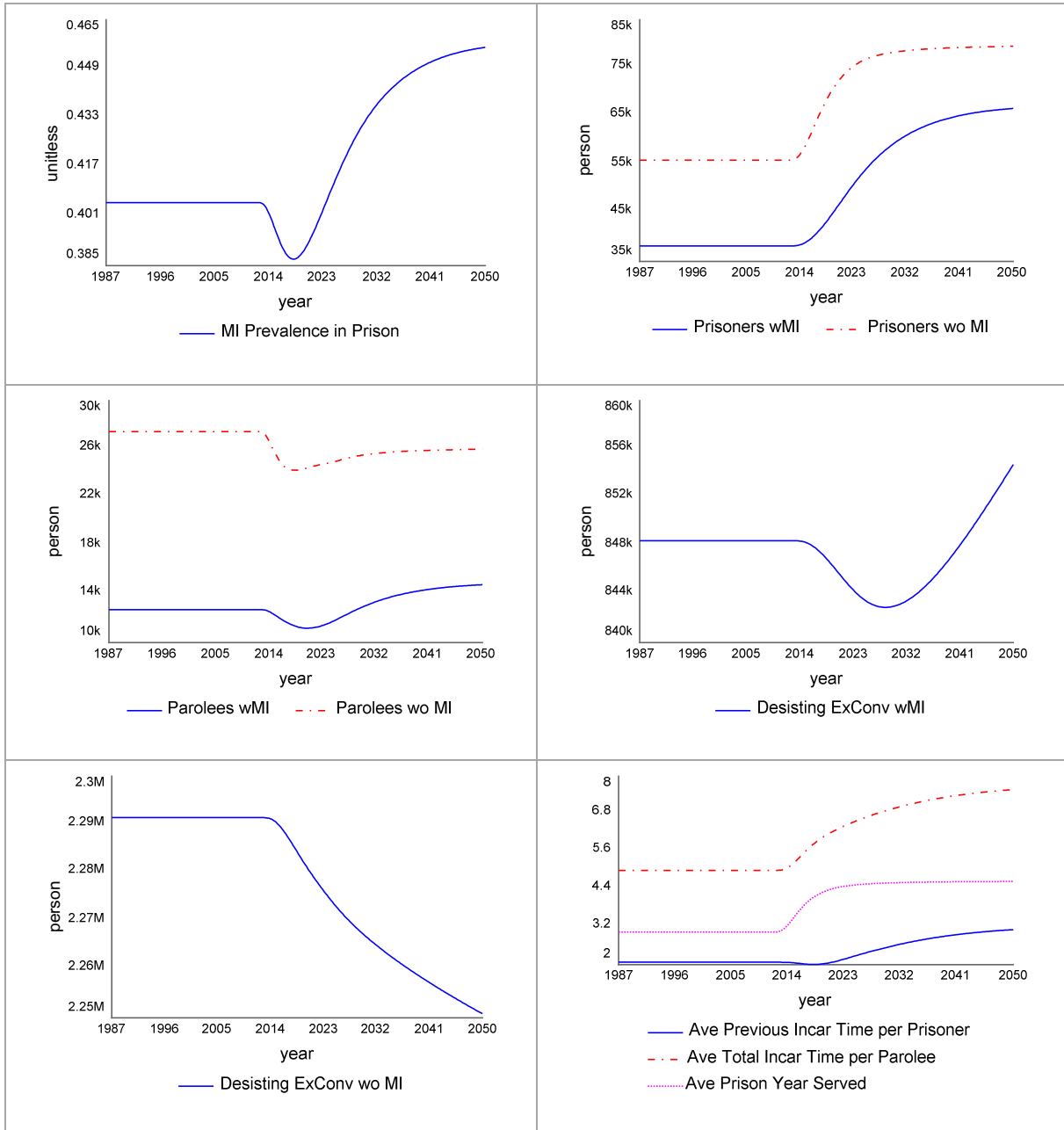


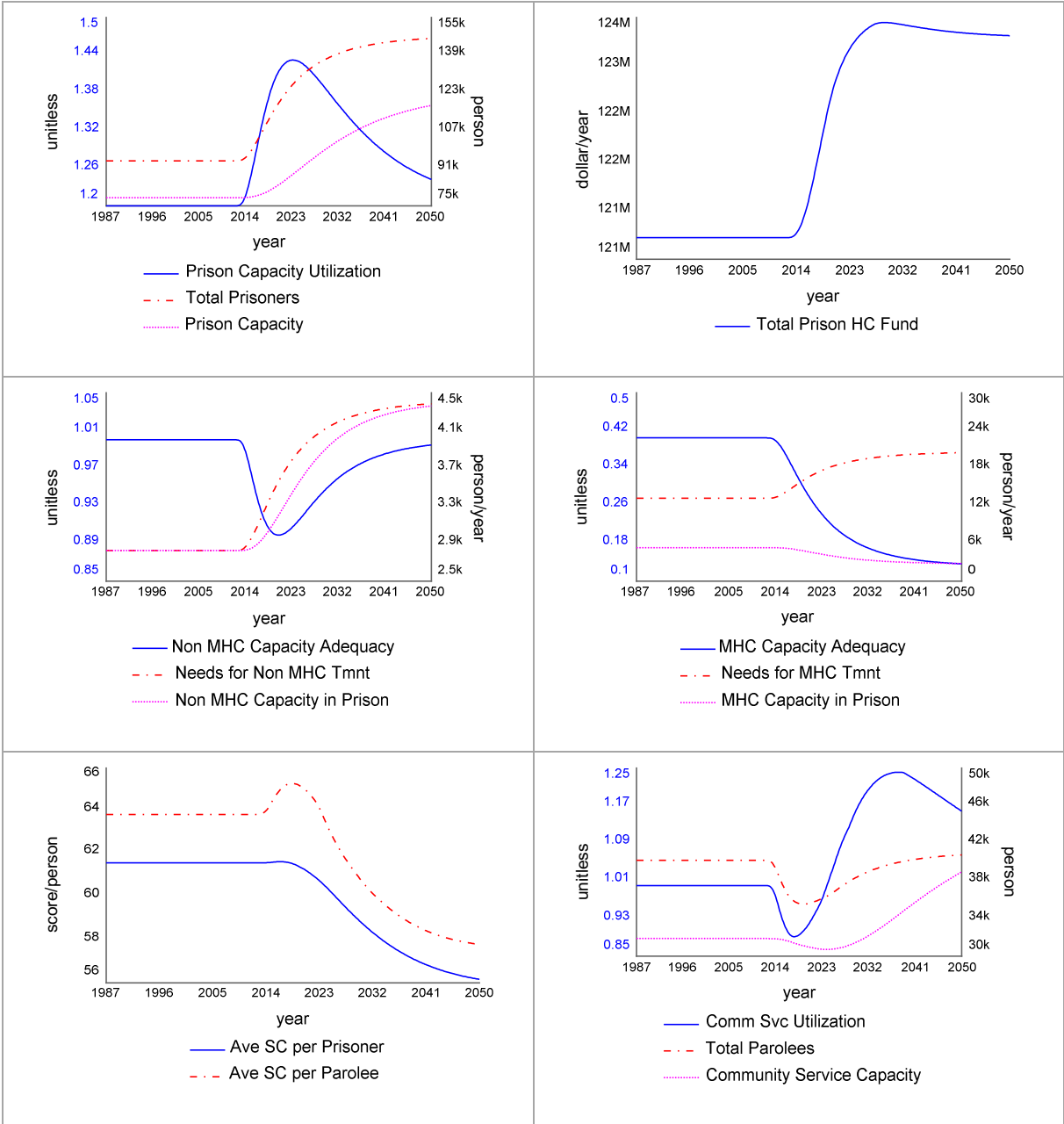


Extreme Condition Test 3 – Increase Average Prison Year Served by 50%

In this test, the “ave prison year served wMI” and “ave prison year served wo MI” are increased by 50% from 2012 onwards.

Selected Results

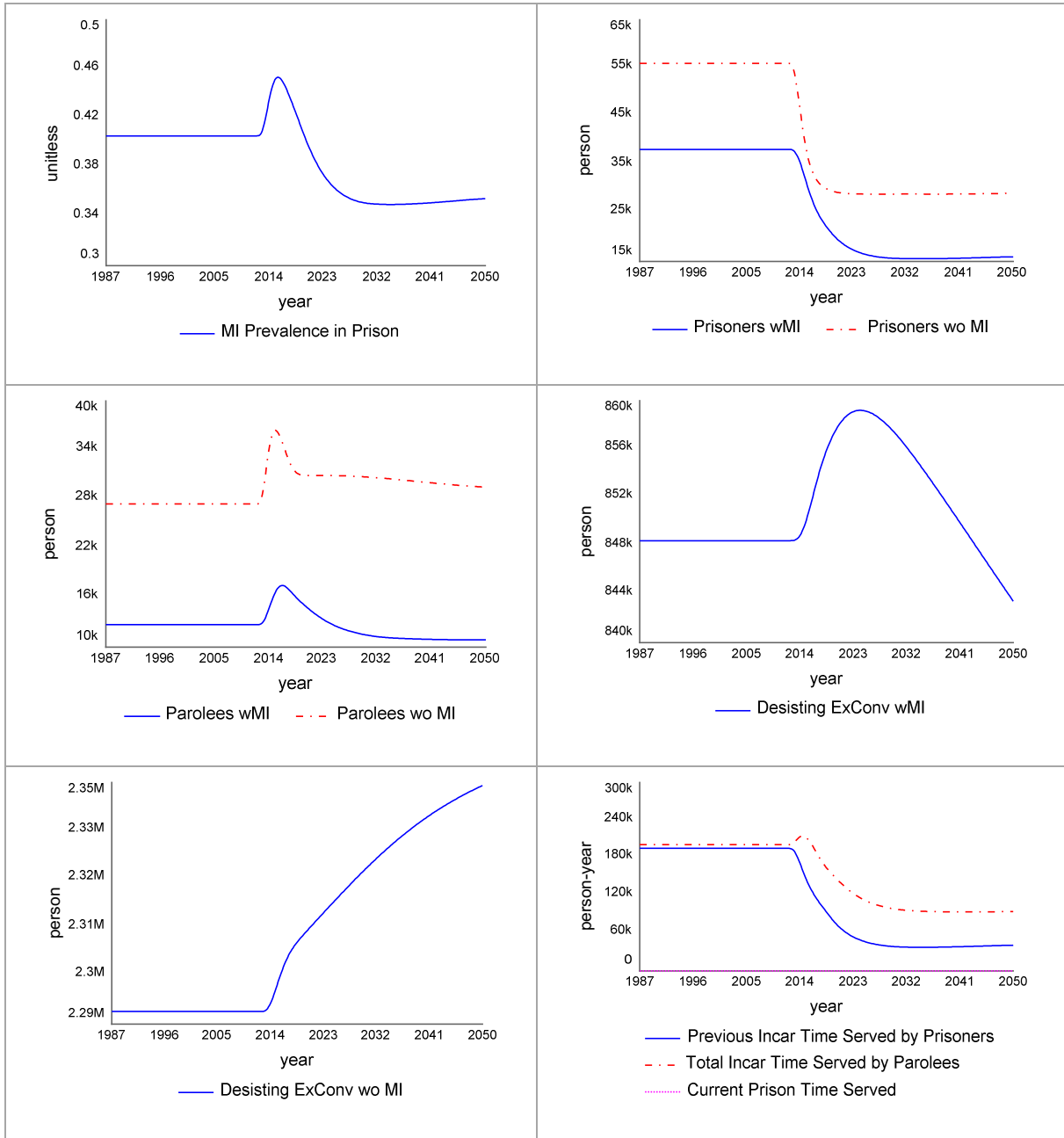


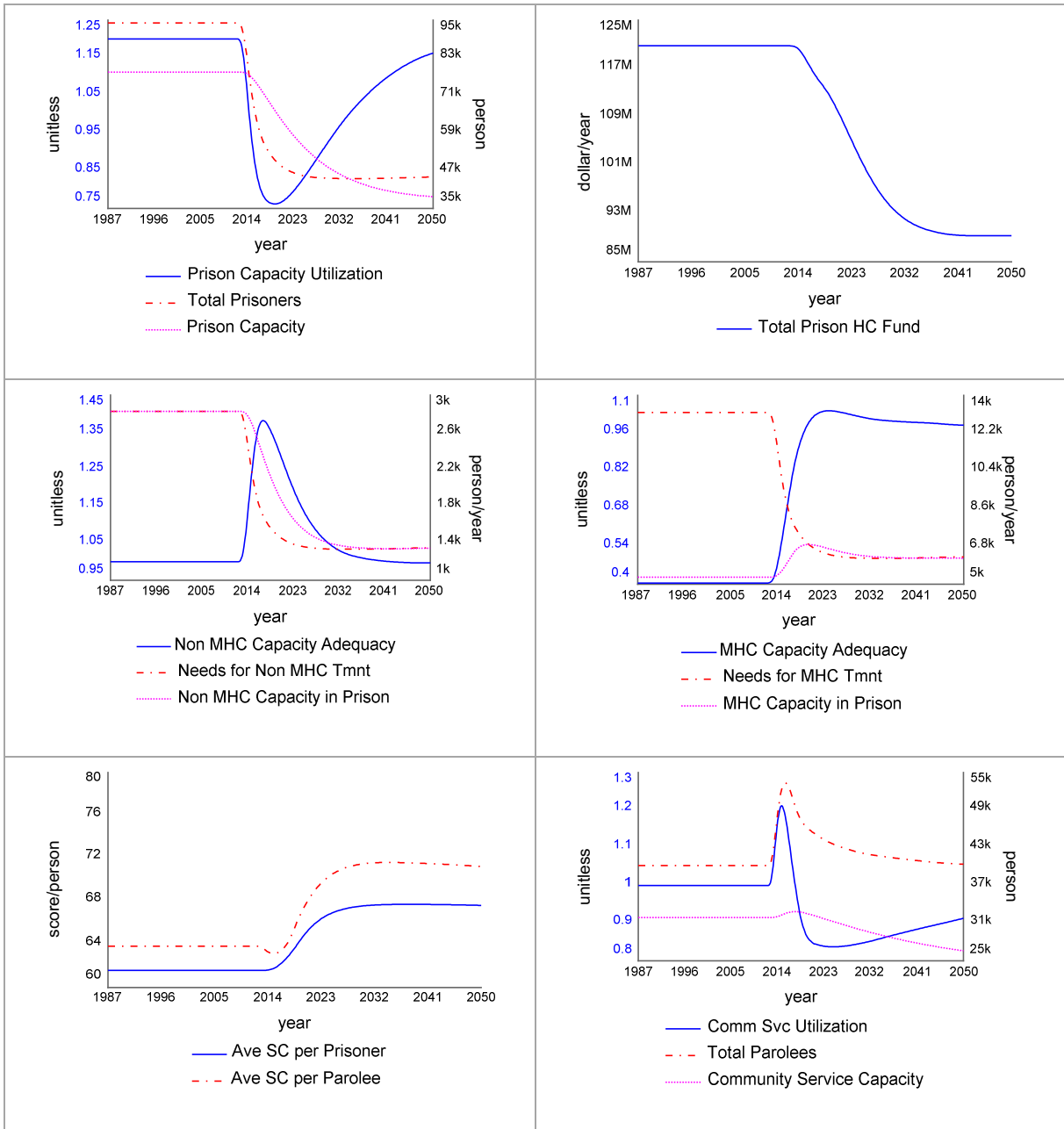


Extreme Condition Test 4 – Decrease Average Prison Year Served by 50%

In this test, the “ave prison year served wMI” and “ave prison year served wo MI” are decreased by 50% from 2012 onwards.

Selected Results

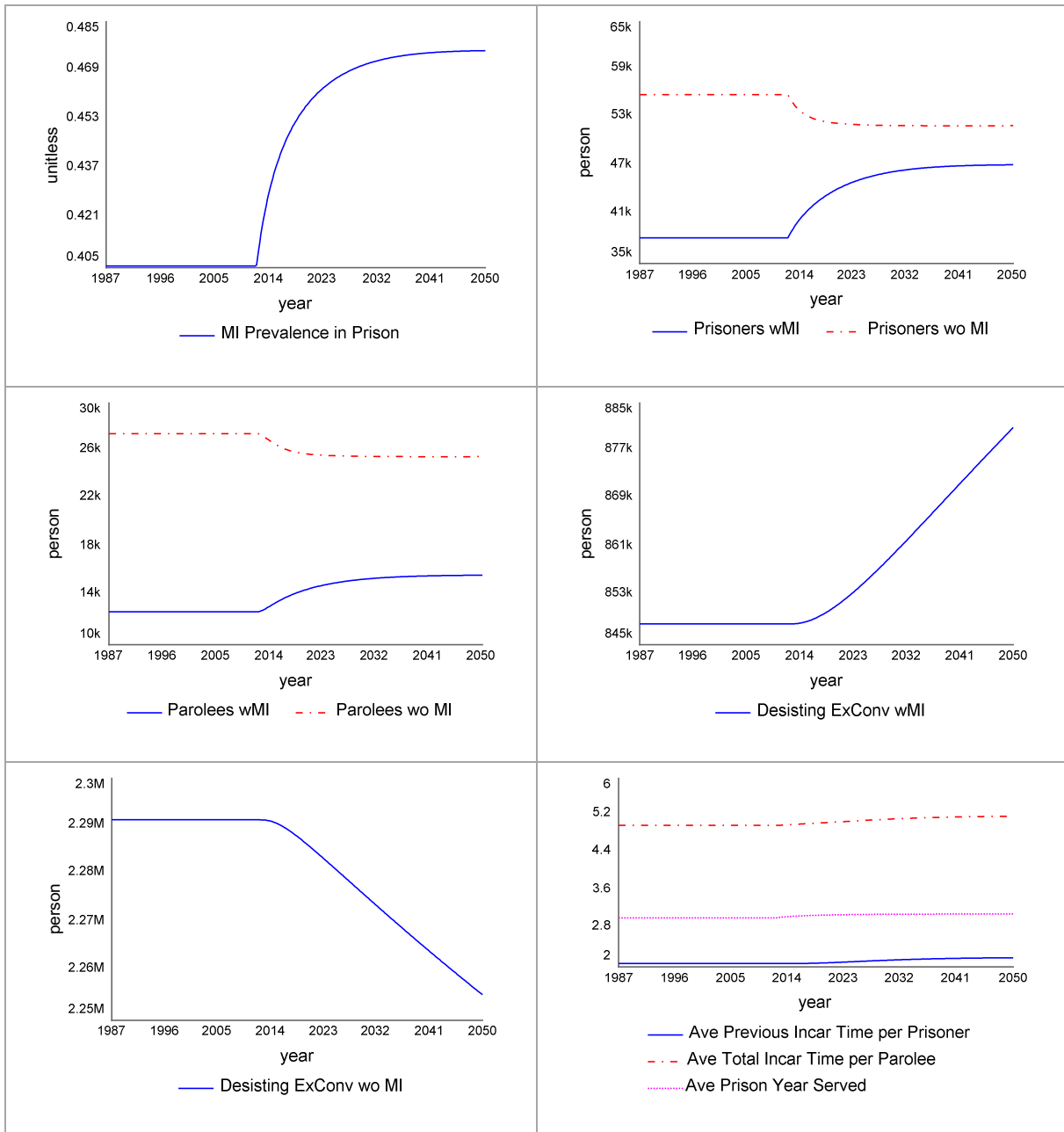


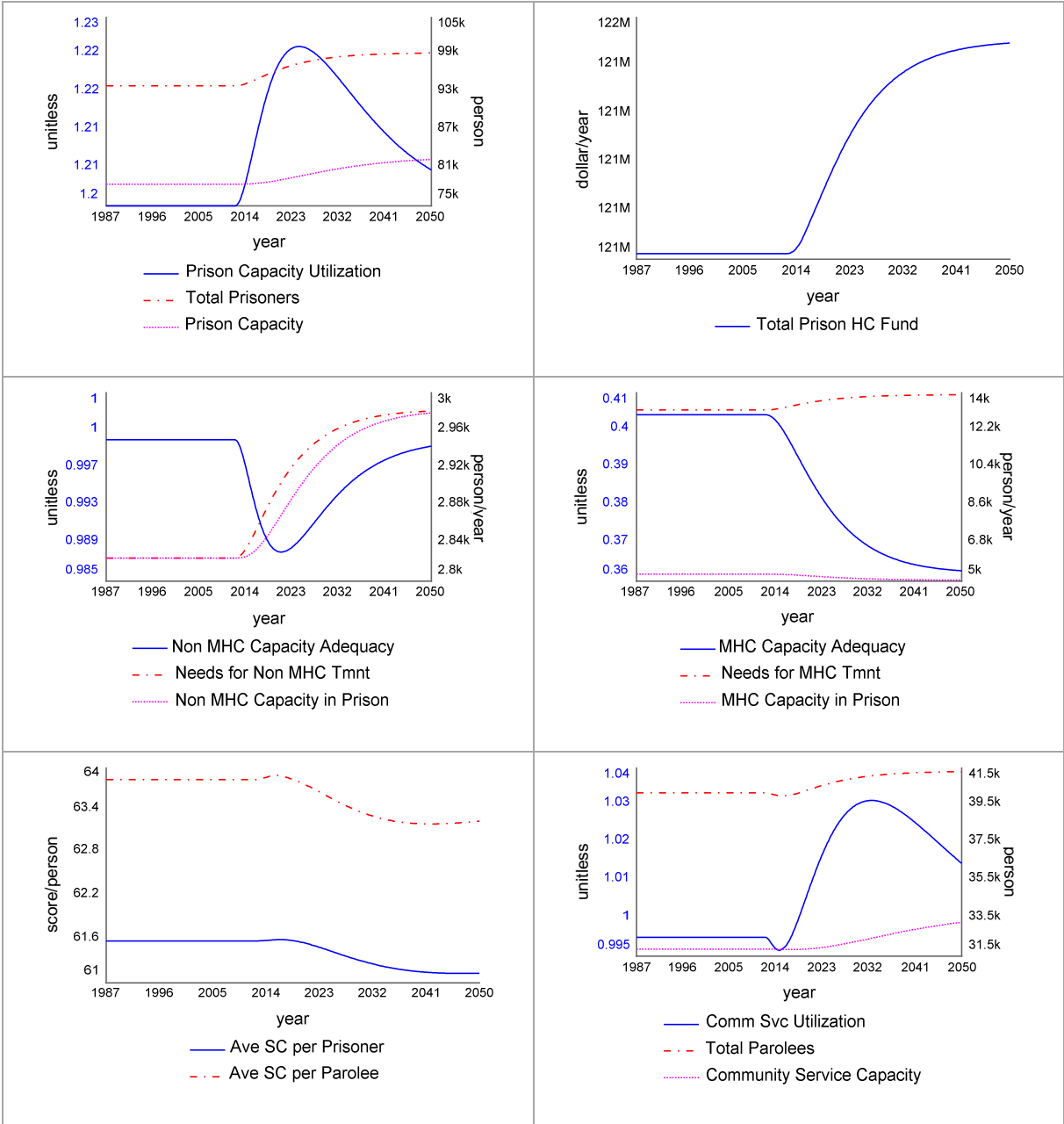


Extreme Condition Test 5 – Double the Fraction of Prisoners Develop MI

In this test, the “ref fract devMI” is increased from 0.01 to 0.02 per year from 2012 onwards.

Selected Results

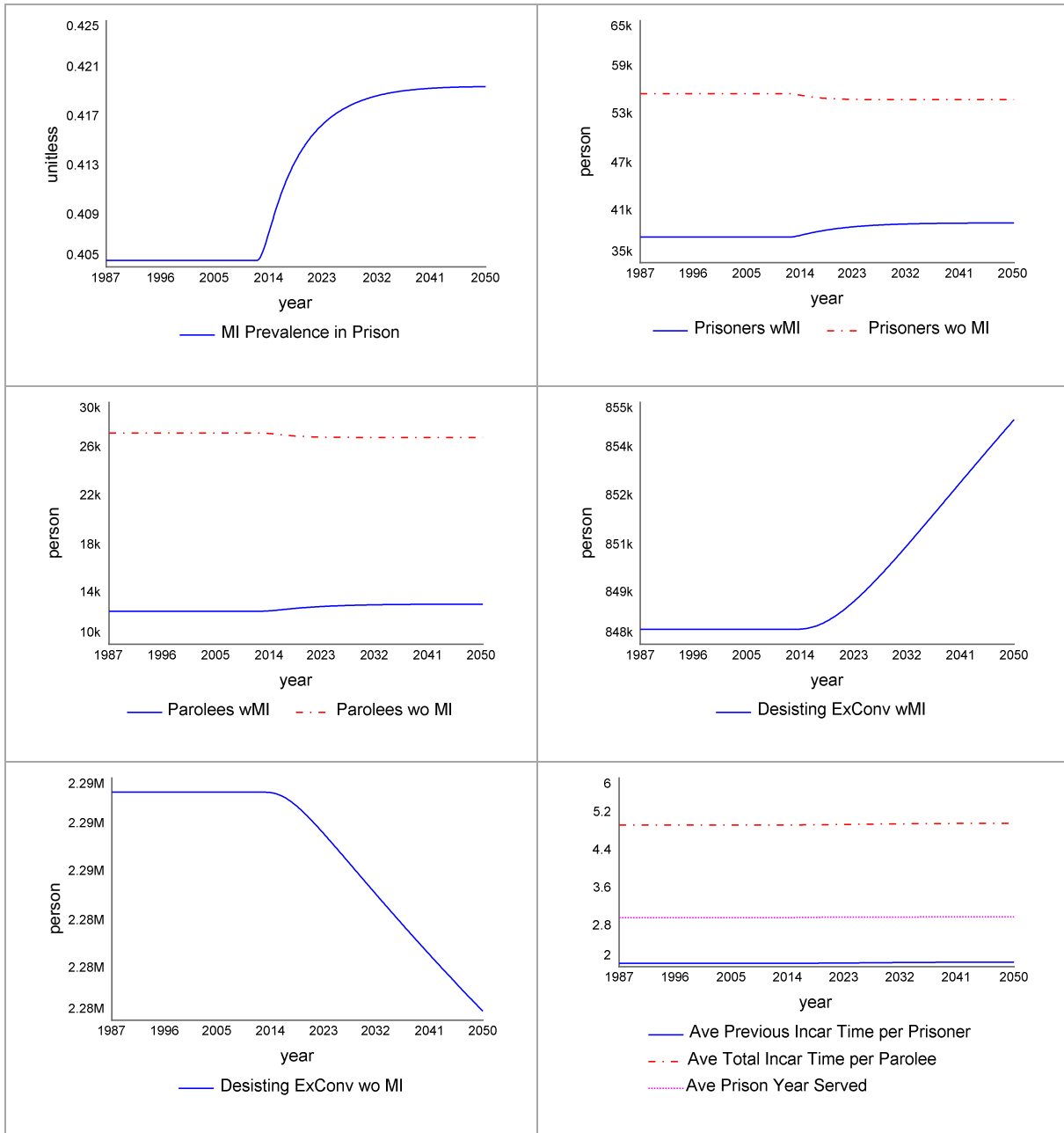


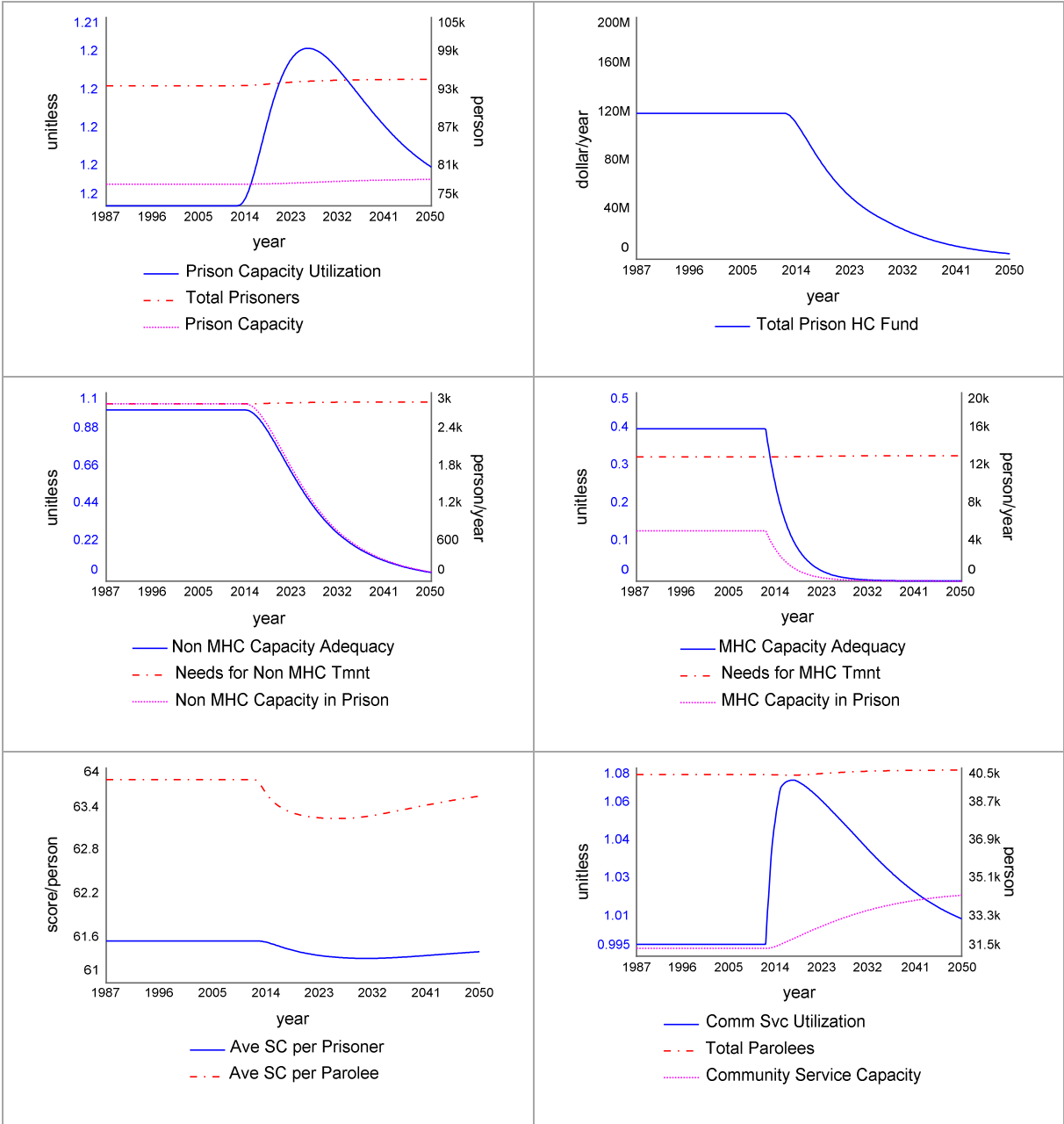


Extreme Condition Test 6 – Decrease Total Prison Health Care Budget by 50%

In this test, the Total Prison Health Care Budget reduces 50% from 2012 onwards. This modification will lead to only 50% fewer “funded non MHC capacity” and “funded MHC capacity” respectively.

Selected Results

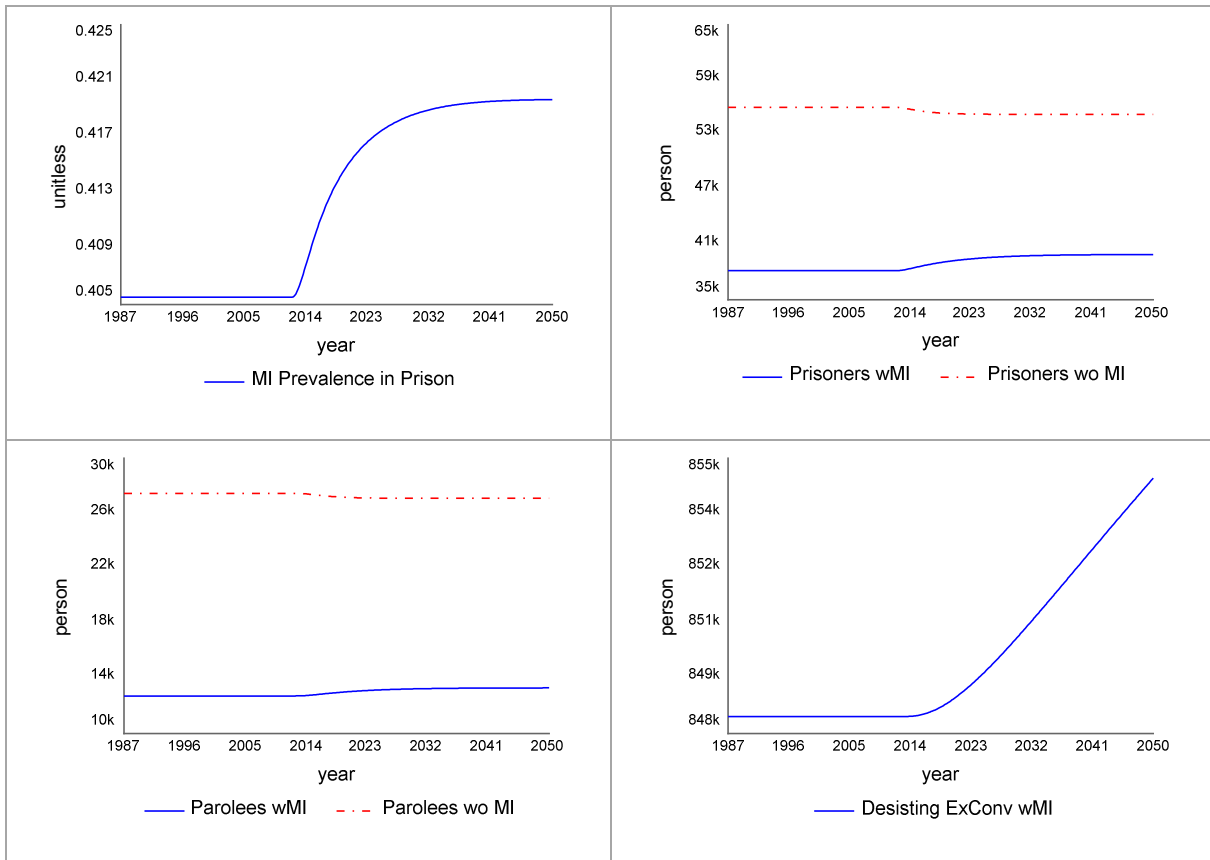


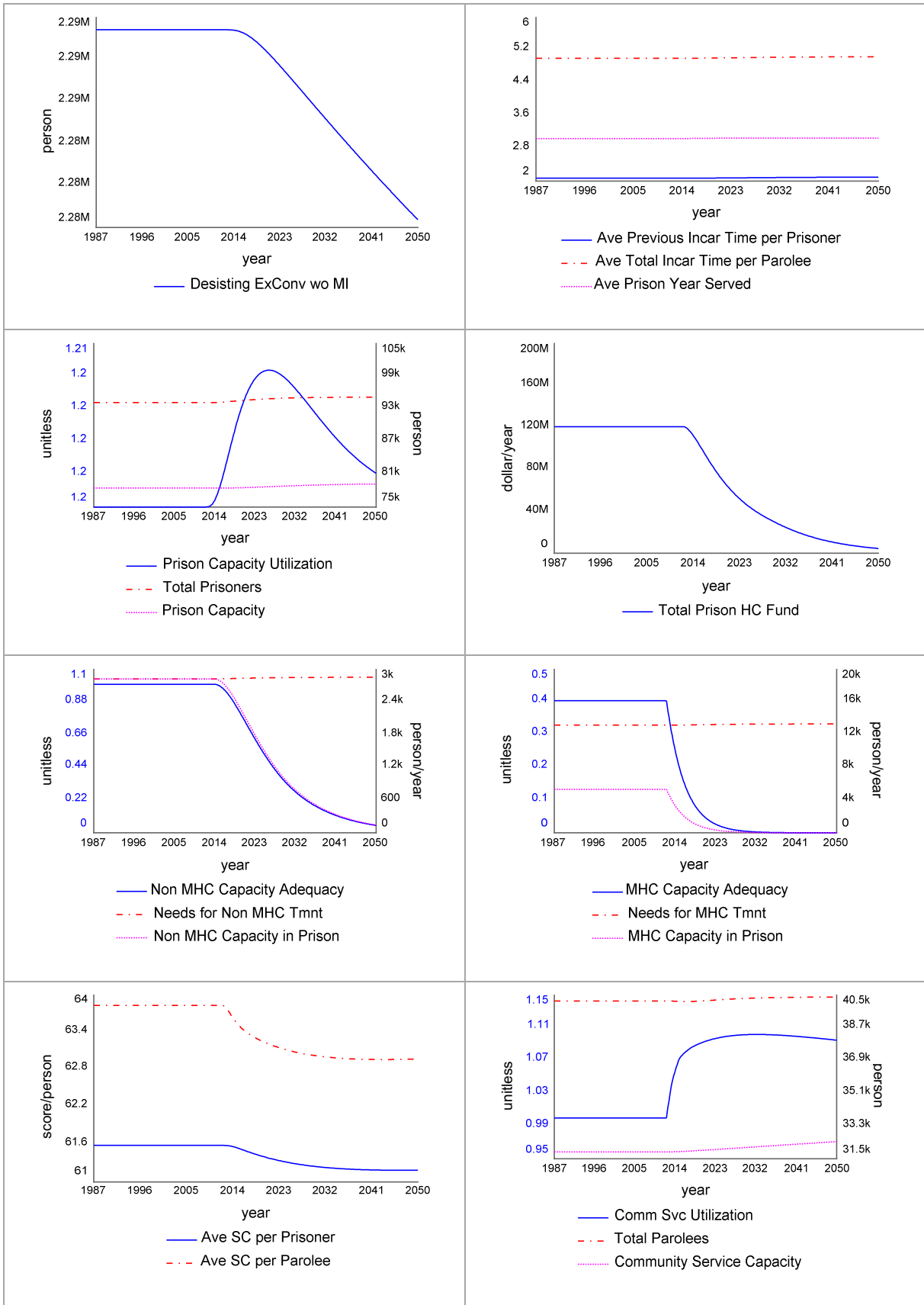


Extreme Condition Test 7 – Increase Community Service Capacity Adjustment Time to 200 Years

In this test, the “comm svc capacity adj time” increases from 20 years to 200 years from 2012 onwards. This modification will generate an outcome where the community service capacity responds to the needs for community service slowly due to the overly long adjustment time. However, when the system is in equilibrium, lengthening the capacity adjustment time has no effect on the system. The system has to be disturbed and affect the needs for community services. In such case, the gap for community services widens. Only when the community service capacity responds can we trace the impact of a slow community service capacity adjustment process. So, Test 7 is a continuation of Test 6 with an additional modification, i.e. a long community service capacity adjustment time.

Selected Results



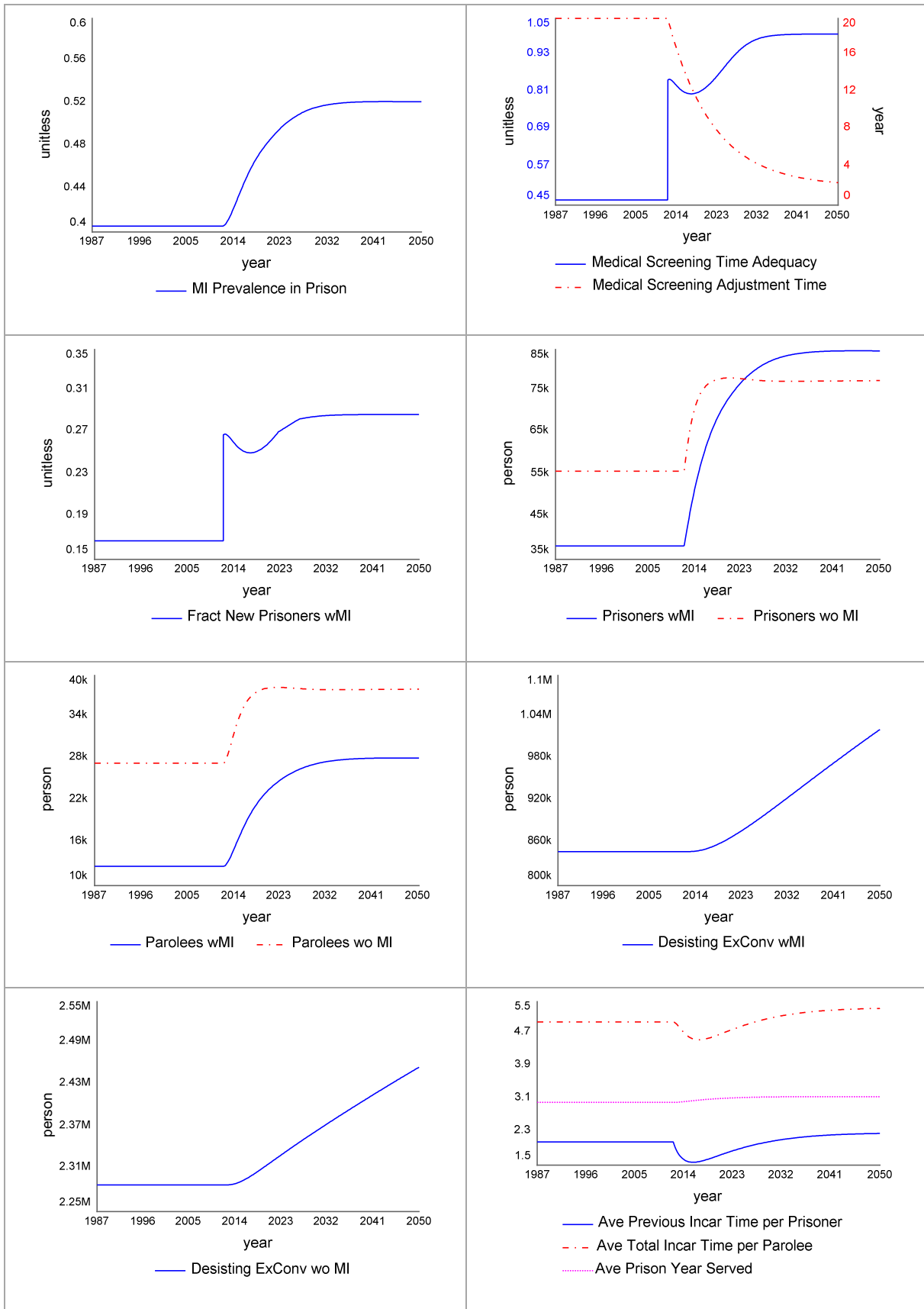


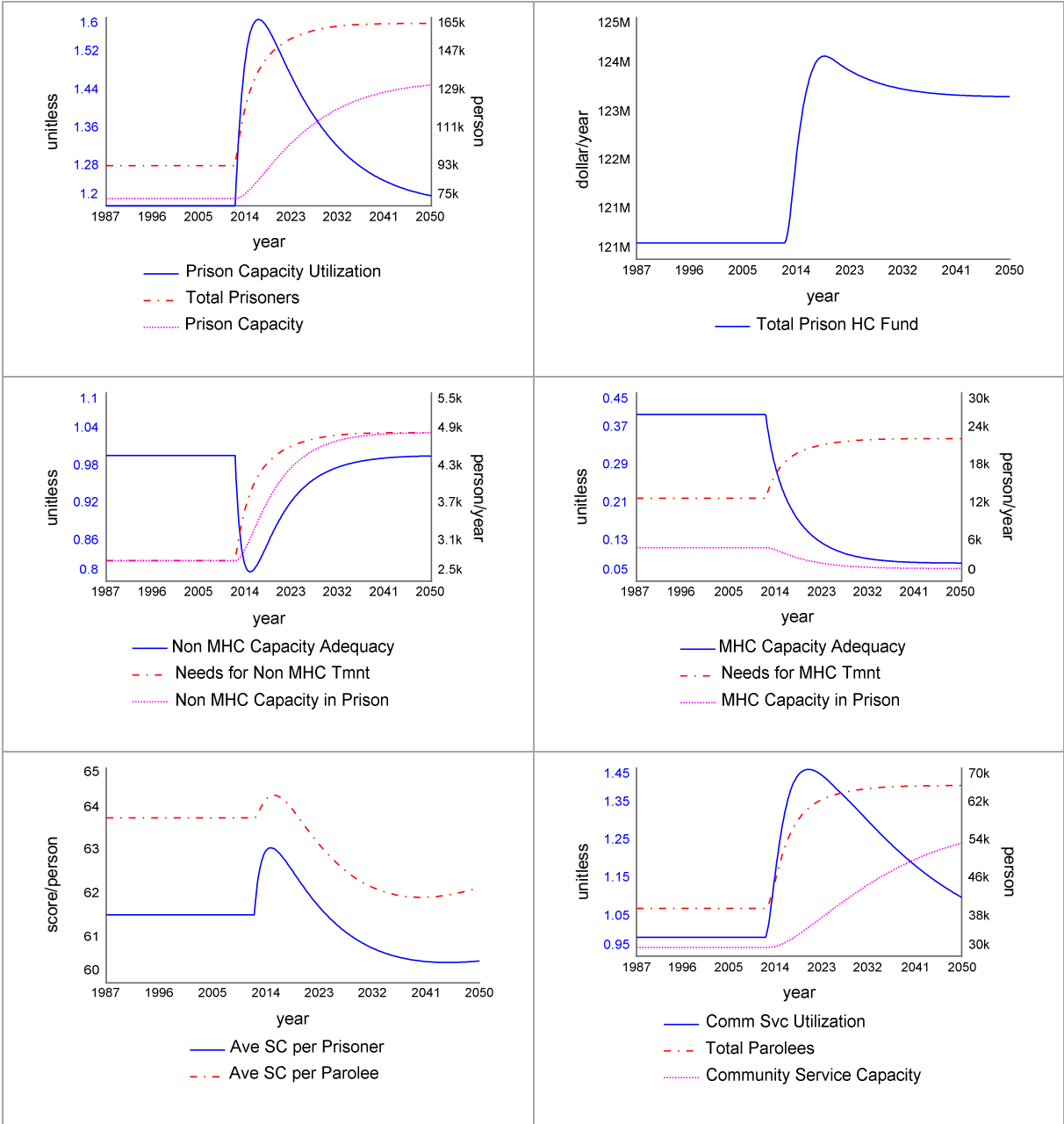
Extreme Condition Test 8 – Decrease the Adjustment Time for Building Medical Screening Capacity at Reception Center

In this test, the “time to adjust medical screening adj time” decreases from 20 years to 2 years starting from 2012. This modification will shorten the time to bring the medical screening capacity at the reception center up to the desired level at a faster rate. As in Test 7, this test requires a perturbation to system in order to have an impact. Thus, the “new prison admission” is increased by 100% in this test. The following modification are also needed for this test:

Equation in Parameters	
gap in medical screening adj time	$(\text{init_medical_screening_adj_time} - \text{Medical_Screening_Adjustment_Time}) * (1 - \text{STEP}(1, 2012)) +$ $(\text{desired_adj_time_for_medical_screening_adj_time} - \text{Medical_Screening_Adjustment_Time}) * (0 + \text{STEP}(1, 2012))$
actual medical screening time at reception center	$\text{INIT}(\text{SMTH3}(\text{desired_MH_screening_capacity}, \text{Medical_Screening_Adjustment_Time}, \text{init_total_medical_screening_time_at_reception_center})) * (1 - \text{STEP}(1, 2012)) +$ $((\text{SMTH3}(\text{desired_MH_screening_capacity}, \text{Medical_Screening_Adjustment_Time}, \text{init_total_medical_screening_time_at_reception_center})) * (0 + \text{STEP}(1, 2012)))$

Selected Results





Appendix P – Model Documentation

Concept Model

$\text{comm_svc_utilization} = \text{total_parolees} / \text{Community_Service_Capacity}$

UNITS: unitless

$\text{equilibrium_switch} = 0$

UNITS: unitless

$\text{init_ave_SC_per_parolee} = 68.3$

UNITS: score/person

$\text{init_previous_incar_time_per_prisoner} = 0.0347$

UNITS: person-year/person

$\text{init_SC_per_prisoner} = 76.7$

UNITS: score/person

$\text{init_total_incar_time_per_parolee} = 2.69$

UNITS: person-year/person

$\text{Realignment_policy} = \text{STEP}(1, 2012) * 1$

UNITS: unitless

Community Services Sector

$\text{comm_svc_adequacy} = \text{Community_Service_Capacity} / \text{total_parolees}$

UNITS: unitless

$\text{comm_svc_capacity_adj_time} = 20$

UNITS: year

$\text{Community_Service_Capacity}(t) = \text{Community_Service_Capacity}(t - dt) + (\text{chg_in_comm_svc_capacity}) * dt$

INIT Community_Service_Capacity = IF equilibrium_switch = 1 THEN 29578.7110944 ELSE total_parolees * 0.4

UNITS: person

INFLOWS:

$\text{chg_in_comm_svc_capacity} = \text{gap_in_comm_svc_capacity} / \text{comm_svc_capacity_adj_time}$

UNITS: person/year

effect_of_comm_svc_adequacy_on_parolee_SC = GRAPH(comm_svc_adequacy)

(0.000, 0.100), (0.125, 0.151), (0.250, 0.207), (0.375, 0.286), (0.500, 0.359), (0.625, 0.454), (0.750, 0.533), (0.875, 0.707), (1.000, 1.000), (1.125, 1.612), (1.250, 1.870), (1.375, 1.954), (1.500, 2.000)

UNITS: unitless

effect_of_comm_svc_adequacy_on_parolee_wMI_recidivism = GRAPH(comm_svc_adequacy)

(0.000, 2.000), (0.100, 1.976), (0.200, 1.933), (0.300, 1.841), (0.400, 1.634), (0.500, 1.398), (0.600, 1.108), (0.700, 0.951), (0.800, 0.8675), (0.900, 0.8161), (1.000, 0.800)

UNITS: unitless

effect_of_comm_svc_adequacy_on_parolee_wo_MI_recidivism = GRAPH(comm_svc_adequacy)

(0.000, 1.5000), (0.100, 1.4357), (0.200, 1.3586), (0.300, 1.2430), (0.400, 1.1080), (0.500, 0.9827), (0.600, 0.8863), (0.700, 0.8028), (0.800, 0.7546), (0.900, 0.7257), (1.000, 0.7000)

UNITS: unitless

fract_parolees_need_comm_svcs = ref_fract_parolees_need_comm_svcs *

effect_of_MHC_capacity_adequacy_on_needs_for_comm_svcs *

effect_of_parolee_SC_on_needs_for_comm_svc

UNITS: unitless

gap_in_comm_svc_capacity = total_parolees * fract_parolees_need_comm_svcs -
Community_Service_Capacity

UNITS: person

ref_fract_parolees_need_comm_svcs = 0.6

UNITS: unitless

total_parolees = Parolees_wMI + Parolees_wo_MI

UNITS: person

Incarceration Year Served Sector

annual_prison_time_gain = 1

UNITS: unitless

ave_previous_incar_time_per_prisoner = Previous_Incar_Time_Served_by_Prisoners /
total_prisoners

UNITS: person-year/person

ave_prison_year_served = (Prisoners_wo_MI * ave_prison_year_served_wo_MI + Prisoners_wMI *
ave_prison_year_served_wMI) / (Prisoners_wo_MI+Prisoners_wMI)

UNITS: year

ave_total_incar_time_per_parolee = Total_Incar_Time_Served_by_Parolees / total_parolees

UNITS: person-year/person

Current_Prison_Time_Served(t) = Current_Prison_Time_Served(t - dt) +
(increasing_curret_prison_time_served - transferring_current_prison_time_thru_release) * dt

INIT Current_Prison_Time_Served = IF equilibrium_switch = 1 THEN 0 ELSE total_prisoners *
ave_prison_year_served

UNITS: person-year

INFLOWS:

increasing_curret_prison_time_served = total_prisoners * annual_prison_time_gain

UNITS: person

OUTFLOWS:

transferring_current_prison_time_thru_release = IF equilibrium_switch = 1 THEN
increasing_curret_prison_time_served ELSE DELAY3(increasing_curret_prison_time_served,
ave_prison_year_served, increasing_curret_prison_time_served)

UNITS: person

effect_of_parolee_total_incar_time_on_prison_year_served =
GRAPH(relative_total_incar_time_per_parolee_on_prison_year_served)

(1.0000, 1.0000), (1.0300, 1.0964), (1.0600, 1.1988), (1.0900, 1.2811), (1.1200, 1.3695), (1.1500,
1.4197), (1.1800, 1.4618), (1.2100, 1.4819), (1.2400, 1.4940), (1.2700, 1.5000), (1.3000, 1.5000)

UNITS: unitless

Previous_Incar_Time_Served_by_Prisoners(t) = Previous_Incar_Time_Served_by_Prisoners(t - dt) +
(transferring_incar_time_thru_recidivism - transferring_previous_incar_time_thru_release -
transferring_previous_incar_time_thru_release_to_county_parole) * dt

INIT Previous_Incar_Time_Served_by_Prisoners = IF equilibrium_switch = 1 THEN 87978.441284
ELSE total_prisoners * init_previous_incar_time_per_prisoner

UNITS: person-year

INFLOWS:

transferring_incar_time_thru_recidivism = total_recidivism * ave_total_incar_time_per_parolee

UNITS: person

OUTFLOWS:

transferring_previous_incar_time_thru_release = total_releases *
ave_previous_incar_time_per_prisoner

UNITS: person

transferring_previous_incar_time_thru_release_to_county_parole =
("county_parolee_becoming_desisting_ex-conv_wMI" + "county_parolee_becoming_desisting_ex-
conv_wo_MI") * ave_previous_incar_time_per_prisoner

UNITS: person

$\text{relative_total_incar_time_per_parolee_on_prison_year_served} = \text{ave_total_incar_time_per_parolee} / \text{init_total_incar_time_per_parolee}$

UNITS: unitless

$\text{total_discharges} = \text{being_discharged_fr_parole_wMI} + \text{being_dishcarged_fr_parolee_wo_MI}$

UNITS: person/year

$\text{Total_Incar_Time_Served_by_Parolees}(t) = \text{Total_Incar_Time_Served_by_Parolees}(t - dt) + (\text{transferring_previous_incar_time_thru_release} + \text{transferring_current_prison_time_thru_release} - \text{transferring_incar_time_thru_recidivism} - \text{transferring_previous_incar_time_thru_discharge}) * dt$

INIT Total_Incar_Time_Served_by_Parolees = IF equilibrium_switch = 1 THEN 175412.337232 ELSE total_parolees * init_total_incar_time_per_parolee

UNITS: person-year

DOCUMENT:

$((\text{total_prisoners} * \text{annual_prison_time_gain} + \text{total_releases} * \text{ave_previous_incar_time_per_prisoner}) * \text{total_parolees}) / (\text{total_discharges} + \text{total_recidivism})$

INFLOWS:

$\text{transferring_previous_incar_time_thru_release} = \text{total_releases} * \text{ave_previous_incar_time_per_prisoner}$

UNITS: person

$\text{transferring_current_prison_time_thru_release} = \text{IF equilibrium_switch} = 1 \text{ THEN increasing_curret_prison_time_served ELSE DELAY3}(\text{increasing_curret_prison_time_served}, \text{ave_prison_year_served}, \text{increasing_curret_prison_time_served})$

UNITS: person

OUTFLOWS:

$\text{transferring_incar_time_thru_recidivism} = \text{total_recidivism} * \text{ave_total_incar_time_per_parolee}$

UNITS: person

$\text{transferring_previous_incar_time_thru_discharge} = \text{total_discharges} * \text{ave_total_incar_time_per_parolee}$

UNITS: person

$\text{total_recidivism} = \text{parolees_wMI_recidivism} + \text{parolees_wo_MI_recidivism}$

UNITS: person/year

Individuals with Criminal History Sector

ave_county_parole_length_wMI = 1

UNITS: year

ave_county_parole_length_wo_MI = 1.5

UNITS: year

ave_parole_length_wMI = 2.5

UNITS: year

ave_parole_length_wo_MI = 2

UNITS: year

ave_prison_year_served_wMI = SMTH3(ref_ave_prison_year_served_wMI,
ref_ave_prison_year_served_wMI, ref_ave_prison_year_served_wMI) *
effect_of_parolee_total_incar_time_on_prison_year_served

UNITS: year

ave_prison_year_served_wo_MI = ref_ave_prison_year_served_wo_MI *
effect_of_parolee_total_incar_time_on_prison_year_served

UNITS: year

Desisting_ExConv_wMI(t) = Desisting_ExConv_wMI(t - dt) + (being_discharged_fr_parole_wMI +
"county_parolee_becoming_desisting_ex-conv_wMI" - desisting_wMI_deaths) * dt

INIT Desisting_ExConv_wMI = IF equilibrium_switch=1 THEN
Parolees_wMI/(ave_parole_length_wMI*mortality_rate) ELSE 205334

UNITS: person

INFLOWS:

being_discharged_fr_parole_wMI = Parolees_wMI / ave_parole_length_wMI

UNITS: person/year

"county_parolee_becoming_desisting_ex-conv_wMI" = Realignment_policy* (Prisoners_wMI *
fract_parolees_wMI_eligible_for_county_parole) / (ave_county_parole_length_wMI)

UNITS: person/year

OUTFLOWS:

desisting_wMI_deaths = Desisting_ExConv_wMI * mortality_rate

UNITS: person/year

Desisting_ExConv_wo_MI(t) = Desisting_ExConv_wo_MI(t - dt) +
(being_dishcarged_fr_parolee_wo_MI + "county_parolee_becoming_desisting_ex-conv_wo_MI" -
desisting_wo_MI_deaths) * dt

INIT Desisting_ExConv_wo_MI = IF equilibrium_switch=1 THEN
Parolees_wo_MI/(ave_parole_length_wo_MI*mortality_rate) ELSE 1853257

UNITS: person

INFLOWS:

$\text{being_dishcarged_fr_parolee_wo_MI} = \text{Parolees_wo_MI} / \text{ave_parole_length_wo_MI}$

UNITS: person/year

$\text{"county_parolee_becoming_desisting_ex-conv_wo_MI"} = \text{Realignment_policy} * (\text{Prisoners_wo_MI} * \text{fract_parolees_wo_MI_eligible_for_county_parole}) / \text{ave_county_parole_length_wo_MI}$

UNITS: person/year

OUTFLOWS:

$\text{desisting_wo_MI_deaths} = \text{Desisting_ExConv_wo_MI} * \text{mortality_rate}$

UNITS: person/year

$\text{divert_prison_admission} = (1 - \text{Realignment_policy}) * 1 + \text{Realignment_policy} * (1 - \text{STEP}(0.5, 2012))$

UNITS: unitless

$\text{fract_devMI} = \text{ref_fract_devMI} * \text{effect_of_prison_utilization_on_fract_devMI} * \text{effect_of_MHC_capacity_adequacy_on_MI_dev}$

UNITS: 1/year

$\text{fract_new_prisoners_wMI} = \text{ref_fract_new_prisoners_wMI} * \text{effect_of_medical_screening_time_adequacy_on_MI_screening_effectiveness}$

UNITS: unitless

$\text{fract_parolees_wMI_eligible_for_county_parole} = 0.2$

UNITS: unitless

$\text{fract_parolees_wMI_reoffend} = \text{ref_fract_parolees_wMI_reoffend} * \text{effect_of_comm_svc_adequacy_on_parolee_wMI_recidivism}$

UNITS: 1/year

$\text{fract_parolees_wo_MI_eligible_for_county_parole} = 0.4$

UNITS: unitless

$\text{fract_parolees_wo_MI_reoffend} = \text{ref_fract_parolees_wo_MI_reoffend} * \text{effect_of_comm_svc_adequacy_on_parolee_wo_MI_recidivism}$

UNITS: 1/year

$\text{histocial_new_prison_admission} = \text{GRAPH}(\text{TIME})$

(1987.00, 26515), (1988.00, 29579), (1989.00, 34226), (1990.00, 39272), (1991.00, 38252), (1992.00, 40158), (1993.00, 43149), (1994.00, 41580), (1995.00, 45459), (1996.00, 46487), (1997.00, 46823), (1998.00, 46589), (1999.00, 42936), (2000.00, 40276), (2001.00, 37932), (2002.00, 38662), (2003.00, 43422), (2004.00, 46798), (2005.00, 48609), (2006.00, 48639), (2007.00, 46987), (2008.00, 46386),

(2009.00, 45006), (2010.00, 41550), (2011.00, 54306), (2012.00, 67062), (2013.00, 79818), (2014.00, 92574), (2015.00, 92574), (2016.00, 92574)

UNITS: person/year

$MI_prevalence_in_prison = Prisoners_wMI / (Prisoners_wMI + Prisoners_wo_MI)$

UNITS: unitless

mortality_rate = 0.006

UNITS: 1/year

$new_prison_admission = histocial_new_prison_admission * divert_prison_admission$

UNITS: person/year

$Parolees_wMI(t) = Parolees_wMI(t - dt) + (being_released_to_parole_wMI - being_discharged_fr_parole_wMI - parolees_wMI_recidivism) * dt$

INIT Parolees_wMI = IF equilibrium_switch = 1 THEN 11425.1001423 ELSE 4194

UNITS: person

INFLOWS:

$being_released_to_parole_wMI = Prisoners_wMI / ave_prison_year_served_wMI$

UNITS: person/year

OUTFLOWS:

$being_discharged_fr_parole_wMI = Parolees_wMI / ave_parole_length_wMI$

UNITS: person/year

$parolees_wMI_recidivism = Parolees_wMI * fract_parolees_wMI_reoffend$

UNITS: person/year

$Parolees_wo_MI(t) = Parolees_wo_MI(t - dt) + (being_released_to_parole_wo_MI - being_discharged_fr_parole_wo_MI - parolees_wo_MI_recidivism) * dt$

INIT Parolees_wo_MI = IF equilibrium_switch = 1 THEN 33687.7403324 ELSE 29101

UNITS: person

INFLOWS:

$being_released_to_parole_wo_MI = Prisoners_wo_MI / ave_prison_year_served_wo_MI$

UNITS: person/year

OUTFLOWS:

$being_discharged_fr_parole_wo_MI = Parolees_wo_MI / ave_parole_length_wo_MI$

UNITS: person/year

$parolees_wo_MI_recidivism = Parolees_wo_MI * fract_parolees_wo_MI_reoffend$

UNITS: person/year

Prisoners_wMI(t) = Prisoners_wMI(t - dt) + (being_admitted_wMI + developing_MI + parolees_wMI_recidivism - being_released_to_parole_wMI - "county_parolee_becoming_desisting_ex-conv_wMI") * dt

INIT Prisoners_wMI = IF equilibrium_switch=1 THEN 25883.1033736
ELSE (66975 - 9705 {reprisoned})* 0.14 {9136}

UNITS: person

INFLOWS:

being_admitted_wMI = IF equilibrium_switch = 1 THEN ((INIT (new_prison_admission) - parolees_wMI_recidivism) * fract_new_prisoners_wMI) ELSE new_prison_admission * fract_new_prisoners_wMI - parolees_wMI_recidivism

UNITS: person/year

developing_MI = Prisoners_wo_MI * fract_devMI

UNITS: person/year

parolees_wMI_recidivism = Parolees_wMI * fract_parolees_wMI_reoffend

UNITS: person/year

OUTFLOWS:

being_released_to_parole_wMI = Prisoners_wMI / ave_prison_year_served_wMI

UNITS: person/year

"county_parolee_becoming_desisting_ex-conv_wMI" = Realignment_policy* (Prisoners_wMI * fract_parolees_wMI_eligible_for_county_parole) / (ave_county_parole_length_wMI)

UNITS: person/year

Prisoners_wo_MI(t) = Prisoners_wo_MI(t - dt) + (being_admitted_wo_MI + parolees_wo_MI_recidivism - being_released_to_parole_wo_MI - developing_MI - "county_parolee_becoming_desisting_ex-conv_wo_MI") * dt

INIT Prisoners_wo_MI = IF equilibrium_switch=1 THEN 57380.6627633 ELSE ((66975 - 1718 {reprisoned})* 0.86 {56121})

UNITS: person

INFLOWS:

being_admitted_wo_MI = IF equilibrium_switch = 1 THEN (INIT(new_prison_admission) - parolees_wo_MI_recidivism) * (1-fract_new_prisoners_wMI) ELSE new_prison_admission * (1-fract_new_prisoners_wMI) - parolees_wo_MI_recidivism

UNITS: person/year

parolees_wo_MI_recidivism = Parolees_wo_MI * fract_parolees_wo_MI_reoffend

UNITS: person/year

OUTFLOWS:

being_released_to_parole_wo_MI = Prisoners_wo_MI / ave_prison_year_served_wo_MI

UNITS: person/year

developing_MI = Prisoners_wo_MI * fract_devMI

UNITS: person/year

"county_parolee_becoming_desisting_ex-conv_wo_MI" = Realignment_policy *
(Prisoners_wo_MI * fract_parolees_wo_MI_eligible_for_county_parole)/
ave_county_parole_length_wo_MI

UNITS: person/year

ref_ave_prison_year_served_wMI = 2.5

UNITS: year

ref_ave_prison_year_served_wo_MI = 1.7

UNITS: year

ref_fract_devMI = 0.02

UNITS: 1/year

ref_fract_new_prisoners_wMI = 0.32

UNITS: unitless

ref_fract_parolees_wMI_reoffend = 0.2

UNITS: 1/year

ref_fract_parolees_wo_MI_reoffend = 0.2

UNITS: 1/year

Prison Capacity Sector

ave_prison_lifetime = 60

UNITS: year

effect_of_prison_utilization_on_fract_devMI = GRAPH(prison_capacity_utilization)

(1.000, 1.000), (1.050, 1.008), (1.100, 1.024), (1.150, 1.048), (1.200, 1.072), (1.250, 1.100), (1.300,
1.124), (1.350, 1.149), (1.400, 1.185), (1.450, 1.225), (1.500, 1.293), (1.550, 1.349), (1.600, 1.435),
(1.650, 1.567), (1.700, 1.678), (1.750, 1.775), (1.800, 1.854), (1.850, 1.920), (1.900, 1.956), (1.950,
1.987), (2.000, 1.996)

UNITS: unitless

gap_in_prison_capacity = total_prisoners - Prison_Capacity

UNITS: person

Prison_Capacity(t) = Prison_Capacity(t - dt) + (chg_in_prison_capacity - prison_capacity_obsoleting) * dt

INIT Prison_Capacity = IF equilibrium_switch = 1 THEN 47382.0813183 ELSE total_prisoners * 0.72

UNITS: person

INFLOWS:

chg_in_prison_capacity = gap_in_prison_capacity / prison_capacity_adj_time

UNITS: person/year

OUTFLOWS:

prison_capacity_obsoleting = Prison_Capacity / ave_prison_lifetime

UNITS: person/year

prison_capacity_adj_time = 10

UNITS: year

prison_capacity_utilization = total_prisoners / Prison_Capacity

UNITS: unitless

total_prisoners = Prisoners_wMI + Prisoners_wo_MI

UNITS: person

Prison_Health_Care_Resource_Allocation_Module:

adjustment_for_MHC_capacity = (needs_for_MHC_tmnt - MHC_Capacity_in_Prison) / time_to_adj_MHC_capacity

UNITS: person/year/year

adjustment_for_non_MHC_capacity = (needs_for_non_MHC_tmnt - Non_MHC_Capacity_in_Prison) / time_to_adj_non_MHC_capacity

UNITS: person/year/year

cost_per_MHC_tmnt = ref_cost_per_MHC_tmnt * effect_of_MHC_capacity_adequacy_on_cost_per_MHC_tmnt

UNITS: dollar/person

cost_per_non_MHC_tmnt = ref_cost_per_non_MHC_tmnt * effect_of_non_MHC_capacity_adequacy_on_cost_per_non_MHC_tmnt

UNITS: dollar/person

desired_change_in_MHC_fund = adjustment_for_MHC_capacity * cost_per_MHC_tmnt

UNITS: dollar/year/year

desired_change_in_non_MHC_fund = adjustment_for_non_MHC_capacity *
cost_per_non_MHC_tmnt

UNITS: dollar/year/year

effect_of_MHC_capacity_adequacy_on_cost_per_MHC_tmnt = GRAPH(MHC_capacity_adequacy)
(0.000, 1.3000), (0.100, 1.2928), (0.200, 1.2831), (0.300, 1.2554), (0.400, 1.2096), (0.500, 1.1373),
(0.600, 1.0867), (0.700, 1.0506), (0.800, 1.0241), (0.900, 1.0096), (1.000, 1.0000)

UNITS: unitless

effect_of_MHC_capacity_adequacy_on_MI_dev = GRAPH(MHC_capacity_adequacy)
(0.000, 0.004), (0.100, 0.036), (0.200, 0.071), (0.300, 0.121), (0.400, 0.188), (0.500, 0.284), (0.600,
0.401), (0.700, 0.586), (0.800, 0.888), (0.900, 1.083), (1.000, 1.200)

UNITS: unitless

effect_of_MHC_capacity_adequacy_on_needs_for_comm_svcs = GRAPH(MHC_capacity_adequacy)
(0.000, 1.3000), (0.100, 1.2928), (0.200, 1.2831), (0.300, 1.2554), (0.400, 1.2096), (0.500, 1.1373),
(0.600, 1.0867), (0.700, 1.0506), (0.800, 1.0241), (0.900, 1.0096), (1.000, 1.0000)

UNITS: unitless

effect_of_MHC_capacity_on_chg = GRAPH(MHC_Capacity_in_Prison / min_MHC_capacity)
(0.000, 0.000), (0.100, 0.000), (0.200, 0.024), (0.300, 0.052), (0.400, 0.112), (0.500, 0.249), (0.600,
0.434), (0.700, 0.675), (0.800, 0.859), (0.900, 0.964), (1.000, 1.000)

UNITS: unitless

effect_of_non_MHC_capacity_adequacy_on_cost_per_non_MHC_tmnt =
GRAPH(non_MHC_capacity_adequacy)
(0.000, 1.3000), (0.100, 1.2928), (0.200, 1.2831), (0.300, 1.2554), (0.400, 1.2096), (0.500, 1.1373),
(0.600, 1.0867), (0.700, 1.0506), (0.800, 1.0241), (0.900, 1.0096), (1.000, 1.0000)

UNITS: unitless

expected_prison_HC_fund_growth_rate = 0.003

UNITS: 1/year

fract_prisoners_need_MHC_tmnt = 0.14

UNITS: 1/year

fract_prisoners_need_non_MHC_tmnt = 0.03

UNITS: 1/year

funded_MHC_capacity = MIN (remaining_fund_for_MHC, needs_for_MHC_tmnt *
cost_per_MHC_tmnt) / cost_per_MHC_tmnt

UNITS: person/year

$\text{funded_non_MHC_capacity} = \text{MIN}(\text{Total_Prison_HC_Fund}, \text{needs_for_non_MHC_tmnt} * \text{cost_per_non_MHC_tmnt}) / \text{cost_per_non_MHC_tmnt}$

UNITS: person/year

$\text{gap_in_MHC_tmnt_capacity} = \text{funded_MHC_capacity} - \text{MHC_Capacity_in_Prison}$

UNITS: person/year

$\text{gap_in_non_MHC_tmnt_capacity} = \text{funded_non_MHC_capacity} - \text{Non_MHC_Capacity_in_Prison}$

UNITS: person/year

$\text{MHC_capacity_adequacy} = \text{MHC_Capacity_in_Prison} / \text{needs_for_MHC_tmnt}$

UNITS: unitless

$\text{MHC_Capacity_in_Prison}(t) = \text{MHC_Capacity_in_Prison}(t - dt) + (\text{chg_in_MHC_capacity}) * dt$

INIT MHC_Capacity_in_Prison = IF equilibrium_switch = 1 THEN 7163.60564183 ELSE needs_for_MHC_tmnt * 0.01

UNITS: person/year

INFLOWS:

$\text{chg_in_MHC_capacity} = (\text{gap_in_MHC_tmnt_capacity} / \text{time_to_adj_MHC_capacity}) * \text{effect_of_MHC_capacity_on_chg}$

UNITS: person/year/year

$\text{min_MHC_capacity} = 1$

UNITS: person

$\text{needs_for_MHC_tmnt} = \text{total_prisoners} * \text{fract_prisoners_need_MHC_tmnt}$

UNITS: person/year

$\text{needs_for_non_MHC_tmnt} = \text{total_prisoners} * \text{fract_prisoners_need_non_MHC_tmnt}$

UNITS: person/year

$\text{non_MHC_capacity_adequacy} = \text{Non_MHC_Capacity_in_Prison} / \text{needs_for_non_MHC_tmnt}$

UNITS: unitless

$\text{Non_MHC_Capacity_in_Prison}(t) = \text{Non_MHC_Capacity_in_Prison}(t - dt) + (\text{chg_in_non_MHC_capacity}) * dt$

INIT Non_MHC_Capacity_in_Prison = IF equilibrium_switch = 1 THEN 2497.91250287 ELSE 5865

UNITS: person/year

INFLOWS:

$\text{chg_in_non_MHC_capacity} = \text{gap_in_non_MHC_tmnt_capacity} / \text{time_to_adj_non_MHC_capacity}$

UNITS: person/year/year

Prison_HC_fund_adjustment_time = 2

UNITS: year

ref_cost_per_MHC_tmnt = 10000

UNITS: dollar/person

ref_cost_per_non_MHC_tmnt = 20000

UNITS: dollar/person

remaining_fund_for_MHC = Total_Prison_HC_Fund - (funded_non_MHC_capacity *
cost_per_non_MHC_tmnt)

UNITS: dollar/year

time_to_adj_MHC_capacity = 10

UNITS: year

time_to_adj_non_MHC_capacity = 2

UNITS: year

Total_Prison_HC_Fund(t) = Total_Prison_HC_Fund(t - dt) + (chg_in_HC_fund) * dt

INIT Total_Prison_HC_Fund = IF equilibrium_switch = 1 THEN
Non_MHC_Capacity_in_Prison*cost_per_non_MHC_tmnt +
MHC_Capacity_in_Prison*cost_per_MHC_tmnt ELSE 63925844.4

UNITS: dollar/year

INFLOWS:

chg_in_HC_fund = IF equilibrium_switch = 1 THEN (((Non_MHC_Capacity_in_Prison *
cost_per_non_MHC_tmnt + MHC_Capacity_in_Prison * cost_per_MHC_tmnt) -
Total_Prison_HC_Fund) / Prison_HC_fund_adjustment_time) ELSE (1 - Realignment_policy) *
Total_Prison_HC_Fund * expected_prison_HC_fund_growth_rate+ Realignment_policy *
(desired_change_in_non_MHC_fund + desired_change_in_MHC_fund)

UNITS: dollar/year/year

Prison Health Care Resource Allocation Module-Medical ScreenCapacity Sector

actual_medical_screening_time_at_reception_center = IF equilibrium_switch = 1 THEN
INIT(SMTH3(desired_medical_screening_capacity,
Medical_Screening_Adjustment_Time,init_total_medical_screening_time_at_reception_center))

ELSE SMTH3(desired_medical_screening_capacity,
Medical_Screening_Adjustment_Time,init_total_medical_screening_time_at_reception_center)

UNITS: minute/year

desired_adj_time_for_medical_screening_adj_time = 2

UNITS: year

desired_medical_screening_capacity = IF equilibrium_switch = 1 THEN (INIT
(new_prison_admission)+ parolees_wMI_recidivism +parolees_wo_MI_recidivism) *
minimum_medical_screening_time_required ELSE (new_prison_admission+
parolees_wMI_recidivism +parolees_wo_MI_recidivism) *
minimum_medical_screening_time_required

UNITS: minute/year

effect_of_medical_screening_time_adequacy_on_MI_screening_effectiveness =
GRAPH(medical_screening_time_adequacy)

(0.3000, 0.5000), (0.3700, 0.5065), (0.4400, 0.5181), (0.5100, 0.5324), (0.5800, 0.5674), (0.6500,
0.6057), (0.7200, 0.6751), (0.7900, 0.7653), (0.8600, 0.8482), (0.9300, 0.8865), (1.0000, 0.9000)

UNITS: unitless

gap_in_medical_screening_adj_time = IF reduce_medical_screening_AT = 1 THEN
desired_adj_time_for_medical_screening_adj_time - Medical_Screening_Adjustment_Time ELSE
(init_medical_screening_adj_time - Medical_Screening_Adjustment_Time)* (1 - STEP (1, 2012) * 0)

UNITS: year

init_medical_screening_adj_time = 20

UNITS: year

init_medical_screening_time_per_person = 7

UNITS: minute/person

init_total_medical_screening_time_at_reception_center = init_medical_screening_time_per_person
* (INIT (new_prison_admission+ parolees_wMI_recidivism + parolees_wo_MI_recidivism))

UNITS: minute/year

Medical_Screening_Adjustment_Time(t) = Medical_Screening_Adjustment_Time(t - dt) +
(chg_in_medical_screening_adj_time) * dt

INIT Medical_Screening_Adjustment_Time = init_medical_screening_adj_time

UNITS: year

INFLOWS:

chg_in_medical_screening_adj_time = gap_in_medical_screening_adj_time /
time_to_adjust_medical_screening_adj_time

UNITS: unitless

medical_screening_time_adequacy = actual_medical_screening_time_at_reception_center /
desired_medical_screening_capacity

UNITS: unitless

minimum_medical_screening_time_required = 15

UNITS: minute/person

reduce_medical_screening_AT = STEP(1, 2008) * 1

UNITS: unitless

time_to_adjust_medical_screening_adj_time = 10

UNITS: year

DOCUMENT: According to "Three-Judge Court: Opinion and Order" (August 2009) on p. 34:

"Over the next eight years, as part of its ongoing effort to ensure that California hires and retains sufficient clinical staff, the court issued several orders concerning recruitment and retention bonuses, as well as salary increases for mental health clinicians."

Hence, we set the delay in medical screening at the reception centers to be 8 yrs.

Social Capital Sector

annual_increase_of_SC = ref_annual_increase_of_SC *
effect_of_comm_svc_adequacy_on_parolee_SC

UNITS: score/person/year

annual_loss_of_SC = ref_annual_loss_of_SC

UNITS: score/person/year

ave_SC_per_new_prisoner = 70

UNITS: score/person

ave_SC_per_parolee = MAX (SC_of_Parolees / total_parolees, 0)

UNITS: score/person

ave_SC_per_prisoner = MAX (SC_of_Prisoners / total_prisoners, 0)

UNITS: score/person

effect_of_parolee_SC_on_needs_for_comm_svc = GRAPH(relative_SC_per_parolee)

(0.8000, 1.5000), (0.8200, 1.4859), (0.8400, 1.4478), (0.8600, 1.3936), (0.8800, 1.2932), (0.9000,
1.1988), (0.9200, 1.1325), (0.9400, 1.0823), (0.9600, 1.0402), (0.9800, 1.0120), (1.0000, 1.0000)

UNITS: unitless

ref_annual_increase_of_SC = 1

UNITS: score/person/year

ref_annual_loss_of_SC = 1

UNITS: score/person/year

relative_SC_per_parolee = ave_SC_per_parolee / init_ave_SC_per_parolee

UNITS: unitless

$SC_of_Parolees(t) = SC_of_Parolees(t - dt) + (transferring_SC_thru_release + adding_SC - transferring_SC_thru_recidivism - transferring_SC_thru_discharge) * dt$

INIT $SC_of_Parolees = IF\ equilibrium_switch = 1\ THEN\ 3027475.76392\ ELSE\ total_parolees * init_ave_SC_per_parolee$

UNITS: score

INFLOWS:

$transferring_SC_thru_release = total_releases * ave_SC_per_prisoner$

UNITS: score/year

$adding_SC = total_parolees * annual_increase_of_SC$

UNITS: score/year

OUTFLOWS:

$transferring_SC_thru_recidivism = total_recidivism * ave_SC_per_parolee$

UNITS: score/year

$transferring_SC_thru_discharge = total_discharges * ave_SC_per_parolee$

UNITS: score/year

$SC_of_Prisoners(t) = SC_of_Prisoners(t - dt) + (increasing_SC_thru_new_admission + transferring_SC_thru_recidivism - transferring_SC_thru_release - losing_SC - transferring_SC_thru_release_to_county_parole) * dt$

INIT $SC_of_Prisoners = IF\ equilibrium_switch = 1\ THEN\ 5527272.52285\ ELSE\ total_prisoners * init_ave_SC_per_parolee$

UNITS: score

INFLOWS:

$increasing_SC_thru_new_admission = (being_admitted_wMI + being_admitted_wo_MI) * ave_SC_per_new_prisoner$

UNITS: score/year

$transferring_SC_thru_recidivism = total_recidivism * ave_SC_per_parolee$

UNITS: score/year

OUTFLOWS:

$transferring_SC_thru_release = total_releases * ave_SC_per_prisoner$

UNITS: score/year

$losing_SC = total_prisoners * annual_loss_of_SC$

UNITS: score/year

$transferring_SC_thru_release_to_county_parole = ("county_parolee_becoming_desisting_ex-conv_wMI" + "county_parolee_becoming_desisting_ex-conv_wo_MI") * ave_SC_per_prisoner$

UNITS: score/year

total_releases = being_released_to_parole_wMI + being_released_to_parole_wo_MI

UNITS: person/year

{ The model has 154 (154) variables (array expansion in parens).

In root model and 0 additional modules with 7 sectors.

Stocks: 17 (17) Flows: 33 (33) Converters: 104 (104)

Constants: 40 (40) Equations: 97 (97) Graphicals: 14 (14)

There are also 41 expanded macro variables.

}

Full Model

This is the documentation of the model initialized with the pre-Realignment condition. The difference between the pre-Realignment and post-Realignment initial conditions lie in the initial values of stocks and the activation of the Realignment policy structure. Otherwise, the structures for the base cases are identical.

Population Module

$$\text{Innocent_Pop}(t) = \text{Innocent_Pop}(t - dt) + (\text{chg_in_pop} + \text{first_time_arrestee_released_wo_conviction} - \text{innocent_pop_deaths} - \text{being_arrested_first_time}) * dt$$

INIT Innocent_Pop = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 3431340.52756 ELSE 27000000 * 0.83

UNITS: person

INFLOWS:

$$\text{chg_in_pop} = \text{IF Individuals_with_Criminal_History.equilibrium_switch} = 1 \text{ THEN recovered_pop_deaths} + \text{innocent_pop_deaths} + \text{unrecovered_pop_deaths} \text{ ELSE ref_CA_pop} * \text{adjusted_historical_pop_growth_rate}$$

UNITS: person/year

$$\text{first_time_arrestee_released_wo_conviction} = \text{Individuals_with_Criminal_History.first_time_arrestee_release_wo_charges}$$

UNITS: person/year

OUTFLOWS:

$$\text{innocent_pop_deaths} = \text{Innocent_Pop} * \text{mortality_rate}$$

UNITS: person/year

$$\text{being_arrested_first_time} = \text{Individuals_with_Criminal_History.first_time_arrest_rate}$$

UNITS: person/year

$$\text{Pop_Initial_Contact_with_Criminal_Justice_System}(t) = \text{Pop_Initial_Contact_with_Criminal_Justice_System}(t - dt) + (\text{being_arrested_first_time} + \text{parolee_committing_new_crimes} + \text{recidivism} - \text{getting_involved_in_the_correctional_system} - \text{first_time_arrestee_released_wo_conviction}) * dt$$

INIT Pop_Initial_Contact_with_Criminal_Justice_System = Individuals_with_Criminal_History.Arrestees

UNITS: person

INFLOWS:

$$\text{being_arrested_first_time} = \text{Individuals_with_Criminal_History.first_time_arrest_rate}$$

UNITS: person/year

$$\text{parolee_committing_new_crimes} = \text{total_parolees_committing_new_crimes}$$

UNITS: person/year

$$\text{recidivism} = \text{exConv_wo_parolees_recidivism}$$

UNITS: person/year

OUTFLOWS:

getting_involved_in_the_correctional_system = total_being_involved_in_the_correctional_system

UNITS: person/year

first_time_arrestee_released_wo_conviction =
Individuals_with_Criminal_History.first_time_arrestee_release_wo_charges

UNITS: person/year

Recovered_Pop_with_Criminal_History(t) = Recovered_Pop_with_Criminal_History(t - dt) + (desisting -
recovered_pop_deaths) * dt

INIT Recovered_Pop_with_Criminal_History = total_desisting_pop

UNITS: person

INFLOWS:

desisting = total_unrecovered_pop_desisting

UNITS: person/year

OUTFLOWS:

recovered_pop_deaths = total_recovered_pop_deaths

UNITS: person/year

Unrecovered_Pop_with_Criminal_History(t) = Unrecovered_Pop_with_Criminal_History(t - dt) +
(getting_involved_in_the_correctional_system - desisting - unrecovered_pop_deaths - parolee_committing_new_crimes -
recidivism) * dt

INIT Unrecovered_Pop_with_Criminal_History = total_affected

UNITS: person

INFLOWS:

getting_involved_in_the_correctional_system = total_being_involved_in_the_correctional_system

UNITS: person/year

OUTFLOWS:

desisting = total_unrecovered_pop_desisting

UNITS: person/year

unrecovered_pop_deaths = total_deaths_of_affected_pop

UNITS: person/year

parolee_committing_new_crimes = total_parolees_committing_new_crimes

UNITS: person/year

recidivism = exConv_wo_parolees_recidivism

UNITS: person/year

adjusted_historical_pop_growth_rate = GRAPH(TIME)

(1987.00, 0.033236118), (1988.00, 0.033186086), (1989.00, 0.032925641), (1990.00, 0.035612651), (1991.00,
0.028629756), (1992.00, 0.031690139), (1993.00, 0.02343642), (1994.00, 0.014237625), (1995.00, 0.009031891), (1996.00,
0.008057897), (1997.00, 0.010689538), (1998.00, 0.02068908), (1999.00, 0.017062866), (2000.00, 0.022824403), (2001.00,
0.018302731), (2002.00, 0.025551459), (2003.00, 0.01664573), (2004.00, 0.017412452), (2005.00, 0.013879481), (2006.00,

0.008791011), (2007.00, 0.009800425), (2008.00, 0.011385949), (2009.00, 0.011216339), (2010.00, 0.00809431), (2011.00, 0.006435631), (2012.00, 0.016232524), (2013.00, 0.012922071), (2014.00, 0.013073862), (2015.00, 0.013036073), (2016.00, 0.013036073)

UNITS: 1/year

exConv_wo_parolees_recidivism = Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism +
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism +
Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_recidivism +
Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism +
Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_recidivism +
Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_recidivism +
Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism +
Individuals_with_Criminal_History.lo_risk_prison_exConv_wMI_recidivism

UNITS: person/year

fract_of_pop_with_criminal_history = (Unrecovered_Pop_with_Criminal_History + Recovered_Pop_with_Criminal_History) / total_pop

UNITS: unitless

fract_of_recovered_pop_with_criminal_history = Recovered_Pop_with_Criminal_History / total_pop

UNITS: unitless

fract_of_unrecovered_pop_with_criminal_history = Unrecovered_Pop_with_Criminal_History / total_pop

UNITS: unitless

fract_of_unrecovered_pop_wMI_with_criminal_history = Individuals_with_Criminal_History.total_unrecovered_pop_wMI / total_pop

UNITS: unitless

fract_pop_not_in_CJ = (Recovered_Pop_with_Criminal_History+Innocent_Pop) / total_pop

UNITS: unitless

mortality_rate = 0.006

UNITS: 1/year

DOCUMENT: Source : CA Dept of Public Health

<https://archive.cdph.ca.gov/data/statistics/Pages/DeathStatisticalDataTables.aspx>

ref_CA_pop = GRAPH(TIME)

(1987.00, 27717000.0), (1988.00, 28393000.0), (1989.00, 29142000.0), (1990.00, 29760021.0), (1991.00, 30458613.0), (1992.00, 30987384.0), (1993.00, 31314189.0), (1994.00, 31523690.0), (1995.00, 31711849.0), (1996.00, 31962949.0), (1997.00, 32452789.0), (1998.00, 32862965.0), (1999.00, 33418578.0), (2000.00, 33871653.0), (2001.00, 34512742.0), (2002.00, 34938290.0), (2003.00, 35388928.0), (2004.00, 35752765.0), (2005.00, 35985582.0), (2006.00, 36246822.0), (2007.00, 36552529.0), (2008.00, 36856222.0), (2009.00, 37077204.0), (2010.00, 37253956.0), (2011.00, 37701901.0), (2012.00, 38062780.0), (2013.00, 38431393.0), (2014.00, 38802500.0), (2015.00, 39177191.0)

UNITS: person

total_affected = Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI +
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI +
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI +
Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI +
Individuals_with_Criminal_History.Prison_Parolees_wo_MI + Individuals_with_Criminal_History.Prisoners_wo_MI +
Individuals_with_Criminal_History.Prisoners_wMI + Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI +
Individuals_with_Criminal_History.Prison_Parolees_wMI + Individuals_with_Criminal_History.Jail_Offenders_wo_MI +

Individuals_with_Criminal_History.Jail_Offenders_wMI + Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI +
 Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI +
 Individuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed +
 Individuals_with_Criminal_History.Probationers + Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI +
 Individuals_with_Criminal_History.Suspects_in_Custody +
 Individuals_with_Criminal_History.Pretrial_Suspects_in_Community +
 Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed +
 Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI +
 Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI +
 Individuals_with_Criminal_History.County_Parolees_wo_MI + Individuals_with_Criminal_History.County_Parolees_wMI +
 Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI +
 Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI +
 Individuals_with_Criminal_History.PreSentencing_Convicts_fr_Comm_in_Custody +
 Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition +
 Individuals_with_Criminal_History.PreSentencing_Convicts_in_Custody +
 Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition +
 Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition +
 Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition +
 Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed +
 Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed +
 Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI +
 Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI +
 Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility

UNITS: person

total_being_involved_in_the_correctional_system = Individuals_with_Criminal_History.pretrial_release +
 Individuals_with_Criminal_History.being_held_in_custody

UNITS: person/year

total_complaints_dismissed_after_charges =
 Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_custody_dismissed_before_trial +
 Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_comm_dismissed_before_trial +
 Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_comm_dismissed_after_trial +
 Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_custody_dismissed_after_trial

UNITS: person/year

total_deaths_of_affected_pop = Individuals_with_Criminal_History.prisoner_wo_MI_deaths +
 Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_deaths +
 Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wo_MI +
 Individuals_with_Criminal_History.prisoner_wMI_deaths +
 Individuals_with_Criminal_History.hi_risk_prison_exConv_deaths_wMI +
 Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wMI +
 Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_deaths +
 Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_deaths +
 Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_deaths +
 Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_deaths

UNITS: person/year

total_desisting_pop = Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wo_MI +
 Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wMI +
 Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wo_MI +
 Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wMI

UNITS: person

total_parolees_committing_new_crimes =
 Individuals_with_Criminal_History.county_parolee_wMI_committing_new_crimes +
 Individuals_with_Criminal_History.county_parolee_wo_MI_committing_new_crimes +

Individuals_with_Criminal_History.prison_parolee_wMI_committing_new_crimes +
Individuals_with_Criminal_History.prison_parolee_wo_MI_committing_new_crimes +
Individuals_with_Criminal_History.prison_parolee_wMI_violated_condition_committing_new_crimes +
Individuals_with_Criminal_History.prison_parolee_wo_MI_violated_condition_committing_new_crimes +
Individuals_with_Criminal_History.county_parolee_wMI_violated_condition_committing_new_crimes +
Individuals_with_Criminal_History.county_parolee_wo_MI_violated_condition_committing_new_crimes

UNITS: person/year

total_pop = Innocent_Pop + Unrecovered_Pop_with_Criminal_History + Recovered_Pop_with_Criminal_History +
Pop_Initial_Contact_with_Criminal_Justice_System

UNITS: person

"total_PV-RTC_rate" = Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail +
Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail +
Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison +
Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison

UNITS: person/year

total_recovered_pop_deaths = Individuals_with_Criminal_History.desisting_prison_exConv_deaths_wo_MI +
Individuals_with_Criminal_History.desisting_prison_exConv_deaths_wMI +
Individuals_with_Criminal_History.desisting_jail_exConv_deaths_wo_MI +
Individuals_with_Criminal_History.desisting_jail_exConv_deaths_wMI

UNITS: person/year

total_unrecovered_pop_desisting = Individuals_with_Criminal_History.prison_exConv_desisting_wo_MI +
Individuals_with_Criminal_History.prison_exConv_desisting_wMI +
Individuals_with_Criminal_History.jail_exConv_wo_MI_desisting +
Individuals_with_Criminal_History.jail_exConv_wMI_desisting

UNITS: person/year

{ The model has 129 (129) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 4 (4) Flows: 10 (10) Converters: 115 (115)

Constants: 1 (1) Equations: 124 (124) Graphicals: 2 (2)

There are also 409 expanded macro variables.

}

Individuals with Criminal History Module

```
Arrestees(t) = Arrestees(t - dt) + (first_time_arrest_rate + hi_risk_prison_exConv_wMI_recidivism +  
prison_parolee_wMI_committing_new_crimes + county_parolee_wMI_committing_new_crimes +  
hi_risk_jail_exConv_wMI_recidivism + lo_risk_jail_exConv_wMI_recidivism +  
county_parolee_wo_MI_committing_new_crimes + hi_risk_jail_exConv_wo_MI_recidivism +  
lo_risk_jail_exConv_wo_MI_recidivism + lo_risk_prison_exConv_wMI_recidivism +  
lo_risk_prison_exConv_wo_MI_recidivism + hi_risk_prison_exConv_wo_MI_recidivism +  
prison_parolee_wo_MI_committing_new_crimes + prison_parolee_wo_MI_violated_condition_committing_new_crimes +  
county_parolee_wMI_violated_condition_committing_new_crimes +  
prison_parolee_wMI_violated_condition_committing_new_crimes +  
county_parolee_wo_MI_violated_condition_committing_new_crimes - pretrial_release -  
first_time_arrestee_release_wo_charges - being_held_in_custody) * dt
```

```
INIT Arrestees = IF equilibrium_switch= 1 THEN 4458.92022298 ELSE 17876
```

```
UNITS: person
```

```
DOCUMENT: 60,802 average daily population in jails in 1987
```

I treat the "unconvicted inmates" as suspects and convicted probationers who are in transit to start their sentences. In 1987, there were 150101 unconvicted inmates (Jail Profile 1987). According to BJS Probation and Parole 1987, the inflow to probation in 1987 was 139110. So, I assume that 139110 probationers stayed in the "Convicted Jail Offenders". The jail conviction (an inflow to jail) was 13476 in 1996. In the absence of any prior available data, I assume the inflow to jail for 1987 was around this figure. The maths goes like this: 150101 - 139110 = 10991 (those convicted to jail sentence)

A second calculation:

The Jail Profile states that there are 28,528 unconvicted ADP.

The distribution among the unconvicted suspect stocks is as the following:

Arrestees - 17,876

Suspects in Custody - 261

Suspects in Custody with Cases Filed - 256

Defendants in Custody Being Tried - 12.9

PreSentencing Convicts in Custody - 3,550

PreSentencing Convicts fr Comm in Custody - 6,290

INFLOWS:

```
first_time_arrest_rate = IF equilibrium_switch = 1 THEN INIT(Population.Innocent_Pop) *  
INIT(fract_innocent_pop_arrested) ELSE Population.Innocent_Pop * fract_innocent_pop_arrested
```

```
UNITS: person/ year
```

```
hi_risk_prison_exConv_wMI_recidivism = HI_Risk_Prison_ExConvicts_wMI *  
hi_risk_prison_exConv_wMI_recidivism_rate
```

```
UNITS: person/ year
```

```
prison_parolee_wMI_committing_new_crimes = (Prison_Parolees_wMI -  
Community_Services.employed_prison_parolees_wMI_likely_fulfill_parole) * fract_prison_parolees_reoffend *  
Social_Capital.effect_of_SC_on_prison_parolee_wMI_recidivism
```

UNITS: person/ year

county_parolee_wMI_committing_new_crimes = realignment_policy * ((County_Parolees_wMI - Community_Services.employed_county_parolees_wMI_likely_fulfill_parole) * fract_county_parolees_reoffend * Social_Capital.effect_of_SC_on_county_parolee_wMI_recidivism)

UNITS: person/ year

hi_risk_jail_exConv_wMI_recidivism = HI_Risk_Jail_ExConvicts_wMI * hi_risk_jail_exConv_wMI_recidivism_rate

UNITS: person/ year

lo_risk_jail_exConv_wMI_recidivism = Lo_Risk_Jail_ExConvicts_wMI * lo_risk_jail_exConv_wMI_recidivism_rate

UNITS: person/ year

county_parolee_wo_MI_committing_new_crimes = realignment_policy * (County_Parolees_wo_MI - Community_Services.employed_county_parolees_wo_MI_likely_fulfill_parole) * fract_county_parolees_reoffend * Social_Capital.effect_of_SC_on_county_parolee_wo_MI_recidivism

UNITS: person/ year

hi_risk_jail_exConv_wo_MI_recidivism = HI_Risk_Jail_ExConvicts_wo_MI * hi_risk_jail_exConv_wo_MI_recidivism_rate

UNITS: person/ year

lo_risk_jail_exConv_wo_MI_recidivism = Lo_Risk_Jail_ExConvicts_wo_MI * lo_risk_jail_exConv_wo_MI_recidivism_rate

UNITS: person/ year

lo_risk_prison_exConv_wMI_recidivism = Lo_Risk_Prison_ExConvicts_wMI * lo_risk_prison_exConv_wMI_recidivism_rate

UNITS: person/ year

lo_risk_prison_exConv_wo_MI_recidivism = Lo_Risk_Prison_ExConvicts_wo_MI * lo_risk_prison_exConv_wo_MI_recidivism_rate

UNITS: person/ year

hi_risk_prison_exConv_wo_MI_recidivism = HI_Risk_Prison_ExConvicts_wo_MI * hi_risk_prison_exConv_wo_MI_recidivism_rate

UNITS: person/ year

prison_parolee_wo_MI_committing_new_crimes = (Prison_Parolees_wo_MI - Community_Services.employed_prison_parolees_wo_MI_likely_fulfill_parole) * fract_prison_parolees_reoffend * Social_Capital.effect_of_SC_on_prison_parolee_wo_MI_recidivism

UNITS: person/ year

prison_parolee_wo_MI_violated_condition_committing_new_crimes = (Prison_Parolees_wo_MI_Violated_Condition - Community_Services.employed_prison_parolees_wo_MI_violated_condition_likely_fulfill_parole) * fract_prison_parolees_reoffend * Social_Capital.effect_of_SC_on_prison_parolee_wo_MI_recidivism

UNITS: person/ year

county_parolee_wMI_violated_condition_committing_new_crimes = realignment_policy * ((County_Parolee_wMI_Violated_Condition - Community_Services.employed_county_parolees_wMI_violated_condition_likely_fulfill_parole) * fract_county_parolees_reoffend * Social_Capital.effect_of_SC_on_county_parolee_wMI_recidivism)

UNITS: person/ year

prison_parolee_wMI_violated_condition_committing_new_crimes = (Prison_Parolees_wMI_Violated_Condition - Community_Services.employed_prison_parolees_wMI_violated_condition_likely_fulfill_parole) * fract_prison_parolees_reoffend * Social_Capital.effect_of_SC_on_prison_parolee_wMI_recidivism

UNITS: person/ year

county_parolee_wo_MI_violated_condition_committing_new_crimes = realignment_policy * ((County_Parolee_wo_MI_Violated_Condition - Community_Services.employed_county_parolees_wo_MI_violated_condition_likely_fulfill_parole) * fract_county_parolees_reoffend * Social_Capital.effect_of_SC_on_county_parolee_wo_MI_recidivism)

UNITS: person/ year

OUTFLOWS:

pretrial_release = Arrestees / time_for_arraignment * fract_on_bails

UNITS: person/ year

first_time_arrestee_release_wo_charges = DELAY1((first_time_arrest_rate) * fract_first_time_arrestees_release_wo_charges, time_for_arraignment, (first_time_arrest_rate) * fract_first_time_arrestees_release_wo_charges)

UNITS: person/ year

being_held_in_custody = (Arrestees / time_for_arraignment) * fract_being_held_in_custody

UNITS: person/ year

County_Parolee_wMI_Violated_Condition(t) = County_Parolee_wMI_Violated_Condition(t - dt) + (county_parolee_wMI_violating_condition - discharging_county_parolee_wMI_violated_condition - county_parolee_wMI_returning_to_jail - county_parolee_wMI_violated_condition_committing_new_crimes) * dt

INIT County_Parolee_wMI_Violated_Condition = IF equilibrium_switch = 1 THEN 0.000248 ELSE 0.001

UNITS: person

INFLOWS:

county_parolee_wMI_violating_condition = (County_Parolees_wMI - Community_Services.employed_county_parolees_wMI_likely_fulfill_parole) * fract_county_parolees_wMI_violate_condition

UNITS: person/ year

OUTFLOWS:

discharging_county_parolee_wMI_violated_condition = realignment_policy * (County_Parolee_wMI_Violated_Condition / county_parolee_duration)

UNITS: person/ year

county_parolee_wMI_returning_to_jail = County_Parolee_wMI_Violated_Condition * county_parolee_wMI_RTJ_rate

UNITS: person/ year

county_parolee_wMI_violated_condition_committing_new_crimes = realignment_policy * (County_Parolee_wMI_Violated_Condition - Community_Services.employed_county_parolees_wMI_violated_condition_likely_fulfill_parole) * fract_county_parolees_reoffend * Social_Capital.effect_of_SC_on_county_parolee_wMI_recidivism)

UNITS: person/ year

County_Parolee_wo_MI_Violated_Condition(t) = County_Parolee_wo_MI_Violated_Condition(t - dt) + (county_parolee_wo_MI_violating_condition - county_parolee_wo_MI_returning_to_jail -

discharging_county_parolee_wo_MI_violated_condition -
county_parolee_wo_MI_violated_condition_committing_new_crimes) * dt

INIT County_Parolee_wo_MI_Violated_Condition = IF equilibrium_switch = 1 THEN 0.000352 ELSE 0.001

UNITS: person

INFLOWS:

county_parolee_wo_MI_violating_condition = (County_Parolees_wo_MI -
Community_Services.employed_county_parolees_wo_MI_likely_fulfill_parole) *
fract_county_parolees_wo_MI_violate_condition

UNITS: person/ year

OUTFLOWS:

county_parolee_wo_MI_returning_to_jail = County_Parolee_wo_MI_Violated_Condition *
county_parolee_wo_MI_RTJ_rate

UNITS: person/ year

discharging_county_parolee_wo_MI_violated_condition = realignment_policy *
(County_Parolee_wo_MI_Violated_Condition / county_parole_duration)

UNITS: person/ year

county_parolee_wo_MI_violated_condition_committing_new_crimes = realignment_policy *
((County_Parolee_wo_MI_Violated_Condition -
Community_Services.employed_county_parolees_wo_MI_violated_condition_likely_fulfill_parole) *
fract_county_parolees_reoffend * Social_Capital.effect_of_SC_on_county_parolee_wo_MI_recidivism)

UNITS: person/ year

County_Parolees_wMI(t) = County_Parolees_wMI(t - dt) + (releasing_prisoner_wMI_to_parole_after_realignment -
discharging_county_parolee_wMI - county_parolee_wMI_committing_new_crimes -
county_parolee_wMI_violating_condition) * dt

INIT County_Parolees_wMI = 0.00025

UNITS: person

INFLOWS:

releasing_prisoner_wMI_to_parole_after_realignment = (1 - realignment_policy) * ((Prisoners_wMI/
ave_prison_time_served_at_current_release_wMI) * zero_fract_parolees_realigned_wMI) + realignment_policy * ((
Prisoners_wMI/ ave_prison_time_served_at_current_release_wMI) * fract_parolees_realigned_wMI)

UNITS: person/ year

OUTFLOWS:

discharging_county_parolee_wMI = realignment_policy * (County_Parolees_wMI / county_parole_duration)

UNITS: person/ year

county_parolee_wMI_committing_new_crimes = realignment_policy * ((County_Parolees_wMI -
Community_Services.employed_county_parolees_wMI_likely_fulfill_parole) * fract_county_parolees_reoffend *
Social_Capital.effect_of_SC_on_county_parolee_wMI_recidivism)

UNITS: person/ year

county_parolee_wMI_violating_condition = (County_Parolees_wMI -
Community_Services.employed_county_parolees_wMI_likely_fulfill_parole) *
fract_county_parolees_wMI_violate_condition

UNITS: person/ year

County_Parolees_wo_MI(t) = County_Parolees_wo_MI(t - dt) + (releasing_prisoner_wo_MI_to_parole_after_realignment - discharging_county_parolee_wo_MI - county_parolee_wo_MI_committing_new_crimes - county_parolee_wo_MI_violating_condition) * dt

INIT County_Parolees_wo_MI = 0.0000133

UNITS: person

INFLOWS:

releasing_prisoner_wo_MI_to_parole_after_realignment = realignment_policy * (Prisoners_wo_MI / ave_prison_time_served_at_current_release_wo_MI * fract_parolees_realigned_wo_MI)

UNITS: person/ year

OUTFLOWS:

discharging_county_parolee_wo_MI = realignment_policy * (County_Parolees_wo_MI / county_parole_duration)

UNITS: person/ year

county_parolee_wo_MI_committing_new_crimes = realignment_policy * (County_Parolees_wo_MI - Community_Services.employed_county_parolees_wo_MI_likely_fulfill_parole) * fract_county_parolees_reoffend * Social_Capital.effect_of_SC_on_county_parolee_wo_MI_recidivism

UNITS: person/ year

county_parolee_wo_MI_violating_condition = (County_Parolees_wo_MI - Community_Services.employed_county_parolees_wo_MI_likely_fulfill_parole) * fract_county_parolees_wo_MI_violate_condition

UNITS: person/ year

Defendants_in_Comm_Being_Trialed(t) = Defendants_in_Comm_Being_Trialed(t - dt) + (suspect_in_comm_waiting_for_trial + violating_probation - defendants_in_comm_waiting_for_sentence - complaints_against_recidivating_defendant_in_comm_dismissed_after_trial) * dt

INIT Defendants_in_Comm_Being_Trialed = IF equilibrium_switch = 1 THEN 612.297419223 ELSE 2430

UNITS: person

DOCUMENT: 60,802 average daily population in jails in 1987

INFLOWS:

suspect_in_comm_waiting_for_trial = Suspects_in_Comm_with_Cases_Filed / wait_time_for_trial_suspect_in_comm * fract_defendants_in_comm_wait_for_trial

UNITS: person/ year

violating_probation = Probationers * fract_probation_violators_sent_to_jail_for_hearing

UNITS: person/ year

OUTFLOWS:

defendants_in_comm_waiting_for_sentence = Defendants_in_Comm_Being_Trialed / hearing_duration_for_defendants_in_comm

UNITS: person/ year

complaints_against_recidivating_defendant_in_comm_dismissed_after_trial = Defendants_in_Comm_Being_Trialed * fract_complaints_on_defendant_in_comm_dismissed_after_trial

UNITS: person/ year

Defendants_in_Custody_Being_Trialed(t) = Defendants_in_Custody_Being_Trialed(t - dt) +
(suspect_in_custody_waiting_for_trial - defendents_in_custody_waiting_for_sentence -
complaints_against_recidivating_defendant_in_custody_dismissed_after_trial) * dt

INIT Defendants_in_Custody_Being_Trialed = IF equilibrium_switch = 1 THEN 8.22869207327 ELSE
12.9

UNITS: person

DOCUMENT: 60,802 average daily population in jails in 1987

INFLOWS:

suspect_in_custody_waiting_for_trial = (Suspects_in_Custody_with_Cases_Filed /
wait_time_for_trial_suspect_in_custody)* fract_defendants_in_custody_wait_for_trial

UNITS: person/ year

OUTFLOWS:

defendents_in_custody_waiting_for_sentence = Defendants_in_Custody_Being_Trialed /
hearing_duration_for_defendants_in_custody

UNITS: person/ year

complaints_against_recidivating_defendant_in_custody_dismissed_after_trial =
(Defendants_in_Custody_Being_Trialed * fract_complaints_on_recidivating_defendants_in_custody_dismissed_after_trial)

UNITS: person/ year

Desisting_Jail_ExConvicts_wMI(t) = Desisting_Jail_ExConvicts_wMI(t - dt) + (jail_exConv_wMI_desisting -
desisting_jail_exConv_deaths_wMI) * dt

INIT Desisting_Jail_ExConvicts_wMI = IF equilibrium_switch = 1 THEN
(Lo_Risk_Jail_ExConvicts_wMI/(time_for_jail_exConv_wMI_to_cease_criminal_behavior*exConv_mortality_rate)) ELSE
267429

UNITS: person

INFLOWS:

jail_exConv_wMI_desisting = Lo_Risk_Jail_ExConvicts_wMI / time_for_jail_exConv_wMI_to_cease_criminal_behavior

UNITS: person/ year

OUTFLOWS:

desisting_jail_exConv_deaths_wMI = Desisting_Jail_ExConvicts_wMI * exConv_mortality_rate

UNITS: person/ year

Desisting_Jail_ExConvicts_wo_MI(t) = Desisting_Jail_ExConvicts_wo_MI(t - dt) + (jail_exConv_wo_MI_desisting -
desisting_jail_exConv_deaths_wo_MI) * dt

INIT Desisting_Jail_ExConvicts_wo_MI = IF equilibrium_switch = 1 THEN
(Lo_Risk_Jail_ExConvicts_wo_MI/(time_for_jail_exConv_wo_MI_to_cease_criminal_behavior*exConv_mortality_rate))
ELSE 2413855

UNITS: person

INFLOWS:

jail_exConv_wo_MI_desisting = Lo_Risk_Jail_ExConvicts_wo_MI /
time_for_jail_exConv_wo_MI_to_cease_criminal_behavior

UNITS: person/ year

OUTFLOWS:

desisting_jail_exConv_deaths_wo_MI = Desisting_Jail_ExConvicts_wo_MI * exConv_mortality_rate

UNITS: person/ year

Desisting_Prison_ExConvicts_wMI(t) = Desisting_Prison_ExConvicts_wMI(t - dt) + (prison_exConv_desisting_wMI - desisting_prison_exConv_deaths_wMI) * dt

INIT Desisting_Prison_ExConvicts_wMI = IF equilibrium_switch=1 THEN
Lo_Risk_Prison_ExConvicts_wMI/(time_for_prison_exConv_wMI_to_cease_criminal_behavior*exConv_mortality_rate)
ELSE 205334

UNITS: person

INFLOWS:

prison_exConv_desisting_wMI = Lo_Risk_Prison_ExConvicts_wMI /
time_for_prison_exConv_wMI_to_cease_criminal_behavior

UNITS: person/ year

OUTFLOWS:

desisting_prison_exConv_deaths_wMI = Desisting_Prison_ExConvicts_wMI * exConv_mortality_rate

UNITS: person/ year

Desisting_Prison_ExConvicts_wo_MI(t) = Desisting_Prison_ExConvicts_wo_MI(t - dt) + (prison_exConv_desisting_wo_MI - desisting_prison_exConv_deaths_wo_MI) * dt

INIT Desisting_Prison_ExConvicts_wo_MI = IF equilibrium_switch=1 THEN
Lo_Risk_Prison_ExConvicts_wo_MI/(time_for_prison_exConv_wo_MI_to_cease_criminal_behavior*exConv_mortality_rate)
) ELSE 1853257

UNITS: person

INFLOWS:

prison_exConv_desisting_wo_MI = Lo_Risk_Prison_ExConvicts_wo_MI /
time_for_prison_exConv_wo_MI_to_cease_criminal_behavior

UNITS: person/ year

OUTFLOWS:

desisting_prison_exConv_deaths_wo_MI = Desisting_Prison_ExConvicts_wo_MI * exConv_mortality_rate

UNITS: person/ year

HI_Risk_Jail_ExConvicts_wMI(t) = HI_Risk_Jail_ExConvicts_wMI(t - dt) + (discharging_county_parolee_wMI + releasing_jail_offenders_directly_wMI + discharging_county_parolee_wMI_violated_condition + rerelease_reprisoned_county_parolee_wMI + dismissed_jail_exConv_returning_to_comm_wMI - hi_risk_jail_exConv_wMI_deaths - hi_risk_jail_exConv_wMI_recidivism - becoming_lo_risk_jail_exConv_wMI) * dt

INIT HI_Risk_Jail_ExConvicts_wMI = IF equilibrium_switch = 1 THEN 13419.7668246 ELSE 3203

UNITS: person

INFLOWS:

discharging_county_parolee_wMI = realignment_policy * (County_Parolees_wMI / county_parole_duration)

UNITS: person/ year

releasing_jail_offenders_directly_wMI = Jail_Offenders_wMI / ave_jail_time_served_at_current_release_wMI *
fract_jail_offenders_release_directly

UNITS: person/ year

discharging_county_parolee_wMI_violated_condition = realignment_policy *
(County_Parolee_wMI_Violated_Condition / county_parole_duration)

UNITS: person/ year

rerelease_reprisoned_county_parolee_wMI = realignment_policy * (Reprisoned_County_Parole_Violators_wMI /
county_parole_reprison_time)

UNITS: person/ year

dismissed_jail_exConv_returning_to_comm_wMI = dismissed_jail_exConv_wMI

UNITS: person/ year

OUTFLOWS:

hi_risk_jail_exConv_wMI_deaths = HI_Risk_Jail_ExConvicts_wMI * exConv_mortality_rate

UNITS: person/ year

hi_risk_jail_exConv_wMI_recidivism = HI_Risk_Jail_ExConvicts_wMI * hi_risk_jail_exConv_wMI_recidivism_rate

UNITS: person/ year

becoming_lo_risk_jail_exConv_wMI = HI_Risk_Jail_ExConvicts_wMI / time_for_jail_exConv_wMI_to_become_lo_risk

UNITS: person/ year

HI_Risk_Jail_ExConvicts_wo_MI(t) = HI_Risk_Jail_ExConvicts_wo_MI(t - dt) + (discharging_county_parolee_wo_MI +
releasing_jail_offenders_directly_wo_MI + discharging_county_parolee_wo_MI_violated_condition +
rerelease_reprisoned_county_parolee_wo_MI + dismissed_jail_exConv_returning_to_comm_wo_MI -
becoming_lo_risk_jail_exConv_wo_MI - hi_risk_jail_exConv_wo_MI_recidivism - hi_risk_jail_exConv_wo_MI_deaths) * dt

INIT HI_Risk_Jail_ExConvicts_wo_MI = IF equilibrium_switch = 1 THEN 15721.4014321 ELSE 21681

UNITS: person

INFLOWS:

discharging_county_parolee_wo_MI = realignment_policy * (County_Parolees_wo_MI / county_parole_duration)

UNITS: person/ year

releasing_jail_offenders_directly_wo_MI = Jail_Offenders_wo_MI / ave_jail_time_served_at_current_release_wo_MI*
fract_jail_offenders_release_directly

UNITS: person/ year

discharging_county_parolee_wo_MI_violated_condition = realignment_policy *
(County_Parolee_wo_MI_Violated_Condition / county_parole_duration)

UNITS: person/ year

rerelease_reprisoned_county_parolee_wo_MI = Reprisoned_County_Parole_Violators_wo_MI /
county_parole_reprison_time

UNITS: person/ year

dismissed_jail_exConv_returning_to_comm_wo_MI = dismissed_jail_exConv_wo_MI

UNITS: person/ year

OUTFLOWS:

becoming_lo_risk_jail_exConv_wo_MI = HI_Risk_Jail_ExConvicts_wo_MI /
time_for_jail_exConv_wo_MI_to_become_lo_risk

UNITS: person/ year

hi_risk_jail_exConv_wo_MI_recidivism = HI_Risk_Jail_ExConvicts_wo_MI * hi_risk_jail_exConv_wo_MI_recidivism_rate

UNITS: person/ year

hi_risk_jail_exConv_wo_MI_deaths = HI_Risk_Jail_ExConvicts_wo_MI * exConv_mortality_rate

UNITS: person/ year

HI_Risk_Prison_ExConvicts_wMI(t) = HI_Risk_Prison_ExConvicts_wMI(t - dt) + (discharging_prison_parolee_wMI +
discharging_prison_parolee_wMI_violated_condition + discharging_reparoled_prison_parolee_wMI +
prisoners_wSMI_fr_alt_facility_being_released + dismissed_prison_exConv_returning_to_comm_wMI -
becoming_lo_risk_prison_exConv_wMI - hi_risk_prison_exConv_deaths_wMI - hi_risk_prison_exConv_wMI_recidivism) *
dt

INIT HI_Risk_Prison_ExConvicts_wMI = IF equilibrium_switch=1 THEN 8462.43746799 ELSE 3074

UNITS: person

DOCUMENT: CA Pop in 1987 = 27,717,000

INFLOWS:

discharging_prison_parolee_wMI = Prison_Parolees_wMI /prison_parole_duration_wMI

UNITS: person/ year

discharging_prison_parolee_wMI_violated_condition = Prison_Parolees_wMI_Violated_Condition /
prison_parole_duration_wMI

UNITS: person/ year

discharging_reparoled_prison_parolee_wMI = Reparoled_Prison_Parolees_wMI / prison_parole_duration_wMI

UNITS: person/ year

prisoners_wSMI_fr_alt_facility_being_released = releasing_prisoner_wSMI_in_alt_facility

UNITS: person/ year

dismissed_prison_exConv_returning_to_comm_wMI = dismissed_prison_exConv_wMI

UNITS: person/ year

OUTFLOWS:

becoming_lo_risk_prison_exConv_wMI = HI_Risk_Prison_ExConvicts_wMI /
time_for_prison_exConv_wMI_to_become_lo_risk

UNITS: person/ year

hi_risk_prison_exConv_deaths_wMI = HI_Risk_Prison_ExConvicts_wMI * exConv_mortality_rate

UNITS: person/ year

hi_risk_prison_exConv_wMI_recidivism = HI_Risk_Prison_ExConvicts_wMI *
hi_risk_prison_exConv_wMI_recidivism_rate

UNITS: person/ year

HI_Risk_Prison_ExConvicts_wo_MI(t) = HI_Risk_Prison_ExConvicts_wo_MI(t - dt) + (discharging_prison_parolee_wo_MI +
discharging_prison_parolee_wo_MI_violated_condition + discharging_reparoled_prison_parolee_wo_MI +
dismissed_prison_exConv_returning_to_comm_wo_MI - becoming_lo_risk_prison_exConv_wo_MI -
hi_risk_prison_exConv_wo_MI_deaths - hi_risk_prison_exConv_wo_MI_recidivism) * dt

INIT HI_Risk_Prison_ExConvicts_wo_MI = IF equilibrium_switch=1 THEN 25894.0320892 ELSE 22195

UNITS: person

DOCUMENT: CA Pop in 1987 = 27,717,000

INFLOWS:

discharging_prison_parolee_wo_MI = Prison_Parolees_wo_MI / prisoner_parole_duration_wo_MI

UNITS: person/ year

discharging_prison_parolee_wo_MI_violated_condition = Prison_Parolees_wo_MI_Violated_Condition /
prisoner_parole_duration_wo_MI

UNITS: person/ year

discharging_reparoled_prison_parolee_wo_MI = Reparoled_Prison_Parolees_wo_MI /
prisoner_parole_duration_wo_MI

UNITS: person/ year

dismissed_prison_exConv_returning_to_comm_wo_MI = dismissed_prison_exConv_wo_MI

UNITS: person/ year

OUTFLOWS:

becoming_lo_risk_prison_exConv_wo_MI = HI_Risk_Prison_ExConvicts_wo_MI /
time_for_prison_exConv_wo_MI_to_become_lo_risk

UNITS: person/ year

hi_risk_prison_exConv_wo_MI_deaths = HI_Risk_Prison_ExConvicts_wo_MI * exConv_mortality_rate

UNITS: person/ year

hi_risk_prison_exConv_wo_MI_recidivism = HI_Risk_Prison_ExConvicts_wo_MI *
hi_risk_prison_exConv_wo_MI_recidivism_rate

UNITS: person/ year

Jail_Offenders_wMI(t) = Jail_Offenders_wMI(t - dt) + (jail_offender_devMI + convicting_convict_in_comm_to_jail_wMI +
convicting_convict_in_custody_to_jail_wMI - releasing_jail_offenders_directly_wMI -
continue_serving_thru_probation_wMI) * dt

INIT Jail_Offenders_wMI = IF equilibrium_switch = 1 THEN 3119.51236829
ELSE 12738.1137513

UNITS: person

INFLOWS:

jail_offender_devMI = realignment_policy * (Jail_Offenders_wo_MI * fract_jail_offenders_devMI)

UNITS: person/ year

convicting_convict_in_comm_to_jail_wMI = convict_in_comm_being_sentenced *
fract_convicts_in_comm_convicted_to_jail_sentence * fract_jail_offenders_wMI

UNITS: person/ year

convicting_convict_in_custody_to_jail_wMI = convict_in_custody_being_sentenced *
fract_convicts_in_custody_convicted_to_jail * fract_jail_offenders_wMI

UNITS: person/ year

OUTFLOWS:

releasing_jail_offenders_directly_wMI = Jail_Offenders_wMI / ave_jail_time_served_at_current_release_wMI *
fract_jail_offenders_release_directly

UNITS: person/ year

continue_serving_thru_probation_wMI = Jail_Offenders_wMI / ave_jail_time_served_at_current_release_wMI *
fract_jail_offenders_serving_split_sentence

UNITS: person/ year

Jail_Offenders_wo_MI(t) = Jail_Offenders_wo_MI(t - dt) + (convicting_convict_in_custody_to_jail_wo_MI +
convicting_convict_in_comm_to_jail_wo_MI - jail_offender_devMI - continue_serving_thru_probation_wo_MI -
releasing_jail_offenders_directly_wo_MI) * dt

INIT Jail_Offenders_wo_MI = IF equilibrium_switch = 1 THEN 3662.03625843 ELSE 15281.5477543

UNITS: person

INFLOWS:

convicting_convict_in_custody_to_jail_wo_MI = convict_in_custody_being_sentenced *
fract_convicts_in_custody_convicted_to_jail * fract_jail_offenders_wo_MI

UNITS: person/ year

convicting_convict_in_comm_to_jail_wo_MI = convict_in_comm_being_sentenced *
fract_convicts_in_comm_convicted_to_jail_sentence * fract_jail_offenders_wo_MI

UNITS: person/ year

OUTFLOWS:

jail_offender_devMI = realignment_policy * (Jail_Offenders_wo_MI * fract_jail_offenders_devMI)

UNITS: person/ year

continue_serving_thru_probation_wo_MI = Jail_Offenders_wo_MI / ave_jail_time_served_at_current_release_wo_MI
* fract_jail_offenders_serving_split_sentence

UNITS: person/ year

releasing_jail_offenders_directly_wo_MI = Jail_Offenders_wo_MI / ave_jail_time_served_at_current_release_wo_MI *
fract_jail_offenders_release_directly

UNITS: person/ year

Lo_Risk_Jail_ExConvicts_wMI(t) = Lo_Risk_Jail_ExConvicts_wMI(t - dt) + (becoming_lo_risk_jail_exConv_wMI -
jail_exConv_wMI_desisting - lo_risk_jail_exConv_wMI_recidivism - lo_risk_jail_exConv_wMI_deaths) * dt

INIT Lo_Risk_Jail_ExConvicts_wMI = IF equilibrium_switch = 1 THEN 19635.9464427 ELSE 5605

UNITS: person

INFLOWS:

becoming_lo_risk_jail_exConv_wMI = HI_Risk_Jail_ExConvicts_wMI / time_for_jail_exConv_wMI_to_become_lo_risk

UNITS: person/ year

OUTFLOWS:

jail_exConv_wMI_desisting = Lo_Risk_Jail_ExConvicts_wMI / time_for_jail_exConv_wMI_to_cease_criminal_behavior

UNITS: person/ year

lo_risk_jail_exConv_wMI_recidivism = Lo_Risk_Jail_ExConvicts_wMI * lo_risk_jail_exConv_wMI_recidivism_rate

UNITS: person/ year

lo_risk_jail_exConv_wMI_deaths = Lo_Risk_Jail_ExConvicts_wMI * exConv_mortality_rate

UNITS: person/ year

Lo_Risk_Jail_ExConvicts_wo_MI(t) = Lo_Risk_Jail_ExConvicts_wo_MI(t - dt) + (becoming_lo_risk_jail_exConv_wo_MI + discharging_fr_probation - jail_exConv_wo_MI_desisting - lo_risk_jail_exConv_wo_MI_deaths - lo_risk_jail_exConv_wo_MI_recidivism) * dt

INIT Lo_Risk_Jail_ExConvicts_wo_MI = IF equilibrium_switch = 1 THEN 66567.8854416
ELSE 50590

UNITS: person

INFLOWS:

becoming_lo_risk_jail_exConv_wo_MI = HI_Risk_Jail_ExConvicts_wo_MI /
time_for_jail_exConv_wo_MI_to_become_lo_risk

UNITS: person/ year

discharging_fr_probation = Probationers/ave_probation_duration

UNITS: person/ year

OUTFLOWS:

jail_exConv_wo_MI_desisting = Lo_Risk_Jail_ExConvicts_wo_MI /
time_for_jail_exConv_wo_MI_to_cease_criminal_behavior

UNITS: person/ year

lo_risk_jail_exConv_wo_MI_deaths = Lo_Risk_Jail_ExConvicts_wo_MI * exConv_mortality_rate

UNITS: person/ year

lo_risk_jail_exConv_wo_MI_recidivism = Lo_Risk_Jail_ExConvicts_wo_MI *
lo_risk_jail_exConv_wo_MI_recidivism_rate

UNITS: person/ year

Lo_Risk_Prison_ExConvicts_wMI(t) = Lo_Risk_Prison_ExConvicts_wMI(t - dt) + (becoming_lo_risk_prison_exConv_wMI -
prison_exConv_desisting_wMI - lo_risk_prison_exConv_deaths_wMI - lo_risk_prison_exConv_wMI_recidivism) * dt

INIT Lo_Risk_Prison_ExConvicts_wMI = IF equilibrium_switch = 1 THEN 20046.3831395 ELSE 8607

UNITS: person

DOCUMENT: CA Pop in 1987 = 27,717,000

INFLOWS:

becoming_lo_risk_prison_exConv_wMI = HI_Risk_Prison_ExConvicts_wMI /
time_for_prison_exConv_wMI_to_become_lo_risk

UNITS: person/ year

OUTFLOWS:

prison_exConv_desisting_wMI = Lo_Risk_Prison_ExConvicts_wMI /
time_for_prison_exConv_wMI_to_cease_criminal_behavior

UNITS: person/ year

lo_risk_prison_exConv_deaths_wMI = Lo_Risk_Prison_ExConvicts_wMI * exConv_mortality_rate

UNITS: person/ year

lo_risk_prison_exConv_wMI_recidivism = Lo_Risk_Prison_ExConvicts_wMI *
lo_risk_prison_exConv_wMI_recidivism_rate

UNITS: person/ year

Lo_Risk_Prison_ExConvicts_wo_MI(t) = Lo_Risk_Prison_ExConvicts_wo_MI(t - dt) +
(becoming_lo_risk_prison_exConv_wo_MI - lo_risk_prison_exConv_wo_MI_recidivism -
lo_risk_prison_exConv_deaths_wo_MI - prison_exConv_desisting_wo_MI) * dt

INIT Lo_Risk_Prison_ExConvicts_wo_MI = IF equilibrium_switch = 1 THEN 82540.175157 ELSE 77681

UNITS: person

DOCUMENT: CA Pop in 1987 = 27,717,000

INFLOWS:

becoming_lo_risk_prison_exConv_wo_MI = HI_Risk_Prison_ExConvicts_wo_MI /
time_for_prison_exConv_wo_MI_to_become_lo_risk

UNITS: person/ year

OUTFLOWS:

lo_risk_prison_exConv_wo_MI_recidivism = Lo_Risk_Prison_ExConvicts_wo_MI *
lo_risk_prison_exConv_wo_MI_recidivism_rate

UNITS: person/ year

lo_risk_prison_exConv_deaths_wo_MI = Lo_Risk_Prison_ExConvicts_wo_MI * exConv_mortality_rate

UNITS: person/ year

prison_exConv_desisting_wo_MI = Lo_Risk_Prison_ExConvicts_wo_MI /
time_for_prison_exConv_wo_MI_to_cease_criminal_behavior

UNITS: person/ year

New_Prisoners_at_Reception_Center_for_Medical_Screening(t) =
New_Prisoners_at_Reception_Center_for_Medical_Screening(t - dt) + (admitting_to_reception_center -
fulfilling_medical_screening_requirement) * dt

INIT New_Prisoners_at_Reception_Center_for_Medical_Screening = IF equilibrium_switch = 1 THEN 13268.1386222
ELSE 26515

UNITS: person

DOCUMENT: There were 23588 new prison admission per year in 1986.

There were 26515 new prison admission per year in 1987.

INFLOWS:

admitting_to_reception_center = IF equilibrium_switch = 1 THEN (1-
MHC_screening_capacity_building_start_time_switch) * INIT (total_new_prison_admission)+
MHC_screening_capacity_building_start_time_switch * total_new_prison_admission ELSE total_new_prison_admission

UNITS: person/year

OUTFLOWS:

fulfilling_medical_screening_requirement = New_Prisoners_at_Reception_Center_for_Medical_Screening /
ave_time_stay_in_reception_center

UNITS: person/year

PreSentencing_Convicts_fr_Comm_in_Custody(t) = PreSentencing_Convicts_fr_Comm_in_Custody(t - dt) +
(defendants_in_comm_waiting_for_sentence + suspect_in_comm_conviction_wo_trial -
convict_in_comm_being_sentenced) * dt

INIT PreSentencing_Convicts_fr_Comm_in_Custody = IF equilibrium_switch=1 THEN 1307.84975076 ELSE 6290

UNITS: person

INFLOWS:

defendants_in_comm_waiting_for_sentence = Defendants_in_Comm_Being_Trialed /
hearing_duration_for_defendants_in_comm

UNITS: person/ year

suspect_in_comm_conviction_wo_trial = Suspects_in_Comm_with_Cases_Filed /
wait_time_for_trial_suspect_in_comm * fract_suspects_in_comm_convicted_wo_trial

UNITS: person/ year

OUTFLOWS:

convict_in_comm_being_sentenced = PreSentencing_Convicts_fr_Comm_in_Custody /
ave_time_to_determine_sentence_for_convict_in_comm

UNITS: person/ year

PreSentencing_Convicts_in_Custody(t) = PreSentencing_Convicts_in_Custody(t - dt) +
(defendants_in_custody_waiting_for_sentence + suspect_in_cusotdy_conviction_wo_trial -
convict_in_custody_being_sentenced) * dt

INIT PreSentencing_Convicts_in_Custody = IF equilibrium_switch = 1 THEN 2388.22569968 ELSE 3550

UNITS: person

INFLOWS:

defendants_in_custody_waiting_for_sentence = Defendants_in_Custody_Being_Trialed /
hearing_duration_for_defendants_in_custody

UNITS: person/ year

suspect_in_cusotdy_conviction_wo_trial = (Suspects_in_Custody_with_Cases_Filed /
wait_time_for_trial_suspect_in_custody) * fract_recidivating_suspects_in_custody_convicted_wo_trial

UNITS: person/ year

OUTFLOWS:

convict_in_custody_being_sentenced = PreSentencing_Convicts_in_Custody /
ave_time_to_determine_sentence_for_convicts_in_custody

UNITS: person/ year

Pretrial_Suspects_in_Community(t) = Pretrial_Suspects_in_Community(t - dt) + (pretrial_release -
filing_case_for_suspect_in_comm) * dt

INIT Pretrial_Suspects_in_Community = IF equilibrium_switch = 1 THEN 999.10701295 ELSE 5200

UNITS: person

INFLOWS:

pretrial_release = Arrestees / time_for_arraignment * fract_on_bails

UNITS: person/ year

OUTFLOWS:

filing_case_for_suspect_in_comm = Pretrial_Suspects_in_Community / time_to_file_case_for_suspect_in_comm

UNITS: person/ year

Prison_Parolees_wMI(t) = Prison_Parolees_wMI(t - dt) + (releasing_prisoner_wMI_before_realignment -
discharging_prison_parolee_wMI - prison_parolee_wMI_committing_new_crimes -
prison_parolee_wMI_violating_condition) * dt

INIT Prison_Parolees_wMI = IF equilibrium_switch = 1 THEN 3099.21450896 ELSE 4194

UNITS: person

DOCUMENT: "Parolees with Mental Disorder: Toward Evidence-Based Practice" (Louden & Skeem, 2011)

20.4% of parolees in their sample were identified as having a mental disorder, either by their mental health designation or diagnosis. Estimates from other studies indicated 14.5% and 30% of men and women in prisons have serious mental disorder.

In CA, mental disorder classification is based on functioning impairment and symptoms.

INFLOWS:

releasing_prisoner_wMI_before_realignment = IF realignment_policy = 1 THEN Prisoners_wMI /
ave_prison_time_served_at_current_release_wMI * fract_parolees_not_realigned_wMI ELSE Prisoners_wMI /
ave_prison_time_served_at_current_release_wMI

UNITS: person/ year

OUTFLOWS:

discharging_prison_parolee_wMI = Prison_Parolees_wMI / prison_parole_duration_wMI

UNITS: person/ year

prison_parolee_wMI_committing_new_crimes = (Prison_Parolees_wMI -
Community_Services.employed_prison_parolees_wMI_likely_fulfill_parole) * fract_prison_parolees_reoffend *
Social_Capital.effect_of_SC_on_prison_parolee_wMI_recidivism

UNITS: person/ year

prison_parolee_wMI_violating_condition = (Prison_Parolees_wMI -
Community_Services.employed_prison_parolees_wMI_likely_fulfill_parole) *
fract_prison_parolees_wMI_violate_condition

UNITS: person/ year

Prison_Parolees_wMI_Violated_Condition(t) = Prison_Parolees_wMI_Violated_Condition(t - dt) +
(prison_parolee_wMI_violating_condition - prison_parolee_wMI_returning_to_prison -
discharging_prison_parolee_wMI_violated_condition - prison_parolee_wMI_violated_condition_committing_new_crimes)
* dt

INIT Prison_Parolees_wMI_Violated_Condition = IF equilibrium_switch = 1 THEN 925.396462556 ELSE 478

UNITS: person

INFLOWS:

prison_parolee_wMI_violating_condition = (Prison_Parolees_wMI -
Community_Services.employed_prison_parolees_wMI_likely_fulfill_parole) *
fract_prison_parolees_wMI_violate_condition

UNITS: person/ year

OUTFLOWS:

prison_parolee_wMI_returning_to_prison = Prison_Parolees_wMI_Violated_Condition *
prison_parolee_wMI_RTP_rate

UNITS: person/ year

discharging_prison_parolee_wMI_violated_condition = Prison_Parolees_wMI_Violated_Condition /
prison_parole_duration_wMI

UNITS: person/ year

prison_parolee_wMI_violated_condition_committing_new_crimes = (Prison_Parolees_wMI_Violated_Condition -
Community_Services.employed_prison_parolees_wMI_violated_condition_likely_fulfill_parole) *
fract_prison_parolees_reoffend * Social_Capital.effect_of_SC_on_prison_parolee_wMI_recidivism

UNITS: person/ year

Prison_Parolees_wo_MI(t) = Prison_Parolees_wo_MI(t - dt) + (releasing_prisoner_wo_MI_before_realignment -
discharging_prison_parolee_wo_MI - prison_parolee_wo_MI_committing_new_crimes -
prison_parolee_wo_MI_violating_condition) * dt

INIT Prison_Parolees_wo_MI = IF equilibrium_switch = 1 THEN 12120.3335133 ELSE 29101

UNITS: person

INFLOWS:

releasing_prisoner_wo_MI_before_realignment = IF realignment_policy = 1 THEN Prisoners_wo_MI
/ave_prison_time_served_at_current_release_wo_MI * fract_parolees_not_realigned_wo_MI ELSE Prisoners_wo_MI /
ave_prison_time_served_at_current_release_wo_MI

UNITS: person/ year

OUTFLOWS:

discharging_prison_parolee_wo_MI = Prison_Parolees_wo_MI / prisoner_parole_duration_wo_MI

UNITS: person/ year

prison_parolee_wo_MI_committing_new_crimes = (Prison_Parolees_wo_MI -
Community_Services.employed_prison_parolees_wo_MI_likely_fulfill_parole) * fract_prison_parolees_reoffend *
Social_Capital.effect_of_SC_on_prison_parolee_wo_MI_recidivism

UNITS: person/ year

prison_parolee_wo_MI_violating_condition = (Prison_Parolees_wo_MI -
Community_Services.employed_prison_parolees_wo_MI_likely_fulfill_parole) *
fract_prison_parolees_wo_MI_violate_condition

UNITS: person/ year

Prison_Parolees_wo_MI_Violated_Condition(t) = Prison_Parolees_wo_MI_Violated_Condition(t - dt) +
(prison_parolee_wo_MI_violating_condition - discharging_prison_parolee_wo_MI_violated_condition -
prison_parolee_wo_MI_returning_to_prison - prison_parolee_wo_MI_violated_condition_committing_new_crimes) * dt

INIT Prison_Parolees_wo_MI_Violated_Condition = IF equilibrium_switch = 1 THEN 3049.12684893 ELSE 2327

UNITS: person

INFLOWS:

prison_parolee_wo_MI_violating_condition = (Prison_Parolees_wo_MI -
Community_Services.employed_prison_parolees_wo_MI_likely_fulfill_parole)*
fract_prison_parolees_wo_MI_violate_condition

UNITS: person/ year

OUTFLOWS:

discharging_prison_parolee_wo_MI_violated_condition = Prison_Parolees_wo_MI_Violated_Condition /
prisoner_parole_duration_wo_MI

UNITS: person/ year

prison_parolee_wo_MI_returning_to_prison = Prison_Parolees_wo_MI_Violated_Condition *
prison_parolee_wo_MI_RTP_rate

UNITS: person/ year

prison_parolee_wo_MI_violated_condition_committing_new_crimes = (Prison_Parolees_wo_MI_Violated_Condition -
Community_Services.employed_prison_parolees_wo_MI_violated_condition_likely_fulfill_parole) *
fract_prison_parolees_reoffend * Social_Capital.effect_of_SC_on_prison_parolee_wo_MI_recidivism

UNITS: person/ year

Prisoners_wMI(t) = Prisoners_wMI(t - dt) + (convicting_convict_in_custody_to_prison_wMI +
convicting_convict_in_comm_to_prison_wMI + prisoner_develop_MI - releasing_prisoner_wMI_before_realignment -
releasing_prisoner_wMI_to_parole_after_realignment - prisoner_wMI_recovering - prisoner_wMI_deaths) * dt

INIT Prisoners_wMI = IF equilibrium_switch=1 THEN 6198.8722379 ELSE
(66975 - 1718 {reprisoned})* 0.14 {9136}

UNITS: person

INFLOWS:

convicting_convict_in_custody_to_prison_wMI = incoming_prison_convicts_in_custody_wMI_entering_prison

UNITS: person/ year

convicting_convict_in_comm_to_prison_wMI = incoming_prison_convicts_in_comm_wMI_entering_prison

UNITS: person/ year

prisoner_develop_MI = Prisoners_wo_MI * fract_prisoners_devMI

UNITS: person/ year

OUTFLOWS:

releasing_prisoner_wMI_before_realignment = IF realignment_policy = 1 THEN Prisoners_wMI /
ave_prison_time_served_at_current_release_wMI * fract_parolees_not_realigned_wMI ELSE Prisoners_wMI /
ave_prison_time_served_at_current_release_wMI

UNITS: person/ year

releasing_prisoner_wMI_to_parole_after_realignment = (1 - realignment_policy) * ((Prisoners_wMI/
ave_prison_time_served_at_current_release_wMI) * zero_fract_parolees_realigned_wMI) + realignment_policy * ((
Prisoners_wMI/ ave_prison_time_served_at_current_release_wMI) * fract_parolees_realigned_wMI)

UNITS: person/ year

prisoner_wMI_recovering = IF realignment_policy = 1 THEN Prisoners_wMI / Time_to_Recover_fr_MI_in_Prison ELSE
0

UNITS: person/ year

prisoner_wMI_deaths = Prisoners_wMI * Age_Profiles.prisoner_wMI_mortality_rate

UNITS: person/ year

Prisoners_wo_MI(t) = Prisoners_wo_MI(t - dt) + (prisoner_wMI_recovering + convicting_convict_in_comm_to_prison_wo_MI + convicting_convict_in_custody_to_prison_wo_MI - prisoner_wo_MI_deaths - releasing_prisoner_wo_MI_to_parole_after_realignment - prisoner_develop_MI - releasing_prisoner_wo_MI_before_realignment) * dt

INIT Prisoners_wo_MI = IF equilibrium_switch=1 THEN 18783.1474149 ELSE ((66975 - 1718 {reprisoned})* 0.86 {56121})

UNITS: person

INFLOWS:

prisoner_wMI_recovering = IF realignment_policy = 1 THEN Prisoners_wMI / Time_to_Recover_fr_MI_in_Prison ELSE 0

UNITS: person/ year

convicting_convict_in_comm_to_prison_wo_MI = convict_in_comm_being_sentenced * fract_convicts_in_comm_convicted_to_prison_sentence * fract_prison_convicts_wo_MI

UNITS: person/ year

convicting_convict_in_custody_to_prison_wo_MI = convict_in_custody_being_sentenced * fract_convicts_in_custody_convicted_to_prison_sentence * fract_prison_convicts_wo_MI

UNITS: person/ year

OUTFLOWS:

prisoner_wo_MI_deaths = Prisoners_wo_MI * Age_Profiles.prisoner_wo_MI_mortality_rate

UNITS: person/ year

releasing_prisoner_wo_MI_to_parole_after_realignment = realignment_policy * (Prisoners_wo_MI / ave_prison_time_served_at_current_release_wo_MI * fract_parolees_realigned_wo_MI)

UNITS: person/ year

prisoner_develop_MI = Prisoners_wo_MI * fract_prisoners_devMI

UNITS: person/ year

releasing_prisoner_wo_MI_before_realignment = IF realignment_policy = 1 THEN Prisoners_wo_MI / ave_prison_time_served_at_current_release_wo_MI * fract_parolees_not_realigned_wo_MI ELSE Prisoners_wo_MI / ave_prison_time_served_at_current_release_wo_MI

UNITS: person/ year

Prisoners_wSMI_in_Alternative_Facility(t) = Prisoners_wSMI_in_Alternative_Facility(t - dt) + (diverting_prisoners_wSMI_in_custody + diverting_prisoners_wSMI_in_comm - deaths_of_prisoners_wSMI_in_alt_facility - releasing_prisoner_wSMI_in_alt_facility) * dt

INIT Prisoners_wSMI_in_Alternative_Facility = 0.001

UNITS: person

INFLOWS:

diverting_prisoners_wSMI_in_custody = incoming_prison_convicts_in_custody_wMI * fract_incoming_prisoners_wSMI_in_custody_diverted

UNITS: person/year

diverting_prisoners_wSMI_in_comm = incoming_prison_convicts_in_comm_wMI * fract_incoming_prisoners_wSMI_in_comm_diverted

UNITS: person/year

OUTFLOWS:

deaths_of_prisoners_wSMI_in_alt_facility = policy_alternative_facility_for_prisoners_wSMI *
(Prisoners_wSMI_in_Alternative_Facility * Age_Profiles.prisoner_wSMI_in_alt_facility_mortality_rate)

UNITS: person/year

releasing_prisoner_wSMI_in_alt_facility = policy_alternative_facility_for_prisoners_wSMI *
(Prisoners_wSMI_in_Alternative_Facility / ave_time_served_in_alt_facility)

UNITS: person/year

Probationers(t) = Probationers(t - dt) + (continue_serving_thru_probation_wo_MI + continue_serving_thru_probation_wMI
+ convicting_convict_in_custody_to_probation + convicting_convict_in_comm_to_probation - discharging_fr_probation -
violating_probation) * dt

INIT Probationers = IF equilibrium_switch = 1 THEN 73597.5788178 ELSE 242529

UNITS: person

DOCUMENT: BJS Probation and Parole 1987

INFLOWS:

continue_serving_thru_probation_wo_MI = Jail_Offenders_wo_MI / ave_jail_time_served_at_current_release_wo_MI
* fract_jail_offenders_serving_split_sentence

UNITS: person/ year

continue_serving_thru_probation_wMI = Jail_Offenders_wMI / ave_jail_time_served_at_current_release_wMI *
fract_jail_offenders_serving_split_sentence

UNITS: person/ year

convicting_convict_in_custody_to_probation = convict_in_custody_being_sentenced *
fract_convicts_in_custody_convicted_to_probation

UNITS: person/ year

convicting_convict_in_comm_to_probation = convict_in_comm_being_sentenced *
fract_convicts_in_comm_convicted_to_probation

UNITS: person/ year

OUTFLOWS:

discharging_fr_probation = Probationers/ave_probation_duration

UNITS: person/ year

violating_probation = Probationers * fract_probation_violators_sent_to_jail_for_hearing

UNITS: person/ year

Reparoled_Prison_Parolees_wMI(t) = Reparoled_Prison_Parolees_wMI(t - dt) + (rerelease_to_prison_parole_wMI -
discharging_reparoled_prison_parolee_wMI) * dt

INIT Reparoled_Prison_Parolees_wMI = IF equilibrium_switch = 1 THEN
(Reprisoned_Prison_Parole_Violators_wMI*prison_parole_duration_wMI)/reprison_time_served ELSE 886

UNITS: person

INFLOWS:

rerelease_to_prison_parole_wMI = Reprisoned_Prison_Parole_Violators_wMI / reprison_time_served

UNITS: person/ year

OUTFLOWS:

discharging_reparoled_prison_parolee_wMI = Reparoled_Prison_Parolees_wMI / prison_parole_duration_wMI

UNITS: person/ year

Reparoled_Prison_Parolees_wo_MI(t) = Reparoled_Prison_Parolees_wo_MI(t - dt) + (rerelease_to_prison_parole_wo_MI - discharging_reparoled_prison_parolee_wo_MI) * dt

INIT Reparoled_Prison_Parolees_wo_MI = IF equilibrium_switch = 1 THEN Reprisoned_Prison_Parole_Violators_wo_MI* prisoner_parole_duration_wo_MI/reprison_time_served ELSE 3638

UNITS: person

INFLOWS:

rerelease_to_prison_parole_wo_MI = Reprisoned_Prison_Parole_Violators_wo_MI / reprison_time_served

UNITS: person/ year

OUTFLOWS:

discharging_reparoled_prison_parolee_wo_MI = Reparoled_Prison_Parolees_wo_MI / prisoner_parole_duration_wo_MI

UNITS: person/ year

Reprisoned_County_Parole_Violators_wMI(t) = Reprisoned_County_Parole_Violators_wMI(t - dt) + (county_parolee_wMI_returning_to_jail - rerelease_reprisoned_county_parolee_wMI) * dt

INIT Reprisoned_County_Parole_Violators_wMI = IF equilibrium_switch = 1 THEN 0.00000637 ELSE 0.001

UNITS: person

INFLOWS:

county_parolee_wMI_returning_to_jail = County_Parolee_wMI_Violated_Condition * county_parolee_wMI_RTJ_rate

UNITS: person/ year

OUTFLOWS:

rerelease_reprisoned_county_parolee_wMI = realignment_policy * (Reprisoned_County_Parole_Violators_wMI / county_parole_reprison_time)

UNITS: person/ year

Reprisoned_County_Parole_Violators_wo_MI(t) = Reprisoned_County_Parole_Violators_wo_MI(t - dt) + (county_parolee_wo_MI_returning_to_jail - rerelease_reprisoned_county_parolee_wo_MI) * dt

INIT Reprisoned_County_Parole_Violators_wo_MI = IF equilibrium_switch = 1 THEN 1 ELSE 0.001

UNITS: person

INFLOWS:

county_parolee_wo_MI_returning_to_jail = County_Parolee_wo_MI_Violated_Condition * county_parolee_wo_MI_RTJ_rate

UNITS: person/ year

OUTFLOWS:

$\text{rerelease_reprisoned_county_parolee_wo_MI} = \text{Reprisoned_County_Parole_Violators_wo_MI} / \text{county_parole_reprison_time}$

UNITS: person/ year

$\text{Reprisoned_Prison_Parole_Violators_wMI}(t) = \text{Reprisoned_Prison_Parole_Violators_wMI}(t - dt) + (\text{prison_parolee_wMI_returning_to_prison} - \text{rerelease_to_prison_parole_wMI}) * dt$

INIT $\text{Reprisoned_Prison_Parole_Violators_wMI} = \text{IF equilibrium_switch}=1 \text{ THEN Prison_Parolees_wMI_Violated_Condition} * \text{prison_parolee_wMI_RTP_rate} * \text{reprison_time_served} \text{ ELSE } 408$

UNITS: person

INFLOWS:

$\text{prison_parolee_wMI_returning_to_prison} = \text{Prison_Parolees_wMI_Violated_Condition} * \text{prison_parolee_wMI_RTP_rate}$

UNITS: person/ year

OUTFLOWS:

$\text{rerelease_to_prison_parole_wMI} = \text{Reprisoned_Prison_Parole_Violators_wMI} / \text{reprison_time_served}$

UNITS: person/ year

$\text{Reprisoned_Prison_Parole_Violators_wo_MI}(t) = \text{Reprisoned_Prison_Parole_Violators_wo_MI}(t - dt) + (\text{prison_parolee_wo_MI_returning_to_prison} - \text{rerelease_to_prison_parole_wo_MI}) * dt$

INIT $\text{Reprisoned_Prison_Parole_Violators_wo_MI} = \text{IF equilibrium_switch} = 1 \text{ THEN } (\text{Prison_Parolees_wo_MI_Violated_Condition} * \text{prison_parolee_wo_MI_RTP_rate} * \text{reprison_time_served}) \text{ ELSE } 1310$

UNITS: person

INFLOWS:

$\text{prison_parolee_wo_MI_returning_to_prison} = \text{Prison_Parolees_wo_MI_Violated_Condition} * \text{prison_parolee_wo_MI_RTP_rate}$

UNITS: person/ year

OUTFLOWS:

$\text{rerelease_to_prison_parole_wo_MI} = \text{Reprisoned_Prison_Parole_Violators_wo_MI} / \text{reprison_time_served}$

UNITS: person/ year

$\text{Suspects_in_Comm_with_Cases_Filed}(t) = \text{Suspects_in_Comm_with_Cases_Filed}(t - dt) + (\text{filing_case_for_suspect_in_comm} - \text{suspect_in_comm_waiting_for_trial} - \text{suspect_in_comm_conviction_wo_trial} - \text{complaints_against_recidivating_suspects_in_comm_dismissed_before_trial}) * dt$

INIT $\text{Suspects_in_Comm_with_Cases_Filed} = \text{IF equilibrium_switch} = 1 \text{ THEN } 3853.69847852 \text{ ELSE } 21000$

UNITS: person

DOCUMENT: 60,802 average daily population in jails in 1987

INFLOWS:

$\text{filing_case_for_suspect_in_comm} = \text{Pretrial_Suspects_in_Community} / \text{time_to_file_case_for_suspect_in_comm}$

UNITS: person/ year

OUTFLOWS:

$\text{suspect_in_comm_waiting_for_trial} = \text{Suspects_in_Comm_with_Cases_Filed} / \text{wait_time_for_trial_suspect_in_comm} * \text{fract_defendants_in_comm_wait_for_trial}$

UNITS: person/ year

$\text{suspect_in_comm_conviction_wo_trial} = \text{Suspects_in_Comm_with_Cases_Filed} / \text{wait_time_for_trial_suspect_in_comm} * \text{fract_suspects_in_comm_convicted_wo_trial}$

UNITS: person/ year

$\text{complaints_against_recidivating_suspects_in_comm_dismissed_before_trial} = (\text{Suspects_in_Comm_with_Cases_Filed} / \text{wait_time_for_trial_suspect_in_comm}) * \text{fract_complaints_on_suspect_in_comm_dismissed_after_filing}$

UNITS: person/ year

$\text{Suspects_in_Custody}(t) = \text{Suspects_in_Custody}(t - dt) + (\text{being_held_in_custody} - \text{filing_case_for_suspect_in_custody}) * dt$

INIT Suspects_in_Custody = IF equilibrium_switch = 1 THEN 170.209931929
ELSE 261

UNITS: person

INFLOWS:

$\text{being_held_in_custody} = (\text{Arrestees} / \text{time_for_arraignment}) * \text{fract_being_held_in_custody}$

UNITS: person/ year

OUTFLOWS:

$\text{filing_case_for_suspect_in_custody} = \text{Suspects_in_Custody} / \text{time_to_file_case_for_suspect_in_custody}$

UNITS: person/ year

$\text{Suspects_in_Custody_with_Cases_Filed}(t) = \text{Suspects_in_Custody_with_Cases_Filed}(t - dt) + (\text{filing_case_for_suspect_in_custody} - \text{suspect_in_custody_waiting_for_trial} - \text{suspect_in_custody_conviction_wo_trial} - \text{complaints_against_recidivating_suspects_in_custody_dismissed_before_trial}) * dt$

INIT Suspects_in_Custody_with_Cases_Filed = IF equilibrium_switch = 1 THEN 170.209931929 ELSE 256

UNITS: person

INFLOWS:

$\text{filing_case_for_suspect_in_custody} = \text{Suspects_in_Custody} / \text{time_to_file_case_for_suspect_in_custody}$

UNITS: person/ year

OUTFLOWS:

$\text{suspect_in_custody_waiting_for_trial} = (\text{Suspects_in_Custody_with_Cases_Filed} / \text{wait_time_for_trial_suspect_in_custody}) * \text{fract_defendants_in_custody_wait_for_trial}$

UNITS: person/ year

$\text{suspect_in_custody_conviction_wo_trial} = (\text{Suspects_in_Custody_with_Cases_Filed} / \text{wait_time_for_trial_suspect_in_custody}) * \text{fract_recidivating_suspects_in_custody_convicted_wo_trial}$

UNITS: person/ year

$\text{complaints_against_recidivating_suspects_in_custody_dismissed_before_trial} = (\text{Suspects_in_Custody_with_Cases_Filed} / \text{wait_time_for_trial_suspect_in_custody}) * \text{fract_complaints_on_recidivating_suspects_in_custody_dismissed_after_filing}$

UNITS: person/ year

$\text{Time_to_Recover_fr_MI_in_Prison}(t) = \text{Time_to_Recover_fr_MI_in_Prison}(t - dt) + (\text{chg_in_time_to_recover_fr_wMi_in_prison}) * dt$

INIT Time_to_Recover_fr_MI_in_Prison = IF equilibrium_switch = 1 THEN 6.71320256893 ELSE
ref_time_to_recover_fr_MI_in_prison

UNITS: year

INFLOWS:

chg_in_time_to_recover_fr_wMI_in_prison = (new_time_to_recover_fr_wMI_in_prison -
Time_to_Recover_fr_MI_in_Prison) / time_to_adj_MI_recovery_time_in_prison

UNITS: unitless

ADP_of_Reception_Center = New_Prisoners_at_Reception_Center_for_Medical_Screening / year_to_day_conversion

UNITS: person/day

ave_jail_time_served_at_current_release_wMI = IF equilibrium_switch = 1 THEN
ref_ave_jail_time_served_at_current_release_wMI * Jail_Capacity.effect_of_jail_utilization_on_jail_time *
Incarceration_Year_Served.effect_of_incar_time_on_jail_time_served_wMI ELSE
SMTH3(ref_ave_jail_time_served_at_current_release_wMI * Jail_Capacity.effect_of_jail_utilization_on_jail_time *
Incarceration_Year_Served.effect_of_incar_time_on_jail_time_served_wMI,
ref_ave_jail_time_served_at_current_release_wMI * Jail_Capacity.effect_of_jail_utilization_on_jail_time *
Incarceration_Year_Served.effect_of_incar_time_on_jail_time_served_wMI,
ref_ave_jail_time_served_at_current_release_wMI * Jail_Capacity.effect_of_jail_utilization_on_jail_time *
Incarceration_Year_Served.effect_of_incar_time_on_jail_time_served_wMI)

UNITS: year

ave_jail_time_served_at_current_release_wo_MI = IF equilibrium_switch = 1 THEN
ref_ave_jail_time_served_at_current_release_wo_MI * Jail_Capacity.effect_of_jail_utilization_on_jail_time *
Incarceration_Year_Served.effect_of_incar_time_on_jail_time_served_wo_MI ELSE
SMTH3(ref_ave_jail_time_served_at_current_release_wo_MI * Jail_Capacity.effect_of_jail_utilization_on_jail_time *
Incarceration_Year_Served.effect_of_incar_time_on_jail_time_served_wo_MI,
ref_ave_jail_time_served_at_current_release_wo_MI * Jail_Capacity.effect_of_jail_utilization_on_jail_time *
Incarceration_Year_Served.effect_of_incar_time_on_jail_time_served_wo_MI,
ref_ave_jail_time_served_at_current_release_wo_MI * Jail_Capacity.effect_of_jail_utilization_on_jail_time *
Incarceration_Year_Served.effect_of_incar_time_on_jail_time_served_wo_MI)

UNITS: year

ave_prison_time_served_at_current_release_wMI = IF equilibrium_switch = 1 THEN ref_ave_prison_time_served_wMI
ELSE SMTH3(ref_ave_prison_time_served_wMI *
Incarceration_Year_Served.effect_of_incar_time_on_prison_time_served_wMI , ref_ave_prison_time_served_wMI *
Incarceration_Year_Served.effect_of_incar_time_on_prison_time_served_wMI , ref_ave_prison_time_served_wMI)

UNITS: year

ave_prison_time_served_at_current_release_wo_MI = IF equilibrium_switch = 1 THEN
ref_ave_prison_time_served_wo_MI ELSE SMTH3(ref_ave_prison_time_served_wo_MI *
Incarceration_Year_Served.effect_of_incar_time_on_prison_time_served_wo_MI , ref_ave_prison_time_served_wo_MI *
Incarceration_Year_Served.effect_of_incar_time_on_prison_time_served_wo_MI , ref_ave_prison_time_served_wo_MI)

UNITS: year

ave_probation_duration = (1 - realignment_policy) * ref_ave_probation_duration + (realignment_policy *
(ref_ave_probation_duration - 2.5))

UNITS: year

DOCUMENT:

Calculated from BJS Probation and Parole 1987 inflow, outflow, and stock values. The residence time is about 2 years. But this value fails to generate a behavior that replicate the ref mode. Given that the max. probation length in CA is about 5 years (Watts, Alexis Lee, 2014), I calibrated the value to 3.85 years)

ave_time_served_in_alt_facility = SMTH3(ref_ave_time_served_in_alt_facility *
Mental_Profiles.effect_of_mental_func_per_prisoner_wSMI_in_alt_facility_on_time_served,
ref_ave_time_served_in_alt_facility *
Mental_Profiles.effect_of_mental_func_per_prisoner_wSMI_in_alt_facility_on_time_served,
ref_ave_time_served_in_alt_facility *
Mental_Profiles.effect_of_mental_func_per_prisoner_wSMI_in_alt_facility_on_time_served)

UNITS: year

ave_time_stay_in_reception_center = 1

UNITS: year

DOCUMENT: For the purpose to capture the number of newly admitted prisoners who get medical screening, this structure assumed that all the new prisoners stay in the reception center for one day for health screening.

ave_time_to_determine_sentence_for_convict_in_comm = 11/365 {0.003}

UNITS: year

ave_time_to_determine_sentence_for_convicts_in_custody = 270/365 {0.74}

UNITS: year

county_parole_duration = 1

UNITS: year

county_parole_reprison_time = 0.5

UNITS: year

county_parolee_wMI_RTJ_rate = ref_county_parolees_wMI_RTJ_rate *
Incarceration_Year_Served.effect_of_incar_time_per_county_parolee_wMI_on_RTJ

UNITS: 1/year

county_parolee_wo_MI_RTJ_rate = ref_county_parolees_wo_MI_RTJ_rate *
Incarceration_Year_Served.effect_of_incar_time_per_county_parolee_wo_MI_on_RTJ

UNITS: 1/year

delay_in_medical_screening_capacity_building = STEP(1, 2008) * 0

UNITS: unitless

DOCUMENT: When the first STEP function is turned on, the delay in medical MHC screening capacity building takes place in 1987. When the second STEP function is turned on, the delay in medical MHC screening capacity building takes place in 1990. When the third STEP function is turned on, the delay in medical MHC screening capacity building takes place in 2008.

dismissed_jail_exConv_wMI = recidivating_suspects_dismissed * fract_jail_exConv_wMI_recidivism

UNITS: person/year

dismissed_jail_exConv_wo_MI = recidivating_suspects_dismissed * fract_jail_exConv_wo_MI_recidivism

UNITS: person/year

dismissed_prison_exConv_wMI = recidivating_suspects_dismissed * fract_prison_exConv_wMI_recidivism

UNITS: person/year

dismissed_prison_exConv_wo_MI = recidivating_suspects_dismissed * fract_prison_exConv_wo_MI_recidivism

UNITS: person/year

effect_of_mental_func_of_recidivist_on_fract_prison_convicts_wMI = GRAPH(DELAY3
(relative_mental_func_of_recidivists, 1, relative_mental_func_of_recidivists))

(0.9000, 1.2000), (0.9100, 1.1959), (0.9200, 1.1927), (0.9300, 1.1865), (0.9400, 1.1803), (0.9500, 1.1741), (0.9600, 1.1658), (0.9700, 1.1585), (0.9800, 1.1492), (0.9900, 1.1295), (1.0000, 1.0974), (1.0100, 1.0549), (1.0200, 1.0000), (1.0300, 0.9181), (1.0400, 0.8684), (1.0500, 0.8446), (1.0600, 0.8321), (1.0700, 0.8238), (1.0800, 0.8114), (1.0900, 0.8041), (1.1000, 0.8000)

UNITS: unitless

effect_of_recidivism_on_case_dismissal_after_arraignment = GRAPH(fract_recidivism_as_total_arrest)

(0.03, 1.0000), (0.037, 0.9130), (0.044, 0.8741), (0.051, 0.8500), (0.058, 0.8298), (0.065, 0.8166), (0.072, 0.8096), (0.079, 0.8057), (0.086, 0.8041), (0.093, 0.8026), (0.1, 0.8010)

UNITS: unitless

effect_of_recidivism_on_fract_released_by_law_enforcement = GRAPH(fract_recidivism_as_total_arrest)

(0.03, 1.0000), (0.037, 0.9508), (0.044, 0.9212), (0.051, 0.9161), (0.058, 0.9114), (0.065, 0.9078), (0.072, 0.9078), (0.079, 0.9073), (0.086, 0.9073), (0.093, 0.9073), (0.1, 0.9073)

UNITS: unitless

effect_of_relative_jail_time_on_jail_exConv_wMI_recidivism = GRAPH(SMTH3
(relative_jail_time_served_by_offenders_wMI, 1, relative_jail_time_served_by_offenders_wMI))

(0.5000, 1.997), (0.5500, 1.965), (0.6000, 1.916), (0.6500, 1.816), (0.7000, 1.681), (0.7500, 1.439), (0.8000, 1.265), (0.8500, 1.161), (0.9000, 1.087), (0.9500, 1.039), (1.0000, 1.000)

UNITS: unitless

effect_of_relative_jail_time_on_jail_exConv_wo_MI_recidivism = GRAPH(SMTH3
(relative_jail_time_served_by_offenders_wo_MI, 1, relative_jail_time_served_by_offenders_wo_MI))

(0.5000, 1.997), (0.5500, 1.965), (0.6000, 1.916), (0.6500, 1.816), (0.7000, 1.681), (0.7500, 1.439), (0.8000, 1.265), (0.8500, 1.161), (0.9000, 1.087), (0.9500, 1.039), (1.0000, 1.000)

UNITS: unitless

effect_of_reoffense_by_exConv_wMI_on_ave_SC_per_convicted_offender =
GRAPH(fraction_of_reoffending_exConv_wMI_of_total_arrestees /
init_fract_of_reoffense_by_exConv_wMI_in_total_arrest)

(1.000, 1.0000), (1.300, 0.9991), (1.600, 0.9909), (1.900, 0.9808), (2.200, 0.9635), (2.500, 0.9288), (2.800, 0.8831), (3.100, 0.8457), (3.400, 0.8183), (3.700, 0.8082), (4.000, 0.8000)

UNITS: unitless

effect_of_war_on_drugs_policy_on_fract_release_after_case_filed = GRAPH(TIME)

(1987.00, 1.0004), (1989.00, 1.00058), (1991.00, 1.00067), (1993.00, 1), (1995.00, 1), (1997.00, 1), (1999.00, 1), (2001.00, 1), (2003.00, 1), (2005.00, 1), (2007.00, 1), (2009.00, 1), (2011.00, 1), (2013.00, 1), (2015.00, 1)

UNITS: unitless

DOCUMENT: This is an exogenous input. When the War on Drug policy was launched, the law enforcement agencies were more aggressive in prosecuting drug-related offenses. So the fraction of charge dismissal dropped drastically in the beginning of the simulation. The effect gradually wore off as federal resources was directed away after several years.

effect_of_war_on_drugs_policy_on_parole_violation_RTP = GRAPH(TIME)

(1987.00, 2.000), (1988.00, 1.85714285714), (1989.00, 1.71428571429), (1990.00, 1.57142857143), (1991.00, 1.42857142857), (1992.00, 1.28571428571), (1993.00, 1.14285714286), (1994.00, 1.000), (1995.00, 1.000), (1996.00, 1.000), (1997.00, 1.000), (1998.00, 1.000), (1999.00, 1.000), (2000.00, 1.000), (2001.00, 1.000), (2002.00, 1.000), (2003.00, 1.000), (2004.00, 1.000), (2005.00, 1.000), (2006.00, 1.000), (2007.00, 1.000), (2008.00, 1.000), (2009.00, 1.000), (2010.00, 1.000), (2011.00, 1.000), (2012.00, 1.000), (2013.00, 1.000), (2014.00, 1.000), (2015.00, 1.000)

UNITS: unitless

DOCUMENT: This is an exogeneous input. When the War on Drug policy was launched, the law enforcement agencies were more aggressive in prosecuting drug-related offenses. So the fraction of return-to-prison rate due to parole violation hiked drastically in the beginning of the simulation. The effect gradually wore off as federal resources was directed away after several years.

equilibrium_switch = STEP (1, 1900) * 0 + STEP (1, 1987) * 0

UNITS: unitless

DOCUMENT: 1 means the model is initialized in equilibrium.

exConv_and_parolees_wMI_recidivism = prison_parolee_wMI_committing_new_crimes +
hi_risk_prison_exConv_wMI_recidivism + lo_risk_prison_exConv_wMI_recidivism + hi_risk_jail_exConv_wMI_recidivism +
lo_risk_jail_exConv_wMI_recidivism + county_parolee_wo_MI_committing_new_crimes +
county_parolee_wo_MI_violated_condition_committing_new_crimes +
prison_parolee_wMI_violated_condition_committing_new_crimes

UNITS: person/year

exConv_and_parolees_wo_MI_recidivism = prison_parolee_wo_MI_committing_new_crimes +
hi_risk_prison_exConv_wo_MI_recidivism + lo_risk_prison_exConv_wo_MI_recidivism +
hi_risk_jail_exConv_wo_MI_recidivism + lo_risk_jail_exConv_wo_MI_recidivism +
county_parolee_wMI_committing_new_crimes + prison_parolee_wo_MI_violated_condition_committing_new_crimes +
county_parolee_wMI_violated_condition_committing_new_crimes

UNITS: person/year

exConv_mortality_rate = 0.006

UNITS: 1/year

DOCUMENT: Source : CA Dept of Public Health

<https://archive.cdph.ca.gov/data/statistics/Pages/DeathStatisticalDataTables.aspx>

Similar to the general population in CA.

exConv_recidivism_rate = total_exConv_and_parolees_recidivism / total_exConv

UNITS: 1/year

fract_being_held_in_custody = ref_fract_being_held_in_custody *
Incarceration_Year_Served.effect_of_incar_time_on_fract_suspects_held_in_custody

UNITS: unitless

fract_complaints_on_defendant_in_comm_dismissed_after_trial = IF equilibrium_switch = 1 THEN
ref_fract_complaints_on_defendant_in_comm_dismissed_after_trial * (1-fract_recidivism_as_total_arrest) ELSE
(ref_fract_complaints_on_defendant_in_comm_dismissed_after_trial *
effect_of_war_on_drugs_policy_on_fract_release_after_case_filed * (1-fract_recidivism_as_total_arrest))

UNITS: 1/year

fract_complaints_on_recidivating_defendants_in_custody_dismissed_after_trial = IF equilibrium_switch = 1 THEN
ref_fract_complaints_on_recidivating_defendants_in_custody_dismissed_after_trial ELSE
(ref_fract_complaints_on_recidivating_defendants_in_custody_dismissed_after_trial *
effect_of_war_on_drugs_policy_on_fract_release_after_case_filed * (1 - fract_recidivism_as_total_arrest))

UNITS: 1/year

fract_complaints_on_recidivating_suspects_in_custody_dismissed_after_filing = IF equilibrium_switch =1 THEN
ref_fract_complaints_on_defendant_in_custody_dismissed_after_filing ELSE
(ref_fract_complaints_on_defendant_in_custody_dismissed_after_filing *
effect_of_war_on_drugs_policy_on_fract_release_after_case_filed * (1 - fract_recidivism_as_total_arrest))

UNITS: unitless

fract_complaints_on_suspect_in_comm_dismissed_after_filing = IF equilibrium_switch = 1 THEN
(ref_fract_complaints_on_suspect_in_comm_dismissed_after_filing * (1-fract_recidivism_as_total_arrest)) ELSE
(ref_fract_complaints_on_suspect_in_comm_dismissed_after_filing *
effect_of_war_on_drugs_policy_on_fract_release_after_case_filed * (1-fract_recidivism_as_total_arrest))

UNITS: unitless

fract_convicts_in_comm_convicted_to_jail_sentence = MAX (1 - (fract_convicts_in_comm_convicted_to_prison_sentence
+ fract_convicts_in_comm_convicted_to_probation), 0)

UNITS: unitless

fract_convicts_in_comm_convicted_to_prison_sentence = IF realignment_policy = 1 THEN (MIN
((ref_fract_convicts_in_comm_convict_to_prison_sentence * prison_sentence_conviction_reduction_post_realignment *
Incarceration_Year_Served.effect_of_incar_time_on_fract_prison_sentence_conviction), 1)) ELSE MIN
(ref_fract_convicts_in_comm_convict_to_prison_sentence *
Incarceration_Year_Served.effect_of_incar_time_on_fract_prison_sentence_conviction, 1)

UNITS: unitless

fract_convicts_in_comm_convicted_to_probation = 0.13

UNITS: unitless

fract_convicts_in_custody_convicted_to_jail = MAX (1 - (fract_convicts_in_custody_convicted_to_probation +
fract_convicts_in_custody_convicted_to_prison_sentence), 0)

UNITS: unitless

fract_convicts_in_custody_convicted_to_prison_sentence = IF realignment_policy = 1 THEN (MIN
((ref_fract_convicts_in_custody_convict_to_prison_sentence * prison_sentence_conviction_reduction_post_realignment *
Incarceration_Year_Served.effect_of_incar_time_on_fract_prison_sentence_conviction), 1)) ELSE MIN
(ref_fract_convicts_in_custody_convict_to_prison_sentence *
Incarceration_Year_Served.effect_of_incar_time_on_fract_prison_sentence_conviction , 1)

UNITS: unitless

fract_convicts_in_custody_convicted_to_probation = 0.01

UNITS: unitless

fract_county_parolees_reoffend = 0.15

UNITS: 1/year

fract_county_parolees_wMI_violate_condition = ref_fract_county_parolee_wMI_violate_condition *
Social_Capital.effect_of_SC_on_county_parole_violation_wMI

UNITS: 1/year

fract_county_parolees_wo_MI_violate_condition = ref_fract_county_parolee_wo_MI_violate_condition *
Social_Capital.effect_of_SC_on_county_parole_violation_wo_MI

UNITS: 1/year

fract_defendants_in_comm_wait_for_trial = ref_fract_defendants_in_comm_wait_for_trial

UNITS: unitless

fract_defendants_in_custody_being_trialed = Defendants_in_Custody_Being_Trialed /
(Defendants_in_Custody_Being_Trialed + Defendants_in_Comm_Being_Trialed)

UNITS: unitless

fract_defendants_in_custody_wait_for_trial = 0.01

UNITS: unitless

fract_defendants_in_custody_with_cases_filed = Suspects_in_Custody_with_Cases_Filed /
(Suspects_in_Custody_with_Cases_Filed + Suspects_in_Comm_with_Cases_Filed)

UNITS: unitless

fract_first_time_arrestees_release_wo_charges = IF equilibrium_switch = 1 THEN
ref_fract_first_time_arrestees_release_wo_charges ELSE ref_fract_first_time_arrestees_release_wo_charges *
effect_of_war_on_drugs_policy_on_fract_release_after_case_filed

UNITS: unitless

fract_incoming_prison_convicts_wMI = ref_fract_prison_convicts_wMI *
effect_of_mental_func_of_recidivist_on_fract_prison_convicts_wMI *
Prison_HC_Resource_Allocation.effect_of_medical_screening_time_adequacy_on_MI_screening_effectiveness

UNITS: unitless

fract_incoming_prisoners_wSMI_in_comm_diverted = IF policy_alternative_facility_for_prisoners_wSMI = 1 THEN
ref_fract_incoming_prisoners_wSMI_diverted *
Mental_Profiles.effect_of_mental_func_of_preSentencing_convict_in_comm_on_fract_incoming_prisoner_wSMI_diverted
ELSE 0

UNITS: unitless

DOCUMENT: 1 means not diverting prisoners wMI away

fract_incoming_prisoners_wSMI_in_custody_diverted = IF policy_alternative_facility_for_prisoners_wSMI = 1 THEN
ref_fract_incoming_prisoners_wSMI_diverted *
Mental_Profiles.effect_of_mental_func_of_preSentencing_convict_in_custody_on_fract_incoming_prisoner_wSMI_diverte
d ELSE 0

UNITS: unitless

DOCUMENT: 1 means not diverting prisoners wMI away

fract_innocent_pop_arrested = GRAPH(TIME)

(1987.00, 0.07045), (1988.00, 0.0712203225806), (1989.00, 0.0700540092166), (1990.00, 0.0642725345622), (1991.00,
0.0586923041475), (1992.00, 0.0546694470046), (1993.00, 0.0518989861751), (1994.00, 0.0501361290323), (1995.00,
0.0488458064516), (1996.00, 0.0471905069124), (1997.00, 0.0457794930876), (1998.00, 0.0442452995392), (1999.00,
0.0430525806452), (2000.00, 0.0428453456221), (2001.00, 0.0433470967742), (2002.00, 0.0440490322581), (2003.00,
0.0444348387097), (2004.00, 0.0443615668203), (2005.00, 0.0437422119816), (2006.00, 0.0420219354839), (2007.00,
0.0390500460829), (2008.00, 0.0370306912442), (2009.00, 0.0360303686636), (2010.00, 0.0354570967742), (2011.00,
0.0351635483871), (2012.00, 0.0349731336406), (2013.00, 0.0347504608295), (2014.00, 0.0345720276498), (2015.00,
0.03453), (2016.00, 0.03453), (2017.00, 0.03453), (2018.00, 0.03453)

UNITS: 1/year

fract_jail_exConv_wMI_recidivism = (hi_risk_jail_exConv_wMI_recidivism + lo_risk_jail_exConv_wMI_recidivism +
county_parolee_wMI_committing_new_crimes + county_parolee_wMI_violated_condition_committing_new_crimes) /
total_exConv_and_parolees_recidivism

UNITS: unitless

fract_jail_exConv_wo_MI_recidivism = (hi_risk_jail_exConv_wo_MI_recidivism + lo_risk_jail_exConv_wo_MI_recidivism +
county_parolee_wo_MI_committing_new_crimes + county_parolee_wo_MI_violated_condition_committing_new_crimes)
/ total_exConv_and_parolees_recidivism

UNITS: unitless

fract_jail_offenders_devMI = ref_fract_jail_offenders_devMI *
Mental_Profiles.effect_of_mental_func_per_jail_offender_wo_MI_on_devMI

UNITS: 1/year

$\text{fract_jail_offenders_release_directly} = 1 - \text{fract_jail_offenders_serving_split_sentence}$

UNITS: unitless

$\text{fract_jail_offenders_serving_split_sentence} = 0.65$

UNITS: unitless

$\text{fract_jail_offenders_wMI} = 0.46$

UNITS: unitless

$\text{fract_jail_offenders_wo_MI} = 1 - \text{fract_jail_offenders_wMI}$

UNITS: unitless

$\text{fract_jail_recidivism_as_total_jail_conviction} = \text{total_jail_recidivism} / \text{total_jail_conviction_rate}$

UNITS: unitless

$\text{fract_of_reoffense_by_exConv_of_total_arrest} = (\text{exConv_and_parolees_wMI_recidivism} + \text{exConv_and_parolees_wo_MI_recidivism}) / (\text{first_time_arrest_rate} + \text{exConv_and_parolees_wMI_recidivism} + \text{exConv_and_parolees_wo_MI_recidivism})$

UNITS: unitless

$\text{fract_on_bails} = \text{MAX} ((1 - \text{fract_first_time_arrestees_release_wo_charges} - \text{fract_being_held_in_custody}), 0)$

UNITS: unitless

$\text{fract_parolees_not_realigned_wMI} = 1 - \text{fract_parolees_realigned_wMI}$

UNITS: unitless

$\text{fract_parolees_not_realigned_wo_MI} = 1 - \text{fract_parolees_realigned_wo_MI}$

UNITS: unitless

$\text{fract_parolees_realigned_wMI} = 0.7$

UNITS: unitless

DOCUMENT: "Public Safety Realignment--What is it.pdf" (CPOC, 2012)

Between Nov 2011 - 2012, 23,000 parolees were transferred to county supervision.

There were 119,941 prisoners being released to parole in 2010 (because the reported data for parolee was for Dec 2011, so it may not be accurate to use the Dec data after Realignment initiated in November)

$23000/119941 = 0.2$

But, under the Act, prisoners wMI will not be released to parole under county supervision. This only refers to prisoners who have severe MI that require treatment at the Dept of State Hospitals ("Felony Sentencing After Realignment.pdf"). So prisoners wMI who are do not have SMI will still be transferred to county parole supervision.

The Scarlett Carp Report published at the request of California state government in 1992 for the Coleman v. Wilson lawsuit discloses the prevalence of severe MI was about 10%.

Thus, the fraction of 0.2 will be reduced to 0.18 for prisoners wMI.

fract_parolees_realigned_wo_MI = 0.85

UNITS: unitless

fract_prison_convicts_wo_MI = 1 - fract_incoming_prison_convicts_wMI

UNITS: unitless

fract_prison_exConv_wMI_recidivism = (prison_parolee_wMI_violated_condition_committing_new_crimes +
prison_parolee_wMI_committing_new_crimes + hi_risk_prison_exConv_wMI_recidivism +
lo_risk_prison_exConv_wMI_recidivism) / total_exConv_and_parolees_recidivism

UNITS: unitless

fract_prison_exConv_wo_MI_recidivism = (prison_parolee_wo_MI_committing_new_crimes +
prison_parolee_wo_MI_violated_condition_committing_new_crimes + hi_risk_prison_exConv_wo_MI_recidivism +
lo_risk_prison_exConv_wo_MI_recidivism) / total_exConv_and_parolees_recidivism

UNITS: unitless

fract_prison_parolees_reoffend = 0.2

UNITS: 1/year

fract_prison_parolees_wMI_violate_condition = ref_fract_prison_parolees_wMI_violate_condition *
Social_Capital.effect_of_SC_on_prison_parole_violation_wMI

UNITS: 1/year

fract_prison_parolees_wo_MI_violate_condition = ref_fract_prison_parolees_wo_MI_violate_condition *
Social_Capital.effect_of_SC_on_prison_parole_violation_wo_MI

UNITS: 1/year

fract_prison_recidivism_as_total_prison_conviction = total_prison_recidivism / total_prison_conviction_rate

UNITS: unitless

fract_prisoners_devMI = IF equilibrium_switch = 1 THEN (1 - prisoners_devMI_switch) * zero_fract_develop_MI +
prisoners_devMI_switch * (ref_fract_prisoners_devMI *
Mental_Profiles.effect_of_mental_func_per_prisoner_wo_MI_on_devMI *
Prison_HC_Resource_Allocation.effect_of_MHC_adequacy_on_MI_screening_in_prison) ELSE ref_fract_prisoners_devMI *
Mental_Profiles.effect_of_mental_func_per_prisoner_wo_MI_on_devMI *
Prison_HC_Resource_Allocation.effect_of_MHC_adequacy_on_MI_screening_in_prison

UNITS: 1/year

fract_probation_violators_sent_to_jail_for_hearing = 0.15

UNITS: 1/year

fract_recidivating_suspects_in_custody_convicted_wo_trial = 1 -
fract_complaints_on_recidivating_suspects_in_custody_dismissed_after_filing -
fract_defendants_in_custody_wait_for_trial

UNITS: unitless

fract_recidivism_as_total_arrest = total_exConv_and_parolees_recidivism / (first_time_arrest_rate +
total_exConv_and_parolees_recidivism)

UNITS: unitless

fract_suspects_in_comm_convicted_wo_trial = 1 - fract_defendants_in_comm_wait_for_trial -
fract_complaints_on_suspect_in_comm_dismissed_after_filing

UNITS: unitless

fraction_of_reoffending_exConv_wMI_of_total_arrestees = exConv_and_parolees_wMI_recidivism /
(first_time_arrest_rate + exConv_and_parolees_wMI_recidivism + exConv_and_parolees_wo_MI_recidivism)

UNITS: unitless

hearing_duration_for_defendants_in_comm = 14/365 {0.04}

UNITS: year

hearing_duration_for_defendants_in_custody = 50/365 {0.16}

UNITS: year

hi_risk_jail_exConv_wMI_recidivism_rate = ref_hi_risk_jail_exConv_wMI_recidivism_rate *
Social_Capital.effect_of_SC_on_hi_risk_jail_exConv_wMI_recidivism

UNITS: 1/year

hi_risk_jail_exConv_wo_MI_recidivism_rate = ref_hi_risk_jail_exConv_wo_MI_recidivism_rate *
Social_Capital.effect_of_SC_on_hi_risk_jail_exConv_wo_MI_recidivism

UNITS: 1/year

hi_risk_prison_exConv_wMI_recidivism_rate = 0.08

UNITS: 1/year

hi_risk_prison_exConv_wo_MI_recidivism_rate = 0.03

UNITS: 1/year

incoming_prison_convicts_in_comm_wMI = convict_in_comm_being_sentenced *
fract_convicts_in_comm_convicted_to_prison_sentence * fract_incoming_prison_convicts_wMI

UNITS: person/year

incoming_prison_convicts_in_comm_wMI_entering_prison = incoming_prison_convicts_in_comm_wMI * (1 -
fract_incoming_prisoners_wSMI_in_custody_diverted)

UNITS: person/year

incoming_prison_convicts_in_custody_wMI = convict_in_custody_being_sentenced *
fract_convicts_in_custody_convicted_to_prison_sentence * fract_incoming_prison_convicts_wMI

UNITS: person/year

incoming_prison_convicts_in_custody_wMI_entering_prison = incoming_prison_convicts_in_custody_wMI * (1 -
fract_incoming_prisoners_wSMI_in_custody_diverted)

UNITS: person/year

init_ave_jail_time_served_at_current_release_wMI = INIT(ave_jail_time_served_at_current_release_wMI)

UNITS: year

init_ave_jail_time_served_at_current_release_wo_MI = INIT(ave_jail_time_served_at_current_release_wo_MI)

UNITS: year

init_fract_of_reoffense_by_exConv_wMI_in_total_arrest = INIT(fraction_of_reoffending_exConv_wMI_of_total_arrestees)

UNITS: unitless

lo_risk_jail_exConv_wMI_recidivism_rate = 0.05

UNITS: 1/year

lo_risk_jail_exConv_wo_MI_recidivism_rate = 0.05

UNITS: 1/year

lo_risk_prison_exConv_wMI_recidivism_rate = 0.02

UNITS: 1/year

lo_risk_prison_exConv_wo_MI_recidivism_rate = 0.008

UNITS: 1/year

MHC_screening_capacity_building_start_time_switch = STEP(1, 1900) * 0 + STEP(1, 2008) * 0

UNITS: unitless

DOCUMENT: When the first STEP function is turned on, MHC screening capacity building start time takes place in 1987. When the second STEP function is turned on, MHC screening capacity building start time takes place in 1990. When the third STEP function is turned on, MHC screening capacity building start time takes place in 2008.

MI_prevalence_in_prison = (Prisoners_wMI + Reprisoned_Prison_Parole_Violators_wMI) / (Prisoners_wo_MI + Prisoners_wMI + Reprisoned_Prison_Parole_Violators_wo_MI + Reprisoned_Prison_Parole_Violators_wMI)

UNITS: unitless

new_time_to_recover_fr_wMI_in_prison = (1-realignment_policy) * ref_time_to_recover_fr_MI_in_prison + realignment_policy * (Mental_Profiles.effect_of_mental_func_per_prisoner_wMI_on_recovery_time * ref_time_to_recover_fr_MI_in_prison)

UNITS: year

policy_alternative_facility_for_prisoners_wSMI = STEP(1, 2018) * 0

UNITS: unitless

policy_comm_svc_fund_distribution = STEP(1, 2018) * 0

UNITS: unitless

DOCUMENT: When STEP function is turned on, the community service budget is distributed based on the the expected costs for parolees wMI and parolees wo MI, not only on the fractions.

policy_jail_capacity_steady_state_error = STEP(1, 2018) * 0

UNITS: unitless

DOCUMENT: When the STEP function is one, the depreciation rate of jail capacity is included in the gap.

policy_prison_capacity_steady_state_error = STEP(1, 2018) * 0

UNITS: unitless

DOCUMENT: When the STEP function is one, the depreciation rate of prison capacity is included in the gap.

policy_reduce_comm_svc_capacity_adj_time = STEP(1, 2018) * 0

UNITS: unitless

prison_parole_duration_wMI = 2.5

UNITS: year

prison_parolee_wMI_recidivism_rate = (prison_parolee_wMI_violated_condition_committing_new_crimes + prison_parolee_wMI_committing_new_crimes) / (Prison_Parolees_wMI_Violated_Condition + Prison_Parolees_wMI)

UNITS: 1/year

prison_parolee_wMI_RTP_rate = IF equilibrium_switch=1 THEN ref_prison_parolee_wMI_RTP_rate *
Incarceration_Year_Served.effect_of_incar_time_per_prison_parolee_wMI_on_RTP ELSE
(ref_prison_parolee_wMI_RTP_rate * Incarceration_Year_Served.effect_of_incar_time_per_prison_parolee_wMI_on_RTP
* effect_of_war_on_drugs_policy_on_parole_violation_RTP)

UNITS: 1/year

prison_parolee_wo_MI_RTP_rate = IF equilibrium_switch = 1 THEN ref_prison_parolee_wo_MI_RTP_rate *
Incarceration_Year_Served.effect_of_incar_time_per_prison_parolee_wo_MI_on_RTP ELSE
(ref_prison_parolee_wo_MI_RTP_rate * effect_of_war_on_drugs_policy_on_parole_violation_RTP *
Incarceration_Year_Served.effect_of_incar_time_per_prison_parolee_wo_MI_on_RTP)

UNITS: 1/year

prison_sentence_conviction_reduction_post_realignment = 0.6

UNITS: unitless

prisoner_parole_duration_wo_MI = 2

UNITS: year

prisoners_devMI_switch = STEP(1, 1900) * 0 + STEP(1, 1987) * 0

UNITS: unitless

DOCUMENT: When the first STEP function is turned on, prisoners develop MI.

realignment_fund_constant_switch = STEP (1, 1900) * 1 + STEP (1, 1987) * 0

UNITS: unitless

realignment_policy = STEP (1, 1900) * 0 + STEP (1, 2012) * 0

UNITS: unitless

DOCUMENT: When the first STEP function alone is turned on, the Realignment Poilcy starts in 1990; if the second STEP
function alone is turned on, the Realignment Poilcy starts in 2010.

recidivating_suspects_dismissed = complaints_against_recidivating_suspects_in_custody_dismissed_before_trial +
complaints_against_recidivating_defendant_in_custody_dismissed_after_trial +
complaints_against_recidivating_suspects_in_comm_dismissed_before_trial
+complaints_against_recidivating_defendant_in_comm_dismissed_after_trial

UNITS: person/year

ref_arrest_rate = GRAPH(TIME)

(1987.00, 1635731.0), (1987.89285714, 1673864.0), (1988.78571429, 1730927.0), (1989.67857143, 1736828.0),
(1990.57142857, 1546002.0), (1991.46428571, 1471058.0), (1992.35714286, 1412431.0), (1993.25, 1394894.0),
(1994.14285714, 1394732.0), (1995.03571429, 1348340.0), (1995.92857143, 1343861.0), (1996.82142857, 1301765.0),
(1997.71428571, 1238334.0), (1998.60714286, 1181803.0), (1999.50, 1180194.0), (2000.39285714, 1196599.0),
(2001.28571429, 1247763.0), (2002.17857143, 1280937.0), (2003.07142857, 1289431.0), (2003.96428571, 1306515.0),
(2004.85714286, 1315044.0), (2005.75, 1314561.0), (2006.64285714, 1262156.0), (2007.53571429, 1208558.0),
(2008.42857143, 1117633.0), (2009.32142857, 1117776.0), (2010.21428571, 1108599.0), (2011.10714286, 1126022.0),
(2012.00, 1086889.0)

UNITS: person/year

ref_ave_jail_time_served_at_current_release_wMI = 0.25

UNITS: year

ref_ave_jail_time_served_at_current_release_wo_MI = 0.25

UNITS: year

ref_ave_prison_time_served_wMI = 2.5

UNITS: year

ref_ave_prison_time_served_wo_MI = 1.7

UNITS: year

ref_ave_probation_duration = 6

UNITS: year

ref_ave_time_served_in_alt_facility = 3 + STEP(3, 2018)* 0

UNITS: year

ref_complaint_dismissed_after_arraignment = GRAPH(TIME)

(1987.00, 116896.0), (1987.89285714, 112319.0), (1988.78571429, 107524.0), (1989.67857143, 89391.0), (1990.57142857, 107980.0), (1991.46428571, 84691.0), (1992.35714286, 104133.0), (1993.25, 109612.0), (1994.14285714, 106815.0), (1995.03571429, 104309.0), (1995.92857143, 104960.0), (1996.82142857, 96509.0), (1997.71428571, 85837.0), (1998.60714286, 81426.0), (1999.50, 88365.0), (2000.39285714, 92048.0), (2001.28571429, 99049.0), (2002.17857143, 102050.0), (2003.07142857, 92786.0), (2003.96428571, 98069.0), (2004.85714286, 101633.0), (2005.75, 97530.0), (2006.64285714, 98211.0), (2007.53571429, 96827.0), (2008.42857143, 96410.0), (2009.32142857, 93052.0), (2010.21428571, 92113.0), (2011.10714286, 98094.0), (2012.00, 80178.0)

UNITS: person/year

ref_complaint_dismissed_before_arraignment = GRAPH(TIME)

(1987.00, 1365235.0), (1987.89285714, 1407874.0), (1988.78571429, 1455776.0), (1989.67857143, 1478094.0), (1990.57142857, 1242295.0), (1991.46428571, 1186248.0), (1992.35714286, 1066962.0), (1993.25, 1052573.0), (1994.14285714, 1049607.0), (1995.03571429, 1020172.0), (1995.92857143, 1017093.0), (1996.82142857, 987282.0), (1997.71428571, 959619.0), (1998.60714286, 914291.0), (1999.50, 908202.0), (2000.39285714, 909100.0), (2001.28571429, 931386.0), (2002.17857143, 935522.0), (2003.07142857, 969844.0), (2003.96428571, 986697.0), (2004.85714286, 982397.0), (2005.75, 989320.0), (2006.64285714, 955986.0), (2007.53571429, 909911.0), (2008.42857143, 825402.0), (2009.32142857, 822311.0), (2010.21428571, 803096.0), (2011.10714286, 810240.0), (2012.00, 844429.0)

UNITS: person/year

ref_convicted_jail_inmates = GRAPH(TIME)

(1987.00, 32274.0), (1987.89285714, 32376.0), (1988.78571429, 33271.0), (1989.67857143, 33215.0), (1990.57142857, 32859.0), (1991.46428571, 32743.0), (1992.35714286, 31677.0), (1993.25, 30142.0), (1994.14285714, 28801.0), (1995.03571429, 29468.0), (1995.92857143, 32347.0), (1996.82142857, 33841.0), (1997.71428571, 31802.0), (1998.60714286, 30109.0), (1999.50, 28637.0), (2000.39285714, 28180.0), (2001.28571429, 26235.0), (2002.17857143, 26262.0), (2003.07142857, 26454.0), (2003.96428571, 26519.0), (2004.85714286, 26556.0), (2005.75, 26165.0), (2006.64285714, 26277.0), (2007.53571429, 21386.0), (2008.42857143, 21303.0), (2009.32142857, 28844.0), (2010.21428571, 30522.0), (2011.10714286, 30746.0), (2012.00, 30746.0)

UNITS: person

ref_conviction_rate = GRAPH(TIME)

(1987.00, 153600.0), (1988.00, 153671.0), (1989.00, 167627.0), (1990.00, 169343.0), (1991.00, 195727.0), (1992.00, 200119.0), (1993.00, 241336.0), (1994.00, 235709.0), (1995.00, 238310.0), (1996.00, 223859.0), (1997.00, 221808.0), (1998.00, 192814.0), (1999.00, 192878.0), (2000.00, 186086.0), (2001.00, 183627.0), (2002.00, 195451.0), (2003.00, 195451.0), (2004.00, 243365.0), (2005.00, 226801.0), (2006.00, 221749.0), (2007.00, 231014.0), (2008.00, 227711.0), (2009.00, 207959.0), (2010.00, 201820.0), (2011.00, 195821.0), (2012.00, 202413.0)

UNITS: person/year

ref_conviction_to_jail = GRAPH(TIME)

(1987.00, 105375.0), (1988.00, 105424.0), (1989.00, 114998.0), (1990.00, 116175.0), (1991.00, 134276.0), (1992.00, 137289.0), (1993.00, 165565.0), (1994.00, 168807.0), (1995.00, 168905.0), (1996.00, 154297.0), (1997.00, 152823.0), (1998.00, 149467.0), (1999.00, 131458.0), (2000.00, 130095.0), (2001.00, 126258.0), (2002.00, 127933.0), (2003.00, 140738.0), (2004.00, 154738.0), (2005.00, 141623.0), (2006.00, 138664.0), (2007.00, 143650.0), (2008.00, 137907.0), (2009.00, 128050.0), (2010.00, 125406.0), (2011.00, 123153.0), (2012.00, 136568.0)

UNITS: person/year

ref_conviction_to_probation = GRAPH(TIME)

(1987.00, 15209.0), (1987.89285714, 15216.0), (1988.78571429, 16598.0), (1989.67857143, 16768.0), (1990.57142857, 19381.0), (1991.46428571, 19816.0), (1992.35714286, 23897.0), (1993.25, 22625.0), (1994.14285714, 23120.0), (1995.03571429, 21278.0), (1995.92857143, 19003.0), (1996.82142857, 18885.0), (1997.71428571, 15788.0), (1998.60714286, 16874.0), (1999.50, 21503.0), (2000.39285714, 31499.0), (2001.28571429, 33471.0), (2002.17857143, 35579.0), (2003.07142857, 34128.0), (2003.96428571, 33636.0), (2004.85714286, 34487.0), (2005.75, 35684.0), (2006.64285714, 30082.0), (2007.53571429, 27605.0), (2008.42857143, 27654.0), (2009.32142857, 29518.0), (2010.21428571, 32998.0), (2011.10714286, 31812.0), (2012.00, 15616.0)

UNITS: person/year

ref_county_parolees_wMI_RTJ_rate = 0.05

UNITS: 1/year

ref_county_parolees_wo_MI_RTJ_rate = 0.01

UNITS: 1/year

ref_disposition_rate = GRAPH(TIME)

(1987.00, 270496.0), (1988.00, 265990.0), (1989.00, 275151.0), (1990.00, 258734.0), (1991.00, 303707.0), (1992.00, 284810.0), (1993.00, 345469.0), (1994.00, 342321.0), (1995.00, 345125.0), (1996.00, 328168.0), (1997.00, 326768.0), (1998.00, 314483.0), (1999.00, 278715.0), (2000.00, 267512.0), (2001.00, 271992.0), (2002.00, 287499.0), (2003.00, 316377.0), (2004.00, 345415.0), (2005.00, 319587.0), (2006.00, 319818.0), (2007.00, 332647.0), (2008.00, 325241.0), (2009.00, 306170.0), (2010.00, 298647.0), (2011.00, 292231.0), (2012.00, 295465.0), (2013.00, 305503.0), (2014.00, 315782.0), (2015.00, 242460.0)

UNITS: person/year

ref_fract_being_held_in_custody = 0.018

UNITS: unitless

ref_fract_complaints_on_defendant_in_comm_dismissed_after_trial = 0.5

UNITS: 1/year

ref_fract_complaints_on_defendant_in_custody_dismissed_after_filling = 0.48

UNITS: unitless

ref_fract_complaints_on_recidivating_defendants_in_custody_dismissed_after_trial = 0.25

UNITS: 1/year

ref_fract_complaints_on_suspect_in_comm_dismissed_after_filling = 0.4

UNITS: unitless

ref_fract_convicts_in_comm_convict_to_prison_sentence = 0.29

UNITS: unitless

DOCUMENT: Crime in CA 1996

Adult Felony Arrest Disposition - 1, 348, 340
 Misdemeanor Adult Arrest - 1,051,453 (64.8%)
 Felony - 533,989 (32.9%)
 Status Offense Arrest - 37,093 (2.3%)
 ref_fract_convicts_in_custody_convict_to_prison_sentence = 0.38
 UNITS: unitless
 DOCUMENT: Crime in CA 1996

Adult Felony Arrest Disposition - 1, 348, 340
 Misdemeanor Adult Arrest - 1,051,453 (64.8%)
 Felony - 533,989 (32.9%)
 Status Offense Arrest - 37,093 (2.3%)
 ref_fract_county_parolee_wMI_violate_condition = 0.3
 UNITS: 1/year
 ref_fract_county_parolee_wo_MI_violate_condition = 0.25
 UNITS: 1/year
 ref_fract_defendants_in_comm_wait_for_trial = 0.1
 UNITS: unitless
 ref_fract_first_time_arrestees_release_wo_charges = 0.83
 UNITS: unitless
 ref_fract_incoming_prisoners_wSMI_diverted = 0.05 * STEP(1, 2018)
 UNITS: unitless
 ref_fract_jail_offenders_devMI = 0.01
 UNITS: 1/year
 ref_fract_prison_convicts_wMI = 0.32
 UNITS: unitless
 ref_fract_prison_parolees_wMI_violate_condition = 0.3
 UNITS: 1/year
 ref_fract_prison_parolees_wo_MI_violate_condition = 0.25
 UNITS: 1/year
 ref_fract_prisoners_devMI = 0.02
 UNITS: 1/year
 ref_fract_striker_pop = GRAPH(TIME)

(1987.00, 0.000), (1988.00, 0.000), (1989.00, 0.000), (1990.00, 0.000), (1991.00, 0.000), (1992.00, 0.000), (1993.00, 0.000),
 (1994.00, 0.024268849), (1995.00, 0.117900582), (1996.00, 0.186014247), (1997.00, 0.213992445), (1998.00,

0.274066046), (1999.00, 0.312879248), (2000.00, 0.278439383), (2001.00, 0.248663222), (2002.00, 0.249432661), (2003.00, 0.246751786), (2004.00, 0.247000345), (2005.00, 0.244992157), (2006.00, 0.241375479), (2007.00, 0.245813471), (2008.00, 0.241671568), (2009.00, 0.244521826), (2010.00, 0.253064701), (2011.00, 0.301333021), (2012.00, 0.340687052), (2013.00, 0.354699741), (2014.00, 0.358355239), (2015.00, 0.335074806), (2016.00, 0.335421674)

UNITS: unitless

ref_hi_risk_jail_exConv_wMI_recidivism_rate = 0.25

UNITS: 1/year

ref_hi_risk_jail_exConv_wo_MI_recidivism_rate = 0.2

UNITS: 1/year

ref_jail_ADP = GRAPH(TIME)

(1987.00, 60802.0), (1988.00, 64335.0), (1989.00, 68535.0), (1990.00, 70845.0), (1991.00, 68923.0), (1992.00, 70853.0), (1993.00, 67576.0), (1994.00, 69233.0), (1995.00, 70938.0), (1996.00, 72007.0), (1997.00, 76938.0), (1998.00, 79143.0), (1999.00, 76311.0), (2000.00, 75044.0), (2001.00, 73824.0), (2002.00, 75156.0), (2003.00, 75340.0), (2004.00, 76939.0), (2005.00, 79639.0), (2006.00, 81104.0), (2007.00, 83184.0), (2008.00, 82397.0), (2009.00, 80866.0), (2010.00, 73445.0), (2011.00, 71011.0), (2012.00, 77818.0), (2013.00, 81818.0), (2014.00, 81551.0), (2015.00, 73891.0)

UNITS: person

ref_jail_inmate = GRAPH(TIME)

(1987.00, 289495.0), (1988.00, 343569.0), (1989.00, 393303.0), (1990.00, 403019.0), (1991.00, 424129.0), (1992.00, 399600.0), (1993.00, 375071.0), (1994.00, 350542.0), (1995.00, 326014.0), (1996.00, 301485.0), (1997.00, 276956.0), (1998.00, 252427.0), (1999.00, 227898.0), (2000.00, 203369.0), (2001.00, 178840.0), (2002.00, 154312.0), (2003.00, 129783.0), (2004.00, 105254.0), (2005.00, 80725.0), (2006.00, 81612.0), (2007.00, 82662.0), (2008.00, 82397.0), (2009.00, 78416.0), (2010.00, 72306.0), (2011.00, 72132.0), (2012.00, 80136.0), (2013.00, 82248.0), (2014.00, 77673.0), (2015.00, 73891.0)

UNITS: person

ref_MI_prev = GRAPH(TIME)

(1987.00, 0.14), (1989.33333333, 0.21), (1991.66666667, 0.09), (1994.00, 0.105), (1996.33333333, 0.145), (1998.66666667, 0.19), (2001.00, 0.201), (2003.33333333, 0.22), (2005.66666667, 0.263), (2008.00, 0.251), (2010.33333333, 0.251), (2012.66666667, 0.247), (2015.00, 0.285)

UNITS: unitless

ref_parolees = GRAPH(TIME)

(1987.00, 42298.0), (1988.00, 50832.0), (1989.00, 59313.0), (1990.00, 70479.0), (1991.00, 82603.0), (1992.00, 86389.0), (1993.00, 85886.0), (1994.00, 89609.0), (1995.00, 96109.0), (1996.00, 100935.0), (1997.00, 105449.0), (1998.00, 111875.0), (1999.00, 117612.0), (2000.00, 121414.0), (2001.00, 121820.0), (2002.00, 117138.0), (2003.00, 114136.0), (2004.00, 113768.0), (2005.00, 115001.0), (2006.00, 121808.0), (2007.00, 126906.0), (2008.00, 123597.0), (2009.00, 109026.0), (2010.00, 91701.0), (2011.00, 114842.0), (2012.00, 65931.0), (2013.00, 55449.0), (2014.00, 48101.0), (2015.00, 49743.0), (2016.00, 48979.0)

UNITS: person

ref_prison_admission = GRAPH(TIME)

(1987.00, 32905), (1988.00, 37989), (1989.00, 45266), (1990.00, 53342), (1991.00, 54262), (1992.00, 58097), (1993.00, 62299), (1994.00, 58589), (1995.00, 62913), (1996.00, 63922), (1997.00, 64318), (1998.00, 63883), (1999.00, 60007), (2000.00, 56287), (2001.00, 52460), (2002.00, 52990), (2003.00, 59138), (2004.00, 64621), (2005.00, 68330), (2006.00, 69389), (2007.00, 67778), (2008.00, 66336), (2009.00, 63633), (2010.00, 58743), (2011.00, 111572), (2012.00, 49504), (2013.00, 49504), (2014.00, 49504), (2015.00, 49504)

UNITS: person

ref_prison_parolee_wMI_RTP_rate = 0.23

UNITS: 1/year

ref_prison_parolee_wo_MI_RTP_rate = 0.18

UNITS: 1/year

ref_prison_recidivism = GRAPH(TIME)

(1987.00, 6390.0), (1988.00, 8410.0), (1989.00, 11040.0), (1990.00, 14070.0), (1991.00, 16010.0), (1992.00, 17939.0), (1993.00, 19150.0), (1994.00, 17009.0), (1995.00, 17454.0), (1996.00, 17435.0), (1997.00, 17495.0), (1998.00, 17294.0), (1999.00, 17071.0), (2000.00, 16011.0), (2001.00, 14528.0), (2002.00, 14328.0), (2003.00, 15716.0), (2004.00, 17823.0), (2005.00, 19721.0), (2006.00, 20750.0), (2007.00, 20791.0), (2008.00, 19950.0), (2009.00, 18627.0), (2010.00, 17193.0), (2011.00, 57266.0), (2012.00, 57266.0)

UNITS: person/year

ref_prison_time_served = GRAPH(TIME)

(1987.00, 1.42), (1988.00, 1.5), (1989.00, 1.42), (1990.00, 1.33), (1991.00, 1.33), (1992.00, 1.33), (1993.00, 1.33), (1994.00, 1.4), (1995.00, 1.65), (1996.00, 1.82), (1997.00, 1.9), (1998.00, 1.93), (1999.00, 1.96), (2000.00, 2.03), (2001.00, 2.09), (2002.00, 2.21), (2003.00, 2.18), (2004.00, 2.07), (2005.00, 2.01), (2006.00, 1.97), (2007.00, 1.99), (2008.00, 2.08), (2009.00, 2.15), (2010.00, 2.24), (2011.00, 2.51), (2012.00, 4.62)

UNITS: year

ref_prisoners = GRAPH(TIME)

(1987.00, 66975.0), (1988.00, 76171.0), (1989.00, 87297.0), (1990.00, 97309.0), (1991.00, 101808.0), (1992.00, 109496.0), (1993.00, 119951.0), (1994.00, 125605.0), (1995.00, 135133.0), (1996.00, 145565.0), (1997.00, 155276.0), (1998.00, 159563.0), (1999.00, 160687.0), (2000.00, 160655.0), (2001.00, 157142.0), (2002.00, 159695.0), (2003.00, 161785.0), (2004.00, 163939.0), (2005.00, 168035.0), (2006.00, 172528.0), (2007.00, 171444.0), (2008.00, 171085.0), (2009.00, 168830.0), (2010.00, 162821.0), (2011.00, 147578.0), (2012.00, 132935.0), (2013.00, 134339.0), (2014.00, 135484.0), (2015.00, 128900.0)

UNITS: person

ref_probationers = GRAPH(TIME)

(1987.00, 242529.0), (1988.00, 265643.0), (1989.00, 285018.0), (1990.00, 305700.0), (1991.00, 315421.0), (1992.00, 302754.0), (1993.00, 280749.0), (1994.00, 285105.0), (1995.00, 286986.0), (1996.00, 289503.0), (1997.00, 302236.0), (1998.00, 330945.0), (1999.00, 338785.0), (2000.00, 333288.0), (2001.00, 328540.0), (2002.00, 336740.0), (2003.00, 352449.0), (2004.00, 341227.0), (2005.00, 344442.0), (2006.00, 346495.0), (2007.00, 347199.0), (2008.00, 341584.0), (2009.00, 331270.0), (2010.00, 311692.0), (2011.00, 297917.0), (2012.00, 294993.0), (2013.00, 296964.0), (2014.00, 285681.0), (2015.00, 263531.0)

UNITS: person

"ref_PV-RTC_stock" = GRAPH(TIME)

(1987.00, 9705.0), (1987.89285714, 11590.0), (1988.78571429, 12946.0), (1989.67857143, 13113.0), (1990.57142857, 12019.0), (1991.46428571, 11285.0), (1992.35714286, 12563.0), (1993.25, 16820.0), (1994.14285714, 19333.0), (1995.03571429, 22266.0), (1995.92857143, 26754.0), (1996.82142857, 31187.0), (1997.71428571, 26435.0), (1998.60714286, 26802.0), (1999.50, 25797.0), (2000.39285714, 26364.0), (2001.28571429, 23239.0), (2002.17857143, 19004.0), (2003.07142857, 18546.0), (2003.96428571, 20222.0), (2004.85714286, 19254.0), (2005.75, 18610.0), (2006.64285714, 15703.0), (2007.53571429, 13160.0), (2008.42857143, 5119.0), (2009.32142857, 163.0), (2010.21428571, 131.0), (2011.10714286, 79.0), (2012.00, 27.0)

UNITS: person/year

ref_release_wo_trial = GRAPH(TIME)

(1987.00, 1482131.0), (1987.89285714, 1520193.0), (1988.78571429, 1563300.0), (1989.67857143, 1567485.0), (1990.57142857, 1350275.0), (1991.46428571, 1270939.0), (1992.35714286, 1171095.0), (1993.25, 1159185.0)

(1994.14285714, 1156422.0), (1995.03571429, 1124481.0), (1995.92857143, 1122053.0), (1996.82142857, 1108951.0), (1997.71428571, 1045456.0), (1998.60714286, 995717.0), (1999.50, 996567.0), (2000.39285714, 1001148.0), (2001.28571429, 1052312.0), (2002.17857143, 1037572.0), (2003.07142857, 1062630.0), (2003.96428571, 1084766.0), (2004.85714286, 1084030.0), (2005.75, 1086850.0), (2006.64285714, 1054197.0), (2007.53571429, 1006738.0), (2008.42857143, 921812.0), (2009.32142857, 915363.0), (2010.21428571, 895209.0), (2011.10714286, 908334.0), (2012.00, 924607.0)

UNITS: person/year

ref_suspects_in_custody = GRAPH(TIME)

(1987.00, 28528.0), (1988.00, 31959.0), (1989.00, 35264.0), (1990.00, 37630.0), (1991.00, 36064.0), (1992.00, 38110.0), (1993.00, 35899.0), (1994.00, 39122.0), (1995.00, 42137.0), (1996.00, 42539.0), (1997.00, 44593.0), (1998.00, 45303.0), (1999.00, 44509.0), (2000.00, 44940.0), (2001.00, 45187.0), (2002.00, 46975.0), (2003.00, 49105.0), (2004.00, 50677.0), (2005.00, 53186.0), (2006.00, 54585.0), (2007.00, 56628.0), (2008.00, 56232.0), (2009.00, 54589.0), (2010.00, 52059.0), (2011.00, 49708.0), (2012.00, 49705.0)

UNITS: person

ref_time_to_recover_fr_MI_in_prison = 10

UNITS: year

relative_fract_of_reoffense_by_exConv_wMI_of_total_arrest = fraction_of_reoffending_exConv_wMI_of_total_arrestees /
init_fract_of_reoffense_by_exConv_wMI_in_total_arrest

UNITS: unitless

relative_jail_time_served_by_offenders_wMI = ave_jail_time_served_at_current_release_wMI /
init_ave_jail_time_served_at_current_release_wMI

UNITS: unitless

relative_jail_time_served_by_offenders_wo_MI = ave_jail_time_served_at_current_release_wo_MI /
init_ave_jail_time_served_at_current_release_wo_MI

UNITS: unitless

relative_mental_func_of_recidivists = Mental_Profiles.ave_mental_func_per_recidivist /
Mental_Profiles.init_mental_func_per_prisoner_wo_MI

UNITS: unitless

reprison_time_served = 0.5

UNITS: year

time_for_arraignment = 0.013 {w/in 48 hours workdays, so use 5 days here}

UNITS: year

time_for_jail_exConv_wMI_to_become_lo_risk = 2

UNITS: year

time_for_jail_exConv_wMI_to_cease_criminal_behavior = 3.5

UNITS: year

time_for_jail_exConv_wo_MI_to_become_lo_risk = 1.5

UNITS: year

time_for_jail_exConv_wo_MI_to_cease_criminal_behavior = 3.5

UNITS: year

time_for_prison_exConv_wMI_to_become_lo_risk = 2.5

UNITS: year

time_for_prison_exConv_wMI_to_cease_criminal_behavior = 7

UNITS: year

time_for_prison_exConv_wo_MI_to_become_lo_risk = 2

UNITS: year

time_for_prison_exConv_wo_MI_to_cease_criminal_behavior = 7

UNITS: year

time_to_adj_MI_recovery_time_in_prison = 5

UNITS: year

time_to_file_case_for_suspect_in_comm = 7/365 {0.02}

UNITS: year

time_to_file_case_for_suspect_in_custody = 10/365 {0.0274}

UNITS: year

total_complaints_dropped_before_trial = first_time_arrestee_release_wo_charges

UNITS: person/year

total_complaints_dismissed_after_arraignment =
complaints_against_recidivating_suspects_in_custody_dismissed_before_trial +
complaints_against_recidivating_suspects_in_comm_dismissed_before_trial +
complaints_against_recidivating_defendant_in_custody_dismissed_after_trial +
complaints_against_recidivating_defendant_in_comm_dismissed_after_trial

UNITS: person/year

total_complaints_dropped_after_trial = complaints_against_recidivating_suspects_in_comm_dismissed_before_trial +
complaints_against_recidivating_suspects_in_custody_dismissed_before_trial +
complaints_against_recidivating_defendant_in_custody_dismissed_after_trial +
complaints_against_recidivating_defendant_in_comm_dismissed_after_trial

UNITS: person/year

total_convicted_jail_offenders = Jail_Offenders_wMI + Jail_Offenders_wo_MI

UNITS: person

total_conviction_rate = convicting_convict_in_custody_to_probation + convicting_convict_in_comm_to_probation +
convicting_convict_in_custody_to_jail_wo_MI + convicting_convict_in_custody_to_jail_wMI +
convicting_convict_in_custody_to_prison_wMI + convicting_convict_in_custody_to_prison_wo_MI +
convicting_convict_in_comm_to_prison_wo_MI + convicting_convict_in_comm_to_prison_wMI +
convicting_convict_in_comm_to_jail_wo_MI + convicting_convict_in_comm_to_jail_wMI

UNITS: person/year

total_conviction_rate_2 = convict_in_custody_being_sentenced + convict_in_comm_being_sentenced

UNITS: person/year

total_county_parolee_wo_MI = County_Parolees_wo_MI + County_Parolee_wo_MI_Violated_Condition

UNITS: person

total_county_parolees = County_Parolees_wMI + County_Parolees_wo_MI + County_Parolee_wo_MI_Violated_Condition + County_Parolee_wMI_Violated_Condition

UNITS: person

total_county_parolees_wMI = County_Parolees_wMI + County_Parolee_wMI_Violated_Condition

UNITS: person

total_desisting_exConv_wMI = Desisting_Prison_ExConvicts_wMI + Desisting_Jail_ExConvicts_wMI

UNITS: person

total_desisting_exConv_wo_MI = Desisting_Prison_ExConvicts_wo_MI + Desisting_Jail_ExConvicts_wo_MI

UNITS: person

total_disposition_rate = convict_in_custody_being_sentenced + complaints_against_recidivating_defendant_in_custody_dismissed_after_trial + suspect_in_cusotdy_conviction_wo_trial + complaints_against_recidivating_suspects_in_custody_dismissed_before_trial + convict_in_comm_being_sentenced + complaints_against_recidivating_defendant_in_comm_dismissed_after_trial + suspect_in_comm_conviction_wo_trial + complaints_against_recidivating_suspects_in_comm_dismissed_before_trial

UNITS: person/year

total_exConv = total_exConv_wMI + total_exConv_wo_MI

UNITS: person

total_exConv_and_parolees_recidivism = exConv_and_parolees_wo_MI_recidivism + exConv_and_parolees_wMI_recidivism

UNITS: person/year

total_exConv_wMI = HI_Risk_Prison_ExConvicts_wMI + Lo_Risk_Prison_ExConvicts_wMI + HI_Risk_Jail_ExConvicts_wMI + Lo_Risk_Jail_ExConvicts_wMI + total_parolees_wMI

UNITS: person

total_exConv_wo_MI = HI_Risk_Prison_ExConvicts_wo_MI + Lo_Risk_Prison_ExConvicts_wo_MI + HI_Risk_Jail_ExConvicts_wo_MI + Lo_Risk_Jail_ExConvicts_wo_MI + total_parolees_wo_MI

UNITS: person

total_exConv_wo_parolees = HI_Risk_Prison_ExConvicts_wo_MI + Lo_Risk_Prison_ExConvicts_wo_MI + HI_Risk_Prison_ExConvicts_wMI + Lo_Risk_Prison_ExConvicts_wMI + HI_Risk_Jail_ExConvicts_wo_MI + Lo_Risk_Jail_ExConvicts_wo_MI + HI_Risk_Jail_ExConvicts_wMI + Lo_Risk_Jail_ExConvicts_wMI

UNITS: person

total_hi_risk_exConv_recidivism = hi_risk_prison_exConv_wMI_recidivism + hi_risk_jail_exConv_wo_MI_recidivism + hi_risk_prison_exConv_wo_MI_recidivism + hi_risk_jail_exConv_wMI_recidivism

UNITS: person/year

total_jail_conviction_rate = convicting_convict_in_custody_to_jail_wo_MI + convicting_convict_in_custody_to_jail_wMI + convicting_convict_in_comm_to_jail_wo_MI + convicting_convict_in_comm_to_jail_wMI

UNITS: person/year

total_jail_pop = Arrestees + Suspects_in_Custody + Suspects_in_Custody_with_Cases_Filed + Defendants_in_Custody_Being_Trialed + PreSentencing_Convicts_in_Custody + Jail_Offenders_wMI + Jail_Offenders_wo_MI + Reprisoned_County_Parole_Violators_wMI + Reprisoned_County_Parole_Violators_wo_MI + PreSentencing_Convicts_fr_Comm_in_Custody

UNITS: person

total_jail_recidivism = hi_risk_jail_exConv_wMI_recidivism + lo_risk_jail_exConv_wMI_recidivism +
hi_risk_jail_exConv_wo_MI_recidivism + lo_risk_jail_exConv_wo_MI_recidivism

UNITS: person/year

total_law_enforcement_release = first_time_arrestee_release_wo_charges

UNITS: person/year

total_lo_risk_exConv_recidivism = lo_risk_prison_exConv_wo_MI_recidivism + lo_risk_prison_exConv_wMI_recidivism +
lo_risk_jail_exConv_wo_MI_recidivism + lo_risk_jail_exConv_wMI_recidivism

UNITS: person/year

total_new_prison_admission = convicting_convict_in_custody_to_prison_wo_MI +
convicting_convict_in_comm_to_prison_wo_MI + convicting_convict_in_custody_to_prison_wMI +
convicting_convict_in_comm_to_prison_wMI

UNITS: person/year

total_parolee_recidivism = prison_parolee_wMI_committing_new_crimes +
prison_parolee_wo_MI_committing_new_crimes + prison_parolee_wMI_violated_condition_committing_new_crimes +
prison_parolee_wo_MI_violated_condition_committing_new_crimes + county_parolee_wMI_committing_new_crimes +
county_parolee_wo_MI_committing_new_crimes + county_parolee_wMI_violated_condition_committing_new_crimes +
county_parolee_wo_MI_violated_condition_committing_new_crimes

UNITS: person/year

total_parolees = Prison_Parolees_wMI + Prison_Parolees_wo_MI + County_Parolees_wMI + County_Parolees_wo_MI +
Prison_Parolees_wo_MI_Violated_Condition + Prison_Parolees_wMI_Violated_Condition +
County_Parolee_wo_MI_Violated_Condition + County_Parolee_wMI_Violated_Condition +
Reparoled_Prison_Parolees_wMI + Reparoled_Prison_Parolees_wo_MI + Reprisoned_Prison_Parole_Violators_wMI +
Reprisoned_Prison_Parole_Violators_wo_MI

UNITS: person

total_parolees_wMI = total_prison_parolees_wMI + total_county_parolees_wMI

UNITS: person

total_parolees_wMI_discharges = discharging_prison_parolee_wo_MI + discharging_prison_parolee_wMI +
discharging_prison_parolee_wo_MI_violated_condition + discharging_prison_parolee_wMI_violated_condition

UNITS: person/year

total_parolees_wo_MI = Prison_Parolees_wo_MI + Prison_Parolees_wo_MI_Violated_Condition +
County_Parolees_wo_MI + County_Parolee_wo_MI_Violated_Condition + Reparoled_Prison_Parolees_wo_MI

UNITS: person

total_preSentencing_defendants = PreSentencing_Convicts_in_Custody + PreSentencing_Convicts_fr_Comm_in_Custody

UNITS: people

total_prison_conviction_rate = (convicting_convict_in_custody_to_prison_wo_MI +
convicting_convict_in_custody_to_prison_wMI + convicting_convict_in_comm_to_prison_wo_MI +
convicting_convict_in_comm_to_prison_wMI) + 1

UNITS: person/year

total_prison_parolee_wo_MI = Prison_Parolees_wo_MI + Prison_Parolees_wo_MI_Violated_Condition +
Reparoled_Prison_Parolees_wo_MI

UNITS: person

total_prison_parolees = Prison_Parolees_wMI + Prison_Parolees_wo_MI + Prison_Parolees_wMI_Violated_Condition +
Prison_Parolees_wo_MI_Violated_Condition + Reparoled_Prison_Parolees_wMI + Reparoled_Prison_Parolees_wo_MI

UNITS: person

total_prison_parolees_wMI = Prison_Parolees_wMI + Prison_Parolees_wMI_Violated_Condition +
Reparoled_Prison_Parolees_wMI

UNITS: person

total_prison_recidivism = (prison_parolee_wMI_committing_new_crimes +
prison_parolee_wo_MI_committing_new_crimes + hi_risk_prison_exConv_wo_MI_recidivism +
hi_risk_prison_exConv_wMI_recidivism + lo_risk_prison_exConv_wMI_recidivism +
lo_risk_prison_exConv_wo_MI_recidivism + county_parolee_wMI_committing_new_crimes +
county_parolee_wo_MI_committing_new_crimes) + 1

UNITS: person/year

total_prisoners = Prisoners_wo_MI + Prisoners_wMI + Reprisoned_Prison_Parole_Violators_wo_MI +
Reprisoned_Prison_Parole_Violators_wMI

UNITS: person

total_probation_conviction_rate = convicting_convict_in_custody_to_probation +
convicting_convict_in_comm_to_probation

UNITS: person/year

"total_PV-RTC_stock" = Reprisoned_Prison_Parole_Violators_wMI + Reprisoned_Prison_Parole_Violators_wo_MI

UNITS: person

total_suspect_in_custody_being_trialed = Defendants_in_Custody_Being_Trialed + PreSentencing_Convicts_in_Custody +
Suspects_in_Custody_with_Cases_Filed

UNITS: person

total_suspects_in_comm_being_trialed = PreSentencing_Convicts_fr_Comm_in_Custody +
Defendants_in_Comm_Being_Trialed + Suspects_in_Comm_with_Cases_Filed

UNITS: person

total_suspects_in_custody = Arrestees + Suspects_in_Custody + Defendants_in_Custody_Being_Trialed +
PreSentencing_Convicts_in_Custody + Suspects_in_Custody_with_Cases_Filed +
PreSentencing_Convicts_fr_Comm_in_Custody

UNITS: person

total_unrecovered_pop_wMI = Prisoners_wMI + Prison_Parolees_wMI + HI_Risk_Prison_ExConvicts_wMI +
Lo_Risk_Prison_ExConvicts_wMI + Prison_Parolees_wMI_Violated_Condition + Reprisoned_Prison_Parole_Violators_wMI +
Reparoled_Prison_Parolees_wMI + Jail_Offenders_wMI + HI_Risk_Jail_ExConvicts_wMI + Lo_Risk_Jail_ExConvicts_wMI +
County_Parolees_wMI + County_Parolee_wMI_Violated_Condition + Reprisoned_County_Parole_Violators_wMI +
Prisoners_wSMI_in_Alternative_Facility

UNITS: person

wait_time_for_trial_suspect_in_comm = 27/365

UNITS: year

wait_time_for_trial_suspect_in_custody = 10/365 {0.03}

UNITS: year

year_to_day_conversion = 365

UNITS: day

zero_fract_develop_MI = 0

UNITS: 1/year

zero_fract_parolees_realigned_wMI = 0

UNITS: unitless

{ The model has 442 (442) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 43 (43) Flows: 113 (113) Converters: 286 (286)

Constants: 84 (84) Equations: 315 (315) Graphicals: 61 (61)

There are also 409 expanded macro variables.

}

Age Profiles Module

Total_Age_of_Arrestees(t) = Total_Age_of_Arrestees(t - dt) + (transferring_age_thru_hi_risk_jail_exConv_wo_MI_recidivism +
transferring_age_thru_lo_risk_jail_exConv_wMI_recidivism + transferringage_thru_hi_risk_prison_exConv_wMI_recidivism +
transferring_age_thru_lo_risk_jail_exConv_recidivism + transferring_age_thru_hi_risk_jail_exConv_wMI_recidivism +
adding_age_thru_arresting_first_time_arrestee + transferring_age_thru_lo_risk_prison_exConv_recidivism +
transferring_age_thru_hi_risk_prison_exConv_wo_MI_recidivism + transferring_age_thru_prison_parolee_wo_MI_recidivism +
transferring_age_thru_county_parolee_wo_MI_recidivism + transferring_age_thru_county_parolee_wMI_recidivism +
transferring_age_thru_prison_parolee_wo_MI_violated_condition_recidivism +
transferring_age_thru_prison_parolee_wMI_violated_condition_recidivism +
transferring_age_thru_county_parolee_wMI_violated_condition_recidivism +
transferring_age_thru_lo_risk_prison_exConv_wMI_recidivism +
transferring_age_thru_county_parolee_wo_MI_violated_condition_recidivism + transferring_age_thru_prison_parolee_wMI_recidivism -
transferring_age_thru_pretrial_release - losing_age_thru_first_time_arrestee_release_wo_conviction -
transferring_age_thru_holding_suspect_in_custody) * dt

INIT Total_Age_of_Arrestees = IF Individuals_with_Criminal_History.equilibrium_switch= 1 THEN 133934.860445 ELSE
Individuals_with_Criminal_History.Arrestees * init_age_per_arrestee

UNITS: year

INFLOWS:

transferring_age_thru_hi_risk_jail_exConv_wo_MI_recidivism =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_recidivism * ave_age_per_hi_risk_jail_exConv_wo_MI

UNITS: unitless

transferring_age_thru_lo_risk_jail_exConv_wMI_recidivism = Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_recidivism *
ave_age_per_lo_risk_jail_exConv_wMI

UNITS: unitless

transferringage_thru_hi_risk_prison_exConv_wMI_recidivism =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism * ave_age_per_hi_risk_prison_exCon_wMI

UNITS: unitless

transferring_age_thru_lo_risk_jail_exConv_recidivism = Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism *
ave_age_per_lo_risk_jail_exConv_wo_MI

UNITS: unitless

transferring_age_thru_hi_risk_jail_exConv_wMI_recidivism = Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_recidivism *
ave_age_per_hi_risk_jail_exConv_wMI

UNITS: unitless

adding_age_thru_arresting_first_time_arrestee = Individuals_with_Criminal_History.first_time_arrest_rate *
age_at_first_commitment

UNITS: unitless

transferring_age_thru_lo_risk_prison_exConv_recidivism =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism * ave_age_per_lo_risk_prison_exConv_wo_MI

UNITS: unitless

transferring_age_thru_hi_risk_prison_exConv_wo_MI_recidivism =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism * ave_age_per_hi_risk_prison_exConv_wo_MI

UNITS: unitless

transferring_age_thru_prison_parolee_wo_MI_recidivism =
Individuals_with_Criminal_History.prison_parolee_wo_MI_committing_new_crimes * ave_age_per_prison_parolee_wo_MI

UNITS: unitless

transferring_age_thru_county_parolee_wo_MI_recidivism =
Individuals_with_Criminal_History.county_parolee_wo_MI_committing_new_crimes * ave_age_per_county_parolee_wo_MI

UNITS: unitless

transferring_age_thru_county_parolee_wMI_recidivism = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.county_parolee_wMI_committing_new_crimes * ave_age_per_county_parolee_wMI)

UNITS: unitless

transferring_age_thru_prison_parolee_wo_MI_violated_condition_recidivism =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violated_condition_committing_new_crimes *
ave_age_per_prison_parolee_wo_MI_violated_condition

UNITS: unitless

transferring_age_thru_prison_parolee_wMI_violated_condition_recidivism =
Individuals_with_Criminal_History.prison_parolee_wMI_violated_condition_committing_new_crimes *
ave_age_per_prison_parolee_wMI_violated_condition

UNITS: unitless

transferring_age_thru_county_parolee_wMI_violated_condition_recidivism =
Individuals_with_Criminal_History.county_parolee_wMI_violated_condition_committing_new_crimes *
ave_age_per_county_parolee_wMI_violated_condition

UNITS: unitless

transferring_age_thru_lo_risk_prison_exConv_wMI_recidivism =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wMI_recidivism * ave_age_per_lo_risk_prison_exConv_wMI

UNITS: unitless

transferring_age_thru_county_parolee_wo_MI_violated_condition_recidivism =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.county_parolee_wo_MI_violated_condition_committing_new_crimes *
ave_age_per_county_parolee_wo_MI_violated_condition)

UNITS: unitless

transferring_age_thru_prison_parolee_wMI_recidivism =
Individuals_with_Criminal_History.prison_parolee_wMI_committing_new_crimes * ave_age_per_prison_parolee_wMI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_pretrial_release = Individuals_with_Criminal_History.pretrial_release * ave_age_per_arrestee

UNITS: unitless

losing_age_thru_first_time_arrestee_release_wo_conviction =
Individuals_with_Criminal_History.first_time_arrestee_release_wo_charges * age_at_first_commitment

UNITS: unitless

transferring_age_thru_holding_suspect_in_custody = Individuals_with_Criminal_History.being_held_in_custody *
ave_age_per_arrestee

UNITS: unitless

Total_Age_of_County_Parolee_wMI_Violated_Condition(t) = Total_Age_of_County_Parolee_wMI_Violated_Condition(t - dt) +
(transferring_age_thru_county_parolee_wMI_violating_condition + chg_in_age_in_county_parolee_wMI_violated_condition -
transferring_age_thru_county_parolee_returning_to_jail_wMI -
transferring_age_thru_discharging_county_parolee_wMI_violated_condition -
transferring_age_thru_county_parolee_wMI_violated_condition_recidivism) * dt

INIT Total_Age_of_County_Parolee_wMI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition*(ave_age_per_county_parolee_wMI*Individuals_with_Crim
inal_History.county_parolee_wMI_violating_condition+annual_age_chg_county_parolee_wMI_violated_condition)) /
(Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail+Individuals_with_Criminal_History.discharging_county_parole
e_wMI_violated_condition+Individuals_with_Criminal_History.county_parolee_wMI_violated_condition_committing_new_crimes) ELSE
Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition * init_age_per_county_parolee_wMI_violated_condition

UNITS: year

INFLOWS:

transferring_age_thru_county_parolee_wMI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wMI_violating_condition * ave_age_per_county_parolee_wMI

UNITS: unitless

chg_in_age_in_county_parolee_wMI_violated_condition = annual_age_chg_county_parolee_wMI_violated_condition

UNITS: unitless

OUTFLOWS:

transferring_age_thru_county_parolee_returning_to_jail_wMI =
Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail * ave_age_per_county_parolee_wMI_violated_condition

UNITS: unitless

transferring_age_thru_discharging_county_parolee_wMI_violated_condition = Individuals_with_Criminal_History.realignment_policy
* (Individuals_with_Criminal_History.discharging_county_parolee_wMI_violated_condition *
ave_age_per_county_parolee_wMI_violated_condition)

UNITS: unitless

transferring_age_thru_county_parolee_wMI_violated_condition_recidivism =
Individuals_with_Criminal_History.county_parolee_wMI_violated_condition_committing_new_crimes *
ave_age_per_county_parolee_wMI_violated_condition

UNITS: unitless

Total_Age_of_County_Parolee_wo_MI_Violated_Condition(t) = Total_Age_of_County_Parolee_wo_MI_Violated_Condition(t - dt) +
(transferring_age_thru_county_parolee_wo_MI_violating_condition + chg_in_age_in_county_parolee_woMI_violated_condition -
transferring_age_thru_county_parolee_returning_to_jail_wo_MI -
transferring_age_thru_discharging_county_parolee_wo_MI_violated_condition -
transferring_age_thru_county_parolee_wo_MI_violated_condition_recidivism) * dt

INIT Total_Age_of_County_Parolee_wo_MI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
((ave_age_per_county_parolee_wo_MI*Individuals_with_Criminal_History.county_parolee_wo_MI_violating_condition+annual_age_chg_
county_parolee_wo_MI_violated_condition)*Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition) /
(Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail) ELSE
Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition *
init_age_per_county_parolee_wo_MI_violated_condition

UNITS: year

INFLOWS:

transferring_age_thru_county_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wo_MI_violating_condition * ave_age_per_county_parolee_wo_MI

UNITS: unitless

chg_in_age_in_county_parolee_woMI_violated_condition = annual_age_chg_county_parolee_wo_MI_violated_condition

UNITS: unitless

OUTFLOWS:

transferring_age_thru_county_parolee_returning_to_jail_wo_MI =
Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail * ave_age_per_county_parolee_wo_MI_violated_condition

UNITS: unitless

transferring_age_thru_discharging_county_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.discharging_county_parolee_wo_MI_violated_condition *
ave_age_per_county_parolee_wo_MI_violated_condition)

UNITS: unitless

transferring_age_thru_county_parolee_wo_MI_violated_condition_recidivism =
Individuals_with_Criminal_History.realignment_policy *

(Individuals_with_Criminal_History.county_parolee_wo_MI_violated_condition_committing_new_crimes *
ave_age_per_county_parolee_wo_MI_violated_condition)

UNITS: unitless

Total_Age_of_County_Parolees_wMI(t) = Total_Age_of_County_Parolees_wMI(t - dt) +
(transferring_age_thru_releasing_prisoner_wMI_to_parole_after_realignment - transferring_age_thru_discharging_county_parolee_wMI -
transferring_age_thru_county_parolee_wMI_recidivism - transferring_age_thru_county_parolee_wMI_violating_condition) * dt

INIT Total_Age_of_County_Parolees_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0
ELSE Individuals_with_Criminal_History.County_Parolees_wMI * init_age_per_county_parolees_wMI

UNITS: year

INFLOWS:

transferring_age_thru_releasing_prisoner_wMI_to_parole_after_realignment = Individuals_with_Criminal_History.realignment_policy
* (Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment * ave_age_per_prisoner_wMI)

UNITS: unitless

OUTFLOWS:

transferring_age_thru_discharging_county_parolee_wMI = Individuals_with_Criminal_History.discharging_county_parolee_wMI *
ave_age_per_county_parolee_wMI

UNITS: unitless

transferring_age_thru_county_parolee_wMI_recidivism = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.county_parolee_wMI_committing_new_crimes * ave_age_per_county_parolee_wMI)

UNITS: unitless

transferring_age_thru_county_parolee_wMI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wMI_violating_condition * ave_age_per_county_parolee_wMI

UNITS: unitless

Total_Age_of_County_Parolees_wo_MI(t) = Total_Age_of_County_Parolees_wo_MI(t - dt) +
(transferring_age_thru_releasing_prisoner_wo_MI_to_parole_after_realignment -
transferring_age_thru_discharging_county_parolee_wo_MI - transferring_age_thru_county_parolee_wo_MI_recidivism -
transferring_age_thru_county_parolee_wo_MI_violating_condition) * dt

INIT Total_Age_of_County_Parolees_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0.001
ELSE Individuals_with_Criminal_History.County_Parolees_wo_MI * init_age_per_county_parolees_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_releasing_prisoner_wo_MI_to_parole_after_realignment =
(Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment * ave_age_per_prisoner_wo_MI)

UNITS: unitless

OUTFLOWS:

transferring_age_thru_discharging_county_parolee_wo_MI = Individuals_with_Criminal_History.discharging_county_parolee_wo_MI
* ave_age_per_county_parolee_wo_MI

UNITS: unitless

transferring_age_thru_county_parolee_wo_MI_recidivism =
Individuals_with_Criminal_History.county_parolee_wo_MI_committing_new_crimes * ave_age_per_county_parolee_wo_MI

UNITS: unitless

transferring_age_thru_county_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wo_MI_violating_condition * ave_age_per_county_parolee_wo_MI

UNITS: unitless

Total_Age_of_Defendants_in_Comm_Being_Trialed(t) = Total_Age_of_Defendants_in_Comm_Being_Trialed(t - dt) +
(transferring_age_thru_suspect_in_comm_being_trial + transferring_age_thru_violating_probation -
transferring_age_thru_complaints_against_recidivating_suspect_in_comm_dismissed_after_trial -
transferring_age_thru_defendants_in_comm_waiting_for_sentence) * dt

INIT Total_Age_of_Defendants_in_Comm_Being_Trialed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
20069.9513918 ELSE Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed *
init_age_per_defendant_in_comm_being_trialed

UNITS: year

INFLOWS:

transferring_age_thru_suspect_in_comm_being_trial = Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial *
ave_age_per_suspect_in_comm_with_case_filed

UNITS: unitless

transferring_age_thru_violating_probation = Individuals_with_Criminal_History.violating_probation * ave_age_per_probationer

UNITS: unitless

OUTFLOWS:

transferring_age_thru_complaints_against_recidivating_suspect_in_comm_dismissed_after_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_comm_dismissed_after_trial *
ave_age_per_defendant_in_comm_being_trialed

UNITS: unitless

transferring_age_thru_defendants_in_comm_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_comm_waiting_for_sentence * ave_age_per_defendant_in_comm_being_trialed

UNITS: unitless

Total_Age_of_Defendants_in_Custody_Being_Trialed(t) = Total_Age_of_Defendants_in_Custody_Being_Trialed(t - dt) +
(transferring_age_thru_suspect_in_custody_being_trial -
transferring_age_thru_complaints_against_recidivating_suspect_in_custody_dismissed_after_trial -
transferring_age_thru_defendants_in_custody_waiting_for_sentence) * dt

INIT Total_Age_of_Defendants_in_Custody_Being_Trialed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial*ave_age_per_suspect_in_custody_with_case_filed*Individuals_
with_Criminal_History.Defendants_in_Custody_Being_Trialed)/(Individuals_with_Criminal_History.defendants_in_custody_waiting_for_sen-
tence+Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_custody_dismissed_after_trial)
ELSE Individuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed *
init_age_per_defendant_in_custody_being_trialed

UNITS: year

INFLOWS:

transferring_age_thru_suspect_in_custody_being_trial = Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial *
ave_age_per_suspect_in_custody_with_case_filed

UNITS: unitless

OUTFLOWS:

transferring_age_thru_complaints_against_recidivating_suspect_in_custody_dismissed_after_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_custody_dismissed_after_trial *
ave_age_per_defendant_in_custody_being_trialed

UNITS: unitless

transferring_age_thru_defendants_in_custody_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_custody_waiting_for_sentence * ave_age_per_defendant_in_custody_being_trialed

UNITS: unitless

Total_Age_of_Desisting_Jail_ExConvicts_wMI(t) = Total_Age_of_Desisting_Jail_ExConvicts_wMI(t - dt) +
(transferring_age_thru_jail_exConv_wMI_being_assimilated + chg_in_age_in_desisting_jail_exConv_wMI -
losing_age_thru_desisting_jail_exConv_deaths_wMI) * dt

INIT Total_Age_of_Desisting_Jail_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(ave_age_per_lo_risk_jail_exConv_wMI*Individuals_with_Criminal_History.jail_exConv_wMI_desisting+annual_age_chg_desisting_jail_ex
Conv_wMI)*Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wMI/Individuals_with_Criminal_History.desisting_jail_exConv_d
eaths_wMI ELSE Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wMI * init_age_per_lo_risk_jail_exConv_wMI

UNITS: year

INFLOWS:

transferring_age_thru_jail_exConv_wMI_being_assimilated = Individuals_with_Criminal_History.jail_exConv_wMI_desisting *
ave_age_per_lo_risk_jail_exConv_wMI

UNITS: unitless

chg_in_age_in_desisting_jail_exConv_wMI = annual_age_chg_desisting_jail_exConv_wMI

UNITS: unitless

OUTFLOWS:

losing_age_thru_desisting_jail_exConv_deaths_wMI = Individuals_with_Criminal_History.desisting_jail_exConv_deaths_wMI *
ave_age_per_desisting_jail_exConv_wMI

UNITS: unitless

Total_Age_of_Desisting_Jail_ExConvicts_wo_MI(t) = Total_Age_of_Desisting_Jail_ExConvicts_wo_MI(t - dt) +
(transferring_age_thru_jail_exConv_wo_MI_being_assimilated + chg_in_age_in_desisting_jail_exConv_wo_MI -
losing_age_thru_desisting_jail_exConv_deaths_wo_MI) * dt

INIT Total_Age_of_Desisting_Jail_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(age_chg_per_year*Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wo_MI+Individuals_with_Criminal_History.jail_exConv_w
o_MI_desisting*ave_age_per_lo_risk_jail_exConv_wo_MI)*Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wo_MI/Individual
s_with_Criminal_History.desisting_jail_exConv_deaths_wo_MI ELSE Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wo_MI *
init_age_per_desisting_jail_exConv_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_jail_exConv_wo_MI_being_assimilated = Individuals_with_Criminal_History.jail_exConv_wo_MI_desisting *
ave_age_per_lo_risk_jail_exConv_wo_MI

UNITS: unitless

chg_in_age_in_desisting_jail_exConv_wo_MI = annual_age_chg_desisting_jail_exConv_wo_MI

UNITS: unitless

OUTFLOWS:

losing_age_thru_desisting_jail_exConv_deaths_wo_MI = Individuals_with_Criminal_History.desisting_jail_exConv_deaths_wo_MI *
ave_age_per_desisting_jail_exConv_wo_MI

UNITS: unitless

Total_Age_of_Desisting_Prison_ExConvicts_wMI(t) = Total_Age_of_Desisting_Prison_ExConvicts_wMI(t - dt) +
(transferring_age_thru_prison_exConv_being_assimilated_wMI + chg_in_age_in_desisting_prison_exConv_wMI -
losing_age_thru_desisting_prison_exConv_deaths_wMI) * dt

INIT Total_Age_of_Desisting_Prison_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN
(ave_age_per_lo_risk_prison_exCon_wMI*Individuals_with_Criminal_History.prison_exConv_desisting_wMI+annual_age_chg_desisting_p
rison_exConv_wMI)*Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wMI/Individuals_with_Criminal_History.desisting_pri
son_exConv_deaths_wMI ELSE Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wMI *
init_age_per_desisting_prison_exConv_wMI

UNITS: year

INFLOWS:

transferring_age_thru_prison_exConv_being_assimilated_wMI = Individuals_with_Criminal_History.prison_exConv_desisting_wMI *
ave_age_per_lo_risk_prison_exCon_wMI

UNITS: unitless

chg_in_age_in_desisting_prison_exConv_wMI = annual_age_chg_desisting_prison_exConv_wMI

UNITS: unitless

OUTFLOWS:

losing_age_thru_desisting_prison_exConv_deaths_wMI = Individuals_with_Criminal_History.desisting_prison_exConv_deaths_wMI *
ave_age_desisting_prison_exConv_wMI

UNITS: unitless

Total_Age_of_Desisting_Prison_ExConvicts_wo_MI(t) = Total_Age_of_Desisting_Prison_ExConvicts_wo_MI(t - dt) +
(transferring_age_thru_prison_exConv_being_assimilated_wo_MI + chg_in_age_in_desisting_prison_exConv_wo_MI -
losing_MH_cap_thru_desisting_prison_exConv_deaths) * dt

INIT Total_Age_of_Desisting_Prison_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN
(ave_age_per_lo_risk_prison_exConv_wo_MI*Individuals_with_Criminal_History.prison_exConv_desisting_wo_MI+annual_age_chg_desis
ting_prison_exConv_wo_MI)*Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wo_MI/Individuals_with_Criminal_History.d
esisting_prison_exConv_deaths_wo_MI ELSE Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wo_MI *
init_age_per_desisting_prison_exConv_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_prison_exConv_being_assimilated_wo_MI =
Individuals_with_Criminal_History.prison_exConv_desisting_wo_MI * ave_age_per_lo_risk_prison_exConv_wo_MI

UNITS: unitless

chg_in_age_in_desisting_prison_exConv_wo_MI = annual_age_chg_desisting_prison_exConv_wo_MI

UNITS: unitless

OUTFLOWS:

losing_MH_cap_thru_desisting_prison_exConv_deaths = Individuals_with_Criminal_History.desisting_prison_exConv_deaths_wo_MI
* ave_age_per_desisting_prison_exConv_wo_MI

UNITS: unitless

Total_Age_of_HI_Risk_Jail_ExConvicts_wMI(t) = Total_Age_of_HI_Risk_Jail_ExConvicts_wMI(t - dt) +
(chg_in_age_in_hi_risk_jail_exConv_wMI + transferring_age_thru_discharging_county_parolee_wMI +
transferring_age_thru_releasing_jail_offender_wMI + transferring_age_thru_discharging_county_parolee_wMI_violated_condition +
transferring_age_thru_rerelease_exprisoners_to_county_parolee_wMI +
transferring_age_thru_dismissed_jail_exConv_returning_to_comm_wMI - transferring_age_thru_becoming_lo_risk_jail_exConv_wMI -
losing_age_thru_hi_risk_jail_exConv_wMI_deaths - transferring_age_thru_hi_risk_jail_exConv_wMI_recidivism) * dt

INIT Total_Age_of_HI_Risk_Jail_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 421423.423893
ELSE Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI * init_age_per_hi_risk_jail_exConv_wMI

UNITS: year

INFLOWS:

chg_in_age_in_hi_risk_jail_exConv_wMI = annual_age_chg_hi_risk_jail_exConv_wMI

UNITS: unitless

transferring_age_thru_discharging_county_parolee_wMI = Individuals_with_Criminal_History.discharging_county_parolee_wMI *
ave_age_per_county_parolee_wMI

UNITS: unitless

transferring_age_thru_releasing_jail_offender_wMI = Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_age_per_jail_offender_wMI

UNITS: unitless

transferring_age_thru_discharging_county_parolee_wMI_violated_condition = Individuals_with_Criminal_History.realignment_policy * (Individuals_with_Criminal_History.discharging_county_parolee_wMI_violated_condition * ave_age_per_county_parolee_wMI_violated_condition)

UNITS: unitless

transferring_age_thru_rerelease_exprisoners_to_county_parole_wMI = Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wMI * ave_age_per_reprisoned_county_parolee_wMI

UNITS: unitless

transferring_age_thru_dismissed_jail_exConv_returning_to_comm_wMI = Individuals_with_Criminal_History.dismissed_jail_exConv_returning_to_comm_wMI * ave_age_per_suspect_in_comm_with_case_filed

UNITS: unitless

OUTFLOWS:

transferring_age_thru_becoming_lo_risk_jail_exConv_wMI = Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wMI * ave_age_per_hi_risk_jail_exConv_wMI

UNITS: unitless

losing_age_thru_hi_risk_jail_exConv_wMI_deaths = Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_deaths * ave_age_per_hi_risk_jail_exConv_wMI

UNITS: unitless

transferring_age_thru_hi_risk_jail_exConv_wMI_recidivism = Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_recidivism * ave_age_per_hi_risk_jail_exConv_wMI

UNITS: unitless

Total_Age_of_HI_Risk_Jail_ExConvicts_wo_MI(t) = Total_Age_of_HI_Risk_Jail_ExConvicts_wo_MI(t - dt) + (chg_in_age_in_hi_risk_jail_exConv_wo_MI + transferring_age_thru_discharging_county_parolee_wo_MI + transferring_age_thru_releasing_jail_offender_wo_MI + transferring_age_thru_discharging_county_parolee_wo_MI_violated_condition + transferring_age_thru_rerelease_exprisoners_to_county_parole_wo_MI + transferring_age_thru_dismissed_jail_exConv_returning_to_comm_wo_MI - transferring_age_thru_becoming_lo_risk_jail_exConv_wo_MI - transferring_age_thru_hi_risk_jail_exConv_wo_MI_recidivism - transferring_age_thru_hi_risk_jail_exConv_deaths) * dt

INIT Total_Age_of_HI_Risk_Jail_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 495976.028403 ELSE Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI * init_age_per_hi_risk_jail_exConv_wo_MI

UNITS: year

INFLOWS:

chg_in_age_in_hi_risk_jail_exConv_wo_MI = annual_age_chg_hi_risk_jail_exConv_wo_MI

UNITS: unitless

transferring_age_thru_discharging_county_parolee_wo_MI = Individuals_with_Criminal_History.discharging_county_parolee_wo_MI * ave_age_per_county_parolee_wo_MI

UNITS: unitless

transferring_age_thru_releasing_jail_offender_wo_MI = Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI * ave_age_per_jail_offender_wo_MI

UNITS: unitless

transferring_age_thru_discharging_county_parolee_wo_MI_violated_condition = Individuals_with_Criminal_History.realignment_policy * (Individuals_with_Criminal_History.discharging_county_parolee_wo_MI_violated_condition * ave_age_per_county_parolee_wo_MI_violated_condition)

UNITS: unitless

transferring_age_thru_rerelease_exprisoners_to_county_parole_wo_MI = Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wo_MI * ave_age_per_reprisoned_county_parolee_wo_MI

UNITS: unitless

transferring_age_thru_dismissed_jail_exConv_returning_to_comm_wo_MI =
Individuals_with_Criminal_History.dismissed_jail_exConv_returning_to_comm_wo_MI * ave_age_per_suspect_in_comm_with_case_filed

UNITS: unitless

OUTFLOWS:

transferring_age_thru_becoming_lo_risk_jail_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI * ave_age_per_hi_risk_jail_exConv_wo_MI

UNITS: unitless

transferring_age_thru_hi_risk_jail_exConv_wo_MI_recidivism =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_recidivism * ave_age_per_hi_risk_jail_exConv_wo_MI

UNITS: unitless

transferring_age_thru_hi_risk_jail_exConv_deaths = Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_deaths *
ave_age_per_hi_risk_jail_exConv_wo_MI

UNITS: unitless

Total_Age_of_HI_Risk_Prison_ExConvicts_wMI(t) = Total_Age_of_HI_Risk_Prison_ExConvicts_wMI(t - dt) +
(transferring_age_thru_discharging_prison_parolee_wMI + chg_in_age_in_hi_risk_prison_exConv_wMI +
transferring_age_thru_discharging_prison_parolee_wMI_violated_condition +
transferring_age_thru_discharging_reparoled_parolee_wMI_violated_condition +
transferring_age_thru_prisoners_wSMI_in_alt_facility_being_released +
transferring_age_thru_dismissed_prison_exConv_returning_to_comm_wMI -
transferring_age_thru_becoming_lo_risk_prison_exConv_wMI - losing_age_thru_hi_risk_prison_exConv_wMI_deaths -
transferring_age_thru_hi_risk_prison_exConv_wMI_recidivism) * dt

INIT Total_Age_of_HI_Risk_Prison_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN
((ave_age_per_prison_parolee_wMI*Individuals_with_Criminal_History.discharging_prison_parolee_wMI+ave_age_per_reparoled_prison
n_parolee_wMI*Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wMI+ave_age_per_suspect_in_comm_with_ca
se_filed*Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wo_MI+ave_age_per_prison_parolee_wMI_v
iolated_condition*Individuals_with_Criminal_History.discharging_prison_parolee_wMI_violated_condition+annual_age_chg_hi_risk_prison
_exConv_wMI) * Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI) /
(Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism+Individuals_with_Criminal_History.hi_risk_prison_exConv_dea
ths_wMI+Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI) ELSE
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI * init_age_per_hi_risk_prison_exConv_wMI

UNITS: year

INFLOWS:

transferring_age_thru_discharging_prison_parolee_wMI = Individuals_with_Criminal_History.discharging_prison_parolee_wMI *
ave_age_per_prison_parolee_wMI

UNITS: unitless

chg_in_age_in_hi_risk_prison_exConv_wMI = annual_age_chg_hi_risk_prison_exConv_wMI

UNITS: unitless

transferring_age_thru_discharging_prison_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wMI_violated_condition *
ave_age_per_prison_parolee_wMI_violated_condition

UNITS: unitless

transferring_age_thru_discharging_reparoled_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wMI * ave_age_per_reparoled_prison_parolee_wMI

UNITS: unitless

transferring_age_thru_prisoners_wSMI_in_alt_facility_being_released =
transferring_age_thru_releasing_prisoner_wSMI_in_alt_facility

UNITS: unitless

transferring_age_thru_dismissed_prison_exConv_returning_to_comm_wMI =
Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wo_MI *
ave_age_per_suspect_in_comm_with_case_filed

UNITS: unitless

OUTFLOWS:

transferring_age_thru_becoming_lo_risk_prison_exConv_wMI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI * ave_age_per_hi_risk_prison_exCon_wMI

UNITS: unitless

losing_age_thru_hi_risk_prison_exConv_wMI_deaths = Individuals_with_Criminal_History.hi_risk_prison_exConv_deaths_wMI *
ave_age_per_hi_risk_prison_exCon_wMI

UNITS: unitless

transferringage_thru_hi_risk_prison_exConv_wMI_recidivism =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism * ave_age_per_hi_risk_prison_exCon_wMI

UNITS: unitless

Total_Age_of_HI_Risk_Prison_ExConvicts_wo_MI(t) = Total_Age_of_HI_Risk_Prison_ExConvicts_wo_MI(t - dt) +
(transferring_age_thru_discharging_prison_parolee_wo_MI + chg_in_age_in_hi_risk_prison_exConv_wo_MI +
transferring_age_thru_discharging_prison_parolee_wo_MI_violated_condition +
transferring_age_thru_discharging_reparoled_parolee_wo_MI_violated_condition +
transferring_age_thru_dismissed_prison_exConv_returning_to_comm_wo_MI -
transferring_age_thru_becoming_lo_risk_prison_exConv_wo_MI - transferring_age_thru_hi_risk_prison_exConv_wo_MI_deaths -
transferring_age_thru_hi_risk_prison_exConv_wo_MI_recidivism) * dt

INIT Total_Age_of_HI_Risk_Prison_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN
(((ave_age_per_prison_parolee_wo_MI*Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI+ave_age_per_reparoled
_prison_parolee_wo_MI*Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wo_MI+ave_age_per_suspect_in_com
m_with_case_filed*Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wMI+ave_age_per_prison_parolee
_wo_MI_violated_condition*Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI_violated_condition+annual_age_chg_
hi_risk_prison_exConv_wo_MI)*Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI))/
(Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI+Individuals_with_Criminal_History.hi_risk_prison_exConv_w
o_MI_deaths+Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism)) ELSE
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI * init_age_per_hi_risk_prison_exConv_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_discharging_prison_parolee_wo_MI = Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI *
ave_age_per_prison_parolee_wo_MI

UNITS: unitless

chg_in_age_in_hi_risk_prison_exConv_wo_MI = annual_age_chg_hi_risk_prison_exConv_wo_MI

UNITS: unitless

transferring_age_thru_discharging_prison_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI_violated_condition *
ave_age_per_prison_parolee_wo_MI_violated_condition

UNITS: unitless

transferring_age_thru_discharging_reparoled_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wo_MI * ave_age_per_reparoled_prison_parolee_wo_MI

UNITS: unitless

transferring_age_thru_dismissed_prison_exConv_returning_to_comm_wo_MI =
Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wMI * ave_age_per_suspect_in_comm_with_case_filed

UNITS: unitless

OUTFLOWS:

transferring_age_thru_becoming_lo_risk_prison_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI * ave_age_per_hi_risk_prison_exConv_wo_MI

UNITS: unitless

transferring_age_thru_hi_risk_prison_exConv_wo_MI_deaths =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_deaths * ave_age_per_hi_risk_prison_exConv_wo_MI

UNITS: unitless

transferring_age_thru_hi_risk_prison_exConv_wo_MI_recidivism =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism * ave_age_per_hi_risk_prison_exConv_wo_MI

UNITS: unitless

Total_Age_of_Jail_Offenders_wMI(t) = Total_Age_of_Jail_Offenders_wMI(t - dt) +
(transferring_age_thru_convicting_convict_in_custody_to_jail_wMI + transferring_MH_cap_thru_jail_offender_devMI_after_realignment
+ chg_in_age_in_jail_offender_wMI + transferring_age_thru_convicting_convict_in_comm_to_jail_wMI -
transferring_age_thru_continue_serving_probation_wMI - transferring_age_thru_releasing_jail_offender_wMI) * dt

INIT Total_Age_of_Jail_Offenders_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
((ave_age_per_preSentencing_convict_in_comm*Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wMI+
ave_age_per_preSentencing_convict_in_custody*Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wMI+annual_
age_chg_jail_offender_wMI) * Individuals_with_Criminal_History.Jail_Offenders_wMI) /
(Individuals_with_Criminal_History.continue_serving_thru_probation_wMI+Individuals_with_Criminal_History.releasing_jail_offenders_dir
ectly_wMI) ELSE Individuals_with_Criminal_History.Jail_Offenders_wMI * init_age_per_jail_offender_wMI

UNITS: year

INFLOWS:

transferring_age_thru_convicting_convict_in_custody_to_jail_wMI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wMI * ave_age_per_preSentencing_convict_in_comm

UNITS: unitless

transferring_MH_cap_thru_jail_offender_devMI_after_realignment = (Individuals_with_Criminal_History.jail_offender_devMI *
ave_age_per_jail_offender_wo_MI)

UNITS: unitless

chg_in_age_in_jail_offender_wMI = annual_age_chg_jail_offender_wMI

UNITS: unitless

transferring_age_thru_convicting_convict_in_comm_to_jail_wMI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wMI * ave_age_per_preSentencing_convict_in_custody

UNITS: unitless

OUTFLOWS:

transferring_age_thru_continue_serving_probation_wMI = Individuals_with_Criminal_History.continue_serving_thru_probation_wMI
* ave_age_per_jail_offender_wMI

UNITS: unitless

transferring_age_thru_releasing_jail_offender_wMI = Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_age_per_jail_offender_wMI

UNITS: unitless

Total_Age_of_Jail_Offenders_wo_MI(t) = Total_Age_of_Jail_Offenders_wo_MI(t - dt) + (chg_in_age_in_jail_offender_wo_MI +
transferring_age_thru_convicting_convict_in_custody_to_jail_wo_MI +
transferring_age_thru_convicting_convict_in_comm_to_jail_wo_MI - transferring_MH_cap_thru_jail_offender_devMI_after_realignment -
transferring_age_thru_continue_serving_probation_wo_MI - transferring_age_thru_releasing_jail_offender_wo_MI) * dt

INIT Total_Age_of_Jail_Offenders_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
((ave_age_per_preSentencing_convict_in_comm*Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wo_MI+ave_ag
e_per_preSentencing_convict_in_custody*Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wo_MI+annual_age_
chg_jail_offender_wo_MI)*Individuals_with_Criminal_History.Jail_Offenders_wo_MI) /
(Individuals_with_Criminal_History.jail_offender_devMI+Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI+Indi

viduals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI) ELSE Individuals_with_Criminal_History.Jail_Offenders_wo_MI *
init_age_per_jail_offender_wo_MI

UNITS: year

INFLOWS:

chg_in_age_in_jail_offender_wo_MI = annual_age_chg_jail_offender_wo_MI

UNITS: unitless

transferring_age_thru_convicting_convict_in_custody_to_jail_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wo_MI * ave_age_per_preSentencing_convict_in_custody

UNITS: unitless

transferring_age_thru_convicting_convict_in_comm_to_jail_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wo_MI * ave_age_per_preSentencing_convict_in_comm

UNITS: unitless

OUTFLOWS:

transferring_MH_cap_thru_jail_offender_devMI_after_realignment = (Individuals_with_Criminal_History.jail_offender_devMI *
ave_age_per_jail_offender_wo_MI)

UNITS: unitless

transferring_age_thru_continue_serving_probation_wo_MI =
Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI * ave_age_per_jail_offender_wo_MI

UNITS: unitless

transferring_age_thru_releasing_jail_offender_wo_MI = Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI *
ave_age_per_jail_offender_wo_MI

UNITS: unitless

Total_Age_of_Lo_Risk_Jail_ExConvicts_wMI(t) = Total_Age_of_Lo_Risk_Jail_ExConvicts_wMI(t - dt) +
(chg_in_age_in_lo_risk_jail_exConv_wMI + transferring_age_thru_becoming_lo_risk_jail_exConv_wMI -
transferring_age_thru_jail_exConv_wMI_being_assimilated - losing_MH_cap_thru_lo_risk_jail_exConv_wMI_deaths -
transferring_age_thru_lo_risk_jail_exConv_wMI_recidivism) * dt

INIT Total_Age_of_Lo_Risk_Jail_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(ave_age_per_hi_risk_jail_exConv_wMI*Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wMI+annual_age_chg_lo_risk_j
ail_exConv_wMI)*Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI/(Individuals_with_Criminal_History.lo_risk_jail_exConv
_wMI_deaths+Individuals_with_Criminal_History.jail_exConv_wMI_desisting+Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_
recidivism) ELSE Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI * init_age_per_lo_risk_jail_exConv_wMI

UNITS: year

INFLOWS:

chg_in_age_in_lo_risk_jail_exConv_wMI = annual_age_chg_lo_risk_jail_exConv_wMI

UNITS: unitless

transferring_age_thru_becoming_lo_risk_jail_exConv_wMI = Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wMI *
ave_age_per_hi_risk_jail_exConv_wMI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_jail_exConv_wMI_being_assimilated = Individuals_with_Criminal_History.jail_exConv_wMI_desisting *
ave_age_per_lo_risk_jail_exConv_wMI

UNITS: unitless

losing_MH_cap_thru_lo_risk_jail_exConv_wMI_deaths = Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_deaths *
ave_age_per_lo_risk_jail_exConv_wMI

UNITS: unitless

transferring_age_thru_lo_risk_jail_exConv_wMI_recidivism = Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_recidivism * ave_age_per_lo_risk_jail_exConv_wMI

UNITS: unitless

Total_Age_of_Lo_Risk_Jail_ExConvicts_wo_MI(t) = Total_Age_of_Lo_Risk_Jail_ExConvicts_wo_MI(t - dt) + (transferring_age_thru_discharging_fr_probation + chg_in_age_in_lo_risk_jail_exConv_wo_MI + transferring_age_thru_becoming_lo_risk_jail_exConv_wo_MI - transferring_age_thru_jail_exConv_wo_MI_being_assimilated - losing_age_thru_lo_risk_jail_exConv_deaths - transferring_age_thru_lo_risk_jail_exConv_recidivism) * dt

INIT Total_Age_of_Lo_Risk_Jail_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN ((ave_age_per_probationer*Individuals_with_Criminal_History.discharging_fr_probation+ave_age_per_hi_risk_jail_exConv_wo_MI*Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI+annual_age_chg_lo_risk_jail_exConv_wo_MI)*Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI)/(Individuals_with_Criminal_History.jail_exConv_wo_MI_desisting+Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_deaths+Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism) ELSE Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI * init_age_per_lo_risk_jail_exConv_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_discharging_fr_probation = Individuals_with_Criminal_History.discharging_fr_probation * ave_age_per_probationer

UNITS: unitless

chg_in_age_in_lo_risk_jail_exConv_wo_MI = annual_age_chg_lo_risk_jail_exConv_wo_MI

UNITS: unitless

transferring_age_thru_becoming_lo_risk_jail_exConv_wo_MI = Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI * ave_age_per_hi_risk_jail_exConv_wo_MI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_jail_exConv_wo_MI_being_assimilated = Individuals_with_Criminal_History.jail_exConv_wo_MI_desisting * ave_age_per_lo_risk_jail_exConv_wo_MI

UNITS: unitless

losing_age_thru_lo_risk_jail_exConv_deaths = Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_deaths * ave_age_per_lo_risk_jail_exConv_wo_MI

UNITS: unitless

transferring_age_thru_lo_risk_jail_exConv_recidivism = Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism * ave_age_per_lo_risk_jail_exConv_wo_MI

UNITS: unitless

Total_Age_of_Lo_Risk_Prison_ExConvicts_wMI(t) = Total_Age_of_Lo_Risk_Prison_ExConvicts_wMI(t - dt) + (chg_in_age_in_lo_risk_prison_exConv_wMI + transferring_age_thru_becoming_lo_risk_prison_exConv_wMI - transferring_age_thru_prison_exConv_being_assimilated_wMI - losing_age_thru_lo_risk_prison_exConv_wMI_deaths - transferring_age_thru_lo_risk_prison_exConv_wMI_recidivism) * dt

INIT Total_Age_of_Lo_Risk_Prison_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN ((ave_age_per_hi_risk_prison_exConv_wMI*Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI+annual_age_chg_lo_risk_prison_exConv_wMI)*Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI)/(Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wMI+Individuals_with_Criminal_History.lo_risk_prison_exConv_wMI_recidivism+Individuals_with_Criminal_History.prison_exConv_desisting_wMI) ELSE Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI * init_age_per_lo_risk_prison_exConv_wMI

UNITS: year

INFLOWS:

chg_in_age_in_lo_risk_prison_exConv_wMI = annual_age_chg_lo_risk_prison_exConv_wMI

UNITS: unitless

transferring_age_thru_becoming_lo_risk_prison_exConv_wMI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI * ave_age_per_hi_risk_prison_exCon_wMI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_prison_exConv_being_assimilated_wMI = Individuals_with_Criminal_History.prison_exConv_desisting_wMI *
ave_age_per_lo_risk_prison_exCon_wMI

UNITS: unitless

losing_age_thru_lo_risk_prison_exConv_wMI_deaths = Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wMI *
ave_age_per_lo_risk_prison_exCon_wMI

UNITS: unitless

transferring_age_thru_lo_risk_prison_exConv_wMI_recidivism =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wMI_recidivism * ave_age_per_lo_risk_prison_exCon_wMI

UNITS: unitless

Total_Age_of_Lo_Risk_Prison_ExConvicts_wo_MI(t) = Total_Age_of_Lo_Risk_Prison_ExConvicts_wo_MI(t - dt) +
(transferring_age_thru_becoming_lo_risk_prison_exConv_wo_MI + chg_in_age_in_lo_risk_prison_exConv_wo_MI -
transferring_age_thru_lo_risk_prison_exConv_recidivism - transferring_age_thru_lo_risk_prison_exConv_wo_MI_deaths -
transferring_age_thru_prison_exConv_being_assimilated_wo_MI) * dt

INIT Total_Age_of_Lo_Risk_Prison_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
((ave_age_per_hi_risk_prison_exConv_wo_MI*Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI+annual_age_
chg_lo_risk_prison_exConv_wo_MI)*Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI)/(Individuals_with_Criminal_Hi
story.lo_risk_prison_exConv_deaths_wo_MI+Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism+Individuals_wit
h_Criminal_History.prison_exConv_desisting_wo_MI) ELSE Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI *
init_age_per_lo_risk_prison_exConv_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_becoming_lo_risk_prison_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI * ave_age_per_hi_risk_prison_exConv_wo_MI

UNITS: unitless

chg_in_age_in_lo_risk_prison_exConv_wo_MI = annual_age_chg_lo_risk_prison_exConv_wo_MI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_lo_risk_prison_exConv_recidivism =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism * ave_age_per_lo_risk_prison_exConv_wo_MI

UNITS: unitless

transferring_age_thru_lo_risk_prison_exConv_wo_MI_deaths =
Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wo_MI * ave_age_per_lo_risk_prison_exConv_wo_MI

UNITS: unitless

transferring_age_thru_prison_exConv_being_assimilated_wo_MI =
Individuals_with_Criminal_History.prison_exConv_desisting_wo_MI * ave_age_per_lo_risk_prison_exConv_wo_MI

UNITS: unitless

Total_Age_of_PreSentencing_Convicts_in_Comm(t) = Total_Age_of_PreSentencing_Convicts_in_Comm(t - dt) +
(transferring_age_thru_defendants_in_comm_waiting_for_sentence + transferring_age_thru_defendants_in_comm_conviction_wo_trial -
transferring_age_thru_convicts_in_comm_being_sentenced) * dt

INIT Total_Age_of_PreSentencing_Convicts_in_Comm = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
40624.8790358 ELSE Individuals_with_Criminal_History.PreSentencing_Convicts_fr_Comm_in_Custody *
init_age_per_defendant_in_comm_waiting_for_sentence

UNITS: year

INFLOWS:

transferring_age_thru_defendents_in_comm_waiting_for_sentence =
Individuals_with_Criminal_History.defendents_in_comm_waiting_for_sentence * ave_age_per_defendant_in_comm_being_trialed

UNITS: unitless

transferring_age_thru_defendants_in_comm_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial * ave_age_per_suspect_in_comm_with_case_filed

UNITS: unitless

OUTFLOWS:

transferring_age_thru_convicts_in_comm_being_sentenced = Individuals_with_Criminal_History.convict_in_comm_being_sentenced
* ave_age_per_preSentencing_convict_in_comm

UNITS: unitless

Total_Age_of_PreSentencing_Convicts_in_Custody(t) = Total_Age_of_PreSentencing_Convicts_in_Custody(t - dt) +
(transferring_age_thru_defendents_in_custody_waiting_for_sentence +
transferring_age_thru_defendants_in_cusotdy_conviction_wo_trial - transferring_age_thru_convicts_in_custody_being_sentenced) * dt

INIT Total_Age_of_PreSentencing_Convicts_in_Custody = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
71288.6494537 ELSE Individuals_with_Criminal_History.PreSentencing_Convicts_in_Custody *
init_age_per_defendant_in_custody_waiting_for_sentence

UNITS: year

INFLOWS:

transferring_age_thru_defendents_in_custody_waiting_for_sentence =
Individuals_with_Criminal_History.defendents_in_custody_waiting_for_sentence * ave_age_per_defendant_in_custody_being_trialed

UNITS: unitless

transferring_age_thru_defendants_in_cusotdy_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial * ave_age_per_suspect_in_custody_with_case_filed

UNITS: unitless

OUTFLOWS:

transferring_age_thru_convicts_in_custody_being_sentenced =
Individuals_with_Criminal_History.convict_in_custody_being_sentenced * ave_age_per_preSentencing_convict_in_custody

UNITS: unitless

Total_Age_of_Pretial_Suspects_in_Community(t) = Total_Age_of_Pretial_Suspects_in_Community(t - dt) +
(transferring_age_thru_pretial_release - transferring_age_thru_suspect_in_comm_being_trialed) * dt

INIT Total_Age_of_Pretial_Suspects_in_Community = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.pretial_release*ave_age_per_arrestee*Individuals_with_Criminal_History.Pretial_Suspects_in_Com
munity)/Individuals_with_Criminal_History.filing_case_for_suspect_in_comm ELSE
Individuals_with_Criminal_History.Pretial_Suspects_in_Community * init_age_per_pretial_suspect_in_comm

UNITS: year

INFLOWS:

transferring_age_thru_pretial_release = Individuals_with_Criminal_History.pretial_release * ave_age_per_arrestee

UNITS: unitless

OUTFLOWS:

transferring_age_thru_suspect_in_comm_being_trialed = Individuals_with_Criminal_History.filing_case_for_suspect_in_comm *
ave_age_per_pretial_suspect_in_comm

UNITS: unitless

Total_Age_of_Prison_Parolee_wMI_Violated_Condition(t) = Total_Age_of_Prison_Parolee_wMI_Violated_Condition(t - dt) +
(transferring_age_thru_prison_parolee_wMI_violating_condition + chg_in_age_in_prison_parolee_wMI_violated_condition -
transferring_age_thru_prison_parolee_returning_to_prison_wMI -
transferring_age_thru_discharging_prison_parolee_wMI_violated_condition -
transferring_age_thru_prison_parolee_wMI_violated_condition_recidivism) * dt

INIT Total_Age_of_Prison_Parolee_wMI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(((ave_age_per_prison_parolee_wMI*Individuals_with_Criminal_History.prison_parolee_wMI_violating_condition+annual_age_chg_priso
n_parolee_wMI_violated_condition)*Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition) /
(Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison+Individuals_with_Criminal_History.discharging_prison_parol
ee_wMI_violated_condition+Individuals_with_Criminal_History.prison_parolee_wMI_violated_condition_committing_new_crimes)) ELSE
Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition * init_age_per_prison_parolee_wMI_violated_condition

UNITS: year

INFLOWS:

transferring_age_thru_prison_parolee_wMI_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wMI_violating_condition * ave_age_per_prison_parolee_wMI

UNITS: unitless

chg_in_age_in_prison_parolee_wMI_violated_condition = annual_age_chg_prison_parolee_wMI_violated_condition

UNITS: unitless

OUTFLOWS:

transferring_age_thru_prison_parolee_returning_to_prison_wMI =
Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison * ave_age_per_prison_parolee_wMI_violated_condition

UNITS: unitless

transferring_age_thru_discharging_prison_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wMI_violated_condition *
ave_age_per_prison_parolee_wMI_violated_condition

UNITS: unitless

transferring_age_thru_prison_parolee_wMI_violated_condition_recidivism =
Individuals_with_Criminal_History.prison_parolee_wMI_violated_condition_committing_new_crimes *
ave_age_per_prison_parolee_wMI_violated_condition

UNITS: unitless

Total_Age_of_Prison_Parolee_wo_MI_Violated_Condition(t) = Total_Age_of_Prison_Parolee_wo_MI_Violated_Condition(t - dt) +
(transferring_age_thru_prison_parolee_wo_MI_violating_condition + chg_in_age_in_prison_parolee_wo_MI_violated_condition -
transferring_age_thru_prison_parolee_returning_to_prison_wo_MI -
transferring_age_thru_discharging_prison_parolee_wo_MI_violated_condition -
transferring_age_thru_prison_parolee_wo_MI_violated_condition_recidivism) * dt

INIT Total_Age_of_Prison_Parolee_wo_MI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(((ave_age_per_prison_parolee_wo_MI*Individuals_with_Criminal_History.prison_parolee_wo_MI_violating_condition+annual_age_chg_
prison_parolee_wo_MI_violated_condition) * Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition) /
(Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison+Individuals_with_Criminal_History.discharging_prison_pa
rolee_wo_MI_violated_condition+Individuals_with_Criminal_History.prison_parolee_wo_MI_violated_condition_committing_new_crimes
)) ELSE Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition *
init_age_per_prison_parolee_wo_MI_violated_condition

UNITS: year

INFLOWS:

transferring_age_thru_prison_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violating_condition * ave_age_per_prison_parolee_wo_MI

UNITS: unitless

chg_in_age_in_prison_parolee_wo_MI_violated_condition = annual_age_chg_prison_parolee_wo_MI_violated_condition

UNITS: unitless

OUTFLOWS:

transferring_age_thru_prison_parolee_returning_to_prison_wo_MI =
Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison *
ave_age_per_prison_parolee_wo_MI_violated_condition

UNITS: unitless

transferring_age_thru_discharging_prison_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI_violated_condition *
ave_age_per_prison_parolee_wo_MI_violated_condition

UNITS: unitless

transferring_age_thru_prison_parolee_wo_MI_violated_condition_recidivism =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violated_condition_committing_new_crimes *
ave_age_per_prison_parolee_wo_MI_violated_condition

UNITS: unitless

Total_Age_of_Prison_Parolees_wo_MI(t) = Total_Age_of_Prison_Parolees_wo_MI(t - dt) +
(transferring_age_thru_releasing_prisoner_wo_MI + chg_in_age_in_prison_parolee_wo_MI -
transferring_age_thru_discharging_prison_parolee_wo_MI - transferring_age_thru_prison_parolee_wo_MI_recidivism -
transferring_age_thru_prison_parolee_wo_MI_violating_condition) * dt

INIT Total_Age_of_Prison_Parolees_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 403349.829893 ELSE
Individuals_with_Criminal_History.Prison_Parolees_wo_MI * init_age_per_prison_parolee_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_releasing_prisoner_wo_MI =
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment * ave_age_per_prisoner_wo_MI

UNITS: unitless

chg_in_age_in_prison_parolee_wo_MI = annual_age_chg_prison_parolee_wo_MI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_discharging_prison_parolee_wo_MI = Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI *
ave_age_per_prison_parolee_wo_MI

UNITS: unitless

transferring_age_thru_prison_parolee_wo_MI_recidivism =
Individuals_with_Criminal_History.prison_parolee_wo_MI_committing_new_crimes * ave_age_per_prison_parolee_wo_MI

UNITS: unitless

transferring_age_thru_prison_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violating_condition * ave_age_per_prison_parolee_wo_MI

UNITS: unitless

Total_Age_of_Prisoners_wMI(t) = Total_Age_of_Prisoners_wMI(t - dt) +
(transferring_age_thru_convicting_convict_in_custody_to_prison_wMI + transferring_age_thru_prisoner_develop_wMI +
chg_in_age_in_prisoner_wMI + transferring_age_thru_convicting_convict_in_comm_to_prison_wMI -
losing_age_thru_prisoner_wMI_deaths - transferring_age_thru_releasing_prisoner_wMI_before_realignment -
transferring_age_thru_recovering_fr_MI - transferring_age_thru_releasing_prisoner_wMI_to_parole_after_realignment) * dt

INIT Total_Age_of_Prisoners_wMI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN 209288.288601 ELSE
Individuals_with_Criminal_History.Prisoners_wMI * init_age_per_prisoner_wMI

UNITS: year

INFLOWS:

transferring_age_thru_convicting_convict_in_custody_to_prison_wMI =
Individuals_with_Criminal_History.incoming_prison_convicts_in_custody_wMI * ave_age_per_preSentencing_convict_in_custody * (1 -
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted)

UNITS: unitless

transferring_age_thru_prisoner_develop_MI = Individuals_with_Criminal_History.prisoner_develop_MI *
ave_age_per_prisoner_wo_MI

UNITS: unitless

chg_in_age_in_prisoner_wMI = annual_age_chg_prisoners_wMI

UNITS: unitless

transferring_age_thru_convicting_convict_in_comm_to_prison_wMI =
Individuals_with_Criminal_History.incoming_prison_convicts_in_comm_wMI * ave_age_per_preSentencing_convict_in_comm * (1 -
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted)

UNITS: unitless

OUTFLOWS:

losing_age_thru_prisoner_wMI_deaths = Individuals_with_Criminal_History.prisoner_wMI_deaths * ave_age_per_prisoner_wMI

UNITS: unitless

transferring_age_thru_releasing_prisoner_wMI_before_realignment =
(Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment * ave_age_per_prisoner_wMI)

UNITS: unitless

transferring_age_thru_recovering_fr_MI = Individuals_with_Criminal_History.prisoner_wMI_recovering * ave_age_per_prisoner_wMI

UNITS: unitless

transferring_age_thru_releasing_prisoner_wMI_to_parole_after_realignment = Individuals_with_Criminal_History.realignment_policy
* (Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment * ave_age_per_prisoner_wMI)

UNITS: unitless

Total_Age_of_Prisoners_wo_MI(t) = Total_Age_of_Prisoners_wo_MI(t - dt) +
(transferring_age_thru_convicting_convict_in_custody_to_prison_wo_MI + chg_in_age_in_prisoner_wo_MI +
transferring_age_thru_recovering_fr_MI + transferring_age_thru_convicting_convict_in_comm_to_prison_wo_MI -
transferring_age_thru_releasing_prisoner_wo_MI - losing_age_thru_prisoner_wo_MI_deaths -
transferring_age_thru_prisoner_develop_MI - transferring_age_thru_releasing_prisoner_wo_MI_to_parole_after_realignment) * dt

INIT Total_Age_of_Prisoners_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN 610452.070635 ELSE
Individuals_with_Criminal_History.Prisoners_wo_MI * init_age_per_prisoner_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_convicting_convict_in_custody_to_prison_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_prison_wo_MI * ave_age_per_preSentencing_convict_in_custody

UNITS: unitless

chg_in_age_in_prisoner_wo_MI = annual_age_chg_prisoners_wo_MI

UNITS: unitless

transferring_age_thru_recovering_fr_MI = Individuals_with_Criminal_History.prisoner_wMI_recovering * ave_age_per_prisoner_wMI

UNITS: unitless

transferring_age_thru_convicting_convict_in_comm_to_prison_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_prison_wo_MI * ave_age_per_preSentencing_convict_in_comm

UNITS: unitless

OUTFLOWS:

transferring_age_thru_releasing_prisoner_wo_MI =
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment * ave_age_per_prisoner_wo_MI

UNITS: unitless

losing_age_thru_prisoner_wo_MI_deaths = Individuals_with_Criminal_History.prisoner_wo_MI_deaths *
ave_age_per_prisoner_wo_MI

UNITS: unitless

transferring_age_thru_prisoner_develop_MI = Individuals_with_Criminal_History.prisoner_develop_MI *
ave_age_per_prisoner_wo_MI

UNITS: unitless

transferring_age_thru_releasing_prisoner_wo_MI_to_parole_after_realignment =
(Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment * ave_age_per_prisoner_wo_MI)

UNITS: unitless

Total_Age_of_Prisoners_wSMI_in_Alternative_Facility(t) = Total_Age_of_Prisoners_wSMI_in_Alternative_Facility(t - dt) +
(transferring_age_thru_convicting_convict_in_custody_to_alt_facility_wSMI +
transferring_age_thru_convicting_convict_in_comm_to_alt_facility_wSMI + chg_in_age_in_prisoner_wSMI_in_alt_facility -
transferring_age_thru_releasing_prisoner_wSMI_in_alt_facility - losing_age_thru_prisoner_wSMI_in_alt_facility_deaths) * dt

INIT Total_Age_of_Prisoners_wSMI_in_Alternative_Facility = IF
Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI = 1 THEN
Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility * ave_age_per_prisoner_wMI ELSE 0.000000001

UNITS: year

INFLOWS:

transferring_age_thru_convicting_convict_in_custody_to_alt_facility_wSMI =
Individuals_with_Criminal_History.incoming_prison_convicts_in_custody_wMI *
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted *
ave_age_per_preSentencing_convict_in_custody

UNITS: unitless

transferring_age_thru_convicting_convict_in_comm_to_alt_facility_wSMI =
Individuals_with_Criminal_History.incoming_prison_convicts_in_comm_wMI *
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_comm_diverted * ave_age_per_preSentencing_convict_in_comm

UNITS: unitless

chg_in_age_in_prisoner_wSMI_in_alt_facility = (1 - Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI)
* 0 + Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI *
(Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility * age_chg_per_year)

UNITS: unitless

OUTFLOWS:

transferring_age_thru_releasing_prisoner_wSMI_in_alt_facility =
Individuals_with_Criminal_History.releasing_prisoner_wSMI_in_alt_facility * ave_age_per_prisoner_wSMI_in_alt_facility

UNITS: unitless

losing_age_thru_prisoner_wSMI_in_alt_facility_deaths = Individuals_with_Criminal_History.deaths_of_prisoners_wSMI_in_alt_facility
* ave_age_per_prisoner_wSMI_in_alt_facility

UNITS: unitless

Total_Age_of_Probationers(t) = Total_Age_of_Probationers(t - dt) + (transferring_age_thru_continue_serving_probation_wMI +
transferring_age_thru_continue_serving_probation_wo_MI + transferring_age_thru_convicting_convict_in_custody_to_probation +
transferring_age_thru_convicting_convict_in_comm_to_probation + chg_in_age_in_probationer -
transferring_age_thru_discharging_fr_probation - transferring_age_thru_violating_probation) * dt

INIT Total_Age_of_Probationers = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 2506784.43367 ELSE
Individuals_with_Criminal_History.Probationers * init_age_per_probationer

UNITS: year

INFLOWS:

transferring_age_thru_continue_serving_probation_wMI = Individuals_with_Criminal_History.continue_serving_thru_probation_wMI * ave_age_per_jail_offender_wMI

UNITS: unitless

transferring_age_thru_continue_serving_probation_wo_MI = Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI * ave_age_per_jail_offender_wo_MI

UNITS: unitless

transferring_age_thru_convicting_convict_in_custody_to_probation = Individuals_with_Criminal_History.convicting_convict_in_custody_to_probation * ave_age_per_preSentencing_convict_in_custody

UNITS: unitless

transferring_age_thru_convicting_convict_in_comm_to_probation = Individuals_with_Criminal_History.convicting_convict_in_comm_to_probation * ave_age_per_preSentencing_convict_in_comm

UNITS: unitless

chg_in_age_in_probationer = annual_age_chg_probationer

UNITS: unitless

OUTFLOWS:

transferring_age_thru_discharging_fr_probation = Individuals_with_Criminal_History.discharging_fr_probation * ave_age_per_probationer

UNITS: unitless

transferring_age_thru_violating_probation = Individuals_with_Criminal_History.violating_probation * ave_age_per_probationer

UNITS: unitless

Total_Age_of_Reparoled_Prison_Parole_Violators_wMI(t) = Total_Age_of_Reparoled_Prison_Parole_Violators_wMI(t - dt) + (transferring_age_thru_rerelease_prison_parole_wMI + chg_in_age_in_reparoled_prison_parolee_wMI - transferring_age_thru_discharging_reparoled_parolee_wMI_violated_condition) * dt

INIT Total_Age_of_Reparoled_Prison_Parole_Violators_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 22236.3254013 ELSE Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI * init_age_per_reparoled_prison_parole_violator_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_rerelease_prison_parole_wMI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI * ave_age_per_reprisoned_prison_parole_violator_wMI

UNITS: unitless

chg_in_age_in_reparoled_prison_parolee_wMI = annual_age_chg_reparoled_prison_parole_wMI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_discharging_reparoled_parolee_wMI_violated_condition = Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wMI * ave_age_per_reparoleed_prison_parolee_wMI

UNITS: unitless

Total_Age_of_Reparoled_Prison_Parole_Violators_wo_MI(t) = Total_Age_of_Reparoled_Prison_Parole_Violators_wo_MI(t - dt) + (transferring_age_thru_rerelease_prison_parole_wo_MI + chg_in_age_in_reparoled_prison_parolee_wo_MI - transferring_age_thru_discharging_reparoled_parolee_wo_MI_violated_condition) * dt

INIT Total_Age_of_Reparoled_Prison_Parole_Violators_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 39467.9187288 ELSE Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI * init_age_per_reparoled_prison_parole_violator_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_rerelease_prison_parole_wo_MI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wo_MI * ave_age_per_reprisoned_prison_parole_violator_wo_MI

UNITS: unitless

chg_in_age_in_reparoled_prison_parolee_wo_MI = annual_age_chg_reparoled_prison_parole_wo_MI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_discharging_reparoled_parolee_wo_MI_violated_condition = Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wo_MI * ave_age_per_reparoled_prison_parolee_wo_MI

UNITS: unitless

Total_Age_of_Reprisoned_County_Parole_Violator_wMI(t) = Total_Age_of_Reprisoned_County_Parole_Violator_wMI(t - dt) + (transferring_age_thru_county_parolee_returning_to_jail_wMI + chg_in_age_in_county_parolee_wMI - transferring_age_thru_rerelease_exprisoners_to_county_parole_wMI) * dt

INIT Total_Age_of_Reprisoned_County_Parole_Violator_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 1 + ((Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail*ave_age_per_county_parolee_wMI_violated_condition+annual_age_chg_county_parolee_wMI)*Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI/Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wMI)*0 ELSE Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI * init_age_per_reprisoned_county_parole_violator_wMI

UNITS: year

INFLOWS:

transferring_age_thru_county_parolee_returning_to_jail_wMI = Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail * ave_age_per_county_parolee_wMI_violated_condition

UNITS: unitless

chg_in_age_in_county_parolee_wMI = annual_age_chg_county_parolee_wMI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_rerelease_exprisoners_to_county_parole_wMI = Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wMI * ave_age_per_reprisoned_county_parolee_wMI

UNITS: unitless

Total_Age_of_Reprisoned_County_Parole_Violator_wo_MI(t) = Total_Age_of_Reprisoned_County_Parole_Violator_wo_MI(t - dt) + (transferring_age_thru_county_parolee_returning_to_jail_wo_MI + chg_in_age_in_county_parolee_wo_MI - transferring_age_thru_rerelease_exprisoners_to_county_parole_wo_MI) * dt

INIT Total_Age_of_Reprisoned_County_Parole_Violator_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN ((Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail*ave_age_per_county_parolee_wo_MI_violated_condition+annual_age_chg_county_parolee_wo_MI) * Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI) / (Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wo_MI) ELSE Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI * init_age_per_reprisoned_county_parole_violator_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_county_parolee_returning_to_jail_wo_MI = Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail * ave_age_per_county_parolee_wo_MI_violated_condition

UNITS: unitless

chg_in_age_in_county_parolee_wo_MI = annual_age_chg_county_parolee_wo_MI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_rerelease_exprisoners_to_county_parole_wo_MI =
Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wo_MI * ave_age_per_reprisoned_county_parolee_wo_MI

UNITS: unitless

Total_Age_of_Reprisoned_Prison_Parole_Violator_wMI(t) = Total_Age_of_Reprisoned_Prison_Parole_Violator_wMI(t - dt) +
(transferring_age_thru_prison_parolee_returning_to_prison_wMI - transferring_age_thru_rerelease_prison_parole_wMI) * dt

INIT Total_Age_of_Reprisoned_Prison_Parole_Violator_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison*ave_age_per_prison_parolee_wMI_violated_condition*Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI)/Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI ELSE Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI *
init_age_per_reprisoned_prison_parole_violator_wMI

UNITS: year

INFLOWS:

transferring_age_thru_prison_parolee_returning_to_prison_wMI =
Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison * ave_age_per_prison_parolee_wMI_violated_condition

UNITS: unitless

OUTFLOWS:

transferring_age_thru_rerelease_prison_parole_wMI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI *
ave_age_per_reprisoned_prison_parole_violator_wMI

UNITS: unitless

Total_Age_of_Reprisoned_Prison_Parole_Violator_wo_MI(t) = Total_Age_of_Reprisoned_Prison_Parole_Violator_wo_MI(t - dt) +
(transferring_age_thru_prison_parolee_returning_to_prison_wo_MI - transferring_age_thru_rerelease_prison_parole_wo_MI) * dt

INIT Total_Age_of_Reprisoned_Prison_Parole_Violator_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison*ave_age_per_prison_parolee_wo_MI_violated_condition*Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI)/Individuals_with_Criminal_History.rerelease_to_prison_parole_wo_MI ELSE Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI *
init_age_per_reprisoned_prison_parole_violator_wo_MI

UNITS: year

INFLOWS:

transferring_age_thru_prison_parolee_returning_to_prison_wo_MI =
Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison *
ave_age_per_prison_parolee_wo_MI_violated_condition

UNITS: unitless

OUTFLOWS:

transferring_age_thru_rerelease_prison_parole_wo_MI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wo_MI *
ave_age_per_reprisoned_prison_parole_violator_wo_MI

UNITS: unitless

Total_Age_of_Suspects_in_Comm_with_Cases_Filed(t) = Total_Age_of_Suspects_in_Comm_with_Cases_Filed(t - dt) +
(transferring_age_thru_suspect_in_comm_being_trialed - transferring_age_thru_suspect_in_comm_being_trial -
transferring_age_thru_defendants_in_comm_conviction_wo_trial -
transferring_age_thru_complaints_against_recidivating_suspects_in_comm_dismissed_before_trial) * dt

INIT Total_Age_of_Suspects_in_Comm_with_Cases_Filed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
472051.873352*0+
(Individuals_with_Criminal_History.filing_case_for_suspect_in_comm*ave_age_per_pretrial_suspect_in_comm*Individuals_with_Criminal

$$\frac{\text{Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed}}{(\text{Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial} + \text{Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial} + \text{Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_comm_dismissed_before_trial})}$$
 ELSE
 Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed * init_age_per_suspect_in_comm_with_cases_filed

UNITS: year

INFLOWS:

$$\text{transferring_age_thru_suspect_in_comm_being_tried} = \text{Individuals_with_Criminal_History.filing_case_for_suspect_in_comm} * \text{ave_age_per_pretrial_suspect_in_comm}$$

UNITS: unitless

OUTFLOWS:

$$\text{transferring_age_thru_suspect_in_comm_being_trial} = \text{Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial} * \text{ave_age_per_suspect_in_comm_with_case_filed}$$

UNITS: unitless

$$\text{transferring_age_thru_defendants_in_comm_conviction_wo_trial} = \text{Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial} * \text{ave_age_per_suspect_in_comm_with_case_filed}$$

UNITS: unitless

$$\text{transferring_age_thru_complaints_against_recidivating_suspects_in_comm_dismissed_before_trial} = \text{Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_comm_dismissed_before_trial} * \text{ave_age_per_suspect_in_comm_with_case_filed}$$

UNITS: unitless

$$\text{Total_Age_of_Suspects_in_Custody}(t) = \text{Total_Age_of_Suspects_in_Custody}(t - dt) + (\text{transferring_age_thru_holding_suspect_in_custody} - \text{transferring_age_thru_filing_case_for_suspect_in_custody}) * dt$$

INIT Total_Age_of_Suspects_in_Custody = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
 (Individuals_with_Criminal_History.being_held_in_custody * ave_age_per_arrestee *
 Individuals_with_Criminal_History.Suspects_in_Custody) / (Individuals_with_Criminal_History.filing_case_for_suspect_in_custody ELSE
 Individuals_with_Criminal_History.Suspects_in_Custody * init_age_per_suspect_in_custody

UNITS: year

INFLOWS:

$$\text{transferring_age_thru_holding_suspect_in_custody} = \text{Individuals_with_Criminal_History.being_held_in_custody} * \text{ave_age_per_arrestee}$$

UNITS: unitless

OUTFLOWS:

$$\text{transferring_age_thru_filing_case_for_suspect_in_custody} = \text{Individuals_with_Criminal_History.filing_case_for_suspect_in_custody} * \text{ave_age_per_suspect_in_custody}$$

UNITS: unitless

$$\text{Total_Age_of_Suspects_in_Custody_with_Cases_Filed}(t) = \text{Total_Age_of_Suspects_in_Custody_with_Cases_Filed}(t - dt) + (\text{transferring_age_thru_filing_case_for_suspect_in_custody} - \text{transferring_age_thru_suspect_in_custody_being_trial} - \text{transferring_age_thru_complaints_against_recidivating_suspect_in_custody_dismissed_before_trial} - \text{transferring_age_thru_defendants_in_custody_conviction_wo_trial}) * dt$$

INIT Total_Age_of_Suspects_in_Custody_with_Cases_Filed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
 (Individuals_with_Criminal_History.filing_case_for_suspect_in_custody * ave_age_per_suspect_in_custody * Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed) / (Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial + Individuals_with_Criminal_History.suspect_in_custody_conviction_wo_trial + Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_custody_dismissed_before_trial)
 ELSE
 Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed * init_age_per_suspect_in_custody_with_cases_filed

UNITS: year

INFLOWS:

transferring_age_thru_filing_case_for_suspect_in_custody = Individuals_with_Criminal_History.filing_case_for_suspect_in_custody * ave_age_per_suspect_in_custody

UNITS: unitless

OUTFLOWS:

transferring_age_thru_suspect_in_custody_being_trial = Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial * ave_age_per_suspect_in_custody_with_case_filed

UNITS: unitless

transferring_age_thru_complaints_against_recidivating_suspect_in_custody_dismissed_before_trial = Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_custody_dismissed_before_trial * ave_age_per_suspect_in_custody_with_case_filed

UNITS: unitless

transferring_age_thru_defendants_in_cusotdy_conviction_wo_trial = Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial * ave_age_per_suspect_in_custody_with_case_filed

UNITS: unitless

Total_Age_Prison_Parolee_wMI(t) = Total_Age_Prison_Parolee_wMI(t - dt) + (transferring_age_thru_releasing_prisoner_wMI_before_realignment + chg_in_age_in_prison_parolee_wMI - transferring_age_thru_prison_parolee_wMI_violating_condition - transferring_age_thru_discharging_prison_parolee_wMI - transferring_age_thru_prison_parolee_wMI_recidivism) * dt

INIT Total_Age_Prison_Parolee_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 106919.714035 ELSE Individuals_with_Criminal_History.Prison_Parolees_wMI * init_age_per_prison_parolee_wMI

UNITS: year

INFLOWS:

transferring_age_thru_releasing_prisoner_wMI_before_realignment = (Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment * ave_age_per_prisoner_wMI)

UNITS: unitless

chg_in_age_in_prison_parolee_wMI = annual_age_chg_prison_parolee_wMI

UNITS: unitless

OUTFLOWS:

transferring_age_thru_prison_parolee_wMI_violating_condition = Individuals_with_Criminal_History.prison_parolee_wMI_violating_condition * ave_age_per_prison_parolee_wMI

UNITS: unitless

transferring_age_thru_discharging_prison_parolee_wMI = Individuals_with_Criminal_History.discharging_prison_parolee_wMI * ave_age_per_prison_parolee_wMI

UNITS: unitless

transferring_age_thru_prison_parolee_wMI_recidivism = Individuals_with_Criminal_History.prison_parolee_wMI_committing_new_crimes * ave_age_per_prison_parolee_wMI

UNITS: unitless

age_at_first_commitment = 28

UNITS: year/person

age_chg_per_year = 1

UNITS: year/year/person

annual_age_chg_county_parolee_wMI = Individuals_with_Criminal_History.County_Parolees_wMI * age_chg_per_year

UNITS: unitless

annual_age_chg_county_parolee_wMI_violated_condition = Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition * age_chg_per_year

UNITS: unitless

annual_age_chg_county_parolee_wo_MI = Individuals_with_Criminal_History.County_Parolees_wo_MI * age_chg_per_year

UNITS: unitless

annual_age_chg_county_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition * age_chg_per_year

UNITS: unitless

annual_age_chg_desisting_jail_exConv_wMI = Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wMI * age_chg_per_year

UNITS: unitless

annual_age_chg_desisting_jail_exConv_wo_MI = Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wo_MI * age_chg_per_year

UNITS: unitless

annual_age_chg_desisting_prison_exConv_wMI = Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wMI *
age_chg_per_year

UNITS: unitless

annual_age_chg_desisting_prison_exConv_wo_MI = Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wo_MI *
age_chg_per_year

UNITS: unitless

annual_age_chg_hi_risk_jail_exConv_wMI = Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI * age_chg_per_year

UNITS: unitless

annual_age_chg_hi_risk_jail_exConv_wo_MI = Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI * age_chg_per_year

UNITS: unitless

annual_age_chg_hi_risk_prison_exConv_wMI = Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI * age_chg_per_year

UNITS: unitless

annual_age_chg_hi_risk_prison_exConv_wo_MI = Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI *
age_chg_per_year

UNITS: unitless

annual_age_chg_jail_offender_wMI = Individuals_with_Criminal_History.Jail_Offenders_wMI * age_chg_per_year

UNITS: unitless

annual_age_chg_jail_offender_wo_MI = Individuals_with_Criminal_History.Jail_Offenders_wo_MI * age_chg_per_year

UNITS: unitless

annual_age_chg_lo_risk_jail_exConv_wMI = Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI * age_chg_per_year

UNITS: unitless

annual_age_chg_lo_risk_jail_exConv_wo_MI = Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI * age_chg_per_year

UNITS: unitless

annual_age_chg_lo_risk_prison_exConv_wMI = Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI * age_chg_per_year

UNITS: unitless

annual_age_chg_lo_risk_prison_exConv_wo_MI = Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI *
age_chg_per_year

UNITS: unitless

annual_age_chg_prison_parolee_wMI = Individuals_with_Criminal_History.Prison_Parolees_wMI * age_chg_per_year

UNITS: unitless

annual_age_chg_prison_parolee_wMI_violated_condition = Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition * age_chg_per_year

UNITS: unitless

annual_age_chg_prison_parolee_wo_MI = Individuals_with_Criminal_History.Prison_Parolees_wo_MI * age_chg_per_year

UNITS: unitless

annual_age_chg_prison_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition * age_chg_per_year

UNITS: unitless

annual_age_chg_prisoners_wMI = Individuals_with_Criminal_History.Prisoners_wMI * age_chg_per_year

UNITS: unitless

annual_age_chg_prisoners_wo_MI = Individuals_with_Criminal_History.Prisoners_wo_MI * age_chg_per_year

UNITS: unitless

annual_age_chg_probationer = Individuals_with_Criminal_History.Probationers * age_chg_per_year

UNITS: unitless

annual_age_chg_reparoled_prison_parole_wMI = Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI *
age_chg_per_year

UNITS: unitless

annual_age_chg_reparoled_prison_parole_wo_MI = Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI *
age_chg_per_year

UNITS: unitless

annual_age_chg_unconv_detainee = Individuals_with_Criminal_History.Arrestees * age_chg_per_year

UNITS: unitless

ave_age_desisting_prison_exConv_wMI = MAX (MIN (Total_Age_of_Desisting_Prison_ExConvicts_wMI /
Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wMI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_arrestee = Total_Age_of_Arrestees / Individuals_with_Criminal_History.Arrestees

UNITS: year/person

ave_age_per_county_parolee_wMI = Total_Age_of_County_Parolees_wMI / Individuals_with_Criminal_History.County_Parolees_wMI

UNITS: year/person

ave_age_per_county_parolee_wMI_violated_condition = Total_Age_of_County_Parolee_wMI_Violated_Condition /
Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition

UNITS: year/person

ave_age_per_county_parolee_wo_MI = MAX (MIN (Total_Age_of_County_Parolees_wo_MI /
Individuals_with_Criminal_History.County_Parolees_wo_MI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_county_parolee_wo_MI_violated_condition = Total_Age_of_County_Parolee_wo_MI_Violated_Condition /
Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition

UNITS: year/person

ave_age_per_defendant_in_comm_being_trialed = Total_Age_of_Defendants_in_Comm_Being_Trialed /
Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed

UNITS: year/person

ave_age_per_defendant_in_custody_being_trialed = Total_Age_of_Defendants_in_Custody_Being_Trialed /
Individuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed

UNITS: year/person

ave_age_per_desisting_jail_exConv_wMI = MAX (MIN (Total_Age_of_Desisting_Jail_ExConvicts_wMI /
Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wMI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_desisting_jail_exConv_wo_MI = MAX (MIN (Total_Age_of_Desisting_Jail_ExConvicts_wo_MI /
Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wo_MI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_desisting_prison_exConv_wo_MI = Total_Age_of_Desisting_Prison_ExConvicts_wo_MI /
Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wo_MI

UNITS: year/person

ave_age_per_hi_risk_jail_exConv_wMI = MAX (MIN (Total_Age_of_HI_Risk_Jail_ExConvicts_wMI /
Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_hi_risk_jail_exConv_wo_MI = MAX (MIN (Total_Age_of_HI_Risk_Jail_ExConvicts_wo_MI /
Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_hi_risk_prison_exCon_wMI = MAX (MIN (Total_Age_of_HI_Risk_Prison_ExConvicts_wMI /
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_hi_risk_prison_exConv_wo_MI = MAX (MIN (Total_Age_of_HI_Risk_Prison_ExConvicts_wo_MI /
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_jail_offender_wMI = MAX (MIN (Total_Age_of_Jail_Offenders_wMI / Individuals_with_Criminal_History.Jail_Offenders_wMI,
max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_jail_offender_wo_MI = MAX (MIN (Total_Age_of_Jail_Offenders_wo_MI /
Individuals_with_Criminal_History.Jail_Offenders_wo_MI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_lo_risk_jail_exConv_wMI = MAX (MIN (Total_Age_of_Lo_Risk_Jail_ExConvicts_wMI /
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_lo_risk_jail_exConv_wo_MI = MAX (MIN (Total_Age_of_Lo_Risk_Jail_ExConvicts_wo_MI /
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_lo_risk_prison_exCon_wMI = MAX (MIN (Total_Age_of_Lo_Risk_Prison_ExConvicts_wMI /
Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_lo_risk_prison_exConv_wo_MI = MAX (MIN (Total_Age_of_Lo_Risk_Prison_ExConvicts_wo_MI /
Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_preSentencing_convict_in_comm = Total_Age_of_PreSentencing_Convicts_in_Comm /
Individuals_with_Criminal_History.PreSentencing_Convicts_fr_Comm_in_Custody

UNITS: year/person

ave_age_per_preSentencing_convict_in_custody = Total_Age_of_PreSentencing_Convicts_in_Custody /
Individuals_with_Criminal_History.PreSentencing_Convicts_in_Custody

UNITS: year/person

ave_age_per_pretrial_suspect_in_comm = Total_Age_of_Pretrial_Suspects_in_Community /
Individuals_with_Criminal_History.Pretrial_Suspects_in_Community

UNITS: year/person

ave_age_per_prison_parolee_wMI = MAX (MIN (Total_Age_Prison_Parolee_wMI /
Individuals_with_Criminal_History.Prison_Parolees_wMI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_prison_parolee_wMI_violated_condition = Total_Age_of_Prison_Parolee_wMI_Violated_Condition /
Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition

UNITS: year/person

ave_age_per_prison_parolee_wo_MI = MAX (MIN (Total_Age_of_Prison_Parolees_wo_MI /
Individuals_with_Criminal_History.Prison_Parolees_wo_MI, max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_prison_parolee_wo_MI_violated_condition = Total_Age_of_Prison_Parolee_wo_MI_Violated_Condition /
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition

UNITS: year/person

ave_age_per_prisoner_wMI = MAX (MIN (Total_Age_of_Prisoners_wMI /Individuals_with_Criminal_History.Prisoners_wMI,
max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_prisoner_wo_MI = MAX (MIN (Total_Age_of_Prisoners_wo_MI / Individuals_with_Criminal_History.Prisoners_wo_MI,
max_ave_age), min_ave_age)

UNITS: year/person

ave_age_per_prisoner_wSMI_in_alt_facility = Total_Age_of_Prisoners_wSMI_in_Alternative_Facility /
Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility

UNITS: year/person

ave_age_per_probationer = MAX (MIN (Total_Age_of_Probationers / Individuals_with_Criminal_History.Probationers, max_ave_age),
min_ave_age)

UNITS: year/person

ave_age_per_reparoleed_prison_parolee_wMI = Total_Age_of_Reparoled_Prison_Parole_Violators_wMI /
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI

UNITS: year/person

ave_age_per_reparoleed_prison_parolee_wo_MI = Total_Age_of_Reparoled_Prison_Parole_Violators_wo_MI /
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI

UNITS: year/person

ave_age_per_reprisoned_county_parolee_wMI = Total_Age_of_Reprisoned_County_Parole_Violator_wMI /
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI

UNITS: year/person

ave_age_per_reprisoned_county_parolee_wo_MI = Total_Age_of_Reprisoned_County_Parole_Violator_wo_MI /
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI

UNITS: year/person

ave_age_per_reprisoned_prison_parole_violator_wMI = Total_Age_of_Reprisoned_Prison_Parole_Violator_wMI /
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI

UNITS: year/person

ave_age_per_reprisoned_prison_parole_violator_wo_MI = Total_Age_of_Reprisoned_Prison_Parole_Violator_wo_MI /
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI

UNITS: year/person

ave_age_per_suspect_in_comm_with_case_filed = Total_Age_of_Suspects_in_Comm_with_Cases_Filed /
Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed

UNITS: year/person

ave_age_per_suspect_in_custody = Total_Age_of_Suspects_in_Custody / Individuals_with_Criminal_History.Suspects_in_Custody

UNITS: year/person

ave_age_per_suspect_in_custody_with_case_filed = Total_Age_of_Suspects_in_Custody_with_Cases_Filed /
Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed

UNITS: year/person

effect_of_remaining_years_of_life_on_mortality_rate_wMI = GRAPH(remaining_years_of_life_of_prisoners_wMI)

(1.00, 332.6), (1.94117647059, 328.7), (2.88235294118, 324.1), (3.82352941176, 317.2), (4.76470588235, 307.9), (5.70588235294, 297.2),
(6.64705882353, 281.8), (7.58823529412, 261.0), (8.52941176471, 237.2), (9.47058823529, 211.0), (10.4117647059, 188.7),
(11.3529411765, 166.4), (12.2941176471, 144.9), (13.2352941176, 124.9), (14.1764705882, 104.1), (15.1176470588, 84.9),
(16.0588235294, 63.3), (17.00, 54.8), (17.9411764706, 47.2), (18.8823529412, 39.5), (19.8235294118, 33.3), (20.7647058824, 25.6),
(21.7058823529, 23.3), (22.6470588235, 17.9), (23.5882352941, 14.8), (24.5294117647, 11.8), (25.4705882353, 9.5), (26.4117647059,
7.9), (27.3529411765, 7.9), (28.2941176471, 5.6), (29.2352941176, 4.8), (30.1764705882, 4.1), (31.1176470588, 4.1), (32.0588235294,
2.5), (33.00, 1.0)

UNITS: unitless

effect_of_remaining_years_of_life_on_mortality_rate_wo_MI = GRAPH(remaining_years_of_life_of_prisoners_wo_MI)

(1.00, 332.6), (1.99117647059, 328.7), (2.98235294118, 324.1), (3.97352941176, 317.2), (4.96470588235, 307.9), (5.95588235294, 297.2),
(6.94705882353, 281.8), (7.93823529412, 261.0), (8.92941176471, 237.2), (9.92058823529, 211.0), (10.9117647059, 188.7),
(11.9029411765, 166.4), (12.8941176471, 144.9), (13.8852941176, 124.9), (14.8764705882, 104.1), (15.8676470588, 84.9),
(16.8588235294, 63.3), (17.85, 54.8), (18.8411764706, 47.2), (19.8323529412, 39.5), (20.8235294118, 33.3), (21.8147058824, 25.6),
(22.8058823529, 23.3), (23.7970588235, 17.9), (24.7882352941, 14.8), (25.7794117647, 11.8), (26.7705882353, 9.5), (27.7617647059,
7.9), (28.7529411765, 7.9), (29.7441176471, 5.6), (30.7352941176, 4.8), (31.7264705882, 4.1), (32.7176470588, 4.1), (33.7088235294,
2.5), (34.70, 1.0)

UNITS: unitless

effect_of_remaining_years_of_life_on_mortality_rate_wSMI = GRAPH(remaining_years_of_life_of_prisoners_wSMI_in_alt_facility)

(1.00, 332.6), (1.97058823529, 328.7), (2.94117647059, 324.1), (3.91176470588, 317.2), (4.88235294118, 307.9), (5.85294117647, 297.2),
(6.82352941176, 281.8), (7.79411764706, 261.0), (8.76470588235, 237.2), (9.73529411765, 211.0), (10.7058823529, 188.7),
(11.6764705882, 166.4), (12.6470588235, 144.9), (13.6176470588, 124.9), (14.5882352941, 104.1), (15.5588235294, 84.9),
(16.5294117647, 63.3), (17.50, 54.8), (18.4705882353, 47.2), (19.4411764706, 39.5), (20.4117647059, 33.3), (21.3823529412, 25.6),
(22.3529411765, 23.3), (23.3235294118, 17.9), (24.2941176471, 14.8), (25.2647058824, 11.8), (26.2352941176, 9.5), (27.2058823529,
7.9), (28.1764705882, 7.9), (29.1470588235, 5.6), (30.1176470588, 4.8), (31.0882352941, 4.1), (32.0588235294, 4.1), (33.0294117647,
2.5), (34.00, 1.0)

UNITS: unitless

init_age_per_arrestee = 28.1488558657

UNITS: year/person

init_age_per_county_parolee_wMI_violated_condition = 37.5

UNITS: year/person

init_age_per_county_parolee_wo_MI_violated_condition = 37

UNITS: year/person
init_age_per_county_parolees_wMI = 37.5
UNITS: year/person
init_age_per_county_parolees_wo_MI = 37
UNITS: year/person
init_age_per_defendant_in_comm_being_trialed = 28.1488558657
UNITS: year/person
init_age_per_defendant_in_comm_waiting_for_sentence = 28.1488558657
UNITS: year/person
init_age_per_defendant_in_custody_being_trialed = 30.4326964551
UNITS: year/person
init_age_per_defendant_in_custody_waiting_for_sentence = 30.4326964551
UNITS: year/person
init_age_per_desisting_jail_exConv_wMI = 39
UNITS: year/person
init_age_per_desisting_jail_exConv_wo_MI = 38.5
UNITS: year/person
init_age_per_desisting_prison_exConv_wMI = 45
UNITS: year/person
init_age_per_desisting_prison_exConv_wo_MI = 42.8
UNITS: year/person
init_age_per_hi_risk_jail_exConv_wMI = 30.0868696905
UNITS: year/person
init_age_per_hi_risk_jail_exConv_wo_MI = 29.7104055345
UNITS: year/person
init_age_per_hi_risk_prison_exConv_wMI = 34.9867305247
UNITS: year/person
init_age_per_hi_risk_prison_exConv_wo_MI = 34.3744137966
UNITS: year/person
init_age_per_jail_offender_wMI = 28.5671128516
UNITS: year/person
init_age_per_jail_offender_wo_MI = 28.5671128516
UNITS: year/person
init_age_per_lo_risk_jail_exConv_wMI = 35.5513505648
UNITS: year/person
init_age_per_lo_risk_jail_exConv_wo_MI = 34.1701961644
UNITS: year/person
init_age_per_lo_risk_prison_exConv_wMI = 40.8395733342

UNITS: year/person
init_age_per_lo_risk_prison_exConv_wo_MI = 40.5911100666
UNITS: year/person
init_age_per_pretrial_suspect_in_comm = 28.1488558657
UNITS: year/person
init_age_per_prison_parolee_wMI = 33.2064558091
UNITS: year/person
init_age_per_prison_parolee_wMI_violated_condition = 34.5763188228
UNITS: year/person
init_age_per_prison_parolee_wo_MI = 32.5647693529
UNITS: year/person
init_age_per_prison_parolee_wo_MI_violated_condition = 33.9346323666
UNITS: year/person
init_age_per_prisoner_wMI = 30.9607125619
UNITS: year/person
init_age_per_prisoner_wo_MI = 30.3187295177
UNITS: year/person
init_age_per_probationer = 31.7007956908
UNITS: year/person
init_age_per_reparoled_prison_parole_violator_wMI = 34.5763188228
UNITS: year/person
init_age_per_reparoled_prison_parole_violator_wo_MI = 33.9346323666
UNITS: year/person
init_age_per_reprisoned_county_parole_violator_wMI = 38
UNITS: year/person
init_age_per_reprisoned_county_parole_violator_wo_MI = 37.5
UNITS: year/person
init_age_per_reprisoned_prison_parole_violator_wMI = 34.5763188228
UNITS: year/person
init_age_per_reprisoned_prison_parole_violator_wo_MI = 33.9346323666
UNITS: year/person
init_age_per_suspect_in_comm_with_cases_filed = 28.1488558657
UNITS: year/person
init_age_per_suspect_in_custody = 30.4326964551
UNITS: year/person
init_age_per_suspect_in_custody_with_cases_filed = 30.4326964551
UNITS: year/person
max_ave_age = 90

UNITS: year/person

min_ave_age = 18

UNITS: year/person

min_remaining_years_of_life = 1

UNITS: year/person

prisoner_life_expectancy = 65

UNITS: year/person

prisoner_wMI_mortality_rate = ref_mortality_rate * effect_of_remaining_years_of_life_on_mortality_rate_wMI

UNITS: 1/year

prisoner_wo_MI_mortality_rate = ref_mortality_rate * effect_of_remaining_years_of_life_on_mortality_rate_wo_MI

UNITS: 1/year

prisoner_wSMI_in_alt_facility_mortality_rate = ref_mortality_rate * effect_of_remaining_years_of_life_on_mortality_rate_wSMI

UNITS: 1/year

ref_mortality_rate = 0.003

UNITS: 1/year

remaining_years_of_life_of_prisoners_wMI = MAX (prisoner_life_expectancy - ave_age_per_prisoner_wMI, min_remaining_years_of_life)

UNITS: year/person

remaining_years_of_life_of_prisoners_wo_MI = MAX (prisoner_life_expectancy - ave_age_per_prisoner_wo_MI, min_remaining_years_of_life)

UNITS: year/person

remaining_years_of_life_of_prisoners_wSMI_in_alt_facility = MAX (prisoner_life_expectancy - ave_age_per_prisoner_wSMI_in_alt_facility, min_remaining_years_of_life)

UNITS: year/person

{ The model has 457 (457) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 41 (41) Flows: 138 (138) Converters: 278 (278)

Constants: 47 (47) Equations: 369 (369) Graphicals: 3 (3)

There are also 409 expanded macro variables.

}

Mental Profiles Module

Mental_Functions_of_Arrestees(t) = Mental_Functions_of_Arrestees(t - dt) + (adding_mental_func_thru_arresting +
transferring_mental_func_thru_hi_risk_jail_exConv_wo_MI_recidivism +
transferring_mental_func_thru_lo_risk_jail_exConv_wMI_recidivism +
transferring_mental_func_thru_hi_risk_prison_exConv_wMI_recidivism + transferring_mental_func_thru_lo_risk_jail_exConv_recidivism +
transferring_mental_func_thru_hi_risk_jail_exConv_wMI_recidivism + transferring_mental_func_thru_prison_parolee_wMI_recidivism +
transferring_mental_func_thru_lo_risk_prison_exConv_recidivism +
transferring_mental_func_thru_hi_risk_prison_exConv_wo_MI_recidivism +
transferring_mental_func_thru_county_parolee_wMI_recidivism + transferring_mental_func_thru_county_parolee_wo_MI_recidivism +
transferring_mental_func_thru_prison_parolee_wMI_violated_condition_recidivism +
transferring_mental_func_thru_prison_parolee_wo_MI_recidivism +
transferring_mental_func_thru_lo_risk_prison_exConv_wMI_recidivism +
transferring_mental_func_thru_prison_parolee_wo_MI_violated_condition_recidivism +
transferring_mental_func_thru_county_parolee_wMI_violated_condition_recidivism +
transferring_mental_func_thru_county_parolee_wo_MI_violated_condition_recidivism - losing_mental_func_thru_pretrial_release -
transferring_mental_func_thru_holding_suspect_in_custody - losing_mental_func_thru_first_time_arrestee_release_wo_conviction) * dt

INIT Mental_Functions_of_Arrestees = IF Individuals_with_Criminal_History.equilibrium_switch= 1 THEN 289360.210695 ELSE
Individuals_with_Criminal_History.Arrestees * init_mental_func_per_arrestee

UNITS: score

INFLOWS:

adding_mental_func_thru_arresting = Individuals_with_Criminal_History.first_time_arrest_rate *
mental_func_per_first_time_arrestee

UNITS: score/year

transferring_mental_func_thru_hi_risk_jail_exConv_wo_MI_recidivism =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_recidivism * ave_mental_func_per_hi_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_lo_risk_jail_exConv_wMI_recidivism =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_recidivism * ave_mental_func_per_lo_risk_jail_exConv_wMI

UNITS: score/year

transferring_mental_func_thru_hi_risk_prison_exConv_wMI_recidivism =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism * ave_mental_func_per_hi_risk_prison_exConv_wMI

UNITS: score/year

transferring_mental_func_thru_lo_risk_jail_exConv_recidivism =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism * ave_mental_func_per_lo_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_hi_risk_jail_exConv_wMI_recidivism =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_recidivism * ave_mental_func_per_hi_risk_jail_exConv_wMI

UNITS: score/year

transferring_mental_func_thru_prison_parolee_wMI_recidivism =
Individuals_with_Criminal_History.prison_parolee_wMI_committing_new_crimes * ave_mental_func_per_prison_parolee_wMI

UNITS: score/year

transferring_mental_func_thru_lo_risk_prison_exConv_recidivism =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism * ave_mental_func_per_lo_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_hi_risk_prison_exConv_wo_MI_recidivism =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism * ave_mental_func_per_hi_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_county_parolee_wMI_recidivism = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.county_parolee_wMI_committing_new_crimes * ave_mental_func_per_county_parolee_wMI)

UNITS: score/year

transferring_mental_func_thru_county_parolee_wo_MI_recidivism =
Individuals_with_Criminal_History.county_parolee_wo_MI_committing_new_crimes * ave_mental_func_per_county_parolee_wo_MI

UNITS: score/year

transferring_mental_func_thru_prison_parolee_wMI_violated_condition_recidivism =
Individuals_with_Criminal_History.prison_parolee_wMI_violated_condition_committing_new_crimes *
ave_mental_func_per_prison_parolee_wMI_violated_condition

UNITS: score/year

transferring_mental_func_thru_prison_parolee_wo_MI_recidivism =
Individuals_with_Criminal_History.prison_parolee_wo_MI_committing_new_crimes * ave_mental_func_per_prison_parolee_wo_MI

UNITS: score/year

transferring_mental_func_thru_lo_risk_prison_exConv_wMI_recidivism =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wMI_recidivism * ave_mental_func_per_lo_risk_prison_exCon_wMI

UNITS: score/year

transferring_mental_func_thru_prison_parolee_wo_MI_violated_condition_recidivism =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violated_condition_committing_new_crimes *
ave_mental_func_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_mental_func_thru_county_parolee_wMI_violated_condition_recidivism =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.county_parolee_wMI_violated_condition_committing_new_crimes *
ave_mental_func_per_county_parolee_wMI_violated_condition)

UNITS: score/year

transferring_mental_func_thru_county_parolee_wo_MI_violated_condition_recidivism =
Individuals_with_Criminal_History.county_parolee_wo_MI_violated_condition_committing_new_crimes *
ave_mental_func_per_county_parolee_wo_MI_violated_condition

UNITS: score/year

OUTFLOWS:

losing_mental_func_thru_pretrial_release = Individuals_with_Criminal_History.pretrial_release * ave_mental_func_per_arrestee

UNITS: score/year

transferring_mental_func_thru_holding_suspect_in_custody = Individuals_with_Criminal_History.being_held_in_custody *
ave_mental_func_per_arrestee

UNITS: score/year

losing_mental_func_thru_first_time_arrestee_release_wo_conviction =
Individuals_with_Criminal_History.first_time_arrestee_release_wo_charges * mental_func_per_first_time_arrestee

UNITS: score/year

Mental_Functions_of_County_Parolee_wMI_Violated_Condition(t) = Mental_Functions_of_County_Parolee_wMI_Violated_Condition(t -
dt) + (transferring_mental_func_thru_county_parolee_wMI_violating_condition +
increasing_mental_func_of_county_parolee_wMI_violated_condition_thru_comm_svcs -
transferring_mental_func_thru_discharging_county_parolee_wMI_violated_condition -
transferring_mental_func_thru_county_parolee_returning_to_jail_wMI -
transferring_mental_func_thru_county_parolee_wMI_violated_condition_recidivism) * dt

INIT Mental_Functions_of_County_Parolee_wMI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1
THEN 7.03854255345e-039 ELSE Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition *
init_mental_func_per_county_parolee_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_county_parolee_wMI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wMI_violating_condition * ave_mental_func_per_county_parolee_wMI

UNITS: score/year

increasing_mental_func_of_county_parolee_wMIviolated_condition_thru_comm_svcs =
county_parolee_violator_wMI_mental_func_chg_thru_comm_svcs

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_discharging_county_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.discharging_county_parolee_wMI_violated_condition *
ave_mental_func_per_county_parolee_wMI_violated_condition)

UNITS: score/year

transferring_mental_func_thru_county_parolee_returning_to_jail_wMI =
Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail *
ave_mental_func_per_county_parolee_wMI_violated_condition

UNITS: score/year

transferring_mental_func_thru_county_parolee_wMI_violated_condition_recidivism =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.county_parolee_wMI_violated_condition_committing_new_crimes *
ave_mental_func_per_county_parolee_wMI_violated_condition)

UNITS: score/year

Mental_Functions_of_County_Parolee_wo_MI_Violated_Condition(t) =
Mental_Functions_of_County_Parolee_wo_MI_Violated_Condition(t - dt) +
(transferring_mental_func_thru_county_parolee_wo_MI_violating_condition -
transferring_mental_func_thru_discharging_county_parolee_wo_MI_violated_condition -
transferring_mental_func_thru_county_parolee_returning_to_jail_wo_MI -
transferring_mental_func_thru_county_parolee_wo_MI_violated_condition_recidivism) * dt

INIT Mental_Functions_of_County_Parolee_wo_MI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1
THEN 0.001 ELSE Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition *
init_mental_func_per_county_parolee_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_county_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wo_MI_violating_condition * ave_mental_func_per_county_parolee_wo_MI

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_discharging_county_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.discharging_county_parolee_wo_MI_violated_condition *
ave_mental_func_per_county_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_mental_func_thru_county_parolee_returning_to_jail_wo_MI =
Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail *
ave_mental_func_per_county_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_mental_func_thru_county_parolee_wo_MI_violated_condition_recidivism =
Individuals_with_Criminal_History.county_parolee_wo_MI_violated_condition_committed_new_crimes *
ave_mental_func_per_county_parolee_wo_MI_violated_condition

UNITS: score/year

Mental_Functions_of_County_Parolees_wMI(t) = Mental_Functions_of_County_Parolees_wMI(t - dt) +
(transferring_mental_func_thru_releasing_prisoner_wMI_to_parole_after_realignment +
increasing_mental_func_of_county_parolee_wMI_thru_comm_svcs - transferring_mental_func_thru_discharging_county_parolee_wMI -
transferring_mental_func_thru_county_parolee_wMI_recidivism -
transferring_mental_func_thru_county_parolee_wMI_violating_condition) * dt

INIT Mental_Functions_of_County_Parolees_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0.001 ELSE
Individuals_with_Criminal_History.County_Parolees_wMI * init_mental_func_per_county_parolee_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_releasing_prisoner_wMI_to_parole_after_realignment =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment * ave_mental_func_per_prisoner_wMI *
multiplier_of_ave_mental_func_of_prisoner_to_county_parolee)

UNITS: score/year

increasing_mental_func_of_county_parolee_wMI_thru_comm_svcs = Individuals_with_Criminal_History.realignment_policy *
county_parolee_wMI_mental_func_chg_thru_comm_svcs

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_discharging_county_parolee_wMI =
Individuals_with_Criminal_History.discharging_county_parolee_wMI * ave_mental_func_per_county_parolee_wMI

UNITS: score/year

transferring_mental_func_thru_county_parolee_wMI_recidivism = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.county_parolee_wMI_committed_new_crimes * ave_mental_func_per_county_parolee_wMI)

UNITS: score/year

transferring_mental_func_thru_county_parolee_wMI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wMI_violating_condition * ave_mental_func_per_county_parolee_wMI

UNITS: score/year

Mental_Functions_of_County_Parolees_wo_MI(t) = Mental_Functions_of_County_Parolees_wo_MI(t - dt) +
(transferring_mental_func_thru_releasing_prisoner_wo_MI_to_parole_after_realignment -
transferring_mental_func_thru_discharging_county_parolee_wo_MI - transferring_mental_func_thru_county_parolee_wo_MI_recidivism
- transferring_mental_func_thru_county_parolee_wo_MI_violating_condition) * dt

INIT Mental_Functions_of_County_Parolees_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0.001 ELSE
Individuals_with_Criminal_History.County_Parolees_wo_MI * init_mental_func_per_county_parolee_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_releasing_prisoner_wo_MI_to_parole_after_realignment =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment * ave_mental_func_per_prisoner_wo_MI *
multiplier_of_ave_mental_func_of_prisoner_to_county_parolee)

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_discharging_county_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_county_parolee_wo_MI * ave_mental_func_per_county_parolee_wo_MI

UNITS: score/year

transferring_mental_func_thru_county_parolee_wo_MI_recidivism =
Individuals_with_Criminal_History.county_parolee_wo_MI_committing_new_crimes * ave_mental_func_per_county_parolee_wo_MI

UNITS: score/year

transferring_mental_func_thru_county_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wo_MI_violating_condition * ave_mental_func_per_county_parolee_wo_MI

UNITS: score/year

Mental_Functions_of_Defendants_in_Comm_Being_Trialed(t) = Mental_Functions_of_Defendants_in_Comm_Being_Trialed(t - dt) +
(transferring_mental_func_thru_suspect_in_comm_being_trial + transferring_mental_func_thru_violating_probation -
transferring_mental_func_thru_complaints_against_recidivating_suspect_in_comm_dismissed_after_trial -
transferring_mental_func_thru_defendants_in_comm_waiting_for_sentence) * dt

INIT Mental_Functions_of_Defendants_in_Comm_Being_Trialed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
((Individuals_with_Criminal_History.violating_probation*ave_mental_func_per_probationer+Individuals_with_Criminal_History.suspect_in
_comm_waiting_for_trial*ave_mental_func_per_suspect_in_comm_with_cases_filed) *
Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed) /
(Individuals_with_Criminal_History.defendants_in_comm_waiting_for_sentence+Individuals_with_Criminal_History.complaints_against_re
cidivating_defendant_in_comm_dismissed_after_trial) ELSE Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed *
init_mental_func_per_defendant_in_comm_being_trialed

UNITS: score

INFLOWS:

transferring_mental_func_thru_suspect_in_comm_being_trial =
Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial * ave_mental_func_per_suspect_in_comm_with_cases_filed

UNITS: score/year

transferring_mental_func_thru_violating_probation = Individuals_with_Criminal_History.violating_probation *
ave_mental_func_per_probationer

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_complaints_against_recidivating_suspect_in_comm_dismissed_after_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_comm_dismissed_after_trial *
ave_mental_func_per_defendant_in_comm_being_trialed

UNITS: score/year

transferring_mental_func_thru_defendants_in_comm_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_comm_waiting_for_sentence *
ave_mental_func_per_defendant_in_comm_being_trialed

UNITS: score/year

Mental_Functions_of_Defendants_in_Custody_Being_Trialed(t) = Mental_Functions_of_Defendants_in_Custody_Being_Trialed(t - dt) +
(transferring_mental_func_thru_suspect_in_custody_being_trial -
transferring_mental_func_thru_complaints_against_recidivating_suspects_in_custody_dismissed_after_trial -
transferring_mental_func_thru_defendants_in_custody_waiting_for_sentence) * dt

INIT Mental_Functions_of_Defendants_in_Custody_Being_Trialed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial*ave_mental_func_per_suspect_in_custody_with_cases_filed*In
dividuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed)/(Individuals_with_Criminal_History.defendants_in_custody_wai
ng_for_sentence+Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_custody_dismissed_after_trial)
ELSE Individuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed *
init_mental_func_per_defendant_in_custody_being_trialed

UNITS: score

INFLOWS:

transferring_mental_func_thru_suspect_in_custody_being_trial =
Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial * ave_mental_func_per_suspect_in_custody_with_cases_filed

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_complaints_against_recidivating_suspects_in_custody_dismissed_after_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_custody_dismissed_after_trial *
ave_mental_func_per_defendant_in_custody_being_trialed

UNITS: score/year

transferring_mental_func_thru_defendants_in_custody_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_custody_waiting_for_sentence *
ave_mental_func_per_defendant_in_custody_being_trialed

UNITS: score/year

Mental_Functions_of_Desisting_Jail_ExConvicts_wMI(t) = Mental_Functions_of_Desisting_Jail_ExConvicts_wMI(t - dt) +
(transferring_mental_func_thru_jail_exConv_wMI_being_assimilated - losing_mental_func_thru_desisting_jail_exConv_deaths_wMI) * dt

INIT Mental_Functions_of_Desisting_Jail_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.jail_exConv_wMI_desisting*ave_mental_func_per_lo_risk_jail_exConv_wMI*Individuals_with_Criminal
_History.Desisting_Jail_ExConvicts_wMI)/Individuals_with_Criminal_History.desisting_jail_exConv_deaths_wMI ELSE
Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wMI * init_mental_func_per_desisting_jail_exConv_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_jail_exConv_wMI_being_assimilated = Individuals_with_Criminal_History.jail_exConv_wMI_desisting
* ave_mental_func_per_lo_risk_jail_exConv_wMI

UNITS: score/year

OUTFLOWS:

losing_mental_func_thru_desisting_jail_exConv_deaths_wMI = Individuals_with_Criminal_History.desisting_jail_exConv_deaths_wMI
* ave_mental_func_per_desisting_jail_exConv_wMI

UNITS: score/year

Mental_Functions_of_Desisting_Jail_ExConvicts_wo_MI(t) = Mental_Functions_of_Desisting_Jail_ExConvicts_wo_MI(t - dt) +
(transferring_mental_func_thru_jail_exConv_wo_MI_being_assimilated - losing_mental_func_thru_desisting_jail_exConv_deaths_wo_MI)
* dt

INIT Mental_Functions_of_Desisting_Jail_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.jail_exConv_wo_MI_desisting*ave_mental_func_per_lo_risk_jail_exConv_wo_MI*Individuals_with_Cri
minal_History.Desisting_Jail_ExConvicts_wo_MI)/Individuals_with_Criminal_History.desisting_jail_exConv_deaths_wo_MI ELSE
Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wo_MI * init_mental_func_per_desisting_jail_exConv_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_jail_exConv_wo_MI_being_assimilated =
Individuals_with_Criminal_History.jail_exConv_wo_MI_desisting * ave_mental_func_per_lo_risk_jail_exConv_wo_MI

UNITS: score/year

OUTFLOWS:

losing_mental_func_thru_desisting_jail_exConv_deaths_wo_MI =
Individuals_with_Criminal_History.desisting_jail_exConv_deaths_wo_MI * ave_mental_func_per_desisting_jail_exConv_wo_MI

UNITS: score/year

Mental_Functions_of_Desisting_Prison_ExConvicts_wMI(t) = Mental_Functions_of_Desisting_Prison_ExConvicts_wMI(t - dt) +
(transferring_mental_func_thru_prison_exConv_being_assimilated_wMI -
losing_mental_func_thru_desisting_prison_exConv_deaths_wMI) * dt

INIT Mental_Functions_of_Desisting_Prison_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN
(Individuals_with_Criminal_History.prison_exConv_desisting_wMI*ave_mental_func_per_lo_risk_prison_exCon_wMI*Individuals_with_Cr

iminal_History.Desisting_Prison_ExConvicts_wMI)/Individuals_with_Criminal_History.desisting_prison_exConv_deaths_wMI ELSE
Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wMI * init_mental_func_per_desisting_prison_exConv_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_prison_exConv_being_assimilated_wMI =
Individuals_with_Criminal_History.prison_exConv_desisting_wMI * ave_mental_func_per_lo_risk_prison_exConv_wMI

UNITS: score/year

OUTFLOWS:

losing_mental_func_thru_desisting_prison_exConv_deaths_wMI =
Individuals_with_Criminal_History.desisting_prison_exConv_deaths_wMI * ave_mental_func_per_desisting_prison_exConv_wMI

UNITS: score/year

Mental_Functions_of_Desisting_Prison_ExConvicts_wo_MI(t) = Mental_Functions_of_Desisting_Prison_ExConvicts_wo_MI(t - dt) +
(transferring_mental_func_thru_prison_exConv_being_assimilated_wo_MI - losing_mental_func_thru_desisting_prison_exConv_deaths) *
dt

INIT Mental_Functions_of_Desisting_Prison_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN
(Individuals_with_Criminal_History.prison_exConv_desisting_wo_MI*ave_mental_func_per_lo_risk_prison_exConv_wo_MI*Individuals_w
ith_Criminal_History.Desisting_Prison_ExConvicts_wo_MI)/Individuals_with_Criminal_History.desisting_prison_exConv_deaths_wo_MI
ELSE Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wo_MI * init_mental_func_per_desisting_prison_exConv_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_prison_exConv_being_assimilated_wo_MI =
Individuals_with_Criminal_History.prison_exConv_desisting_wo_MI * ave_mental_func_per_lo_risk_prison_exConv_wo_MI

UNITS: score/year

OUTFLOWS:

losing_mental_func_thru_desisting_prison_exConv_deaths =
Individuals_with_Criminal_History.desisting_prison_exConv_deaths_wo_MI * ave_mental_func_per_desisting_prison_exConv_wo_MI

UNITS: score/year

Mental_Functions_of_HI_Risk_Jail_ExConvicts_wMI(t) = Mental_Functions_of_HI_Risk_Jail_ExConvicts_wMI(t - dt) +
(transferring_mental_func_thru_discharging_county_parolee_wMI + transferring_mental_func_thru_releasing_offender_wMI +
transferring_mental_func_thru_discharging_county_parolee_wMI_violated_condition +
transferring_mental_func_thru_rerelease_exPrisoners_wMI_to_county_parolee +
transferring_mental_func_thru_dismissed_jail_exConv_returning_to_comm_wMI -
losing_mental_func_thru_hi_risk_jail_exConv_wMI_deaths - transferring_mental_func_thru_hi_risk_jail_exConv_wMI_recidivism -
transferring_mental_func_thru_becoming_lo_risk_jail_exConv_wMI) * dt

INIT Mental_Functions_of_HI_Risk_Jail_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
866207.376467 ELSE Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI * init_mental_func_per_hi_risk_jail_exConv_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_discharging_county_parolee_wMI =
Individuals_with_Criminal_History.discharging_county_parolee_wMI * ave_mental_func_per_county_parolee_wMI

UNITS: score/year

transferring_mental_func_thru_releasing_offender_wMI = Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_mental_func_per_jail_offender_wMI

UNITS: score/year

transferring_mental_func_thru_discharging_county_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.realignment_policy *

(Individuals_with_Criminal_History.discharging_county_parolee_wMI_violated_condition *
ave_mental_func_per_county_parolee_wMI_violated_condition)

UNITS: score/year

transferring_mental_func_thru_rerelease_exPrisoners_wMI_to_county_parolee =
Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wMI *
ave_mental_func_per_reprisoned_county_parolee_violator_wMI

UNITS: score/year

transferring_mental_func_thru_dismissed_jail_exConv_returning_to_comm_wMI =
Individuals_with_Criminal_History.dismissed_jail_exConv_returning_to_comm_wMI *
ave_mental_func_per_suspect_in_comm_with_cases_filed

UNITS: score/year

OUTFLOWS:

losing_mental_func_thru_hi_risk_jail_exConv_wMI_deaths = Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_deaths *
ave_mental_func_per_hi_risk_jail_exConv_wMI

UNITS: score/year

transferring_mental_func_thru_hi_risk_jail_exConv_wMI_recidivism =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_recidivism * ave_mental_func_per_hi_risk_jail_exConv_wMI

UNITS: score/year

transferring_mental_func_thru_becoming_lo_risk_jail_exConv_wMI =
Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wMI * ave_mental_func_per_hi_risk_jail_exConv_wMI

UNITS: score/year

Mental_Functions_of_HI_Risk_Jail_ExConvicts_wo_MI(t) = Mental_Functions_of_HI_Risk_Jail_ExConvicts_wo_MI(t - dt) +
(transferring_mental_func_thru_discharging_county_parolee_wo_MI + transferring_mental_func_thru_releasing_offender_wo_MI +
transferring_mental_func_thru_discharging_county_parolee_wo_MI_violated_condition +
transferring_mental_func_thru_rerelease_exPrisoners_to_county_parolee_wo_MI +
transferring_mental_func_thru_dismissed_jail_exConv_returning_to_comm_wo_MI -
transferring_mental_func_thru_becoming_lo_risk_jail_exConv_wo_MI -
transferring_mental_func_thru_hi_risk_jail_exConv_wo_MI_recidivism - transferring_mental_func_thru_hi_risk_jail_exConv_deaths) * dt

INIT Mental_Functions_of_HI_Risk_Jail_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
1015608.92962 ELSE Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI *
init_mental_func_per_hi_risk_jail_exConv_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_discharging_county_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_county_parolee_wo_MI * ave_mental_func_per_county_parolee_wo_MI

UNITS: score/year

transferring_mental_func_thru_releasing_offender_wo_MI =
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI * ave_mental_func_per_jail_offender_wo_MI

UNITS: score/year

transferring_mental_func_thru_discharging_county_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.discharging_county_parolee_wo_MI_violated_condition *
ave_mental_func_per_county_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_mental_func_thru_rerelease_exPrisoners_to_county_parolee_wo_MI =
Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wo_MI *
ave_mental_func_per_reprisoned_county_parolee_violator_wo_MI

UNITS: score/year

transferring_mental_func_thru_dismissed_jail_exConv_returning_to_comm_wo_MI =
Individuals_with_Criminal_History.dismissed_jail_exConv_returning_to_comm_wo_MI *
ave_mental_func_per_suspect_in_comm_with_cases_filed

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_becoming_lo_risk_jail_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI * ave_mental_func_per_hi_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_hi_risk_jail_exConv_wo_MI_recidivism =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_recidivism * ave_mental_func_per_hi_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_hi_risk_jail_exConv_deaths = Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_deaths *
ave_mental_func_per_hi_risk_jail_exConv_wo_MI

UNITS: score/year

Mental_Functions_of_Hi_Risk_Prison_ExConvicts_wMI(t) = Mental_Functions_of_Hi_Risk_Prison_ExConvicts_wMI(t - dt) +
(transferring_mental_func_thru_discharging_prison_parolee_wMI +
transferring_mental_func_thru_discharging_prison_parolee_wMI_violated_condition +
transferring_mental_func_thru_discharging_reparoled_prison_parolee_wMI +
transferring_mental_func_thru_prisoners_wSMI_in_alt_facility_being_released +
transferring_mental_func_thru_dismissed_prison_exConv_returning_to_comm_wMI -
transferring_mental_func_thru_becoming_lo_risk_prison_exConv_wMI - losing_mental_func_thru_hi_risk_prison_exConv_wMI_deaths -
transferring_mental_func_thru_hi_risk_prison_exConv_wMI_recidivism) * dt

INIT Mental_Functions_of_Hi_Risk_Prison_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN +
((Individuals_with_Criminal_History.discharging_prison_parolee_wMI*ave_mental_func_per_prison_parolee_wMI+Individuals_with_Crimina
l_History.discharging_reparoled_prison_parolee_wMI*ave_mental_func_per_reparoled_prison_parolee_wMI+Individuals_with_Crimina
l_History.dismissed_prison_exConv_returning_to_comm_wMI*ave_mental_func_per_suspect_in_comm_with_cases_filed+Individuals_wit
h_Criminal_History.discharging_prison_parolee_wMI_violated_condition*ave_mental_func_per_prison_parolee_wMI_violated_condition)
* Individuals_with_Criminal_History.Hi_Risk_Prison_ExConvicts_wMI) /
(Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism+Individuals_with_Criminal_History.hi_risk_prison_exConv_dea
ths_wMI+Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI) ELSE
Individuals_with_Criminal_History.Hi_Risk_Prison_ExConvicts_wMI * init_mental_func_per_hi_risk_exConv_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_discharging_prison_parolee_wMI =
(Individuals_with_Criminal_History.discharging_prison_parolee_wMI * ave_mental_func_per_prison_parolee_wMI)

UNITS: score/year

transferring_mental_func_thru_discharging_prison_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wMI_violated_condition *
ave_mental_func_per_prison_parolee_wMI_violated_condition

UNITS: score/year

transferring_mental_func_thru_discharging_reparoled_prison_parolee_wMI =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wMI * ave_mental_func_per_reparoled_prison_parolee_wMI

UNITS: score/year

transferring_mental_func_thru_prisoners_wSMI_in_alt_facility_being_released =
transferring_mental_func_thru_releasing_prisoner_wSMI_in_alt_facility

UNITS: score/year

transferring_mental_func_thru_dismissed_prison_exConv_returning_to_comm_wMI =
Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wMI *
ave_mental_func_per_suspect_in_comm_with_cases_filed

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_becoming_lo_risk_prison_exConv_wMI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI * ave_mental_func_per_hi_risk_prison_exCon_wMI

UNITS: score/year

losing_mental_func_thru_hi_risk_prison_exConv_wMI_deaths =
Individuals_with_Criminal_History.hi_risk_prison_exConv_deaths_wMI * ave_mental_func_per_hi_risk_prison_exCon_wMI

UNITS: score/year

transferring_mental_func_thru_hi_risk_prison_exConv_wMI_recidivism =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism * ave_mental_func_per_hi_risk_prison_exCon_wMI

UNITS: score/year

Mental_Functions_of_HI_Risk_Prison_ExConvicts_wo_MI(t) = Mental_Functions_of_HI_Risk_Prison_ExConvicts_wo_MI(t - dt) +
(transferring_mental_func_thru_discharging_prison_parolee_wo_MI +
transferring_mental_func_thru_discharging_reparoled_prison_parolee_wo_MI +
transferring_mental_func_thru_dismissed_prison_exConv_returning_to_comm_wo_MI -
transferring_mental_func_thru_becoming_lo_risk_prison_exConv_wo_MI -
transferring_mental_func_thru_hi_risk_prison_exConv_wo_MI_deaths -
transferring_mental_func_thru_hi_risk_prison_exConv_wo_MI_recidivism) * dt

INIT Mental_Functions_of_HI_Risk_Prison_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN
((Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI*ave_mental_func_per_prison_parolee_wo_MI+
ave_mental_func_per_defendant_in_comm_being_trialed
*Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wo_MI+Individuals_with_Criminal_History.discharging
_reparoled_prison_parolee_wo_MI*ave_mental_func_per_reparoled_prison_parolee_wo_MI+Individuals_with_Criminal_History.discharg
ing_prison_parolee_wo_MI_violated_condition*ave_mental_func_per_prison_parolee_wo_MI_violated_condition) *
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI) /
(Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI+Individuals_with_Criminal_History.hi_risk_prison_exConv_w
o_MI_deaths+Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism) ELSE
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI * init_mental_func_per_hi_risk_exConv_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_discharging_prison_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI * ave_mental_func_per_prison_parolee_wo_MI

UNITS: score/year

transferring_mental_func_thru_discharging_prison_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI_violated_condition *
ave_mental_func_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_mental_func_thru_discharging_reparoled_prison_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wo_MI *
ave_mental_func_per_reparoled_prison_parolee_wo_MI

UNITS: score/year

transferring_mental_func_thru_dismissed_prison_exConv_returning_to_comm_wo_MI =
Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wo_MI *
ave_mental_func_per_defendant_in_comm_being_trialed

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_becoming_lo_risk_prison_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI * ave_mental_func_per_hi_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_hi_risk_prison_exConv_wo_MI_deaths =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_deaths * ave_mental_func_per_hi_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_hi_risk_prison_exConv_wo_MI_recidivism =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism * ave_mental_func_per_hi_risk_prison_exConv_wo_MI

UNITS: score/year

Mental_Functions_of_Jail_Offenders_wMI(t) = Mental_Functions_of_Jail_Offenders_wMI(t - dt) +
(transferring_mental_func_thru_convicting_convict_in_custody_to_jail_wMI +
transferring_mental_func_thru_jail_offender_devMI_after_realignment +
transferring_mental_func_thru_convicting_convict_in_comm_to_jail_wMI -
transferring_mental_func_thru_continue_serving_thru_probation_wMI - transferring_mental_func_thru_releasing_offender_wMI -
mental_func_loss_in_jail_wMI) * dt

INIT Mental_Functions_of_Jail_Offenders_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 201166.930286
ELSE Individuals_with_Criminal_History.Jail_Offenders_wMI * init_mental_func_per_jail_offenders_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_convicting_convict_in_custody_to_jail_wMI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wMI * ave_mental_func_per_preSentencing_convict_in_custody

UNITS: score/year

transferring_mental_func_thru_jail_offender_devMI_after_realignment = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.jail_offender_devMI * ave_mental_func_per_jail_offender_wo_MI)

UNITS: score/year

transferring_mental_func_thru_convicting_convict_in_comm_to_jail_wMI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wMI * ave_mental_func_per_preSentencing_convict_in_comm

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_continue_serving_thru_probation_wMI =
Individuals_with_Criminal_History.continue_serving_thru_probation_wMI * ave_mental_func_per_jail_offender_wMI

UNITS: score/year

transferring_mental_func_thru_releasing_offender_wMI = Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_mental_func_per_jail_offender_wMI

UNITS: score/year

mental_func_loss_in_jail_wMI = jail_offenders_wMI_mental_func_chg

UNITS: score/year

Mental_Functions_of_Jail_Offenders_wo_MI(t) = Mental_Functions_of_Jail_Offenders_wo_MI(t - dt) +
(transferring_mental_func_thru_convicting_convict_in_custody_to_jail_wo_MI +
transferring_mental_func_thru_convicting_convict_in_comm_to_jail_wo_MI -
transferring_mental_func_thru_jail_offender_devMI_after_realignment -
transferring_mental_func_thru_continue_serving_thru_probation_wo_MI - transferring_mental_func_thru_releasing_offender_wo_MI -
mental_func_loss_in_jail_wo_MI) * dt

INIT Mental_Functions_of_Jail_Offenders_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
((Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wo_MI*ave_mental_func_per_preSentencing_convict_in_comm
+Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wo_MI*ave_mental_func_per_preSentencing_convict_in_cust
ody) * Individuals_with_Criminal_History.Jail_Offenders_wo_MI) /
(Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI+Individuals_with_Criminal_History.releasing_jail_offenders_
directly_wo_MI) ELSE Individuals_with_Criminal_History.Jail_Offenders_wo_MI * init_mental_func_per_jail_offender_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_convicting_convict_in_custody_to_jail_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wo_MI *
ave_mental_func_per_preSentencing_convict_in_custody

UNITS: score/year

transferring_mental_func_thru_convicting_convict_in_comm_to_jail_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wo_MI * ave_mental_func_per_preSentencing_convict_in_comm

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_jail_offender_devMI_after_realignment = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.jail_offender_devMI * ave_mental_func_per_jail_offender_wo_MI)

UNITS: score/year

transferring_mental_func_thru_continue_serving_thru_probation_wo_MI =
Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI * ave_mental_func_per_jail_offender_wo_MI

UNITS: score/year

transferring_mental_func_thru_releasing_offender_wo_MI =
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI * ave_mental_func_per_jail_offender_wo_MI

UNITS: score/year

mental_func_loss_in_jail_wo_MI = jail_offenders_wo_MI_mental_func_chg

UNITS: score/year

Mental_Functions_of_Lo_Risk_Jail_ExConvicts_wMI(t) = Mental_Functions_of_Lo_Risk_Jail_ExConvicts_wMI(t - dt) +
(transferring_mental_func_thru_becoming_lo_risk_jail_exConv_wMI -
transferring_mental_func_thru_jail_exConv_wMI_being_assimilated - transferring_mental_func_thru_lo_risk_jail_exConv_wMI_recidivism
- losing_mental_func_thru_lo_risk_jail_exConv_wMI_deaths) * dt

INIT Mental_Functions_of_Lo_Risk_Jail_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
1267443.90754 ELSE Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI * init_mental_func_per_lo_risk_jail_exConv_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_becoming_lo_risk_jail_exConv_wMI =
Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wMI * ave_mental_func_per_hi_risk_jail_exConv_wMI

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_jail_exConv_wMI_being_assimilated = Individuals_with_Criminal_History.jail_exConv_wMI_desisting
* ave_mental_func_per_lo_risk_jail_exConv_wMI

UNITS: score/year

transferring_mental_func_thru_lo_risk_jail_exConv_wMI_recidivism =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_recidivism * ave_mental_func_per_lo_risk_jail_exConv_wMI

UNITS: score/year

losing_mental_func_thru_lo_risk_jail_exConv_wMI_deaths = Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_deaths *
ave_mental_func_per_lo_risk_jail_exConv_wMI

UNITS: score/year

Mental_Functions_of_Lo_Risk_Jail_ExConvicts_wo_MI(t) = Mental_Functions_of_Lo_Risk_Jail_ExConvicts_wo_MI(t - dt) +
(transferring_mental_func_thru_becoming_lo_risk_jail_exConv_wo_MI + transferring_mental_func_thru_discharging_fr_probation -
transferring_mental_func_thru_jail_exConv_wo_MI_being_assimilated - losing_mental_func_thru_lo_risk_jail_exConv_deaths -
transferring_mental_func_thru_lo_risk_jail_exConv_recidivism) * dt

INIT Mental_Functions_of_Lo_Risk_Jail_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
 ((ave_mental_func_per_probationer*Individuals_with_Criminal_History.discharging_fr_probation+Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI*ave_mental_func_per_hi_risk_jail_exConv_wo_MI)*Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI)/(Individuals_with_Criminal_History.jail_exConv_wo_MI_desisting+Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_deaths+Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism) ELSE
 Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI * init_mental_func_per_lo_risk_jail_exConv_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_becoming_lo_risk_jail_exConv_wo_MI =
 Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI * ave_mental_func_per_hi_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_discharging_fr_probation = Individuals_with_Criminal_History.discharging_fr_probation *
 ave_mental_func_per_probationer

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_jail_exConv_wo_MI_being_assimilated =
 Individuals_with_Criminal_History.jail_exConv_wo_MI_desisting * ave_mental_func_per_lo_risk_jail_exConv_wo_MI

UNITS: score/year

losing_mental_func_thru_lo_risk_jail_exConv_deaths = Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_deaths *
 ave_mental_func_per_lo_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_lo_risk_jail_exConv_recidivism =
 Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism * ave_mental_func_per_lo_risk_jail_exConv_wo_MI

UNITS: score/year

Mental_Functions_of_Lo_Risk_Prison_ExConvicts_wMI(t) = Mental_Functions_of_Lo_Risk_Prison_ExConvicts_wMI(t - dt) +
 (transferring_mental_func_thru_becoming_lo_risk_prison_exConv_wMI -
 transferring_mental_func_thru_prison_exConv_being_assimilated_wMI - losing_mental_func_thru_lo_risk_prison_exConv_wMI_deaths -
 transferring_mental_func_thru_lo_risk_prison_exConv_wMI_recidivism) * dt

INIT Mental_Functions_of_Lo_Risk_Prison_ExConvicts_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
 1310702.65217 ELSE Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI * init_mental_func_per_lo_risk_exConv_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_becoming_lo_risk_prison_exConv_wMI =
 Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI * ave_mental_func_per_hi_risk_prison_exConv_wMI

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_prison_exConv_being_assimilated_wMI =
 Individuals_with_Criminal_History.prison_exConv_desisting_wMI * ave_mental_func_per_lo_risk_prison_exConv_wMI

UNITS: score/year

losing_mental_func_thru_lo_risk_prison_exConv_wMI_deaths =
 Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wMI * ave_mental_func_per_lo_risk_prison_exConv_wMI

UNITS: score/year

transferring_mental_func_thru_lo_risk_prison_exConv_wMI_recidivism =
 Individuals_with_Criminal_History.lo_risk_prison_exConv_wMI_recidivism * ave_mental_func_per_lo_risk_prison_exConv_wMI

UNITS: score/year

Mental_Functions_of_Lo_Risk_Prison_ExConvicts_wo_MI(t) = Mental_Functions_of_Lo_Risk_Prison_ExConvicts_wo_MI(t - dt) +
(transferring_mental_func_thru_becoming_lo_risk_prison_exConv_wo_MI -
transferring_mental_func_thru_lo_risk_prison_exConv_recidivism -
transferring_mental_func_thru_lo_risk_prison_exConv_wo_MI_deaths -
transferring_mental_func_thru_prison_exConv_being_assimilated_wo_MI) * dt

INIT Mental_Functions_of_Lo_Risk_Prison_ExConvicts_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI*ave_mental_func_per_hi_risk_prison_exConv_wo_MI*Indiv
iduals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI)/(Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wo_
MI+Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism+Individuals_with_Criminal_History.prison_exConv_desist
ing_wo_MI) ELSE Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI * init_mental_func_per_lo_risk_exConv_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_becoming_lo_risk_prison_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI * ave_mental_func_per_hi_risk_prison_exConv_wo_MI

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_lo_risk_prison_exConv_recidivism =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism * ave_mental_func_per_lo_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_lo_risk_prison_exConv_wo_MI_deaths =
Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wo_MI * ave_mental_func_per_lo_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_mental_func_thru_prison_exConv_being_assimilated_wo_MI =
Individuals_with_Criminal_History.prison_exConv_desisting_wo_MI * ave_mental_func_per_lo_risk_prison_exConv_wo_MI

UNITS: score/year

Mental_Functions_of_PreSentencing_Convicts_in_Comm(t) = Mental_Functions_of_PreSentencing_Convicts_in_Comm(t - dt) +
(transferring_mental_func_thru_defendants_in_comm_waiting_for_sentence +
transferring_mental_func_thru_defendants_in_comm_conviction_wo_trial -
transferring_mental_func_thru_convict_in_comm_being_sentenced) * dt

INIT Mental_Functions_of_PreSentencing_Convicts_in_Comm = IF Individuals_with_Criminal_History.equilibrium_switch =1 THEN
84823.1985785 ELSE Individuals_with_Criminal_History.PreSentencing_Convicts_fr_Comm_in_Custody *
init_mental_func_per_preSentencing_convict_in_comm

UNITS: score

INFLOWS:

transferring_mental_func_thru_defendants_in_comm_waiting_for_sentence =
Individuals_with_Criminal_History.defendents_in_comm_waiting_for_sentence *
ave_mental_func_per_defendant_in_comm_being_trialed

UNITS: score/year

transferring_mental_func_thru_defendants_in_comm_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial * ave_mental_func_per_suspect_in_comm_with_cases_filed

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_convict_in_comm_being_sentenced =
Individuals_with_Criminal_History.convict_in_comm_being_sentenced * ave_mental_func_per_preSentencing_convict_in_comm

UNITS: score/year

Mental_Functions_of_PreSentencing_Convicts_in_Custody(t) = Mental_Functions_of_PreSentencing_Convicts_in_Custody(t - dt) +
(transferring_mental_func_thru_defendants_in_custody_waiting_for_sentence +

transferring_mental_func_thru_defendants_in_cusotdy_conviction_wo_trial -
transferring_mental_func_thru_convict_in_custody_being_sentenced) * dt

INIT Mental_Functions_of_PreSentencing_Convicts_in_Custody = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
154015.904149 ELSE Individuals_with_Criminal_History.PreSentencing_Convicts_in_Custody *
init_mental_func_per_preSentencing_convict_in_custody

UNITS: score

INFLOWS:

transferring_mental_func_thru_defendants_in_custody_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_custody_waiting_for_sentence *
ave_mental_func_per_defendant_in_custody_being_trialed

UNITS: score/year

transferring_mental_func_thru_defendants_in_cusotdy_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial * ave_mental_func_per_suspect_in_custody_with_cases_filed

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_convict_in_custody_being_sentenced =
Individuals_with_Criminal_History.convict_in_custody_being_sentenced * ave_mental_func_per_preSentencing_convict_in_custody

UNITS: score/year

Mental_Functions_of_Prison_Parolee_wMI_Violated_Condition(t) = Mental_Functions_of_Prison_Parolee_wMI_Violated_Condition(t - dt)
+ (transferring_mental_func_thru_prison_parolee_wMI_violating_condition +
increasing_mental_func_of_prison_parolee_wMI_violated_condition_thru_comm_svcs -
transferring_mental_func_thru_prison_parolee_returning_to_prison_wMI -
transferring_mental_func_thru_discharging_prison_parolee_wMI_violated_condition -
transferring_mental_func_thru_prison_parolee_wMI_violated_condition_recidivism) * dt

INIT Mental_Functions_of_Prison_Parolee_wMI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1
THEN 61487.6302106 ELSE
Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition *
init_mental_func_per_prison_parolee_wMI_violated_condition

UNITS: score

INFLOWS:

transferring_mental_func_thru_prison_parolee_wMI_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wMI_violating_condition * ave_mental_func_per_prison_parolee_wMI

UNITS: score/year

increasing_mental_func_of_prison_parolee_wMI_violated_condition_thru_comm_svcs =
prison_parolee_violator_wMI_mental_func_chg_thru_comm_svcs

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_prison_parolee_returning_to_prison_wMI =
Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison *
ave_mental_func_per_prison_parolee_wMI_violated_condition

UNITS: score/year

transferring_mental_func_thru_discharging_prison_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wMI_violated_condition *
ave_mental_func_per_prison_parolee_wMI_violated_condition

UNITS: score/year

transferring_mental_func_thru_prison_parolee_wMI_violated_condition_recidivism =
Individuals_with_Criminal_History.prison_parolee_wMI_violated_condition_committing_new_crimes *
ave_mental_func_per_prison_parolee_wMI_violated_condition

UNITS: score/year

Mental_Functions_of_Prison_Parolee_wo_MI_Violated_Condition(t) = Mental_Functions_of_Prison_Parolee_wo_MI_Violated_Condition(t - dt) + (transferring_mental_func_thru_prison_parolee_wo_MI_violating_condition - transferring_mental_func_thru_prison_parolee_returning_to_prison_wo_MI - transferring_mental_func_thru_discharging_prison_parolee_wo_MI_violated_condition - transferring_mental_func_thru_prison_parolee_wo_MI_violated_condition_recidivism) * dt

INIT Mental_Functions_of_Prison_Parolee_wo_MI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 195243.364222 ELSE Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition * init_mental_func_per_prison_parolee_wo_MI_violated_condition

UNITS: score

INFLOWS:

transferring_mental_func_thru_prison_parolee_wo_MI_violating_condition = Individuals_with_Criminal_History.prison_parolee_wo_MI_violating_condition * ave_mental_func_per_prison_parolee_wo_MI

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_prison_parolee_returning_to_prison_wo_MI = Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison * ave_mental_func_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_mental_func_thru_discharging_prison_parolee_wo_MI_violated_condition = Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI_violated_condition * ave_mental_func_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_mental_func_thru_prison_parolee_wo_MI_violated_condition_recidivism = Individuals_with_Criminal_History.prison_parolee_wo_MI_violated_condition_committing_new_crimes * ave_mental_func_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

Mental_Functions_of_Prison_Parolees_wMI(t) = Mental_Functions_of_Prison_Parolees_wMI(t - dt) + (transferring_mental_func_thru_releasing_prisoner_wMI + increasing_mental_func_of_prison_parolee_wMI_thru_comm_svcs - transferring_mental_func_thru_discharging_prison_parolee_wMI - transferring_mental_func_thru_prison_parolee_wMI_recidivism - transferring_mental_func_thru_prison_parolee_wMI_violating_condition) * dt

INIT Mental_Functions_of_Prison_Parolees_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 199840.700638 ELSE Individuals_with_Criminal_History.Prison_Parolees_wMI * init_mental_func_per_prison_parolee_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_releasing_prisoner_wMI = Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment * ave_mental_func_per_prisoner_wMI

UNITS: score/year

increasing_mental_func_of_prison_parolee_wMI_thru_comm_svcs = prison_parolee_wMI_mental_func_chg_thru_comm_svcs

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_discharging_prison_parolee_wMI = (Individuals_with_Criminal_History.discharging_prison_parolee_wMI * ave_mental_func_per_prison_parolee_wMI)

UNITS: score/year

transferring_mental_func_thru_prison_parolee_wMI_recidivism = Individuals_with_Criminal_History.prison_parolee_wMI_committing_new_crimes * ave_mental_func_per_prison_parolee_wMI

UNITS: score/year

transferring_mental_func_thru_prison_parolee_wMI_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wMI_violating_condition * ave_mental_func_per_prison_parolee_wMI

UNITS: score/year

Mental_Functions_of_Prison_Parolees_wo_MI(t) = Mental_Functions_of_Prison_Parolees_wo_MI(t - dt) +
(transferring_mental_func_thru_releasing_prisoner_wo_MI - transferring_mental_func_thru_discharging_prison_parolee_wo_MI -
transferring_mental_func_thru_prison_parolee_wo_MI_recidivism -
transferring_mental_func_thru_prison_parolee_wo_MI_violating_condition) * dt

INIT Mental_Functions_of_Prison_Parolees_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 763615.70038
ELSE Individuals_with_Criminal_History.Prison_Parolees_wo_MI * init_mental_func_per_prison_parolee_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_releasing_prisoner_wo_MI =
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment * ave_mental_func_per_prisoner_wo_MI

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_discharging_prison_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI * ave_mental_func_per_prison_parolee_wo_MI

UNITS: score/year

transferring_mental_func_thru_prison_parolee_wo_MI_recidivism =
Individuals_with_Criminal_History.prison_parolee_wo_MI_committing_new_crimes * ave_mental_func_per_prison_parolee_wo_MI

UNITS: score/year

transferring_mental_func_thru_prison_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violating_condition * ave_mental_func_per_prison_parolee_wo_MI

UNITS: score/year

Mental_Functions_of_Prisoners_wMI(t) = Mental_Functions_of_Prisoners_wMI(t - dt) +
(transferring_mental_func_thru_convicting_convict_in_custody_to_prisoner_wMI + transferring_mental_func_thru_prisoner_develop_MI
+ transferring_mental_func_thru_convicting_convict_in_comm_to_prisoner_wMI - losing_mental_func_thru_prisoner_wMI_deaths -
transferring_mental_func_thru_releasing_prisoner_wMI -
transferring_mental_func_thru_releasing_prisoner_wMI_to_parole_after_realignment - mental_func_loss_in_prison_wMI -
transferring_mental_func_thru_recovering_fr_MI) * dt

INIT Mental_Functions_of_Prisoners_wMI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN 403034.840795
ELSE Individuals_with_Criminal_History.Prisoners_wMI * init_mental_func_per_prisoner_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_convicting_convict_in_custody_to_prisoner_wMI =
(Individuals_with_Criminal_History.incoming_prison_convicts_in_custody_wMI *
ave_mental_func_per_incoming_prisoner_in_custody_wMI) * (1 -
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted)

UNITS: score/year

transferring_mental_func_thru_prisoner_develop_MI = Individuals_with_Criminal_History.prisoner_develop_MI *
ave_mental_func_per_prisoner_wo_MI

UNITS: score/year

transferring_mental_func_thru_convicting_convict_in_comm_to_prisoner_wMI =
(Individuals_with_Criminal_History.incoming_prison_convicts_in_comm_wMI * ave_mental_func_per_incoming_prisoner_in_comm_wMI)
* (1 - Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_comm_diverted)

UNITS: score/year

OUTFLOWS:

losing_mental_func_thru_prisoner_wMI_deaths = Individuals_with_Criminal_History.prisoner_wMI_deaths *
ave_mental_func_per_prisoner_wMI

UNITS: score/year

transferring_mental_func_thru_releasing_prisoner_wMI =
Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment * ave_mental_func_per_prisoner_wMI

UNITS: score/year

transferring_mental_func_thru_releasing_prisoner_wMI_to_parole_after_realignment =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment * ave_mental_func_per_prisoner_wMI *
multiplier_of_ave_mental_func_of_prisoner_to_county_parole)

UNITS: score/year

mental_func_loss_in_prison_wMI = prisoner_mental_func_reduction_wMI

UNITS: score/year

transferring_mental_func_thru_recovering_fr_MI = Individuals_with_Criminal_History.prisoner_wMI_recovering *
ave_mental_func_per_prisoner_wMI

UNITS: score/year

Mental_Functions_of_Prisoners_wo_MI(t) = Mental_Functions_of_Prisoners_wo_MI(t - dt) +
(transferring_mental_func_thru_convicting_convict_in_custody_to_prisoner_wo_MI + transferring_mental_func_thru_recovering_fr_MI +
transferring_mental_func_thru_convicting_convict_in_comm_to_prisoner_wo_MI -
transferring_mental_func_thru_releasing_prisoner_wo_MI - losing_mental_func_thru_prisoner_wo_MI_deaths -
transferring_mental_func_thru_prisoner_develop_MI -
transferring_mental_func_thru_releasing_prisoner_wo_MI_to_parole_after_realignment - mental_func_loss_in_prison_wo_MI) * dt

INIT Mental_Functions_of_Prisoners_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN 1194306.10972 ELSE
Individuals_with_Criminal_History.Prisoners_wo_MI * init_mental_func_per_prisoner_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_convicting_convict_in_custody_to_prisoner_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_prison_wo_MI *
ave_mental_func_per_preSentencing_convict_in_custody

UNITS: score/year

transferring_mental_func_thru_recovering_fr_MI = Individuals_with_Criminal_History.prisoner_wMI_recovering *
ave_mental_func_per_prisoner_wMI

UNITS: score/year

transferring_mental_func_thru_convicting_convict_in_comm_to_prisoner_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_prison_wo_MI *
ave_mental_func_per_preSentencing_convict_in_comm

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_releasing_prisoner_wo_MI =
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment * ave_mental_func_per_prisoner_wo_MI

UNITS: score/year

losing_mental_func_thru_prisoner_wo_MI_deaths = Individuals_with_Criminal_History.prisoner_wo_MI_deaths *
ave_mental_func_per_prisoner_wo_MI

UNITS: score/year

transferring_mental_func_thru_prisoner_develop_MI = Individuals_with_Criminal_History.prisoner_develop_MI *
ave_mental_func_per_prisoner_wo_MI

UNITS: score/year

transferring_mental_func_thru_releasing_prisoner_wo_MI_to_parole_after_realignment =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment * ave_mental_func_per_prisoner_wo_MI *
multiplier_of_ave_mental_func_of_prisoner_to_county_parole)

UNITS: score/year

mental_func_loss_in_prison_wo_MI = prisoner_mental_func_reduction_wo_MI

UNITS: score/year

Mental_Functions_of_Prisoners_wSMI_in_Alternative_Facility(t) = Mental_Functions_of_Prisoners_wSMI_in_Alternative_Facility(t - dt) +
(transferring_mental_func_thru_convicting_convict_in_custody_to_alt_facility_wSMI +
transferring_mental_func_thru_convicting_convict_in_comm_to_alt_facility_wSMI + mental_func_gain_in_alt_facility -
transferring_mental_func_thru_releasing_prisoner_wSMI_in_alt_facility -
losing_mental_func_thru_prisoner_wSMI_in_alt_facility_deaths) * dt

INIT Mental_Functions_of_Prisoners_wSMI_in_Alternative_Facility = IF
Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI = 1 THEN
Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility * ave_mental_func_per_prisoner_wMI ELSE 0.0000000001

UNITS: score

INFLOWS:

transferring_mental_func_thru_convicting_convict_in_custody_to_alt_facility_wSMI =
(Individuals_with_Criminal_History.incoming_prison_convicts_in_custody_wMI *
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted) *
ave_mental_func_per_diverted_prison_convict_in_custody_wSMI

UNITS: score/year

transferring_mental_func_thru_convicting_convict_in_comm_to_alt_facility_wSMI =
(Individuals_with_Criminal_History.incoming_prison_convicts_in_comm_wMI *
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_comm_diverted) *
ave_mental_func_per_diverted_prison_convict_in_comm_wSMI

UNITS: score/year

mental_func_gain_in_alt_facility = Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI *
(Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility * mental_func_gain)

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_releasing_prisoner_wSMI_in_alt_facility =
Individuals_with_Criminal_History.releasing_prisoner_wSMI_in_alt_facility * ave_mental_func_per_prisoner_wSMI_in_alt_facility

UNITS: score/year

losing_mental_func_thru_prisoner_wSMI_in_alt_facility_deaths =
Individuals_with_Criminal_History.deaths_of_prisoners_wSMI_in_alt_facility * ave_mental_func_per_prisoner_wSMI_in_alt_facility

UNITS: score/year

Mental_Functions_of_Probationers(t) = Mental_Functions_of_Probationers(t - dt) +
(transferring_mental_func_thru_continue_serving_thru_probation_wMI +
transferring_mental_func_thru_continue_serving_thru_probation_wo_MI +
transferring_mental_func_thru_convicting_convict_in_custody_to_probation +
transferring_mental_func_thru_convicting_convict_in_comm_to_probation - transferring_mental_func_thru_discharging_fr_probation -
transferring_mental_func_thru_violating_probation) * dt

INIT Mental_Functions_of_Probationers = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 4752659.96977 ELSE
Individuals_with_Criminal_History.Probationers * init_mental_func_per_probationer

UNITS: score

INFLOWS:

transferring_mental_func_thru_continue_serving_thru_probation_wMI =
Individuals_with_Criminal_History.continue_serving_thru_probation_wMI * ave_mental_func_per_jail_offender_wMI

UNITS: score/year

transferring_mental_func_thru_continue_serving_thru_probation_wo_MI =
Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI * ave_mental_func_per_jail_offender_wo_MI

UNITS: score/year

transferring_mental_func_thru_convicting_convict_in_custody_to_probation =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_probation *
ave_mental_func_per_preSentencing_convict_in_custody

UNITS: score/year

transferring_mental_func_thru_convicting_convict_in_comm_to_probation =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_probation * ave_mental_func_per_preSentencing_convict_in_comm

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_discharging_fr_probation = Individuals_with_Criminal_History.discharging_fr_probation *
ave_mental_func_per_probationer

UNITS: score/year

transferring_mental_func_thru_violating_probation = Individuals_with_Criminal_History.violating_probation *
ave_mental_func_per_probationer

UNITS: score/year

Mental_Functions_of_Reparoled_Prison_Parolee_wMI(t) = Mental_Functions_of_Reparoled_Prison_Parolee_wMI(t - dt) +
(transferring_mental_func_thru_rerelease_prison_parole_wMI +
increasing_mental_func_of_reparoled_prison_parolee_wMI_thru_comm_svcs -
transferring_mental_func_thru_discharging_reparoled_prison_parolee_wMI) * dt

INIT Mental_Functions_of_Reparoled_Prison_Parolee_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
61491.5834487 ELSE Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI *
init_mental_func_per_reprisoned_prison_parole_violator_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_rerelease_prison_parole_wMI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI
* ave_mental_func_per_reprisoned_prison_parole_violator_wMI

UNITS: score/year

increasing_mental_func_of_reparoled_prison_parolee_wMI_thru_comm_svcs =
reparoled_prison_parolee_wMI_mental_func_chg_thru_comm_svcs

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_discharging_reparoled_prison_parolee_wMI =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wMI * ave_mental_func_per_reparoled_prison_parolee_wMI

UNITS: score/year

Mental_Functions_of_Reparoled_Prison_Parolee_wo_MI(t) = Mental_Functions_of_Reparoled_Prison_Parolee_wo_MI(t - dt) +
(transferring_mental_func_thru_rerelease_prison_parole_wo_MI -
transferring_mental_func_thru_discharging_reparoled_prison_parolee_wo_MI) * dt

INIT Mental_Functions_of_Reparoled_Prison_Parolee_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
70294.3254251 ELSE Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI *
init_mental_func_per_reprisoned_prison_parole_violator_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_rerelease_prison_parole_wo_MI =
Individuals_with_Criminal_History.rerelease_to_prison_parole_wo_MI *
ave_mental_func_per_reprisoned_prison_parole_violator_wo_MI

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_discharging_reparoled_prison_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wo_MI *
ave_mental_func_per_reparoled_prison_parolee_wo_MI

UNITS: score/year

Mental_Functions_of_Reprisoned_County_Parole_Violator_wMI(t) = Mental_Functions_of_Reprisoned_County_Parole_Violator_wMI(t -
dt) + (transferring_mental_func_thru_county_parolee_returning_to_jail_wMI -
transferring_mental_func_thru_rerelease_exPrisoners_wMI_to_county_parolee) * dt

INIT Mental_Functions_of_Reprisoned_County_Parole_Violator_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1
THEN Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI *
init_mental_func_per_reprisoned_county_parole_violator_wMI ELSE
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI *
init_mental_func_per_reprisoned_county_parole_violator_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_county_parolee_returning_to_jail_wMI =
Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail *
ave_mental_func_per_county_parolee_wMI_violated_condition

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_rerelease_exPrisoners_wMI_to_county_parolee =
Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wMI *
ave_mental_func_per_reprisoned_county_parole_violator_wMI

UNITS: score/year

Mental_Functions_of_Reprisoned_County_Parole_Violator_wo_MI(t) =
Mental_Functions_of_Reprisoned_County_Parole_Violator_wo_MI(t - dt) +
(transferring_mental_func_thru_county_parolee_returning_to_jail_wo_MI -
transferring_mental_func_thru_rerelease_exPrisoners_to_county_parolee_wo_MI) * dt

INIT Mental_Functions_of_Reprisoned_County_Parole_Violator_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1
THEN 0.001 ELSE Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI *
init_mental_func_per_reprisoned_county_parole_violator_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_county_parolee_returning_to_jail_wo_MI =
Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail *
ave_mental_func_per_county_parolee_wo_MI_violated_condition

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_rerelease_exPrisoners_to_county_parolee_wo_MI =
Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wo_MI *
ave_mental_func_per_reprisoned_county_parole_violator_wo_MI

UNITS: score/year

Mental_Functions_of_Reprisoned_Prison_Parole_Violator_wMI(t) = Mental_Functions_of_Reprisoned_Prison_Parole_Violator_wMI(t - dt) + (transferring_mental_func_thru_prison_parolee_returning_to_prison_wMI - transferring_mental_func_thru_rerelease_prison_parole_wMI) * dt

INIT Mental_Functions_of_Reprisoned_Prison_Parole_Violator_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN (Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison*ave_mental_func_per_prison_parolee_wMI_violated_condition*Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI)/Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI ELSE Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI * init_mental_func_per_reprisoned_prison_parole_violator_wMI

UNITS: score

INFLOWS:

transferring_mental_func_thru_prison_parolee_returning_to_prison_wMI = Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison * ave_mental_func_per_prison_parolee_wMI_violated_condition

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_rerelease_prison_parole_wMI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI * ave_mental_func_per_reprisoned_prison_parole_violator_wMI

UNITS: score/year

Mental_Functions_of_Reprisoned_Prison_Parole_Violator_wo_MI(t) = Mental_Functions_of_Reprisoned_Prison_Parole_Violator_wo_MI(t - dt) + (transferring_mental_func_thru_prison_parolee_returning_to_prison_wo_MI - transferring_mental_func_thru_rerelease_prison_parole_wo_MI) * dt

INIT Mental_Functions_of_Reprisoned_Prison_Parole_Violator_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN (Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison*ave_mental_func_per_prison_parolee_wo_MI_violated_condition*Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI)/Individuals_with_Criminal_History.rerelease_to_prison_parole_wo_MI ELSE Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI * init_mental_func_per_reprisoned_prison_parole_violator_wo_MI

UNITS: score

INFLOWS:

transferring_mental_func_thru_prison_parolee_returning_to_prison_wo_MI = Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison * ave_mental_func_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_rerelease_prison_parole_wo_MI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wo_MI * ave_mental_func_per_reprisoned_prison_parole_violator_wo_MI

UNITS: score/year

Mental_Functions_of_Suspects_in_Comm_with_Cases_Filed(t) = Mental_Functions_of_Suspects_in_Comm_with_Cases_Filed(t - dt) + (transferring_mental_func_thru_filing_case_for_suspect_in_comm - transferring_mental_func_thru_suspect_in_comm_being_trial - transferring_mental_func_thru_complaints_against_recidivating_suspects_in_comm_dismissed_before_trial - transferring_mental_func_thru_defendants_in_comm_conviction_wo_trial) * dt

INIT Mental_Functions_of_Suspects_in_Comm_with_Cases_Filed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN (Individuals_with_Criminal_History.filing_case_for_suspect_in_comm*ave_mental_func_per_pretrial_suspect_in_comm*Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed)/(Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial+Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial+Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_comm_dismissed_before_trial) ELSE Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed * init_mental_func_per_suspect_in_comm_with_case_filed

UNITS: score

INFLOWS:

transferring_mental_func_thru_filing_case_for_suspect_in_comm =
Individuals_with_Criminal_History.filing_case_for_suspect_in_comm * ave_mental_func_per_pretrial_suspect_in_comm

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_suspect_in_comm_being_trial =
Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial * ave_mental_func_per_suspect_in_comm_with_cases_filed

UNITS: score/year

transferring_mental_func_thru_complaints_against_recidivating_suspects_in_comm_dismissed_before_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_comm_dismissed_before_trial *
ave_mental_func_per_suspect_in_comm_with_cases_filed

UNITS: score/year

transferring_mental_func_thru_defendants_in_comm_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial * ave_mental_func_per_suspect_in_comm_with_cases_filed

UNITS: score/year

Mental_Functions_of_Suspects_in_Community(t) = Mental_Functions_of_Suspects_in_Community(t - dt) +
(losing_mental_func_thru_pretrial_release - transferring_mental_func_thru_filing_case_for_suspect_in_comm) * dt

INIT Mental_Functions_of_Suspects_in_Community = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.pretrial_release*ave_mental_func_per_arrestee*Individuals_with_Criminal_History.Pretrial_Suspects_in_Community)/Individuals_with_Criminal_History.filing_case_for_suspect_in_comm ELSE
Individuals_with_Criminal_History.Pretrial_Suspects_in_Community * init_mental_func_per_pretrial_suspect_in_comm

UNITS: score

INFLOWS:

losing_mental_func_thru_pretrial_release = Individuals_with_Criminal_History.pretrial_release * ave_mental_func_per_arrestee

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_filing_case_for_suspect_in_comm =
Individuals_with_Criminal_History.filing_case_for_suspect_in_comm * ave_mental_func_per_pretrial_suspect_in_comm

UNITS: score/year

Mental_Functions_of_Suspects_in_Custody(t) = Mental_Functions_of_Suspects_in_Custody(t - dt) +
(transferring_mental_func_thru_holding_suspect_in_custody - transferring_mental_func_thru_filing_case_for_suspect_in_custody) * dt

INIT Mental_Functions_of_Suspects_in_Custody = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.being_held_in_custody*ave_mental_func_per_arrestee*Individuals_with_Criminal_History.Suspects_in_Custody/Individuals_with_Criminal_History.filing_case_for_suspect_in_custody ELSE
Individuals_with_Criminal_History.Suspects_in_Custody * init_mental_func_per_suspect_in_custody

UNITS: score

INFLOWS:

transferring_mental_func_thru_holding_suspect_in_custody = Individuals_with_Criminal_History.being_held_in_custody *
ave_mental_func_per_arrestee

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_filing_case_for_suspect_in_custody =
Individuals_with_Criminal_History.filing_case_for_suspect_in_custody * ave_mental_func_per_suspect_in_custody

UNITS: score/year

Mental_Functions_of_Suspects_in_Custody_with_Cases_Filed(t) = Mental_Functions_of_Suspects_in_Custody_with_Cases_Filed(t - dt) + (transferring_mental_func_thru_filing_case_for_suspect_in_custody - transferring_mental_func_thru_suspect_in_custody_being_trial - transferring_mental_func_thru_defendants_in_cusotdy_conviction_wo_trial - transferring_mental_func_thru_complaints_against_recidivating_suspects_in_custody_dismissed_before_trial) * dt

INIT Mental_Functions_of_Suspects_in_Custody_with_Cases_Filed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN (Individuals_with_Criminal_History.filing_case_for_suspect_in_custody*ave_mental_func_per_suspect_in_custody*Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed)/(Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial+Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial+Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_custody_dismissed_before_trial) ELSE Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed * init_mental_func_per_suspect_in_custody_with_case_filed

UNITS: score

INFLOWS:

transferring_mental_func_thru_filing_case_for_suspect_in_custody =
Individuals_with_Criminal_History.filing_case_for_suspect_in_custody * ave_mental_func_per_suspect_in_custody

UNITS: score/year

OUTFLOWS:

transferring_mental_func_thru_suspect_in_custody_being_trial =
Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial * ave_mental_func_per_suspect_in_custody_with_cases_filed

UNITS: score/year

transferring_mental_func_thru_defendants_in_cusotdy_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial * ave_mental_func_per_suspect_in_custody_with_cases_filed

UNITS: score/year

transferring_mental_func_thru_complaints_against_recidivating_suspects_in_custody_dismissed_before_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_custody_dismissed_before_trial *
ave_mental_func_per_suspect_in_custody_with_cases_filed

UNITS: score/year

ave_mental_func_of_all_parolees_wMI = (ave_mental_func_per_prison_parolee_wMI *
Individuals_with_Criminal_History.Prison_Parolees_wMI + ave_mental_func_per_prison_parolee_wMI_violated_condition *
Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition + ave_mental_func_per_county_parolee_wMI *
Individuals_with_Criminal_History.County_Parolees_wMI + ave_mental_func_per_county_parolee_wMI_violated_condition *
Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition + ave_mental_func_per_reparoled_prison_parolee_wMI *
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI) / (Individuals_with_Criminal_History.Prison_Parolees_wMI +
Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition + Individuals_with_Criminal_History.County_Parolees_wMI +
Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition +
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI)

UNITS: score/person

ave_mental_func_of_all_parolees_wo_MI = (ave_mental_func_per_prison_parolee_wo_MI *
Individuals_with_Criminal_History.Prison_Parolees_wo_MI + ave_mental_func_per_prison_parolee_wo_MI_violated_condition *
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition + ave_mental_func_per_county_parolee_wo_MI *
Individuals_with_Criminal_History.County_Parolees_wo_MI + ave_mental_func_per_county_parolee_wo_MI_violated_condition *
Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition +
ave_mental_func_per_reparoled_prison_parolee_wo_MI * Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI) /
(Individuals_with_Criminal_History.Prison_Parolees_wo_MI +
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition +
Individuals_with_Criminal_History.County_Parolees_wo_MI +
Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition +
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI)

UNITS: score/person

ave_mental_func_per_arrestee = MIN (Mental_Functions_of_Arrestees / Individuals_with_Criminal_History.Arrestees, 90)

UNITS: score/person

ave_mental_func_per_county_parolee_wMI = MIN (Mental_Functions_of_County_Parolees_wMI /
Individuals_with_Criminal_History.County_Parolees_wMI, 90)

UNITS: score/person

ave_mental_func_per_county_parolee_wMI_violated_condition = MIN (Mental_Functions_of_County_Parolee_wMI_Violated_Condition / Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition, 90)

UNITS: score/person

ave_mental_func_per_county_parolee_wo_MI = MIN (Mental_Functions_of_County_Parolees_wo_MI / Individuals_with_Criminal_History.County_Parolees_wo_MI, 90)

UNITS: score/person

ave_mental_func_per_county_parolee_wo_MI_violated_condition = MIN (Mental_Functions_of_County_Parolee_wo_MI_Violated_Condition / Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition, 90)

UNITS: score/person

ave_mental_func_per_defendant_in_comm_being_trialed = MIN (Mental_Functions_of_Defendants_in_Comm_Being_Trialed / Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed, 90)

UNITS: score/person

ave_mental_func_per_defendant_in_custody_being_trialed = MIN (Mental_Functions_of_Defendants_in_Custody_Being_Trialed / Individuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed, 90)

UNITS: score/person

ave_mental_func_per_desisting_jail_exConv_wMI = MIN (Mental_Functions_of_Desisting_Jail_ExConvicts_wMI / Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wMI, 90)

UNITS: score/person

ave_mental_func_per_desisting_jail_exConv_wo_MI = MIN (Mental_Functions_of_Desisting_Jail_ExConvicts_wo_MI / Individuals_with_Criminal_History.Desisting_Jail_ExConvicts_wo_MI, 90)

UNITS: score/person

ave_mental_func_per_desisting_prison_exConv_wMI = (MIN (Mental_Functions_of_Desisting_Prison_ExConvicts_wMI / Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wMI, 90))

UNITS: score/person

ave_mental_func_per_desisting_prison_exConv_wo_MI = MIN (Mental_Functions_of_Desisting_Prison_ExConvicts_wo_MI / Individuals_with_Criminal_History.Desisting_Prison_ExConvicts_wo_MI, 90)

UNITS: score/person

ave_mental_func_per_diverted_prison_convict_in_comm_wSMI = (1 - Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI) * zero_mental_function_diverted + Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI * (ave_mental_func_per_preSentencing_convict_in_comm * effect_of_relative_mental_func_per_preSentencing_convict_in_comm_on_mental_func_per_prisoner_wSMI)

UNITS: score/person

ave_mental_func_per_diverted_prison_convict_in_custody_wSMI = (1 - Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI) * zero_mental_function_diverted + Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI * (ave_mental_func_per_preSentencing_convict_in_custody * effect_of_mental_func_per_preSentencing_convict_in_custody_on_mental_func_per_prisoner_wSMI)

UNITS: score/person

ave_mental_func_per_hi_risk_exConv = (ave_mental_func_per_hi_risk_prison_exCon_wMI * Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI + ave_mental_func_per_hi_risk_prison_exConv_wo_MI * Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI + ave_mental_func_per_hi_risk_jail_exConv_wMI * Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI + ave_mental_func_per_hi_risk_jail_exConv_wo_MI * Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI) / (Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI + Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI + Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI + Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI)

UNITS: score/person

ave_mental_func_per_hi_risk_jail_exConv_wMI = MIN (Mental_Functions_of_HI_Risk_Jail_ExConvicts_wMI /
Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI, 90)

UNITS: score/person

ave_mental_func_per_hi_risk_jail_exConv_wo_MI = MIN (Mental_Functions_of_HI_Risk_Jail_ExConvicts_wo_MI /
Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI, 90)

UNITS: score/person

ave_mental_func_per_hi_risk_prison_exCon_wMI = (MIN (Mental_Functions_of_HI_Risk_Prison_ExConvicts_wMI /
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI, 90))

UNITS: score/person

ave_mental_func_per_hi_risk_prison_exConv_wo_MI =
Mental_Functions_of_HI_Risk_Prison_ExConvicts_wo_MI/Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI

UNITS: score/person

ave_mental_func_per_incoming_prisoner_in_comm_wMI = IF
Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI = 1 THEN
ave_mental_func_per_preSentencing_convict_in_comm *
effect_of_mental_func_per_preSentencing_convict_in_comm_on_ave_mental_func_per_prisoner_wMMI ELSE
ave_mental_func_per_preSentencing_convict_in_comm

UNITS: score/person

ave_mental_func_per_incoming_prisoner_in_custody_wMI = IF
Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI = 1 THEN
ave_mental_func_per_preSentencing_convict_in_custody *
effect_of_mental_func_per_preSentencing_convict_in_custody_on_ave_mental_func_per_prisoner_wMMI ELSE
ave_mental_func_per_preSentencing_convict_in_custody

UNITS: score/person

ave_mental_func_per_jail_offender_wMI =
Mental_Functions_of_Jail_Offenders_wMI/Individuals_with_Criminal_History.Jail_Offenders_wMI

UNITS: score/person

ave_mental_func_per_jail_offender_wo_MI = MIN (Mental_Functions_of_Jail_Offenders_wo_MI /
Individuals_with_Criminal_History.Jail_Offenders_wo_MI, 90)

UNITS: score/person

ave_mental_func_per_lo_risk_exConv = (ave_mental_func_per_lo_risk_prison_exCon_wMI *
Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI + ave_mental_func_per_lo_risk_prison_exConv_wo_MI *
Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI + ave_mental_func_per_lo_risk_jail_exConv_wMI *
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI + ave_mental_func_per_lo_risk_jail_exConv_wo_MI *
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI) / (Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI
+ Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI + Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI
+ Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI)

UNITS: score/person

ave_mental_func_per_lo_risk_jail_exConv_wMI = MIN (Mental_Functions_of_Lo_Risk_Jail_ExConvicts_wMI /
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI, 90)

UNITS: score/person

ave_mental_func_per_lo_risk_jail_exConv_wo_MI = MIN (Mental_Functions_of_Lo_Risk_Jail_ExConvicts_wo_MI /
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI, 90)

UNITS: score/person

ave_mental_func_per_lo_risk_prison_exCon_wMI = (MIN (Mental_Functions_of_Lo_Risk_Prison_ExConvicts_wMI /
Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI, 90))

UNITS: score/person

ave_mental_func_per_lo_risk_prison_exConv_wo_MI = MIN (Mental_Functions_of_Lo_Risk_Prison_ExConvicts_wo_MI /
Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI, 90)

UNITS: score/person

ave_mental_func_per_parolee = (ave_mental_func_per_prison_parolee_wMI * Individuals_with_Criminal_History.Prison_Parolees_wMI +
ave_mental_func_per_prison_parolee_wMI_violated_condition *
Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition + ave_mental_func_per_county_parolee_wMI *
Individuals_with_Criminal_History.County_Parolees_wMI + ave_mental_func_per_county_parolee_wMI_violated_condition *
Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition + ave_mental_func_per_reparoled_prison_parolee_wMI *
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI + ave_mental_func_per_prison_parolee_wo_MI *
Individuals_with_Criminal_History.Prison_Parolees_wo_MI + ave_mental_func_per_prison_parolee_wo_MI_violated_condition *
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition + ave_mental_func_per_county_parolee_wo_MI *
Individuals_with_Criminal_History.County_Parolees_wo_MI + ave_mental_func_per_county_parolee_wo_MI_violated_condition *
Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition +
ave_mental_func_per_reparoled_prison_parolee_wo_MI * Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI) /
(Individuals_with_Criminal_History.Prison_Parolees_wMI + Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition +
Individuals_with_Criminal_History.County_Parolees_wMI +
Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition+Individuals_with_Criminal_History.Prison_Parolees_wo_MI +
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition +
Individuals_with_Criminal_History.County_Parolees_wo_MI +
Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition +
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI +
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI)

UNITS: score/person

ave_mental_func_per_preSentencing_convict_in_comm = MIN (Mental_Functions_of_PreSentencing_Convicts_in_Comm /
Individuals_with_Criminal_History.PreSentencing_Convicts_fr_Comm_in_Custody, 90)

UNITS: score/person

ave_mental_func_per_preSentencing_convict_in_custody = MIN (Mental_Functions_of_PreSentencing_Convicts_in_Custody /
Individuals_with_Criminal_History.PreSentencing_Convicts_in_Custody, 90)

UNITS: score/person

ave_mental_func_per_pretrial_suspect_in_comm = MIN (Mental_Functions_of_Suspects_in_Community /
Individuals_with_Criminal_History.Pretrial_Suspects_in_Community, 90)

UNITS: score/person

ave_mental_func_per_prison_parolee_wMI =
Mental_Functions_of_Prison_Parolees_wMI/Individuals_with_Criminal_History.Prison_Parolees_wMI

UNITS: score/person

ave_mental_func_per_prison_parolee_wMI_violated_condition = (MIN (Mental_Functions_of_Prison_Parolee_wMI_Violated_Condition /
Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition, 90))

UNITS: score/person

ave_mental_func_per_prison_parolee_wo_MI =
Mental_Functions_of_Prison_Parolees_wo_MI/Individuals_with_Criminal_History.Prison_Parolees_wo_MI

UNITS: score/person

ave_mental_func_per_prison_parolee_wo_MI_violated_condition = MIN
(Mental_Functions_of_Prison_Parolee_wo_MI_Violated_Condition /
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition, 90)

UNITS: score/person

ave_mental_func_per_prisoner_wMI = Mental_Functions_of_Prisoners_wMI/Individuals_with_Criminal_History.Prisoners_wMI

UNITS: score/person

ave_mental_func_per_prisoner_wo_MI = Mental_Functions_of_Prisoners_wo_MI/Individuals_with_Criminal_History.Prisoners_wo_MI

UNITS: score/person

ave_mental_func_per_prisoner_wSMI_in_alt_facility =
Mental_Functions_of_Prisoners_wSMI_in_Alternative_Facility/Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility

UNITS: score/person

ave_mental_func_per_probationer = MIN (Mental_Functions_of_Probationers / Individuals_with_Criminal_History.Probationers, 90)

UNITS: score/person

ave_mental_func_per_recidivist = ave_mental_func_per_parolee
*relative_strength_of_parolee_recidivism_for_ave_mental_func_calculation + ave_mental_func_per_hi_risk_exConv *
relative_strength_of_hi_risk_exConv_recidivism_for_ave_mental_func_calculation + ave_mental_func_per_lo_risk_exConv *
relative_strength_of_lo_risk_exConv_recidivism_for_ave_mental_func_calculation

UNITS: score/person

ave_mental_func_per_reparoled_prison_parolee_wMI = Mental_Functions_of_Reparoled_Prison_Parolee_wMI /
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI

UNITS: score/person

ave_mental_func_per_reparoled_prison_parolee_wo_MI = Mental_Functions_of_Reparoled_Prison_Parolee_wo_MI /
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI

UNITS: score/person

ave_mental_func_per_reprisoned_county_parole_violator_wMI = MIN (Mental_Functions_of_Reprisoned_County_Parole_Violator_wMI /
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI, 90)

UNITS: score/person

ave_mental_func_per_reprisoned_county_parole_violator_wo_MI = MIN
(Mental_Functions_of_Reprisoned_County_Parole_Violator_wo_MI /
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI, 90)

UNITS: score/person

ave_mental_func_per_reprisoned_prison_parole_violator_wMI = (MIN (Mental_Functions_of_Reprisoned_Prison_Parole_Violator_wMI /
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI, 90))

UNITS: score/person

ave_mental_func_per_reprisoned_prison_parole_violator_wo_MI = MIN
(Mental_Functions_of_Reprisoned_Prison_Parole_Violator_wo_MI /
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI, 90)

UNITS: score/person

ave_mental_func_per_suspect_in_comm_with_cases_filed = MIN (Mental_Functions_of_Suspects_in_Comm_with_Cases_Filed /
Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed, 90)

UNITS: score/person

ave_mental_func_per_suspect_in_custody = MIN (Mental_Functions_of_Suspects_in_Custody /
Individuals_with_Criminal_History.Suspects_in_Custody, 90)

UNITS: score/person

ave_mental_func_per_suspect_in_custody_with_cases_filed = MIN (Mental_Functions_of_Suspects_in_Custody_with_Cases_Filed /
Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed, 90)

UNITS: score/person

county_parole_violator_wMI_mental_func_chg_thru_comm_svcs =
Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition * parolee_wMI_mental_func_gain_per_year *
Community_Services.effect_of_comm_svc_utilization_on_parolee_wMI_mental_func

UNITS: score/year

county_parolee_wMI_mental_func_chg_thru_comm_svcs = Individuals_with_Criminal_History.County_Parolees_wMI *
parolee_wMI_mental_func_gain_per_year *Community_Services.effect_of_comm_svc_utilization_on_parolee_wMI_mental_func

UNITS: score/year

desired_mental_func_per_prisoner_wSMI_in_alt_facility = 70

UNITS: score/person

desired_mental_func_per_recovered_prisoner = init_mental_func_per_prisoner_wo_MI

UNITS: score/person

effect_of_mental_func_of_preSentencing_convict_in_comm_on_fract_incoming_prisoner_wSMI_diverted =
GRAPH(relative_mental_func_per_preSentencing_convict_in_comm)

(0.8000, 1.600), (0.8750, 1.519), (0.9500, 1.325), (1.0250, 0.923), (1.1000, 0.716), (1.1750, 0.589), (1.2500, 0.513), (1.3250, 0.445), (1.4000, 0.400)

UNITS: unitless

effect_of_mental_func_of_preSentencing_convict_in_custody_on_fract_incoming_prisoner_wSMI_diverted =
GRAPH(relative_mental_func_per_preSentencing_convict_in_custody)

(0.8000, 1.600), (0.8400, 1.562), (0.8800, 1.492), (0.9200, 1.388), (0.9600, 1.228), (1.0000, 1.000), (1.0400, 0.809), (1.0800, 0.678), (1.1200, 0.593), (1.1600, 0.546), (1.2000, 0.508), (1.2400, 0.485), (1.2800, 0.466), (1.3200, 0.442), (1.3600, 0.419), (1.4000, 0.400)

UNITS: unitless

effect_of_mental_func_per_jail_offender_wo_MI_on_devMI = GRAPH(SMTH3 (relative_ave_mental_func_of_jail_offender_wo_MI, 1, relative_ave_mental_func_of_jail_offender_wo_MI))

(0.5000, 1.996), (0.5500, 1.982), (0.6000, 1.945), (0.6500, 1.873), (0.7000, 1.759), (0.7500, 1.553), (0.8000, 1.363), (0.8500, 1.224), (0.9000, 1.129), (0.9500, 1.061), (1.0000, 1.000), (1.0500, 0.933), (1.1000, 0.867), (1.1500, 0.802), (1.2000, 0.756)

UNITS: unitless

effect_of_mental_func_per_preSentencing_convict_in_comm_on_ave_mental_func_per_prisoner_wMMI =
GRAPH(Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_comm_diverted)

(0.0000, 1.0000), (0.1000, 1.0010), (0.2000, 1.0020), (0.3000, 1.0040), (0.4000, 1.0070), (0.5000, 1.1200)

UNITS: unitless

effect_of_mental_func_per_preSentencing_convict_in_custody_on_ave_mental_func_per_prisoner_wMMI =
GRAPH(Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted)

(0.0000, 1), (0.1000, 1.001), (0.2000, 1.002), (0.3000, 1.004), (0.4000, 1.007), (0.5000, 1.012)

UNITS: unitless

effect_of_mental_func_per_preSentencing_convict_in_custody_on_mental_func_per_prisoner_wSMI =
GRAPH(relative_mental_func_per_preSentencing_convict_in_custody)

(0.5000, 0.6000), (0.5625, 0.6096), (0.6250, 0.6270), (0.6875, 0.6517), (0.7500, 0.6857), (0.8125, 0.7270), (0.8750, 0.7535), (0.9375, 0.7661), (1.0000, 0.7700)

UNITS: unitless

effect_of_mental_func_per_prison_parolee_and_violator_wMI_on_comm_svc_cost =
GRAPH(relative_ave_mental_func_of_all_parolees_wMI)

(0.8000, 1.5000), (0.8400, 1.4647), (0.8800, 1.4133), (0.9200, 1.3201), (0.9600, 1.1562), (1.0000, 1.0000), (1.0400, 0.8896), (1.0800, 0.8157), (1.1200, 0.7643), (1.1600, 0.7257), (1.2000, 0.7000)

UNITS: unitless

effect_of_mental_func_per_prison_parolee_and_violator_wo_MI_on_comm_cost =
GRAPH(relative_ave_mental_func_of_all_parolees_wo_MI)

(0.5000, 2.000), (0.5700, 1.948), (0.6400, 1.869), (0.7100, 1.697), (0.7800, 1.332), (0.8500, 1.060), (0.9200, 0.909), (0.9900, 0.8157), (1.0600, 0.7643), (1.1300, 0.7257), (1.2000, 0.700)

UNITS: unitless

effect_of_mental_func_per_prisoner_wMI_on_recovery_time = GRAPH(relative_mental_func_of_prisoner_wMI_to_recovered_prisoner)

(0.4000, 1.2000), (0.6000, 1.1467), (0.8000, 1.0000), (1.0000, 0.6000), (1.2000, 0.4000)

UNITS: unitless

effect_of_mental_func_per_prisoner_wo_MI_on_devMI = GRAPH(SMTH3 (relative_mental_func_of_prisoner_wo_MI, 1, relative_mental_func_of_prisoner_wo_MI))

(0.5000, 1.996), (0.5500, 1.982), (0.6000, 1.945), (0.6500, 1.873), (0.7000, 1.759), (0.7500, 1.553), (0.8000, 1.363), (0.8500, 1.224), (0.9000, 1.111), (0.9500, 1.015), (1.0000, 0.949), (1.0500, 0.883), (1.1000, 0.850)

UNITS: unitless

effect_of_mental_func_per_prisoner_wSMI_in_alt_facility_on_time_served = GRAPH(relative_mental_func_per_prisoner_wSMI_in_alt_facility)

(0.5000, 1.5000), (0.5500, 1.4920), (0.6000, 1.4799), (0.6500, 1.4618), (0.7000, 1.4398), (0.7500, 1.3996), (0.8000, 1.3333), (0.8500, 1.2639), (0.9000, 1.1795), (0.9500, 1.0811), (1.0000, 1.0000), (1.0500, 0.9096), (1.1000, 0.8506), (1.1500, 0.8169), (1.2000, 0.8000)

UNITS: unitless

effect_of_relative_mental_func_per_preSentencing_convict_in_comm_on_mental_func_per_prisoner_wSMI = GRAPH((1 - Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI) + Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI * relative_mental_func_per_preSentencing_convict_in_comm)

(0.5000, 0.6000), (0.5625, 0.6096), (0.6250, 0.6270), (0.6875, 0.6517), (0.7500, 0.6857), (0.8125, 0.7270), (0.8750, 0.7535), (0.9375, 0.7661), (1.0000, 0.7700)

UNITS: unitless

fract_county_parolee_wMI_mental_func = (Mental_Functions_of_County_Parolees_wMI + Mental_Functions_of_County_Parolee_wMI_Violated_Condition) / (Mental_Functions_of_Prison_Parolees_wMI + Mental_Functions_of_Prison_Parolee_wMI_Violated_Condition + Mental_Functions_of_County_Parolees_wMI + Mental_Functions_of_County_Parolee_wMI_Violated_Condition)

UNITS: unitless

fract_county_parolee_wMI_violated_condition_mental_func = (Mental_Functions_of_County_Parolee_wMI_Violated_Condition) / (Mental_Functions_of_Prison_Parolees_wMI + Mental_Functions_of_Prison_Parolee_wMI_Violated_Condition + Mental_Functions_of_County_Parolees_wMI + Mental_Functions_of_County_Parolee_wMI_Violated_Condition)

UNITS: unitless

fract_hi_risk_jail_exConv_wMI_mental_func = Mental_Functions_of_HI_Risk_Jail_ExConvicts_wMI / (Mental_Functions_of_HI_Risk_Prison_ExConvicts_wMI + Mental_Functions_of_HI_Risk_Jail_ExConvicts_wMI)

UNITS: unitless

fract_hi_risk_prison_exConv_wMI_mental_func = Mental_Functions_of_HI_Risk_Prison_ExConvicts_wMI / (Mental_Functions_of_HI_Risk_Prison_ExConvicts_wMI + Mental_Functions_of_HI_Risk_Jail_ExConvicts_wMI)

UNITS: unitless

fract_prison_parolee_wMI_mental_func = (Mental_Functions_of_Prison_Parolees_wMI) / (Mental_Functions_of_Prison_Parolees_wMI + Mental_Functions_of_County_Parolees_wMI + Mental_Functions_of_Prison_Parolee_wMI_Violated_Condition + Mental_Functions_of_County_Parolee_wMI_Violated_Condition)

UNITS: unitless

fract_prison_parolee_wMI_violated_condition_mental_func = (Mental_Functions_of_Prison_Parolee_wMI_Violated_Condition) / (Mental_Functions_of_Prison_Parolees_wMI + Mental_Functions_of_County_Parolees_wMI + Mental_Functions_of_Prison_Parolee_wMI_Violated_Condition + Mental_Functions_of_County_Parolee_wMI_Violated_Condition)

UNITS: unitless

fract_recidivism_by_hi_risk_exConv_for_ave_mental_func_calculation = Individuals_with_Criminal_History.total_hi_risk_exConv_recidivism/total_recidivism_for_ave_mental_func_calculation

UNITS: unitless

fract_recidivism_by_lo_risk_exConv_for_ave_mental_func_calculation = Individuals_with_Criminal_History.total_lo_risk_exConv_recidivism/total_recidivism_for_ave_mental_func_calculation

UNITS: unitless

fract_recidivism_by_parolees_for_ave_mental_func_calculation =
Individuals_with_Criminal_History.total_parolee_recidivism/total_recidivism_for_ave_mental_func_calculation

UNITS: unitless

init_ave_mental_func_of_all_parolees_wMI = 68.1

UNITS: score/person

init_ave_mental_func_of_all_parolees_wo_MI = INIT(ave_mental_func_of_all_parolees_wo_MI)

UNITS: score/person

init_mental_func_per_arrestee = 65

UNITS: score/person

init_mental_func_per_county_parolee_wMI = 59

UNITS: score/person

init_mental_func_per_county_parolee_wo_MI = 63

UNITS: score/person

init_mental_func_per_defendant_in_comm_being_trialed = 65

UNITS: score/person

init_mental_func_per_defendant_in_custody_being_trialed = 65

UNITS: score/person

init_mental_func_per_desisting_jail_exConv_wMI = 68

UNITS: score/person

init_mental_func_per_desisting_jail_exConv_wo_MI = 70

UNITS: score/person

init_mental_func_per_desisting_prison_exConv_wMI = 67

UNITS: score/person

init_mental_func_per_desisting_prison_exConv_wo_MI = 70

UNITS: score/person

init_mental_func_per_hi_risk_exConv_wMI = 61

UNITS: score/person

init_mental_func_per_hi_risk_exConv_wo_MI = 64

UNITS: score/person

init_mental_func_per_hi_risk_jail_exConv_wMI = 62

UNITS: score/person

init_mental_func_per_hi_risk_jail_exConv_wo_MI = 65

UNITS: score/person

init_mental_func_per_jail_offender_wo_MI = 64.7

UNITS: score/person

init_mental_func_per_jail_offenders_wMI = 60

UNITS: score/person

init_mental_func_per_lo_risk_exConv_wMI = 65

UNITS: score/person
init_mental_func_per_lo_risk_exConv_wo_MI = 67
UNITS: score/person
init_mental_func_per_lo_risk_jail_exConv_wMI = 65
UNITS: score/person
init_mental_func_per_lo_risk_jail_exConv_wo_MI = 67
UNITS: score/person
init_mental_func_per_parole_violator_wMI = 59
UNITS: score/person
init_mental_func_per_parole_violator_wo_MI = 63
UNITS: score/person
init_mental_func_per_preSentencing_convict_in_comm = 65
UNITS: score/person
init_mental_func_per_preSentencing_convict_in_custody = 66
UNITS: score/person
init_mental_func_per_pretrial_suspect_in_comm = 65
UNITS: score/person
init_mental_func_per_prison_parolee_wMI = 59
UNITS: score/person
init_mental_func_per_prison_parolee_wMI_violated_condition = 59
UNITS: score/person
init_mental_func_per_prison_parolee_wo_MI = 63
UNITS: score/person
init_mental_func_per_prison_parolee_wo_MI_violated_condition = 63
UNITS: score/person
init_mental_func_per_prisoner_wMI = 57
UNITS: score/person
init_mental_func_per_prisoner_wo_MI = 63.1
UNITS: score/person
init_mental_func_per_probationer = 70
UNITS: score/person
init_mental_func_per_reprisoned_county_parole_violator_wMI = 58
UNITS: score/person
init_mental_func_per_reprisoned_county_parole_violator_wo_MI = 62
UNITS: score/person
init_mental_func_per_reprisoned_prison_parole_violator_wMI = 58
UNITS: score/person
init_mental_func_per_reprisoned_prison_parole_violator_wo_MI = 62

UNITS: score/person

init_mental_func_per_suspect_in_comm_with_case_filed = 65

UNITS: score/person

init_mental_func_per_suspect_in_custody = 65

UNITS: score/person

init_mental_func_per_suspect_in_custody_with_case_filed = 65

UNITS: score/person

jail_mental_func_chg_per_year = 1.5

UNITS: score/person/year

jail_offenders_wMI_mental_func_chg = Individuals_with_Criminal_History.Jail_Offenders_wMI * jail_mental_func_chg_per_year * Jail_Capacity.effect_of_jail_utilization_on_mental_func

UNITS: score/year

jail_offenders_wo_MI_mental_func_chg = Individuals_with_Criminal_History.Jail_Offenders_wo_MI * jail_mental_func_chg_per_year * Jail_Capacity.effect_of_jail_utilization_on_mental_func

UNITS: score/year

max_cutoff_point_for_SMI = 50

UNITS: score/person

mental_func_gain = 2 * (1+ STEP(4, 2018)* 0)

UNITS: score/year/person

mental_func_per_first_time_arrestee = 65

UNITS: score/person

min_mental_func_per_person = 20

UNITS: score/person

multiplier_of_ave_mental_func_of_prisoner_to_county_parole = 1.1

UNITS: unitless

parolee_wMI_mental_func_gain_per_year = 1

UNITS: score/year/person

prison_parole_violator_wMI_mental_func_chg_thru_comm_svcs = Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition * parolee_wMI_mental_func_gain_per_year * Community_Services.effect_of_comm_svc_utilization_on_parolee_wMI_mental_func

UNITS: score/year

prison_parolee_wMI_mental_func_chg_thru_comm_svcs = Individuals_with_Criminal_History.Prison_Parolees_wMI * parolee_wMI_mental_func_gain_per_year * Community_Services.effect_of_comm_svc_utilization_on_parolee_wMI_mental_func

UNITS: score/year

prisoner_mental_func_reduction_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN Individuals_with_Criminal_History.Prisoners_wMI * prisoner_wMI_mental_func_loss_per_year * Prison_Capacity.effect_of_prison_utilization_on_mental_func_change_in_prison * Prison_HC_Resource_Allocation.effect_of_MHC_adequacy_on_mental_func_of_prisoners_wMI ELSE Individuals_with_Criminal_History.Prisoners_wMI * prisoner_wMI_mental_func_loss_per_year * Prison_Capacity.effect_of_prison_utilization_on_mental_func_change_in_prison * Prison_HC_Resource_Allocation.effect_of_MHC_adequacy_on_mental_func_of_prisoners_wMI

UNITS: score/year

prisoner_mental_func_reduction_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.Prisoners_wo_MI * prisoner_wo_MI_mental_func_loss_per_year *
Prison_Capacity.effect_of_prison_utilization_on_mental_func_change_in_prison ELSE
Individuals_with_Criminal_History.Prisoners_wo_MI * prisoner_wo_MI_mental_func_loss_per_year *
Prison_Capacity.effect_of_prison_utilization_on_mental_func_change_in_prison

UNITS: score/year

prisoner_wMI_mental_func_loss_per_year = 2

UNITS: score/year/person

prisoner_wo_MI_mental_func_loss_per_year = 0.5

UNITS: score/year/person

relative_ave_mental_func_of_all_parolees_wMI = ave_mental_func_of_all_parolees_wMI / init_ave_mental_func_of_all_parolees_wMI

UNITS: unitless

relative_ave_mental_func_of_all_parolees_wo_MI = ave_mental_func_of_all_parolees_wo_MI /
init_ave_mental_func_of_all_parolees_wo_MI

UNITS: unitless

relative_ave_mental_func_of_jail_offender_wo_MI = ave_mental_func_per_jail_offender_wo_MI /
init_mental_func_per_jail_offender_wo_MI

UNITS: unitless

relative_mental_func_of_prisoner_wMI_to_recovered_prisoner = ave_mental_func_per_prisoner_wMI /
desired_mental_func_per_recovered_prisoner

UNITS: unitless

relative_mental_func_of_prisoner_wo_MI = ave_mental_func_per_prisoner_wo_MI / init_mental_func_per_prisoner_wo_MI

UNITS: unitless

relative_mental_func_per_preSentencing_convict_in_comm = ave_mental_func_per_preSentencing_convict_in_comm /
init_mental_func_per_preSentencing_convict_in_comm

UNITS: unitless

relative_mental_func_per_preSentencing_convict_in_custody = ave_mental_func_per_preSentencing_convict_in_custody /
init_mental_func_per_preSentencing_convict_in_custody

UNITS: unitless

relative_mental_func_per_prisoner_wSMI_in_alt_facility = ave_mental_func_per_prisoner_wSMI_in_alt_facility /
desired_mental_func_per_prisoner_wSMI_in_alt_facility

UNITS: unitless

relative_strength_of_hi_risk_exConv_recidivism_for_ave_mental_func_calculation =
weighted_strength_of_hi_risk_exConv_recidivism_for_ave_mental_func_calculation /
total_recidivism_strength_for_ave_mental_func_calculation

UNITS: unitless

relative_strength_of_lo_risk_exConv_recidivism_for_ave_mental_func_calculation =
weighted_strength_of_lo_risk_exConv_recidivism_for_ave_mental_func_calculation /
total_recidivism_strength_for_ave_mental_func_calculation

UNITS: unitless

relative_strength_of_parolee_recidivism_for_ave_mental_func_calculation =
weighted_strength_of_parolee_recidivism_for_ave_mental_func_calculation /
total_recidivism_strength_for_ave_mental_func_calculation

UNITS: unitless

reparoled_prison_parolee_wMI_mental_func_chg_thru_comm_svcs = Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI * parolee_wMI_mental_func_gain_per_year * Community_Services.effect_of_comm_svc_utilization_on_parolee_wMI_mental_func

UNITS: score/year

total_recidivism_for_ave_mental_func_calculation = Individuals_with_Criminal_History.total_parolee_recidivism+ Individuals_with_Criminal_History.total_hi_risk_exConv_recidivism+ Individuals_with_Criminal_History.total_lo_risk_exConv_recidivism

UNITS: person/year

total_recidivism_strength_for_ave_mental_func_calculation = weighted_strength_of_parolee_recidivism_for_ave_mental_func_calculation+ weighted_strength_of_hi_risk_exConv_recidivism_for_ave_mental_func_calculation+ weighted_strength_of_lo_risk_exConv_recidivism_for_ave_mental_func_calculation

UNITS: unitless

weight_for_hi_risk_recidivism_for_ave_mental_func_calculation = 0.27

UNITS: unitless

weight_for_lo_risk_recidivism_for_ave_mental_func_calculation = 0.06

UNITS: unitless

weight_for_parolee_recidivism_for_ave_mental_func_calculation = 0.97

UNITS: unitless

weighted_strength_of_hi_risk_exConv_recidivism_for_ave_mental_func_calculation = fract_recidivism_by_hi_risk_exConv_for_ave_mental_func_calculation * weight_for_hi_risk_recidivism_for_ave_mental_func_calculation

UNITS: unitless

weighted_strength_of_lo_risk_exConv_recidivism_for_ave_mental_func_calculation = fract_recidivism_by_lo_risk_exConv_for_ave_mental_func_calculation * weight_for_lo_risk_recidivism_for_ave_mental_func_calculation

UNITS: unitless

weighted_strength_of_parolee_recidivism_for_ave_mental_func_calculation = fract_recidivism_by_parolees_for_ave_mental_func_calculation * weight_for_parolee_recidivism_for_ave_mental_func_calculation

UNITS: unitless

zero_mental_function_diverted = 0

UNITS: score/person

{ The model has 473 (473) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 41 (41) Flows: 120 (120) Converters: 312 (312)

Constants: 53 (53) Equations: 379 (379) Graphicals: 16 (16)

There are also 409 expanded macro variables.

}

Incarceration Year Served Module

Current_Jail_Time_Served_wMI(t) = Current_Jail_Time_Served_wMI(t - dt) +
(addition_to_current_jail_sentence_time_served_wMI +
total_current_jail_time_served_transferred_thru_jail_offender_devMI -
total_current_jail_time_served_transferred_thru_continue_serving_probation_wMI -
transferring_current_jail_time_served_transferred_thru_releasing_jail_offender_directly_wMI) * dt

INIT Current_Jail_Time_Served_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1
THEN (((Individuals_with_Criminal_History.Jail_Offenders_wMI*prison_year_gained_per_year-
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI*Individuals_with_Criminal
_History.ave_jail_time_served_at_current_release_wMI)*Individuals_with_Criminal_History.Jail_Off
enders_wMI)/Individuals_with_Criminal_History.continue_serving_thru_probation_wMI) * 1 ELSE
Individuals_with_Criminal_History.Jail_Offenders_wMI *
init_current_jail_time_served_per_jail_offender_wMI

UNITS: person-year

INFLOWS:

addition_to_current_jail_sentence_time_served_wMI =
Individuals_with_Criminal_History.Jail_Offenders_wMI * prison_year_gained_per_year

UNITS: person

total_current_jail_time_served_transferred_thru_jail_offender_devMI =
Individuals_with_Criminal_History.jail_offender_devMI * ave_current_jail_time_served_wMI

UNITS: person

OUTFLOWS:

total_current_jail_time_served_transferred_thru_continue_serving_probation_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.continue_serving_thru_probation_wMI *
ave_current_jail_time_served_wMI ELSE
DELAY3(Individuals_with_Criminal_History.continue_serving_thru_probation_wMI *
ave_current_jail_time_served_wMI, ave_current_jail_time_served_wMI,
Individuals_with_Criminal_History.continue_serving_thru_probation_wMI *
ave_current_jail_time_served_wMI)

UNITS: person

transferring_current_jail_time_served_transferred_thru_releasing_jail_offender_directly_wMI =
IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_current_sentence_length_served_per_jail_offender_wMI ELSE
DELAY3(Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_current_sentence_length_served_per_jail_offender_wMI,
ave_current_sentence_length_served_per_jail_offender_wMI,
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_current_sentence_length_served_per_jail_offender_wMI)

UNITS: person

Current_Jail_Time_Served_wo_MI(t) = Current_Jail_Time_Served_wo_MI(t - dt) +
(addition_to_current_jail_sentence_time_served_wo_MI -
total_current_jail_time_served_transferred_thru_jail_offender_devMI -
total_current_jail_time_served_transferred_thru_continue_serving_probation_wo_MI -
transferring_current_jail_time_served_transferred_thru_releasing_jail_offender_directly_wo_MI) *
dt

INIT Current_Jail_Time_Served_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch
= 1 THEN 917.047004956 ELSE Individuals_with_Criminal_History.Jail_Offenders_wo_MI *
init_current_jail_time_served_per_jail_offender_wo_MI

UNITS: person-year

INFLOWS:

addition_to_current_jail_sentence_time_served_wo_MI =
Individuals_with_Criminal_History.Jail_Offenders_wo_MI * prison_year_gained_per_year

UNITS: person

OUTFLOWS:

total_current_jail_time_served_transferred_thru_jail_offender_devMI =
Individuals_with_Criminal_History.jail_offender_devMI * ave_current_jail_time_served_wMI

UNITS: person

total_current_jail_time_served_transferred_thru_continue_serving_probation_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI *
ave_current_jail_time_served_wo_MI ELSE
DELAY3(Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI *
ave_current_jail_time_served_wo_MI, ave_current_jail_time_served_wo_MI,
Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI *
ave_current_jail_time_served_wo_MI)

UNITS: person

transferring_current_jail_time_served_transferred_thru_releasing_jail_offender_directly_wo_MI =
IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI *
ave_current_sentence_length_served_per_jail_offender_wo_MI ELSE
DELAY3(Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI *
ave_current_sentence_length_served_per_jail_offender_wo_MI,
ave_current_sentence_length_served_per_jail_offender_wo_MI,
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI *
ave_current_sentence_length_served_per_jail_offender_wo_MI)

UNITS: person

$$\text{Current_Prison_Time_Served_by_Prisoners_wSMI_in_Alternative_Facility}(t) =$$

$$\text{Current_Prison_Time_Served_by_Prisoners_wSMI_in_Alternative_Facility}(t - dt) +$$

$$(\text{additions_to_current_prison_time_served_by_prisoners_wSMI_in_alt_facility} -$$

$$\text{current_prison_time_released_with_prisoners_wSMI_in_alt_facility} -$$

$$\text{total_current_prison_time_served_lost_thru_prisoners_wSMI_in_alt_facility_deaths}) * dt$$

INIT Current_Prison_Time_Served_by_Prisoners_wSMI_in_Alternative_Facility = IF
 Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI = 1 THEN
 Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility *
 Individuals_with_Criminal_History.ave_time_served_in_alt_facility ELSE 0.0000000001

UNITS: person-year

INFLOWS:

$$\text{additions_to_current_prison_time_served_by_prisoners_wSMI_in_alt_facility} =$$

$$\text{Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI} *$$

$$(\text{Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility} *$$

$$\text{prison_year_gained_per_year})$$

UNITS: person

OUTFLOWS:

$$\text{current_prison_time_released_with_prisoners_wSMI_in_alt_facility} =$$

$$\text{Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI} * \text{DELAY3}$$

$$(\text{Individuals_with_Criminal_History.releasing_prisoner_wSMI_in_alt_facility} *$$

$$\text{Individuals_with_Criminal_History.ave_time_served_in_alt_facility},$$

$$\text{Individuals_with_Criminal_History.ave_time_served_in_alt_facility},$$

$$\text{Individuals_with_Criminal_History.releasing_prisoner_wSMI_in_alt_facility} *$$

$$\text{Individuals_with_Criminal_History.ave_time_served_in_alt_facility})$$

UNITS: person

$$\text{total_current_prison_time_served_lost_thru_prisoners_wSMI_in_alt_facility_deaths} =$$

$$\text{Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI} *$$

$$(\text{Individuals_with_Criminal_History.deaths_of_prisoners_wSMI_in_alt_facility} *$$

$$\text{ave_current_prison_time_served_per_prisoner_wSMI_in_alt_facility})$$

UNITS: person

$$\text{Current_Prison_Time_Served_wMI}(t) = \text{Current_Prison_Time_Served_wMI}(t - dt) +$$

$$(\text{addition_to_current_prison_time_served_wMI} +$$

$$\text{current_prison_time_served_transferred_thru_devMI} -$$

$$\text{transferring_current_prison_time_thru_release_wMI_before_realignment} -$$

$$\text{total_current_prison_time_served_lost_thru_deaths_wMI} -$$

$$\text{transferring_current_time_serve_thru_recovery} -$$

$$\text{transferring_current_prison_time_wMI_after_realignment}) * dt$$

INIT Current_Prison_Time_Served_wMI = IF Individuals_with_Criminal_History.equilibrium_switch
 = 1 THEN
 ((Individuals_with_Criminal_History.Prisoners_wMI*prison_year_gained_per_year+Individuals_with
 _Criminal_History.prisoner_develop_MI*ave_current_prison_time_served_wo_MI-

$$\frac{\text{Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI} * \text{Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment}}{\text{Individuals_with_Criminal_History.Prisoners_wMI}} /$$

$$(\text{Individuals_with_Criminal_History.prisoner_wMI_deaths}) \text{ ELSE}$$

$$\text{Individuals_with_Criminal_History.Prisoners_wMI} * \text{INIT}(\text{Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI})$$

UNITS: person-year

INFLOWS:

$$\text{addition_to_current_prison_time_served_wMI} =$$

$$\text{Individuals_with_Criminal_History.Prisoners_wMI} * \text{prison_year_gained_per_year}$$

UNITS: person

$$\text{current_prison_time_served_transferred_thru_devMI} =$$

$$\text{Individuals_with_Criminal_History.prisoner_develop_MI} * \text{ave_current_prison_time_served_wo_MI}$$

UNITS: person

OUTFLOWS:

$$\text{transferring_current_prison_time_thru_release_wMI_before_realignment} = \text{IF}$$

$$\text{Individuals_with_Criminal_History.equilibrium_switch} = 1 \text{ THEN}$$

$$\text{Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment} * \text{Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI}$$

$$\text{ELSE}$$

$$\text{DELAY3}(\text{Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment} * \text{Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI},$$

$$\text{Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI},$$

$$\text{Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment} * \text{Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI})$$

UNITS: person

$$\text{total_current_prison_time_served_lost_thru_deaths_wMI} =$$

$$\text{Individuals_with_Criminal_History.prisoner_wMI_deaths} * \text{ave_current_prison_time_served_wMI}$$

UNITS: person

$$\text{transferring_current_time_serve_thru_recovery} =$$

$$\text{Individuals_with_Criminal_History.prisoner_wMI_recovering} * \text{ave_current_prison_time_served_wMI}$$

UNITS: person

$$\text{transferring_current_prison_time_wMI_after_realignment} =$$

$$\text{Individuals_with_Criminal_History.realignment_policy} * \text{DELAY3}$$

$$(\text{Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment} * \text{Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI} * \text{multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole},$$

$$\text{Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI},$$

$$\text{Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment} * \text{Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI})$$

Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI * multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole)

UNITS: person

Current_Prison_Time_Served_wo_MI(t) = Current_Prison_Time_Served_wo_MI(t - dt) + (addition_to_current_prison_time_served_wo_MI + transferring_current_time_serve_thru_recovery - transferring_current_prison_time_thru_release_wo_MI_before_realignment - current_prison_time_served_transferred_out_wo_MI_after_realignment - total_current_prison_time_served_lost_thru_deaths_wo_MI - current_prison_time_served_transferred_thru_devMI) * dt

INIT Current_Prison_Time_Served_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(((Individuals_with_Criminal_History.Prisoners_wo_MI*prison_year_gained_per_year-
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI*Individuals_ with_Criminal_History.releasing_prisoner_wo_MI_before_realignment)*Individuals_ with_Criminal_ History.Prisoners_wo_MI)/(Individuals_with_Criminal_History.prisoner_wo_MI_deaths+Individuals_ with_Criminal_History.prisoner_develop_MI)) ELSE
Individuals_with_Criminal_History.Prisoners_wo_MI *
init_current_prison_time_served_per_prisoner_wo_MI

UNITS: person-year

INFLOWS:

addition_to_current_prison_time_served_wo_MI =
Individuals_with_Criminal_History.Prisoners_wo_MI * prison_year_gained_per_year

UNITS: person

transferring_current_time_serve_thru_recovery =
Individuals_with_Criminal_History.prisoner_wMI_recovering *
ave_current_prison_time_served_wMI

UNITS: person

OUTFLOWS:

transferring_current_prison_time_thru_release_wo_MI_before_realignment = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment *
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI ELSE
DELAY3(Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment *
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI,
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI,
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment *
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI)

UNITS: person

current_prison_time_served_transferred_out_wo_MI_after_realignment =
Individuals_with_Criminal_History.realignment_policy *
DELAY3(Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment

* Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI *
multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole,
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI,
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment *
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI)

UNITS: person

total_current_prison_time_served_lost_thru_deaths_wo_MI =
Individuals_with_Criminal_History.prisoner_wo_MI_deaths *
ave_current_prison_time_served_wo_MI

UNITS: person

current_prison_time_served_transferred_thru_devMI =
Individuals_with_Criminal_History.prisoner_develop_MI * ave_current_prison_time_served_wo_MI

UNITS: person

Previous_Incarceration_Time_Served_by_Jail_Offender_wo_MI(t) =
Previous_Incarceration_Time_Served_by_Jail_Offender_wo_MI(t - dt) +
(transferring_previous_incar_time_by_convict_in_custody_to_jail_wo_MI +
transferring_previous_incar_time_by_convict_comm_to_jail_wo_MI -
total_previous_incar_time_served_transferred_thru_jail_offender_devMI -
total_previous_incar_time_served_transferred_thru_continue_serving_probation_wo_MI -
transferring_previous_incar_time_served_transferred_thru_releasing_jail_offender_directly_wo_MI
) * dt

INIT Previous_Incarceration_Time_Served_by_Jail_Offender_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 387.523006418 ELSE
Individuals_with_Criminal_History.Jail_Offenders_wo_MI *
init_previous_incar_time_served_per_jail_offender_wo_MI

UNITS: person-year

INFLOWS:

transferring_previous_incar_time_by_convict_in_custody_to_jail_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wo_MI *
ave_previous_incar_time_per_preSentencing_convict_in_custody

UNITS: person

transferring_previous_incar_time_by_convict_comm_to_jail_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wo_MI *
ave_previous_incar_time_per_preSentencing_convict_in_comm

UNITS: person

OUTFLOWS:

total_previous_incar_time_served_transferred_thru_jail_offender_devMI =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.jail_offender_devMI *
ave_previous_incar_time_served_per_jail_offender_wo_MI)

UNITS: person

total_previous_incar_time_served_transferred_thru_continue_serving_probation_wo_MI =
Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI *
ave_previous_incar_time_served_per_jail_offender_wo_MI

UNITS: person

transferring_previous_incar_time_served_transferred_thru_releasing_jail_offender_directly_wo_MI
= Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI *
ave_previous_incar_time_served_per_jail_offender_wo_MI

UNITS: person

Previous_Incarceration_Time_Served_by_Jail_Offenders_wMI(t) =
Previous_Incarceration_Time_Served_by_Jail_Offenders_wMI(t - dt) +
(total_preuiuos_incar_time_served_transferred_thru_jail_offender_devMI +
transferring_previous_incar_time_by_convict_in_custody_to_jail_wMI +
transferring_previous_incar_time_by_convict_in_comm_to_jail_wMI -
transferring_previous_incar_time_served_transferred_thru_releasing_jail_offender_directly_wMI -
total_previous_jail_time_served_transferred_thru_continue_serving_probation_wMI) * dt

INIT Previous_Incarceration_Time_Served_by_Jail_Offenders_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch =1 THEN 330.112190653
ELSE Individuals_with_Criminal_History.Jail_Offenders_wMI *
init_previous_incar_time_served_per_jail_offender_wMI

UNITS: person-year

INFLOWS:

total_preuiuos_incar_time_served_transferred_thru_jail_offender_devMI =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.jail_offender_devMI *
ave_previous_incar_time_served_per_jail_offender_wo_MI)

UNITS: person

transferring_previous_incar_time_by_convict_in_custody_to_jail_wMI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wMI *
ave_previous_incar_time_per_preSentencing_convict_in_custody

UNITS: person

transferring_previous_incar_time_by_convict_in_comm_to_jail_wMI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wMI *
ave_previous_incar_time_per_preSentencing_convict_in_comm

UNITS: person

OUTFLOWS:

transferring_previous_incar_time_served_transferred_thru_releasing_jail_offender_directly_wMI =

Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_previous_incar_time_per_served_jail_offender_wMI

UNITS: person

total_previous_jail_time_served_transferred_thru_continue_serving_probation_wMI =
Individuals_with_Criminal_History.continue_serving_thru_probation_wMI *
ave_previous_incar_time_per_served_jail_offender_wMI

UNITS: person

Previous_Incarceration_Time_Served_by_Prisoners_wMI(t) =
Previous_Incarceration_Time_Served_by_Prisoners_wMI(t - dt) +
(previous_time_served_transferred_thru_devMI +
transferring_previous_incar_time_by_convict_in_comm_to_prison_wMI +
transferring_previous_incar_time_by_convict_in_custody_to_prison_wMI -
transferring_previous_time_served_wMI -
total_previous_prison_time_served_lost_thru_deaths_wMI -
transferring_previous_time_served_wMI_after_realignment -
transferring_previous_time_serve_thru_recovery) * dt

INIT Previous_Incarceration_Time_Served_by_Prisoners_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 652.659690803 ELSE
Individuals_with_Criminal_History.Prisoners_wMI *
init_previous_incar_time_served_per_prisoner_wMI

UNITS: person-year

INFLOWS:

previous_time_served_transferred_thru_devMI =
Individuals_with_Criminal_History.prisoner_develop_MI *
ave_previous_incar_time_per_prisoner_wo_MI

UNITS: person

transferring_previous_incar_time_by_convict_in_comm_to_prison_wMI =
Individuals_with_Criminal_History.incoming_prison_convicts_in_comm_wMI *
ave_previous_incar_time_per_preSentencing_convict_in_comm * (1 -
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted)

UNITS: person

transferring_previous_incar_time_by_convict_in_custody_to_prison_wMI =
Individuals_with_Criminal_History.incoming_prison_convicts_in_custody_wMI *
ave_previous_incar_time_per_preSentencing_convict_in_custody * (1 -
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted)

UNITS: person

OUTFLOWS:

transferring_previous_time_served_wMI = ave_previous_incar_time_per_prisoner_wMI *
Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment

UNITS: person

total_previous_prison_time_served_lost_thru_deaths_wMI =
Individuals_with_Criminal_History.prisoner_wMI_deaths *
ave_previous_incar_time_per_prisoner_wMI

UNITS: person

transferring_previous_time_served_wMI_after_realignment =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment *
ave_previous_incar_time_per_prisoner_wMI *
multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole)

UNITS: person

transferring_previous_time_serve_thru_recovery =
Individuals_with_Criminal_History.prisoner_wMI_recovering *
ave_previous_incar_time_per_prisoner_wMI

UNITS: person

Previous_Incarceration_Time_Served_by_Prisoners_wo_MI(t) =
Previous_Incarceration_Time_Served_by_Prisoners_wo_MI(t - dt) +
(transferring_previous_incar_time_by_convict_in_custody_to_prison_wo_MI +
transferring_previous_incar_time_by_convict_in_comm_to_prison_wo_MI +
transferring_previous_time_serve_thru_recovery - transferring_previous_time_served_wo_MI -
total_previous_prison_time_served_lost_thru_deaths_wo_MI -
previous_time_served_transferred_out_wo_MI_after_realignment -
previous_time_served_transferred_thru_devMI) * dt

INIT Previous_Incarceration_Time_Served_by_Prisoners_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch=1 THEN 1963.05221952 ELSE
Individuals_with_Criminal_History.Prisoners_wo_MI *
init_previous_incar_time_served_per_prisoner_wo_MI

UNITS: person-year

INFLOWS:

transferring_previous_incar_time_by_convict_in_custody_to_prison_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_prison_wo_MI *
ave_previous_incar_time_per_preSentencing_convict_in_custody

UNITS: person

transferring_previous_incar_time_by_convict_in_comm_to_prison_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_prison_wo_MI *
ave_previous_incar_time_per_preSentencing_convict_in_comm

UNITS: person

transferring_previous_time_serve_thru_recovery =
Individuals_with_Criminal_History.prisoner_wMI_recovering *
ave_previous_incar_time_per_prisoner_wMI

UNITS: person

OUTFLOWS:

transferring_previous_time_served_wo_MI = ave_previous_incar_time_per_prisoner_wo_MI *
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment

UNITS: person

total_previous_prison_time_served_lost_thru_deaths_wo_MI =
Individuals_with_Criminal_History.prisoner_wo_MI_deaths *
ave_previous_incar_time_per_prisoner_wo_MI

UNITS: person

previous_time_served_transferred_out_wo_MI_after_realignment =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment *
ave_previous_incar_time_per_prisoner_wo_MI *
multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole)

UNITS: person

previous_time_served_transferred_thru_devMI =
Individuals_with_Criminal_History.prisoner_develop_MI *
ave_previous_incar_time_per_prisoner_wo_MI

UNITS: person

Previous_Incarceration_Time_Served_by_Prisoners_wSMI_in_Alternative_Facility(t) =
Previous_Incarceration_Time_Served_by_Prisoners_wSMI_in_Alternative_Facility(t - dt) +
(transferring_previous_incar_time_thru_convicting_convict_in_custody_to_alt_facility_wSMI +
transferring_previous_incar_time_thru_convicting_convict_in_comm_to_alt_facility_wSMI -
transferring_previous_incar_time_thru_releasing_prisoner_wSMI_in_alt_facility -
losing_previous_incar_time_thru_prisoner_wSMI_in_alt_facility_deaths) * dt

INIT Previous_Incarceration_Time_Served_by_Prisoners_wSMI_in_Alternative_Facility = IF
Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI = 1 THEN
Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility *
ave_previous_incar_time_per_prisoner_wMI ELSE 0.0000000001

UNITS: person-year

INFLOWS:

transferring_previous_incar_time_thru_convicting_convict_in_custody_to_alt_facility_wSMI =
Individuals_with_Criminal_History.incoming_prison_convicts_in_custody_wMI *
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted *
ave_previous_incar_time_per_preSentencing_convict_in_custody

UNITS: person

transferring_previous_incar_time_thru_convicting_convict_in_comm_to_alt_facility_wSMI =
Individuals_with_Criminal_History.incoming_prison_convicts_in_comm_wMI *

Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_comm_diverted*
ave_previous_incar_time_per_preSentencing_convict_in_comm

UNITS: person

OUTFLOWS:

transferring_previous_incar_time_thru_releasing_prisoner_wSMI_in_alt_facility =
Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI *
(Individuals_with_Criminal_History.releasing_prisoner_wSMI_in_alt_facility *
ave_previous_incar_time_per_prisoner_wSMI_in_alt_facility)

UNITS: person

losing_previous_incar_time_thru_prisoner_wSMI_in_alt_facility_deaths =
Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI *
(Individuals_with_Criminal_History.deaths_of_prisoners_wSMI_in_alt_facility *
ave_previous_incar_time_per_prisoner_wSMI_in_alt_facility)

UNITS: person

Total_Incar_Time_Served_by_County_Parolees_wMI(t) =
Total_Incar_Time_Served_by_County_Parolees_wMI(t - dt) +
(transferring_current_prison_time_wMI_after_realignment +
transferring_previous_time_served_wMI_after_realignment -
transferring_incar_time_thru_discharging_county_parolee_wMI -
total_prison_time_served_by_county_parolee_wo_MI_transferred_thru_committing_new_crimes -
transferring_total_prison_time_served_thru_county_parolee_wMI_violating_condition) * dt

INIT Total_Incar_Time_Served_by_County_Parolees_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0.001 ELSE
Individuals_with_Criminal_History.County_Parolees_wMI * total_incar_time_per_prisoner_wMI *
multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole

UNITS: person-year

INFLOWS:

transferring_current_prison_time_wMI_after_realignment =
Individuals_with_Criminal_History.realignment_policy * DELAY3
(Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment *
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI *
multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole,
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI,
Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment *
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI *
multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole)

UNITS: person

transferring_previous_time_served_wMI_after_realignment =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment *

ave_previous_incar_time_per_prisoner_wMI *
multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole)

UNITS: person

OUTFLOWS:

transferring_incar_time_thru_discharging_county_parolee_wMI =
Individuals_with_Criminal_History.discharging_county_parolee_wMI *
ave_incar_time_per_county_parolee_wMI

UNITS: person

total_prison_time_served_by_county_parolee_wo_MI_transferred_thru_committing_new_crimes =
Individuals_with_Criminal_History.county_parolee_wo_MI_committing_new_crimes *
ave_incar_time_per_county_parolee_wMI

UNITS: person

transferring_total_prison_time_served_thru_county_parolee_wMI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wMI_violating_condition *
ave_incar_time_per_county_parolee_wMI

UNITS: person

Total_Incar_Time_Served_by_Reprisoned_County_Parole_Violators_wMI(t) =
Total_Incar_Time_Served_by_Reprisoned_County_Parole_Violators_wMI(t - dt) +
(transferring_incar_time_thru_county_parolee_returning_to_jail_wMI -
transferring_incar_time_thru_rerelease_exPrisoner_to_county_parole_wMI) * dt

INIT Total_Incar_Time_Served_by_Reprisoned_County_Parole_Violators_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0.0045 ELSE
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI *
init_previous_incar_time_served_per_reprisoned_county_parole_violator_fr_prison_wMI

UNITS: person-year

INFLOWS:

transferring_incar_time_thru_county_parolee_returning_to_jail_wMI =
Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail *
ave_incar_time_served_per_county_parolee_wMI_violated_condition

UNITS: person

OUTFLOWS:

transferring_incar_time_thru_rerelease_exPrisoner_to_county_parole_wMI =
Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wMI *
ave_incar_time_served_per_reprisoned_county_parole_violator_wMI

UNITS: person

Total_Incarceration_Time_Served_by_County_Parolee_wMI_Violated_Condition(t) =
Total_Incarceration_Time_Served_by_County_Parolee_wMI_Violated_Condition(t - dt) +

(transferring_total_prison_time_served_thru_county_parolee_wMI_violating_condition -
transferring_total_prison_time_served_thru_discharging_county_parolee_wMI_violated_condition -
transferring_incar_time_thru_county_parolee_returning_to_jail_wMI -
total_prison_time_served_by_county_parolee_wMI_violated_condition_transferred_thru_committi
ng_new_crimes) * dt

INIT Total_Incarceration_Time_Served_by_County_Parolee_wMI_Violated_Condition = IF
Individuals_with_Criminal_History.equilibrium_switch =1 THEN 0.0001 ELSE
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI *
init_previous_incar_time_served_per_reprisoned_county_parole_violator_fr_prison_wMI

UNITS: person-year

INFLOWS:

transferring_total_prison_time_served_thru_county_parolee_wMI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wMI_violating_condition *
ave_incar_time_per_county_parolee_wMI

UNITS: person

OUTFLOWS:

transferring_total_prison_time_served_thru_discharging_county_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.discharging_county_parolee_wMI_violated_condition *
ave_incar_time_served_per_county_parolee_wMI_violated_condition

UNITS: person

transferring_incar_time_thru_county_parolee_returning_to_jail_wMI =
Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail *
ave_incar_time_served_per_county_parolee_wMI_violated_condition

UNITS: person

total_prison_time_served_by_county_parolee_wMI_violated_condition_transferred_thru_committi
ng_new_crimes =
Individuals_with_Criminal_History.county_parolee_wMI_violated_condition_committing_new_crim
es * ave_incar_time_served_per_county_parolee_wMI_violated_condition

UNITS: person

Total_Incarceration_Time_Served_by_County_Parolee_wo_MI_Violated_Condition(t) =
Total_Incarceration_Time_Served_by_County_Parolee_wo_MI_Violated_Condition(t - dt) +
(transferring_total_prison_time_served_thru_county_parolee_wo_MI_violating_condition -
transferring_incar_time_thru_county_parolee_returning_to_jail_wo_MI -
transferring_total_prison_time_served_thru_discharging_county_parolee_wo_MI_violated_conditio
n -
total_prison_time_served_by_county_parolee_wo_MI_violated_condition_transferred_thru_commi
tting_new_crimes) * dt

INIT Total_Incarceration_Time_Served_by_County_Parolee_wo_MI_Violated_Condition = IF
 Individuals_with_Criminal_History.equilibrium_switch =1 THEN
 (Individuals_with_Criminal_History.county_parolee_wo_MI_violating_condition*ave_incar_time_ser
 ved_per_county_parolee_wo_MI*Individuals_with_Criminal_History.County_Parolee_wo_MI_Violat
 ed_Condition)/(Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail+Individ
 uals_with_Criminal_History.discharging_county_parolee_wo_MI_violated_condition+Individuals_wit
 h_Criminal_History.county_parolee_wo_MI_violated_condition_committing_new_crimes) ELSE
 Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI *
 init_previous_incar_time_served_per_reprisoned_county_parole_violator_fr_prison_wo_MI

UNITS: person-year

INFLOWS:

transferring_total_prison_time_served_thru_county_parolee_wo_MI_violating_condition =
 Individuals_with_Criminal_History.county_parolee_wo_MI_violating_condition *
 ave_incar_time_served_per_county_parolee_wo_MI

UNITS: person

OUTFLOWS:

transferring_incar_time_thru_county_parolee_returning_to_jail_wo_MI =
 Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail *
 ave_incar_time_served_per_county_parolee_wo_MI_violated_condition

UNITS: person

transferring_total_prison_time_served_thru_discharging_county_parolee_wo_MI_violated_conditio
 n = Individuals_with_Criminal_History.discharging_county_parolee_wo_MI_violated_condition *
 ave_incar_time_served_per_county_parolee_wo_MI_violated_condition

UNITS: person

total_prison_time_served_by_county_parolee_wo_MI_violated_condition_transferred_thru_commi
 tting_new_crimes =
 Individuals_with_Criminal_History.county_parolee_wo_MI_violated_condition_committing_new_cri
 mes * ave_incar_time_served_per_county_parolee_wo_MI_violated_condition

UNITS: person

Total_Incarceration_Time_Served_by_County_Parolees_wo_MI(t) =
 Total_Incarceration_Time_Served_by_County_Parolees_wo_MI(t - dt) +
 (current_prison_time_served_transferred_out_wo_MI_after_realignment +
 previous_time_served_transferred_out_wo_MI_after_realignment -
 transferring_incar_time_thru_discharging_county_parolee_wo_MI -
 total_prison_time_served_by_county_parolee_wMI_transferred_thru_committing_new_crimes -
 transferring_total_prison_time_served_thru_county_parolee_wo_MI_violating_condition) * dt

INIT Total_Incarceration_Time_Served_by_County_Parolees_wo_MI = IF
 Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0 ELSE
 Individuals_with_Criminal_History.County_Parolees_wo_MI *

total_incar_time_per_prisoner_wo_MI *
multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole

UNITS: person-year

INFLOWS:

current_prison_time_served_transferred_out_wo_MI_after_realignment =
Individuals_with_Criminal_History.realignment_policy *
DELAY3(Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment
* Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI *
multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole,
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI,
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment *
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI)

UNITS: person

previous_time_served_transferred_out_wo_MI_after_realignment =
Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment *
ave_previous_incar_time_per_prisoner_wo_MI *
multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole)

UNITS: person

OUTFLOWS:

transferring_incar_time_thru_discharging_county_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_county_parolee_wo_MI *
ave_incar_time_served_per_county_parolee_wo_MI

UNITS: person

total_prison_time_served_by_county_parolee_wMI_transferred_thru_committing_new_crimes
= Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.county_parolee_wMI_committing_new_crimes *
ave_incar_time_served_per_county_parolee_wo_MI)

UNITS: person

transferring_total_prison_time_served_thru_county_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.county_parolee_wo_MI_violating_condition *
ave_incar_time_served_per_county_parolee_wo_MI

UNITS: person

Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wMI(t) =
Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wMI(t - dt) +
(transferring_incar_time_thru_discharging_county_parolee_wMI +
transferring_previous_incar_time_served_transferred_thru_releasing_jail_offender_directly_wMI +
transferring_current_jail_time_served_transferred_thru_releasing_jail_offender_directly_wMI +
transferring_total_prison_time_served_thru_discharging_county_parolee_wMI_violated_condition +
transferring_incar_time_thru_rerelease_exPrisoner_to_county_parole_wMI +

transferring_previous_incar_time_served_thru_dismissed_jail_exConv_returning_to_comm_wMI -
total_jail_time_served_lost_thru_hi_risk_exConv_deaths_wMI -
total_incar_time_served_transferred_out_thru_becoming_lo_risk_exConv_wMI -
total_jail_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wMI) * dt

INIT Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 2873.24575982 ELSE
Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI *
init_previous_incar_time_served_per_hi_risk_jail_exConv_wMI

UNITS: person-year

INFLOWS:

transferring_incar_time_thru_discharging_county_parolee_wMI =
Individuals_with_Criminal_History.discharging_county_parolee_wMI *
ave_incar_time_per_county_parolee_wMI

UNITS: person

transferring_previous_incar_time_served_transferred_thru_releasing_jail_offender_directly_wMI =
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_previous_incar_time_per_served_jail_offender_wMI

UNITS: person

transferring_current_jail_time_served_transferred_thru_releasing_jail_offender_directly_wMI =
IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_current_sentence_length_served_per_jail_offender_wMI ELSE
DELAY3(Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_current_sentence_length_served_per_jail_offender_wMI,
ave_current_sentence_length_served_per_jail_offender_wMI,
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI *
ave_current_sentence_length_served_per_jail_offender_wMI)

UNITS: person

transferring_total_prison_time_served_thru_discharging_county_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.discharging_county_parolee_wMI_violated_condition *
ave_incar_time_served_per_county_parolee_wMI_violated_condition

UNITS: person

transferring_incar_time_thru_rerelease_exPrisoner_to_county_parole_wMI =
Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wMI *
ave_incar_time_served_per_reprisoned_county_parole_violator_wMI

UNITS: person

transferring_previous_incar_time_served_thru_dismissed_jail_exConv_returning_to_comm_wMI =

Individuals_with_Criminal_History.dismissed_jail_exConv_returning_to_comm_wMI *
ave_previous_incar_time_per_preSentencing_convict_in_comm

UNITS: person

OUTFLOWS:

total_jail_time_served_lost_thru_hi_risk_exConv_deaths_wMI =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_deaths *
ave_incar_time_served_per_hi_risk_jail_exConv_wMI

UNITS: person

total_incar_time_served_transferred_out_thru_becoming_lo_risk_exConv_wMI =
Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wMI *
ave_incar_time_served_per_hi_risk_jail_exConv_wMI

UNITS: person

total_jail_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wMI =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_recidivism *
ave_incar_time_served_per_hi_risk_jail_exConv_wMI

UNITS: person

Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wo_MI(t) =
Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wo_MI(t - dt) +
(transferring_incar_time_thru_discharging_county_parolee_wo_MI +
transferring_previous_incar_time_served_transferred_thru_releasing_jail_offender_directly_wo_MI +
transferring_current_jail_time_served_transferred_thru_releasing_jail_offender_directly_wo_MI +
transferring_total_prison_time_served_thru_discharging_county_parolee_wo_MI_violated_conditio
n + transferring_incar_time_thru_rerelease_exPrisoner_to_county_parolee_wo_MI +
transferring_previous_incar_time_served_thru_dismissed_jail_exConv_returning_to_comm_wo_MI
- total_jail_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wo_MI -
total_jail_time_served_lost_thru_hi_risk_exConv_deaths_wo_MI -
total_jail_time_served_transferred_out_thru_becoming_lo_risk_exConv_wo_MI) * dt

INIT Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 3158.37382552 ELSE
Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI *
init_previous_incar_time_served_per_hi_risk_jail_exConv_wo_MI

UNITS: person-year

INFLOWS:

transferring_incar_time_thru_discharging_county_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_county_parolee_wo_MI *
ave_incar_time_served_per_county_parolee_wo_MI

UNITS: person

transferring_previous_incar_time_served_transferred_thru_releasing_jail_offender_directly_wo_MI

= Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI *
ave_previous_incar_time_served_per_jail_offender_wo_MI

UNITS: person

transferring_current_jail_time_served_transferred_thru_releasing_jail_offender_directly_wo_MI =
IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI *
ave_current_sentence_length_served_per_jail_offender_wo_MI ELSE
DELAY3(Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI *
ave_current_sentence_length_served_per_jail_offender_wo_MI,
ave_current_sentence_length_served_per_jail_offender_wo_MI,
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI *
ave_current_sentence_length_served_per_jail_offender_wo_MI)

UNITS: person

transferring_total_prison_time_served_thru_discharging_county_parolee_wo_MI_violated_conditio
n = Individuals_with_Criminal_History.discharging_county_parolee_wo_MI_violated_condition *
ave_incar_time_served_per_county_parolee_wo_MI_violated_condition

UNITS: person

transferring_incar_time_thru_rerelease_exPrisoner_to_county_parole_wo_MI =
Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wo_MI *
ave_incar_time_served_by_reprisoned_county_parolee_violator_wo_MI

UNITS: person

transferring_previous_incar_time_served_thru_dismissed_jail_exConv_returning_to_comm_wo_MI
= Individuals_with_Criminal_History.dismissed_jail_exConv_returning_to_comm_wo_MI *
ave_previous_incar_time_per_preSentencing_convict_in_comm

UNITS: person

OUTFLOWS:

total_jail_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wo_MI =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_recidivism *
ave_incar_time_served_by_hi_risk_jail_exConv_wo_MI

UNITS: person

total_jail_time_served_lost_thru_hi_risk_exConv_deaths_wo_MI =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_deaths *
ave_incar_time_served_by_hi_risk_jail_exConv_wo_MI

UNITS: person

total_jail_time_served_transferred_out_thru_becoming_lo_risk_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI *
ave_incar_time_served_by_hi_risk_jail_exConv_wo_MI

UNITS: person

Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wMI(t) =
Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wMI(t - dt) +
(transferring_incar_time_served_thru_discharge_wMI +
transferring_total_prison_time_served_thru_discharging_prison_parolee_wMI_violated_condition +
transferring_total_prison_time_served_thru_discharging_reparoled_prison_parolee_wMI +
transferring_total_incar_time_thru_prisoners_wSMI_in_alt_facility_being_released +
transferring_previous_incar_time_served_thru_dismissed_prison_exConv_returning_to_comm_wMI
- total_prison_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wMI -
new_prison_time_served_lost_thru_hi_risk_exConv_deaths_wMI -
total_prison_time_served_transferred_out_thru_becoming_lo_risk_exConv_wMI) * dt

INIT Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 11070.911786 ELSE
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI *
init_previous_incar_time_served_per_hi_risk_prison_exConv_wMI

UNITS: person-year

INFLOWS:

transferring_incar_time_served_thru_discharge_wMI =
Individuals_with_Criminal_History.discharging_prison_parolee_wMI *
ave_incar_time_per_prison_parolee_wMI

UNITS: person

transferring_total_prison_time_served_thru_discharging_prison_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wMI_violated_condition *
ave_incar_time_per_prison_parolee_wMI_violated_condition

UNITS: person

transferring_total_prison_time_served_thru_discharging_reparoled_prison_parolee_wMI =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wMI *
ave_incar_time_per_reparoled_prison_parolee_wMI

UNITS: person

transferring_total_incar_time_thru_prisoners_wSMI_in_alt_facility_being_released =
transferring_previous_incar_time_thru_releasing_prisoner_wSMI_in_alt_facility +
current_prison_time_released_with_prisoners_wSMI_in_alt_facility

UNITS: person

transferring_previous_incar_time_served_thru_dismissed_prison_exConv_returning_to_comm_wMI
= Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wo_MI *
ave_previous_incar_time_per_preSentencing_convict_in_comm

UNITS: person

OUTFLOWS:

total_prison_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wMI =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism *
ave_incar_time_per_hi_risk_prison_exConv_wMI

UNITS: person

new_prison_time_served_lost_thru_hi_risk_exConv_deaths_wMI =
Individuals_with_Criminal_History.hi_risk_prison_exConv_deaths_wMI *
ave_incar_time_per_hi_risk_prison_exConv_wMI

UNITS: person

total_prison_time_served_transferred_out_thru_becoming_lo_risk_exConv_wMI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI *
ave_incar_time_per_hi_risk_prison_exConv_wMI

UNITS: person

Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wo_MI(t) =
Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wo_MI(t - dt) +
(transferring_incar_time_served_thru_discharge_wo_MI +
transferring_total_prison_time_served_thru_discharging_prison_parolee_wo_MI_violated_conditio
n + transferring_total_prison_time_served_thru_discharging_reparoled_prison_parolee_wo_MI +
transferring_previous_incar_time_served_thru_dismissed_prison_exConv_returning_to_comm_wo_
MI - new_prison_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wo_MI -
new_prison_time_served_lost_thru_hi_risk_exConv_deaths_wo_MI -
total_pison_time_served_transferred_out_thru_becoming_lo_risk_exConv_wo_MI) * dt

INIT Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 27688.4281597 ELSE
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI *
init_previous_incar_time_served_per_hi_risk_prison_exConv_wo_MI

UNITS: person-year

INFLOWS:

transferring_incar_time_served_thru_discharge_wo_MI =
Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI *
ave_incar_time_per_prison_parolee_wo_MI

UNITS: person

transferring_total_prison_time_served_thru_discharging_prison_parolee_wo_MI_violated_conditio
n = Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI_violated_condition *
ave_incar_time_per_prison_parolee_wo_MI_violated_condition

UNITS: person

transferring_total_prison_time_served_thru_discharging_reparoled_prison_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wo_MI *
ave_incar_time_per_reparoled_prison_parolee_wo_MI

UNITS: person

transferring_previous_incar_time_served_thru_dismissed_prison_exConv_returning_to_comm_wo_MI = Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wMI *
ave_previous_incar_time_per_preSentencing_convict_in_comm

UNITS: person

OUTFLOWS:

new_prison_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wo_MI =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism *
ave_incar_time_per_hi_risk_prison_exConv_wo_MI

UNITS: person

new_prison_time_served_lost_thru_hi_risk_exConv_deaths_wo_MI =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_deaths *
ave_incar_time_per_hi_risk_prison_exConv_wo_MI

UNITS: person

total_pison_time_served_transferred_out_thru_becoming_lo_risk_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI *
ave_incar_time_per_hi_risk_prison_exConv_wo_MI

UNITS: person

Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wMI(t) =
Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wMI(t - dt) +
(total_incar_time_served_transferred_out_thru_becoming_lo_risk_exConv_wMI -
total_jail_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wMI -
total_incar_time_served_transferred_out_thru_becoming_desisting_exConv_wMI -
total_jail_time_served_lost_thru_lo_risk_exConv_deaths_wMI) * dt

INIT Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 4204.16392854 ELSE
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI *
init_previous_incar_time_served_per_lo_risk_jail_exConv_wMI

UNITS: person-year

INFLOWS:

total_incar_time_served_transferred_out_thru_becoming_lo_risk_exConv_wMI =
Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wMI *
ave_incar_time_served_per_hi_risk_jail_exConv_wMI

UNITS: person

OUTFLOWS:

total_jail_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wMI =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_recidivism *
ave_incar_time_served_by_lo_risk_jail_exConv_wMI

UNITS: person

total_incar_time_served_transferred_out_thru_becoming_desisting_exConv_wMI =
Individuals_with_Criminal_History.jail_exConv_wMI_desisting *
ave_incar_time_served_by_lo_risk_jail_exConv_wMI

UNITS: person

total_jail_time_served_lost_thru_lo_risk_exConv_deaths_wMI =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_deaths *
ave_incar_time_served_by_lo_risk_jail_exConv_wMI

UNITS: person

Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wo_MI(t) =
Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wo_MI(t - dt) +
(total_jail_time_served_transferred_out_thru_becoming_lo_risk_exConv_wo_MI +
total_previous_incar_time_transferred_thru_discharging_fr_probation -
total_jail_time_served_transferred_out_thru_becoming_desisting_exConv_wo_MI -
total_jail_time_served_lost_thru_lo_risk_exConv_deaths_wo_MI -
total_jail_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wo_MI) * dt

INIT Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 16797.0988401 ELSE
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI *
init_previous_incar_time_served_per_lo_risk_jail_exConv_wo_MI

UNITS: person-year

INFLOWS:

total_jail_time_served_transferred_out_thru_becoming_lo_risk_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI *
ave_incar_time_served_by_hi_risk_jail_exConv_wo_MI

UNITS: person

total_previous_incar_time_transferred_thru_discharging_fr_probation =
Individuals_with_Criminal_History.discharging_fr_probation *
ave_previous_incar_time_served_by_probationer

UNITS: person

OUTFLOWS:

total_jail_time_served_transferred_out_thru_becoming_desisting_exConv_wo_MI =
Individuals_with_Criminal_History.jail_exConv_wo_MI_desisting *
ave_incar_time_served_by_lo_risk_jail_exConv_wo_MI

UNITS: person

total_jail_time_served_lost_thru_lo_risk_exConv_deaths_wo_MI =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_deaths *
ave_incar_time_served_by_lo_risk_jail_exConv_wo_MI

UNITS: person

total_jail_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wo_MI =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism *
ave_incar_time_served_by_lo_risk_jail_exConv_wo_MI

UNITS: person

Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wMI(t) =
Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wMI(t - dt) +
(total_prison_time_served_transferred_out_thru_becoming_lo_risk_exConv_wMI -
total_prison_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wMI -
new_prison_time_served_lost_thru_lo_risk_exConv_deaths_wMI -
total_prison_time_served_transferred_out_thru_becoming_desisting_exConv_wMI) * dt

INIT Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI*ave_incar_time_per_hi_
risk_prison_exConv_wMI*Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI)/(Indiv
iduals_with_Criminal_History.lo_risk_prison_exConv_deaths_wMI+Individuals_with_Criminal_Histor
y.lo_risk_prison_exConv_wMI_recidivism+Individuals_with_Criminal_History.prison_exConv_desistin
g_wMI) ELSE Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI *
init_previous_incar_time_served_per_lo_risk_prison_exConv_wMI

UNITS: person-year

INFLOWS:

total_prison_time_served_transferred_out_thru_becoming_lo_risk_exConv_wMI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI *
ave_incar_time_per_hi_risk_prison_exConv_wMI

UNITS: person

OUTFLOWS:

total_prison_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wMI =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wMI_recidivism *
ave_incar_time_per_lo_risk_prison_exConv_wMI

UNITS: person

new_prison_time_served_lost_thru_lo_risk_exConv_deaths_wMI =
Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wMI *
ave_incar_time_per_lo_risk_prison_exConv_wMI

UNITS: person

total_prison_time_served_transferred_out_thru_becoming_desisting_exConv_wMI =
Individuals_with_Criminal_History.prison_exConv_desisting_wMI *
ave_incar_time_per_lo_risk_prison_exConv_wMI

UNITS: person

Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wo_MI(t) =
Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wo_MI(t - dt) +
(total_pison_time_served_transferred_out_thru_becoming_lo_risk_exConv_wo_MI -

new_prison_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wo_MI -
total_prison_time_served_transferred_out_thru_becoming_desisting_exConv_wo_MI -
new_prison_time_served_lost_thru_lo_risk_exConv_deaths_wo_MI) * dt

INIT Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI*ave_incar_time_per_h
i_risk_prison_exConv_wo_MI*Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI
)/(Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wo_MI+Individuals_with_Crimi
nal_History.lo_risk_prison_exConv_wo_MI_recidivism+Individuals_with_Criminal_History.prison_ex
Conv_desisting_wo_MI) ELSE Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI
* init_previous_incar_time_served_per_lo_risk_prison_exConv_wo_MI

UNITS: person-year

INFLOWS:

total_pison_time_served_transferred_out_thru_becoming_lo_risk_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI *
ave_incar_time_per_hi_risk_prison_exConv_wo_MI

UNITS: person

OUTFLOWS:

new_prison_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wo_MI =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism *
ave_incar_time_per_lo_risk_prison_exConv_wo_MI

UNITS: person

total_prison_time_served_transferred_out_thru_becoming_desisting_exConv_wo_MI =
Individuals_with_Criminal_History.prison_exConv_desisting_wo_MI *
ave_incar_time_per_lo_risk_prison_exConv_wo_MI

UNITS: person

new_prison_time_served_lost_thru_lo_risk_exConv_deaths_wo_MI =
Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wo_MI *
ave_incar_time_per_lo_risk_prison_exConv_wo_MI

UNITS: person

Total_Incarceration_Time_Served_by_Prison_Parolee_wMI_Violated_Condition(t) =
Total_Incarceration_Time_Served_by_Prison_Parolee_wMI_Violated_Condition(t - dt) +
(transferring_total_prison_time_served_thru_prison_parolee_wMI_violating_condition -
total_prison_time_served_transferred_out_thru_returning_prison_wMI -
transferring_total_prison_time_served_thru_discharging_prison_parolee_wMI_violated_condition -
total_prison_time_served_by_prison_parolee_wMI_violated_condition_transferred_thru_committin
g_new_crimes) * dt

INIT Total_Incarceration_Time_Served_by_Prison_Parolee_wMI_Violated_Condition = IF
Individuals_with_Criminal_History.equilibrium_switch =1 THEN
(Individuals_with_Criminal_History.prison_parolee_wMI_violating_condition*ave_incar_time_per_p

rison_parolee_wMI*Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition)/(I
 ndividuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison+Individuals_with_Crimi
 nal_History.discharging_prison_parolee_wMI_violated_condition+Individuals_with_Criminal_History
 .prison_parolee_wMI_violated_condition_committing_new_crimes) ELSE
 Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition *
 init_previous_incar_time_served_per_prison_parole_violator_wMI

UNITS: person-year

INFLOWS:

transferring_total_prison_time_served_thru_prison_parolee_wMI_violating_condition =
 Individuals_with_Criminal_History.prison_parolee_wMI_violating_condition *
 ave_incar_time_per_prison_parolee_wMI

UNITS: person

OUTFLOWS:

total_prison_time_served_transferred_out_thru_returning_prison_wMI =
 Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison *
 ave_incar_time_per_prison_parolee_wMI_violated_condition

UNITS: person

transferring_total_prison_time_served_thru_discharging_prison_parolee_wMI_violated_condition =
 Individuals_with_Criminal_History.discharging_prison_parolee_wMI_violated_condition *
 ave_incar_time_per_prison_parolee_wMI_violated_condition

UNITS: person

total_prison_time_served_by_prison_parolee_wMI_violated_condition_transferred_thru_committin
 g_new_crimes =
 Individuals_with_Criminal_History.prison_parolee_wMI_violated_condition_committing_new_crime
 s * ave_incar_time_per_prison_parolee_wMI_violated_condition

UNITS: person

Total_Incarceration_Time_Served_by_Prison_Parolee_wo_MI_Violated_Condition(t) =
 Total_Incarceration_Time_Served_by_Prison_Parolee_wo_MI_Violated_Condition(t - dt) +
 (transferring_total_prison_time_served_thru_prison_parolee_wo_MI_violating_condition -
 total_prison_time_served_transferred_out_thru_returning_prison_wo_MI -
 transferring_total_prison_time_served_thru_discharging_prison_parolee_wo_MI_violated_conditio
 n -
 total_prison_time_served_by_prison_parolee_wo_MI_violated_condition_transferred_thru_commit
 ting_new_crimes) * dt

INIT Total_Incarceration_Time_Served_by_Prison_Parolee_wo_MI_Violated_Condition = IF
 Individuals_with_Criminal_History.equilibrium_switch =1 THEN 5534.36840122 ELSE
 Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition *
 init_previous_incar_time_served_per_prison_parole_violator_wo_MI

UNITS: person-year

INFLOWS:

transferring_total_prison_time_served_thru_prison_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violating_condition *
ave_incar_time_per_prison_parolee_wo_MI

UNITS: person

OUTFLOWS:

total_prison_time_served_transferred_out_thru_returning_prison_wo_MI =
Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison *
ave_incar_time_per_prison_parolee_wo_MI_violated_condition

UNITS: person

transferring_total_prison_time_served_thru_discharging_prison_parolee_wo_MI_violated_conditio
n = Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI_violated_condition *
ave_incar_time_per_prison_parolee_wo_MI_violated_condition

UNITS: person

total_prison_time_served_by_prison_parolee_wo_MI_violated_condition_transferred_thru_commit
ting_new_crimes =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violated_condition_committing_new_cri
mes * ave_incar_time_per_prison_parolee_wo_MI_violated_condition

UNITS: person

Total_Incarceration_Time_Served_by_Prison_Parolees_wMI(t) =
Total_Incarceration_Time_Served_by_Prison_Parolees_wMI(t - dt) +
(transferring_previous_time_served_wMI +
transferring_current_prison_time_thru_release_wMI_before_realignment -
transferring_incar_time_served_thru_discharge_wMI -
transferring_total_prison_time_served_thru_prison_parolee_wMI_violating_condition -
total_prison_time_served_by_prison_parolee_wMI_transferred_thru_committing_new_crimes) * dt

INIT Total_Incarceration_Time_Served_by_Prison_Parolees_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 8005.22393069 ELSE
Individuals_with_Criminal_History.Prison_Parolees_wMI *
init_previous_incar_time_served_per_prison_parolee_wMI

UNITS: person-year

INFLOWS:

transferring_previous_time_served_wMI = ave_previous_incar_time_per_prisoner_wMI *
Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment

UNITS: person

transferring_current_prison_time_thru_release_wMI_before_realignment = IF
 Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
 Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment *
 Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI ELSE
 DELAY3(Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment *
 Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI,
 Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI,
 Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment *
 Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI)

UNITS: person

OUTFLOWS:

transferring_incar_time_served_thru_discharge_wMI =
 Individuals_with_Criminal_History.discharging_prison_parolee_wMI *
 ave_incar_time_per_prison_parolee_wMI

UNITS: person

transferring_total_prison_time_served_thru_prison_parolee_wMI_violating_condition =
 Individuals_with_Criminal_History.prison_parolee_wMI_violating_condition *
 ave_incar_time_per_prison_parolee_wMI

UNITS: person

total_prison_time_served_by_prison_parolee_wMI_transferred_thru_committing_new_crimes
 = Individuals_with_Criminal_History.prison_parolee_wMI_committing_new_crimes *
 ave_incar_time_per_prison_parolee_wMI

UNITS: person

Total_Incarceration_Time_Served_by_Prison_Parolees_wo_MI(t) =
 Total_Incarceration_Time_Served_by_Prison_Parolees_wo_MI(t - dt) +
 (transferring_previous_time_served_wo_MI +
 transferring_current_prison_time_thru_release_wo_MI_before_realignment -
 transferring_incar_time_served_thru_discharge_wo_MI -
 total_prison_time_served_by_prison_parolee_wo_MI_transferred_thru_committing_new_crimes -
 transferring_total_prison_time_served_thru_prison_parolee_wo_MI_violating_condition) * dt

INIT Total_Incarceration_Time_Served_by_Prison_Parolees_wo_MI = IF
 Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 21645.450645
 ELSE Individuals_with_Criminal_History.Prison_Parolees_wo_MI *
 init_previous_incar_time_served_per_prison_parolee_wo_MI

UNITS: person-year

INFLOWS:

transferring_previous_time_served_wo_MI = ave_previous_incar_time_per_prisoner_wo_MI *
 Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment

UNITS: person

transferring_current_prison_time_thru_release_wo_MI_before_realignment = IF
 Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
 Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment *
 Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI ELSE
 DELAY3(Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment *
 Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI,
 Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI,
 Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment *
 Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI)

UNITS: person

OUTFLOWS:

transferring_incar_time_served_thru_discharge_wo_MI =
 Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI *
 ave_incar_time_per_prison_parolee_wo_MI

UNITS: person

total_prison_time_served_by_prison_parolee_wo_MI_transferred_thru_committing_new_crimes =
 Individuals_with_Criminal_History.prison_parolee_wo_MI_committing_new_crimes *
 ave_incar_time_per_prison_parolee_wo_MI

UNITS: person

transferring_total_prison_time_served_thru_prison_parolee_wo_MI_violating_condition =
 Individuals_with_Criminal_History.prison_parolee_wo_MI_violating_condition *
 ave_incar_time_per_prison_parolee_wo_MI

UNITS: person

Total_Incarceration_Time_Served_by_Reparoled_Prison_Parolees_wMI(t) =
 Total_Incarceration_Time_Served_by_Reparoled_Prison_Parolees_wMI(t - dt) +
 (total_prison_time_served_transferred_out_thru_rerelease_wMI -
 transferring_total_prison_time_served_thru_discharging_reparoled_prison_parolee_wMI) * dt

INIT Total_Incarceration_Time_Served_by_Reparoled_Prison_Parolees_wMI = IF
 Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 193.675803083 ELSE
 Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI *
 init_previous_incar_time_served_per_reprisoned_prison_parole_violator_wMI

UNITS: person-year

INFLOWS:

total_prison_time_served_transferred_out_thru_rerelease_wMI =
 Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI *
 ave_incar_time_served_time_by_reprisoned_parole_violator_wMI

UNITS: person

OUTFLOWS:

transferring_total_prison_time_served_thru_discharging_reparoled_prison_parolee_wMI =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wMI *
ave_incar_time_per_reparoled_prison_parolee_wMI

UNITS: person

Total_Incarceration_Time_Served_by_Reparoled_Prison_Parolees_wo_MI(t) =
Total_Incarceration_Time_Served_by_Reparoled_Prison_Parolees_wo_MI(t - dt) +
(total_prison_time_served_transferred_out_thru_rerelease_wo_MI -
transferring_total_prison_time_served_thru_discharging_reparoled_prison_parolee_wo_MI) * dt

INIT Total_Incarceration_Time_Served_by_Reparoled_Prison_Parolees_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 1992.56294679 ELSE
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI *
init_previous_incar_time_served_per_reprisoned_prison_parole_violator_wo_MI

UNITS: person-year

INFLOWS:

total_prison_time_served_transferred_out_thru_rerelease_wo_MI =
Individuals_with_Criminal_History.rerelease_to_prison_parole_wo_MI *
ave_incar_time_served_time_by_reprisoned_parole_violator_wo_MI

UNITS: person

OUTFLOWS:

transferring_total_prison_time_served_thru_discharging_reparoled_prison_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wo_MI *
ave_incar_time_per_reparoled_prison_parolee_wo_MI

UNITS: person

Total_Incarceration_Time_Served_by_Reprisoned_County_Parole_Violators_wo_MI(t) =
Total_Incarceration_Time_Served_by_Reprisoned_County_Parole_Violators_wo_MI(t - dt) +
(transferring_incar_time_thru_county_parolee_returning_to_jail_wo_MI -
transferring_incar_time_thru_rerelease_exPrisoner_to_county_parole_wo_MI) * dt

INIT Total_Incarceration_Time_Served_by_Reprisoned_County_Parole_Violators_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail*ave_incar_time_serve
d_per_county_parolee_wo_MI_violated_condition*Individuals_with_Criminal_History.Reprisoned_C
ounty_Parole_Violators_wo_MI)/Individuals_with_Criminal_History.rerelease_reprisoned_county_p
arolee_wo_MI ELSE
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI *
init_previous_incar_time_served_per_reprisoned_county_parole_violator_fr_prison_wo_MI

UNITS: person-year

INFLOWS:

transferring_incar_time_thru_county_parolee_returning_to_jail_wo_MI =
Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail *
ave_incar_time_served_per_county_parolee_wo_MI_violated_condition

UNITS: person

OUTFLOWS:

transferring_incar_time_thru_rerelease_exPrisoner_to_county_parole_wo_MI =
Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wo_MI *
ave_incar_time_served_by_reprisoned_county_parole_violator_wo_MI

UNITS: person

Total_Incarceration_Time_Served_by_Reprisoned_Prison_Parole_Violators_wMI(t) =
Total_Incarceration_Time_Served_by_Reprisoned_Prison_Parole_Violators_wMI(t - dt) +
(total_prison_time_served_transferred_out_thru_returning_prison_wMI -
total_prison_time_served_transferred_out_thru_rerelease_wMI) * dt

INIT Total_Incarceration_Time_Served_by_Reprisoned_Prison_Parole_Violators_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison*ave_incar_time_per_
prison_parolee_wMI_violated_condition*Individuals_with_Criminal_History.Reprisoned_Prison_Par
ole_Violators_wMI)/Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI ELSE
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI *
init_previous_incar_time_served_per_reprisoned_prison_parole_violator_wMI

UNITS: person-year

INFLOWS:

total_prison_time_served_transferred_out_thru_returning_prison_wMI =
Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison *
ave_incar_time_per_prison_parolee_wMI_violated_condition

UNITS: person

OUTFLOWS:

total_prison_time_served_transferred_out_thru_rerelease_wMI =
Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI *
ave_incar_time_served_time_by_reprisoned_parole_violator_wMI

UNITS: person

Total_Incarceration_Time_Served_by_Reprisoned_Prison_Parole_Violators_wo_MI(t) =
Total_Incarceration_Time_Served_by_Reprisoned_Prison_Parole_Violators_wo_MI(t - dt) +
(total_prison_time_served_transferred_out_thru_returning_prison_wo_MI -
total_prison_time_served_transferred_out_thru_rerelease_wo_MI) * dt

INIT Total_Incarceration_Time_Served_by_Reprisoned_Prison_Parole_Violators_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch =1 THEN 498.140739232 ELSE
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI *
init_previous_incar_time_served_per_reprisoned_prison_parole_violator_wo_MI

UNITS: person-year

INFLOWS:

total_prison_time_served_transferred_out_thru_returning_prison_wo_MI =
Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison *
ave_incar_time_per_prison_parolee_wo_MI_violated_condition

UNITS: person

OUTFLOWS:

total_prison_time_served_transferred_out_thru_rerelease_wo_MI =
Individuals_with_Criminal_History.rerelease_to_prison_parole_wo_MI *
ave_incar_time_served_time_by_reprisoned_parole_violator_wo_MI

UNITS: person

Total_Previous_Incar_Time_Served_by_Arrestees(t) =
Total_Previous_Incar_Time_Served_by_Arrestees(t - dt) +
(total_prison_time_served_by_county_parolee_wo_MI_transferred_thru_committing_new_crimes +
total_prison_time_served_by_county_parolee_wMI_transferred_thru_committing_new_crimes +
new_prison_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wo_MI +
total_jail_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wo_MI +
total_jail_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wo_MI +
new_prison_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wo_MI +
total_jail_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wMI +
total_jail_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wMI +
total_prison_time_served_by_prison_parolee_wMI_transferred_thru_committing_new_crimes +
total_prison_time_served_by_prison_parolee_wo_MI_violated_condition_transferred_thru_committing_new_crimes +
total_prison_time_served_by_prison_parolee_wo_MI_transferred_thru_committing_new_crimes +
total_prison_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wMI +
total_prison_time_served_by_prison_parolee_wMI_violated_condition_transferred_thru_committing_new_crimes +
total_prison_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wMI +
total_prison_time_served_by_county_parolee_wo_MI_violated_condition_transferred_thru_committing_new_crimes +
total_prison_time_served_by_county_parolee_wMI_violated_condition_transferred_thru_committing_new_crimes -
losing_total_previous_incar_time_thru_first_time_arrestee_release_wo_conviction -
transferring_total_previous_time_thru_pretrial_release -
transferring_total_previous_time_thru_holding_suspect_in_custody) * dt

INIT Total_Previous_Incar_Time_Served_by_Arrestees = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 215.286512448 ELSE
Individuals_with_Criminal_History.Arrestees * init_previous_incar_time_served_per_arrestee

UNITS: person-year

INFLOWS:

total_prison_time_served_by_county_parolee_wo_MI_transferred_thru_committing_new_crimes =
Individuals_with_Criminal_History.county_parolee_wo_MI_committing_new_crimes *
ave_incar_time_per_county_parolee_wMI

UNITS: person

total_prison_time_served_by_county_parolee_wMI_transferred_thru_committing_new_crimes = Individuals_with_Criminal_History.realignment_policy * (Individuals_with_Criminal_History.county_parolee_wMI_committing_new_crimes * ave_incar_time_served_per_county_parolee_wo_MI)

UNITS: person

new_prison_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wo_MI = Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism * ave_incar_time_per_lo_risk_prison_exConv_wo_MI

UNITS: person

total_jail_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wo_MI = Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_recidivism * ave_incar_time_served_by_hi_risk_jail_exConv_wo_MI

UNITS: person

total_jail_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wo_MI = Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism * ave_incar_time_served_by_lo_risk_jail_exConv_wo_MI

UNITS: person

new_prison_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wo_MI = Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism * ave_incar_time_per_hi_risk_prison_exConv_wo_MI

UNITS: person

total_jail_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wMI = Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_recidivism * ave_incar_time_served_per_hi_risk_jail_exConv_wMI

UNITS: person

total_jail_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wMI = Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_recidivism * ave_incar_time_served_by_lo_risk_jail_exConv_wMI

UNITS: person

total_prison_time_served_by_prison_parolee_wMI_transferred_thru_committing_new_crimes = Individuals_with_Criminal_History.prison_parolee_wMI_committing_new_crimes * ave_incar_time_per_prison_parolee_wMI

UNITS: person

total_prison_time_served_by_prison_parolee_wo_MI_violated_condition_transferred_thru_committing_new_crimes = Individuals_with_Criminal_History.prison_parolee_wo_MI_violated_condition_committing_new_crimes * ave_incar_time_per_prison_parolee_wo_MI_violated_condition

UNITS: person

total_prison_time_served_by_prison_parolee_wo_MI_transferred_thru_committing_new_crimes =
Individuals_with_Criminal_History.prison_parolee_wo_MI_committing_new_crimes *
ave_incar_time_per_prison_parolee_wo_MI

UNITS: person

total_prison_time_served_transferred_out_thru_lo_risk_exConv_recidivism_wMI =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wMI_recidivism *
ave_incar_time_per_lo_risk_prison_exConv_wMI

UNITS: person

total_prison_time_served_by_prison_parolee_wMI_violated_condition_transferred_thru_committin
g_new_crimes =
Individuals_with_Criminal_History.prison_parolee_wMI_violated_condition_committing_new_crime
s * ave_incar_time_per_prison_parolee_wMI_violated_condition

UNITS: person

total_prison_time_served_transferred_out_thru_hi_risk_exConv_recidivism_wMI =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism *
ave_incar_time_per_hi_risk_prison_exConv_wMI

UNITS: person

total_prison_time_served_by_county_parolee_wo_MI_violated_condition_transferred_thru_commi
tting_new_crimes =
Individuals_with_Criminal_History.county_parolee_wo_MI_violated_condition_committing_new_cri
mes * ave_incar_time_served_per_county_parolee_wo_MI_violated_condition

UNITS: person

total_prison_time_served_by_county_parolee_wMI_violated_condition_transferred_thru_committi
ng_new_crimes =
Individuals_with_Criminal_History.county_parolee_wMI_violated_condition_committing_new_crim
es * ave_incar_time_served_per_county_parolee_wMI_violated_condition

UNITS: person

OUTFLOWS:

losing_total_previous_incar_time_thru_first_time_arrestee_release_wo_conviction =
Individuals_with_Criminal_History.first_time_arrestee_release_wo_charges *
ave_previous_incar_time_per_arrestee

UNITS: person

transferring_total_previous_time_thru_pretrial_release =
Individuals_with_Criminal_History.pretrial_release * ave_previous_incar_time_per_arrestee

UNITS: person

transferring_total_previous_time_thru_holding_suspect_in_custody =
Individuals_with_Criminal_History.being_held_in_custody * ave_previous_incar_time_per_arrestee

UNITS: person

Total_Previous_Incar_Time_Served_by_Defendants_in_Comm_Being_Trialed(t) =
Total_Previous_Incar_Time_Served_by_Defendants_in_Comm_Being_Trialed(t - dt) +
(total_previous_incar_time_transferred_thru_conviction_detainee_in_community +
total_previous_time_transferred_thru_probation_violation -
transferring_total_previous_time_thru_complaints_against_recidivating_suspect_in_comm_dismiss
ed_after_trial -
transferring_previous_incar_time_thru_defendants_in_comm_waiting_for_sentence) * dt

INIT Total_Previous_Incar_Time_Served_by_Defendants_in_Comm_Being_Trialed = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
((Individuals_with_Criminal_History.violating_probation*ave_previous_incar_time_served_by_proba
tioner+Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial*ave_previous_incar_t
ime_per_suspect_in_comm_with_case_filed) *
Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed) /
(Individuals_with_Criminal_History.defendants_in_comm_waiting_for_sentence+Individuals_with_C
riminal_History.complaints_against_recidivating_defendant_in_comm_dismissed_after_trial) ELSE
Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed *
init_previous_incar_time_served_per_defendant_in_comm_being_trialed

UNITS: person-year

INFLOWS:

total_previous_incar_time_transferred_thru_conviction_detainee_in_community =
Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial *
ave_previous_incar_time_per_suspect_in_comm_with_case_filed

UNITS: person

total_previous_time_transferred_thru_probation_violation =
Individuals_with_Criminal_History.violating_probation *
ave_previous_incar_time_served_by_probationer

UNITS: person

OUTFLOWS:

transferring_total_previous_time_thru_complaints_against_recidivating_suspect_in_comm_dismiss
ed_after_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_comm_dismissed
_after_trial * ave_previous_incar_time_per_defendant_in_comm_being_trialed

UNITS: person

transferring_previous_incar_time_thru_defendents_in_comm_waiting_for_sentence =
Individuals_with_Criminal_History.defendents_in_comm_waiting_for_sentence *
ave_previous_incar_time_per_defendant_in_comm_being_trialed

UNITS: person

Total_Previous_Incar_Time_Served_by_Defendants_in_Custody_Being_Trialed(t) =
Total_Previous_Incar_Time_Served_by_Defendants_in_Custody_Being_Trialed(t - dt) +
(transferring_total_previous_time_thru_suspect_in_custody_being_trial -
transferring_total_previous_time_thru_complaints_against_recidivating_suspect_in_custody_dismissed_after_trial -
transferring_previous_incar_time_thru_defendents_in_custody_waiting_for_sentence) * dt

INIT Total_Previous_Incar_Time_Served_by_Defendants_in_Custody_Being_Trialed = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial*ave_previous_incar_time_per_suspect_in_custody_with_case_filed*Individuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed)/(Individuals_with_Criminal_History.defendents_in_custody_waiting_for_sentence+Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_custody_dismissed_after_trial) ELSE
Individuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed *
init_previous_incar_time_served_per_defendant_in_custody_being_trialed

UNITS: person-year

INFLOWS:

transferring_total_previous_time_thru_suspect_in_custody_being_trial =
Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial *
ave_previous_incar_time_per_suspect_in_custody_with_case_filed

UNITS: person

OUTFLOWS:

transferring_total_previous_time_thru_complaints_against_recidivating_suspect_in_custody_dismissed_after_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_custody_dismissed_after_trial * ave_previous_incar_time_per_defendant_in_custody_being_trialed

UNITS: person

transferring_previous_incar_time_thru_defendents_in_custody_waiting_for_sentence =
Individuals_with_Criminal_History.defendents_in_custody_waiting_for_sentence *
ave_previous_incar_time_per_defendant_in_custody_being_trialed

UNITS: person

Total_Previous_Incar_Time_Served_by_PreSentencing_Convicts_in_Comm(t) =
Total_Previous_Incar_Time_Served_by_PreSentencing_Convicts_in_Comm(t - dt) +
(transferring_previous_incar_time_thru_defendents_in_comm_waiting_for_sentence +
transferring_previous_incar_time_thru_defendents_in_comm_conviction_wo_trial -
transferring_total_previous_time_thru_convict_in_comm_conviction) * dt

INIT Total_Previous_Incar_Time_Served_by_PreSentencing_Convicts_in_Comm = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 144.244304433 ELSE
Individuals_with_Criminal_History.PreSentencing_Convicts_fr_Comm_in_Custody *
init_previous_incar_time_served_per_preSentencing_defendant_in_comm

UNITS: person-year

INFLOWS:

transferring_previous_incar_time_thru_defendants_in_comm_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_comm_waiting_for_sentence *
ave_previous_incar_time_per_defendant_in_comm_being_trialed

UNITS: person

transferring_previous_incar_time_thru_defendants_in_comm_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial *
ave_previous_incar_time_per_suspect_in_comm_with_case_filed

UNITS: person

OUTFLOWS:

transferring_total_previous_time_thru_convict_in_comm_conviction =
Individuals_with_Criminal_History.convict_in_comm_being_sentenced *
ave_previous_incar_time_per_preSentencing_convict_in_comm

UNITS: person

Total_Previous_Incar_Time_Served_by_PreSentencing_Convicts_in_Custody(t) =
Total_Previous_Incar_Time_Served_by_PreSentencing_Convicts_in_Custody(t - dt) +
(transferring_previous_incar_time_thru_defendants_in_custody_waiting_for_sentence +
transferring_total_previous_incar_time_thru_convicts_in_comm_being_sentenced -
transferring_total_previous_incar_time_thru_convicts_in_custody_being_sentenced) * dt

INIT Total_Previous_Incar_Time_Served_by_PreSentencing_Convicts_in_Custody = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 114.589171371
ELSE Individuals_with_Criminal_History.PreSentencing_Convicts_in_Custody *
init_previous_incar_time_served_per_preSentencing_defendant_in_custody

UNITS: person-year

INFLOWS:

transferring_previous_incar_time_thru_defendants_in_custody_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_custody_waiting_for_sentence *
ave_previous_incar_time_per_defendant_in_custody_being_trialed

UNITS: person

transferring_total_previous_incar_time_thru_convicts_in_comm_being_sentenced =
Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial *
ave_previous_incar_time_per_suspect_in_custody_with_case_filed

UNITS: person

OUTFLOWS:

transferring_total_previous_incar_time_thru_convicts_in_custody_being_sentenced =
Individuals_with_Criminal_History.convict_in_custody_being_sentenced *
ave_previous_incar_time_per_preSentencing_convict_in_custody

UNITS: person

Total_Previous_Incar_Time_Served_by_Pretrial_Suspects_in_Community(t) =
Total_Previous_Incar_Time_Served_by_Pretrial_Suspects_in_Community(t - dt) +
(transferring_total_previous_time_thru_pretrial_release -
transferring_previous_incar_time_thru_filing_case_for_suspect_in_comm) * dt

INIT Total_Previous_Incar_Time_Served_by_Pretrial_Suspects_in_Community = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.pretrial_release*ave_previous_incar_time_per_arrestee*Individ
uals_with_Criminal_History.Pretrial_Suspects_in_Community)/Individuals_with_Criminal_History.fili
ng_case_for_suspect_in_comm ELSE
Individuals_with_Criminal_History.Pretrial_Suspects_in_Community *
init_previous_incar_time_served_per_pretrial_suspect_in_comm

UNITS: person-year

INFLOWS:

transferring_total_previous_time_thru_pretrial_release =
Individuals_with_Criminal_History.pretrial_release * ave_previous_incar_time_per_arrestee

UNITS: person

OUTFLOWS:

transferring_previous_incar_time_thru_filing_case_for_suspect_in_comm =
Individuals_with_Criminal_History.filing_case_for_suspect_in_comm *
ave_previous_incar_time_per_suspects_in_community

UNITS: person

Total_Previous_Incar_Time_Served_by_Probationers(t) =
Total_Previous_Incar_Time_Served_by_Probationers(t - dt) +
(transferring_previous_incar_time_thru_convicting_convict_in_custody_to_probation +
total_previous_incar_time_served_transferred_thru_continue_serving_probation_wo_MI +
total_current_jail_time_served_transferred_thru_continue_serving_probation_wo_MI +
total_current_jail_time_served_transferred_thru_continue_serving_probation_wMI +
total_previous_jail_time_served_transferred_thru_continue_serving_probation_wMI +
transferring_previous_incar_time_thru_convicting_convict_in_comm_to_probation -
total_previous_incar_time_transferred_thru_discharging_fr_probation -
total_previous_time_transferred_thru_probation_violation) * dt

INIT Total_Previous_Incar_Time_Served_by_Probationers = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(((Individuals_with_Criminal_History.continue_serving_thru_probation_wMI*ave_current_jail_time_
served_wMI+Individuals_with_Criminal_History.continue_serving_thru_probation_wMI*ave_previo
us_incar_time_per_served_jail_offender_wMI+Individuals_with_Criminal_History.continue_serving

thru_probation_wo_MI*ave_current_jail_time_served_wo_MI+Individuals_with_Criminal_History.c
 ontinue_serving_thru_probation_wo_MI*ave_previous_incar_time_served_per_jail_offender_wo_
 MI+Individuals_with_Criminal_History.convicting_convict_in_comm_to_probation*ave_previous_inca
 r_time_per_preSentencing_convict_in_comm+Individuals_with_Criminal_History.convicting_convic
 t_in_custody_to_probation*ave_previous_incar_time_per_preSentencing_convict_in_custody) *
 Individuals_with_Criminal_History.Probationers) /
 (Individuals_with_Criminal_History.violating_probation+Individuals_with_Criminal_History.dischargi
 ng_fr_probation)) * 1 + 87235.0056235 * 0 ELSE Individuals_with_Criminal_History.Probationers *
 init_previous_incar_time_served_per_probationer

UNITS: person-year

INFLOWS:

transferring_previous_incar_time_thru_convicting_convict_in_custody_to_probation =
 Individuals_with_Criminal_History.convicting_convict_in_custody_to_probation *
 ave_previous_incar_time_per_preSentencing_convict_in_custody

UNITS: person

total_previous_incar_time_served_transferred_thru_continue_serving_probation_wo_MI =
 Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI *
 ave_previous_incar_time_served_per_jail_offender_wo_MI

UNITS: person

total_current_jail_time_served_transferred_thru_continue_serving_probation_wo_MI = IF
 Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
 Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI *
 ave_current_jail_time_served_wo_MI ELSE
 DELAY3(Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI *
 ave_current_jail_time_served_wo_MI, ave_current_jail_time_served_wo_MI,
 Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI *
 ave_current_jail_time_served_wo_MI)

UNITS: person

total_current_jail_time_served_transferred_thru_continue_serving_probation_wMI = IF
 Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
 Individuals_with_Criminal_History.continue_serving_thru_probation_wMI *
 ave_current_jail_time_served_wMI ELSE
 DELAY3(Individuals_with_Criminal_History.continue_serving_thru_probation_wMI *
 ave_current_jail_time_served_wMI, ave_current_jail_time_served_wMI,
 Individuals_with_Criminal_History.continue_serving_thru_probation_wMI *
 ave_current_jail_time_served_wMI)

UNITS: person

total_previous_jail_time_served_transferred_thru_continue_serving_probation_wMI =
 Individuals_with_Criminal_History.continue_serving_thru_probation_wMI *
 ave_previous_incar_time_per_served_jail_offender_wMI

UNITS: person

transferring_previous_incar_time_thru_convicting_convict_in_comm_to_probation =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_probation *
ave_previous_incar_time_per_preSentencing_convict_in_comm

UNITS: person

OUTFLOWS:

total_previous_incar_time_transferred_thru_discharging_fr_probation =
Individuals_with_Criminal_History.discharging_fr_probation *
ave_previous_incar_time_served_by_probationer

UNITS: person

total_previous_time_transferred_thru_probation_violation =
Individuals_with_Criminal_History.violating_probation *
ave_previous_incar_time_served_by_probationer

UNITS: person

Total_Previous_Incar_Time_Served_by_Suspects_in_Comm_with_Cases_Filed(t) =
Total_Previous_Incar_Time_Served_by_Suspects_in_Comm_with_Cases_Filed(t - dt) +
(transferring_previous_incar_time_thru_filing_case_for_suspect_in_comm -
total_previous_incar_time_transferred_thru_conviction_detainee_in_community -
transferring_previous_incar_time_thru_defendants_in_comm_conviction_wo_trial -
transferring_previous_incar_time_thru_complaints_against_recidivating_suspects_in_comm_dismissed_before_trial) * dt

INIT Total_Previous_Incar_Time_Served_by_Suspects_in_Comm_with_Cases_Filed = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.filing_case_for_suspect_in_comm*ave_previous_incar_time_per_suspects_in_community*Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed)/
(Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial+Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial+Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_comm_dismissed_before_trial) ELSE
Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed *
init_previous_incar_time_served_per_suspect_in_comm_case_filed

UNITS: person-year

INFLOWS:

transferring_previous_incar_time_thru_filing_case_for_suspect_in_comm =
Individuals_with_Criminal_History.filing_case_for_suspect_in_comm *
ave_previous_incar_time_per_suspects_in_community

UNITS: person

OUTFLOWS:

total_previous_incar_time_transferred_thru_conviction_detainee_in_community =
Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial *
ave_previous_incar_time_per_suspect_in_comm_with_case_filed

UNITS: person

transferring_previous_incar_time_thru_defendants_in_comm_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial *
ave_previous_incar_time_per_suspect_in_comm_with_case_filed

UNITS: person

transferring_previous_incar_time_thru_complaints_against_recidivating_suspects_in_comm_dismissed_before_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_comm_dismissed_b
efore_trial * ave_previous_incar_time_per_suspect_in_comm_with_case_filed

UNITS: person

Total_Previous_Incar_Time_Served_by_Suspects_in_Custody(t) =
Total_Previous_Incar_Time_Served_by_Suspects_in_Custody(t - dt) +
(transferring_total_previous_time_thru_holding_suspect_in_custody -
transferring_previous_incar_time_thru_filing_case_for_suspect_in_custody) * dt

INIT Total_Previous_Incar_Time_Served_by_Suspects_in_Custody = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.being_held_in_custody * ave_previous_incar_time_per_arrestee
* Individuals_with_Criminal_History.Suspects_in_Custody/
Individuals_with_Criminal_History.filing_case_for_suspect_in_custody ELSE
Individuals_with_Criminal_History.Suspects_in_Custody *
init_previous_incar_time_served_per_suspect_in_custody

UNITS: person-year

INFLOWS:

transferring_total_previous_time_thru_holding_suspect_in_custody =
Individuals_with_Criminal_History.being_held_in_custody * ave_previous_incar_time_per_arrestee

UNITS: person

OUTFLOWS:

transferring_previous_incar_time_thru_filing_case_for_suspect_in_custody =
Individuals_with_Criminal_History.filing_case_for_suspect_in_custody *
ave_previous_incar_time_per_suspect_in_custody

UNITS: person

Total_Previous_Incar_Time_Served_by_Suspects_in_Custody_with_Cases_Filed(t) =
Total_Previous_Incar_Time_Served_by_Suspects_in_Custody_with_Cases_Filed(t - dt) +
(transferring_previous_incar_time_thru_filing_case_for_suspect_in_custody -
transferring_total_previous_time_thru_suspect_in_custody_being_trial -
transferring_total_previous_incar_time_thru_convicts_in_comm_being_sentenced -
transferring_previous_incar_time_thru_complaints_against_recidivating_suspects_in_custody_dismissed_before_trial) * dt

INIT Total_Previous_Incar_Time_Served_by_Suspects_in_Custody_with_Cases_Filed = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN

(Individuals_with_Criminal_History.filing_case_for_suspect_in_custody*ave_previous_incar_time_per_suspect_in_custody*Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed)/(Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial+Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial+Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_custody_dismissed_before_trial) ELSE
Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed *
init_previous_incar_time_served_per_suspect_in_custody_case_filed

UNITS: person-year

INFLOWS:

transferring_previous_incar_time_thru_filing_case_for_suspect_in_custody =
Individuals_with_Criminal_History.filing_case_for_suspect_in_custody *
ave_previous_incar_time_per_suspect_in_custody

UNITS: person

OUTFLOWS:

transferring_total_previous_time_thru_suspect_in_custody_being_trial =
Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial *
ave_previous_incar_time_per_suspect_in_custody_with_case_filed

UNITS: person

transferring_total_previous_incar_time_thru_convicts_in_comm_being_sentenced =
Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial *
ave_previous_incar_time_per_suspect_in_custody_with_case_filed

UNITS: person

transferring_previous_incar_time_thru_complaints_against_recidivating_suspects_in_custody_dismissed_before_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_custody_dismissed_before_trial * ave_previous_incar_time_per_suspect_in_custody_with_case_filed

UNITS: person

ave_current_jail_time_served_wMI = Current_Jail_Time_Served_wMI /
Individuals_with_Criminal_History.Jail_Offenders_wMI

UNITS: person-year/person

ave_current_jail_time_served_wo_MI = Current_Jail_Time_Served_wo_MI /
Individuals_with_Criminal_History.Jail_Offenders_wo_MI

UNITS: person-year/person

ave_current_prison_time_served_per_prisoner_wSMI_in_alt_facility =
Current_Prison_Time_Served_by_Prisoners_wSMI_in_Alternative_Facility /
Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility

UNITS: person-year/person

ave_current_prison_time_served_wMI = Current_Prison_Time_Served_wMI /
Individuals_with_Criminal_History.Prisoners_wMI

UNITS: person-year/person

ave_current_prison_time_served_wo_MI = Current_Prison_Time_Served_wo_MI /
Individuals_with_Criminal_History.Prisoners_wo_MI

UNITS: person-year/person

ave_current_sentence_length_served_per_jail_offender_wMI =
Individuals_with_Criminal_History.ave_jail_time_served_at_current_release_wMI

UNITS: year

ave_current_sentence_length_served_per_jail_offender_wo_MI =
Individuals_with_Criminal_History.ave_jail_time_served_at_current_release_wo_MI

UNITS: year

ave_incar_time_per_county_parolee_wMI = Total_Incar_Time_Served_by_County_Parolees_wMI /
Individuals_with_Criminal_History.County_Parolees_wMI

UNITS: person-year/person

ave_incar_time_per_hi_risk_exConv = (
Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wMI +
Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wo_MI +
Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wMI +
Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wo_MI) / (
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI +
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI +
Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI +
Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI)

UNITS: person-year/person

ave_incar_time_per_hi_risk_prison_exConv_wMI =
Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wMI /
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI

UNITS: person-year/person

ave_incar_time_per_hi_risk_prison_exConv_wo_MI =
Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wo_MI /
Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI

UNITS: person-year/person

ave_incar_time_per_lo_risk_exConv =
(Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wMI +
Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wo_MI +
Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wo_MI +
Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wMI) /
(Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI +

Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI +
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI +
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI)

UNITS: person-year/person

ave_incar_time_per_lo_risk_prison_exConv_wMI =
Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wMI /
Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI

UNITS: person-year/person

ave_incar_time_per_lo_risk_prison_exConv_wo_MI =
Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wo_MI /
Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI

UNITS: person-year/person

ave_incar_time_per_prison_parolee = (Total_Incarceration_Time_Served_by_Prison_Parolees_wMI
+ Total_Incarceration_Time_Served_by_Prison_Parolee_wMI_Violated_Condition +
Total_Incarceration_Time_Served_by_Prison_Parolees_wo_MI +
Total_Incarceration_Time_Served_by_Prison_Parolee_wo_MI_Violated_Condition +
Total_Incar_Time_Served_by_County_Parolees_wMI +
Total_Incarceration_Time_Served_by_County_Parolee_wMI_Violated_Condition +
Total_Incarceration_Time_Served_by_County_Parolees_wo_MI +
Total_Incarceration_Time_Served_by_County_Parolee_wo_MI_Violated_Condition) /
(Individuals_with_Criminal_History.Prison_Parolees_wMI +
Individuals_with_Criminal_History.Prison_Parolees_wo_MI +
Individuals_with_Criminal_History.County_Parolees_wMI +
Individuals_with_Criminal_History.County_Parolees_wo_MI +
Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition +
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition +
Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition +
Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition)

UNITS: person-year/person

ave_incar_time_per_prison_parolee_wMI =
Total_Incarceration_Time_Served_by_Prison_Parolees_wMI /
Individuals_with_Criminal_History.Prison_Parolees_wMI

UNITS: person-year/person

ave_incar_time_per_prison_parolee_wMI_violated_condition =
Total_Incarceration_Time_Served_by_Prison_Parolee_wMI_Violated_Condition /
Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition

UNITS: person-year/person

ave_incar_time_per_prison_parolee_wo_MI =
Total_Incarceration_Time_Served_by_Prison_Parolees_wo_MI /
Individuals_with_Criminal_History.Prison_Parolees_wo_MI

UNITS: person-year/person

ave_incar_time_per_prison_parolee_wo_MI_violated_condition =
Total_Incarceration_Time_Served_by_Prison_Parolee_wo_MI_Violated_Condition /
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition

UNITS: person-year/person

ave_incar_time_per_reparoled_prison_parolee_wMI =
Total_Incarceration_Time_Served_by_Reparoled_Prison_Parolees_wMI/
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI

UNITS: person-year/person

ave_incar_time_per_reparoled_prison_parolee_wo_MI =
Total_Incarceration_Time_Served_by_Reparoled_Prison_Parolees_wo_MI /
Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI

UNITS: person-year/person

ave_incar_time_served_by_hi_risk_jail_exConv_wo_MI =
Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wo_MI /
Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI

UNITS: person-year/person

ave_incar_time_served_by_lo_risk_jail_exConv_wMI =
Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wMI /
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI

UNITS: person-year/person

ave_incar_time_served_by_lo_risk_jail_exConv_wo_MI =
Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wo_MI /
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI

UNITS: person-year/person

ave_incar_time_served_by_reprisoned_county_parole_violator_wo_MI =
Total_Incarceration_Time_Served_by_Reprisoned_County_Parole_Violators_wo_MI /
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI

UNITS: person-year/person

ave_incar_time_served_per_county_parolee_wMI_violated_condition =
Total_Incarceration_Time_Served_by_County_Parolee_wMI_Violated_Condition /
Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition

UNITS: person-year/person

ave_incar_time_served_per_county_parolee_wo_MI =
Total_Incarceration_Time_Served_by_County_Parolees_wo_MI /
Individuals_with_Criminal_History.County_Parolees_wo_MI

UNITS: person-year/person

ave_incar_time_served_per_county_parolee_wo_MI_violated_condition =
Total_Incarceration_Time_Served_by_County_Parolee_wo_MI_Violated_Condition /
Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition

UNITS: person-year/person

ave_incar_time_served_per_exConv =
(Total_Incarceration_Time_Served_by_Prison_Parolees_wo_MI+Total_Incarceration_Time_Served_b
y_Hi_Risk_Prison_ExConv_wo_MI+Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_w
o_MI+Total_Incarceration_Time_Served_by_Prison_Parolees_wMI+Total_Incarceration_Time_Serve
d_by_Hi_Risk_Prison_ExConv_wMI+Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_
wMI + Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wo_MI +
Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wo_MI +
Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wMI +
Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wMI +
Total_Incar_Time_Served_by_County_Parolees_wMI +
Total_Incarceration_Time_Served_by_County_Parolees_wo_MI +
Total_Incarceration_Time_Served_by_Prison_Parolee_wMI_Violated_Condition +
Total_Incarceration_Time_Served_by_County_Parolee_wMI_Violated_Condition +
Total_Incarceration_Time_Served_by_County_Parolee_wo_MI_Violated_Condition +
Total_Incarceration_Time_Served_by_Prison_Parolee_wo_MI_Violated_Condition) /
(Individuals_with_Criminal_History.total_exConv_wo_parolees +
Individuals_with_Criminal_History.total_parolees)

UNITS: person-year/person

ave_incar_time_served_per_exConv_wMI =
(Total_Incarceration_Time_Served_by_Prison_Parolees_wMI +
Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wMI +
Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wMI +
Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wMI +
Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wMI +
Total_Incarceration_Time_Served_by_Prison_Parolee_wMI_Violated_Condition +
Total_Incar_Time_Served_by_County_Parolees_wMI +
Total_Incarceration_Time_Served_by_County_Parolee_wMI_Violated_Condition) /
Individuals_with_Criminal_History.total_exConv_wMI

UNITS: person-year/person

ave_incar_time_served_per_exConv_wo_MI =
(Total_Incarceration_Time_Served_by_Prison_Parolees_wo_MI+
Total_Incarceration_Time_Served_by_Prison_Parolee_wo_MI_Violated_Condition+
Total_Incarceration_Time_Served_by_Hi_Risk_Prison_ExConv_wo_MI+
Total_Incarceration_Time_Served_by_Lo_Risk_Prison_ExConv_wo_MI+
Total_Incarceration_Time_Served_by_County_Parolees_wo_MI+
Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wo_MI+
Total_Incarceration_Time_Served_by_Lo_Risk_Jail_ExConv_wo_MI +
Total_Incarceration_Time_Served_by_County_Parolee_wo_MI_Violated_Condition) /
Individuals_with_Criminal_History.total_exConv_wo_MI

UNITS: person-year/person

ave_incar_time_served_per_hi_risk_jail_exConv_wMI =
Total_Incarceration_Time_Served_by_Hi_Risk_Jail_ExConv_wMI /
Individuals_with_Criminal_History.Hi_Risk_Jail_ExConvicts_wMI

UNITS: person-year/person

ave_incar_time_served_per_reprisoned_county_parole_violator_wMI =
Total_Incar_Time_Served_by_Reprisoned_County_Parole_Violators_wMI /
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI

UNITS: person-year/person

ave_incar_time_served_time_by_reprisoned_parole_violator_wMI =
Total_Incarceration_Time_Served_by_Reprisoned_Prison_Parole_Violators_wMI /
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI

UNITS: person-year/person

ave_incar_time_served_time_by_reprisoned_parole_violator_wo_MI =
Total_Incarceration_Time_Served_by_Reprisoned_Prison_Parole_Violators_wo_MI /
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI

UNITS: person-year/person

ave_previous_incar_time_per_arrestee = Total_Previous_Incar_Time_Served_by_Arrestees /
Individuals_with_Criminal_History.Arrestees

UNITS: person-year/person

ave_previous_incar_time_per_defendant_in_comm_being_trialed =
Total_Previous_Incar_Time_Served_by_Defendants_in_Comm_Being_Trialed /
Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed

UNITS: person-year/person

ave_previous_incar_time_per_defendant_in_custody_being_trialed =
Total_Previous_Incar_Time_Served_by_Defendants_in_Custody_Being_Trialed /
Individuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed

UNITS: person-year/person

ave_previous_incar_time_per_preSentencing_convict_in_comm =
Total_Previous_Incar_Time_Served_by_PreSentencing_Convicts_in_Comm /
Individuals_with_Criminal_History.PreSentencing_Convicts_fr_Comm_in_Custody

UNITS: person-year/person

ave_previous_incar_time_per_preSentencing_convict_in_custody =
Total_Previous_Incar_Time_Served_by_PreSentencing_Convicts_in_Custody /
Individuals_with_Criminal_History.PreSentencing_Convicts_in_Custody

UNITS: person-year/person

ave_previous_incar_time_per_prisoner_wMI =
Previous_Incarceration_Time_Served_by_Prisoners_wMI /
Individuals_with_Criminal_History.Prisoners_wMI

UNITS: person-year/person

ave_previous_incar_time_per_prisoner_wo_MI =
Previous_Incarceration_Time_Served_by_Prisoners_wo_MI /
Individuals_with_Criminal_History.Prisoners_wo_MI

UNITS: person-year/person

ave_previous_incar_time_per_prisoner_wSMI_in_alt_facility =
Previous_Incarceration_Time_Served_by_Prisoners_wSMI_in_Alternative_Facility /
Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility

UNITS: person-year/person

ave_previous_incar_time_per_served_jail_offender_wMI =
Previous_Incarceration_Time_Served_by_Jail_Offenders_wMI /
Individuals_with_Criminal_History.Jail_Offenders_wMI

UNITS: person-year/person

ave_previous_incar_time_per_suspect_in_comm_with_case_filed =
Total_Previous_Incar_Time_Served_by_Suspects_in_Comm_with_Cases_Filed /
Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed

UNITS: person-year/person

ave_previous_incar_time_per_suspect_in_custody =
Total_Previous_Incar_Time_Served_by_Suspects_in_Custody /
Individuals_with_Criminal_History.Suspects_in_Custody

UNITS: person-year/person

ave_previous_incar_time_per_suspect_in_custody_with_case_filed =
Total_Previous_Incar_Time_Served_by_Suspects_in_Custody_with_Cases_Filed /
Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed

UNITS: person-year/person

ave_previous_incar_time_per_suspects_in_community =
Total_Previous_Incar_Time_Served_by_Pretial_Suspects_in_Community /
Individuals_with_Criminal_History.Pretial_Suspects_in_Community

UNITS: person-year/person

ave_previous_incar_time_served_by_probationer =
Total_Previous_Incar_Time_Served_by_Probationers /
Individuals_with_Criminal_History.Probationers

UNITS: person-year/person

ave_previous_incar_time_served_per_jail_offender_wo_MI =
Previous_Incarceration_Time_Served_by_Jail_Offender_wo_MI /
Individuals_with_Criminal_History.Jail_Offenders_wo_MI

UNITS: person-year/person

ave_previous_time_served_per_recidivist = ave_incar_time_per_prison_parolee *
relative_strength_of_parolee_recidivism + ave_incar_time_per_hi_risk_exConv *
relative_strength_of_hi_risk_exConv_recidivism + ave_incar_time_per_lo_risk_exConv *
relative_strength_of_lo_risk_exConv_recidivism

UNITS: person-year/person

current_prison_time_served_switch = STEP(1, 2012) * 1

UNITS: unitless

effect_of_incar_time_on_complaints_dismissed_after_arraignment =
GRAPH(relative_ave_previous_incar_time_served_per_recidivist)

(1.000, 1.0000), (1.100, 0.9653), (1.200, 0.9332), (1.300, 0.9057), (1.400, 0.8793), (1.500, 0.8596),
(1.600, 0.8435), (1.700, 0.8301), (1.800, 0.8192), (1.900, 0.8104), (2.000, 0.8000)

UNITS: unitless

effect_of_incar_time_on_fract_prison_sentence_conviction =
GRAPH(relative_ave_previous_incar_time_served_per_recidivist)

(1.000, 1.0000), (1.100, 1.0447), (1.200, 1.1578), (1.300, 1.2153), (1.400, 1.2487), (1.500, 1.2666),
(1.600, 1.2798), (1.700, 1.2876), (1.800, 1.2915), (1.900, 1.2953), (2.000, 1.3000)

UNITS: unitless

effect_of_incar_time_on_fract_suspects_held_in_custody =
GRAPH(relative_ave_previous_incar_time_served_per_recidivist)

(1.000, 1.000), (1.100, 1.290), (1.200, 1.596), (1.300, 1.943), (1.400, 2.228), (1.500, 2.508), (1.600,
2.694), (1.700, 2.834), (1.800, 2.922), (1.900, 2.974), (2.000, 3.000)

UNITS: unitless

effect_of_incar_time_on_jail_time_served_wMI =
GRAPH(relative_ave_previous_incar_time_served_per_jail_offender_wMI)

(1.000, 1.0000), (1.300, 1.0369), (1.600, 1.0731), (1.900, 1.1076), (2.200, 1.1365), (2.500, 1.1590),
(2.800, 1.1735), (3.100, 1.1847), (3.400, 1.1912), (3.700, 1.1968), (4.000, 1.2000)

UNITS: unitless

effect_of_incar_time_on_jail_time_served_wo_MI =
GRAPH(relative_ave_previous_incar_time_served_per_jail_offender_wo_MI)

(1.000, 1.0000), (1.300, 1.0044), (1.600, 1.0092), (1.900, 1.0161), (2.200, 1.0229), (2.500, 1.0309),
(2.800, 1.0450), (3.100, 1.0663), (3.400, 1.0843), (3.700, 1.0952), (4.000, 1.1000)

UNITS: unitless

effect_of_incar_time_on_law_enforcement_release =
GRAPH(relative_ave_previous_incar_time_served_per_recidivist)

(1.000, 1), (1.100, 0.94954), (1.200, 0.92778), (1.300, 0.91759), (1.400, 0.91319), (1.500, 0.91088),
(1.600, 0.90787), (1.700, 0.90602), (1.800, 0.90394), (1.900, 0.90208), (2.000, 0.9)

UNITS: unitless

effect_of_incar_time_on_prison_time_served_wMI =
GRAPH(SMTH3(relative_ave_previous_incar_time_served_per_prisoner_wMI,
Individuals_with_Criminal_History.ref_ave_prison_time_served_wMI,
relative_ave_previous_incar_time_served_per_prisoner_wMI))

(1.000, 1.0000), (1.300, 1.0586), (1.600, 1.1020), (1.900, 1.1285), (2.200, 1.1502), (2.500, 1.1655),
(2.800, 1.1743), (3.100, 1.1815), (3.400, 1.1896), (3.700, 1.1952), (4.000, 1.2000)

UNITS: unitless

effect_of_incar_time_on_prison_time_served_wMI_1 =
GRAPH(SMTH3(relative_ave_previous_incar_time_served_per_prisoner_wMI,
Individuals_with_Criminal_History.ref_ave_prison_time_served_wMI,
relative_ave_previous_incar_time_served_per_prisoner_wMI))

(1.000, 1.0000), (1.300, 1.0036), (1.600, 1.0066), (1.900, 1.0097), (2.200, 1.0138), (2.500, 1.0174),
(2.800, 1.0225), (3.100, 1.0297), (3.400, 1.0389), (3.700, 1.0767), (4.000, 1.2000)

UNITS: unitless

effect_of_incar_time_on_prison_time_served_wMI_2 =
GRAPH(SMTH3(relative_ave_previous_incar_time_served_per_prisoner_wMI,
Individuals_with_Criminal_History.ref_ave_prison_time_served_wMI,
relative_ave_previous_incar_time_served_per_prisoner_wMI))

(1.000, 1.0000), (1.300, 1.0107), (1.600, 1.0194), (1.900, 1.0338), (2.200, 1.0512), (2.500, 1.0737),
(2.800, 1.1146), (3.100, 1.1657), (3.400, 1.1867), (3.700, 1.1952), (4.000, 1.2000)

UNITS: unitless

effect_of_incar_time_on_prison_time_served_wo_MI = GRAPH(SMTH3
(relative_ave_previous_incar_time_per_prisoner_wo_MI,
Individuals_with_Criminal_History.ref_ave_prison_time_served_wo_MI,
relative_ave_previous_incar_time_per_prisoner_wo_MI))

(1.000, 1.0000), (1.300, 1.0394), (1.600, 1.0771), (1.900, 1.1149), (2.200, 1.1398), (2.500, 1.1606),
(2.800, 1.1743), (3.100, 1.1847), (3.400, 1.1944), (3.700, 1.1984), (4.000, 1.2000)

UNITS: unitless

effect_of_incar_time_per_county_parolee_wMI_on_RTJ =
GRAPH(relative_ave_previous_incar_time_per_county_parolee_wMI)

(1.0000, 1.0000), (1.0500, 1.0201), (1.1000, 1.0534), (1.1500, 1.0898), (1.2000, 1.1331), (1.2500,
1.1877), (1.3000, 1.2601), (1.3500, 1.3669), (1.4000, 1.4417), (1.4500, 1.4822), (1.5000, 1.4984)

UNITS: unitless

effect_of_incar_time_per_county_parolee_wMI_on_RTJ_1 =
GRAPH(relative_ave_previous_incar_time_per_county_parolee_wMI)

(1.0000, 1.0000), (1.0500, 1.0064), (1.1000, 1.0141), (1.1500, 1.0192), (1.2000, 1.0243), (1.2500,
1.0307), (1.3000, 1.0448), (1.3500, 1.0729), (1.4000, 1.1292), (1.4500, 1.2788), (1.5000, 1.5000)

UNITS: unitless

effect_of_incar_time_per_county_parolee_wMI_on_RTJ_2 =
GRAPH(relative_ave_previous_incar_time_per_county_parolee_wMI)

(1.0000, 1.0000), (1.0500, 1.1650), (1.1000, 1.3043), (1.1500, 1.3900), (1.2000, 1.4361), (1.2500, 1.4680), (1.3000, 1.4808), (1.3500, 1.4859), (1.4000, 1.4898), (1.4500, 1.4936), (1.5000, 1.4984)

UNITS: unitless

effect_of_incar_time_per_county_parolee_wo_MI_on_RTJ =
GRAPH(relative_ave_previous_incar_time_per_county_parolee_wo_MI)

(1.0000, 1.0000), (1.0500, 1.0105), (1.1000, 1.0245), (1.1500, 1.0432), (1.2000, 1.0724), (1.2500, 1.1121), (1.3000, 1.1623), (1.3500, 1.2230), (1.4000, 1.2696), (1.4500, 1.2930), (1.5000, 1.3000)

UNITS: unitless

effect_of_incar_time_per_jail_offender_on_SC_loss_per_jail_offender_wMI =
GRAPH(relative_ave_previous_incar_time_served_per_jail_offender_wMI)

(1.000, 1.0000), (1.300, 1.0296), (1.600, 1.0607), (1.900, 1.1028), (2.200, 1.1713), (2.500, 1.2632), (2.800, 1.3583), (3.100, 1.4268), (3.400, 1.4688), (3.700, 1.4922), (4.000, 1.5000)

UNITS: unitless

effect_of_incar_time_per_jail_offender_on_SC_loss_per_jail_offender_wMI_1 =
GRAPH(relative_ave_previous_incar_time_served_per_jail_offender_wMI)

(1.000, 1.0000), (1.300, 1.0064), (1.600, 1.0128), (1.900, 1.0179), (2.200, 1.0256), (2.500, 1.0307), (2.800, 1.0384), (3.100, 1.0499), (3.400, 1.0908), (3.700, 1.2174), (4.000, 1.5000)

UNITS: unitless

effect_of_incar_time_per_jail_offender_on_SC_loss_per_jail_offender_wMI_2 =
GRAPH(relative_ave_previous_incar_time_served_per_jail_offender_wMI)

(1.000, 1.0000), (1.300, 1.2327), (1.600, 1.3785), (1.900, 1.4488), (2.200, 1.4731), (2.500, 1.4808), (2.800, 1.4834), (3.100, 1.4872), (3.400, 1.4885), (3.700, 1.4936), (4.000, 1.5000)

UNITS: unitless

effect_of_incar_time_per_jail_offender_on_SC_loss_per_jail_offender_wo_MI =
GRAPH(relative_ave_previous_incar_time_served_per_jail_offender_wo_MI)

(1.000, 1.0000), (1.300, 1.0296), (1.600, 1.0607), (1.900, 1.1028), (2.200, 1.1713), (2.500, 1.2632), (2.800, 1.3583), (3.100, 1.4268), (3.400, 1.4688), (3.700, 1.4922), (4.000, 1.5000)

UNITS: unitless

effect_of_incar_time_per_prison_parolee_wMI_on_RTP =
GRAPH(relative_ave_previous_incar_time_per_prison_parolee_wMI)

(1.000, 1.0000), (1.200, 1.0141), (1.400, 1.0301), (1.600, 1.0602), (1.800, 1.1071), (2.000, 1.1671), (2.200, 1.2165), (2.400, 1.2506), (2.600, 1.2718), (2.800, 1.2894), (3.000, 1.2988)

UNITS: unitless

effect_of_incar_time_per_prison_parolee_wo_MI_on_RTP =
GRAPH(relative_ave_previous_incar_time_per_prison_parolee_wo_MI)
(1.000, 1.0000), (1.200, 1.0068), (1.400, 1.0136), (1.600, 1.0261), (1.800, 1.0477), (2.000, 1.0727),
(2.200, 1.1239), (2.400, 1.1705), (2.600, 1.2136), (2.800, 1.2352), (3.000, 1.2500)

UNITS: unitless

effect_of_incar_time_per_prisoner_on_SC_loss_per_prisoner_wMI =
GRAPH(relative_ave_previous_incar_time_served_per_prisoner_wMI)
(1.000, 1.0000), (1.300, 1.0296), (1.600, 1.0607), (1.900, 1.1028), (2.200, 1.1713), (2.500, 1.2632),
(2.800, 1.3583), (3.100, 1.4268), (3.400, 1.4688), (3.700, 1.4922), (4.000, 1.5000)

UNITS: unitless

effect_of_incar_time_per_prisoner_on_SC_loss_per_prisoner_wMI_1 =
GRAPH(relative_ave_previous_incar_time_served_per_prisoner_wMI)
(1.000, 1.0000), (1.300, 1.0064), (1.600, 1.0128), (1.900, 1.0179), (2.200, 1.0243), (2.500, 1.0307),
(2.800, 1.0448), (3.100, 1.0691), (3.400, 1.1164), (3.700, 1.2379), (4.000, 1.5000)

UNITS: unitless

effect_of_incar_time_per_prisoner_on_SC_loss_per_prisoner_wo_MI =
GRAPH(relative_ave_previous_incar_time_per_prisoner_wo_MI)
(1.000, 1.0000), (1.300, 1.0296), (1.600, 1.0607), (1.900, 1.1028), (2.200, 1.1713), (2.500, 1.2632),
(2.800, 1.3583), (3.100, 1.4268), (3.400, 1.4688), (3.700, 1.4922), (4.000, 1.5000)

UNITS: unitless

fract_recidivism_by_hi_risk_exConv =
Individuals_with_Criminal_History.total_hi_risk_exConv_recidivism / total_recidivism

UNITS: unitless

fract_recidivism_by_parolees = Individuals_with_Criminal_History.total_parolee_recidivism /
total_recidivism

UNITS: unitless

fract_recidivism_lo_risk_exConv =
Individuals_with_Criminal_History.total_lo_risk_exConv_recidivism / total_recidivism

UNITS: unitless

init_ave_incar_time_served_per_exConv = INIT(ave_incar_time_served_per_exConv)

UNITS: person-year/person

init_ave_incar_time_served_per_prison_parolee_wMI_at_eq =
INIT(ave_incar_time_per_prison_parolee_wMI)

UNITS: person-year/person

init_ave_incar_time_served_per_prison_parolee_wo_MI_at_eq =
INIT(ave_incar_time_per_prison_parolee_wo_MI)

UNITS: person-year/person

init_ave_previous_time_served_per_recidivist = INIT(ave_previous_time_served_per_recidivist)

UNITS: person-year/person

init_current_jail_time_served_per_jail_offender_wMI = 0.25

UNITS: person-year/person

init_current_jail_time_served_per_jail_offender_wo_MI = 0.25

UNITS: person-year/person

init_current_prison_time_served_per_prisoner_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0 ELSE 1.8

UNITS: person-year/person

init_current_prison_time_served_per_prisoner_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0 ELSE 1.4

UNITS: person-year/person

init_previous_incar_time_served_per_arrestee = 0.0217718188998

UNITS: person-year/person

init_previous_incar_time_served_per_convicted_offenders_to_prison = 1.5

UNITS: person-year/person

init_previous_incar_time_served_per_county_parole_violator_wMI = 3.2

UNITS: person-year/person

init_previous_incar_time_served_per_county_parole_violator_wo_MI = 2.8

UNITS: person-year/person

init_previous_incar_time_served_per_county_parolee_wo_MI = 2.05

UNITS: person-year/person

init_previous_incar_time_served_per_county_parolees_wMI = 2.98

UNITS: person-year/person

init_previous_incar_time_served_per_defendant_in_comm_being_trialed = 0.0217718188998

UNITS: person-year/person

init_previous_incar_time_served_per_defendant_in_custody_being_trialed = 0.155418255726

UNITS: person-year/person

init_previous_incar_time_served_per_desisting_jail_exConv_wMI = 0.281622560959

UNITS: person-year/person

init_previous_incar_time_served_per_desisting_jail_exConv_wo_MI = 0.241117535893

UNITS: person-year/person
init_previous_incar_time_served_per_desisting_prison_exConv_wMI = 2.43468289005
UNITS: person-year/person
init_previous_incar_time_served_per_desisting_prison_exConv_wo_MI = 1.45
UNITS: person-year/person
init_previous_incar_time_served_per_hi_risk_jail_exConv_wMI = 0.281622560959
UNITS: person-year/person
init_previous_incar_time_served_per_hi_risk_jail_exConv_wo_MI = 0.281622560959
UNITS: person-year/person
init_previous_incar_time_served_per_hi_risk_prison_exConv_wMI = 2.31
UNITS: person-year/person
init_previous_incar_time_served_per_hi_risk_prison_exConv_wo_MI = 1.2
UNITS: person-year/person
init_previous_incar_time_served_per_jail_offender_wMI = 0.109
UNITS: person-year/person
init_previous_incar_time_served_per_jail_offender_wo_MI = 0.109
UNITS: person-year/person
init_previous_incar_time_served_per_lo_risk_jail_exConv_wMI = 0.281622560959
UNITS: person-year/person
init_previous_incar_time_served_per_lo_risk_jail_exConv_wo_MI = 0.241117535893
UNITS: person-year/person
init_previous_incar_time_served_per_lo_risk_prison_exConv_wMI = 2.43468289005
UNITS: person-year/person
init_previous_incar_time_served_per_lo_risk_prison_exConv_wo_MI = 1.45
UNITS: person-year/person
init_previous_incar_time_served_per_preSentencing_defendant_in_comm = 0.0217718188998
UNITS: person-year/person
init_previous_incar_time_served_per_preSentencing_defendant_in_custody = 0.155418255726
UNITS: person-year/person
init_previous_incar_time_served_per_pretrial_suspect_in_comm = 0.0217718188998
UNITS: person-year/person

init_previous_incar_time_served_per_prison_parole_violator_wMI = 2.08
UNITS: person-year/person

init_previous_incar_time_served_per_prison_parole_violator_wo_MI = 1.45
UNITS: person-year/person

init_previous_incar_time_served_per_prison_parolee_wMI = 2.19
UNITS: person-year/person

init_previous_incar_time_served_per_prison_parolee_wo_MI = 1.45
UNITS: person-year/person

init_previous_incar_time_served_per_prisoner_wMI = 0.0346828900489
UNITS: person-year/person

init_previous_incar_time_served_per_prisoner_wo_MI = 0.0346828900489
UNITS: person-year/person

init_previous_incar_time_served_per_probationer = 0.229622473257
UNITS: person-year/person

init_previous_incar_time_served_per_reprisoned_county_parole_violator_fr_prison_wMI = 3.7
UNITS: person-year/person

init_previous_incar_time_served_per_reprisoned_county_parole_violator_fr_prison_wo_MI = 3.2
UNITS: person-year/person

init_previous_incar_time_served_per_reprisoned_prison_parole_violator_wMI = 0.0346828900489
UNITS: person-year/person

init_previous_incar_time_served_per_reprisoned_prison_parole_violator_wo_MI = 1.45
UNITS: person-year/person

init_previous_incar_time_served_per_suspect_in_comm_case_filed = 0.0217718188998
UNITS: person-year/person

init_previous_incar_time_served_per_suspect_in_custody = 0.155418255726
UNITS: person-year/person

init_previous_incar_time_served_per_suspect_in_custody_case_filed = 0.155418255726
UNITS: person-year/person

multiplier_of_ave_incar_time_served_by_prisoner_to_county_parole = 0.9
UNITS: unitless

prison_year_gained_per_year = 1

UNITS: unitless

ref_jail_time_served_in_split_sentence_wMI = 1.5

UNITS: year

ref_jail_time_served_in_split_sentence_wo_MI = 1.5

UNITS: year

relative_ave_previous_incar_time_per_county_parolee_wMI =
ave_incar_time_per_county_parolee_wMI /
init_previous_incar_time_served_per_county_parolees_wMI

UNITS: unitless

relative_ave_previous_incar_time_per_county_parolee_wo_MI =
ave_incar_time_served_per_county_parolee_wo_MI /
init_previous_incar_time_served_per_county_parolee_wo_MI

UNITS: unitless

relative_ave_previous_incar_time_per_prison_parolee_wMI = IF
Individuals_with_Criminal_History.equilibrium_switch=1 THEN
ave_incar_time_per_prison_parolee_wMI /
init_ave_incar_time_served_per_prison_parolee_wMI_at_eq ELSE
ave_incar_time_per_prison_parolee_wMI /
init_previous_incar_time_served_per_prison_parolee_wMI

UNITS: unitless

relative_ave_previous_incar_time_per_prison_parolee_wo_MI = IF
Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
ave_incar_time_per_prison_parolee_wo_MI/init_ave_incar_time_served_per_prison_parolee_wo_
MI_at_eq ELSE ave_incar_time_per_prison_parolee_wo_MI /
init_previous_incar_time_served_per_prison_parolee_wo_MI

UNITS: unitless

relative_ave_previous_incar_time_per_prisoner_wo_MI =
ave_previous_incar_time_per_prisoner_wo_MI /
init_previous_incar_time_served_per_prisoner_wo_MI

UNITS: unitless

relative_ave_previous_incar_time_served_per_exConv = ave_incar_time_served_per_exConv /
init_ave_incar_time_served_per_exConv

UNITS: unitless

relative_ave_previous_incar_time_served_per_jail_offender_wMI =
ave_previous_incar_time_per_served_jail_offender_wMI /
init_previous_incar_time_served_per_jail_offender_wMI

UNITS: unitless

relative_ave_previous_incar_time_served_per_jail_offender_wo_MI =
ave_previous_incar_time_served_per_jail_offender_wo_MI /
init_previous_incar_time_served_per_jail_offender_wo_MI

UNITS: unitless

relative_ave_previous_incar_time_served_per_prisoner_wMI =
ave_previous_incar_time_per_prisoner_wMI / init_previous_incar_time_served_per_prisoner_wMI

UNITS: unitless

relative_ave_previous_incar_time_served_per_recidivist = ave_previous_time_served_per_recidivist
/ init_ave_previous_time_served_per_recidivist

UNITS: unitless

relative_strength_of_hi_risk_exConv_recidivism = weighted_strength_of_hi_risk_exConv_recidivism
/ total_recidivism_strength

UNITS: unitless

relative_strength_of_lo_risk_exConv_recidivism = weighted_strength_of_lo_risk_exConv_recidivism
/ total_recidivism_strength

UNITS: unitless

relative_strength_of_parolee_recidivism = weighted_strength_of_parolee_recidivism /
total_recidivism_strength

UNITS: unitless

total_incar_time_per_jail_offender_wMI = ave_previous_incar_time_per_served_jail_offender_wMI
+ ave_current_sentence_length_served_per_jail_offender_wMI

UNITS: person-year/person

total_incar_time_per_jail_offender_wo_MI =
ave_previous_incar_time_served_per_jail_offender_wo_MI +
ave_current_sentence_length_served_per_jail_offender_wo_MI

UNITS: year

total_incar_time_per_prisoner_wMI = ave_previous_incar_time_per_prisoner_wMI +
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wMI

UNITS: person-year/person

total_incar_time_per_prisoner_wo_MI = ave_previous_incar_time_per_prisoner_wo_MI +
Individuals_with_Criminal_History.ave_prison_time_served_at_current_release_wo_MI

UNITS: person-year/person

total_incar_time_per_prisoner_wSMI_in_alt_facility =
Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI *
(Individuals_with_Criminal_History.ave_time_served_in_alt_facility +
ave_previous_incar_time_per_prisoner_wSMI_in_alt_facility)

UNITS: person-year/person

total_recidivism = Individuals_with_Criminal_History.total_parolee_recidivism +
Individuals_with_Criminal_History.total_hi_risk_exConv_recidivism +
Individuals_with_Criminal_History.total_lo_risk_exConv_recidivism

UNITS: person/year

total_recidivism_strength = weighted_strength_of_parolee_recidivism +
weighted_strength_of_hi_risk_exConv_recidivism + weighted_strength_of_lo_risk_exConv_recidivism

UNITS: unitless

weight_for_hi_risk_exConv_recidivism = 0.09

UNITS: unitless

weight_for_lo_risk_exConv_recidivism = 0.03

UNITS: unitless

weight_for_parolee_recidivism = 0.88

UNITS: unitless

weighted_strength_of_hi_risk_exConv_recidivism = fract_recidivism_by_hi_risk_exConv *
weight_for_hi_risk_exConv_recidivism

UNITS: unitless

weighted_strength_of_lo_risk_exConv_recidivism = fract_recidivism_lo_risk_exConv *
weight_for_lo_risk_exConv_recidivism

UNITS: unitless

weighted_strength_of_parolee_recidivism = fract_recidivism_by_parolees *
weight_for_parolee_recidivism

UNITS: unitless

{ The model has 480 (480) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 42 (42) Flows: 125 (125) Converters: 313 (313)

Constants: 48 (48) Equations: 390 (390) Graphicals: 23 (23)

There are also 409 expanded macro variables.

}

Social Capital Module

$SC_County_Parolees_wMI(t) = SC_County_Parolees_wMI(t - dt) + (county_parolee_gaining_SC + transferring_SC_thru_releasing_parolee_wMI_after_realignment - transferring_SC_thru_county_parolee_violating_condition - transferring_SC_thru_discharging_county_parolee_wMI - transferring_SC_thru_county_parolee_wMI_committing_new_crime - county_parolee_losing_SC) * dt$

INIT $SC_County_Parolees_wMI = IF$ Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.County_Parolees_wMI * init_SC_per_county_parolee_wMI ELSE 0.000001

UNITS: score

INFLOWS:

county_parolee_gaining_SC = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.County_Parolees_wMI * annual_parolee_wMI_SC_gain_per_person)

UNITS: score/year

transferring_SC_thru_releasing_parolee_wMI_after_realignment =
(Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parolee_after_realignment * ave_SC_per_prisoner_wMI * multiplier_of_ave_SC_per_prisoner_to_county_parolee)

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_county_parolee_violating_condition =
(Individuals_with_Criminal_History.county_parolee_wMI_violating_condition * ave_SC_per_county_parolee_wMI)

UNITS: score/year

transferring_SC_thru_discharging_county_parolee_wMI = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.discharging_county_parolee_wMI * ave_SC_per_county_parolee_wMI)

UNITS: score/year

transferring_SC_thru_county_parolee_wMI_committing_new_crime =
(Individuals_with_Criminal_History.county_parolee_wMI_committing_new_crimes * ave_SC_per_county_parolee_wMI)

UNITS: score/year

county_parolee_losing_SC = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.County_Parolees_wMI * annual_parolee_wMI_SC_loss_per_person)

UNITS: score/year

$SC_County_Parolees_wMI_Violated_Condition(t) = SC_County_Parolees_wMI_Violated_Condition(t - dt) + (transferring_SC_thru_county_parolee_violating_condition - transferring_SC_thru_county_parolee_returning_to_prison_wMI - transferring_SC_thru_discharging_county_parolee_wMI_violated_condition - transferring_SC_thru_county_parolee_wMI_violated_condition_committing_new_crime) * dt$

INIT $SC_County_Parolees_wMI_Violated_Condition = IF$ Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI * init_SC_per_reprisoned_county_parolee_violator_wMI
ELSE Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI * ave_SC_per_prisoner_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_county_parolee_violating_condition =
(Individuals_with_Criminal_History.county_parolee_wMI_violating_condition * ave_SC_per_county_parolee_wMI)

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_county_parolee_returning_to_prison_wMI =
(Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail * ave_SC_per_county_parolee_violator_wMI)

UNITS: score/year

transferring_SC_thru_discharging_county_parolee_wMI_violated_condition = Individuals_with_Criminal_History.realignment_policy * (Individuals_with_Criminal_History.discharging_county_parolee_wMI_violated_condition * ave_SC_per_county_parolee_violator_wMI)

UNITS: score/year

transferring_SC_thru_county_parolee_wMI_violated_condition_committing_new_crime = (Individuals_with_Criminal_History.county_parolee_wMI_violated_condition_committing_new_crimes * ave_SC_per_county_parolee_violator_wMI)

UNITS: score/year

SC_County_Parolees_wo_MI(t) = SC_County_Parolees_wo_MI(t - dt) + (county_parolee_gaining_SC_wo_MI + transferring_SC_thru_releasing_parolee_wo_MI_after_realignment - transferring_SC_thru_county_parolee_violating_condition_wo_MI - transferring_SC_thru_discharging_county_parolee_wo_MI - county_parolee_losing_SC_wo_MI - transferring_SC_thru_county_parolee_wo_MI_committing_new_crime) * dt

INIT SC_County_Parolees_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN Individuals_with_Criminal_History.County_Parolees_wMI * init_SC_per_county_parolee_wMI ELSE 0.000001

UNITS: score

INFLOWS:

county_parolee_gaining_SC_wo_MI = Individuals_with_Criminal_History.realignment_policy * (Individuals_with_Criminal_History.County_Parolees_wo_MI * annual_parolee_wo_MI_SC_gain_per_capita)

UNITS: score/year

transferring_SC_thru_releasing_parolee_wo_MI_after_realignment = Individuals_with_Criminal_History.realignment_policy * (Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment * ave_SC_per_prisoner_wo_MI * multiplier_of_ave_SC_per_prisoner_to_county_parolee)

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_county_parolee_violating_condition_wo_MI = (Individuals_with_Criminal_History.county_parolee_wo_MI_violating_condition * ave_SC_per_county_parolee_wo_MI)

UNITS: score/year

transferring_SC_thru_discharging_county_parolee_wo_MI = Individuals_with_Criminal_History.realignment_policy * (Individuals_with_Criminal_History.discharging_county_parolee_wo_MI * ave_SC_per_county_parolee_wo_MI) + (1 - Individuals_with_Criminal_History.realignment_policy) * zero_transferring_SC_thru_discharging_county_parolee_wo_MI

UNITS: score/year

county_parolee_losing_SC_wo_MI = Individuals_with_Criminal_History.realignment_policy * (Individuals_with_Criminal_History.County_Parolees_wo_MI * annual_parolee_wo_MI_SC_loss_per_capita)

UNITS: score/year

transferring_SC_thru_county_parolee_wo_MI_committing_new_crime = Individuals_with_Criminal_History.realignment_policy * (Individuals_with_Criminal_History.county_parolee_wo_MI_committing_new_crimes * ave_SC_per_county_parolee_wo_MI)

UNITS: score/year

SC_County_Parolees_wo_MI_Violated_Condition(t) = SC_County_Parolees_wo_MI_Violated_Condition(t - dt) + (transferring_SC_thru_county_parolee_violating_condition_wo_MI - transferring_SC_thru_county_parolee_returning_to_prison_wo_MI - transferring_SC_thru_discharging_county_parolee_violated_condition_wo_MI - transferring_SC_thru_county_parolee_wo_MI_violated_condition_committing_new_crime) * dt

INIT SC_County_Parolees_wo_MI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI * init_SC_per_reprisoned_county_parolee_violator_wo_MI ELSE Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI * ave_SC_per_prison_parolee_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_county_parolee_violating_condition_wo_MI =
(Individuals_with_Criminal_History.county_parolee_wo_MI_violating_condition * ave_SC_per_county_parolee_wo_MI)

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_county_parolee_returning_to_prison_wo_MI =
Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail * ave_SC_per_county_parolee_violator_wo_MI

UNITS: score/year

transferring_SC_thru_discharging_county_parolee_violated_condition_wo_MI = Individuals_with_Criminal_History.realignment_policy
* (Individuals_with_Criminal_History.discharging_county_parolee_wo_MI_violated_condition *
ave_SC_per_county_parolee_violator_wo_MI)

UNITS: score/year

transferring_SC_thru_county_parolee_wo_MI_violated_condition_committing_new_crime =
Individuals_with_Criminal_History.county_parolee_wo_MI_violated_condition_committing_new_crimes *
ave_SC_per_county_parolee_violator_wo_MI

UNITS: score/year

SC_Hi_Risk_Jail_ExConv_wMI(t) = SC_Hi_Risk_Jail_ExConv_wMI(t - dt) + (transferring_SC_thru_releasing_jail_offenders_directly_wMI +
transferring_SC_thru_discharging_county_parolee_wMI_violated_condition + transferring_SC_thru_discharging_county_parolee_wMI +
transferring_SC_thru_rerelease_to_county_parolee_wMI + transferring_SC_thru_dismissed_jail_exConv_returning_to_comm_wo_MI -
transferring_SC_thru_becoming_lo_risk_jail_exConv_wMI - transferring_SC_thru_hi_risk_jail_exConv_wMI_committing_new_crime -
transferring_SC_thru_hi_risk_jail_exConv_deaths_wMI) * dt

INIT SC_Hi_Risk_Jail_ExConv_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 932641.307426 ELSE
Individuals_with_Criminal_History.Hi_Risk_Jail_ExConvicts_wMI * init_SC_per_hi_risk_jail_exConv_wMI

UNITS: score

INFLOWS:

transferring_SC_thru_releasing_jail_offenders_directly_wMI =
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI * ave_SC_per_jail_offender_wMI

UNITS: score/year

transferring_SC_thru_discharging_county_parolee_wMI_violated_condition = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.discharging_county_parolee_wMI_violated_condition * ave_SC_per_county_parolee_violator_wMI)

UNITS: score/year

transferring_SC_thru_discharging_county_parolee_wMI = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.discharging_county_parolee_wMI * ave_SC_per_county_parolee_wMI)

UNITS: score/year

transferring_SC_thru_rerelease_to_county_parolee_wMI = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wMI * ave_SC_per_reprisoned_county_parolee_violator_wMI)

UNITS: score/year

transferring_SC_thru_dismissed_jail_exConv_returning_to_comm_wo_MI =
Individuals_with_Criminal_History.dismissed_jail_exConv_returning_to_comm_wMI * ave_SC_per_suspect_in_comm_with_case_filed

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_becoming_lo_risk_jail_exConv_wMI = Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wMI *
ave_SC_per_hi_risk_jail_exConv_wMI

UNITS: score/year

transferring_SC_thru_hi_risk_jail_exConv_wMI_committing_new_crime =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_recidivism * ave_SC_per_hi_risk_jail_exConv_wMI

UNITS: score/year

transferring_SC_thru_hi_risk_jail_exConv_deaths_wMI = Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_deaths *
ave_SC_per_hi_risk_jail_exConv_wMI

UNITS: score/year

SC_Hi_Risk_Jail_ExConv_wo_MI(t) = SC_Hi_Risk_Jail_ExConv_wo_MI(t - dt) +
(transferring_SC_thru_releasing_jail_offenders_directly_wo_MI +
transferring_SC_thru_discharging_county_parolee_violated_condition_wo_MI + transferring_SC_thru_discharging_county_parolee_wo_MI
+ transferring_SC_thru_rerelease_to_county_parolee_wo_MI + transferring_SC_thru_dismissed_jail_exConv_returning_to_comm_wMI -
transferring_SC_thru_becoming_lo_risk_jail_exConv_wo_MI - transferring_SC_thru_hi_risk_jail_exConv_wo_MI_committing_new_crime -
transferring_SC_thru_hi_risk_jail_exConv_deaths_wo_MI) * dt

INIT SC_Hi_Risk_Jail_ExConv_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 1093602.03382 ELSE
Individuals_with_Criminal_History.Hi_Risk_Jail_ExConvicts_wo_MI * init_SC_per_hi_risk_jail_exConv_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_releasing_jail_offenders_directly_wo_MI =
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI * ave_SC_per_jail_offender_wo_MI

UNITS: score/year

transferring_SC_thru_discharging_county_parolee_violated_condition_wo_MI = Individuals_with_Criminal_History.realignment_policy
* (Individuals_with_Criminal_History.discharging_county_parolee_wo_MI_violated_condition *
ave_SC_per_county_parolee_violator_wo_MI)

UNITS: score/year

transferring_SC_thru_discharging_county_parolee_wo_MI = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.discharging_county_parolee_wo_MI * ave_SC_per_county_parolee_wo_MI) + (1-
Individuals_with_Criminal_History.realignment_policy) * zero_transferring_SC_thru_discharging_county_parolee_wo_MI

UNITS: score/year

transferring_SC_thru_rerelease_to_county_parolee_wo_MI = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wo_MI * ave_SC_per_county_parolee_wo_MI)

UNITS: score/year

transferring_SC_thru_dismissed_jail_exConv_returning_to_comm_wMI =
Individuals_with_Criminal_History.dismissed_jail_exConv_returning_to_comm_wo_MI * ave_SC_per_suspect_in_comm_with_case_filed

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_becoming_lo_risk_jail_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI * ave_SC_per_hi_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_hi_risk_jail_exConv_wo_MI_committing_new_crime =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_recidivism * ave_SC_per_hi_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_hi_risk_jail_exConv_deaths_wo_MI = Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_deaths *
ave_SC_per_hi_risk_jail_exConv_wo_MI

UNITS: score/year

SC_Hi_Risk_Prison_ExConv_wMI(t) = SC_Hi_Risk_Prison_ExConv_wMI(t - dt) + (transferring_SC_thru_discharging_prison_parolee_wMI +
transferring_SC_thru_discharging_prison_parolee_wMI_violated_condition +
transferring_SC_thru_discharging_reparoled_prison_parolee_wMI + transferring_SC_thru_prisoner_wMI_in_alt_facility_being_released +
transferring_SC_thru_dismissed_prison_exConv_returning_to_comm_wMI - transferring_SC_thru_becoming_lo_risk_exConv_wMI -
transferring_SC_thru_hi_risk_exConv_wMI_committing_new_crime - transferring_SC_thru_hi_risk_exConv_deaths_wMI) * dt

INIT SC_Hi_Risk_Prison_ExConv_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
((ave_SC_per_prison_parolee_wMI*Individuals_with_Criminal_History.discharging_prison_parolee_wMI+ave_SC_per_reparoled_prison_p
arolee_wMI*Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wMI+ave_SC_per_suspect_in_comm_with_case_fil

ed*Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wo_MI+ave_SC_per_prison_parolee_wMI_violated
 _condition*Individuals_with_Criminal_History.discharging_prison_parolee_wMI_violated_condition)*Individuals_with_Criminal_History.HI
 _Risk_Prison_ExConvicts_wMI) /
 (Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism+Individuals_with_Criminal_History.hi_risk_prison_exConv_dea
 ths_wMI+Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI) ELSE
 Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI * init_SC_per_hi_risk_prison_exConv_wMI

UNITS: score

INFLOWS:

transferring_SC_thru_discharging_prison_parolee_wMI = Individuals_with_Criminal_History.discharging_prison_parolee_wMI *
 ave_SC_per_prison_parolee_wMI

UNITS: score/year

transferring_SC_thru_discharging_prison_parolee_wMI_violated_condition =
 Individuals_with_Criminal_History.discharging_prison_parolee_wMI_violated_condition *
 ave_SC_per_prison_parolee_wMI_violated_condition

UNITS: score/year

transferring_SC_thru_discharging_reparoled_prison_parolee_wMI =
 Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wMI * ave_SC_per_reparoled_prison_parolee_wMI

UNITS: score/year

transferring_SC_thru_prisoner_wSMI_in_alt_facility_being_released = transferring_SC_thru_releasing_prisoner_wSMI_in_alt_facility

UNITS: score/year

transferring_SC_thru_dismissed_prison_exConv_returning_to_comm_wMI =
 Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wMI * ave_SC_per_suspect_in_comm_with_case_filed

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_becoming_lo_risk_exConv_wMI = Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI *
 ave_SC_per_hi_risk_prison_exConv_wMI

UNITS: score/year

transferring_SC_thru_hi_risk_exConv_wMI_committing_new_crime =
 Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism * ave_SC_per_hi_risk_prison_exConv_wMI

UNITS: score/year

transferring_SC_thru_hi_risk_exConv_deaths_wMI = Individuals_with_Criminal_History.hi_risk_prison_exConv_deaths_wMI *
 ave_SC_per_hi_risk_prison_exConv_wMI

UNITS: score/year

SC_Hi_Risk_Prison_ExConv_wo_MI(t) = SC_Hi_Risk_Prison_ExConv_wo_MI(t - dt) +
 (transferring_SC_thru_discharging_prison_parolee_wo_MI + transferring_SC_thru_discharging_prison_parolee_wo_MI_violated_condition +
 transferring_SC_thru_discharging_reparoled_prison_parolee_wo_MI +
 transferring_SC_thru_dismissed_prison_exConv_returning_to_comm_wo_MI - transferring_SC_thru_becoming_lo_risk_exConv_wo_MI -
 transferring_SC_thru_hi_risk_exConv_wo_MI_committing_new_crime - transferring_SC_thru_hi_risk_exConv_deaths_wo_MI) * dt

INIT SC_Hi_Risk_Prison_ExConv_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 1726721.04547 ELSE
 Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI * init_SC_per_hi_risk_prison_exConv_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_discharging_prison_parolee_wo_MI = Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI *
 ave_SC_per_prison_parolee_wo_MI

UNITS: score/year

transferring_SC_thru_discharging_prison_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI_violated_condition *
ave_SC_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_SC_thru_discharging_reparoled_prison_parolee_wo_MI =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wo_MI * ave_SC_per_reparoled_prison_parolee_wo_MI

UNITS: score/year

transferring_SC_thru_dismissed_prison_exConv_returning_to_comm_wo_MI =
Individuals_with_Criminal_History.dismissed_prison_exConv_returning_to_comm_wo_MI *
ave_SC_per_suspect_in_comm_with_case_filed

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_becoming_lo_risk_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI * ave_SC_per_hi_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_hi_risk_exConv_wo_MI_committing_new_crime =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism * ave_SC_per_hi_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_hi_risk_exConv_deaths_wo_MI = Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_deaths *
ave_SC_per_hi_risk_prison_exConv_wo_MI

UNITS: score/year

SC_Jail_Offenders_wMI(t) = SC_Jail_Offenders_wMI(t - dt) + (transferring_SC_thru_convicting_convict_in_comm_to_jail_wMI +
transferring_SC_thru_jail_offender_devMI + transferring_SC_thru_convicting_convict_in_custody_to_jail_wMI -
transferring_SC_thru_releasing_jail_offenders_directly_wMI - transferring_SC_thru_continue_serving_thru_probation_wMI -
losing_SC_in_jail_wMI) * dt

INIT SC_Jail_Offenders_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 216382.795101 ELSE
Individuals_with_Criminal_History.Jail_Offenders_wMI * init_SC_per_jail_offender_wMI

UNITS: score

INFLOWS:

transferring_SC_thru_convicting_convict_in_comm_to_jail_wMI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wMI * ave_SC_per_PreSentencing_convict_in_comm

UNITS: score/year

transferring_SC_thru_jail_offender_devMI = Individuals_with_Criminal_History.jail_offender_devMI *
ave_SC_per_jail_offender_wo_MI

UNITS: score/year

transferring_SC_thru_convicting_convict_in_custody_to_jail_wMI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wMI * ave_SC_per_PreSentencing_convict_in_custody

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_releasing_jail_offenders_directly_wMI =
Individuals_with_Criminal_History.releasing_jail_offenders_directly_wMI * ave_SC_per_jail_offender_wMI

UNITS: score/year

transferring_SC_thru_continue_serving_thru_probation_wMI =
Individuals_with_Criminal_History.continue_serving_thru_probation_wMI * ave_SC_per_jail_offender_wMI

UNITS: score/year

losing_SC_in_jail_wMI = Individuals_with_Criminal_History.Jail_Offenders_wMI * ref_annual_jail_offender_SC_loss_per_person * Incarceration_Year_Served.effect_of_incar_time_per_jail_offender_on_SC_loss_per_jail_offender_wMI

UNITS: score/year

SC_Jail_Offenders_wo_MI(t) = SC_Jail_Offenders_wo_MI(t - dt) + (transferring_SC_thru_convicting_convict_in_comm_to_jail_wo_MI + transferring_SC_thru_convicting_convict_in_custody_to_jail_wo_MI - transferring_SC_thru_releasing_jail_offenders_directly_wo_MI - continue_serving_thru_probation_wo_MI - transferring_SC_thru_jail_offender_devMI - losing_SC_in_jail_wo_MI) * dt

INIT SC_Jail_Offenders_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 254014.585553 ELSE Individuals_with_Criminal_History.Jail_Offenders_wo_MI * init_SC_per_jail_offender_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_convicting_convict_in_comm_to_jail_wo_MI = Individuals_with_Criminal_History.convicting_convict_in_comm_to_jail_wo_MI * ave_SC_per_PreSentencing_convict_in_comm

UNITS: score/year

transferring_SC_thru_convicting_convict_in_custody_to_jail_wo_MI = Individuals_with_Criminal_History.convicting_convict_in_custody_to_jail_wo_MI * ave_SC_per_PreSentencing_convict_in_custody

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_releasing_jail_offenders_directly_wo_MI = Individuals_with_Criminal_History.releasing_jail_offenders_directly_wo_MI * ave_SC_per_jail_offender_wo_MI

UNITS: score/year

continue_serving_thru_probation_wo_MI = Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI * ave_SC_per_jail_offender_wo_MI

UNITS: score/year

transferring_SC_thru_jail_offender_devMI = Individuals_with_Criminal_History.jail_offender_devMI * ave_SC_per_jail_offender_wo_MI

UNITS: score/year

losing_SC_in_jail_wo_MI = Individuals_with_Criminal_History.Jail_Offenders_wo_MI * ref_annual_jail_offender_SC_loss_per_person * Incarceration_Year_Served.effect_of_incar_time_per_jail_offender_on_SC_loss_per_jail_offender_wo_MI

UNITS: score/year

SC_Lo_Risk_Jail_ExConv_wMI(t) = SC_Lo_Risk_Jail_ExConv_wMI(t - dt) + (transferring_SC_thru_becoming_lo_risk_jail_exConv_wMI - transferring_SC_thru_jail_exConv_becoming_desisting_wMI - transferring_SC_thru_lo_risk_jail_exConv_wMI_committing_new_crime - transferring_SC_thru_lo_risk_jail_exConv_deaths_wMI) * dt

INIT SC_Lo_Risk_Jail_ExConv_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN (Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wMI*ave_SC_per_hi_risk_jail_exConv_wMI*Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI)/(Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_deaths+Individuals_with_Criminal_History.jail_exConv_wMI_desisting+Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_recidivism) ELSE Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI * init_SC_per_lo_risk_jail_exConv_wMI

UNITS: score

INFLOWS:

transferring_SC_thru_becoming_lo_risk_jail_exConv_wMI = Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wMI * ave_SC_per_hi_risk_jail_exConv_wMI

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_jail_exConv_becoming_desisting_wMI = Individuals_with_Criminal_History.jail_exConv_wMI_desisting * ave_SC_per_lo_risk_jail_exConv_wMI

UNITS: score/year

transferring_SC_thru_lo_risk_jail_exConv_wMI_committing_new_crime =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_recidivism * ave_SC_per_lo_risk_jail_exConv_wMI

UNITS: score/year

transferring_SC_thru_lo_risk_jail_exConv_deaths_wMI = Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_deaths *
ave_SC_per_lo_risk_jail_exConv_wMI

UNITS: score/year

SC_Lo_Risk_Jail_ExConv_wo_MI(t) = SC_Lo_Risk_Jail_ExConv_wo_MI(t - dt) + (transferring_SC_thru_becoming_lo_risk_jail_exConv_wo_MI
+ transferring_SC_thru_discharging_fr_probation - transferring_SC_thru_jail_exConv_becoming_desisting_wo_MI -
transferring_SC_thru_lo_risk_jail_exConv_wo_MI_committing_new_crime - transferring_SC_thru_lo_risk_jail_exConv_deaths_wo_MI) *
dt

INIT SC_Lo_Risk_Jail_ExConv_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
((ave_SC_per_probationer*Individuals_with_Criminal_History.discharging_fr_probation+ave_SC_per_hi_risk_jail_exConv_wo_MI*Individu
als_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI)*Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI)/(In
dividuals_with_Criminal_History.jail_exConv_wo_MI_desisting+Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_deaths+Indi
viduals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism) ELSE
Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI * init_SC_per_lo_risk_jail_exConv_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_becoming_lo_risk_jail_exConv_wo_MI =
Individuals_with_Criminal_History.becoming_lo_risk_jail_exConv_wo_MI * ave_SC_per_hi_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_discharging_fr_probation = Individuals_with_Criminal_History.discharging_fr_probation *
ave_SC_per_probationer

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_jail_exConv_becoming_desisting_wo_MI = Individuals_with_Criminal_History.jail_exConv_wo_MI_desisting *
ave_SC_per_lo_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_lo_risk_jail_exConv_wo_MI_committing_new_crime =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism * ave_SC_per_lo_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_lo_risk_jail_exConv_deaths_wo_MI = Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_deaths *
ave_SC_per_lo_risk_jail_exConv_wo_MI

UNITS: score/year

SC_Lo_Risk_Prison_ExConv_wMI(t) = SC_Lo_Risk_Prison_ExConv_wMI(t - dt) + (transferring_SC_thru_becoming_lo_risk_exConv_wMI -
transferring_SC_thru_prison_exConv_becoming_desisting_wMI - transferring_SC_thru_lo_risk_exConv_deaths_wMI -
transferring_SC_thru_lo_risk_exConv_wMI_committing_new_crime) * dt

INIT SC_Lo_Risk_Prison_ExConv_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI*ave_SC_per_hi_risk_prison_exConv_wMI*Individuals_with_Cri
minal_History.Lo_Risk_Prison_ExConvicts_wMI)/(Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wMI+Individuals_with
_Criminal_History.lo_risk_prison_exConv_wMI_recidivism+Individuals_with_Criminal_History.prison_exConv_desisting_wMI) ELSE
Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI * init_SC_per_lo_risk_prison_exConv_wMI

UNITS: score

INFLOWS:

transferring_SC_thru_becoming_lo_risk_exConv_wMI = Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wMI *
ave_SC_per_hi_risk_prison_exConv_wMI

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_prison_exConv_becoming_desisting_wMI = Individuals_with_Criminal_History.prison_exConv_desisting_wMI * ave_SC_per_lo_risk_prison_exConv_wMI

UNITS: score/year

transferring_SC_thru_lo_risk_exConv_deaths_wMI = Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wMI * ave_SC_per_lo_risk_prison_exConv_wMI

UNITS: score/year

transferring_SC_thru_lo_risk_exConv_wMI_committing_new_crime = Individuals_with_Criminal_History.lo_risk_prison_exConv_wMI_recidivism * ave_SC_per_lo_risk_prison_exConv_wMI

UNITS: score/year

SC_Lo_Risk_Prison_ExConv_wo_MI(t) = SC_Lo_Risk_Prison_ExConv_wo_MI(t - dt) + (transferring_SC_thru_becoming_lo_risk_exConv_wo_MI - transferring_SC_thru_prison_exConv_becoming_desisting_wo_MI - transferring_SC_thru_lo_risk_exConv_deaths_wo_MI - transferring_SC_thru_lo_risk_exConv_wo_MI_committing_new_crime) * dt

INIT SC_Lo_Risk_Prison_ExConv_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN ((ave_SC_per_hi_risk_prison_exConv_wo_MI * Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI) * Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI) / (Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wo_MI + Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism + Individuals_with_Criminal_History.prison_exConv_desisting_wo_MI) ELSE Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI * init_SC_per_lo_risk_prison_exConv_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_becoming_lo_risk_exConv_wo_MI = Individuals_with_Criminal_History.becoming_lo_risk_prison_exConv_wo_MI * ave_SC_per_hi_risk_prison_exConv_wo_MI

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_prison_exConv_becoming_desisting_wo_MI = Individuals_with_Criminal_History.prison_exConv_desisting_wo_MI * ave_SC_per_lo_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_lo_risk_exConv_deaths_wo_MI = Individuals_with_Criminal_History.lo_risk_prison_exConv_deaths_wo_MI * ave_SC_per_lo_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_lo_risk_exConv_wo_MI_committing_new_crime = Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism * ave_SC_per_lo_risk_prison_exConv_wo_MI

UNITS: score/year

SC_of_Arrestees(t) = SC_of_Arrestees(t - dt) + (transferring_SC_thru_hi_risk_exConv_wo_MI_committing_new_crime + transferring_SC_thru_prison_parolee_wMI_committing_new_crime + transferring_SC_thru_county_parolee_wMI_committing_new_crime + transferring_SC_thru_hi_risk_jail_exConv_wMI_committing_new_crime + transferring_SC_thru_lo_risk_jail_exConv_wMI_committing_new_crime + transferring_SC_thru_prison_parolee_wo_MI_committing_new_crime + transferring_SC_thru_lo_risk_exConv_wMI_committing_new_crime + transferring_SC_thru_county_parolee_wo_MI_committing_new_crime + transferring_SC_thru_hi_risk_jail_exConv_wo_MI_committing_new_crime + transferring_SC_thru_lo_risk_jail_exConv_wo_MI_committing_new_crime + transferring_SC_thru_lo_risk_exConv_wo_MI_committing_new_crime + adding_SC_thru_arresting + transferring_SC_thru_prison_parolee_wo_MI_violated_condition_committing_new_crime + transferring_SC_thru_prison_parolee_wMI_violated_condition_committing_new_crime + transferring_SC_thru_county_parolee_wo_MI_violated_condition_committing_new_crime + transferring_SC_thru_county_parolee_wMI_violated_condition_committing_new_crime + transferring_SC_thru_hi_risk_exConv_wMI_committing_new_crime - transferring_SC_thru_holding_in_custody - transferring_SC_thru_pretrial_release - losing_SC_thru_first_time_arrestee_release_wo_conviction) * dt

INIT_SC_of_Arrestees = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 311777.117994 ELSE
Individuals_with_Criminal_History.Arrestees * init_SC_per_arrestee

UNITS: score

INFLOWS:

transferring_SC_thru_hi_risk_exConv_wo_MI_committing_new_crime =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wo_MI_recidivism * ave_SC_per_hi_risk_prison_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_prison_parolee_wMI_committing_new_crime =
Individuals_with_Criminal_History.prison_parolee_wMI_committing_new_crimes * ave_SC_per_prison_parolee_wMI

UNITS: score/year

transferring_SC_thru_county_parolee_wMI_committing_new_crime =
(Individuals_with_Criminal_History.county_parolee_wMI_committing_new_crimes * ave_SC_per_county_parolee_wMI)

UNITS: score/year

transferring_SC_thru_hi_risk_jail_exConv_wMI_committing_new_crime =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wMI_recidivism * ave_SC_per_hi_risk_jail_exConv_wMI

UNITS: score/year

transferring_SC_thru_lo_risk_jail_exConv_wMI_committing_new_crime =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wMI_recidivism * ave_SC_per_lo_risk_jail_exConv_wMI

UNITS: score/year

transferring_SC_thru_prison_parolee_wo_MI_committing_new_crime =
Individuals_with_Criminal_History.prison_parolee_wo_MI_committing_new_crimes * ave_SC_per_prison_parolee_wo_MI

UNITS: score/year

transferring_SC_thru_lo_risk_exConv_wMI_committing_new_crime =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wMI_recidivism * ave_SC_per_lo_risk_prison_exConv_wMI

UNITS: score/year

transferring_SC_thru_county_parolee_wo_MI_committing_new_crime = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.county_parolee_wo_MI_committing_new_crimes * ave_SC_per_county_parolee_wo_MI)

UNITS: score/year

transferring_SC_thru_hi_risk_jail_exConv_wo_MI_committing_new_crime =
Individuals_with_Criminal_History.hi_risk_jail_exConv_wo_MI_recidivism * ave_SC_per_hi_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_lo_risk_jail_exConv_wo_MI_committing_new_crime =
Individuals_with_Criminal_History.lo_risk_jail_exConv_wo_MI_recidivism * ave_SC_per_lo_risk_jail_exConv_wo_MI

UNITS: score/year

transferring_SC_thru_lo_risk_exConv_wo_MI_committing_new_crime =
Individuals_with_Criminal_History.lo_risk_prison_exConv_wo_MI_recidivism * ave_SC_per_lo_risk_prison_exConv_wo_MI

UNITS: score/year

adding_SC_thru_arresting = Individuals_with_Criminal_History.first_time_arrest_rate * ave_SC_per_new_arrestee

UNITS: score/year

transferring_SC_thru_prison_parolee_wo_MI_violated_condition_committing_new_crime =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violated_condition_committing_new_crimes *
ave_SC_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_SC_thru_prison_parolee_wMI_violated_condition_committing_new_crime =
Individuals_with_Criminal_History.prison_parolee_wMI_violated_condition_committing_new_crimes *
ave_SC_per_prison_parolee_wMI_violated_condition

UNITS: score/year

transferring_SC_thru_county_parolee_wo_MI_violated_condition_committing_new_crime =
Individuals_with_Criminal_History.county_parolee_wo_MI_violated_condition_committing_new_crimes *
ave_SC_per_county_parole_violator_wo_MI

UNITS: score/year

transferring_SC_thru_county_parolee_wMI_violated_condition_committing_new_crime =
(Individuals_with_Criminal_History.county_parolee_wMI_violated_condition_committing_new_crimes *
ave_SC_per_county_parole_violator_wMI)

UNITS: score/year

transferring_SC_thru_hi_risk_exConv_wMI_committing_new_crime =
Individuals_with_Criminal_History.hi_risk_prison_exConv_wMI_recidivism * ave_SC_per_hi_risk_prison_exConv_wMI

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_holding_in_custody = Individuals_with_Criminal_History.being_held_in_custody * ave_SC_per_arrestee

UNITS: score/year

transferring_SC_thru_pretrial_release = Individuals_with_Criminal_History.pretrial_release * ave_SC_per_arrestee

UNITS: score/year

losing_SC_thru_first_time_arrestee_release_wo_conviction =
Individuals_with_Criminal_History.first_time_arrestee_release_wo_charges * ave_SC_per_arrestee

UNITS: score/year

SC_of_Defendant_in_Comm_Being_Trialed(t) = SC_of_Defendant_in_Comm_Being_Trialed(t - dt) +
(transferring_SC_thru_defendant_in_comm_waiting_for_trial + transferring_SC_thru_violating_probation -
transferring_SC_thru_defendant_in_comm_waiting_for_sentence -
losing_SC_thru_dismissing_complaint_against_recidivating_suspect_in_comm_after_trial) * dt

INIT SC_of_Defendant_in_Comm_Being_Trialed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 42641.1997899
ELSE Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed * init_SC_per_defendant_in_comm_being_trialed

UNITS: score

INFLOWS:

transferring_SC_thru_defendant_in_comm_waiting_for_trial = Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial
* ave_SC_per_suspect_in_comm_with_case_filed

UNITS: score/year

transferring_SC_thru_violating_probation = Individuals_with_Criminal_History.violating_probation * ave_SC_per_probationer

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_defendant_in_comm_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_comm_waiting_for_sentence * ave_SC_per_defendant_in_comm_being_trialed

UNITS: score/year

losing_SC_thru_dismissing_complaint_against_recidivating_suspect_in_comm_after_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_comm_dismissed_after_trial *
ave_SC_per_defendant_in_comm_being_trialed

UNITS: score/year

SC_of_Defendant_in_Custody_Being_Trialed(t) = SC_of_Defendant_in_Custody_Being_Trialed(t - dt) +
(transferring_SC_thru_defendant_in_custody_waiting_for_trial - transferring_SC_thru_defendant_in_custody_waiting_for_sentence -
losing_SC_thru_dismissing_complaint_against_recidivating_suspect_in_custody_after_trial) * dt

INIT SC_of_Defendant_in_Custody_Being_Trialed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial*ave_SC_per_suspects_in_custody_with_cases_filed*Individuals_
with_Criminal_History.Defendants_in_Custody_Being_Trialed)/(Individuals_with_Criminal_History.defendants_in_custody_waiting_for_se
ntence+Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_custody_dismissed_after_trial) ELSE
Individuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed * init_SC_per_defendant_in_custody_being_trialed

UNITS: score

INFLOWS:

transferring_SC_thru_defendant_in_custody_waiting_for_trial =
Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial * ave_SC_per_suspects_in_custody_with_cases_filed

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_defendant_in_custody_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_custody_waiting_for_sentence * ave_SC_per_defendant_in_custody_being_trialed

UNITS: score/year

losing_SC_thru_dismissing_complaint_against_recidivating_suspect_in_custody_after_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_defendant_in_custody_dismissed_after_trial *
ave_SC_per_defendant_in_custody_being_trialed

UNITS: score/year

SC_of_PreSentencing_Convicts_in_Comm(t) = SC_of_PreSentencing_Convicts_in_Comm(t - dt) +
(transferring_SC_thru_defendant_in_comm_waiting_for_sentence + transferring_SC_thru_defendant_in_comm_conviction_wo_trial -
transferring_SC_thru_convict_in_comm_being_sentenced) * dt

INIT SC_of_PreSentencing_Convicts_in_Comm = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 91363.3976542 ELSE
Individuals_with_Criminal_History.PreSentencing_Convicts_fr_Comm_in_Custody * init_SC_per_PreSentencing_defendants_in_comm

UNITS: score

INFLOWS:

transferring_SC_thru_defendant_in_comm_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_comm_waiting_for_sentence * ave_SC_per_defendant_in_comm_being_trialed

UNITS: score/year

transferring_SC_thru_defendant_in_comm_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial * ave_SC_per_suspect_in_comm_with_case_filed

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_convict_in_comm_being_sentenced = Individuals_with_Criminal_History.convict_in_comm_being_sentenced *
ave_SC_per_PreSentencing_convict_in_comm

UNITS: score/year

SC_of_PreSentencing_Convicts_in_Custody(t) = SC_of_PreSentencing_Convicts_in_Custody(t - dt) +
(transferring_SC_thru_defendant_in_custody_waiting_for_sentence + transferring_SC_thru_defendant_in_custody_conviction_wo_trial -
transferring_SC_thru_convict_in_custody_being_sentenced) * dt

INIT SC_of_PreSentencing_Convicts_in_Custody = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 165947.607664
ELSE Individuals_with_Criminal_History.PreSentencing_Convicts_in_Custody *
init_SC_per_PreSentencing_defendants_in_custody

UNITS: score

INFLOWS:

transferring_SC_thru_defendant_in_custody_waiting_for_sentence =
Individuals_with_Criminal_History.defendants_in_custody_waiting_for_sentence * ave_SC_per_defendant_in_custody_being_trialed

UNITS: score/year

transferring_SC_thru_defendant_in_custody_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial * ave_SC_per_suspects_in_custody_with_cases_filed

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_convict_in_custody_being_sentenced = Individuals_with_Criminal_History.convict_in_custody_being_sentenced
* ave_SC_per_PreSentencing_convict_in_custody

UNITS: score/year

SC_of_Pretial_Suspects_in_Community(t) = SC_of_Pretial_Suspects_in_Community(t - dt) + (transferring_SC_thru_pretial_release -
transferring_SC_thru_filing_cases_for_suspect_in_comm) * dt

INIT SC_of_Pretial_Suspects_in_Community = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
(Individuals_with_Criminal_History.pretial_release*ave_SC_per_arrestee*Individuals_with_Criminal_History.Pretial_Suspects_in_Community)/Individuals_with_Criminal_History.filing_case_for_suspect_in_comm ELSE
Individuals_with_Criminal_History.Pretial_Suspects_in_Community * init_SC_per_suspect_in_comm

UNITS: score

INFLOWS:

transferring_SC_thru_pretial_release = Individuals_with_Criminal_History.pretial_release * ave_SC_per_arrestee

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_filing_cases_for_suspect_in_comm = Individuals_with_Criminal_History.filing_case_for_suspect_in_comm *
ave_SC_per_suspect_in_comm

UNITS: score/year

SC_of_Prisoners_wSMI_in_Alternative_Facility(t) = SC_of_Prisoners_wSMI_in_Alternative_Facility(t - dt) +
(transferring_SC_thru_convicting_convict_in_custody_to_alt_facility_wSMI +
transferring_SC_thru_convicting_convict_in_comm_to_alt_facility_wSMI - transferring_SC_thru_releasing_prisoner_wSMI_in_alt_facility -
losing_SC_thru_prisoner_wSMI_in_alt_facility_deaths - losing_SC_in_alt_facility) * dt

INIT SC_of_Prisoners_wSMI_in_Alternative_Facility = IF
Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI = 1 THEN
Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility * ave_SC_per_prisoner_wMI ELSE 0.001

UNITS: score

INFLOWS:

transferring_SC_thru_convicting_convict_in_custody_to_alt_facility_wSMI =
Individuals_with_Criminal_History.incoming_prison_convicts_in_custody_wMI *
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted * ave_SC_per_PreSentencing_convict_in_custody

UNITS: score/year

transferring_SC_thru_convicting_convict_in_comm_to_alt_facility_wSMI =
Individuals_with_Criminal_History.incoming_prison_convicts_in_comm_wMI *
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_comm_diverted * ave_SC_per_PreSentencing_convict_in_comm

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_releasing_prisoner_wSMI_in_alt_facility =
Individuals_with_Criminal_History.releasing_prisoner_wSMI_in_alt_facility * ave_SC_per_prisoner_wSMI_in_alt_facility

UNITS: score/year

losing_SC_thru_prisoner_wSMI_in_alt_facility_deaths = Individuals_with_Criminal_History.deaths_of_prisoners_wSMI_in_alt_facility * ave_SC_per_prisoner_wSMI_in_alt_facility

UNITS: score/year

losing_SC_in_alt_facility = Individuals_with_Criminal_History.policy_alternative_facility_for_prisoners_wSMI * (Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility * annual_prisoner_SC_loss_per_prisoner_in_alt_facility)

UNITS: score/year

SC_of_Probationers(t) = SC_of_Probationers(t - dt) + (transferring_SC_thru_convicting_convict_in_custody_to_probation + transferring_SC_thru_convicting_convict_in_comm_to_probation + continue_serving_thru_probation_wo_MI + transferring_SC_thru_continue_serving_thru_probation_wMI - transferring_SC_thru_violating_probation - transferring_SC_thru_discharging_fr_probation) * dt

INIT SC_of_Probationers = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 5113847.50974 ELSE Individuals_with_Criminal_History.Probationers * init_SC_per_probationer

UNITS: score

INFLOWS:

transferring_SC_thru_convicting_convict_in_custody_to_probation = Individuals_with_Criminal_History.convicting_convict_in_custody_to_probation * ave_SC_per_PreSentencing_convict_in_custody

UNITS: score/year

transferring_SC_thru_convicting_convict_in_comm_to_probation = Individuals_with_Criminal_History.convicting_convict_in_comm_to_probation * ave_SC_per_PreSentencing_convict_in_comm

UNITS: score/year

continue_serving_thru_probation_wo_MI = Individuals_with_Criminal_History.continue_serving_thru_probation_wo_MI * ave_SC_per_jail_offender_wo_MI

UNITS: score/year

transferring_SC_thru_continue_serving_thru_probation_wMI = Individuals_with_Criminal_History.continue_serving_thru_probation_wMI * ave_SC_per_jail_offender_wMI

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_violating_probation = Individuals_with_Criminal_History.violating_probation * ave_SC_per_probationer

UNITS: score/year

transferring_SC_thru_discharging_fr_probation = Individuals_with_Criminal_History.discharging_fr_probation * ave_SC_per_probationer

UNITS: score/year

SC_of_Suspects_in_Comm_with_Cases_Filed(t) = SC_of_Suspects_in_Comm_with_Cases_Filed(t - dt) + (transferring_SC_thru_filing_cases_for_suspect_in_comm - transferring_SC_thru_defendant_in_comm_waiting_for_trial - losing_SC_thru_dismissing_complaint_against_recidivating_suspect_in_comm_before_trial - transferring_SC_thru_defendant_in_comm_conviction_wo_trial) * dt

INIT SC_of_Suspects_in_Comm_with_Cases_Filed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN (Individuals_with_Criminal_History.filing_case_for_suspect_in_comm * ave_SC_per_suspect_in_comm * Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed) / (Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial + Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial + Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_comm_dismissed_before_trial) ELSE Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed * init_SC_per_suspect_in_comm_with_case_filed

UNITS: score

INFLOWS:

transferring_SC_thru_filing_cases_for_suspect_in_comm = Individuals_with_Criminal_History.filing_case_for_suspect_in_comm * ave_SC_per_suspect_in_comm

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_defendant_in_comm_waiting_for_trial = Individuals_with_Criminal_History.suspect_in_comm_waiting_for_trial * ave_SC_per_suspect_in_comm_with_case_filed

UNITS: score/year

losing_SC_thru_dismissing_complaint_against_recidivating_suspect_in_comm_before_trial = Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_comm_dismissed_before_trial * ave_SC_per_suspect_in_comm_with_case_filed

UNITS: score/year

transferring_SC_thru_defendant_in_comm_conviction_wo_trial = Individuals_with_Criminal_History.suspect_in_comm_conviction_wo_trial * ave_SC_per_suspect_in_comm_with_case_filed

UNITS: score/year

SC_of_Suspects_in_Custody(t) = SC_of_Suspects_in_Custody(t - dt) + (transferring_SC_thru_holding_in_custody - transferring_SC_thru_filing_cases_for_suspect_in_custody) * dt

INIT SC_of_Suspects_in_Custody = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN (Individuals_with_Criminal_History.being_held_in_custody*ave_SC_per_arrestee*Individuals_with_Criminal_History.Suspects_in_Custody)/Individuals_with_Criminal_History.filing_case_for_suspect_in_custody ELSE Individuals_with_Criminal_History.Suspects_in_Custody * init_SC_per_suspect_in_custody

UNITS: score

INFLOWS:

transferring_SC_thru_holding_in_custody = Individuals_with_Criminal_History.being_held_in_custody * ave_SC_per_arrestee

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_filing_cases_for_suspect_in_custody = Individuals_with_Criminal_History.filing_case_for_suspect_in_custody * ave_SC_per_suspect_in_custody

UNITS: score/year

SC_of_Suspects_in_Custody_with_Cases_Filed(t) = SC_of_Suspects_in_Custody_with_Cases_Filed(t - dt) + (transferring_SC_thru_filing_cases_for_suspect_in_custody - transferring_SC_thru_defendant_in_custody_waiting_for_trial - losing_SC_thru_dismissing_complaint_against_recidivating_suspect_in_custody_before_trial - transferring_SC_thru_defendant_in_custody_conviction_wo_trial) * dt

INIT SC_of_Suspects_in_Custody_with_Cases_Filed = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN (Individuals_with_Criminal_History.filing_case_for_suspect_in_custody*ave_SC_per_suspect_in_custody*Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed)/(Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial+Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial+Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_custody_dismissed_before_trial) ELSE Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed * init_SC_per_suspect_in_custody_with_case_filed

UNITS: score

INFLOWS:

transferring_SC_thru_filing_cases_for_suspect_in_custody = Individuals_with_Criminal_History.filing_case_for_suspect_in_custody * ave_SC_per_suspect_in_custody

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_defendant_in_custody_waiting_for_trial = Individuals_with_Criminal_History.suspect_in_custody_waiting_for_trial * ave_SC_per_suspects_in_custody_with_cases_filed

UNITS: score/year

losing_SC_thru_dismissing_complaint_against_recidivating_suspect_in_custody_before_trial =
Individuals_with_Criminal_History.complaints_against_recidivating_suspects_in_custody_dismissed_before_trial *
ave_SC_per_suspects_in_custody_with_cases_filed

UNITS: score/year

transferring_SC_thru_defendant_in_custody_conviction_wo_trial =
Individuals_with_Criminal_History.suspect_in_cusotdy_conviction_wo_trial * ave_SC_per_suspects_in_custody_with_cases_filed

UNITS: score/year

SC_Prison_Parolees_wMI(t) = SC_Prison_Parolees_wMI(t - dt) + (transferring_SC_thru_releasing_parolee_before_realignment +
prison_parolee_wMI_gaining_SC - transferring_SC_thru_discharging_prison_parolee_wMI -
transferring_SC_thru_prison_parolee_violating_condition - transferring_SC_thru_prison_parolee_wMI_committing_new_crime -
prison_parolee_wMI_losing_SC) * dt

INIT SC_Prison_Parolees_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 188137.525358 ELSE
Individuals_with_Criminal_History.Prison_Parolees_wMI * init_SC_per_prison_parolee_wMI

UNITS: score

INFLOWS:

transferring_SC_thru_releasing_parolee_before_realignment =
Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment * ave_SC_per_prisoner_wMI *
effect_of_indicated_min_prisoner_wMI_multiple_on_outflow

UNITS: score/year

prison_parolee_wMI_gaining_SC = Individuals_with_Criminal_History.Prison_Parolees_wMI *
annual_parolee_wMI_SC_gain_per_person

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_discharging_prison_parolee_wMI = Individuals_with_Criminal_History.discharging_prison_parolee_wMI *
ave_SC_per_prison_parolee_wMI

UNITS: score/year

transferring_SC_thru_prison_parolee_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wMI_violating_condition * ave_SC_per_prison_parolee_wMI

UNITS: score/year

transferring_SC_thru_prison_parolee_wMI_committing_new_crime =
Individuals_with_Criminal_History.prison_parolee_wMI_committing_new_crimes * ave_SC_per_prison_parolee_wMI

UNITS: score/year

prison_parolee_wMI_losing_SC = Individuals_with_Criminal_History.Prison_Parolees_wMI *
annual_parolee_wMI_SC_loss_per_person

UNITS: score/year

SC_Prison_Parolees_wMI_Violated_Condition(t) = SC_Prison_Parolees_wMI_Violated_Condition(t - dt) +
(transferring_SC_thru_prison_parolee_violating_condition + prison_parolee_wMI_violated_condition_gaining_SC -
transferring_SC_thru_prison_parolee_returning_to_prison_wMI -
transferring_SC_thru_discharging_prison_parolee_wMI_violated_condition -
transferring_SC_thru_prison_parolee_wMI_violated_condition_committing_new_crime -
prison_parolee_wMI_violated_condition_losing_SC) * dt

INIT SC_Prison_Parolees_wMI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 56462.7717697
ELSE Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition * init_SC_per_prison_parolee_wMI_violated_condition

UNITS: score

INFLOWS:

transferring_SC_thru_prison_parolee_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wMI_violating_condition * ave_SC_per_prison_parolee_wMI

UNITS: score/year

prison_parolee_wMI_violated_condition_gaining_SC = Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition * annual_parolee_wMI_SC_gain_per_person

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_prison_parolee_returning_to_prison_wMI =
Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison * ave_SC_per_prison_parolee_wMI_violated_condition

UNITS: score/year

transferring_SC_thru_discharging_prison_parolee_wMI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wMI_violated_condition *
ave_SC_per_prison_parolee_wMI_violated_condition

UNITS: score/year

transferring_SC_thru_prison_parolee_wMI_violated_condition_committing_new_crime =
Individuals_with_Criminal_History.prison_parolee_wMI_violated_condition_committing_new_crimes *
ave_SC_per_prison_parolee_wMI_violated_condition

UNITS: score/year

prison_parolee_wMI_violated_condition_losing_SC = Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition *
annual_parolee_wMI_SC_loss_per_person

UNITS: score/year

SC_Prison_Parolees_wo_MI(t) = SC_Prison_Parolees_wo_MI(t - dt) +
(transferring_SC_thru_releasing_parolee_wo_MI_before_realignment + prison_parolee_wo_MI_gaining_SC -
transferring_SC_thru_discharging_prison_parolee_wo_MI - transferring_SC_thru_prison_parolee_wo_MI_violating_condition -
transferring_SC_thru_prison_parolee_wo_MI_committing_new_crime - prison_parolee_wo_MI_losing_SC) * dt

INIT SC_Prison_Parolees_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 778948.656005 ELSE
Individuals_with_Criminal_History.Prison_Parolees_wo_MI * init_SC_per_prison_parolee_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_releasing_parolee_wo_MI_before_realignment =
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment * ave_SC_per_prisoner_wo_MI *
effect_of_indicated_min_prisoner_wo_MI_multiple_on_outflow

UNITS: score/year

prison_parolee_wo_MI_gaining_SC = Individuals_with_Criminal_History.Prison_Parolees_wMI *
annual_parolee_wo_MI_SC_gain_per_capita

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_discharging_prison_parolee_wo_MI = Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI *
ave_SC_per_prison_parolee_wo_MI

UNITS: score/year

transferring_SC_thru_prison_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violating_condition * ave_SC_per_prison_parolee_wo_MI

UNITS: score/year

transferring_SC_thru_prison_parolee_wo_MI_committing_new_crime =
Individuals_with_Criminal_History.prison_parolee_wo_MI_committing_new_crimes * ave_SC_per_prison_parolee_wo_MI

UNITS: score/year

prison_parolee_wo_MI_losing_SC = Individuals_with_Criminal_History.Prison_Parolees_wMI *
annual_parolee_wo_MI_SC_loss_per_capita

UNITS: score/year

SC_Prison_Parolees_wo_MI_Violated_Condition(t) = SC_Prison_Parolees_wo_MI_Violated_Condition(t - dt) +
(transferring_SC_thru_prison_parolee_wo_MI_violating_condition + prison_parolee_wo_MI_violated_condition_gaining_SC -
transferring_SC_thru_prison_parolee_wo_MI_returning_to_prison -
transferring_SC_thru_discharging_prison_parolee_wo_MI_violated_condition -
transferring_SC_thru_prison_parolee_wo_MI_violated_condition_committing_new_crime -
prison_parolee_violated_condition_wo_MI_losing_SC) * dt

INIT SC_Prison_Parolees_wo_MI_Violated_Condition = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
196083.946096 ELSE Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition *
init_SC_per_prison_parolee_wo_MI_violated_condition

UNITS: score

INFLOWS:

transferring_SC_thru_prison_parolee_wo_MI_violating_condition =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violating_condition * ave_SC_per_prison_parolee_wo_MI

UNITS: score/year

prison_parolee_wo_MI_violated_condition_gaining_SC =
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition * annual_parolee_wo_MI_SC_gain_per_capita

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_prison_parolee_wo_MI_returning_to_prison =
Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison * ave_SC_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_SC_thru_discharging_prison_parolee_wo_MI_violated_condition =
Individuals_with_Criminal_History.discharging_prison_parolee_wo_MI_violated_condition *
ave_SC_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

transferring_SC_thru_prison_parolee_wo_MI_violated_condition_committing_new_crime =
Individuals_with_Criminal_History.prison_parolee_wo_MI_violated_condition_committing_new_crimes *
ave_SC_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

prison_parolee_violated_condition_wo_MI_losing_SC =
Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition * annual_parolee_wo_MI_SC_loss_per_capita

UNITS: score/year

SC_Prisoners_wMI(t) = SC_Prisoners_wMI(t - dt) + (transferring_SC_thru_prisoner_devMI +
transferring_SC_thru_convicting_convict_in_custody_to_prison + transferring_SC_thru_convicting_convict_in_comm_to_prison -
transferring_SC_thru_releasing_parolee_before_realignment - transferring_SC_thru_prisoner_wMI_recovering - losing_SC_in_prison -
transferring_SC_thru_releasing_parolee_wMI_after_realignment - losing_SC_thru_prisoner_wMI_deaths) * dt

INIT SC_Prisoners_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 388754.337632 ELSE
Individuals_with_Criminal_History.Prisoners_wMI * init_SC_per_prisoner_wMI

UNITS: score

INFLOWS:

transferring_SC_thru_prisoner_devMI = Individuals_with_Criminal_History.prisoner_develop_MI * ave_SC_per_prisoner_wo_MI

UNITS: score/year

transferring_SC_thru_convicting_convict_in_custody_to_prison =
Individuals_with_Criminal_History.incoming_prison_convicts_in_custody_wMI * ave_SC_per_PreSentencing_convict_in_custody * (1 -
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted)

UNITS: score/year

transferring_SC_thru_convicting_convict_in_comm_to_prison =
Individuals_with_Criminal_History.incoming_prison_convicts_in_comm_wMI * ave_SC_per_PreSentencing_convict_in_comm * (1 -
Individuals_with_Criminal_History.fract_incoming_prisoners_wSMI_in_custody_diverted)

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_releasing_parolee_before_realignment =
Individuals_with_Criminal_History.releasing_prisoner_wMI_before_realignment * ave_SC_per_prisoner_wMI *
effect_of_indicated_min_prisoner_wMI_multiple_on_outflow

UNITS: score/year

transferring_SC_thru_prisoner_wMI_recovering = Individuals_with_Criminal_History.prisoner_wMI_recovering *
ave_SC_per_prisoner_wMI

UNITS: score/year

losing_SC_in_prison = Individuals_with_Criminal_History.Prisoners_wMI * annual_prisoner_SC_loss_per_prisoner_wMI *
effect_of_indicated_min_prisoner_wMI_multiple_on_outflow

UNITS: score/year

transferring_SC_thru_releasing_parolee_wMI_after_realignment =
(Individuals_with_Criminal_History.releasing_prisoner_wMI_to_parole_after_realignment * ave_SC_per_prisoner_wMI *
multiplier_of_ave_SC_per_prisoner_to_county_parole)

UNITS: score/year

losing_SC_thru_prisoner_wMI_deaths = Individuals_with_Criminal_History.prisoner_wMI_deaths * ave_SC_per_prisoner_wMI *
effect_of_indicated_min_prisoner_wMI_multiple_on_outflow

UNITS: score/year

SC_Prisoners_wo_MI(t) = SC_Prisoners_wo_MI(t - dt) + (transferring_SC_thru_convicting_convict_in_custody_to_prison_wo_MI +
transferring_SC_thru_prisoner_wMI_recovering + transferring_SC_thru_convicting_convict_in_comm_to_prison_wo_MI -
transferring_SC_thru_releasing_parolee_wo_MI_before_realignment - losing_SC_thru_prisoner_wo_MI_deaths -
losing_SC_in_prison_wo_MI - transferring_SC_thru_prisoner_devMI - transferring_SC_thru_releasing_parolee_wo_MI_after_realignment)
* dt

INIT SC_Prisoners_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 1222896.08416 ELSE
Individuals_with_Criminal_History.Prisoners_wo_MI * init_SC_per_prisoner_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_convicting_convict_in_custody_to_prison_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_custody_to_prison_wo_MI * ave_SC_per_PreSentencing_convict_in_custody

UNITS: score/year

transferring_SC_thru_prisoner_wMI_recovering = Individuals_with_Criminal_History.prisoner_wMI_recovering *
ave_SC_per_prisoner_wMI

UNITS: score/year

transferring_SC_thru_convicting_convict_in_comm_to_prison_wo_MI =
Individuals_with_Criminal_History.convicting_convict_in_comm_to_prison_wo_MI * ave_SC_per_PreSentencing_convict_in_comm

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_releasing_parolee_wo_MI_before_realignment =
Individuals_with_Criminal_History.releasing_prisoner_wo_MI_before_realignment * ave_SC_per_prisoner_wo_MI *
effect_of_indicated_min_prisoner_wo_MI_multiple_on_outflow

UNITS: score/year

losing_SC_thru_prisoner_wo_MI_deaths = Individuals_with_Criminal_History.prisoner_wo_MI_deaths * ave_SC_per_prisoner_wo_MI * effect_of_indicated_min_prisoner_wo_MI_multiple_on_outflow

UNITS: score/year

losing_SC_in_prison_wo_MI = Individuals_with_Criminal_History.Prisoners_wo_MI * annual_prisoner_SC_loss_per_prisoner_wo_MI * effect_of_indicated_min_prisoner_wo_MI_multiple_on_outflow

UNITS: score/year

transferring_SC_thru_prisoner_devMI = Individuals_with_Criminal_History.prisoner_develop_MI * ave_SC_per_prisoner_wo_MI

UNITS: score/year

transferring_SC_thru_releasing_parolee_wo_MI_after_realignment = Individuals_with_Criminal_History.realignment_policy * (Individuals_with_Criminal_History.releasing_prisoner_wo_MI_to_parole_after_realignment * ave_SC_per_prisoner_wo_MI * multiplier_of_ave_SC_per_prisoner_to_county_parole)

UNITS: score/year

SC_Reparoled_Prison_Parole_Violator_wo_MI(t) = SC_Reparoled_Prison_Parole_Violator_wo_MI(t - dt) + (transferring_SC_thru_rerelease_to_prison_parole_wo_MI + reparoled_prison_parolee_violated_condition_wo_MI_gaining_SC - transferring_SC_thru_discharging_reparoled_prison_parolee_wo_MI - reparoled_prison_parolee_violated_condition_wo_MI_losing_SC) * dt

INIT SC_Reparoled_Prison_Parole_Violator_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 68648.9866004 ELSE Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI * init_SC_per_reprisoned_prison_parolee_violator_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_rerelease_to_prison_parole_wo_MI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wo_MI * ave_SC_per_reprisoned_prison_parolee_violator_wo_MI

UNITS: score/year

reparoled_prison_parolee_violated_condition_wo_MI_gaining_SC = Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI * annual_parolee_wo_MI_SC_gain_per_capita

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_discharging_reparoled_prison_parolee_wo_MI = Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wo_MI * ave_SC_per_reparoled_prison_parolee_wo_MI

UNITS: score/year

reparoled_prison_parolee_violated_condition_wo_MI_losing_SC = Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI * annual_parolee_wo_MI_SC_loss_per_capita

UNITS: score/year

SC_Reparoled_Prison_Parolee_wMI(t) = SC_Reparoled_Prison_Parolee_wMI(t - dt) + (transferring_SC_thru_rerelease_to_prison_parole_wMI + reparoled_prison_parolee_violated_condition_wMI_gaining_SC - transferring_SC_thru_discharging_reparoled_prison_parolee_wMI - reparoled_prison_parolee_violated_condition_wMI_losing_SC) * dt

INIT SC_Reparoled_Prison_Parolee_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 31245.3878275 ELSE Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI * init_SC_per_reprisoned_prison_parolee_violator_wMI

UNITS: score

INFLOWS:

transferring_SC_thru_rerelease_to_prison_parole_wMI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI * ave_SC_per_reprisoned_prison_parolee_violator_wMI

UNITS: score/year

reparoled_prison_parolee_violated_condition_wMI_gaining_SC = Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI * annual_parolee_wMI_SC_gain_per_person

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_discharging_reparoled_prison_parolee_wMI =
Individuals_with_Criminal_History.discharging_reparoled_prison_parolee_wMI * ave_SC_per_reparoled_prison_parolee_wMI

UNITS: score/year

reparoled_prison_parolee_violated_condition_wMI_losing_SC = Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI *
annual_parolee_wMI_SC_loss_per_person

UNITS: score/year

SC_Reprisoned_County_Parole_Violator_wMI(t) = SC_Reprisoned_County_Parole_Violator_wMI(t - dt) +
(transferring_SC_thru_county_parolee_returning_to_prison_wMI - transferring_SC_thru_rerelease_to_county_parolee_wMI) * dt

INIT SC_Reprisoned_County_Parole_Violator_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
1.96191766496e-039 ELSE Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI * ave_SC_per_prisoner_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_county_parolee_returning_to_prison_wMI =
(Individuals_with_Criminal_History.county_parolee_wMI_returning_to_jail * ave_SC_per_county_parolee_violator_wMI)

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_rerelease_to_county_parolee_wMI = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wMI * ave_SC_per_reprisoned_county_parolee_violator_wMI)

UNITS: score/year

SC_Reprisoned_County_Parole_Violator_wo_MI(t) = SC_Reprisoned_County_Parole_Violator_wo_MI(t - dt) +
(transferring_SC_thru_county_parolee_returning_to_prison_wo_MI - transferring_SC_thru_rerelease_to_county_parolee_wo_MI) * dt

INIT SC_Reprisoned_County_Parole_Violator_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0.0001
ELSE Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI * ave_SC_per_prison_parolee_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_county_parolee_returning_to_prison_wo_MI =
Individuals_with_Criminal_History.county_parolee_wo_MI_returning_to_jail * ave_SC_per_county_parolee_violator_wo_MI

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_rerelease_to_county_parolee_wo_MI = Individuals_with_Criminal_History.realignment_policy *
(Individuals_with_Criminal_History.rerelease_reprisoned_county_parolee_wo_MI * ave_SC_per_county_parolee_wo_MI)

UNITS: score/year

SC_Reprisoned_Prison_Parole_Violator_wMI(t) = SC_Reprisoned_Prison_Parole_Violator_wMI(t - dt) +
(transferring_SC_thru_prison_parolee_returning_to_prison_wMI - transferring_SC_thru_rerelease_to_prison_parolee_wMI) * dt

INIT SC_Reprisoned_Prison_Parole_Violator_wMI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison * ave_SC_per_prison_parolee_wMI_violated_condition *
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI / Individuals_with_Criminal_History.rerelease_to_prison_parolee_wMI
ELSE Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI *
init_SC_per_reprisoned_prison_parolee_violator_wMI

UNITS: score

INFLOWS:

transferring_SC_thru_prison_parolee_returning_to_prison_wMI =
Individuals_with_Criminal_History.prison_parolee_wMI_returning_to_prison * ave_SC_per_prison_parolee_wMI_violated_condition

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_rerelease_to_prison_parole_wMI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wMI *
ave_SC_per_reprisoned_prison_parolee_violator_wMI

UNITS: score/year

SC_Reprisoned_Prison_Parole_Violator_wo_MI(t) = SC_Reprisoned_Prison_Parole_Violator_wo_MI(t - dt) +
(transferring_SC_thru_prison_parolee_wo_MI_returning_to_prison - transferring_SC_thru_rerelease_to_prison_parolee_wo_MI) * dt

INIT SC_Reprisoned_Prison_Parole_Violator_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 17649.2410342
ELSE Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI *
init_SC_per_reprisoned_prison_parolee_violator_wo_MI

UNITS: score

INFLOWS:

transferring_SC_thru_prison_parolee_wo_MI_returning_to_prison =
Individuals_with_Criminal_History.prison_parolee_wo_MI_returning_to_prison * ave_SC_per_prison_parolee_wo_MI_violated_condition

UNITS: score/year

OUTFLOWS:

transferring_SC_thru_rerelease_to_prison_parole_wo_MI = Individuals_with_Criminal_History.rerelease_to_prison_parole_wo_MI *
ave_SC_per_reprisoned_prison_parolee_violator_wo_MI

UNITS: score/year

annual_parolee_wMI_SC_gain_per_person = ref_annual_parolee_SC_gain *
Community_Services.effect_of_employment_on_parolee_wMI_SC_gain

UNITS: score/person/year

annual_parolee_wMI_SC_loss_per_person = 2

UNITS: score/person/year

annual_parolee_wo_MI_SC_gain_per_capita = ref_annual_parolee_SC_gain *
Community_Services.effect_of_employment_on_parolee_wo_MI_SC_gain

UNITS: score/person/year

annual_parolee_wo_MI_SC_loss_per_capita = 2

UNITS: score/person/year

annual_prisoner_SC_loss_per_prisoner_in_alt_facility = 1.5

UNITS: score/person/year

annual_prisoner_SC_loss_per_prisoner_wMI = ref_annual_prisoner_SC_loss_per_person *
Incarceration_Year_Served.effect_of_incar_time_per_prisoner_on_SC_loss_per_prisoner_wMI

UNITS: score/person/year

annual_prisoner_SC_loss_per_prisoner_wo_MI = ref_annual_prisoner_SC_loss_per_person *
Incarceration_Year_Served.effect_of_incar_time_per_prisoner_on_SC_loss_per_prisoner_wo_MI

UNITS: score/person/year

ave_SC_of_all_parolees_wMI =
(SC_Prison_Parolees_wMI+SC_Prison_Parolees_wMI_Violated_Condition+SC_Reprisoned_Prison_Parole_Violator_wMI++SC_Reparoled_Prison_Parolee_wMI+SC_County_Parolees_wMI+SC_County_Parolees_wMI_Violated_Condition+SC_Reprisoned_County_Parole_Violator_wMI) /
(Individuals_with_Criminal_History.Prison_Parolees_wMI+Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition+Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI+Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI+Individuals_with_Criminal_History.County_Parolees_wMI+Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition+Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI)

UNITS: score/person

ave_SC_of_all_parolees_wo_MI =

(SC_Reprisoned_County_Parole_Violator_wo_MI+SC_Prison_Parolees_wo_MI+SC_Reprisoned_Prison_Parole_Violator_wo_MI+SC_Prison_Parolees_wo_MI_Violated_Condition+SC_Reparoled_Prison_Parole_Violator_wo_MI+SC_County_Parolees_wo_MI+SC_County_Parolees_wo_MI_Violated_Condition) /

(Individuals_with_Criminal_History.Prison_Parolees_wo_MI+Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition+Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI+Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI+Individuals_with_Criminal_History.County_Parolees_wo_MI+Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition+Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI)

UNITS: score/person

ave_SC_per_arrestee = MIN (SC_of_Arrestees / Individuals_with_Criminal_History.Arrestees, 100)

UNITS: score/person

ave_SC_per_county_parole_violator_wMI =

SC_County_Parolees_wMI_Violated_Condition/Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition

UNITS: score/person

ave_SC_per_county_parole_violator_wo_MI = MIN (SC_County_Parolees_wo_MI_Violated_Condition / Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition, 100)

UNITS: score/person

ave_SC_per_county_parolee_wMI = SC_County_Parolees_wMI/Individuals_with_Criminal_History.County_Parolees_wMI

UNITS: score/person

ave_SC_per_county_parolee_wo_MI = SC_County_Parolees_wo_MI/Individuals_with_Criminal_History.County_Parolees_wo_MI

UNITS: score/person

ave_SC_per_defendant_in_comm_being_trialed = MIN (SC_of_Defendant_in_Comm_Being_Trialed / Individuals_with_Criminal_History.Defendants_in_Comm_Being_Trialed, 100)

UNITS: score/person

ave_SC_per_defendant_in_custody_being_trialed = MIN (SC_of_Defendant_in_Custody_Being_Trialed / Individuals_with_Criminal_History.Defendants_in_Custody_Being_Trialed, 100)

UNITS: score/person

ave_SC_per_hi_risk_jail_exConv_wMI = SC_Hi_Risk_Jail_ExConv_wMI/Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wMI

UNITS: score/person

ave_SC_per_hi_risk_jail_exConv_wo_MI =

SC_Hi_Risk_Jail_ExConv_wo_MI/Individuals_with_Criminal_History.HI_Risk_Jail_ExConvicts_wo_MI

UNITS: score/person

ave_SC_per_hi_risk_prison_exConv_wMI =

SC_Hi_Risk_Prison_ExConv_wMI/Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wMI

UNITS: score/person

ave_SC_per_hi_risk_prison_exConv_wo_MI =

SC_Hi_Risk_Prison_ExConv_wo_MI/Individuals_with_Criminal_History.HI_Risk_Prison_ExConvicts_wo_MI

UNITS: score/person

ave_SC_per_jail_offender_wMI = SC_Jail_Offenders_wMI/Individuals_with_Criminal_History.Jail_Offenders_wMI

UNITS: score/person

ave_SC_per_jail_offender_wo_MI = SC_Jail_Offenders_wo_MI/Individuals_with_Criminal_History.Jail_Offenders_wo_MI

UNITS: score/person

ave_SC_per_lo_risk_jail_exConv_wMI = SC_Lo_Risk_Jail_ExConv_wMI/Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wMI

UNITS: score/person

ave_SC_per_lo_risk_jail_exConv_wo_MI =
 SC_Lo_Risk_Jail_ExConv_wo_MI/Individuals_with_Criminal_History.Lo_Risk_Jail_ExConvicts_wo_MI

UNITS: score/person

ave_SC_per_lo_risk_prison_exConv_wMI =
 SC_Lo_Risk_Prison_ExConv_wMI/Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wMI

UNITS: score/person

ave_SC_per_lo_risk_prison_exConv_wo_MI =
 SC_Lo_Risk_Prison_ExConv_wo_MI/Individuals_with_Criminal_History.Lo_Risk_Prison_ExConvicts_wo_MI

UNITS: score/person

ave_SC_per_new_arrestee = 70

UNITS: score/person

ave_SC_per_PreSentencing_convict_in_comm = MIN (SC_of_PreSentencing_Convicts_in_Comm /
 Individuals_with_Criminal_History.PreSentencing_Convicts_fr_Comm_in_Custody, 100)

UNITS: score/person

ave_SC_per_PreSentencing_convict_in_custody = MIN (SC_of_PreSentencing_Convicts_in_Custody /
 Individuals_with_Criminal_History.PreSentencing_Convicts_in_Custody, 100)

UNITS: score/person

ave_SC_per_prison_parolee_wMI = SC_Prison_Parolees_wMI/Individuals_with_Criminal_History.Prison_Parolees_wMI

UNITS: score/person

ave_SC_per_prison_parolee_wMI_violated_condition = MIN (SC_Prison_Parolees_wMI_Violated_Condition /
 Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition, 100)

UNITS: score/person

ave_SC_per_prison_parolee_wo_MI = SC_Prison_Parolees_wo_MI/Individuals_with_Criminal_History.Prison_Parolees_wo_MI

UNITS: score/person

ave_SC_per_prison_parolee_wo_MI_violated_condition = MIN (SC_Prison_Parolees_wo_MI_Violated_Condition /
 Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition, 100)

UNITS: score/person

ave_SC_per_prisoner_wMI = SC_Prisoners_wMI/Individuals_with_Criminal_History.Prisoners_wMI

UNITS: score/person

ave_SC_per_prisoner_wo_MI = SC_Prisoners_wo_MI/Individuals_with_Criminal_History.Prisoners_wo_MI

UNITS: score/person

ave_SC_per_prisoner_wSMI_in_alt_facility = SC_of_Prisoners_wSMI_in_Alternative_Facility /
 Individuals_with_Criminal_History.Prisoners_wSMI_in_Alternative_Facility

UNITS: score/person

ave_SC_per_probationer = SC_of_Probationers/Individuals_with_Criminal_History.Probationers

UNITS: score/person

ave_SC_per_reparoled_prison_parolee_wMI =
 SC_Reparoled_Prison_Parolee_wMI/Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI

UNITS: score/person

ave_SC_per_reparoled_prison_parolee_wo_MI = MIN (SC_Reparoled_Prison_Parole_Violator_wo_MI /
 Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI, 100)

UNITS: score/person

ave_SC_per_reprisoned_prison_parole_violator_wo_MI = MIN (SC_Reprisoned_Prison_Parole_Violator_wo_MI /
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wo_MI, 100)

UNITS: score/person

ave_SC_per_reprisoned_county_parole_violator_wMI =
SC_Reprisoned_County_Parole_Violator_wMI/Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wMI

UNITS: score/person

ave_SC_per_reprisoned_prison_parole_violator_wMI = MIN (SC_Reprisoned_Prison_Parole_Violator_wMI /
Individuals_with_Criminal_History.Reprisoned_Prison_Parole_Violators_wMI, 100)

UNITS: score/person

ave_SC_per_reprisoned_prison_parole_violator_wo_MI = MIN (SC_Reprisoned_County_Parole_Violator_wo_MI /
Individuals_with_Criminal_History.Reprisoned_County_Parole_Violators_wo_MI, 100)

UNITS: score/person

ave_SC_per_suspect_in_comm = MIN (SC_of_Pretial_Suspects_in_Community /
Individuals_with_Criminal_History.Pretial_Suspects_in_Community, 100)

UNITS: score/person

ave_SC_per_suspect_in_comm_with_case_filed = MIN (SC_of_Suspects_in_Comm_with_Cases_Filed /
Individuals_with_Criminal_History.Suspects_in_Comm_with_Cases_Filed, 100)

UNITS: score/person

ave_SC_per_suspect_in_custody = MIN (SC_of_Suspects_in_Custody / Individuals_with_Criminal_History.Suspects_in_Custody, 100)

UNITS: score/person

ave_SC_per_suspects_in_custody_with_cases_filed = MIN (SC_of_Suspects_in_Custody_with_Cases_Filed /
Individuals_with_Criminal_History.Suspects_in_Custody_with_Cases_Filed, 100)

UNITS: score/person

effect_of_indicated_min_prisoner_wMI_multiple_on_outflow = GRAPH(indicated_min_SC_prisoner_wMI_multiple / min_SC_stock)
(0.000, 0.000), (0.100, 0.028), (0.200, 0.072), (0.300, 0.173), (0.400, 0.353), (0.500, 0.574), (0.600, 0.767), (0.700, 0.871), (0.800, 0.940),
(0.900, 0.976), (1.000, 1.000)

UNITS: unitless

effect_of_indicated_min_prisoner_wo_MI_multiple_on_outflow = GRAPH(indicated_min_SC_prisoner_wo_MI_multiple / min_SC_stock)
(0.000, 0.000), (0.100, 0.028), (0.200, 0.072), (0.300, 0.173), (0.400, 0.353), (0.500, 0.574), (0.600, 0.767), (0.700, 0.871), (0.800, 0.940),
(0.900, 0.976), (1.000, 1.000)

UNITS: unitless

effect_of_SC_of_all_parolees_wMI_on_comm_svc_cost = GRAPH(relative_ave_SC_of_all_parolees_wMI)
(0.8000, 1.5000), (0.8500, 1.4775), (0.9000, 1.4325), (0.9500, 1.2892), (1.0000, 1.0000), (1.0500, 0.9068), (1.1000, 0.8675), (1.1500,
0.8534), (1.2000, 0.8450), (1.2500, 0.8365), (1.3000, 0.8253), (1.3500, 0.8169), (1.4000, 0.8084), (1.4500, 0.8028), (1.5000, 0.8000)

UNITS: unitless

effect_of_SC_of_all_parolees_wo_MI_on_comm_svcs_cost = GRAPH(relative_ave_SC_of_all_parolees_wo_MI)
(0.8000, 1.5000), (0.8500, 1.3573), (0.9000, 1.1806), (0.9500, 1.0718), (1.0000, 1.0000), (1.0500, 0.9472), (1.1000, 0.9110), (1.1500,
0.8816), (1.2000, 0.8657), (1.2500, 0.8544), (1.3000, 0.8408), (1.3500, 0.8294), (1.4000, 0.8204), (1.4500, 0.8113), (1.5000, 0.8000)

UNITS: unitless

effect_of_SC_on_county_parole_violation_wMI = GRAPH(relative_SC_per_county_parolee_wMI)
(0.8000, 1.5000), (0.8400, 1.4786), (0.8800, 1.4423), (0.9200, 1.3532), (0.9600, 1.1828), (1.0000, 1.0000), (1.0400, 0.9180), (1.0800,
0.8655), (1.1200, 0.8341), (1.1600, 0.8131), (1.2000, 0.8000)

UNITS: unitless

effect_of_SC_on_county_parole_violation_wo_MI = GRAPH(relative_SC_per_county_parolee_wo_MI)

(0.8000, 1.5000), (0.833333333333, 1.4786), (0.866666666667, 1.4553), (0.9000, 1.3854), (0.933333333333, 1.2359), (0.966666666667, 1.1039), (1.0000, 1.0000), (1.033333333333, 0.9621), (1.066666666667, 0.9388), (1.1000, 0.9252), (1.133333333333, 0.9117), (1.166666666667, 0.9039), (1.2000, 0.9039)

UNITS: unitless

effect_of_SC_on_county_parolee_wMI_recidivism = GRAPH(relative_SC_per_county_parolee_wMI)

(0.8000, 1.5000), (0.8400, 1.4803), (0.8800, 1.4494), (0.9200, 1.4241), (0.9600, 1.3735), (1.0000, 1.2976), (1.0400, 1.2020), (1.0800, 1.0671), (1.1200, 0.9672), (1.1600, 0.9012), (1.2000, 0.8500)

UNITS: unitless

effect_of_SC_on_county_parolee_wo_MI_recidivism = GRAPH(relative_SC_per_county_parolee_wo_MI)

(0.8000, 1.2952), (0.8400, 1.2759), (0.8800, 1.2494), (0.9200, 1.2133), (0.9600, 1.1699), (1.0000, 1.1169), (1.0400, 1.0446), (1.0800, 0.9554), (1.1200, 0.8711), (1.1600, 0.8036), (1.2000, 0.7506)

UNITS: unitless

effect_of_SC_on_hi_risk_jail_exConv_wMI_recidivism = GRAPH(SMTH3(relative_SC_per_hi_risk_jail_offender_wMI, 1, relative_SC_per_hi_risk_jail_offender_wMI))

(0.8000, 1.5000), (0.8400, 1.4817), (0.8800, 1.4435), (0.9200, 1.3404), (0.9600, 1.1359), (1.0000, 1.0000), (1.0400, 0.9331), (1.0800, 0.8999), (1.1200, 0.8783), (1.1600, 0.8616), (1.2000, 0.8500)

UNITS: unitless

effect_of_SC_on_hi_risk_jail_exConv_wMI_recidivism_1 = GRAPH(SMTH3(relative_SC_per_hi_risk_jail_offender_wMI, 1, relative_SC_per_hi_risk_jail_offender_wMI))

(0.8000, 1.5000), (0.8400, 1.4884), (0.8800, 1.4717), (0.9200, 1.4418), (0.9600, 1.3554), (1.0000, 1.0000), (1.0400, 0.9331), (1.0800, 0.8999), (1.1200, 0.8783), (1.1600, 0.8616), (1.2000, 0.8500)

UNITS: unitless

effect_of_SC_on_hi_risk_jail_exConv_wMI_recidivism_2 = GRAPH(SMTH3(relative_SC_per_hi_risk_jail_offender_wMI, 1, relative_SC_per_hi_risk_jail_offender_wMI))

(0.8000, 1.5000), (0.8400, 1.3205), (0.8800, 1.2024), (0.9200, 1.1210), (0.9600, 1.0545), (1.0000, 1.0000), (1.0400, 0.9514), (1.0800, 0.9148), (1.1200, 0.8816), (1.1600, 0.8616), (1.2000, 0.8500)

UNITS: unitless

effect_of_SC_on_hi_risk_jail_exConv_wo_MI_recidivism = GRAPH(SMTH3(relative_SC_per_hi_risk_jail_offender_wo_MI, 1, relative_SC_per_hi_risk_jail_offender_wo_MI))

(0.8000, 1.5000), (0.8400, 1.4817), (0.8800, 1.4435), (0.9200, 1.3404), (0.9600, 1.1359), (1.0000, 1.0000), (1.0400, 0.9331), (1.0800, 0.8999), (1.1200, 0.8783), (1.1600, 0.8616), (1.2000, 0.8500)

UNITS: unitless

effect_of_SC_on_prison_parole_violation_wMI = GRAPH(relative_SC_per_prison_parolee_wMI)

(0.8000, 1.2000), (0.8400, 1.1815), (0.8800, 1.1552), (0.9200, 1.1212), (0.9600, 1.0744), (1.0000, 1.0000), (1.0400, 0.9050), (1.0800, 0.8541), (1.1200, 0.8247), (1.1600, 0.8108), (1.2000, 0.8000)

UNITS: unitless

effect_of_SC_on_prison_parole_violation_wo_MI = GRAPH(relative_SC_per_prison_parolee_wo_MI)

(0.8000, 1.2000), (0.8400, 1.1861), (0.8800, 1.1707), (0.9200, 1.1459), (0.9600, 1.0888), (1.0000, 1.0000), (1.0400, 0.9174), (1.0800, 0.8710), (1.1200, 0.8340), (1.1600, 0.8154), (1.2000, 0.8000)

UNITS: unitless

effect_of_SC_on_prison_parolee_wMI_recidivism = GRAPH(relative_SC_per_prison_parolee_wMI)

(0.8000, 1.5000), (0.8400, 1.4803), (0.8800, 1.4495), (0.9200, 1.3759), (0.9600, 1.1887), (1.0000, 1.0000), (1.0400, 0.9383), (1.0800, 0.9005), (1.1200, 0.8837), (1.1600, 0.8668), (1.2000, 0.8500)

UNITS: unitless

effect_of_SC_on_prison_parolee_wo_MI_recidivism = GRAPH(relative_SC_per_prison_parolee_wo_MI)

(0.8000, 1.3000), (0.8400, 1.2759), (0.8800, 1.2494), (0.9200, 1.2133), (0.9600, 1.1699), (1.0000, 1.1169), (1.0400, 1.0446), (1.0800, 0.9554), (1.1200, 0.8711), (1.1600, 0.8036), (1.2000, 0.7500)

UNITS: unitless

indicated_min_SC_prisoner_wMI_multiple = SC_Prisoners_wMI / min_SC_stock

UNITS: unitless

indicated_min_SC_prisoner_wo_MI_multiple = SC_Prisoners_wo_MI / min_SC_stock

UNITS: unitless

init_ave_SC_of_all_parolees_wMI = INIT(ave_SC_of_all_parolees_wMI)

UNITS: score/person

init_ave_SC_of_all_parolees_wo_MI = INIT(ave_SC_of_all_parolees_wo_MI)

UNITS: score/person

init_SC_per_arrestee = 70

UNITS: score/person

init_SC_per_county_parolee_wMI = 62

UNITS: score/person

init_SC_per_county_parolee_wMI_violated_condition = 62

UNITS: score/person

init_SC_per_county_parolee_wo_MI = 0.0001

UNITS: score/person

init_SC_per_county_parolee_wo_MI_violated_condition = 67

UNITS: score/person

init_SC_per_defendant_in_comm_being_trialed = 70.6338902527

UNITS: score/person

init_SC_per_defendant_in_custody_being_trialed = 70.6338902527

UNITS: score/person

init_SC_per_hi_risk_jail_exConv_wMI = 70.6338902527

UNITS: score/person

init_SC_per_hi_risk_jail_exConv_wo_MI = 70.6338902527

UNITS: score/person

init_SC_per_hi_risk_prison_exConv_wMI = 67.558514057

UNITS: score/person

init_SC_per_hi_risk_prison_exConv_wo_MI = 66.735254775

UNITS: score/person

init_SC_per_jail_offender_wMI = 70.6338902527

UNITS: score/person

init_SC_per_jail_offender_wo_MI = 70.6338902527
UNITS: score/person

init_SC_per_lo_risk_jail_exConv_wMI = 70.6338902527
UNITS: score/person

init_SC_per_lo_risk_jail_exConv_wo_MI = 70.6338902527
UNITS: score/person

init_SC_per_lo_risk_prison_exConv_wMI = 67.558514057
UNITS: score/person

init_SC_per_lo_risk_prison_exConv_wo_MI = 66.735254775
UNITS: score/person

init_SC_per_PreSentencing_defendants_in_comm = 70.6338902527
UNITS: score/person

init_SC_per_PreSentencing_defendants_in_custody = 70.6338902527
UNITS: score/person

init_SC_per_prison_parolee_wMI = 59.7
UNITS: score/person

init_SC_per_prison_parolee_wMI_violated_condition = 67.558514057
UNITS: score/person

init_SC_per_prison_parolee_wo_MI = 66.735254775
UNITS: score/person

init_SC_per_prison_parolee_wo_MI_violated_condition = 66.7352547751
UNITS: score/person

init_SC_per_prisoner_wMI = 64.4512886869
UNITS: score/person

init_SC_per_prisoner_wo_MI = 66.735254775
UNITS: score/person

init_SC_per_probationer = 70.6338902527
UNITS: score/person

init_SC_per_reprisoned_county_parolee_violator_wMI = 62
UNITS: score/person

init_SC_per_reprisoned_county_parolee_violator_wo_MI = 67
UNITS: score/person

init_SC_per_reprisoned_prison_parolee_violator_wMI = 67.558514057
UNITS: score/person

init_SC_per_reprisoned_prison_parolee_violator_wo_MI = 66.7352547751
UNITS: score/person

init_SC_per_suspect_in_comm = 70.6338902527
UNITS: score/person

init_SC_per_suspect_in_comm_with_case_filed = 70.6338902527

UNITS: score/person

init_SC_per_suspect_in_custody = 70.6338902527

UNITS: score/person

init_SC_per_suspect_in_custody_with_case_filed = 70.6338902527

UNITS: score/person

max_SC_per_person = 100

UNITS: score/person

min_SC_per_person = 0

UNITS: score/person

min_SC_stock = 0.1

UNITS: score

multiplier_of_ave_SC_per_prisoner_to_county_parole = 1.1

UNITS: unitless

ref_annual_jail_offender_SC_loss_per_person = 2

UNITS: score/person/year

ref_annual_parolee_SC_gain = 2

UNITS: score/person/year

ref_annual_prisoner_SC_loss_per_person = 2

UNITS: score/person/year

ref_SC_per_normal_person = 100

UNITS: score/person

relative_ave_SC_of_all_parolees_wMI = ave_SC_of_all_parolees_wMI / init_ave_SC_of_all_parolees_wMI

UNITS: unitless

relative_ave_SC_of_all_parolees_wo_MI = ave_SC_of_all_parolees_wo_MI / init_ave_SC_of_all_parolees_wo_MI

UNITS: unitless

relative_SC_per_county_parolee_wMI = ave_SC_per_county_parolee_wMI / init_SC_per_county_parolee_wMI

UNITS: unitless

relative_SC_per_county_parolee_wo_MI = ave_SC_per_county_parolee_wo_MI / init_SC_per_county_parolee_wo_MI

UNITS: unitless

relative_SC_per_hi_risk_jail_offender_wMI = ave_SC_per_hi_risk_jail_exConv_wMI / init_SC_per_hi_risk_jail_exConv_wMI

UNITS: unitless

relative_SC_per_hi_risk_jail_offender_wo_MI = ave_SC_per_hi_risk_jail_exConv_wo_MI / init_SC_per_hi_risk_jail_exConv_wo_MI

UNITS: unitless

relative_SC_per_prison_parolee_wMI = ave_SC_per_prison_parolee_wMI / init_SC_per_prison_parolee_wMI

UNITS: unitless

relative_SC_per_prison_parolee_wo_MI = ave_SC_per_prison_parolee_wo_MI / init_SC_per_prison_parolee_wo_MI

UNITS: unitless

zero_transferring_SC_thru_discharging_county_parolee_wo_MI = 0

UNITS: score/year

{ The model has 437 (437) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 37 (37) Flows: 127 (127) Converters: 273 (273)

Constants: 47 (47) Equations: 353 (353) Graphicals: 25 (25)

There are also 409 expanded macro variables.

}

Prisoner Health Care Needs

$\text{actual_total_mental_functions_in_prison} = \text{Mental_Profiles.Mental_Functions_of_Prisoners_wMI} + \text{Mental_Profiles.Mental_Functions_of_Prisoners_wo_MI}$

UNITS: score

$\text{ave_age_in_prison} = (\text{Age_Profiles.Total_Age_of_Prisoners_wMI} + \text{Age_Profiles.Total_Age_of_Prisoners_wo_MI}) / \text{Individuals_with_Criminal_History.total_prisoners}$

UNITS: year/person

$\text{desired_mental_func_per_prisoner} = 70$

UNITS: score/person

$\text{desired_total_mental_functions_in_prison} = \text{Individuals_with_Criminal_History.total_prisoners} * \text{desired_mental_func_per_prisoner}$

UNITS: score

$\text{effect_of_age_on_fract_of_elderly_prisoners} = \text{GRAPH}(\text{relative_ave_age_in_prison})$

(0.9000, 0.900), (0.916666666667, 0.957), (0.933333333333, 1.000), (0.9500, 1.442), (0.966666666667, 2.155), (0.983333333333, 3.324), (1.0000, 4.978), (1.016666666667, 6.000), (1.033333333333, 6.888), (1.0500, 7.487), (1.066666666667, 7.743), (1.083333333333, 7.886), (1.1000, 8.000)

UNITS: unitless

$\text{effect_of_relative_age_on_CD_cost_per_prisoner} = \text{GRAPH}(\text{relative_ave_age_in_prison})$

(1.0000, 1.000), (1.0100, 1.037), (1.0200, 1.110), (1.0300, 1.220), (1.0400, 1.367), (1.0500, 1.531), (1.0600, 1.686), (1.0700, 1.812), (1.0800, 1.918), (1.0900, 1.980), (1.1000, 2.000)

UNITS: unitless

$\text{fract_prisoners_need_CD_tmnt} = \text{IF Individuals_with_Criminal_History.equilibrium_switch} = 1 \text{ THEN init_fract_prisoners_need_CD_tmnt} * \text{effect_of_age_on_fract_of_elderly_prisoners} \text{ ELSE SMTH3}((\text{init_fract_prisoners_need_CD_tmnt} * \text{effect_of_age_on_fract_of_elderly_prisoners}), 1, (\text{init_fract_prisoners_need_CD_tmnt} * \text{effect_of_age_on_fract_of_elderly_prisoners}))$

UNITS: unitless

$\text{fract_prisoners_wIDs} = \text{ref_fract_prisoners_wID} * \text{Prison_Capacity.effect_of_prison_utilization_on_fract_of_prisoners_wID}$

UNITS: unitless

$\text{init_ave_age_in_prison} = \text{INIT}(\text{ave_age_in_prison})$

UNITS: year/person

$\text{init_fract_prisoners_need_CD_tmnt} = 0.02$

UNITS: unitless

$\text{prisoners_need_CD_tmnt} = \text{Individuals_with_Criminal_History.total_prisoners} * \text{fract_prisoners_need_CD_tmnt}$

UNITS: person

$\text{prisoners_wIDs} = \text{Individuals_with_Criminal_History.total_prisoners} * \text{fract_prisoners_wIDs}$

UNITS: person

$\text{ref_fract_prisoners_wID} = 0.03$

UNITS: unitless

DOCUMENT: See Calculate IR and Prev of Diseases.xls.

This is calculated by analyzing the prevalence and incidence rates of HIV/AIDS, TB, and Hep C.

relative_ave_age_in_prison = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN ave_age_in_prison/
init_ave_age_in_prison ELSE ave_age_in_prison / init_ave_age_in_prison

UNITS: unitless

total_discrepancy_in_mental_functions_in_prison = MAX (desired_total_mental_functions_in_prison -
actual_total_mental_functions_in_prison, 1)

UNITS: score

{ The model has 22 (22) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 0 (0) Flows: 0 (0) Converters: 22 (22)

Constants: 3 (3) Equations: 19 (19) Graphicals: 3 (3)

There are also 409 expanded macro variables.

}

Prison Health Care Resource Allocation Module

$Ave_HC_Cost_per_Prisoner(t) = Ave_HC_Cost_per_Prisoner(t - dt) + (chg_in_ave_HC_cost) * dt$

INIT Ave_HC_Cost_per_Prisoner = 4000 {calculated}

UNITS: dollar/person

DOCUMENT: \$319,629,222 per year / 66975 per person = \$4,722 per person

INFLOWS:

$chg_in_ave_HC_cost = Ave_HC_Cost_per_Prisoner * growth_rate_of_ave_HC_cost$

UNITS: dollar/person/year

$CD_Capacity_Adjustment_Time(t) = CD_Capacity_Adjustment_Time(t - dt) + (updating_new_CD_capacity_adj_time) * dt$

INIT CD_Capacity_Adjustment_Time = ref_CD_capacity_adjustment_time

UNITS: year

INFLOWS:

$updating_new_CD_capacity_adj_time = (1 - acuity_based_fund_policy_switch) * 0 + acuity_based_fund_policy_switch * ((desired_new_CD_capacity_adjustment_time - CD_Capacity_Adjustment_Time) / ref_CD_capacity_adjustment_time)$

UNITS: unitless

$CD_Tmnt_Cost_per_Prisoner(t) = CD_Tmnt_Cost_per_Prisoner(t - dt) + (chg_in_CD_cost_per_prisoner) * dt$

INIT CD_Tmnt_Cost_per_Prisoner = 1990

UNITS: dollar/person

DOCUMENT: \$1990/person

-\$4450/person/year HC cost in 2000. Back traced 6% HC spending inflation} * 3 {older inmates cost 3x more to treat than the younger ones}

INFLOWS:

$chg_in_CD_cost_per_prisoner = IF\ Individuals_with_Criminal_History.equilibrium_switch = 1\ THEN\ 0\ ELSE\ CD_Tmnt_Cost_per_Prisoner * growth_rate_of_ave_HC_cost * Prisoner_Health_Care_Needs.effect_of_relative_age_on_CD_cost_per_prisoner$

UNITS: dollar/person/year

$CD_Treatment_Capacity_Fund(t) = CD_Treatment_Capacity_Fund(t - dt) + (chg_in_CD_fund) * dt$

INIT CD_Treatment_Capacity_Fund = 0

UNITS: dollar/year

INFLOWS:

$chg_in_CD_fund = (acuity_based_fund_policy_switch * (adjustment_for_CD_fund)) * 0 + acuity_based_fund_policy_switch * (IF\ adjustment_for_CD_fund > 0\ THEN\ adjustment_for_CD_fund * 1\ ELSE\ adjustment_for_CD_fund)$

UNITS: dollar/year/year

$Chronic_Disease_Treatment_Capacity(t) = Chronic_Disease_Treatment_Capacity(t - dt) + (chg_in_capacity_for_CD) * dt$

INIT Chronic_Disease_Treatment_Capacity = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 2520.43957465 ELSE perceived_needs_for_CD_tmnt * 0.5

UNITS: person

INFLOWS:

$\text{chg_in_capacity_for_CD} = \text{IF Individuals_with_Criminal_History.equilibrium_switch} = 1 \text{ THEN MIN} \\
(\text{funded_CD_tmnt_capacity_adjustment}, \text{gap_in_CD_tmnt_capacity} / \text{CD_Capacity_Adjustment_Time}) \text{ ELSE } (\text{MIN} \\
(\text{funded_CD_tmnt_capacity_adjustment}, \text{gap_in_CD_tmnt_capacity} / \text{CD_Capacity_Adjustment_Time}) * \\
\text{effect_of_indicated_min_CD_tmnt_capacity_multiple_on_chg_in_CD_tmnt_capacity}) + \text{acuity_based_fund_policy_switch} * \\
\text{change_in_CD_capacity} * \text{effect_of_indicated_min_CD_tmnt_capacity_multiple_on_chg_in_CD_tmnt_capacity}$

UNITS: person/year

$\text{ID_Capacity_Adjustment_Time}(t) = \text{ID_Capacity_Adjustment_Time}(t - dt) + (\text{updating_new_ID_capacity_adj_time}) * dt$

INIT ID_Capacity_Adjustment_Time = ref_ID_capacity_adjustment_time

UNITS: year

INFLOWS:

$\text{updating_new_ID_capacity_adj_time} = (1 - \text{acuity_based_fund_policy_switch}) * 0 + \text{acuity_based_fund_policy_switch} * \\
((\text{desired_new_ID_capacity_adjustment_time} - \text{ID_Capacity_Adjustment_Time}) / \text{ref_ID_capacity_adjustment_time})$

UNITS: unitless

$\text{ID_Tmnt_Cost_per_Prisoner}(t) = \text{ID_Tmnt_Cost_per_Prisoner}(t - dt) + (\text{chg_in_ID_cost_per_prisoner}) * dt$

INIT ID_Tmnt_Cost_per_Prisoner = 20000

UNITS: dollar/person

INFLOWS:

$\text{chg_in_ID_cost_per_prisoner} = \text{IF Individuals_with_Criminal_History.equilibrium_switch} = 1 \text{ THEN } 0 \text{ ELSE} \\
\text{ID_Tmnt_Cost_per_Prisoner} * \text{growth_rate_of_ave_HC_cost} * \text{effect_of_ID_tmnt_capacity_on_cost_per_prisoner}$

UNITS: dollar/person/year

$\text{ID_Treatment_Capacity_Fund}(t) = \text{ID_Treatment_Capacity_Fund}(t - dt) + (\text{chg_in_ID_fund}) * dt$

INIT ID_Treatment_Capacity_Fund = 339507151.949

UNITS: dollar/year

INFLOWS:

$\text{chg_in_ID_fund} = (\text{acuity_based_fund_policy_switch} * (\text{adjustment_for_ID_fund})) * 0 + \text{acuity_based_fund_policy_switch} * (\text{IF} \\
\text{adjustment_for_ID_fund} > 0 \text{ THEN adjustment_for_ID_fund} * 1 \text{ ELSE adjustment_for_ID_fund})$

UNITS: dollar/year/year

$\text{Infectious_Disease_Treatment_Capacity}(t) = \text{Infectious_Disease_Treatment_Capacity}(t - dt) + (\text{chg_in_capacity_for_ID}) * dt$

INIT Infectious_Disease_Treatment_Capacity = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 802.734571953 ELSE 2530.62356631

UNITS: person

INFLOWS:

$\text{chg_in_capacity_for_ID} = \text{IF Individuals_with_Criminal_History.equilibrium_switch} = 1 \text{ THEN MIN} \\
(\text{funded_ID_tmnt_capacity_adjustment}, \text{gap_in_ID_tmnt_capacity} / \text{ID_Capacity_Adjustment_Time}) * \\
\text{effect_of_min_ID_tmnt_capacity_multiple_on_chg_in_ID_tmnt_capacity} \text{ ELSE } (1 - \text{acuity_based_fund_policy_switch}) * \text{MIN} \\
(\text{funded_ID_tmnt_capacity_adjustment}, \text{gap_in_ID_tmnt_capacity} / \text{ID_Capacity_Adjustment_Time}) * \\
\text{effect_of_min_ID_tmnt_capacity_multiple_on_chg_in_ID_tmnt_capacity} + \text{acuity_based_fund_policy_switch} * \\
\text{change_in_ID_tmnt_capacity} * \text{effect_of_min_ID_tmnt_capacity_multiple_on_chg_in_ID_tmnt_capacity}$

UNITS: person/year

$\text{Medical_Screening_Adjustment_Time}(t) = \text{Medical_Screening_Adjustment_Time}(t - dt) + (\text{chg_in_medical_screening_adj_time}) * dt$

INIT Medical_Screening_Adjustment_Time = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
desired_adj_time_for_medical_screening_adj_time ELSE (1 -
Individuals_with_Criminal_History.MHC_screening_capacity_building_start_time_switch) * (init_medical_screening_adj_time) +
Individuals_with_Criminal_History.MHC_screening_capacity_building_start_time_switch *
desired_adj_time_for_medical_screening_adj_time

UNITS: year

INFLOWS:

$$\text{chg_in_medical_screening_adj_time} = (1 - \text{acuity_based_fund_policy_switch}) * 0 + \text{acuity_based_fund_policy_switch} * (\text{gap_in_medical_screening_adj_time} / \text{time_to_adjust_medical_screening_adj_time})$$

UNITS: unitless

$$\text{Mental_Health_Care_Capacity}(t) = \text{Mental_Health_Care_Capacity}(t - dt) + (\text{chg_in_capacity_for_MHC}) * dt$$

INIT Mental_Health_Care_Capacity = IF Individuals_with_Criminal_History.equilibrium_switch =1 THEN 178725.929597 ELSE perceived_needs_for_MHC * 0.1

UNITS: score

INFLOWS:

$$\text{chg_in_capacity_for_MHC} = \text{IF Individuals_with_Criminal_History.equilibrium_switch} = 1 \text{ THEN MIN} (\text{funded_MHC_capacity_adjustment}, \text{gap_in_MHC_capacity}/\text{MHC_Capacity_Adjustment_Time}) \text{ ELSE } (1 - \text{acuity_based_fund_policy_switch}) * \text{MIN} (\text{funded_MHC_capacity_adjustment}, \text{gap_in_MHC_capacity}/\text{MHC_Capacity_Adjustment_Time}) * \text{effect_of_indicated_min_MHC_capacity_multiple_on_chg_in_MHC_capacity} + \text{acuity_based_fund_policy_switch} * \text{change_in_MHC_capacity} * \text{effect_of_indicated_min_MHC_capacity_multiple_on_chg_in_MHC_capacity}$$

UNITS: score/year

$$\text{MHC_Capacity_Adjustment_Time}(t) = \text{MHC_Capacity_Adjustment_Time}(t - dt) + (\text{updating_new_MHC_capacity_adj_time}) * dt$$

INIT MHC_Capacity_Adjustment_Time = ref_MHC_capacity_adjustment_time

UNITS: year

INFLOWS:

$$\text{updating_new_MHC_capacity_adj_time} = (1 - \text{acuity_based_fund_policy_switch}) * 0 + \text{acuity_based_fund_policy_switch} * ((\text{desired_new_MHC_capacity_adjustment_time} - \text{MHC_Capacity_Adjustment_Time}) / \text{ref_MHC_capacity_adjustment_time})$$

UNITS: unitless

$$\text{MHC_Capacity_Fund}(t) = \text{MHC_Capacity_Fund}(t - dt) + (\text{chg_in_MHC_fund}) * dt$$

INIT MHC_Capacity_Fund = 0

UNITS: dollar/year

INFLOWS:

$$\text{chg_in_MHC_fund} = (\text{acuity_based_fund_policy_switch} * (\text{IF adjustment_for_MHC_fund} > 0 \text{ THEN adjustment_for_MHC_fund} * 1 \text{ ELSE adjustment_for_MHC_fund}))$$

UNITS: dollar/year/year

$$\text{MHC_Cost_per_Mental_Function_Improvement}(t) = \text{MHC_Cost_per_Mental_Function_Improvement}(t - dt) + (\text{chg_in_MHC_cost_per_improvement}) * dt$$

INIT MHC_Cost_per_Mental_Function_Improvement = 24

UNITS: dollar/score

DOCUMENT:

mental func of prisoners wMI => 66975 person * 0.14 {MI prev} * 57 score/person = 247990 score

nm mental functions of MI prisoners

=> 66975 * 0.14 * 100 = 937650 score

Cost of Incarceration

See "Cost of Incarceration_Care_Comm Svcs.docx" and "Corrections Criminal Justice and the Mental Illness Observations about Costs in California.pdf"

CCCM Costs \$880/prisoner * 10595 prisoners wMI {except SMI}

= \$9323600 (1996-97)

EOP Costs \$9,600/prisoner x 1896 prisoner

= \$18201600 (1996-97)

\$9323600 + \$18201600 = \$27525200

1987 real price @ 2009 => 59.935

Real Price @ 2009 = \$16497228

MHC cost/discrepancy in mental function

= \$16497228 / 689660 = \$23.92 /score

INFLOWS:

chg_in_MHC_cost_per_improvement = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0 ELSE
MHC_Cost_per_Mental_Function_Improvement * growth_rate_of_ave_HC_cost * effect_of_MHC_adequacy_on_cost_per_mental_func

UNITS: dollar/score /year

New_Time_to_Perceive_MHC_Needs(t) = New_Time_to_Perceive_MHC_Needs(t - dt) + (chg_in_new_perceive_time_in_MHC_needs) * dt

INIT New_Time_to_Perceive_MHC_Needs = 4

UNITS: year

INFLOWS:

chg_in_new_perceive_time_in_MHC_needs = (1 - acuity_based_fund_policy_switch) * 0 + acuity_based_fund_policy_switch *
((desired_perception_delay_in_MHC_needs - New_Time_to_Perceive_MHC_Needs) / ref_perception_delay_in_MHC_needs)

UNITS: unitless

Prison_HC_Fund(t) = Prison_HC_Fund(t - dt) + (increasing_HC_fund) * dt

INIT Prison_HC_Fund = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 101520000 ELSE 319629222 {714470631
(2000 figure) minus 6% of HC spending inflation every year back to 1987}*0.2

UNITS: dollar/year

DOCUMENT: The estimated initial value seems overly high. With the estimated initial value, MHC capacity adequacy should have exceed one in the beginning of the simulation. Given the reported severe shortage in MHC capacity, the initial value is tested with a range of fraction lower than 0.5. With 0.5 of the estimated initial value, MHC capacity adequacy still exceeds one. So we test 0.4 and 0.3 of estimated initial value. Then MHC capacity adequacy is lower than one. Considering the lack of data in 1987 and the reported shortage, we set the initial value for Total Prison HC Budget as 0.3 of the estimated initial value.

The Correctional Health Care Services Budget for 2000 was \$714,470,631. Factoring in the 6 - 7% prison medical expenditure growth and back trace the budget to 1987, we obtain \$31,962,922.

INFLOWS:

increasing_HC_fund = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN gap_in_total_HC_fund /
time_to_adjust_total_HC_fund ELSE (1 - acuity_based_fund_policy_switch) * (gap_in_total_HC_fund / time_to_adjust_total_HC_fund) +
acuity_based_fund_policy_switch * ((total_desired_itemized_HC_fund_chg - Prison_HC_Fund) / time_to_adjust_total_HC_fund)

UNITS: dollar/year/year

actual_medical_screening_time_at_reception_center = (1-
Individuals_with_Criminal_History.delay_in_medical_screening_capacity_building) *
init_total_medical_screening_time_at_reception_center +

Individuals_with_Criminal_History.delay_in_medical_screening_capacity_building * (SMTH3(desired_medical_screening_time, Medical_Screening_Adjustment_Time,init_total_medical_screening_time_at_reception_center))

UNITS: minute/day

actual_total_itemized_HC_capacity_fund = ID_Treatment_Capacity_Fund + CD_Treatment_Capacity_Fund + MHC_Capacity_Fund

UNITS: dollar/year

acuity_based_fund_policy_switch = STEP(1, 1900) * 0 + STEP(1, 2012) * 0

UNITS: unitless

DOCUMENT: When the first STEP function is turned on, the acuity-based prison health care budget policy is activated.

adjustment_for_CD_fund = gap_in_CD_fund_change / time_to_adjust_total_HC_fund

UNITS: dollar/year/year

adjustment_for_CD_tmnt_capacity = gap_in_CD_tmnt_capacity / CD_Capacity_Adjustment_Time

UNITS: person/year

adjustment_for_ID_fund = gap_in_ID_fund_change / time_to_adjust_total_HC_fund

UNITS: dollar/year/year

adjustment_for_ID_tmnt_capacity_based_on_gap = gap_in_ID_tmnt_capacity / ID_Capacity_Adjustment_Time

UNITS: person/year

adjustment_for_MHC_capacity = gap_in_MHC_capacity/MHC_Capacity_Adjustment_Time

UNITS: score/year

adjustment_for_MHC_fund = gap_in_MHC_fund_change / time_to_adjust_total_HC_fund

UNITS: dollar/year/year

averaging_time_to_estimate_prisoners_growth_rate = 5

UNITS: year

averaging_time_to_observe_chg_in_needs_for_CD_tmnt = 2

UNITS: year

averaging_time_to_observe_chg_in_needs_for_ID_tmnt = 1

UNITS: year

averaging_time_to_perceive_indicated_total_HC_fund = 15

UNITS: year

CD_tmnt_capacity_adequacy = Chronic_Disease_Treatment_Capacity/perceived_needs_for_CD_tmnt

UNITS: unitless

change_in_CD_capacity = CD_Treatment_Capacity_Fund / CD_Tmnt_Cost_per_Prisoner

UNITS: person/year

change_in_ID_tmnt_capacity = ID_Treatment_Capacity_Fund / ID_Tmnt_Cost_per_Prisoner

UNITS: person/year

change_in_MHC_capacity = MHC_Capacity_Fund/ MHC_Cost_per_Mental_Function_Improvement

UNITS: score/year

desired_adj_time_for_medical_screening_adj_time = 2

UNITS: year

desired_CD_tmnt_fund_chg = adjustment_for_CD_tmnt_capacity * CD_Tmnt_Cost_per_Prisoner

UNITS: dollar/year

desired_ID_tmnt_fund_chg = adjustment_for_ID_tmnt_capacity_based_on_gap * ID_Tmnt_Cost_per_Prisoner

UNITS: dollar/year

desired_medical_screening_time = Individuals_with_Criminal_History.ADP_of_Reception_Center *
minimum_medical_screening_time_required_per_person

UNITS: minute/day

desired_MHC_fund_chg = adjustment_for_MHC_capacity * MHC_Cost_per_Mental_Function_Improvement

UNITS: dollar/year

desired_new_CD_capacity_adjustment_time = 1

UNITS: year

desired_new_ID_capacity_adjustment_time = 1

UNITS: year

desired_new_MHC_capacity_adjustment_time = 1

UNITS: year

desired_perception_delay_in_MHC_needs = 2

UNITS: year

effect_of_CD_tmnt_capacity_fund_on_capacity_AT = GRAPH(CD_Treatment_Capacity_Fund)

(0.000, 0.1000), (0.100, 0.1104), (0.200, 0.1174), (0.300, 0.1243), (0.400, 0.1382), (0.500, 0.1625), (0.600, 0.1869), (0.700, 0.2181), (0.800, 0.2668), (0.900, 0.4058), (1.000, 1.0000)

UNITS: unitless

effect_of_ID_tmnt_capacity_fund_on_capacity_AT = GRAPH(ID_Treatment_Capacity_Fund)

(0.000, 0.1000), (0.100, 0.1104), (0.200, 0.1174), (0.300, 0.1243), (0.400, 0.1382), (0.500, 0.1625), (0.600, 0.1869), (0.700, 0.2181), (0.800, 0.2668), (0.900, 0.4058), (1.000, 1.0000)

UNITS: unitless

effect_of_ID_tmnt_capacity_on_cost_per_prisoner = GRAPH(ID_tmnt_capacity_adequacy)

(0.000, 1.1000), (0.100, 1.0988), (0.200, 1.0968), (0.300, 1.0940), (0.400, 1.0884), (0.500, 1.0791), (0.600, 1.0622), (0.700, 1.0390), (0.800, 1.0169), (0.900, 1.0044), (1.000, 1.0000)

UNITS: unitless

effect_of_indicated_min_CD_tmnt_capacity_multiple_on_chg_in_CD_tmnt_capacity =
GRAPH(indicated_min_CD_tmnt_capacity_multiple)

(0.000, 0.000), (0.100, 0.020), (0.200, 0.060), (0.300, 0.149), (0.400, 0.273), (0.500, 0.434), (0.600, 0.651), (0.700, 0.815), (0.800, 0.916), (0.900, 0.976), (1.000, 1.000)

UNITS: unitless

effect_of_indicated_min_MHC_capacity_multiple_on_chg_in_MHC_capacity = GRAPH(indicated_min_MHC_capacity_multiple)

(0.000, 0.000), (0.100, 0.020), (0.200, 0.060), (0.300, 0.149), (0.400, 0.273), (0.500, 0.434), (0.600, 0.651), (0.700, 0.815), (0.800, 0.916), (0.900, 0.976), (1.000, 1.000)

UNITS: unitless

effect_of_medical_screening_time_adequacy_on_MI_screening_effectiveness = GRAPH(medical_screening_time_adequacy)

(0.4600, 0.5000), (0.5140, 0.5065), (0.5680, 0.5145), (0.6220, 0.5257), (0.6760, 0.5498), (0.7300, 0.5803), (0.7840, 0.6349), (0.8380, 0.7120), (0.8920, 0.8213), (0.9460, 0.8743), (1.0000, 0.9000)

UNITS: unitless

effect_of_MHC_adequacy_on_cost_per_mental_func = GRAPH(MHC_capacity_adequacy)

(0.1000, 2.000), (0.1900, 1.969), (0.2800, 1.927), (0.3700, 1.867), (0.4600, 1.74657142857), (0.5500, 1.62214285714), (0.6400, 1.49771428571), (0.7300, 1.37328571429), (0.8200, 1.24885714286), (0.9100, 1.12442857143), (1.0000, 1.000)

UNITS: unitless

effect_of_MHC_adequacy_on_mental_func_of_prisoners_wMI = GRAPH(MHC_capacity_adequacy)

(0.100, 1.495), (0.200, 1.463), (0.300, 1.416), (0.400, 1.337), (0.500, 1.206), (0.600, 1.012), (0.700, 0.708), (0.800, 0.372), (0.900, 0.136), (1.000, 0.000), (1.100, -0.048), (1.200, -0.069), (1.300, -0.074), (1.400, -0.086), (1.500, -0.100)

UNITS: unitless

effect_of_MHC_adequacy_on_MI_screening_in_prison = GRAPH(MHC_capacity_adequacy)

(0.000, 0.2000), (0.100, 0.2163), (0.200, 0.2345), (0.300, 0.2562), (0.400, 0.2798), (0.500, 0.3342), (0.600, 0.4267), (0.700, 0.5953), (0.800, 0.7712), (0.900, 0.8619), (1.000, 0.8972)

UNITS: unitless

effect_of_MHC_adequacy_on_recovery_time_after_realignment = GRAPH(IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN MHC_capacity_adequacy ELSE SMTH3(MHC_capacity_adequacy, 1, MHC_capacity_adequacy))

(0.000, 1.5000), (0.100, 1.4912), (0.200, 1.4868), (0.300, 1.4758), (0.400, 1.4604), (0.500, 1.4230), (0.600, 1.3701), (0.700, 1.2909), (0.800, 1.2050), (0.900, 1.1038), (1.000, 1.0000), (1.100, 0.8881), (1.200, 0.8264), (1.300, 0.8000)

UNITS: unitless

DOCUMENT: IF Individuals_with_Criminal_History.equilibrium_switch = 1

THEN

MHC_capacity_adequacy

ELSE

SMTH3(MHC_capacity_adequacy, 1, MHC_capacity_adequacy)

effect_of_MHC_capacity_fund_on_capactiy_AT = GRAPH(MHC_Capacity_Fund)

(0.000, 0.1000), (0.100, 0.1104), (0.200, 0.1174), (0.300, 0.1243), (0.400, 0.1382), (0.500, 0.1625), (0.600, 0.1869), (0.700, 0.2181), (0.800, 0.2668), (0.900, 0.4058), (1.000, 1.0000)

UNITS: unitless

effect_of_min_ID_tmnt_capacity_multiple_on_chg_in_ID_tmnt_capacity = GRAPH(indicated_ID_tmnt)

(0.000, 0.000), (0.100, 0.161), (0.200, 0.345), (0.300, 0.534), (0.400, 0.689), (0.500, 0.780), (0.600, 0.876), (0.700, 0.925), (0.800, 0.951), (0.900, 0.976), (1.000, 1.000)

UNITS: unitless

expected_frational_growth_rate_of_prison_pop = TREND(Individuals_with_Criminal_History.total_prisoners, averaging_time_to_estimate_prisoners_growth_rate, 0)

UNITS: 1/year

expected_growth_rate_for_needs_for_CD_tmnt = TREND(Prisoner_Health_Care_Needs.prisoners_need_CD_tmnt, averaging_time_to_observe_chg_in_needs_for_CD_tmnt, 0)

UNITS: 1/year

expected_growth_rate_in_needs_for_ID_tmnt = TREND(needs_for_ID_tmnt, averaging_time_to_observe_chg_in_needs_for_ID_tmnt, 0)

UNITS: 1/year

expected_needs_for_CD_tmnt = Prisoner_Health_Care_Needs.prisoners_need_CD_tmnt * (1 + expected_growth_rate_for_needs_for_CD_tmnt)

UNITS: person/year

expected_needs_for_ID_tmnt = needs_for_ID_tmnt * (1 + expected_growth_rate_in_needs_for_ID_tmnt)

UNITS: person/year

expected_total_prisoners = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN ROUND (Individuals_with_Criminal_History.total_prisoners * (1+expected_fractional_growth_rate_of_prison_pop)) ELSE Individuals_with_Criminal_History.total_prisoners * (1 + expected_fractional_growth_rate_of_prison_pop)

UNITS: person/year

fract_prison_HC_fund_on_ID_CD_and_MHC_tmnt = 0.9

UNITS: unitless

DOCUMENT: Correctional health care costs also consist of dental care, ancillary health care, and relevant management expenditures.

funded_CD_tmnt_capacity = remaining_HC_fund_for_CD / CD_Tmnt_Cost_per_Prisoner

UNITS: person/year

funded_CD_tmnt_capacity_adjustment = funded_CD_tmnt_capacity - Chronic_Disease_Treatment_Capacity / CD_Capacity_Adjustment_Time

UNITS: person/ year

funded_ID_tmnt_capacity = (Prison_HC_Fund * (1 - STEP(1, 2012) * 0)) / ID_Tmnt_Cost_per_Prisoner

UNITS: person/year

funded_ID_tmnt_capacity_adjustment = funded_ID_tmnt_capacity - Infectious_Disease_Treatment_Capacity / ID_Capacity_Adjustment_Time

UNITS: person/year

funded_MHC_capacity = remaining_HC_fund_for_MHC / MHC_Cost_per_Mental_Function_Improvement

UNITS: score/year

funded_MHC_capacity_adjustment = funded_MHC_capacity - Mental_Health_Care_Capacity / MHC_Capacity_Adjustment_Time

UNITS: score/year

gap_in_CD_fund_change = desired_CD_tmnt_fund_chg - CD_Treatment_Capacity_Fund

UNITS: dollar/year

gap_in_CD_tmnt_capacity = perceived_needs_for_CD_tmnt - Chronic_Disease_Treatment_Capacity

UNITS: person

gap_in_ID_fund_change = (desired_ID_tmnt_fund_chg - ID_Treatment_Capacity_Fund)

UNITS: dollar/year

gap_in_ID_tmnt_capacity = needs_for_ID_tmnt - Infectious_Disease_Treatment_Capacity

UNITS: person

gap_in_medical_screening_adj_time = desired_adj_time_for_medical_screening_adj_time - Medical_Screening_Adjustment_Time

UNITS: year

gap_in_MHC_capacity = perceived_needs_for_MHC - Mental_Health_Care_Capacity

UNITS: score

gap_in_MHC_fund_change = desired_MHC_fund_chg - MHC_Capacity_Fund

UNITS: dollar/year

gap_in_total_HC_fund = (indicated_total_HC_fund - Prison_HC_Fund) * (1 - STEP(1, 1988) * 0) - STEP (Prison_HC_Fund , 1988) * 0

UNITS: dollar/year

growth_rate_of_ave_HC_cost = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 0 ELSE 0.05

UNITS: 1/year

ID_tmnt_capacity_adequacy = Infectious_Disease_Treatment_Capacity/needs_for_ID_tmnt

UNITS: unitless

indicated_ID_tmnt = Infectious_Disease_Treatment_Capacity / min_ID_tmnt_capacity

UNITS: unitless

indicated_min_CD_tmnt_capacity_multiple = Chronic_Disease_Treatment_Capacity / min_CD_tmnt_capacity

UNITS: unitless

indicated_min_MHC_capacity_multiple = Mental_Health_Care_Capacity / min_MHC_capacity

UNITS: unitless

indicated_total_HC_fund = SMTH3 (expected_total_prisoners * Ave_HC_Cost_per_Prisoner, averaging_time_to_perceive_indicated_total_HC_fund, expected_total_prisoners * Ave_HC_Cost_per_Prisoner)

UNITS: dollar/year

init_medical_screening_adj_time = 20

UNITS: year

init_medical_screening_time_per_person = 7

UNITS: minute/person

init_total_medical_screening_time_at_reception_center = init_medical_screening_time_per_person * INIT (Individuals_with_Criminal_History.ADP_of_Reception_Center)

UNITS: minute/day

medical_screening_time_adequacy = actual_medical_screening_time_at_reception_center / desired_medical_screening_time

UNITS: unitless

MHC_capacity_adequacy = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN Mental_Health_Care_Capacity / perceived_needs_for_MHC ELSE Mental_Health_Care_Capacity / perceived_needs_for_MHC

UNITS: unitless

min_CD_tmnt_capacity = 20

UNITS: person

min_ID_tmnt_capacity = 10

UNITS: person

min_MHC_capacity = 100

UNITS: score

minimum_medical_screening_time_required_per_person = 15

UNITS: minute/person

needs_for_ID_tmnt = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN Prisoner_Health_Care_Needs.prisoners_wIDs ELSE SMTH3(Prisoner_Health_Care_Needs.prisoners_wIDs, perception_delay_in_ID_tmnt_needs, Prisoner_Health_Care_Needs.prisoners_wIDs)

UNITS: person

perceived_needs_for_CD_tmnt = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Prisoner_Health_Care_Needs.prisoners_need_CD_tmnt ELSE SMTH3(Prisoner_Health_Care_Needs.prisoners_need_CD_tmnt ,
perception_delay_in_CD_tmnt_needs , Prisoner_Health_Care_Needs.prisoners_need_CD_tmnt)

UNITS: person

perceived_needs_for_MHC = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Prisoner_Health_Care_Needs.total_discrepancy_in_mental_functions_in_prison ELSE
SMTH3(Prisoner_Health_Care_Needs.total_discrepancy_in_mental_functions_in_prison , perception_delay_in_needs_for_MHC ,
Prisoner_Health_Care_Needs.total_discrepancy_in_mental_functions_in_prison)

UNITS: score

perception_delay_in_CD_tmnt_needs = 2

UNITS: year

perception_delay_in_ID_tmnt_needs = 1

UNITS: year

perception_delay_in_needs_for_MHC = (1 - acuity_based_fund_policy_switch) * ref_perception_delay_in_MHC_needs +
acuity_based_fund_policy_switch * New_Time_to_Perceive_MHC_Needs

UNITS: year

ref_CD_capacity_adjustment_time = 4

UNITS: year

ref_ID_capacity_adjustment_time = 4

UNITS: year

ref_MHC_capacity_adjustment_time = 4

UNITS: year

ref_perception_delay_in_MHC_needs = 4

UNITS: year

remaining_HC_fund_for_CD = MAX (Prison_HC_Fund * fract_prison_HC_fund_on_ID_CD_and_MHC_tmnt - (expected_needs_for_ID_tmnt
* ID_Tmnt_Cost_per_Prisoner), 0)

UNITS: dollar/year

remaining_HC_fund_for_MHC = MAX (remaining_HC_fund_for_CD - (expected_needs_for_CD_tmnt * CD_Tmnt_Cost_per_Prisoner), 0)

UNITS: dollar/year

time_to_adjust_medical_screening_adj_time = 5

UNITS: year

DOCUMENT: According to "Three-Judge Court: Opinion and Order" (August 2009) on p. 34:

"Over the next eight years, as part of its ongoing effort to ensure that California hires and retains sufficient clinical staff, the court issued several orders concerning recruitment and retention bonuses, as well as salary increases for mental health clinicians."

Hence, we set the delay in medical screening at the reception centers to be 8 yrs.

time_to_adjust_total_HC_fund = 2

UNITS: year

total_desired_itemized_HC_fund = total_desired_itemized_HC_fund_chg + Prison_HC_Fund

UNITS: dollar/year

$total_desired_itemized_HC_fund_chg = desired_ID_tmnt_fund_chg + desired_CD_tmnt_fund_chg + desired_MHC_fund_chg$

UNITS: dollar/year

$total_itemized_HC_fund = ID_Treatment_Capacity_Fund + CD_Treatment_Capacity_Fund + MHC_Capacity_Fund$

UNITS: dollar/year

{ The model has 135 (135) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 16 (16) Flows: 16 (16) Converters: 103 (103)

Constants: 25 (25) Equations: 94 (94) Graphicals: 13 (13)

There are also 409 expanded macro variables.

}

Prison Capacity Module

$Prison_Capacity(t) = Prison_Capacity(t - dt) + (chg_in_prison_capacity - prison_capacity_obsoleting) * dt$

INIT Prison_Capacity = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN
(Individuals_with_Criminal_History.total_prisoners*ave_prison_lifetime)/(time_to_adjust_prison_capacity+ave_prison_lifetime) ELSE
36465

UNITS: person

INFLOWS:

$chg_in_prison_capacity = (1 - Individuals_with_Criminal_History.policy_prison_capacity_steady_state_error) * gap_in_prison_capacity / time_to_adjust_prison_capacity + Individuals_with_Criminal_History.policy_prison_capacity_steady_state_error * ((gap_in_prison_capacity / time_to_adjust_prison_capacity) + SMTH1 (prison_capacity_obsoleting, 1, 0))$

UNITS: person/year

OUTFLOWS:

$prison_capacity_obsoleting = Prison_Capacity / ave_prison_lifetime$

UNITS: person/year

ave_prison_lifetime = 60

UNITS: year

effect_of_prison_utilization_on_mental_func_change_in_prison = GRAPH(prison_capacity_utilization)

(0.900, 0.900), (1.000, 1.000), (1.100, 1.178), (1.200, 1.346), (1.300, 1.457), (1.400, 1.571), (1.500, 1.660), (1.600, 1.722), (1.700, 1.775), (1.800, 1.810), (1.900, 1.836), (2.000, 1.861), (2.100, 1.894), (2.200, 1.916), (2.300, 1.934), (2.400, 1.947), (2.500, 1.956), (2.600, 1.973), (2.700, 1.978), (2.800, 1.987), (2.900, 1.996), (3.000, 2.000)

UNITS: unitless

effect_of_prison_utilization_on_fract_of_prisoners_wID = GRAPH(prison_capacity_utilization)

(1.000, 1.000), (1.200, 1.055), (1.400, 1.192), (1.600, 1.411), (1.800, 1.721), (2.000, 2.178), (2.200, 2.461), (2.400, 2.671), (2.600, 2.826), (2.800, 2.918), (3.000, 3.000)

UNITS: unitless

gap_in_prison_capacity = Individuals_with_Criminal_History.total_prisoners - Prison_Capacity

UNITS: person

prison_capacity_utilization = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN
Individuals_with_Criminal_History.total_prisoners / Prison_Capacity ELSE Individuals_with_Criminal_History.total_prisoners /
Prison_Capacity

UNITS: unitless

ref_design_bed_capacity = GRAPH(TIME)

(1987.00, 36465.0), (1987.86206897, 44124.0), (1988.72413793, 47120.0), (1989.5862069, 51013.0), (1990.44827586, 54042.0), (1991.31034483, 57986.0), (1992.17241379, 61983.0), (1993.03448276, 66183.0), (1993.89655172, 70717.0), (1994.75862069, 73121.0), (1995.62068966, 75952.0), (1996.48275862, 79877.0), (1997.34482759, 79873.0), (1998.20689655, 80272.0), (1999.06896552, 80467.0), (1999.93103448, 79957.0), (2000.79310345, 80187.0), (2001.65517241, 80890.0), (2002.51724138, 81008.0), (2003.37931034, 87370.0), (2004.24137931, 84653.0), (2005.10344828, 84066.0), (2005.96551724, 84241.0), (2006.82758621, 84156.0), (2007.68965517, 84130.0), (2008.55172414, 84130.0), (2009.4137931, 86054.0), (2010.27586207, 87187.0), (2011.13793103, 87287.0), (2012.00, 88971.0)

UNITS: person

time_to_adjust_prison_capacity = 12

UNITS: year

{ The model has 13 (13) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 1 (1) Flows: 2 (2) Converters: 10 (10)

Constants: 2 (2) Equations: 10 (10) Graphicals: 3 (3)

There are also 409 expanded macro variables.

}

Jail Capacity

$Jail_Capacity(t) = Jail_Capacity(t - dt) + (chg_in_jail_capacity - jail_capacity_obsoleting) * dt$

INIT Jail_Capacity = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 15285.1933563 ELSE 63842

UNITS: person

INFLOWS:

$chg_in_jail_capacity = (1 - Individuals_with_Criminal_History.policy_jail_capacity_steady_state_error) * ((gap_in_jail_capacity / time_to_adjust_jail_capacity) + adding_jail_capacity_thru_preRealignment_new_jail_construction_fund) + Individuals_with_Criminal_History.policy_jail_capacity_steady_state_error * ((gap_in_jail_capacity / time_to_adjust_jail_capacity) + adding_jail_capacity_thru_preRealignment_new_jail_construction_fund) + jail_capacity_obsoleting$

UNITS: person/year

OUTFLOWS:

$jail_capacity_obsoleting = Jail_Capacity / ave_jail_lifetime$

UNITS: person/year

$Jail_Capacity_fr_Special_Fund_for_Realignment(t) = Jail_Capacity_fr_Special_Fund_for_Realignment(t - dt) + (adding_jail_capacity_thru_preRealignment_new_jail_construction_fund - jail_capacity_thru_preRealignment_fund_obsoleting) * dt$

INIT Jail_Capacity_fr_Special_Fund_for_Realignment = 0

UNITS: person

INFLOWS:

$adding_jail_capacity_thru_preRealignment_new_jail_construction_fund = gap_in_jail_capacity_thru_preRealignment_fund / time_to_adjust_jail_capacity$

UNITS: person/year

OUTFLOWS:

$jail_capacity_thru_preRealignment_fund_obsoleting = Jail_Capacity_fr_Special_Fund_for_Realignment / ave_jail_lifetime$

UNITS: person/year

$PreRealignment_New_Jail_Construction_Fund(t) = PreRealignment_New_Jail_Construction_Fund(t - dt) + (approving_preRealignment_new_jail_construction_fund) * dt$

INIT PreRealignment_New_Jail_Construction_Fund = 0

UNITS: dollar/year

INFLOWS:

$approving_preRealignment_new_jail_construction_fund = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN zero_additional_new_jail_construction_fund ELSE (1 - Individuals_with_Criminal_History.realignment_policy) * (PreRealignment_New_Jail_Construction_Fund_in_2007 + SB_1022_New_Jail_Construction_Fund_in_2012) + Individuals_with_Criminal_History.realignment_policy * (Community_Services.Realignment_resources_for_local_law_enforcement * fract_of_Realignment_resources_spent_on_jail_expansion) / time_to_appropriate_PreRealignment_new_jail_construction_fund$

UNITS: dollar/year/year

$ave_jail_lifetime = 40$

UNITS: year

$construction_cost_of_jail_bed = 160000$

UNITS: dollar/person/year

$effect_of_jail_capacity_utilization_on_law_enforcement_claim = GRAPH(jail_capacity_utilization)$

(1.0000, 1.0000), (1.0200, 0.9880), (1.0400, 0.9598), (1.0600, 0.9036), (1.0800, 0.8032), (1.1000, 0.6988), (1.1200, 0.6365), (1.1400, 0.5863), (1.1600, 0.5502), (1.1800, 0.5241), (1.2000, 0.5000)

UNITS: unitless

effect_of_jail_utilization_on_jail_time = GRAPH(jail_capacity_utilization)

(1.0000, 1.0000), (1.0200, 0.9463), (1.0400, 0.9023), (1.0600, 0.8787), (1.0800, 0.8630), (1.1000, 0.8477), (1.1200, 0.8356), (1.1400, 0.8264), (1.1600, 0.8162), (1.1800, 0.8060), (1.2000, 0.8000)

UNITS: unitless

effect_of_jail_utilization_on_mental_func = GRAPH(jail_capacity_utilization)

(1.0000, 1.0000), (1.0200, 1.0036), (1.0400, 1.0122), (1.0600, 1.0281), (1.0800, 1.0504), (1.1000, 1.0777), (1.1200, 1.1173), (1.1400, 1.1561), (1.1600, 1.1820), (1.1800, 1.1942), (1.2000, 1.2000)

UNITS: unitless

fract_of_Realignment_resources_spent_on_jail_expansion = 0.2

UNITS: unitless

gap_in_jail_capacity = Individuals_with_Criminal_History.total_jail_pop - Jail_Capacity

UNITS: person

gap_in_jail_capacity_thru_preRealignment_fund = ((PreRealignment_New_Jail_Construction_Fund / construction_cost_of_jail_bed) - Jail_Capacity_fr_Special_Fund_for_Realignment)

UNITS: person

jail_capacity_utilization = IF Individuals_with_Criminal_History.equilibrium_switch =1 THEN Individuals_with_Criminal_History.total_jail_pop/ Jail_Capacity ELSE Individuals_with_Criminal_History.total_jail_pop / Jail_Capacity

UNITS: unitless

PreRealignment_New_Jail_Construction_Fund_in_2007 = PULSE(1586000000, 2007, 200)

UNITS: dollar/year/year

SB_1022_New_Jail_Construction_Fund_in_2012 = PULSE (500000000, 2012, 200)

UNITS: dollar/year/year

time_to_adjust_jail_capacity = 6

UNITS: year

time_to_appropriate_PreRealignment_new_jail_construction_fund = 1

UNITS: year

zero_additional_new_jail_construction_fund = 0

UNITS: dollar/year/year

{ The model has 27 (27) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 3 (3) Flows: 5 (5) Converters: 19 (19)

Constants: 6 (6) Equations: 18 (18) Graphicals: 3 (3)

There are also 409 expanded macro variables.

}

Community Services Module

Community_Service_Capacity_for_Parolees_wMI(t) = Community_Service_Capacity_for_Parolees_wMI(t - dt) + (chg_in_comm_svc_capacity_wMI) * dt

INIT Community_Service_Capacity_for_Parolees_wMI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN 361.720606465 ELSE 2536.50950893

UNITS: person

DOCUMENT: It has been reported that community services capacity hasn't been adjusted rapid enough to meet the needs. So it is assumed that the initial capacity to be 25% of the actual needs.

INFLOWS:

chg_in_comm_svc_capacity_wMI = (1 - Individuals_with_Criminal_History.policy_comm_svc_fund_distribution) * (gap_in_total_comm_svc_capacity_for_parolees_wMI / (Time_to_Adjust_Comm_Svc_Capacity_for_Parolees * effect_of_lack_of_fund_on_comm_svc_capacity_adj_time)) + Individuals_with_Criminal_History.policy_comm_svc_fund_distribution * (MIN(gap_in_total_comm_svc_capacity_for_parolees_wMI / Time_to_Adjust_Comm_Svc_Capacity_for_Parolees * effect_of_lack_of_fund_on_comm_svc_capacity_adj_time , desired_adjustment_for_comm_svc_capacity_for_parolees_wMI) * effect_of_min_comm_svc_capacity_for_parolees_wMI_multiple_on_adjustment)

UNITS: person/year

Community_Service_Capacity_for_Parolees_wo_MI(t) = Community_Service_Capacity_for_Parolees_wo_MI(t - dt) + (chg_in_comm_svc_capacity_wo_MI) * dt

INIT Community_Service_Capacity_for_Parolees_wo_MI = IF Individuals_with_Criminal_History.equilibrium_switch=1 THEN 20210.4120228

UNITS: person

DOCUMENT: It has been reported that community services capacity hasn't been adjusted rapid enough to meet the needs. So it is assumed that the initial capacity to be 60% of the actual needs.

INFLOWS:

chg_in_comm_svc_capacity_wo_MI = (1 - Individuals_with_Criminal_History.policy_comm_svc_fund_distribution) * (gap_in_total_comm_svc_capacity_for_parolees_wo_MI / Time_to_Adjust_Comm_Svc_Capacity_for_Parolees) * effect_of_lack_of_fund_on_comm_svc_capacity_adj_time * effect_of_min_comm_svc_for_parolees_wo_MI_capacity_multiple_on_chg_in_comm_svc_capacity + Individuals_with_Criminal_History.policy_comm_svc_fund_distribution * (MIN(gap_in_total_comm_svc_capacity_for_parolees_wo_MI / Time_to_Adjust_Comm_Svc_Capacity_for_Parolees * effect_of_lack_of_fund_on_comm_svc_capacity_adj_time , desired_adjustment_for_comm_svc_capacity_for_parolees_wo_MI)) * effect_of_min_comm_svc_for_parolees_wo_MI_capacity_multiple_on_chg_in_comm_svc_capacity

UNITS: person/year

Correctional_Fund_to_Community_Services(t) = Correctional_Fund_to_Community_Services(t - dt) + (chg_in_county_correctional_fund) * dt

INIT Correctional_Fund_to_Community_Services = IF Individuals_with_Criminal_History.equilibrium_switch = 1 THEN 34965299.6379 ELSE total_desired_comm_svc_fund * 0.8

UNITS: dollar/year

INFLOWS:

chg_in_county_correctional_fund = IF Individuals_with_Criminal_History.equilibrium_switch = 1 AND Individuals_with_Criminal_History.policy_comm_svc_fund_distribution = 0 THEN Correctional_Fund_to_Community_Services * zero_correctional_comm_svc_fund_growth ELSE (IF Individuals_with_Criminal_History.equilibrium_switch = 0 AND Individuals_with_Criminal_History.policy_comm_svc_fund_distribution = 0 THEN MIN (Correctional_Fund_to_Community_Services * smoothed_correctional_comm_svc_fund_growth_rate, gap_in_fund_for_all_required_employed_parolees/time_to_adjust_correction_fund_for_comm_svcs) ELSE IF Individuals_with_Criminal_History.equilibrium_switch = 1 AND Individuals_with_Criminal_History.policy_comm_svc_fund_distribution = 1

THEN (MIN (total_desired_correctional_comm_svc_fund_adjustment, gap_in_fund_for_all_required_employed_parolees / time_to_adjust_correction_fund_for_comm_svcs)) ELSE IF Individuals_with_Criminal_History.equilibrium_switch = 0 AND Individuals_with_Criminal_History.policy_comm_svc_fund_distribution = 1 THEN (MIN (total_desired_correctional_comm_svc_fund_adjustment, gap_in_fund_for_all_required_employed_parolees / time_to_adjust_correction_fund_for_comm_svcs)) ELSE 0)

UNITS: dollar/year/year

DOCUMENT: IF Individuals_with_Criminal_History.equilibrium_switch = 1

THEN

Correctional_Fund_to_Community_Services * zero_correctional_comm_svc_fund_growth

ELSE

(1 - Individuals_with_Criminal_History.policy_comm_svc_fund_distribution) * (MIN (Correctional_Fund_to_Community_Services * smoothed_correctional_comm_svc_fund_growth_rate, gap_in_fund_for_all_required_employed_parolees/time_to_adjust_correction_fund_for_comm_svcs)) +

(Individuals_with_Criminal_History.policy_comm_svc_fund_distribution *

(MIN (total_desired_correctional_comm_svc_fund_adjustment, gap_in_fund_for_all_required_employed_parolees / time_to_adjust_correction_fund_for_comm_svcs)))

Time_to_Adjust_Comm_Svc_Capacity_for_Parolees(t) = Time_to_Adjust_Comm_Svc_Capacity_for_Parolees(t - dt) + (chg_in_comm_svc_for_parolee_wMI_adj_time) * dt

INIT Time_to_Adjust_Comm_Svc_Capacity_for_Parolees = init_comm_svc_for_parolees_capacity_adj_time

UNITS: year

INFLOWS:

chg_in_comm_svc_for_parolee_wMI_adj_time = (1 - Individuals_with_Criminal_History.policy_reduce_comm_svc_capacity_adj_time) * 0 + Individuals_with_Criminal_History.policy_reduce_comm_svc_capacity_adj_time * ((desired_comm_svc_for_parolees_capacity_adj_time - Time_to_Adjust_Comm_Svc_Capacity_for_Parolees) / comm_svc_capacity_adj_time_delay)

UNITS: unitless

allocated_fund_for_comm_svcs_for_parolee_wMI = IF Individuals_with_Criminal_History.policy_comm_svc_fund_distribution = 1 THEN (1 - Individuals_with_Criminal_History.realignment_policy) * (Correctional_Fund_to_Community_Services * fract_correctional_fund_to_comm_svc_for_parolees_wMI) + Individuals_with_Criminal_History.realignment_policy * ((Correctional_Fund_to_Community_Services + Realignment_resources_for_comm_svcs) * fract_comm_svc_fund_for_parolees_wMI_under_new_policy) ELSE (1 - Individuals_with_Criminal_History.realignment_policy) * (Correctional_Fund_to_Community_Services * fract_correctional_fund_to_comm_svc_for_parolees_wMI) + Individuals_with_Criminal_History.realignment_policy * ((Correctional_Fund_to_Community_Services + Realignment_resources_for_comm_svcs) * fract_correctional_fund_to_comm_svc_for_parolees_wMI)

UNITS: dollar/year

allocated_fund_for_comm_svcs_for_parolee_wo_MI = IF Individuals_with_Criminal_History.policy_comm_svc_fund_distribution = 1 THEN (1 - Individuals_with_Criminal_History.realignment_policy) * (Correctional_Fund_to_Community_Services * fract_correctional_fund_to_comm_svc_for_parolees_wo_MI) + Individuals_with_Criminal_History.realignment_policy * (Correctional_Fund_to_Community_Services + Realignment_resources_for_comm_svcs) ELSE (1 - Individuals_with_Criminal_History.realignment_policy) * (Correctional_Fund_to_Community_Services * fract_correctional_fund_to_comm_svc_for_parolees_wo_MI) + Individuals_with_Criminal_History.realignment_policy * ((Correctional_Fund_to_Community_Services + Realignment_resources_for_comm_svcs) * fract_correctional_fund_to_comm_svc_for_parolees_wo_MI)

UNITS: dollar/year

ave_comm_svc_cost_per_parolee_wo_MI = (Individuals_with_Criminal_History.total_prison_parolee_wo_MI * comm_svc_cost_per_prison_parolee_wo_MI + Individuals_with_Criminal_History.total_county_parolee_wo_MI * comm_svc_cost_per_county_parolee_wo_MI) / (Individuals_with_Criminal_History.total_county_parolee_wo_MI + Individuals_with_Criminal_History.total_prison_parolee_wo_MI)

UNITS: dollar/person/year

ave_cost_of_comm_svcs_per_parolee_wMI = (Individuals_with_Criminal_History.total_prison_parolees_wMI * comm_svc_cost_per_prison_parolee_wMI + Individuals_with_Criminal_History.total_county_parolees_wMI * comm_svc_cost_per_county_parolee_wMI) / (Individuals_with_Criminal_History.total_prison_parolees_wMI + Individuals_with_Criminal_History.total_county_parolees_wMI)

UNITS: dollar/person/year

CA_pop_annual_growth_rate = GRAPH(TIME)

(1987.00, 0.024619347), (1988.00, 0.024582286), (1989.00, 0.024389364), (1990.00, 0.026379741), (1991.00, 0.021207227), (1992.00, 0.023474177), (1993.00, 0.017360311), (1994.00, 0.010546389), (1995.00, 0.00669029), (1996.00, 0.005968813), (1997.00, 0.007918176), (1998.00, 0.015325244), (1999.00, 0.01263916), (2000.00, 0.016906965), (2001.00, 0.013557579), (2002.00, 0.018927007), (2003.00, 0.012330171), (2004.00, 0.012898113), (2005.00, 0.010281097), (2006.00, 0.00651186), (2007.00, 0.007259574), (2008.00, 0.008434036), (2009.00, 0.008308399), (2010.00, 0.005995785), (2011.00, 0.004767134), (2012.00, 0.012024092), (2013.00, 0.009571905), (2014.00, 0.009684343), (2015.00, 0.00965635), (2016.00, 0.00965635)

UNITS: 1/year

comm_svc_capacity_adj_time_delay = 10

UNITS: year

comm_svc_cost_per_county_parolee_wMI = (1-Individuals_with_Criminal_History.realignment_policy) * init_comm_svcs_cost_per_county_parolee + Individuals_with_Criminal_History.realignment_policy * (comm_svc_cost_per_prison_parolee_wMI * fract_comm_cost_per_county_parolee)

UNITS: dollar/person/year

DOCUMENT: Analysis of the 2000-01 Budget Bill-Linking Mentally Ill Offenders To Community Care.pdf

In 1994, there were 285,105 former jail inmates being supervised by county probation departments and the cost of probation in 1993-94 was \$811 million. That works out to an annual per capita cost of \$2,845. Under the 7.2 percent scenario, the cost of supervising mentally ill probationers would have been \$58.4 million. Under the 9.8 percent estimate (the CA figure), the cost would have been \$79.5 million. At 15 percent the cost would be \$122 million.

$\$58400000 / (285105 * 0.072)$ person = \$2845 per person

$\$79500000 / (285105 * 0.098)$ person = \$2845 per person

So, if a parolee wMI is supervised by the community, the cost per person will be lower than being supervised by the state authority, which costs about \$4200/person/year.

Fraction of comm service costs for parolee wMI under local supervision is $2845 / 4200 = 0.68$

comm_svc_cost_per_county_parolee_wo_MI = (1-Individuals_with_Criminal_History.realignment_policy) * init_comm_svcs_cost_per_county_parolee + Individuals_with_Criminal_History.realignment_policy * (comm_svc_cost_per_prison_parolee_wo_MI * fract_comm_cost_per_county_parolee)

UNITS: dollar/person/year

comm_svc_cost_per_prison_parolee_wMI = ref_comm_svc_cost_per_parolee_wMI * Mental_Profiles.effect_of_mental_func_per_prison_parolee_and_violator_wMI_on_comm_svc_cost * Social_Capital.effect_of_SC_of_all_parolees_wMI_on_comm_svc_cost

UNITS: dollar/person/year

DOCUMENT: calculation see "Cost of Incarceration_Care_Comm Svcs.docx"

According to the Department of Corrections, by the end of the 1995-96 fiscal year, the state parole population will reach 97,590. The cost of parole for those suffering from a mental disorder would be \$41 million.

If 20% parolees with MI, there will be 19,518 parolees

$$41,000,000 / 19,518 = 2,100$$

comm_svc_cost_per_prison_parolee_wo_MI = ref_comm_svcs_cost_per_prison_parolee_wo_MI *
Mental_Profiles.effect_of_mental_func_per_prison_parolee_and_violator_wo_MI_on_comm_cost *
Social_Capital.effect_of_SC_of_all_parolees_wo_MI_on_comm_svcs_cost

UNITS: dollar/person/year

DOCUMENT: calculation see "Cost of Incarceration_Care_Comm Svcs.docx"

According to the Department of Corrections, by the end of the 1995-96 fiscal year, the state parole population will reach 97,590. The cost of parole for those suffering from a mental disorder would be \$41 million.

comm_svc_utilization_by_parolees_wMI = desired_employed_parolees_wMI / Community_Service_Capacity_for_Parolees_wMI

UNITS: unitless

comm_svc_utilization_by_parolees_wo_MI = desired_employed_parolees_wo_MI / Community_Service_Capacity_for_Parolees_wo_MI

UNITS: unitless

correctional_comm_svc_fund_averaging_time = 10

UNITS: year

County_Realignment_Fund_stops_at_2017 = GRAPH(TIME)

(1987.00, 0), (1988.00, 0), (1989.00, 0), (1990.00, 0), (1991.00, 0), (1992.00, 0), (1993.00, 0), (1994.00, 0), (1995.00, 0), (1996.00, 0),
(1997.00, 0), (1998.00, 0), (1999.00, 0), (2000.00, 0), (2001.00, 0), (2002.00, 0), (2003.00, 0), (2004.00, 0), (2005.00, 0), (2006.00, 0),
(2007.00, 0), (2008.00, 0), (2009.00, 0), (2010.00, 0), (2011.00, 0), (2012.00, 0), (2013.00, 2e+09), (2014.00, 1.1e+09), (2015.00, 1.1e+09),
(2016.00, 1.1e+09), (2017.00, 1.1e+09), (2018.00, 0), (2019.00, 0)

UNITS: dollar/year

DOCUMENT: "Follow the Money: How California Counties Are Spending Their Public Safety Realignment Funds" (Lin & Petersilia, 2014)

"To help local governments shoulder the costs of housing and supervising this new stream of offenders, the state has allocated \$2 billion through 2013-2014 and anticipates

distributing \$4.4 billion to the counties by 2016-2017"

So I laid out the fund distribution as the following:

$$2013 - \$2,000,000,000 / 4 = \$1,100,000,000$$

$$2014 - \$4,400,000,000 / 4 = \$1,100,000,000$$

$$2015 - \$4,400,000,000 / 4 = \$1,100,000,000$$

2016 - \$4,400,000,000 / 4 = \$1,100,000,000

2017 - \$4,400,000,000 / 4 = \$1,100,000,000

desired_additional_parolees_wMI_to_be_employed = MAX (desired_employed_parolees_wMI - total_employed_parolees_wMI, 0.001)*0+ (desired_employed_parolees_wMI - total_employed_parolees_wMI)

UNITS: person

desired_additional_parolees_wo_MI_to_be_employed = desired_employed_parolees_wo_MI - total_employed_parolees_wo_MI

UNITS: person

desired_adjustment_for_comm_svc_capacity_for_parolees_wMI = desired_additional_parolees_wMI_to_be_employed / Time_to_Adjust_Comm_Svc_Capacity_for_Parolees

UNITS: person/year

desired_adjustment_for_comm_svc_capacity_for_parolees_wo_MI = desired_additional_parolees_wo_MI_to_be_employed / Time_to_Adjust_Comm_Svc_Capacity_for_Parolees

UNITS: person/year

desired_comm_svc_for_parolees_capacity_adj_time = 3

UNITS: year

desired_comm_svc_fund_adjustment_for_parolees_wMI = desired_adjustment_for_comm_svc_capacity_for_parolees_wMI * ave_cost_of_comm_svcs_per_parolee_wMI

UNITS: dollar/year/year

desired_comm_svc_fund_adjustment_for_parolees_wo_MI = desired_adjustment_for_comm_svc_capacity_for_parolees_wo_MI * ave_comm_svc_cost_per_parolee_wo_MI

UNITS: dollar/year/year

desired_employed_parolees_wMI = Individuals_with_Criminal_History.total_parolees_wMI * desired_fract_parolee_work

UNITS: person

desired_employed_parolees_wo_MI = Individuals_with_Criminal_History.total_parolees_wo_MI * desired_fract_parolee_work

UNITS: person

desired_fract_parolee_work = 0.6

UNITS: unitless

desired_fund_for_prison_parolees_wMI = ((Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition + Individuals_with_Criminal_History.Prison_Parolees_wMI + Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI + Individuals_with_Criminal_History.County_Parolees_wMI + Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition) * 0.6) * comm_svc_cost_per_prison_parolee_wMI

UNITS: dollar/year

desired_fund_for_prison_parolees_wo_MI = ((Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition + Individuals_with_Criminal_History.Prison_Parolees_wo_MI + Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI + Individuals_with_Criminal_History.County_Parolees_wo_MI + Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition) * 0.6) * comm_svc_cost_per_prison_parolee_wo_MI

UNITS: dollar/year

effect_of_comm_svc_utilization_by_parolees_wMI_on_fund_multiplier = GRAPH(comm_svc_utilization_by_parolees_wMI)

(1.000, 1.0000), (1.100, 1.0115), (1.200, 1.0306), (1.300, 1.0587), (1.400, 1.1161), (1.500, 1.1990), (1.600, 1.3099), (1.700, 1.4158), (1.800, 1.4707), (1.900, 1.4898), (2.000, 1.5000)

UNITS: unitless

effect_of_comm_svc_utilization_on_parolee_wMI_employability = GRAPH(comm_svc_utilization_by_parolees_wMI)

(1.00, 1.0000), (2.40, 0.8482), (3.80, 0.6855), (5.20, 0.5301), (6.60, 0.4185), (8.00, 0.3446), (9.40, 0.2964), (10.80, 0.2610), (12.20, 0.2386), (13.60, 0.2193), (15.00, 0.2000)

UNITS: unitless

effect_of_comm_svc_utilization_on_parolee_wMI_mental_func = GRAPH(comm_svc_utilization_by_parolees_wMI)

(1.00, 1.000), (2.40, 0.970), (3.80, 0.932), (5.20, 0.853), (6.60, 0.703), (8.00, 0.462), (9.40, 0.267), (10.80, 0.154), (12.20, 0.083), (13.60, 0.030), (15.00, 0.000)

UNITS: unitless

effect_of_comm_svcs_utilization_on_parolee_wo_MI_employability = GRAPH(SMTH3 (comm_svc_utilization_by_parolees_wo_MI, 1, comm_svc_utilization_by_parolees_wo_MI))

(1.000, 1.0000), (1.250, 0.9775), (1.500, 0.9454), (1.750, 0.8811), (2.000, 0.8137), (2.250, 0.7333), (2.500, 0.6241), (2.750, 0.5390), (3.000, 0.4546), (3.250, 0.3843), (3.500, 0.3450), (3.750, 0.3197), (4.000, 0.3000)

UNITS: unitless

effect_of_employment_on_parolee_wMI_SC_gain = GRAPH(parolee_wMI_employment_ratio)

(0.000, 0.500), (0.040, 0.508), (0.080, 0.519), (0.120, 0.529), (0.160, 0.536), (0.200, 0.552), (0.240, 0.568), (0.280, 0.597), (0.320, 0.629), (0.360, 0.655), (0.400, 0.697), (0.440, 0.736), (0.480, 0.782), (0.520, 0.837), (0.560, 0.911), (0.600, 1.000), (0.640, 1.154), (0.680, 1.257), (0.720, 1.332), (0.760, 1.383), (0.800, 1.422), (0.840, 1.451), (0.880, 1.471), (0.920, 1.481), (0.960, 1.490), (1.000, 1.500)

UNITS: unitless

effect_of_employment_on_parolee_wo_MI_SC_gain = GRAPH(parolees_wo_MI_employment_ratio)

(0.000, 0.500), (0.100, 0.509), (0.200, 0.537), (0.300, 0.605), (0.400, 0.715), (0.500, 0.843), (0.600, 1.000), (0.700, 1.238), (0.800, 1.387), (0.900, 1.468), (1.000, 1.495)

UNITS: unitless

effect_of_lack_of_fund_on_comm_svc_capacity_adj_time = GRAPH(Correctional_Fund_to_Community_Services)

(0, 0.1000), (1500, 0.1207), (3000, 0.1552), (4500, 0.2197), (6000, 0.3095), (7500, 0.4223), (9000, 0.5857), (10500, 0.7560), (12000, 0.8895), (13500, 0.9678), (15000, 1.0000)

UNITS: unitless

effect_of_min_comm_svc_capacity_for_parolees_wMI_multiple_on_adjustment = GRAPH(indicated_min_comm_svc_for_parolees_wMI_capacity_multiple)

(0.000, 0.000), (0.100, 0.020), (0.200, 0.060), (0.300, 0.149), (0.400, 0.273), (0.500, 0.434), (0.600, 0.651), (0.700, 0.815), (0.800, 0.916), (0.900, 0.976), (1.000, 1.000)

UNITS: unitless

effect_of_min_comm_svc_for_parolees_wo_MI_capacity_multiple_on_chg_in_comm_svc_capacity = GRAPH(indicated_min_comm_svc_for_parolees_wo_MI_capacity_multiple)

(0.000, 0.000), (0.100, 0.020), (0.200, 0.060), (0.300, 0.149), (0.400, 0.273), (0.500, 0.434), (0.600, 0.651), (0.700, 0.815), (0.800, 0.916), (0.900, 0.976), (1.000, 1.000)

UNITS: unitless

employed_county_parolees_wMI = Individuals_with_Criminal_History.County_Parolees_wMI * fract_parolee_wMI_employed

UNITS: person

employed_county_parolees_wMI_likely_fulfill_parole = employed_county_parolees_wMI * (1 - probability_of_employed_parolee_fail_parole)

UNITS: person

employed_county_parolees_wMI_violated_condition = Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition * fract_parolee_wMI_violated_condition_employed

UNITS: person

employed_county_parolees_wMI_violated_condition_likely_fulfill_parole = employed_county_parolees_wMI_violated_condition * (1 - probability_of_employed_parolee_fail_parole)

UNITS: person

employed_county_parolees_wo_MI = Individuals_with_Criminal_History.County_Parolees_wo_MI * fract_parolee_wo_MI_employed

UNITS: person

employed_county_parolees_wo_MI_likely_fulfill_parole = employed_county_parolees_wo_MI * (1 - probability_of_employed_parolee_fail_parole)

UNITS: person

employed_county_parolees_wo_MI_violated_condition = Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition * fract_parolee_wo_MI_violated_condition_employed

UNITS: person

employed_county_parolees_wo_MI_violated_condition_likely_fulfill_parole = employed_county_parolees_wo_MI_violated_condition * (1 - probability_of_employed_parolee_fail_parole)

UNITS: person

employed_prison_parolees_wMI = (Individuals_with_Criminal_History.Prison_Parolees_wMI + Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI) * fract_parolee_wMI_employed

UNITS: person

employed_prison_parolees_wMI_likely_fulfill_parole = employed_prison_parolees_wMI * (1 - probability_of_employed_parolee_fail_parole)

UNITS: person

employed_prison_parolees_wMI_violated_condition = Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition * fract_parolee_wMI_violated_condition_employed

UNITS: person

employed_prison_parolees_wMI_violated_condition_likely_fulfill_parole = employed_prison_parolees_wMI_violated_condition * (1 - probability_of_employed_parolee_fail_parole)

UNITS: person

employed_prison_parolees_wo_MI = (Individuals_with_Criminal_History.Prison_Parolees_wo_MI + Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI) * fract_parolee_wo_MI_employed

UNITS: person

employed_prison_parolees_wo_MI_likely_fulfill_parole = employed_prison_parolees_wo_MI * (1 - probability_of_employed_parolee_fail_parole)

UNITS: person

employed_prison_parolees_wo_MI_violated_condition = Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition * fract_parolee_wo_MI_violated_condition_employed

UNITS: person

employed_prison_parolees_wo_MI_violated_condition_likely_fulfill_parole = employed_prison_parolees_wo_MI_violated_condition * (1 - probability_of_employed_parolee_fail_parole)

UNITS: person

fract_comm_cost_per_county_parole = 4438*0+0.68

UNITS: unitless

DOCUMENT: Analysis of the 2000-01 Budget Bill-Linking Mentally Ill Offenders To Community Care.pdf

In 1994, there were 285,105 former jail inmates being supervised by county probation departments and the cost of probation in 1993-94 was \$811 million. That works out to an annual per capita cost of \$2,845. Under the 7.2 percent scenario, the cost of supervising mentally ill probationers would have been \$58.4 million. Under the 9.8 percent estimate (the CA figure), the cost would have been \$79.5 million. At 15 percent the cost would be \$122 million.

$$\$58400000 / 285105 * 0.072 \text{ person} = \$2845 \text{ per person}$$

$$\$79500000 / (285105 * 0.098) \text{ person} = \$2845 \text{ per person}$$

So, if a parolee wMI is supervised by the community, the cost per person will be lower than being supervised by the state authority, which costs about \$4200/person/year.

$$\text{Fraction of comm service costs for parolee wMI under local supervision } 2845 / 4200 = 0.68$$

fract_comm_svc_fund_for_parolees_wMI_under_new_policy = SMTH3((MAX((desired_comm_svc_fund_adjustment_for_parolees_wMI / (desired_comm_svc_fund_adjustment_for_parolees_wMI + desired_comm_svc_fund_adjustment_for_parolees_wo_MI)), 0)), 2, fract_correctional_fund_to_comm_svc_for_parolees_wMI)

UNITS: unitless

fract_correctional_fund_to_comm_svc_for_parolees_wMI = (1 - Individuals_with_Criminal_History.realignment_policy) * ((Individuals_with_Criminal_History.total_parolees_wMI / (Individuals_with_Criminal_History.total_parolees_wMI + Individuals_with_Criminal_History.total_parolees_wo_MI)) + Individuals_with_Criminal_History.realignment_policy * ((Individuals_with_Criminal_History.total_parolees_wMI / (Individuals_with_Criminal_History.total_parolees_wMI + Individuals_with_Criminal_History.total_parolees_wo_MI))) * fund_to_comm_svc_for_parolees_wMI_multiplier_after_Realignment

UNITS: unitless

fract_correctional_fund_to_comm_svc_for_parolees_wo_MI = 1 - fract_correctional_fund_to_comm_svc_for_parolees_wMI

UNITS: unitless

fract_county_parolee_wMI = 1 - fract_prison_parolee_wMI

UNITS: unitless

fract_county_parolee_wo_MI = 1 - fract_prison_parolee_wo_MI

UNITS: unitless

fract_parolee_wMI_employed = desired_fract_parolee_work * effect_of_comm_svc_utilization_on_parolee_wMI_employability

UNITS: unitless

fract_parolee_wMI_violated_condition_employed = desired_fract_parolee_work * effect_of_comm_svc_utilization_on_parolee_wMI_employability

UNITS: unitless

fract_parolee_wo_MI_employed = desired_fract_parolee_work * effect_of_comm_svcs_utilization_on_parolee_wo_MI_employability

UNITS: unitless

fract_parolee_wo_MI_violated_condition_employed = desired_fract_parolee_work * effect_of_comm_svcs_utilization_on_parolee_wo_MI_employability

UNITS: unitless

fract_prison_parolee_wMI = (Individuals_with_Criminal_History.Prison_Parolees_wMI + Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition + Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI) / (Individuals_with_Criminal_History.Prison_Parolees_wMI + Individuals_with_Criminal_History.Prison_Parolees_wMI_Violated_Condition + Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wMI + Individuals_with_Criminal_History.County_Parolees_wMI + Individuals_with_Criminal_History.County_Parolee_wMI_Violated_Condition)

UNITS: unitless

fract_prison_parolee_wo_MI =
(Individuals_with_Criminal_History.Prison_Parolees_wo_MI+Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition+Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI) /
(Individuals_with_Criminal_History.Prison_Parolees_wo_MI+Individuals_with_Criminal_History.Prison_Parolees_wo_MI_Violated_Condition+Individuals_with_Criminal_History.Reparoled_Prison_Parolees_wo_MI+Individuals_with_Criminal_History.County_Parolees_wo_MI+Individuals_with_Criminal_History.County_Parolee_wo_MI_Violated_Condition)

UNITS: unitless

fund_to_comm_svc_for_parolees_wMI_multiplier_after_Realignment =
effect_of_comm_svc_utilization_by_parolees_wMI_on_fund_multiplier

UNITS: unitless

funded_comm_services_capacity_for_county_parolees_wMI_preRealignment = 0

UNITS: person

funded_comm_services_capacity_for_county_parolees_wo_MI_preRealignment = 0

UNITS: person

funded_comm_svc_capacity_for_county_parolees_wMI = IF Individuals_with_Criminal_History.realignment_policy = 1 THEN
(allocated_fund_for_comm_svcs_for_parolee_wMI - allocated_fund_for_comm_svcs_for_parolee_wMI * fract_prison_parolee_wMI) /
comm_svc_cost_per_county_parolee_wMI ELSE funded_comm_services_capacity_for_county_parolees_wMI_preRealignment

UNITS: person

funded_comm_svc_capacity_for_county_parolees_wo_MI = IF Individuals_with_Criminal_History.realignment_policy = 1 THEN
(allocated_fund_for_comm_svcs_for_parolee_wo_MI - allocated_fund_for_comm_svcs_for_parolee_wo_MI *
fract_prison_parolee_wo_MI) / comm_svc_cost_per_county_parolee_wo_MI ELSE
funded_comm_services_capacity_for_county_parolees_wo_MI_preRealignment

UNITS: person

funded_comm_svc_capacity_for_prison_parolees_wMI = (allocated_fund_for_comm_svcs_for_parolee_wMI * fract_prison_parolee_wMI
)/ comm_svc_cost_per_prison_parolee_wMI

UNITS: person

funded_comm_svc_capacity_for_prison_parolees_wo_MI = (allocated_fund_for_comm_svcs_for_parolee_wo_MI *
fract_prison_parolee_wo_MI)/ comm_svc_cost_per_prison_parolee_wo_MI

UNITS: person

gap_in_fund_for_all_required_employed_parolees = total_required_correctional_fund - Correctional_Fund_to_Community_Services

UNITS: dollar/year

gap_in_total_comm_svc_capacity_for_parolees_wMI = IF Individuals_with_Criminal_History.policy_comm_svc_fund_distribution = 1
THEN MIN ((funded_comm_svc_capacity_for_prison_parolees_wMI + funded_comm_svc_capacity_for_county_parolees_wMI) -
Community_Service_Capacity_for_Parolees_wMI, total_employed_parolees_wMI - Community_Service_Capacity_for_Parolees_wMI)
ELSE (funded_comm_svc_capacity_for_prison_parolees_wMI + funded_comm_svc_capacity_for_county_parolees_wMI) -
Community_Service_Capacity_for_Parolees_wMI

UNITS: person

gap_in_total_comm_svc_capacity_for_parolees_wo_MI = (IF Individuals_with_Criminal_History.policy_comm_svc_fund_distribution = 1
THEN MIN ((funded_comm_svc_capacity_for_county_parolees_wo_MI + funded_comm_svc_capacity_for_prison_parolees_wo_MI) -
Community_Service_Capacity_for_Parolees_wo_MI, total_employed_parolees_wo_MI -
Community_Service_Capacity_for_Parolees_wo_MI) ELSE (funded_comm_svc_capacity_for_county_parolees_wo_MI +
funded_comm_svc_capacity_for_prison_parolees_wo_MI) - Community_Service_Capacity_for_Parolees_wo_MI) * 0 + (IF
Individuals_with_Criminal_History.policy_comm_svc_fund_distribution = 1 THEN MIN
((funded_comm_svc_capacity_for_county_parolees_wo_MI + funded_comm_svc_capacity_for_prison_parolees_wo_MI) -
Community_Service_Capacity_for_Parolees_wo_MI, total_employed_parolees_wo_MI -
Community_Service_Capacity_for_Parolees_wo_MI) ELSE funded_comm_svc_capacity_for_county_parolees_wo_MI +
funded_comm_svc_capacity_for_prison_parolees_wo_MI) - Community_Service_Capacity_for_Parolees_wo_MI

UNITS: person

$\text{indicated_min_comm_svc_for_parolees_wMI_capacity_multiple} = \text{Community_Service_Capacity_for_Parolees_wMI} / \text{min_comm_svc_capacity_for_parolees}$

UNITS: unitless

$\text{indicated_min_comm_svc_for_parolees_wo_MI_capacity_multiple} = \text{Community_Service_Capacity_for_Parolees_wo_MI} / \text{min_comm_svc_capacity_for_parolees}$

UNITS: unitless

$\text{init_comm_svc_for_parolees_capacity_adj_time} = 20$

UNITS: year

$\text{init_comm_svcs_cost_per_county_parolee} = 0.0001$

UNITS: dollar/person/year

$\text{min_comm_svc_capacity_for_parolees} = 1$

UNITS: person

$\text{parolee_wMI_employment_ratio} = \text{total_employed_parolees_wMI} / \text{Individuals_with_Criminal_History.total_parolees_wMI}$

UNITS: unitless

$\text{parolees_wo_MI_employment_ratio} = \text{total_employed_parolees_wo_MI} / \text{Individuals_with_Criminal_History.total_parolees_wo_MI}$

UNITS: unitless

$\text{probability_of_employed_parolee_fail_parole} = 0.4$

UNITS: unitless

$\text{Realignment_resources_for_comm_svcs} = \text{IF Individuals_with_Criminal_History.realignment_fund_constant_switch} = 1 \text{ THEN } 0.001 \text{ ELSE } \text{County_Realignment_Fund_stops_at_2017} * \text{relative_of_strength_of_comm_svcs_claim}$

UNITS: dollar/year

$\text{Realignment_resources_for_local_law_enforcement} = \text{IF Individuals_with_Criminal_History.realignment_fund_constant_switch} = 1 \text{ THEN } 0.001 \text{ ELSE } \text{County_Realignment_Fund_stops_at_2017} * \text{relative_of_strength_of_local_law_enforcement_claim}$

UNITS: dollar/year

DOCUMENT: Do Local Realignment Policy Affect Recidivism in CA.pdf

(Bird & Grattet, 2014)

- Programs and services expenditures varied from zero to 84 percent of total realignment funding. The median was 18 percent. Half the counties directed between 8 and 33 percent to the category.

- For law enforcement, the median expenditure was zero, meaning that at least half the counties did not allocate any money for this category. The highest law enforcement allocation was 23 percent.

- Jail bed expenditures ranged from zero to 70 percent. Half the counties directed from zero to 19 percent to expanding jail capacity.

- Expenditures in the sheriff category ranged from zero to 72 percent, with a median of 17 percent. Half the counties directed between 7 and 30 percent to the sheriff's office.

- Probation expenditures varied the most, ranging from zero to 86 percent, with a median of 27 percent. Half the probation budgets were between 20 and 38 percent.

ref_comm_svc_cost_per_parolee_wMI = 18600

UNITS: dollar/person/year

DOCUMENT: In 1994, there were 285,105 former jail inmates being supervised by county probation departments and the cost of probation in 1993-94 was \$811 million.*15* That works out to an annual per capita cost of \$2,845.

ref_comm_svcs_cost_per_prison_parolee_wo_MI = 10700

UNITS: dollar/person/year

DOCUMENT: calculation see "Cost of Incarceration_Care_Comm Svcs.docx"

According to the Department of Corrections, by the end of the 1995-96 fiscal year, the state parole population will reach 97,590. The cost of parole for those suffering from a mental disorder would be \$41 million.

relative_of_strength_of_comm_svcs_claim = weighted_strength_of_comm_svcs_claim / total_claim_strength

UNITS: unitless

relative_of_strength_of_local_law_enforcement_claim = weighted_strength_of_local_law_enforcement_claim / total_claim_strength

UNITS: unitless

smoothed_correctional_comm_svc_fund_growth_rate = SMTH3(CA_pop_annual_growth_rate ,
correctional_comm_svc_fund_averaging_time, CA_pop_annual_growth_rate)

UNITS: 1/year

strength_of_comm_svcs_claim = total_comm_svcs_utilization

UNITS: unitless

strength_of_local_law_enforcement_claim = Jail_Capacity.jail_capacity_utilization

UNITS: unitless

time_to_adjust_correction_fund_for_comm_svcs = 3

UNITS: year

total_claim_strength = weighted_strength_of_local_law_enforcement_claim + weighted_strength_of_comm_svcs_claim

UNITS: unitless

total_comm_svcs_utilization = (Individuals_with_Criminal_History.total_parolees_wo_MI +
Individuals_with_Criminal_History.total_parolees_wMI)/
(Community_Service_Capacity_for_Parolees_wo_MI+Community_Service_Capacity_for_Parolees_wMI)

UNITS: unitless

total_desired_comm_svc_fund = desired_fund_for_prison_parolees_wMI + desired_fund_for_prison_parolees_wo_MI

UNITS: dollar/year

total_desired_correctional_comm_svc_fund_adjustment =
(desired_comm_svc_fund_adjustment_for_parolees_wMI+desired_comm_svc_fund_adjustment_for_parolees_wo_MI)

UNITS: dollar/year/year

total_employed_parolees_wMI = employed_prison_parolees_wMI + employed_prison_parolees_wMI_violated_condition +
employed_county_parolees_wMI + employed_county_parolees_wMI_violated_condition

UNITS: person

total_employed_parolees_wo_MI = employed_prison_parolees_wo_MI + employed_prison_parolees_wo_MI_violated_condition +
employed_county_parolees_wo_MI + employed_county_parolees_wo_MI_violated_condition

UNITS: person

total_parolee_employment_ratio =
(employed_county_parolees_wMI+employed_county_parolees_wMI_violated_condition+employed_county_parolees_wo_MI_violated_co
ndition+employed_county_parolees_wo_MI + employed_prison_parolees_wMI_violated_condition+
employed_prison_parolees_wMI+employed_prison_parolees_wo_MI_violated_condition+employed_prison_parolees_wo_MI) /
(Individuals_with_Criminal_History.total_parolees_wMI+Individuals_with_Criminal_History.total_parolees_wo_MI)

UNITS: unitless

total_required_correctional_fund = total_employed_parolees_wMI * comm_svc_cost_per_prison_parolee_wMI+
total_employed_parolees_wo_MI * comm_svc_cost_per_prison_parolee_wo_MI

UNITS: dollar/year

weight_for_comm_svcs_claim = 1 - weight_for_local_law_enforcement_claim

UNITS: unitless

DOCUMENT: Do Local Realignment Policy Affect Recidivism in CA.pdf

(Bird & Grattet, 2014)

Enforcement-focused plans

56.1% (Budget allocation to sheriffs, jails, and law enforcement)

8.0 (Number of reentry services)

19 (Number of Counties)

Reentry-focused plans

15.3%(Budget allocation to sheriffs, jails, and law enforcement)

8.6 (Number of reentry services)

24 (Number of Counties)

Average/Total

33.4% (Budget allocation to sheriffs, jails, and law enforcement)

8.4 (Number of reentry services)

43 (Number of Counties)

19 out of 43 counties spent more on enforcement. So this leads to about 45%. The reentry-focus counties is about 55%.

weight_for_local_law_enforcement_claim = STEP(0.05, 2012) * 0

UNITS: unitless

DOCUMENT: Do Local Realignment Policy Affect Recidivism in CA.pdf

(Bird & Grattet, 2014)

Enforcement-focused plans

56.1% (Budget allocation to sheriffs, jails, and law enforcement)

8.0 (Number of reentry services)

19 (Number of Counties)

Reentry-focused plans

15.3%(Budget allocation to sheriffs, jails, and law enforcement)

8.6 (Number of reentry services)

24 (Number of Counties)

Average/Total

33.4% (Budget allocation to sheriffs, jails, and law enforcement)

8.4 (Number of reentry services)

43 (Number of Counties)

19 out of 43 counties spent more on enforcement. So this leads to about 45%. The reentry-focus counties is about 55%.

```
weighted_strength_of_comm_svcs_claim = IF TIME >= 2013 THEN weight_for_comm_svcs_claim * strength_of_comm_svcs_claim ELSE 0.55
```

UNITS: unitless

```
weighted_strength_of_local_law_enforcement_claim = IF TIME>=2013 THEN weight_for_local_law_enforcement_claim * strength_of_local_law_enforcement_claim ELSE 0.45
```

UNITS: unitless

```
zero_correctional_comm_svc_fund_growth = 0
```

UNITS: 1/year

{ The model has 138 (138) variables (array expansion in parens).

In this module and 0 additional modules with 0 sectors.

Stocks: 4 (4) Flows: 4 (4) Converters: 130 (130)

Constants: 16 (16) Equations: 118 (118) Graphicals: 15 (15)

There are also 409 expanded macro variables.

}

Glossary—United States Criminal Justice System and Court

A

Acquittal	A judgment of a court, based either on the verdict of a jury or a judicial officer, that the defendant is not guilty of the offense(s) for which he or she was tried.
Adjudication	The formal hearing and settling of a case by judicial procedure.
Adult	A person 18 years of age or older.
Arraignment	A proceeding in which a criminal defendant is brought into court, told of the charges in an indictment or information, and asked to plead guilty or not guilty.
Arrest	"...taking a person into custody, in a case and in the manner authorized by law. An arrest may be made by a peace officer or by a private person" (California Penal Code section 834).
Arrest Rate	The number of arrests per 100,000 population.
Average Daily Jail Population (ADP)	The average number of inmates housed in a local facility per day. The number includes inmates housed in single cells, double cells, dormitories (multiple occupancy cells), disabled housing, disciplinary segregation, and administrative segregation.

B

Bail	The release, prior to trial, of a person accused of a crime, under specified conditions designed to assure that person's appearance in court when required. Also can refer to the amount of bond money posted as a financial condition of pretrial release.
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C

California Department of Corrections and Rehabilitation (CDCR)	The state agency that operates all state adult prisons and juvenile facilities, oversees a variety of community correctional facilities and other important correctional facility responsibilities, and supervises all adult and juvenile parolees during their reentry into society
Caseload	The total number of clients or cases on probation or under supervision with a given agency.
Charge	A formal allegation that a specific person has committed a specific offense.
Class Action	A lawsuit in which one or more members of a large group, or class, of individuals or other entities sue on behalf of the entire class. The district court must find that the claims of the class members contain questions of law or fact in common before the lawsuit can proceed as a class action.

Classification	Process through which the educational, vocation, treatment, and security needs of an offender are determined.
Complaint	A verified written accusation, filed by a prosecuting attorney with a local criminal court, which charges one or more persons with the commission of one or more offenses.
Convict	An offender who has been sentenced or a person found guilty of a criminal offense and serving a sentence of imprisonment.
Conviction	A judgment, based either on the verdict of a jury or a judicial officer or on the guilty plea of the defendant, that the defendant is guilty.
Correctional Facility	Facility for the incarceration of individuals accused or convicted of criminal activity. A correctional facility must have a separate perimeter that precludes the regular co-mingling of the inmates from other facilities.
Corrections	Those agencies or facilities concerned with the custody, confinement, supervision, or treatment of alleged or adjudicated offenders.
Court	An agency of the judicial branch of government authorized or established by statute or constitution, having one or more judicial officers on its staff. A court has the authority to decide upon controversies in law and disputed matters of fact brought before it. Because of court consolidation there is no longer a distinction between lower court and superior court.
Crime	". . . an act committed or omitted in violation of a law forbidding or commanding it. . ." (California Penal Code section 15).
Crime Rate	A measure of how much crime is known about for any given region or population, calculated by adding up all of the criminal incidents that have been reported to the police and dividing by the population (i.e. per every 100,000 persons). Because it does not include information about any crimes that were not reported, the crime rate is only one indicator of how much crime really occurs.
Criminal Commitment	Type of commitment that results when a defendant is sentenced to an adult prison or juvenile facility overseen by the California Department of Corrections and Rehabilitation.

D

Defendant	A person against whom a criminal proceeding is pending
Deferred Parole Revocation	Action taken by a prosecutor to revoke the parole status of an offender to return the subject to state prison in lieu of filing new charges.
Desistance	The process of permanent abstention from criminal activity.
Desisting Ex-convict	An ex-convict who permanently cease criminal activity.
Dismissal	A decision by a judicial officer to terminate a case without a determination of guilt or innocence.

Disposition – Court	An action taken as the result of an appearance in court by a defendant. Examples are: adults – dismissed, acquitted, or convicted and sentenced; juveniles – dismissed, transferred, remanded to adult court, placed on probation, or sentenced to a CDCR youth facility.
Disposition – Law Enforcement	An action taken as the result of an arrest. Examples of police dispositions are: adults - released by law enforcement, referred to another jurisdiction, or a misdemeanor or felony complaint sought; juveniles - handled within the department, referred to another agency, or referred to the probation department or juvenile court.
Disposition – Prosecutor	An action taken as the result of complaints requested by the arresting agency. Dispositions include granting a misdemeanor or a felony complaint, or denying a complaint for such reasons as lack of corpus, lack of sufficient evidence, interest of justice, complainant refuses to testify, witness unavailable, inadmissible search, deferred parole revocation, prefiling deferral, and other.
Diversion	a disposition of a criminal defendant either before adjudication or following adjudication but prior to sentencing, in which the court directs the defendant to participate in a work, educational, or rehabilitation program.

E, F, G, H, I

Ex-convict	A former convict.
Felon	A person who has committed felony.
Felony	A crime which is punishable by death or imprisonment in state penal institutions.
Filing	A document filed with the court clerk by a prosecuting attorney alleging that a person committed or attempted to commit a crime.
Guilty Plea	A defendant's formal answer in open court to charges in a complaint, indictment, or information stating that the charges are true and that he or she has committed the offense(s) as charged.
Halfway House	A residential setting within the community that is staffed by professional workers who support offenders released on parole with the process of returning to the community.
Inmate	Someone confined to an institution such as hospital or prison. In this study, "inmate" refers to an individual who are incarcerated.
Inmate	A person confined to an institution such as a prison or hospital.
Institution Population	

J, L, M, O

Jail	A county or city facility for incarceration of sentenced and unsentenced persons. See Type I, II, III, and IV Facilities.
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Lawsuit	A legal action started by a plaintiff
Local Supervision	Local correctional agencies provide confinement, rehabilitation, and probation services for those sentenced to their care and also
Mental Health Treatment	Special condition the court imposes to require an individual to undergo evaluation and treatment for a mental disorder. Treatment may include psychiatric, psychological, and sex offense-specific evaluations, inpatient or outpatient counselling, and medication
Misdemeanor	Crime punishable by imprisonment in a county jail for up to one year.
Offender	An individual who have committed crime.
Offense	The charged offense is the crime for which the defendant was arrested or filed on by the district attorney. The convicted offense is the offense the defendant was convicted of or pleaded guilty to in court. The sustained offense is the offense for which the juvenile court sustains a petition.

P

Parole	A period of supervision in the community following completion of a prison sentence. The conditional release provides supervision and control over offenders after they return to society.
Parole	an added period of control following release from prison (California Penal Code section 3000(a)).
Parole Release	The release of an inmate to the jurisdiction of the Parole and Community Services Division. This includes both first paroles and reparaoles.
Parole Violation	Violation of one or more of the conditions of parole or an illegal act for which parole is revoked rather than proceeding with criminal prosecution. See Deferred Parole Revocation.
Parole Violators Returned to Custody (PV-RTC)	A parolee who has violated the terms of parole, been revoked by the Board of Prison Terms (BPT), and returned to prison for a term up to twelve months.
Parole Violators with New Term (PV-WNT)	A parolee who has violated the terms of parole by committing a new crime and has been returned to prison with a new commitment from court.
Plaintiff	A person or business that files a formal complaint with the court.
Plea	In a criminal case, the defendant's statement pleading "guilty" or "not guilty" in answer to the charges.
Population-at-risk	That portion of the total population who, because of like characteristics to the specific study group, are considered "at risk." For example, if one

were studying juvenile arrestees, all persons between 10 and 17 years of age would constitute the at-risk population.

Prison	A state correctional facility where persons are confined following conviction for a felony offense.
Prisoner	A person deprived of liberty and kept under involuntary restraint, confinement, or custody; especially: one on trial or in prison
Probation	A judicial requirement that a person fulfill certain conditions of behavior in lieu of a sentence to confinement. See Straight Probation.
Probation Officer	Officers of probation office of a court. Probation officer duties include conducting presentence investigations, preparing presentence reports on convicted defendants, and supervising released defendants.
Probation with Jail	A type of disposition given upon conviction that imposes a jail term as a condition of probation.
Prosecutor	An attorney employed by a governmental agency whose official duty is to initiate and maintain criminal proceedings on behalf of the government against persons accused of committing criminal offenses.
Punishment	Penalty imposed for wrongdoing; punishment varies by type of crime committed

R

Recidivism	Relapsing into criminal behavior after treatment and/or sentencing within the criminal justice system. Most simply, it can be thought of as “reoffending”. An offender who reoffends after being released from a correctional service is said to have “recidivate”. In this study, recidivism rate refers to the number of prisoners released in a particular time who are rearrested, reconvicted, and resentenced.
Reentry	Programs or activities aims to assist individuals who have been incarcerated to return to the society and live as law-abiding citizens.
Rehabilitation	The treatment of offenders in order to prevent future criminal activity; a planned intervention that targets some aspect about the offender that is thought to cause the offender’s criminality (e.g. attitude, cognitive processes, social relationships, and employment); the process whereby a person recognizes that his or her behavior was wrong, fully understands why it was wrong, and decides not to behave that way in the future.
Reintegrate	Returning offenders to society as law-abiding and productive citizen
Reintegration	The process whereby a person lives in the community in a law-abiding manner and maintains his or her decision not to continue with the past destructive behavior.
Revocation	Cancellation or suspension of parole or probation.

Revoke To withdraw, repeal, or cancel probation or parole for an adult.

S

Sentence The penalty imposed by a court upon a convicted person.

Sentence The punishment ordered by the court for a defendant convicted of crime.

Social Control Informal influences (e.g. disapproving frown from parent) and formal influences (e.g. laws, regulations) on person's behavior.

State Institution A facility for housing defendants who are under the jurisdiction of state correctional or treatment programs.

State Supervision The state correctional system provides confinement, rehabilitation, and parole services. The principal provider of these services for adults is the California Department of Corrections and Rehabilitation (CDCR), which includes the California Rehabilitation Center (CRC). Based on special circumstances, some adult offenders are placed in the CDCR's youth facilities and the California Department of Mental Health.

Straight Probation Probation granted to adults without condition or stipulation that the defendant serve time in jail as a condition of probation.

T, V

Type I Facility A local detention facility used for detaining persons for not more than 96 hours after booking, excluding holidays. Type I facilities may also detain persons on a court order or for their own safekeeping, or sentence persons to a city jail as inmate workers. This facility may also house inmate workers sentenced to the county jail, provided such placement in the facility is made voluntarily by the inmate. An inmate worker is a person assigned to do designated tasks outside his or her cell or dormitory, pursuant to the written policy of the facility, for a minimum of four hours each day on a five-day scheduled workweek.

Type II Facility A local detention facility for the detention of persons pending an arraignment, participating in a trial, or awaiting a sentence of commitment.

Type III Facility local detention facility used only for persons convicted and sentenced.

Type IV Facility A local detention facility or portion of it designated for the housing of inmates eligible under Penal Code section 1208 for work/education furlough and/or other programs involving inmate access into the community.

Violent Crimes Crimes committed against people. This category includes homicide, forcible rape, robbery, and aggravated assault.

Violent Offenses Felony arrest offenses for crimes against people. This category includes homicide, forcible rape, robbery, assault, and kidnapping.



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