*Additional file 1 A.1: Prevalence and health service use for musculoskeletal disorders by age in men*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | <10 |   |   |   |   | 10-19 |   |   |   |   | 20-29 |   |   |   |   | 30-39 |   |   |   |   | 40-49 |   |   |   |
|  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |
| *Survey of health and living conditions* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  2002 | - | - | - | - |  | 5.90 | 2.24 | 13 | 224 |  | 9.39 | 1.82 | 50 | 529 |  | 14.82 | 1.96 | 97 | 666 |  | 18.32 | 2.14 | 123 | 672 |
|  2005 | - | - | - | - |  | 3.59 | 1.67 | 9 | 253 |  | 6.44 | 1.54 | 33 | 518 |  | 13.25 | 1.90 | 83 | 639 |  | 20.07 | 2.32 | 124 | 613 |
|  2008 | - | - | - | - |  | 5.39 | 2.18 | 10 | 203 |  | 7.89 | 1.79 | 35 | 456 |  | 12.66 | 2.03 | 64 | 528 |  | 17.57 | 2.16 | 110 | 631 |
|  2012 | - | - | - | - |  | 1.03 | 0.78 | 2 | 181 |  | 8.72 | 1.30 | 32 | 417 |  | 12.84 | 1.58 | 52 | 429 |  | 19.16 | 1.75 | 92 | 496 |
| GP visit 2012 | 6.92 | 0.05 | 21687 | 313388 |  | 19.54 | 0.07 | 63994 | 327534 |  | 22.66 | 0.07 | 75383 | 332710 |  | 25.43 | 0.07 | 88336 | 347331 |  | 30.92 | 0.08 | 115349 | 373083 |
| Chiro/Phys 2012\* | 3.37 | 0.03 | 10575 | 313388 |  | 4.93 | 0.04 | 16161 | 327534 |  | 7.93 | 0.05 | 26377 | 332710 |  | 11.52 | 0.05 | 40023 | 347331 |  | 14.10 | 0.06 | 52616 | 373083 |
| GP/Chiro/Phys 2012\*\* | 9.75 | 0.05 | 30553 | 313388 |  | 21.95 | 0.07 | 71883 | 327534 |  | 26.53 | 0.08 | 88266 | 332710 |  | 30.99 | 0.08 | 107654 | 347331 |  | 37.01 | 0.08 | 138081 | 373083 |
| NPR 2012 | 0.82 | 0.02 | 2567 | 313388 |   | 2.03 | 0.03 | 6651 | 327534 |   | 3.00 | 0.03 | 9965 | 332710 |   | 4.09 | 0.03 | 14204 | 347331 |   | 6.15 | 0.04 | 22929 | 373083 |
|  | 50-59 |   |   |   |  | 60-69 |   |   |   |  | 70-79 |   |   |   |  | 80+ |   |   |   |  |  |  |  |  |
| Survey of health and living conditions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  2002 | 26.27 | 2.58 | 155 | 593 |  | 29.34 | 3.36 | 112 | 379 |  | 35.43 | 4.37 | 86 | 245 |  | 26.63 | 6.33 | 28 | 102 |  |  |  |  |  |
|  2005 | 27.82 | 2.60 | 163 | 599 |  | 29.75 | 3.16 | 120 | 419 |  | 33.38 | 4.30 | 82 | 246 |  | 32.88 | 6.28 | 37 | 114 |  |  |  |  |  |
|  2008 | 20.88 | 2.51 | 111 | 536 |  | 25.32 | 2.84 | 113 | 466 |  | 21.58 | 3.97 | 49 | 223 |  | 34.89 | 6.01 | 45 | 129 |  |  |  |  |  |
|  2012 | 24.52 | 1.88 | 123 | 514 |  | 27.87 | 2.07 | 124 | 459 |  | 30.97 | 3.02 | 71 | 233 |  | 28.69 | 5.10 | 22 | 78 |  |  |  |  |  |
| GP visit 2012 | 33.86 | 0.08 | 108282 | 319785 |  | 34.23 | 0.09 | 91821 | 268253 |  | 34.08 | 0.13 | 46730 | 137117 |  | 35.18 | 0.17 | 28031 | 79670 |  |  |  |  |  |
| Chiro/Phys 2012\* | 14.67 | 0.06 | 46918 | 319785 |  | 14.64 | 0.07 | 39267 | 268253 |  | 14.20 | 0.09 | 19466 | 137117 |  | 10.19 | 0.11 | 8118 | 79670 |  |  |  |  |  |
| GP/Chiro/Phys 2012\*\* | 39.41 | 0.09 | 126035 | 319785 |  | 39.24 | 0.09 | 105254 | 268253 |  | 38.58 | 0.13 | 52894 | 137117 |  | 38.01 | 0.17 | 30279 | 79670 |  |  |  |  |  |
| NPR 2012 | 7.90 | 0.05 | 25252 | 319785 |   | 9.04 | 0.06 | 24262 | 268253 |   | 9.68 | 0.08 | 13277 | 137117 |   | 7.47 | 0.09 | 5952 | 79670 |  |  |  |  |  |

\* Chiropractor or physiotherapist visit

\*\*GP visit or chiropractor or physiotherapist visit

Note: The means in in the survey of health and living conditions are weighted. The standard errors (S.E.) are based on a binomial distribution. In the survey of health and living conditions the standard errors are also corrected for clustered sampling.

*A.2: Prevalence and health service use for musculoskeletal disorders by age in women*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | <10 |   |   |   |   | 10-19 |   |   |   |   | 20-29 |   |   |   |   | 30-39 |   |   |   |   | 40-49 |   |   |   |
|  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |
| Survey of health and living conditions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  2002 | - | - | - | - |  | 5.03 | 2.09 | 9 | 201 |  | 10.53 | 1.91 | 56 | 531 |  | 14.97 | 1.95 | 98 | 673 |  | 24.57 | 2.47 | 150 | 618 |
|  2005 | - | - | - | - |  | 7.82 | 2.58 | 17 | 220 |  | 10.58 | 1.97 | 52 | 497 |  | 15.32 | 1.99 | 98 | 656 |  | 26.51 | 2.49 | 168 | 640 |
|  2008 | - | - | - | - |  | 7.64 | 2.34 | 18 | 250 |  | 8.24 | 1.86 | 36 | 442 |  | 13.29 | 1.95 | 72 | 582 |  | 23.93 | 2.46 | 133 | 592 |
|  2012 | - | - | - | - |  | 9.60 | 2.08 | 18 | 194 |  | 7.10 | 1.23 | 26 | 402 |  | 15.62 | 1.72 | 57 | 408 |  | 22.04 | 1.89 | 98 | 466 |
| GP visit 2012 | 6.49 | 0.05 | 19372 | 298448 |  | 21.94 | 0.07 | 67840 | 309195 |  | 24.45 | 0.08 | 78251 | 320077 |  | 29.93 | 0.08 | 98709 | 329843 |  | 39.21 | 0.08 | 137971 | 351924 |
| Chiro/Phys 2012\* | 2.70 | 0.03 | 8066 | 298448 |  | 6.49 | 0.04 | 20074 | 309195 |  | 10.54 | 0.05 | 33737 | 320077 |  | 16.01 | 0.06 | 52811 | 329843 |  | 19.44 | 0.07 | 68408 | 351924 |
| GP/Chiro/Phys 2012\*\* | 8.72 | 0.05 | 26014 | 298448 |  | 24.74 | 0.08 | 76508 | 309195 |  | 29.42 | 0.08 | 94153 | 320077 |  | 36.90 | 0.08 | 121718 | 329843 |  | 45.83 | 0.08 | 161297 | 351924 |
| NPR 2012 | 0.75 | 0.02 | 2222 | 298448 |   | 2.96 | 0.03 | 9157 | 309195 |   | 3.53 | 0.03 | 11290 | 320077 |   | 4.93 | 0.04 | 16273 | 329843 |   | 7.71 | 0.05 | 27119 | 351924 |
|  | 50-59 |   |   |   |  | 60-69 |   |   |   |  | 70-79 |   |   |   |  | 80+ |   |   |   |  |  |  |  |  |
| Survey of health and living conditions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  2002 | 39.58 | 2.93 | 217 | 565 |  | 45.30 | 3.66 | 169 | 378 |  | 46.12 | 4.22 | 131 | 286 |  | 52.71 | 5.56 | 88 | 165 |  |  |  |  |  |
|  2005 | 37.84 | 2.97 | 203 | 543 |  | 44.78 | 3.47 | 186 | 420 |  | 53.61 | 4.70 | 124 | 231 |  | 55.69 | 5.66 | 88 | 158 |  |  |  |  |  |
|  2008 | 32.27 | 2.81 | 176 | 559 |  | 44.42 | 3.32 | 200 | 457 |  | 45.71 | 4.54 | 113 | 247 |  | 47.59 | 5.58 | 78 | 164 |  |  |  |  |  |
|  2012 | 31.47 | 2.03 | 165 | 524 |  | 43.37 | 2.36 | 188 | 439 |  | 52.49 | 2.91 | 152 | 294 |  | 58.89 | 4.39 | 74 | 126 |  |  |  |  |  |
| GP visit 2012 | 44.85 | 0.09 | 138321 | 308391 |  | 45.35 | 0.10 | 121096 | 267000 |  | 47.39 | 0.13 | 75927 | 160208 |  | 45.68 | 0.13 | 64822 | 141913 |  |  |  |  |  |
| Chiro/Phys 2012\* | 20.74 | 0.07 | 63959 | 308391 |  | 20.91 | 0.08 | 55818 | 267000 |  | 20.89 | 0.10 | 33475 | 160208 |  | 12.57 | 0.09 | 17839 | 141913 |  |  |  |  |  |
| GP/Chiro/Phys 2012\*\* | 50.35 | 0.09 | 155286 | 308391 |  | 50.35 | 0.10 | 134425 | 267000 |  | 51.73 | 0.12 | 82881 | 160208 |  | 47.90 | 0.13 | 67979 | 141913 |  |  |  |  |  |
| NPR 2012 | 10.61 | 0.06 | 32722 | 308391 |   | 12.51 | 0.06 | 33412 | 267000 |   | 14.05 | 0.09 | 22504 | 160208 |   | 9.06 | 0.08 | 12852 | 141913 |  |  |  |  |  |

\* Chiropractor or physiotherapist visit

\*\*GP visit or chiropractor or physiotherapist visit

Note: The means in in the survey of health and living conditions are weighted. The standard errors (S.E.) are based on a binomial distribution. In the survey of health and living conditions the standard errors are also corrected for clustered sampling.

*A.3: Prevalence and health service use for lower back and neck pain by age in men*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | <10 |   |   |   |   | 10-19 |   |   |   |   | 20-29 |   |   |   |   | 30-39 |   |   |   |   | 40-49 |   |   |   |
|  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |
| Survey of health and living conditions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  2002 | - | - | - | - |  | 3.67 | 1.78 | 8 | 224 |  | 4.68 | 1.32 | 25 | 529 |  | 7.47 | 1.45 | 49 | 666 |  | 9.64 | 1.62 | 64 | 672 |
|  2005 | - | - | - | - |  | 1.28 | 0.97 | 3 | 253 |  | 2.87 | 1.06 | 15 | 518 |  | 7.29 | 1.45 | 45 | 639 |  | 9.22 | 1.65 | 55 | 613 |
|  2008 | - | - | - | - |  | 3.14 | 1.70 | 6 | 203 |  | 3.62 | 1.23 | 16 | 456 |  | 5.31 | 1.32 | 25 | 528 |  | 9.75 | 1.66 | 59 | 631 |
|  2012 | - | - | - | - |  | 0.00 | 0.00 | 0 | 181 |  | 4.67 | 0.94 | 16 | 417 |  | 7.16 | 1.23 | 30 | 429 |  | 7.58 | 1.17 | 36 | 496 |
| GP visit 2012 | 0.77 | 0.02 | 2422 | 313388 |  | 3.68 | 0.03 | 12054 | 327534 |  | 10.06 | 0.05 | 33481 | 332710 |  | 14.71 | 0.06 | 51102 | 347331 |  | 19.03 | 0.06 | 71013 | 373083 |
| Chiro/Phys 2012\* | 2.53 | 0.03 | 7925 | 313388 |  | 2.65 | 0.03 | 8668 | 327534 |  | 5.50 | 0.04 | 18298 | 332710 |  | 8.74 | 0.05 | 30341 | 347331 |  | 10.15 | 0.05 | 37858 | 373083 |
| GP/Chiro/Phys 2012\*\* | 3.21 | 0.03 | 10074 | 313388 |  | 5.81 | 0.04 | 19041 | 327534 |  | 14.11 | 0.06 | 46930 | 332710 |  | 20.97 | 0.07 | 72836 | 347331 |  | 26.17 | 0.07 | 97622 | 373083 |
| NPR 2012 | 0.03 | 0.00 | 104 | 313388 |   | 0.18 | 0.01 | 576 | 327534 |   | 0.57 | 0.01 | 1898 | 332710 |   | 1.15 | 0.02 | 3980 | 347331 |   | 1.69 | 0.02 | 6297 | 373083 |
|  | 50-59 |   |   |   |  | 60-69 |   |   |   |  | 70-79 |   |   |   |  | 80+ |   |   |   |  |  |  |  |  |
| Survey of health and living conditions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  2002 | 10.54 | 1.80 | 62 | 593 |  | 13.12 | 2.49 | 50 | 379 |  | 15.93 | 3.38 | 40 | 245 |  | 9.83 | 4.40 | 11 | 102 |  |  |  |  |  |
|  2005 | 11.97 | 1.88 | 70 | 599 |  | 10.70 | 2.12 | 43 | 419 |  | 10.64 | 2.81 | 26 | 246 |  | 6.27 | 3.22 | 7 | 114 |  |  |  |  |  |
|  2008 | 10.63 | 1.88 | 55 | 536 |  | 8.62 | 1.82 | 38 | 466 |  | 7.31 | 2.54 | 17 | 223 |  | 8.16 | 3.52 | 11 | 129 |  |  |  |  |  |
|  2012 | 9.39 | 1.23 | 44 | 514 |  | 10.09 | 1.37 | 44 | 459 |  | 10.59 | 1.99 | 24 | 233 |  | 12.08 | 3.62 | 9 | 78 |  |  |  |  |  |
| GP visit 2012 | 20.82 | 0.07 | 66591 | 319785 |  | 18.32 | 0.08 | 49145 | 268253 |  | 15.42 | 0.10 | 21136 | 137117 |  | 14.96 | 0.13 | 11917 | 79670 |  |  |  |  |  |
| Chiro/Phys 2012\* | 9.54 | 0.05 | 30496 | 319785 |  | 8.36 | 0.05 | 22416 | 268253 |  | 7.11 | 0.07 | 9752 | 137117 |  | 4.17 | 0.07 | 3320 | 79670 |  |  |  |  |  |
| GP/Chiro/Phys 2012\*\* | 27.33 | 0.08 | 87399 | 319785 |  | 24.07 | 0.08 | 64576 | 268253 |  | 20.34 | 0.11 | 27887 | 137117 |  | 17.55 | 0.13 | 13980 | 79670 |  |  |  |  |  |
| NPR 2012 | 1.91 | 0.02 | 6111 | 319785 |   | 1.74 | 0.03 | 4654 | 268253 |   | 1.64 | 0.03 | 2253 | 137117 |   | 1.26 | 0.04 | 1001 | 79670 |  |  |  |  |  |

\* Chiropractor or physiotherapist visit

\*\*GP visit or chiropractor or physiotherapist visit

Note: The means in in the survey of health and living conditions are weighted. The standard errors (S.E.) are based on a binomial distribution. In the survey of health and living conditions the standard errors are also corrected for clustered sampling.

*A.4: Prevalence and health service use for lower back and neck pain by age in women*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | <10 |   |   |   |   | 10-19 |   |   |   |   | 20-29 |   |   |   |   | 30-39 |   |   |   |   | 40-49 |   |   |   |
|  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |  | *Mean (%)* | *S.E.*  | *Freq.* | *N* |
| Survey of health and living conditions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  2002 | - | - | - | - |  | 1.41 | 1.00 | 2 | 201 |  | 2.39 | 0.92 | 12 | 531 |  | 5.36 | 1.23 | 35 | 673 |  | 6.10 | 1.37 | 37 | 618 |
|  2005 | - | - | - | - |  | 3.42 | 1.69 | 7 | 220 |  | 5.32 | 1.43 | 26 | 497 |  | 5.55 | 1.27 | 36 | 656 |  | 9.24 | 1.64 | 59 | 640 |
|  2008 | - | - | - | - |  | 2.77 | 1.49 | 7 | 250 |  | 3.60 | 1.27 | 16 | 442 |  | 5.28 | 1.27 | 28 | 582 |  | 10.43 | 1.76 | 59 | 592 |
|  2012 | - | - | - | - |  | 2.86 | 1.14 | 5 | 194 |  | 2.54 | 0.78 | 10 | 402 |  | 7.28 | 1.21 | 26 | 408 |  | 8.74 | 1.30 | 40 | 466 |
| GP visit 2012 | 0.76 | 0.02 | 2271 | 298448 |  | 5.23 | 0.04 | 16161 | 309195 |  | 12.92 | 0.06 | 41365 | 320077 |  | 18.92 | 0.07 | 62415 | 329843 |  | 24.80 | 0.07 | 87281 | 351924 |
| Chiro/Phys 2012\* | 1.97 | 0.03 | 5874 | 298448 |  | 3.54 | 0.03 | 10947 | 309195 |  | 7.95 | 0.05 | 25431 | 320077 |  | 12.25 | 0.06 | 40417 | 329843 |  | 13.08 | 0.06 | 46036 | 351924 |
| GP/Chiro/Phys 2012\*\* | 2.65 | 0.03 | 7905 | 298448 |  | 7.86 | 0.05 | 24313 | 309195 |  | 18.56 | 0.07 | 59404 | 320077 |  | 27.31 | 0.08 | 90090 | 329843 |  | 33.35 | 0.08 | 117375 | 351924 |
| NPR 2012 | 0.03 | 0.00 | 82 | 298448 |   | 0.25 | 0.01 | 777 | 309195 |   | 0.76 | 0.02 | 2422 | 320077 |   | 1.37 | 0.02 | 4529 | 329843 |   | 1.91 | 0.02 | 6724 | 351924 |
|  | 50-59 |   |   |   |  | 60-69 |   |   |   |  | 70-79 |   |   |   |  | 80+ |   |   |   |  |  |  |  |  |
| Survey of health and living conditions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  2002 | 8.15 | 1.63 | 45 | 565 |  | 10.05 | 2.19 | 37 | 378 |  | 9.06 | 2.39 | 25 | 286 |  | 14.42 | 3.79 | 22 | 165 |  |  |  |  |  |
|  2005 | 7.13 | 1.59 | 39 | 543 |  | 7.15 | 1.80 | 30 | 420 |  | 6.28 | 2.25 | 14 | 231 |  | 10.41 | 3.44 | 16 | 158 |  |  |  |  |  |
|  2008 | 9.94 | 1.77 | 53 | 559 |  | 7.56 | 1.73 | 33 | 457 |  | 4.95 | 1.96 | 12 | 247 |  | 9.72 | 3.32 | 16 | 164 |  |  |  |  |  |
|  2012 | 10.28 | 1.34 | 55 | 524 |  | 9.51 | 1.37 | 40 | 439 |  | 10.47 | 1.77 | 30 | 294 |  | 12.70 | 2.80 | 14 | 126 |  |  |  |  |  |
| GP visit 2012 | 25.96 | 0.08 | 80069 | 308391 |  | 20.79 | 0.08 | 55515 | 267000 |  | 19.68 | 0.10 | 31522 | 160208 |  | 18.53 | 0.10 | 26291 | 141913 |  |  |  |  |  |
| Chiro/Phys 2012\* | 11.75 | 0.06 | 36251 | 308391 |  | 9.60 | 0.06 | 25623 | 267000 |  | 7.54 | 0.07 | 12077 | 160208 |  | 3.48 | 0.05 | 4934 | 141913 |  |  |  |  |  |
| GP/Chiro/Phys 2012\*\* | 33.37 | 0.08 | 102920 | 308391 |  | 26.96 | 0.09 | 71982 | 267000 |  | 24.35 | 0.11 | 39013 | 160208 |  | 20.37 | 0.11 | 28907 | 141913 |  |  |  |  |  |
| NPR 2012 | 1.88 | 0.02 | 5800 | 308391 |   | 1.71 | 0.03 | 4575 | 267000 |   | 1.93 | 0.03 | 3089 | 160208 |   | 1.30 | 0.03 | 1845 | 141913 |  |  |  |  |  |

\* Chiropractor or physiotherapist visit

\*\*GP visit or chiropractor or physiotherapist visit

Note: The means in in the survey of health and living conditions are weighted. The standard errors (S.E.) are based on a binomial distribution. In the survey of health and living conditions the standard errors are also corrected for clustered sampling.