**Supplementary material**

Table 1. Crude and age-adjusted Hospital Admissions Rate (HAR) of hip fractures per 100.000 AR-patients (of both sexes) by age range and year.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **RA-population** | | | | | **N Hospital Admissions** | | | | | **Crude HAR /100.000 RA-patients-year** | | | | | **Age-adjusted HAR /100.000 RA-patients-year** | | |
| **Year** | **20-40 years** | **40-60 years** | **60-80 years** | **>80 years** | **Total** | **20-40 years** | **40-60 years** | **60-80 years** | **>80 years** | **Total** | **20-40 years** | **40-60 years** | **60-80 years** | **>80 years** | **Total** | **Adjusted Rate** | **IC95%** | **IC95%** |
| 1.999 | 66,351 | 48,716 | 35,633 | 7,242 | 154,688 | 1 | 7 | 121 | 66 | 195 | 1.51 | 14.37 | 339.57 | 911.35 | 126.06 | 150.11 | 129.24 | 173.64 |
| 2.000 | 66,628 | 49,916 | 35,819 | 7,445 | 156,458 | 0 | 19 | 149 | 88 | 256 | 0.00 | 38.06 | 415.98 | 1,182.00 | 163.62 | 195.87 | 172.09 | 222.26 |
| 2.001 | 66,744 | 51,016 | 36,087 | 7,776 | 158,163 | 0 | 9 | 141 | 95 | 245 | 0.00 | 17.64 | 390.72 | 1,221.72 | 154.90 | 185.38 | 162.42 | 210.85 |
| 2.002 | 67,979 | 52,659 | 36,222 | 8,121 | 164,981 | 2 | 16 | 190 | 107 | 315 | 2.94 | 30.38 | 524.54 | 1,317.56 | 190.93 | 228.49 | 203.52 | 255.84 |
| 2.003 | 69,149 | 54,258 | 36,575 | 8,528 | 168,509 | 2 | 17 | 181 | 124 | 324 | 2.89 | 31.33 | 494.87 | 1,454.07 | 192.27 | 232.22 | 207.30 | 259.46 |
| 2.004 | 69,791 | 55,815 | 37,061 | 8,892 | 171,559 | 4 | 17 | 158 | 110 | 289 | 5.73 | 30.46 | 426.32 | 1,237.06 | 168.45 | 201.25 | 178.47 | 226.28 |
| 2.005 | 70,821 | 57,505 | 37,586 | 9,237 | 175,149 | 4 | 16 | 194 | 164 | 378 | 5.65 | 27.82 | 516.15 | 1,775.48 | 215.82 | 260.36 | 234.49 | 288.41 |
| 2.006 | 71,153 | 59,087 | 38,111 | 9,707 | 178,059 | 4 | 20 | 179 | 169 | 372 | 5.62 | 33.85 | 469.68 | 1,740.99 | 208.92 | 249.56 | 224.63 | 276.57 |
| 2.007 | 71,981 | 60,917 | 38,600 | 10,137 | 181,634 | 2 | 23 | 206 | 180 | 411 | 2.78 | 37.76 | 533.69 | 1,775.71 | 226.28 | 267.17 | 241.83 | 294.54 |
| 2.008 | 72,274 | 62,520 | 39,180 | 10,581 | 184,555 | 1 | 23 | 195 | 186 | 405 | 1.38 | 36.79 | 497.70 | 1,757.89 | 219.45 | 256.90 | 232.36 | 283.36 |
| 2.009 | 71,439 | 63,785 | 39,729 | 11,042 | 185,995 | 3 | 16 | 205 | 207 | 431 | 4.20 | 25.08 | 516.00 | 1,874.58 | 231.73 | 266.15 | 241.52 | 292.65 |
| 2.010 | 70,009 | 65,076 | 40,117 | 11,560 | 186,762 | 2 | 20 | 192 | 226 | 440 | 2.86 | 30.73 | 478.60 | 1,955.08 | 235.59 | 265.35 | 241.07 | 291.44 |
| 2.011 | 68,459 | 66,429 | 40,453 | 12,075 | 187,416 | 3 | 23 | 187 | 241 | 454 | 4.38 | 34.62 | 462.27 | 1,995.79 | 242.24 | 266.62 | 242.61 | 292.39 |
| 2.012 | 66,619 | 67,566 | 40,831 | 12,492 | 187,508 | 1 | 23 | 197 | 253 | 474 | 1.50 | 34.04 | 482.48 | 2,025.31 | 252.79 | 272.23 | 248.28 | 297.93 |
| 2.013 | 64,247 | 68,398 | 41,209 | 13,000 | 186,853 | 1 | 21 | 205 | 304 | 531 | 1.56 | 30.70 | 497.47 | 2,338.50 | 284.18 | 297.53 | 272.74 | 323.99 |
| 2.014 | 61,936 | 69,312 | 41,609 | 13,442 | 186,298 | 1 | 26 | 236 | 310 | 573 | 1.61 | 37.51 | 567.19 | 2,306.27 | 307.57 | 313.51 | 288.36 | 340.27 |
| 2.015 | 59,888 | 70,338 | 42,084 | 13,758 | 186,069 | 1 | 19 | 213 | 331 | 564 | 1.67 | 27.01 | 506.13 | 2,405.92 | 303.11 | 303.12 | 278.61 | 329.18 |
| **1999-2015** | **1,155,468** | **1,023,310** | **656,907** | **175,034** | **3,000,654** | **32** | **315** | **3,149** | **3,161** | **6,657** | **2.77** | **30.78** | **479.37** | **1.805.93** | **221.85** |  |  |  |

Table 2. Crude and age-adjusted Hospital Admissions Rate (HAR) of hip fractures per 100.000 AR-patients (in men) by age range and year.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **RA-population** | | | | | **N Hospital Admissions** | | | | | **Crude HAR /100.000 RA-patients-year** | | | | | **Age-adjusted HAR /100.000 RA-patients-year** | | |
| **Year** | **20-40 years** | **40-60 years** | **60-80 years** | **>80 years** | **Total** | **20-40 years** | **40-60 years** | **60-80 years** | **>80 years** | **Total** | **20-40 years** | **40-60 years** | **60-80 years** | **>80 years** | **Total** | **Adjusted Rate** | **IC95%** | **IC95%** |
| 1.999 | 13,469 | 9,651 | 6,456 | 962 | 30,141 | 1 | 0 | 15 | 8 | 24 | 7.42 | 0.00 | 232.34 | 831.99 | 79.63 | 99.83 | 62.69 | 152.90 |
| 2.000 | 13,534 | 9,892 | 6,497 | 990 | 30,507 | 0 | 7 | 20 | 12 | 39 | 0.00 | 70.77 | 307.82 | 1,212.03 | 127.84 | 162.74 | 114.47 | 226.23 |
| 2.001 | 13,568 | 10,110 | 6,558 | 1,043 | 30,860 | 0 | 3 | 25 | 9 | 37 | 0.00 | 29.67 | 381.21 | 863.02 | 119.90 | 143.16 | 99.83 | 200.75 |
| 2.002 | 13,866 | 10,444 | 6,591 | 1,100 | 32,002 | 1 | 3 | 29 | 11 | 44 | 7.21 | 28.72 | 439.96 | 1,000.23 | 137.49 | 165.72 | 119.50 | 225.47 |
| 2.003 | 14,143 | 10,775 | 6,669 | 1,165 | 32,751 | 0 | 8 | 27 | 13 | 48 | 0.00 | 74.25 | 404.85 | 1,116.34 | 146.56 | 179.93 | 131.97 | 240.86 |
| 2.004 | 14,306 | 11,102 | 6,773 | 1,224 | 33,405 | 1 | 4 | 21 | 13 | 39 | 6.99 | 36.03 | 310.07 | 1,062.34 | 116.75 | 143.64 | 101.54 | 198.39 |
| 2.005 | 14,586 | 11,463 | 6,884 | 1,278 | 34,211 | 3 | 6 | 26 | 30 | 65 | 20.57 | 52.34 | 377.68 | 2,346.92 | 190.00 | 241.27 | 185.42 | 309.39 |
| 2.006 | 14,659 | 11,797 | 6,999 | 1,352 | 34,808 | 1 | 1 | 25 | 32 | 59 | 6.82 | 8.48 | 357.19 | 2,366.52 | 169.50 | 216.14 | 164.05 | 280.07 |
| 2.007 | 14,851 | 12,185 | 7,106 | 1,421 | 35,562 | 1 | 6 | 34 | 25 | 66 | 6.73 | 49.24 | 478.50 | 1,759.93 | 185.59 | 224.55 | 173.25 | 286.86 |
| 2.008 | 14,925 | 12,531 | 7,232 | 1,492 | 36,180 | 0 | 6 | 31 | 31 | 68 | 0.00 | 47.88 | 428.68 | 2,078.22 | 187.95 | 228.74 | 177.34 | 290.83 |
| 2.009 | 14,715 | 12,798 | 7,351 | 1,566 | 36,431 | 2 | 2 | 35 | 32 | 71 | 13.59 | 15.63 | 476.10 | 2,042.96 | 194.89 | 229.03 | 178.63 | 289.64 |
| 2.010 | 14,374 | 13,067 | 7,443 | 1,650 | 36,534 | 0 | 6 | 26 | 45 | 77 | 0.00 | 45.92 | 349.34 | 2,727.24 | 210.76 | 246.97 | 194.78 | 309.04 |
| 2.011 | 14,011 | 13,347 | 7,524 | 1,734 | 36,616 | 0 | 5 | 31 | 32 | 68 | 0.00 | 37.46 | 412.03 | 1,845.60 | 185.71 | 208.00 | 161.45 | 264.01 |
| 2.012 | 13,580 | 13,573 | 7,610 | 1,806 | 36,569 | 1 | 5 | 25 | 36 | 67 | 7.36 | 36.84 | 328.53 | 1,993.40 | 183.22 | 200.29 | 155.17 | 254.57 |
| 2.013 | 13,045 | 13,734 | 7,697 | 1,892 | 36,367 | 0 | 4 | 37 | 47 | 88 | 0.00 | 29.12 | 480.71 | 2,484.60 | 241.98 | 255.53 | 204.91 | 314.90 |
| 2.014 | 12,541 | 13,914 | 7,785 | 1,967 | 36,207 | 0 | 6 | 37 | 48 | 91 | 0.00 | 43.12 | 475.30 | 2,440.41 | 251.33 | 257.35 | 207.20 | 315.99 |
| 2.015 | 12,101 | 14,120 | 7,882 | 2,024 | 36,127 | 1 | 3 | 36 | 57 | 97 | 8.26 | 21.25 | 456.71 | 2,816.02 | 268.49 | 268.50 | 217.73 | 327.54 |
| **1999-2015** | **236,273** | **204,505** | **121,056** | **24,664** | **585,276** | **12** | **75** | **480** | **481** | **1,048** | **5.08** | **36.67** | **396.51** | **1.950.21** | **179.06** |  |  |  |

Table 3. Crude and age-adjusted Hospital Admissions Rate (HAR) of hip fractures per 100.000 AR-patients (in women) by age range and year.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **RA-population** | | | | | **N Hospital Admissions** | | | | | **Crude HAR /100,000 RA-patients-year** | | | | | **Age-adjusted HAR /100,000 RA-patients-year** | | |
| **Year** | **20-40 years** | **40-60 years** | **60-80 years** | **>80 years** | **Total** | **20-40 years** | **40-60 years** | **60-80 years** | **>80 years** | **Total** | **20-40 years** | **40-60 years** | **60-80 years** | **>80 years** | **Total** | **Adjusted Rate** | **IC95%** | **IC95%** |
| 1.999 | 52,287 | 39,340 | 31,189 | 7,741 | 126,938 | 0 | 7 | 106 | 58 | 171 | 0.00 | 17.79 | 339.86 | 749.26 | 134.71 | 154.01 | 131.29 | 179.82 |
| 2.000 | 52,469 | 40,299 | 31,321 | 7,952 | 128,307 | 0 | 12 | 129 | 76 | 217 | 0.00 | 29.78 | 411.86 | 955.76 | 169.13 | 193.98 | 168.51 | 222.46 |
| 2.001 | 52,519 | 41,184 | 31,508 | 8,270 | 129,619 | 0 | 6 | 116 | 86 | 208 | 0.00 | 14.57 | 368.16 | 1.039.89 | 160.47 | 185.83 | 161.01 | 213.62 |
| 2.002 | 53,301 | 42,477 | 31,590 | 8,595 | 135,963 | 1 | 13 | 161 | 96 | 271 | 1.88 | 30.60 | 509.66 | 1.116.96 | 199.32 | 232.36 | 205.13 | 262.42 |
| 2.003 | 54,067 | 43,713 | 31,844 | 8,986 | 138,609 | 2 | 9 | 154 | 111 | 276 | 3.70 | 20.59 | 483.61 | 1.235.20 | 199.12 | 233.91 | 206.79 | 263.74 |
| 2.004 | 54,441 | 44,896 | 32,207 | 9,332 | 140,877 | 3 | 13 | 136 | 97 | 249 | 5.51 | 28.96 | 422.26 | 1.039.38 | 176.75 | 205.40 | 180.43 | 233.04 |
| 2.005 | 54,971 | 46,157 | 32,601 | 9,666 | 143,395 | 1 | 10 | 168 | 134 | 313 | 1.82 | 21.67 | 515.32 | 1.386.30 | 218.28 | 254.85 | 227.17 | 285.10 |
| 2.006 | 55,209 | 47,351 | 32,981 | 10,123 | 145,664 | 3 | 19 | 154 | 137 | 313 | 5.43 | 40.13 | 466.93 | 1.353.41 | 214.88 | 248.43 | 221.51 | 277.85 |
| 2.007 | 55,765 | 48,725 | 33,337 | 10,537 | 148,365 | 1 | 17 | 172 | 155 | 345 | 1.79 | 34.89 | 515.94 | 1.471.03 | 232.54 | 267.53 | 239.90 | 297.58 |
| 2.008 | 55,937 | 49,907 | 33,763 | 10,963 | 150,569 | 1 | 17 | 164 | 155 | 337 | 1.79 | 34.06 | 485.74 | 1.413.88 | 223.82 | 254.98 | 228.38 | 283.89 |
| 2.009 | 55,440 | 50,865 | 34,160 | 11,403 | 151,868 | 1 | 14 | 170 | 175 | 360 | 1.80 | 27.52 | 497.65 | 1.534.74 | 237.05 | 266.35 | 239.45 | 295.48 |
| 2.010 | 54,518 | 51,854 | 34,417 | 11,895 | 152,684 | 2 | 14 | 166 | 181 | 363 | 3.67 | 27.00 | 482.32 | 1.521.61 | 237.75 | 261.95 | 235.63 | 290.44 |
| 2.011 | 53,490 | 52,897 | 34,629 | 12,385 | 153,402 | 3 | 18 | 156 | 209 | 386 | 5.61 | 34.03 | 450.48 | 1.687.49 | 251.63 | 272.75 | 246.20 | 301.44 |
| 2.012 | 52,272 | 53,812 | 34,891 | 12,763 | 153,738 | 0 | 18 | 172 | 217 | 407 | 0.00 | 33.45 | 492.97 | 1.700.20 | 264.74 | 281.89 | 255.16 | 310.70 |
| 2.013 | 50,617 | 54,500 | 35,146 | 13,233 | 153,496 | 1 | 17 | 168 | 257 | 443 | 1.98 | 31.19 | 478.00 | 1.942.11 | 288.61 | 300.14 | 272.82 | 329.46 |
| 2.014 | 48,933 | 55,241 | 35,436 | 13,639 | 153,249 | 1 | 20 | 199 | 262 | 482 | 2.04 | 36.20 | 561.58 | 1.920.96 | 314.52 | 319.61 | 291.73 | 349.47 |
| 2.015 | 47,419 | 56,060 | 35,805 | 13,916 | 153,201 | 0 | 16 | 177 | 274 | 467 | 0.00 | 28.54 | 494.34 | 1.968.98 | 304.83 | 304.83 | 277.81 | 333.77 |
| **1999-2015** | **903,655** | **819,277** | **566,826** | **181,399** | **2,459,943** | **20** | **240** | **2,668** | **2,680** | **5,608** | **2.21** | **29.29** | **470.69** | **1.477.41** | **227.97** |  |  |  |

**Table 4. Age and Average Length Hospital Stay (ALHS) by time periods.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Period** | **N** | **Mean** | **SD** | **IC95%** | **p** |
| **Age** | 1999-2002 | 1011 | 75.3 | 9,304 | 74.73-75.88 | p<0.001 |
|  | 2003-2006 | 1362 | 76.33 | 10,278 | 75.79-76.88 | p<0.001 |
|  | 2007-2010 | 1687 | 77.5 | 9,821 | 77.03-77.97 | p<0.001 |
|  | 2011-2015 | 2596 | 79.08 | 9,605 | 78.71-79.45 | p<0.001 |
|  | **Total** | 6656 | 77.54 | 9,855 | 77.3-77.78 | p<0.001 |
| **ALHS** | 1999-2002 | 1011 | 16.87 | 14,44 | 15.98-17.77 | p<0.001 |
|  | 2003-2006 | 1362 | 15.96 | 13,394 | 15.25-16.67 | p<0.001 |
|  | 2007-2010 | 1687 | 14.49 | 13,619 | 13.84-15.14 | p<0.001 |
|  | 2011-2015 | 2596 | 11.42 | 10,725 | 11.01-11.83 | p<0.001 |
|  | **Total** | 6656 | 13.96 | 12,84 | 13.65-14.26 | p<0.001 |

**Table 5. In-hospital case fatality rate (%) by sex and year.**

|  |  |  |
| --- | --- | --- |
| **Year** | **Men** | **Women** |
| **1999** | 4.20% | 6.40% |
| **2000** | 7.70% | 3.20% |
| **2001** | 2.70% | 7.20% |
| **2002** | 9.10% | 5.90% |
| **2003** | 4.20% | 5.80% |
| **2004** | 5.10% | 6.00% |
| **2005** | 15.40% | 4.20% |
| **2006** | 10.20% | 4.20% |
| **2007** | 3.00% | 2.90% |
| **2008** | 2.90% | 5.90% |
| **2009** | 8.50% | 3.90% |
| **2010** | 3.90% | 3.60% |
| **2011** | 8.80% | 4.10% |
| **2012** | 7.50% | 4.20% |
| **2013** | 6.80% | 4.10% |
| **2014** | 13.20% | 3.10% |
| **2014** | 8.20% | 3.90% |
| **2015** | 7.50% | 4.40% |

**Supplementary material**

**Fig 1****.** **Hospital Admission Rate of hip fractures (per 100,000 RA-patients-year) by sex.**

**Supplementary material Fig 2. In-hospital Case Fatality Rate (CFR) by sex.**