##### AGE BREAK

Table 1: Patient characteristics in Sweden 2008-2015 and Denmark 2016 to September 2018. Educational levels were classified as low (up to 9 years), middle (10-12 years) and high (more than 12 years). Data on hospital levels were not available for the Danish cohort. Some additional cells have been intentionally left blank due to small numbers and privacy concerns for the Danish cohort. BMI = Body mass index. ASA class = American Society for Anaesthesiologists classification. CNS = central nervous system.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | level | SE PJI | SE No PJI | SE Total | DK PJI | DK No PJI | DK Total |
| Total |  | 2173 | 86657 | 88830 | 410 | 18444 | 18854 |
| Age | <50 | 104 ( 4.8) | 4541 ( 5.2) | 4645 ( 5.2) | 9 (2.2) | 871 (4.7) | 880 (4.7) |
|  | 50-<60 | 231 ( 10.6) | 11581 ( 13.4) | 11812 ( 13.3) | 45 (11.0) | 2415 (13.1) | 2460 (13.0) |
|  | 60-<70 | 609 ( 28.0) | 28372 ( 32.7) | 28981 ( 32.6) | 112 (27.3) | 5114 (27.7) | 5226 (27.7) |
|  | 70-<80 | 776 ( 35.7) | 29610 ( 34.2) | 30386 ( 34.2) | 164 (40.0) | 7037 (38.2) | 7201 (38.2) |
|  | 80+ | 453 ( 20.8) | 12553 ( 14.5) | 13006 ( 14.6) | 80 (19.5) | 3007 (16.3) | 3087 (16.4) |
| Sex | female | 1062 ( 48.9) | 49089 ( 56.6) | 50151 ( 56.5) | 209 (51.0) | 10706 (58.0) | 10915 (57.9) |
|  | male | 1111 ( 51.1) | 37568 ( 43.4) | 38679 ( 43.5) | 201 (49.0) | 7738 (42.0) | 7939 (42.1) |
| BMI | under/normal  weight | 487 ( 22.4) | 28944 ( 33.4) | 29431 ( 33.1) | 101 (24.6) | 6746 (36.6) | 6847 (36.3) |
|  | overweight | 863 ( 39.7) | 37280 ( 43.0) | 38143 ( 42.9) | 152 (37.1) | 7264 (39.4) | 7416 (39.3) |
|  | class I obesity | 531 ( 24.4) | 15693 ( 18.1) | 16224 ( 18.3) | 86 (21.0) | 3261 (17.7) | 3347 (17.8) |
|  | class II-III obesity | 292 ( 13.4) | 4740 ( 5.5) | 5032 ( 5.7) | 71 (17.3) | 1173 (6.4) | 1244 (6.6) |
| ASA class | I | 302 ( 13.9) | 20785 ( 24.0) | 21087 ( 23.7) | 44 (10.7) | 3898 (21.1) | 3942 (20.9) |
|  | II | 1228 ( 56.5) | 51570 ( 59.5) | 52798 ( 59.4) | 253 (61.7) | 11325 (61.4) | 11578 (61.4) |
|  | III | 643 ( 29.6) | 14302 ( 16.5) | 14945 ( 16.8) | 113 (27.6) | 3221 (17.5) | 3334 (17.7) |
| Diagnosis | primary osteoarthritis | 1766 ( 81.3) | 76812 ( 88.6) | 78578 ( 88.5) | 329 (80.2) | 15597 (84.6) | 15926 (84.5) |
|  | secondary osteoarthritis | 232 ( 10.7) | 5039 ( 5.8) | 5271 ( 5.9) | 57 (13.9) | 1781 (9.7) | 1838 (9.7) |
|  | sequelae after childhood hip disease | 41 ( 1.9) | 1821 ( 2.1) | 1862 ( 2.1) |  |  | 626 (3.3) |
|  | avascular necrosis of the femoral head (avn) | 77 ( 3.5) | 1818 ( 2.1) | 1895 ( 2.1) | 15 (3.7) | 303 (1.6) | 318 (1.7) |
|  | inflammatory joint disease | 57 ( 2.6) | 1167 ( 1.3) | 1224 ( 1.4) |  |  | 146 (0.8) |
| Cemented stem |  | 1600 ( 73.6) | 59777 ( 69.0) | 61377 ( 69.1) | 106 (25.9) | 4933 (26.7) | 5039 (26.7) |
| Cemented cup |  | 1739 ( 80.0) | 68147 ( 78.6) | 69886 ( 78.7) | 45 (11.0) | 1456 (7.9) | 1501 (8.0) |
| Hospital | university | 776 ( 35.7) | 33162 ( 38.3) | 33938 ( 38.2) |  |  |  |
|  | county | 851 ( 39.2) | 28369 ( 32.7) | 29220 ( 32.9) |  |  |  |
|  | rural | 319 ( 14.7) | 17406 ( 20.1) | 17725 ( 20.0) |  |  |  |
|  | private | 227 ( 10.4) | 7720 ( 8.9) | 7947 ( 8.9) |  |  |  |
| Education | low | 453 ( 20.8) | 22207 ( 25.6) | 22660 ( 25.5) | 164 (40.0) | 5994 (32.5) | 6158 (32.7) |
|  | middle | 814 ( 37.5) | 28509 ( 32.9) | 29323 ( 33.0) | 163 (39.8) | 8409 (45.6) | 8572 (45.5) |
|  | high | 906 ( 41.7) | 35941 ( 41.5) | 36847 ( 41.5) | 83 (20.2) | 4041 (21.9) | 4124 (21.9) |
| Civil status | married | 1134 ( 52.2) | 47999 ( 55.4) | 49133 ( 55.3) | 204 (49.8) | 10724 (58.1) | 10928 (58.0) |
|  | single | 647 ( 29.8) | 25283 ( 29.2) | 25930 ( 29.2) | 123 (30.0) | 4393 (23.8) | 4516 (23.9) |
|  | widow/widower | 392 ( 18.0) | 13375 ( 15.4) | 13767 ( 15.5) | 83 (20.2) | 3327 (18.0) | 3410 (18.1) |
| Charlson | 0 | 1413 ( 65.0) | 66024 ( 76.2) | 67437 ( 75.9) | 328 (80.0) | 15804 (85.7) | 16132 (85.6) |
|  | 1 | 423 ( 19.5) | 12281 ( 14.2) | 12704 ( 14.3) | 63 (15.4) | 2180 (11.8) | 2243 (11.9) |
|  | 2+ | 337 ( 15.5) | 8352 ( 9.6) | 8689 ( 9.8) | 19 (4.6) | 460 (2.5) | 479 (2.5) |
| Elixhauser | 0 | 946 ( 43.5) | 49267 ( 56.9) | 50213 ( 56.5) | 280 (68.3) | 14473 (78.5) | 14753 (78.2) |
|  | 1 | 539 ( 24.8) | 20809 ( 24.0) | 21348 ( 24.0) | 77 (18.8) | 2639 (14.3) | 2716 (14.4) |
|  | 2 | 372 ( 17.1) | 10362 ( 12.0) | 10734 ( 12.1) | 35 (8.5) | 865 (4.7) | 900 (4.8) |
|  | 3+ | 316 ( 14.5) | 6219 ( 7.2) | 6535 ( 7.4) | 18 (4.4) | 467 (2.5) | 485 (2.6) |
| RxRiskV | -5-0 | 448 ( 20.6) | 25508 ( 29.4) | 25956 ( 29.2) | 123 (30.0) | 8106 (43.9) | 8229 (43.6) |
|  | 1-3 | 711 ( 32.7) | 30846 ( 35.6) | 31557 ( 35.5) | 153 (37.3) | 6277 (34.0) | 6430 (34.1) |
|  | 4-6 | 547 ( 25.2) | 19304 ( 22.3) | 19851 ( 22.3) | 86 (21.0) | 2684 (14.6) | 2770 (14.7) |
|  | 7+ | 467 ( 21.5) | 10999 ( 12.7) | 11466 ( 12.9) | 48 (11.7) | 1377 (7.5) | 1425 (7.6) |
| AIDS/HIV |  | 1 ( 0.0) | 15 ( 0.0) | 16 ( 0.0) | 0 (0.0) | 8 (0.0) | 8 (0.0) |
| Anemia |  | 20 ( 0.9) | 599 ( 0.7) | 619 ( 0.7) | 0 (0.0) | 49 (0.3) | 49 (0.3) |
| Arrhythmia |  | 271 ( 12.5) | 6097 ( 7.0) | 6368 ( 7.2) | 28 (6.8) | 815 (4.4) | 843 (4.5) |
| Arterial hypertension |  | 753 ( 34.7) | 23305 ( 26.9) | 24058 ( 27.1) | 45 (11.0) | 1395 (7.6) | 1440 (7.6) |
| Cancer |  | 142 ( 6.5) | 3855 ( 4.4) | 3997 ( 4.5) | 20 (4.9) | 802 (4.3) | 822 (4.4) |
| CNS disease |  | 166 ( 7.6) | 2976 ( 3.4) | 3142 ( 3.5) | 17 (4.1) | 293 (1.6) | 310 (1.6) |
| Coagulopathy |  | 9 ( 0.4) | 320 ( 0.4) | 329 ( 0.4) | 0 (0.0) | 17 (0.1) | 17 (0.1) |
| Diabetes |  | 212 ( 9.8) | 5761 ( 6.6) | 5973 ( 6.7) | 17 (4.1) | 476 (2.6) | 493 (2.6) |
| Drug alcohol abuse |  | 30 ( 1.4) | 652 ( 0.8) | 682 ( 0.8) | 6 (1.5) | 99 (0.5) | 105 (0.6) |
| Fluid electrolyte disorders |  | 29 ( 1.3) | 505 ( 0.6) | 534 ( 0.6) | 8 (2.0) | 187 (1.0) | 195 (1.0) |
| Heart condition |  | 149 ( 6.9) | 3544 ( 4.1) | 3693 ( 4.2) | 13 (3.2) | 408 (2.2) | 421 (2.2) |
| Myocardial infarction |  | 105 ( 4.8) | 2982 ( 3.4) | 3087 ( 3.5) | 0 (0.0) | 73 (0.4) | 73 (0.4) |
| Hypothyroidism |  | 82 ( 3.8) | 2501 ( 2.9) | 2583 ( 2.9) |  |  |  |
| Kidney disease |  | 36 ( 1.7) | 847 ( 1.0) | 883 ( 1.0) |  |  |  |
| Liver disease |  | 33 ( 1.5) | 491 ( 0.6) | 524 ( 0.6) |  |  |  |
| Lung airways disease |  | 172 ( 7.9) | 4145 ( 4.8) | 4317 ( 4.9) | 20 (4.9) | 517 (2.8) | 537 (2.8) |
| Peptic ulcer |  | 21 ( 1.0) | 515 ( 0.6) | 536 ( 0.6) |  |  |  |
| Rheumatic disease |  | 144 ( 6.6) | 3782 ( 4.4) | 3926 ( 4.4) | 12 (2.9) | 372 (2.0) | 384 (2.0) |
| Vascular disease |  | 89 ( 4.1) | 2434 ( 2.8) | 2523 ( 2.8) | 21 (5.1) | 485 (2.6) | 506 (2.7) |
| Weight loss |  | 5 ( 0.2) | 64 ( 0.1) | 69 ( 0.1) | 0 (0.0) | 29 (0.2) | 29 (0.2) |

Table 2: Estimated coefficients (beta) and odds ratios (OR) with 95 % confidence intervals for the reduced models. BMI = body mass index (under/normal weight as baseline). CNS = central nervous system. ASA = American Society for Anesthesiologists

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| variable | level | beta | OR 95 % CI | p |
| (Intercept) |  | -6.31 |  |  |
| Age |  | 0.02 | 1.02 (1.02-1.03) | <0.001 |
| Arrhythmia |  | 0.27 | 1.30 (1.13-1.49) | <0.001 |
| ASA class | I | 0.00 | (ref) |  |
|  | II | 0.18 | 1.20 (1.05-1.37) | 0.009 |
|  | III | 0.44 | 1.56 (1.33-1.83) | <0.001 |
| BMI | under/normal weight | 0.00 | (ref) |  |
|  | overweight | 0.39 | 1.47 (1.32-1.65) | <0.001 |
|  | class I obesity | 0.81 | 2.24 (1.97-2.55) | <0.001 |
|  | class II-III obesity | 1.40 | 4.05 (3.46-4.75) | <0.001 |
| CNS disease |  | 0.69 | 2.00 (1.68-2.35) | <0.001 |
| Diagnosis | Primary osteoarthritis | 0.00 | (ref) |  |
|  | Sequelae after childhood hip disease | 0.39 | 1.48 (1.06-2.01) | 0.016 |
|  | Avascular necrosis of the femoral head (AVN) | 0.58 | 1.79 (1.40-2.26) | <0.001 |
|  | Secondary osteoarthritis | 0.74 | 2.09 (1.80-2.41) | <0.001 |
|  | Inflammatory joint disease | 0.94 | 2.55 (1.91-3.33) | <0.001 |
| Fluid electrolyte disorders |  | 0.42 | 1.52 (1.01-2.20) | 0.034 |
| Liver disease |  | 0.75 | 2.11 (1.44-3.00) | <0.001 |
| Lung airways disease |  | 0.27 | 1.31 (1.11-1.54) | 0.001 |
| Sex | Female | 0.00 | (ref) |  |
|  | Male | 0.37 | 1.45 (1.33-1.59) | <0.001 |

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