**Supplementary table 1. Clinical Classifications Software (CCS) diagnosis codes associated with DM after the 1:1 propensity score matching, National Inpatient Sample, years 2010-2014.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CCS Diagnosis Code** | **Conditions** | **Whether DM was recorded as a discharge diagnosis** | |  |
| **Yes (n = 1,891)** | **No (n = 1,891)** | **RR (95% CI)** |
| 55 | Fluid and electrolyte disorders | 579 (30.6%) | 430 (22.7%) | **1.35 (1.21, 1.50)\*** |
| 53 | Disorders of lipid metabolism | 554 (29.3%) | 514 (27.2%) | 1.08 (0.98, 1.20) |
| 106 | Cardiac dysrhythmias | 540 (28.6%) | 240 (12.7%) | **2.25 (1.96, 2.58)\*** |
| 155 | Other gastrointestinal disorders | 497 (26.3%) | 248 (13.1%) | **2.00 (1.74, 2.30)\*** |
| 663 | Screening and history of mental health and substance abuse codes | 468 (24.8%) | 680 (36.0%) | **0.69 (0.62, 0.76)\*** |
| 257 | Other aftercare | 460 (24.3%) | 363 (19.2%) | **1.27 (1.12, 1.43)\*** |
| 138 | Esophageal disorders | 450 (23.8%) | 384 (20.3%) | **1.17 (1.04, 1.32)\*** |
| 98 | Essential hypertension | 445 (23.5%) | 736 (38.9%) | **0.60 (0.54, 0.66)\*** |
| 58 | Other nutritional; endocrine; and metabolic disorders | 437 (23.1%) | 435 (23.0%) | 1.00 (0.89, 1.12) |
| 105 | Conduction disorders | 432 (22.9%) | 99 (5.2%) | **4.36 (3.54, 5.37)\*** |
| 131 | Respiratory failure; insufficiency; arrest (adult) | 403 (21.3%) | 117 (6.2%) | **3.44 (2.83, 4.18)\*** |
| 657 | Mood disorders | 367 (19.4%) | 456 (24.1%) | **0.80 (0.71, 0.90)\*** |
| 49 | Diabetes mellitus without complication | 358 (18.9%) | 346 (18.3%) | 1.03 (0.90, 1.18) |
| 101 | Coronary atherosclerosis and other heart disease | 299 (15.8%) | 344 (18.2%) | **0.87 (0.76, 1.00)\*** |
| 59 | Deficiency and other anemia | 293 (15.5%) | 323 (17.1%) | 0.91 (0.79, 1.05) |
| 48 | Thyroid disorders | 276 (14.6%) | 227 (12.0%) | **1.22 (1.04, 1.44)\*** |
| 122 | Pneumonia (except that caused by tuberculosis or sexually transmitted disease) | 269 (14.2%) | 127 (6.7%) | **2.12 (1.73, 2.59)\*** |
| 244 | Other injuries and conditions due to external causes | 260 (13.8%) | 132 (7.0%) | **1.97 (1.61, 2.41)\*** |
| 117 | Other circulatory disease | 250 (13.2%) | 174 (9.2%) | **1.44 (1.20, 1.73)\*** |
| 127 | Chronic obstructive pulmonary disease and bronchiectasis | 250 (13.2%) | 247 (13.1%) | 1.01 (0.86, 1.19) |
| 108 | Congestive heart failure; nonhypertensive | 243 (12.9%) | 165 (8.7%) | **1.47 (1.22, 1.77)\*** |
| 97 | Peri-; endo-; and myocarditis; cardiomyopathy (except that caused by tuberculosis or sexually transmitted disease) | 236 (12.5%) | 50 (2.6%) | **4.72 (3.50, 6.36)\*** |
| 128 | Asthma | 229 (12.1%) | 213 (11.3%) | 1.08 (0.91, 1.29) |
| 133 | Other lower respiratory disease | 206 (10.9%) | 90 (4.8%) | **2.29 (1.80, 2.91)\*** |
| 118 | Phlebitis; thrombophlebitis and thromboembolism | 185 (9.8%) | 109 (5.8%) | **1.70 (1.35, 2.14)\*** |
| 159 | Urinary tract infections | 180 (9.5%) | 164 (8.7%) | 1.10 (0.90, 1.35) |
| 52 | Nutritional deficiencies | 169 (8.9%) | 87 (4.6%) | **1.94 (1.51, 2.49)\*** |
| 253 | Allergic reactions | 167 (8.8%) | 168 (8.9%) | 0.99 (0.81, 1.21) |
| 651 | Anxiety disorders | 162 (8.6%) | 247 (13.1%) | **0.66 (0.55, 0.80)\*** |
| 129 | Aspiration pneumonitis; food/vomitus | 160 (8.5%) | 18 (1.0%) | **8.89 (5.48,14.41)\*** |
| 151 | Other liver diseases | 156 (8.3%) | 113 (6.0%) | **1.38 (1.09, 1.74)\*** |
| 130 | Pleurisy; pneumothorax; pulmonary collapse | 154 (8.1%) | 50 (2.6%) | **3.08 (2.25, 4.21)\*** |
| 211 | Other connective tissue disease | 147 (7.8%) | 198 (10.5%) | **0.74 (0.60, 0.91)\*** |
| 145 | Intestinal obstruction without hernia | 124 (6.6%) | 58 (3.1%) | **2.14 (1.58, 2.90)\*** |
| 50 | Diabetes mellitus with complications | 121 (6.4%) | 163 (8.6%) | **0.74 (0.59, 0.93)\*** |
| 102 | Nonspecific chest pain | 118 (6.2%) | 87 (4.6%) | **1.36 (1.04, 1.78)\*** |
| 205 | Spondylosis; intervertebral disc disorders; other back Bacterial infection | 118 (6.2%) | 228 (12.1%) | **0.52 (0.42, 0.64)\*** |
| 3 | Bacterial infection; unspecified site | 115 (6.1%) | 109 (5.8%) | 1.06 (0.82, 1.37) |
| 163 | Genitourinary symptoms and ill-defined conditions | 115 (6.1%) | 101 (5.3%) | 1.14 (0.88, 1.48) |
| 238 | Complications of surgical procedures or medical care | 114 (6.0%) | 107 (5.7%) | 1.07 (0.83, 1.38) |
| 96 | Heart valve disorders | 111 (5.9%) | 81 (4.3%) | **1.37 (1.04, 1.81)\*** |
| 10 | Immunizations and screening for infectious disease | 109 (5.8%) | 61 (3.2%) | **1.79 (1.32, 2.43)\*** |
| 134 | Other upper respiratory disease | 108 (5.7%) | 47 (2.5%) | **2.30 (1.64, 3.22)\*** |
| 62 | Coagulation and hemorrhagic disorders | 105 (5.6%) | 98 (5.2%) | 1.07 (0.82, 1.40) |

\*Significant differences between hospitalizations among adult patients with DM and hospitalizations among adult patients without DM

**Supplementary table 2. Clinical Classifications Software (CCS) diagnosis codes associated with hospitalizations among adult patients with or without DM after the 1:1 propensity score matching, Female vs. Male, National Inpatient Sample, years 2010-2014.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CCS Diagnosis Code** | **Conditions** | **Hospitalizations among patients with DM** | | | **Hospitalizations among patients without DM** | | |
| **Female (n=1033)** | **Male (n=858)** | **RR (95% CI)** | **Female (n=1034)** | **Male (n=857)** | **RR (95% CI)** |
| 55 | Fluid and electrolyte disorders | 309 (29.9%) | 270 (31.5%) | 0.95 (0.83, 1.09) | 238 (23.0%) | 192 (22.4%) | 1.03 (0.87, 1.22) |
| 53 | Disorders of lipid metabolism | 287 (27.8%) | 267 (31.1%) | 0.89 (0.77, 1.02) | 267 (25.8%) | 247 (28.8%) | 0.90 (0.78, 1.04) |
| 106 | Cardiac dysrhythmias | 294 (28.5%) | 246 (28.7%) | 0.99 (0.86, 1.14) | 111 (10.7%) | 129 (15.1%) | **0.71 (0.56, 0.90)\*** |
| 155 | Other gastrointestinal disorders | 255 (24.7%) | 242 (28.2%) | 0.88 (0.76, 1.02) | 151 (14.6%) | 97 (11.3%) | **1.29 (1.02, 1.64)\*** |
| 663 | Screening and history of mental health and substance abuse codes | 219 (21.2%) | 249 (29.0%) | **0.73 (0.62, 0.85)\*** | 316 (30.6%) | 364 (42.5%) | **0.72 (0.64, 0.81)\*** |
| 257 | Other aftercare | 247 (23.9%) | 213 (24.8%) | 0.96 (0.82, 1.13) | 184 (17.8%) | 179 (20.9%) | 0.85 (0.71, 1.02) |
| 138 | Esophageal disorders | 255 (24.7%) | 195 (22.7%) | 1.09 (0.93, 1.28) | 215 (20.8%) | 169 (19.7%) | 1.05 (0.88, 1.26) |
| 98 | Essential hypertension | 227 (22.0%) | 218 (25.4%) | 0.86 (0.73, 1.01) | 404 (39.1%) | 332 (38.7%) | 1.10 (0.90, 1.13) |
| 58 | Other nutritional; endocrine; and metabolic disorders | 271 (26.2%) | 166 (19.4%) | **1.36 (1.15, 1.61)\*** | 265 (25.6%) | 170 (19.8%) | **1.29 (1.09, 1.53)\*** |
| 105 | Conduction disorders | 213 (20.6%) | 219 (25.5%) | **0.81 (0.69, 0.96)\*** | 36 (3.5%) | 63 (7.4%) | **0.47 (0.32, 0.70)\*** |
| 131 | Respiratory failure; insufficiency; arrest (adult) | 220 (21.3%) | 183 (21.3%) | 1.00 (0.84, 1.19) | 65 (6.3%) | 52 (6.1%) | 1.04 (0.73, 1.48) |
| 657 | Mood disorders | 240 (23.2%) | 127 (14.8%) | **1.57 (1.29, 1.91)\*** | 298 (28.8%) | 158 (18.4%) | **1.56 (1.32, 1.85)\*** |
| 49 | Diabetes mellitus without complication | 201 (19.5%) | 157 (18.3%) | 1.06 (0.88, 1.28) | 202 (19.5%) | 144 (16.8%) | 1.16 (0.96, 1.41) |
| 101 | Coronary atherosclerosis and other heart disease | 147 (14.2%) | 152 (17.7%) | **0.80 (0.65, 0.98)\*** | 151 (14.6%) | 193 (22.5%) | **0.65 (0.54, 0.79)\*** |
| 59 | Deficiency and other anemia | 177 (17.1%) | 116 (13.5%) | **1.27 (1.02, 1.58)\*** | 206 (19.9%) | 117 (13.7%) | **1.46 (1.19, 1.80)\*** |
| 48 | Thyroid disorders | 189 (18.3%) | 87 (10.1%) | **1.80 (1.42, 2.28)\*** | 170 (16.4%) | 57 (6.7%) | **2.47 (1.86, 3.29)\*** |
| 122 | Pneumonia (except that caused by tuberculosis or sexually transmitted disease) | 134 (13.0%) | 135 (15.7%) | 0.82 (0.66, 1.02) | 68 (6.6%) | 59 (6.9%) | 0.96 (0.69, 1.34) |
| 244 | Other injuries and conditions due to external causes | 139 (13.5%) | 121 (14.1%) | 0.95 (0.76, 1.19) | 67 (6.5%) | 65 (7.6%) | 0.85 (0.61, 1.18) |
| 117 | Other circulatory disease | 136 (13.2%) | 114 (13.3%) | 0.99 (0.79, 1.25) | 98 (9.5%) | 76 (8.9%) | 1.07 (0.80, 1.42) |
| 127 | Chronic obstructive pulmonary disease and bronchiectasis | 132 (12.8%) | 118 (13.8%) | 0.93 (0.74, 1.17) | 127 (12.3%) | 120 (14.0%) | 0.88 (0.70, 1.11) |
| 108 | Congestive heart failure; nonhypertensive | 125 (12.1%) | 118 (13.8%) | 0.88 (0.70, 1.11) | 84 (8.1%) | 81 (9.5%) | 0.86 (0.64, 1.15) |
| 97 | Peri-; endo-; and myocarditis; cardiomyopathy (except that caused by tuberculosis or sexually transmitted disease) | 114 (11.0%) | 122 (14.2%) | **0.78 (0.61, 0.99)\*** | 20 (1.9%) | 30 (3.5%) | **0.55 (0.31, 0.96)\*** |
| 128 | Asthma | 148 (14.3%) | 81 (9.4%) | **1.52 (1.18, 1.96)\*** | 138 (13.3%) | 75 (8.8%) | **1.53 (1.17, 2.00)\*** |
| 133 | Other lower respiratory disease | 106 (10.3%) | 100 (11.7%) | 0.88 (0.70, 1.11) | 47 (4.5%) | 43 (5.0%) | 0.91 (0.62, 1.36) |
| 118 | Phlebitis; thrombophlebitis and thromboembolism | 112 (10.8%) | 73 (8.5%) | 1.27 (0.96, 1.68) | 62 (5.9%) | 48 (5.6%) | 1.05 (0.73, 1.52) |
| 159 | Urinary tract infections | 126 (12.2%) | 54 (6.3%) | **1.94 (1.43, 2.63)\*** | 116 (11.2%) | 48 (5.6%) | **2.00 (1.45, 2.77)\*** |
| 52 | Nutritional deficiencies | 84 (8.1%) | 85 (9.9%) | 0.82 (0.62, 1.09) | 53 (5.1%) | 34 (4.0%) | 1.29 (0.85, 1.97) |
| 253 | Allergic reactions | 111 (10.8%) | 56 (6.5%) | **1.65 (1.21, 2.25)\*** | 116 (11.2%) | 52 (6.1%) | **1.85 (1.35, 2.53)\*** |
| 651 | Anxiety disorders | 111 (10.8%) | 51 (5.9%) | **1.81 (1.32, 2.49)\*** | 162 (15.7%) | 85 (9.9%) | **1.58 (1.23, 2.02)\*** |
| 129 | Aspiration pneumonitis; food/vomitus | 70 (6.8%) | 90 (10.5%) | **0.65 (0.48, 0.88)\*** | \_\_\_\_\_\*\*\* | 14 (1.6%) | **0.24 (0.08, 0.73)\*** |
| 151 | Other liver diseases | 89 (8.6%) | 67 (7.8%) | 1.10 (0.81, 1.49) | 55 (5.3%) | 58 (6.8%) | 0.79 (0.55, 1.13) |
| 130 | Pleurisy; pneumothorax; pulmonary collapse | 92 (8.9%) | 62 (7.2%) | 1.23 (0.90, 1.68) | 23 (2.2%) | 27 (3.2%) | 0.71 (0.41, 1.23) |
| 211 | Other connective tissue disease | 76 (7.4%) | 71 (8.3%) | 0.89 (0.65, 1.21) | 119 (11.5%) | 79 (9.2%) | 1.25 (0.95, 1.64) |
| 145 | Intestinal obstruction without hernia | 47 (4.6%) | 77 (9.0%) | **0.51 (0.36, 0.72)\*** | 32 (3.1%) | 26 (3.0%) | 1.02 (0.61, 1.70) |
| 50 | Diabetes mellitus with complications | 70 (6.8%) | 51 (5.9%) | 1.14 (0.80, 1.62) | 78 (7.5%) | 85 (9.9%) | 0.76 (0.57, 1.02) |
| 102 | Nonspecific chest pain | 76 (7.4%) | 42 (4.9%) | **1.50 (1.04, 2.16)\*** | 47 (4.5%) | 40 (4.7%) | 0.97 (0.46, 1.46) |
| 205 | Spondylosis; intervertebral disc disorders; other back Bacterial infection | 71 (6.9%) | 47 (5.5%) | 1.25 (0.87, 1.79) | 127 (12.3%) | 101 (11.8%) | 1.04 (0.81, 1.33) |
| 3 | Bacterial infection; unspecified site | 76 (7.4%) | 39 (4.6%) | **1.62 (1.11, 2.36)\*** | 58 (5.6%) | 51 (6.0%) | 0.94 (0.65, 1.35) |
| 163 | Genitourinary symptoms and ill-defined conditions | 63 (6.1%) | 52 (6.1%) | 1.01 (0.71, 1.44) | 59 (5.7%) | 42 (4.9%) | 1.16 (0.79, 1.71) |
| 238 | Complications of surgical procedures or medical care | 74 (7.2%) | 40 (4.7%) | **1.54 (1.06, 2.24)\*** | 55 (5.3%) | 52 (6.1%) | 0.88 (0.61, 1.27) |
| 96 | Heart valve disorders | 63 (6.1%) | 48 (5.6%) | 1.09 (0.76, 1.57) | 43 (4.2%) | 38 (4.4%) | 0.94 (0.61, 1.44) |
| 10 | Immunizations and screening for infectious disease | 58 (5.6%) | 51 (5.9%) | 0.94 (0.65, 1.35) | 26 (2.5%) | 35 (4.1%) | 0.62 (0.38, 1.02) |
| 134 | Other upper respiratory disease | 48 (4.7%) | 60 (7.0%) | **0.66 (0.46, 0.95)\*** | 23 (2.2%) | 24 (2.8%) | 0.79 (0.45, 1.39) |
| 62 | Coagulation and hemorrhagic disorders | 42 (4.1%) | 63 (7.3%) | **0.55 (0.38, 0.80)\*** | 43 (4.2%) | 55 (6.4%) | **0.65 (0.44, 0.96)\*** |

\*Significant differences between hospitalizations among male and female adult patients

\*\*Conditions for which females had significantly higher risk than males had a relative risk value and confidence interval greater than 1

\*\*\*Cells containing less than 10 individuals were masked to protect patient’s confidentiality