**Table 1. Medication Coding.**

|  |  |
| --- | --- |
| **MEDICATION** | **ATC CODE** |
| **NSAIDs** |  |
|  *Cyclo-Oxygenase-2 (COX-2) Inhibitor* |
|  Celecoxib | M01AH01 |
|  *Non-Selective COX Inhibitor* |  |
|  Aceclofenac | M01AB16 |
|  Naproxen | M01AE02 |
|  Meloxicam | M01AC06 |
|  Indomethacin | M01AB01 |
|  Diclofenac | M01AB05 |
|  Morniflumate | M01AX22 |
|  Nabumetone | M01AX01 |
|  Etodolac | M01AB08 |
|  Piroxicam | M01AC01 |
| **csDMARDs** |  |
|  Auranofin | M01CB03 |
|  Aurothioglucose | M01CB04 |
|  Azathioprine | L04AX01 |
|  Cyclosporin | L04AD01 |
|  Gold Sodium | M01CB01/M01CB02 |
|  Hydroxychloroquine | P01BA02 |
|  Leflunomide | L04AA13 |
|  Methotrexate | L04AX03/ L01BA01 |
|  Sulfasalazine | A07EC01 |
| **BIOLOGICS** |  |
|  Etanercept | L04AB01 |
|  Adalimumab | L04AB04 |
|  Golimumab | L04AB06 |
|  Infliximab\* | L04AB02 |
|  Secukinumab\* | L04AC10 |
|  Certolizumab\* | L04AB05 |
| **OTHER MEDICATIONS** |  |
|  Corticosteroids | H02 |
|  Opioids | N02A |
|  Antidepressants | N06A |
|  Anxiolytic | N05B |
|  Topical Analgesic | M02A |
|  Sleeping Aid | N05C |
|  Muscle Relaxants | M03 |
|  Pregabalin | N03AX16 |
| \*Reimbursed after study index period. Available during follow-up |

**Table 2. Diagnostic Codes.**

|  |  |
| --- | --- |
| **COMORBIDITY** | **ICD-9-CM(S)** |
| CHARLSON COMORBIDITY INDEX |  |
|  Myocardial infarction | 410-410.9, 412 |
|  Congestive heart failure | 428-428.9 |
|  Peripheral vascular | 443.9, 441, 441.9, 785.4, V43.4, Procedure 38.48 |
|  Cerebro-vascular disease | 430-437, 438 |
|  Dementia | 290-290.9 |
|  Chronic pulmonary disease | 490-496, 500-505, 506.4 |
|  Rheumatologic disease | 710, 710.1, 710.4, 714-714.2, 714.81, 725 |
|  Peptic ulcer disease | 531-534.9, 531.4-531.7, 532.4-532.7, 533.4-533.7, 534.4-534.7 |
|  Mild liver disease | 571.2, 571.5, 571.6, 571.4-571.49 |
|  Diabetes | 250-250.3, 250.7 |
|  Diabetes with chronic complication | 250.4-250.6 |
|  Hemi-plegia or paraplegia | 344.1, 342-342.9 |
|  Renal disease | 582-582.9, 583-583.7, 585, 586, 588-588.9 |
|  Malignancy, including leukemia and lymphoma | 140-172.9, 200-208.9, 174-195.8 |
|  Moderate or severe liver disease | 572.2-572.8, 456.0-456.21 |
|  Metastases solid tumor | 196-199.1 |
|  AIDS | 042-044.9 |
| WALSH ET AL. 2018 |  |
|  Cardiovascular |  |
|  Angina | 413.xx |
|  Atherosclerosis | 414.0x, 437.0x, 440.xx |
|  Cerebrovascular disease/Stroke | 430.xx, 431.xx, 432.xx, 433.x1, 434.x1, 997.02, 435.xx, 434.x0, 435.xx, 436.xx, 437.xx, 438.xx |
|  Coronary Artery Disease | 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.2x, 414.3x, 414.4x |
|  Hypertension | 401.xx, 402.xx, 403.xx, 404.xx, 405.xx |
|  Myocardial Infarction | 410.xx, 411.0x, 412.xx |
|  Peripheral Vascular Disease (PVD) | 441.xx, 443.9x, 785.4x, V43.4x, 38.48 |
|  Venous Thromboembolism (VTE) | 415.1x, 451.1x, 451.2x, 453.4x, 453.8x, 453.9 |
|  GI Disorder |  |
|  Inflammatory Bowel Disease (IBD) | 555.xx, 556.xx |
|  Peptic Ulcer Disease | 530.2x, 531.xx, 532.xx, 533.xx, 534.xx |
|  Malignancies |  |
|  Malignancies | 140.xx-149.xx, 150.xx-159.xx, 160.xx-165.xx, 170.xx-176.xx, 179.xx-189.xx, 190.xx-199.xx, 200.xx-208.xx, 209.xx |
|  Metabolic Syndrome |  |
|  Diabetes | 250.xx |
|  Dyslipidemia | 272.xx |
|  Neurologic / Psychologic Conditions |  |
|  Multiple Sclerosis | 340.xx |
|  Parkinson Disease | 332.xx |
|  Respiratory Diseases |  |
|  Asthma | 493.x |
|  Sleep Apnea | 780.51, 780.53, 780.57, 327.2x |
|  Other Diseases |  |
|  Osteoporosis | 733.0x |
|  Uveitis | 017.3x, 090.0, 090.5, 091.51, 094.83, 095.8, 115.02, 115.12, 130.2, 360.1, 360.11, 360.12, 360.13, 360.19, 362.12, 362.18, 363.1x, 363.2x, 364.00, 364.01, 364.02, 364.10, 364.11, 364.2, 364.21, 364.22, 364.24, 364.3, 363.00, 363.01, 363.03, 363.04, 363.05, 363.06 |
| AS-RELATED COMORBIDITIES |  |
|  Psoriasis | 696.0, 696.1, 696.8 |
|  Rheumatoid Arthritis | 714.XX (Excluding 714.3)  |
|  COPD | 491, 492, 496 |
|  Hepatitis |  |
|  Hepatitis B | 070.2, 070.3, and/or V02.61 |
|  Hepatitis C | 070.51, 070.54, and/or V02.61 |
|  Tuberculosis | 010-018 |
|  Depressive Disorder | 296.2, 296.3, 300.4, 311 |
|  Anxiety Disorder | 300.0, 300.2, 300.3, 308.3, and 309.81 |