**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 |