|  |  |
| --- | --- |
| **Covariate (reference)** | **ICD-9-CM Codes** |
| Pain related diagnoses20 | 250.6X, 307.81, 307.89, 346.xx, 350.8, 353.6, 454.8, 524.6X, 526.9, 564.1, 608.9, 625.9, 714.X, 715.X, 716.X, 719.4X, 721.X, 722.X, 723.3, 724.X, 726.X, 729.X, 780.99, 784.0, 786.5X, 789.0X, 846.9 |
| Nicotine use disorder | 305.1,V15.82 |
| Alcohol use disorder16 | 291.x; 303.00-303.02;, 303.90-303.92, 305.00-305.02; 535.3; 571.1 |
| Other substance use disorders  | Cocaine 304.2, 304.20-304.22,305.6, 305.60-305.62; Sedative/Hypnotics: 304.1, 304.10-304.12, 305.4, 305.40-305.42; Cannabis: 304.3, 304.30-304.32, 305.2, 305.20-305.22; Amphetamines: 304.4, 304.40-304.42, 305.7, 305.70-305.72; Hallucinogens: 304.5, 304.50-304.52, 305.3, 305.30-305.32; Other Drug-Related Diagnoses (combined or unspecified, non-OUD disorders): 304.6, 304.60-304.62, 304.8, 304.80-304.82, 304.9, 304.90-304.92, 305.8, 305.80-305.82, 305.9, 305.90-305.92 292.x, 648.3x 648.3  |
| Mood disorders | 296.xx, 293.83, 300.4, 311.x |
| Anxiety disorders | 300.0x-300.3x                 |
| Schizophrenia | 293.81, 293.82, 295.xx |
| Posttraumatic stress disorder | 309.81 |
| Hepatocellular carcinoma | 155.0 |

**Supplemental Table 1: Data Definitions**