

Supplementary Online Content

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eMethods

This supplementary material has been provided by the authors to give readers additional information about their work.

eMethods

FDA-approved indications for benzodiazepines were obtained from IBM Micromedex®.

All approved indications were considered irrespective of age-specific approvals and mapped to corresponding ICD-9 and ICD10 codes. The following benzodiazepines were

included in the analysis: **Alprazolam** (anxiety: 300.00, 300.02, 300.09, F41.1, F41.3, F41.8, F41.9; panic disorder: 300.01, F41.0); **chlordiazepoxide HCL/clidinium**

bromide (disorders of the gastrointestinal tract to control emotional and somatic factors: 306.4, F45.8; enterocolitis: 558.9, 787.91, K52; irritable bowel syndrome: 564.1, K58;

peptic ulcer disease: 533, K27); **chlordiazepoxide** (alcohol withdrawal syndrome:

291.0, 291.3, 291.81, F10.23; anxiety: 300.00, 300.02, 300.09, F41.1, F41.3, F41.8,

F41.9); **chlordiazepoxide HCl/amitriptyline HCl** (mixed anxiety and depressive

disorder: 300.09, F41.8); **clobazam** (Lennox-Gastaut syndrome: 345.80, 345.81,

345.10, G40.81, G40.401, G40.409); **clonazepam** (absence seizures: 345.00, 345.01,

345.2, G40.A; Lennox-Gastaut syndrome: 345.80, 345.81, 345.10, G40.81, G40.401,

G40.409; myoclonic seizure: 345.80, 345.81, 345.10, G40.B, G40.401, G40.409; panic

disorder: 300.01, F41.0; seizure, akinetic: 345.10, G40.401, G40.409); **clorazepate**

(alcohol withdrawal syndrome: 291.0, 291.3, 291.81, F10.23; anxiety: 300.00, 300.02,

300.09, F41.1, F41.3, F41.8, F41.9; partial seizure: 345.50, 345.01, G40.2); **diazepam**

(alcohol withdrawal syndrome: 291.0, 291.3, 291.81, F10.23; anxiety: 300.00, 300.02,

300.09, F41.1, F41.3, F41.8, F41.9; seizure: 780.31, 780.32, 780.33, 780.39, R56;

skeletal muscle spasm: 728.85, M62.40, M62.83; status epilepticus: 345.90, 345.91,

G40.901, G40.911); **estazolam** (insomnia: 780.52, 327.00, 327.01, 327.09, G47.0);

flurazepam (insomnia: 780.52, 327.00, 327.01, 327.09, G47.0); **lorazepam** (anxiety:

300.00, 300.02, 300.09, F41.1, F41.3, F41.8, F41.9; insomnia: 780.52, 327.00, 327.01, 327.09, G47.0; status epilepticus: 345.90, 345.91, G40.901, G40.911); **midazolam** (status epilepticus: 345.90, 345.91, G40.901, G40.911); **oxazepam** (alcohol withdrawal syndrome: 291.0, 291.3, 291.81, F10.23; anxiety: 300.00, 300.02, 300.09, F41.1, F41.3, F41.8, F41.9); **quazepam** (insomnia: 780.52, 327.00, 327.01, 327.09, G47.0); **temazepam** (insomnia: 780.52, 327.00, 327.01, 327.09, G47.0); and **triazolam** (insomnia: 780.52, 327.00, 327.01, 327.09, G47.0).

The following opioids (including combination products) were included in the analysis: buprenorphine, codeine, fentanyl, hydrocodone, hydromorphone, levorphanol, meperidine, methadone, morphine, oxycodone, oxymorphone, propoxyphene, tapendatol, and tramadol.