

Appendix

Analysis of Real-World Dosing Patterns for the 3 FDA-Approved Medications in the Treatment of Fibromyalgia

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Appendix 1 [Table 1]: Diagnostic codes used to identify comorbidities

| Charlson Comorbidities | |
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| Condition | ICD-9 CM Codes |
| AIDS/HIV | 042.x – 044.x |
| Any malignancy, including lymphoma and leukemia, except malignant neoplasm of skin | 140.x-172.x, 174.x-195.8, 200.x-208.x, 238.6 |
| Cerebrovascular disease | 362.34, 430.x-438.x |
| Chronic pulmonary disease | 416.8, 416.9, 490.x-505.x, 506.4, 508.1, 508.8 |
| Congestive heart failure | 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 425.4-425.9, 428.x |
| Dementia | 290.x, 294.1, 331.2 |
| Depression | V79.0, 311, 300.4, 296.2x, 296.3x, 298.0, 309.0, 309.1 |
| Diabetes without chronic complications | 250.0 – 250.3, 250.7, 250.8, 250.9 |
| Diabetes with chronic complications | 250.4 – 250.7 |
| Hemiplegia or paraplegia | 334.1, 342.x, 343.x, 344.0-344.6, 344.9 |
| Metastatic solid tumor | 196.x-199.x |
| Mild liver disease | 070.22, 070.23, 070.32, 070.33, 070.44, 070.54, 070.6, 070.9, 570.x, 571.x, 573.3, 573.4, 573.8, 573.9, |

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| | V42.7 |
| Moderate or severe liver disease | 456.0-456.2, 572.2 – 572.8 |
| Myocardial infarction | 410.x, 412.x |
| Peptic ulcer disease | 531.x – 534.x |
| Peripheral vascular disease | 093.0, 437.3, 440.x, 441.x, 443.1-443.9, 047.1, 557.1, 557.9, V43.4, Procedure 38.48 |
| Renal disease | 403.01, 403.11, 403.91, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 582.x, 583.0-583.7, 585.x, 586.x, 588.0, V42.0, V45.1, V56.x |
| Rheumatologic disease (connective tissue disease) | 710.0, 710.1, 710.4, 714.0 – 714.2, 714.81, 725.x |
| Other Comorbidities | |
| Fatigue Disorders | 780.7, 780.71, 780.79 |
| Hypertension | 401.x, 402.xx, 403.xx, 404.xx, 405.xx, 459.3x, 997.91 |
| Depression | 296.2x, 296.3x, 298.0, 300.4, 309.1, 311, V79.0 |
| Anxiety | 300.02, 293.84, 300.00, 300.09, 300.4, 308.28, 309.21, 309.24, 313.0 |
| Migraine/Headache | 307.81, 339.1x, 339.2x, 339.3, 339.4x, 339.8x, 349.0, 346.xx, 784.0 |
| Musculoskeletal pain disorders | 338.29, 338.4, 359.4, 715.xx, 710.4, 714.0, 714.1, 714.2, 723.0, 724.0x, 710.0 |
| Neuropathic pain disorders | 250.6x, 357.2, 053.13, 333.94 |
| Gastrointestinal disorders | 530.11, 530.81 |
| Obesity | 278.0x, V77.8 |
| Epilepsy | 345.x |

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| Sleep Disorder | 327.1x, 780.53, 780.54, 046.72, 327.0x, 780.51, 780.52, V69.4, 347.0x, 347.1x, 327.20, 780.57, 307.4x, 327.3x, 327.42, 327.43, 327.52, 327.53, 327.59, 327.8, 780.50, 780.53, 780.55, 780.56, 780.57, 780.58, 780.59, 291.82, 292.85 |
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Appendix 2 [Table 2]: Classifications for Fibromyalgia related drugs

| Category | Generic drug names |
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| Anticonvulsants | Acetazolamide, Carbamazepine, Divalproex sodium, Ethosuximide, Ethotoin, Felbamate, Gabapentine, Lacosamide, Lamotrigine, Levetiracetam, Methosuximide, Oxcarbazepine, Perampanel, Phenytoin, Pregabalin, Primidone, Tiagabine, Toprimate, Valproic acid, Zonisamide |
| Antidepressants | Bupropion, Hydracarbazine, Isocarboxazid, Isoniazid, Phenelzine, Procarbazine, Rasagiline, Selegiline, Tranylcypromine, Desvenlafaxine, Duloxetine, Levomilnacipran, Milnacipran, Venlafaxine, Citalopram, "Escitalopram, Fluoxetine, Fluvoxamine, Paroxetine, Sertraline, Loxapine, Maprotiline, Mirtazapine, Trazodone, Amitriptyline, Amoxapine, Clomipramine, Desipramine, Doxepin, Imipramine, Nortriptyline, Protriptyline, Trimipramine |
| TCAs | Amitriptyline, Amoxapine, Clomipramine, Desipramine, Doxepin, Imipramine, Nortriptyline, Protriptyline, Trimipramine |

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| SSRIs | Citalopram, Escitalopram, Fluoxetine, Fluvoxamine, Paroxetine, Sertraline |
| SNRIs | Desvenlafaxine, Duloxetine, Levomilnacipran, Milnacipran, Venlafaxine |
| Anti-migraine | Almotriptan, Avitriptan, Eletriptan, Frovatriptan, Naratriptan, Rizatriptan, Sumatriptan, Zolmitriptan |
| Gastroenterologics | Dolasetron, Granisetron, Metoclopramide, Ondansetron, Dexlansoprazole, Esomeprazole, Lansoprazole, Omeprazole, Pantoprazole, Rabeprazole |
| NSAIDs: non-selective | Diclofenac , Fenoprofen, Flurbiprofen, Ibuprofen, Indomethacin, Ketoprofen, Meloxicam, Naproxen, Oxaprozin, Piroxicam, Sulindac |
| Skeletal muscle relaxants | Baclofen, Carisoprodol, Chlorzoxazone, Cyclobenzaprine, Dantrolene, Metaxalone, Methocarbamol , Orphenadrine , Tizanidine |
| Sedative/hypnotics | Eszopiclone, Flurazepam, Halazepam, Meprobamate, Ramelteon, Zaleplon, Zolpidem |

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| Oral corticosteroids | Betamethasone, Budesonide, Cortisone acetate, Dexamethasone, Fludrocortisone, Hydrocortisone, Methylprednisolone, Prednisolone, Prednisone, Triamcinolone |
| Topical corticosteroids | Alclometasone, Amcinonide, Betamethasone, Clobetasol propionate, Clo cortolone, Desonide, Desoximetasone, Desoximetasone, Diflorasone, Fluocinonide, Flurandrenolide, Halcinonide, Halobetasol, Mometasone , Prednicarbate, Triamcinolone |
| Opioids: Long Acting | Fentanyl ER transdermal, Hydrocodone bitartrate ER, Hydromorphone HCl ER, Methadone HCl, Morphine sulfate ER, Oxycodone HCl, Oxymorphone HCl ER |
| Opioids: Short Acting | Codiene, Fentanyl citrate, Hydrocodone, Hydromorphone, Meperidine, Morphine, Oxycodone, Oxymorphone IR, Propoxyphene, Tapentadol |
| Topical analgesics | Capsaicin cream, Capsaicin transdermal patch, Lidocaine cream, Lidocaine gel, Lidocaine lotion, Lidocaine ointment, Lidocaine spray, Lidocaine transdermal patch |
| Benzodiazepines | Clonazepam, Clobazam, Clorazepate, Cloxazolam, Diazepam, Lorazepam, |

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| | Midazolam |
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