Appendix A Definitions of patient characteristics

DRUG GROUPS:

ANTIDEPRESSANTS

Amitriptyline oral

Amoxapine oral

Bupropion oral

Chlordiazepoxide – amitriptyline fixed-dose combinations oral

Citalopram oral

Clomipramine oral

Desipramine oral

Desvenlafaxine oral

Doxepin oral

Duloxetine oral

Escitalopram oral

Fluoxetine oral

Fluvoxamine oral

Imipramine oral

Isocarboxazid oral

Levomilnacipran oral

Maprotiline oral

Mirtazapine oral

Nefazodone oral

Nortriptyline oral

Paroxetine oral

Perphenazine – amitriptyline fixed-dose combinations oral

Phenelzine oral

Protriptyline oral

Selegiline transdermal patch

Sertraline oral

Tranylcypromine oral

Trazodone oral

Trimipramine oral

Venlafaxine oral

Vilazodone oral

Vortioxetine oral

ANTIPSYCHOTICS

Aripiprazole injection

Aripiprazole oral

Asenapine sublingual

Carbamazepine oral (antipsychotic formulation)

Chlorpromazine injection

Chlorpromazine oral

Chlorpromazine rectal suppositories

Clozapine oral

Fluphenazine injection

Fluphenazine oral

Haloperidol injection

Haloperidol oral

Iloperidone oral

Loxapine inhalation

Loxapine oral

Lurasidone oral

Molindone oral

Olanapine injection

Olanzapine oral

Olanzapine – fluoxetine fixed-dose combinations oral

Paliperidone injection

Paliperidone oral

Perphenazine oral

Quetiapine oral

Risperidone injection

Risperidone oral

Thioridazine oral

Thiothixene oral

Trifluoperazine oral

Ziprasidone injection

Ziprasidone oral

ANXIOLYTICS

Alprazolam oral

Buspirone oral

Chlordiazepoxide oral

Clorazepate oral

Diazepam injection

Diazepam oral

Diazepam rectal gel

Hydroxyzine injection

Hydroxyzine oral

Lorazepam injection

Lorazepam oral

Meprobamate oral

Midazolam injection

Midazolam oral

Oxazepam oral

HYPNOTICS

Barbiturate sedatives & hypnotics

Amobarbital injection

Butabarbital oral

Mephobarbital oral

Pentobarbital injection

Phenobarbital injection

Phenobarbital oral

Secobarbital oral

Non-barbiturate sedatives & hypnotics

Chloral hydrate oral

Doxepin oral (sleep formulation)

Estazolam oral

Eszopiclone oral

Flurazepam oral

Quazepam oral

Ramelteon oral

Scopolamine injection

Suvorexant oral

Tasimelteon oral

Temazepam oral

Triazolam oral

Zaleplon oral

Zolpidem oral

Zolpidem sublingual

PSYCHOSTIMULANTS

Amphetamine oral

Amphetamine – dextroamphetamine oral

Armodafinil oral

Benzphetamine oral

Caffeine – sodium benzoate injection

Dexmethylphenidate oral

Dextroamphetamine oral

Diethylpropion oral

Lisdexamfetamine oral

Methamphetamine oral

Methylphenidate oral

Methylphenidate transdermal patch

Modafinil oral

Phendimetrazine oral

Phentermine oral

Phentermine – topiramate fixed-dose combinations oral

PAIN DIAGNOSES

Each group below is coded yes if any diagnosis associated with an outpatient medical encounter in one of the ICD code ranges below has appeared in period from first opioid dispensing in 2012 through the ensuing 548 days. (ICD-9 3-digit code ranges in parentheses)

Arthritis

Arthropathies and related disorders (710-719)

Back pain

Dorsopathies (720-724)

Other congenital musculoskeletal anomalies (756)

Fractures

Other disorders of bone and cartilage (733)

Fractures (800-829)

Late effects of musculoskeletal and connective tissue injuries (905)

Headaches

Other headache syndromes (339)

Migraine (346)

Malignancy

Neoplasms (140-209, 235-239)

Musculoskeletal pain

Rheumatism, excluding the back (725-729)

Dislocation (830-839)

Sprains and strains of joints and adjacent muscles (840-848)

Neuropathies

Disorders of the peripheral nervous system (350-359)

Wounds/Injury

Intracranial injury, excluding those with skull fracture (850-854)

Internal injury of thorax, abdomen and pelvis (860-869)

Open wounds (890-897)

Crushing injury (925-929)

Burns (940-949)

Injury to nerves and spinal cord (950-957)

Certain traumatic complications and unspecified injuries (958-959)

NON-PAIN DIAGNOSES

Grouped by ICD-9 Chapter, except as included above

Infectious and parasitic diseases (001-139)

Benign neoplasms (210-229)

Endocrine nutritional, metabolic, immune disorders (240-279)

Disease of blood and blood-forming organs (280-289)

Mental disorders (290-319)

Nervous system and sense organs (320-389)

Circulatory system (390-459)

Respiratory system (460-519)

Digestive system (520-579)

Genitourinary system (580-629)

Complications of pregnancy, childbirth and the puerperium (630-679)

Skin and subcutaneous tissue (680-709)

Congenital anomalies (740-759)

Symptoms, signs and ill-defined conditions (780-799)

Injury and poisoning (800-999)

SPECIALIST AND NON-SPECIALIST PRESCRIBERS

Specialists

Anesthesiology

Dentist

Emergency Medicine

Hospice and Palliative Medicine

Neurology

Oncology

Pain

Physical Medicine & Rehabilitation

Rheumatology

Surgery

Nonspecialists

Nurse Practitioners

PCP

Pediatrics

Physician Assistant

All Other

# Appendix B. Detailed tabulations

| Appendix B Table 1. Distribution of possible shopping behavior by state of residence.  |
| --- |
|  |  | Proportion at levels a |
| State | Category of Possible Shopping Behavior |  | Any | Moderate or Extensive | Extensive |
| None | Minimal | Moderate | Extensive | Total |
| NH |  669 | 93 | 48 | 31 | 841 | 20.5% | 9.4% | 3.7% |
| DE | 518 | 69 | 39 | 21 | 647 | 19.9% | 9.3% | 3.2% |
| NJ | 439 | 51 | 25 | 15 | 530 | 17.2% | 7.5% | 2.8% |
| VA | 2,355 | 354 | 124 | 78 | 2,911 | 19.1% | 6.9% | 2.7% |
| AZ | 541 | 95 | 40 | 18 | 694 | 22.0% | 8.4% | 2.6% |
| MD | 389 | 35 | 27 | 11 | 462 | 15.8% | 8.2% | 2.4% |
| NY | 10,252 | 1,191 | 453 | 290 | 12,186 | 15.9% | 6.1% | 2.4% |
| MA | 10,392 | 1,299 | 458 | 296 | 12,445 | 16.5% | 6.1% | 2.4% |
| WA | 358 | 41 | 13 | 10 | 422 | 15.2% | 5.5% | 2.4% |
| RI | 456 | 53 | 20 | 12 | 541 | 15.7% | 5.9% | 2.2% |
| SC | 685 | 104 | 38 | 18 | 845 | 18.9% | 6.6% | 2.1% |
| GA | 1,197 | 152 | 49 | 30 | 1,428 | 16.2% | 5.5% | 2.1% |
| PA | 16,685 | 2,023 | 790 | 411 | 19,909 | 16.2% | 6.0% | 2.1% |
| NC | 920 | 100 | 43 | 20 | 1,083 | 15.1% | 5.8% | 1.8% |
| MI | 4,702 | 582 | 219 | 102 | 5,605 | 16.1% | 5.7% | 1.8% |
| MO | 521 | 61 | 22 | 11 | 615 | 15.3% | 5.4% | 1.8% |
| IN | 2,257 | 279 | 112 | 45 | 2,693 | 16.2% | 5.8% | 1.7% |
| WI | 752 | 81 | 37 | 14 | 884 | 14.9% | 5.8% | 1.6% |
| KS | 229 | 26 | 10 | 4 | 269 | 14.9% | 5.2% | 1.5% |
| LA | 1,176 | 160 | 67 | 21 | 1,424 | 17.4% | 6.2% | 1.5% |
| CT | 2,008 | 246 | 88 | 35 | 2,377 | 15.5% | 5.2% | 1.5% |
| FL | 10,199 | 1,233 | 483 | 176 | 12,091 | 15.6% | 5.5% | 1.5% |
| NM | 1,053 | 125 | 43 | 18 | 1,239 | 15.0% | 4.9% | 1.5% |
| OK | 2,632 | 345 | 113 | 44 | 3,134 | 16.0% | 5.0% | 1.4% |
| NV | 181 | 26 | 9 | 3 | 219 | 17.4% | 5.5% | 1.4% |
| TN | 6,505 | 780 | 294 | 100 | 7,679 | 15.3% | 5.1% | 1.3% |
| IL | 12,865 | 1,454 | 495 | 180 | 14,994 | 14.2% | 4.5% | 1.2% |
| TX | 17,351 | 2,188 | 760 | 241 | 20,540 | 15.5% | 4.9% | 1.2% |
| MS | 730 | 94 | 26 | 9 | 859 | 15.0% | 4.1% | 1.0% |
| AL | 15,011 | 1,698 | 572 | 174 | 17,455 | 14.0% | 4.3% | 1.0% |
| CA | 1,427 | 140 | 63 | 15 | 1,645 | 13.3% | 4.7% | 0.9% |
| CO | 407 | 37 | 13 | 4 | 461 | 11.7% | 3.7% | 0.9% |
| WV | 1,480 | 107 | 38 | 13 | 1,638 | 9.6% | 3.1% | 0.8% |
| OH | 1,565 | 174 | 49 | 14 | 1,802 | 13.2% | 3.5% | 0.8% |
| MN | 3,139 | 233 | 73 | 24 | 3,469 | 9.5% | 2.8% | 0.7% |
| NE | 2,885 | 244 | 87 | 22 | 3,238 | 10.9% | 3.4% | 0.7% |
| ID | 1,070 | 87 | 24 | 7 | 1,188 | 9.9% | 2.6% | 0.6% |
| KY | 674 | 67 | 15 | 4 | 760 | 11.3% | 2.5% | 0.5% |
| OR | 187 | 15 | 6 | 1 | 209 | 10.5% | 3.3% | 0.5% |
| AR | 2,172 | 200 | 50 | 11 | 2,433 | 10.7% | 2.5% | 0.5% |
| IA | 285 | 28 | 4 | 1 | 318 | 10.4% | 1.6% | 0.3% |
| ME | 169 | 18 | 5 | - | 192 | 12.0% | 2.6% | 0.0% |
| ND | 113 | 6 | 1 | - | 120 | 5.8% | 0.8% | 0.0% |
| SD | 93 | 4 | 1 | - | 98 |  |  |  |
| MT | 70 | 12 | 1 | - | 83 |  |  |  |
| UT | 74 | 6 | 2 | - | 82 |  |  |  |
| VT | 55 | 8 | 4 | 3 | 70 |  |  |  |
| WY | 51 | 4 | 2 | 1 | 58 |  |  |  |
| AK | 11 | 1 | 1 | 1 | 14 |  |  |  |
| DC | 13 | 1 | - | - | 14 |  |  |  |
| HI | 9 | 1 | - | - | 10 |  |  |  |
| Total | 139,977 | 16,431 | 5,956 | 2,559 | 164,923 | 15.1% | 5.2% | 1.6% |
| a Percentages restricted to states with at least 100 study members |
| Source: “PDMP\_norestrict\_full\_2feb2016” |

| Appendix B Table 2. Relation of possible shopping behavior to characteristics identifiable in the insurance claims data |
| --- |
|  | Category of Possible Shopping Behavior |  |  |
| None | Minimal | Moderate | Extensive | Total | Regression a |
| Total |  139,977  |  16,431  |  5,956  |  2,559  | 164,923  | p, odds ratio, 95% bounds |
| % | 84.87 | 9.96 | 3.61 | 1.55 | 100.00 |
| State of residence (categorical, 50 levels, see Appendix B Table 1)  | <10-10 |
| Age |  |  |  |  |  | <10-10 |
| 18-24 | 11,29283.69 | 1,39910.37 | 6094.51 | 1931.43 |  13,493100.00 | 1.00 |
| 25-34 | 19,39781.33 | 2,83811.90 | 1,1394.78 | 4762.00 |  23,850100.00  | 0.77(0.70-0.85) |
| 35-44 | 30,23283.45 | 3,91110.80 | 1,4323.95 | 6511.80 |  36,226100.00  | 0.50(0.46-0.55) |
| 45-54 | 40,13885.33 | 4,5999.78 | 1,6023.41 | 6991.49 |  47,038100.00  | 0.35(0.32-0.39) |
| 55-64 | 33,02987.57 | 3,1758.42 | 1,0242.71 | 4891.30 |  37,717100.00  | 0.27(0.24-0.30) |
| 65-74 | 4,88288.80 | 4317.84 | 1372.49 | 480.87 |  5,498100.00  | 0.20(0.17-0.24) |
| 75-84 | 1,00791.46 | 787.08 | 131.18 | 30.27 |  1,101100.00  | 0.07(0.04-0.12) |
| Sex |  |  |  |  |  | .0001 |
| Female | 71,65284.69 | 8,51110.06 | 3,0773.64 | 1,3681.62 | 84,608100.00  | 1.00 |
| Male | 68,32585.07 | 7,9209.86 | 2,8793.58 | 1,1911.48 | 80,315100.00  | 1.11(1.05-1.16) |
| Type of Opioid Dispensed | <10-10 |
| ER/LA only | 1,13284.92 | 15111.33 | 403.00 | 100.75 | 1,333100.00 | 1.00 |
| IR and ER/LA | 5,56059.60 | 1,94820.88 | 94210.10 | 8799.42 | 9,329100.00 | 5.19(3.87-6.95) |
| IR only | 133,28586.40 | 14,3329.29 | 4,9743.22 | 1,6701.08 | 154,261100.00 | 2.67(1.99-3.57) |
| Antidepressant fills during the observation period | 5 x 10-6 |
| 0 : 0 c | 94,21687.92 | 9,1558.54 | 2,9832.78 | 8040.75 | 107,158100.00  |  |
| 1 : 1, 2 | 9,69180.46 | 1,45312.06 | 6075.04 | 2942.44 | 12.045100.00 |  |
| 2 : 3 - 7 | 9,68179.29 | 1,59813.09 | 6195.07 | 3112.55 | 12,209100.00 | OR per unit increase1.05 (1.03-1.07) |
| 3 : 8 - 14 | 9,28280.42 | 1,42612.35 | 5444.71 | 2902.51 | 11,542100.00 |
| 4 : 15 - 24 | 9,03880.31 | 1,39312.38 | 5174.59 | 3062.72 | 11,254100.00 |  |
| 5 : 25+ | 8,06975.31 | 1,40613.12 | 6866.40 | 5545.17 | 10,715 100.00 |  |
| Antidepressant fills in the 365 days before the observation period | 5 x 10-5 |
| 0 : 0 c | 104,28586.75 | 11,0389.18 | 3,6943.07 | 1,2021.00 | 120,219100.00  |  |
| 1 : 1, 2 | 8,57379.99 | 1,31312.25 | 5485.11 | 2842.65 | 10,718100.00 |  |
| 2 : 3 - 5 | 6,82679.64 | 1,10512.89 | 4184.88 | 2222.59 | 8,571100.00 | OR per unit increase1.04 (1.02-1.06) |
| 3 : 6 - 9 | 6,40580.43 | 93211.70 | 3995.01 | 2272.85 | 7,963100.00  |
| 4 : 10 - 14 | 7,31881.42 | 1,03411.50 | 4054.51 | 2312.57 | 8,988100.00  |  |
| 5 : 15+ | 6,57077.62 | 1,00911.92 | 4925.81 | 3934.64 | 8,464100.00 |  |
| Antipsychotic fills during the observation period | <10-10 |
| 0 : 0 c | 136,18985.44 | 15,5579.76 | 5,4943.45 | 2,1561.35 | 159,396100.00  |  |
| 1 : 1 | 80666.23 | 20817.09 | 1098.96 | 947.72 | 1,217100.00  |  |
| 2 : 2, 3 | 71767.20 | 18016.87 | 969.00 | 746.94 | 1,067100.00  | OR per unit increase1.10 (1.07-1.13) |
| 3 : 4 - 8 | 80569.16 | 19116.41 | 907.73 | 786.70 | 1,164100.00  |
| 4 : 9 - 19 | 78171.26 | 15013.69 | 686.20 | 978.85 | 1,096100.00  |  |
| 5 : 20+ | 67969.07 | 14514.75 | 9910.07 | 606.10 | 983100.00  |  |
| Antipsychotic fills in 365 days before the observation period | NR b |
| 0 : 0 c | 137,37485.20 | 15,9019.86 | 5,6563.51 | 2,3011.43 | 161,232100.00 |  |
| 1 : 1 | 63073.86 | 9811.49 | 637.39 | 627.27 | 853100.00 |  |
| 2 : 2, 3 | 48166.44 | 11716.16 | 729.94 | 547.46 | 724100.00 |  |
| 3 : 3 - 7 | 54369.26 | 12315.69 | 607.65 | 587.40 | 784100.00 |  |
| 4 : 8 - 12 | 43669.54 | 9615.31 | 538.45 | 426.70 | 627100.00 |  |
| 5 : 13+ | 51372.97 | 9613.66 | 527.40 | 425.97 | 703100.00 |  |
| Anxiolytic fills during the observation period | <10-10 |
| 0 : 0 c | 98,60587.93 | 9,5268.49 | 3,1462.81 | 8610.77 | 112,138100.00 |  |
| 1 : 1 | 14,79282.60 | 2,09011.67 | 7153.99 | 3111.74 | 17,908100.00 |  |
| 2 : 2, 3 | 9,27379.07 | 1,54813.20 | 6105.20 | 2962.52 | 11,727100.00 | OR per unit increase 1.10 (1.09-1.12) |
| 3 : 4 - 8 | 6,74875.66 | 1,25714.09 | 5536.20 | 3614.05 | 8,919100.00 |
| 4 : 9 - 19 | 5,65674.80 | 1,07314.19 | 4956.55 | 3384.47 | 7,562100.00 |  |
| 5 : 20+ | 4,90373.52 | 93714.05 | 4376.55 | 3925.88 | 6,669100.00 |  |
| Anxiolytic fills in the 365 days before the observation period | NR |
| 0 : 0 c | 112,20986.53 | 12,0329.28 | 4,0863.15 | 1,3491.04 | 129,676100.00 |  |
| 1 : 1 | 10,52581.82 | 1,46011.35 | 5524.29 | 3262.53 | 12,863100.00 |  |
| 2 : 2 | 3,98879.38 | 65112.96 | 2575.12 | 1282.55 | 5,024100.00 |  |
| 3 : 3 - 5 | 4,98678.26 | 84013.18 | 3375.29 | 2083.26 | 6,371100.00 |  |
| 4 : 6 - 11 | 4,52176.05 | 74912.60 | 4096.88 | 2664.47 | 5,945100.00 |  |
| 5 : 12+ | 3,74874.31 | 69913.86 | 3156.25 | 2825.59 | 5,044100.00 |  |
| Hypnotic fills during the observation period | <10-10 |
| 0 : 0 c | 122,07086.09 | 13,3899.44 | 4,6283.26 | 1,7081.20 | 141,795100.00 |  |
| 1 : 1 | 5,09178.95 | 85513.26 | 3245.02 | 1782.76 | 6,448100.00 |  |
| 2 : 2 - 4 | 3,94677.42 | 65812.91 | 2985.85 | 1953.83 | 5,097100.00 | OR per unit increase 1.06 (1.05-1.08) |
| 3 : 5 – 10 | 2,94076.72 | 49512.92 | 2396.24 | 1584.12 | 3,832100.00 |
| 4 : 11 - 21 | 2,92876.77 | 52413.74 | 2205.77 | 1423.72 | 3,814100.00 |  |
| 5 : 22+ | 3,00276.25 | 51012.95 | 2476.27 | 1784.52 | 3,937100.00 |  |
| Hypnotic fills in the 365 days before the observation period | NR |
| 0 : 0 c | 126,47885.62 | 14,3109.69 | 4,9923.38 | 1,9321.31 | 147,712100.00 |  |
| 1 : 1 | 3,72680.28 | 54211.68 | 2395.15 | 1342.89 | 4,641100.00 |  |
| 2 : 2, 3 | 2,54478.66 | 39512.21 | 1735.35 | 1223.77 | 3,234100.00 |
| 3 : 4 - 7 | 2,52978.76 | 38712.05 | 1745.42 | 1213.77 | 3,211100.00 |  |
| 4 : 8 - 12 | 2,28875.86 | 40713.49 | 1986.56 | 1234.08 | 3,016100.00 |  |
| 5 : 13+ | 2,41277.58 | 39012.54 | 1805.79 | 1274.08 | 3,109100.00 |  |
| Psychostimulant fills during the observation period | NR |
| 0 : 0 c | 128,44085.60 | 14,4969.66 | 5,0603.37 | 2,0571.37 | 150,053100.00 |  |
| 1 : 1 | 2,01880.53 | 28611.41 | 1325.27 | 702.79 | 2,506100.00 |  |
| 2 : 2,3 | 2,32179.98 | 35212.13 | 1555.34 | 742.55 | 2,902100.00 |
| 3 : 4 - 7 | 2,34878.27 | 38212.73 | 1795.97 | 913.03 | 3,000100.00 |  |
| 4 : 8 - 16 | 2,57977.96 | 42212.76 | 1955.89 | 1123.39 | 3,308100.00 |  |
| 5 : 17+ | 2,27172.00 | 49315.63 | 2357.45 | 1554.91 | 3,154100.00 |  |
| Psychostimulant fills in the 365 days before the observation period | <10-10 |
| 0 : 0 c | 131,69085.36 | 15,0689.77 | 5,3183.45 | 2,1951.42 | 154,271100.00 |  |
| 1 : 1 | 1,72378.96 | 27612.65 | 1235.64 | 602.75 | 2,182100.00 |  |
| 2 : 2, 3 | 1,93980.29 | 29112.05 | 1245.13 | 612.53 | 2,415100.00 | OR per unit increase 1.10 (1.07-1.12) |
| 3 : 4 - 6 | 1,75079.80 | 25311.54 | 1245.65 | 663.01 | 2,193100.00 |
| 4 : 7 - 11 | 1,52675.77 | 27513.65 | 1306.45 | 834.12 | 2,014100.00 |  |
| 5 : 12+ | 1,34973.00 | 26814.50 | 1377.41 | 945.09 | 1,848100.00 |  |
| Diagnoses during the observation period |  |
| Arthritis | 57,15782.52 | 7,89911.40 | 2,8374.10 | 1,3751.99 | 69,268100.00 | NR |
| Back pain | 60,79881.33 | 9,03212.08 | 3,3234.45 | 1,6042.15 | 74,757100.00 | NR |
| Fracture | 16,85380.02 | 2,73612.99 | 1,0014.75 | 4712.24 | 21,061100.00 | 2 x 10-8 1.20(1.13-1.28) |
| Headache | 8,95479.69 | 1,45312.93 | 5234.65 | 3062.72 | 11,236100.00 | NR |
| Malignancy | 17,06884.54 | 2,11510.48 | 6613.27 | 3461.71 | 20,190100.00 | NR |
| Musculo-skeletal | 70,62282.20 | 9,91511.54 | 3,6614.26 | 1,7212.00 | 85,919100.00 | <10-10 1.19(1.13-1.25) |
| Neuropathic pain | 11,97681.25 | 1,79712.19 | 6264.25 | 3412.31 | 14,740100.00 | .009 0.90(0.84-0.97) |
| Wounds & Injuries | 11,39877.05 | 2,10814.25 | 8305.61 | 4573.09 | 14,793100.00 | <10-10 1.38(1.28-1.48) |
| Infection | 25,96882.49 | 3,57811.37 | 1,3354.24 | 5981.90 | 31,479100.00 | NR |
| Benign neoplasm | 22,70885.08 | 2,6629.97 | 9313.49 | 3901.46 | 26,691100.00 | NR |
| Endocrine | 64,00684.46 | 7,82310.32 | 2,6973.56 | 1,2551.66 | 75,781100.00 | 1 x 10-6 0.88(0.84-0.93) |
| Blood disorders | 11,63680.70 | 1,82212.64 | 6064.20 | 3552.46 | 14,419100.00 | NR |
| Mental disorders | 49,30680.27 | 7,75812.63 | 2,8494.64 | 1,5142.46 | 61,427100.00 | NR |
| Nervous disorders | 59,13282.83 | 7,90911.08 | 2,8964.06 | 1,4542.04 | 71,391100.00 | NR |
| Circulatory disorders | 55,74584.40 | 6,83110.34 | 2,3363.54 | 1,1331.72 | 66,045100.00 | .005 0.93(0.88-0.98) |
| Respiratory disorders | 71,90083.81 | 9,12910.64 | 3,2753.82 | 1,4821.73 | 85,786100.00 | NR |
| Digestive disorders | 48,60882.46 | 6,80111.54 | 2,4094.09 | 1,1281.91 | 58,946100.00 | 9 x 10-9 1.16(1.10-1.22) |
| Genitourinary disorders | 50,50283.11 | 6,81311.21 | 2,4073.96 | 1,0401.71 | 60,762100.00 | 9 x 10-8 1.15(1.09-1.21) |
| Pregnancy & complications | 3,40681.52 | 51812.40 | 1794.28 | 751.80 | 4,178100.00 | NR |
| Skin disorders | 45,71283.79 | 5,81410.66 | 2,0973.84 | 9321.71 | 54,555100.00 | .0021.08(1.03-1.14) |
| Congenital disorders | 4,00083.66 | 53511.19 | 1603.35 | 861.80 | 4,781100.00 | .0040.81(0.71-0.94) |
| Signs and symptoms | 96,29783.28 | 12,75911.03 | 4,5273.91 | 2,0511.77 | 115,634100.00 | .0021.10(1.03-1.16) |
| Injury and poisoning | 26,71179.52 | 4,39713.09 | 1,6744.98 | 8072.40 | 33,589100.00 | <10-10 1.29(1.22-1.36) |
| Number of non-specialist fills | <10-10 |
| 1 : 1 c | 73,28791.58 | 4,9516.19 | 1,5961.99 | 1950.24 | 80,029100.00 | 1.00 |
| 2 : 2 | 28,35787.08 | 3,0099.24 | 9963.06 | 2020.62 | 32.564100.00 | 1.73 (1.60-1.87) |
| 3 : 3 | 10,48877.71 | 2,04915.18 | 7835.80 | 1771.31 | 13,497100.00 | 2.28(2.09-2.48) |
| 4 : 4-6 | 10,48671.61 | 2,62017.89 | 9616.56 | 5763.93 | 14,643100.00 | 2.48(2.29-2.68) |
| 5 : 7-14 | 8,37470.98 | 1,93016.36 | 7816.62 | 7126.04 | 11,797100.00 | 2.12(1.95-2.30) |
| 6 : 15+ | 8,98572.50 | 1,87215.11 | 8396.77 | 6975.62 | 12,393100.00 | 1.41(1.28-1.54) |
| Number of self-paid fills | <10-10 |
| 0 : 0 c | 131,45486.41 | 14,1739.32 | 4,7963.15 | 1,7041.12 | 152,127100.00 | 1.00 |
| 1 : 1 | 6,41369.78 | 1,57817.17 | 7568.23 | 4434.82 | 9,190100.00 | 2.14(1.99-2.30) |
| 2 : 2 | 1,21461.04 | 38819.51 | 20210.16 | 1859.30 | 1,989100.00 | 2.75(2.43-3.12) |
| 3 : 3 | 36154.45 | 13119.76 | 8112.22 | 9013.57 | 663100.00 | 3.43(2.83-4.16) |
| 4 : 4+ | 53556.08 | 16116.88 | 12112.68 | 13714.36 | 954100.00 | 3.23(2.75-3.79) |
| Total MEQ dispensed | <10-10 |
| 1 : <250 c | 28,31898.39 | 3661.27 | 960.33 | 00.00 | 28,780100.00 | 1.00 |
| 2 : 250-499 | 42,95891.48 | 3,1056.61 | 8691.85 | 280.06 | 46,960100.00 | 5.28(4.27-6.52) |
| 3 : 500-999 | 26,23082.71 | 3,97312.53 | 1,3074.12 | 2020.64 | 31,712100.00 | 11.36(9.22-14.01) |
| 4 : 1000-2499 | 17,39377.82 | 3,27514.65 | 1,1715.24 | 5102.28 | 22,349100.00 | 15.63(12.65-19.32) |
| 5 : 2500-4999 | 7,75874.73 | 1,65615.95 | 5985.76 | 3693.55 | 10,381100.00 | 18.26(14.67-22.73) |
| 6 : 5000-9999 | 6,21974.50 | 1,26215.12 | 5206.23 | 3474.16 | 8,348 100.00  | 21.46(17.18-26.80) |
| 7 : 10,000+ | 11,10167.72 | 2,79417.04 | 1,3958.51 | 1,1036.73 | 16,393100.00 | 29.59(23.75-36.86) |
| c-statistic | 0.82 |
| a Stepwise multivariable logistic regression using all the predictors listed, backwards elimination with p-value to retain set at <0.01. There were high positive correlations between many of the predictors, for example between use of a drug class during the observation period and use of the same drug class during the year preceding the observation period. An effect of this is that the multivariable-adjusted coefficients are often smaller than would seem appropriate from the crude tables.b NR – not retained in the stepwise regression. |