

Economic Outcomes Following Combinatorial Pharmacogenomic Testing for Elderly Psychiatric Patients

SUPPLEMENTAL DATA

Supplemental Table 1. A list of the 26 psychotropic medications on the combinatorial PGx test at the time of the study.

Generic Drug Name	Branded Drug Name
Antidepressants	
citalopram	Celexa [®]
desvenlafaxine	Pristiq [®]
escitalopram	Lexapro [®]
fluvoxamine	Luvox [®]
selegiline	Emsam [®]
sertraline	Zoloft [®]
duloxetine	Cymbalta [®]
mirtazapine	Remeron [®]
trazodone	Desyrel [®]
amitriptyline	Elavil [®]
bupropion	Wellbutrin [®]
clomipramine	Anafranil [®]
desipramine	norpramin [®]
fluoxetine	Prozac [®]
imipramine	Tofranil [®]
nortriptyline	Pamelor [®]
paroxetine	Paxil [®]
venlafaxine	Effexor [®]
Antipsychotics	
quetiapine	Seroquel [®]
ziprasidone	Geodon [®]
clozapine	Clozaril [®]
olanzapine	Zyprexa [®]
risperidone	Risperdal [®]
aripiprazole	Abilify [®]
haloperidol	Haldol [®]
perphenazine	Trilafon [®]

Supplemental Table 2. Patient Characteristics by Age Group (N = 1,662).

Characteristic	<65 Years N=1,277	≥65 Years N=385	Total N=1,662
Gender, N (%)			
Female	882 (69.1%)	269 (69.9%)	1,151 (69.3%)
Male	394 (30.9%)	116 (30.1%)	510 (30.7%)
Age, Median (25 th and 75 th percentiles)	49 (18, 64)	75 (65, 97)	53 (18, 97)
Prescribing Physician Specialty			
Primary Care Provider	670 (52.4%)	269 (69.9%)	939 (56.5%)
Psychiatrist	400 (31.3%)	77 (20.0%)	477 (28.7%)
Obstetrician/Gynecologist	26 (2.0%)	0 (0%)	26 (1.6%)
Other	181 (14.2%)	39 (10.1%)	220 (13.2%)
Psychiatric Condition			
Major Depressive Disorder	215 (16.8%)	85 (22.1%)	300 (18.1%)
Generalized Anxiety Disorder	136 (10.6%)	23 (6.0%)	159 (9.6%)
Major Depressive Disorder and Generalized Anxiety Disorder	134 (10.5%)	25 (6.5%)	159 (9.6%)
Unspecified or Other Psychiatric Disorder	792 (62.0%)	252 (65.5%)	1,044 (62.8%)

Supplemental Table 3. Mean Medication Costs per Member per Year (PMPY) for Patients Treated by a Psychiatrist When Psychotropic Medications Were Congruent versus Incongruent with Combinatorial Pharmacogenomic Test Recommendations.

Therapeutic Chapter Index ^a	Incongruent (Std. Dev.)	Congruent (Std. Dev.)	Difference (Std. Error)	P- value
Age ≥ 65 (N=77)	n = 21	n = 56	--	--
CNS, Neurology & Psychotherapeutic Drugs	\$6,042 (\$4,013)	\$5,529 (\$4,773)	\$514 (\$1,083)	0.3973
Antineoplastic & Immunosuppressant Drugs	\$48 (\$163)	\$37 (\$147)	\$11 (\$41)	0.4760
Respiratory, Allergy, Cough & Cold	\$585 (\$2,096)	\$432 (\$1,753)	\$153 (\$514)	0.4716
Musculoskeletal & Rheumatology	\$137 (\$512)	\$101 (\$495)	\$36 (\$130)	0.4465
Urologicals	\$229 (\$504)	\$303 (\$885)	-\$73 (\$162)	0.7687
Other ^b	\$2,691 (\$2,946)	\$3,213 (\$3,961)	-\$521 (\$833)	0.4998
Total	\$9,733 (\$5,705)	\$9,614 (\$6,670)	\$120 (\$615)	0.7144
Age < 65 (N=400)	n = 92	n = 308	--	--
CNS, Neurology & Psychotherapeutic Drugs	\$5,955 (\$5,627)	\$5,467 (\$6,544)	\$488 (\$695)	0.0702
Antineoplastic & Immunosuppressant Drugs	\$1,302 (\$6,155)	\$443 (\$5,853)	\$859 (\$723)	0.2719
Respiratory, Allergy, Cough & Cold	\$212 (\$666)	\$297 (\$978)	-\$85 (\$89)	0.9323
Musculoskeletal & Rheumatology	\$14 (\$91)	\$46 (\$364)	-\$32 (\$23)	0.2675
Urologicals	\$89 (\$332)	\$113 (\$912)	-\$24 (\$62)	0.5708
Other ^b	\$2,278 (\$3,631)	\$1,956 (\$5,135)	\$322 (\$479)	0.9992
Total	\$9,851 (\$8,938)	\$8,322 (\$11,351)	\$1,528 (\$461)	0.0150

^aThe Therapeutic Chapter Index from the Medco formulary reference guide available at the time of the project was used to categorize medications.

^bOther chapters included Anti-Infectives; Cardiovascular, Hypertension & Lipids; Dermatologicals/Topical Therapy; Ear, Nose & Throat Medications; Endocrine/Diabetes; Gastroenterology; Immunology, Vaccines & Biotechnology; Obstetrics & Gynecology; Ophthalmology; Vitamins, Hematinics & Electrolytes; and Diagnostics & Miscellaneous Agents

Supplemental Figure 1. Study workflow. Patients were enrolled if they started a new medication within 180 days before testing or if they switched medications 90 days before the test date (day 0).

