

APPENDIX

Table 1. List of psychotropic medications considered for polypharmacy analysis

Active ingredient	Psychotropic drug class	Active ingredient	Psychotropic drug class
clonidine	Alpha Agonists	5-hydroxytryptophan	Antidepressants
guanfacine	Alpha Agonists	amitriptyline	Antidepressants
acetazolamide	Anticonvulsants	amoxapine	Antidepressants
carbamazepine	Anticonvulsants	bupropion	Antidepressants
clobazam	Anticonvulsants	citalopram	Antidepressants
clonazepam	Anticonvulsants	escitalopram	Antidepressants
diazepam	Anticonvulsants	clomipramine	Antidepressants
divalproex sodium	Anticonvulsants	desipramine	Antidepressants
valproic acid	Anticonvulsants	desvenlafaxine	Antidepressants
ethosuximide	Anticonvulsants	venlafaxine	Antidepressants
ethotoin	Anticonvulsants	doxepin	Antidepressants
ezogabine	Anticonvulsants	duloxetine	Antidepressants
felbamate	Anticonvulsants	fluoxetine	Antidepressants
fosphenytoin	Anticonvulsants	fluvoxamine	Antidepressants
gabapentin	Anticonvulsants	imipramine	Antidepressants
lacosamide	Anticonvulsants	isocarboxazid	Antidepressants
lamotrigine	Anticonvulsants	maprotiline	Antidepressants
levetiracetam	Anticonvulsants	milnacipran	Antidepressants
lorazepam	Anticonvulsants	mirtazapine	Antidepressants
mephenytoin	Anticonvulsants	nefazodone	Antidepressants
mephobarbital	Anticonvulsants	nortriptyline	Antidepressants
methsuximide	Anticonvulsants	paroxetine	Antidepressants
oxcarbazepine	Anticonvulsants	phenelzine	Antidepressants
phenacemide	Anticonvulsants	protriptyline	Antidepressants
phenobarbital	Anticonvulsants	selegiline	Antidepressants
phensuximide	Anticonvulsants	sertraline	Antidepressants
phenytoin	Anticonvulsants	St. John's wort	Antidepressants
pregabalin	Anticonvulsants	tranylcypromine	Antidepressants
primidone	Anticonvulsants	trazodone	Antidepressants
rufinamide	Anticonvulsants	trimipramine	Antidepressants
thiopental	Anticonvulsants	vilazodone	Antidepressants
tiagabine	Anticonvulsants	acetylcarbromal	Anxiolytics Sedatives And Hypnotics
topiramate	Anticonvulsants	alprazolam	Anxiolytics Sedatives And Hypnotics
trimethadione	Anticonvulsants	amobarbital	Anxiolytics Sedatives And Hypnotics
vigabatrin	Anticonvulsants	buspirone	Anxiolytics Sedatives And Hypnotics
zonisamide	Anticonvulsants	butobarbital	Anxiolytics Sedatives And Hypnotics
lithium	Antimanic Agents	butalbital	Anxiolytics Sedatives And Hypnotics
aripiprazole	Atypical Antipsychotics	chloral hydrate	Anxiolytics Sedatives And Hypnotics
asenapine	Atypical Antipsychotics	chlordiazepoxide	Anxiolytics Sedatives And Hypnotics
chlorpromazine	Antipsychotics	chlormezanone	Anxiolytics Sedatives And Hypnotics
clozapine	Atypical Antipsychotics	clonazepam	Anxiolytics Sedatives And Hypnotics
fluphenazine	Antipsychotics	clorazepate	Anxiolytics Sedatives And Hypnotics

Active ingredient	Psychotropic drug class	Active ingredient	Psychotropic drug class
haloperidol	Antipsychotics	dexmedetomidine	Anxiolytics Sedatives And Hypnotics
iloperidone	Antipsychotics	diazepam	Anxiolytics Sedatives And Hypnotics
loxapine	Antipsychotics	dichloralphenazone	Anxiolytics Sedatives And Hypnotics
lurasidone	Antipsychotics	diphenhydramine	Anxiolytics Sedatives And Hypnotics
mesoridazine	Antipsychotics	doxepin	Anxiolytics Sedatives And Hypnotics
molindone	Antipsychotics	doxylamine	Anxiolytics Sedatives And Hypnotics
olanzapine	Atypical Antipsychotics	estazolam	Anxiolytics Sedatives And Hypnotics
paliperidone	Atypical Antipsychotics	eszopiclone	Anxiolytics Sedatives And Hypnotics
perphenazine	Antipsychotics	ethchlorvynol	Anxiolytics Sedatives And Hypnotics
pimozide	Antipsychotics	flurazepam	Anxiolytics Sedatives And Hypnotics
prochlorperazine	Antipsychotics	fospropofol	Anxiolytics Sedatives And Hypnotics
promazine	Antipsychotics	halazepam	Anxiolytics Sedatives And Hypnotics
quetiapine	Atypical Antipsychotics	hydroxyzine	Anxiolytics Sedatives And Hypnotics
risperidone	Atypical Antipsychotics	lorazepam	Anxiolytics Sedatives And Hypnotics
thioridazine	Antipsychotics	melatonin	Anxiolytics Sedatives And Hypnotics
thiothixene	Antipsychotics	mephobarbital	Anxiolytics Sedatives And Hypnotics
trifluoperazine	Antipsychotics	meprobamate	Anxiolytics Sedatives And Hypnotics
triflupromazine	Antipsychotics	midazolam	Anxiolytics Sedatives And Hypnotics
ziprasidone	Atypical Antipsychotics	oxazepam	Anxiolytics Sedatives And Hypnotics
amphetamine/ dextroamphetamine	Central Nervous System (CNS) Stimulants	pentobarbital	Anxiolytics Sedatives And Hypnotics
armodafinil	CNS Stimulants	phenobarbital	Anxiolytics Sedatives And Hypnotics
atomoxetine	CNS Stimulants	promethazine	Anxiolytics Sedatives And Hypnotics
benzphetamine	CNS Stimulants	propiomazine	Anxiolytics Sedatives And Hypnotics
dexmethylphenidate	CNS Stimulants	pyrilamine	Anxiolytics Sedatives And Hypnotics
methylphenidate/ dexmethylphenidate	CNS Stimulants	quazepam	Anxiolytics Sedatives And Hypnotics
diethylpropion	CNS Stimulants	ramelteon	Anxiolytics Sedatives And Hypnotics
doxapram	CNS Stimulants	secobarbital	Anxiolytics Sedatives And Hypnotics
lisdexamfetamine	CNS Stimulants	sodium oxybate	Anxiolytics Sedatives And Hypnotics
methamphetamine	CNS Stimulants	temazepam	Anxiolytics Sedatives And Hypnotics
modafinil	CNS Stimulants	thiopental	Anxiolytics Sedatives And Hypnotics
pemoline	CNS Stimulants	triazolam	Anxiolytics Sedatives And Hypnotics
phendimetrazine	CNS Stimulants	zaleplon	Anxiolytics Sedatives And Hypnotics
phentermine	CNS Stimulants	zolpidem	Anxiolytics Sedatives And Hypnotics

Table 2. Prevalence of psychotropic polypharmacy defined as use of ≥ 2 psychotropic medications in pediatric patients across 29 states, 1999-2010

Year	Number of eligible children	Number of children with ≥ 2 any-class psychotropic medications	Prevalence %
1999-2000	637,174	135,007	21.2
2001-2002	683,280	149,889	21.9
2002-2003	769,872	171,652	22.3
2003-2004	823,047	198,725	24.1
2004-2005	966,613	233,588	24.2
2005-2006	809,466	211,883	26.2
2006-2007	639,182	177,346	27.7
2007-2008	552,980	151,580	27.4
2008-2009	557,371	148,287	26.6
2009-2010	485,874	132,436	27.3

*Defined as children with at least one psychotropic medication and 2 years continuous eligibility in FFS/PCCM program following the index psychotropic medication claim.

Table 3. Prevalence of psychotropic polypharmacy (various definitions) by age group, across 29 states, 1999-2010 (n=3,198,296)

Age	≥ 2 Any-class	≥ 2 Multi-class	≥ 2 SSRIs	≥ 2 ADs	≥ 2 APs	≥ 2 AAP	≥ 2 stimulants	≥ 2 α - agonists
<=5	4.5	3.4	0.00	0.09	0.09	0.08	0.05	0.07
6-9	17.8	16.3	0.02	0.8	0.5	0.4	0.3	0.1
10-14	22.5	20.7	0.08	2.5	1.0	0.8	0.2	0.1
15-17	23.7	20.9	0.14	4.7	1.5	1.1	0.1	0.02

Table 4. Prevalence of psychotropic polypharmacy (various definitions) in pediatric patients by state across 29 states, 1999-2010

State	Sample size	≥2 Any-class	≥ 2 Multi-class	≥ 2 SSRIs	≥ 2 Ads	≥ 2 APs	≥ 2 AAP	≥ 2 stimulants	≥ 2 α-agonists
Alabama	5,483	18.7	16.3	0.05	1.5	1.3	1.0	0.1	0.04
Arkansas	85,196	12.3	11.0	0.04	1.4	0.2	0.1	0.1	0.05
California	204,514	16.0	13.7	0.05	1.4	0.9	0.6	0.1	0.08
Florida	119,448	21.5	19.4	0.05	1.5	0.8	0.5	0.2	0.18
Georgia	184,841	12.3	10.9	0.03	1.0	0.4	0.3	0.1	0.02
Idaho	28,125	21.2	19.1	0.10	3.5	1.3	1.2	0.1	0.11
Illinois	493,093	6.9	6.1	0.02	0.4	0.2	0.1	0.1	0.04
Indiana	73,483	25.2	22.8	0.09	3.2	1.1	0.9	0.3	0.11
Kansas	24,952	34.9	32.3	0.10	4.5	2.6	2.2	0.2	0.33
Louisiana	365,516	7.4	6.6	0.01	0.5	0.1	0.1	0.1	0.07
Massachusetts	9,231	36.4	30.5	0.08	2.9	1.5	1.2	0.1	0.42
Minnesota	26,362	42.0	37.2	0.10	6.4	1.9	1.8	0.2	0.45
Mississippi	127,342	8.3	7.3	0.02	0.6	0.3	0.2	0.1	0.03
Missouri	106,442	14.4	13.3	0.06	1.9	0.5	0.4	0.1	0.11
Nebraska	2,053	48.8	38.2	0.02	4.2	4.6	3.4	0.3	0.49
New Jersey	13,494	34.4	29.9	0.10	1.7	1.7	1.0	0.1	0.16
New Mexico	9,437	8.3	7.1	0.02	1.6	0.3	0.2	0.0	0.01
New York	121,560	22.2	19.8	0.03	0.8	1.1	0.9	0.1	0.11
North Carolina	230,476	12.6	11.2	0.02	0.9	0.4	0.3	0.2	0.08
Ohio	162,692	20.4	18.1	0.05	1.8	1.0	0.9	0.2	0.14
South Carolina	126,596	11.3	10.1	0.03	0.9	0.1	0.1	0.1	0.07
Tennessee	73,430	17.5	15.6	0.07	1.6	0.8	0.7	0.2	0.11
Texas	468,018	11.9	10.7	0.03	1.2	0.4	0.4	0.1	0.07
Virginia	53,827	21.7	19.5	0.09	2.7	1.1	0.9	0.2	0.20
Washington	6,666	26.8	23.8	0.03	1.7	0.4	0.2	0.8	0.14
West Virginia	37,171	21.2	19.1	0.06	2.3	0.5	0.4	0.3	0.15
Wisconsin	37,503	36.3	32.3	0.07	3.0	1.8	1.6	0.3	0.41

PS: psychotropic; SSRI: selective serotonin reuptake inhibitor; AD: antidepressant; AP: antipsychotic; AAP: atypical antipsychotic.