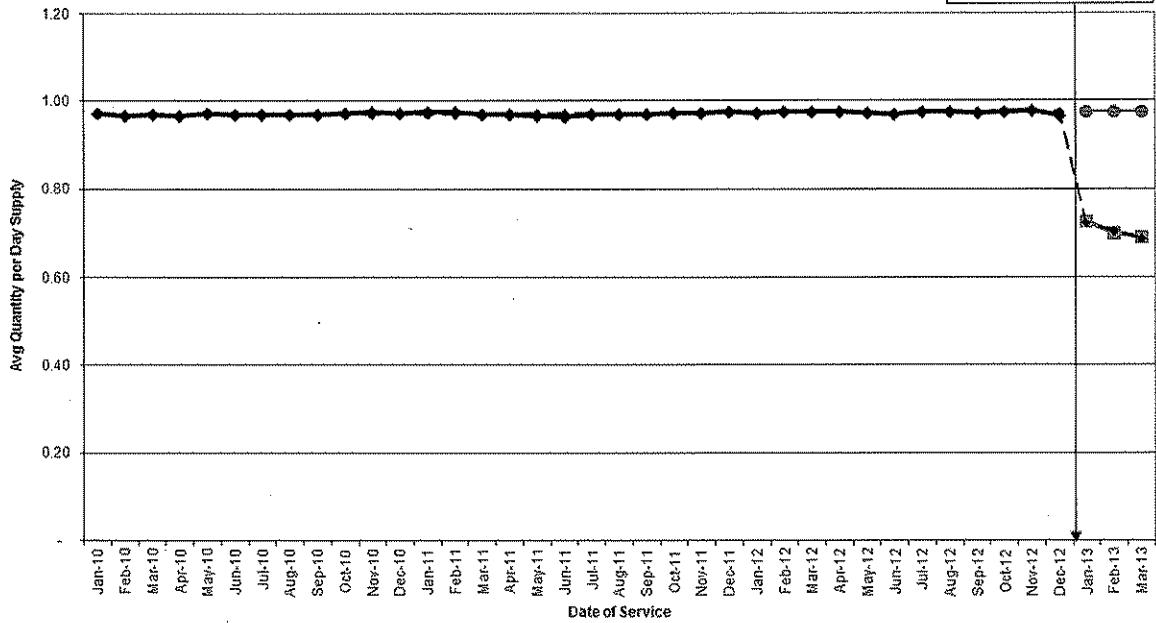


Iowa Medicaid Abilify Utilization
 Interrupted Time Series Analysis
 Average Abilify Quantity per Day Supply
 Abilify Oral Solution, Injection and ODT are Excluded

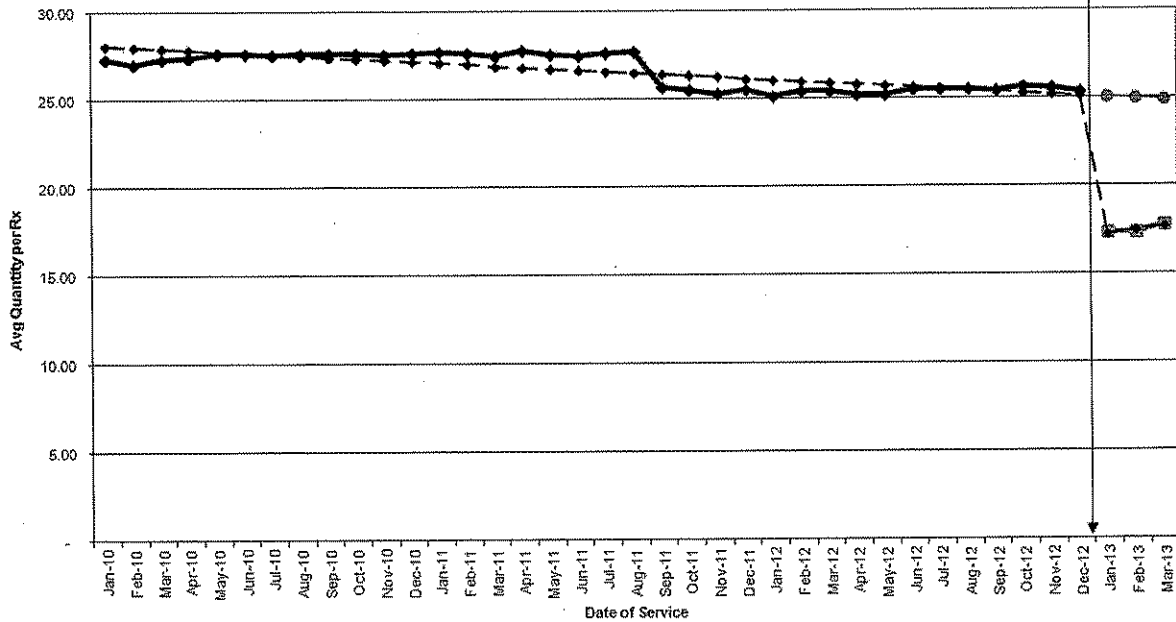
Abilify Dose Splitting
 started in Iowa



- IA Average Qty per DS before Abilify Dose Splitting
- IA Average Qty per DS since Abilify Dose Splitting
- IA Segmented Regression on Average Qty per DS
- IA Predicted Average Qty per DS if Abilify Dose Splitting had not started

Iowa Medicaid Ability Utilization
 Interrupted Time Series Analysis
 Average Ability Quantity per Script
 Ability Oral Solution, Injection and ODT are Excluded

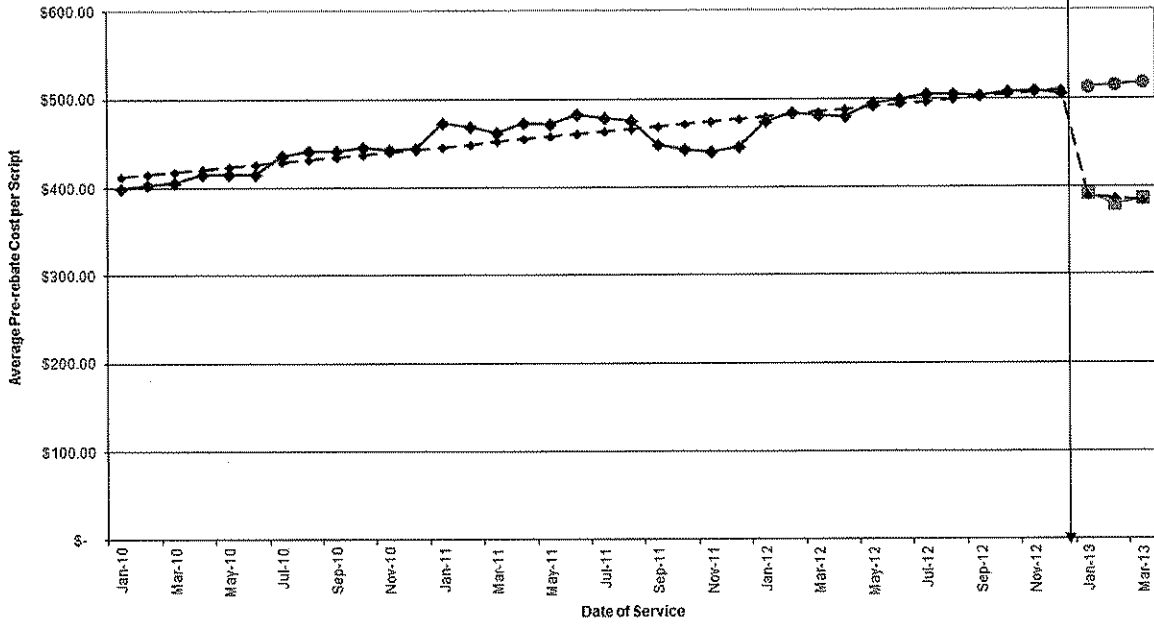
Ability Dose Splitting
 started in Iowa



- IA Average Qty per Script before Ability Dose Splitting
- IA Average Qty per Script since Ability Dose Splitting
- IA Segmented Regression on Average Qty per Script
- IA Predicted Average Qty per Script if Ability Dose Splitting had not started

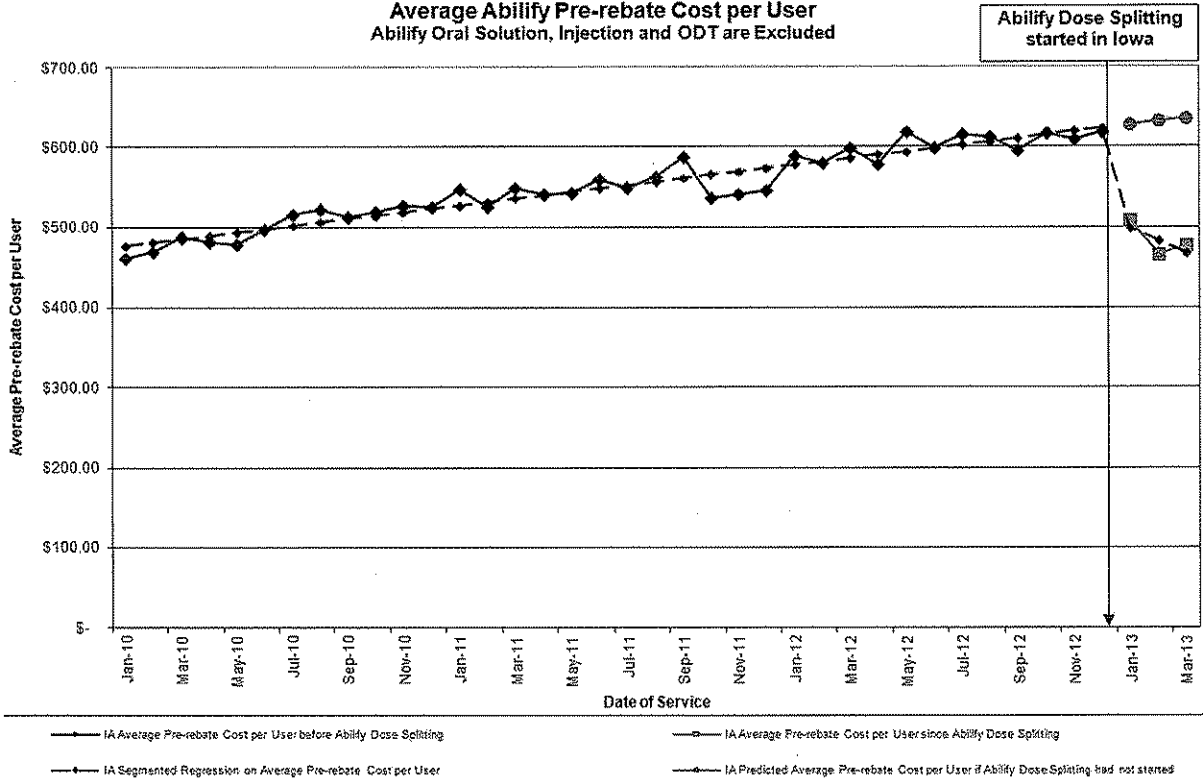
Iowa Medicaid Ability Utilization
 Interrupted Time Series Analysis
 Average Ability Pre-rebate Cost per Script
 Ability Oral Solution, Injection and ODT are Excluded

Ability Dose Splitting
 started in Iowa



— IA Average Pre-rebate Cost per Script before Ability Dose Splitting
 — IA Average Pre-rebate Cost per Script since Ability Dose Splitting
 — IA Segmented Regression on Average Pre-rebate Cost per Script
 — IA Predicted Average Pre-rebate Cost per Script if Ability Dose Splitting had not started

Iowa Medicaid Abilify Utilization
 Interrupted Time Series Analysis
 Average Abilify Pre-rebate Cost per User
 Abilify Oral Solution, Injection and ODT are Excluded



Days Late for Refill

Days Late for Refill	Patient who used ability dose splitting in January 2013 - March 2013		Patient who did not use ability dose splitting in January 2013 - March 2013	
	N of New Starters	%	N of New Starters	%
0	352	69.4%	182	71.7%
1-6	22	4.3%	7	2.8%
7-14	24	4.7%	7	2.8%
15-30	44	8.7%	20	7.9%
>30	65	12.8%	38	15.0%
Total # of Users:	507	100.0%	254	100.0%

Group of Patients	Total # of New Starters	Who were 0 - 6 days late for refill:	%	Who were 7 and more days late for refill:	%
Who used ability dose splitting in January 2013 - March 2013:	507	374	73.8%	133	26.2%
Who did not use ability dose splitting in January 2013 - March 2013:	254	189	74.4%	65	25.6%
Totals:	761	563	74.0%	198	26.0%

Chi Square Calculation before Yates Correction			Chi Square Calculation after Yates Correction			
Chi Square Calculation before Yates Correction	Critical Chi-Square	Statistically Different	Yates Correction	Chi Square Calculation after Yates Correction	Critical Chi-Square	Statistically Different
0.036	3.841	No	0.011	0.036	3.841	No

Group of Patients	Total # of New Starters without those who were > 30 days later for refill	Who were 0 - 6 days late for refill:	%	Who were 7 - 30 days late for refill:	%
Who used ability dose splitting in January 2013 - March 2013:	442	374	84.6%	68	15.4%
Who did not use ability dose splitting in January 2013 - March 2013:	216	189	87.5%	27	12.5%
Totals:	658	563	85.6%	95	14.4%

Chi Square Calculation before Yates Correction			Chi Square Calculation after Yates Correction			
Chi Square Calculation before Yates Correction	Critical Chi-Square	Statistically Different	Yates Correction	Chi Square Calculation after Yates Correction	Critical Chi-Square	Statistically Different
0.977	3.841	No	0.758	0.977	3.841	No

Medication Possession Ratio (MPR) =

sum of days supply on scripts/ # days between first fill and last fill plus the # of day supply in the last fill

Group of Patients	Total # of New Starters	# of New Starters Adherent to Ability in January 2013 - March 2013 (based on MPR >= 0.8)	%	# of New Starters Not Adherent to Ability in January 2013 - March 2013 (based on MPR < 0.8)	%
Who used ability dose splitting in January 2013 - March 2013:	507	454	89.5%	53	10.5%
Who did not use ability dose splitting in January 2013 - March 2013:	254	225	88.6%	29	11.4%
Totals:	761	679	89.2%	82	10.8%

Chi Square Calculation before Yates Correction			Chi Square Calculation after Yates Correction			
Chi Square Calculation before Yates Correction	Critical Chi-Square	Statistically Different	Yates Correction	Chi Square Calculation after Yates Correction	Critical Chi-Square	Statistically Different
0.163	3.841	No	0.079	0.163	3.841	No

Injectable Medications

The Iowa Medicaid Outpatient Pharmacy Program primarily covered oral medications and self administered injections (i.e. EpiPen, Imitrex, insulin). With the expansion of home health care, more medications are being provided in the home. With the increase in home health care services the Preferred Drug List (PDL) was expanded to allow for administration of injectable medications in the patients home.

The Social Security Act §1927 defines a covered outpatient drug as those drugs which are treated as prescribed drugs for purposes of section 1905(a)(12), a drug which may be dispensed only upon prescription. The term outpatient drug does not include any drug, biological product, or insulin provided as part of, or as incident to and in the same setting as, any of the following (and for which payment may be made under this title as part of payment for the following and not as direct reimbursement for the drug):

- Inpatient hospital services
- Hospice services
- Dental services
- Physicians' services
- Outpatient hospital services
- Nursing facility services and services provided by an intermediate care facility for the mentally retarded.
- Other laboratory and x-ray services
- Renal dialysis

Review injectable drugs from August 2013 paid claims

8/2013
DRUG

SCRIPTS QUANTITY INGREDIENTCOST DISPENSINGFEE TOTALDOLLARS ADMINISTRATION

DRUG	SCRIPTS	QUANTITY	INGREDIENTCOST	DISPENSINGFEE	TOTALDOLLARS	ADMINISTRATION
ACTHAR HP INJ 80UNIT	2	30	\$180,720.00	\$20.04	\$180,740.04	IM/SC
INVEGA SUST INJ 234/1.5	49	74	\$83,380.44	\$480.96	\$83,818.40	by healthcare professional
RISPERDAL INJ 50MG	85	120	\$68,964.57	\$851.70	\$69,738.27	by healthcare professional
NAGLAZYME INJ 1MG/ML	2	180	\$62,244.00	\$20.04	\$62,264.04	IV infusion
INVEGA SUST INJ 156MG/ML	38	38	\$44,107.88	\$370.74	\$44,443.62	by healthcare professional
PROLASTIN-C INJ 1000MG	5	95,700	\$39,237.00	\$50.10	\$39,272.10	IV infusion
RISPERDAL INJ 37.5MG	44	77	\$33,335.90	\$440.88	\$33,740.78	by healthcare professional
GAMUNEX-C INJ 20GM/200	5	3,200	\$32,422.40	\$50.10	\$32,469.50	IV infusion
LUPR DEP-PED INJ 30MG	4	4	\$23,051.97	\$30.06	\$23,082.03	supervision of physician
LUPR DEP-PED INJ 15MG	12	12	\$22,931.04	\$120.24	\$23,051.29	supervision of physician
ISTODAX INJ 10MG	1	9	\$22,131.00	\$10.02	\$22,140.02	IV infusion
RISPERDAL INJ 25MG	49	69	\$19,969.98	\$490.98	\$20,418.96	by healthcare professional
ARCALYST INJ 220MG	1	4	\$20,000.00	\$10.02	\$20,007.02	SC
INVEGA SUST INJ 117/0.75	20	15	\$17,273.22	\$190.38	\$17,446.60	by healthcare professional
XOLAIR SOL 150MG	7	22	\$16,436.64	\$70.14	\$16,491.78	in healthcare setting
GAMMAGARD INJ 5GM/50ML	2	2,000	\$15,600.62	\$20.04	\$15,619.66	IV/SC
REMODULIN INJ 2.5MG/ML	1	100	\$14,737.50	\$10.02	\$14,744.52	IV/SC infusion
ABRAXANE INJ 100MG	1	9	\$8,565.75	\$10.02	\$8,574.77	IV
LUPRON DEPOT INJ 3.75MG	9	9	\$7,040.34	\$90.18	\$7,121.52	supervision of physician
GAMUNEX-C INJ 10GM/100	3	700	\$7,092.40	\$30.06	\$7,120.46	IV infusion
CEREZYME INJ 400UNIT	1	1	\$6,345.83	\$10.02	\$6,355.85	IV infusion
LUPR DEP-PED INJ 11.25MG	3	3	\$5,283.15	\$30.06	\$5,282.21	supervision of physician
GAMMAGARD INJ 1GM/10ML	1	640	\$4,992.20	\$10.02	\$5,001.22	IV/SC
HALOPER DEC INJ 100MG/ML	70	120	\$4,357.69	\$621.24	\$4,911.93	IM
ABILIFY MAIN INJ 400MG	3	3	\$4,328.10	\$20.04	\$4,342.14	by healthcare professional
INVEGA SUST INJ 78/0.5ML	8	4	\$4,110.64	\$70.14	\$4,173.78	by healthcare professional
FLEBOGAMMA INJ DIF 5%	2	1,000	\$4,133.00	\$20.04	\$4,151.04	IV
MILRINONE INJ 10/10ML	3	970	\$3,885.48	\$30.06	\$3,915.54	IV
NEULASTA INJ 6MG/0.6M	1	1	\$3,757.96	\$10.02	\$3,764.98	SC
RISPERDAL INJ 12.5MG	15	22	\$3,209.80	\$150.30	\$3,347.10	by healthcare professional
HALOPER DEC INJ 50MG/ML	51	82	\$1,945.79	\$380.76	\$2,279.55	IM
ORENCIA INJ 125MG/ML	1	4	\$2,189.17	\$10.02	\$2,196.19	IV/SC
GAMUNEX-C INJ 5GM/50ML	4	200	\$2,026.40	\$40.08	\$2,065.48	IV infusion

HYDROMORPHON INJ 500/50ML	7	1,000	\$1,889.85	\$70.14	\$1,952.99	SC/IM/IV
FLUPHENAZ DE INJ 25MG/ML	12	80	\$1,774.66	\$90.18	\$1,833.84	IM/SC
GLYCOPYRROL INJ 0.2MG/ML	16	2,298	\$1,159.87	\$130.26	\$1,288.13	IM/IV
ZYPREXA RELP INJ 210MG	1	2	\$1,113.00	\$10.02	\$1,120.02	by healthcare professional
MILRINONE INJ 1MG/ML	9	4,600	\$980.73	\$90.18	\$1,061.91	IV
EPINEPHRINE INJ 1MG/ML	1	600	\$938.44	\$0.00	\$938.44	IV/SC
GAMMAGARD INJ 10GM/100	1	100	\$780.03	\$10.02	\$790.05	IV/SC
ROBINUL INJ 0.2MG/ML	2	1,700	\$702.41	\$0.00	\$699.41	IM/IV
NABI-HB INJ	1	5	\$643.55	\$10.02	\$652.57	IM
DIPHENHYDRAM INJ 50MG/ML	21	478	\$367.02	\$190.38	\$546.40	IV/IM
KENALOG-40 INJ 40MG/ML	15	3,496	\$403.98	\$150.30	\$546.28	IM
ZOSTAVAX INJ	3	3	\$505.32	\$20.04	\$516.36	SC
FLUOROURACIL INJ 5GM/100M	12	1,500	\$396.74	\$120.24	\$504.98	IV
COLISTIMETH INJ 150MG	1	30	\$503.66	\$0.00	\$502.66	IM/IV
HALDOL DECAN INJ 100MG/ML	2	3	\$375.16	\$20.04	\$389.20	IM
LORAZEPAM INJ 2MG/ML	28	178	\$206.02	\$170.34	\$369.36	IM/IV
PYRIDOXINE INJ 100MG/ML	8	28	\$251.72	\$80.16	\$328.88	IM/IV
INVEGA SUST INJ 39/0.25	1	0	\$294.97	\$10.02	\$303.99	by healthcare professional
MIDAZOLAM INJ 5MG/ML	27	96	\$147.69	\$150.30	\$297.99	IM/IV
CHLORPROMAZ INJ 25MG/ML	3	12	\$231.98	\$10.02	\$240.00	IM/IV
HYDROMORPHON INJ 50MG/5ML	6	690	\$163.46	\$60.12	\$217.58	SC/IM/IV
SOLU-MEDROL INJ 1GM	2	105	\$166.79	\$20.04	\$184.83	IM/IV
FENTANYL CIT INJ 100MCG	2	200	\$160.00	\$20.04	\$180.04	IV
INTRALIPID INJ 20%	2	1,500	\$159.90	\$20.04	\$177.94	IV
CYTARABINE INJ 20MG/ML	5	91	\$125.21	\$50.10	\$175.31	IV/SC
METOCLOPRAM INJ 5MG/ML	5	224	\$115.25	\$50.10	\$160.35	IV
HALOPER LAC INJ 5MG/ML	6	30	\$99.78	\$60.12	\$157.90	IM
BONIVA INJ 3MG/3ML	1	1	\$150.47	\$10.02	\$157.49	IV by healthcare professional
THIAMINE HCL INJ 100MG/ML	4	74	\$144.30	\$10.02	\$151.32	IM/IV
MORPHINE SUL INJ 50MG/ML	5	180	\$100.66	\$50.10	\$145.76	IV/Intrathecal
LIDOCAINE INJ 1%	13	300	\$50.46	\$90.18	\$139.64	IV?
ADRUCL INJ 5GM/100M	3	450	\$108.00	\$30.06	\$135.06	IV
PROMETHAZINE INJ 25MG/ML	4	100	\$81.40	\$40.08	\$117.48	IM/IV
INFED INJ 50MG/ML	3	7	\$81.18	\$30.06	\$111.24	IM/IV
PROGESTERONE INJ 50MG/ML	1	40	\$98.84	\$10.02	\$108.86	IM
VARIVAX INJ	1	1	\$98.74	\$10.02	\$108.76	SC
HYPERRHO S/D INJ 300MCG	1	1	\$91.89	\$10.02	\$100.91	IM

DEXAMETH PHO INJ 4MG/ML	8	145	\$23.13	\$70.14	\$93.27	IV
AMIKACIN INJ 1GM/4ML	1	28	\$93.03	\$0.00	\$93.03	IV
MAGNESIUM SU INJ 50%	8	86	\$16.01	\$80.16	\$89.17	IM/IV
FAMOTIDINE INJ 10MG/ML	4	112	\$50.40	\$40.08	\$86.48	IV
KCL/D5W/NACL INJ .15/.45%	4	28,000	\$50.12	\$40.08	\$86.20	IV
FLUCONAZOLE/ INJ DEX 400	1	1,200	\$76.20	\$10.02	\$85.22	IV
LACTATED RIN INJ	3	35,000	\$57.75	\$30.06	\$84.81	IV
FAMOTIDINE INJ 200/20ML	4	100	\$44.50	\$40.08	\$84.58	IV
FENTANYL CIT INJ 0.05MG/1	4	500	\$44.00	\$40.08	\$84.08	IV
PANTOPRAZOLE INJ 40MG	3	44	\$61.42	\$20.04	\$78.46	IV
GLYCOPHOS SOL 1MM/ML	1	120	\$66.00	\$10.02	\$76.02	IV
FLUOROURACIL INJ 1GM/20ML	2	190	\$57.79	\$20.04	\$75.83	IV
MIDAZOLAM INJ 10MG/2ML	10	36	\$41.74	\$20.04	\$59.78	IM/IV
DIAZEPAM INJ 5MG/ML	3	7	\$48.36	\$10.02	\$58.38	IM/IV
PROCHLORPER INJ 5MG/ML	4	12	\$57.60	\$0.00	\$57.60	IM/IV
EPINEPHRINE INJ 0.3MG	1	2	\$55.00	\$0.00	\$55.00	IV/SC
POT CHLORIDE INJ 2MEQ/ML	4	225	\$25.08	\$30.06	\$51.14	IV
DEXFERRUM INJ 50MG/ML	1	2	\$36.00	\$10.02	\$46.02	IV
CYTARABINE INJ 100MG/ML	4	12	\$24.35	\$20.04	\$44.39	IV/SC
SOD ACETATE INJ 2MEQ/ML	4	400	\$45.36	\$0.00	\$41.36	IV
KENALOG-10 INJ 10MG/ML	1	160	\$28.15	\$10.02	\$38.17	IM
FAMOTIDINE INJ 20MG/2ML	4	38	\$26.35	\$10.02	\$35.37	IV
FOLIC ACID INJ 5MG/ML	4	19	\$28.16	\$0.00	\$25.16	IM/IV/SC
VITAMIN K1 INJ 10MG/ML	1	1	\$10.41	\$10.02	\$20.43	IV/SC
SOLU-MEDROL INJ 40MG	1	2	\$6.03	\$10.02	\$15.05	IM/IV
LEUCOVOR CA INJ 50MG	1	10	\$2.75	\$10.02	\$12.77	IV
FUROSEMIDE INJ 10MG/ML	1	8	\$1.97	\$10.02	\$11.99	IM/IV

825 192,083 \$806,518.65 \$7,224.42 \$813,116.08



Choosing Wisely

An initiative of the ABIM Foundation

Five Things Physicians and Patients Should Question

- 1** **Don't prescribe antipsychotic medications to patients for any indication without appropriate initial evaluation and appropriate ongoing monitoring.**

Metabolic, neuromuscular and cardiovascular side effects are common in patients receiving antipsychotic medications for any indication, so thorough initial evaluation to ensure that their use is clinically warranted, and ongoing monitoring to ensure that side effects are identified, are essential. "Appropriate initial evaluation" includes the following: (a) thorough assessment of possible underlying causes of target symptoms including general medical, psychiatric, environmental or psychosocial problems; (b) consideration of general medical conditions; and (c) assessment of family history of general medical conditions, especially of metabolic and cardiovascular disorders. "Appropriate ongoing monitoring" includes re-evaluation and documentation of dose, efficacy and adverse effects; and targeted assessment, including assessment of movement disorder or neurological symptoms; weight, waist circumference and/or BMI; blood pressure; heart rate; blood glucose level; and lipid profile at periodic intervals.
- 2** **Don't routinely prescribe two or more antipsychotic medications concurrently.**

Research shows that use of two or more antipsychotic medications occurs in 4 to 35% of outpatients and 30 to 50% of inpatients. However, evidence for the efficacy and safety of using multiple antipsychotic medications is limited, and risk for drug interactions, noncompliance and medication errors is increased. Generally, the use of two or more antipsychotic medications concurrently should be avoided except in cases of three failed trials of monotherapy, which included one failed trial of Clozapine where possible, or where a second antipsychotic medication is added with a plan to cross-taper to monotherapy.
- 3** **Don't use antipsychotics as first choice to treat behavioral and psychological symptoms of dementia.**

Behavioral and psychological symptoms of dementia are defined as the non-cognitive symptoms and behaviors, including agitation or aggression, anxiety, irritability, depression, apathy and psychosis. Evidence shows that risks (e.g., cerebrovascular effects, mortality, parkinsonism or extrapyramidal signs, sedation, confusion and other cognitive disturbances, and increased body weight) tend to outweigh the potential benefits of antipsychotic medications in this population. Clinicians should limit the use of antipsychotic medications to cases where non-pharmacologic measures have failed and the patients' symptoms may create a threat to themselves or others. This item is also included in the American Geriatric Society's list of recommendations for "Choosing Wisely."
- 4** **Don't routinely prescribe antipsychotic medications as a first-line intervention for insomnia in adults.**

There is inadequate evidence for the efficacy of antipsychotic medications to treat insomnia (primary or due to another psychiatric or medical condition), with the few studies that do exist showing mixed results.
- 5** **Don't routinely prescribe antipsychotic medications as a first-line intervention for children and adolescents for any diagnosis other than psychotic disorders.**

Recent research indicates that use of antipsychotic medication in children has nearly tripled in the past 10 to 15 years, and this increase appears to be disproportionate among children with low family income, minority children and children with externalizing behavior disorders (i.e., rather than schizophrenia, other psychotic disorders and severe tic disorders). Evidence for the efficacy and tolerability of antipsychotic medications in children and adolescents is inadequate and there are notable concerns about weight gain, metabolic side effects and a potentially greater tendency for cardiovascular changes in children than in adults.

How This List Was Created

The American Psychiatric Association (APA) created a work group of members from the Council on Research and Quality Care (CRQC) to identify, refine and ascertain the degree of consensus for five proposed items. Two rounds of surveys were used to arrive at the final list: the first round narrowed the list from more than 20 potential items by inquiring about the extent of overuse, the impact on patients' health, the associated costs of care and the level of evidence for each treatment or procedure; and the second gauged membership support for the top five and asked for suggested revisions and comments. The surveys targeted the CRQC; the Council on Geriatric Psychiatry; the Council on Children, Adolescents, and Their Families; and the Assembly, which is the APA's governing body consisting of representative psychiatrists from around the country. After the work group incorporated feedback from the two large surveys, the APA's Board of Trustees Executive Committee reviewed and unanimously approved the final list.

For APA disclosure and conflict of interest policy please visit www.psychiatry.org.

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About the ABIM Foundation

The mission of the ABIM Foundation is to advance medical professionalism to improve the health care system. We achieve this by collaborating with physicians and physician leaders, medical trainees, health care delivery systems, payers, policymakers, consumer organizations and patients to foster a shared understanding of professionalism and how they can adopt the tenets of professionalism in practice.

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About the American Psychiatric Association

The American Psychiatric Association (APA), founded in 1844, is the world's largest psychiatric organization. It is a medical specialty society representing more than 33,000 psychiatric physicians from the United States and around the world. Its member physicians work together to ensure humane care and effective treatment for all persons with mental disorders, including intellectual disabilities and substance use disorders.

APA is the voice and conscience of modern psychiatry. Participating in the *Choosing Wisely*® campaign furthers APA's mission to promote the highest quality care for individuals with mental disorders (including intellectual disabilities and substance use disorders) and their families.

For more information, visit www.psychiatry.org.



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