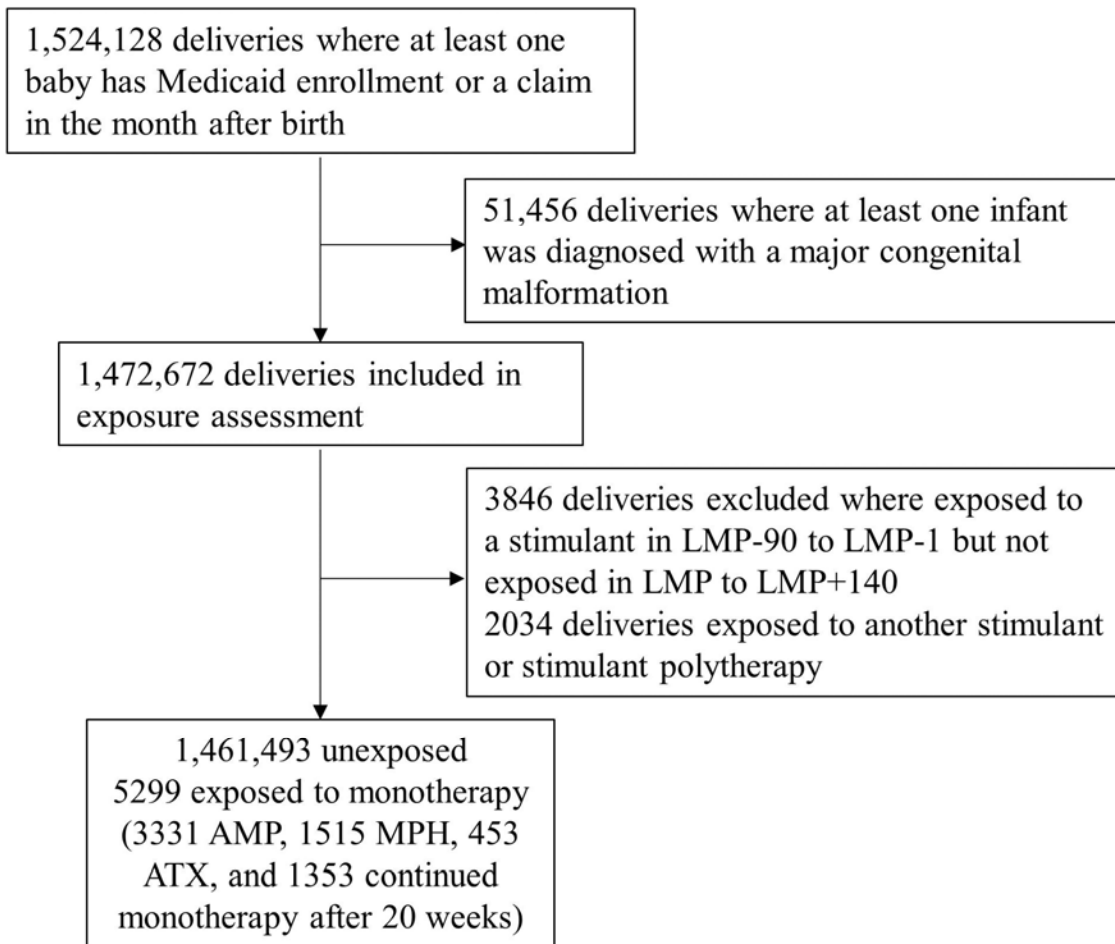


Appendix 1. Outcome Diagnosis Codes

Outcome	ICD-9 Codes
Preeclampsia	642.4x-642.7x
Placental abruption	641.20, 641.21, 641.23
Small for gestational age	656.5x, 764.0x, 764.1x, 764.9x
Preterm birth	362.20, 362.22, 362.23, 362.24, 362.25, 362.26, 362.27, 644.2x, 765.xx excluding 765.20 and 765.29, 774.2x, 776.6x, or CPT codes 00836, 49491, 49492, or 67229

Cohen JM, Hernandez-Diaz S, Bateman BT, Park Y, Desai RJ, Gray KJ, et al. Placental complications associated with psychostimulant use in pregnancy. *Obstet Gynecol* 2017; 130. The authors provided this information as a supplement to their article.

Appendix 2. Flow diagram of study sample selection. LMP, last menstrual period; AMP, amphetamine–dextroamphetamine; MPH, methylphenidate; ATX, atomoxetine.



Cohen JM, Hernandez-Diaz S, Bateman BT, Park Y, Desai RJ, Gray KJ, et al. Placental complications associated with psychostimulant use in pregnancy. *Obstet Gynecol* 2017; 130. The authors provided this information as a supplement to their article.

Appendix 3. Characteristics of Amphetamine–Dextroamphetamine–Exposed and Unexposed Reference Group

	Unadjusted					Adjusted				
	No Stimulant Use LMP-90 to LMP+140		AMP Monotherapy LMP to LMP+140		St. Diff.	No Stimulant Use LMP-90 to LMP+140		AMP Monotherapy LMP to LMP+140		St. Diff.
	N	%	N	%		N	%	N	%	
Total	1461493		3331			1417790		3328		
Calendar year at delivery										
2000	1811	0.1	0	0.0	0.05	0.0	0.0	0	0.0	
2001	92450	6.3	26	0.8	0.30	11544.8	0.8	26	0.8	0.00
2002	108062	7.4	68	2.0	0.25	28032.3	2.0	68	2.0	0.00
2003	139585	9.6	113	3.4	0.25	47640.2	3.4	113	3.4	0.00
2004	167258	11.4	165	5.0	0.24	71076.8	5.0	165	5.0	0.00
2005	167285	11.5	267	8.0	0.12	118054.3	8.3	267	8.0	0.01
2006	168389	11.5	340	10.2	0.04	145031.0	10.2	340	10.2	0.00
2007	153209	10.5	410	12.3	-0.06	178879.5	12.6	410	12.3	0.01
2008	154732	10.6	503	15.1	-0.14	217570.5	15.4	501	15.1	0.01
2009	157865	10.8	676	20.3	-0.26	283831.6	20.0	675	20.3	-0.01
2010	150847	10.3	763	22.9	-0.34	316129.1	22.3	763	22.9	-0.02
Region										
Midwest	445121	30.5	1547	46.4	-0.33	655421.8	46.2	1546	46.5	0.00
Northeast	232711	15.9	414	12.4	0.10	178439.2	12.6	414	12.4	0.00
South	395275	27.1	1170	35.1	-0.18	502941.7	35.5	1168	35.1	0.01
West	388386	26.6	200	6.0	0.58	80987.3	5.7	200	6.0	-0.01
Age at delivery										
≤19	351638	24.1	1188	35.7	-0.26	549553.3	38.8	1188	35.7	0.06
20-24	511333	35.0	896	26.9	0.18	367242.3	25.9	894	26.9	-0.02
25-29	343902	23.5	733	22.0	0.04	294640.5	20.8	732	22.0	-0.03

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30-34	162968	11.2	346	10.4	0.02	139624.6	9.9	346	10.4	-0.02
35-39	72540	5.0	142	4.3	0.03	56117.5	4.0	142	4.3	-0.02
≥40	19112	1.3	26	0.8	0.05	10611.8	0.8	26	0.8	0.00
Race/Ethnicity										
White	581811	39.8	2747	82.5	-0.97	1183498.7	83.5	2744	82.5	0.03
Black/African American	491124	33.6	293	8.8	0.64	118312.3	8.3	293	8.8	-0.02
Hispanic/Latino	219666	15.0	68	2.0	0.48	26719.8	1.9	68	2.0	-0.01
Asian/Pacific Islander	52161	3.6	*	0.1	0.26	1912.7	0.1	*	0.1	0.00
American Indian	26047	1.8	59	1.8	0.00	23990.3	1.7	59	1.8	-0.01
Other	59443	4.1	68	2.0	0.12	26602.2	1.9	68	2.0	-0.01
Unknown	31241	2.1	92	2.8	-0.04	36753.9	2.6	92	2.8	-0.01
Placental-Complications Risk Factors										
Multiparous	1104366	75.6	2019	60.6	0.32	818768.7	57.8	2016	60.6	-0.06
Multifetal gestation	41956	2.9	71	2.1	0.05	27503.3	1.9	71	2.1	-0.01
Tobacco use	52913	3.6	349	10.5	-0.27	153666.9	10.8	349	10.5	0.01
Alcohol use	8891	0.6	45	1.4	-0.08	21356.6	1.5	45	1.4	0.01
Other drug abuse or dependence	21991	1.5	143	4.3	-0.17	68316.4	4.8	142	4.3	0.03
Rheumatoid arthritis	1565	0.1	*	0.2	-0.03	2669.3	0.2	*	0.2	-0.01
Fibromyalgia	14246	1.0	97	2.9	-0.14	40154.2	2.8	96	2.9	0.00
Chronic lower GI conditions	5342	0.4	34	1.0	-0.08	14055.8	1.0	33	1.0	0.00
Asthma	68321	4.7	321	9.6	-0.19	145410.3	10.3	321	9.7	0.02
Hypertension	38192	2.6	110	3.3	-0.04	41083.3	2.9	109	3.3	-0.02
Antihypertensive medication	40598	2.8	177	5.3	-0.13	70755.0	5.0	177	5.3	-0.01
Diabetes	25977	1.8	58	1.7	0.00	25324.0	1.8	58	1.7	0.00
Insulin use	14638	1.0	32	1.0	0.00	14762.5	1.0	32	1.0	0.01
Antidiabetic medication	11977	0.8	37	1.1	-0.03	17451.9	1.2	37	1.1	0.01
Renal disease	6126	0.4	20	0.6	-0.03	8516.1	0.6	20	0.6	0.00

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Overweight or obese	31329	2.1	101	3.0	-0.06	43294.7	3.1	101	3.0	0.00
Dyslipidemia	15179	1.0	42	1.3	-0.02	17243.9	1.2	42	1.3	0.00
Congestive heart failure	1705	0.1	*	0.1	0.00	1684.0	0.1	*	0.1	0.00
Cardiac arrhythmia	9246	0.6	35	1.1	-0.05	14661.9	1.0	35	1.1	0.00
Ischemic Heart Disease	2118	0.1	*	0.2	-0.01	2687.7	0.2	*	0.2	0.00
Potential Indications for Stimulants†										
ADHD	10997	0.8	2025	60.8	-1.71	847540.4	59.8	2022	60.8	-0.02
Migraine	165332	11.3	671	20.1	-0.24	292212.1	20.6	670	20.1	0.01
Bipolar disorder	23901	1.6	550	16.5	-0.54	253130.0	17.9	550	16.5	0.03
Chronic fatigue syndrome	56547	3.9	297	8.9	-0.21	128069.5	9.0	297	8.9	0.00
Narcolepsy	193	0.0	23	0.7	-0.12	8891.8	0.6	21	0.6	0.00
Epilepsy	17023	1.2	98	2.9	-0.13	46320.5	3.3	98	2.9	0.02
Other Psychiatric Conditions										
Psychosis	3225	0.2	30	0.9	-0.09	15203.0	1.1	30	0.9	0.02
Schizophrenia	2703	0.2	23	0.7	-0.08	11524.5	0.8	23	0.7	0.01
Depression	96814	6.6	972	29.2	-0.62	450954.8	31.8	969	29.1	0.06
Personality disorder	3467	0.2	49	1.5	-0.13	23774.7	1.7	49	1.5	0.02
Adjustment disorder	17340	1.2	117	3.5	-0.15	56384.1	4.0	116	3.5	0.03
Anxiety disorder	54289	3.7	633	19.0	-0.50	266488.5	18.8	633	19.0	-0.01
Sleep disorder	10183	0.7	117	3.5	-0.20	51216.0	3.6	115	3.5	0.01
Delirium	1128	0.1	14	0.4	-0.07	7120.6	0.5	14	0.4	0.01
Other Medication Use										
Atypical antipsychotic	18080	1.2	495	14.9	-0.52	233238.6	16.5	495	14.9	0.04
Typical antipsychotic	1548	0.1	17	0.5	-0.07	9122.5	0.6	17	0.5	0.02
Antidepressant	138074	9.5	1602	48.1	-0.94	727158.8	51.3	1599	48.1	0.06
Benzodiazepine	45483	3.1	753	22.6	-0.61	317283.4	22.4	750	22.5	0.00
Other hypnotic	61332	4.2	435	13.1	-0.32	191097.4	13.5	433	13.0	0.01

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Barbiturates	21792	1.5	112	3.4	-0.12	48687.8	3.4	112	3.4	0.00
Anxiolytic	6044	0.4	66	2.0	-0.14	30391.1	2.1	66	2.0	0.01
Opioid	323505	22.1	1457	43.7	-0.47	628530.2	44.3	1454	43.7	0.01
Triptan	16202	1.1	123	3.7	-0.17	53400.3	3.8	123	3.7	0.00
NSAID	244501	16.7	822	24.7	-0.20	354493.5	25.0	822	24.7	0.01
Acetaminophen	389759	26.7	1508	45.3	-0.40	650583.2	45.9	1505	45.2	0.01
Anticonvulsant or lithium	18186	1.2	399	12.0	-0.44	179967.0	12.7	398	12.0	0.02
Indication Severity Proxies	Mean	SD	Mean	SD	St. Diff.	Mean	SD	Mean	SD	St. Diff.
Number of ADHD diagnoses	0.01	0.07	0.47	0.50	-1.30	0.46	0.50	0.47	0.50	-0.02
Number of Bipolar disorder diagnoses	0.01	0.10	0.11	0.32	-0.44	0.12	0.33	0.11	0.32	0.03
Number of depression diagnoses	0.06	0.23	0.24	0.43	-0.54	0.27	0.44	0.24	0.43	0.05
Number of generic medications	4.26	3.87	8.87	5.42	-0.98	9.06	6.22	8.86	5.40	0.03
Number of generics excluding stimulants‡	1.68	2.39	3.96	3.58	-0.75	4.08	3.96	3.95	3.58	0.03
Number of emergency department visits‡	0.28	0.79	0.51	1.22	-0.23	0.53	1.12	0.51	1.21	0.01
Number of hospitalizations‡	0.04	0.24	0.04	0.22	0.00	0.05	0.24	0.04	0.22	0.00
Number of outpatient visits‡	1.81	3.27	4.30	6.32	-0.49	4.62	6.36	4.30	6.32	0.05

Covariates defined from LMP-90 to LMP+140, unless otherwise indicated

*Actual numbers suppressed as required per data use agreement with the Centers for Medicare and Medicaid Services for counts <11

†1 or more ICD-9 diagnostic codes from LMP-90 to delivery

‡Healthcare utilization proxy variables defined during LMP-90 to LMP-1

Appendix 4. Characteristics of Methylphenidate-Exposed and Unexposed Reference Group

	Unadjusted					Adjusted				
	No Stimulant Use LMP-90 to LMP+140		MPH Monotherapy LMP to LMP+140		St. Diff.	No Stimulant Use LMP-90 to LMP+140		MPH Monotherapy LMP to LMP+140		St. Diff.
	N	%	N	%		N	%	N	%	
Total	1461493		1515			1427252		1515		
Calendar year at delivery										
2000	1811	0.1	*	0.1	0.02	879.0	0.1	*	0.1	0.00
2001	92450	6.3	42	2.8	0.17	39452.9	2.8	42	2.8	0.00
2002	108062	7.4	79	5.2	0.09	75053.6	5.3	79	5.2	0.00
2003	139585	9.6	99	6.5	0.11	92294.6	6.5	99	6.5	0.00
2004	167258	11.4	134	8.8	0.09	123676.8	8.7	134	8.8	-0.01
2005	167285	11.5	158	10.4	0.03	151281.5	10.6	158	10.4	0.01
2006	168389	11.5	181	12.0	-0.01	171792.3	12.0	181	12.0	0.00
2007	153209	10.5	193	12.7	-0.07	177415.0	12.4	193	12.7	-0.01
2008	154732	10.6	209	13.8	-0.10	195788.3	13.7	209	13.8	0.00
2009	157865	10.8	213	14.1	-0.10	200803.8	14.1	213	14.1	0.00
2010	150847	10.3	206	13.6	-0.10	198814.2	13.9	206	13.6	0.01
Region										
Midwest	445121	30.5	660	43.6	-0.27	619029.5	43.4	660	43.6	0.00
Northeast	232711	15.9	301	19.9	-0.10	283155.1	19.8	301	19.9	0.00
South	395275	27.1	420	27.7	-0.02	406987.5	28.5	420	27.7	0.02
West	388386	26.6	134	8.8	0.48	118079.9	8.3	134	8.8	-0.02
Age at delivery										
≤19	351638	24.1	770	50.8	-0.58	747808.2	52.4	770	50.8	0.03
20-24	511333	35.0	317	20.9	0.32	287055.7	20.1	317	20.9	-0.02

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25-29	343902	23.5	220	14.5	0.23	201043.0	14.1	220	14.5	-0.01
30-34	162968	11.2	142	9.4	0.06	130620.1	9.2	142	9.4	-0.01
35-39	72540	5.0	55	3.6	0.07	50557.6	3.5	55	3.6	0.00
≥40	19112	1.3	11	0.7	0.06	10167.5	0.7	11	0.7	0.00
Race/Ethnicity										
White	581811	39.8	1083	71.5	-0.67	1036461.1	72.6	1083	71.5	0.03
Black/African American	491124	33.6	271	17.9	0.37	249225.0	17.5	271	17.9	-0.01
Hispanic/Latino	219666	15.0	45	3.0	0.43	36679.6	2.6	45	3.0	-0.02
Asian/Pacific Islander	52161	3.6	*	0.4	0.23	4032.3	0.3	*	0.4	-0.02
American Indian	26047	1.8	33	2.2	-0.03	30865.0	2.2	33	2.2	0.00
Other	59443	4.1	30	2.0	0.12	26326.5	1.8	30	2.0	-0.01
Unknown	31241	2.1	47	3.1	-0.06	43662.6	3.1	47	3.1	0.00
Placental-Complications Risk Factors										
Multiparous	1104366	75.6	651	43.0	0.70	594497.9	41.7	651	43.0	-0.03
Multifetal gestation	41956	2.9	30	2.0	0.06	30005.1	2.1	30	2.0	0.01
Tobacco use	52913	3.6	111	7.3	-0.16	105857.9	7.4	111	7.3	0.00
Alcohol use	8891	0.6	23	1.5	-0.09	23509.1	1.7	23	1.5	0.01
Other drug abuse or dependence	21991	1.5	58	3.8	-0.15	57487.9	4.0	58	3.8	0.01
Rheumatoid arthritis	1565	0.1	*	0.1	-0.01	2338.3	0.2	*	0.1	0.01
Fibromyalgia	14246	1.0	41	2.7	-0.13	38009.9	2.7	41	2.7	0.00
Chronic lower GI conditions	5342	0.4	12	0.8	-0.06	11787.7	0.8	12	0.8	0.00
Asthma	68321	4.7	146	9.6	-0.19	137370.1	9.6	146	9.6	0.00
Hypertension	38192	2.6	37	2.4	0.01	34466.6	2.4	37	2.4	0.00
Antihypertensive medication	40598	2.8	77	5.1	-0.12	70111.2	4.9	77	5.1	-0.01
Diabetes	25977	1.8	26	1.7	0.00	25055.0	1.8	26	1.7	0.00
Insulin use	14638	1.0	13	0.9	0.01	12845.7	0.9	13	0.9	0.00
Antidiabetic medication	11977	0.8	13	0.9	0.00	11637.3	0.8	13	0.9	0.00

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Renal disease	6126	0.4	*	0.4	0.00	5494.8	0.4	*	0.4	0.00
Overweight or obese	31329	2.1	36	2.4	-0.02	34038.3	2.4	36	2.4	0.00
Dyslipidemia	15179	1.0	23	1.5	-0.04	21109.6	1.5	23	1.5	0.00
Congestive heart failure	1705	0.1	*	0.3	-0.03	3517.6	0.3	*	0.3	0.00
Cardiac arrhythmia	9246	0.6	11	0.7	-0.01	11454.8	0.8	11	0.7	0.01
Ischemic Heart Disease	2118	0.1	*	0.1	0.00	2131.5	0.2	*	0.1	0.01
Potential Indications for Stimulants†										
ADHD	10997	0.8	841	55.5	-1.54	791032.8	55.4	841	55.5	0.00
Migraine	165332	11.3	257	17.0	-0.16	244083.7	17.1	257	17.0	0.00
Bipolar disorder	23901	1.6	243	16.0	-0.52	219066.2	15.4	243	16.0	-0.02
Chronic fatigue syndrome	56547	3.9	107	7.1	-0.14	101136.6	7.1	107	7.1	0.00
Narcolepsy	193	0.0	19	1.3	-0.16	12980.5	0.9	19	1.3	-0.03
Epilepsy	17023	1.2	39	2.6	-0.10	34866.1	2.4	39	2.6	-0.01
Other Psychiatric Conditions										
Psychosis	3225	0.2	17	1.1	-0.11	17775.6	1.3	17	1.1	0.01
Schizophrenia	2703	0.2	18	1.2	-0.12	16892.6	1.2	18	1.2	0.00
Depression	96814	6.6	451	29.8	-0.63	444182.9	31.1	451	29.8	0.03
Personality disorder	3467	0.2	23	1.5	-0.14	21787.1	1.5	23	1.5	0.00
Adjustment disorder	17340	1.2	86	5.7	-0.25	87987.2	6.2	86	5.7	0.02
Anxiety disorder	54289	3.7	240	15.8	-0.42	230401.3	16.1	240	15.8	0.01
Sleep disorder	10183	0.7	52	3.4	-0.19	49435.9	3.5	52	3.4	0.00
Delirium	1128	0.1	*	0.3	-0.06	4214.1	0.3	*	0.3	-0.01
Other Medication Use										
Atypical antipsychotic	18080	1.2	259	17.1	-0.57	225625.3	15.8	259	17.1	-0.03
Typical antipsychotic	1548	0.1	*	0.5	-0.07	8332.1	0.6	*	0.5	0.01
Antidepressant	138074	9.5	761	50.2	-1.00	733574.6	51.4	761	50.2	0.02
Benzodiazepine	45483	3.1	234	15.5	-0.44	224469.3	15.7	234	15.5	0.01

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Other hypnotic	61332	4.2	184	12.2	-0.29	174022.9	12.2	184	12.2	0.00
Barbiturates	21792	1.5	38	2.5	-0.07	36855.7	2.6	38	2.5	0.00
Anxiolytic	6044	0.4	31	2.1	-0.15	29398.8	2.1	31	2.1	0.00
Opioid	323505	22.1	515	34.0	-0.27	490508.2	34.4	515	34.0	0.01
Triptan	16202	1.1	45	3.0	-0.13	43444.6	3.0	45	3.0	0.00
NSAID	244501	16.7	364	24.0	-0.18	342764.7	24.0	364	24.0	0.00
Acetaminophen	389759	26.7	549	36.2	-0.21	522078.1	36.6	549	36.2	0.01
Anticonvulsant or lithium	18186	1.2	192	12.7	-0.46	157554.5	11.0	192	12.7	-0.05
Indication Severity Proxies	Mean	SD	Mean	SD	St. Diff.	Mean	SD	Mean	SD	St. Diff.
Number of ADHD diagnoses	0.01	0.07	0.43	0.50	-1.21	0.43	0.49	0.43	0.50	-0.02
Number of Bipolar disorder diagnoses	0.01	0.10	0.11	0.31	-0.42	0.10	0.30	0.11	0.31	-0.02
Number of depression diagnoses	0.06	0.23	0.26	0.44	-0.57	0.27	0.44	0.26	0.44	0.03
Number of generic medications	4.26	3.87	8.42	5.18	-0.91	8.36	6.03	8.42	5.18	-0.01
Number of generics excluding stimulants‡	1.68	2.39	3.65	3.45	-0.66	3.63	3.75	3.65	3.45	-0.01
Number of emergency department visits‡	0.28	0.79	0.45	1.12	-0.18	0.46	1.02	0.45	1.12	0.00
Number of hospitalizations‡	0.04	0.24	0.04	0.22	0.03	0.04	0.22	0.04	0.22	0.01
Number of outpatient visits‡	1.81	3.27	5.26	8.97	-0.51	5.20	8.43	5.26	8.97	-0.01

Covariates defined from LMP-90 to LMP+140, unless otherwise indicated

*Actual numbers suppressed as required per data use agreement with the Centers for Medicare and Medicaid Services for counts <11

†1 or more ICD-9 diagnostic codes from LMP-90 to delivery

‡Healthcare utilization proxy variables defined during LMP-90 to LMP-1

Appendix 5. Characteristics of Atomoxetine-Exposed and Unexposed Reference Group

	Unadjusted					Adjusted				
	No Stimulant Use LMP-90 to LMP+140		ATX Monotherapy LMP to LMP+140		St. Diff.	No Stimulant Use LMP-90 to LMP+140		ATX Monotherapy LMP to LMP+140		St. Diff.
	N	%	N	%		N	%	N	%	
Total	1461493		453			1158784		452		
Calendar year at delivery										
2000	1811	0.1	0	0.0	0.05	0.0	0.0	0	0.0	
2001	92450	6.3	0	0.0	0.37	0.0	0.0	0	0.0	
2002	108062	7.4	0	0.0	0.40	0.0	0.0	0	0.0	
2003	139585	9.6	*	1.1	0.38	11486.3	1.0	*	1.1	-0.01
2004	167258	11.4	73	16.1	-0.14	188275.5	16.3	73	16.2	0.00
2005	167285	11.5	97	21.4	-0.27	246505.6	21.3	97	21.5	0.00
2006	168389	11.5	76	16.8	-0.15	197938.7	17.1	76	16.8	0.01
2007	153209	10.5	56	12.4	-0.06	140188.2	12.1	56	12.4	-0.01
2008	154732	10.6	49	10.8	-0.01	121362.1	10.5	48	10.6	0.00
2009	157865	10.8	49	10.8	0.00	124473.5	10.7	49	10.8	0.00
2010	150847	10.3	48	10.6	-0.01	128554.1	11.1	48	10.6	0.02
Region										
Midwest	445121	30.5	146	32.2	-0.04	380225.8	32.8	146	32.3	0.01
Northeast	232711	15.9	73	16.1	-0.01	186708.8	16.1	73	16.2	0.00
South	395275	27.1	146	32.2	-0.11	373858.4	32.3	145	32.1	0.00
West	388386	26.6	88	19.4	0.17	217991.1	18.8	88	19.5	-0.02
Age at delivery										
≤19	351638	24.1	176	38.9	-0.32	441358.4	38.1	176	38.9	-0.02
20-24	511333	35.0	108	23.8	0.25	267823.0	23.1	108	23.9	-0.02
25-29	343902	23.5	86	19.0	0.11	227856.7	19.7	85	18.8	0.02

Cohen JM, Hernandez-Diaz S, Bateman BT, Park Y, Desai RJ, Gray KJ, et al. Placental complications associated with psychostimulant use in pregnancy. *Obstet Gynecol* 2017; 130. The authors provided this information as a supplement to their article.

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30-34	162968	11.2	45	9.9	0.04	116894.3	10.1	45	10.0	0.00
35-39	72540	5.0	31	6.8	-0.08	84696.8	7.3	31	6.9	0.02
≥40	19112	1.3	*	1.6	-0.02	20154.7	1.7	*	1.6	0.01
Race/Ethnicity										
White	581811	39.8	351	77.5	-0.83	928045.4	80.1	350	77.4	0.07
Black/African American	491124	33.6	62	13.7	0.48	143600.3	12.4	62	13.7	-0.04
Hispanic/Latino	219666	15.0	14	3.1	0.43	27524.9	2.4	14	3.1	-0.04
Asian/Pacific Islander	52161	3.6	*	1.1	0.16	9231.0	0.8	*	1.1	-0.03
American Indian	26047	1.8	*	0.9	0.08	9644.6	0.8	*	0.9	-0.01
Other	59443	4.1	*	2.0	0.12	21073.8	1.8	*	2.0	-0.01
Unknown	31241	2.1	*	1.8	0.03	19664.0	1.7	*	1.8	-0.01
Placental-Complications Risk Factors										
Multiparous	1104366	75.6	249	55.0	0.44	648595.2	56.0	249	55.1	0.02
Multifetal gestation	41956	2.9	13	2.9	0.00	36353.7	3.1	13	2.9	0.02
Tobacco use	52913	3.6	38	8.4	-0.20	100906.8	8.7	38	8.4	0.01
Alcohol use	8891	0.6	18	4.0	-0.23	49853.7	4.3	18	4.0	0.02
Other drug abuse or dependence	21991	1.5	53	11.7	-0.42	131057.8	11.3	53	11.7	-0.01
Rheumatoid arthritis	1565	0.1	0	0.0	0.05	0.0	0.0	0	0.0	
Fibromyalgia	14246	1.0	11	2.4	-0.11	29571.0	2.6	11	2.4	0.01
Chronic lower GI conditions	5342	0.4	*	1.6	-0.12	20915.5	1.8	*	1.6	0.02
Asthma	68321	4.7	34	7.5	-0.12	90716.6	7.8	34	7.5	0.01
Hypertension	38192	2.6	12	2.7	0.00	32051.5	2.8	12	2.7	0.01
Antihypertensive medication	40598	2.8	40	8.8	-0.26	108507.6	9.4	39	8.6	0.03
Diabetes	25977	1.8	*	2.2	-0.03	28354.0	2.5	*	2.2	0.02
Insulin use	14638	1.0	*	2.0	-0.08	24677.1	2.1	*	2.0	0.01
Antidiabetic medication	11977	0.8	*	1.8	-0.08	22982.3	2.0	*	1.8	0.02
Renal disease	6126	0.4	*	0.7	-0.03	8472.9	0.7	*	0.7	0.01

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Overweight or obese	31329	2.1	13	2.9	-0.05	33100.9	2.9	13	2.9	0.00
Dyslipidemia	15179	1.0	11	2.4	-0.11	30303.1	2.6	11	2.4	0.01
Congestive heart failure	1705	0.1	0	0.0	0.05	0.0	0.0	0	0.0	
Cardiac arrhythmia	9246	0.6	*	1.6	-0.09	18832.4	1.6	*	1.6	0.01
Ischemic Heart Disease	2118	0.1	0	0.0	0.05	0.0	0.0	0	0.0	
Potential Indications for Stimulants†										
ADHD	10997	0.8	204	45.0	-1.24	489818.1	42.3	203	44.9	-0.05
Migraine	165332	11.3	95	21.0	-0.26	255706.1	22.1	95	21.0	0.03
Bipolar disorder	23901	1.6	102	22.5	-0.68	239458.9	20.7	101	22.4	-0.04
Chronic fatigue syndrome	56547	3.9	48	10.6	-0.26	128553.9	11.1	48	10.6	0.02
Narcolepsy	193	0.0	0	0.0	0.01	0.0	0.0	0	0.0	
Epilepsy	17023	1.2	18	4.0	-0.18	45312.3	3.9	18	4.0	0.00
Other Psychiatric Conditions										
Psychosis	3225	0.2	14	3.1	-0.23	28502.3	2.5	14	3.1	-0.04
Schizophrenia	2703	0.2	*	1.6	-0.15	17393.4	1.5	*	1.6	0.00
Depression	96814	6.6	173	38.2	-0.82	471946.0	40.7	173	38.3	0.05
Personality disorder	3467	0.2	12	2.7	-0.20	28494.5	2.5	12	2.7	-0.01
Adjustment disorder	17340	1.2	30	6.6	-0.28	78945.7	6.8	30	6.6	0.01
Anxiety disorder	54289	3.7	102	22.5	-0.58	272118.5	23.5	101	22.4	0.03
Sleep disorder	10183	0.7	20	4.4	-0.24	55824.8	4.8	20	4.4	0.02
Delirium	1128	0.1	0	0.0	0.04	0.0	0.0	0	0.0	
Other Medication Use										
Atypical antipsychotic	18080	1.2	122	26.9	-0.79	290923.6	25.1	121	26.8	-0.04
Typical antipsychotic	1548	0.1	*	1.1	-0.13	12003.6	1.0	*	1.1	-0.01
Antidepressant	138074	9.5	276	60.9	-1.28	763961.1	65.9	275	60.8	0.11
Benzodiazepine	45483	3.1	76	16.8	-0.47	212796.4	18.4	76	16.8	0.04
Other hypnotic	61332	4.2	76	16.8	-0.42	201749.8	17.4	75	16.6	0.02

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Barbiturates	21792	1.5	17	3.8	-0.14	46593.9	4.0	17	3.8	0.01
Anxiolytic	6044	0.4	14	3.1	-0.21	33593.5	2.9	13	2.9	0.00
Opioid	323505	22.1	168	37.1	-0.33	456240.5	39.4	168	37.2	0.05
Triptan	16202	1.1	16	3.5	-0.16	46921.5	4.1	16	3.5	0.03
NSAID	244501	16.7	104	23.0	-0.16	284385.3	24.5	104	23.0	0.04
Acetaminophen	389759	26.7	183	40.4	-0.29	492901.3	42.5	183	40.5	0.04
Anticonvulsant or lithium	18186	1.2	89	19.7	-0.63	204282.9	17.6	88	19.5	-0.05
Indication Severity Proxies	Mean	SD	Mean	SD	St. Diff.	Mean	SD	Mean	SD	St. Diff.
Number of ADHD diagnoses	0.01	0.07	0.35	0.48	-1.00	0.32	0.47	0.35	0.48	-0.05
Number of Bipolar disorder diagnoses	0.01	0.10	0.17	0.38	-0.58	0.15	0.36	0.17	0.37	-0.04
Number of depression diagnoses	0.06	0.23	0.33	0.47	-0.74	0.36	0.48	0.33	0.47	0.05
Number of generic medications	4.26	3.87	9.88	6.39	-1.06	10.12	6.92	9.85	6.35	0.04
Number of generics excluding stimulants‡	1.68	2.39	4.47	4.40	-0.79	4.61	4.39	4.45	4.39	0.04
Number of emergency department visits‡	0.28	0.79	0.40	1.02	-0.13	0.41	0.90	0.40	1.02	0.01
Number of hospitalizations‡	0.04	0.24	0.07	0.34	-0.08	0.06	0.29	0.07	0.34	-0.01
Number of outpatient visits‡	1.81	3.27	5.45	7.94	-0.60	5.42	8.22	5.45	7.94	0.00

Covariates defined from LMP-90 to LMP+140, unless otherwise indicated

*Actual numbers suppressed as required per data use agreement with the Centers for Medicare and Medicaid Services for counts <11

†1 or more ICD-9 diagnostic codes from LMP-90 to delivery

‡Healthcare utilization proxy variables defined during LMP-90 to LMP-1

Appendix 6. Characteristics of Women With Monotherapy Continuation After 20 Weeks of Gestation Compared With Discontinuation

	Unadjusted					Adjusted				
	Discontinuation ≤ LMP+140		Continuation > LMP+140		St. Diff.	Discontinuation ≤ LMP+140		Continuation > LMP+140		St. Diff.
	N	%	N	%		N	%	N	%	
Total	3946		1353			3930		1350		
Calendar year at delivery										
2000	0	0.0	*	0.1	-0.04	0.0	0.0	0	0.0	
2001	57	1.4	11	0.8	0.06	30.3	0.8	11	0.8	0.00
2002	120	3.0	27	2.0	0.07	81.5	2.1	27	2.0	0.00
2003	174	4.4	43	3.2	0.06	130.1	3.3	43	3.2	0.01
2004	294	7.5	78	5.8	0.07	233.3	5.9	78	5.8	0.01
2005	412	10.4	110	8.1	0.08	321.2	8.2	110	8.2	0.00
2006	469	11.9	128	9.5	0.08	371.4	9.5	128	9.5	0.00
2007	504	12.8	155	11.5	0.04	437.6	11.1	155	11.5	-0.01
2008	555	14.1	206	15.2	-0.03	607.7	15.5	206	15.3	0.01
2009	673	17.1	265	19.6	-0.07	756.9	19.3	265	19.6	-0.01
2010	688	17.4	329	24.3	-0.17	960.0	24.4	327	24.2	0.00
Region										
Midwest	1715	43.5	638	47.2	-0.07	1857.7	47.3	636	47.1	0.00
Northeast	605	15.3	183	13.5	0.05	541.4	13.8	183	13.6	0.01
South	1301	33.0	435	32.2	0.02	1248.1	31.8	434	32.2	-0.01
West	325	8.2	97	7.2	0.04	282.8	7.2	97	7.2	0.00
Age at delivery										
≤19	1772	44.9	362	26.8	0.39	1068.0	27.2	362	26.8	0.01
20-24	946	24.0	375	27.7	-0.09	1081.4	27.5	375	27.8	-0.01
25-29	704	17.8	335	24.8	-0.17	980.1	24.9	334	24.7	0.00

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30-34	349	8.8	184	13.6	-0.15	527.4	13.4	183	13.6	0.00
35-39	144	3.7	84	6.2	-0.12	240.2	6.1	83	6.2	0.00
≥40	31	0.8	13	1.0	-0.02	32.9	0.8	13	1.0	-0.01
Race/Ethnicity										
White	3052	77.3	1129	83.4	-0.15	3276.7	83.4	1127	83.5	0.00
Black/African American	528	13.4	98	7.2	0.20	291.6	7.4	98	7.3	0.01
Hispanic/Latino	96	2.4	31	2.3	0.01	87.7	2.2	31	2.3	0.00
Asian/Pacific Islander	9	0.2	*	0.4	-0.04	16.0	0.4	*	0.4	0.01
American Indian	67	1.7	29	2.1	-0.03	82.3	2.1	29	2.2	0.00
Other	80	2.0	27	2.0	0.00	80.2	2.0	27	2.0	0.00
Unknown	114	2.9	33	2.4	0.03	95.5	2.4	33	2.4	0.00
Placental-Complications Risk Factors										
Multiparous	2032	51.5	887	65.6	-0.29	2560.5	65.2	886	65.6	-0.01
Multifetal gestation	92	2.3	22	1.6	0.05	69.2	1.8	22	1.6	0.01
Tobacco use	324	8.2	174	12.9	-0.15	510.4	13.0	174	12.9	0.00
Alcohol use	70	1.8	16	1.2	0.05	44.9	1.1	16	1.2	0.00
Other drug abuse or dependence	193	4.9	61	4.5	0.02	168.0	4.3	61	4.5	-0.01
Rheumatoid arthritis	*	0.1	*	0.4	-0.05	14.4	0.4	*	0.3	0.01
Fibromyalgia	96	2.4	53	3.9	-0.09	153.2	3.9	53	3.9	0.00
Chronic lower GI conditions	40	1.0	13	1.0	0.01	47.8	1.2	13	1.0	0.03
Asthma	381	9.7	120	8.9	0.03	360.6	9.2	120	8.9	0.01
Hypertension	110	2.8	49	3.6	-0.05	133.1	3.4	49	3.6	-0.01
Antihypertensive medication	205	5.2	89	6.6	-0.06	245.2	6.2	88	6.5	-0.01
Diabetes	73	1.9	21	1.6	0.02	52.7	1.3	21	1.6	-0.02
Insulin use	39	1.0	15	1.1	-0.01	40.9	1.0	15	1.1	-0.01
Antidiabetic medication	45	1.1	13	1.0	0.02	35.7	0.9	13	1.0	-0.01
Renal disease	20	0.5	*	0.7	-0.02	26.1	0.7	*	0.7	0.00

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Overweight or obese	115	2.9	35	2.6	0.02	107.8	2.7	35	2.6	0.01
Dyslipidemia	59	1.5	17	1.3	0.02	51.2	1.3	17	1.3	0.00
Congestive heart failure	*	0.1	*	0.2	-0.02	*	0.2	*	0.2	-0.01
Cardiac arrhythmia	39	1.0	14	1.0	0.00	39.3	1.0	14	1.0	0.00
Ischemic Heart Disease	*	0.2	*	0.2	0.00	*	0.1	*	0.2	-0.01
Potential Indications for Stimulants†										
ADHD	2184	55.4	886	65.5	-0.21	2573.2	65.5	883	65.4	0.00
Migraine	743	18.8	280	20.7	-0.05	789.5	20.1	280	20.7	-0.02
Bipolar disorder	666	16.9	229	16.9	0.00	673.4	17.1	228	16.9	0.01
Chronic fatigue syndrome	334	8.5	118	8.7	-0.01	340.8	8.7	118	8.7	0.00
Narcolepsy	27	0.7	15	1.1	-0.05	41.8	1.1	15	1.1	0.00
Epilepsy	117	3.0	38	2.8	0.01	108.7	2.8	38	2.8	0.00
Other Psychiatric Conditions										
Psychosis	49	1.2	12	0.9	0.03	38.8	1.0	12	0.9	0.01
Schizophrenia	39	1.0	*	0.7	0.04	24.1	0.6	*	0.7	-0.01
Depression	1184	30.0	412	30.5	-0.01	1211.9	30.8	410	30.4	0.01
Personality disorder	62	1.6	22	1.6	0.00	66.3	1.7	22	1.6	0.00
Adjustment disorder	187	4.7	46	3.4	0.07	139.1	3.5	46	3.4	0.01
Anxiety disorder	672	17.0	303	22.4	-0.14	872.8	22.2	303	22.4	-0.01
Sleep disorder	138	3.5	51	3.8	-0.01	144.8	3.7	51	3.8	0.00
Delirium	17	0.4	*	0.2	0.05	*	0.1	*	0.2	-0.01
Other Medication Use										
Atypical antipsychotic	686	17.4	190	14.0	0.09	545.6	13.9	190	14.1	-0.01
Typical antipsychotic	24	0.6	*	0.4	0.02	16.9	0.4	*	0.4	0.00
Antidepressant	1959	49.7	680	50.3	-0.01	1969.9	50.1	679	50.3	0.00
Benzodiazepine	663	16.8	400	29.6	-0.31	1144.4	29.1	398	29.5	-0.01
Other hypnotic	485	12.3	210	15.5	-0.09	616.6	15.7	208	15.4	0.01

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Barbiturates	129	3.3	38	2.8	0.03	104.0	2.7	38	2.8	-0.01
Anxiolytic	87	2.2	24	1.8	0.03	72.2	1.8	24	1.8	0.00
Opioid	1451	36.8	689	50.9	-0.29	1990.8	50.7	687	50.9	0.00
Triptan	124	3.1	60	4.4	-0.07	168.4	4.3	60	4.4	-0.01
NSAID	911	23.1	379	28.0	-0.11	1096.8	27.9	378	28.0	0.00
Acetaminophen	1546	39.2	694	51.3	-0.25	1994.1	50.7	692	51.3	-0.01
Anticonvulsant or lithium	498	12.6	182	13.5	-0.02	518.8	13.2	182	13.5	-0.01
Indication Severity Proxies	Mean	SD	Mean	SD	St. Diff.	Mean	SD	Mean	SD	St. Diff.
Number of ADHD diagnoses	0.44	0.50	0.46	0.50	-0.05	0.46	0.50	0.47	0.50	-0.01
Number of Bipolar disorder diagnoses	0.12	0.32	0.11	0.31	0.04	0.11	0.31	0.11	0.31	0.00
Number of depression diagnoses	0.26	0.44	0.24	0.43	0.03	0.25	0.43	0.25	0.43	0.00
Number of generic medications	0.46	1.14	0.57	1.27	-0.09	9.19	5.52	9.22	5.61	-0.01
Number of generics excluding stimulants‡	8.70	5.39	9.21	5.61	-0.09	4.32	3.75	4.31	3.85	0.00
Number of emergency department visits‡	3.78	3.54	4.31	3.84	-0.14	0.56	1.34	0.57	1.28	-0.01
Number of hospitalizations‡	0.04	0.23	0.05	0.25	-0.05	0.06	0.28	0.05	0.25	0.02
Number of outpatient visits‡	4.84	7.60	4.18	6.46	0.09	4.22	5.80	4.19	6.46	0.00

Covariates defined from LMP-90 to LMP+140, unless otherwise indicated

*Actual numbers suppressed as required per data use agreement with the Centers for Medicare and Medicaid Services for counts <11

†1 or more ICD-9 diagnostic codes from LMP-90 to delivery

‡Healthcare utilization proxy variables defined during LMP-90 to LMP-1