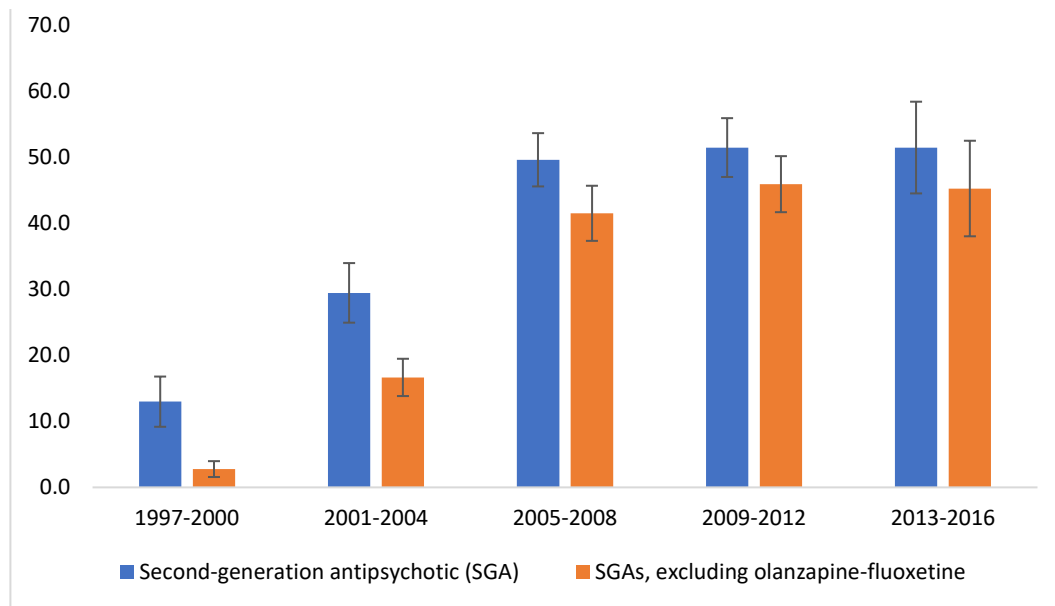


FIGURE S1. Prescribing trends of second-generation antipsychotics (SGAs) with and without olanzapine-fluoxetine, 1997-2016



Note: Data are from National Ambulatory Medical Care Survey, 1997-2016. Bars represent 95% confidence intervals.

TABLE S1. ICD-9 and ICD-10 codes for bipolar disorder

ICD-9-CM	Description		ICD-10
Bipolar mania			
29600	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, UNSPECIFIED DEGREE	→	F3010
29601	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, MILD DEGREE	→	F3011
29602	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, MODERATE DEGREE	→	F3012
29603	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, SEVERE DEGREE WITHOUT MENTION OF PSYCHOTIC BEHAVIOR	→	F3013
29604	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, SEVERE DEGREE, SPECIFIED AS WITH PSYCHOTIC BEHAVIOR	→	F302
29605	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, IN PARTIAL OR UNSPECIFIED REMISSION	→	F303
29606	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, IN FULL REMISSION	→	F304
29610	MANIC AFFECTIVE DISORDER RECURRENT EPISODE UNSPECIFIED DEGREE	→	F3010
29611	MANIC AFFECTIVE DISORDER RECURRENT EPISODE MILD DEGREE	→	F3011
29612	MANIC AFFECTIVE DISORDER RECURRENT EPISODE MODERATE DEGREE	→	F3012
29613	MANIC AFFECTIVE DISORDER RECURRENT EPISODE SEVERE DEGREE WITHOUT PSYCHOTIC BEHAVIOR	→	F3013
29614	MANIC AFFECTIVE DISORDER RECURRENT EPISODE SEVERE DEGREE SPECIFIED AS WITH PSYCHOTIC BEHAVIOR	→	F302
29615	MANIC AFFECTIVE DISORDER RECURRENT EPISODE IN PARTIAL OR UNSPECIFIED REMISSION	→	F303
29616	MANIC AFFECTIVE DISORDER RECURRENT EPISODE IN FULL REMISSION	→	F304
29640	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC UNSPECIFIED DEGREE	→	F3110
29641	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC MILD DEGREE	→	F3111
29642	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC MODERATE DEGREE	→	F3112
29643	BIPOLAR AFFECTIVE DISORDER MANIC SEVERE DEGREE, WITHOUT MENTION OF PSYCHOTIC BEHAVIOR	→	F3113
29644	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC SEVERE DEGREE SPECIFIED AS WITH PSYCHOTIC BEHAVIOR	→	F312
29645	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC IN PARTIAL OR UNSPECIFIED REMISSION	→	F3173
29646	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC IN FULL REMISSION	→	F3174
Bipolar depressed			
29650	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED UNSPECIFIED DEGREE	→	F3130

29651	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED MILD DEGREE	→	F3131
29652	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED MODERATE DEGREE	→	F312
29653	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED SEVERE DEGREE, WITHOUT MENTION OF PSYCHOTIC BEHAVIOR	→	F314
29654	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED SEVERE DEGREE SPECIFIED AS WITH PSYCHOTIC BEHAVIOR	→	F315
29655	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED IN PARTIAL OR UNSPECIFIED REMISSION	→	F3175
29656	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED IN REMISSION	→	F3176
Bipolar mixed			
29660	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED UNSPECIFIED DEGREE	→	F3160
29661	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED MILD DEGREE	→	F3161
29662	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED MODERATE DEGREE	→	F3162
29663	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED, SEVERE DEGREE WITHOUT MENTION OF PSYCHOTIC BEHAVIOR	→	F3163
29664	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED SEVERE DEGREE SPECIFIED AS WITH PSYCHOTIC BEHAVIOR	→	F3164
29665	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED IN PARTIAL OR UNSPECIFIED REMISSION	→	F3177
29666	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED IN FULL REMISSION	→	F3178
Bipolar unspecified			
2967	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) UNSPECIFIED	→	F319
29680	BIPOLAR DISORDER, UNSPECIFIED	→	F319
29689	BIPOLAR DISORDER, OTHER	→	F3181

TABLE S2. ICD-9 and ICD-10 codes for psychiatric co-morbidities

Comorbidity	ICD-9-CM	ICD-9-CM Description		ICD-10
Anxiety disorder				
Generalized anxiety disorder	30002	GENERALIZED ANXIETY DISORDER	→	F411
Panic disorder	30001	PANIC DISORDER WITHOUT AGORAPHOBIA	→	F410
Phobia	30020	PHOBIA UNSPECIFIED	→	F409
	30021	AGORAPHOBIA WITH PANIC DISORDER	→	F4001
	30022	AGORAPHOBIA WITHOUT PANIC ATTACKS	→	F4002
	30023	SOCIAL PHOBIA	→	F4010
	30029	OTHER ISOLATED OR SPECIFIC PHOBIAS	→	F40218
			→	F40240
→			F40241	
Post-traumatic stress disorder	30981	POSTTRAUMATIC STRESS DISORDER	→	F4310
			→	F4312
Other	30000	ANXIETY STATE UNSPECIFIED	→	F419
	30009	OTHER ANXIETY STATES	→	F418
	29384	ANXIETY DISORDER IN CONDITIONS CLASSIFIED ELSEWHERE	→	F064
	3003	OBSESSIVE-COMPULSIVE DISORDERS	→	F42
Psychotic disorder				
Schizophreniform disorder	29540	ACUTE SCHIZOPHRENIC EPISODE UNSPECIFIED STATE	→	F2081
	29541	ACUTE SCHIZOPHRENIC EPISODE SUBCHRONIC STATE		
	29542	ACUTE SCHIZOPHRENIC EPISODE CHRONIC STATE		
	29543	ACUTE SCHIZOPHRENIC EPISODE SUBCHRONIC STATE WITH ACUTE EXACERBATION		
	29544	ACUTE SCHIZOPHRENIC EPISODE CHRONIC STATE WITH ACUTE EXACERBATION		
	29545	ACUTE SCHIZOPHRENIC EPISODE IN REMISSION		
Catatonic schizophrenia	29520	CATATONIC TYPE SCHIZOPHRENIA UNSPECIFIED STATE	→	F202
	29521	CATATONIC TYPE SCHIZOPHRENIA SUBCHRONIC STATE		
	29522	CATATONIC TYPE SCHIZOPHRENIA CHRONIC STATE		
	29523	CATATONIC TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION		
	29524	CATATONIC TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION		

	29525	CATATONIC TYPE SCHIZOPHRENIA IN REMISSION		
Disorganized schizophrenia	29510	DISORGANIZED TYPE SCHIZOPHRENIA UNSPECIFIED STATE	→	F201
	29511	DISORGANIZED TYPE SCHIZOPHRENIA SUBCHRONIC STATE		
	29512	DISORGANIZED TYPE SCHIZOPHRENIA CHRONIC STATE		
	29513	DISORGANIZED TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION		
	29514	DISORGANIZED TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION		
	29515	DISORGANIZED TYPE SCHIZOPHRENIA IN REMISSION		
Paranoid schizophrenia	29530	PARANOID TYPE SCHIZOPHRENIA UNSPECIFIED STATE	→	F200
	29531	PARANOID TYPE SCHIZOPHRENIA SUBCHRONIC STATE		
	29532	PARANOID TYPE SCHIZOPHRENIA CHRONIC STATE		
	29533	PARANOID TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION		
	29534	PARANOID TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION		
	29535	PARANOID TYPE SCHIZOPHRENIA IN REMISSION		
Residual schizophrenia	29560	RESIDUAL SCHIZOPHRENIA UNSPECIFIED STATE	→	F205
	29561	RESIDUAL SCHIZOPHRENIA SUBCHRONIC STATE		
	29562	RESIDUAL SCHIZOPHRENIA CHRONIC STATE		
	29563	RESIDUAL SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION		
	29564	RESIDUAL SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION		
	29565	RESIDUAL SCHIZOPHRENIA IN REMISSION		
Unspecified schizophrenia	29590	UNSPECIFIED TYPE SCHIZOPHRENIA UNSPECIFIED STATE	→	F209
	29591	UNSPECIFIED TYPE SCHIZOPHRENIA SUBCHRONIC STATE		
	29592	UNSPECIFIED TYPE SCHIZOPHRENIA CHRONIC STATE		
	29593	UNSPECIFIED TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION		
	29594	UNSPECIFIED TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION		
	29595	UNSPECIFIED TYPE SCHIZOPHRENIA IN REMISSION		
Schizoaffective disorder	29570	SCHIZO-AFFECTIVE TYPE SCHIZOPHRENIA UNSPECIFIED STATE	→	F259
	29571	SCHIZO-AFFECTIVE TYPE SCHIZOPHRENIA SUBCHRONIC STATE		

	29572	SCHIZO-AFFECTIVE TYPE SCHIZOPHRENIA CHRONIC STATE		
	29573	SCHIZO-AFFECTIVE TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION		
	29574	SCHIZO-AFFECTIVE TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION		
	29575	SCHIZO-AFFECTIVE TYPE SCHIZOPHRENIA IN REMISSION		
Other schizophrenia	29500	SIMPLE TYPE SCHIZOPHRENIA UNSPECIFIED STATE	→	F2089
	29501	SIMPLE TYPE SCHIZOPHRENIA SUBCHRONIC STATE		
	29502	SIMPLE TYPE SCHIZOPHRENIA CHRONIC STATE		
	29503	SIMPLE TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION		
	29504	SIMPLE TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION		
	29505	SIMPLE TYPE SCHIZOPHRENIA IN REMISSION		
	29550	LATENT SCHIZOPHRENIA UNSPECIFIED STATE		
	29551	LATENT SCHIZOPHRENIA SUBCHRONIC STATE		
	29552	LATENT SCHIZOPHRENIA CHRONIC STATE		
	29553	LATENT SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION		
	29554	LATENT SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION		
	29555	LATENT SCHIZOPHRENIA IN REMISSION		
	29580	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA UNSPECIFIED STATE		
	29581	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA SUBCHRONIC STATE		
	29582	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA CHRONIC STATE		
	29583	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION		
29584	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION			
29585	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA IN REMISSION			
Psychosis	2970	DELUSIONAL DISORDER	→	F22
	2971			
	2972			
	2978			

	2981	OTHER PSYCHOTIC DISORDER NOT DUE TO A SUBSTANCE OR KNOWN PHYSIOLOGICAL CONDITION		F28
	2979	BRIEF PSYCHOTIC DISORDER	→	F23
	2983			
	2984			
	2988			
	2989	UNSPECIFIED PSYCHOSIS	→	F29
	2973	SHARED PSYCHOTIC DISORDER	→	F24
	29381	PSYCHOTIC DISORDER WITH DELUSIONS IN CONDITIONS CLASSIFIED ELSEWHERE	→	F062
	29382	PSYCHOTIC DISORDER WITH HALLUCINATIONS IN CONDITIONS CLASSIFIED ELSEWHERE	→	F060
Substance use disorder				
Alcohol-related	2910	ALCOHOL WITHDRAWAL DELIRIUM	→	F10231
	2911	ALCOHOL-INDUCED PERSISTING AMNESTIC DISORDER	→	F1096
	2912	ALCOHOL-INDUCED PERSISTING DEMENTIA	→	F1027
	2913	ALCOHOL-INDUCED PSYCHOTIC DISORDER WITH HALLUCINATIONS	→	F10951
	2914	IDIOSYNCRATIC ALCOHOL INTOXICATION	→	F10929
	2915	ALCOHOL-INDUCED PSYCHOTIC DISORDER WITH DELUSIONS	→	F10950
	29181	ALCOHOL WITHDRAWAL	→	F10239
	29182	ALCOHOL INDUCED SLEEP DISORDERS	→	F10182 F10282 F10982
	29189	OTHER SPECIFIED ALCOHOL-INDUCED MENTAL DISORDERS	→	F10159 F10180 F10181 F10188 F10259 F10280 F10281 F10288 F10959 F10980
	2919	UNSPECIFIED ALCOHOL-INDUCED MENTAL DISORDERS	→	F1099

	30300	ACUTE ALCOHOLIC INTOXICATION IN ALCOHOLISM UNSPECIFIED DRINKING BEHAVIOR		
	30301	ACUTE ALCOHOLIC INTOXICATION IN ALCOHOLISM CONTINUOUS DRINKING BEHAVIOR	→	F10229
	30302	ACUTE ALCOHOLIC INTOXICATION IN ALCOHOLISM EPISODIC DRINKING BEHAVIOR		
	30303	ACUTE ALCOHOLIC INTOXICATION IN ALCOHOLISM IN REMISSION		
	30390	OTHER AND UNSPECIFIED ALCOHOL DEPENDENCE UNSPECIFIED DRINKING BEHAVIOR		
	30391	OTHER AND UNSPECIFIED ALCOHOL DEPENDENCE CONTINUOUS DRINKING BEHAVIOR	→	F1020
	30392	OTHER AND UNSPECIFIED ALCOHOL DEPENDENCE EPISODIC DRINKING BEHAVIOR		
	30393	OTHER AND UNSPECIFIED ALCOHOL DEPENDENCE IN REMISSION		
	30500	NONDEPENDENT ALCOHOL ABUSE UNSPECIFIED DRINKING BEHAVIOR		
	30501	NONDEPENDENT ALCOHOL ABUSE CONTINUOUS DRINKING BEHAVIOR	→	F1010
	30502	NONDEPENDENT ALCOHOL ABUSE EPISODIC DRINKING BEHAVIOR		
	30503	NONDEPENDENT ALCOHOL ABUSE IN REMISSION		
	3575	ALCOHOLIC POLYNEUROPATHY	→	G621
	4255	ALCOHOLIC CARDIOMYOPATHY	→	I426
	53530	ALCOHOLIC GASTRITIS (WITHOUT HEMORRHAGE)	→	K2920
	53531	ALCOHOLIC GASTRITIS WITH HEMORRHAGE	→	K2921
	5710	ALCOHOLIC FATTY LIVER	→	K700
	5711	ACUTE ALCOHOLIC HEPATITIS	→	K7010
	5712	ALCOHOLIC CIRRHOSIS OF LIVER	→	K7030
	5713	ALCOHOLIC LIVER DAMAGE UNSPECIFIED	→	K709
Amphetamines	30440	AMPHETAMINE AND OTHER PSYCHOSTIMULANT DEPENDENCE UNSPECIFIED USE		
	30441	AMPHETAMINE AND OTHER PSYCHOSTIMULANT DEPENDENCE CONTINUOUS USE	→	F1520
	30442	AMPHETAMINE AND OTHER PSYCHOSTIMULANT DEPENDENCE EPISODIC USE		
	30443	AMPHETAMINE AND OTHER PSYCHOSTIMULANT DEPENDENCE IN REMISSION	→	F1521

	30570	NONDEPENDENT AMPHETAMINE OR RELATED ACTING SYMPATHOMIMETIC ABUSE UNSPECIFIED USE		
	30571	NONDEPENDENT AMPHETAMINE OR RELATED ACTING SYMPATHOMIMETIC ABUSE CONTINUOUS USE	→	F1510
	30572	NONDEPENDENT AMPHETAMINE OR RELATED ACTING SYMPATHOMIMETIC ABUSE EPISODIC USE		
	30573	NONDEPENDENT AMPHETAMINE OR RELATED ACTING SYMPATHOMIMETIC ABUSE IN REMISSION		
	30430	CANNABIS DEPENDENCE UNSPECIFIED USE		
Cannabis	30431	CANNABIS DEPENDENCE CONTINUOUS USE	→	F1220
	30432	CANNABIS DEPENDENCE EPISODIC USE		
	30433	CANNABIS DEPENDENCE IN REMISSION	→	F1210
	30520	NONDEPENDENT CANNABIS ABUSE UNSPECIFIED USE		
	30521	NONDEPENDENT CANNABIS ABUSE CONTINUOUS USE	→	F1210 or F1290
	30522	NONDEPENDENT CANNABIS ABUSE EPISODIC USE		
	30523	NONDEPENDENT CANNABIS ABUSE IN REMISSION		
		9696	POISONING BY CANNABIS	→
Cocaine	30420	COCAINE DEPENDENCE UNSPECIFIED USE		
	30421	COCAINE DEPENDENCE CONTINUOUS USE	→	F1420
	30422	COCAINE DEPENDENCE EPISODIC USE		
	30423	COCAINE DEPENDENCE IN REMISSION		
	30560	NONDEPENDENT COCAINE ABUSE UNSPECIFIED USE		
	30561	NONDEPENDENT COCAINE ABUSE CONTINUOUS USE	→	F1410
	30562	NONDEPENDENT COCAINE ABUSE EPISODIC USE		
	30563	NONDEPENDENT COCAINE ABUSE IN REMISSION		
		97081	POISONING BY COCAINE	→
Drug-induced mental disorders	2920	DRUG WITHDRAWAL	→	F19939
	29211	DRUG-INDUCED PSYCHOTIC DISORDER WITH DELUSIONS	→	F19950
	29212	DRUG-INDUCED PSYCHOTIC DISORDER WITH HALLUCINATIONS	→	F19951

	2922	PATHOLOGICAL DRUG INTOXICATION	→	F15920
	29281	DRUG-INDUCED DELIRIUM	→	F19921
	29282	DRUG-INDUCED PERSISTING DEMENTIA	→	F1997
	29283	DRUG-INDUCED PERSISTING AMNESTIC DISORDER	→	F1996
	29284	DRUG-INDUCED MOOD DISORDER	→	F1994
	29285	DRUG INDUCED SLEEP DISORDERS	→	F11182 F11282 F11982 F13182 F13282 F13982 F14182 F14282 F14982 F15182 F15282 F15982 F19182 F19282 F19982
	29289	OTHER SPECIFIED DRUG-INDUCED MENTAL DISORDERS	→	F11159 F11181 F11188 F11222 F11259 F11281 F11288 F11922 F11959 F11981 F11988 F12122 F12159 F12180 F12188

			F12222
			F12259
			F12280
			F12288
			F12922
			F12959
			F12980
			F12988
			F13159
			F13180
			F13181
			F13188
			F13259
			F13280
			F13281
			F13288
			F13959
			F13980
			F13981
			F13988
			F14122
			F14159
			F14180
			F14181
			F14188
			F14222
			F14259
			F14280
			F14281
			F14288
			F14922
			F14959
			F14980
			F14981
			F14988

			F15122
			F15159
			F15180
			F15181
			F15188
			F15222
			F15259
			F15280
			F15281
			F15288
			F15922
			F15959
			F15980
			F15981
			F15988
			F16122
			F16159
			F16180
			F16183
			F16188
			F16259
			F16280
			F16283
			F16288
			F16959
			F16980
			F16983
			F16988
			F17208
			F17218
			F17228
			F17298
			F18159
			F18180
			F18188

				F18259
				F18280
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				F18988
				F19122
				F19159
				F19180
				F19181
				F19188
				F19222
				F19259
				F19280
				F19281
				F19288
				F19922
				F19959
				F19980
				F19981
				F19988
	2929	UNSPECIFIED DRUG-INDUCED MENTAL DISORDER	→	F1999
Hallucinogens	30450	HALLUCINOGEN DEPENDENCE UNSPECIFIED USE		
	30451	HALLUCINOGEN DEPENDENCE CONTINUOUS USE	→	F1620
	30452	HALLUCINOGEN DEPENDENCE EPISODIC USE		
	30453	HALLUCINOGEN DEPENDENCE IN REMISSION	→	F1621
	30530	NONDEPENDENT HALLUCINOGEN ABUSE UNSPECIFIED USE		
	30531	NONDEPENDENT HALLUCINOGEN ABUSE CONTINUOUS USE	→	F1610
	30532	NONDEPENDENT HALLUCINOGEN ABUSE EPISODIC USE		
	30533	NONDEPENDENT HALLUCINOGEN ABUSE IN REMISSION		
	9696	POISONING BY PSYCHODYSLEPTICS (HALLUCINOGENS)	→	T40901A
				T40902A
				T40903A
				T40904A
				T40991A

				T40992A T40993A T40994A
Opioids	30400	OPIOID TYPE DEPENDENCE UNSPECIFIED USE		
	30401	OPIOID TYPE DEPENDENCE CONTINUOUS USE	→	F1120
	30402	OPIOID TYPE DEPENDENCE EPISODIC USE		
	30403	OPIOID TYPE DEPENDENCE IN REMISSION	→	F1121
	30470	COMBINATIONS OF OPIOID TYPE DRUG WITH ANY OTHER DRUG DEPENDENCE UNSPECIFIED USE		
	30471	COMBINATIONS OF OPIOID TYPE DRUG WITH ANY OTHER DRUG DEPENDENCE CONTINUOUS USE	→	F1920
	30472	COMBINATIONS OF OPIOID TYPE DRUG WITH ANY OTHER DRUG DEPENDENCE EPISODIC USE		
	30473	COMBINATIONS OF OPIOID TYPE DRUG WITH ANY OTHER DRUG DEPENDENCE IN REMISSION	→	F1921
	30550	NONDEPENDENT OPIOID ABUSE UNSPECIFIED USE		
	30551	NONDEPENDENT OPIOID ABUSE CONTINUOUS USE		
	30552	NONDEPENDENT OPIOID ABUSE EPISODIC USE	→	F1110
	30553	NONDEPENDENT OPIOID ABUSE IN REMISSION		
	96500	POISONING BY OPIUM (ALKALOIDS) UNSPECIFIED	→	T400X1A T400X2A T400X3A T400X4A
	96501	POISONING BY HEROIN	→	T401X1A T401X2A T401X3A T401X4A
	96502	POISONING BY METHADONE	→	T403X1A T403X2A T403X3A T403X4A
	96509	POISONING BY OTHER OPIATES AND RELATED NARCOTICS	→	T402X1A → T402X2A → T402X3A → T402X4A

			→	T404X1A
			→	T404X2A
			→	T404X3A
			→	T404X4A
			→	T40601A
			→	T40602A
			→	T40603A
			→	T40604A
			→	T40691A
			→	T40692A
			→	T40693A
			→	T40694A
Sedatives, hypnotics, anxiolytics, tranquilizers, or barbiturates	30410	SEDATIVE, HYPNOTIC OR ANXIOLYTIC DEPENDENCE UNSPECIFIED USE		
	30411	SEDATIVE, HYPNOTIC OR ANXIOLYTIC DEPENDENCE CONTINUOUS USE	→	F1320
	30412	SEDATIVE, HYPNOTIC OR ANXIOLYTIC DEPENDENCE EPISODIC USE		
	30413	SEDATIVE, HYPNOTIC OR ANXIOLYTIC DEPENDENCE IN REMISSION	→	F1321
	30540	NONDEPENDENT SEDATIVE, HYPNOTIC, OR ANXIOLYTIC ABUSE, UNSPECIFIED USE		
	30541	NONDEPENDENT SEDATIVE, HYPNOTIC, OR ANXIOLYTIC ABUSE, CONTINUOUS USE	→	F1310
	30542	NONDEPENDENT SEDATIVE, HYPNOTIC, OR ANXIOLYTIC ABUSE, EPISODIC USE		
	30543	NONDEPENDENT SEDATIVE, HYPNOTIC, OR ANXIOLYTIC ABUSE, IN REMISSION		
Other	30460	OTHER SPECIFIED DRUG DEPENDENCE UNSPECIFIED USE		
	30461	OTHER SPECIFIED DRUG DEPENDENCE CONTINUOUS USE	→	F1920
	30462	OTHER SPECIFIED DRUG DEPENDENCE EPISODIC USE		
	30463	OTHER SPECIFIED DRUG DEPENDENCE IN REMISSION		
	30480	COMBINATIONS OF DRUG DEPENDENCE EXCLUDING OPIOID TYPE DRUG UNSPECIFIED USE	→	F1920
	30481	COMBINATIONS OF DRUG DEPENDENCE EXCLUDING OPIOID TYPE DRUG CONTINUOUS USE		

	30482	COMBINATIONS OF DRUG DEPENDENCE EXCLUDING OPIOID TYPE DRUG EPISODIC USE		
	30483	COMBINATIONS OF DRUG DEPENDENCE EXCLUDING OPIOID TYPE DRUG IN REMISSION		
	30490	UNSPECIFIED DRUG DEPENDENCE UNSPECIFIED USE		
	30491	UNSPECIFIED DRUG DEPENDENCE CONTINUOUS USE	→	F1920
	30492	UNSPECIFIED DRUG DEPENDENCE EPISODIC USE		
	30493	UNSPECIFIED DRUG DEPENDENCE IN REMISSION	→	F1921
	30590	NONDEPENDENT OTHER MIXED OR UNSPECIFIED DRUG ABUSE UNSPECIFIED USE		
	30591	NONDEPENDENT OTHER MIXED OR UNSPECIFIED DRUG ABUSE CONTINUOUS USE	→	F1810
	30592	NONDEPENDENT OTHER MIXED OR UNSPECIFIED DRUG ABUSE EPISODIC USE		
	30593	NONDEPENDENT OTHER MIXED OR UNSPECIFIED DRUG ABUSE IN REMISSION		
	64830	DRUG DEPENDENCE OF MOTHER COMPLICATING PREGNANCY CHILDBIRTH OR THE PUERPERIUM UNSPECIFIED AS TO EPISODE OF CARE	→	O99320
	64831	DRUG DEPENDENCE OF MOTHER WITH DELIVERY	→	O99321 O99322 O99323 O99324
	64832	DRUG DEPENDENCE OF MOTHER WITH DELIVERY WITH POSTPARTUM COMPLICATION	→	O99325
	64833	ANTEPARTUM DRUG DEPENDENCE	→	O99321 O99322 O99323
	63834	POSTPARTUM DRUG DEPENDENCE	→	O99325
Other mental disorder				
	3010	PARANOID PERSONALITY DISORDER	→	F600
	30110	AFFECTIVE PERSONALITY DISORDER UNSPECIFIED	→	F340
Personality disorder	30111	CHRONIC HYPOMANIC PERSONALITY DISORDER	→	F6089
	30112	CHRONIC DEPRESSIVE PERSONALITY DISORDER	→	F341
	30113	CYCLOTHYMIC DISORDER	→	F340

	30120	SCHIZOID PERSONALITY DISORDER UNSPECIFIED	→	F601
	30121	INTROVERTED PERSONALITY DISORDER	→	F601
	30122	SCHIZOTYPAL PERSONALITY DISORDER	→	F21
	3013	EXPLOSIVE PERSONALITY DISORDER	→	F603
	3014	OBSESSIVE-COMPULSIVE PERSONALITY DISORDER	→	F605
	30150	HISTRIONIC PERSONALITY DISORDER UNSPECIFIED	→	F604
	30151	CHRONIC FACTITIOUS ILLNESS WITH PHYSICAL SYMPTOMS	→	F6812
	30159	OTHER HISTRIONIC PERSONALITY DISORDER	→	F604
	3016	DEPENDENT PERSONALITY DISORDER	→	F607
	3017	ANTISOCIAL PERSONALITY DISORDER	→	F602
	30181	NARCISSISTIC PERSONALITY DISORDER	→	F6081
	30182	AVOIDANT PERSONALITY DISORDER	→	F606
	30183	BORDERLINE PERSONALITY DISORDER	→	F603
	30184	PASSIVE-AGGRESSIVE PERSONALITY	→	F6089
	30189	OTHER PERSONALITY DISORDERS	→	F6089
	3019	UNSPECIFIED PERSONALITY DISORDER	→	F609
	2900	SENILE DEMENTIA UNCOMPLICATED	→	F0390
	29010	PRESENILE DEMENTIA UNCOMPLICATED	→	F0390
	29011	PRESENILE DEMENTIA WITH DELIRIUM	→	F0390
	29012	PRESENILE DEMENTIA WITH DELUSIONAL FEATURES	→	F0390 or F05
	29013	PRESENILE DEMENTIA WITH DEPRESSIVE FEATURES	→	F0390
	29020	SENILE DEMENTIA WITH DELUSIONAL FEATURES	→	F0390 or F05
	29021	SENILE DEMENTIA WITH DEPRESSIVE FEATURES	→	F0390
	2903	SENILE DEMENTIA WITH DELIRIUM	→	F0390 or F05
	29040	VASCULAR DEMENTIA UNCOMPLICATED	→	F0150
	29041	VASCULAR DEMENTIA WITH DELIRIUM		
	29042	VASCULAR DEMENTIA WITH DELUSIONS	→	F0151
	29043	VASCULAR DEMENTIA WITH DEPRESSED MOOD		
	2908	OTHER SPECIFIED SENILE PSYCHOTIC CONDITIONS	→	F0390
	2909	UNSPECIFIED SENILE PSYCHOTIC CONDITION	→	F0390
	2912	ALCOHOL-INDUCED PERSISTING DEMENTIA	→	F1027
Dementia				

	29410	DEMENTIA IN CONDITIONS CLASSIFIED ELSEWHERE WITHOUT BEHAVIORAL DISTURBANCE	→	F0280
	29411	DEMENTIA IN CONDITIONS CLASSIFIED ELSEWHERE WITH BEHAVIORAL DISTURBANC	→	F0281
	29420	DEMENTIA, UNSPECIFIED, WITHOUT BEHAVIORAL DISTURBANCE	→	F0390
	29421	DEMENTIA, UNSPECIFIED, WITH BEHAVIORAL DISTURBANCE	→	F0391
	3310	ALZHEIMER'S DISEASE	→	G309
	33111	PICK'S DISEASE	→	G3101
	33119	OTHER FRONTOTEMPORAL DEMENTIA	→	G3109
	33182	DEMENTIA WITH LEWY BODIES	→	G3183
Mild cognitive impairment	33183	MILD COGNITIVE IMPAIRMENT, SO STATED	→	G3184

TABLE S3. Trends of medications prescribed during office-based visits to psychiatrists among patients with bipolar disorder by secular period and limiting to first six medications only, 1997-2016

Sample size	1997-2000	2001-2004	2005-2008	2009-2012	2013-2016	Secular trends					
	Unweighted visits	Unweighted visits	Unweighted visits	Unweighted visits	Unweighted visits	Unadjusted odds ratio	95% CI	p-value	Adjusted odds ratio ^{a)}	95% CI	p-value
Unweighted visits	504	889	864	1,313	849						
Weighted visits (Row %)	467,057 (11.1%)	753,228 (17.8%)	867,632 (20.6%)	1,074,923 (25.5%)	1,059,311 (25.1%)						
Any antipsychotic	19.1	31.8	51.5	52.9	51.7	3.64	2.60, 5.10	<0.001	3.85	2.77, 5.35	<0.001
First-generation antipsychotic	7.0	3.1	2.8	3.1	1.7	0.32	0.16, 0.65	0.002	0.23	0.11, 0.49	<0.001
Second-generation antipsychotic (SGA)	12.4	29.3	49.5	51.3	50.4	4.46	3.15, 6.32	<0.001	4.88	3.47, 6.87	<0.001
FDA-approved SGA	12.1	28.1	49.1	48.5	49.1	4.27	3.00, 6.06	<0.001	4.64	3.28, 6.56	<0.001
Any mood stabilizer	62.3	50.3	28.5	23.4	25.6	0.19	0.13, 0.27	<0.001	0.18	0.12, 0.26	<0.001
Lithium	30.4	20.7	17.3	13.9	17.3	0.49	0.31, 0.76	0.002	0.45	0.28, 0.71	0.001
Carbamazepine or valproic acid	35.4	24.8	7.6	7.4	4.8	0.07	0.05, 0.11	<0.001	0.07	0.04, 0.11	<0.001
Lamotrigine	2.1	9.7	5.8	3.9	4.3	0.65	0.40, 1.07	0.088	0.65	0.39, 1.07	0.093
Other anticonvulsant	6.3	19.8	12.1	11.9	12.2	0.93	0.60, 1.44	0.730	0.88	0.56, 1.36	0.557
Gabapentin	6.0	9.0	3.9	3.9	4.3	0.47	0.27, 0.83	0.009	0.42	0.23, 0.75	0.003
Oxcarbazepine	0.0	5.7	4.5	3.3	5.3	1.85	0.83, 4.13	0.134	1.82	0.82, 4.03	0.143
Topiramate	0.3	5.7	4.4	4.9	3.0	1.16	0.68, 1.99	0.578	1.23	0.69, 2.17	0.484
Any antidepressant	47.0	50.2	55.0	49.7	56.8	1.33	0.97, 1.83	0.077	1.24	0.88, 1.73	0.219
Tricyclics or MAOI	6.2	3.5	3.1	2.2	2.9	0.44	0.19, 1.05	0.066	0.36	0.15, 0.84	0.018
SSRI	24.0	31.4	30.6	25.8	25.3	0.85	0.62, 1.16	0.307	0.82	0.60, 1.13	0.234
SNRI	4.5	6.6	13.7	12.9	11.4	2.15	1.37, 3.37	0.001	1.97	1.28, 3.03	0.002
Other	19.0	17.5	19.8	19.2	29.0	1.86	1.24, 2.79	0.003	1.78	1.14, 2.79	0.011
Bupropion	9.8	11.8	10.7	10.2	12.1	1.12	0.73, 1.71	0.618	1.10	0.70, 1.74	0.684
Mirtazapine	2.4	2.1	1.8	1.7	3.9	1.85	0.76, 4.48	0.172	1.60	0.65, 3.93	0.304
Other	8.4	5.0	7.8	8.3	15.4	2.93	1.63, 5.27	<0.001	2.80	1.50, 5.26	0.001
Any antidepressant without mood stabilizers	17.9	20.7	38.8	35.7	40.8	2.98	2.13, 4.18	<0.001	2.89	2.04, 4.09	<0.001
Any antidepressant without antipsychotics	38.0	34.8	28.7	21.9	25.9	0.5	0.36, 0.70	<0.001	0.46	0.33, 0.64	<0.001
Any antidepressant without mood stabilizers and antipsychotics	14.9	13.0	19.4	14.2	16.8	1.14	0.78, 1.69	0.498	1.06	0.72, 1.55	0.783
Any benzodiazepines	24.2	27.4	30.2	33.0	30.7	1.38	0.98, 1.93	0.064	1.28	0.93, 1.75	0.130
Any stimulants	5.3	3.5	6.1	7.6	9.8	2.67	1.37, 5.19	0.004	4.14	2.17, 7.90	<0.001

Note: Data are from National Ambulatory Medical Care Survey, 1997-2016. a) Accounted for age, sex, race/ethnicity, and source of payment.

TABLE S4. Sample sizes of visit to psychiatrists for bipolar disorder and for schizophrenia

	1997-2000	2001-2004	2005-2008	2009-2012	2013-2016
Unweighted visits to psychiatrists, in which bipolar disorder was diagnosed	504	889	864	1,313	849
Weighted visits to psychiatrists, in which bipolar disorder was diagnosed	467,057	753,228	867,632	1,074,923	1,059,311
Proportion of bipolar disorder in visits to psychiatrists	9.7%	14.0%	15.9%	17.4%	13.6%
Unweighted visits to psychiatrists, in which schizophrenia was diagnosed	380	368	380	561	322
Weighted visits to psychiatrists, in which schizophrenia was diagnosed	380,013	318,178	371,286	407,799	369,749
Proportion of schizophrenia in visits to psychiatrists	7.9%	5.9%	6.8%	6.6%	4.8%

Note: Data are from National Ambulatory Medical Care Survey, 1997-2016.

TABLE S5. Trends of medications prescribed during office-based visits to psychiatrists among patients with bipolar I disorder only by secular period, 1997-2016

	1997-	2001-	2005-	2009-	2013-	Secular trends					
	2000	2004	2008	2012	2016	Unadjusted odds ratio	95% CI	p-value	Adjusted odds ratio ^{a)}	95% CI	p-value
Sample size											
Unweighted visits	463	742	711	1,093	724						
Weighted visits (Row %)	433,869 (12.2%)	643,448 (18.0%)	710,061 (19.9%)	892,690 (25.0%)	891,209 (25.0%)						
Any antipsychotic	20.2	33.2	53.7	54.4	55.1	4.02	2.78, 5.81	<0.001	4.18	2.91, 6.00	<0.001
First-generation antipsychotic	7.5	3.4	3.1	3.5	2.0	0.34	0.16, 0.70	0.004	0.25	0.12, 0.54	<0.001
Second-generation antipsychotic (SGA)	13.0	30.6	51.7	52.6	53.7	4.97	3.40, 7.29	<0.001	5.33	3.66, 7.76	<0.001
FDA-approved SGA	12.7	29.3	51.3	49.7	52.5	4.80	3.27, 7.04	<0.001	5.11	3.49, 7.47	<0.001
Any mood stabilizer	62.4	49.5	30.5	25.3	29.0	0.23	0.16, 0.34	<0.001	0.22	0.15, 0.31	<0.001
Lithium	29.8	21.7	18.7	15.1	19.7	0.58	0.37, 0.90	0.017	0.53	0.34, 0.84	0.007
Carbamazepine or valproic acid	36.3	24.2	8.3	7.5	5.2	0.08	0.05, 0.12	<0.001	0.07	0.05, 0.12	<0.001
Lamotrigine	2.3	9.0	5.9	4.8	4.9	0.87	0.52, 1.47	0.613	0.83	0.49, 1.41	0.486
Other anticonvulsant	6.2	19.7	12.6	12.3	11.8	0.95	0.61, 1.48	0.822	0.90	0.58, 1.40	0.647
Gabapentin	6.0	9.2	4.4	4.8	4.9	0.59	0.34, 1.01	0.055	0.51	0.29, 0.89	0.018
Oxcarbazepine	0.0	5.6	5.0	3.1	5.4	1.89	0.79, 4.55	0.151	1.85	0.80, 4.31	0.152
Topiramate	0.2	5.5	4.0	4.6	2.3	1.07	0.60, 1.88	0.823	1.15	0.63, 2.09	0.649
Any antidepressant	45.8	48.7	55.0	50.2	56.0	1.39	1.00, 1.94	0.050	1.31	0.92, 1.86	0.130
Tricyclics or MAOI	5.8	3.4	3.4	2.2	2.8	0.46	0.18, 1.18	0.105	0.40	0.16, 1.01	0.052
SSRI	23.4	29.9	29.5	26.5	25.0	0.92	0.66, 1.29	0.621	0.89	0.63, 1.26	0.520
SNRI	3.6	6.4	13.9	12.7	11.7	2.44	1.50, 3.98	<0.001	2.24	1.43, 3.50	<0.001
Other	18.1	16.9	20.1	18.9	30.0	2.03	1.31, 3.14	0.001	2.01	1.24, 3.25	0.004
Bupropion	8.9	11.3	11.2	9.7	12.0	1.18	0.75, 1.85	0.479	1.19	0.73, 1.92	0.489
Mirtazapine	2.5	2.1	2.0	1.9	4.4	2.12	0.85, 5.28	0.108	1.88	0.73, 4.85	0.189
Other	8.3	5.1	7.8	8.6	16.0	2.99	1.59, 5.63	0.001	2.98	1.49, 5.96	0.002
Any antidepressant without mood stabilizers	17.1	19.5	37.8	35.0	38.3	2.89	2.03, 4.11	<0.001	2.84	1.98, 4.08	<0.001
Any antidepressant without antipsychotics	36.3	32.9	27.5	20.9	23.2	0.47	0.33, 0.67	<0.001	0.44	0.31, 0.62	<0.001
Any antidepressant without mood stabilizers and antipsychotics	13.8	11.8	17.8	13.2	13.8	1.02	0.68, 1.52	0.930	0.96	0.64, 1.45	0.858
Any benzodiazepines	24.2	27.9	30.4	34.0	30.8	1.39	0.96, 2.01	0.080	1.29	0.92, 1.82	0.144
Any stimulants	5.5	3.8	6.2	7.2	9.3	2.30	1.12, 4.72	0.024	3.64	1.82, 7.32	<0.001

Note: Data are from National Ambulatory Medical Care Survey, 1997-2016. a) Accounted for age, sex, race/ethnicity, and source of payment.