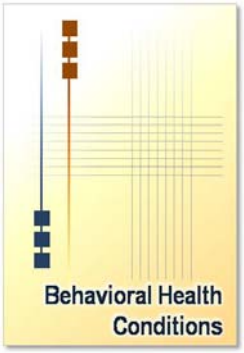

Identifying Behavioral Health Problems among Medicaid Disabled Adults

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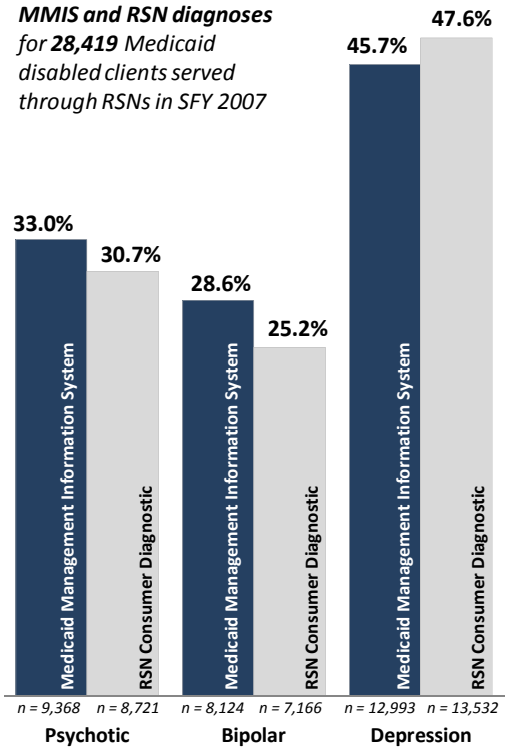
THIS REPORT summarizes behavioral health diagnoses for Medicaid disabled adults served by the state medical and mental health systems during State Fiscal Year (SFY) 2007. Overall, there was a great deal of agreement between measures of mental illness constructed from the Medicaid Management Information System (MMIS) and the state administered mental health system. Specifically, Medicaid fee-for-service (FFS) claims and encounter data provided mental illness client population estimates that were comparable to measures derived from the Regional Service Network (RSN) Consumer Diagnostic records for adult Medicaid disabled clients, with a great deal of overlap in identifying individual cases. Findings suggest that MMIS claims and encounters are effective in identifying mental illness for adult Medicaid disabled clients who have not been served through the state administered mental health system.

Findings for Medicaid Disabled Adults

- Diagnoses recorded in medical service data (MMIS) credibly identify behavioral health conditions for adult Medicaid Disabled clients.
- Client population estimates of mental illness constructed from primarily medical (MMIS) and mental health service (RSN Consumer Diagnostic) records are almost identical for major behavioral health categories (see chart).
- Individual cases identified from MMIS and RSN Consumer Diagnostic records are similar for major behavioral health categories.
- About half of Medicaid disabled adults with mental health problems (54 percent) received services through the Regional Support Networks.
- MMIS claims and medical managed care encounter data are likely to be very useful tools for the identification of behavioral health needs for adult Medicaid disabled clients who have not yet been served in the RSN system.



Behavioral Health Classification using Medical and Mental Health Service Records

Behavioral Health Diagnoses and Service Information are Available in Administrative Data

The classification scheme presented below can be used to identify behavioral health problems based on International Classification of Diseases (ICD-9) codes recorded in medical and mental health service records. We have also created summary indicators that indicate the presence of 1) a primary mental health problem (psychotic, bipolar, depression, anxiety, ADHD, conduct and other impulse, or adjustment disorders), and 2) diagnoses included in the DBHR/MH Access to Care Standards.[1]

Additional information is available in MMIS on psychotropic medications prescribed to patients. For example, the following classes of psychotropic medications may be included as part of a mental illness indicator: Antianxiety, Antidepressant, Antipsychotic, Antimania, and ADHD. Procedure codes are also recorded in MMIS for substance use related medical visits and can be used as components of a substance use disorder indicator. Details on these categories are presented in the Appendix.

Table 1. Behavioral Health Diagnostic Classification

DIAGNOSTIC CATEGORIES	Example Diagnoses (see technical notes for complete list of included ICD-9 codes)
Psychotic disorder	Schizophrenia, schizoaffective, delusional disorder
Bipolar disorders	Bipolar I, Bipolar II, cyclothymic
Depressive disorders	Major depressive, depressive disorder NOS, dysthymic disorder
Delirium and Dementia	Dementia of the Alzheimer's type, Vascular dementia with delirium, Vascular dementia with depressed mood, Dementia NOS
Developmental Disorders	Tourette's, Asperger's, mental retardation, autistic disorder
Anxiety Disorders	Panic disorder with agoraphobia, Obsessive compulsive disorder, Posttraumatic stress disorder, acute stress disorder
Alcohol Use Disorders	Alcohol abuse, alcohol dependence, alcohol intoxication
Drug Use Disorders	Amphetamine-induced anxiety disorder, cocaine dependence, inhalant abuse, opioid abuse
ADHD, Conduct and Impulse Disorders	ADHD, Conduct Disorder, Oppositional Defiant disorder, Intermittent Explosive disorder
Somatoform Disorders	Hypochondriasis, somatization disorder, night terrors, unspecified neurotic disorder
Factitious Disorders	Factitious disorder with combined psychological and physical signs and symptoms
Dissociative Disorders	Dissociative amnesia, dissociative identity disorder, dissociative fugue
Adjustment Disorders	Adjustment disorder with depressed mood/anxiety/mixed
Personality Disorders	Borderline personality disorder, avoidant personality disorder, antisocial personality disorder
Sexual and Gender Identity Disorders	Pedophilia, exhibitionism, gender identity disorder in children/adolescents/adults
Eating Disorders	Anorexia nervosa, Bulimia Nervosa, Eating Disorder NOS
Cognitive Disorder NOS	Cognitive Disorder NOS
Other Childhood Disorders	Separation anxiety disorder, Selective mutism, Reactive attachment disorder, stereotypical movement disorder
SUMMARY INDICATORS	**Components**
1. Mental Illness Indicator	**Presence of any diagnosis in the following categories recorded in health records: psychotic, bipolar, depression, anxiety, ADHD, conduct, impulse, or adjustment disorders.**
2. Access to Care Indicators	**Indicators based on the presence of any diagnosis included in the Washington State Access to Care Standards (Category A, Category B, or Both)**

A Large Proportion of Medicaid Disabled Adults have Behavioral Health Disorders

Medicaid Disabled Adults

This report focuses on the adult Medicaid Disabled population, which includes clients receiving Supplemental Security Income (SSI) grants, General Assistance Expedited SSI (now Disability Lifeline Expedited), and related medical coverage groups. A large proportion of the overall Medicaid disabled population have mental health diagnoses, recorded either in the Medicaid Management Information System (MMIS), or the RSN Consumer Diagnostic records. Using the mental illness indicator described in Table 1 , nearly half (48.77 percent) of the Medicaid disabled population were identified as having mental health diagnoses recorded in either medical or mental health records. Specifically, 44 percent of Medicaid Disabled adults have mental health ICD-9 diagnostic codes recorded in MMIS fee for service claims or encounters, and 22 percent have a mental health diagnosis recorded in mental health provider records (Consumer Diagnostic records).

With reference to the current Access to Care Standards, 27 percent of the overall Medicaid Disabled population had a *Category A* diagnosis recorded in MMIS, and 31 percent had *Category B* diagnoses. The Access to Care diagnoses are major components of mental health services eligibility determination for Medicaid recipients.

About 17 percent of the Medicaid disabled population was identified as having substance use (alcohol or other drug) disorder diagnoses recorded in medical records. This number increased to 19 percent when history of chemical dependency treatment, encounters, and pharmacy data were added.

Table 2. SFY 2007 Medicaid Disabled Adults with Behavioral Health Problems Recorded in MMIS

Mental Illness Indicators *Pooled SFY 2006–2007* **Population = 155,046**	**SFY 2007 Medicaid Disabled with Mental Illness**	**SFY 2007 Medicaid Disabled with Mental Illness**
	NUMBER WITH INDICATOR	PERCENT WITH INDICATOR
Mental Illness Indicator*	68,012	43.9%
Access to Care: Category A	41,926	27.0%
Access to Care: Category A or antipsychotic or antimania Rx	51,846	33.4%
Substance Use Disorder Indicators *Pooled SFY 2006–2007*	**SFY 2007 Medicaid Disabled with Substance Use Disorder**	**SFY 2007 Medicaid Disabled with Substance Use Disorder**
	NUMBER WITH INDICATOR	PERCENT WITH INDICATOR
Substance (Alcohol or Drug) Use diagnosis	26,650	17.2%
Alcohol Use Disorder	14,635	9.4%
Drug Use Disorder	18,674	12.0%

* Mental Illness here is defined as the presence of any diagnosis in the following categories recorded in medical or mental health service records: psychotic, bipolar, depression, anxiety, ADHD, conduct, impulse, or adjustment disorders.

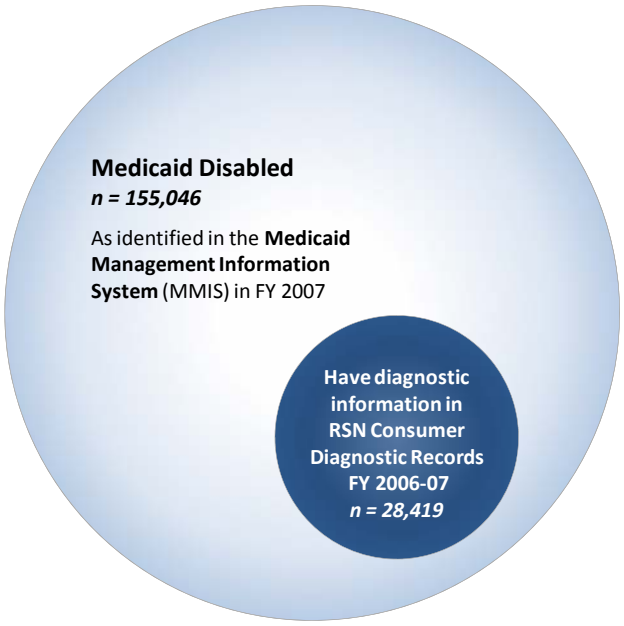
Adult Medicaid Disabled Client Population Estimates Constructed from Medical and Mental Health Records are Similar for Major Behavioral Health Categories

Client population estimates are similar for major behavioral health categories

In order to evaluate the comparability of diagnostic information from the two sources, we compared mental health diagnoses extracted from medical (MMIS) tables and behavioral health (RSN Consumer Diagnostic records) for a subpopulation of 28,419 Medicaid Disabled adults who received services and diagnoses through the RSN system during SFY 2007.

Medicaid Disabled and RSN Adult Clients served in FY2007

SOURCE: Washington State Department of Social and Health Services, Research and Data Analysis Division, Integrated Client Database



The results of these comparisons are presented in Table 3. There is a great deal of consistency in client population estimates between data sources for the diagnostic categories commonly served by DBHR: psychotic, bipolar, depression, anxiety, and alcohol or other drug use disorders. Other mental health categories for which there is a great deal of concordance between MMIS and Consumer Diagnostic records include: dissociative, factitious, adjustment, sexual and gender identity, eating, cognitive, and other childhood disorders.

When psychotropic medications were included (not shown), the MMIS estimates for the presence of psychotic, depressive, and anxiety disorders increased significantly. For example, the estimate for psychotic disorders increased from 33 percent to 61 percent, the estimate for depressive disorders increased from 46 percent to 75 percent, and anxiety disorders increased from 30 percent to 49 percent. The inclusion of antimania medications only increases the bipolar estimate slightly, from 29 percent to 31 percent. This is likely due to the fact that lithium carbonate, the primary medication classified as "antimania," is rarely prescribed for anything but bipoloar disorder. In contrast, antidepressants, antipsychotics, and antianxiety medications may be prescribed for a variety of behavioral health and medical conditions.

There is less consistency between data sources for diagnostic categories that are less common for this population such as delirium and dementia, and developmental disorders. Two of the most notable differences in estimates between data sources are for somatoform (MMIS estimate **11 percent** vs. Consumer Diagnostic estimate **0.7 percent)** and personality disorders (MMIS estimate **4.8 percent** vs. Consumer Diagnostic estimate **18 percent)**. It is possible that these differences represent diagnostic preferences by the medical and behavioral health professions, with those in medical settings more likely

to diagnose somatoform disorders, which are more medically focused. For example, diagnosis of somatization disorder involves a "pattern of recurring, multiple, clinically significant somatic complaints" that impact at least four body areas or functions.

Behavioral health providers may, on the other hand, be more likely to diagnose personality disorders, which are a major component of the multi-axial diagnostic system to which they are trained.[2] Although similar codes exist for ICD-9 diagnoses, these Axis II diagnoses such as personality disorders may not be recorded by medical personnel if they are not the primary focus of a visit.

ADHD, conduct and impulse disorders seem to be more commonly diagnosed in the medical system (5.2 percent) than the behavioral health system (2.7 percent). Client population estimates for this category increase significantly when MMIS diagnostic and prescription data are combined, from 5 percent to 11 percent.

The behavioral health summary flags that indicate the presence of a mental health problem, the presence of a category A diagnosis, and the presence of a substance use disorder, are relatively comparable with respect to client population estimates derived from the two data sources. Not surprisingly, the Consumer Diagnostic records were more likely to contain Access to Care Standards Category A or B diagnoses that are required for receipt of state-administered mental health services.

Table 3. Medicaid Disabled Adults* served by RSNs with Behavioral Health Diagnoses in RSN Consumer Diagnostic Records

INDICATORS *Pooled SFY 2006–SFY 2007*	***Adults served by RSNs and Medicaid disabled in SFY 2007***			
	MMIS		**RSN CONSUMER DIAGNOSTIC**	
DIAGNOSTIC CATEGORY	COUNT	PERCENT	COUNT	PERCENT
Psychotic disorder	9,368	33.0%	8,721	30.7%
Bipolar disorders	8,124	28.6%	7,166	25.2%
Depressive disorders	12,993	45.7%	13,523	47.6%
Delirium and Dementia	1,354	4.8%	449	1.6%
Developmental Disorders	1,026	3.6%	1,735	6.1%
Anxiety Disorders	8,538	30.0%	10,360	36.5%
Alcohol Use Disorders	4,581	16.1%	3,136	11.0%
Drug Use Disorders	6,234	21.9%	5,173	18.2%
ADHD, Conduct and impulse Disorders	1,481	5.2%	778	2.7%
Somatoform Disorders	3,208	11.3%	191	0.7%
Factitious Disorders	21	0.1%	15	0.1%
Dissociative Disorders	118	0.4%	107	0.4%
Adjustment Disorders	585	2.1%	729	2.6%
Personality Disorders	1,352	4.8%	5,043	17.7%
Sexual and Gender Identity Disorders	130	0.5%	120	0.4%
Eating Disorders	100	0.4%	108	0.4%
Cognitive Disorder NOS	158	0.6%	173	0.6%
Other Childhood Disorders	17	0.1%	22	0.1%
SUMMARY INDICATOR	COUNT	PERCENT	COUNT	PERCENT
Mental Illness**	22,761	80.1%	27,929	98.3%
Adult Access to Care Standards Category A	18,338	64.5%	20,766	73.1%
Adult Access to Care Standards Category B	14,307	50.3%	12,234	43.0%
Adult Access to Care Standards Category A or B	22,677	79.8%	27,957	98.4%
Alcohol or drug use disorder	8,361	29.4%	7,562	26.6%
Population:	**28,419**			

* Adult is defined as being age 18 through 64 as of January 2007.

** Mental Illness here is defined as the presence of any diagnosis in the following categories recorded in medical or mental health service records: psychotic, bipolar, depression, anxiety, ADHD, conduct, impulse, or adjustment disorders.

Individual Cases Identified from Medical and Mental Health Records are Similar for Major Behavioral Health Categories

At the individual level, there is a great deal of agreement between mental illness indicators generated using MMIS data and the mental health Consumer Diagnostic records. In other words, medical and mental health professionals are identifying the same individuals as having mental health problems in the same diagnostic categories for: psychotic, bipolar, depressive, and, to a lesser extent, anxiety disorders. The mental illness flag constructed from MMIS identified a primary mental health problem for about 81 percent of Medicaid Disabled adults served and diagnosed through the RSN system.

Table 4. Adults age 18 through 64 as of January 2007

CONCORDANCE OF INDICATORS *Pooled SFY 2006–SFY 2007*	***Adults served by RSNs and Medicaid disabled in SFY 2007***		
	Cases Identified in Consumer Diagnostic Records	**Same Case Identified in MMIS**	
Diagnostic Category	COUNT	COUNT	PERCENT
Psychotic disorder	8,721	6,892	79.0
Bipolar disorders	7,166	5,021	70.1
Depressive disorders	13,523	8,708	64.4
Anxiety disorders	10,360	5,048	48.8
Summary Indicator	COUNT	COUNT	PERCENT
Mental Illness Indicator*	27,929	22,498	80.6
			Population: 28,419

* Mental Illness here is defined as the presence of any diagnosis in the following categories recorded in medical or mental health service records: psychotic, bipolar, depression, anxiety, ADHD, conduct, impulse, or adjustment disorders.

Medicaid Disabled Adults with Behavioral Health Disorders are served in both Behavioral and other Health Care Settings

Around half (54 percent) of the Medicaid disabled population with primary mental health problems recorded in MMIS received outpatient or inpatient services through Division of Behavioral Health and Recovery Mental Health (DBHR/MH) programs in SFY 2007. Of those with psychotic or bipolar diagnoses recorded, 73 percent were served through DBHR/MH (not shown). Of those with Category A diagnoses, 71 percent were served through the RSNs; 66 percent of those with Category A diagnoses or prescribed antipsychotic or antimania medications were served. Finally, 43 percent of the Medicaid disabled adults with recorded substance use diagnoses received services through the Division of Behavioral Health and Recovery chemical dependency (DBHR/CD) programs in SFY 2007.

Table 5. Medicaid Disabled Adults with Mental Health Problems

Mental Illness Indicators *Pooled SFY 2006–2007*	**Medicaid Disabled, SFY 2007, population = 155,046**	**Served by DBHR/MH (RSN system) in SFY 2007**	**Served by DBHR/MH (RSN system) in SFY 2007**
	NUMBER WITH INDICATOR	NUMBER WITH INDICATOR SERVED BY DBHR	PERCENT WITH INDICATOR SERVED BY DBHR
Mental Illness Indicator*	68,012	36,962	54.4
Access to Care: Category A	41,926	29,605	70.6
Access to Care: Category A or antipsychotic or antimania Rx	51,846	34,449	66.4
Substance Use Disorder Flag *Pooled SFY 2006–2007*	**Medicaid Disabled with Substance Use Disorder Flag SFY 2007**	**Served by DBHR/CD in SFY 2007**	**Served by DBHR/CD in SFY 2007**
Substance Use diagnosis	26,650	11,551	43.3

* Mental Illness here is defined as the presence of any diagnosis in the following categories recorded in medical or mental health service records: psychotic, bipolar, depression, anxiety, ADHD, conduct, impulse, or adjustment disorders.

Summary and Recommendations

The Washington State Medicaid disabled population is at high risk for behavioral health problems. Individuals with this type of Medicaid eligibility are very likely to have received behavioral health diagnoses, services, or medications. The individuals we identified as having mental health problems seem to have been served along the broader continuum of health care. About half (54 percent) of the Medicaid Disabled adults with mental health diagnoses recorded in mental health or medical records were served through the state mental health system during SFY 2007. It is assumed that the other half were served through the medical system either because: 1) they did not meet full Access to Care diagnostic or level of functioning criteria; or 2) they did not actively seek services through the mental health system.

Consistencies in diagnostic information retrieved from both settings indicated that administrative data can be useful and reliable in identifying the needs of this population. In fact, medical and behavioral records generated client population estimates that were strikingly similarly for major diagnostic categories: psychotic, bipolar, depressive, and anxiety disorders, with relatively high concordance at the individual level. This is not a validation study, which would involve the use of "gold standard" diagnostic interview or assessment tool, however, it does provide evidence of the consistencies between two sources of diagnostic information: medical and behavioral health service records, in identifying mental health problems among the Medicaid Disabled population.

Further study is warranted to validate the mental illness indicator presented in this report. Based on our findings, an indicator that combines diagnostic information with the receipt of past mental health services seems warranted. Although the inclusion of psychotropic medications seemed to artificially elevate the client population estimates for psychotic and depressive disorders, we cannot rule these out as important indicators of mental illness without more detailed analysis of specific diagnoses and medications used. Additionally, these findings cannot be generalized to other populations, including children receiving publicly funded services, until similar analyses are conducted specific to those populations.

Finally, it is apparent that Medicaid Disabled adults with mental health problems are being served in a variety of settings, including providers funded through DBHR/MH, and medical providers in primary care and other clinics. It is unclear at this point what impact, if any, the setting and specific services received may have on treatment and other outcomes for these clients. For example, our findings suggest that some clients with mental health diagnoses do not receive services through DBHR/MH. It would be useful to compare long-term outcomes such as employment, housing, and service use and costs for two groups of clients with similar diagnoses and baseline levels of functioning who receive services in medical and mental health settings.

DATA SOURCES

Consumer Diagnostic. The RSN Consumer Diagnostic records contains data entered by Regional Support Network (RSN) providers who conduct intake assessments with consumers served through the publicly funded mental health system in Washington State. The Consumer Diagnostic tables in the DBHR Consumer Information System (CIS) contain diagnoses for consumers served in a particular region. Consumer Diagnostic data are constructed by service month and submitted to DBHR by RSNs. Clinicians can record up to four diagnoses per person. This includes at least one Axis I or Axis II "primary" diagnosis.

MMIS. The Medicaid Management Information System (MMIS) contains data entered by medical providers and hospitals that provide services funded by Medicaid. For adults enrolled in DSHS Medical coverage (Medicaid or Medical Care Services coverage), indicators of substance abuse and mental health disorders constructed from administrative data have been used extensively by RDA to estimate treatment need in other projects.[3, 4]

DIAGNOSTIC CATEGORIES

The ICD-9 diagnostic codes were placed into diagnostic categories that based on those in the Diagnostic and Statistical Manual of Mental Disorders (DSM-4-TR).[2] Wherever possible, a crosswalk published by the American Psychological Association practice organization was used to ensure appropriate classification (see http://www.apapracticecentral.org/reimbursement/billing/dsmiv-to-icd9cm-codes-chart.pdf).

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Table 6. Behavioral Health Classification

DIAGNOSTIC CATEGORES	ICD-9 Codes	Example Diagnoses
Psychotic disorder	295 - 295.99 297 - 297.99 298 - 298.99 293.81 - 293.82	Schizophrenia, schizoaffective, delusional disorder
Bipolar disorders	301.13 296 - 296.19 296.4 - 296.99	Bipolar I, bipolar II, cyclothymic
Depressive disorders	293.83 - 293.83 296.2 - 296.29 296.3 - 296.39 300.4 - 300.49 300.5 - 300.59 311 - 311.99	Major depressive, depressive disorder NOS, dysthymic disorder
Delirium and Dementia	290 - 290.99 293 - 293.79 293.89 294 - 294.89 310 - 310.99	Dementia of the Alzheimer's type, vascular dementia with delirium, vascular dementia with depressed mood, dementia NOS
Developmental Disorders	299 - 299.99 307.2 - 307.29 315 - 315.99 317 - 317.99 318 - 318.99 319 - 319.99	Tourette's, Asperger's, mental retardation, autistic disorder
Anxiety Disorders	300.0 - 300.09 300.2 - 300.39 308 - 308.99 309.22 - 309.23 309.81 - 309.89 309.9	Panic disorder with agoraphobia, obsessive compulsive disorder, posttraumatic stress disorder, acute stress disorder
Alcohol Use Disorders	303 - 303.99 305 - 305.09 291 - 291.99	Alcohol abuse, alcohol dependence, alcohol intoxication
Drug Use Disorders	304 - 304.99 305.2 - 305.99 292 - 292.99	Amphetamine-induced anxiety disorder, cocaine dependence, inhalant abuse, opioid abuse
ADHD, Conduct and Impulse Disorders	313.81 312 - 312.99 314.1 - 314.99	ADHD, conduct disorder, oppositional defiant disorder, intermittent explosive disorder
Somatoform Disorders	300.1 300.7 - 300.79 306 - 306.99 307.4 - 307.49 307.6 - 307.99 300.8 - 300.89 300.9 - 300.99	Hypochondriasis, somatization disorder, night terrors, unspecified neurotic disorder
Factitious Disorders	300.16 - 300.19	Factitious disorder with combined psychological and physical signs and symptoms
Dissociative Disorders	300.12 - 300.15 300.6 - 300.69	Dissociative amnesia, dissociative identity disorder, dissociative fugue
Adjustment Disorders	309.24 - 309.8 309 - 309.20	Adjustment disorder with depressed mood/anxiety/mixed
Personality Disorders	301 - 301.12 301.14 - 301.99	Borderline personality disorder, avoidant personality disorder, antisocial personality disorder
Sexual and Gender Identity Disorders	302 - 302.99	Pedophilia, exhibitionism, gender identity disorder in children/adolescents/adults
Eating Disorders	307.5 - 307.59	Anorexia nervosa, bulimia nervosa, eating disorder NOS
Cognitive Disorder NOS	294.9	Cognitive disorder NOS
Other Childhood Disorders	307.3 - 307.39 309.21 313 - 313.8 313.82 - 313.99	Separation anxiety disorder, selective mutism, reactive attachment disorder, stereotypical movement disorder