DATA DICTIONARY

Measuring Antipsychotic Medication Use in Medicaid Children and Adolescents: 2004–2007

Medicaid Medical Directors Learning Network (MMDLN)/Rutgers CERTs

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Table of Contents

Data Element **Page**

CORE	Core tables that all States should provide for comparison.
CORE DEFINITIONS	Core definitions that all States agree to as the common data set.
OPTIONAL	Optional tables that all States may choose to provide but are not required to match the data in the Resource Guide. During the planning process, many measures were proposed. To test feasibility, Washington State would pull data on the draft measure and other States would then test whether their claims systems had similar functionality. Many States were not able to accurately identify prescriber/provider types or diagnoses.

A. Project Background

Over 15 million children and adolescents in the United States have a diagnosable psychiatric disorder. About 15 percent suffer from functional impairment and developmental delays in academic, emotional, social, or behavioral skills. For many of these children and adolescents access to treatment is limited, especially in the public health mental health setting. At the same time, researchers have noted increased and expanded use of antipsychotic medications for a wide range of clinical indications in children.

Data Dictionary

The Data Dictionary outlines common definitions for variables, demographic splits, and program descriptions, as well as clarifies numerators and denominators for each of the calculated rates. Using this dictionary as a template, States can pull their own data based on agreed definitions and examine:

- Demographic splits (age, gender, eligibility types, fee-for-service [FFS]/managed care, etc.)
- Dose (drug type by multiples of maximal dose or thresholds, and by diagnosis if available)
- Multiple drug exposure (define how to discern crossover and medication changes)
- Poly-prescribers (as an indicator of continuity of care)
- Diagnosis (diagnosis and drug correlations if available)
- Maximal gap in days (are prescriptions being taken)
- Mental health eligibility descriptions (how carve outs in mental health services and FFS pharmacy services affect antipsychotic [AP] medication utilization); and
- Program characteristics (each State can be characterized by programs—central and local —to compare trends and practices)

B. Definitions: CORE

Purpose	Standardized definitions are of critical importance for ensuring that State-to-State comparisons are compatible.	
Definition	Each of the following project definitions are outlined in lettered section with a corresponding table cited in the Blank Excel Spreadsheets attachment.	
Data Labels	AP medication class inclusion	Table N
	Gaps in therapy	Table J
	AP medication administrative rule	Table C
	Adolescent (12-20 y/o)	Table E
	Calendar year (used in all tables rather than fiscal year)	Table C-P
	Child (0-11 y/o)	Table E
	Concurrent use	Table H
	Costs (ingredients, dispensing fees and supplemental)	Table D
	Diagnoses	Table O
	Dosage	Table F
	Dual and non-dual	Table L
	Duration of AP medication use	Table J
	Eligibility	Table L
	Foster Care	Table L
	Fee for Service	Table C
	Generic	Table N
	International Classification of Diseases (ICD)	Table O
	Managed care	Table C
	Maximal dose	Table F
	Maximal gap	Table J
	Medication adherence ratio	Table J
	Medicaid Medical Director Network	Table A
	Member/client month	Tables C&E
	Mental health drug inclusion	Table N
	National Drug Code (NDC)	Table N
	Per member per month	Tables C&E
	Multiple AP medication exposure	Tables G&H
	Within class poly-pharm	
	Between class psych poly-pharm	
	Poly-prescribing	Table I
	Provider types	Table P
	Rebates (Federal and supplemental)	Tables D&E
	Mental health drug statute	Table C
	Utilization management and review (UM/UR)	Table C

C. Program Characteristics: CORE

Purpose	Understanding each State's program characteristics related to AP medication and mental health drug prescribing is at the core of this project. By aligning the program descriptions with the data, the project will seek to identify possible "mature practices" that may impact the numbers, trends, and rates of AP medication prescribing.
Definition	A program characteristic is any UM/UR, policy, process, statute, rule, or program that might affect the prescribing or usage of AP medications.
Data	**State Program/Processes (Examples)** Preferred Drug List (PDL) PA for AP medications Report cards Eli Lilly program (Comprehensive NeuroSciences [CNS]) Algorithm Guidelines Association agreement with guidelines Record review/second opinions Provider type Rx restrictions DAW Protections Refill Protections Contract continuity agreement Second opinions Lawsuits related to AP medication restrictions, Early Periodic Screening, Diagnosis, and Treatment (EPSDT) or mental health issues effecting AP medication use Drug Utilization Review (DUR) edits Hyperglycemia and lipid restrictions
Program Questionnaire	A short template can be found in the addendum to this Data Dictionary. The questions are mostly yes/no, with a request for a Web site reference, where available, to aid in defining program/process scope and help to determine effect size. Each State is asked to complete this questionnaire and submit it with their data.
Key Questions	1. How do AP medication programs differ across States? 2. Do program differences correlate with utilization rates? 3. Do States differ in statutes with regard to restrictions and controls for AP medication prescribing and do the differences correlate with prescribing rates? 4. Do States differ in using contractors or community programs to reduce AP prescribing variation and do differences correlate with prescribing rates?

D. Program Cost and Utilization Statistics: *OPTIONAL*

Purpose	The following tables outline the cost and utilization trends in each State based on the Centers for Medicare & Medicaid Services (CMS) data source. Using total drug costs and utilization, as well as AP medication cost and utilization, a State may identify AP medication effects by program size. This may serve as an indicator of statute, rule, program, and/or policy influences. These tables can be found on the CMS MAX Web site (see URLs below) and are derived from the Medicaid Medical Information Systems (MMIS) data sent to CMS quarterly. States may wish to use these tables to compare trends.
Definition	The tables are modeled after the Healthcare Cost and Utilization Project (HCUP) data found in the MAX data sets: Introduction http://www.cms.gov/MedicaidDataSourcesGenInfo/downloads/maxintro.zip General http://www.cms.gov/MedicaidDataSourcesGenInfo/07_MAXGeneralInformation.asp State data http://www.cms.hhs.gov/MedicaidDataSourcesGenInfo/MAX/list.asp?cmdSubmit=Return+to+List&filterType=none&filterByDID=-99&sortByDID=1&sortOrder=ascending&listpage=1
Data	**Tables** — **Table Title** ND.7 — Ranks 10 drug classes to determine AP medication ranking ***OPTIONAL*** N1 — Details overall State pharmacy spending ***OPTIONAL*** ND.2 — Details non-dual costs by total and per client per month of eligibility ***OPTIONAL*** ND.3 — Details non-dual use by unique users and eligibility types ***OPTIONAL*** N7A - — Details non-dual use and costs for AP medications ***OPTIONAL*** ND.5 — Details non-dual use of generic and brands ***OPTIONAL***
Program Questionnaire	A complete list of cost and utilization labels can be found in the D tables in the Blank Excel Spreadsheets attachment.
Key Questions	1. Do States differ in their AP medication utilization rates and costs? 2. If yes, are differences correlated with programs, administration rules and/or statutes?

E: Demographics of Medicaid Clients Prescribed AP Medications: CORE

Purpose	Standard definitions of age and eligibility are necessary to ensure accurate comparisons.
Population	Tables are produced for each participating State and each calendar year from 2004–2007. For each year, all non-dual fee-for-service Medicaid clients with ≥ one month eligibility are included.
Data	**Age: For each calendar year, client age on July 1** (regardless of whether the client is eligible during July). **Race and ethnicity:** Race and ethnicity are optional for this project due to coding issues. **Required Medicaid eligibility for inclusion:** Each table contains unique eligibility criteria (one or six months). **Foster Care:** For each calendar year, every non-dual fee-for- service client with ≥ one month eligibility. **AP User:** For each calendar year, clients with ≥ one claim for an AP medication in the respective calendar year. **All clients:** For each calendar year, every non-dual fee-for-service client with ≥ one month eligibility. **Eligibility categories:** The following eligibility categories are defined and may not be mutually exclusive (i.e., a client can be counted in more than one category if his eligibility category changes during a calendar year. See Table L for a list of eligibility codes. • ***Aged, Blind & Disabled:*** For each calendar year, ≥ one month of eligibility. • ***TANF:*** For each calendar year, ≥ one month of eligibility. • ***SCHIP:*** For each calendar year, ≥ one month of eligibility. • ***Other:*** For each calendar year, ≥ one month of eligibility. **No. of benefit months among AP users:** By calendar year, sum of all eligible months among users of first generation antipsychotics (FGAs) or second generation antipsychotics (SGAs) (for the "Foster Care" row, use month specific eligibility group not modal eligibility group). **Mean Number of AP Rx:** By calendar year, mean number of all claims for FGAs/SGAs among users of AP medications. **Mean AP Rx $:** By calendar year, mean total cost per member for all FGA/SGA medication claims (ingredient cost after Federal rebate and supplement rebates, excluding dispensing fees) reported out by per member per month (PMPM). The PMPM is a standard insurance term with member and Medicaid client interchangeable.
Data Labels	A complete list of demographic labels can be found in the table E of the Blank Excel

	Spreadsheets attachment.
Key Questions	1. Do States prescribing rates of AP medications differ by client demographics? 2. If yes, are differences correlated with programs, administrative rules and/or statutes?

F. AP Medication Dosing: CORE

Purpose	Understanding each State's program characteristics related to AP and mental health drug prescribing is at the core of this project. By aligning the program descriptions with the data, the project will seek to identify possible "best practices" that may impact the numbers, trends, and rates of AP medication prescribing.
Population	The thresholds are listed as multiples of the maximal doses in the Texas Foster Care Report. For the purposes of reporting, the numerator is any AP prescription and the denominator is all clients with any AP prescription in the calendar year of study. Tables are produced for each participating State, for each calendar year from 2004–2007, and selected AP medications. For each year, all non-dual FFS Medicaid clients with ≥ one month eligibility are included. States with large managed care volumes or all managed care may as an optional set of tables report populations by coverage, in an effort to link to the AP medication programs in FFS. **Age: For each calendar year, client age on July 1** (regardless of whether the client is eligible during July). **User:** For each individual AP medication and calendar year, clients with ≥ one claim in the respective calendar year. **Foster Care:** For each calendar year, every non-dual FFS client with ≥ one month eligibility. **All clients:** For each calendar year, every non-dual FFS client with ≥ one month eligibility. **Eligibility categories:** The following eligibility categories are defined non-mutually exclusive (i.e., a client can be counted in more than one category if his/her eligibility category changes during a calendar year. Please see Table L in the Blank Excel Spreadsheets attachment for further coding. • ***Aged, Blind & Disabled:*** For each calendar year, ≥ one month of eligibility. • ***TANF:*** For each calendar year, ≥ one month of eligibility. • ***SCHIP:*** For each calendar year, ≥ one month of eligibility. • ***Other:*** For each calendar year, ≥ one month of eligibility. **State Average Dose:** For each AP medication separately; mean dose in [mg] of all prescriptions filled during the calendar year. Calculate the mean dose for an individual AP medication as follows based **on all claims for the individual AP** medication during a calendar year: [Sum (number of pills dispensed x dose in mg)] / (Sum(days supply) **Greater Max, 2x Max, etc:** Based on **the single highest dose observed** for each user for each AP medication. Calculate dose for **each individual claim** as [Sum (number of pills dispensed x dose in mg)] / (Sum(days supply). Number and proportion of users who fall into five exclusive categories: • Max: Highest observed dose greater than age specific defined maximum dose for one month or greater than one month. Maximial doses for each AP are found in Table F. States' comparisons were to doses exceeding twice the maximum dose.

<table>
<tr><td></td><td>

2x Max: Highest observed dose greater than twice the age specific defined maximum dose (see Table F) but not exceeding three times the maximum dose.
Doses can be expressed as multiples of the maximal doses and approximate the FDA recommended (e.g. 1/4Max, 1/2 Max, 3x Max, 5x Max or greater than 5x Max)

Dose tables are based on the Psychotropic Medication Utilization Parameters for Foster Children, page 6 and 7, available at: http://www.dshs.state.tx.us/mhprograms/pdf/PsychotropicMedicationUtilizationParametersFosterChildren.pdf.

A complete list of doses and max doses by drug can be found in the National Drug Code attachment.
</td></tr>
<tr><td>Drug List</td><td>
Anti-Psychotics (APs) from TX Foster Care Report
<table>
<tr><th></th><th>Max Dose Definition</th></tr>
<tr><td>Aripiprazole</td><td>30</td></tr>
<tr><td>Clozapine</td><td>600</td></tr>
<tr><td>Haloperidol</td><td>10</td></tr>
<tr><td>Olanzapine</td><td>20</td></tr>
<tr><td>Perphenazine</td><td>32</td></tr>
<tr><td>Quetiapine</td><td>600</td></tr>
<tr><td>Risperidone</td><td>6</td></tr>
<tr><td>Ziprasidone</td><td>180</td></tr>
</table>
</td></tr>
<tr><td>Data Labels</td><td>A complete list of drug and dose labels can be found in table F in the Blank Excel Spreadsheets attachment.</td></tr>
<tr><td>Reported Variable</td><td>Rate of average dosing and rates of between ¼ Max, ½ Max, Max and 2X, 3X, 4X and 5X or greater than the dosing listed in drug list.</td></tr>
<tr><td>Key Questions</td><td>1. Do States differ in their dosing of AP medications (mean and maximum)?
2. If yes, are differences correlated with programs, administrative rules and/or statutes?</td></tr>
</table>

G. Multiple AP Medication Exposure: CORE

Purpose	Examination of multiple AP medication exposure has been shown as a marker of both disease severity and poor coordination of care. Multiple AP medication exposure is defined as the overlapping of multiple doses of medications (A list of the drugs used by States is found in the National Drug Codes table in Resource Guide). G tables provides suggested thresholds to determine the frequency and rates of multiple exposures in the AP medication class. Using these rates the project will seek to compare State-to-State and intra-State assumptions for multiple AP medication exposure variation and whether State or local programs effect the prescribing of multiple AP medications to children.
Population	Tables are produced for each participating State and each calendar year from 2004–2007. For each year, all non-dual FFS Medicaid clients with ≥ six months of eligibility are included.
Data	**Age: For each calendar year client age on July 1** (regardless of whether the client is eligible during July). **User:** For each calendar year, eligible clients with ≥ one claim for an AP medication in the respective calendar year. **All clients:** By calendar year, every non-dual FFS client with ≥ six months of eligibility. **Eligibility categories:** The following eligibility categories are defined non-mutually exclusive (i.e., a client can be counted in more than one category if his eligibility category changes during a calendar year. Please see Table L for further coding. • ***Aged, Blind & Disabled:*** For each calendar year, ≥ one month of eligibility. • ***TANF:*** For each calendar year, ≥ one month of eligibility. • ***SCHIP:*** For each calendar year, ≥ one month of eligibility. • ***Other:*** For each calendar year, ≥ one month of eligibility. **Foster Care:** For each calendar year, every non-dual fee-for-service client with ≥ six month eligibility and > one month of foster care. **Count of APs:** Multiple exposure is defined as the count of different AP medications submitted by a beneficiary during a calendar year (Defined by generic name). An AP medication is counted if the days supply for the specific AP medication during the calendar year exceeds 15 days. Some States may wish to check their data by using a sensitivity analysis with a count of minimum numbers of days supply for an AP (any days, >30, >60, >90, and >180 days) conducted analogously (see Table G in the Blank Excel Spreadsheets for an example).
Data List	A complete list of multiple AP labels can be found in table G in the Blank Excel Spreadsheets attachment.

Data Labels	Foster care may differ by State but includes any child with a foster care designation regardless of their placement in or out of parents home or with family. Foster care participation will be defined as greater than one month of claims during the study period. Medicaid Management Information Systems (MMIS) definitions of foster care are used.
Key Questions	1. Do States differ in their patterns of multiple AP medication exposure? 2. If yes, are differences correlated with programs, administrative rules and/or statutes? 3. If yes, are there differences in combinations or patterns of multiple exposures?

H. Multiple Mental Health Drug Exposure: CORE

Purpose	Multiple mental health drug (MHD) exposure has been shown to be a marker of both disease severity and poor coordination of care. The National Drug Code attachment lists suggested drugs to determine the frequency and rates of multiple drug exposure in several mental health drug classes. Using these rates, the project will seek to compare State-to-State and intra-State assumptions for multiple drug exposure variation and whether State or local programs have affects on the use of multiple mental health drugs in children.
Population	Tables are produced for each participating State, for each calendar year from 2004–2007. For each year, all non-dual FFS Medicaid clients with ≥ six consecutive months of eligibility are included.
Data	**Age: For each calendar year client age on July 1** (regardless of whether the client is eligible during July). **User:** For each calendar year, eligible clients with ≥ one claim for a MHD in the respective calendar year. **All clients:** By calendar year, every non-dual FFS client with ≥ six months of consecutive eligibility. **Eligibility categories:** The following eligibility categories are defined non-mutually exclusive (i.e., a client can be counted in more than one category if his/her eligibility category changes during a calendar year. Please see the list of eligibility codes in section L. • ***Aged, Blind & Disabled:*** For each calendar year, ≥ one month of eligibility. • ***TANF:*** For each calendar year, ≥ one month of eligibility. • ***SCHIP:*** For each calendar year, ≥ one month of eligibility. • ***Other:*** For each calendar year, ≥ one month of eligibility. **Foster Care:** For each calendar year, every non-dual FFS client with ≥ six month eligibility and > one month of foster care. **Count of MHDs:** Multiple MHD drug exposure is assessed as the count of different MHDs (defined by generic name) submitted by a beneficiary during a calendar year. An MHD is counted if the days supply for the specific MHD during the calendar year exceeds 15 days. NOTE: Mood stabilizers are only counted in patients without a diagnosis of a seizure disorder (ICD-9-CM 345.xx). Some States did a sensitivity analysis by counting the larger minimum numbers of days supply for an MHD to be counted (any days, >30, >60, >90, and >180 days) conducted analogously (examples can be found in table H of the Blank Excel Spreadsheets attachment).
Drug List	See the National Drug Code list attachment.
Data Label	A complete list of multiple MHD labels can be found in the H tables in the Blank Excel Spreadsheets attachment.

Reported Variable	Rate of average number of mental health drugs and rates of 1, 2, 3, 4 and 5 or more mental health drugs contained in the drug list. Rates may be calculated and reported by age, sex, county, etc., using the numerators (MHD) and denominator (eligibility types) descriptors listed above.
Key Questions	1. Do States differ in their patterns of multiple MHD exposure? 2 . If yes, are differences correlated with programs, administrative rules and/or statutes? 3. If yes, are there differences in combinations or patterns of multiple drug exposure?

I. Mental Health Drug Poly-Prescribing: CORE

Purpose	The examination of poly-prescribing for mental health drugs has been shown to be a marker of both multiple sites of service (i.e., hospital and outpatient) and poor coordination of care (i.e., outpatient and ER). Poly-prescribing refers to the mean number of unique providers associated with a claim for a MHD for a client per calendar year. The tables in the Blank Excel Spreadsheets attachment are suggested for the determination of the frequency and rates of poly-prescribing in a State. Using these rates the project will seek to compare State-to-State and intra-State assumptions for poly-prescribing variation and whether State or local programs have effects on the rates of poly-prescribing.
Population	Tables are produced for each participating State, for each calendar year from 2004–2007. For each year, all non-dual FFS Medicaid clients with ≥ six consecutive months of eligibility are included.
Data	**Age**: For each calendar year client age on July 1 (regardless of whether the client is eligible during July). **User:** For each and calendar year, eligible clients with ≥ one claim for a MHD in the respective calendar year. **All clients:** By calendar year, every non-dual FFS client with ≥ six months of consecutive eligibility. **Eligibility categories:** The following eligibility categories are defined non-mutually exclusive (i.e. a client can be counted in more than one category if his eligibility category changes during a calendar year. Please see Table L for a list of elibility codes. • ***Aged, Blind & Disabled:*** For each calendar year, ≥ one month of eligibility. • ***TANF:*** For each calendar year, ≥ one month of eligibility. • ***SCHIP:*** For each calendar year, ≥ one month of eligibility. • ***Other:*** For each calendar year, ≥ one month of eligibility. **Foster Care:** For each calendar year, every non-dual fee-for-service client with ≥ 6 month eligibility and > one month of foster care. **Average # of providers:** Mean number of providers (unique Drug Enforcement Agency [DEA] numbers or State-specific provider number) associated with a claim for a MHD for a client per calendar year. **1 Provider - ≥ 5 Providers**: Per calendar year, number of clients and proportion (denominator = no. of users) with 1 (2, 3, 4, and 5, respectively) providers (unique DEA numbers) associated with a claim for a MHD for a client. Each State should document the identifier used to count unique prescribers.
Drug List	A complete list can be found in the National Drug Codes attachment.
Data Label	A complete list of poly-prescribing labels can be found in table I in the Blank Excel Spreadsheets attachment.

Reported Variable	Rate of average number of prescribers and the rates of 1, 2, 3, 4 or 5 or more unique DEAs. Rates may be calculated and reported by age, sex, county, etc., using the numerators and denominator descriptors listed above.
Key Questions	1. Do States differ in their patterns of MHD poly-prescribers? 2. If yes, are differences correlated with programs, administrative rules and/or statutes?

J. Maximal Gap in Days: CORE

Purpose	A number of Medicaid and non-Medicaid (e.g., CATIE) studies show that AP medication adherence is poor. Other studies indicate that adherence can be a marker of severity, dual diagnosis issues, homelessness, costs associated with co-pays and/or a variety of other issues. Using these maximal gap days, State-to-State comparisons will highlight programmatic effects on gaps in therapy.
Population	Tables are produced for each participating State, for each calendar year from 2004-2007. For each year, all non-dual fee-for-service Medicaid clients with ≥ 6 consecutive months of eligibility are included.
Data	**Age**: For each calendar year client age on July 1 (regardless of whether the client is eligible during July). **User**: For each calendar year, eligible clients with ≥ one claim for an AP medication in the respective calendar year. **All clients**: By calendar year, every non-dual FFS client with ≥ 6 months of consecutive eligibility. For each calendar year, only the longest period of consecutive eligibility is considered. Eligibility categories: The following eligibility categories are defined non-mutually exclusive (i.e. a client can be counted in more than one category if his eligibility category changes during a calendar year. Please see Section L for a list of eligibility codes. • ***Aged, Blind & Disabled:*** For each calendar year, ≥ one month of eligibility. • ***TANF:*** For each calendar year, ≥ one month of eligibility. • ***SCHIP:*** For each calendar year, ≥ one month of eligibility. • ***Other:*** For each calendar year, ≥ one month of eligibility. **Foster care:** For each calendar year, every non-dual FFS client with ≥ 6 month eligibility and > one month of foster care. **Gap in days:** Based on the largest observed gap in AP medication use during the longest consecutive period of eligibility each client is classified into four mutually exclusive categories (0 days, 1-20 days, 21-40 days, >40 days). For each client AP medication use is defined for each day of the eligibility period based on AP medication claims and days of supply. Oversupply of AP medications is not taken into account. The largest gap is defined as the largest number of consecutive days without supply for at least one AP medication in the period between the first AP medication prescription and the date of the last AP medication prescription (i.e., AP medication discontinuation without re-start does not count as a gap).
Drug List	A complete list can be found in the National Drug Code attachment.
Data Label	A complete list of maximal gap labels can be found in the J tables in the Blank Excel Spreadsheets attachment.
Reported Variable	Rate of average number of maximal gap days for the State and rates for each maximal gap in days as noted in the list above. Rates may be calculated and reported by age, sex, county, etc. using the numerators and denominator descriptors listed above.

Key Questions	1. Do States differ in their patterns of AP medication gaps in therapy? 2. If yes, are differences correlated with programs, admin rules and/or statutes? 3. Extra Credit: Do gaps in therapy have any relationships to re-hospitalization rates, ER utilization, SA/AD, Skilled Nursing Facility admissions or other health care outcomes?

K. Regional Variation Maps: *OPTIONAL*

Purpose	States may benefit from an examination of regional variations in multiple AP medication exposure, poly-prescribing, age, and dosing of AP medications. The documented variation may highlight areas with excessive rates or under-utilization.
Population	Each rate is designated to a county. Some States may wish to aggregate counties to focus on contracted regional care areas.
Data	Regional variation maps can be constructed for any of the measures defined in this dictionary. For demonstration purposes we ask that each State that participates in this optional analysis provides regional variation maps by county for their State for the following two measures based on the flags listed below (an example map can be found in table K of the Blank Excel Spreadsheets attachment): 1. Among clients <19 years, county specific rates of AP medication use (one AP medication for ≥ 15 days) 2. Among clients <19 years, county specific rates of multiple AP medication use (≥one AP medication each for ≥ 15 days) 3. Additional maps could include rates for multiple MHD exposure (>five MHD), poly-prescribers (>two Rxers) and Gap in therapy (>20 days) Note: Please flag counties with <50 eligible clients <19years
Data Label	An example of a map can be found in the K table in the Blank Excel Spreadsheets attachment.
Key Questions	1. Do States differ in their patterns of multiple AP medication exposure, poly-prescribing, gaps in therapy? 2. If yes, are differences correlated with programs, admin rules and/or statutes? 3. If yes, are the differences explained by known variables (e.g. regional contractors, unique programs, proximity to some program)?

L. Eligibility: CORE

Purpose

Defining the eligibility groups is important for maintaining consistency in State comparisons. For some data tables the eligibility groups for determining rates (i.e., one or six months) are reflective of program components (e.g., PA, DUR, etc.) that are affecting the rates. For example, gaps in therapy would not make sense if clients with only one month were counted.

Population

Table	Denominator Eligibility Requirements
C. Program Characteristics	One month
D. Program Cost and Utilization Statistics	One month
E: Demographics of AP medication users	One month
F. AP Medication Dosing	One month
G. Multiple AP Medication Exposure	Six months
H. Multiple Mental Health Drug Exposure	Six months
I. Mental Health Drug Poly-prescribing	Six months
J. Maximal Gap in Days	Six months consecutive
N: Diagnosis Tables for AP Medication Users	One month
O: Provider Type Tables	One month

Data Labels

Eligibility Types:
Max Uniform Eligibility Medicaid Analytic Extracts (MAX)

These labels (not the numbers) are consistent in most MMIS system used in Federal reporting.

CODES:
00 = NOT ELIGIBLE
11 = AGED, CASH
12 = BLIND/DISABLED, CASH
14 = CHILD (NOT CHILD OF UNEPLOYED ADULT, NOT FOSTER CARE CHILD), ELIGIBLE UNDER SECTION 1931 OF THE ACT
16 = CHILD OF UNEMPLOYED ADULT, ELIGIBLE UNDER SECTION 1931
15 = ADULT (NOT BASED ON UNEMPLOYMENT STATUS), ELIGIBLE UNDER SECTION 1931
17 = UNEMPLOYED ADULT, ELIGIBLE UNDER SECTION 1931 OF THE ACT
21 = AGED, MN
22 = BLIND/DISABLED, MN
24 = CHILD, MN (FORMERLY AFDC CHILD, MN)
25 = ADULT, MN (FORMERLY AFDC ADULT, MN)
31 = AGED, POVERTY
32 = BLIND/DISABLED, POVERTY
34 = CHILD, POVERTY (INCLUDES MEDICAID EXPANSION SCHIP CHILDREN)
35 = ADULT, POVERTY (ANALYTIC EXTRACT INPATIENT RECORD (1999 AND LATER YEARS)
3A = INDIVIDUAL COVERED UNDER THE BREAST AND CERVICAL

	CANCER PREVENTION 41 = OTHER AGED 42 = OTHER BLIND/DISABLED 48 = FOSTER CARE CHILD 44 = OTHER CHILD 45 = OTHER ADULT 51 = AGED, SECTION 1115 DEMONSTRATION EXPANSION 52 = DISABLED, SECTION 1115 DEMONSTRATION EXPANSION 54 = CHILD, SECTION 1115 DEMONSTRATION EXPANSION 55 = ADULT, SECTION 1115 DEMONSTRATION EXPANSION 99 = UNKNOWN ELIGIBILITY
Key Questions	1. Do States differ in their patterns of AP medication use by eligibility in children (e.g., foster care)? 2. If yes, are differences correlated with programs, admin rules and/or statutes?

M. National Drug Code Tables: CORE

Purpose	Standard tables for AP and mental health NDCs are required to ensure consistency in State-to-State comparisons.
Definition	NDC is the National Drug Code assigned to a drug that designates its label, drug, dose, color, and packaging. NDCs will change over the study period.
Drug List	A complete list can be found in the National Drug Code attachment. Several NDCs are listed for each drug in the Blank Excel Spreadsheets attachment.
NDC	Please see tables for a list of NDCs by drug, dose, etc. Use this list for all reporting based on drug tables under each section. If there are errors please report to the group. If differing from the drug tables please report change to the group. If a State reports AP or MHD utilization beyond CY 2007 an updated NDC list with newer drugs will be necessary.

N. Diagnosis Tables for MHD Users: Optional

Purpose	The percentage of diagnoses when trended over the calendar year may show changes in community standards over a particular area.	
Population	Tables are produced for each participating State, for each calendar year from 2004–2007. For each year, all non-dual FFS Medicaid clients with ≥ one month eligibility and ≥ one claim for a MHD are included.	
Data	**Age:** For each calendar year client age on July 1 (regardless of whether the client is eligible during July). **N:** For each individual calendar year, clients with ≥ one claim for a MHD in the respective calendar year. **All clients:** By calendar year, every non-dual FFS client with ≥ one month eligibility **Eligibility categories:** The following eligibility categories are defined non-mutually exclusive (i.e. a client can be counted in more than one category if his eligibility category changes during a calendar year. Please see the elibility list in Table L. ***Aged, Blind & Disabled:*** For each calendar year, ≥ one month of eligibility. ***TANF:*** For each calendar year, ≥ one month of eligibility. ***SCHIP:*** For each calendar year, ≥ one month of eligibility. ***Other:*** For each calendar year, ≥ one month of eligibility. **Foster Care:** For each calendar year, every non-dual FFS client with ≥ one month eligibility. **Diagnoses:** By calendar year and using the ICD-9-CM codes below (in any position, not limited to the primary diagnosis), number and proportion (denominator = all users) of clients with two or more claims for each of the diagnoses groups. **Quality measures:** Using the previously created measures (G-J, including analysis specific eligibility criteria) for subjects meeting the cutoffs specified in the table (TBD, N), number and proportion (denominator = N) of clients with two or more claims for each of the diagnoses groups.	
Drug List	A complete list can be found in the National Drug Code attachment.	
Data Labels	**Group**	**ICD-9-CM**
	Substance use disorders	291, 292, 303-305
	Conduct disorder/antisocial personality disorders	312, 301.7
	Anxiety disorders	300.0, 300.2,300.3, 308.3
	Depressive disorders	296.2, 296.3, 311, 300.4
	Schizophrenia and related disorders	295, 297-298
	Attention-deficit/hyperactivity disorders	314
	Other mental disorders, not specified above	290-319
	Diabetes	250.x
	Bipolar *(see further coding below)*	296.x
	Autism spectrum disorder *(see further coding below)*	299.x
	Bipolar	
	Manic disorder, single episode	296.0

	Manic disorder, recurrent episode Bipolar affective disorder, manic Bipolar affective disorder, depressed Bipolar affective disorder, mixed Bipolar affective disorder, unspecified Manic depressive psychosis **Autism Spectrum Disorder (ASD) / Pervasive Developmental Disorder** Autistic disorder Childhood autism Infantile psychosis Kanner's syndrome Childhood disintegrative disorder Heller's syndrome Other specified pervasive developmental disorders: • Asperger's disorder • Atypical childhood psychosis • Borderline psychosis of childhood Unspecified pervasive developmental disorders: • Childhood psychosis NOS • Schizophrenia, childhood type NOS • Schizophrenic syndrome of childhood NOS • **Abbreviations:** Substance use disorders (SUDs), Conduct disorder/antisocial personality disorders (CDs) Anxiety disorders (ADs) Depressive disorders (DDs) Schizophrenia and related disorders (SCH) Attention-deficit/hyperactivity disorders (ADHD) Other mental disorders (OMD) Diabetes (DB) Bipolar (BP) Autistic Spectrum Disorder (AS)	296.1 296.4 296.5 296.6 296.7 296.8 299.0 299.1 299.8 299.9
Reported Variable	A complete list of diagnostic labels can be found in the N tables in the Blank Excel Spreadsheets attachment.	
Key Questions	1. Do States differ in their diagnosis rates for MHD use in children? 2. If yes, are differences correlated with programs, administrative rules and/or statute? 3. Are the trends related to diagnosis?	

O: Provider Type Tables: Optional

Purpose	Examining Prescriber types across AP medication use and issues (multiple drug exposure, gaps in therapy and poly-prescriber) may be useful in the determination of practice variation.
Population	**Age:** For each calendar year client age on July 1 (regardless of whether the client is eligible during July). **N:** For each individual calendar year, clients with ≥ one claim for a MHD in the respective calendar year. **Provider types:** Provider types are defined based solely on claims for MHDs. Number and proportion (denominator = N) of clients with MHD claims written by the types of providers specified below. **Quality measures:** Using the previously created measures (G-J; including analysis specific eligibility criteria) for subjects meeting the cutoffs specified in the table (TBD; N), number and proportion (denominator = N) of clients with ≥ one claims from each of the provider groups. **Provider types:** 1. MD/PCP: FP, GP, and/or IM who writes an AP medication (would in 2. clude other prescribers not listed below). 3. PEDIATRICIAN: Any pediatrician (general pediatrics, PA/ARNPs in a pediatrician office). 4. ARNP: All types including those mental health specialists who write for an AP medication. 5. Psychiatrists: Are both adult and Ped & Adolescent who write for an AP medication. 6. INSTITUTIONAL DEA: For some States the training residents will have high numbers of Rxs without having a unique provider number. 7. ALL OTHER TYPES: States should attempt to capture all other provider types not noted above and list those types if known (e.g. dentists).
Data	Tables are produced for each participating State, for each calendar year from 2004–2007. For each year, all non-dual FFS Medicaid clients with ≥ one month eligibility and ≥ one claim for a MHD are included.
Data Labels	A complete list of provider labels can be found in the O table in the Blank Excel Spreadsheets attachment.
Reported Variable	Percentages of prescription written by a provider type for differing issues.
Key Questions	1. Do States differ in their patterns of AP medication prescribers? 2. If yes, are differences correlated with programs, administrative rules and/or statutes?

ADDENDUM: Medicaid Program Characteristics Template

The following questionnaire relates to your State's mental health and pharmacy programs. Each question has a ***yes/no/not applicable*** response and/or a space to add specific programmatic information. If you respond ***yes,*** please give a brief description and/or provide a Web site, contact person, or other source for more information. If you respond ***no***, please move to the next question. The Key Questions below are correlated with the pharmacy data questions in an effort to identify possible "mature, promising, or emerging practices." Section 3 of the *Report and Resource Guide* describes some of the participating States' results.

Is AP medication utilization affected by:

- Contracted mental health services that bear prescription risk?
- FFS mental health services that bear prescription risk?
- Coordination between agencies (Medicaid, Mental Health, Children's Services and Foster Care)?
- The level of P&T or DUR activity?
- AP medication program controls (e.g. PDL, step therapies, guidelines, report cards)?
- Existence of in-State CNS programs?
- Special State programs (e.g., second opinions, PA programs, benefits limits)?
- Are measures other than pharmacy utilization used to assess AP medication programs?

I. Program Structure Questions	Yes	No	N/A
1) Does your State have a risk-bearing, contracted mental health program?			
1a) If yes, please indicate a Web site location where this program is described and/or contact person for further information: _____			
1b) Does this contractor bear the risk for mental health drugs?			
2) Does your State pay for all mental health care programs?			
2a) If yes, please indicate a Web site location that describes those benefits that are not paid for by FFS: _____			
2b) Does the FFS program pay for all mental health drug claims?			
2c) If no, what claims are not paid for? Please indicate a web site that describes those benefits: _____			

I. Program Structure Questions (cont.)	Yes	No	N/A
3) Does your State's managed care contractor(s) that covers medical services also cover mental health benefits in addition to the carved out mental health contracts?			
3a) If yes, please indicate a Web site location that describes those benefits: _____			
3b) Do these contractors bear the risk for mental health drugs?			
4) Do you share data on Medicaid costs, trends, and utilization for mental health related medications and services with the mental health clinical community in your State?			
4a) If yes, what are the groups and please indicate a Web site location that describes the data sharing and/or contact person for further info: _____			
5) For the purposes of mental health treatments, are populations screened for mental health severity to determine MH service eligibility?			
5a) If yes, what are the screening criteria (please list and/or indicate source) and what entities are responsible for screening? _____			
6) Does your Medicaid program make independent mental health pharmacy decisions (e.g., PA on AP medications)?			
7) Is your Medicaid program required to obtain Mental Health Agency approval for mental health pharmacy decisions?			
8) Do Medicaid and your Mental Health Agency cooperate on mental health pharmacy decisions?			
8a) If yes, what are those processes? _____			

I. Program Structure Questions (cont.)	Yes	No	N/A
9) Is there an interagency agreement or memorandum of understanding between the Medicaid and mental health agencies, which specifically addresses issues of mental health pharmacy?			
9a) If yes, what are the essential elements? Please provide a link or source of additional information if possible: _____			
10) Is there an interagency agreement or memorandum of understanding between the Medicaid and Children's Agency (i.e., responsible for foster care, etc.) that specifically relates to children's mental health issues?			
10a) If yes, what are the essential elements? Please provide a link or source of additional information if possible: _____			
11) Is there an interagency agreement or memorandum of understanding between Juvenile Rehabilitation and Mental Health that specifically relates to children's mental health issues?			
11a) If yes, what are the essential elements? Please provide a link or source of additional information, if possible: _____			
12) Has your program examined the effects of AP medication controls on children's mental health services other than pharmacy costs or utilization (e.g., ER or hospitalization rates, foster care placements disruptions)?			
12a) If yes, can you summarize, and/or provide additional documentation, a Web site link and/or contact person for further information? _____			
13) Please indicate services that are typically available to all children in Medicaid that could apply to children prescribed AP medications. (Please mark all that apply). ___Inpatient mental health-psychiatric hospital ___Home and community-based services that are child specific ___School-based mental health services			

I. Program Structure Questions (cont.)	Yes	No	N/A
___Respite care ___Group therapy ___Family therapy ___Family support services ___Clinical psychologists ___Mental Health services of other licensed professionals ___Mental health clinic ___Outpatient hospital services ___Partial day treatment ___Psychosocial rehabilitation ___Targeted case management ___Psychiatric social workers ___Residential treatment ___Wrap around services ___Psychiatric phone consultations ___Club houses ___PACT Teams ___Other			
14) For the purposes of children's mental health service coordination, are there regular policy working groups that involve at least two of the following: ___Regular meetings between agency directors/commissioners to review cross cutting mental and medical policy decisions; ___Meetings between agency staff at least monthly; ___One or more "very influential" work groups in which cross agencies participate; and/or ___Links between Medicaid medical and mental health data. 14a) Which of the following agencies participate? ___Medicaid agency ___Children and family services ___Substance abuse agency ___Juvenile justice agency ___Social services agency ___Health department ___Education department ___Disabilities agency ___Special education ___Corrections agency ___Rehabilitation agency ___Governor's office staff ___Budget office staff ___State legislative staff ___Other agencies, please specify: _____			

The following questions relate your State's pharmacy program. Each question has a yes/no response. If you answer ***yes***, please give a brief description and/or provide a Web site location or source for additional information. If you answer ***no***, please move to the next question. Where policies differ by age, please indicate.

II. Pharmacy Process Questions	**Yes**	**No**
15) Does your Medicaid program have a P&T committee?		
15a) Has the P&T discussed AP medication use in children and adolescents?		
15b) Has the DUR committee actively examined AP medication utilization in children and adolescents?		
15c) Can you provide a Web site with a description of the AP medication utilization? _____		
16) Does your Medicaid Program have a PDL? Can you provide a web site with a description of the PDL program? _____		
16a) Does the list include any AP medications?		
16b) Does it include mood stabilizers?		
16c) Does it include antidepressants?		
16d) Does it include stimulants?		
17) Do AP medications have "Dispense as Written" protections specifically protecting mental health drugs?		
17a) Do you have refill protections or grandfathering of AP medications for continuation of therapy? 17b) Can you provide a Web site location with a description of these protections? _____		

II. Pharmacy Process Questions (cont.)	Yes	No
18) Do you use a particular professional association guideline to inform clinical practices of appropriate AP medication use? 18a) If yes, which guidelines? _____		
19) Do you use a unique State guideline to inform clinical practice of appropriate AP medication use? 19a) If yes, which guideline(s)? _____		

III. Pharmacy Outcome Questions	Yes	No
20) Do you provide individual prescriber reports cards with AP medication utilization compared to a peer group? 20a) Can you provide a web site location with a description of this program or a contact person? _____		
21) Do you use the Lilly CNS program?		
22) Do your contracted mental health providers (i.e., plans, managed care, or mental health contractors) have metrics or outcomes for AP medications (e.g. safety and utilization outcomes, adherence etc)? 22a) If yes, please indicate where can this information can be found or a contact person? _____		
23) Are there any significant legal precedents, consent decrees, injunctions, legislative provisions, or other constraints that affect AP prescription use? 23a) If yes, where can this information be found? _____		

III. Pharmacy Outcome Questions (cont.)	Yes	No
24) Are there any significant programs that influence AP prescription use as it relates to metabolic syndrome (i.e., standard forms that are necessary to check glucose, HbA1c, lipid panels)? 24a) If yes, where can this information be found? _____		

IV. Pharmacy Policy Questions	Yes	No
25) Does your FFS Medicaid program directly set policies for the mental health pharmacy claims system (prior authorization, DUR limits, age or provider type restrictions)? 25a) If no, who sets the policies? _____		
26) Does your Medicaid program set specific policies for mental health pharmacy through mental health contractors? 26a) If no, who sets the policies? _____		
27) Do you have structured AP medication metrics in mental health contracts (adherence maintenance, case management PACT teams, Rx, CME, etc.) related to AP medications? 27a) If yes, what are they and where can they be found? _____		
28) Will generic substitution apply to SGA medications in your State when there is a generic SGA medication?		
29) Will you require a generic first start for SGA medications in your State when there is a generic SGA medication?		
30) Please mark the utilization control that applies to the specific AP medication. If a medication is left blank, the response indicates no controls. If there are areas where policies vary by age, please provide clarifying comments.		

V. AP Medication Control Questions														
	PA	**PDL- Preferred**	**PDL- Non-Preferred**	**Provider Type Restriction**	**Step Therapy**	**Guidelines**	**Refill Protections**	**Second Opinions**	**Age Restrictions**	**Dose Restrictions**	**Combination Restrictions**	**Supplemental rebates**	**Fixed State Maximal Allowable Cost**	**Generic First for SGA (Planning)**
FGAs														
Chlorpromazine/HCL														
Fluphenazine decanoate/HCL														
Haloperidol/decanoate														
Loxapine HCL/succinate														
Mesoridazine besylate														
Molindone HCL														
Perphenazine														
Pimozide														
Thioridazine/thioridazine HCL														
Thiothixene/thiothixene HCL														
Trifluoperazine HCL														
Triflupromazine HCL														
SGAs														
Aripiprazole														
Clozapine														
Olanzapine														
Olanzapine + fluoxetine (Symbyax)														
Paliperidone														
Quetiapine fumarate														
Risperidone														
Risperidone inj.														
Ziprasidone HCL														

If you have checked yes to any of these controls, please indicate a location (website, statute/code, publication) where further information can be found and person to contact within your program for clarification if necessary.