Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics

Section 1. Basic Measure Information

1.A. Measure Name

Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics

1.B. Measure Number

0148

1.C. Measure Description

Please provide a non-technical description of the measure that conveys what it measures to a broad audience.

The percentage of children and adolescents who had a new prescription for an antipsychotic medication without a primary indication for it and had documentation of psychosocial care as first-line treatment.

Note: A higher rate indicates better performance.

1.D. Measure Owner

The measure owner is the National Committee for Quality Assurance. The measure was developed through the National Collaborative for Innovation in Quality Measurement (NCINQ) and the Rutgers University-based multi-State MEDNET consortium.

1.E. National Quality Forum (NQF) ID (if applicable)

Not applicable.

1.F. Measure Hierarchy

Please note here if the measure is part of a measure hierarchy or is part of a measure group or composite measure. The following definitions are used by AHRQ:

1. **Please identify the name of the collection of measures to which the measure belongs (if applicable). A collection is the highest possible level of the measure hierarchy. A collection may contain one or more sets, subsets, composites, and/or individual measures.**

Not applicable.

2. **Please identify the name of the measure set to which the measure belongs (if applicable). A set is the second level of the hierarchy. A set may include one or more subsets, composites, and/or individual measures.**

   Safe and Judicious Use of Antipsychotics in Children and Adolescents.

3. **Please identify the name of the subset to which the measure belongs (if applicable). A subset is the third level of the hierarchy. A subset may include one or more composites, and/or individual measures.**

   Not applicable.

4. **Please identify the name of the composite measure to which the measure belongs (if applicable). A composite is a measure with a score that is an aggregate of scores from other measures. A composite may include one or more other composites and/or individual measures. Composites may comprise component measures that can or cannot be used on their own.**

   Not applicable.

1.G. Numerator Statement

Documentation of psychosocial care during the 121 day period from 90 days prior to the date on which a new antipsychotic prescription was dispensed to 30 days after the date on which a new antipsychotic prescription was dispensed.

1.H. Numerator Exclusions

None.

1.I. Denominator Statement

Children and adolescents ages 1 to 20 years with a new prescription for an antipsychotic medication during the measurement year.

Age Stratification: 1-5 years, 6-11 years, 12-17 years, 18-20 years

Continuous Eligibility: 4 months prior and 1 month following the new prescription

Benefit: Medical, Mental Health, and Pharmacy.

1.J. Denominator Exclusions

Diagnosis with a primary indication for an antipsychotic (schizophrenia and psychotic disorders, bipolar disorder, tic disorder, autism).

1.K. Data Sources

Check all the data sources for which the measure is specified and tested.

Administrative data (e.g., claims data).

If other, please list all other data sources in the field below.

Not applicable.

Section 2: Detailed Measure Specifications

Provide sufficient detail to describe how a measure would be calculated from the recommended data sources, uploading a separate document (+ Upload attachment) or a link to a URL. Examples of detailed measure specifications can be found in the CHIPRA Initial Core Set Technical Specifications Manual 2011 published by the Centers for Medicare & Medicaid Services. Although submission of formal programming code or algorithms that demonstrate how a measure would be calculated from a query of an appropriate electronic data source are not requested at this time, the availability of these resources may be a factor in determining whether a measure can be recommended for use.

Please see the Supporting Documents for State and health plan reporting measure specifications.

Section 3. Importance of the Measure

In the following sections, provide brief descriptions of how the measure meets one or more of the following criteria for measure importance (general importance, importance to Medicaid and/or CHIP, complements or enhances an existing measure). Include references related to specific points made in your narrative (not a free-form listing of citations).

3.A. Evidence for General Importance of the Measure

Provide evidence for all applicable aspects of general importance:

- **Addresses a known or suspected quality gap and/or disparity in quality (e.g., addresses a socioeconomic disparity, a racial/ethnic disparity, a disparity for Children with Special Health Care Needs (CSHCN), a disparity for limited English proficient (LEP) populations).**

- **Potential for quality improvement (i.e., there are effective approaches to reducing the quality gap or disparity in quality).**

- **Prevalence of condition among children under age 21 and/or among pregnant women.**

- **Severity of condition and burden of condition on children, family, and society (unrelated to cost).**

- **Fiscal burden of measure focus (e.g., clinical condition) on patients, families, public and private payers, or society more generally, currently and over the life span of the child.**

- **Association of measure topic with children's future health – for example, a measure addressing childhood obesity may have implications for the subsequent development of cardiovascular diseases.**

- **The extent to which the measure is applicable to changes across developmental stages (e.g., infancy, early childhood, middle childhood, adolescence, young adulthood).**

Antipsychotic medication use is an important area of interest for pediatric measures development, given the growing use in children and adolescents. Although antipsychotic medications may serve as effective treatment for a narrowly defined set of psychiatric disorders in children, they are often being prescribed for nonpsychotic conditions such as attention-deficit hyperactivity disorder (ADHD) and disruptive behaviors (Cooper, Hickson, Fuchs, et al., 2004; McKinney, Renk, 2011; Olfson, Blanco, Liu, et al., 2006), conditions for which psychosocial interventions are considered first-line treatment (Kutcher, Aman, Brooks, et al., 2004; Pappadopulos, Mcintyre Li, Crimson, et al., 2003; Scotto Rosato, Correll, Pappadopulos, et al., 2012). Thus, clinicians may be underutilizing safer first-line psychosocial interventions in children with non-primary indications for antipsychotics.

Antipsychotics can increase a child's risk for developing serious health concerns and are associated with a number of adverse side effects (Andrade, Lo, Roblin, et al, 2011; Bobo, Cooper, Stein, et al, 2013; Correll, Manu, Olshanskiy, et al, 2009). This measure assesses whether children and adolescents who do not have a primary indication for an antipsychotic have been provided psychosocial services prior to or immediately after initiating an antipsychotic. The measure is part of a set that assesses the safe and judicious use of antipsychotics in children and adolescents; we assessed care for those in a general Medicaid population as well as those in the foster care system.

Prevalence of Antipsychotic Prescribing and Health Impact

Antipsychotic prescribing for children and adolescents has increased rapidly in recent decades, driven both by new prescriptions as well as longer duration of use (Patten, Waheed, Bresee, 2012). The frequency of prescribing antipsychotics among children and adolescents increased almost five-fold from 1996 to 2002, from 8.6 per 1,000 children and adolescents in 1996 to 39.4 per 1,000 in 2002 (Cooper, Arbogast, Ding, et al., 2006).

Use of antipsychotics in children can increase a child's risk for developing serious health issues, such as metabolic and physical health complications (Crystal, Olfson, Huang, et al., 2009), which are of particular concern given their potential for adversely affecting development. Antipsychotics are associated with a number of potential adverse impacts, including weight gain (Correll, et al., 2009) and diabetes (Andrade, et al. 2011; Bobo, et al., 2013), which can have serious implications for future health outcomes. For example, metabolic problems in childhood and adolescence are associated with poor cardio-metabolic outcomes in adulthood (Srinivasan, Myers, Berenson, et al. 2002). Obesity and dyslipidemias in childhood carry increased long-term health risk into adulthood, including heart disease, cancer, and shortened life span (Daniels,

2006). Other serious risks associated with antipsychotic medication use in children include extrapyramidal side effects, sedation and somnolence, liver toxicity, and cardiac arrhythmias (Correll, 2008).

Use of Antipsychotics in the Absence of a Primary Indication

Many children and adolescents receiving antipsychotic medications do not have a primary indication for their use. Studies have found that antipsychotics are increasingly being prescribed for children who have conditions such as ADHD and disruptive behavior disorders (Cooper, et al., 2004; Olfson, et al., 2006), which are not primary indications for the use of antipsychotics. Use of antipsychotics in children and adolescents has been examined for a broad array of other non-primary indications, including depression, anxiety disorders, eating disorders, obsessive compulsive disorder, post-traumatic stress disorder, and even insomnia. However, for these non-primary indications, psychosocial interventions are recommended treatment options, while antipsychotics are not.

Bipolar disorder and schizophrenia and psychotic disorders are the only conditions for which antipsychotics are a first-line treatment for children and adolescents, and both have Food and Drug Administration (FDA) approval for this population. These conditions are excluded from our measure, as guidelines recommend psychosocial treatments be offered in conjunction with medication management but not necessarily prior to medication. Tic disorders and management of irritability for children and adolescents with autism are two additional indications with FDA approval. For both of these conditions, while psychosocial treatments are first-line, in the case of severe symptomatology, antipsychotics are a therapeutic option. Thus, these conditions are also excluded from our measure.

For all other conditions, treatment guidelines endorse a trial of antipsychotics as a second-line treatment, after first-line psychosocial treatments, such as parent and child skills training, have been tried (Scotto Rosato, et al., 2012).

Children without a primary indication for an antipsychotic who are not first given the benefit of a trial of psychosocial treatment may unnecessarily incur the risks associated with these medications. Mental health conditions in youth are associated with a number of potential adverse sequelae, including increased risk for substance use (Substance Abuse and Mental Health Services Administration, 2007). To the extent that psychosocial interventions are associated with better outcomes (Eyberg, Nelson, Boggs, 2008; Jensen, Hinshaw, Swanson, et al., 2001; Schimmelmann, Schmidt, Carbon, et al., 2013), underuse of these therapies may lead to poorer mental and physical health outcomes.

Fiscal Burden

No studies have been done that compare the short-term cost-effectiveness of antipsychotic treatment with psychosocial interventions, but psychosocial treatment is not known or proposed to have any ongoing costs after termination, while antipsychotics have the potential to cause lasting health impacts and associated treatment costs. Antipsychotics are one of the most costly medication classes (Crystal, et al., 2009), and the substantial long-term costs of treating the health impacts associated with antipsychotics can include treatment of obesity, diabetes, and dyslipidemias. There is some evidence that these health conditions, such as new-onset diabetes,

may not resolve after discontinuation of the antipsychotic (Lean, Pajonk, 2003). Although this is an understudied area, it is reasonable to assume that unresolved health impacts of antipsychotics would be associated with long-term increases in health costs established for obesity and diabetes.

Opportunity for Improvement

Even as the use of psychopharmacological interventions has increased, the proportion of children and adolescents receiving outpatient psychotherapy declined from 2.95 percent in 1998 to 2.72 percent in 2007 (Olfson, Crystal, Huang, et al., 2010). One study of Medicaid-enrolled children and youth starting an antipsychotic medication found that almost one-third did not receive concurrent psychosocial therapy (Harris, Sorbero, Kogan, et al., 2012). A study of privately insured children 2–5 years of age found that only 40 percent who were prescribed an antipsychotic also had one or more therapy visits in the measurement year (Olfson, et al., 2010). From 1998-2007, the proportion of those receiving mental health outpatient treatment who were treated only with psychotherapy or with both psychotherapy and medication decreased significantly during the same period, while the proportion of those prescribed medications alone increased significantly (Olfson, et al., 2010).

Health Disparities

Research using Medical Expenditure Panel Survey (MEPS) data shows that black and Latino youth aged 5–21 years were significantly less likely to access outpatient mental health care (LeCook, Barry, Busch, 2013). This finding is consistent with more than a decade of research suggesting that minority youth may have higher unmet needs for mental health care and receive lower quality care than white American youth (Alegria, Vallas, Pumariega, 2010).

Data also suggest that youth in the child welfare system, particularly those aged 10 and younger, may have significant unmet mental health care needs (Burns, Phillips, Wagner, et al., 2004). Analysis of Medicaid data shows that youth in foster care are more likely to be prescribed antipsychotics than those not in foster care (Zito, Safer, Sai, et al., 2008). Taken together, these trends suggest that access to psychosocial interventions for minority and foster care youth prescribed antipsychotics may be of particular importance.

3.B. Evidence for Importance of the Measure to Medicaid and/or CHIP

Comment on any specific features of this measure important to Medicaid and/or CHIP that are in addition to the evidence of importance described above, including the following:

- **The extent to which the measure is understood to be sensitive to changes in Medicaid or CHIP (e.g., policy changes, quality improvement strategies).**

- **Relevance to the Early and Periodic Screening, Diagnostic and Treatment benefit in Medicaid (EPSDT).**

- **Any other specific relevance to Medicaid/CHIP (please specify).**

Research demonstrates that children without health insurance have higher rates of unmet needs for mental health care compared with those who have public insurance, suggesting that Medicaid and the Children's Health Insurance Program (CHIP) may play an important role in promoting

access to care (Kataoka, Zhang, Wells, 2001). Further, the rate of increase in the use of antipsychotics is higher for children and adolescents with public insurance than commercial insurance, indicating that this measure may be of particular concern for CHIP.

One study of Medicaid-enrolled children and youth starting an antipsychotic medication found that almost one-third did not receive concurrent psychosocial therapy (Harris, et al., 2012). This study also found that youth 12–17 years who are prescribed antipsychotics are less likely to receive concurrent psychotherapy than children aged 6–11 years. This measure may help increase attention and access to psychosocial services and may decrease the utilization and need for antipsychotic medication for non-primary indications in children and adolescents.

3.C. Relationship to Other Measures (if any)

Describe, if known, how this measure complements or improves on an existing measure in this topic area for the child or adult population, or if it is intended to fill a specific gap in an existing measure category or topic. For example, the proposed measure may enhance an existing measure in the initial core set, it may lower the age range for an existing adult-focused measure, or it may fill a gap in measurement (e.g., for asthma care quality, inpatient care measures).

We did not find other measures that address this quality concern.

Section 4. Measure Categories

CHIPRA legislation requires that measures in the initial and improved core set, taken together, cover all settings, services, and topics of health care relevant to children. Moreover, the legislation requires the core set to address the needs of children across all ages, including services to promote healthy birth. Regardless of the eventual use of the measure, we are interested in knowing all settings, services, measure topics, and populations that this measure addresses. These categories are not exclusive of one another, so please indicate "Yes" to all that apply.

Does the measure address this category?

   a. **Care Setting – ambulatory:** Yes.
   b. **Care Setting – inpatient:** No.
   c. **Care Setting – other – please specify:** No.
   d. **Service – preventive health, including services to promote healthy birth:** No.
   e. **Service – care for acute conditions:** No.
   f. **Service – care for children with special health care needs/chronic conditions:** Yes.
   g. **Service – other (please specify):** No.
   h. **Measure Topic – duration of enrollment:** No.
   i. **Measure Topic – clinical quality:** Yes.
   j. **Measure Topic – patient safety:** No.
   k. **Measure Topic – family experience with care:** No.
   l. **Measure Topic – care in the most integrated setting:** No.

    m. Measure Topic other (please specify): Yes; access to care.
    n. Population – pregnant women: No.
    o. Population – neonates (28 days after birth) (specify age range): No.
    p. Population – infants (29 days to 1 year) (specify age range): No.
    q. Population – pre-school age children (1 year through 5 years) (specify age range): Yes; 1-5 years.
    r. Population – school-aged children (6 years through 10 years) (specify age range): Yes; 6-11 years.
    s. Population – adolescents (11 years through 20 years) (specify age range): Yes; 12-17 and 18-20 years.
    t. Population – other (specify age range): No.
    u. Other category (please specify): Not applicable.

Section 5. Evidence or Other Justification for the Focus of the Measure

The evidence base for the focus of the measures will be made explicit and transparent as part of the public release of CHIPRA deliberations; thus, it is critical for submitters to specify the scientific evidence or other basis for the focus of the measure in the following sections.

5.A. Research Evidence

Research evidence should include a brief description of the evidence base for valid relationship(s) among the structure, process, and/or outcome of health care that is the focus of the measure. For example, evidence exists for the relationship between immunizing a child or adolescent (process of care) and improved outcomes for the child and the public. If sufficient evidence existed for the use of immunization registries in practice or at the State level and the provision of immunizations to children and adolescents, such evidence would support the focus of a measure on immunization registries (a structural measure).

Describe the nature of the evidence, including study design, and provide relevant citations for statements made. Evidence may include rigorous systematic reviews of research literature and high-quality research studies.

Treatment recommendations endorse the use of psychosocial services prior to advancing to antipsychotics in the absence of a primary indication for use of an antipsychotic. These recommendations are based on established metabolic impacts of antipsychotics and other health risks and evidence of efficacy of psychosocial treatments. This approach preserves access to antipsychotic medications when needed, while ensuring children have had access to effective and safer alternatives first.

Three treatment guidelines address the use of psychosocial care and antipsychotics, one in general (American Academy of Child and Adolescent Psychiatry Practice Parameters for the Use

of Atypical Antipsychotic Medications in Children and Adolescents [AACAP-AAA], 2001) and two for use in managing aggression (TRAAY, TMAY). All recommend use of psychosocial treatments prior to use of antipsychotic medications for non-primary indications. Recommendations were graded by two guidelines (AACAP-AAA, TMAY), while the other guideline (TRAAY) did not rate individual recommendations.

Guidelines for individual conditions that recommend use of antipsychotics in the absence of a primary indication address the use of psychosocial interventions prior to use of an antipsychotic. Treatment guidelines for management of aggression (Scotto Rosato, et al., 2012; Pappadopulos, et al., 2003) and disruptive behavior disorders endorse psychosocial interventions as first-line treatment. Antipsychotics are a recommended second-line treatment option only after psychosocial interventions have been tried and symptoms continue to be severe and persistent.

The AACAP practice parameters for Oppositional Defiant Disorder recommend psychosocial treatments, such as parent-management training and cognitive problem-solving skills training, as a standard of care, and they endorse use of antipsychotics with a lower level of recommendation only after psychosocial interventions have been tried. The AACAP sponsored Preschool Psychopharmacology Working Group published treatment algorithms for a number of conditions, including disruptive behavior disorders, ADHD, major depression, anxiety disorders (GAD, SAD, SM, SP), PTSD, OCD, PDD) and sleep disorders, primarily focusing on preschool children 0–5 years of age, but they also rated recommendations for children and adolescents 6–18 years. Psychosocial treatments were first-line for all conditions. Only the disruptive behavior disorders had a non-primary indication for use of an antipsychotic but only after psychosocial interventions (e.g., parent management training, parent-child interaction therapy) are provided for 10–20 weeks. For very young children, the guideline recommends psychosocial interventions prior to any psychotropic medication.

See Appendix 1 in the Supporting Documents for Clinical Guideline Tables.

5.B. Clinical or Other Rationale Supporting the Focus of the Measure (optional)

Provide documentation of the clinical or other rationale for the focus of this measure, including citations as appropriate and available.

This measure assesses whether children and adolescents who do not have a primary indication for antipsychotics have documentation of psychosocial care as first-line treatment when a new antipsychotic medication has been prescribed. Existing guidelines recommend that children and youth receive psychosocial interventions prior to antipsychotic medications in these cases. The measure is intended for use by States and plans to target inappropriate prescribing practices and increase access to psychosocial treatments. The measure can encourage systems of care to increase access to recommended psychosocial services.

Section 6. Scientific Soundness of the Measure

Explain the methods used to determine the scientific soundness of the measure itself. Include results of all tests of validity and reliability, including description(s) of the study sample(s) and methods used to arrive at the results. Note how characteristics of other data systems, data sources, or eligible populations may affect reliability and validity.

6.A. Reliability

Reliability of the measure is the extent to which the measure results are reproducible when conditions remain the same. The method for establishing the reliability of a measure will depend on the type of measure, data source, and other factors.

Explain your rationale for selecting the methods you have chosen, show how you used the methods chosen, and provide information on the results (e.g., the Kappa statistic). Provide appropriate citations to justify methods.

Methods

NCINQ employed a multi-step process that includes working with a wide range of stakeholders to define measure specifications and review testing results. We tested the measure in a population of children and adolescents in Medicaid; we present results at both the State and health plan levels. While key findings are presented here, measure-specific data results tables are described in Appendix 1 (see Supporting Documents). Findings across the measures set for eligible population, performance rates, reliability, and validity are described in the Antipsychotics Testing Summary (see Supporting Documents).

As an additional analysis at the end, we tested the feasibility of the measures for commercial health plans. We show the means and ranges of the eligible population and performance rates in the Antipsychotics Testing Summary (see Supporting Documents).

Our research questions were as follows:

1. What is the eligible population for each measure?
2. What is the distribution of performance rates at the State and health plan levels?
3. How does performance vary for important subpopulations?
4. What is the validity and reliability of each measure?

We tested the measures in the following administrative data sources:

- 2008 claims data from the Medicaid Analytic eXtract (MAX) dataset for 11 States.
- 2011 claims data from two MEDNET States.
- 2012 claims data from one MEDNET State.
- 2009 claims data from 17 New York State Medicaid health plans.

- 2013 claims data from 73 commercial health plans nationwide.

Our study population comprised children up to age 20 years as of December 31 of the measurement year. We examined performance separately for children with foster care experience, defined as those with a MAX eligibility code for foster care in their last month within the study period. This population included children receiving adoption benefits and older youth who had aged out of the foster care system. It also includes children who were placed in group homes and other out-of-home placements.

Our results showed that this measure was reliable at the State and plan levels. The measure had an average plan-level reliability of 0.97 and State-level reliability of 0.99. Full reliability results are presented in the Antipsychotics Testing Summary (see Supporting Documents).

6.B. Validity

Validity of the measure is the extent to which the measure meaningfully represents the concept being evaluated. The method for establishing the validity of a measure will depend on the type of measure, data source, and other factors.

Explain your rationale for selecting the methods you have chosen, show how you used the methods chosen, and provide information on the results (e.g., R2 for concurrent validity).

Face validity refers to whether the measure plausibly represents the concept being evaluated in the judgment of likely users of the measure. To assess different perspectives on the measure's validity, NCINQ reviewed the specifications and field test results with our NCINQ advisory panels and other stakeholders. NCINQ's stakeholders include patients and families, clinicians, and State Medicaid officials, as well as experts in the fields of child health, foster care, and measure development (i.e., individuals well-positioned to speak to this measure's face validity). This process ensures measures are reasonable and important to those using them. Our advisory panels concluded this measure is a valid way to assess access to psychosocial services for children and youth before or immediately after receiving a new prescription for antipsychotic medications. Stakeholder reviews of the specifications and field test results indicate the measure has face validity.

In addition, rankings among measures in the antipsychotic measures set showed that plans and States can be approximately ranked based on profiles of performance across the measures. See Antipsychotics Testing Summary (see Supporting Documents) for full validity results.

Section 7. Identification of Disparities

CHIPRA requires that quality measures be able to identify disparities by race, ethnicity, socioeconomic status, and special health care needs. Thus, we strongly encourage nominators to have tested measures in diverse populations. Such testing provides evidence for assessing measure's performance for disparities identification. In the sections below, describe the results of efforts to demonstrate the capacity of this measure to produce

results that can be stratified by the characteristics noted and retain the scientific soundness (reliability and validity) within and across the relevant subgroups.

7.A. Race/Ethnicity

Using the MAX data files, NCINQ was able to collect race and ethnicity data for five categories: white non-Hispanic, black non-Hispanic, Hispanic, other, and unknown.

In the general population, rates of psychosocial care visits were slightly lower among white non-Hispanic children (43.4 percent) compared with black non-Hispanic (49.3 percent) and Hispanic (46.6 percent) children and adolescents. In the foster care population, rates of psychosocial care visits were slightly lower among Hispanic children (53.7 percent) compared with black non-Hispanic (57.2 percent) and white non-Hispanic (57.5 percent) children and adolescents (see Supporting Documents, Appendix 1, Table 1.

7.B. Special Health Care Needs

NCINQ explored the relationship between the general population of children and children in the foster care system. Children in foster care were more likely to have psychosocial services prior to or concurrent with a new start of antipsychotic medication (see Supporting Documents, Appendix 1, Table 2).

7.C. Socioeconomic Status

We used Medicaid data only and were unable to assess information on socioeconomic status.

7.D. Rurality/Urbanicity

We assessed rurality/urbanicity using 2003 Rural-Urban Continuum Codes from the Area Resource File, which provides a wide range of county-level data collected from a number of sources. We merged these codes with the MAX data. Metropolitan is defined as counties in metro areas; Non-Metropolitan is defined as urban populations of at least 2,500 population, adjacent or not adjacent to a metro area.

For both the general and foster care populations, rates of access to psychosocial care among children and adolescents with a new antipsychotic prescription were higher (i.e., better) in rural areas (49.2 percent for those residing in rural areas compared with 46.2 percent for children dwelling in metropolitan areas; see Supporting Documents, Appendix 1, Table 3).

7.E. Limited English Proficiency (LEP) Populations

We were unable to assess information on Limited English Proficiency.

Section 8. Feasibility

Feasibility is the extent to which the data required for the measure are readily available, retrievable without undue burden, and can be implemented for performance measurement. Using the following sections, explain the methods used to determine the feasibility of implementing the measure.

8.A. Data Availability

1. What is the availability of data in existing data systems? How readily are the data available?

As specified, all data needed to calculate the Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics measure are generally present in claims data. However, there are large variations in how States pay for services. States may have State-specific codes for psychosocial services that are not captured in our current specification. Youth may receive psychosocial services in other settings which are not paid through Medicaid (e.g., child welfare setting, education, State mental health programs). We excluded several States from this analysis because results in the MAX data suggested there were data systems issues.

2. If data are not available in existing data systems or would be better collected from future data systems, what is the potential for modifying current data systems or creating new data systems to enhance the feasibility of the measure and facilitate implementation?

Although this measure has been developed and tested for claims data, it is feasible to implement in an electronic health record (EHR) system or e-prescribing program. The value of this approach would be to increase opportunities for interventions at the point of service through decision support.

Eligible Population and Performance Rates

The estimated required sample size needed to gain adequate numbers of observations was 38 for Medicaid plans and 62 for States. This calculation is based on the Spearman-Brown prediction formula to achieve reliability of 0.70.

Because this measure focuses on the rate of providing a recommended service, a higher rate indicates better performance. Among health plans, the mean performance rate was 44.7 percent, with variability (minimum 26.4 percent, maximum 67.7 percent), indicating room for improvement. Among States, the mean performance rate was 48.2 percent among the general population of children, with a range of 35.8 to 64.1 percent. For children in foster care, the average rate was 56.3 percent, with a range of 38.8 to 68.9 percent.

See the Supporting Documents, Appendix 1, Tables 4 and 5, for full performance rates and the Antipsychotics Testing Summary (also in the Supporting Documents) for details on estimated sample size.

8.B. Lessons from Use of the Measure

1. Describe the extent to which the measure has been used or is in use, including the types of settings in which it has been used, and purposes for which it has been used.

A similar measure is used by New York State and is implemented in a Web-based application to support clinical decision-making and quality improvement. Several multi-State quality collaboratives have used a related measure, and a number of States have incorporated these measures into their pharmacy oversight systems.

2. If the measure has been used or is in use, what methods, if any, have already been used to collect data for this measure?

Not applicable.

3. What lessons are available from the current or prior use of the measure?

Not applicable.

Section 9. Levels of Aggregation

CHIPRA states that data used in quality measures must be collected and reported in a standard format that permits comparison (at minimum) at State, health plan, and provider levels. Use the following table to provide information about this measure's use for reporting at the levels of aggregation in the table.

For the purpose of this section, please refer to the definitions for provider, practice site, medical group, and network in the Glossary of Terms.

If there is no information about whether the measure could be meaningfully reported at a specific level of aggregation, please write "Not available" in the text field before progressing to the next section.

Level of aggregation (Unit) for reporting on the quality of care for children covered by Medicaid/ CHIP†:

State level* Can compare States

Intended use: **Is measure intended to support meaningful comparisons at this level? (Yes/No)**
Yes.

Data Sources: **Are data sources available to support reporting at this level?**
Yes.

Sample Size: **What is the typical sample size available for each unit at this level? What proportion of units at this level of aggregation can achieve an acceptable minimum sample size?**

62.

In Use: **Have measure results been reported at this level previously?**
No.

Reliability & Validity: **Is there published evidence about the reliability and validity of the measure when reported at this level of aggregation?**
No.

Unintended consequences: **What are the potential unintended consequences of reporting at this level of aggregation?**
None.

Other geographic level: Can compare other geographic regions (e.g., MSA, HRR)

Intended use: **Is measure intended to support meaningful comparisons at this level? (Yes/No)**
Yes.

Data Sources: **Are data sources available to support reporting at this level?**
Yes.

Sample Size: **What is the typical sample size available for each unit at this level? What proportion of units at this level of aggregation can achieve an acceptable minimum sample size?**
Not applicable.

In Use: **Have measure results been reported at this level previously?**
No.

Reliability & Validity: **Is there published evidence about the reliability and validity of the measure when reported at this level of aggregation?**
No.

Unintended consequences: **What are the potential unintended consequences of reporting at this level of aggregation?**
Limited denominator size may affect reliability.

Medicaid or CHIP Payment model: Can compare payment models (e.g., managed care, primary care case management, FFS, and other models)

Intended use: **Is measure intended to support meaningful comparisons at this level? (Yes/No)**
Yes.

Data Sources: **Are data sources available to support reporting at this level?**
Yes.

Sample Size: **What is the typical sample size available for each unit at this level? What proportion of units at this level of aggregation can achieve an acceptable minimum sample size?**
Not applicable.

In Use: **Have measure results been reported at this level previously?**
No.

Reliability & Validity: **Is there published evidence about the reliability and validity of the measure when reported at this level of aggregation?**
No.

Unintended consequences: **What are the potential unintended consequences of reporting at this level of aggregation?**
None.

Health plan*: Can compare quality of care among health plans.

Intended use: **Is measure intended to support meaningful comparisons at this level? (Yes/No)**
Yes.

Data Sources: **Are data sources available to support reporting at this level?**
Yes.

Sample Size: **What is the typical sample size available for each unit at this level? What proportion of units at this level of aggregation can achieve an acceptable minimum sample size?**
38.

In Use: **Have measure results been reported at this level previously?**
No.

Reliability & Validity: **Is there published evidence about the reliability and validity of the measure when reported at this level of aggregation?**
No.

Unintended consequences: **What are the potential unintended consequences of reporting at this level of aggregation?**
None.

Provider Level
Individual practitioner: Can compare individual health care professionals

Intended use: **Is measure intended to support meaningful comparisons at this level? (Yes/No)**
No.

Data Sources: **Are data sources available to support reporting at this level?**
No.

Sample Size: **What is the typical sample size available for each unit at this level? What proportion of units at this level of aggregation can achieve an acceptable minimum sample size?**
Not applicable.

In Use: **Have measure results been reported at this level previously?**
Not applicable.

Reliability & Validity: **Is there published evidence about the reliability and validity of the measure when reported at this level of aggregation?**
Not applicable.

Unintended consequences: **What are the potential unintended consequences of reporting at this level of aggregation?**
Limited denominator size may affect reliability; access to information on services provided in other settings may be limited.

Provider Level
Hospital: Can compare hospitals

Intended use: **Is measure intended to support meaningful comparisons at this level? (Yes/No)**
No.

Data Sources: **Are data sources available to support reporting at this level?**
No.

Sample Size: **What is the typical sample size available for each unit at this level? What proportion of units at this level of aggregation can achieve an acceptable minimum sample size?**
Not applicable.

In Use: **Have measure results been reported at this level previously?**
Not applicable.

Reliability & Validity: **Is there published evidence about the reliability and validity of the measure when reported at this level of aggregation?**
Not applicable.

Unintended consequences: **What are the potential unintended consequences of reporting at this level of aggregation?**
Not applicable.

Provider Level

Practice, group, or facility:** Can compare: (i) practice sites; (ii) medical or other professional groups; or (iii) integrated or other delivery networks

Intended use: **Is measure intended to support meaningful comparisons at this level? (Yes/No)**
No.

Data Sources: **Are data sources available to support reporting at this level?**
No.

Sample Size: **What is the typical sample size available for each unit at this level? What proportion of units at this level of aggregation can achieve an acceptable minimum sample size?**
Not applicable.

In Use: **Have measure results been reported at this level previously?**
Not applicable.

Reliability & Validity: **Is there published evidence about the reliability and validity of the measure when reported at this level of aggregation?**
Not applicable.

Unintended consequences: **What are the potential unintended consequences of reporting at this level of aggregation?**
Limited denominator size may affect reliability; access to information on services provided in other settings may be limited.

Section 10. Understandability

CHIPRA states that the core set should allow purchasers, families, and health care providers to understand the quality of care for children. Please describe the usefulness of this measure toward achieving this goal. Describe efforts to assess the understandability of this measure (e.g., focus group testing with stakeholders).

NCINQ specifically sought to assess the understandability of the measures from a wide range of stakeholders, including purchasers, families, and providers. We convened an overall, multi-stakeholder advisory panel to assess all measures developed by our Center. This panel included representation from consumers, pediatricians, family physicians, adolescent medicine physicians, health plans, State Medicaid agencies, and researchers. In addition to our multi-stakeholder panel, we convened the following targeted panels:

- State Advisory Panel.
- Consumer Advisory Panel.
- Mental Health Technical Subgroup.

We also convened two panels with particular relevance to antipsychotic measures: (1) a Foster Care Panel with representatives from State child welfare and behavioral health services, Medicaid officials, the Administration on Children, Youth and Families, and foster care alumni and (2) the Center for Health Care Strategies Improving the Use of Psychotropic Medications Among Children in Foster Care (PMQIC) Workgroup, a six-State collaborative working with cross-agency teams to improve issues around the use of psychotropic medications among youth. Input from these groups, in particular our targeted panels, were instrumental in ensuring these measures addressed the needs of children in Medicaid and the foster care system. Throughout the measure development process, we presented the measures to these panels and solicited feedback on importance, understandability, and usability.

We also posted the measures for public comment to obtain feedback from an even wider audience. In addition to our usual questions around importance of the topic, usability, and feasibility of implementation, we specifically sought feedback on the appropriateness of our continuous eligibility definitions, how we defined antipsychotic "use," and appropriateness of the specifications for foster care populations.

The vast majority of comments received for Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics either supported the measure as specified or supported it with some suggested modifications. In general, commenters noted the measure is understandable and represents a reasonable strategy to assess access to psychosocial care. There were some concerns regarding lack of access to psychosocial treatment in some localities, though others noted the measure should be implemented in order to encourage better access.

This measure was deemed a high-priority measure by all NCINQ advisory panels. Stakeholders noted the measure topic is of particular importance given the increasing use of antipsychotics for non-indicated conditions.

Section 11. Health Information Technology

Please respond to the following questions in terms of any health information technology (health IT) that has been or could be incorporated into the measure calculation.

11.A. Health IT Enhancement

Please describe how health IT may enhance the use of this measure.

This measure has been specified and tested in claims data alone. This measure would benefit from incorporation in health IT because it would allow determinations of whether children with new antipsychotic prescriptions receive timely access to psychosocial care after starting the medication. A measure in the EHR could incorporate information about services received in other settings.

11.B. Health IT Testing

Has the measure been tested as part of an electronic health record (EHR) or other health IT system?

The measure has not been tested in an EHR.

If so, in what health IT system was it tested and what were the results of testing?

Not applicable.

11.C. Health IT Workflow

Please describe how the information needed to calculate the measure may be captured as part of routine clinical or administrative workflow.

As currently specified, measure elements are derived from claims/encounter data, and necessary data elements are generated when a prescription is filled at a pharmacy. For an EHR- or e-prescribing-based measure, data elements are generated automatically when a prescription is written; no change in clinician workflow would be required. Documentation of psychosocial care would require clinicians to document this care in the EHR, although in these systems, documentation should be similar to the workflow required for a paper chart.

11.D. Health IT Standards

Are the data elements in this measure supported explicitly by the Office of the National Coordinator for Health IT Standards and Certification criteria (see healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov__standards_ifr/1195)?

Both Stage 2 of Meaningful Use and the 2014 edition of the ONC Certification of EHR technology require the electronic capture of medication order/prescription data in ambulatory settings.

If yes, please describe.

Not applicable.

11.E. Health IT Calculation

Please assess the likelihood that missing or ambiguous information will lead to calculation errors.

This measure assesses whether new prescriptions of antipsychotics are preceded by documentation of psychosocial care. Calculation errors are unlikely.

11.F. Health IT Other Functions

If the measure is implemented in an EHR or other health IT system, how might implementation of other health IT functions (e.g., computerized decision support systems in an EHR) enhance performance characteristics on the measure?

E-prescribing platforms can be designed to feed databases that can be used for performance reporting but also can be used to provide decision support to the provider.

Section 12. Limitations of the Measure

Describe any limitations of the measure related to the attributes included in this CPCF (i.e., availability of measure specifications, importance of the measure, evidence for the focus of the measure, scientific soundness of the measure, identification of disparities, feasibility, levels of aggregation, understandability, health information technology).

This measure is based on services reported in claims data; thus, it does not capture psychosocial services provided in other sectors not found in claims. In addition, the measure uses existing nationally supported codes for identifying psychosocial services. State-specific codes are not included. Current billing codes are not specific about the content of the therapy or psychosocial visits. It is unclear how these services relate to specific evidence-based psychotherapy methods.

Section 13. Summary Statement

Provide a summary rationale for why the measure should be selected for use, taking into account a balance among desirable attributes and limitations of the measure. Highlight specific advantages that this measure has over alternative measures on the same topic that were considered by the measure developer or specific advantages that this measure has over existing measures. If there is any information about this measure that is important for the review process but has not been addressed above, include it here.

Antipsychotic use is increasing rapidly, and many of the children and adolescents receiving these powerful medications do not have a primary indication for their use. Antipsychotics are increasingly being prescribed for children who have conditions such as ADHD and disruptive behavior disorders, depression, and anxiety disorders (Cooper, et al., 2004; Olfson, et al., 2006), conditions for which psychosocial interventions are recommended alone or as first-line treatment. Thus, this measure assesses whether children and adolescents who do not have a primary indication for an antipsychotic have been provided psychosocial services prior to initiating an antipsychotic. The measure is part of a set that assesses the safe and judicious use of antipsychotics in children and adolescents.

Use of antipsychotics in children carries multiple risks that may adversely affect a child's developmental trajectory. Obesity and dyslipidemias in childhood carry increased long-term health risk into adulthood, including heart disease, cancer, and shortened life span (Daniels, 2006). Other serious risks associated with antipsychotic medications in children include extrapyramidal side effects, sedation and somnolence, liver toxicity, and cardiac arrhythmias (Correll, 2008). Children without a primary indication for an antipsychotic who are not given the benefit of a trial of psychosocial treatment first may unnecessarily incur the risks associated with these medications.

This measure is specified for administrative claims and is intended for use by States and health plans to ensure appropriate use of psychosocial care for children and adolescents without a

primary indication for antipsychotics. Testing results suggest the measure is highly feasible, valid, and reliable at both the State and health plan levels. This measure was placed among the highest priorities across all of the advisory panels we convened, including our targeted panels with special interest in Medicaid and the foster care system. States and consumers agreed the measure is necessary to focus attention on proper use of psychosocial care prior to antipsychotic use.

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Section 14: Identifying Information for the Measure Submitter

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The CHIPRA Pediatric Quality Measures Program (PQMP) Candidate Measure Submission Form (CPCF) was approved by the Office of Management and Budget (OMB) in accordance with the Paperwork Reduction Act.

The OMB Control Number is 0935-0205 and the Expiration Date is December 31, 2015.

Public Disclosure Requirements

Each submission must include a written statement agreeing that, should U.S. Department of Health and Human Services accept the measure for the 2014 and/or 2015 Improved Core Measure Sets, full measure specifications for the accepted measure will be subject to public disclosure (e.g., on the Agency for Healthcare Research and Quality [AHRQ] and/or Centers for Medicare & Medicaid Services [CMS] websites), except that potential measure users will not be permitted to use the measure for commercial use. In addition, AHRQ expects that measures and full measure specifications will be made reasonably available to all interested parties. "Full measure specifications" is defined as all information that any

potential measure implementer will need to use and analyze the measure, including use and analysis within an electronic health record or other health information technology. As used herein, "commercial use" refers to any sale, license or distribution of a measure for commercial gain, or incorporation of a measure into any product or service that is sold, licensed or distributed for commercial gain, even if there is no actual charge for inclusion of the measure. This statement must be signed by an individual authorized to act for any holder of copyright on each submitted measure or instrument. The authority of the signatory to provide such authorization should be described in the letter.