

Access to Outpatient Child and Adolescent Psychiatrists, Neurodevelopmental Pediatricians, and Developmental-Behavioral Pediatricians

Section 1. Basic Measure Information

1.A. Measure Name

Access to Outpatient Child and Adolescent Psychiatrists, Neurodevelopmental Pediatricians, and Developmental-Behavioral Pediatricians

1.B. Measure Number

0236

1.C. Measure Description

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

This measure assesses the rate of participating child and adolescent psychiatrists, neurodevelopmental pediatricians, and developmental-behavioral pediatricians who have seen at least one enrolled child in the measurement year for an outpatient visit per eligible population of children. This rate will be expressed in terms of 1,000 eligible children (number of providers/1,000 enrolled children). The eligible population includes children younger than 18 years of age who have been enrolled in a Medicaid program or health plan that includes outpatient specialty care for at least one 90-day period (or 3 consecutive months) within the measurement year. Specialists are identified by specific taxonomy codes, as outlined in the numerator statement below.

Many children have conditions that would benefit from treatment provided by child and adolescent psychiatrists, neurodevelopmental pediatricians, and developmental-behavioral pediatricians. A 2009 review by the National Research Council and Institute of Medicine noted that 14-20 percent of young people experience a mental, emotional, or behavioral disorder at any given point in time, and nearly 40 percent have experienced at least one psychiatric disorder by 16 years of age (O'Connell, Boat, Warner, et al., 2009). The number of children with disabilities related to mental and neurodevelopmental conditions has increased, even as disabilities related to physical causes in this age group have declined (Houtrow, Larson, Olson, et al., 2014). Most pediatricians consider it appropriate to refer children with suspected developmental or behavioral problems for specialty care (Stein, Horwitz, Storfer-Isser, et al., 2008). However, difficulties with access to behavioral or developmental specialty care have been reported by both parents and primary care physicians (GAO, 2011; Krauss, Gulley, Sciegaj, et al., 2003; Steinman, Kelleher, Dembe, et al., 2012a).

This measure is implemented with administrative claims data and is calculated as three rates: (1) the number of child and adolescent psychiatrists who have provided any outpatient care to at least one child per 1,000 eligible children; (2) the number of neurodevelopmental pediatricians or developmental-behavioral pediatricians who have provided any outpatient care to at least one child per 1,000 eligible children; and (3) the combined number of child and adolescent psychiatrists, neurodevelopmental pediatricians, and developmental-behavioral pediatricians who have provided any outpatient care to at least one child per 1,000 eligible children.

1.D. Measure Owner

The Quality Measurement, Evaluation, Testing, Review, and Implementation Consortium (Q-METRIC).

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.**

This measure is part of the Q-METRIC Availability of Specialty Services Measures collection.

- 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.**

Not applicable.

- 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

The eligible populations for the numerator are:

- The number of child and adolescent psychiatrists who have provided any outpatient care to at least one enrolled child.
- The number of neurodevelopmental pediatricians or developmental-behavioral pediatricians who have provided any outpatient care to at least one enrolled child.
- The combined number of child and adolescent psychiatrists, neurodevelopmental pediatricians, and developmental-behavioral pediatricians who have provided any outpatient care to at least one enrolled child.

These specialist physicians are identified using taxonomy codes (Table 1; see Supporting Documents) linked to a National Provider Identifier (NPI) with the National Plan & Provider Enumeration System (NPPES) registry (NPPES, 2014). Only individual physicians are included as eligible providers.

For this measure, outpatient care is defined as any visit within the measurement year to a facility with a place of service code listed in Table 2 (see Supporting Documents).

1.H. Numerator Exclusions

- NPIs representing organizations and clinics.
- NPIs representing professionals who are not physicians (e.g., nurse practitioners and physician assistants).

1.I. Denominator Statement

The eligible population for the denominator is the number of children younger than 18 years of age who are enrolled in a Medicaid program or health plan that includes outpatient specialty care for at least one 90-day period (or 3 consecutive months) within the measurement year. This denominator is divided by 1,000 to calculate the rate per 1,000 enrolled children.

1.J. Denominator Exclusions

None.

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.

See the Supporting Documents for detailed 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).**

Prevalence of Mental, Developmental, and Behavioral Conditions Among Children

Obtaining a general prevalence count for mental, developmental, and behavioral health conditions in children is not simple. Diagnoses may be difficult to determine at the population level, as patients may be seen in a variety of settings that are not billed in a uniform fashion, if at all. It is also common for individuals to have more than one disorder, making it necessary to estimate prevalence for both multiple and individual conditions. A 2009 review by the National Research Council and Institute of Medicine noted that 14-20 percent of young people experience a mental, emotional, or behavioral disorder at any given point in time, and nearly 40 percent have experienced at least one psychiatric disorder by the age of 16 years (O’Connell, et al., 2009).

Severity of Mental Health, Developmental, and Behavioral Conditions Among Children

Mental health disorders can impose a heavy burden for children. These conditions may be associated with substance use, criminal behavior, and other risk-taking activities (CDC Mental Health Surveillance, 2013). Frequently, they are linked with additional mental health disorders and other medical conditions. Furthermore, mental health conditions beginning in childhood may continue into adulthood or even lead to suicide (CDC Mental Health Surveillance, 2013). The overall cost of mental health disorders for young adults has been estimated at \$247 billion annually (CDC Mental Health Surveillance, 2013).

Similarly, developmental disorders cover a wide range of conditions that vary in both severity and prevalence. Recent estimates indicate that nearly 14 percent of children have some form of developmental disability (Boyle, Boulet, Schieve, et al., 2011). Autism spectrum disorder is one of the more widely known developmental disorders, characterized by issues with social, emotional, and communication skills. At this time, autism affects 1 in 59 children (CDC Autism Spectrum Disorder, 2015 [updated 2018]). While autism can be successfully identified in the first 2-3 years of life, the disorder itself can last a lifetime and impede an individual’s ability to live a normal life (Lord, Risi, DiLavore, et al., 2006; Matson, Kozlowski, 2011). The toll exacted by developmental and behavioral disorders varies tremendously and may involve other medical conditions. These conditions can increase the risk of developing further behavioral and developmental disorders or other medical complications (Council on Children with Disabilities, 2006).

Performance Gap

Despite the prevalence of these disorders and conditions, treatment utilization lags far behind. Using the National Health and Nutrition Examination Survey (NHANES), Merikangas and colleagues found that only about half of respondents (aged 8 to 15 years) with a mental disorder had used mental health services in the previous year. Utilization varied by disorder; approximately 48 percent of adolescents with attention-deficit hyperactivity disorder (ADHD) used mental health services, while only 32 percent of those with generalized anxiety disorder did so (Merikangas, He, Brody, et al., 2010). In a second study, using the National Comorbidity Survey-Adolescent Supplement, only an estimated 36 percent of adolescents (aged 13-18 years) with a mental health disorder had ever used mental health services (Merikangas, He, Burstein, et al., 2011). In the latter study, Hispanic and non-Hispanic black adolescents were less likely than white adolescents to receive services for mood and anxiety disorders, even in cases involving severe impairment (Merikangas, et al., 2011).

Similar gaps in treatment have been seen for children with developmental disorders. Despite the importance of early treatment, waiting times in urban areas for pediatric autism evaluations were found to average 3 months, regardless of insurance type (Bisgaier, Levinson, Cutts, et al., 2011). Others researchers have reported longer wait times for children with Medicaid to access a psychiatrist compared with access times for children with private insurance (Steinman, et al., 2012a). However, evidence is limited, and some approaches to quantify access require costly data collection methods that may be difficult to implement on a large scale (Steinman, et al., 2012b).

Within Medicaid, standards for quantifying access to developmental and behavioral specialty care, as well as to other types of specialty care, vary significantly by State, as do the types of providers measured and the methods of assessing compliance with State access standards (Department of Health and Human Services [HHS], 2014). These issues make it more difficult to compare access across States.

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).**

Availability and EPSDT

Medicaid's Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit provides the foundation for comprehensive and preventive health care services for all Medicaid-enrolled children under age 21. Health screenings are mandated by the EPSDT guidelines, under which States are required to arrange (directly or through referral) for corrective treatment, as indicated

by the screenings, including screening for developmental and behavioral concerns (Centers for Medicare & Medicaid Services [CMS], 2014). In order to fulfill these obligations, it is imperative that providers are available to treat patients.

Though EPSDT is designed to cover screening, diagnosis, and treatment, parents of children covered through Medicaid may find it more difficult to obtain treatment, particularly for psychiatric, developmental-behavioral, and neurodevelopmental conditions. As noted above, recent studies have shown long wait times in urban areas for pediatric autism evaluations, regardless of insurance type (Bisgaier, et al., 2011) and longer wait times for children with Medicaid coverage for psychiatrist visits compared with privately insured children (Steinman, et al., 2012a).

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 are unaware of any existing quality measures specific to the rate of participating child and adolescent psychiatrists, neurodevelopmental pediatricians, and/or developmental-behavioral pediatricians per eligible population of children.

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: Yes.**
- 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: No.**
- 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):** No.
- 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):** Yes; all ages in this range.
- q. **Population – pre-school age children (1 year through 5 years) (specify age range):** Yes; all ages in this range.
- r. **Population – school-aged children (6 years through 10 years) (specify age range):** Yes; all ages in this range.
- s. **Population – adolescents (11 years through 20 years) (specify age range):** Yes; children 11 to 18 years of age.
- t. **Population – other (specify age range):** Not applicable.
- 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.

A significant proportion of children have conditions that would benefit from treatment provided by child and adolescent psychiatrists, neurodevelopmental pediatricians, and developmental-behavioral pediatricians. The number of children with disabilities related to mental and neurodevelopmental conditions is increasing, even as disabilities related to physical causes in this age group are declining (Houtrow, et al., 2014). Most pediatricians consider it appropriate to refer children with suspected developmental or behavioral problems for specialty care (Stein, et al., 2008). However, difficulties with access to behavioral and/or developmental specialty care

have been reported by both parents and primary care physicians (GAO, 2011; Krauss, et al., 2003; Steinman, et al., 2012a). This Q-METRIC availability of specialty services measure focuses on the availability of child and adolescent psychiatrists, neurodevelopmental pediatricians, and developmental-behavioral pediatricians.

Table 3 (see Supporting Documents) summarizes several key sources of evidence for this measure, using the U.S. Preventive Services Task Force (USPSTF) rankings (criteria given as a note to the table.)

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.

Not applicable.

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.

Reliability testing was done to examine the extent to which this measure yields reproducible results. Two methods were used to test the reliability of the measure: (1) replication of the measure calculation process, and (2) comparison of the taxonomy-based provider identification data sources.

Reliability Test 1: Replication of the Measure Calculation Process

Reliability testing for this measure was performed for one State Medicaid program (Michigan) using data housed in program files in the State's data warehouse. Combined, these files contain all Medicaid health care utilization (claims) data and program enrollment and eligibility files, as well as provider enrollment files for the State of Michigan.

Reliability testing was performed by two data analysts experienced in extracting and analyzing Medicaid enrollment, utilization, and provider data. Testing was performed using the same

measure specifications for two calendar years (2012, 2013). Analyst 1 performed data extraction and initial measure calculation in August 2014; Analyst 2 repeated data extraction and measure calculation in January 2015.

Measures were calculated according to measure specifications, with Analysts 1 and 2 using their own discretion in determining how to process the data. Provider NPIs from rendering and billing provider fields were linked to relevant taxonomy codes (child and adolescent psychiatrists 2084P0804X, neurodevelopmental pediatricians 2080P0008X, developmental-behavioral pediatricians 2080P0006X) from two data sources: (1) the National Plan & Provider Enumeration System (NPPES) registry, a national system developed by CMS to assign unique identifiers for providers (www.nppesregistry.com), and (2) taxonomy codes in provider enrollment data collected and maintained for use by the Michigan Medicaid program.

This measure calculated the rate of participating child and adolescent psychiatrists, neurodevelopmental pediatricians, and developmental-behavioral pediatricians who had seen at least one enrolled child, younger than 18 years of age, for an outpatient visit during the measurement year. This measure represents the number of providers per member, where a higher rate indicates better performance, as reflected by an increased availability of service. Results for Analysts 1 and 2 are shown in Table 4 and Figure 1 (see Supporting Documents). The differences in measure results for Analyst 1 vs. Analyst 2 ranged from 0.001-0.008 providers per 1,000 members.

Examination of differences was performed to describe the reasons for the variance between Analyst 1 and Analyst 2.

Numerator Differences

With respect to identification of child and adolescent psychiatrists, Analyst 2 identified seven additional providers compared with Analyst 1. Upon investigation, it was determined that:

- Three child and adolescent psychiatrists, all of whom provided outpatient care in both 2012 and 2013, had updated specialty records added to the data warehouse in the period between the data extraction for Analysts 1 and 2.
- Three child and adolescent psychiatrists were identified for 2013 only, based on outpatient claims added to the data warehouse in the period between the data extraction for Analysts 1 and 2.
- One child and adolescent psychiatrist was identified only by Analyst 2 because her processing included searching for rendering provider NPI in the line detail of claims, while Analyst 1 focused only at the claim level.

In summary, six of seven additional child and adolescent psychiatrists found by Analyst 2 were identified as a result of new data submitted following the initial assessment by Analyst 1. This difference reflects the dynamic nature of administrative data, where corrections and updates to provider enrollment and claims are processed continuously by Medicaid programs. Modifications to provider enrollment data typically are prompted by an administrative change (e.g., change in institution or health plan affiliation), and modifications to claims data are added retrospectively after adjudication. Only one of seven additional child and adolescent psychiatrists

was identified as a result of different data processing methods between Analysts 1 and 2. Thus, the identification of child and adolescent psychiatrists would have had a reliability of 99.2 percent (122 of 123 providers identified by both analysts) for data that were concurrently present in the Medicaid data warehouse at the time of initial extraction.

With respect to identification of developmental pediatricians, Analyst 2 identified one additional provider who offered outpatient care in both 2012 and 2013. Upon investigation, it was found that this provider had been removed manually by Analyst 1 after noticing a PhD in the provider name field; further inquiry using public data sources confirmed that this individual is not a physician and thus did not meet inclusion criteria. Thus, the identification of developmental pediatricians had a reliability of 96.4 percent from Analyst 1 to Analyst 2.

Denominator Differences

In reliability testing for the measure denominator (enrolled children), Analyst 2 had enrollment counts that were <.001 percent higher than Analyst 1. This was the result of updates to enrollment data that occurred in the period between the data extraction for Analysts 1 and 2. Thus, the reliability of denominator calculation was 99.999 percent.

In summary, Reliability Test 1 demonstrates excellent reliability of this measure, with some minor variance observed due to the dynamic nature of health administrative data. Consequently, it is likely that Medicaid programs assessing availability of specialty services using these methods would yield very consistent results; this suggests a high degree of reproducibility, given similar conditions in other settings.

Reliability Test 2: Comparison of National vs. Program-Specific Taxonomy-Based Provider Identification Data Sources

A second component of reliability testing compared the results of specialty identification by data source. Initial feasibility testing for Michigan's Medicaid program utilized two sources of specialty information: the NPPES registry and the taxonomy codes from Michigan Medicaid's own provider enrollment data. Using the population of specialists identified for 2012 and/or 2013, comparison of the relative contribution of each data source is shown in Table 5 (see Supporting Documents). As shown, slightly over half of the identified child and adolescent psychiatrists have matching taxonomy codes in both the NPPES and State taxonomy data; the proportion is much higher for developmental-behavioral pediatricians.

Use of NPPES taxonomy codes as the sole source of specialty identification would yield 86 percent of child and adolescent psychiatrists and 90 percent of developmental-behavioral and neurodevelopmental pediatricians who were identified by the combined method. The addition of State taxonomy codes contributed 14 percent for child and adolescent psychiatrists and 10 percent for developmental pediatricians.

As all Medicaid programs and health plans have access to NPPES taxonomy data, all would be expected to have reliability of specialist identification of at least 86 percent. Moreover, while the inclusion of program-specific taxonomy code data resulted in the identification of additional specialists, over 80 percent of specialists identified in the program-specific taxonomy data were

also identified in NPES. Thus, Reliability Test 2 demonstrates very good reliability for the use of taxonomy-based specialty codes.

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

Face validity represents the degree to which the measure construct characterizes the concept being assessed. The face validity of the measure was reviewed by a panel convened by Q-METRIC; the expert panel included nationally recognized experts representing pediatrics, family medicine, psychiatry, and dentistry, as well as two parent representatives. In addition, validity was considered by experts in State Medicaid program operations, health plan quality measurement, health informatics, and health care quality measurement. In total, the Q-METRIC Availability of Specialty Services panel included 12 experts, providing a comprehensive perspective on the availability of specialty services and the measurement of quality metrics for States and health plans.

The Q-METRIC expert panel concluded that this measure has a high degree of face validity through a detailed review of concepts and metrics considered to be essential to parents' ability to access outpatient child and adolescent psychiatrists, neurodevelopmental pediatricians, and developmental-behavioral pediatricians. Concepts and draft measures were rated by this group for their relative importance. The measure received a score of 7.7 on a scale of 1 to 9, with 9 representing the highest possible ranking.

Measure Validity

Validity testing was performed to assess three aspects of the measure: whether the identified specialists had specific certification and/or training in the respective areas; whether the content of care provided to Medicaid-enrolled children reflected the specialty areas; and whether the inclusion of alternate provider specialty data sources would affect specialist identification. Three methods were used to test these aspects of measure validity: (1) examination of credentials for specialists identified through the two taxonomy databases; (2) examination of the proportion of outpatient visits with Medicaid-enrolled children containing a specialty-related diagnostic or procedure code; and (3) examination of the number and characteristics of specialists identified through an alternate, non-taxonomy-based source of physician specialty data.

Validity Test 1: Examination of Credentials for Specialists Identified Using Taxonomy Information

To test the validity of the measure, in terms of whether the measure specifications were accurate in identifying providers with appropriate child-focused training and credentials, an examination of public information sources was performed to document the training (medical school, residency, fellowship) and board certification history of identified providers. Results are presented, by specialty area, stratified by whether specialty identification was concordant or discordant across the two taxonomy-based data sources.

Among the 123 child and adolescent psychiatrists identified in feasibility testing:

- 68 physicians (55 percent) were identified in both NPPES and State taxonomy codes.
 - 65 have board certification and/or fellowship training in child and adolescent psychiatry.
 - Two have psychiatry certification and/or fellowship training with no evidence of pediatric or child and adolescent training.
 - One has no evidence of board certification and/or fellowship training in any field.
- 38 physicians (31 percent) were identified in NPPES but not State taxonomy codes.
 - 37 have board-certification and/or fellowship training in child and adolescent psychiatry.
 - One has board-certification and fellowship training in child neurology, with no evidence of psychiatry training.
- 17 physicians (14 percent) were identified in State taxonomy codes but not NPPES.
 - 11 have board-certification and/or fellowship training in child and adolescent psychiatry.
 - One has dual board certification in psychiatry and pediatrics.
 - Three have board-certification and/or fellowship training in psychiatry with no evidence of pediatric or child and adolescent training.
 - One has board-certification and fellowship training in child neurology, with no evidence of psychiatry training.
 - One is a family physician with no evidence of psychiatry or subspecialty training.

Overall, 113 of 123 (92 percent) have evidence of board certification and/or fellowship training in child and adolescent psychiatry, consistent with the objective of this measure. Among physicians identified through NPPES, 102 of 106 (96 percent) have evidence of board certification and/or fellowship training in child and adolescent psychiatry; for physicians not identified through NPPES, 11 of 17 (65 percent) have such evidence.

Among the 29 developmental-behavioral pediatricians or neurodevelopmental pediatricians identified in feasibility testing:

- 22 (76 percent) were identified in both NPPES and State taxonomy codes.

- 12 have board certification and/or fellowship training in developmental-behavioral pediatrics or neurodevelopmental disabilities.
- Six have related board certification and/or fellowship training (five in child neurology, one in neonatal/perinatal medicine).
- Four have pediatric training but no board certification and/or fellowship training.
- Four (14 percent) were identified in NPPES but not State taxonomy codes.
 - Two have board certification and/or fellowship training in developmental-behavioral pediatrics.
 - Two have board certification and/or fellowship training in child neurology.
- Three (10 percent) were identified in State taxonomy codes but not NPPES.
 - Two have developmental-behavioral pediatrics board certification but not fellowship training in developmental-behavioral pediatrics.
 - One has board certification and fellowship training in child neurology.

Overall, 16 of 29 (55 percent) have board certification and/or fellowship training in developmental-behavioral pediatrics or neurodevelopmental pediatrics. Among physicians identified through NPPES, 14 of 26 (54 percent) have evidence of board certification and/or fellowship training in child and adolescent psychiatry; for physicians not identified through NPPES, two of three (67 percent) have such evidence.

A key factor affecting certification and training for neurodevelopmental pediatricians involves recent changes in certification processes and requirements. Prior to 2007, physicians specializing in this clinical area typically would receive certification through the American Board of Psychiatry and Neurology, with a certificate of added qualifications in neurodevelopmental disabilities. It is unclear whether the certificate of added qualifications is consistently shown in public information sources about physician credentials. Therefore, an alternate calculation of this validity test indicates that 24 of 29 (83 percent) physicians have evidence of board certification and/or fellowship training in developmental-behavioral pediatrics, neurodevelopmental pediatrics, or child neurology.

In summary, the results of Validity Test 1 indicate that the validity of this measure in identifying child and adolescent psychiatrists is very good; the validity in identifying developmental-behavioral or neurodevelopmental pediatricians is fair, unless child neurology is included in the assessment.

Validity Test 2: Examination of the Proportion of Outpatient Visits with Medicaid-enrolled Children Containing a Specialty-Related Diagnostic or Procedure Code

A second component of validity testing was performed to examine the extent to which identified physicians were delivering specialty-related outpatient care, as reflected in the diagnosis and procedure codes contained in Medicaid utilization data.

Specialty-related visits were identified as those with any diagnosis and/or procedure code included in either the Agency for Healthcare Research and Quality's Clinical Classification Software Category 5 – Mental Health (<http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixCMultiDX.txt>) or the Centers for Disease Control and Prevention's Autism and Developmental Disabilities Monitoring Network (<http://www.cdc.gov/ncbddd/autism/addm.html>). The full list of diagnostic and procedure codes is included in the Appendix (see Supporting Documents).

For each physician, all outpatient visits with Medicaid-enrolled children in 2012 and 2013 were identified. For each year, the proportion of each physician's outpatient visits that were specialty-related (i.e., contained at least one diagnostic or procedure code from the lists noted above) was calculated.

The number of outpatient visits per year ranged from 1 to 4,547 for child and adolescent psychiatrists and from 1 to 2,035 for developmental-behavioral and neurodevelopmental pediatricians. For the vast majority of physicians, the proportion of visits that were specialty-related was similar for 2012 and 2013. The primary exception pertained to developmental-behavioral and neurodevelopmental pediatricians with a substantial proportion of visits related to autism because autism treatment was a covered Medicaid benefit in 2013 but not in 2012.

The proportion of specialty-specific visits was categorized for each physician, using the year (2012 or 2013) with the higher proportion of specialty-related visits. Table 6 (see Supporting Documents) demonstrates that for 98 percent of identified child and adolescent psychiatrists, the majority of outpatient visits were specialty-related. In contrast, only 55 percent of developmental-behavioral and neurodevelopmental pediatricians had specialty-related codes on the majority of their outpatient visits.

Examining credentials for developmental-behavioral and neurodevelopmental pediatricians with <90 percent specialty-related visits:

- The two physicians with 70 to 89 percent specialty-related visits are both board certified in developmental-behavioral pediatrics.
- Two of three physicians with 50 to 69 percent specialty-related visits are out-of-State pediatricians, each with fewer than five visits per year pertaining to neonatal follow-up; the other physician is board certified in both developmental-behavioral pediatrics and child neurology.
- Among the 12 physicians with <50 percent specialty-related visits, three have board certification and/or fellowship training in neurodevelopmental pediatrics; one has board certification and/or fellowship training in developmental-behavioral pediatrics; seven have board certification and/or fellowship training in child neurology; and one is a primary care provider who is board certified in both developmental-behavioral pediatrics and neurodevelopmental pediatrics.

In summary, the results of Validity Test 2 indicate excellent validity in the proportion of specialty-related care provided by identified child and adolescent psychiatrists and fair validity for developmental-behavioral or neurodevelopmental pediatricians. This may reflect the nature

of these two groups, where child and adolescent psychiatry is focused exclusively on mental health services, while clinical services provided by developmental-behavioral and neurodevelopmental pediatrics may have significant overlap with both general pediatrics and child neurology.

Validity Test 3: Examination of an Alternate Source of Physician Identification Data

Michigan Medicaid has an additional source of provider specialty information. This provider specialty table does not include taxonomy codes; rather, specialty data are stored as State-specific codes with text descriptions. Data are populated through Medicaid health plan provider enrollment records and other ad hoc mechanisms.

Applying the additional physician identification data source to the measure specifications yielded 78 additional specialty physicians (Table 7, see Supporting Documents).

As shown in Table 8 (see Supporting Documents), recalculating the measure with the inclusion of these additional physicians yields an increased rate of 0.046-0.051 per 1,000 members for child and adolescent psychiatrists and an increased rate of 0.020-0.021 per 1,000 members for developmental-behavioral and neurodevelopmental pediatricians, compared with the initial results calculated by Analyst 1. This represents an approximately 50 percent increase in the calculated measure rate for child and adolescent psychiatrists and an approximately 75 percent increase in the calculated measure rate for developmental-behavioral and neurodevelopmental pediatricians.

To understand the extent to which the physicians identified through the alternate data source were providing specialty-related care, additional validity testing was performed by calculating the percent of outpatient visits within the measurement year with a diagnosis and/or procedure code relevant to the specialty (i.e., replicating Validity Test 2, described above). Results are shown in Table 9 (see Supporting Documents).

The proportion of specialty-related care for the additional child and adolescent psychiatrists was very high, similar to those identified through taxonomy codes. Conversely, the proportion of specialty-related care for the additional developmental-behavioral and neurodevelopmental pediatricians was very low, and much lower than those identified through taxonomy codes.

Further examination of the credentials of the child and adolescent psychiatrists identified through the alternate data source yields the following:

- The 54 physicians with >90 percent specialty-related visits are all listed in NPPES as Psychiatry & Neurology – Psychiatry.
 - 36 have board certification and/or fellowship training in child and adolescent psychiatry; date of fellowship training varies, indicating that inaccurate NPPES classification is not solely due to very recent certification.
 - 18 have board certification and/or fellowship training in psychiatry, with no evidence of specific child and adolescent training.

- The two physicians with <50 percent specialty-related visits are listed in NPES as Psychiatry & Neurology – Psychiatry; both have board certification and/or fellowship training in child neurology.

Further examination of the credentials of the developmental-behavioral and neurodevelopmental pediatricians identified through the alternate data source yields the following:

- The one physician with ≥ 90 percent specialty-related visits has board certification and/or fellowship training in child neurology.
- The one physician with 70 to 89 percent specialty-related visits has board certification and/or fellowship training in child neurology.
- The one physician with 50 to 69 percent specialty-related visits is a general pediatrician with no board certification and/or fellowship training.
- The 19 physicians with <50 percent specialty-related visits include a mix of situations:
 - Eight are general pediatricians with numerous specialties (including developmental-behavioral/neurodevelopmental disabilities) listed in the alternate data source, clearly in error.
 - Three have board certification and/or fellowship training in child neurology.
 - Eight are general pediatricians with no board certification and/or fellowship training.

Inclusion of the alternate data source would increase the measure result for child and adolescent psychiatrists by approximately 50 percent; however, only 36 of 56 (64 percent) physicians had board certification and/or fellowship training in child and adolescent psychiatry, a much lower rate than for physicians identified by taxonomy codes. Inclusion of the alternate data source would increase the measure result for developmental-behavioral or neurodevelopmental pediatricians by approximately 75 percent; however, 0 percent of providers identified through this alternate source had board certification and/or fellowship training in developmental-behavioral or neurodevelopmental pediatrics.

In summary, results of Validity Test 3 support the use of taxonomy-based codes for specialist identification. These findings underscore the importance of testing and verification prior to supplementing taxonomy-based codes with alternate data sources.

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

This measure does not address any disparities related to race or ethnicity, as the measure does not track any demographic information for the children seen by providers.

7.B. Special Health Care Needs

This measure does not address any disparities related to special health care needs, as the measure does not track any demographic information for the children seen by providers.

7.C. Socioeconomic Status

This measure does not address any disparities related to socioeconomic status, as the measure does not track any demographic information for the children seen by providers.

7.D. Rurality/Urbanicity

This measure does not address any disparities related to rural/urban residence, as the measure does not track any demographic information for the children seen by providers.

7.E. Limited English Proficiency (LEP) Populations

This measure does not address any disparities related to LEP, as the measure does not track any demographic information for the children seen by providers.

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?

These data are considered typical components of health care administrative claims information. As such, they are expected to be routinely collected and maintained by public and private payers.

Feasibility testing for this measure was performed for one State Medicaid program (Michigan) using data routinely maintained in the State's data warehouse. The data warehouse contains health care utilization and eligibility information for Michigan Medicaid members, as well as provider enrollment data. Feasibility testing was performed for two calendar years (2012, 2013) by a data analyst experienced in extracting and analyzing Medicaid enrollment, utilization, and provider data. Testing was performed according to measure specifications; measure results were calculated (see Section 6, Reliability).

For feasibility testing, provider NPIs were linked to relevant taxonomy codes (child and adolescent psychiatrists 2084P0804X, neurodevelopmental pediatricians 2080P0008X, developmental-behavioral pediatricians 2080P0006X) in two data sources: (1) the NPPES (National Plan & Provider Enumeration System) registry, a national data source available to all Medicaid programs and health plans, and (2) taxonomy codes in provider enrollment data collected by the Michigan Medicaid program. Child enrollment data were drawn from enrollment files in the data warehouse; utilization data were drawn from adjudicated claims files in the data warehouse. Rendering and billing provider NPIs were used to identify the providers for outpatient visits.

The required data were readily available in these data sources, with a missing data rate of <0.001 percent.

In summary, the feasibility of calculating this measure is excellent. It is anticipated that calculation of this measure is highly feasible by a data analyst experienced with Medicaid administrative data.

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?

Not applicable.

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.

Not applicable.

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?

Not applicable; requires all enrolled children and providers.

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 identified.

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)

No.

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

Not applicable.

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.

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)

No.

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

Not applicable.

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.

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?

Not applicable; requires all enrolled children and providers.

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 identified.

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?

Not applicable.

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

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?

Not applicable.

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?

Not applicable.

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.

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).

This measure provides States, Medicaid programs, parents, and other stakeholders with a way to assess the availability of behavioral health treatment or counseling services for children. Higher rates of available providers are easily understood to be preferred. The simplicity of the measure allows providers and purchasers to assess the rate of how many providers are available for a State's population.

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.

Health IT enhancements by providers, such as electronic health records (EHRs), are not applicable to this measure. Enhancements of State Medicaid programs to provide more robust data warehouse capabilities for administrative data may improve the timeliness, completeness, and accuracy of provider information used for this measure.

11.B. Health IT Testing

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

No. This measure is derived from administrative data sources that characterize the psychiatric, developmental, and behavioral health providers authorized to bill for services for State Medicaid programs. Consequently, EHR-based information for individual encounters is not applicable to this measure.

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

This measure was tested using Medicaid administrative data acquired directly from the Michigan Medicaid program's administrative data warehouse. In addition, we tested the feasibility of acquiring similar data from Medicaid MAX data that are maintained centrally by CMS for each State's Medicaid program.

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.

Not applicable; this measure is derived from State Medicaid program administrative files.

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)?

No.

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.

Missing or ambiguous information has a direct impact on this measure. The completeness and accuracy of Medicaid administrative data files designating authorized providers will influence the validity of this measure. Missing provider specialty codes in administrative data files will understate the availability of these specialists. Inaccurately coded provider specialties may either under- or overstate the availability of these providers.

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?

Not applicable.

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).

Limitations related to this measure reflect several key areas: accuracy of data sources for provider specialty identification, the challenge of recently introduced specialty areas, tension between defining specialists via training/certification vs. practice, and completeness of outpatient visit data.

Accuracy of Provider Specialty Identification Data Sources

There is no single comprehensive, accurate, up-to-date data source to identify physician specialty. The NPES registry has significant advantages in that it is a national system that is widely available to Medicaid programs and health plans. It is a very accurate data source; validity testing demonstrated that 96 percent of child and adolescent psychiatrists had board certification and/or fellowship training in those specialty areas. However, NPES is also an incomplete data source; there is no standard mechanism or requirement for providers to update their NPES registry information when additional certification is obtained. Moreover, NPIs can be deactivated in NPES (e.g., for deceased physicians), which limits the ability to use NPES as a retroactive data source. The incompleteness of NPES data was demonstrated in validity testing, as the two types of Medicaid program-specific data sources identified additional specialists who were not identified in NPES. The inclusion of program- or plan- specific physician specialty data improves the comprehensiveness of specialist identification but may sacrifice accuracy. It is likely that the process by which specialty data are collected and entered into program- or plan-specific databases is highly variable, resulting in a mix of verified and self-reported specialty designations. As shown in validity testing, this was an issue for both the State taxonomy codes, as well as the alternate program-specific specialty database.

Recognition of Developmental/Behavioral and Neurodevelopmental Pediatrics as Specialties

In 1999, developmental-behavioral pediatrics was introduced as a new pediatric subspecialty, with opportunity for board certification through the American Board of Pediatrics (Althouse, Stockman, 2007). However, the Society of Developmental and Behavioral Pediatrics, known originally as the Society for Behavioral Pediatrics, was formed in 1982 (www.sdbp.org/historyofsdbp_history.cfm), indicating that providers self-identified to this specialty area for at least two decades prior to formal subspecialty designation. A small number of developmental-behavioral fellowship training programs were in place prior to subspecialty designation, though the majority of providers who were members in developmental-behavioral specialty organizations reported that they had not completed a developmental-behavioral fellowship (Adair, Perrin, Hubbard, et al., 2010). When certification became available, many, though not all, of these pediatricians passed the subspecialty examination and became certified. The result is that many pediatricians who trained prior to 1999 and who provide clinical care in developmental-behavioral pediatrics would not appear in a specialty identification data source based on certification or fellowship training, but they likely would appear in a data source based on self-designation. This was evident in validity testing, where the majority of physicians identified as developmental-behavioral pediatricians in NPES and/or State taxonomy codes but without any subspecialty board certification and/or fellowship training were older than 60 years.

The history of neurodevelopmental pediatrics is similarly dynamic. From 2001 to 2007, the American Board of Pediatrics and American Board of Psychiatry and Neurology jointly offered a certificate of added qualifications in neurodevelopmental disabilities. Since 2007, subspecialty certification in neurodevelopmental disabilities has been offered, requiring 2 years of general pediatrics and 4 years of neurology and neurodevelopmental disabilities training (www.abp.org/content/subspecialty-certification). This history was evident in validity testing, where 8 of 11 physicians identified through taxonomy codes who did not have developmental-behavioral pediatrics or neurodevelopmental disabilities board certification and/or fellowship

training had evidence of training or certification in child neurology. Considering these physicians as a specialty match would increase the result of Validity Test 1 (proportion of identified as developmental-behavioral pediatricians/neurodevelopmental pediatricians with board-certification and/or fellowship training) from 55 percent to 83 percent.

Tension Over Defining Specialists via Training/Certification vs. Practice

A related issue is the extent to which specialist designation should be based on training and certification or clinical expertise and experience. This is particularly relevant for developmental-behavioral/neurodevelopmental disabilities pediatrics, where much of the specialty care overlaps with the care provided by general pediatricians. The provision of this type of specialty care, as defined by clinical experience, may be particularly important in rural and other underserved areas, where subspecialists are rarely located. Beyond formal board certification or fellowship training, there is no standard threshold for additional training (e.g., through CME or other professional development) that would identify general pediatricians who are highly qualified to provide developmental-behavioral/neurodevelopmental disabilities specialty care. This may be a topic that warrants further research.

Completeness of Outpatient Visit Data

Accurate calculation of this measure requires complete data for all outpatient visits. There are several threats to data completeness. First, if mental health services are provided to children through a mental health carve-out benefit, the claims may not be present or complete in the primary claims database, which likely would result in understating the measure result. While this was not the case in the data used for reliability and validity testing of this measure, it remains a potential limitation for broader application of the measure. Second, for children enrolled in managed care plans, outpatient visits that are covered under capitation arrangements may be underreported if requirements are not in place for full reporting of all fields for managed care encounters. This may produce understated measure results. While this was not the case in the data used for reliability and validity testing of this measure, it remains a potential limitation for the measure's broader application. Finally, provider information may be incomplete due to use of organization billing NPIs, rather than specific rendering of provider NPI, for some visits, which also may lead to measure results that are understated.

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.

This measure assesses the rate of participating child and adolescent psychiatrists, neurodevelopmental pediatricians, and developmental-behavioral pediatricians who have seen at least one enrolled child in the measurement year for an outpatient visit per eligible population of children. This rate will be expressed in terms of 1,000 eligible children (number of providers/1,000 enrolled children). The eligible population includes children younger than 18

years of age who have been enrolled in a Medicaid program or health plan that includes outpatient specialty care for at least one 90-day period (or 3 consecutive months) within the measurement year. The measure is implemented with administrative claims data, and specialists are identified by specific taxonomy codes. There are no known existing quality measures that assess the availability of such specialists to pediatric patients.

Many children have mental, emotional, or behavioral conditions that would benefit from treatment provided by child and adolescent psychiatrists, neurodevelopmental pediatricians, and developmental-behavioral pediatricians, and the number of children in need is increasing. Most pediatricians consider it appropriate to refer children with suspected developmental or behavioral problems for specialty care; however, difficulties with access to behavioral or developmental specialty care have been reported by both parents and primary care physicians.

Q-METRIC used two methods to test the reliability of the measure: (1) replication of the measure calculation process demonstrated excellent reliability, with some minor variance observed due to the dynamic nature of health administrative data; and (2) comparison of the taxonomy-based provider identification data sources showed very good reliability.

Validity testing was performed to assess three aspects of the measure: (1) testing to determine whether the identified specialists had specific certification and/or training in the respective areas showed very good validity in identifying child and adolescent psychiatrists and fair validity in identifying developmental-behavioral or neurodevelopmental pediatricians. This improved to good validity if child neurology was included in the assessment; (2) testing to determine whether the content of care provided to Medicaid-enrolled children reflected the specialty areas showed excellent validity in the proportion of specialty-related care provided by identified child and adolescent psychiatrists and fair validity for developmental-behavioral or neurodevelopmental pediatricians; and (3) testing to determine whether the inclusion of alternate provider specialty data sources would affect specialist identification showed excellent validity in the proportion of specialty-related care provided by identified child and adolescent psychiatrists and fair validity for developmental-behavioral or neurodevelopmental pediatricians.

This measure provides States, Medicaid programs, parents, and other stakeholders with a way to assess the availability of behavioral health treatment or counseling services for children. While the data sources needed to calculate this measure are easily available, limitations include accuracy of data sources for provider specialty identification, the challenge of recently introduced specialty areas, tension between defining specialists via training and certification vs. practice, and completeness of outpatient visit data. Health IT enhancements by State Medicaid programs to develop more robust data warehouse capabilities for administrative data may improve the timeliness, completeness, and accuracy of provider information used for this measure.

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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.

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