Parent Report of Discussion of Weight Concerns for Child

Section 1. Basic Measure Information

1.A. Measure Name

Parent Report of Discussion of Weight Concerns for Child

1.B. Measure Number

0240

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 percentage of children, ages 2 through 17 years, with a body mass index (BMI) ≥85th percentile, whose parents were surveyed and reported that their provider discussed their child's weight or BMI during an outpatient care visit in the last 12 months. A higher proportion indicates better performance. (Note, here and elsewhere in this documentation, the term "parent" is inclusive of many caregivers, including biological parents, legal guardians, or other family members who are primary caregivers.)

Obesity in children is associated with a broad spectrum of serious health issues, including obstructive sleep apnea, asthma, nonalcoholic fatty liver disease, type 2 diabetes mellitus, depression, orthopedic problems, and skin conditions (Barlow, 2007). While childhood obesity rates have stabilized over the past decade, the percentage of young children and adolescents who are overweight or obese remains high (Ogden, Carroll, Kit, et al., 2014). For the 2011-2012 period, nearly 32 percent of children in the United States were reported to be either overweight or obese (having a BMI ≥85th percentile on sex-specific age-for-growth charts), and 17 percent were obese (having a BMI ≥95th percentile) (Ogden, et al., 2014).

Raising parental awareness of a child's excess weight — and the associated health risks — is an essential first step in helping families make healthy changes that support appropriate weight levels. However, research shows that parents of overweight children have reported receiving too little advice from providers (Taveras, Gortmaker, Mitchell, et al., 2008), and that cultural beliefs often run contrary to medical guidance (Guendelman, Fernald, Neufeld, et al., 2010). Similarly, studies have also shown that providers often do not discuss weight issues with parents of overweight or obese patients or communicate in a way that parents can retain the information (Perrin, Cockrell-Skinner, Steiner, 2012). If healthcare providers discuss weight with families in a timely, informative, supportive, and culturally sensitive manner, they can foster the confidence and skills necessary for parents and children to address dietary and physical activity behaviors (Huang, Becerra, Oda, et al., 2007; Lindsay, Sussner, Greaney, et al., 2011). Many issues exist that make these discussions difficult: uncertainty about appropriate language, lack of familiarity with guidelines, too little support and time in the clinic, concerns about stigmatization, parental misperceptions about normal versus overweight in their own children, and social systems that perpetuate misconceptions about feeding practices and health (Dietz, Robinson, 2005; Doolen, Alpert, Miller, 2009; Klein, Sesselberg, Johnson, et al., 2010; Lindsay, et al., 2011; Puhl, Peterson, Luedicke, 2010). It is important to recognize and address these issues, as families are crucial partners in dealing with weight issues, and clinicians are an excellent source of appropriate guidance. Improving the frequency and quality of these conversations will help children reach and maintain a healthy weight.

This measure uses survey data to calculate the percentage of eligible children whose parents reported that their provider discussed their child's weight or BMI during an outpatient care visit in the last 12 months.

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's National Quality Measures Clearinghouse:

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 High BMI in Children Follow-up 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 population for the numerator is the number of children, ages 2 through 17 years, with a BMI ≥85th percentile, whose parents were surveyed and indicated their child had an outpatient care visit during the measurement year and reported that their provider discussed their child's weight or BMI during a subsequent outpatient care visit in the last 12 months. A higher proportion indicates better performance.

Parent-reported discussion is defined as an affirmative response to the question: "During the __ calendar year, did your provider discuss any concerns/worries about your child's weight or body mass index (BMI)?"

Codes to identify outpatient care visits are listed in Table 1 (see Supporting Documents).

1.H. Numerator Exclusions

1. Inpatient stays, emergency department (ED) visits, and urgent care visits are excluded from the calculation.
2. A diagnosis of pregnancy during the measurement year excludes the patient from the calculation.

1.I. Denominator Statement

The eligible population for the denominator is the number of children, ages 2 through 17 years, with a BMI ≥85th percentile, whose parents were surveyed and indicated that their child had an outpatient care visit during the measurement year.

1.J. Denominator Exclusions

1. Inpatient stays, ED visits, and urgent care visits are excluded from the calculation.
2. A diagnosis of pregnancy during the measurement year excludes the patient from the calculation.

1.K. Data Sources

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

Paper medical record; Survey—parent/caregiver report.

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 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).**

Importance

Childhood overweight and obesity are recognized as major medical and public health problems associated with serious medical complications over the life course, including conditions such as type 2 diabetes, metabolic syndrome, and hypertension (Speiser, Rudolf, Anhalt, et al., 2005). As a result, early screening and identification of weight status in children are critical for both prevention and treatment of childhood overweight and obesity. Primary care providers measure weight and height at yearly visits throughout childhood and calculate BMI by dividing weight by height squared. Overweight is defined as a BMI of the 85th to 94th percentile, and obesity is defined as a BMI ≥95th percentile (Barlow, 2007). Guidelines suggest that patients in the overweight category receive counseling about prevention; those who are obese are quite likely to have obesity-related health risks and should be encouraged to work on weight control practices. Parents are seen as key partners in helping children shape their eating and activity habits to appropriately achieve a healthy weight (Barlow, 2007).

Prevalence of Obesity and Unhealthy Weight in Children

Significant increases in the prevalence of childhood obesity in the United States across both sexes were seen in the 1980s and 1990s (Ogden, Carroll, Kit, et al., 2012). For the 2011-2012 period, nearly 32 percent of children in the United States were reported to be overweight or obese, and at least 17 percent were obese (Ogden, et al., 2014). At the population level, this increase in prevalence is too rapid to be a genetic shift. Rather, changes in eating and physical activity behaviors are affecting the intake and expenditure of energy resulting in overweight and obesity (Barlow, 2007).

Pathology and Severity of Obesity and Unhealthy Weight in Children

Children gain excess weight for many reasons. There is a clear genetic component to obesity: conditions for early humans were stressful, making storage of fat advantageous (Speiser, et al., 2005). Hormones such as leptin, ghrelin, and adiponectin influence appetite, satiety, and fat distribution; they are key metabolic mechanisms that can influence physiologic risk (Barlow, 2007). In those who are genetically predisposed to obesity, behavior and environment influence its development (Barlow, 2007). Currently, genetic susceptibility to obesity is influenced by an environment rife with fast food, processed foods, sugar-sweetened beverages, and easy opportunities for meals eaten outside the home (White House Task Force, 2010). Compounding unhealthy food choices is a noticeable decrease in physical activity for children, as schools cut physical education classes and community design promotes driving over walking and biking (White House Task Force, 2010). Screen time is another contributor to obesity, as children spend increasing amounts of time engaged with television, video games, smart phones, tablets, and computers. Screen time replaces exercise, encourages consumption of advertised foods, and affects sleep quality, which itself is linked to an increased risk of obesity (White House Task Force, 2010).

Medical issues associated with obesity affect almost every organ of the body, though some conditions are without symptoms and signs (Barlow, 2007). Obese children are more likely to suffer from respiratory issues such as disordered breathing (Wing, hui, Pak, et al., 2003), which can lead to right ventricular hypertrophy and pulmonary hypertension, as well as inattention, poor academic performance, and enuresis (Barlow, 2007). Asthma also occurs more frequently among children who are obese (Barlow, 2007). Gastrointestinal problems include nonalcoholic fatty liver disease (NAFLD), which is related to both obesity and diabetes (Barlow, 2007); gallstones (Kaechele, Wabitsch, Thiere, et al., 2006); and gastroesophageal reflux disease and constipation, which are worsened by obesity (Barlow, 2007). Obese children are more likely to have endocrine disorders such as abnormal glucose metabolism (sometimes called pre-diabetes), which indicates higher risk for the development of diabetes (Li, Ford, Zhao, et al., 2009); type 2 diabetes mellitus; polycystic ovary syndrome; and hypothyroidism (Barlow, 2007). Cardiovascular problems for overweight/obese children include dyslipidemia (Lamb, Ogden, Carroll, et al., 2011) and hypertension (Barlow, 2007). Orthopedic problems include Blount disease (a visible bowing of the lower extremities), slipped capital femoral epiphysis, and an increased risk of fractures, musculoskeletal pain, and orthopedic problems (Dietz, Gross, Kirkpatrick Jr, 1982; Manoff, Banffy, Winell, 2005). Skin conditions include acanthosis nigricans, a chronic irritation and infection in the folds of the skin (Nguyen, Keil, Russell, et al., 2001). Metabolic syndrome, a cluster of concurrent conditions (abnormal triglycerides, large waist circumference, and high blood pressure) that increase the risk of heart disease, stroke, and diabetes is not yet defined in children (Speiser, et al., 2005). However, among severely obese children, the risk of developing metabolic syndrome has been estimated at 50 percent (Weiss, Dziura, Burgert, et al., 2004).

Children who are obese also contend with psychiatric problems, including depression, anxiety, and eating disorders (Barlow, 2007). One study found that among female adolescents who were obese, patterns of observation showed more adverse social, educational, and psychological correlates (Faulkner, Neumark-Sztainer, Story, et al., 2001). Children who are obese may also be at risk for academic difficulties, alcohol and tobacco use, premature sexual behavior, inappropriate dieting practices, and physical inactivity (Daniels, Jacobson, McCrindle, et al., 2009). Increasing weight is associated with decreasing health-related quality of life, lower body satisfaction, and low self-esteem. Children who are overweight experience more teasing and are vulnerable to bullying (Daniels, et al., 2009). Children share society’s negative opinions about those who are overweight or obese, regardless of their own weight status or sex (Speiser, et al., 2005). Their perceptions of obesity emphasize laziness, selfishness, lower intelligence, social isolation, and poor social functioning, as well as low levels of perceived health, healthy eating, and activity. Children as young as 5 years of age are aware of their own levels of overweight, which affects their perceptions of appearance, athletic ability, social competence, and self-worth (Speiser, et al., 2005). Research has also shown that children diagnosed with obesity are much more likely to be diagnosed with mental health disorders or bone and joint disorders than children who are not obese; they are also two to three times as likely as non-obese children to be hospitalized (Marder, Chang, 2006).

Being overweight or obese in early life also has implications for a child's future health. First, for a child who is overweight, medical risks include future or persistent obesity (Barlow, 2007; Daniels, et al., 2009). Being overweight or obese in childhood and adolescence is also associated with increased risk of premature mortality and comorbidities in adulthood. A 2011 systematic review reports a significant association between child and adolescent overweight/obesity and premature mortality, with hazard ratios ranging from 1.4 to 2.9 (Reilly, Kelly, 2011). In addition, being overweight or obese as a child or adolescent is significantly associated with increased risk of cardiometabolic morbidity (including diabetes, hypertension, heart disease, and stroke) in later life, with hazard ratios ranging from 1.1 to 5.1, as well as increased risk of asthma in adulthood and polycystic ovary syndrome in adult women (Reilly, Kelly, 2011). Obesity in adolescence is associated with negative self-image that persists into adulthood (Dietz, 1998). These children are also at long-term higher risk for chronic conditions such as breast, colon, and kidney cancer; musculoskeletal disorders; and gall bladder disease (Daniels, et al., 2009). Childhood obesity contributes to a significant and increasing burden of chronic disease, rising healthcare costs, disability, and premature death.

Given the vulnerability of obese children to serious physical and emotional complications, the case for prevention and treatment of pediatric obesity is irrefutable (Speiser, et al., 2005). Reducing childhood obesity can only be achieved through a comprehensive and coordinated effort that includes a range of multidisciplinary strategies (Daniels, et al., 2009). The goals of treatment are, first, to restore the balance between energy intake and expenditure, usually through a decrease in energy consumption and an increase in energy expenditure (Daniels, et al., 2009; Speiser, et al., 2005). Then, over the longer term, the goal shifts to reducing BMI and reversing or preventing short- and long-term comorbidities (Speiser, et al., 2005).

It is understandable for providers to feel overwhelmed in dealing with obesity, given the entrenched environmental forces that have contributed to the rise of unhealthy eating habits and sedentary behavior. Clinicians can, however, help improve outcomes for their patients by identifying problems early, helping families create positive home environments, and providing structured guidance to overweight and obese children and their families (Barlow, 2007). Successful obesity treatment improves long-term physical health through the development of lasting healthy lifestyle habits. For some children, these changes will be enough to induce weight loss or maintenance during growth periods. For others, further work will be needed. But developing and keeping healthy eating and exercise habits, regardless of weight loss, is important because of the long-term health benefits. Even slowed weight gain during growth periods will result in lower BMI percentiles (Barlow, 2007).

Outcomes of Discussing Weight Concerns with Parents

Once a provider has assessed a child's BMI percentile and documented the appropriate weight classification, it is essential to address unhealthy weight by communicating with patients and families. Acknowledging excess weight and its consequences is the first step in addressing obesity (Jeffery, Voss, Metcalf, et al., 2005). In fact, the very diagnosis of obesity is associated with improved obesity management (Perrin, et al., 2012). Pediatricians who screened patients and documented BMI were more likely to provide counseling about achieving a healthy weight status. Talking about overweight in children is the first step to providing ongoing, consistent, and supportive treatment to address potential health consequences. These steps often take the form of developing healthier eating habits and finding consistent opportunities for regular physical exercise. Primary care providers are in an excellent position to help families, by promoting healthy perceptions regarding weight through regular discussion of a child's status. Likewise, parents are essential partners in efforts to address obesity as a health problem (Jeffery, et al., 2005). Clinicians should repeatedly emphasize to parents the importance of their involvement in the ongoing process of weight management. Almost all of the advice about nutrition and exercise that clinicians provide to parents is intended for the entire family and not just the child who is overweight (Baker, Farpour-Lambert, Nowicka, et al., 2010). It is important to support the effectiveness of this provider-family relationship through thoughtful communications. Clinicians can help foster key parental confidence and encourage their involvement in the appropriate steps toward weight reduction and maintenance (Huang, et al., 2007).

This measure indicates that parents of eligible children reported that a provider discussed weight concerns for their child at an outpatient visit within the measurement year. The measure does not change across developmental stages.

Performance Gap

Counseling Rates Are Low

Despite the clear benefits of providers counseling families about a child's weight status, many parents are literally not getting the message. In one study among children with a BMI ≥85th percentile, only 22 percent of parents reported being told their child was overweight, and only 58 percent of parents of very obese children recalled being told of their child's weight status (Perrin, et al., 2012). Other studies report similarly low numbers. Lazorick and colleagues found that documentation of counseling regarding nutrition and physical activity was rare: 16 percent for children ages 3-5 years and 7 percent for ages 13-16 years. Many of the overweight adolescents in this study already had comorbidities seen more frequently in adults (Lazorick, Peaker, Perrin, et al., 2011). A third study reported a somewhat better rate of 51 percent for frequency of diet, exercise, and weight reduction counseling, but its authors noted the rate was still inadequate and did not address the depth or quality of counseling (Patel, Madsen, Maselli, et al., 2010). Yet another study found that among overweight children, aged 2-19 years, only 37 percent reported having ever been told by a provider that they were overweight (Ogden, Tabak, 2005). Among those ages 2-5 years, the rate was 17 percent, and from there it rose steadily: 33 percent for children ages 6-11 years; 40 percent for ages 12-15 years; and 52 percent for the oldest group, ages 16-19 years. Research has further shown that overweight parents of overweight, but not obese, children reported receiving too little advice on nutrition and physical activity, compared with parents of obese children, and they rated the quality of the advice as poor or fair (Taveras, et al., 2008).

Low rates of discussion are prevalent but unacceptable. Children and families need help in addressing unhealthy weight. By the time children are of school age, they are already responding to environmental cues, not satiety, in deciding what they want to eat (Rolls, Engell, Birch, 2000). By the age of 5 years, the amount of food offered influences how much a child eats; in younger children (age 3½ years), the amount of food presented did not affect the amount consumed. As children develop, food intake is affected by social, cultural, and environmental factors. Early recognition of this developmental change is important in helping children learn good habits.

Clinicians Need Educational and Administrative Support

Low rates of counseling stem from many sources. In a study by Klein and colleagues, practicing pediatricians said they lacked the time to counsel patients about weight; found counseling alone to provide poor results; and noted that simple diet and exercise recommendations would be helpful. The intensity of what was needed from them to address obesity in children, many pediatricians felt, was beyond their capability as primary care providers (Klein, et al., 2010).

It is not surprising that clinicians feel at a loss for dependable guidance. Science has lagged behind the obesity epidemic, leaving many gaps in evidence-based recommendations (Barlow, 2007). Randomized, controlled clinical trials have not been conducted to prove or disprove the effect of certain behaviors on weight control in obese children, and primary care systems have often been ineffective in developing processes to implement guidelines to assess children and adolescents who are overweight or obese (Barlow, 2007). Well-defined, validated preventive and therapeutic interventions for children and families are simply lacking (Daniels, et al., 2009), and public policy has not kept up (Speiser, et al., 2005).

Awareness of guidelines, often achieved through continuing medical education, and access to dependable tools for measurement and counseling, such as community resources to promote good nutrition and exercise, are helpful strategies for many clinicians. Providers who were familiar with guidelines for the assessment, prevention, and treatment of obesity reported higher self-efficacy and felt comfortable discussing weight (Klein, et al., 2010). It is interesting to note that one study found that pediatricians were more likely than family physicians to provide obesity-related guidance (Huang, Borowski, Liu, et al., 2011). One possible reason, the authors suggested, is that training for pediatricians may emphasize a greater focus on developmental issues.

Administrative pressure to keep visits brief can make the investment of time to counsel patients about obesity difficult. One answer to this problem is collaboration with other healthcare professionals, such as nurses, registered dieticians, or behavioral and exercise specialists. The use of specially developed tools and technology has also been reported to be of help (Huang, et al., 2011). Use of a simple toolkit that guided provider communication about weight and helped parents learn to correctly assess their children’s BMI status resulted in short-term improvements in dietary and physical activity behaviors (Perrin, et al., 2010). These results (a reduction in the amount of time spent watching television and fewer sweet beverages consumed) showed that sensitively designed materials could help make the clinic an effective place to address short-term behavior change.

Office systems should be designed to track overweight and obese children, better supporting those working to manage their condition (Barlow, 2007). Offices should have the right equipment and staff training to document BMI consistently and accurately. Further, chart audits can help make routine collection of BMI a standard practice by assessing baseline practices, setting goals for improvement, and then measuring improvement over time (Barlow, 2007). Use of color-coded BMI charts in some clinics has led to improved reports of BMI discussion (Perrin, et al., 2010).

Providers have also reported that lack of reimbursement is a barrier to care for children who are obese (Barlow, 2007), and important gaps exist between prevention and treatment of childhood obesity and what is covered by health insurance (Daniels, et al., 2009). Other challenges include program recruitment and retention, financing, apathy at the policy and clinical levels, and variation in the priority placed on childhood obesity (Daniels, et al., 2009).

Discussions About Weight Are Associated with Uncomfortable Emotions

In a society that projects mixed messages about food consumption and body image, the weight discussion itself is an uneasy assignment for some providers. Clinicians have been found to be reluctant to discuss weight issues in very young patients and more likely to discuss weight in those who were most overweight (Ogden, Tabak, 2005). Similarly, recall has been found to be better among the parents of older children, suggesting that providers need to improve their communication strategies regarding younger children (Perrin, et al., 2012). These low recall rates, especially among younger children, suggest that clinicians are not explaining weight issues in ways that help parents grasp and remember their child's weight status and related issues. Parents then interpret provider nonchalance about excess weight in young children as a reason not to improve lifestyle habits (Perrin et al., 2012). Yet, it is the families of very young overweight children who could benefit from addressing weight issues early (Ogden, Tabak, 2005).

Providers say they are reluctant to discuss weight with families for a variety of reasons: they don't want children to feel stigmatized; they are concerned that parents will feel blamed; they fear discussion will trigger an eating disorder or encourage poor self-concepts (Dietz, Robinson, 2005). Indeed, the adolescent experience of obesity has been associated with adverse social and educational experiences (Faulkner, et al., 2001). Findings suggest that not meeting weight and body shape ideals that are culturally pervasive is associated with social and psychological risks (Faulkner, et al., 2001).

Good communication strategies, then, are as important as the screening itself (Perrin, et al., 2012) and start with language that is mutually acceptable to providers and patients. Discussions of excess weight in children should use terms such as weight and unhealthy weight; terms to be avoided include fat, obese, and extremely obese. This approach should be consistent across sex, race, income, education, and parent/child weight (Puhl, et al., 2010). Using common terminology facilitates accurate sharing of information, which leads to an appropriate diagnosis and treatment plan. The words a provider chooses help create a relationship of mutual respect (Dutton, Tan, Perri, et al., 2010). Dietz and Robinson (2005) suggest that unless there are pressing complications to discuss, providers are best off using a neutral approach to discuss weight. This helps avoid a sense of blame or pressure and provides a means of assessing readiness for change. Because language is directly tied to outcomes, stigmatizing or offensive language may prompt harmful reactions: 36 percent of parents said they would put their children on a strict diet if a provider used negative language; 35 percent said they would find a new doctor; and 24 percent noted they would avoid future appointments (Puhl, et al., 2010).

Parents Often Misjudge Their Child's Weight

Parent misperceptions about weight are also an impediment to clear communication about weight status. Several studies have shown that parents are poor judges of overweight (Doolen, et al., 2009; Huang, et al., 2007; Jeffery, et al., 2005; Perrin, et al., 2010, 2012). Jeffery and colleagues (2005) found that parents were poor at recognizing when they themselves were overweight and when their children were. Huang and colleagues (2007) noted a tendency among parents to misperceive what is a normal weight for younger children, and Perrin and colleagues reported that many parents thought their overweight child was of a healthy weight (Perrin, Jacobson Vann, Benjamin, et al., 2010). Likewise, work by Doolen and colleagues (2009) showed that parents were more likely to correctly assess the weight status of normal versus overweight children and more likely to assess a daughter as overweight than a son. These tendencies have the potential to promote disordered eating in girls and leave untreated health issues in boys. Reasons for misperception may include denial; reluctance to admit there is a problem; or desensitization, as overweight is becoming the new normal and thus more accepted (Jeffery, et al., 2005). Because excess weight seems normal, clinical labels are less likely to motivate change. Parents have also reported distrust of growth charts, a reluctance to label their children, and the belief that baby fat is different from adult fat (Doolen, et al., 2009).

It is important to help parents accurately assess their children's weight status: parental involvement is key to weight reduction and maintenance in children, and parental recognition is also associated with their readiness to take action (Huang, et al., 2007). Any missed opportunities to correctly assess weight mean that treatment opportunities are lost, and changes cannot be implemented (Doolen, et al., 2009). Parents with an accurate perception of their child's weight status are more ready to make changes around weight-related behaviors. Communicating with parents about weight status helps make parental changes more effective (Perrin, et al., 2012); and, research suggests that families can handle the facts about excess weight. In a study designed to provide weight measurement and feedback to families in a school setting in the United Kingdom, communication about weight specifics was acceptable to a majority of families (Grimmett, Croker, Carnell, et al., 2008); 50 percent of parents subsequently reported positive changes in health behaviors, and 65 percent of parents were in favor of weight feedback on a regular basis. However, because as girls get older and self-esteem about their bodies decreases, care should be taken, the authors suggest, in how feedback about weight is provided; ample opportunity for discussion should be provided.

Clinicians May Have Uncomfortable Feelings Related to Their Own Weight

Barriers to care may also lie with the clinicians themselves. In a 2005 study looking at pediatricians' self-perceptions about weight, nearly half of pediatricians who were overweight did not identify themselves as such (Perrin, Flower, Ammerman, 2005). Also, both self-identified thin and overweight pediatricians reported difficulty in providing weight counseling. The authors hypothesized that pediatricians who identified as overweight worried about appearing hypocritical, while those who saw themselves as thin were concerned about being perceived as lacking empathy. Helping pediatricians overcome personal weight-related obstacles may enable them to be more successful in guiding their patients to achieve a healthy weight (Perrin, et al., 2005).

Unlike smoking where there is no safe level of use, food is not deadly; everyone needs to eat every day. Because of this, the public health response has focused on strategies that rely on individuals changing their behavior. However, the food industry's substantial resources to influence what people eat make this an ineffective strategy (Daniels, et al., 2009). Encouraging collective responsibility for the availability of healthy foods and the value of physical exercise will better support individual efforts at successful weight management.

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).**

Weight status communication falls under the “screening” portion of the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit in Medicaid. The EPSDT benefit requires States to cover preventive services for children, which includes services necessary to prevent and treat obesity. The health-education component of this mandate provides an opportunity for clinicians to discuss health concerns regarding weight and nutrition with the child and/or the parent or guardian. Necessary medical services can be covered by Medicaid under the EPSDT benefit. There is, however, considerable variability in coverage among the States. In a 2010 report to Congress, Preventive and Obesity-Related Services Available to Medicaid Enrollees, the U.S. Department of Health and Human Services (HHS) states, “CMS will encourage States to include specific information on the standards of practice related to obesity prevention and treatment in their [State Medicaid] provider manuals.” Medicaid and the State Children’s Health Insurance Program (CHIP) can help improve access to preventive screenings and interventions (HHS, 2010). Through provisions in the Affordable Care Act, CMS can work with the public health community to prevent and treat obesity (HHS, 2010).

One in five children is covered by Medicaid or CHIP, and many others are eligible but do not receive services because parents are unaware of their eligibility (Daniels, et al., 2009). The number of children dependent on Medicaid is important, as the burden of the obesity epidemic disproportionately affects them. Nationally, 43 percent of children with public insurance are overweight or obese versus 27 percent of children with private insurance (National Initiative for Children’s Healthcare Quality [NICHQ], 2007). Children enrolled in Medicaid are six times as likely to be treated for obesity as children with private insurance (Marder, Chang, 2006). This may be an underestimate, given the difficulty children with Medicaid have in accessing the health system. Annual healthcare costs for children who are obese and enrolled in Medicaid are approximately $6,700 compared with $3,700 for obese children covered by private insurance; the national cost of treating children with obesity is estimated at roughly $11 billion for children with private insurance compared with $3 billion for those covered by Medicaid (Marder, Chang, 2006).

It has further been noted that children covered by Medicaid are less likely to visit the doctor and more likely to enter the hospital compared with children covered by private insurance (Marder, Chang, 2006). This may suggest that available outpatient resources are inadequate for these Medicaid patients. This lack of services may lead families to postpone seeking treatment, allowing conditions to deteriorate until urgent care is needed.

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).

Many measures regarding pediatric BMI measurement and counseling exist. These measures assess, for populations of varying ages, regular measurement of BMI and documentation of BMI percentile; number of well-child visits with documented BMI; identification of weight classification status; and education about weight management strategies, including counseling regarding nutrition and physical activity. This measure, Parent Report of Discussion of Weight Concerns for Child, differs from existing measures in that it assesses if the parent or guardian of an overweight or obese child (BMI ≥85th percentile) can recall if their healthcare provider has communicated concerns about the child’s weight status or BMI.

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:** Yes.
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:** Yes.
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):** No.
q. **Population – pre-school age children (1 year through 5 years) (specify age range):** Yes; ages 2-5 years.
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; ages 11 through 17 years (i.e., younger than 18 years of age).
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.

This measure focuses on care for children who are overweight or obese; parents are surveyed about a process (whether their child’s provider discussed the child’s overweight status with them during an outpatient visit) that, if followed, results in a desirable clinical outcome (children achieve a healthy weight as families implement opportunities for better eating and more exercise). The measure highlights where providers or health systems are falling short in discussing concerns about a child’s weight status.

National guidelines and expert consensus statements recommend that providers discuss concerns about a child’s overweight status with their families. In 2007, the American Academy of Pediatrics (AAP), American Medical Association (AMA), and the Centers for Disease Control and Prevention (CDC) collaborated to form an expert committee to update recommendations on the prevention, assessment, and treatment of child and adolescent overweight and obesity. The committee recommended that once a child's BMI is measured, clinicians must then be thoughtful in their assessment of the child's health and the words chosen to discuss weight with the child and family (Barlow, 2007). Table 2 (see Supporting Documents) summarizes several key sources of evidence for this measure, using the U.S. Preventive Services Task Force (USPSTF, 2010) rankings (criteria denoted as a note to Table 2).

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.

This measure is based on parent survey data. The reliability of this measure was not separately tested; guidance from the National Quality Forum (NQF) indicates that separate reliability testing of data elements is not necessary if data element validity testing is conducted (NQF, 2011). See Validity section below.

Although reliability was not tested per se, medical records were reviewed to determine the extent to which children with a parent-reported BMI ≥85th percentile had a BMI ≥85th percentile documented in the medical record. The reliability of the abstraction process was evaluated through an assessment of inter-rater reliability (IRR) between abstractors.

The data for this measure was obtained through a survey conducted by HealthCore, Inc. HealthCore is an independent subsidiary of Anthem, Inc., the largest health benefits company/insurer in the United States. HealthCore owns and operates the HealthCore Integrated Research Database (HIRD), a longitudinal database of medical and pharmacy claims and enrollment information for members from 14 geographically diverse Blue Cross Blue Shield Health Plans in the Northeast, South, West, and Central regions of the United States, with members living in all 50 States. In total, the HIRD includes data on approximately 59 million individuals enrolled between January 2006 and June 2014.

More than 12 million members were enrolled at some point during the 2013 measurement year for this study, among which 2.3 million were 2-18 years of age. There were 637,100 children aged 2-18 years with a routine outpatient encounter in 2013, who were currently enrolled and were fully insured. This group was narrowed to a subset who had a provider with a specialty of pediatric medicine or general practice/family practice (451,003). One child per family was then randomly selected, resulting in 293,741 eligible children from all 50 States, as well as the District of Columbia and territories such as Puerto Rico and the Virgin Islands.

A simple random sample (SRS) was used to select 27,000 candidates for a parent survey, of which 26,569 (98 percent) had valid contact information. From this group, a total of 1,580 parent surveys were completed, of which 416 had a BMI ≥85th percentile according to parent-reported height and weight for their eligible child.

To evaluate the validity of the survey data, medical records for a portion of the children represented in the survey were reviewed. Due to incomplete provider information for 14 children, charts for 402 of the 416 children with BMI ≥85th percentile (based on parent-reported height and weight) were requested from provider offices and healthcare facilities, and 298 (74 percent) were received at a centralized location for data abstraction.

Trained medical record abstractors collected and entered information from paper copies of the medical records into a password protected database. To help ensure consistency of data collection, the abstractors were trained on the study's design and presented with a standardized data collection form designed to minimize subjective judgments during the abstraction process. In addition, data entered onto a scanner form and subsequently scanned were reviewed through a series of quality checks.

Reliability of medical record data was determined through re-abstraction of patient record data to calculate the IRR. Broadly, IRR is the extent to which the abstracted information is collected in a consistent manner. Low IRR may be a sign of poorly executed abstraction procedures, such as ambiguous wording in the data collection tool, inadequate abstractor training, or abstractor fatigue. For this measure, the medical record data collected by two abstractors were individually compared with the data obtained by a senior abstractor to gauge the IRR for each abstractor. Any differences were remedied by review of the chart. IRR was determined by calculating both percent agreement and Cohen's Kappa statistic.

Results

Data were abstracted from the medical records of 298 children represented in the survey with BMI ≥85th percentile (according to parent-reported height and weight). From this sample, 56 children (19 percent) had documentation of BMI percentile in the medical record. Of these, four to eight records (7-14 percent) from the two abstractors were reviewed for IRR. Agreement was assessed for three measure variables: documentation of BMI percentile ≥85th percentile and documentation of both height and weight (necessary to calculate BMI).

Abstractor agreement for all three measures variables (BMI ≥85th percentile, height, and weight) was 100 percent with a Kappa statistic of 1 (Table 3; see Supporting Documents). These results indicate that a perfect level of IRR was achieved for each measure variable.

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).

The validity of this measure was determined from two perspectives: face validity and validity of the survey data using clinical documentation obtained from medical record review.

Face Validity

Face validity is the degree to which the measure construct characterizes the concept being assessed. The face validity of this measure was established by a national panel of experts and advocates for families of children with high BMI convened by Q-METRIC. The Q-METRIC expert panel included nationally recognized experts in childhood obesity, representing pediatrics, nephrology, nutrition and dietetics, endocrinology, gastroenterology, health behavior/education, and family advocacy. In addition, measure validity was considered by experts in State Medicaid program operations, health plan quality measurement, health informatics, and healthcare quality measurement. In total, the Q-METRIC High BMI Follow-Up panel included 17 experts, providing a comprehensive perspective on childhood obesity 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 effective management and treatment of childhood obesity. Concepts and draft measures were rated by this group for their relative importance. This measure was very highly rated, receiving an average score of 7.9 (with 9 as the highest possible score).

Parent Survey Data

The eligible population for the denominator is the number of children ages 2 through 17 years with a BMI ≥85th percentile, whose parents were surveyed and had an outpatient care visit during the measurement year. This measure was tested using two methods for determining the denominator:

1. Parent-reported height and weight calculated BMI ≥85th percentile based on height and weight reported by a parent.

2. Recorded height and weight calculated BMI ≥85th percentile based on height and weight recorded in the medical record.

This measure was tested using data from 1,580 parents who completed an online survey; 134 (8.5 percent) parents with children either younger than 2 years or age 18 years or older at time of survey were excluded from subsequent analysis. Of the remaining 1,446 parents, a total of 416 (28.8 percent) children were classified as having a BMI ≥85th percentile, based on parent-reported height and weight. Among this group 83 (20 percent) of surveyed parents reported that their provider discussed their child's weight or BMI during an outpatient care visit in the previous calendar year (Table 4; see Supporting Documents). Among the 298 (18.9 percent) children whose parents were surveyed and had medical record data, there were 146 (49.0 percent) children classified as BMI ≥85th percentile based on height and weight recorded in the medical record. Among this group of surveyed parents, 35 (24 percent), reported that their provider discussed their child's weight or BMI during an outpatient care visit in the last 12 months (Table 4; see Supporting Documents).

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

Analyses by Ogden and colleagues (2014) of data from the 2011-2012 National Health and Nutrition Examination Survey (NHANES) covered many demographic aspects of childhood obesity, including race. Among NHANES participants aged 2 to 19 years, the prevalence of obesity (BMI ≥95th percentile) was highest in Hispanics (22 percent) compared with non-Hispanic blacks (20 percent), non-Hispanic whites (14 percent), and non-Hispanic Asians (9 percent). This order was consistent among racial and ethnic groups when looked at by sex: Hispanic boys and girls had the highest incidence of obesity (24 percent and 21 percent, respectively) compared with non-Hispanic black boys and girls (20 percent and 21 percent), white boys and girls (13 percent and 16 percent), and Asian boys and girls (12 percent and 6 percent). The order also held when considering the broader category of those who were overweight or obese (i.e., having a BMI ≥85th percentile): Hispanic boys and girls had the highest incidence of obesity (41 percent and 37 percent, respectively) compared with non-Hispanic black boys and girls (34 percent and 36 percent), white boys and girls (28 percent and 29 percent), and Asian boys and girls (25 percent and 14 percent). In both weight classifications, Hispanic boys had the highest rate of obesity and Asian girls the lowest; for both black and white children, girls tended to have slightly higher rates of excess weight than boys (Ogden, et al., 2014).

It is interesting to note that two studies reported better communication regarding the topic of excess weight among children who often receive substandard care. Non-Hispanic black girls were more likely to be told they were overweight compared with non-Hispanic white girls (47 percent vs. 31 percent) (Ogden, Tabak, 2005). And notification of overweight status by a doctor or health professional was more likely to occur among Mexican American and other Hispanic children; there was a trend toward increased notification about excess weight to the parents of non-Hispanic black and publicly insured children, which is the opposite of most health-related disparities (Perrin, et al., 2012).

Census/Survey Characteristics

Race and ethnicity were not available from the medical records reviewed for this study. However, the overall race and ethnicity characteristics of the SRS of candidates for the parent survey (n=26,569; n=25,961 with valid zip codes) can be summarized using demographic characteristics based on ZIP codes. This race/ethnicity information was obtained from the 2010 United States Census (U.S. Census Bureau, 2010), which enables characterization of the areas in which the candidates with valid zip codes live. On average, children in this group reside in areas reporting the following breakdowns of race within their respective ZIP codes of residence: white (79 percent, standard deviation (SD)=17 percent); Asian (6.6 percent, SD=10 percent); black or African American (6.4 percent, SD=11 percent); other (4.4 percent, SD=7 percent); mixed race (2.9 percent; SD=2 percent); American Indian or Alaska native (0.5 percent, SD = 1 percent); and native Hawaiian or other Pacific islander (0.1 percent, SD=0.2 percent). On average, children lived within ZIP codes reporting approximately 11 percent Hispanic ethnicity.

Race and ethnicity data were obtained from the parent survey (Tables 5 and 6; see Supporting Documents) for parents who completed the survey (n=1,580), the subset of children identified as having a BMI ≥85th percentile (n=416, based on parent-reported height and weight), and the subset of children with abstracted charts (n=298).

Overall, self-reported race and ethnicity were similar in all three groups of children, with parents reporting primarily white race (86-87 percent) and 5-7 percent reporting Hispanic ethnicity. These populations had a higher proportion of whites and a lower proportion of Hispanics compared with the racial and ethnic characteristics of the ZIP codes in which the broader pool of candidates for the parent survey lived.

7.B. Special Health Care Needs

The survey data accessed for this study did not include indicators of special healthcare needs of represented children.

7.C. Socioeconomic Status

Findings have varied regarding the relationship between socioeconomic status and excess weight. In 2003, Gordon-Larsen and colleagues reported that in adolescents (ages 12 to 20 years) overweight prevalence decreased among white girls as their socioeconomic status increased, while the reverse was true for African American girls. Higher socioeconomic status was associated with elevated and/or increasing BMI in African American adolescent girls. The authors suggest that efforts to reduce disparities regarding excess weight between ethnic groups must look beyond income and education to consider environmental, contextual, biological, and socio-cultural influences (Gordon-Larsen, Adair, Popkin, 2003). More recent findings by Miech and colleagues produced different results when dividing adolescents into two age groups (12- to 14-year olds and 15- to 17-year olds). Trends of increasing overweight showed a greater effect among families living below the poverty line compared with those above it for older, but not younger, adolescents. Additional analyses suggested that physical inactivity and eating habits such as skipping breakfast and consuming sugary drinks contributed to disparities. The authors reason that there is a unique association in later adolescence between poverty and overweight because food choices and activity levels at this age differ considerably from those of early childhood and adulthood. Older adolescents have opportunities and discretionary income to make their own choices regarding food and activities (Miech, Kumanyika, Stettler, et al., 2006).

Census Characteristics

Socioeconomic status was not available from the medical records reviewed for this study. However, the overall household income can be summarized based upon the characteristics of the ZIP codes of the sampled children. This information was obtained from the 2011 American Community Survey (ACS) (U.S. Census Bureau, 2013), which enables characterization of the areas in which sampled children live.

The summary statistics for median household income are reported in Table 7 (see Supporting Documents) for the following sampled individuals with valid ZIP codes:

1. Candidates for the parent survey with non-missing contact information (n=26,569; n=25,961 with valid zip codes).
2. Parents who completed the survey (n=1,580; n=1,563 with valid zip codes).
3. The subset of children who were identified as having a high BMI through the survey (n= 416, n=413 with valid zip codes).
4. The subset of children who were identified as having a high BMI through the survey and had abstracted medical charts (n=298, n=295 with valid zip codes).

Overall, median household income at the ZIP code level was similar among the parents completing the survey, the subset of children with high BMI, and the subset of children with abstracted medical charts ($65,030 - $68,692). These populations had a somewhat lower median household income compared with the broader pool of candidates for the parent survey ($71,418).

7.D. Rurality/Urbanicity

Census Characteristics

Urbanicity was not available from the medical records reviewed for this study. However, urbanicity can be summarized based upon the overall characteristics of the ZIP codes of sampled children. This information was obtained from the 2010 United States Census (U.S. Census Bureau, 2010), which enables characterization of the areas in which sampled children live.

The summary statistics for urbanicity are reported in Table 8 (see Supporting Documents) for the following sampled individuals with valid ZIP codes:

1. Candidates for the parent survey with non-missing contact information (n=26,569; n=25,961 with valid zip codes);
2. Parents who completed the survey (n=1,580; n=1,563 with valid zip codes);
3. The subset of children who were identified as having a high BMI through the survey (n= 416, n=413 with valid zip codes); and
4. The subset of children who were identified as having a high BMI through the survey and had abstracted medical charts (n=298, n=295 with valid zip codes).

Overall, the ZIP codes of the candidates for the parent survey and the ZIP codes for the parents who completed the survey were largely categorized as being urban (80 percent and 79 percent, respectively); the subset identified as having a high BMI and the subset with reviewed and abstracted medical charts resided in ZIP codes categorized as urban to a slightly lesser degree (77 percent and 75 percent, respectively).

7.E. Limited English Proficiency (LEP) Populations

The medical record data abstracted for this study did not include indicators of LEP.

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 noted within the Reliability section of this report, our testing data were obtained through an online survey conducted by HealthCore, Inc., which maintains the HealthCore Integrated Research Database (HIRD). This longitudinal database contains medical and pharmacy claims and enrollment information for members from 14 geographically diverse Blue Cross Blue Shield Health Plans with members living in all 50 States. In total, the HIRD includes approximately 59 million individuals who were enrolled between January 2006 and June 2014.

More than 12 million members were enrolled at some point during the 2013 measurement year that was used for this study, among which 2.3 million were aged 2-18 years. The sample began with 1,048,559 children aged 2-18 years with a routine outpatient encounter in 2013. As described in the Reliability section of this report, this group was subsequently narrowed to

26,569 candidates for the parent survey, which had even representation by sex (50.5 percent male) and a mean age of 9.3 years for sampled children.

Following Institutional Review Board (IRB) approval, notification letters describing the Internet-based survey were sent to the parents of the sampling population (n=26,569). The letter included an opt-out phone number and an Internet address where the survey could be completed online. Study participants were provided an online consent form and received a $10 incentive for survey completion.

The eligible population for the denominator is the number of children ages 2 through 17 years with a BMI ≥85th percentile, whose parents were surveyed and had an outpatient care visit during the measurement year. This measure was tested using two methods for determining the denominator:

1. Calculated BMI ≥85th percentile, based on height and weight reported by a parent.
2. Calculated BMI ≥85th percentile, based on height and weight recorded in the medical record.

In total, 1,580 parents completed the online survey; 134 (8.5 percent) parents with children either younger than 2 years or 18 years or older at the time of survey were excluded from subsequent analysis. Of the remaining, 1,446 parents, a total of 416 (28.8 percent) children were classified as having a BMI ≥85th percentile based on parent-reported height and weight. Overall, 20.0 percent (n=83) parents surveyed reported that their provider discussed their child's weight or BMI during an outpatient care visit in the last 12 months (Table 4; see Supporting Documents). Among the 298 (18.9 percent) children whose parents were surveyed and had medical record data, there were 146 (49.0 percent) children classified as overweight or obese based on height and weight recorded in the medical record. Overall, 24.0 percent (n=35) parents surveyed reported that their provider discussed their child's weight or BMI during an outpatient care visit in the last 12 months.

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)**
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.

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?**
This measure requires a survey to be conducted among parents of members 2 through 17 years of age.

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?**
This survey is aimed at parents with children having a BMI ≥85th percentile; a minimum sample of 100 parents is recommended. To achieve 100 completed surveys among parents of children having a BMI ≥85th percentile, an estimate of 30 percent was used for the prevalence of children who have a BMI ≥85th percentile. Parent response to surveys of this nature is often very low; in this study, a 5 percent response rate was assumed. Using these estimates, surveys would need to be administered to approximately 6,667 parents of children aged 2-17 years: 6,667 surveyed parents with 5 percent response rate = 333 completed surveys; 333 completed surveys = 30 percent prevalence of overweight / obese = 100 completed surveys for children with a BMI ≥85th percentile.

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

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

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

Provider Level
Individual practitioner: Can compare individual health care professionals

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?**
This measure requires a survey to be conducted among parents of patients 2 through 17 years of age.

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?**
This measure has not been tested at the provider level; consequently, the minimum number of parents to be surveyed per provider has not been determined.

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

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

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

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)**
Yes.

Data Sources: **Are data sources available to support reporting at this level?**
This measure requires a survey to be conducted among parents of patients 2 through 17 years of age.

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?**
This measure has not been tested at the practice or group level; consequently, the minimum number of parents to be surveyed per practice has not been determined.

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

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

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

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 a straightforward means to assess how well basic levels of comprehensive care are being provided in regard to efforts by clinicians to communicate with patients and parents about weight concerns. Low rates for the provision of care are easily understood to be unsatisfactory. The simplicity of the measure likewise makes it a straightforward guide for providers and purchasers to assess how well comprehensive care is provided to children in order to assess, prevent, and treat obesity.

This measure has not been assessed for comprehension. The primary information needed for this measure comes from survey responses and medical record data and includes basic demographics, weight classification, diagnostic codes, procedure codes, and dates of services, all of which are widely available.

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.

Electronic health records (EHRs) provide mechanisms for improving all aspects of care before, during and after the visit, while personal health records and applications are able to target patients. Comprehensiveness of care is information that could be fed back to providers and healthcare systems, who can then explore, using data from the EHR, specific parameters that affect it. For example, failure to discuss patient/family-reported concerns, provider-initiated recommendations, or preventive care (as in this case) may be addressed using health information technology (IT), once providers are aware of the issue.

Electronic health applications offer benefits for addressing overweight and obesity: more complete and accurate data with fewer errors, cost-effectiveness, use of online assessment tools, ease of sharing data, more security, elimination of paper document storage, and shorter time for analysis. Disadvantages include providers transitioning to new data collection workflows, cost, logistics, and intellectual property concerns (Daniels, et al., 2009).

11.B. Health IT Testing

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

No.

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.

This measure requires patient feedback, which could be collected via surveys triggered by the EHR based on specific patient parameters. The survey could be delivered via several methods: interactive voice response immediately after the visit, text messages for each question; using a kiosk at check out, or through secure email.

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 (ONC) criteria (see healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov__standards_ifr/1195)?

Yes.

If yes, please describe.

The availability of height and weight information for discussion with parents of overweight children may be facilitated by health IT. The ONC's Health IT Standards explicitly address the recording of vital signs such as height, weight, and BMI into EHRs, which are directly relevant to this measure. The ONC standards include the following specific requirements in the Certification criteria (ONC, 2010) pertaining to Stage 2 Meaningful Use requirements:

1. Enable a user to electronically record, modify, and retrieve a patient's vital signs including, at a minimum, the height, weight, blood pressure, temperature, and pulse.
2. Automatically calculate and display BMI based on a plot and display patient's height and weight.
3. Plot and electronically display, upon request, growth charts (height, weight, and BMI) for patients 2-20 years old.

In addition, ONC specifications also indicate relevant EHR capabilities that would enable alerts to be triggered for provider notifications for children with a BMI ≥85th percentile, based on the vital signs described above. Alerts could also be established to prompt communications with parents pertaining to overweight status of children. These requirements include:

e) Clinical decision support.

(1) Implement rules. Implement automated, electronic clinical decision support rules (in addition to drug-drug and drug-allergy contraindication checking) according to specialty or clinical priorities that use demographic data, specific patient diagnoses, conditions, diagnostic test results, and/or patient medication list.
(2) Alerts. Automatically and electronically generate and indicate in real-time alerts and care suggestions based upon clinical decision support rules and evidence grade.
(3) Alert statistics. Automatically and electronically track, record, and generate reports on the number of alerts responded to by a user.

11.E. Health IT Calculation

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

Missing or ambiguous information in the following areas could lead to missing cases or calculation errors:

1. Child's date of birth.

2. Date and time of treatment.
3. Height and weight.
4. BMI percentile or score.
5. Weight classification based on BMI percentile or score.

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?

Health IT has been shown to improve provider completeness, communication legibility, transmission turnaround times, safety (especially related to medication and procedural errors), and care quality in many settings. Integrating the results of this measure into a health IT system may enable providers to directly make changes in care delivery that affect these measures. For example, how might a physician change a visit when a patient records that they are not satisfied with his or her discussion of their condition? This record gives the provider a more complete picture of care and allows the provider to offer a more complete service to the patient. A special visit, a home visit, or other interventions may be appropriate, which will, in turn, likely affect at least one of these measures.

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 assesses the percentage of children, ages 2 through 17 years, with a BMI ≥85th percentile, whose parents were surveyed and reported that their provider discussed their child’s weight or BMI during an outpatient care visit in the last 12 months. Raising parental awareness of a child’s excess weight — and the associated health risks — is an essential first step toward helping families make healthy changes that support appropriate weight levels. A higher proportion indicates better performance.

This measure was developed with the use of an online survey for the parent. The testing results reported here required the development of a tool to deliver the survey and identification of children who fit the criteria at the health plan level (which included identifying children with an outpatient visit and sampling children from providers with a pediatric/general practitioner/family practitioner specialty). Parents reported their child’s height and weight and responded to the survey question, “During the __ calendar year, did your provider discuss any concerns/worries about your child’s weight or body mass index (BMI)?”

Limitations include possible low response rates from the survey population.

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 percentage of children, ages 2 through 17 years, with a BMI ≥85th percentile, whose parents were surveyed and reported that their provider discussed their child's weight or BMI during an outpatient care visit in the last 12 months. Involving families in discussions about a child's excess weight is an essential step toward creating the healthy changes that support appropriate weight levels. A higher percentage of parents reporting such a discussion with their child's provider during the past year indicates better performance. This measure was tested using medical record data. While similar measures exist, this measure differs in that it assesses if the parent or guardian of an overweight or obese child (BMI ≥85th percentile) can recall if their healthcare provider has communicated concerns about the child's weight status or BMI.

Nearly a third of young children and adolescents in the United States are either overweight or obese. This situation is of pressing concern, given the association between obesity in children and a broad spectrum of serious health issues. Health risks and body fat levels are proportionate. Ensuring that parents are aware of their child's weight status and any medical issues associated with excess weight is important; families are crucial partners in creating and sustaining the changes needed to address unhealthy eating and exercise habits. Improving the frequency and quality of conversations between providers and parents will help children reach and maintain a healthy weight. However, the rates and quality of counseling are low; many parents report either inadequate counseling or no memorable discussion at all. Many issues undermine these discussions: uncertainty about appropriate language, lack of familiarity with guidelines, too little support and time in the clinic, concerns about stigmatization, parental misperceptions about normal versus overweight in their own children, and social systems that perpetuate misconceptions about feeding practices and health.

This measure was tested using data from 1,580 parents who completed an online survey. Of these, 1,446 parents had children of eligible age (2 through 17 years old); 416 (28.8 percent) children were classified as BMI ≥85th percentile, based on parent-reported height and weight. Overall, 20.0 percent (n=83) of parents surveyed reported that their provider discussed their child's weight or BMI during an outpatient care visit in the last 12 months. Among the 298 (18.9 percent) children whose parents were surveyed and had medical record data, 146 (49.0 percent) children were classified as overweight or obese based on height and weight recorded in the medical record. Overall, 24.0 percent (n=35) of parents surveyed reported that their provider discussed their child's weight or BMI during an outpatient care visit in the last 12 months. Limitations for this measure include possible low response rates from the survey population.

This measure provides a straightforward means to assess how well basic levels of comprehensive care are being provided for children in regard to efforts by clinicians to communicate with patients and parents about weight concerns. The primary information needed for this measure includes survey data covering basic demographics and recall of provider discussion of weight within the last 12 months.

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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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