



Measure Fact Sheet – The AHRQ-CMS Pediatric Quality Measures Program (PQMP)

Measure: Body Mass Index (BMI) Assessment and Recommended Weight Gain for Pregnant Women

Measure Developer: Pediatric Measure Center of Excellence (PMCoE)

Numerator	Denominator	Exclusions	Data Source(s)
Patients who had a BMI value recorded and were counseled on recommended weight gain during pregnancy at first prenatal care visit.	All patients, regardless of age, who gave birth during a 12-month period seen at least once for prenatal care.	None.	Electronic medical record.

Measure Importance

The prevalence of obesity, defined as having a BMI of 30 or greater, among women of child-bearing age is 29 percent; yet, few obstetric providers define obesity correctly or recommend weight gain for pregnant women in accordance with Institute of Medicine guidelines.¹ Maternal obesity is associated with adverse pregnancy outcomes, including increased risk for gestational diabetes, preeclampsia, cesarean section, and infants weighing 9 pounds 15 ounces or more at birth (also known as big baby syndrome or macrosomia). Additionally, obese women are more likely to gain in excess of current gestation weight guidelines, which increases the risk for offspring morbidity, such as stillbirth, prematurity, neural tube defects, and childhood obesity.²

Evidence Base for the Focus of the Measure

This measure is supported³ by several clinical guidelines. The VA/DoD Clinical Guidelines for Pregnancy Management recommends assessing and documenting BMI of all pregnant women at the initial prenatal visit and offering counseling when indicated.⁴ In a set of 2010 guidelines, the Society of Obstetricians and Gynecologists of Canada similarly recommended BMI assessment and that obese pregnant women should receive counseling about weight gain, nutrition, and food choices.⁵ According to the Institute of Medicine, the recommended weight gain during pregnancy varies according to a woman's pre-pregnancy BMI. For example, women who are underweight



(BMI less than 18.5) should gain between 28–40 pounds during pregnancy, while women who are obese (BMI greater than 30.0) should gain only 11–20 pounds.⁶

Advantages of the Measure

- This measure has been included in the Core Set of Children’s Health Care Quality Measures for Medicaid and CHIP (Child Core Set).⁷
- This measure is specified for use in electronic health records (EHRs).
- The EHR specifications follow the standards in the Quality Data Model (QDM), developed by the National Quality Forum, and the vocabulary recommendations named by the Health IT Standards Committee (of the Office of the National Coordinator for Health IT). The vocabulary standards used in the specifications are a part of Stage II of the CMS EHR incentive program (meaningful use).

Levels of Aggregation Applicable to the Measure

The measures are intended for aggregation⁸ and comparison at the State, regional, health plan, payment model type, hospital, individual clinician, and provider group levels.

Reliability and Validity of the Measure

The measure reliability, as assessed using a beta-binomial model of signal to noise ratio, was 0.0. The face validity of the measure was assessed using expert and public opinion.⁹

Measure Testing

- This measure’s reliability was tested using 2010 data from the EHR system of an urban, tertiary-care-level hospital. The measure was calculated for the 57 physicians that had a minimum of 10 deliveries in that year.
- The feasibility of the measure was tested in that same location.

Selected Results from Tests of the Measure

To meet the measure, BMI value must be recorded and the patient counseled on recommended weight gain during pregnancy at first prenatal care visit. Based on the sample of 57 physicians, the mean performance rate is 0.0. The range of the performance rate is 0.00 (0.00 - 0.00). No patient records sampled had both BMI value recorded and documentation on receipt of counseling on recommended weight gain during pregnancy at first prenatal care visit. The performance rate indicates that there are opportunities for quality improvement.

Issues to Consider

- One test site indicated that the data element for counseling/weight gain recommendation is not currently routinely documented and therefore may not be reliable when extracted from either the inpatient or outpatient EHR.
- Use of this measure is limited to sites that use EHRs for clinical documentation.
- Missing data or ambiguous information stored in the EHR could lead to calculation errors and low performance on the measure.

Related Measures

For more information about other measures related to prenatal/perinatal performance, see the American Medical Association-Physician Consortium for Performance Improvement (PCPI) Maternity Care Measure Set (available at www.ahrq.gov/sites/default/files/publications/files/perfmeas.pdf - 831k - 2015-06-19).

More Information

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- Coming soon: Link to measure details on the AHRQ Web site.

For more information about the PQMP, visit www.ahrq.gov/chipra.

Notes

¹Herring SJ, Platek DN, Elliot P, et al., Addressing obesity in pregnancy: what do obstetric providers recommend? *J Womens Health (Larchmt)*. 2010 January; 19(1): 65-70. Doi: 10.189/jwh.2008.1343.

²American College of Obstetricians and Gynecologists (ACOG). Committee Opinion No. 549. Obesity in Pregnancy. *Obstet Gynecol* 2013;121:213–7. http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Obstetric_Practice/Obesity_in_Pregnancy.

³An evidence base comprises the breadth and rigor of studies demonstrating 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).

⁴VA/DoD Clinical Practice Guideline For Pregnancy Management. Department of Veterans Affairs, Department of Defense; 2009.

⁵Davies GAL, Maxwell C, McLeod L, et al. Obesity in pregnancy. SOGC Clinical practice guideline. *J Obstet Gynaecol Can*. 2010 Feb;32(2):165-73.

⁶Institute of Medicine. Weight Gain During Pregnancy: Reexamining the Guidelines. May 28, 2009. <http://www.iom.edu/Reports/2009/Weight-Gain-During-Pregnancy-Reexamining-the-Guidelines.aspx>

⁷Core Set of Children’s Health Care Quality Measures for Medicaid and CHIP (Child Core Set): Technical Specifications and Resource Manual for Federal Fiscal Year 2013 Reporting. Updated May 2013. Available: <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/Medicaid-and-CHIP-Child-Core-Set-Manual.pdf> .

⁸The Children’s Health Insurance Program Reauthorization Act required measures developed under this program to “permit comparison of quality and data at a State, plan, and provider level.” The measure developer identified the intended levels of aggregation and comparison as reported here.

⁹The expert panel that reviewed the measure consisted of 24 members, with representation from measure methodologists, patient advocacy groups, and the following clinical specialties: anesthesiology, family practice, geriatric medicine, maternal fetal medicine, neonatology, nurse midwife, obstetrics and gynecology, and perinatal nursing. Twelve of 13 expert panel members that responded to a survey on validity agreed or strongly agreed that the scores obtained from the measure as specified will accurately differentiate quality across providers. A panel of consumer, purchaser, and patient representatives also reviewed the measure, and the measure developers received input from a 30-day public comment period.

The Children’s Health Insurance Program Reauthorization Act (CHIPRA) called for establishment of a Pediatric Quality Measures Program (PQMP) as a followup to identifying the initial core set of children’s health care quality measures. This fact sheet was produced by the Agency for Healthcare Research and Quality (AHRQ), based on information provided by the AHRQ-CMS Pediatric Measure Center of Excellence (PMCoE), which was funded by an AHRQ/CMS grant as a CHIPRA Center of Excellence. A listing of all submitted PQMP Centers of Excellence can be found at www.ahrq.gov/CHIPRA. All measures are publicly available for noncommercial use.



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