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**Gestational Weight Gain: How to “Institute” New Guidelines**

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**Background:** Reproductive age women are not immune from the national obesity epidemic. Obesity prevalence in women of child-bearing age is as high as 28.9%. In pregnancy, obesity affects antenatal, perinatal and short- and long-term postpartum outcomes for the mother and fetus/neonate. BMI-specific gestational weight gain (GWG) adherence optimizes pregnancy outcomes. However, only 30-40% of pregnant women gain weight within pre-pregnancy BMI-specific ranges, with the majority of non-adherers gaining excessively. Roughly 25% of women retain  $\geq 4.5$  kg after pregnancy.

It is the responsibility of obstetric care providers to appropriately counsel patients and to address these poor outcomes, yet studies have shown that providers are ill-equipped to do so. Providers do not necessarily accurately assess patients' BMI or take the steps required to calculate it, nor do they consistently counsel appropriately.

This is a pressing and timely issue as the Institute of Medicine (IOM) recently reviewed and changed recommendations for weight gain in pregnancy. Although the guidelines remain BMI-specific, the span of each BMI category was altered, and a range of gain (rather than a minimum) is now recommended for obese gravidas.

Issuance of new guidelines is often followed by a time-lag in provider knowledge and implementation and thus inaccurate patient counseling in the interim. Educational interventions and heightened awareness could improve significant outcomes related to gestational weight gain (GWG) including antenatal morbidity, peripartum complications and postpartum obesity in both the mother and off-spring.

**Objective:** The purpose of this study is to examine current resident obstetric provider knowledge, behaviors and attitudes regarding GWG, specifically as they relate to the new IOM guidelines.

**Methods:** After an initial pilot study of 21 Obstetric/Gynecology (OBG) residents at University of Massachusetts Medical School, an anonymous electronic survey was distributed to OBG and Family Medicine (FM) residents nationwide. Utilizing FREIDA, ACOG membership directories, residency websites, and public domain, a survey link was emailed to all U.S. OBG & FM residency program directors/coordinators with a request to forward to their residents. The 44 question survey, administered through SurveyMonkey©, addressed provider counseling experience and skills, knowledge of GWG guidelines, and learning preferences. Reminder emails were sent at the one and two month points, and the survey was closed three months after the first notification. Results and statistical analysis were compiled by utilizing frequency measures through the survey database.

**Results:** Of roughly 10,000 potential responders, 660 OBG (51.2%) & FM (48.4%) residents completed the survey. 77.9% of responders were female. Of the responders, 55.7% were unaware of updated recommendations, 87% reported 'routinely use[ing]' BMI to assess patients' weight-status at initial prenatal-visit but only 54.6% calculate BMI for all patients at the initial prenatal visit; and only 29.4% identified GWG-recommendations as being BMI-specific. 52.8%, 94.2% and 82.7% reported pre-pregnancy (pp) BMI, pp-weight and height as 'always/often' available in the chart. Responders selected correct BMI-category ranges and recommended GWG ranges for underweight (17.7%, 36.8%), normal-weight (25.0%, 39.9%), overweight (41.4%, 30.0%) and obese (56.2%, 15.8%) gravidas, respectively. Responders were more likely to discuss GWG with overweight/obese patients than all-comers. Barriers to counseling were lack of time (61.4%), perceived lack of patient motivation (45.4%) fear of alienating the patient (37.0%), and lack of access to support services/referral options (30.8%). 45.5% stated previous counseling training was now outdated or not helpful. Identified resources for counseling improvement include referral/resource lists (73.4%), prompts in the chart/office (50.6%), provider lecture series (46.1%) and provider

information pamphlets (44.5%).

**Conclusions:** The current obesity epidemic requires significant efforts towards resident education regarding GWG guidelines, including implementation and accurate counseling of patients. Utilization of practice guidelines has the potential to produce gradual yet significant change. Increased awareness and use of IOM GWG guidelines will need to be evaluated to assess the impact on rates of prenatal overweight and obesity, excessive GWG, and poor maternal and fetal outcomes.