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Routine weighing of women during pregnancy is of limited value and should be abandoned – Against

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Gestational weight gain (GWG) outside of recommended ranges is a common and growing public health challenge. Since 2000, the percent of US women gaining weight during pregnancy in excess of current guidelines increased 3% – from an already high 42.5% in 2000–1 to 45.5% in 2008–9. (Johnson JL et al. *Am J Obstet Gynecol.* Jan 28 2015). In combination with the ~20% of women with inadequate gain, almost 2/3 of women are now gaining outside of recommended ranges.

Strong and consistent evidence links appropriate GWG to lower risks for adverse pregnancy outcomes, including small or large for gestational age, preterm birth, cesarean delivery, maternal postpartum weight retention, and child obesity (Oken E, et al. *Am J Epidemiol* 2009;170(2):173–180). Out of range GWG carries not only large relative risks, but also impressive population attributable risks. For example, a recent Canadian analysis found that 18.2% (95% CI: 17.8, 18.7) of all preterm births could be attributed to excessive GWG and another 4.7% (4.4, 9.0) to inadequate gain, compared with 2.6% from maternal underweight and 3.2% from prenatal smoking (Dzakupas S, et al. *BMC Preg Child* 2015;15(1):21)

Thus, there should be no debate about the importance of appropriate gestational weight gain for maternal and child health. The question at hand is whether routine weighing of pregnant women is an appropriate screening test. Almost all standard principles for screening programs are easily met. Routine weighing is inexpensive, widely available in multiple settings, and broadly acceptable. Guidelines for appropriate GWG published by the US Institute of Medicine in 2009 have been rapidly adopted, even internationally. Gestational weight gain temporally precedes most outcomes of interest, such as preterm birth, infant mortality, and excess postpartum maternal and child weight, although the timing of its relationship with fetal growth is likely more complex.

Evidence is more limited regarding which interventions are likely to be successful. While additional high-quality adequately-powered trials are certainly needed, existing data suggest that lifestyle interventions that incorporate nutrition and exercise programs can succeed at lowering rates of excessive GWG (Siega-Riz AM, et al. *Nutr Rev* 2013;71 (S1):S26–30).

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Some interventions were also effective at decreasing risk for poor obstetric outcomes including large for gestational age, with no increased risk for small for gestational age or low birth weight.

Furthermore, no great alternative to routine weighing exists. While ultrasound can more directly measure fetal growth, it is expensive, not available in many settings, and does not necessarily predict other outcomes such as cesarean delivery or preterm. Furthermore, ultrasound measurements tend to be least accurate in the heaviest women who are at high risk for both poor and excessive fetal growth.

The path to appropriate gain matters, as we learned in the middle 20th century when some women (in some cases encouraged by their obstetricians) smoked as a way to limit their weight gain. Achieving energy balance by healthful diet and regular physical activity remains essential.

Routine weighing of pregnant women is not by itself a solution to preventing adverse birth outcomes, but it's a start.

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