A BEHAVIORAL WEIGHT GAIN INTERVENTION IN PREGNANCY: A COST-BENEFIT ANALYSIS

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OBJECTIVE: Prior studies have demonstrated that behavioral interventions during pregnancy could prevent excessive gestational weight gain. This study investigates the cost of such interventions, taking into account the costs and benefits associated with outcomes of gestational weight gain according to the 2009 Institute of Medicine (IOM) weight gain recommendations.

STUDY DESIGN: A decision analytic model was built using TreeAge software that compared routine prenatal care vs. routine prenatal care plus a behavioral intervention to prevent excessive gestational weight gain in the 1,528,000 normal weight women who are pregnant each year in the U.S. The Fit for Delivery Study protocol was used to estimate the effect of treatment on gestational weight gain and the costs of intervention. Outcomes included: gestational diabetes, preeclampsia, macrosomia (>4500g), small-for-gestational age, postterm delivery, cesarean delivery, postpartum weight retention, and child obesity.

RESULTS: In addition to reducing gestational weight gain among normal weight women, the intervention was cheaper, $15,965 versus $16,122 without intervention. With lower costs and better outcomes, such a behavioral intervention is a dominant strategy. In addition, it would lead to 7,579 fewer cesareans each year, 6,830 fewer cases of macrosomia, and 10,925 fewer cases of postpartum weight retention at 1 year (see table).

CONCLUSION: A behavioral intervention added to routine prenatal care is cost-beneficial (leads to lower costs and more than recovers the

cost of intervention) as compared to routine prenatal care alone among normal weight women. A proven intervention may have even greater impact in overweight and obese women. Further research in this area could lead to both better outcomes and economic benefits at a societal level.

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