The Accuracy of Recalled versus Measured Pre-Pregnancy Weight for the Calculation of Pre-Pregnancy Body Mass Index

Jessica V. Masiero

University of Massachusetts Medical School

Et al.

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Objective
To examine differences in recalled versus measured pre-pregnancy weight and to examine factors associated with accuracy of recalled weights.

Background
2009: IOM published gestational weight gain guidelines (GWG) with goal of optimizing maternal & fetal outcomes.
GWG recommendations specific to pre-pregnancy body mass index (BMI): 28-40 lbs for underweight (UW; BMI<18.5 kg/m^2), 25-35 lbs for normal weight (NW; 18.5≤BMI<25 kg/m^2), 15-25 lbs for overweight (OW; 25 ≤BMI<30 kg/m^2), and 11-20 lbs for obese (OB; BMI≥30 kg/m^2) women. Measured pre-pregnancy weight is often unavailable in clinical and research settings as >50% of pregnancies in the U.S. are unplanned.

Methods
Medical record review of 1,998 randomly selected pregnancies.
Eligible Women: (1) Prenatal care received in UMMHC faculty and resident clinics, (2) delivered between 01/07-12/12, and (3) had available both: (a) a measured weight within one year of conception & (b) a pre-pregnancy weight self-reported at first prenatal visit.

Data from UMMHC paper or electronic prenatal record and the Allscripts EMR.

Difference in weights = recalled pre-pregnancy weight – most recent measured weight within one year of conception.

Subjects excluded if care received at non-faculty or resident practice, charts not available after 3 retrieval attempts, both weights of interest not available, or if measured weight was at prior pregnancy PNV.

Results
Of 1,998 charts reviewed, 400 were eligible and included in this analysis.
Women mean age 29.7 (SD: 6.2) years, 69.3% multigravida, 64.4% non-Hispanic white, and 65.2% married. 63% received care in the faculty obstetric clinic.

By recalled weight, 3.3% were UW, 46.6% were NW, 25.9% were OW, & 24.2% were OB.

Recalled weights were mean 2.4 (SD: 11.1) pounds lower than measured pre-pregnancy weight.

Difference did not vary by age, location of care, pre-pregnancy BMI, marital status, race/ethnicity, language, gravity, education, or time between measured weight & conception.

Calculating pre-pregnancy BMI based on weight measured up to a year prior to conception or based on recalled weight reported at 1st PNV resulted in the same classification of pre-pregnancy BMI for 88.7% of women.

Conclusions
Prenatal care providers may calculate pre-pregnancy BMIs using recalled pre-pregnancy weights early in prenatal care.
These calculated BMIs can be used to accurately provide gestational weight gain recommendations regardless of demographic variables, gravity, or location of care.