

2014-04-30

## 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.*

Let us know how access to this document benefits you.

Follow this and additional works at: <https://escholarship.umassmed.edu/ssp>



Part of the [Clinical Epidemiology Commons](#), [Epidemiology Commons](#), [Maternal and Child Health Commons](#), [Obstetrics and Gynecology Commons](#), and the [Women's Health Commons](#)

---

### Repository Citation

Masiero JV, Tabroff JM, Scannell E, Leung KG, Waring ME, Moore Simas TA. (2014). The Accuracy of Recalled versus Measured Pre-Pregnancy Weight for the Calculation of Pre-Pregnancy Body Mass Index. Senior Scholars Program. <https://doi.org/10.13028/x88p-jf73>. Retrieved from <https://escholarship.umassmed.edu/ssp/160>

This material is brought to you by eScholarship@UMassChan. It has been accepted for inclusion in Senior Scholars Program by an authorized administrator of eScholarship@UMassChan. For more information, please contact [Lisa.Palmer@umassmed.edu](mailto:Lisa.Palmer@umassmed.edu).



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

Jessica V. Masiero MSIV<sup>1</sup>, Julie M. Tabroff MSIV<sup>1</sup>, Elizabeth Scannell, MD<sup>3a</sup>, Katherine Leung MS<sup>1a</sup>, Molly E. Waring PhD<sup>1b</sup>, Tiffany A. Moore Simas, MD MPH MEd<sup>1ac, 2a</sup>

<sup>1</sup>University of Massachusetts Medical School, <sup>2</sup>UMass Memorial Health Care, Worcester, MA, <sup>3</sup>Mount Sinai Beth Israel, NY, NY, <sup>a</sup>Obstetrics & Gynecology, <sup>b</sup>Quantitative Health Sciences, <sup>c</sup>Pediatrics

## 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<sup>2</sup>), 25-35 lbs for normal weight (NW; 18.5≤BMI<25 kg/m<sup>2</sup>), 15-25 lbs for overweight (OW; 25 ≤BMI<30 kg/m<sup>2</sup>), and 11-20 lbs for obese (OB; BMI≥30 kg/m<sup>2</sup>) 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.

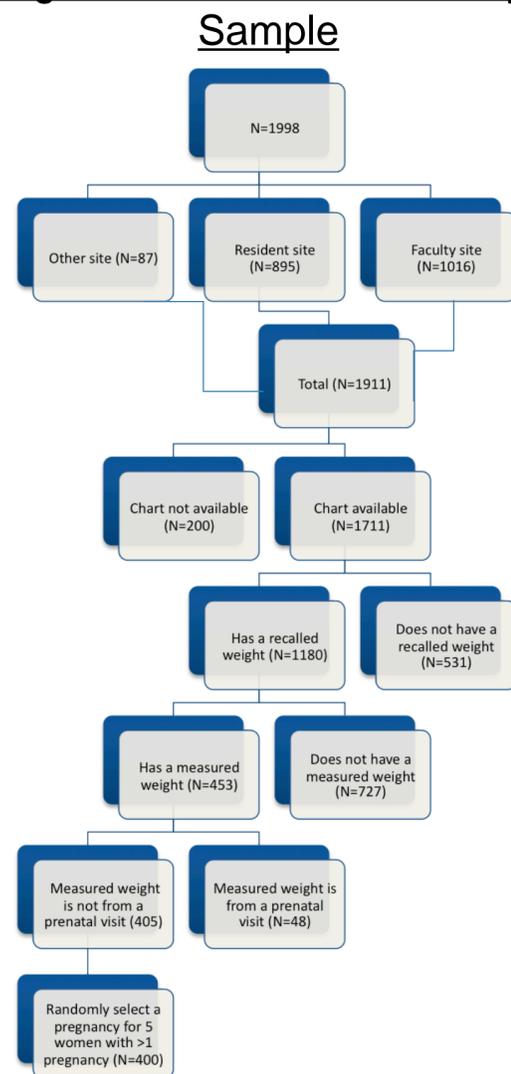
Eligible Women: (1) Prenatal care received in UMMHC faculty and resident clinics, (2) delivered between 01/07-12/12, and (3) had available both: (a) a measured weight within one year of conception & (b) a pre-pregnancy weight self-reported at first prenatal visit.

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

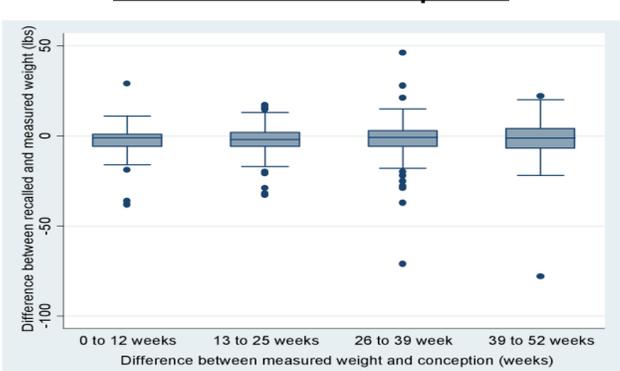
Difference in weights = recalled pre-pregnancy weight – most recent measured weight within one year of conception.

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.

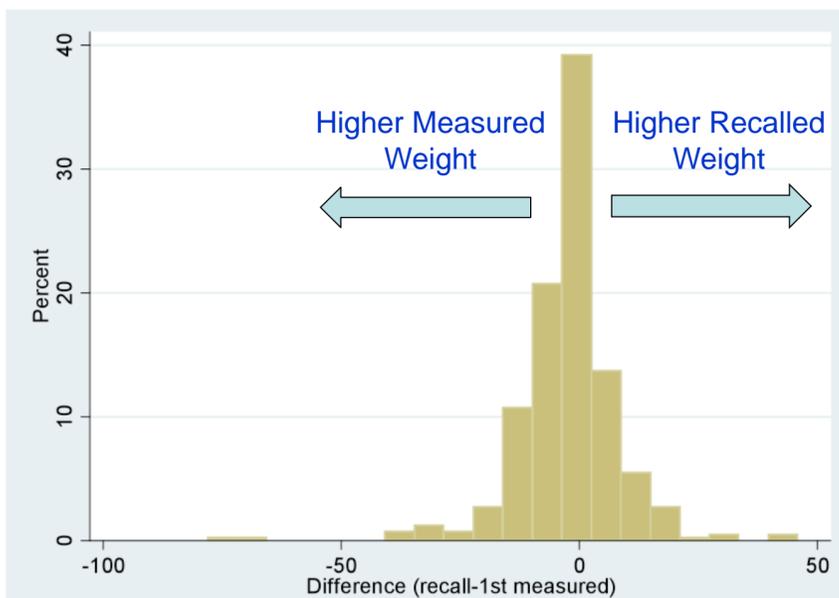
## Pregnancies Included in Analytic Sample



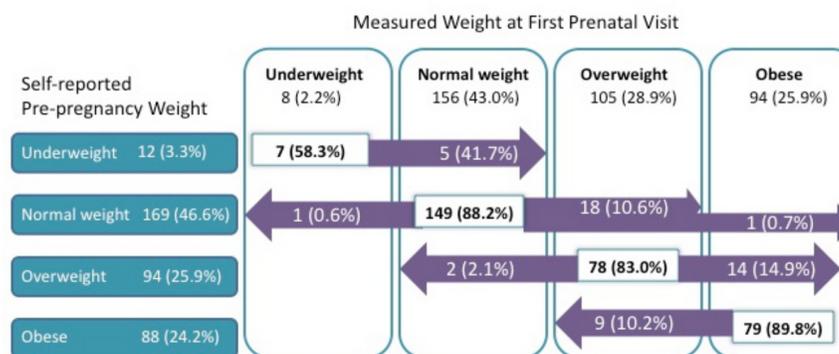
## Recalled vs Measured Weight by Weeks to Conception



## Distribution of the Difference in Recalled vs Measured Pre-Pregnancy Weight



## Differences in BMI Categories Based on Recalled versus Measured Pre-Pregnancy Weight



Support for Dr. Waring provided by NIH grants KL2TR000160 and 1U01HL105268.

## 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 1<sup>st</sup> 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.