

## Maternal Weight Retention two years after Delivery of a Live Birth:

Los Angeles County Department of Public Health, Maternal, Child & Adolescent Health Programs Diana Liu, MPH, Shin Margaret Chao, PhD MPH, Chandra Higgins, MPH, Suzanne Bostwick



LAMB Project is funded in particy First & LA.

### Background

- Postpartum weight retention can predict future weight gain and longterm obesity.
- Nearly half of mothers were overweight or obese before pregnancy in Los Angeles County. Previous research found that 14% - 20% of women tend to retain 11 lbs. or more of the weight gained during pregnancy, thus, having higher pre-pregnancy weight with each subsequent pregnancy. Factors associated with long-term postpartum weight retention have yet to be explored

## Objective

Identify factors associated with weight retention two and half years after pregnancy.

## Methods

#### Study Population

We studied 2,049 women who had a live birth in 2012 and responded to Los Angeles Mommy and Baby (LAMB) survey and the follow up survey (LAMB Follow UP) when the child was two years old. Those who had a subsequent pregnancy after the initial survey were also excluded.

#### Definitions of Measures

The pre-pregnancy BMI was based on weight and height information from the birth records. Mother's weight at time of follow up, approximately 2.5 years postpartum, was based on self report, "How much do you weigh now".

Maternal Weight Retention is calculated as the difference between prepregnancy weight and weight at follow up, and categorized into two groups: (1) those who weigh less or the same and (2) those who weigh more than their pre-pregnancy weight.

# Statistical Analysis

Chi-square tests were performed to identify differences in maternal weight retention.

Statistical Analysis System Version 9.3 was used to perform the analysis.

Weight by Selected Maternal Characteristics	
Selected Maternal Characteristics	Heavier Than Befor
Race/ethnicity*	65.7
White	56.5
Hispanic	69.6
African American	61.8
Asian Pacific Islander	63.1
Native American/Other	61.0
Age at Delivery*	
Less than 20	83.6
20 to 29	68.2
30 to 34	64.1
35+	60.0
Highest Education Attainment*	
Less than 12 years	72.0
12 years	70.1
More than 12 years	62.8
Physical Activity During Last Month*	
Do not exercise	74.0
Less than 1 day per week	64.9
1 to 4 days per week	65.3
5 or more days per week	55.3
Mother's Perception of Her Weight*	
Underweight	44.1
Normal Weight	54.2
Overweight	73.3
Rating for availability places to buy fresh food at	
follow up	
Very poor, poor or neutral	68.7
Good or very good	64.1
Postpartum Depressive Mood	
Not at all or little depressed	65.2
Moderate or very depressed	70.1
*p<0.05	
1	1

Table 1. Percent of Mothers Returning to Pre-pregnancy

### **Results**



Mothers were least likely to return to their prepregnancy weight, if they: - were Hispanic - were teen mothers - had less than 12 years of education

- did not exercised
  perceived themselves
- as overweight (Table
  1)





Figure 1: Maternal Overweight/Obese Status Before Pregnancy and Two and Half Years after Giving Birth By BMI Status Before Pregnancy 100.0 4.2 90.0 19.0 28.4 80.0 43.5 70.0 60.0 of Moth 88 7 50.0 58.8 40.0 74 6 er 30.0 20.0 10.0 12.3 9.4 0.0 Underweight Normal Weight Overweight Obese BMI Status Before Pregnancy Underweight Normal Weight Overweight Obese

- Almost one in five mothers (19%) in the normal weight category before pregnancy became overweight at Follow Up
- Over one in four mothers (28%) in the overweight category before pregnancy became obese at Follow Up (Figure 1).



With the exception of White mothers, the prevalence of overweight/obesity increased at least 7% for mothers of all racial/ethnic groups. (Figure 2)



For more information please visit our website: http://lapublichealth.org/mch/LAMB/LAMB.htm or contact Shin Margaret Chao at schao@ph.lacounty.gov

## **Conclusion & Public Health Implications**

- Special attention should be paid to those women who are overweight before pregnancy to prevent them from becoming obese 2 years postpartum.
- Significant numbers of women are retaining weight after a live birth and are at risk of becoming overweight/obese. Efforts to reduce overweight/obesity among women of reproductive age should consider focusing on women right after giving birth. Programs such as Choose Health LA MOMS should be promoted to help women return to their pre-pregnancy weight.
- Health messaging should include different strategies for teem mothers and be culturally sensitive and linguistically appropriate focusing on building positive body image and resources to promote psychosocial well-being.