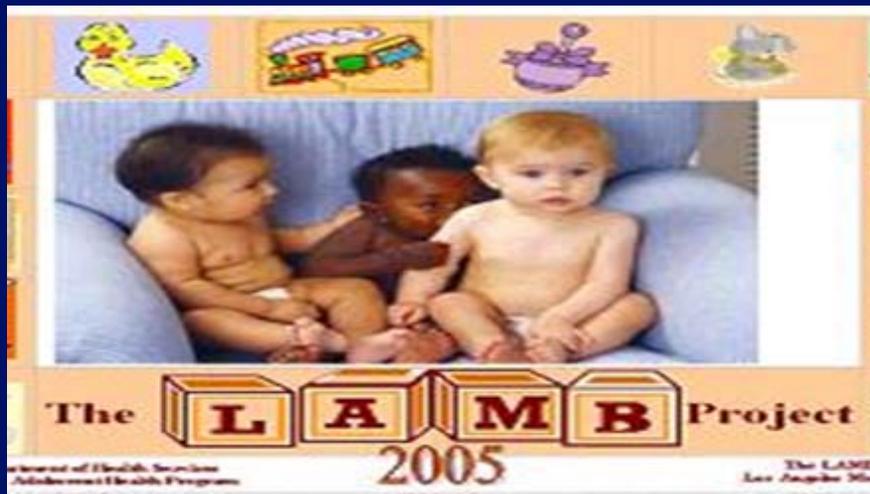


# Racial disparities in maternal depression during pregnancy: Final results from the Los Angeles Mommy and Baby (LAMB) Project, 2005.

Higgins C, MPH, Chao SM, PhD, MPH, Donatoni G, PhD, Lau Y, MPH, RD, Harding CA, MPH

Los Angeles County Department of Public Health, Maternal Child, and Adolescent Health Programs



# Presenter Disclosures

**Chandra Higgins, MPH**

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose



# What is the problem?

- Untreated depression during pregnancy is associated with pre-term delivery, increased uterine artery resistance, neonatal growth retardation, high cortisol levels at birth, maternal hypertension and preeclampsia<sup>1</sup>
- Depression during pregnancy is also an important predictor of post partum depression<sup>2</sup>
- Estimates of the prevalence of depression during pregnancy range from 12-37%<sup>2,3,4</sup>





# Study Objectives

- We aim to:
  - Describe the occurrence of depression during pregnancy among women who have recently delivered in Los Angeles County
  - Investigate racial and ethnic factors related to maternal depression during pregnancy





# Background

- More than 150,000 babies are born in Los Angeles County each year
- In 2006 the fetal – infant mortality rate was 13 per 1000 live births and fetal deaths
- Los Angeles County is one of the most ethnically diverse cities in the world
- Need local data to help health department and community partners identify at-risk groups and develop programs/policies



# Methods

- LAMB is the Los Angeles Mommy and Baby Survey
- It is a population-based survey that aims to identify factors associated with poor birth outcomes and estimate the prevalence of selected maternal experiences
- Questions in the LAMB survey were primarily drawn and adapted from previously validated survey instruments



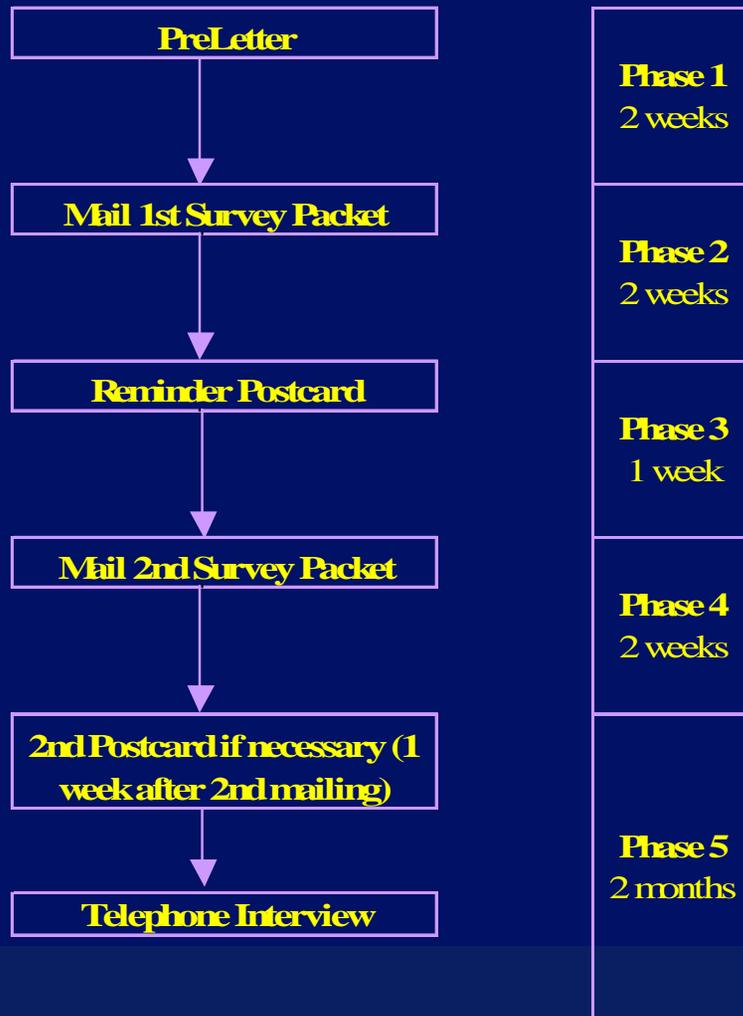
# Methods

- Eligibility
  - Women who recently gave birth
  - In the case of multiples one baby is sampled
- Data
  - Population data obtained from birth certificates
  - Stratified random sample with an over sample of low birth weight/pre-term births as well as African American, Asian/PI and Native American births



# Methods – Study Procedures

## LAMB Survey Mailing Schedule



- ◆ Mixed-mode methodology for data collection similar to the CDC Pregnancy Risk Assessment Monitoring System (PRAMS) Project
- ◆ All survey respondents received a \$20 Ralph's/Food for Less Gift Certificate



# Methods - Data Analysis

- All data analyses were conducted using Statistical Analysis Software (SAS) version 9.1 survey procedures to account for the complex sampling scheme
  - Descriptive analysis using both sampling and non-response weights were done to estimate the population prevalence
  - Bi-variate analyses were done using the Rao-Scott Chi-Square statistic
  - Multivariate analyses were conducted using multiple logistic analysis



# Depression Questions

- For two weeks or longer during your most recent pregnancy, did you
  - Feel sad, empty or depressed for most of the day?
  - Lose interest in most things like work, hobbies, and other things you enjoyed?
- During your most recent pregnancy did you have a diagnosed mental health problem (for example depression, schizophrenia, etc)?



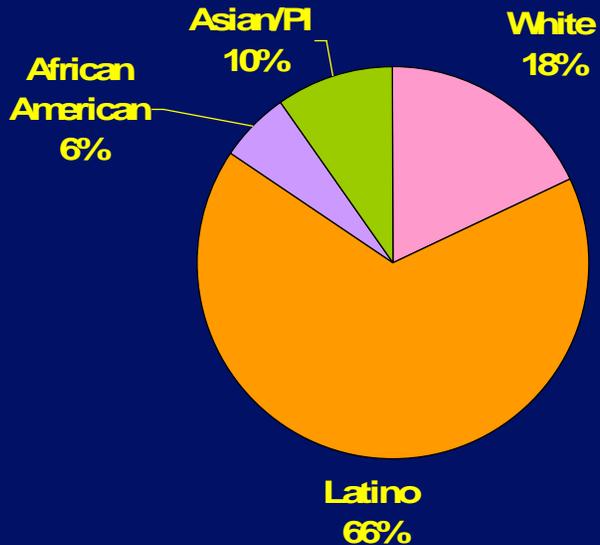
# Maternal Medical Conditions

- Women were also asked about medical conditions they may have experienced during their most recent pregnancy.
- Women were asked if they had experienced the following and the responses were Yes or No.
  - Vaginal bleeding
  - High blood pressure
  - Kidney or bladder infection
  - Labor pains more than 3 weeks before due date
  - Problems with the placenta
  - Premature rupture of membranes
  - Sexually transmitted disease
  - Severe nausea or vomiting
  - High blood sugar
  - Incompetent cervix
  - Hurt in a car accident
  - Periodontal disease
  - Bacterial Vaginosis
  - Group B Streptococcus

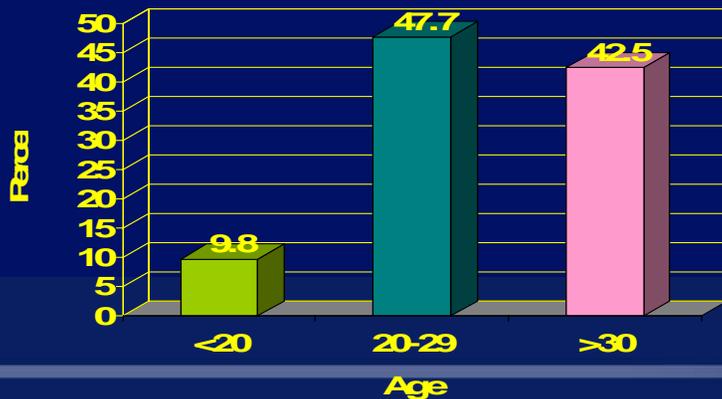


# Demographics

◆ 5,211 women responded to the 2005 LAMB survey



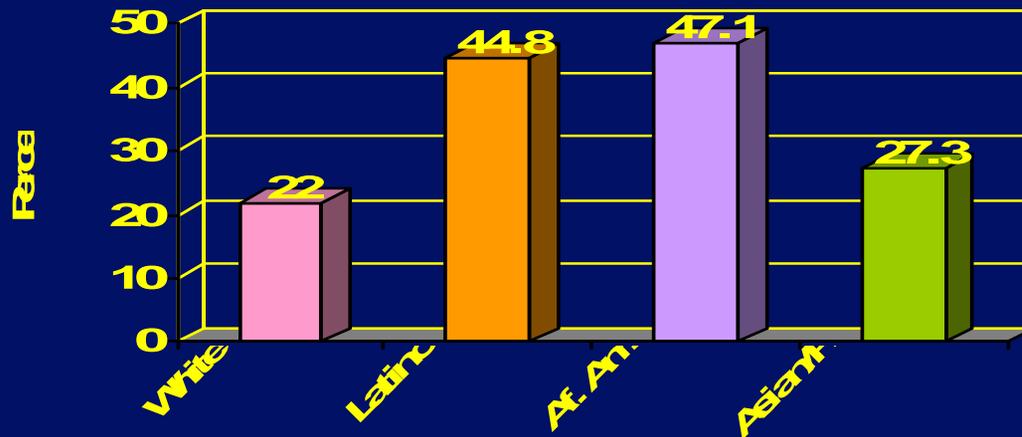
Reported Income



# Results

- 39% of women reported depression during their last pregnancy, while only 3% report having a diagnosed mental health problem

**Reported Depression During Pregnancy by Race/Ethnicity**



$P < 0.0001$

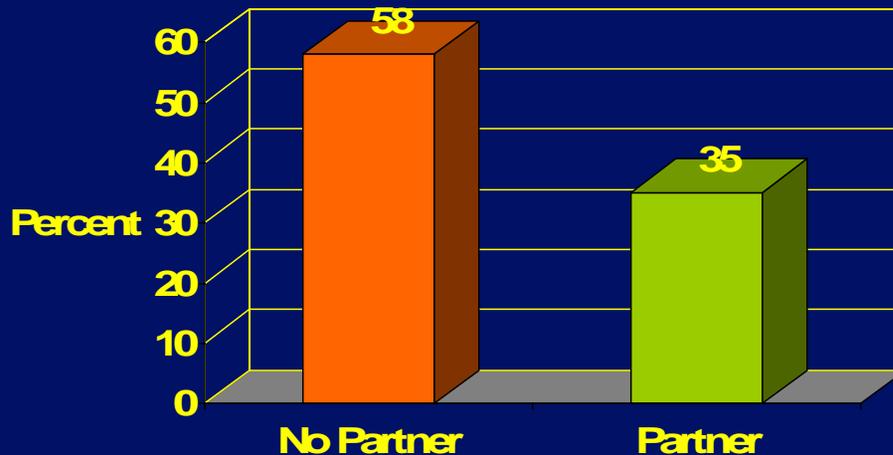
N= 4,324 women responded to the questions about depression



# Results

- 18% of women were single, divorced, or widowed at the time of their delivery

Depression During Pregnancy by Partner Status



Partner= Married or living with a partner

No Partner= Single, divorced, widowed

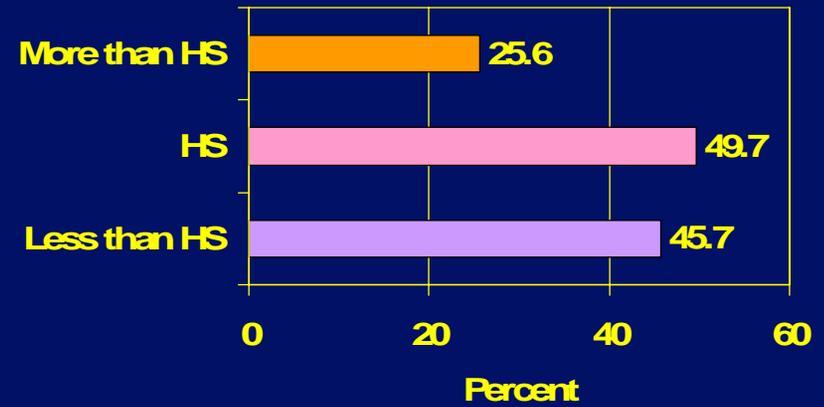
$P < 0.0001$



# Results

- Approximately 30% of women had less than a high school diploma, 30% were high school graduates and 40% had more than a high school education

Depression During Pregnancy by Mother's Education



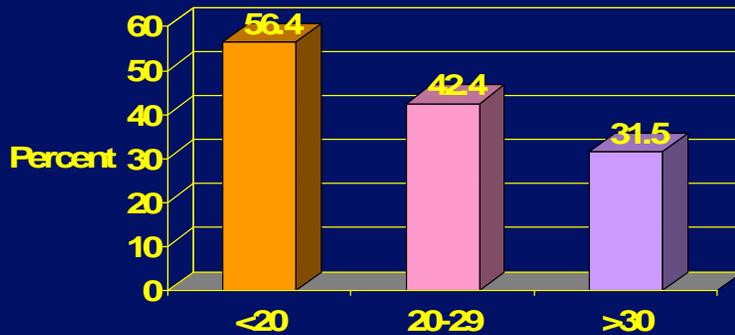
P<0.0001



# Results

- Reported depression during pregnancy also varied by mother's age and income level.

Depression During Pregnancy by  
Mother's Age



$P < 0.0001$

Depression During Pregnancy by  
Mother's Income



$P < 0.0001$



# Results

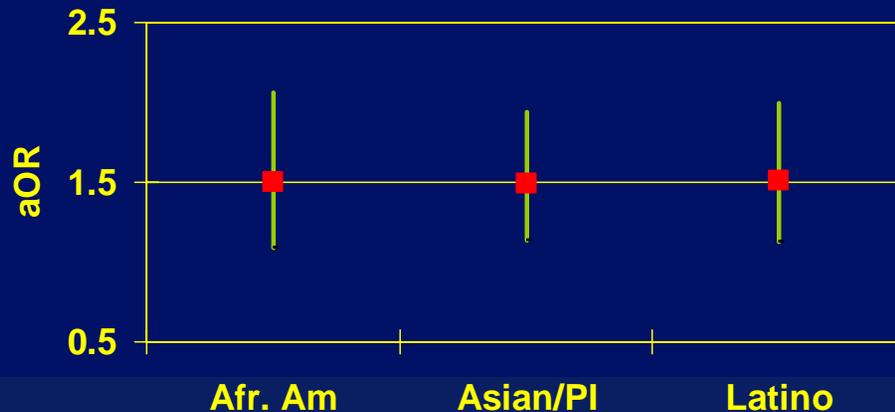
- Several maternal medical conditions were found to be associated with reported depression during pregnancy and were included in multivariate models:
  - Vaginal bleeding
  - High blood pressure
  - Kidney or bladder infection
  - Labor pains more than 3 weeks before due date
  - Problems with the placenta
  - Premature rupture of membranes
  - Sexually transmitted disease
  - Severe nausea or vomiting



# Multivariate Model

African American, Latino and Asian/PI were all more likely than White women to report depression during their last pregnancy.

Adjusted\* Odds Ratio's and CL,  
Race/Ethnicity



\*The multivariate model included maternal medical conditions mentioned previously, mother's education, income, age, and partner status



# Multivariate Model

- In addition to mother's race/ethnicity there were several other important factors associated with reported depression during pregnancy.
- Women with lower income were two times as likely to report depression during pregnancy (aOR 2.18 CI 1.57, 3.03)
- Women who were single, divorced or widowed were also more likely to report depression during pregnancy (aOR 1.85 CI 1.36, 2.50)



# Conclusions

- Overall 39% of women reported depression during pregnancy.
- African American, Latino and Asian/PI women are at increased risk for depression during pregnancy.
- Younger women and women with lower incomes were also at increased risk for depression during pregnancy
- Culturally sensitive strategies for identifying those at risk for depression need to be implemented in the prenatal care setting



# Future Research

- Analysis to assess how often women are being screened for depression in the prenatal care setting.
- Analysis to investigate what role social support plays in the occurrence of depression during pregnancy.



# Strengths and Limitations

- Limitations
  - All data is self reported
  - Recall bias
- Strengths
  - Large Sample
  - Population based



# References

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- For additional LAMB information please visit [www.LALamb.org](http://www.LALamb.org)

