

Maternal Health and Birth Outcomes of Foreign and US-born Women of Mexican Origin



Defining a Paradox

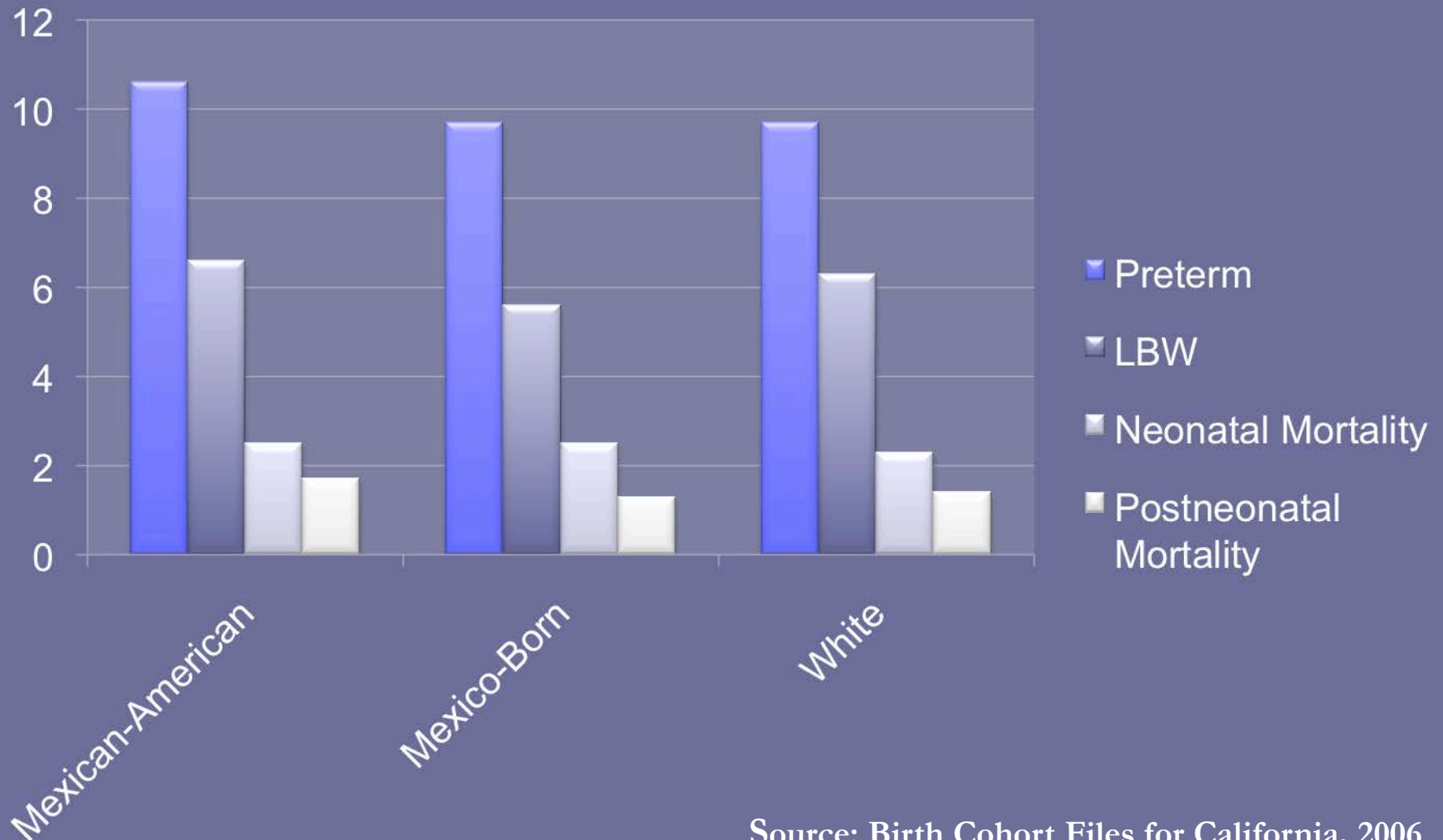
Multiple studies report that Latinos in the US have better or similar health to that of non-Latino Whites despite having lower income, less education and more delayed access to health care

The better-than-expected health of Latinos has been coined:

“The Latino Paradox”

Birth Outcomes

Mexican born vs. Mexican Americans and White non-Latinas



Source: Birth Cohort Files for California, 2006

Aim of this presentation

- Examine the “Mexican immigrant perinatal health” paradox and its implications for research
- Why do Mexican immigrant women show favorable perinatal health outcomes despite higher social risks?
- Highly relevant issue: about 48% of births in California in 2011 were to Latina mothers; 1 in 4 were to Mexican-born mothers

Hypothesis:

Healthy Immigrant Effect

Assumes that immigrants are a select group, with better health than the source population in Mexico

This hypothesis has not been sufficiently tested with perinatal outcomes

Previous Studies

Compared Mexican mothers currently living in the US by nativity, time in the US, generational status, acculturation levels

Missing in this body of research is a comparison of immigrant mothers living in the US with mothers living in Mexico

Recent Study Aim

Test the Healthy Immigrant hypothesis

Compare Preterm Delivery (PTD) Rates of Mexican immigrant mothers who give birth in California with mothers who deliver in Mexico (overall and with mothers who deliver in the top 5 Mexican migrant sending states to California)

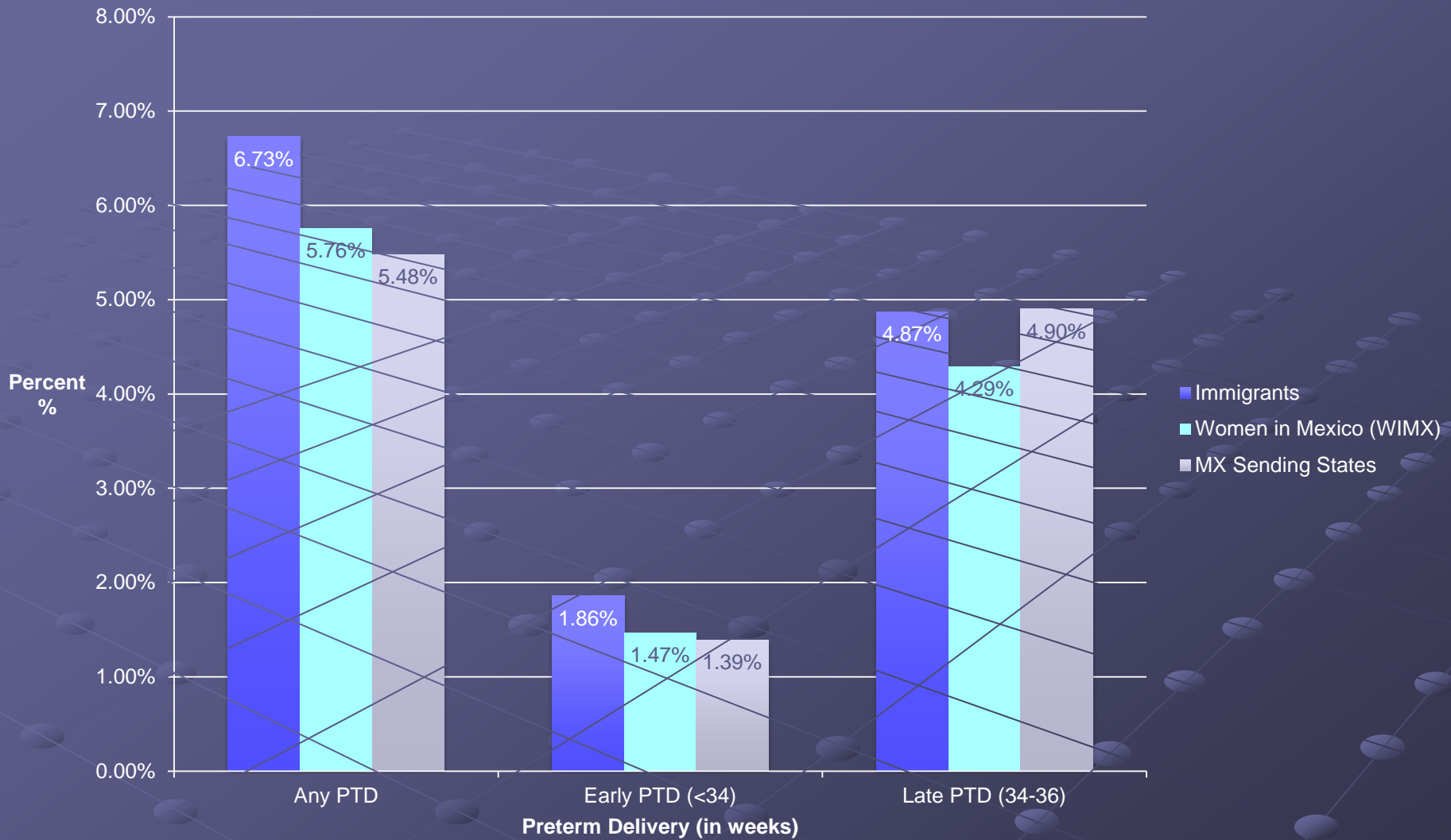
Guendelman S, Thornton D, Perez-Cuevas R, Walsh J

Methods

- Used 2009 birth records of singleton live-born infants born in Mexico and in California to Mexico-born mothers
- To remove effect of a previous PTD, which is a strong risk factor for PTD, restricted sample to primiparous women
- Examined *Any PTD* (<37 completed weeks gestation)
- *Early PTD* (< 34 weeks) and *late PTD* (34-36 weeks)
- *Sample:*

California: 33,251

Mexico all: 701,616; MXSS: 152,440



Rates of Preterm Delivery (PTD) among Women of Mexican-Origin Delivering in California (Immigrants) and Mexico (WiMX) including Women in Mexican Immigrant Sending States in 2009

Compared to Immigrants, women in Mexico:

- Deliver their first baby at a younger age
- Less likely to have a high school diploma or some college
- Less likely to start prenatal care in the first trimester
- More likely to be uninsured, less likely to have public insurance
- More likely to deliver by cesarean section

Late PTD (34-36 weeks)

Models	Immigrant vs WIMX		Immigrant vs MX Sending States	
	RR	95% CI	RR	95% CI
Unadjusted	1.13	1.07-1.19	1.19	1.12-1.26
Model 1: Age and Education	1.12	1.06-1.18	1.17	1.10-1.25
Model 2: Health System	1.15	1.02-1.30	1.26	1.11-1.44

Summary Relative Risks and 95% Confidence Intervals (CI) of Late Preterm Delivery (PTD) among Mexican Immigrants vs Women in Mexico and among Mexican Immigrants vs Women in Mexican Immigrant-Sending States aged 18 years or older in 2009

Conclusions



Conclusion

- Higher rates of PTD among immigrants in California could be an artifact of differences in gestational age ascertainment since use of ultrasound is more common:

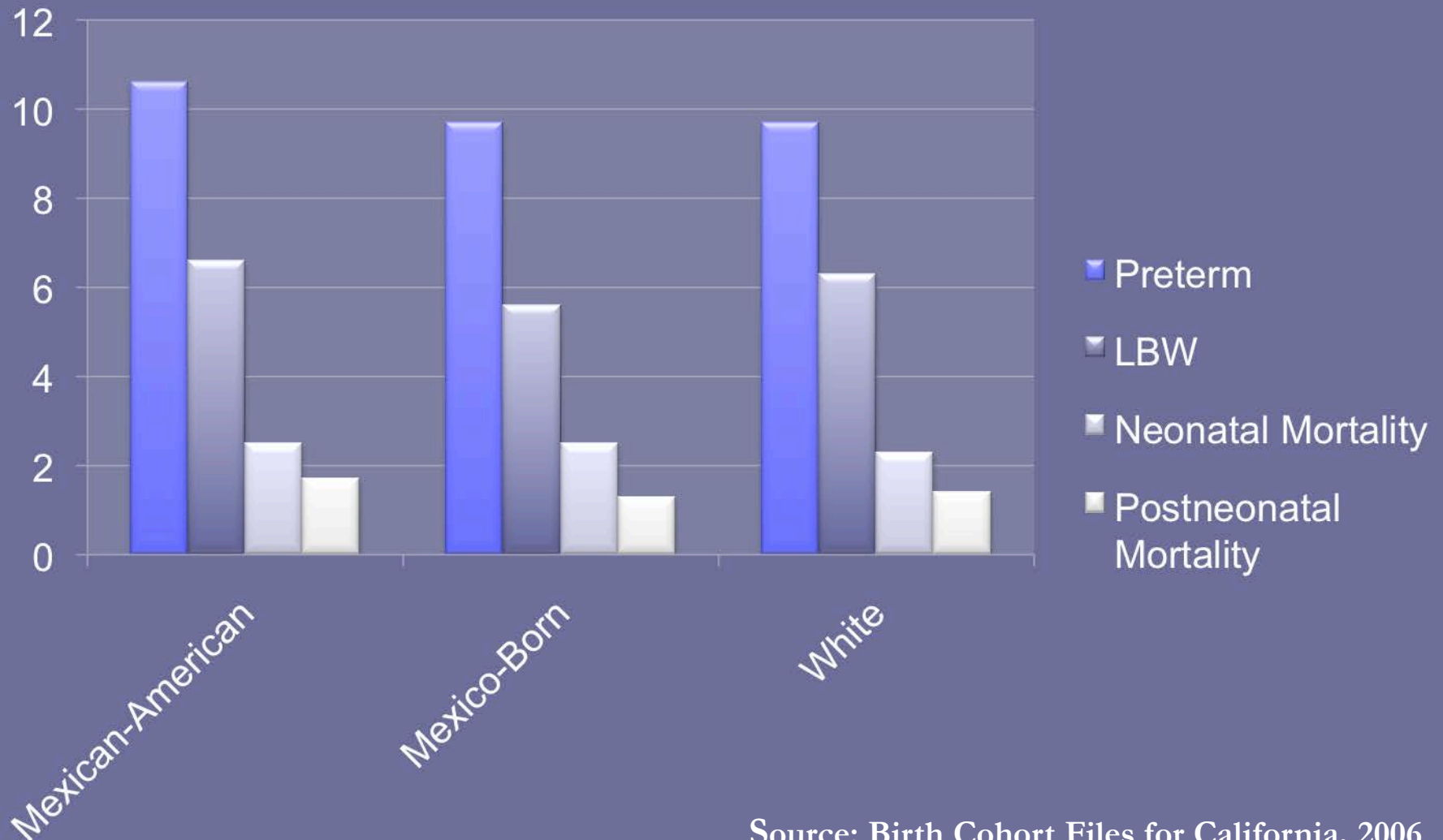
We performed sensitivity analyses and even when taking into account gestational age mis-ascertainment for term babies in Mexico, we found that immigrant women stand a comparable risk of PTD

Conclusion

- Further research must assess the comparability of gestational-age in birth certificates and whether differentials in birth registration might account for disparities in PTD
- Our results showing higher PTD rates among immigrants compared to Mexico are consistent with 2010 country rates (12% in the US vs. 7.3% in Mexico) and with 2009 PTD rates in US border states (11.6%) vs. Mexican border states (6.7%)
- Understanding why babies born to Mexico-born mothers have higher rates of PTD if they deliver in California matters given the high costs of preterm to families and society and because some preventive measures are available

Birth Outcomes

Mexican born vs. Mexican Americans and White non-Latinas



Source: Birth Cohort Files for California, 2006

Obstetric Complications during Labor and Delivery among Women in CA

- We characterized maternal morbidities during L& D using ICD-9 codes of ob complications
- We defined morbidity as a condition caused by the pregnancy itself or by its management that adversely affects a woman's physical health beyond what would be expected in a normal delivery
- *Includes hemorrhage, pre-eclampsia and eclampsia, ob trauma, infections, wound complications, embolism and a few other serious complications*

Obstetric Complications During L&D

California Data:

- Linked hospital discharge and-birth records data for 1996-98 for Mexican-born women (409,765), Mexican-American women (218,516) and White non-Latinas (452,958)
- Postulated that maternal morbidities are influenced by pre-existing health status, SES, access and quality of care received

Guendelman S, Thornton D, Gould J, Hosang N.
Paediatric and Perinatal Epidemiology 2006;20, 471-481;
American Journal of Public Health, 2005; 95;12

Observed Maternal Morbidity during Labor and Delivery: California, 1996-1998

	Mexico-born	Mex-Am	White
Any morbidity	19%	21%	21%
<i>Adjusted Odds Ratios*</i>			
vs. Mex-Amer	0.92 (0.90, 0.93)		
vs. Whites	0.92 (0.91, 0.93)		

** Adjusted for age, parity, SES, prenatal care, hospital quality of care and pre-existing medical conditions*

Findings

- Despite their lower SES, greater delay in obtaining prenatal care and a lower likelihood of giving birth in hospitals that provide better-than-average quality of obstetric care based on their case-mix adjusted neonatal mortality, **Mexican immigrants experienced comparatively fewer maternal morbidities during L & D**
- This protective health pattern is similar to that found for birth outcomes ;
- may partly be explained by healthier lifestyle of Mexican immigrants (eg. less consumption of tobacco, alcohol and illegal drugs, less postponement of pregnancy until advanced age and better coping mechanisms during pregnancy)

Immigrant Women experience more Sub-optimal Care

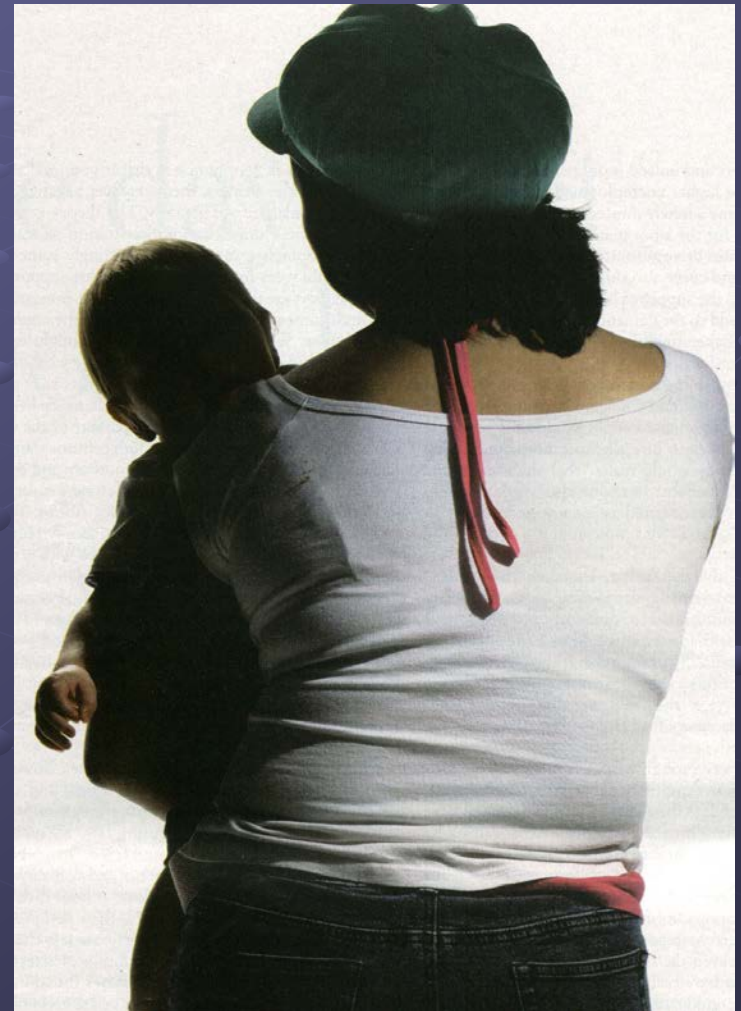
- Compared to white and to Mexican American women, Mexican immigrants showed a higher risk of 3rd and 4th degree lacerations, postpartum hemorrhage and major puerperal infections, after controlling for covariates.
- These conditions are important indicators of quality of intra-partum care

Challenges Ahead

Suggest the vulnerability that Mexican immigrant women face with our health care system

Immigrants experience different standards of care as a result of legal, socio-economic and language barriers

Immigrants also face different obstetric practices in California compared to Mexico



Challenges Ahead

- Future studies need to monitor perinatal outcomes and quality of maternal care for Mexican-origin women in California. We must identify care dimensions (clinical and socio-cultural) that can be improved and/or reinforced to ensure optimal outcomes and help reduce health disparities
- Linked MIHA and hospital records could allow for richer understanding of maternal health
- Further comparisons of populations in Mexico and California can help understand healthy immigrant effect

Given its size, improvements in perinatal health of the Mexican-origin population in California, translate into better health for Californians

THANK YOU!!!!!!

