

Adverse Pregnancy Outcomes Among Immigrant Latinas in California

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Binational Health Policy Forum
October 3, 2011



Low Birth Weight (LBW) Background

- ◆ The most persistent and intractable cause of infant morbidity and mortality in the US is LBW delivery
- ◆ LBW affects roughly 1/13 babies born each year in the US
- ◆ LBW is a factor in almost 65% of all infant deaths

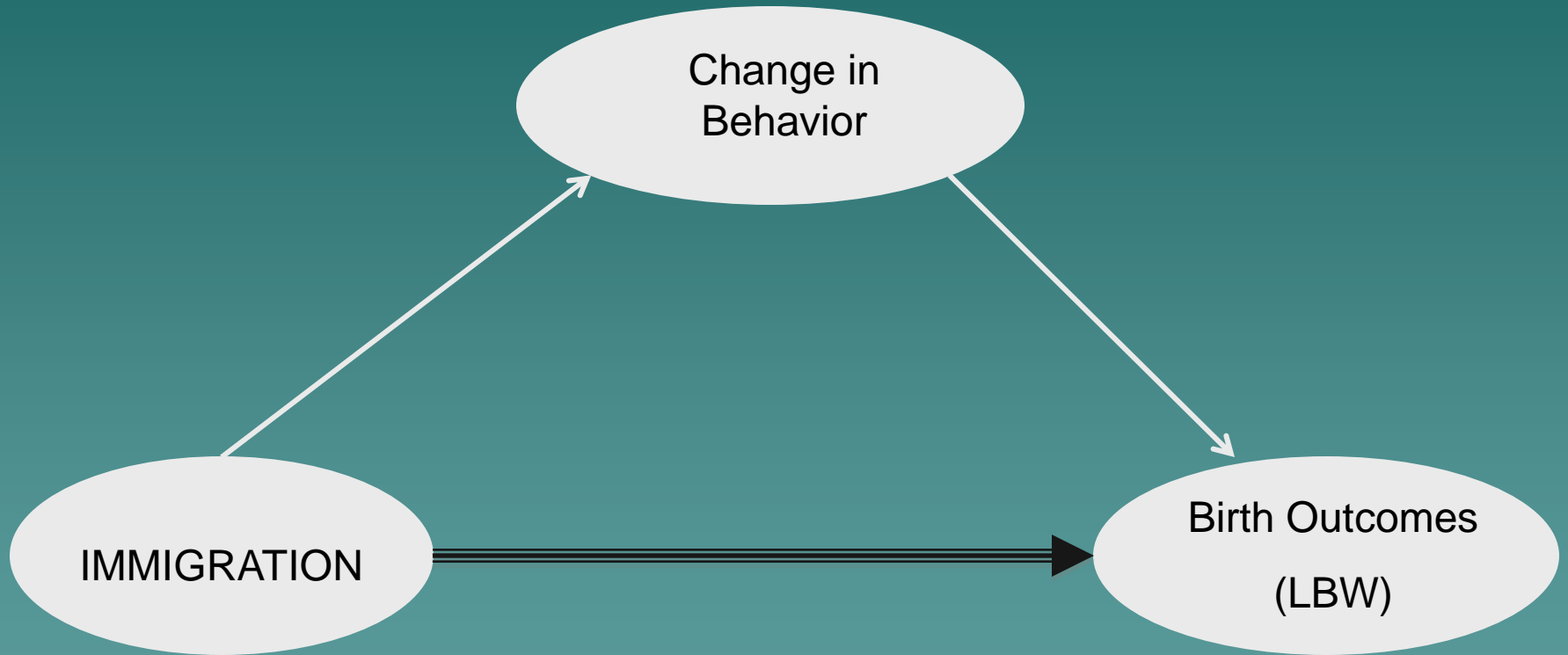
Hispanic Paradox

- ◆ Foreign-born Latin women generally have lower LBW rates than their native-born counterparts
- ◆ This occurs despite socioeconomic disadvantage including poverty rates and uninsured individuals
- ◆ Hispanic immigrant women experience worsening birth outcomes the longer they live in the US

Acculturation

- ◆ The process of cultural exchange by which immigrants modify their attitudes, beliefs, cultural norms, values, or behaviors as a result of interaction with a different culture (Heilemann, 2000)

Acculturation and Pregnancy



Outcome Variables

- ◆ Low Birthweight Delivery (LBW): infant delivered weighing less than 2,500 grams (5.5 lbs)
 - VLBW: 500 – 1,499 grams
 - MLBW: 1,500 – 2,499 grams
- ◆ Preterm Delivery (PTD): infant delivered at a gestational age less than 37 weeks
 - VPTD: 20 – 37 weeks

Maternal and Infant Characteristics

HISPANIC WOMEN

US-BORN

FOREIGN-BORN

N=78,236

N=152,978

Age (years)*	24.6	27.3
Education (years)*	12.3	9.5
Parity*	1.08	1.36
Number of PNC Visits*	12.0	11.9
Month PNC Began*	2.4	2.4
LBW*	5.04%	4.32%
VLBW*	0.81%	0.65%
MLBW*	4.14%	3.61%
PTD*	9.63%	9.0%
VPTD*	1.52%	1.30%

* p-value<0.05

Multivariate Analyses (1980-2000)

	1980	1990	2000
	OR (95% CI)	OR (95% CI)	OR (95% CI)
Mexican Nativity			
Foreign-born	1.00	1.00	1.00
US-born	1.26 (1.18, 1.35)	1.21 (1.14, 1.27)	1.20 (1.15, 1.26)
Ethnicity			
White	1.00	1.00	1.00
Mexican	1.06 (1.01, 1.12)	1.15 (1.10, 1.20)	1.26 (1.20, 1.31)
Ethnicity-Nativity*			
Mexican, USB	1.11 (1.05, 1.17)	1.20 (1.14, 1.26)	1.30 (1.24, 1.36)
Mexican, FB	0.88 (0.84, 1.17)	0.90 (0.86, 0.94)	1.04 (0.99, 1.09)

* White, US-born women is the reference group



Study of Hispanic Acculturation, Reproduction and the Environment (SHARE)

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Methods

- ◆ Study design
 - Prospective cohort
- ◆ Study population
 - 1,024 Hispanic receiving prenatal care through an OB/GYN group at San Joaquin General Hospital in Stockton, CA
 - Study population included Mexican immigrants & U.S. born Mexican women

Study Measures

Interview (CAPI)

- F Background/Demographics
- F Acculturation
- F Reproductive History
- F Smoking, Alcohol & Drug Use
- F Nutritional Intake
- F Occupational Health
- F Stress and Social Support
- F Sexual Activity

Biological Specimens

- F FEMs (Bacterial Vaginosis)
- F Urine Samples (Pesticide Metabolites)
- F Blood Samples

Medical Record Abstraction

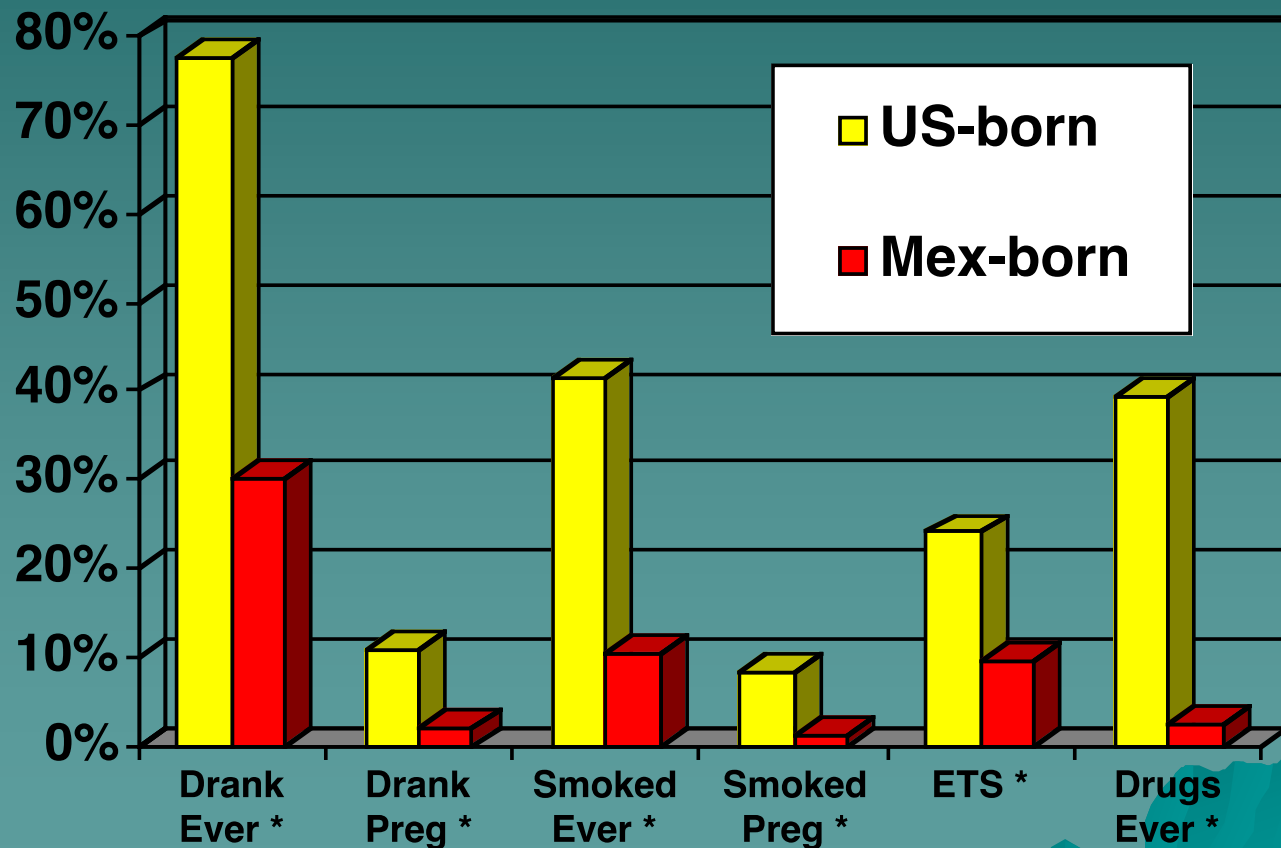
- F Birth weight
- F Gestational Age
- F Fetal anomalies and deaths
- F Pregnancy Complications

Results: Medical Risks

	U.S.- Born	Non U.S.- Born
N Prior Pregnancies *	1.74	1.88
Prior Pregnancies - Two or fewer	73.26%	71.64%
Gestational Diabetes in prior pregnancy	7.5%	4.93%
Hypertension as result of pregnancy *	11.95%	5.87%
Asthma Ever *	6.2%	1.49%

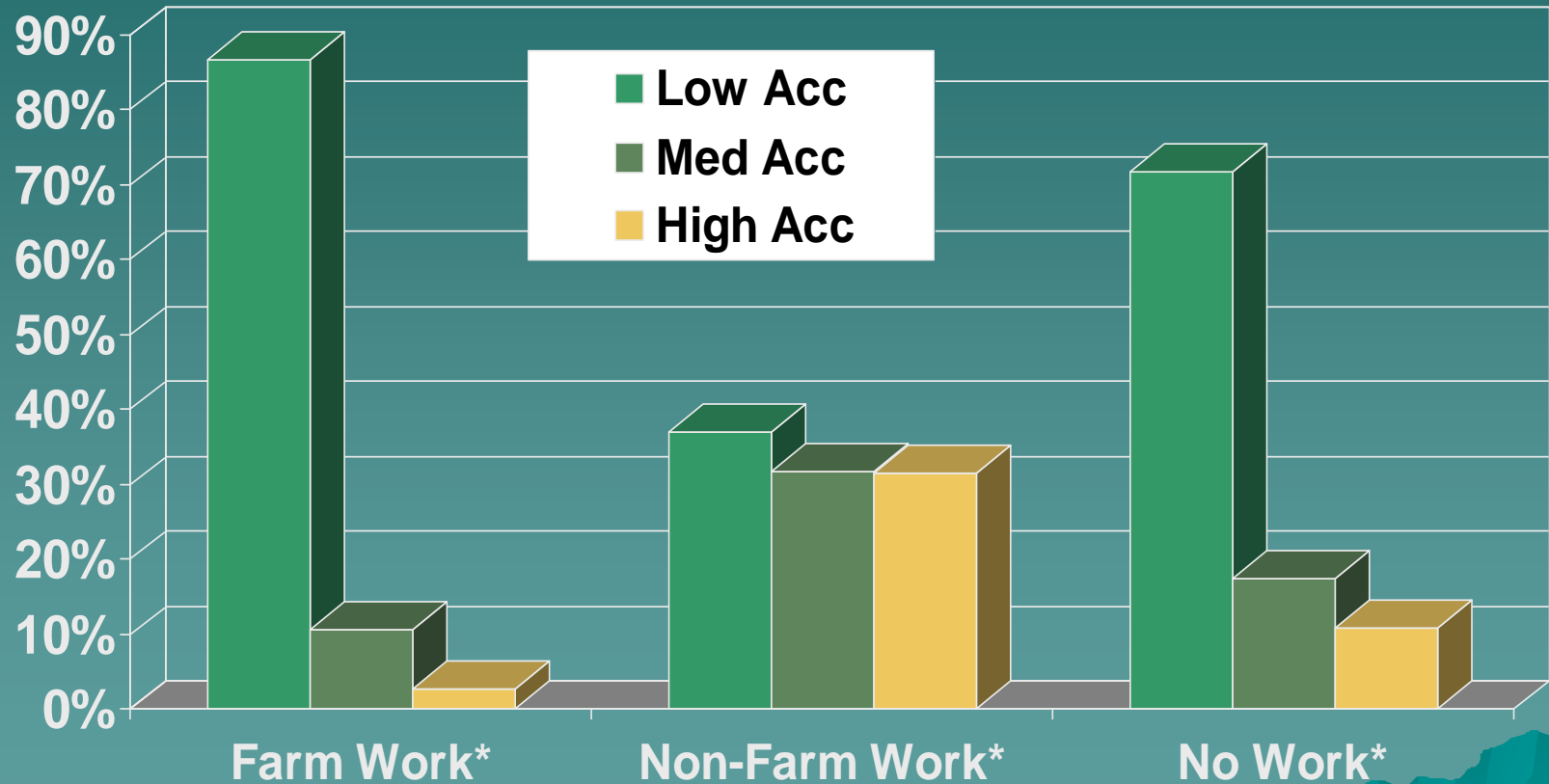
* p <.05

Behavioral Risk Factors for U.S. vs. Mexico-Born



P < 0.05 for all comparisons

Acculturation by Occupation



* p-value < 0.05

Multivariate Analyses

	PTLBW DELIVERY	
	Odds Ratio*	95% CI
Maternal Occupation		
No Work	1.00	---
Non-Farm Work	0.82	0.46, 1.46
Farm Work	1.26	0.64, 2.50
Acculturation		
Low	1.00	---
Medium	2.22	1.26, 3.91
High	2.22	1.15, 4.28

* Adjusted for age and gravidity

Findings

- ◆ No association between adverse pregnancy outcome and maternal work status
- ◆ Significant association between acculturation and adverse pregnancy outcome
 - Acculturation associated with duration living in U.S.
- ◆ Strong association between occupation and acculturation
- ◆ PTLBW associated with number of adverse risk behaviors, but not with any individual risk factor.

Conclusions

- ◆ The Hispanic Paradox may in part be explained by increased risk behaviors (e.g. smoking, alcohol) for adverse pregnancy outcomes after Latinas who immigrate.
- ◆ Prevention efforts should target this population to reduce this adverse behavior.

QUESTIONS??