

# Mobile Health Program Group Prenatal Care and Pregnancy Outcomes

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## Introduction

Birth outcomes tend to be better among Hispanics than among other ethnic groups even when matched for poverty and education (1). This trend is even stronger among newly immigrated Hispanics(2). Differences in lifestyle factors, such as diet, exercise, and social support may help explain this trend (3).

The Mobile Health Program, group prenatal care (GPC) program was developed to serve underserved and uninsured pregnant mothers in Tucson in collaboration with The Family Medicine Residency Program.

The goal of this study was to determine if there is a relationship between birth weights and lifestyle factors among mothers enrolled in the GPC.



Fig 1: Mobile Health Unit

## Methods

Pregnant mothers delivered between May 2013 and February 2014 were included in the project. Demographics and behavioral data were obtained from prenatal records or interviews with the mothers during clinic visits ( Fig: 2). All pregnant mothers were followed up to 6 weeks postpartum. Birth outcomes data were obtained from delivery notes and through a promotora contacting the mother. SPSS was used for running one way ANOVA and Pearson Correlation statistical analyses.

## Results

### Descriptive Statistics

**Number of mothers:** 16  
**Age:** mean 26 years, range: 18-39 years.  
**Language preference:** Spanish: 57%,English:6%, Both: 31%, other: 6%  
**Native status:** Born in Mexico: 94%, other countries: 6%  
**Weight at last visit:** mean:191 lbs., range:132-267 lbs.  
**Number of prenatal visits:** mean:11, range: 8-17  
**Birth weight:** mean:3542 g, range: 3010-4240 g  
**How did find the program:** Previous graduate: 6%, friend: 38%, MHP flyer: 19%, other: 37%  
**WIC enrollment:** Yes: 81%, No: 19%  
**Exercise during pregnancy:** Yes: 81% (walking: 69%, house work:13%), No;19%.  
**Substance use:** No:100%,  
**Prenatal vitamin use:** Yes:100%  
**Social support:** father involved: 88%, others: 12%  
**Nutrition:** three meals+ snacks+ fruits:50%, three meals+fruits: 25%, three meals only: 13%.

### Feeding Type

	At discharge	At 2 weeks	At 6 weeks
Breast feeding	38%	31%	31%
Formula Feeding	13%	13%	25%
Both	38%	31%	19%
No data	11%	25%	25%

### Inferential Statistics

Description: Birth weight and	Pearson Correlation	P-value
Gestational age at enrollment	-0.586	0.017
Mother's weight at enrollment	0.712	0.002
Mother's weight at last visit	0.756	0.001
Number of prenatal visits	0.587	0.021

## Conclusions

There is a statistically significant negative correlation between birth weight and gestational age at enrollment. There are statistically significant positive correlations between birth weight and mother's weight at enrollment, at last visit, and number of prenatal visits. There was no significant relationship between birth weight and diet, WIC enrollment, exercise, and social support. Limitations of the study were low number of participants, limited time, loss to follow up. It is necessary to do a study in a larger population and with a comparison to standard prenatal care.



Fig 2: Prenatal Care at Mobile Health Unit

## References

1. Arias E. United States life tables by Hispanic origin. Vol. 2. Vital Health Statistics. Washington, D.C.: National Center for Health Statistics; 2010.
2. LaVeist TA. Minority populations and health: an introduction to health disparities in the United States. Vol. 5: Jossey-Bass; 2005.
3. Lara M, Gamboa C, Kahramanian MI, Morales LS, Bautista DE. Acculturation and Latino health in the United States: a review of the literature and its sociopolitical context. Annual Review of Public Health. 2005;26:367-397.

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