

Understanding Disaster Displacement Effects on Pregnancy Outcomes Following Hurricane Harvey

Results

Background

- 2017's Hurricane Harvey became the largest disaster response in the state of Texas, displacing more than 30,000 people and damaging and/or destroying over 200,000 businesses and homes.^{1,2}
- Studies have shown that pregnant women are a particularly vulnerable population during and after disasters due to socioeconomic factors.³ As a result of their disaster experiences, variation has been found among their pregnancy outcomes.³
- Displacement, often a result of disasters, are becoming more commonplace, however there are limited studies available on displacement's effects on pregnancy outcomes.⁴

Objective

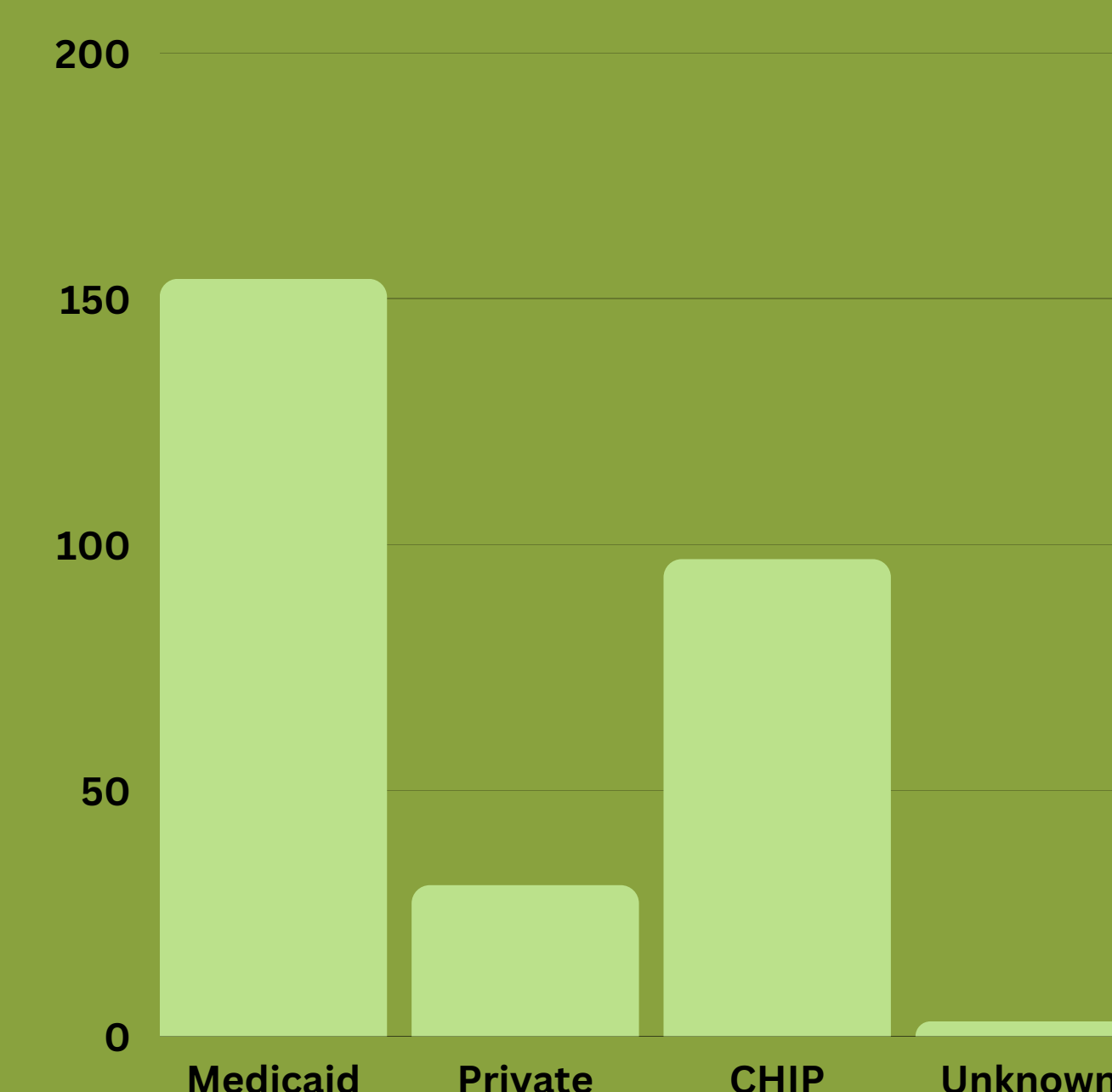
- This study aims to understand the effects of disaster displacement on pregnancy outcomes following 2017's Hurricane Harvey.

Design Methods

- Data from an IRB-approved perinatal and biorepository database at Baylor College of Medicine, PeriBank, was used.
- This database contains over 400 different variables for mother-newborn dyads in Houston, TX. Participants are enrolled from public hospital, Ben Taub and private hospital, Texas Children's Pavilion for Women.
- This study's sample population includes all women who gave birth on or after August 25, 2017 and were impacted and displaced by Hurricane Harvey.
- Descriptive statistics were performed using Stata BE 18.

Characteristics	N (%)
Race	
Asian	9 (2.83%)
Black	91 (28.62%)
White	217 (68.24%)
Multiracial (Black & White)	1 (0.31%)
Ethnicity	
Hispanic	146 (45.91%)
Non-Hispanic	172 (54.09%)
Age (Years)	34 ± 5.92
Marital Status	
Single- Never Married	86 (27.13%)
Married	226 (71.29%)
Separated	2 (0.63%)
Divorced	3 (0.95%)
Income	
Less than \$34,999	169 (59.30%)
\$35,000-\$74,999	70 (24.56%)
\$75,000 and above	70 (24.56%)
Education	
Less than high school	42 (13.29%)
High school/GED	102 (32.28%)
Some college	68 (21.52%)
College degree or higher	104 (32.92%)

Method of Payment By Insurance Type



Location During Displacement



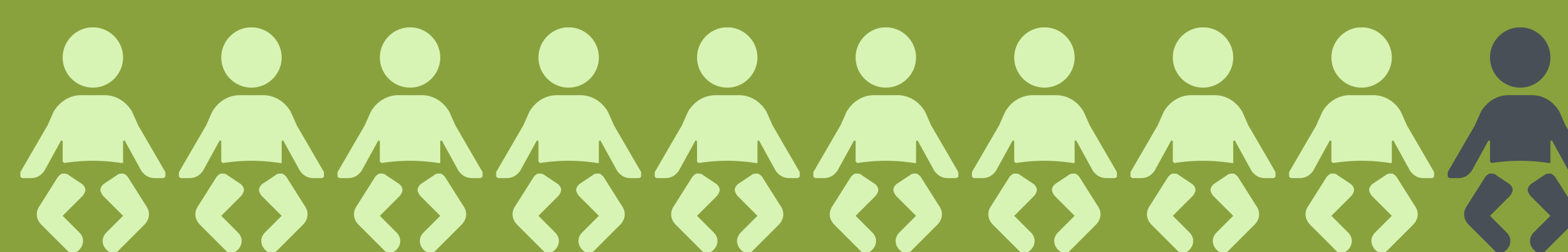
73% of participants stayed with friends or relative during their displacement.

Prenatal Appointments

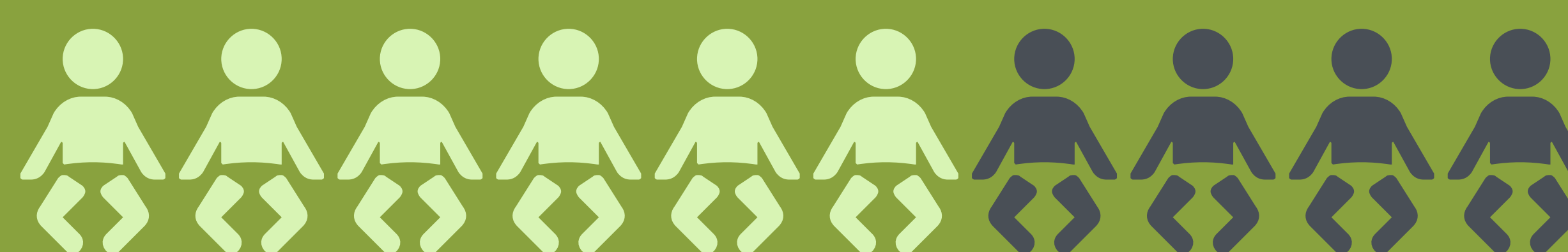


27% of participants missed prenatal appointments with an average of 1.5 missed appointments among them.

Delivery



86% of participants had term deliveries, with an average gestational age at delivery of 38 weeks.



58% of participants had spontaneous vaginal deliveries while 41% had cesarean deliveries.

- 318 pregnant women were impacted and displaced during and/or following Hurricane Harvey.
- They were predominantly:
 - White
 - Hispanic
 - Around 34 years of age
 - Married
 - Made less than \$34,999
 - Had at least a high school/GED education
 - and utilized Medicaid.
- 235 participants stayed with friends or relatives following their displacement.
- 86 participants missed prenatal appointments.
- Of those who missed appointments (N=86), the average number of appointments missed was 1.5.
- 86% had term deliveries, with an average gestational age at delivery of 38 weeks.
- 58% had spontaneous vaginal deliveries while 41% had cesarean deliveries.

Discussion & Conclusion

- A preliminary analysis indicates a greater need for tailored disaster preparedness and response, particularly for pregnant women.
- This study did not evidence adverse pregnancy outcomes among this population, however the interruption of prenatal care is an area of opportunity.
- Reproductive and perinatal health should be a central component of disaster preparedness and response plans and implementation.
- Interdisciplinary professionals should comprise disaster preparedness and response teams to adequately meet the needs of this population.

For More Information

