

# ROUTINE CHECKUP WITHIN THE PAST YEAR FOLLOWING A HURRICANE AMONG LATINO ADULTS

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## Purpose

- Hurricanes have devastating impacts on infrastructure including hospitals and health centers. The resulting disruption in health care access may be associated with increased prevalence of negative health outcomes, especially for disadvantaged populations.
- The effect of disaster exposure on health care access is understudied, especially comparisons with multiple geographic areas and particularly for Latino populations.
- This study compared the rate of routine checkup following a hurricane for Latino adults.

## Research Design

Compared exposure to a category 3+ hurricane with exposure to a category 1-2 hurricane making landfall from 2014 to 2019.

### Major Hurricanes (Category 3+):

- Puerto Rico (2017 Irma, Maria)
- Texas (2017 Harvey)
- Florida (2017 Irma, 2018 Michael)

### Category 1-2 Hurricane States:

- Georgia
- Louisiana
- Mississippi
- North Carolina
- South Carolina

## Methods

Data:  
Behavioral Risk Factor Surveillance Survey, 2014 – 2019, N = 54,113  
Persons 18 years of age or older that self-identified as Latino

Outcome Measure:  
Binary indicator of getting a routine checkup within the past year

Predictor:  
Living in a US state or territory in which a hurricane made landfall during the study period

Control Variables:  
age, sex, marital status, presence of children in the household, education, employment status, income, health insurance, general health

Analysis:  
Margins generated from logistic regression.  
All analyses accounted for survey design effects

## IRB / IACUC Approval

The Drexel University institutional review board determined that the study was exempt because it used publicly available data without personal identifiers.

## Exhibits

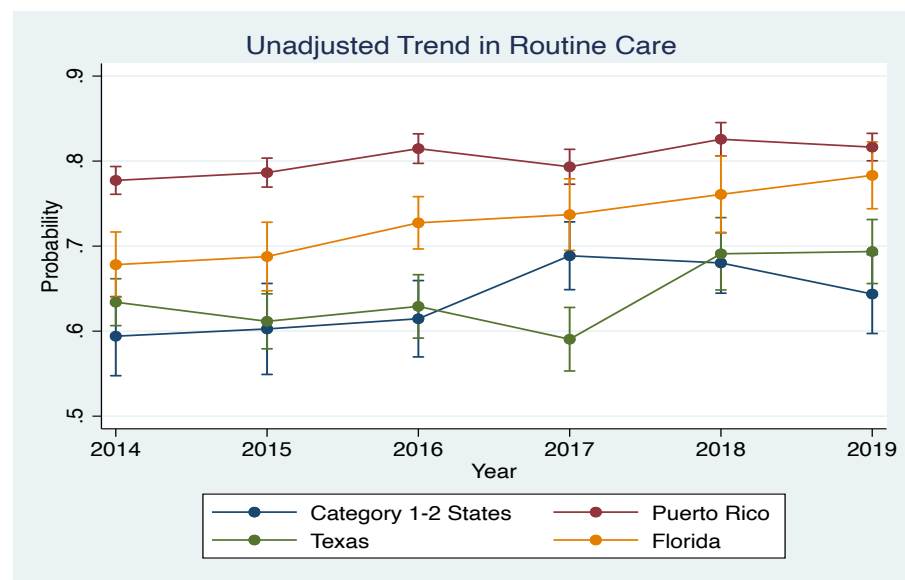


Table: Multivariate Adjusted Trend in Routine Care among Latino Adults

|      | Category 1-2 States |        | Puerto Rico |        | Texas    |        | Florida  |        |
|------|---------------------|--------|-------------|--------|----------|--------|----------|--------|
|      | Estimate            | Change | Estimate    | Change | Estimate | Change | Estimate | Change |
| 2014 | 69%                 |        | 68%         |        | 68%      |        | 66%      |        |
| 2015 | 70%                 | 1%     | 69%         | 2%     | 65%      | -3%    | 66%      | 0%     |
| 2016 | 67%                 | -3%    | 73%         | 4%     | 65%      | 0%     | 71%      | 5%     |
| 2017 | 75%                 | 7%     | 69%         | -4%    | 63%      | -2%    | 70%      | -1%    |
| 2018 | 76%                 | 1%     | 74%         | 5%     | 72%      | 9%     | 74%      | 4%     |
| 2019 | 72%                 | -4%    | 74%         | -1%    | 72%      | -1%    | 75%      | 1%     |

## Results

### 2016, the year prior to the major hurricane season:

- There was an increase in routine checkup for Latino adults living in Puerto Rico (4%) and Florida (5%) compared to 2015.
- There was no change in routine checkup in Texas in 2016 compared to 2015.
- Category 1-2 states reported a decrease in routine checkup in 2016 compared to 2015.

### 2017, the year of 3 major hurricanes (Maria, Irma, Harvey):

- There was a decrease in routine checkup for Latino adults living in Puerto Rico (-4%), Texas (-2%), and Florida (-1%).
- The largest decrease in 2017 for routine checkup was in Puerto Rico.
- Routine checkup increased in category 1-2 states by 7%.

### 2018, the year after the 2017 hurricane season:

- The estimate for routine checkup rebounded for Puerto Rico (5%), Texas (9%), Florida (4%).
- Routine checkup increased in Florida despite another major hurricane that year (Michael)
- Routine checkup increased in category 1-2 states by 1%.

## Conclusion

- Major hurricanes in 2017 were associated with a decrease in routine care for Latino adults, but this rebounded the following year.
- By contrast, routine checkup increased in category 1-2 states in 2017 and 2018.
- Major hurricanes may temporarily reduce access to routine care following a hurricane.
- The long-term impact on disruptions to routine care associated with disasters, such as delayed diagnosis and treatment of disease, warrant further investigation.

## Funding

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