#### **Hurricanes and Health**

The association between Medicare cardiorespiratory hospitalizations and tropical cyclones

Brooke Anderson October 16, 2018

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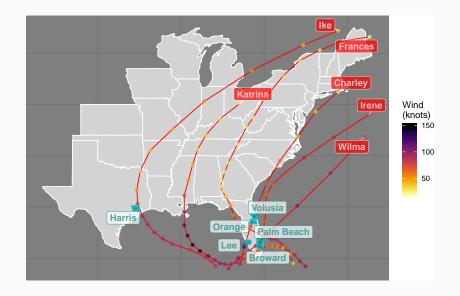
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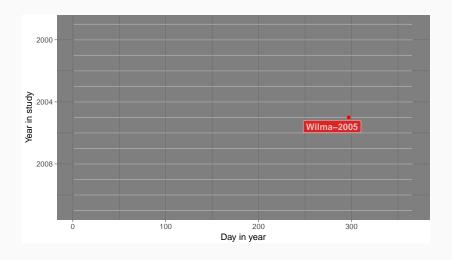
Ohio State University

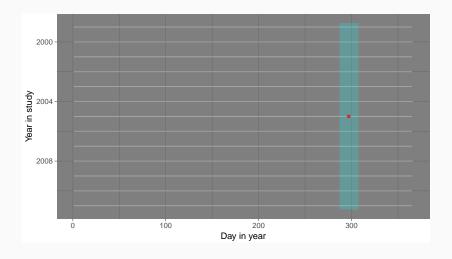
Steven Quiring

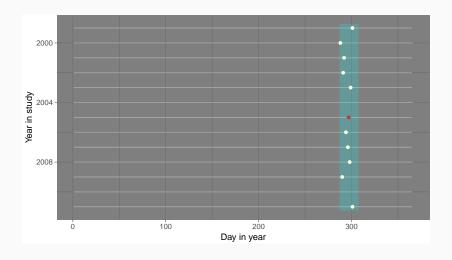
#### Top 10 wind-based exposures in our study

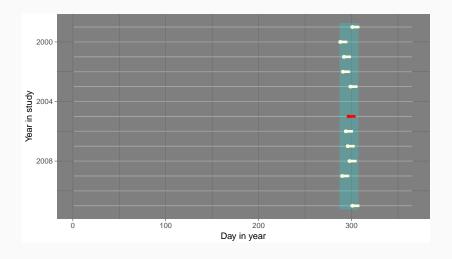


# Potential for seasonal confounding









#### Respiratory hospitalizations

Tropical cyclone	County	$Wind^{a}$	Percent increase <sup>b</sup>
Wilma (2005)	Palm Beach County, FL	52	38 (-3, 95)
Charley (2004)	Lee County, FL	45	25 (-10, 73)
Charley (2004)	Orange County, FL	41	44 (4, 99)
Ike (2008)	Harris County, TX	39	44 (25, 65)
Charley (2004)	Volusia County, FL	37	8 (-15, 38)
Wilma (2005)	Broward County, FL	37	66 (36, 104)
Katrina (2005)	Broward County, FL	34	36 (19, 57)
Frances (2004)	Palm Beach County, FL	33	35 (15, 59)
Irene (1999)	Broward County, FL		10 (-14, 41)
Irene (1999)	Palm Beach County, FL		40 (-3, 100)

<sup>&</sup>lt;sup>a</sup> Modeled maximum sustained surface wind (m/s) at county center

<sup>&</sup>lt;sup>b</sup> Percent increase in hospitalizations compared to matched unexposed days

## Cardiovascular hospitalizations

#### All study storms and counties

# Hospitalization risks by lag day