

Surges in Covid-19 near Wisconsin Trump rallies

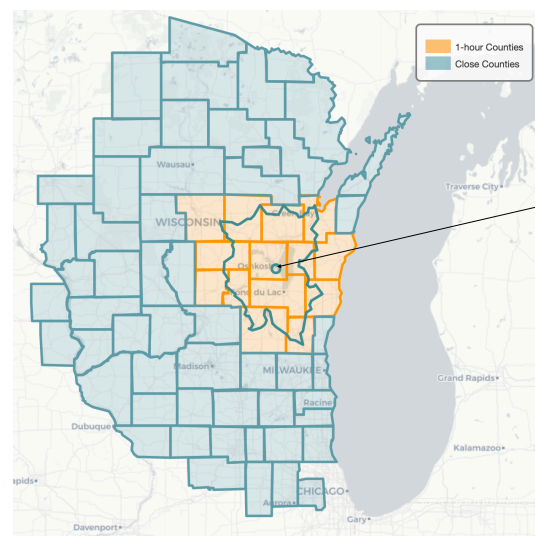
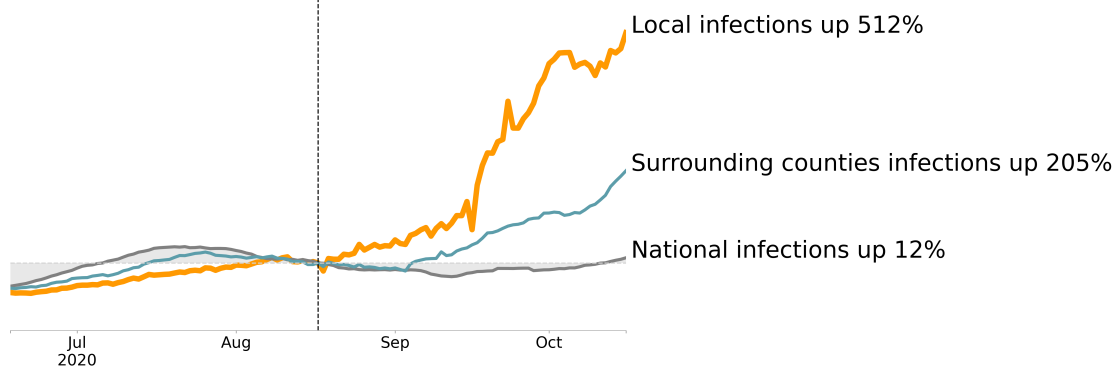
Wisconsinites who lived within an hour of a Trump rally were over 50% more likely to be infected with Covid-19 compared with those in neighboring counties in the two weeks after a Trump rally.

Things got worse after that.

No news outlet has reported this in human-relatable geography (we think in drive-time-radius, not county lines...single-county data is weak)
No news outlet has reported this with meaningful comparisons (the surges were much worse near the rally than in surrounding counties and led the broader outbreak in Wisconsin which is now a national hotspot)

Oshkosh, WI

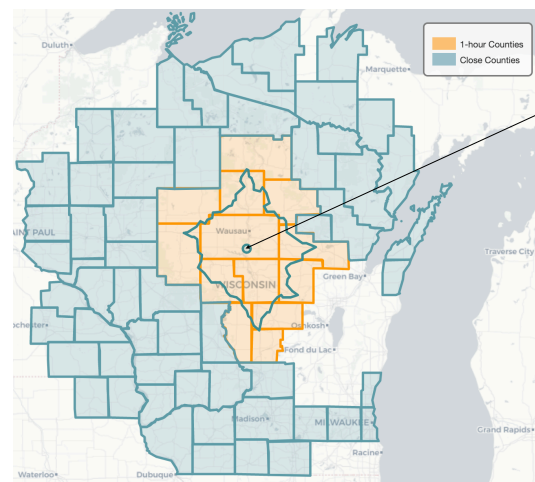
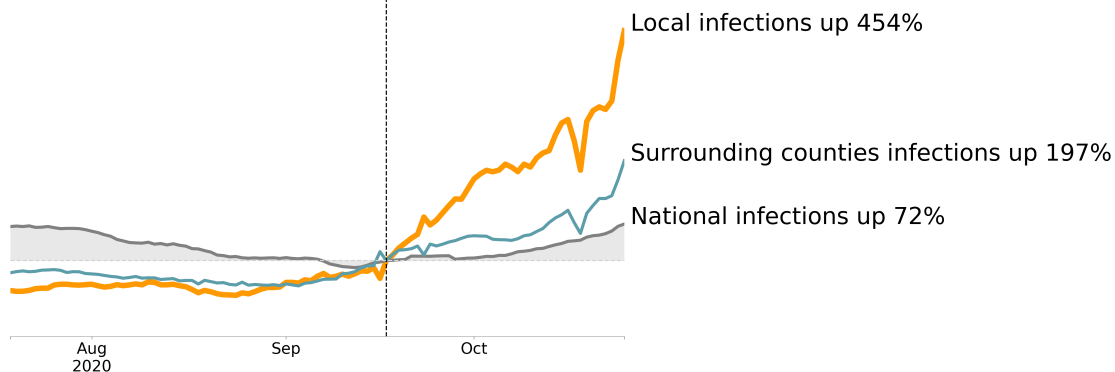
17 Aug 2020



Oshkosh rally

Mosinee, WI

17 Sep 2020



Mosinee rally

Draft Analysis of Mass Gathering Correlation with Covid-19 Infection Spikes

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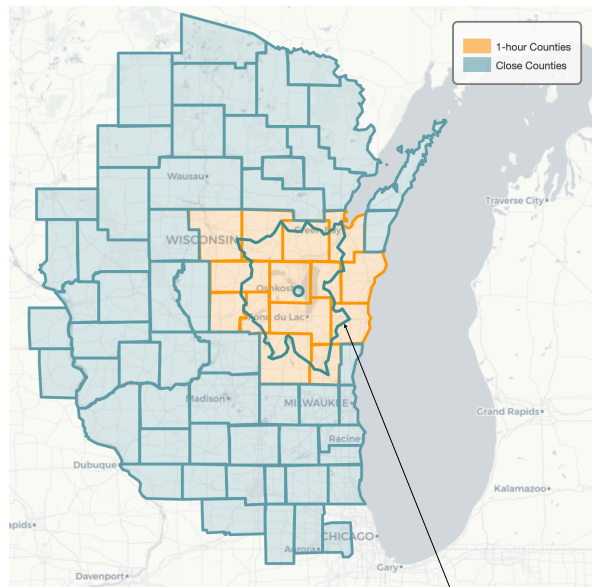
Detailed Overview:

In the 14 days after a Trump rally in Oshkosh Wisconsin on August 17th citizens living within a 1-hour drive of the venue had 54% higher risk of contracting Covid-19 compared to residents of non-rally counties within 150 miles. Prior to the rally, residents near the venue were at only 7% higher risk than their more distant neighbors. This despite the fact that the “local” counties for each rally were less population dense than “surrounding” comparison counties.

Similarly, residents near a rally in Mosinee WI on September 17th were at 50% higher risk than surrounding counties after the rally (prior to that rally they were at lower risk).

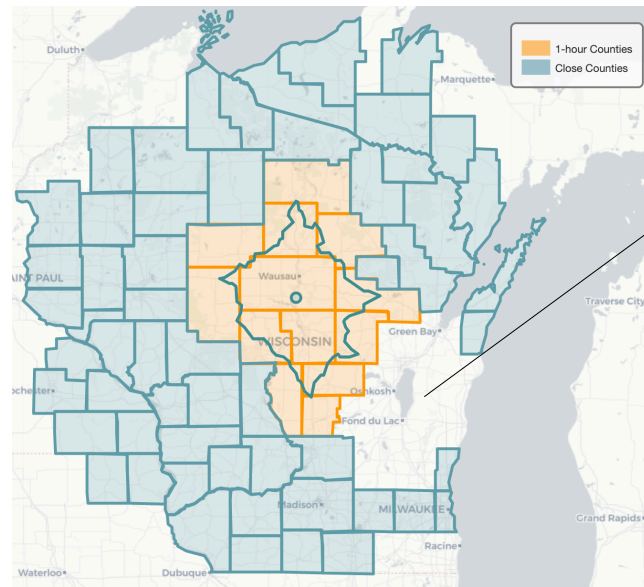
Both rally-adjacent areas saw surges in Covid-19 after the rally that grew faster than in the area around them and helped fuel Wisconsin's record-breaking Covid-19 outbreak. Some, but not all, other Trump rally locations exhibit similar trends.

17 August Oshkosh rally



area within a 1-hour
drive of the rally

17 September Mosinee rally



Cutout for the
surge already
underway near
Oshkosh after the
August rally

Middletown PA, Pittsburgh PA, Old Forge PA, Minden NV, and Bemidji MN all showed increased risk and infection surges after Trump rallies. The strong between trends and rallies does not prove that the rallies caused the surges, but does suggest caution. Masks and distancing matter.

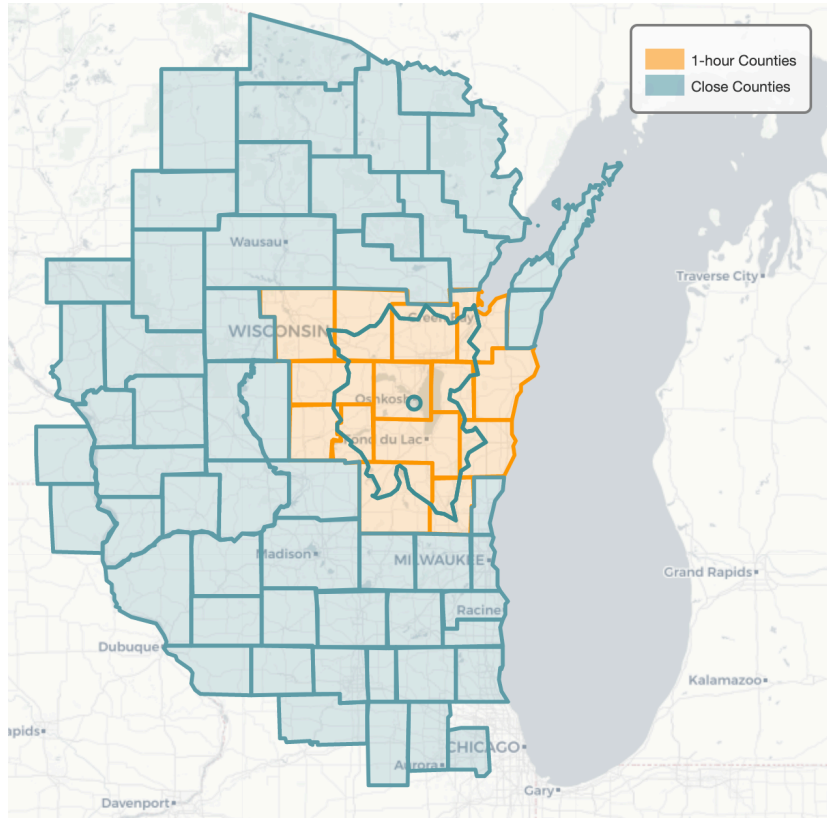
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Relative Risk Calculation Methodology:

[Principles of Epidemiology in Public Health Practice, Third Edition](#)

[An Introduction to Applied Epidemiology and Biostatistics \(https://www.cdc.gov/csels/dsepd/ss1978/lesson3/section5.html\)](https://www.cdc.gov/csels/dsepd/ss1978/lesson3/section5.html)



Example:

Calculating relative risk for “local” counties vs. “surrounding” counties in the 14 days after the Oshkosh rally

	New Covid-19 infections in 14 days post-rally	Uninfected
Lived in County within 1-hr drive of rally	A 3,217	B 1,360,378
Lived in County within 150 miles of rally but outside of 1-hour drive	C 10,553	D 6,892,710

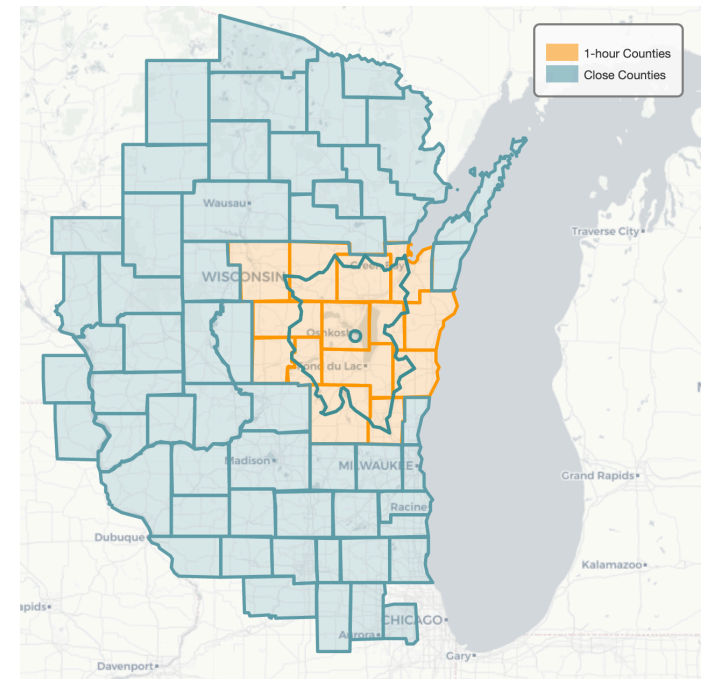
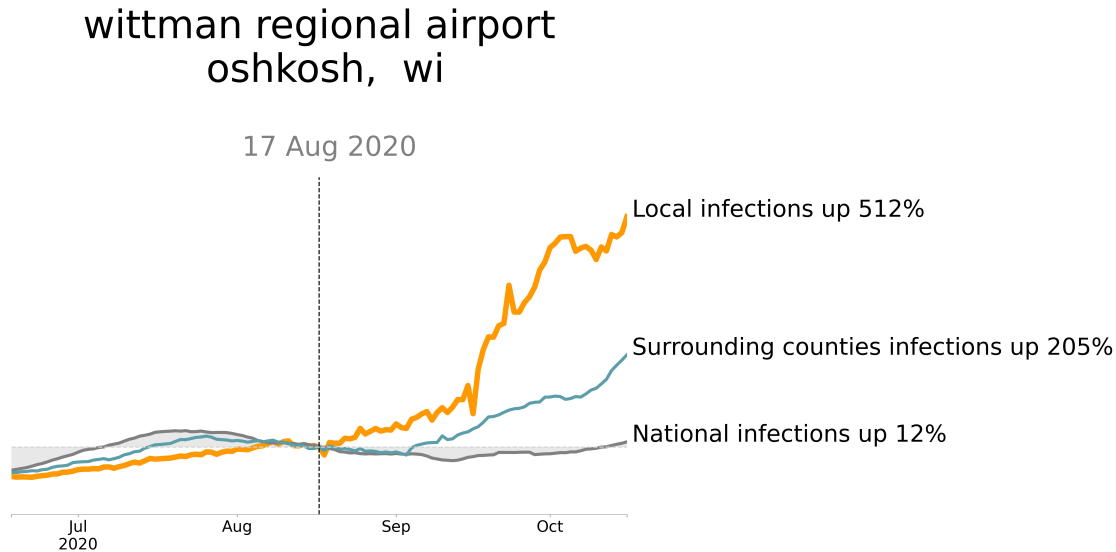
*Note: This analysis removed “surrounding counties” that were “local” to the Mosinee rally

$$\text{Relative Risk} = \frac{\begin{array}{l} \text{A New infections near rally site} \\ \text{+ B total population not infected near the rally site} \end{array}}{\begin{array}{l} \text{C New infections in nearby counties (150 mile radius)} \\ \text{+ D total population not infected in nearby counties} \end{array}} = \frac{3,217 + 1,360,378}{10,553 + 6,892,710} = 1.54$$

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Trend Plot Methodology:



Visualization of daily 7-day-average new infection counts normalized by the value of each on the day of the rally (17 August 2020) for each “Local” counties (defined by 1-hour drive time polygon around rally site), “Surrounding” counties (all others w/in 150 miles with no rally), and National trend for 60 days before and after the rally.

(e.g. summing rolling average new cases across “local” counties within 1-hr drive showed an 7-day-average of 177 new cases per day on the day of the rally...which climbed to 1,084 new cases per day by 16 October...
177 + 512% jump)

Data: Johns Hopkins CSSE (https://github.com/CSSEGISandData/COVID-19/raw/master/csse_covid_19_data/csse_covid_19_time_series/time_series_covid19_confirmed_US.csv) & US Census

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Author:

I'm Alex Rich, a UNC Chapel Hill graduate student finishing a PhD in health informatics. Before coming into public health research, I was a special operations pilot and crash investigator in the Air Force. I approach public health with the same perspective I had when flying top cover over SEALs and Rangers downrange. It is an exercise in using perspective and communication to protect Americans.

I am a registered independent and have never been a member of a political party. This analysis is an extension of my work as a cofounder of [CovidCommitment.org](https://covidcommitment.org), a public service web application that lets Americans see trends in Covid-19 data near them. I'm doing this work because transparent communication about the threat is the only means we have to nudge people toward distancing and mask wearing while we wait for a vaccine.

The goal here is to save lives.

-Alex Rich, MPH

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