

Who is Wearing a Mask to Curb the Spread of COVID-19?

Part II: Locational Differences in Mask Wearing

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Key Points

- **Urban Milwaukee and surrounding suburbs had similar rates of mask wearing entering retail stores (47% and 49%, respectively) from June 3rd to 9th, 2020.**
- **Only 20% of people in rural areas wore masks**
- **Older people in rural areas wore masks at rates more similar to their urban and suburban counterparts than young and middle-aged people.**

COVID-19 cases were increasing in Wisconsin throughout the months of April and May, 2020⁴. Although there is an abundance of evidence that wearing masks significantly reduces the spread of COVID-19, it was clear that many people were not wearing them^{3,4,5}. An [observational study](#)⁵ of N = 5,517 was conducted by Marquette University faculty and students to determine who wears masks at various large retail stores in five counties within southeastern Wisconsin (Milwaukee, Waukesha, Washington, Ozaukee, and Sheboygan) from June 3 to 9, 2020 (Figure 1). In a previous [student commentary](#)⁶, it was reported that women wore masks more frequently than men, and older people wore them more often than younger individuals^{4,5,6}.

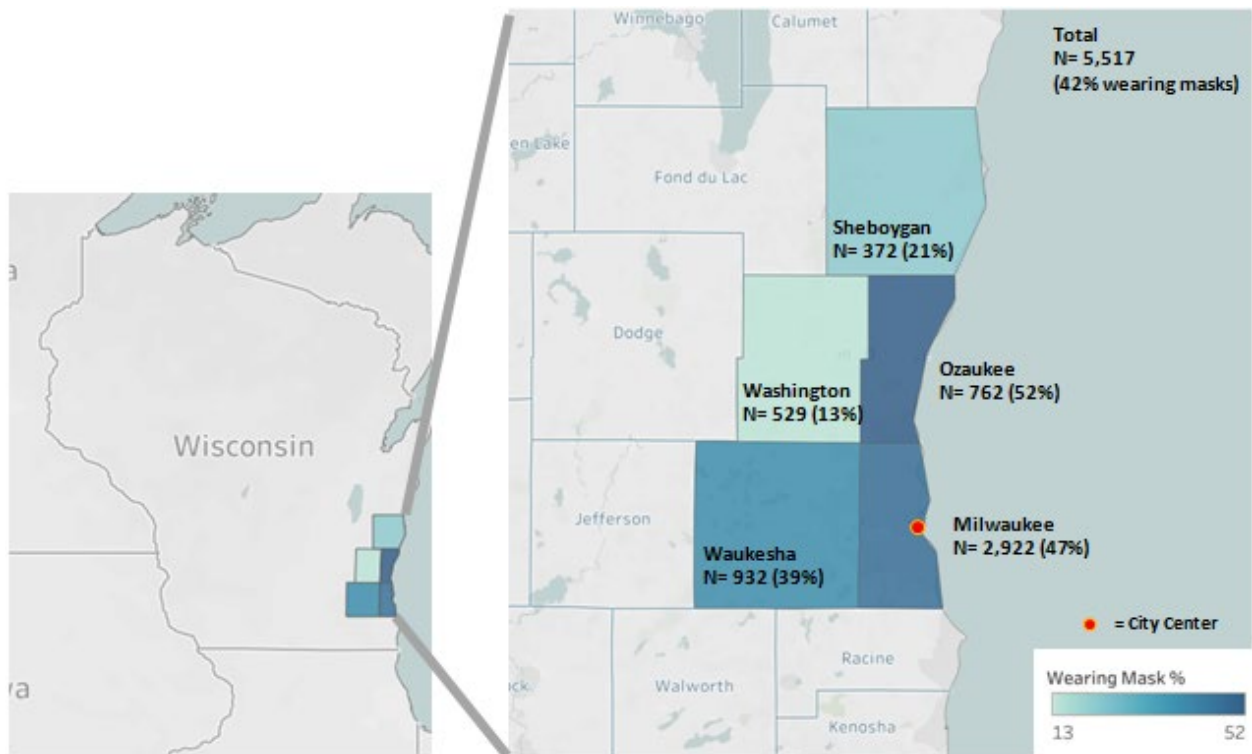


Figure 1. Mask-wearing percentages in five counties in southeastern Wisconsin. The number of people counted (N) is shown with the percentage of people observed wearing masks within that county (%). Note the differences between counties with more rural counties showing substantially less mask-wearing compliance.

Differences between locations were examined with stores categorized by their proximity to the main post office located in the center of Milwaukee. Urban and suburban locations (Figure 2) had very similar rates of overall mask wearing, 47% and 49%, respectively, while rural locations only had 20% of people wearing masks. Older people in rural areas notably wore masks at a more similar rate to their urban and suburban counterparts compared to younger and middle-aged people. The rates of mask wearing in all locations fell short of the 80% mask wearing rate that a modeling study determined is needed to curtail the spread of COVID-19¹².

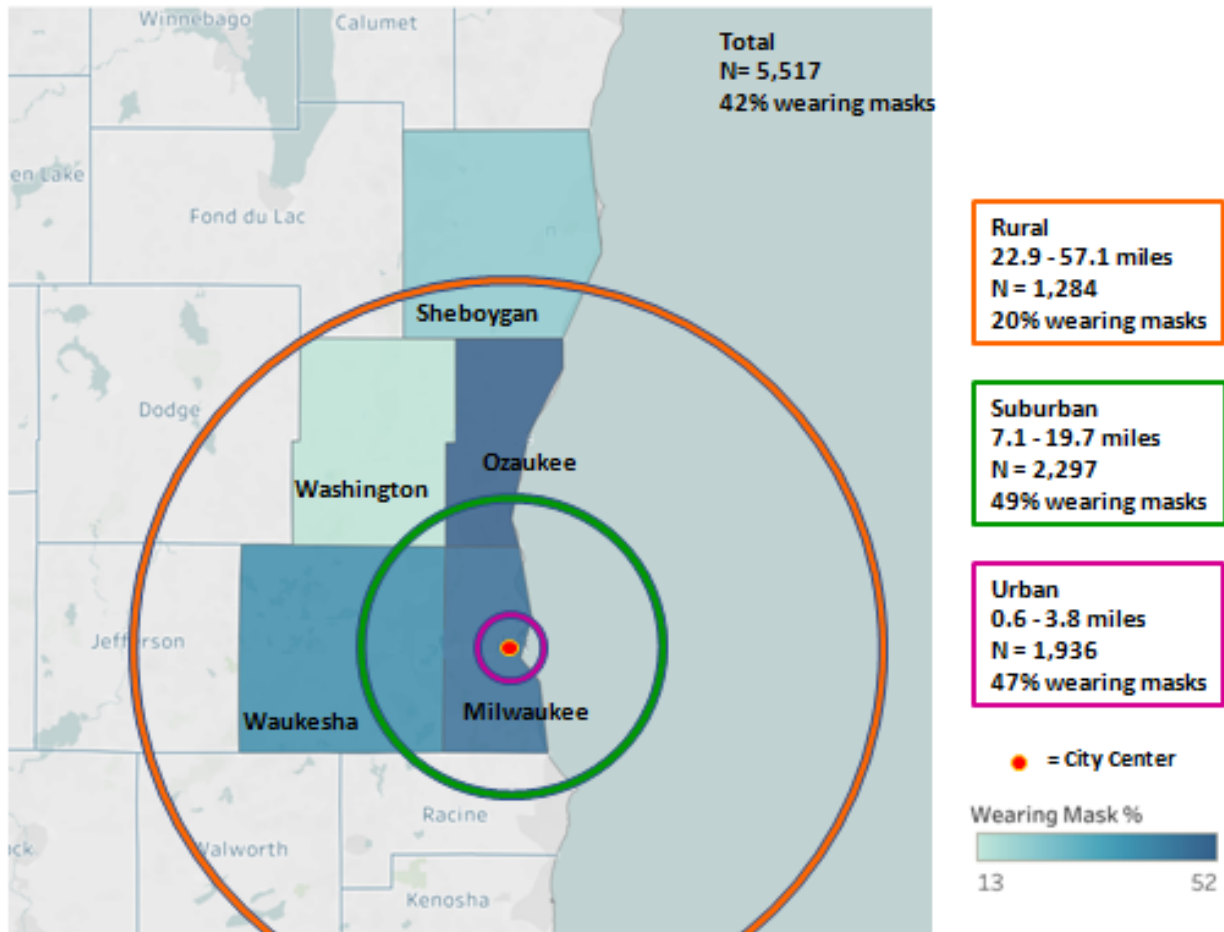


Figure 2. Mask-wearing percentages by location (urban, suburban, rural). The designated city center (345 W. St. Paul Ave) is indicated by the red dot in the center of the figure. Locational categories were identified as: urban (within the purple circle) from 0.6 - 3.8 miles, suburban (purple to green circle) from 7.1-19.7 miles, and rural (green to orange circle) from 22.9 - 57.1 miles.

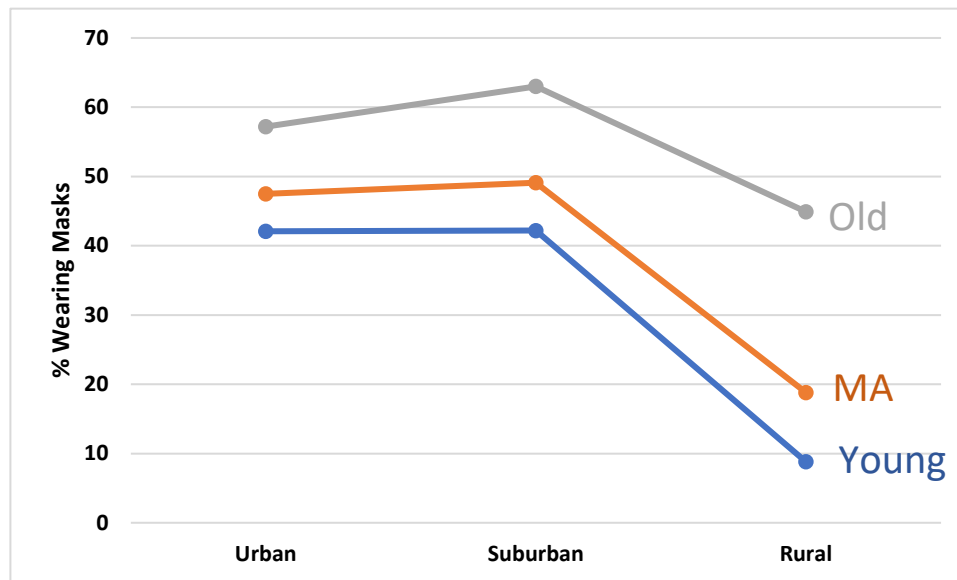


Figure 3. Mask-wearing percentages by age group (young, 2-30 yr; middle age, 30-65 yr; and older, > 65 yr) and location (as defined in figure 2). Across all ages and locations, mask wearing fell short of the 80% minimum mask wearing rate that is needed to stop the spread of COVID-19¹².

There are many possible factors that may have contributed to lower rates of observed mask wearing in rural areas. Survey data shows that republicans, who are more common in rural areas, are less likely to wear masks than democrats^{1,7}. It is likely that lower population density and case prevalence influence perceived COVID-19 threat^{2,7}. Additionally, the vast amount of misinformation circulating regarding COVID-19 may have disproportionately impacted rural areas^{8,9,11}. However, within our observational study, these factors may not have influenced older adults in rural areas as strongly as young and middle-aged people. Fear was potentially a more significant factor in the decision to wear a mask for older adults due to their vulnerability to COVID-19¹⁰. Regardless, without a vaccine every person across all age groups is vulnerable to the deadly coronavirus.

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