Impact of Nonpharmaceutical Interventions on Respiratory Viruses in Reno County, KS

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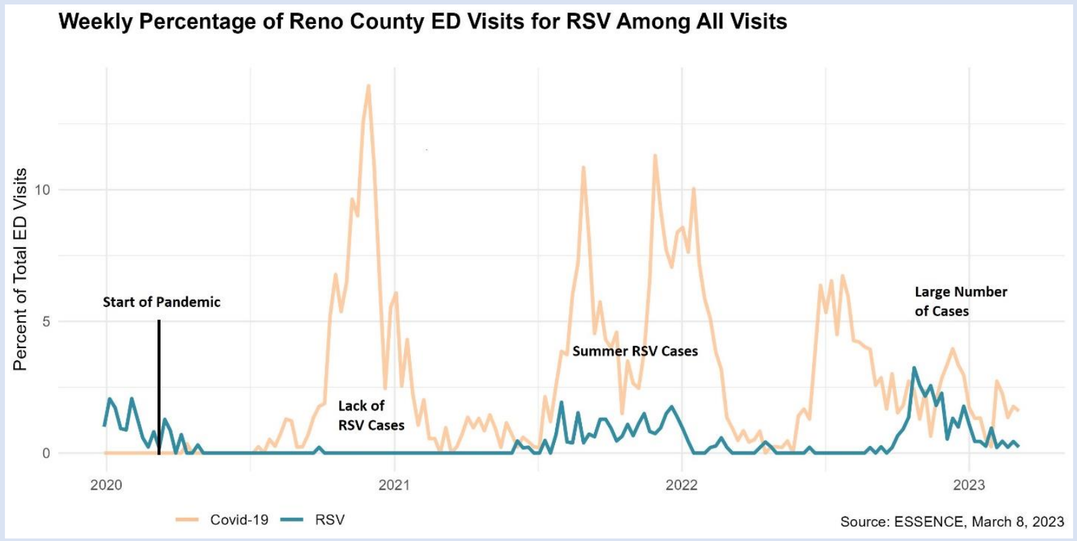
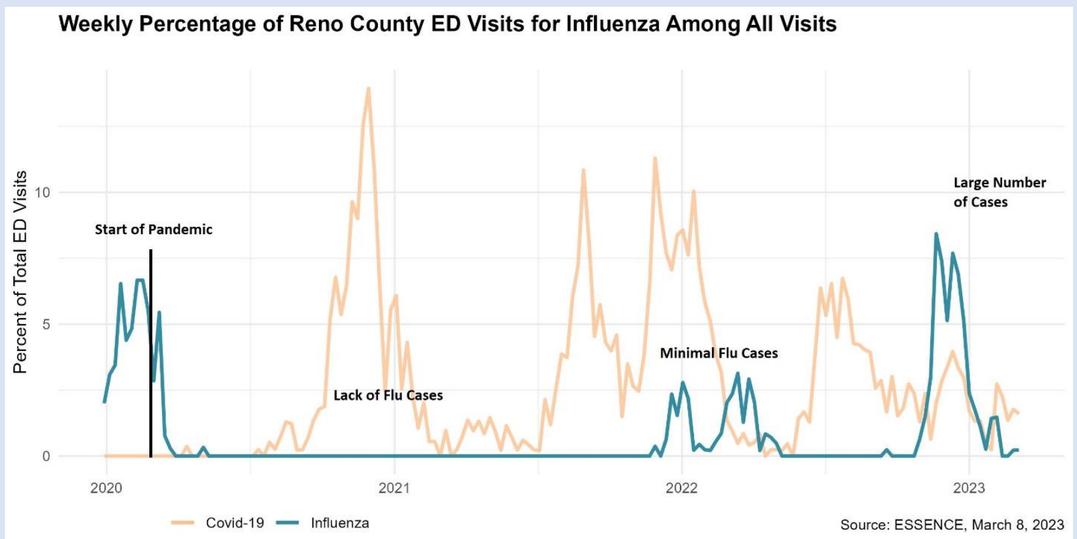
Background

Many nonpharmaceutical interventions (NPIs), such as hand washing, masks, and social distancing, were used to reduce the spread of COVID-19 throughout the pandemic. Besides slowing the spread of COVID-19, NPIs resulted in a reduction of other viruses that spread via respiratory droplets, such as RSV and influenza. RSV and influenza cause thousands of admissions and emergency department visits each year in the U.S. Data came from discharge diagnoses of Reno County residents from the Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE).

Results

Reno County experienced a reduction of ED visits in both RSV and influenza when NPIs were heavily enforced and utilized at the beginning of the pandemic. Once these NPIs were relaxed, disease rates





Results cont.

eventually increased back to their usual seasonal pattern and burden of disease. This return of the pattern for RSV was seen in other places around the world, such as Western Australia and a hospital in New York City and was accredited to the lack of NPI utilization. When NPIs were originally put into effect, influenza incidence was estimated to be reduced by 84%-91% in region 7 of the U.S., which shows the effectiveness of NPIs on disease burden.

Conclusion

NPIs are important and effective at reducing incidence, transmission, and mortality of disease and can be even more powerful when interventions are used together in a multifaceted approach.

References

For a list of references or the full report, please contact Megan Pierce at megan.pierce@renogov.org.