



COVID-19 research update

March 27, 2020

The Health Policy Institute of Ohio is collecting the latest research so that Ohio policymakers and other stakeholders can make informed decisions on the rapidly evolving COVID-19 pandemic. HPIO has also created a [Coronavirus \(COVID-19\) resource page](#) to serve as a "one-stop-shop" for links to the Ohio Department of Health, Centers for Disease Control and Prevention and other sources of frequently updated, reputable information.

Studies explore PPE shortage, identify alternatives

As more COVID-19 patients have been hospitalized, a shortage of personal protective equipment, or PPE, for healthcare workers has become a challenge for hospitals in Ohio and nationwide.

A [New England Journal of Medicine commentary](#) (March 25) provides context to the shortage of ventilators and personal protective equipment in hospitals in the United States. The commentary asserts that there is a role for the federal government to play in expanding manufacturing of ventilators and ensuring that the areas hardest hit at any given time are receiving needed PPE. However, state governments could encourage companies in their communities that might be able to shift production to making PPEs. The elements of PPE are complicated but don't require the intensive capital that ventilator manufacture demands, so smaller regional companies can play a key role in filling the gap.

Another approach to addressing the shortage of PPEs may be to use elastomeric half-mask respirators widely used in construction and manufacturing. A [randomized simulation](#) (JAMA, March 25) examining the feasibility of rapidly training and fit testing healthcare workers to use EHMRs found that time to achieve fit was not significantly different from N95 respirators and EHMR performance was high.

Relaxing China's strict social distancing rules has not increased transmissibility, early study results show

China instituted very strict social distancing requirements in Wuhan, Hubei on Jan. 23, 2020; similar actions were taken in other provinces soon after. After many weeks of severe restrictions, as of March 23, 2020, there have been no new local transmissions for 5 days. Some rules have been relaxed in recent days, allowing some economic activity to resume. A [study](#) (Imperial College, March 24) found that as regulations have been slightly reduced in China, there has not been an increase in transmissibility. Monitoring the impact of relaxing social distancing requirements and the exit strategies used in China

and other countries could inform actions taken in the U.S. and Ohio once new infections are reduced and/or eliminated.

Lit review describes unique challenges of treating COVID patients

A [literature review](#) (National Center for Biotechnology Information, March 20) of the COVID-19 epidemic, along with information from related epidemics, particularly SARS and MERS, found that some patients require mechanical ventilation and, after 24-48 hours, experience improvements that lead to weaning. But very often, after an initial success there is a new worsening of respiratory conditions that requires new invasive therapy. Therefore, mechanical ventilation has been suggested for 1-2 weeks.

Ohio providers should be aware of the need for some patients to be reintubated after showing signs of improvement and being weaned from mechanical ventilation based on measures used for other causes of Acute Respiratory Distress Syndrome (ARDS). Planners should anticipate the need for some patients to stay on mechanical ventilation longer than for other causes of ARDS. The authors emphasize that "The message for those who treat these patients is therefore to follow the clinical performance focusing especially on the values of saturimetry, rather than considering the typical P/F values suggestive of ARDS."