COVID-19 research update

April 1, 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.

Planning beyond the initial COVID-19 surge

As Ohio braces for a surge in COVID-19 cases in the coming weeks, plans are already underway for what steps will need to be taken once the number of cases begins to decline. Several new studies offer guidance on considerations for deciding when restrictions can safely be lifted.

Policymakers, with the help of individual Ohioans, are currently taking steps to reduce infections and expand hospital capacity.A report from the American Enterprise Institute (March 29) outlines specific directions for transitioning away from mitigation strategies that target entire populations to new tools and approaches that target those with infection and prevent further spread of the disease. Specific action steps are discussed across four phases of disease spread and progression: Phase 1 - Slow the Spread; Phase 2 - Reopen, State by State; Phase 3 - Establish protection then lift all restrictions; Phase 4 - Rebuild readiness for the next pandemic. Moving to Phase II requires a state to meet the following criteria: (1) a sustained reduction in cases for at least 14 days; (2) hospitals in the state are safely able to treat all patients requiring hospitalization without resorting to crisis standards of care; (3) the state is able to test all people with COVID-19 symptoms; (4) the state is able to conduct active monitoring of confirmed cases and their contacts.

Another factor that policymakers must consider is the possibility of a second wave of outbreak. A modeling study (medRxiv, March 24) predicts that seasonal variation will reduce transmission during the summer months but could lead to an intense resurgence in the autumn, necessitating additional interventions, such as increased critical care capacity. They also found that a single period of social distancing will not be sufficient to prevent overwhelming critical care capacity; intermittent distancing measures may be the only way to avoid exceeding critical care capacity until immunity increases and effective therapeutics are in place. Effective intermittent social distancing will require widespread surveillance.

Experts suggest considerations for older physicians, nurses treating COVID-19 patients

Using estimates based on Census data, the authors of a new commentary (JAMA, March 30) note that a substantial number of physicians and nurses are age 55 or older, an age group particularly susceptible to complications from COVID-19. For example, in the Columbus, Ohio hospital referral region, 20.9% of nurses and physicians are estimated to be age 55 or older. Given that the severity of COVID-19 complications is higher among older adults, the authors suggest that "hospitals and other care delivery organizations, including state and local health departments, should carefully consider how best to protect and preserve their workforce, with careful consideration involving older physicians and nurses." As retired clinicians are asked to re-enter the workforce to respond to COVID-19, consideration should also be given to the types of roles these practitioners are asked to fill.

New analysis estimates fatality ratio for COVID-19

An analysis (Lancet, March 30) using new statistical approaches found an overall COVID-19 case fatality ratio (percentage of individuals with symptomatic or confirmed COVID-19 who die) in China of 1.38%, with a "substantially higher" estimate of 6.4% for those aged 60 or older. The estimated case fatality ratio for those aged 80 or older was 13.4%. Authors note that while the case fatality ratio for other coronaviruses (SARS and MERS) were higher, the case fatality rate for COVID-19 is "substantially higher" than for H1N1. This model-based analysis focused on fatality and hospitalization due to COVID-19 and could be used to adjust Ohio-specific estimates.

An accompanying commentary (Lancet, March 30) contextualizes just how much more dangerous COVID-19 is than seasonal flu. It concludes that "even for those aged 20-29 years, once infected with [COVID-19], the mortality rate is 33 times higher than that from seasonal influenza." For people aged 60 years and older, the chance of survival is "approximately 95% in the absence of comorbid conditions."