COVID-19 research update

May 1, 2020

Workplace reopening and safety guidance

A **CDC report on factors contributing to the spread of COVID-19 in meatpacking and poultry processing plants** (CDC MMWR early release, May 1) includes data on 115 facilities with 130,000 workers in19 states, including Ohio. There have been 4,913 cases confirmed and 20 deaths in meat processing facilities. Lack of physical distancing and cleanliness are cited as contributors to spread, in addition to multigenerational and dense living situations and language barriers in some facilities. Recommendations include improving distancing to the extent possible, engineering approaches (such as not having fans blowing across workers), encouraging cloth masks (if cleaned regularly and with appropriate donning and doffing) and handwashing, disinfecting surfaces and providing paid medical leave for workers who are ill. Training should be provided by culturally competent trainers in the language spoken by workers. Data for Ohio indicated 10 cases in 1 pork plant with 710 workers. No deaths were reported.

A **new CDC framework for cleaning and disinfection practices in public spaces, workplaces, schools and homes** (CDC, April 28) highlights that reopening public spaces will require careful planning and emphasizes the importance of reducing the risk of exposure to COVID-19 by cleaning and disinfection. The framework states that normal routine cleaning with soap and water will decrease how much of the virus is on surfaces and objects. The authors also state that disinfection using EPA-approved disinfectants against COVID-19 can also help reduce the risk. The EPA has compiled a list of disinfectant products that can be used against COVID-19, available on **the EPA website**. When EPA-approved disinfectants are not available, alternative disinfectants can be used (e.g. 1/3 cup of bleach added to 1 gallon of water, or 70% alcohol solutions).

Contact tracing and isolation strategies

An **epidemiological study of COVID-19** (The Lancet Infectious Diseases, April 27) found that the attack rate of the virus does not differ significantly by age, with on average 7% of close contacts becoming infected, around 80% of these contacts showing symptoms and 3% of infections manifesting severe disease at initial assessment. They also found that contact-based surveillance and isolation in Shenzhen, China reduced the duration an infected individual transmits in the community by 2 days. The household secondary attack rate was 11.2%, and children were as likely to be infected as adults. The observed reproductive number (R) was 0.4, with a mean serial interval of 6.3 days. The

authors found that because children were at a similar risk of infection to the general population, they should be considered in analyses of transmission and control. The analysis presents one of the first estimates of the serial interval, secondary household attack rate and dispersion for SARS-CoV-2, the virus that causes COVID-19, based on active surveillance data.

A **comparison of institution-based and home-based isolation for COVID-19** (The Lancet, April 29) found that institution-based isolation, modeled after China, reduced contact rates by 75% in the household and by 90% in the community. The authors estimated that home-based isolation, modeled after Europe and the U.S., caused a 50% reduction in contact within the home and a 75% reduction in contact in the community. The authors of the study suggest that policymakers facing overburdened health-care facilities to consider strategies to reduce transmission, such as repurposing hotels or dormitories.

A **study of isolation and tracing strategies** found that, in most scenarios, highly effective contact tracing and case isolation are enough to control a new outbreak of COVID-19 within 3 months. The probability of control decreases, however, with long delays from symptom onset to isolation, fewer cases ascertained by contact tracing and increasing transmission before symptoms.