



# COVID-19

## research update

Thursday, June 4, 2020

### **Impact of nonpharmaceutical interventions**

A [study of non-pharmaceutical measures in South Korea](#) (CDC, June 2) found that nonpharmaceutical interventions, including social distancing and quarantining suspected cases, can help reduce the transmissibility of SARS-CoV-2 without a lockdown. These types of measures can effectively reduce local spread as well. They also recommend ongoing monitoring of  $R_t$  to help control a second wave of cases. The authors looked at the transmission intensity ( $R_t$ ) of COVID-19 both before and after Korean officials declared a public alert for the disease.  $R_t$  peaked at 2.85 in the days leading up to the public health alert.  $R_t$  began reducing in the week after the public alert was declared and remained below one (an  $R_t$  below one indicates the epidemic is under control) through the end of the study period. Strict social distancing measures implemented on March 12 are associated with further reducing  $R_t$  by 9.28%. The authors state these reductions in  $R_t$  indicate the effect of non-pharmaceutical interventions implemented over time.

A [study Nonpharmaceutical interventions \(NPI\)](#) (MMWR, June 2) found that implementation of NPIs during Basic Military Training (BMT) at Lackland Air Force Base in San Antonio, including screening, testing, administrative measures, quarantine, isolation, and source control, limited transmission of symptomatic COVID-19 and ensured continuity of critical activities. Despite the communal nature of BMT, which has historically been conducive to outbreaks of respiratory pathogens, the spread of COVID-19 among trainees in BMT appears to have been low: all cases detected occurred during an initial 14-day arrival quarantine, with no cases identified in the larger training population. Factors contributing to lack of transmission likely included early implementation of mitigation strategies before the first case occurred, mobilization of nonmedical personnel to assist in symptom screening and flexibility of the military training staff to adjustments in programs and schedules.

### **Mental health and wellness among frontline health workers**

A [framework developed by Rush University Medical Center in Chicago](#) (NEJM Catalyst, June 1) provides actionable strategies to potentially prevent and address mental illness for HCWs caused or exacerbated by the effects of COVID-19 on the healthcare system. The framework consists of four key strategies to promote mental wellness among front-line healthcare workers: supportive check-ups through rounding, consultation services,

immediate mental health evaluations for individuals in crisis and a resource hub and rooms for healthcare workers to relax and decompress.

A [study of young physicians in China before and during the COVID-19 pandemic](#)

(JAMA, June 1) provides further evidence of the COVID-19 pandemic considerably affecting mental health and well being of front-line healthcare workers, specifically young physicians in this case. Physicians in training from 12 hospitals in Shanghai, China who enrolled in the prospective Intern Health Study were surveyed beginning in August 2019, recurring three months into training (before the COVID-19 pandemic began), and again six months into training (amid the COVID-19 pandemic). The eventual results were compared to the results of the same survey from 2018-2019. The authors found that in the 2019-2020 cohort of physicians, daily mood scores decreased statistically significantly from quarter one to quarter two, while scores for symptoms of depression, scores for symptoms of anxiety, fear of violence and observation of violence from patients or their families all increased statistically significantly in the same time period. For the 2018-2019 cohort, there were no statistically significant changes in any of the indicators mentioned above, leading the authors to conclude that the COVID-19 pandemic is both directly and indirectly responsible for these changes in physician mood and mental health symptoms. The authors determined that it is imperative to continue to monitor mental health outcomes of front- and second-line HCWs during the COVID-19 pandemic to prevent potential long-term mental illness and other adverse health outcomes for these individuals.

**Summary:** A [study of mental health outcomes among healthcare workers in Italy](#)

(JAMA, May 28) confirm a substantial proportion of mental health issues, particularly among young women and frontline HCWs. This warrants further monitoring and specific interventions for HCWs throughout the COVID-19 pandemic to prevent long-term mental health-related disabilities. A total of 681 respondents (49.38%) experienced posttraumatic stress syndrome; 341 (24.73%), symptoms of depression; 273 (19.80%), symptoms of anxiety; 114 (8.27%), insomnia; and 302 (21.90%), high perceived stress.

## **COVID-19 secondary attack rate**

A [study of the secondary attack rate from different types of contact with people that are pre-symptomatic for COVID-19 in Guangzhou, China](#)

(CDC, May 26) found that household isolation for asymptomatic cases should be cautiously implemented given the high rate of secondary infection for household members. Furthermore, the low transmission rate in the cohort potentially highlights the effects of active surveillance, centralized quarantine and forceful social distancing strategies according to the authors.