

I hope everyone had a great weekend

The first article documents the consequences of delaying care during the pandemic. The second article raises concerns for silent myocarditis in athletes who have recovered from COVID-19 to guide safe competitive sports participation. The third article looks at a transmission of SARS-CoV-2 in children aged 0 to 19 years in childcare facilities and schools after their reopening in May 2020 in Germany. Investigation of child-to-child transmission in schools and childcare facilities was uncommon and not the primary cause of SARS-CoV-2 infection in most children. The next publication reports on the transmission dynamics of COVID-19 outbreaks associated with childcare facilities in Utah. The NPI strategies were not consistently implemented across the 3 sites. The last article is what I think was a successful strategy for overnight camps in Maine. Their approach was very different from the report from an overnight camp in Georgia reported in July. Their approach may be the model for opening overnight camps in 2021—both NPI and testing.

Ed

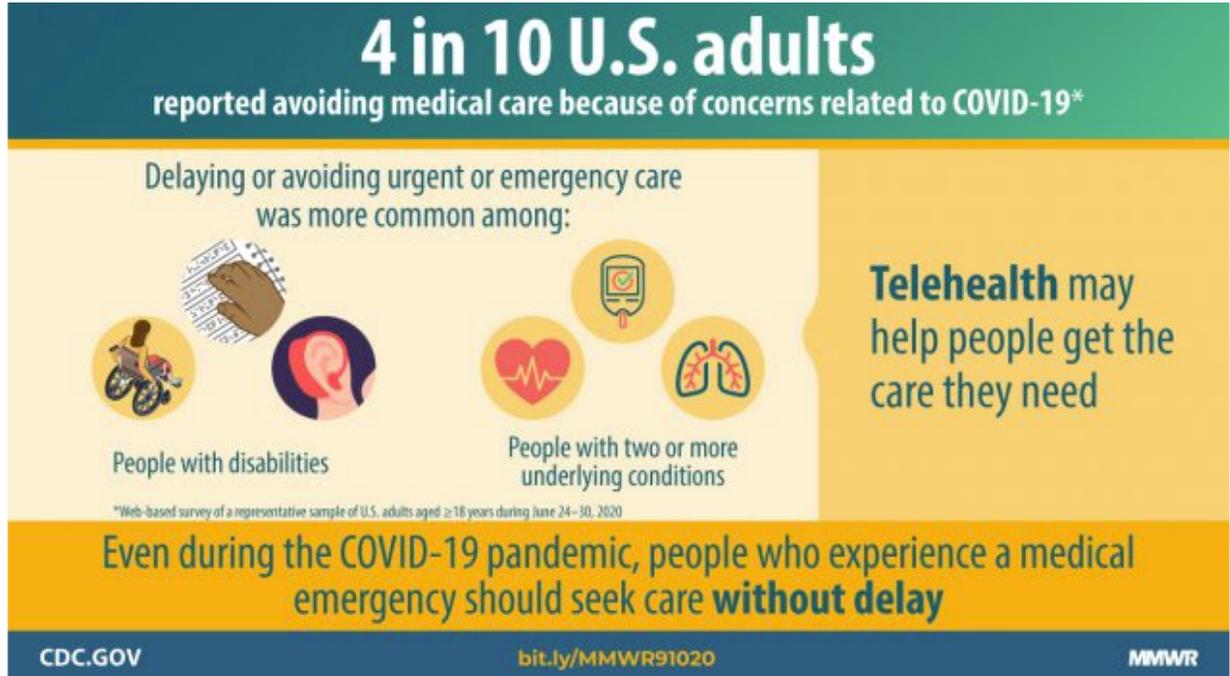
### **Delay or Avoidance of Medical Care Because of COVID-19–Related Concerns — United States, June 2020**

MMWR 2020; 69:1250–1257

During June 24–30, 2020, a total of 5,412 (54.7%) of 9,896 eligible adults completed web-based COVID-19 Outbreak Public Evaluation Initiative surveys. Respondents were informed of the study purposes and provided electronic consent before commencement, and investigators received anonymized responses. The 5,412 participants included 3,683 (68.1%) first-time respondents and 1,729 (31.9%) persons who had completed a related survey during April 2–8, 2020. Among the 5,412 participants, 4,975 (91.9%) provided complete data for all variables in this analysis. Quota sampling and survey weighting were employed to improve cohort representativeness of the U.S. population by gender, age, and race/ethnicity.

As of June 30, 2020, an estimated 41% of U.S. adults reported having delayed or avoided medical care during the pandemic because of concerns about COVID-19, including 12% who reported having avoided urgent or emergency care. These findings align with other publications that hospital admissions, overall ED visits, and the number of ED visits for heart attack, stroke, and hyperglycemic crisis have declined since the start of the pandemic [reviewed in several of prior Daily Briefings], and that excess deaths directly or indirectly related to COVID-19 have increased in 2020 versus prior years. Nearly one third of adult respondents reported having delayed or avoided routine medical care, which might reflect adherence to community mitigation efforts such as stay-at-home orders, temporary closures of health facilities, or additional factors.

Increased prevalence of reported urgent or emergency care avoidance among Black adults and Hispanic adults compared with White adults are especially concerning given increased COVID-19-associated mortality among Black adults and Hispanic adults. In the United States, the age-adjusted COVID-19 hospitalization rates are approximately five times higher among Black persons and four times higher among Hispanic persons than are those among White persons. Factors contributing to racial and ethnic disparities in SARS-CoV-2 exposure, illness, and mortality might include long-standing structural inequities including prevalence and underlying medical conditions, health insurance status, and health care access and utilization, as well as work and living circumstances, including use of public transportation and essential worker status.



**Comments:** This report has several weaknesses. First, self-reported data are subject to recall, response, and social desirability biases. Second, the survey did not assess reasons for COVID-19–associated care avoidance, such as adherence to public health recommendations; closure of health care provider facilities; reduced availability of public transportation; fear of exposure to infection with SARS-CoV-2; or availability, accessibility, and acceptance or recognition of telemedicine as a means of providing care in lieu of in-person. However, the findings are consistent with reported declines in hospital admissions and ED visits during the pandemic. Understanding factors associated with medical care avoidance can help target care delivery approaches and communication efforts to encourage persons to safely seek timely routine, urgent, and emergency care to improve outcomes.

### Cardiovascular Magnetic Resonance Findings in Competitive Athletes Recovering From COVID-19 Infection

JAMA Cardiol published online September 11, 2020

Myocarditis is a significant cause of sudden cardiac death in competitive athletes and can occur with normal ventricular function. Recent studies have raised concerns of myocardial inflammation after recovery from COVID-19, even in asymptomatic or mildly symptomatic patients. This study was to investigate the use of cardiac magnetic resonance (CMR) imaging, electrocardiography, and echocardiography and measured serum troponin I levels in competitive athletes recovered from COVID-19 referred to the sports medicine clinic 11 to 53 days after testing positive to detect myocardial inflammation that would identify high-risk athletes for return to competitive play who might be at risk for sudden cardiac deaths.

Four of 26 competitive athletes (15%) who had recovered from mild or asymptomatic COVID-19 had evidence suggestive of myocarditis, or inflammation of the heart muscle on CMR imaging. Twelve athletes (26.9%) reported having only mild symptoms during their COVID-19 infections, including sore throat, shortness of breath, muscle pain, and fever. The remainder were asymptomatic.

While no diagnostic ST/T wave changes were evident, and ventricular volumes and function and serum troponin I levels were normal in all athletes, four male athletes showed signs of myocardial edema and injury on CMR. Two of them had signs of pericardial effusion. Eight athletes had gadolinium enhancement on CMR without T2 sequence elevation, suggesting myocarditis. Athletes with signs of myocarditis had prolonged T2 sequences compared with those without signs (59 vs 51 milliseconds), suggesting dysfunction. Two of the four affected athletes had had only mild shortness of breath, and the remaining two reported no symptoms.

**Comment:** While long-term follow-up and large studies, including control populations, are required to understand CMR change in competitive athletes, CMR may provide an excellent risk-stratification assessment for myocarditis in athletes who have recovered from COVID-19 to guide safe competitive sports participation.

**Transmission of SARS-CoV-2 in Children Aged 0 To 19 Years in Childcare Facilities and Schools After Their Reopening in May 2020, Baden-Württemberg, Germany**

Eurosurveillance published September 10, 2020

To gain a better understanding of SARS-CoV-2 transmission in schools and childcare facilities in Germany after they reopened in May, the investigators compiled and analyzed data from infected children (ages 0 to 19 years) who had been to those schools and childcare facilities from May 25 to Aug 5. Table 1 outlines mitigation measures implemented.

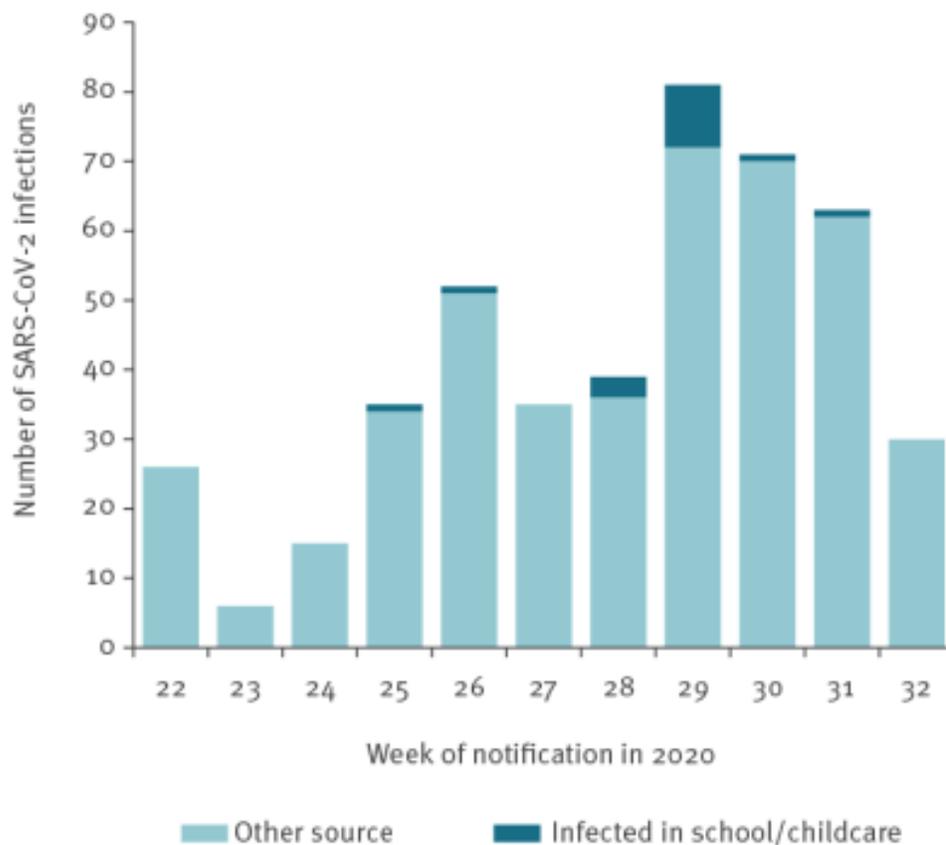
**Table 1.** Infection control measures for the prevention of SARS-CoV-2 transmission in schools and childcare facilities in Baden-Württemberg, Germany, May–July 2020

Infection control measure	Childcare facilities	Primary school	Secondary school <sup>a</sup>
Group sizes reduced by 50%	Yes	Yes	Yes
Cleaning of contact surfaces	Yes	Yes	Yes
Regular and interim ventilation of rooms	Yes	Yes	Yes
Exclusion of sick children	Yes	Yes	Yes
Individual hygiene (hand hygiene, cough etiquette)	Yes	Yes	Yes
Face mask in classroom	No	No	No
Face mask outside classroom	No	Some	Some
Physical distancing between children	No	No	Yes
Cancelling singing and use of wind instruments during music lesson	Some	Yes	Yes
Cancelling physical education	NA	Yes	Yes

In total, 557 cases were reported during the study period (representing 17.9% of all 3,104 reported cases in the state), and information in school attendance was available for 453. Of these cases, 137 attended school or childcare facilities for at least 1 day in their infectious period, while 316 were at home during their entire infectious period.

More than 2,300 nasopharyngeal swabs were taken from the close contacts (teachers and students) of the 137 index cases, and from close contacts of secondary cases. Overall, 6 of the 137 index cases were found to have infected 11 additional pupils, and no secondary infections could be detected for the remaining cases, despite extensive contact tracing and swabbing of contacts. All remaining cases with information on school and childcare attendance were caused by other sources. Based on these data, the researchers estimate one secondary case per roughly 25 infectious school days.

**Figure 2.** Weekly number of notified SARS-CoV-2 infections in the age group 0–19 years by source of infection, Baden-Württemberg, Germany, 25 May 2020–2 August 2020 (n = 453)

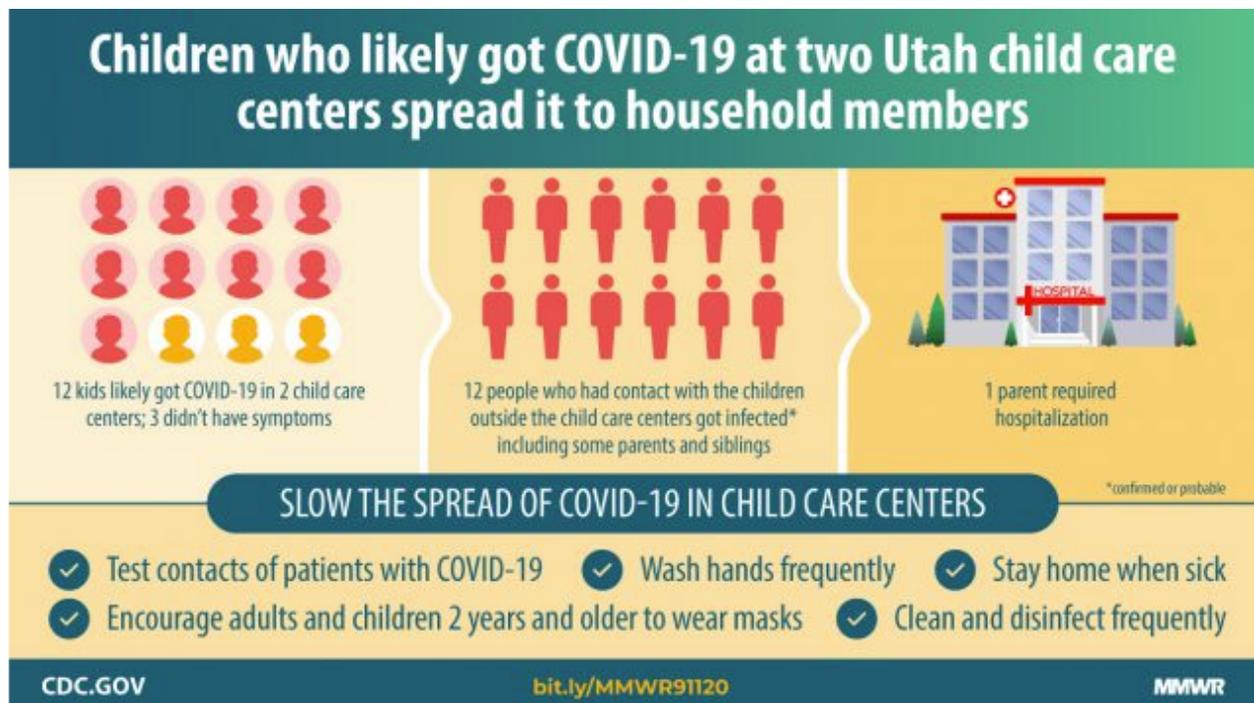


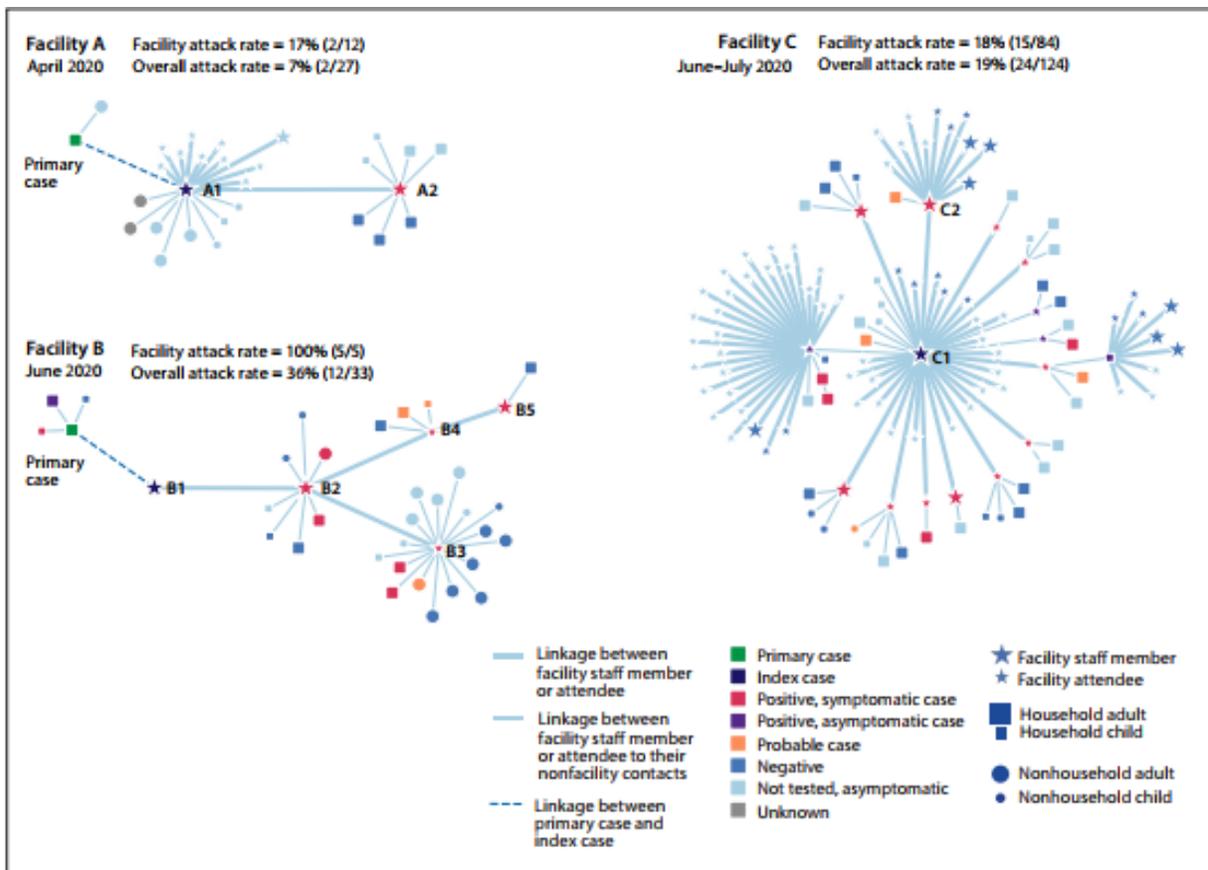
**Comment:** In this investigation child-to-child transmission in schools and childcare facilities is uncommon and not the primary cause of SARS-CoV-2 infection in most children. This is encouraging. One difference between Germany and US is that children did not routinely wear masks in the classrooms or practice social distancing, but class sizes were reduced by 50% and strict ventilation of classrooms was routinely practice. The authors site a report from Israel which showed a large outbreak in over-crowded schools where face-mask usage had been discontinued due to a heat wave. Moving forward they recommend face masks should be used in schools, both, inside and outside of classrooms.

## Transmission Dynamics of COVID-19 Outbreaks Associated with Child Care Facilities — Salt Lake City, Utah, April–July 2020

MMWR published online September 11, 2020

To better understand transmission from young children, contact tracing data collected from three COVID-19 outbreaks in childcare facilities in Salt Lake County, Utah, during April 1–July 10, 2020, were retrospectively reviewed to explore attack rates and transmission patterns. A total of 184 persons, including 110 (60%) children had a known epidemiologic link to one of these three facilities. Among these persons, 31 confirmed COVID-19 cases occurred; 13 (42%) in children. Among pediatric patients with facility-associated confirmed COVID-19, all had mild or no symptoms. Twelve children acquired COVID-19 in childcare facilities. Transmission was documented from these children to at least 12 (26%) of 46 non-facility contacts (confirmed or probable cases). One parent was hospitalized. Transmission was observed from two of three children with confirmed, asymptomatic COVID-19. Detailed contact tracing data show that children can play a role in transmission from childcare settings to household contacts.





**Comment:** In reviewing the mitigation that was in place, facility A&B only required masks for staff members and facility C masks were not required at all. To help control the spread of COVID-19 [CDC guidance], the use of masks is recommended for persons aged  $\geq 2$  years. Although masks likely reduce the transmission risk, some children are too young to wear masks but can transmit SARS-CoV-2, as was seen in facility B when a child aged 8 months transmitted SARS-CoV-2 to both parents. In these three outbreaks, 54% of the cases linked to the facilities occurred in children. Transmission likely occurred from children with confirmed COVID-19 in a childcare facility to 25% of their non-facility contacts. Testing criteria initially included only persons with typical COVID-19 signs and symptoms of fever, cough, and shortness of breath, which could have led to an underestimate of cases and transmission. In addition, the source for the outbreak at facility C was unknown, it is possible that cases associated with facility C resulted from transmission outside the facility. Having SARS-CoV-2 testing available, timely results, and testing of contacts of patients in childcare settings regardless of symptoms can help prevent transmission and provide a better understanding of the role played by children in transmission. Findings that staff members worked while their household contacts were ill with COVID-19-compatible symptoms support CDC guidance for childcare programs recommendations that staff members and attendees quarantine and seek testing if household members are symptomatic. This guidance also recommends the use of face masks, particularly among staff members and children  $>2$ , especially when children are too young to wear masks, along with hand hygiene, frequent cleaning and disinfecting of high-touch surfaces, and staying home when ill to reduce SARS-CoV-2 transmission.

## Preventing and Mitigating SARS-CoV-2 Transmission — Four Overnight Camps, Maine, June–August 2020

MMWR published online August 26, 2020

The Maine Department of Health and Human Services (DHHS) licenses Maine summer camps, which serve 20,000–25,000 children from the United States and other countries each year. To prevent, identify, and mitigate spread of COVID-19, four Maine overnight summer camps with similar size, session duration, and camper and staff member characteristics opened with uniform NPIs, including pre-camp quarantine, pre- and post-arrival testing and symptom screening, cohorting and physical distancing between cohorts. In addition, camps required use of face coverings, enhanced hygiene measures, enhanced cleaning and disinfecting, maximal outdoor programming, and early and rapid identification of infection and isolation. All attendees were instructed to quarantine with their family unit (unless parents were essential workers) for 10–14 days before camp arrival. No camp restricted attendance from any part of the country or globally but did advise on mode of travel (preferred mode was direct to camp in family vehicle; riders on camp buses wore face coverings, with physical distancing monitored by staff members; and air travelers were instructed to wear face coverings while traveling).

Approximately 5–7 days before camp arrival, 1,010 of the 1,022 attendees were tested for SARS-CoV-2 by PCR at the attendees' primary care providers or at commercial laboratories. Camps mandated submission of test results before camp entry. To address potential late exposures or exposures during travel, all camps quarantined attendees by cohort for 14 days after camp arrival, regardless of testing or screening results. After camp arrival, campers and staff members were screened by health staff members at least daily (at one camp twice daily) for fever (temperature >100.4°F [38°C]) with infrared thermometers and through direct questioning for symptoms consistent with COVID-19. Programmatic changes to usual camp activities included limiting indoor activities that mixed cohorts, staggering dining periods or dining outdoors, cohort-specific programming, and limiting sports to those that allowed for physical distancing between staff members and cohorts. PCR testing was repeated a mean of 4.1 to 9.1 days after camp arrival for 1,006 attendees, with results available approximately 2–3 days later.

Three asymptomatic attendees at three different camps (two staff members and one camper) (0.3%) received positive SARS-CoV-2 test results after arrival at camp and were rapidly isolated and their cohorts (sized five, six, and 30 attendees) quarantined for 14 days per state and CDC guidance. Both asymptomatic staff members isolated for 10 days and received negative test results twice 24 hours apart at the end of their isolation. The asymptomatic camper was isolated on day 3 after testing when positive test results were received. The camper was retested on days 4 and 5 after a positive test result and released from isolation on day 8 after a second negative result was received (per CDC isolation termination guidelines at that time). The 30 members of the camper's cohort were retested on days 3 and 4 after the asymptomatic camper's initial positive test result. No cohort members received a positive test result, and all were released from quarantine on day 8 after the asymptomatic camper's positive test result. No secondary transmission was identified.

**Comment:** These findings demonstrate that multilayered public health prevention and mitigation strategies in an overnight camp setting can identify and prevent SARS-CoV-2 transmission, regardless of the prevalence of SARS-CoV-2 transmission in the domestic and international communities from which campers and staff members are arriving. Prearrival quarantine and testing, access to timely repeat test results, cohorting, and the ability to isolate and quarantine during camp allowed prevention and early identification of infection that might not be practicable or feasible in all settings. The degree of adherence to NPIs was not measured. They also did not test all campers and staff members at the end of sessions which might have missed asymptomatic transmission. Nonetheless, these findings have

important implications for the successful implementation of COVID-19 mitigation strategies in other overnight camps in 2021.