

COVID-19 Outbreak Associated with a 10-Day Motorcycle Rally in a Neighboring State — Minnesota, August–September 2020

Melanie J. Firestone, PhD^{1,2}; Haley Wienkes, MPH¹; Jacob Garfin¹; Xiong Wang, DVM, PhD¹; Kelley Vilen, MPH¹; Kirk E. Smith, DVM, PhD¹; Stacy Holzbauer, DVM^{1,3}; Matthew Plumb, MS¹; Kelly Pung¹; Carlota Medus, PhD¹; Joseph D. Yao, MD⁴; Matthew J. Binnicker, PhD⁴; Andrew C. Nelson, MD, PhD⁵; Sophia Yohe, MD⁵; Kathryn Como-Sabetti, MPH¹; Kris Ehresmann, MPH¹; Ruth Lynfield, MD¹; Richard Danila,

On November 20, 2020, this report was posted as an MMWR Early Release on the MMWR website (<https://www.cdc.gov/mmwr>).

During August 7–16, 2020, a motorcycle rally was held in western South Dakota that attracted approximately 460,000 persons from across the United States to numerous indoor and outdoor events over a 10-day period. During August–September 2020, the Minnesota Department of Health (MDH) investigated a coronavirus disease 2019 (COVID-19) outbreak associated with the rally in Minnesota residents. Fifty-one primary event-associated cases were identified, and 35 secondary or tertiary cases occurred among household, social, and workplace contacts, for a total of 86 cases; four patients were hospitalized, and one died. Approximately one third (34%) of 87 counties in Minnesota had at least one primary, secondary, or tertiary case associated with this rally. Genomic sequencing supported the associations with the motorcycle rally. These findings support current recommendations for mask use, physical distancing, reducing the number of attendees at gatherings, isolation for patients with COVID-19, and quarantine for close contacts to slow the spread of SARS-CoV-2 (1). Furthermore, although these findings did not capture the impact of the motorcycle rally on residents of other states, they demonstrate the rationale for consistent mitigation measures across states.

Investigation and Findings

On August 21, 2020, MDH identified confirmed COVID-19 cases in persons who reported attending the motorcycle rally in the neighboring state of South Dakota. A primary, event-associated case was defined as an illness in a person who reported attending the rally or who traveled to western South Dakota by motorcycle during August 7–16 and who had symptom onset or specimen collection before August 30

through 10 days after symptom onset).^{*} To assess exposure, interviews included questions about travel and being in specific settings, such as bars or restaurants, schools, health facilities, or events or social gatherings in the 14 days before symptom onset. During August–September 2020, MDH local health department staff members interviewed >80 patients with a confirmed SARS-CoV-2 infection.

Secondary and tertiary cases were identified from interview data. Confirmed secondary cases were defined as laboratory-confirmed infections in persons who did not attend the rally but who received SARS-CoV-2–positive test results after having contact with a person who had a primary case during their infectious period. Tertiary cases were laboratory-confirmed cases in persons who had contact with a person who had a secondary case during their infectious period. Likely event-associated secondary cases were confirmed infections in patients who had contact with a person who had a primary case during their infectious period and had attended the motorcycle rally but were not tested. Likely event-associated tertiary cases were confirmed infections in patients who had contact with a person who had a likely event-associated secondary case during their infectious period.

To investigate genomic similarity among COVID-19 cases, available SARS-CoV-2 RNA-positive clinical specimens were obtained from clinical laboratories, and whole genome sequencing was conducted at the MDH Public Health Laboratory on 38 specimens using previously described methods (2). Phylogenetic relationships, including discrete clustering of viral whole genome sequences, were inferred on nucleotide differences via IQ-TREE[†] using general reversible substitution models (3) as a part of the Nextstrain workflow (4). This activity was reviewed by CDC and was conducted consistent with applicable federal law and CDC policy.