[Identifying and Interrupting Superspreading Events—Implications for Control of Severe Acute Respiratory Syndrome Coronavirus 2](#)

Bottom Line: Superspreading events (SSEs) fuel outbreaks of infectious disease. To prevent SSEs, communities should develop and implement protocols for rapid identification, diagnosis, and isolation of patients; effective infection prevention and control practices in healthcare facilities; and timely and relevant risk communication to the public.

Details:
A superspreading event (SSE) occurs when, during a disease outbreak, there is a single patient or small group that spreads infection to a large population. SSEs occurred during the outbreak of SARS and MERS, and have also driven the spread of COVID-19. Factors that cause SSEs include asymptomatic patients spreading infection, crowded environments, non-adherence to public health guidance, and delayed diagnosis of symptomatic patients. Prevention and mitigation of SSEs depends on recognizing these events after they occur, and implementing specific measures to avoid future events. Healthcare facilities especially must adhere to rapid identification and isolation of all potentially infectious patients. Social distancing and risk communication can help prevent SSEs in the community.

Key Takeaways:
- Disease outbreaks are fueled by superspreading events
- Delay in diagnosis and failure to rapidly implement isolation and response measures have contributed to previous SSEs
- Surveillance and focused response efforts should prioritize environments and settings at high risk for SSEs (hospitals, nursing homes, prisons, homeless shelters)

[Correlation of Chest CT and RT-PCR Testing in Coronavirus Disease 2019 (COVID-19) in China: A Report of 1014 Cases | Radiology](#)

Bottom Line: In the US, the primary way to diagnose COVID-19 is by analyzing viral swab samples using a technique called reverse transcription polymerase chain reaction (RT-PCR). Chest CT scans may be more sensitive and faster than RT-PCR in diagnosing COVID-19.

Details: The report analyzes and compares two tests: throat swab RT-PCR and chest CT results for 1014 patients with suspected COVID-19 in Wuhan, China. In this study, throat swab tests were positive 59% of the time in patients with suspected COVID-19 infection, whereas chest CT was positive 88% of the time. Further, 81% of patients who had negative COVID-19 throat swabs but had positive chest CT scans were re-classified as highly likely or probable cases of COVID-19.

Key Takeaways:
- Chest CT scans have high sensitivity and may be faster in diagnosing COVID-19 than throat swab samples (Of note, in the US, nose swabs are the preferred testing method, not throat swabs).
- Chest CT should be considered a primary tool for rapid COVID-19 screening and assessment, especially in epidemic areas with high probability for the disease.

[COVID-19 in a Long-Term Care Facility — King County, Washington, February 27–March 9, 2020](#)

Bottom Line: People residing in long-term residential care facilities are particularly vulnerable to COVID-19 infections. Facilities should take proactive steps to prevent the introduction of COVID-19 among their residents and staff.

Details: This report discusses the spread of the COVID-19 outbreak in a long-term skilled nursing facility in King County, Washington. 129 COVID-19 cases were confirmed, including 81 out of the 130 residents who lived there. Over half of these infected residents were hospitalized, and 22 residents died.

Factors that likely contributed to the vulnerability of this facility include: 1) staff who worked while symptomatic; 2) staff who worked in multiple facilities and contributed to COVID-19 spread across locations; 3) inadequate familiarity or adherence to proper infection control and prevention measures; 4) insufficient supplies; and 5) delayed recognition of cases because of limited testing.

Key Takeaways:
- Long-term residential care facilities, as well as other places where large numbers of people live together such as shelters and jails, should proactively set up preventative measures to protect their residents and staff from COVID-19 infections. Such measures include:
    1. Regular symptom screening to promote early detection of infected persons
    2. Strengthening infection control measures and increasing staff training
    3. Social distancing and restricting visitation policies.
- Facilities need to be consistently equipped with sufficient infection control supplies, including alcohol-based hand sanitizer and masks.