

Responding to and Monitoring COVID-19 Exposures in Health Care Settings

Exposure Risk Assessment and Monitoring

MDH and health care organizations are cooperating to identify, manage, and monitor health care workers (HCW) with workplace exposure to persons with confirmed COVID-19 disease. This approach calls for timely identification of these persons who have contact with a coworker, patient, or long-term care resident beginning 48 hours before onset of symptoms. Then, a structured risk assessment is conducted, with individual employees receiving recommendations for health monitoring, voluntary quarantine, and social distancing, as relevant. Details on how to carry out HCW monitoring can be found in posted MDH guidelines,¹⁻³ and exposure risk categories are found in the Appendix of this document. This remains MDH's recommended approach at this time.

This targeted method to identify and exclude those who have had high-risk exposures should be conducted in parallel with efforts such as employee health screening, universal masking for source control, strict enforcement of ill-worker exclusion, and education covering infection prevention, appropriate PPE use, and social distancing in the workplace and community.

Data collected by MDH support the efforts to identify, assess, and exclude HCW with known exposures.

- Among monitored HCW who experienced medium- or high-risk exposures during March 6-April 20, 2020, 33% (411/1,237) developed fever or symptoms consistent with COVID-19 during the 14-day quarantine period. However by June 1, the total percentage of HCW who developed symptoms decreased to 25% (937/3772) possibly indicating the level of exposure may be decreasing as more PPE becomes available.
- On average, symptom onset occurs on day 6 after contact with the person having confirmed COVID-19. Considering the demonstrated danger of asymptomatic shedding of SARS-CoV-2, this finding highlights the importance of excluding HCW with known high-risk exposures before symptom onset.

Protecting HCW during Widespread Community Transmission

Widespread community transmission puts all HCW at some risk for exposure to COVID-19, whether in the workplace or in the community. As community transmission becomes more prevalent in Minnesota, it might become unmanageable for an individual health care organization to conduct contact tracing and risk assessment of all HCW potentially exposed to a patient, resident, or coworker with confirmed COVID-19. If facilities have exhausted all options to continue targeted contact identification and exclusion, they should strengthen efforts to identify recognized exposures (e.g., PPE breaches), institute monitoring of HCW fever and symptoms, and strictly deter HCW from working while ill (“presenteeism”)⁴.

Data collected by MDH support an increased emphasis on limiting close interactions among coworkers, using universal masking for source control, and robust health monitoring.

- As of April 21, the mean number of medium- or high-risk HCW exposures resulting from a confirmed COVID-19 interaction of HCW with coworkers is 3.6 persons. Following the recognition of these significant exposures and systemic efforts to reduce coworker interactions, the mean number of exposures decreased to 2.6 persons as of June 1.
- The mean number of medium- or high-risk HCW exposures resulting from a COVID-19 positive patient is 2.2 persons and from a positive congregate-care resident, 2.6, and has remained relatively constant throughout the response.

Best Practices for Health Care Facilities

- Institute universal masking of all HCW for source control. In light of current PPE limitations, universal masking could be instituted in a tiered, risk-based approach. If this approach is used, begin in areas with highest exposure risk (e.g., emergency departments, urgent care, and emergency medical services) and patient vulnerability (e.g., those in intensive care and immunocompromised persons). Universal masking is intended to protect both patients and employees from infected HCW who might shed virus into the environment before onset of symptoms. HCW should be reminded that universal masking does not excuse their working with signs or symptoms of illness, however mild.
- Institute use of eye protection (e.g., face shield, goggles) during all patient care encounters as a way to reduce COVID-19 exposure risk, now that SARS-CoV-2 is circulating. Eye protection is recommended for all routine outpatient, acute care, and long-term care encounters when PPE supplies allow. Use of all appropriate PPE can reduce the number of exposures for which exclusion from work is recommended.
- Institute active symptom monitoring facility-wide. Enforce policies preventing HCW from reporting to work while ill and mandate departure if symptoms develop mid-shift. Health care organizations

should institute policies to ensure that HCW feel financially and socially supported for taking sick leave.

- Develop social distancing policies that are enforced throughout the facility. Discourage congregating in work areas (e.g., nurse stations, work stations) and in recreation areas (e.g., break rooms, cafeterias).
- Enforce strict hand-hygiene policies throughout the facility. Utilize electronic surveillance or successful existing monitoring programs. Do not take this opportunity to institute new complex hand-hygiene programs.
- Dedicate staff to rigorous cleaning of high-touch areas (e.g., door knobs, computer terminals, phones, etc.).
- Ensure that all personnel performing aerosol-generating procedures have access to an N95 mask or PAPR. Follow extended-use or reuse guidance as outlined by CDC⁵.
- Investigate recognized exposures of high-risk (e.g., PPE breaches, exposures before diagnostic testing) to confirmed or suspected COVID-19 patient infections (see Appendix). Examine and report clusters of employee illness to identify concerning exposures and ongoing transmission risk (see reporting recommendations, below).
- Investigate recognized patient or resident exposures to positive HCW. Anyone with prolonged close contact (within 6 feet for at least 15 minutes) beginning 2 days after HCW's known exposure to a confirmed COVID-19 case or 2 days before specimen collection date is considered exposed. Notify patients or residents of the exposure situation according to facility protocols. Exposed patients or residents that are still admitted should be placed into Transmission-based Precautions if PPE allows and monitored for onset of COVID-19 until 14 days after their last exposure to the positive HCW.
- Ensure prompt notification of all HCW and responders that are involved in the care of a positive COVID-19 patient. Health care facilities, EMS and transporting agencies should develop communication plans to ensure other first responders such as police and fire departments are notified of any positive results.

Best Practices for Health Care Workers

- Observe the social responsibility of staying home while ill. Do not report to work if you have any signs consistent with COVID-19 (measured or subjective fever) or symptoms (e.g., cough, shortness of breath, sore throat, muscle aches, headache, loss of taste or smell). If you develop fever or respiratory symptoms at work, isolate yourself immediately and leave work, reporting the onset to your supervisor or occupational health services before departure.
- Adhere to strict hand hygiene at all times.
- Clean and disinfect high-contact personal items often (e.g. cell phone, computer keyboards, tablets, etc.).
- Practice social distancing whenever possible, including during breaks and meals.

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- If wearing a facemask for source control, wear at all times, including during non-patient encounters when social distancing is not possible.
- Report recognized coworker illness and PPE breaches when caring for a person with suspected or confirmed COVID-19 to your supervisor or occupational health services.

Recommended Incidents to Report to MDH

If they are no longer conducting contact tracing and risk assessment of all HCW potentially exposed to a person with confirmed COVID-19, health care organizations should report the following to MDH.

- Known exposures of high-risk.
- Clusters (≥ 2 cases) of COVID-19-like illness, including among:
 - HCW working in a single unit/ward/care team
 - Patients and/or HCW in a single unit or ward

Health care organizations are strongly encouraged to conduct COVID-19 testing for all HCW who have worked while ill.

References

1. [Potential Exposure to Patients with COVID-19 in Inpatient Settings including Emergency Departments \(ED\) Risk Assessment and Public Health Management of Health Care Personnel \(www.health.state.mn.us/diseases/coronavirus/hcp/inpatient.pdf\)](http://www.health.state.mn.us/diseases/coronavirus/hcp/inpatient.pdf)
2. [Potential Exposure to Patients with COVID-19 in Outpatient Settings excluding Emergency Departments \(ED\) Risk Assessment and Public Health Management of Health Care Personnel \(www.health.state.mn.us/diseases/coronavirus/hcp/outpatient.pdf\)](http://www.health.state.mn.us/diseases/coronavirus/hcp/outpatient.pdf)
3. [Potential Exposure to Residents with COVID-19 in Long-term Care, Nursing Home, and Assisted Living Settings Risk Assessment and Public Health Management of Health Care Personnel \(www.health.state.mn.us/diseases/coronavirus/hcp/ltcassess.pdf\)](http://www.health.state.mn.us/diseases/coronavirus/hcp/ltcassess.pdf)
4. [CDC: Interim U.S. Guidance for Risk Assessment and Work Restrictions for Healthcare Personnel with Potential Exposure to COVID-19 \(www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html\)](https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html)
5. [CDC: Strategies to Optimize the Supply of PPE and Equipment during Shortages \(www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html\)](https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html)
6. [CDC: Clinical Questions about COVID-19: Questions and Answers Infection Control \(www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html#Infection-Control\)](https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html#Infection-Control)

Appendix: Exposure Risk Assessment

Patient or Resident Contact

Risk level	Risk level is defined by any of the following situations involving PATIENT/RESIDENT contact.
Low Risk	HCW did not have prolonged close contact* with patient/resident: <input type="checkbox"/> Regardless of PPE HCW was wearing
	HCW had prolonged close contact* with patient/resident: <input type="checkbox"/> HCW wearing all recommended PPE and adhering to all recommended infection control practices. <input type="checkbox"/> HCW wearing surgical facemask but no eye protection while positive patient or resident is wearing surgical facemask or alternative/cloth mask <input type="checkbox"/> HCW wearing a surgical facemask and eye protection, regardless of gown and gloves
	HCW present when aerosol-generating procedure was performed: <input type="checkbox"/> HCW wearing a respirator, eye protection, gown and gloves
High Risk	HCW had prolonged close contact* with patient/resident: <input type="checkbox"/> HCW not wearing surgical facemask or respirator. <input type="checkbox"/> HCW not wearing eye protection and positive patient or resident is not wearing a surgical facemask or alternative/cloth mask. <input type="checkbox"/> HCW had sustained breach in PPE (eye and/or respiratory protection) for ≥ 15 minutes or had unprotected direct contact with excretion or secretions from positive patient or resident without wearing PPE to prevent unprotected contact
	HCW present when aerosol-generating procedure was performed: <input type="checkbox"/> HCW not wearing all recommended PPE (respirator, eye protection, gown and gloves)

Prolonged close contact is defined as being within 6ft for ≥ 15 minutes cumulatively during a shift **OR having unprotected direct contact with secretions or excretions of a person with confirmed COVID-19 infection.*

Coworker Contact

Risk level	Risk level is defined by any of the following situations involving COWORKER contact.
Low Risk	<input type="checkbox"/> Present in the same indoor environment but did not have prolonged close contact*
	<p>HCW had prolonged close contact* with positive coworker:</p> <input type="checkbox"/> HCW wearing surgical facemask and eye protection, regardless of PPE worn by positive coworker <input type="checkbox"/> HCW wearing surgical facemask but no eye protection while positive coworker is wearing surgical facemask or alternative/cloth mask
High Risk	<input type="checkbox"/> Direct contact with infectious secretions or excretions of positive HCW (e.g., being coughed on) without wearing PPE to prevent direct, unprotected contact
	<p>HCW had prolonged close contact* with positive coworker:</p> <input type="checkbox"/> HCW not wearing surgical facemask, regardless of PPE worn by positive coworker <input type="checkbox"/> HCW wearing surgical facemask but no eye protection and positive coworker is not wearing surgical facemask or alternative/cloth mask

Prolonged close contact is defined as being within 6ft for ≥15 minutes cumulatively during a shift **OR having unprotected direct contact with secretions or excretions of a person with confirmed COVID-19 infection.*



Minnesota Department of Health | health.mn.gov | 651-201-5000
 625 Robert Street North PO Box 64975, St. Paul, MN 55164-0975

Contact health.communications@state.mn.us to request an alternate format.

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