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

INTERIM GUIDANCE AS OF APRIL 21, 2020

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, 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 medium- and 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.
- 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 medium- or 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.
- The mean number of medium- or high-risk HCW exposures resulting from a COVID-19 positive patient is 2.1 persons and from a positive congregate-care resident, 3.1.
- People with confirmed COVID-19 disease in Minnesota have shown varied signs and symptoms, including measured fever ≥100.4°F (59%), subjective fever (59%), cough (76%), muscle aches (60%), headache (60%), chills (56%), congestion (41%), loss of taste (43%), loss of smell (39%), shortness of breath (45%), sore throat (37%), diarrhea (31%), nausea/vomiting (25%).

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 HCWs from reporting to work while ill and mandate departure if symptoms develop mid-shift. Health care organizations should institute policies to ensure that HCWs 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.).

1 Data on signs and symptoms, except loss of taste and smell, have been collected since the first MN COVID-19 case was detected on March 6. Loss of taste and smell were added to case reporting on March 24. Where available, data on these symptoms were added retrospectively.
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 CDC\(^5\).

Investigate recognized exposures of medium or 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).

**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.
- 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.

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**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.

1. Known exposures of medium and high risk.
2. 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


## Appendix: Exposure Risk Assessment

### HCW Contact with COVID-19 Positive Patient or Resident

<table>
<thead>
<tr>
<th>Risk level</th>
<th>Risk level is defined by any of the following situations involving PATIENT/RESIDENT contact.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No Identifiable Risk</strong></td>
<td>Regardless of PPE, HCW who walk by patient or have no direct contact with patient or their secretions/excretions and no entry into the patient room.</td>
</tr>
<tr>
<td><strong>Low Risk</strong></td>
<td>HCW wearing all recommended PPE and adhering to all recommended infection control practices.</td>
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<tr>
<td></td>
<td>HCW not using all recommended PPE who have only brief interactions with a patient, regardless of whether patient was wearing a facemask.</td>
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<tr>
<td></td>
<td>Examples of brief interactions include brief conversations at triage desk; briefly entering patient room without direct contact with the patient or patient’s secretions/excretions; or entering patient room immediately after the patient is discharged.</td>
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<tr>
<td></td>
<td><strong>If patient WAS wearing facemask:</strong></td>
</tr>
<tr>
<td></td>
<td>1. HCW wearing all recommended PPE (except a facemask instead of respirator).</td>
</tr>
<tr>
<td></td>
<td>2. HCW wearing all recommended PPE but not wearing gown or gloves AND HCW did not have extensive body contact with patient (e.g., rolling the patient).</td>
</tr>
<tr>
<td></td>
<td>3. HCW wearing all recommended PPE but not wearing eye protection.</td>
</tr>
<tr>
<td></td>
<td><strong>If patient WAS NOT wearing a facemask:</strong></td>
</tr>
<tr>
<td></td>
<td>1. HCW wearing all recommended PPE (except wearing a facemask instead of a respirator) AND aerosol-generating procedures (see description above) were not performed while HCW present.</td>
</tr>
<tr>
<td></td>
<td>2. HCW wearing all recommended PPE but not wearing gown or gloves AND HCW did not have extensive body contact with patient (e.g., rolling the patient) AND aerosol-generating procedures (description above) NOT performed while HCW present.</td>
</tr>
<tr>
<td><strong>Medium Risk</strong></td>
<td><strong>If patient WAS wearing a facemask:</strong></td>
</tr>
<tr>
<td></td>
<td>1. HCW wearing all recommended PPE but not wearing gown or gloves AND HCW had extensive body contact with the patient (e.g., rolling the patient).</td>
</tr>
<tr>
<td></td>
<td>2. HCW not wearing facemask or respirator.</td>
</tr>
<tr>
<td></td>
<td>3. HCW not wearing any PPE.</td>
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</tbody>
</table>
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#### Risk level

**Medium Risk (cont.)**

- If patient WAS NOT wearing a facemask:
  - HCW wearing all recommended PPE (except wearing a facemask instead of a respirator) **AND** an aerosol-generating procedure (see description above) performed while HCW present
  - HCW wearing all recommended PPE but not wearing gown or gloves **AND** HCW had extensive body contact with the patient (e.g., rolling the patient) **OR** an aerosol-generating procedure (see description above) performed while HCW present
  - HCW wearing all recommended PPE but not wearing eye protection **AND** aerosol-generating procedures (see description above) **WERE NOT** performed while HCW present

- **High Risk**

  - If patient WAS NOT wearing a facemask:
    - HCW wearing all recommended PPE but not wearing eye protection **AND** an aerosol-generating procedure (see description above) performed while HCW present
    - HCW wearing all recommended PPE but not wearing a facemask or respirator
    - HCW not wearing any PPE

#### HCW Contact with COVID-19 Positive Coworker

<table>
<thead>
<tr>
<th>Risk level</th>
<th>Risk level is defined by any of the following situations involving COWORKER contact.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No Identifiable Risk</strong></td>
<td>- Interactions with COVID-19-positive HCW that don’t meet high-, medium-, or low-risk conditions, such as walking by the COVID-19-positive HCW or staying briefly (&lt;10 minutes) in the same room</td>
</tr>
<tr>
<td><strong>Low Risk</strong></td>
<td>- Present in the same indoor environment but not within 6 feet for ≥10 minutes&lt;br&gt; - Close contact (&lt;6 feet) with the COVID-19-positive HCW for prolonged period (≥10 minutes) while both HCW are wearing facemasks <strong>OR</strong> while only the positive HCW is wearing a facemask</td>
</tr>
<tr>
<td><strong>Medium Risk</strong></td>
<td>- Close contact (&lt;6 feet) with the COVID-19 positive HCW for prolonged period (≥10 minutes) while neither HCW is wearing facemask&lt;br&gt; - Close contact (&lt;6 feet) with the COVID-19 positive HCW for prolonged period (≥10 minutes) while positive HCW is not wearing facemask&lt;br&gt; - Direct contact with infectious secretions of a COVID-19-positive person (e.g., being coughed on)</td>
</tr>
<tr>
<td><strong>High Risk</strong></td>
<td>- There are no HCW-HCW exposures considered to be high-risk</td>
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</tbody>
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