1. Introduction

1.1 Background

Health-care workers (HCWs) are a vulnerable population for coronavirus disease 2019 (COVID-19), and their protection is a priority to maintain health-care provision for the public. While data vary, reports from the United States of America and Italy show that up to 20% of HCWs in the worst-affected regions have been found to have COVID-19.\textsuperscript{1,2} Retrospective studies from China found that 3–4% of HCWs in China were infected, including 23 HCWs who died.\textsuperscript{3,4}

1.2 Purpose

This document provides an interim decision-making tool to prevent transmission of health-care-associated infections. By identifying and removing at-risk individuals from the health-care setting, this protects other HCWs and helps to maintain an adequate workforce. It addresses risk assessment and management of HCWs with exposure to suspected or confirmed COVID-19 cases within the health-care setting.

This interim guidance will be revised as more information becomes available and will be updated with recommendations on when HCWs can safely return to the workplace following a high-risk exposure event, or following suspected or confirmed COVID-19.

1.3 Target audience

Ministries/departments of health, health-care facility administrators, occupational health clinic staff and other HCWs involved in response planning for COVID-19.

2. Risk assessment and management of health-care workers with exposure to suspected or confirmed COVID-19 cases during their work

2.1 Assessment of activities and exposure advice

Figure 1 provides a two-step process for determining exposure risk and management of HCWs in the context of health-care settings:

Step 1. Assess the type of activity in which the HCW is engaged.

Step 2. Determine the level of risk based on exposure and advise accordingly:

- Low-risk event
- High-risk event.

The figure includes questions to ask the HCWs and corresponding measures to take based on their answers.

2.2 Symptoms of COVID-19

HCWs should be mindful of the following symptoms of COVID-19:

- Fever or chills
- Shortness of breath
- Cough
- Sore throat
- Nasal congestion/runny nose
- Headache
- Muscle and joint aches and pains
- Lethargy
- Acute confusion
- Changes to smell/taste
- Diarrhoea.
Figure 1: Risk assessment and management of HCWs exposed to suspected or confirmed COVID-19 cases

<table>
<thead>
<tr>
<th>Assessing Activity</th>
<th>Determining Exposure</th>
<th>Exposure Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the HCW participate in any of the following scenarios with a patient with suspected or confirmed COVID-19?</td>
<td>Yes</td>
<td>High-Risk Event</td>
</tr>
<tr>
<td>A. Direct physical care</td>
<td></td>
<td>HIGH-RISK exposure advice: Management of HCWs following a high-risk exposure event will depend upon national/local testing policy and the results of such laboratory testing.</td>
</tr>
<tr>
<td>B. Face-to-face contact (within 1 metre for over 15 minutes)</td>
<td></td>
<td>- All HCWs must immediately stop all interactions with patients and colleagues.</td>
</tr>
<tr>
<td>C. Performed or was present in the same room during any aerosol-generating procedure</td>
<td>No</td>
<td>- All HCWs should inform their manager/supervisor and provide contact information.</td>
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<tr>
<td></td>
<td></td>
<td>- Provide ongoing psychosocial support to HCW and immediate family/loved ones regarding managing their mental health.</td>
</tr>
<tr>
<td>OR</td>
<td>No</td>
<td>If tests positive:</td>
</tr>
<tr>
<td>B. Any major failure in practising appropriate precautions when providing direct care for a patient with suspected or confirmed COVID-19.</td>
<td>No</td>
<td>- Isolate HCW in the health-care facility or designated setting and manage as per national/local policy.</td>
</tr>
<tr>
<td>Examples:</td>
<td></td>
<td>If initial test negative:</td>
</tr>
<tr>
<td>- Not wearing appropriate PPE</td>
<td></td>
<td>- Quarantine HCW at a designated setting or at home.</td>
</tr>
<tr>
<td>- Not wearing eye protection</td>
<td></td>
<td>- Self-monitor for symptoms for 14 days, including body temperature twice daily (see section 2.2).</td>
</tr>
<tr>
<td>- Not wearing a respirator during aerosol-generating procedures</td>
<td></td>
<td>- If symptoms develop, HCW should inform his or her manager/supervisor and refer to the management of symptomatic HCWs flowchart (Figure 2).</td>
</tr>
<tr>
<td>- Using or removing PPE incorrectly</td>
<td></td>
<td>If no testing performed:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Quarantine HCW at a designated setting or at home</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Exclude from the workplace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Self-monitor for symptoms for 14 days, including body temperature twice daily (see section 2.2).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If symptoms develop, HCW should inform his or her manager/supervisor and refer to the management of symptomatic HCWs flowchart (Figure 2).</td>
</tr>
</tbody>
</table>

LOW-RISK exposure advice:
- HCW can continue to work and adhere to infection control precautions.
- HCW should self-monitor for symptoms for 14 days (see section 2.2), including measuring body temperature twice daily. If symptoms develop, HCW should inform his or her manager/supervisor and refer to the management of symptomatic HCWs flowchart (Figure 2).
- Provide ongoing psychosocial support to HCW and immediate family/loved ones regarding managing their mental health.
3. Management of symptomatic health-care workers

If a HCW develops symptoms (see section 2.2), perform a clinical assessment to determine if symptoms are suggestive of COVID-19. Figure 2 provides guidance on how to manage HCWs with symptoms.

4. Return-to-work considerations

The duration before a HCW can return to the workplace after a high-risk exposure event or following suspected or confirmed COVID-19 will depend on multiple factors and needs to be considered within the context of national and local policies.

Factors affecting the return to work of HCWs include national and local testing policies (i.e. whether health workers are tested following a high-risk exposure event). Also, if a HCW is symptomatic or develops symptoms needs to be taken into consideration.

Different strategies (based on time, symptoms and testing) should be considered depending on the context:

- Following a high-risk exposure, a time-based approach should be followed. The HCW should be excluded from the workplace for a minimum of 14 days.
- If the HCW is symptomatic or develops symptoms at any stage, a symptom-based approach (see section 4.2) should be adopted with exclusion from the workplace for a minimum of 14 days from the onset of symptoms.
- If during this time the HCW has a confirmatory positive test for SARS-CoV-2 (the virus that causes COVID-19), then a time-based approach should be adopted with exclusion from the workplace for a minimum of 14 days from the first positive test.

4.1 Time-based strategy

A time-based strategy should be considered following a high-risk exposure event or if a HCW has a positive SARS-CoV-2 diagnostic test and remains asymptomatic.

Exclude from work until:

- 14 days have passed since the exposure event or positive SARS-CoV-2 diagnostic test (whichever is most recent)

AND

- HCW has not developed symptoms since the positive diagnostic test.

If the HCW develops symptoms, use the symptom-based strategy.
4.2 Symptom-based strategy

A symptom-based strategy should be used if a HCW develops symptoms suggestive of COVID-19 (refer to section 2.2).

Exclude from work until:
- at least 14 days since symptoms first appeared

AND
- at least 3 days since the last fever (without the use of fever-reducing medicine) with improvement in respiratory symptoms.

4.3 Test-based strategy

A test-based strategy to determine when a HCW can return to work should not be used alone and should always be considered in combination with either a time- or symptom-based strategy, depending on the context. Note that detecting viral RNA via polymerase chain reaction, or PCR, does not necessarily mean that infectious virus is present and needs to be interpreted with caution.

4.4 Additional recommendations

Upon returning to work, HCWs should wear a face mask until symptoms are completely resolved and comply with their health-care facility policy regarding standard, contact and droplet precautions when caring for patients with COVID-19.

Ensure that HCWs can access confidential counselling services, including on-site services, telephone-based support and other remote options. Also, make sure they are informed of helpful coping strategies and protected from stigma and discrimination.

HCWs returning to work should participate in infection prevention and control refresher training to help reinforce such processes.

5. Guidance development

5.1 Acknowledgements

This document was developed by a guideline development group composed of staff from the WHO Regional Office for the Western Pacific.

5.2 Guidance development methods

This document was developed based on adaptation of WHO COVID-19 global interim guidance, review of relevant literature, expert consultation, and guideline development group discussion and consensus.

5.3 Declaration of interests

Interests have been declared in line with WHO policy, and no conflicts of interest were identified from any of the contributors.
References