GUIDELINES FOR THE USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) IN RELATION TO PROTECTION AGAINST INFLUENZA IN HEALTHCARE SETTINGS BEFORE AND DURING AN INFLUENZA PANDEMIC

RISK CATEGORISATION FOR HEALTH CARE WORKERS (HCWS)

1. The risk levels for HCWs have been classified according to the nature of the role provided by the person working in the healthcare environment in relation to the likelihood of close contact with person(s) with potential influenza. The nature of the roles of HCWs working in the healthcare environment is as follows:

   a. HCWs who can maintain more than 1 metre contact distance from patients with potential influenza.

   b. HCWs who may encounter occasional situations where they may come into close contact\(^2\) with patients with potential influenza.

   c. HCWs who are likely to come into close contact with patients with potential influenza but who are not involved in procedures where aerosolization of secretions is produced.

   d. HCWs who are likely to come into close contact with patients with potential influenza and who also have a high likelihood of contact with respiratory secretions, particularly from aerosolization.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

2. PPE requirements in relation to risk levels at DORSCON YELLOW and (DORSCON ORANGE to BLACK) and details of the respective healthcare environments are shown in Table 1 and 2 respectively. The PPE requirements may be stepped up if the situational assessment of the risk is deemed higher.

3. PPE requirements supplement and do not replace standard precautions and best practices for infection control.

STANDARD PRECAUTIONS

4. Standard Precautions are designed to reduce the risk of transmission of micro-organisms from both recognized and unrecognized sources of infection in the hospitals. Standard Precautions apply to blood, all body fluids and secretions, excretions except sweat, regardless of whether they contain visible blood, non-intact skin and mucous membranes. Standard Precautions

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\(^1\) Includes administrative and other support staff.

\(^2\) A distance of less than or equal to 1 metre.
emphasizes the importance of hand washing after touching blood, body fluids, secretions, excretions and contaminated items and also after the removal of gloves, between patient contact and when indicated.

5. Standard precautions include:

a. **Hand Hygiene.** Hand washing is the single most important method of infection control. HCWs should already be familiar with the 7 steps to hand washing. Thereafter, hands should be dried thoroughly, preferably with a disposable hand towel. Alternatively, a hand rub may be used if soap and running water are not available.

b. **Gloves.** Gloves are to be worn when touching blood, body fluids, secretions, excretions and contaminated items and also before touching mucous membranes and non-intact skin. Gloves are to be removed promptly after use, before touching non-contaminated items and environmental surfaces and before attending to another patient.

c. **Mask.** Masks must be worn during close contact with patients with acute febrile respiratory illnesses or pandemic influenza. N95 masks are recommended. Otherwise, a surgical mask would suffice for low risk settings.

d. **Eye Protection.** Eye Protection (goggles or face shields) should be worn during close contact (<1m) with influenza patients when carrying out invasive procedures with risk of aerosolization to prevent aerosolized droplets from coming into contact with the mucus membranes of the eyes.

e. **Gown.** Gowns are to be worn to protect skin and prevent soiling of clothing during procedures and patient care activities that are likely to generate splashes or sprays of blood, blood fluids, secretions or excretions. A soiled gown should be removed as promptly as possible and HCWs should wash their hands thereafter to avoid transfer of micro-organisms to other patients or the environment. Gowns should also normally be changed in between patients. However, in DORSCON RED when dealing with large numbers of influenza patients, gowns need only be changed when soiled.
## Table 1 - GUIDELINES ON USE OF PERSONAL PROTECTION EQUIPMENT (PPE) FOR HEALTHCARE WORKERS (HCWs) IN RELATION TO PROTECTION AGAINST AVIAN INFLUENZA IN HEALTHCARE SETTINGS (DORSCON YELLOW)*

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Nature of Role of HCWs Working in the Healthcare Environment</th>
<th>Healthcare Environment</th>
<th>Hand Hygiene#</th>
<th>Masks</th>
<th>Gloves</th>
<th>Gown</th>
<th>Eye Protection</th>
<th>PAPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negligible</td>
<td>People who can maintain &gt;1m contact distance from another person or can implement protective barriers</td>
<td>Offices with no patient contact, Tea rooms in wards</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>People who, due to the nature of their job, may be unable to maintain &gt;1m contact distance from patients</td>
<td>PHC and SOC clinics, Pharmacies, Non-isolation wards, Radiology Dept, Operating Theatres</td>
<td>Yes</td>
<td>Surgical Mask when handling febrile patients</td>
<td>Yes if direct contact with blood/secretions likely</td>
<td>Yes if splashes likely</td>
<td>Yes if splashes likely</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>People who, due to the nature of their job, cannot maintain at least &gt;1m contact distance from patients</td>
<td>Ambulance</td>
<td>Yes</td>
<td>N95</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>People who, due to the nature of their job, cannot maintain at least 1m contact distance from patients AND have a high likelihood of potential contact with aerosolized respiratory secretions from invasive procedures – ventilation, airway suctioning, intubation, nasopharyngeal aspiration, bronchoscopy etc.</td>
<td>Triage at PHC and SOC, Emergency Dept, Intensive Care Units, Isolation Areas/ Rooms</td>
<td>Yes</td>
<td>N95</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

1. Patients need only don surgical mask and not the N95 mask.
2. *PPE may be stepped up by the individual institution if the situational assessment of the risk is deemed higher. Use of hair cover during aerosol-producing procedures is optional.
3. #Hand Hygiene refers to hand washing or the use of hand rubs.
Table 2 - GUIDELINES ON USE OF PERSONAL PROTECTION EQUIPMENT (PPE) FOR HEALTHCARE WORKERS (HCWs) IN RELATION TO PROTECTION AGAINST PANDEMIC INFLUENZA IN HEALTHCARE SETTINGS (DORSCON ORANGE*/RED/BLACK)*  

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Nature of Role of HCWs Working in the Healthcare Environment</th>
<th>Healthcare Environment</th>
<th>Hand Hygiene#</th>
<th>Masks</th>
<th>Gloves</th>
<th>Gown**</th>
<th>Eye Protection</th>
<th>PAPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>People who, due to the nature of their job, may be unable to maintain &gt;1m contact distance from another person</td>
<td>Offices with no patient contact, Tea rooms in wards</td>
<td>Yes</td>
<td>Surgical</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium-High</td>
<td>People who, due to the nature of their job, cannot maintain at least &gt;1m contact distance from patients</td>
<td>PHC and SOC triage and clinics, Non-Isolation Wards, Ambulance, Pharmacies, Operating Theatres</td>
<td>Yes</td>
<td>N95</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes If splashes likely</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>People who, due to the nature of their job, cannot maintain at least 1m contact distance from patients AND have a high likelihood of potential contact with aerosolized respiratory secretions from invasive procedures – ventilation, airway suctioning, intubation, nasopharyngeal aspiration, bronchoscopy etc.</td>
<td>Emergency Dept, Intensive Care Units, Isolation Areas/Rooms, Influenza Wards, Radiology Dept</td>
<td>Yes</td>
<td>N95</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>PAPR is optional. It should be used by those trained and certified to use PAPR</td>
</tr>
</tbody>
</table>

Notes:  
(1) Patients need only don surgical masks and not N95 masks.  
(2) ^PPE requirements apply onto to hospitals with suspect/confirmed cases of avian influenza. Hospitals without any cases are to continue to adopt PPE requirements as per DORSCON Yellow.  
(3) *PPE may be stepped up by the individual institution if the situational assessment of the risk is deemed higher. Use of hair cover during aerosol-producing procedures is optional.  
(4) ** From DORSCON Red on wards, gowns need to be changed only when soiled by blood or other body fluids.  
(5) #Hand Hygiene refers to hand washing or the use of hand rubs.