Infection Prevention & Control For Healthcare Workers in Reference to COVID-19
COVID-19

- Agent - Corona viruses belong to a large family of viruses, some causing illness in people

- The etiologic agent responsible for present outbreak of COVID-19 is SARS-CoV-2 which is a novel coronavirus.

- Transmission of coronaviruses can occur via respiratory secretions. Nosocomial transmission has been documented in COVID-19.

- Current estimates of the incubation period of 2019-nCoV range from 2-14 days.

- Most common symptoms include fever, fatigue, dry cough and breathing difficulty. Upper respiratory tract symptoms like sore throat, rhinorrhea, and gastrointestinal symptoms like diarrhea and nausea/ vomiting are seen in about 20% of cases.

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Who is at Risk of Infection?

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Benefits of IPC

Protecting yourself

Protecting your patients

Protecting your family, community & environment
IPC Goals in Outbreak Preparedness

1. To reduce transmission of health care associated infections
2. To enhance the safety of staff, patients and visitors
3. To enhance the ability of the organization/health facility to respond to an outbreak
4. To lower or reduce the risk in the hospital (health care facility) itself amplifying the outbreak
General Advice for COVID-19

• Combination of following for prevention and control

1. Frequent hand hygiene
2. Respiratory etiquettes
3. Personal protective equipment
4. Seek medical care for advice
Elements of Standard Precautions

1. Hand hygiene
2. Respiratory hygiene
3. PPE
4. Safe injection practices, sharps management and injury prevention
5. Safe handling, cleaning and disinfection of patient care equipment
6. Environmental cleaning
7. Safe handling and cleaning of soiled linen
8. Waste management
1. Hand Hygiene

- Best way to prevent the spread of germs in the health care setting and community
- Our hands are our main tool for work as health care workers and they are the key link in the chain of transmission
Hand Hygiene: WHO 5 Moments

1. Before touching a patient
2. Before clean/aseptic procedure
3. After body fluid exposure risk
4. After touching a patient
5. After touching patient surroundings

An alcohol-based hand rub product is preferable, if hands are not visibly soiled

- Rub hands for 20–30 seconds!

Soap, running water and single use towel, when visibly dirty or contaminated with proteinaceous material

- Wash hands for 40–60 seconds!
How to handrub?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

Duration of the entire procedure: 20-30 seconds

1. Apply a small amount of the product in a cupped hand, covering all surfaces.
2. Rub hands palm to palm.
3. Right palm over left dorsum with interlaced fingers and vice versa.
4. Palm to palm with fingers interlaced.
5. Backs of fingers to opposing palms with fingers interlocked.
6. Rotational rubbing of left thumb clasped in right palm and vice versa.
7. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.
8. Once dry, your hands are safe.

How to handwash?

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

Duration of the entire procedure: 40-60 seconds

9. Wet hands with water.
10. Apply enough soap to cover all hand surfaces.
11. Rinse hands with water.

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• DO not panic if hand sanitizer is not available; wash your hands with soap and water.

• DON’T use hand sanitizer if your hands are visibly soiled, you need to wash your hands with soap and water.

• DON’T touch your eyes, nose, and mouth. If you have somehow come into contact with the virus, touching your face can help it enter your body.
2. Respiratory Hygiene/Etiquettes

Reduces the spread of microorganisms (germs) that cause respiratory infections (colds, flu).

- Turn head away from others when coughing/sneezing
- Cover the nose and mouth with a tissue.
- If tissues are used, discard immediately into the trash
- Cough/sneeze into your sleeve if no tissue is available
- Clean your hands with soap and water or alcohol based products
- Do not spit here and there

2. Promoting Respiratory Hygiene

• Encourage handwashing for patients with respiratory symptoms
• Provide masks for patients with respiratory symptoms
• Patients with fever + cough or sneezing should be kept at least 1m away from other patients
• Post visual aids for reminding patients and visitors with respiratory symptoms, to cover their cough
3. PPE for Use in Healthcare for COVID-19

- Face Mask: Nose + mouth
- N95 Mask: Nose + mouth
- Face shield: Eyes + nose + mouth
- Goggle: Eyes
- Gown: Body
- Apron: Body
- Gloves: Hands
- Head cover: Head + hair
## Personal Protective Equipment

### Table 1. Recommended type of personal protective equipment (PPE) to be used in the context of COVID-19 disease, according to the setting, personnel and type of activity

<table>
<thead>
<tr>
<th>Setting</th>
<th>Target personnel or patients</th>
<th>Activity</th>
<th>Type of PPE or procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient room</td>
<td>Healthcare workers</td>
<td>Providing direct care to COVID-19 patients.</td>
<td>Medical mask, Gown, Gloves, Eye protection (goggles or face shield).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aerosol-generating procedures performed on COVID-19 patients.</td>
<td>Respirator N95 or FFP2 standard, or equivalent. Gown, Gloves, Eye protection, Apron.</td>
</tr>
<tr>
<td>Cleaners</td>
<td></td>
<td>Entering the room of COVID-19 patients.</td>
<td>Medical mask, Gown, Heavy duty gloves, Eye protection (if risk of splash from organic material or chemicals), Boots or closed work shoes</td>
</tr>
<tr>
<td>Visitors</td>
<td></td>
<td>Entering the room of a COVID-19 patient</td>
<td>Medical mask, Gown, Gloves</td>
</tr>
<tr>
<td>Other areas of patient transit (e.g., wards, corridors)</td>
<td>All staff, including healthcare workers.</td>
<td>Any activity that does not involve contact with COVID-19 patients.</td>
<td>No PPE required</td>
</tr>
</tbody>
</table>
Principles for Using PPE

✓ Always clean your hands before and after wearing PPE
✓ PPE should be available where and when it is indicated
✓ Always put on before contact with the patient
✓ Always remove immediately after completing the task and/or leaving the patient care area
✓ NEVER reuse disposable PPE
Principles for Using PPE

✓ Change PPE immediately if it becomes contaminated or damaged

✓ PPE should not be adjusted or touched during patient care; specifically
  • never touch your face while wearing PPE
  • if there is concern and/or breach of these practices, leave the patient care area when safe to do so and properly remove and change the PPE
  • Always remove carefully to avoid self-contamination (from dirtiest to cleanest areas)
5. Environment Cleaning, Disinfection and BMWM

• It is important to ensure that environmental cleaning and disinfection procedures are followed consistently and correctly.

• Thorough cleaning environmental surfaces with water and detergent and applying commonly used hospital level disinfectants (such as sodium hypochlorite- 1%, or ethanol 70%) are effective and sufficient procedures.

• Medical devices and equipment, laundry, food service utensils and medical waste should be managed in accordance with safe routine procedures.
Self Monitoring

1. HCP should check their
   - temperature twice daily.
   - respiratory symptoms (cough, shortness of breath and sore throat)

2. Should report immediately if found significant
Precautions

1. Avoid unnecessary contact with the patient
2. Maintain appropriate distance (1 meter)
3. Frequently use hand rub or hand washing.
4. Do not touch ur mouth, nose, eyes or Face.
5. Discard the waste properly wearing PPE.
Patients Suspected or Confirmed COVID-19

- Equipment should be single use when possible, dedicated to the patient and disinfected between uses.
- Routine cleaning of the environment is crucial.
- Limit the number of HCW, visitors, and family members who are in contact with the patient.
Myths vs. reality for COVID-19

As COVID-19 is a new condition, there are many common myths.

<table>
<thead>
<tr>
<th>Myths</th>
<th>Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The corona virus can be transmitted through mosquitoes.</td>
<td>The corona virus <strong>CANNOT</strong> be transmitted through mosquito bites.</td>
</tr>
<tr>
<td>2. Everyone should wear a mask.</td>
<td>People who should wear a mask are:</td>
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<tr>
<td></td>
<td>- Those having symptom of fever, cough etc.</td>
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<td></td>
<td>- Healthcare workers in facilities caring for ill people</td>
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<td></td>
<td>- The assigned care taker of a home quarantined person</td>
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<tr>
<td></td>
<td>- Even those wearing masks should wash their hands frequently</td>
</tr>
<tr>
<td>3. Only people with symptoms of COVID-19 can spread the disease.</td>
<td>Even people with the COVID-19 infection but no symptoms can spread the disease.</td>
</tr>
<tr>
<td>4. Eating garlic and drinking alcohol can prevent COVID 19</td>
<td>Eating garlic and drinking alcohol <strong>DOES NOT</strong> prevent COVID 19</td>
</tr>
</tbody>
</table>

Ministry of Health & Family Welfare
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Conclusions

• IPC is key for Protection and containment
• Based on key principles- Hand Hygiene, Respiratory etiquette, safe distance and PPE
• Self monitoring
• Hospital Infection Prevention & control- Standard & Additional precautions
  • Protect Yourself and the community
  • Triage & Admissions
  • PPE: Judicious and Appropriate use and appropriate donning and doffing
Resources

- WHO Coronavirus Homepage
- All coronavirus (COVID-19) technical guidance documents
- IPC documents
- Questions and Answers
  - https://www.who.int/news-room/q-a-detail/q-a-coronaviruses
Thank you