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COVID-19

Facility Based Infection Prevention & Control

Cascade Sharing By:

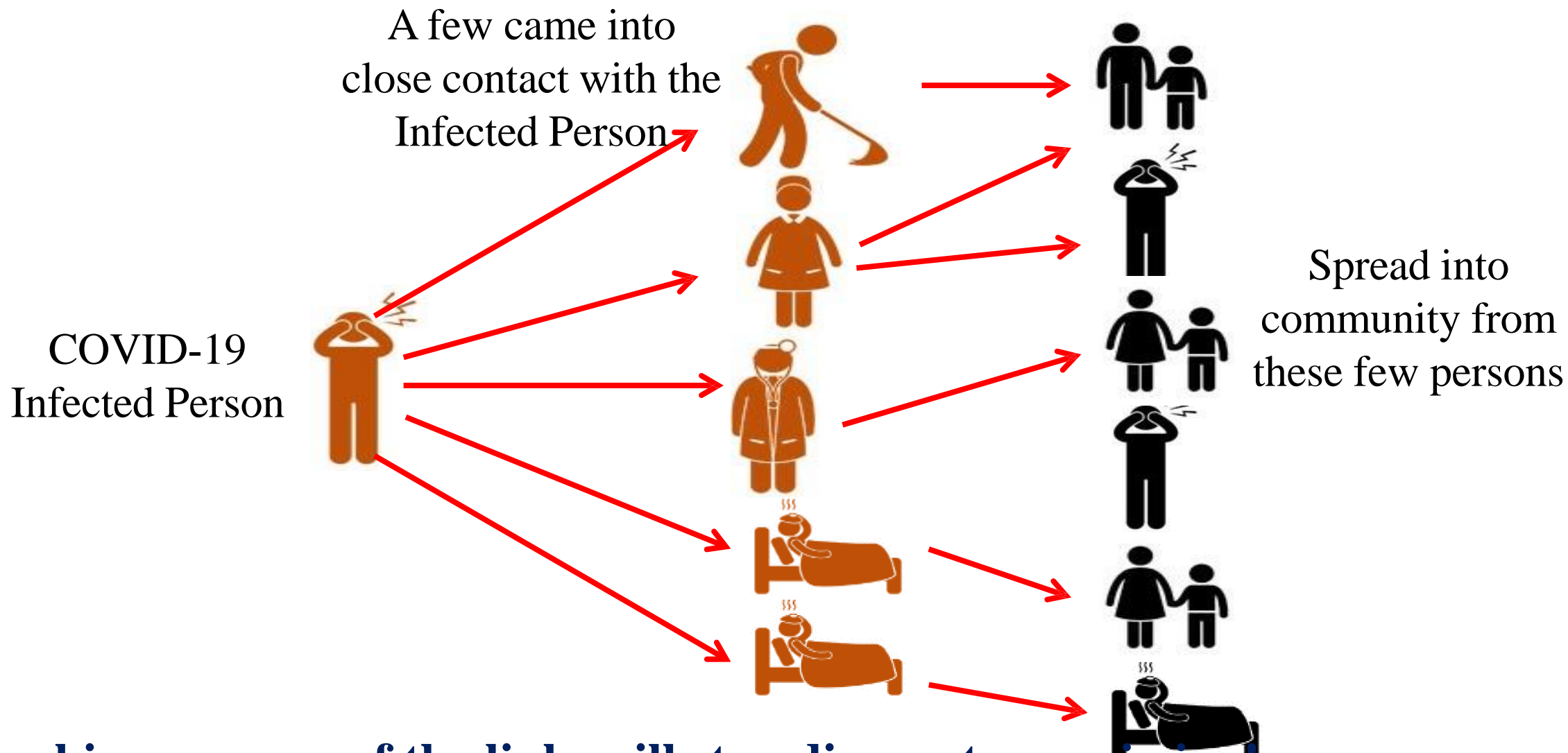


Background

Coronavirus disease 2019 (COVID-19) is a respiratory tract infection caused by a newly emergent coronavirus, that was first recognized in Wuhan, China, in December 2019. This new virus has not been previously identified in humans.

Coronaviruses are a large family of viruses that are known to cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).

Who is At Risk of Infection?



Breaking any one of the link, will stop disease transmission!

Benefits of Infection Prevention & Control



Protecting yourself



**Protecting your
patients**



**Protecting your
family, community &
environment**

Limiting the Spread of COVID-19

- **Applying standard precautions for all patients**
- **Ensuring triage, early recognition, and source control**
- **Implementing empiric additional precautions for suspected cases of COVID-19 infection**
- **Implementing administrative controls**
- **Using environmental and engineering controls.**

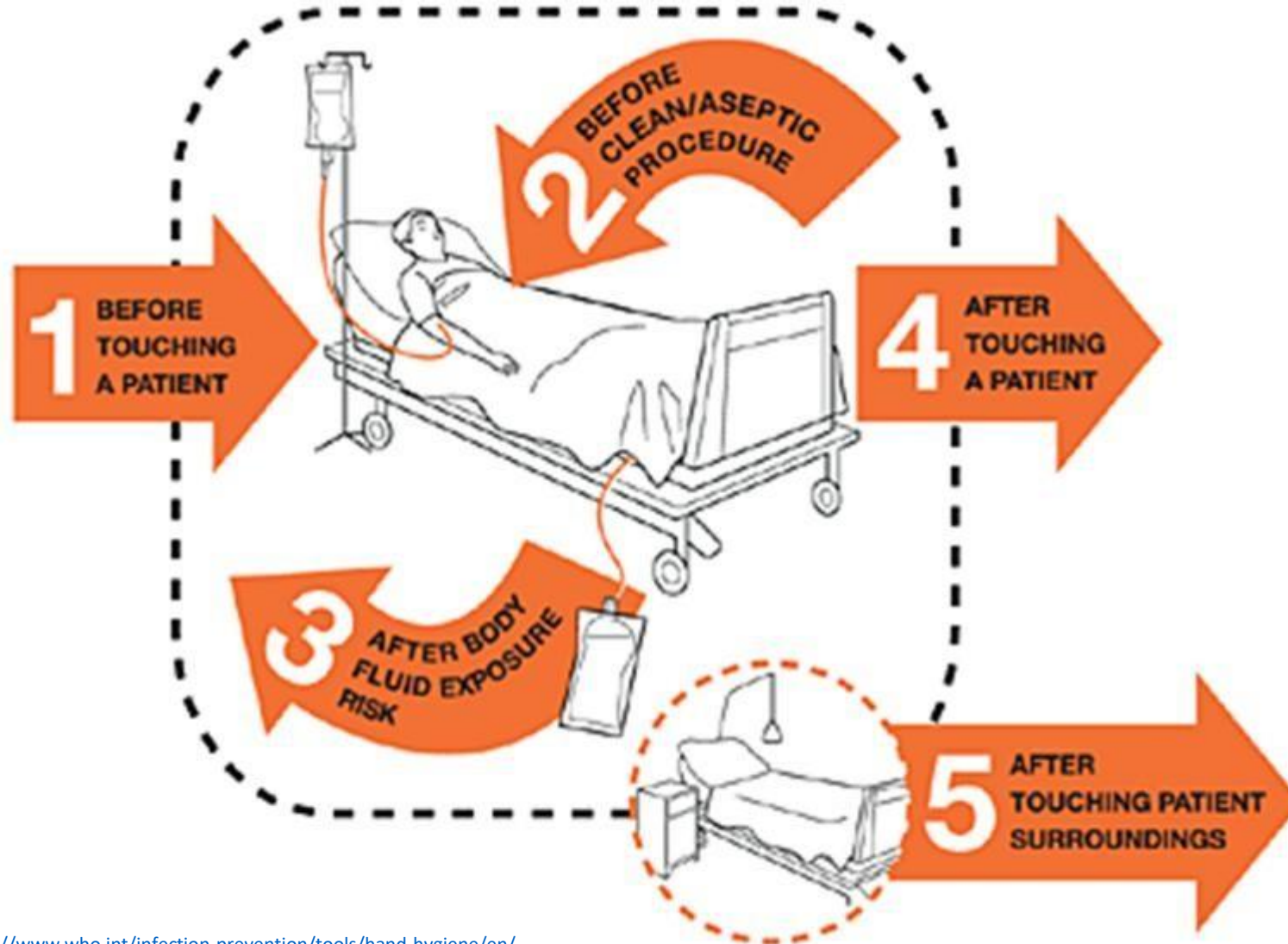
Standard Precautions



Elements of Standard Precautions

- 1. Hand hygiene**
- 2. Respiratory hygiene (etiquette)**
- 3. PPE according to the risk**
- 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. Hospital based Waste Management**

Hand Hygiene: WHO 5 Moments



How to handrub?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

 Duration of the entire procedure: 20-30 seconds



Apply a palmful of the product in a cupped hand, covering all surfaces;



Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



Palm to palm with fingers interlaced;



Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;




Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



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



Wet hands with water;



Apply enough soap to cover all hand surfaces;



Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



Palm to palm with fingers interlaced;



Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



Rinse hands with water;



Dry hands thoroughly with a single use towel;



Use towel to turn off faucet;



Your hands are now safe.

Respiratory Hygiene/Etiquette

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 allow spitting here and there

Image source: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>



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 1 meter away from other patients**
- **Post visual aids reminding patients and visitors with respiratory symptoms to cover while their face while coughing**

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

Principles for Using PPE (1)

- Always wash your hands with soap and water or alcohol based sanitizer before and after wearing PPE
- PPE should be available where and when it is indicated
 - in the correct size
 - select according to risk or per transmission based precautions
- 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
- Clean and disinfect reusable PPE between each use

Principles for Using PPE (2)

- **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)**

The Seven Steps to Safe Injections

1 Clean work space

2 Hand hygiene

3 Sterile safety-engineered syringe

4 Sterile vial of medication and diluent

5 Skin cleaning and antisepsis

6 Appropriate collection of sharps

7 Appropriate waste management



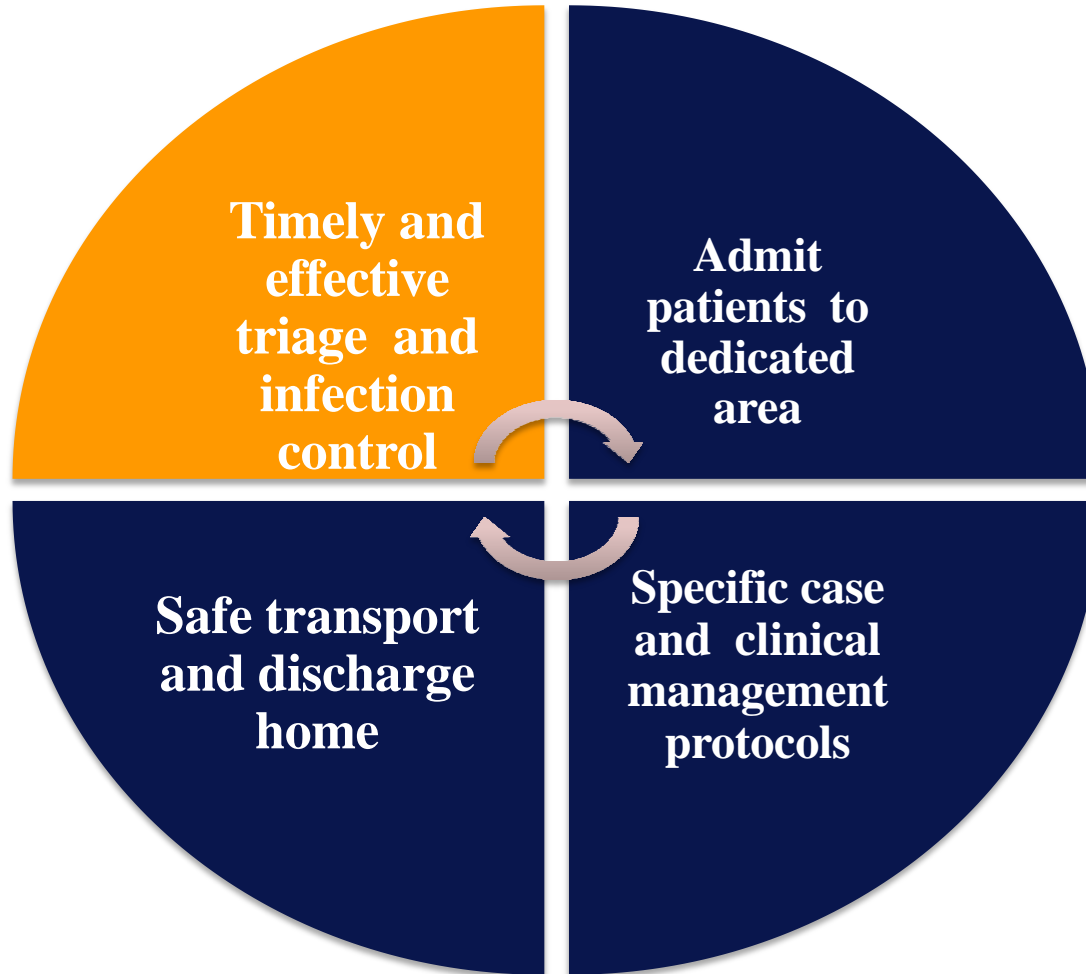
Environment Cleaning, Disinfection and BMWM

- **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, 0.5%, 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.**

Triage, Early Recognition, and Source Control



Manage Ill Patients Seeking Care



Use clinical **Triage** in health care facilities for early identification of patients with acute respiratory infection (ARI) to prevent the transmission of pathogens to **health care workers** and **other patients**.

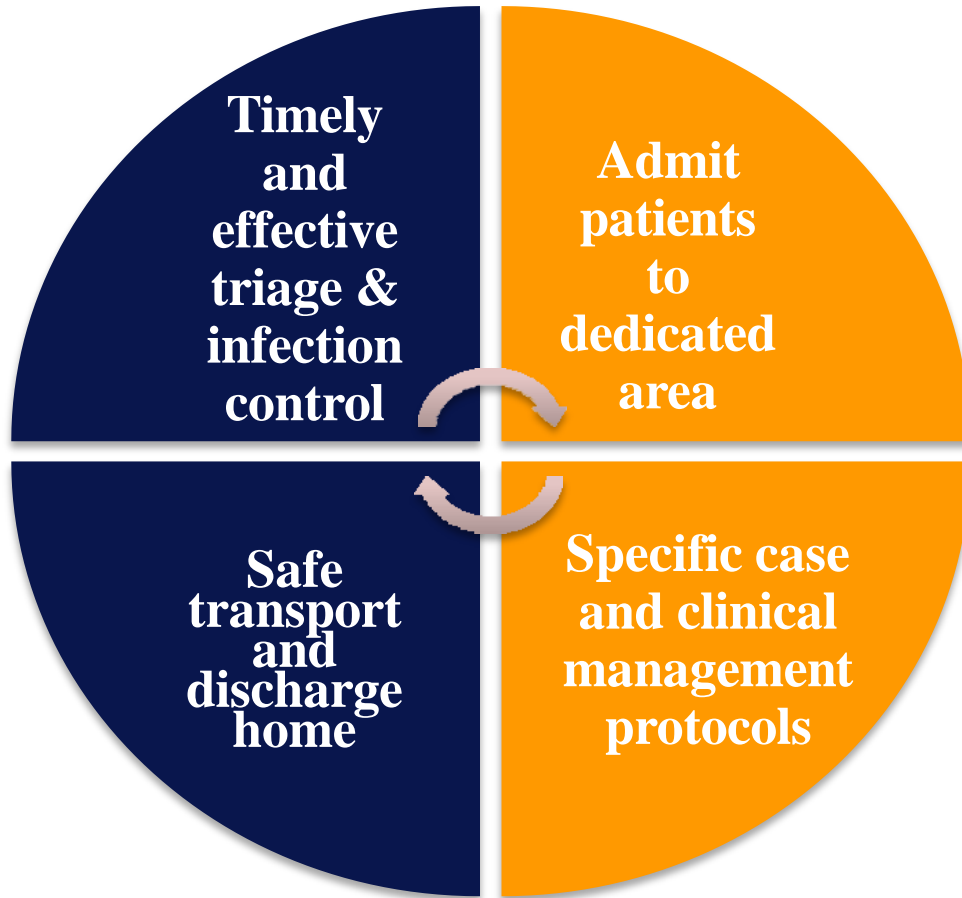
Triage (1)

- Prevent overcrowding.
- Conduct Rapid Triage.
- Place ARI patients in dedicated waiting areas with adequate ventilation.
- In addition to standard precautions, implement **Droplet Precautions** and **Contact Precautions** (if close contact with the patient or contaminated equipment or surfaces/materials).
- Ask patients with respiratory symptoms to perform **Hand Hygiene, Wear a Mask** and perform **Respiratory Hygiene**

Triage (2)

1. Ensure adequate space for triage (maintain **at least 1 meter** distance between staff screening and patient/staff entering)
2. Waiting room chairs for patients should be 1 meter apart
3. Maintain a **one way flow for** patients and for staff
4. The triage or screening area requires the following equipment:
 - Screening questionnaire
 - Algorithm for triage
 - Documentation papers
 - PPE
 - Hand hygiene equipment and posters
 - Infrared thermometer
 - Waste bins and access to cleaning/ disinfection
 - Post signage in public areas with syndromic screening questions to instruct patients to alert Healthcare Workers.

Hospital Admission



- Place patients with ARI of potential concern in single, well ventilated room, when possible
- Cohort patients with the same diagnosis in one area
- Do not place suspect patients in same area as those who are confirmed.
- Assign health care worker with experience with IPC and outbreaks.

Additional Precautions



Patients Suspected or Confirmed COVID-19 (1)

- **Contact and droplet precautions** for all patients with suspected or confirmed COVID-19
- Preferably patient should be in a single room:
 - natural ventilation with air flow of at least 160 L/s per patient or
 - in negative pressure rooms with at least 12 air changes per hour and controlled direction of air flow when using mechanical ventilation
- Cohort: All patients with respiratory illness should be in a single room, or **minimum 1 meter away from other patients** when waiting for a room
- Dedicated & trained Healthcare Workers
- **HCW to wear PPE:** a medical mask, goggles or face shield, gown, & gloves
- **Hand hygiene** should be done **any time the WHO “5 Moments”** apply, and **before PPE** and **after** removing PPE



Patients Suspected or Confirmed COVID-19 (2)

- Equipment should be **single use** when possible, dedicated to the patient and disinfected between uses
- **Avoid transporting** suspected or confirmed cases – if necessary, have patients wear masks. Healthcare Workers should wear appropriate PPE.
- Routine cleaning of the environment is crucial
- **Limit** the number of Healthcare Workers, visitors, and family members who are in contact with the patient. If necessary, everyone must wear PPE.
- All persons entering the patients room (including visitors) should be recorded (for contact tracing purposes).
- Precautions should continue until the patient is asymptomatic.



Use of Mask : Health Care Settings

- **Individuals with respiratory symptoms should:**
 - Wear a medical mask while waiting in **triage** or waiting areas or during transportation within the facility;
 - Wear a medical mask when staying in **cohorting** areas dedicated to suspected or confirmed cases;
 - Do NOT wear a medical mask when isolated in single rooms but cover mouth and nose when coughing or sneezing with disposable paper tissues.
- **Health care workers should:**
 - Wear a medical mask while providing care to the patient
 - Use a particulate respirator N95 (NIOSH certified) , FFP2 (EU standard), or equivalent, when performing aerosol generating procedures (tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation, and bronchoscopy.

Masks Management

- Place mask carefully to cover mouth and nose and tie securely to minimise any gaps between the face and the mask while in use, **avoid touching** the mask
- Remove the mask by using appropriate technique (i.e. do not touch the front but remove the lace from behind)
- After removal or whenever you inadvertently touch a used mask, clean hands by using an alcohol-based hand rub or soap and water if visibly soiled
- Replace masks with a new clean, dry mask as soon as they become damp/humid
- Do not re-use single-use/disposable masks
- Discard single-use masks after each use and dispose of them immediately upon removal

Conclusions

- **IPC is key for containment**
- **Based on key principles- Hand Hygiene, Respiratory etiquette, safe distance**
- **Hospital Infection Prevention & control- Standard & Additional precautions**
 - **Protect Yourself and the community**
 - **Triage & Admissions**
 - **PPE**
 - **Judicious and Appropriate use**
 - **Pay attention to donning and doffing**
- **Home care precautions**

Sources

- WHO Coronavirus Homepage
- <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- All coronavirus (COVID-19) technical guidance documents
- <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance>
- IPC documents
- <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/infection-prevention-and-control>
- <https://www.who.int/infection-prevention/publications/en/>
- Questions and Answers
- <https://www.who.int/news-room/q-a-detail/q-a-coronaviruses>

THANK YOU

