



Sultanate of Oman  
Ministry of Health

# **Infection Prevention and Control Guidelines for Triage of Infectious Diseases**

MOH/DGDSC-DIPC/ IPC guidelines/ Triage  
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**Department Of Infection Prevention and Control**  
**DIRECTORATE GENERAL OF DISEASE SURVEILLANCE AND CONTROL**

## **1. Introduction:**

Health care workers deliver care in the emergency and outpatients setting are on the front lines of the healthcare system every day. Serious communicable diseases like TB, COVID-19, MERS, measles, and viral hemorrhagic fever can access health care facilities at any point of time and pose a risk of transmission to patients, staff, and visitors. Effective screening and isolation of potentially infectious patients especially those at risk for droplet or airborne transmission is essential to ensure appropriate precautions on arrival. It is essential in the process of minimizing the exposure risk at the outpatient settings to ensure that preventive measures are routinely in place including triaging of potential contagious patients with fever and other clinical syndromes as described in this guideline.

This guidance will assist Health institutions in developing protocols for screening (triage) and early containment management of potential infectious patients at the point of entry to healthcare.

## **2. Objective:**

- a. Enhance early recognition of patients who may be having contagious infectious disease on arrival to the facility
- b. Early Implementation of infection prevention and control measures and so minimizing cross transmission and health care associated infections

## **3. Setting up a triage system for infectious diseases**

- Each HCF with A&E/ OPD should ensure that a triage system/ process for infectious diseases is available, implemented, and monitored. It should include defined process with clear roles and responsibilities ensuring the following:
  - Early recognition of patients with communicable diseases like COVID-19, viral hemorrhagic fever, TB, measles, ...etc.
  - Early containment to prevent exposing healthcare staff and other patients unnecessarily in waiting areas and during patient encounters.
  - Informing the infection control team in the health care institution.
  - Reporting to the DGHS department of diseases surveillance and control as per national guidelines for each disease category.
- The procedures at first encounter of patient need to include gathering appropriate information early in the patient encounter, specifically collecting the chief complaint and travel history as well as risk factors relevant to specific diseases. It should include recent serious communicable disease threats and ensure that procedures and protocols are updated to address them.
  - Instruction to the patients for declaring symptoms and/ or risk factors for having transmissible infectious disease which can include some or all of the following:

- Instruction message displayed at the entrance to the facility as a poster or screen display (Annex 2)
  - Declaration forms filled at registration
  - Screening interview by the triage staff
- Providing facilities for an early containment of exposure risks at entry to the facility
  - Hand hygiene facilities (hand rub/ hand wash)
  - Paper towel/ tissues
  - Pedal bin for waste disposal
  - Surgical mask for patients with respiratory symptoms (cough, sneezing)
- Displaying awareness material for public on common / emerging infections and preventive measures like hand hygiene and cough etiquette
- Continuous update for the triage staff especially in the event of emerging / re-emerging infections of public health importance including Identification of suspected case as a clinical syndrome and if there is any epidemiological factors and management algorithm.
- Providing necessary PPE for the triage staff and training on appropriate use.
- Ensure that the triaging for infectious disease does not interfere with the clinical assessment and urgent management of acutely sick patients in the emergency department/ OPD rather alerting the staff on the needed measures to avoid exposure in the context of the patient care.
- The institution need to have a process for receiving suspect cases with contagious infectious diseases arriving by ambulance to be directed to an isolation facility where patient can be assessed and manage without exposing others in the emergency department.
- There is a process that occurs after a suspect case is identified to include immediate notification of infection control team in the institution.
- There is a process to notify local or national disease surveillance and control department of a suspect contagious infectious diseases case in align with MOH guidelines for reporting and surveillance.

#### **4. Triage process** (annex 1)

The procedures of screening & containment of communicable diseases can be divided into 3 steps that should be incorporated to the existing process of triage (severity scale in the A&E or admission system for clinics/day care):

- a. Providing Information and facilities to patient/ accompanying person before entering the HCF
- b. Initial assessment by the triage nurse or the front desk
- c. Implementing infection control precautions when patient is suspected to have contagious disease

- d. Medical assessment by physician
- e. Reporting to facility infection control team and if applicable to governorate disease surveillance and control department

**a. Providing Information and facilities for patients/ accompanying person to help in containment of infections up on entering to the HCF:**

- Signs are posted in triage areas (e.g., A&E entrances) advising patients with fever and/or symptoms of respiratory infection to immediately notify triage personnel so appropriate precautions can be put in place.
- On arrival to the A&E/ OPD/day care, patients/ accompanying person MUST inform staff if they have any of the following:
  1. **FEVER** with any one or some of the following symptoms :
    - a. Running nose and bodyache
    - b. Cough
    - c. Difficulty in breathing
    - d. Skin rash with or without red eyes
    - e. Bleeding
    - f. Profuse diarrhea
    - g. Headache with or without stiff neck
    - h. Altered sensorium/consciousness
  2. Travelling outside country in the past 4-6 weeks especially in the context of ongoing outbreak
  3. Contact with someone having communicable disease in the past 2- 12 weeks (e.g., COVID-19, Measles, TB)
  4. Admission to a hospital in the past 2-12 weeks outside or within Oman
  5. Being diagnosed with any antibiotic resistant pathogens (super bugs) in the past
- Signs are posted at entrances with instructions to individuals with symptoms of respiratory infection to:
  - Immediately put on a mask and keep it on during their assessment
  - Cover their mouth/nose when coughing or sneezing either with paper tissue or inner elbow and dispose off used tissue paper in the waste bin.
  - Perform hand hygiene after contact with respiratory secretions.
- Facemasks are provided to coughing patients and other symptomatic individuals upon entry to the facility.
- Alcohol based hand sanitizer and/or hand washing facility for hand hygiene is available at each entrance to the A&E, OPD, and day care.
- Facility provides tissues and no-touch receptacles for disposal of tissues in waiting areas.

- Facility has a separate well-ventilated space that allows waiting patients to be separated by 1-2 meters, with easy access to respiratory hygiene and cough etiquette supplies.

**b. Initial assessment by the triage nurse at A&E/ OPD/day care:**

To minimize transmission of infectious pathogens to healthcare workers, patients and visitors, check if:

- Patient has history of **fever** for the past 2 weeks and meets at least ONE of the following criteria:
  - Any respiratory symptoms (cough with or without expectoration, breathing difficulty)
  - Skin rash
  - Travel outside Oman in the past 4-6 weeks specifically to endemic areas in the event of an outbreak (e.g. China at the beginning of COVID-19 outbreak)
  - Contact with any person with contagious infectious diseases in the last 2-12 weeks
  - Gastrointestinal symptoms (profuse diarrhea or vomiting)
  - Bleeding from any site in the body
- Based on patients symptoms proceed with the next containment process:
  - 1. Patients with Respiratory symptoms (sneezing, coughing, difficulty breathing) with or without fever:**

This can be any respiratory infection for example; COVID-19, Influenza, MERS CoV, or even Pulmonary TB but the exposure history can help in further categorizing them such as:

- Patient who has a family member recently diagnosed with TB
- Patient coming from endemic area with newly emerging respiratory infection (e.g China at the beginning of COVID-19 pandemic)
- Child attending day care during influenza season

**\*\* The triage is not the place for making diagnosis rather identify risks, start containment process and alert staff in A&E, day care, or clinic to take necessary infection control precautions to avoid exposure as following:**

- The patient should be Instructed to:
  - ✓ immediately put on a mask and keep it on during their assessment

- ✓ Cover their mouth/nose when coughing or sneezing either with paper tissue or inner elbow and dispose off used tissue paper in the waste bin.
- ✓ Perform hand hygiene after contact with respiratory secretions
- Place the patient in a separate well-ventilated space that allows waiting patients to be separated by 1-2 meters, with easy access to respiratory hygiene and cough etiquette supplies.
- Ensure patients with confirmed or suspected contagious respiratory disease (e.g. COVID-19, Influenza, TB) are rapidly moved to an isolation room. Alternatively, for patients that cannot be immediately placed in a room for further evaluation, a system is provided that allows them to wait in a personal vehicle or outside the facility (if medically appropriate) and be notified by phone or other remote methods when it is their turn to be evaluated.
- The health care workers managing the patient should be alerted and instructed on the need to follow infection control preventive measure:
  - Practicing hand hygiene
  - Wearing gown, gloves and surgical mask when attending the patient but if suspect airborne infection or **an aerosol generating procedure** they should put N95 respirator with their correct size
- Infection control team of the facility to be informed about suspect case based on the facility guideline
- Ensure appropriate environmental cleaning for triage area

## 2. Patients with fever & rash :

If Patient has fever with maculopapular / pustular/ macular rash with or without running nose and conjunctivitis, consider the following causes

- Measles
- Rubella
- Chicken pox
- Herpes zoster
- Meningococcal infection
- Severe sepsis with DIC

**\*\* The triage is not the place for making diagnosis rather identify risks, start containment process and alert staff in A&E, day care, or clinic to take necessary infection control precautions to avoid exposure as following:**

- Place the patient immediately in an isolation room (Preferably airborne isolation or with mobile HEPA filter) with appropriate isolation sign (airborne& contact precaution)
- The health care workers managing the patient should be alerted and instructed on the need to follow infection control preventive measures for airborne& contact precautions :
  - Practicing hand hygiene as per WHO 5 moments (Annex 4)
  - Wearing gown, gloves and N95 respirator with their correct size and seal check
- Infection control team of the facility to be informed about suspect case based on the facility guideline
- Ensure appropriate environmental cleaning for triage area

### **3. Patient with fever & CNS symptoms (headache, altered sensorium, seizures)**

- Consider meningitis with/or without sepsis

**\*\* The triage is not the place for making diagnosis rather identify risks, start containment process and alert staff in A&E, day care, or clinic to take necessary infection control precautions to avoid exposure as following:**

- Patient to be seated if clinically appropriate and no available isolation room so that he/she is at least 1-2 meter away from other patients or visitors.
- Patient will need to be in contact and droplet precautions while assessed including:
  - Isolation room or area with appropriate sign (contact and droplet precaution)
  - Hand hygiene practices as per WHO 5 moments (Annex 4)
  - Health care worker attending patient to wear surgical mask, gloves and gowns
- Infection control team of the facility to be informed about suspect case based on the facility guideline
- Ensure appropriate environmental cleaning for triage and isolation area

#### 4. Patients with fever and gastrointestinal symptoms (vomiting /diarrhea)

- Consider contagious infections like cholera, *Clostridium difficile*, rota virus ---etc.

**\*\* The triage is not the place for making diagnosis rather identify risks, start containment process and alert staff in A&E, day care, or clinic to take necessary infection control precautions to avoid exposure as following:**

- Move patient to be in an isolation room or area with contact precautions and dedicated toilet facility
- Put appropriate sign (contact precaution) at the entrance to the isolation room or area
- Hand hygiene using water and soap **Not** alcohol hand sanitizer to ensure effectiveness against *C.difficile* and removing soiling as per WHO 5 moments (Annex 4)
- Health care worker attending patient to wear gloves and gowns
- Infection control team of the facility to be informed about suspect case based on the facility guideline
- Ensure appropriate environmental cleaning for triage and isolation area

#### 5. Patients with fever and bleeding

- Consider contagious hemorrhagic fever ( e.g. Crimean Congo Hemorrhagic fever) or DIC with sepsis

**\*\* The triage is not the place for making diagnosis rather identify risks, start containment process and alert staff in A&E, day care, or clinic to take necessary infection control precautions to avoid exposure as following:**

- Place the patient immediately in an isolation room (Preferably airborne isolation or with mobile HEPA filter) with appropriate isolation sign (airborne /contact precaution )
- The health care workers managing the patient should be alerted and instructed on the need to follow infection control preventive measures of airborne/contact precautions :
  - Practicing hand hygiene as per WHO 5 moments (Annex 4)
  - Wearing gown, gloves and N95 respirator with their correct size and seal check



- Infection control team of the facility to be informed about suspect case based on the facility guideline
- Ensure appropriate environmental cleaning for triage and isolation area

**6. Patient with risk for MDRO infection and/or colonization**

- Consider patient may be carrying or infected with an MDRO if there is recent history of admission to a health care facility or he/she was previously diagnosed with MDRO infection/ colonization.
- Move patient to be in an isolation room or area with contact & droplet precautions
- Put appropriate sign (contact and droplet precaution) at the entrance of isolation room or area
- Health care worker attending patient should:
  - Practice hand hygiene as per WHO 5 moments (Annex 4)
  - Wear gloves, surgical mask, and gowns
- Infection control team of the facility to be informed about suspect case based on the facility guideline
- Ensure appropriate environmental cleaning for triage and isolation area

**C. Assessment by the Physician in the clinical area of A&E , OPD, day care:**

- Practice hand hygiene in accordance with the WHO five moments (Annex 4)
- Ensure wearing appropriate PPE before entering the isolation room/area
- Gather further history and do clinical assessment for the patient
- Reporting to infection control team and governorate department of diseases surveillance and control as deemed necessary and in alignment with MOH guidelines

**d. Reporting to facility infection control team and if applicable to governorate disease surveillance and control department**

In the event of national or international outbreaks of contagious infectious diseases the triage of every HCF should include instruction on process of reporting a suspect case to the facility infection control team and the governorate department of diseases surveillance and control.

## Annex1: Triageing Process for Contiguous Infectious Diseases

### At Entry to the Facility:

- Display instruction message for public on common / emerging infections
- Providing facilities for:
  - Hand hygiene (Hand rub and hand wash)
  - Respiratory hygiene (Surgical mask for patients with respiratory symptoms)
  - Pedal bin for waste disposal

### Screen patient on arrival for:

- **Presence symptoms of fever AND with any of the following:**
  - Respiratory symptoms (e.g. cough, breathing difficulty)
  - Skin rash
  - Bleeding
  - Altered sensorium/consciousness
  - Profuse diarrhea
  - Travel history to endemic countries
  - Contact with person having communicable
- **History of hospitalization in the past 3 months and/ or being diagnosed with MDRO**

YES

- Provide facemasks to patient with respiratory symptoms
- Encourage to perform hand hygiene
- Practice cough etiquette
- Segregate patient from others within 1-2 meters

### Risk Assessment for Contiguous Infectious Diseases <sup>1</sup>

There is Risk

No Risk

#### Contain the spread of infection by the following:

- Place patient in isolation room/area
- Adhere to appropriate precautions as per the guideline for triage of infectious diseases
- Alert the other staffs in same clinical areas (A/E, OPD, Day care)
- Inform infection control staff in facility to monitor the process

Processed as per usual process of triage

### 1. Contiguous Infectious Diseases:

- Respiratory symptoms with or without fever; suspect (e.g. Influenza, Coronavirus infection, TB)
- Fever & rash; suspect: (e.g. Varicella, Measles, Meningococcal infection)
- Fever & headache/altered sensorium; suspect (e.g. Meningitis)
- Fever & gastrointestinal symptoms; suspect (e.g. Cholera, *Clostridium difficile*, Rota virus)
- Fever and bleeding; suspect (e.g. Viral Hemorrhagic Fevers- CCHF)
- MDRO infected/colonized; Suspect (e.g. MRSA, CRE, VRE, MDRA)

## Annex2: Instruction Message in Triage Areas

**عزيزي المواطن / المقيم:**  
توجه إلى غرفة المعاينة المبدئية إذا كنت تعاني من **الحمى**  
مع أحد من هذه الأعراض:

**Dear citizen/ resident**  
Please go to the triage room if you are suffering from **FEVER** with any or some of following symptoms:

The central icon shows a person in bed with a thermometer in their mouth, labeled **الحمى** and **FEVER**. Surrounding this are eight circular icons, each with a symptom in Arabic and English:

- سعال / Cough
- رشح وآلام في الجسم / Runny nose and bodyache
- اضطراب في الوعي / Altered sensorium / consciousness
- صداع مع أو بدون تصلب في الرقبة / Headache with or without neck stiffness
- إسهال شديد / Profuse diarrhea
- نزيف دموي / Bleeding
- طفح جلدي مع أو بدون احمرار في العين / Skin rash with or without red eyes
- صعوبة في التنفس / Difficulty in breathing

**أو كنت قد:**

The risk factors are listed in a series of horizontal bars, each with an icon and text in Arabic and English:

- سافرت خارج السلطنة خلال 4-6 أسابيع سابقة / Traveled outside the country in the past 6-4 weeks
- خالطت شخص مصاب بعدوي جرثوميه خلال 3 أشهر سابقة / Contacted with someone having communicable disease in the past 3 months
- تولمت في مستشفى خلال 3 أشهر سابقة / Admitted in a hospital in the past 3 months
- شخصت سابقا بأحد الجراثيم المقاومة للمضادات الحيوية / Diagnosed with any of the antibiotics resistant pathogens (super bugs)

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### Annex3: Checklist for Triage of Infectious Diseases

Health Care Facilities with A&E / OPD Should Ensure that:	
1. There is a triage system/ process for infectious diseases is available, implemented, and monitored.	<input type="checkbox"/>
2. The triage has defined process with clear roles and responsibilities.	<input type="checkbox"/>
3. There is procedure for collecting information about chief complaint and travel history as well as risk factors relevant to specific diseases at first encounter with patient.	<input type="checkbox"/>
4. The information collecting process includes recent serious communicable disease threats and ensure that procedures and protocols are updated to address them	<input type="checkbox"/>
5. There is provision of facilities for an early containment of exposure risks at entry to the facility:	
○ Hand hygiene facilities (hand rub/ hand wash)	<input type="checkbox"/>
○ Paper towel/ tissues	<input type="checkbox"/>
○ Pedal bin for waste disposal	<input type="checkbox"/>
○ Surgical mask for patients with respiratory symptoms (cough, sneezing)	<input type="checkbox"/>
6. The awareness material for public on common / emerging infections and preventive measures like hand hygiene and cough etiquette are displayed	<input type="checkbox"/>
7. There is continuous training for triage staff, which includes emerging/re-emerging infections of public health importance, identification of suspected case as a clinical syndrome, any epidemiological factors, management algorithm and appropriate use of PPE.	<input type="checkbox"/>
8. Necessary PPE's are provided for the triage staff.	<input type="checkbox"/>
9. The triaging for infectious disease does not interfere with the clinical assessment and urgent management of acutely sick patients in the emergency department/ OPD	<input type="checkbox"/>
10. There is a process for receiving suspect cases with contagious infectious diseases arriving by ambulance	<input type="checkbox"/>
11. There is a process that, occurs after a suspect case is identified to include immediate notification of infection control team in the institution.	<input type="checkbox"/>
12. There is a process to notify local or national disease surveillance and control department of a suspect contagious infectious diseases case in align with MOH guidelines	<input type="checkbox"/>



## Annex4: The Five Moments for Hand Hygiene

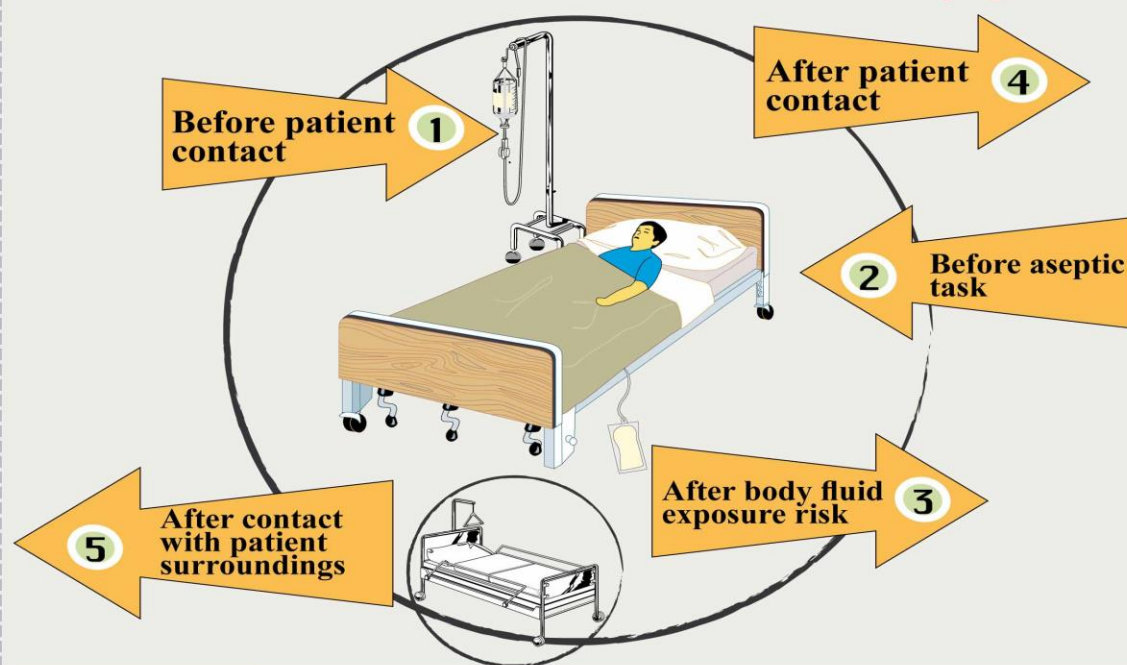
**Make it a Habit**

Clean hands are safer hands.

Are your's clean?



## The 5 moments for hand hygiene



<b>1</b>	<b>Before Patient Contact</b>	<b>WHEN?</b> <b>WHY?</b>	Clean your hands before touching a patient when approaching him or her. To protect the patient against harmful germs carried on your hands
<b>2</b>	<b>Before an Aseptic Task</b>	<b>WHEN?</b> <b>WHY?</b>	Clean your hands immediately before any aseptic task. To protect the patient against harmful germs, including the patient's own germs entering his/her body
<b>3</b>	<b>After Body Fluid Exposure Risk</b>	<b>WHEN?</b> <b>WHY?</b>	Clean your hands immediately after an exposure risk to body fluids (and after glove removal) To protect yourself and the health – care environment from harmful patient germs
<b>4</b>	<b>After Patient Contact</b>	<b>WHEN?</b> <b>WHY?</b>	Clean your hands after touching a patient and his/her immediate surroundings, when leaving the patient's side To protect yourself and the health – care environment from harmful patient germs
<b>5</b>	<b>After Contact With Patient Surroundings</b>	<b>WHEN?</b> <b>WHY?</b>	Clean your hands after touching any object or furniture in the patient's immediate surroundings, when leaving – even without touching the patient To protect yourself and the health – care environment from harmful patient germs



## Annex 5: Definition:

<b>Aerosol</b>	Is a solid particle or liquid droplet suspended in air (or another gas), even temporarily, examples include; a droplet with influenza virus emitted through a cough or sneeze
<b>Aerosol generated procedures</b>	Patient procedures that result in production of aerosol particles (e.g. Sputum induction, bronchoscopy, intubation & extubation, autopsies, CPR, open suctioning of airways)
<b>Aerosol Transmissible Disease (ATD)</b>	Is a disease that can be transmitted by either inhaling particles/droplets; <b>OR</b> direct contact between particles/droplets and mucous membranes in the respiratory tract or eyes
<b>Airborne</b>	Small aerosols (bacteria, viruses or fungi etc.) $\leq 5$ microns in size that remain suspended in the air for longer periods
<b>Airborne Transmission</b>	Occurs when bacteria or viruses travel on dust particles or on small respiratory droplets that may become aerosolized when people sneeze, cough, laugh, or exhale. They hang in the air much like invisible smoke. They can travel on air currents over distance $> 3$ feet considerable distances
<b>Contact</b>	The act of physical touching of any infected person or equipment around the patient
<b>Droplet</b>	Are tiny drops of liquid that land directly on mucosal lining of nose, mouth, eyes of nearby persons or can be inhaled.
<b>Droplet Transmission</b>	Occurs when bacteria or viruses travel on relatively large respiratory droplets that people sneeze, cough, drip, or exhale. They travel only short distances before settling, usually less than 3 feet. These droplets are loaded with infectious particles
<b>Infectious diseases</b>	A disease cause by micro-organisms that is normally not found in the body and capable of causing infections. Some of this infection are contagious or can spread from person to person.
<b>Isolation Signs</b>	These are specific signs placed on the door of isolation rooms to remind healthcare workers and visitors of the precautions necessary to be taken for preventing transmission of infection before entering the isolation room
<b>Mode of Transmission</b>	Refers to routes of infectious pathogens (bacteria, viruses , fungi etc.) are transmitted from one person to another
<b>Personal Protective Equipment (PPE)</b>	Is equipment to be worn to minimize exposure to hazards (infections). Examples of PPE include; gloves, mask, gown, N95 respirators etc.
<b>Precaution</b>	Measures taken in advance to prevent any infection
<b>Standard Precaution</b>	A set of infection control practices used to prevent the transmission of diseases that can be acquired by contact with blood, body fluids, non -intact skin and mucous membrane
<b>Transmission</b>	Passing of pathogen causing communicable disease from an infected person or a group of infected people to individuals who have not been infected previously
<b>Transmission Based Precaution</b>	Infection control measures that are used in addition to standard precautions for patients who may be infected or colonized with infectious agents to prevent infection transmission
<b>Triage</b>	Is the process of categorizing patients in emergency or outpatient setting according to medical care
<b>Triage for Infectious Diseases</b>	Is the process of screening and categorizing patients based on risk of having contagious infectious diseases

## Glossary: Abbreviations

<b>A&amp;E</b>	Accident and emergency
<b>APG</b>	Aerosol generating procedure
<b>CNS</b>	Central Nervous System
<b>COVID</b>	Corona Virus Infectious Disease
<b>DGHS</b>	Directorate General of Health Services
<b>DIC</b>	Disseminated Intravascular Coagulation
<b>HCF</b>	Health care facility
<b>HCW</b>	Healthcare workers
<b>HEPA</b>	High Efficacy Particulate Air
<b>MDRO</b>	Multi Drug Resistant Organism
<b>MERS-CoV</b>	Middle East Respiratory Syndrome- Coronavirus
<b>MoH</b>	Ministry of Health
<b>OPD</b>	Out Patient Department
<b>PPE</b>	Personal protective equipment
<b>TB</b>	Tuberculosis
<b>WHO</b>	World Health Organization