

Section 3: ISOLATION PROCEDURES

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TITLE/DESCRIPTION:

EPIDEMIOLOGY OF INFECTION

INDEX NUMBER

ICM - III - 01

EFFECTIVE DATE:

01/01/2009
01/01/2013
01/01/2018

APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

GULF COOPERATION COUNCIL – CENTRE
FOR INFECTION CONTROL (GCC-CIC)

DEFINITION

The purpose of this policy is to provide information about the epidemiological principles and methods used to describe how microorganisms are transmitted and how to reduce or prevent disease transmission.

REFERENCES

1. Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 10: General principles of epidemiology. In APIC Text of infection control and epidemiology (4th ed.)
2. Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 20: Research and study design. In APIC Text of infection control and epidemiology 4th ed.)
3. HICPAC Guidelines for isolation precautions: preventing transmission of infectious agents in healthcare settings, 2007.

COMMENTS

1. The spread of infection within the hospital requires three essential elements: a source of infectious agents, a susceptible host, and a mode of transmission. Each element can be equated to a link in a chain.
2. This chain analogy is used to represent the series of interactions that are necessary to produce an infection process. To prevent the transmission of infectious agents, it is important to understand the role that each element (link) plays.
3. Healthcare workers are encouraged to become familiar with this concept to develop and expand a knowledge base for interpreting data gathered within and outside the healthcare facility; for understanding the associations between risk factors and infection in different settings; and for appreciating how these findings can be used to reduce infection risks.
4. Endemic refers to the usual incidence of a given disease within a geographical area during a specified time period.
5. Epidemic refers to a greater incidence of disease over the expected incidence of the disease within a given geographical area during a specified time period.
6. Pandemic refers to an epidemic spread over a wide geographical area, across countries or continents.
7. Reservoir refers to a place in where an infectious agent can survive but may or may not multiply.
8. Infection refers to the entry into and multiplication of an infectious agent in the tissues of the host and the tissue damage resulting in apparent or unapparent changes in the host.
9. Healthcare-associated infections (HAIs) are infections that were not present or incubating at the time of admission to the hospital but are temporally associated with admission to or a procedure performed in a healthcare facility.
10. Colonization refers to the presence of microorganisms in or on a host with growth and multiplication but without tissue invasion or damage.

PROCEDURE

Understanding the Chain of Infection must precede the breaking of its links, which leads to the prevention of infection.

A. Chain of Infection

Each of the 6 components (or links) in this chain is required to cause colonization or infection:

1. The causative agent is a biological, physical, or chemical entity capable of causing disease.

2. The reservoir is a place in which an infectious agent can survive but may or may not multiply.
 - a. The source of the infectious agent may be patients, personnel, or visitors and may include persons with active infection, persons in the incubation period of the disease, or persons who are colonized by the infectious agent but have no apparent disease.
 - b. Other sources of infection include inanimate objects in the environment, such as equipment and medications that have become contaminated.
3. The portal of exit is the path by which an infectious agent leaves the reservoir.
4. The mode of transmission is the method by which the organism reaches a susceptible host; three modes of transmission are of particular importance in the healthcare setting:
 - a. Contact Transmission is the most important and frequent mode of transmission in nosocomial infections. This transmission type is further divided into two sub-groups:
 - i. Direct Contact: Involves direct physical contact between a susceptible host and an infected or colonized person, e.g., nurse-patient contact during routine care, patient-patient contact or patient-visitor contact. Such contact can cause direct transfer of microorganisms from one person to another.
 - ii. Indirect Contact: Involves the physical contact of a susceptible host with a contaminated intermediate object such as bed linen, instruments, dressings, shared equipment or healthcare environmental surfaces.
 - b. Droplet Contact involves the transmission of microorganisms in droplets generated from an infected or colonized person during talking, sneezing or coughing or generated during certain procedures such as suctioning and bronchoscopy. Microorganisms are aerosolized and deposited on the host's conjunctiva, nasal mucosa and/or mouth.
 - c. Airborne Transmission involves the dissemination of droplet nuclei or dust particles containing the infectious agent in the air. Organisms carried in this manner can be widely dispersed by air currents before being inhaled.
5. The portal of entry is the means by which an infectious agent enters the susceptible host.
6. Although everyone is a susceptible host at some level, the elderly, the young, and those with decreased stomach acid are especially vulnerable. A patient's resistance to pathogenic agents varies greatly. Systemic disease, age (especially extremely young or old age), trauma, surgical and radiological procedures, drug treatments, and indwelling devices can decrease resistance and make patients more susceptible to infection.

B. Prevention of Disease Transmission

Prevention of the transmission of an infectious agent is the responsibility of all staff:

1. Treat all bodily fluids as potentially infectious.
2. Dispose waste according to hospital policy. (Refer to **ICM-IX-02** Management of Infectious Waste).
3. Adhere to aseptic technique when required. (Refer to **ICM-II-05** Aseptic Technique).
4. Adhere to hand hygiene practices. (Refer to **ICM-II-04** Hand Hygiene).
5. Maintain good personal hygiene.
6. Adhere to the hospital policy for managing isolated patients. (Refer to **ICM-III-02** Isolation (Expanded) Precautions).
7. Observe effective housekeeping practices. (Refer to **ICM-X-07** Housekeeping).
8. Adhere to STANDARD PRECAUTIONS. (Refer to **ICM-II-03** Standard Precautions)
9. Store food and personal belongings appropriately in the workplace.

TITLE/DESCRIPTION:

ISOLATION (EXPANDED) PRECAUTIONS

INDEX NUMBER

ICM - III - 02

EFFECTIVE DATE:

01/01/2009
01/01/2013
01/01/2018

APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

**GULF COOPERATION COUNCIL – CENTRE
FOR INFECTION CONTROL (GCC-CIC)****DEFINITION**

To describe the principles of isolation precautions (also known as expanded precautions) needed to further reduce or prevent the spread of epidemiologically significant or highly transmissible pathogens when standard precautions alone are insufficient.

REFERENCES

1. Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 29: Isolation precautions – recommendation for isolation precautions in hospitals. In APIC Text of infection control and epidemiology (4th ed.).
2. HICPAC Guidelines for isolation precautions: preventing transmission of infectious agents in healthcare settings, 2007.

COMMENTS

1. Isolation precautions contain two tiers: Standard Precautions and Transmission-based Precautions.

STANDARD PRECAUTIONS	TRANSMISSION-BASED PRECAUTIONS
Apply to all patients in all situations.	Apply in addition to Standard Precautions to patients known or suspected of being infected or colonized with an epidemiologically important or highly transmissible pathogen.

- a. Standard precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in hospitals. Standard precautions apply to blood, all body fluids (secretions and excretions except sweat regardless of whether they contain blood), non-intact skin and mucous membranes. Refer to **ICM-II-03** Standard Precautions.
- b. Transmission-based precaution is designed for patients documented to be or suspected to be infected or colonized with highly transmissible or epidemiologically important pathogens for which additional precautions beyond Standard Precautions are required.
 - i. There are three types of isolation precautions: Airborne, Droplet and Contact Precautions.
 - ii. These precautions may be combined for diseases that have multiple routes of transmission. When used either singularly or in combination, they are to be used in addition to Standard Precautions.
 - iii. Refer to **ICM-III-06** Isolation System: A Quick Reference Guide to Pathogen/Isolation Requirements.
 - iv. Protective environment guidelines refer to policy **ICM-VII-05** Immunocompromised Patients.

PROCEDURE

Nurses will take the following steps:

1. Initiate isolation precautions as specified and/or based on clinical assessment of the patient in consultation with the attending physician and/or Infection Preventionist (IP). (Microbiology reports may or may not support the clinical assessment).
2. Arrange for the required isolation supplies for the room. Place the appropriate isolation precautions sign on the room door and on the patient's Kardex.
3. Give the necessary instructions to patients and visitors.

TITLE/DESCRIPTION:

CONTACT ISOLATION PRECAUTIONS

INDEX NUMBER

ICM - III - 03

EFFECTIVE DATE:

01/01/2009
01/01/2013
01/01/2018

APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

GULF COOPERATION COUNCIL – CENTRE
FOR INFECTION CONTROL (GCC-CIC)

DEFINITION

In addition to standard precautions, Contact Isolation Precautions is intended to reduce the risk of transmission of epidemiologically important microorganisms thru direct or indirect contact with the patients or the patients' environment.

REFERENCES

1. Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 29: Isolation precautions – recommendations for isolation precautions in hospitals. In APIC Text of infection control and epidemiology (4th ed.).
2. HICPAC Guidelines for isolation precautions: preventing transmission of infectious agents in healthcare settings, 2007.

COMMENTS

1. Contact isolation precautions must be used together with Standard Precautions (**ICM-II-03**).
2. Contact precautions also apply when the presence of excessive wound drainage, fecal incontinence or other discharges from the body suggest an increased potential for extensive environmental contaminations and risk of transmission.
3. Patients diagnosed with the same disease can be placed in the same room (cohorted), assuming that no other infection is present.

PROCEDURE

1. Contact isolation should be initiated and maintained when there is a suspected or confirmed diagnosis of an infectious disease that is transmitted by the contact route. Refer to **ICM-III-06** Isolation System: A Quick Reference Guide.
2. The patient should be in a single room. A neutral pressure room is indicated. If no single room is available
 - a. Put a contact isolation sign on the door and the patient's curtain. Contact isolation signage must be color coded (e.g., green) and must be available in both English and Arabic languages.
 - b. Keep the door closed.
 - c. If no single room is available cohorting same patients with similar infections may be done in consultation with the Infection Preventionist (IP).
3. All healthcare workers must wear the appropriate PPE (gown and gloves) when anticipating contact with patient or the patient's environment.
 - a. Change the gown and gloves between patients even if both patients share a room and both are under Contact Precautions.

- b. Sequence of donning PPEs before entering the room:
 - i. Perform hand hygiene
 - ii. Don gown. Gown should cover torso from neck to knees and should be secured at neck and waist.
 - iii. Don gloves. Extend gloves over isolation gown cuffs.
 - c. Sequence of doffing PPEs before leaving the room:
 - i. Remove gloves.
 - ii. Remove gown. Unfasten ties, peel gown away from neck and shoulder, turn inside out, fold into a bundle and discard.
 - iii. Perform hand hygiene. Use soap and water when dealing with a patient with spore-forming bacteria (e.g., *Clostridium difficile*) or if hands are visibly soiled.
Refer to **ICM-II-04** Hand Hygiene
4. Notify IP that the patient is in contact isolation.
5. The "5 Moments of Hand Hygiene" must be followed by all personnel entering and leaving the patient care area. Refer to **ICM-II-04** Hand Hygiene.
6. Explain the purpose of precautions to the patient and visitors to encourage their cooperation with hand hygiene.
7. Limit patient transport outside the room to medically necessary purposes. If the patient is to be transported, refer to **ICM-III-09** Transporting Patients on Isolation Precautions.
 - a. Inform the destination department/facility of the patient's isolation status prior to transport.
8. Environmental measures: Housekeepers should wear gowns and gloves before room entry to clean the patient's room, and gowns and gloves should be discarded when leaving. Refer to **ICM-X-07** Housekeeping.
9. Discontinue isolation precautions in consultation with the IP.

TITLE/DESCRIPTION:

DROPLET ISOLATION PRECAUTIONS

INDEX NUMBER

ICM - III - 04

EFFECTIVE DATE:

01/01/2009
01/01/2013
01/01/2018

APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

GULF COOPERATION COUNCIL – CENTRE
FOR INFECTION CONTROL (GCC-CIC)

DEFINITION

In addition to standard precautions, Droplet Isolation Precautions prevents the transmission of infectious agents that are spread through close respiratory or mucous membrane contact with respiratory secretions.

REFERENCES

1. Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 29: Isolation precautions – recommendations for isolation precautions in hospitals. In APIC Text of infection control and epidemiology (4th ed.)
2. HICPAC Guidelines for isolation precautions: preventing transmission of infectious agent in healthcare settings, 2007.

COMMENTS

1. Droplet Isolation Precautions must be used together with Standard Precautions (**ICM-II-03**).
2. Droplet Precautions are intended to reduce the risk of droplet transmission of infectious agents from close contact (exposure to eyes, nose and mouth) with large-particle droplets (larger than 5 µm) generated by coughing, sneezing, talking or aerosol-generating procedures.
3. Patients diagnosed with the same disease can be placed in the same room (cohorted) in consultation with Infection Preventionist (IP), assuming that no other infection is present.

PROCEDURE

1. Initiate and maintain droplet precautions when there is suspected or confirmed diagnosis of an infectious disease that is transmitted by the droplet route.
2. Use a single room. A negative air pressure room is not indicated.
 - a. Place a droplet sign on the door.
 - b. Droplet isolation signage must be color coded (e.g., orange) and must be available in both English and Arabic languages.
3. Notify the IP that the patient is placed under precautions.
4. Wear appropriate PPE (surgical mask, gloves, and gown) as needed. A surgical mask is required within three (3) feet of the patient.
 - a. Sequence of donning PPEs before entering the room:
 - i. Perform hand hygiene.
 - ii. Don gown. Gown should cover torso from neck to knees and should be secure at neck and waist.

- iii. Don surgical mask. Place surgical mask over nose, mouth and chin then fit flexible nosepiece over nose bridge and secure head with ties or elastic.
- iv. Don gloves. Extend gloves over isolation gown cuffs.
- b. Sequence of doffing PPEs before leaving the room:
 - i. Remove gloves.
 - ii. Remove gown. Unfasten ties, peel gown away from neck and shoulder, turn it inside out, fold into a bundle and discard.
 - iii. Perform hand hygiene.
 - iv. Remove surgical mask.
 - v. Perform hand hygiene.

NB: If goggles/face shield are worn:

- Don PPEs in this order: Hand hygiene, gown, surgical mask, goggles/face shield and gloves.
 - Remove PPEs in this order: Gloves, hand hygiene, goggles/face shield, gown, hand hygiene, surgical mask and hand hygiene.
5. The "5 Moments of Hand Hygiene" must be followed by all personnel entering and leaving the patient care area. Refer to **ICM-II-04** Hand Hygiene.
 6. Encourage the patient to observe basic personal hygiene (hand hygiene, care with secretions).
 7. Keep the patient in the room for the duration of the infectious period if possible. Limit patient transport to essential medical purposes (if patient is to be transported, refer to **ICM-III-09** Transporting Patients on Isolation Precautions).
 - a. Place a surgical mask on the patient if he/she must leave the room.
 - b. Inform the destination department/facility regarding droplet precautions when the patient is being transported.
 8. Explain the purpose of the precautions to the patient and visitors to encourage their cooperation.
 9. Environmental Measures: Daily cleaning of the high touch surfaces with hospital-approved disinfectant is appropriate. Housekeeping staff should wear a surgical mask before entering the room. Refer to **ICM-X-07** Housekeeping.
 10. Discontinue isolation precautions in consultation with the IP. Refer to **ICM-III-06** Isolation System: A Quick Reference Guide.

TITLE/DESCRIPTION:

AIRBORNE ISOLATION PRECAUTIONS

INDEX NUMBER

ICM - III - 05

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01/01/2009
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01/01/2018

APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

GULF COOPERATION COUNCIL – CENTRE
FOR INFECTION CONTROL (GCC-CIC)

DEFINITION

In addition to standard precautions, Airborne Isolation Precautions prevents the transmission of infectious agents that remain infectious over long distances when suspended in the air (e.g., measles, varicella, pulmonary tuberculosis, avian influenza, severe acute respiratory syndrome (SARS)).

REFERENCES

1. American Thoracic Society. (1992). Control of tuberculosis in the United States. 146; 1623-1633.
2. Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 29: Isolation Precautions. In APIC Text of infection control and epidemiology (4th ed.).
3. Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 95: Tuberculosis and other Mycobacteria. In APIC Text of infection control and epidemiology (4th ed.).
4. Centers for Disease Control and Prevention (CDC). Guidelines for preventing the transmission of mycobacterium tuberculosis in healthcare settings MMWR. 2005.
5. HICPAC/CDC Guidelines for isolation precautions: preventing transmission of infectious agents in healthcare setting, 2007.

COMMENTS

1. Airborne isolation precautions must be used together with Standard Precautions (**ICM-II-03**).
2. Airborne isolation is used when a patient is suspected or confirmed to have any of the diseases that are spread via the airborne route.
3. Healthcare workers (HCWs) are expected to be immune to vaccine-preventable diseases such as measles and varicella that are transmitted via the airborne route.
4. Non-immune HCWs shall adhere to proper PPE for self-protection and be immunized as soon as possible.
5. Rooms with negative air pressure system (also called airborne infectious isolation rooms (AIIRs) are vital to prevent the risk of infectious particles escaping and potential exposure/transmission of disease.
6. A fit-tested respirator particulate mask (N95 or higher) is required for all HCWs who will potentially care for patients in respiratory isolation. The renewal of fit testing for HCWs should follow a hospital-based policy. This will ensure the prevention of disease transmission to HCWs through the airborne route.
7. A fit check or user seal check is a quick check performed by the wearer each time the respirator is put on. It determines if the respirator is properly sealed to the face or needs to be readjusted.
8. A fit test, tests the seal between the respirator's face piece and your face. It takes about 15 to 20 minutes to complete. After passing a fit test with a respirator, you must use the exact same make, model, style, and size respirator on the workplace.

PROCEDURE

1. Initiate and maintain isolation when there is suspicion or confirmed diagnosis of an infectious disease that is transmitted by the airborne route.

2. Use a single room with a negative air pressure system (AIIR)
 - a. Place the Airborne Isolation sign on the door. Airborne isolation signage must be color coded (e.g., blue) and must be available in both English and Arabic languages.
 - b. Keep door closed at all times except when entering or leaving the room.
3. When a patient is on airborne isolation, HCWs must wear an N95 mask/respirator before entering the room. An N-95 is single-use and disposed after each patient encounter. In the event of a shortage, such as during an outbreak, reuse may be allowed. Refer to **ICM-III-12** Management of Influx of Airborne Infectious Diseases for guidelines on the reuse of N-95 respirators.
 - a. Sequence of donning PPEs before entering the room (preferably done in the anteroom, if available):
 - i. Perform hand hygiene.
 - ii. Don N95 mask or respirator. Place over nose, mouth and chin then fit flexible nosepiece over nose bridge, secure on the head with ties or elastic. Perform fit check.
 - b. Sequence of doffing PPEs before leaving the room:
 - i. Perform hand hygiene.
 - ii. Outside the room, remove your N95 mask (in the anteroom if available)
 - iii. Perform hand hygiene.
 - c. In case of combination of Contact and Airborne precautions with eye protection (goggles/face shield):
 - i. Put PPEs in this order: Hand hygiene, gown, N95 mask, goggles/face shield and gloves.
 - ii. Remove PPEs in this order: Gloves, hand hygiene, goggles/face shield, gown, hand hygiene (inside the room), and remove N95 mask (outside the room) and perform hand hygiene.
4. Notify the IP that the patient is in isolation.
5. The "5 Moments of Hand Hygiene" must be followed by all personnel entering and leaving the patient care area. Refer to **ICM-II-04** Hand Hygiene.
6. Keep the patient in the room during the infectious period (if patient is to be transported, refer to **ICM-III-09** Transporting Patients on Isolation Precautions).
 - a. Place a surgical mask on the patient if he/she must leave the room.
 - b. Instruct patient on respiratory hygiene and cough etiquette.
 - c. Cover all lesions.
 - d. Limit the transport of patients to essential medical purposes.
7. Instruct patients on respiratory hygiene and cough etiquette.
8. Check with visitors and staff for their immune status to the disease and instruct them regarding the use of protective apparel and proper behavior while in the isolation room.
 - a. Emphasize proper personal hygiene and hand hygiene.
9. Notify other departments that will be receiving the patient of his/her isolation status.
10. Environmental measures: Routine cleaning of high touch surfaces is standard. Housekeeping personnel should wear the N95 mask before room entry. Refer to **ICM-X-07** Housekeeping.
11. In settings where airborne precautions cannot be implemented immediately, do the following:
 - a. Place a surgical mask on the patient.
 - b. Place the patient in a single room with a door. Keep the door closed.
 - c. Provide N95 masks for HCWs entering the patient's room.
 - d. Arrange for the patient to be transferred to an airborne isolation room and/or to be discharged as soon as possible.
12. Discontinue isolation precautions in consultation with infection control. Refer to **ICM- III-06** Isolation System: A Quick Reference Guide.
13. In case of negative pressure system failure, refer to **ICM-III-11** Negative Pressure Room Monitoring.

TITLE/DESCRIPTION:

ISOLATION SYSTEM: A QUICK REFERENCE GUIDE

INDEX NUMBER

ICM - III - 06

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APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

**GULF COOPERATION COUNCIL – CENTRE
FOR INFECTION CONTROL (GCC-CIC)**

DEFINITION

This policy provides a quick reference guide for the selection of the appropriate isolation precaution(s). Each disease and condition is considered individually; only those precautions that are indicated to interrupt transmission for the disease/condition in question are recommended.

REFERENCE

1. Interim Guidance on Infection Control Measures for 2009: H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel. July 2010.
2. Siegel JD, Rhinehart E, Jackson M, Chiarello L. The Healthcare Infection Control Practices Advisory Committee (HICPAC) 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings.

COMMENTS

1. Standard Precautions are those designed for the care of all patients in the hospital regardless of their diagnosis or presumed infection status. Implementation of Standard Precautions is the primary strategy for successful nosocomial prevention and control.
2. Isolation (transmission based) Precautions are designed for patients who are known or suspected to be infected with epidemiologically important pathogens that can be spread by the airborne, droplet, or contact routes.

Key	
1. C	Contact isolation
2. CN	Culture negative (with specified amount)
3. D	Droplet precautions
4. DE	Decontamination of environment
5. DH	Duration of hospitalization
6. DI	Duration of illness
7. LC	Lesions crusted
8. A	Airborne precautions
9. S	Standard precautions
10. SAPP	Special Administrative Policy and Procedure
11. U	Time (in hours or days) after the initiation of effective antimicrobial therapy
12. U ^R	Time (in days) after onset of rash
13. U ^S	Time (in days) after onset of swelling

PROCEDURE

Refer to [Appendix 1 – III-06](#) Isolation Systems: A Quick Reference Guide

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
Abscess		
• Draining, major	S, C	DI
• Draining, minor or limited	S	
Acquired immunodeficiency syndrome (AIDS)	S	
Actinomycosis	S	
Adenovirus infection		
• Conjunctivitis	S, C	DI
• Disseminated (2 or more sites) infection in immuno-compromised host	S, C	DI
• Gastroenteritis	S, C	DI
• Respiratory infection	S, D, C	DI
Amoebiasis	S	
Anthrax	S	
• Environmental aerosolizable spore-containing powder	S, C	DE*
• Cutaneous**	S, C	
• Pulmonary	S	
Antibiotic-associated colitis (see <i>Clostridium difficile</i>)	–	–
Arthropod-borne viral encephalitis (Eastern, Western and Venezuelan equine encephalomyelitis; St. Louis or California encephalitis, West Nile Virus, dengue, yellow fever)	S	
Ascariasis	S	
Aspergillosis	S	
Avian influenza A (H5N1 virus and any new emerging pathogens)	S, A, C	14 days after onset of symptoms
Seasonal influenza A or B (H1N1 Virus)	S, D	
Babesiosis	S	

* Until decontamination of environment complete. Persons decontaminating the area must wear N95 mask and protective clothing

** CP if contact with non-intact skin and with draining lesions.

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
Blastomycosis (North American - cutaneous or pulmonary)	S	
Botulism	S	
Bronchiolitis (see respiratory infection in infants and young children)	S,C	DI
Brucellosis (undulant, Malta, Mediterranean fever)	S	
Cat-scratch fever (benign inoculation lymphoreticulosis)	S	
Cellulitis (uncontrolled drainage)	S, C	DI
Chancroid (soft chancre)	S	
Chickenpox (see Varicella)		
<i>Chlamydia trachomatis</i>		
• Conjunctivitis	S	
• Genital (lymphogranuloma venereum)	S	
• Pneumonia (infants ≤3 months old)	S	
Cholera (see gastroenteritis)		
Closed-cavity infection		
• Draining (limited or minor) and not draining	S	
• Copious, uncontrolled drainage	S, C	
Clostridium		
• <i>C. botulinum</i>	S	
• <i>C. difficile</i>	S, C	U ^{48 hours} after diarrhea stops
• <i>C. perfringens</i>		
▪ Food poisoning	S	
▪ Gas gangrene	S	
Coccidioidomycosis (valley fever)		
• Draining lesions	S	
• Pneumonia	S	

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
Colorado tick fever	S	
Congenital rubella	S, C	Until 1 yr of age
Conjunctivitis		
• Acute bacterial	S	
• Chlamydia	S	
• Gonococcal	S	
• Acute viral (acute hemorrhagic)	S, C	DI
Corona virus associated with SARS (see SARS) • Human corona virus (229E, NL63, OC43) • Middle East Respiratory Syndrome Corona virus (MERS-CoV)	S,D S,A,C	
Coxsackie virus disease (see enteroviral infection)		
Creutzfeldt-Jakob disease (CJD, VCJD) refer to policy	S	
Crimean-Congo fever virus	S, C, D	DI
Croup (see respiratory infections in infants and young children)		
Cryptococcosis	S	
Cryptosporidiosis (see gastroenteritis)		
Cysticercosis	S	
Cytomegalovirus infection (neonatal or immuno-suppressed)	S	
Decubitus ulcer (infected)		
• Major	S, C	DI
• Minor or limited	S	
Dengue fever	S	
Diarrhea (acute infective etiology suspected; see gastroenteritis)		
Diphtheria		
• Cutaneous	S, C	CNx ^{2*}

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
• Pharyngeal	S, D	CNx2*
Ebola viral hemorrhagic fever	S, C, D	DI/SAPP
Echinococcosis (hydatidosis)	S	
Echovirus (see enteroviral infection)		
Encephalitis or encephalomyelitis (see specific etiologic agents)		
Endometritis	S	
Enterobiasis (pinworm disease, oxyuriasis)	S	
Enterococcus spp. (see multidrug-resistant organisms if epidemiologically significant or vancomycin resistant)		
Enterocolitis: <i>Clostridium difficile</i>	S, C	DI
Enteroviral infections (group A & B coxsackie and echo viruses-excluding polio virus)		
• Adults	S	
• Infants and young children	S, C	DI
Epiglottitis , due to <i>Haemophilus influenzae type b</i>	S, D	U ^{24Hrs}
Epstein-Barr virus infection , including infectious mononucleosis	S	
Erythema infectiosum (also see parvovirus B19)		
<i>Escherichia coli</i> gastroenteritis (see gastroenteritis)		
Food poisoning		
• Botulism	S	
• <i>Clostridium perfringens</i> or <i>Clostridium welchii</i>	S	
• Staphylococcal	S	
Furunculosis, staphylococcal	S	
• Infants and young children	S, C	DI

* Until 2 cultures taken 24 hours apart negative

Appendix 1
TYPE AND DURATION OF PRECAUTIONS NEEDED FOR
SELECTED INFECTIONS AND CONDITIONS

INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION

Gangrene (gas gangrene)	S	
Gastroenteritis <i>Diapered or incontinent</i>	S, C	DI
• Adenovirus <i>Diapered or incontinent</i>	S S,C	DI
• <i>Campylobacter</i> spp. <i>Diapered or incontinent</i>	S S,C	DI
• Cholera <i>Diapered or incontinent</i>	S S,C	DI
• <i>Clostridium difficile</i> (see <i>C. difficile</i>) * refer to policy	S, C	U 48hrs after diarrhea stops
• <i>Cryptosporidium</i> spp. <i>Diapered or incontinent</i>	S S,C	
• <i>Escherichia coli</i>		
▪ Enterohemorrhagic 0157:H7 <i>E. coli</i> <i>Diapered or incontinent</i>	S S,C	
▪ Other species <i>Diapered or incontinent</i>	S S,C	
• <i>Giardia lamblia</i> <i>Diapered or incontinent</i>	S S,C	DI
• Noroviruses <i>Diapered or incontinent</i>	S S,C	
• Rotavirus	S, C	DI
• <i>Salmonella</i> spp. (including <i>S. typhi</i>) <i>Diapered or incontinent</i>	S S,C	
• <i>Shigella</i> spp. <i>Diapered or incontinent</i>	S S, C	DI
• <i>Vibrio parahaemolyticus</i> <i>Diapered or incontinent</i>	S S,C	

* Discontinue antibiotics if appropriate. Do not share electronic thermometers, ensure consistent environmental cleaning and disinfection using a Hypochlorite solution. Hand washing with soap and water preferred.

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
<ul style="list-style-type: none"> Viral (if not covered elsewhere) <i>Diapered or incontinent</i> 	S S,C	
<ul style="list-style-type: none"> <i>Yersinia enterocolitica</i> <i>Diapered or incontinent</i> 	S S,C	
German measles (see rubella)		
Giardiasis (see gastroenteritis)		
Gonococcal ophthalmia neonatorum (gonorrhoeal ophthalmia, acute conjunctivitis of newborns)	S	
Gonorrhoea	S	
Granuloma inguinale (donovanosis granuloma)	S	
Guillian-Barre syndrome	S	
Hand, foot, and mouth disease (see enteroviral infection)		
Hantavirus pulmonary syndrome	S	
Helicobacter pylori	S	
Hepatitis, viral		
<ul style="list-style-type: none"> Type A <i>Diapered or incontinent patients</i> 	S S, C	
<ul style="list-style-type: none"> Type B, HBsAg positive, acute or chronic 	S	
<ul style="list-style-type: none"> Type C and other unspecified non-A, non-B 	S	
<ul style="list-style-type: none"> Type D (seen only with hepatitis B) 	S	
<ul style="list-style-type: none"> Type E <i>Diapered or incontinent</i> 	S S,C	
<ul style="list-style-type: none"> Type G 	S	
Herpangina (see enteroviral infection)		
Herpes simplex (Herpesvirus hominis)		
<ul style="list-style-type: none"> Encephalitis 	S	
<ul style="list-style-type: none"> Neonatal* 	S, C	DI/LC

* For asymptomatic, exposed infants delivered vaginally or by C-section and if mother has active infection and membranes have been ruptured for more than 4 to 6 hours until infant surface cultures obtained at 24-36 hours of age negative after 48 hrs incubation

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
• Mucocutaneous, disseminated, severe primary or recurrent	S, C	DI/LC
• Mucocutaneous, localized non disseminated recurrent (skin, oral, genital)	S	
Herpes zoster (varicella-zoster)**		
• Disseminated in any patient	S, A, C	DI
• Localized in immuno-compromised patient	S, A, C	DI
• Localized in normal patient	S	DI
Histoplasmosis	S	
Hookworm disease (ancylostomiasis, uncinariasis)	S	
Human Bocavirus	S, D	
Human immunodeficiency virus (HIV) infection	S	
Human Metapneumovirus	S,C	DI
Impetigo	S, C	U ^{24Hrs}
Infectious mononucleosis	S	
Influenza	S, D	DI
• seasonal	S,D	DI
• emerging influenza viruses including Avian and others	S,A,C	DI
• immunocompromised	S,D	DI
Kawasaki syndrome	S	
Lassa fever (see Viral hemorrhagic fever)		
Legionnaires' disease	S	DI
Leprosy	S	
Leptospirosis	S	
Lice (pediculosis)	S, C	U ^{24Hrs}
Listeriosis	S	

** Non-immune staff should not enter room if immune caregivers are available.

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
Lyme disease	S	
Lymphocytic choriomeningitis	S	
Lymphogranuloma venereum	S	
Malaria	S	
Marburg virus disease (see Viral hemorrhagic fever)		
Measles (rubeola), all presentations refer to policy*	S, A	U ^R 4 days
Melioidosis, all forms	S	
Meningitis		
<ul style="list-style-type: none"> • Aseptic (nonbacterial or viral meningitis) (also see enteroviral infections) • Infants and young children 	S S, C	
<ul style="list-style-type: none"> • Bacterial, gram-negative enteric, in neonates 	S	
<ul style="list-style-type: none"> • Fungal 	S	
<ul style="list-style-type: none"> • <i>Haemophilus influenzae</i> type B, known or suspected 	S, D	U ^{24Hrs}
<ul style="list-style-type: none"> • <i>Listeria monocytogenes</i> 	S	
<ul style="list-style-type: none"> • <i>Neisseria meningitidis</i> (meningococcal), known or suspected 	S, D	U ^{24Hrs}
<ul style="list-style-type: none"> • <i>Streptococcus pneumoniae</i> 	S	
<ul style="list-style-type: none"> • Tuberculosis (See M. tuberculosis) 	S	
<ul style="list-style-type: none"> • Other diagnosed bacterial infection 	S	
Meningococcal disease (sepsis, pneumonia, meningitis)	S, D	U ^{24Hrs}
Meningococemia (meningococcal sepsis)	S, D	U ^{24Hrs}
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	S, C	
Middle East Respiratory Syndrome (MERS-CoV)	S, A, C	
Molluscum contagiosum	S	
Monkeypox	S, A, C	LC

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
Mucormycosis	S	
Multidrug-resistant organism, infection or colonization* (e.g., MRSA, VRE, GNR, resistant Strept pneumoniae)	S,C	
• Gastrointestinal	S, C	
• Respiratory	S, C	
• Skin, wound, or burn	S, C	
Mumps (infectious parotitis) refer to policy	S, D	U ^{S9days}
Mycobacteria, nontuberculosis (atypical)		
• Pulmonary	S	
• Wound	S	
Mycoplasma pneumoniae	S, D	DI
Necrotizing enterocolitis	S	
Nocardiosis (draining lesions or other presentations)	S	
Orf virus disease	S	
Parainfluenza virus (respiratory infection in infants and young children)	S, C	DI
Parvovirus B19	S, D	DH
Pediculosis (lice)	S, C	U ^{24Hrs}
Pertussis (whooping cough)*	S, D	U ^{5DAYS}
Pharyngitis (Streptococcus group A)	S, D	U ^{24Hrs}
Pinworm infection	S	
Plague (<i>Yersinia pestis</i>)		
• Bubonic (without cough and chest x-ray negative)	S	
• Pneumonic	S, D	U ^{48Hrs}
Pleurodynia (see enteroviral infection)		

* Discontinue CP after consultation with the IP

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
Pneumonia		
• Adenovirus	S, D, C	DI
• Bacterial case not listed elsewhere (including gram-negative bacterial cases)	S	
• <i>Burkholderia cepacia</i> * with cystic fibrosis patients, including respiratory tract colonization	S,C	
• <i>Chlamydia</i>	S	
• <i>Fungal</i>	S	
• <i>Haemophilus influenzae</i> , Type B		
▪ Adults	S	
▪ Infants and children (any age)	S, D	U ^{24Hrs}
• <i>Legionella spp.</i>	S	
• Meningococcal	S, D	U ^{24Hrs}
• <i>Mycoplasma</i> (primary atypical pneumonia)	S, D	DI
• <i>Pneumocystis jiroveci (carinii)**</i>	S	
• <i>Streptococcus</i> , group A		
▪ Adults	S, D	U ^{24Hrs}
▪ Infants and small children	S, D	U ^{24Hrs}
• Varicella zoster see Varicella-zoster	S,A	DI
Viral		
▪ Adults	S	
▪ Infants and young children (see respiratory infectious disease, acute)		
Poliomyelitis (acute)	S, C	DI
Pressure ulcer (see decubitus ulcer)		
Psittacosis (ornithosis) (<i>Chlamydia psittaci</i>)	S	

* Avoid placement in the same room with CF patients without *B. cepacia*

** Avoid placement in the same room with immunocompromised patient

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
Q fever	S	
Rabies see policy	S	
Rat-bite fever (<i>Streptobacillus moniliformis</i> disease, <i>Spirillum minus</i> disease)	S	
Relapsing fever	S	
Respiratory infectious disease , acute (if not covered elsewhere)		
• Adults	S	
• Infants and young children	S, C	DI
Respiratory syncytial virus infection* (in infants and young children and immunocompromised adults)	S, C	DI
Reye's syndrome	S	
Rheumatic fever	S	
Rhinovirus	S, D	DI
Rickettsial fever, tickborne (Rocky Mountain spotted fever, tickborne typhus fever)	S	
Rickettsialpox (vesicular rickettsiosis)	S	
Ringworm (dermatophytosis, dermatomycosis, tinea)	S	
Ritter's disease (staphylococcal scalded skin syndrome)	S, C	DI
Rocky Mountain spotted fever	S	
Roseola infantum (exanthem subitum)	S	
Rotavirus infection (see gastroenteritis)		
Rubella (German measles) (also see congenital rubella)	S, D	U ^R 7 days
Rubeola (see Measles)		
Salmonellosis (typhoidal or not typhoidal, diapered or incontinent)	S, C	DI
SARS (Severe Acute Respiratory Syndrome)**	S, A, D, C	DI

* In immunocompromised patients, extend the duration of contact precaution due to prolonged shedding.

** Airborne precautions, preferred; D if AIIR not available. N95 or higher respiratory protection; surgical mask if N95 unavailable; eye protection (goggles, face shield); aerosol-generating procedures highest risk for transmission via small droplet nuclei and large droplets; vigilant disinfection.

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
Scabies	S, C	U ^{24Hrs}
Scalded skin syndrome, staphylococcal (Ritter's disease)	S, C	DI
Scarlet fever	S, C	U ^{24Hrs}
Schistosomiasis (bilharziasis)	S	
Shigellosis (see gastroenteritis)		
Smallpox* (variola)	S, C, A	DI/LC
Sporotrichosis	S	
<i>Spirillum minus</i> disease (rat-bite fever)	S	
Staphylococcal disease (<i>S. aureus</i>)		
• Pneumonia	S	
• Skin, wound, or burn		
▪ Major	S, C	DI
▪ Minor or limited	S	
▪ MRSA (see MRSA)		
<i>Streptobacillus moniliformis</i> disease (rat-bite fever)	S	
Streptococcal disease (group A <i>Streptococcus</i>)		
• Skin, wound, or burn		
▪ Major	S, C	U ^{24Hrs}
▪ Minor or limited	S	
• Endometritis (puerperal sepsis)	S	
• Pharyngitis in infants and young children	S, D	U ^{24Hrs}
• Pneumonia in infants and young children	S, D	U ^{24Hrs}
• Scarlet fever in infants and young children	S, D	U ^{24Hrs}
• Severe invasive disease (necrotizing fasciitis, toxic shock syndrome)	S, D	U ^{24Hrs}

* Non immune HCWs should not care when immune caregivers are available. N95 or higher respiratory protection for susceptible and successfully vaccinated individuals; post exposure vaccine within 4 days of exposure for protection.

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
Streptococcal disease (group B <i>Streptococcus neonatal</i>)	S	
Streptococcal disease (not group A or B) unless covered elsewhere	S	
Strongyloidiasis	S	
Syphilis		
• Skin and mucous membrane, including congenital, primary, and secondary	S	
• Latent (tertiary) and seropositivity without lesions	S	
Tapeworm disease		
• <i>Hymenolepis nana</i> (fish)	S	
• <i>Taenia solium</i> (pork)	S	
• <i>Taenia saginata</i> (beef)	S	
Tetanus	S	
Tinea (fungal infection, dermatophytosis, dermatomycosis, ringworm)	S	
Toxoplasmosis	S	
Toxic shock syndrome (staphylococcal disease, streptococcal disease)	S	
Trachoma, acute	S	
Trench mouth (Vincent's angina)	S	
Trichinosis	S	
Trichomoniasis	S	
Trichuriasis (whipworm disease)	S	
Tuberculosis (<i>Mycobacterium tuberculosis</i>)		
• Extra-pulmonary (no draining lesions, meningitis)	S	
• Extra-pulmonary (draining lesions)*	S, A, C	
• Pulmonary or laryngeal (confirmed or suspected)*	S, A	
• Skin-test positive with no evidence of current pulmonary disease	S	

* Discontinue isolation (confirmed cases) when 14 days anti-TB therapy; 3 sputum smears negative for AFB; and, clinical improvement. Discontinue isolation (suspected cases) if patient has 3 sputum smears negative for AFB.

Appendix 1 TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS		
INFECTION / CONDITION	PRECAUTIONS	
	TYPE	DURATION
Tularemia		
• Draining lesion	S	
• Pulmonary	S	
Typhoid (<i>Salmonella typhi</i>) fever (see gastroenteritis)		
Typhus (endemic and epidemic)	S	
• Rickettsia prowazekii	S	
• Rickettsia Typhi		
Urinary tract infection (including pyelonephritis, with or without urinary catheter), except MDRO	S	
Varicella zoster (see chickenpox) refer to policy		
Vibrio parahaemolyticus (see gastroenteritis)		
Vincent's angina (see trench mouth)	S	
Viral hemorrhagic fever refer to policy (Lassa, Ebola, Marburg, Crimean-Congo fever viruses)	S, C, D	DI
Viral respiratory disease		
▪ Adults	S	
▪ Infants and young children (see respiratory infectious disease, acute)		
Whooping cough (see pertussis)	D	
Wound infections		
• Major	S, C	DI
• Minor or limited	S	
Yersinia enterocolitica gastroenteritis (see gastroenteritis)		
Zoster (varicella zoster), shingles (see chicken pox)		
• Disseminated in any patient	S, A, C	DI/LC
• Localized in immunocompromised patient	S, A, C	DI/LC
• Localized in normal patient	S	
Zygomycosis (phycomycosis, mucormycosis)	S	

TITLE/DESCRIPTION:

INITIATING AND DISCONTINUING ISOLATION

INDEX NUMBER

ICM -III - 07

EFFECTIVE DATE:

01/01/2009
01/01/2013
01/01/2018

APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

GULF COOPERATION COUNCIL – CENTRE
FOR INFECTION CONTROL (GCC-CIC)

DEFINITION

To provide guidelines on the process of initiating and discontinuing isolation precautions for patients with a confirmed or suspected infectious diseases that carries the risk of nosocomial transmission.

COMMENTS

1. Standard precautions must always be observed while delivering direct patient care.
2. Appropriate isolation signs must be placed on the doors as needed.
3. Patients requiring isolation precaution can be identified by laboratory results, physician diagnosis, or any existing flagging system.

PROCEDURE

A. Physician

1. Identify patients with either a suspected or confirmed infectious diseases.
2. Where possible, this information should be available on the patient's chart upon admission or as soon as the infection becomes apparent.

B. Nurses

1. Confer with physician(s) regarding suspected/diagnosed infections.
2. Notify Infection Preventionist (IP) for assistance regarding the type of isolation to be used.
3. Request the appropriate single room from the Admissions Office Bed Coordinator.
4. Place the patient in an appropriate room (some patients with the same type of infection can be cohorted upon IP's advice).
5. Place the appropriate isolation sign on the outside of the door of the patient's room.
6. Ensure that the appropriate isolation precautions are maintained for the duration of the infectivity of the patient.
7. Fill out a Report of Communicable Diseases Form for all diagnosed cases of reportable diseases for the MOH; refer to **ICM-I-05** Reporting Communicable Diseases to the Ministry of Health.
8. Discontinue isolation in consultation with IP.
9. Notify the Admissions Office when isolation is discontinued.
10. Request housekeeping staff to carry out a terminal cleaning of the isolation room. Refer to **ICM-X-07** Housekeeping.
11. Return reusable instruments to the department responsible for reprocessing used medical instruments and supplies.
12. Ensure cleaning and storage of other patient care items/equipment, as necessary.

C. Infection Preventionist

1. Provide proper advice to nursing staff regarding the type of isolation.
2. Confer with the attending physician regarding the patient's clinical assessment.
3. Monitor the patient's infectious status and make recommendations on rescreening, maintaining, or discontinuing isolation.
4. Monitor HCWs' compliance with standard and isolation precautions and give consultations where necessary. For exposed unprotected HCWs refer to **ICM-VI-04** Work Restrictions for Infected Healthcare Workers.

TITLE/DESCRIPTION:

SINGLE ROOM USE FOR ISOLATION PRECAUTIONS

INDEX NUMBER

ICM - III - 08

EFFECTIVE DATE:

01/01/2009
01/01/2013
01/01/2018

APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

GULF COOPERATION COUNCIL – CENTRE
FOR INFECTION CONTROL (GCC-CIC)

DEFINITION

To provide guidelines on the appropriate use of single rooms for isolating patient suspected or confirmed with communicable diseases.

REFERENCE

Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 29: Isolation precautions. In APIC Text of infection control and epidemiology (4th ed.).

COMMENTS

1. Appropriate patient placement is an important component of isolation precautions, which are designed to do the following:
 - a. Provide a physical barrier around the patient infected or colonized with epidemiologically significant microorganisms.
 - b. Remind personnel and visitors to observe infection control measures.
2. Consult with the Infection Preventionist (IP) to verify proper patient placement as necessary.

PROCEDURE

A. Single Rooms

1. Use a single room with hand hygiene and toilet facilities for isolation purposes.
2. Use a single room with negative pressure (airborne infectious isolation room (AIIR)) for airborne isolation precautions.
3. Post the appropriate isolation sign on the door to indicate the isolation precaution(s) required.
4. Place isolation carts with the necessary supplies outside the single room.
5. Consult with IP to cohort patients with identical organisms/disease when there is a shortage of single rooms.

B. Indication for Single Room

1. Refer to policy **ICM-III-06** Isolation Systems: A Quick Reference Guide to initiate isolation based on the type of suspected/diagnosed infection or infectious disease.
2. Place the patient in a single room for the duration of infectivity of the patient.
3. When a patient has poor hygienic habits and cannot comply with infection control practices, consult with IP.

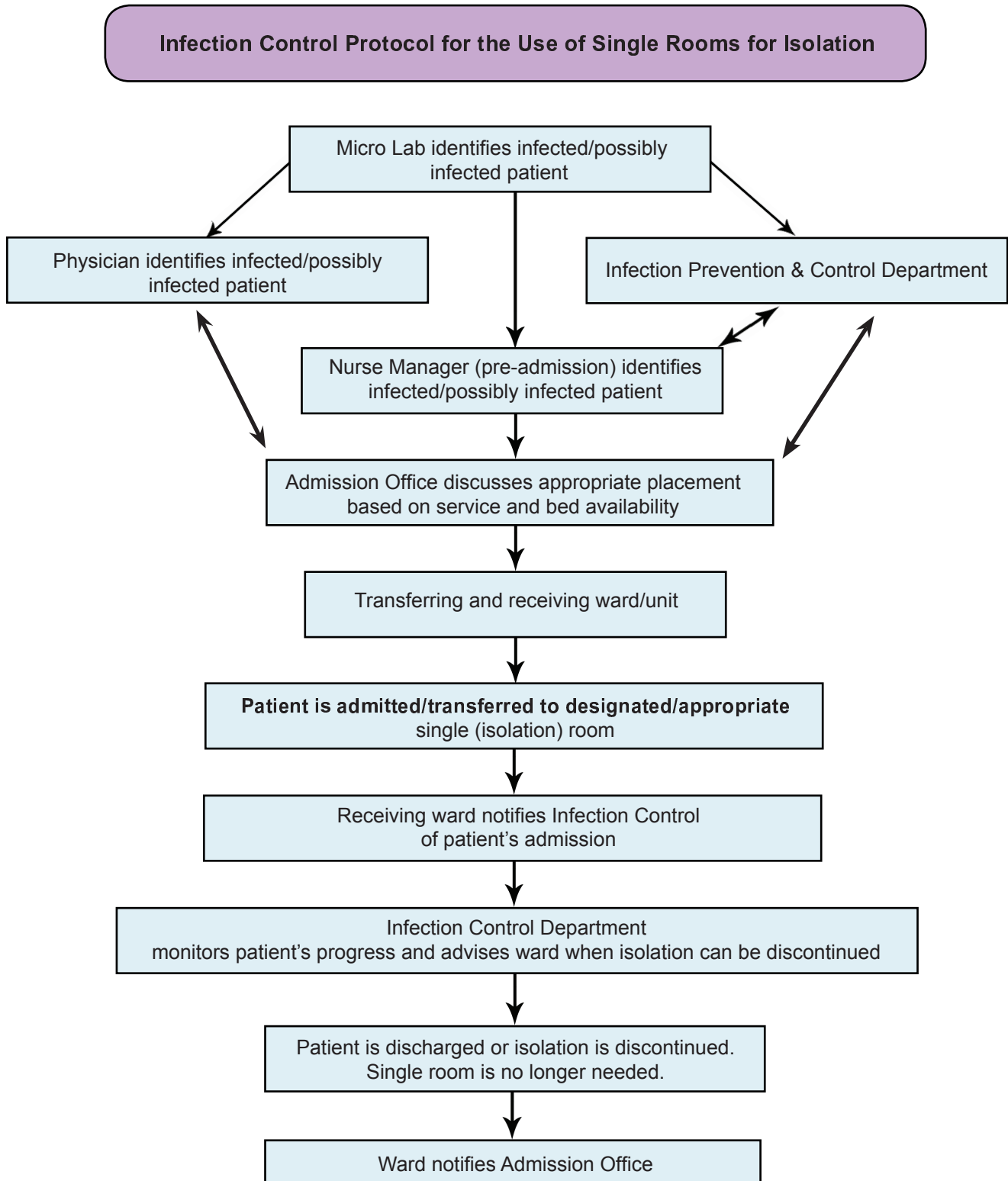
C. Admission Process

1. The attending physician documents confirmed or suspected infectious status of patients that require isolation.
2. Admitting wards (OPD, ER) notify Infection Prevention & Control.
3. IP and the Admissions Department will confer to determine the need for a single room.
4. The receiving ward and admission office shall notify IP when a patient is placed in single-room isolation.

5. If a single room in an OFF-SERVICE ward is utilized, the Admissions Department shall transfer the patient to the appropriate service ward as soon as the required room becomes available.
6. The IP shall monitor the patient's progress and advise on rescreening and discontinuation of isolation.
7. The ward staff shall notify the Admissions Office when isolation is discontinued.

Refer to **Flowchart 1 – III-08** Infection Control Protocol for Use of Single Room for Isolation.

Flowchart 1-III-08:



TITLE/DESCRIPTION:**TRANSPORTING PATIENTS ON ISOLATION PRECAUTIONS****INDEX NUMBER****ICM - III - 09****EFFECTIVE DATE:**01/01/2009
01/01/2013
01/01/2018**APPLIES TO:****All GCC Countries****ISSUING AUTHORITY:****GULF COOPERATION COUNCIL – CENTRE
FOR INFECTION CONTROL (GCC-CIC)**

DEFINITION

To provide clear guidelines to safely transporting isolated patients within the facility while preventing or minimizing infection transmission.

COMMENT

1. Transport of isolated patients should be limited to essential purposes only, such as diagnostic and therapeutic procedures that cannot be performed in the patient's room.
2. When patient transport is necessary, appropriate barriers (e.g., masks, leak-proof dressing) should be worn to reduce potential contamination of the environment and the spread of infection.
3. Refer to **ICM-III-02** Isolation (Expanded) Precautions for specific isolation precautions.
4. All staff must observe Standard Precautions at all times with a multi-drug-resistant organism (MDRO) case.
5. Transporting patients colonized or infected within facility or between facilities within a country or between countries allow risks for spreading MDROs.
6. MDROs, including Vancomycin Resistant Enterococcus (VRE) and Clostridium difficile, are pathogens resistant to more than one antimicrobial agent from at least three different classes.

PROCEDURE

A. Ward

1. Notify the receiving department to which the patient is being transported of the isolation precautions in effect.
2. Instruct the patient on the ways that he/she can assist in maintaining appropriate precautions to prevent transmission of the infection.
3. Healthcare workers transporting patients who are in isolation are not required to wear PPEs unless there is a risk of exposure to blood and body fluids.
4. Isolation instructions must highlight the transmission-based precaution card (isolation signs) needed while transporting patients under transmission-based precautions to other department (e.g radiology).
5. Dress wounds with impervious dressings as required.
6. Dress the patient in a clean gown.
7. For patients with skin lesions associated with varicella or smallpox or with draining lesions caused by Mycobacterium Tuberculosis (MTB), cover the affected areas to prevent aerosolization and to avoid contact with the infectious agent.
8. Explain to the patient the need for the protective apparel that he/she is required to wear.
 - a. Put a mask on any patient who is in airborne isolation.
9. Cover the wheelchair/stretchers with a sheet before moving the patient.
10. Cover the patient with a clean sheet.
11. Transport the patient to the area as required.
12. Return the patient to the isolation room as soon as circumstances allow.
13. Clean and disinfect the wheelchair or stretcher with the hospital-approved disinfectant.

B. Receiving Department

1. Use appropriate personal protective equipment (PPE) when managing the patient.
2. Observe the specified isolation techniques. Adhere to the Hand Hygiene policy.
3. Arrange for the patient's return to his/her ward as soon as possible.
4. Change linens and clean equipment and environmental surfaces as indicated before receiving the next patient.

C. Transferring the Patient to Another Facility

1. Inform the receiving facility and the emergency vehicle personnel in advance about the type of isolation and standard precautions (PPE) required.
2. Provide complete information on the infectious status of the patient to the receiving facility.
3. Inform receiving hospital and document the presence of a MDRO and specify whether it is a colonization or an infection.

TITLE/DESCRIPTION:

PATIENTS AND SITTERS IN ISOLATION: INFECTION CONTROL EDUCATION AND COMPLIANCE

INDEX NUMBER

ICM - III - 10

EFFECTIVE DATE:

01/01/2009
01/01/2013
01/01/2018

APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

GULF COOPERATION COUNCIL – CENTRE FOR INFECTION CONTROL (GCC-CIC)

DEFINITION

To give guidelines on how to manage and achieve compliance from approved sitters of patients in isolation as per the institution's policy and procedures.

REFERENCES

1. Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 29: Isolation precautions. In APIC Text of infection control and epidemiology (4th ed.).
2. HICPAC/CDC Guidelines for isolation precautions: preventing transmission of infectious agents in healthcare setting, 2007.

COMMENTS

1. Apply hospital administrative policies where applicable.
2. In general, sitters are not allowed to accompany patients who are placed in isolation precaution without proper education, counseling, and monitoring.
3. Every patient and approved sitter in isolation will follow standard and isolation precautions.
4. Compliance with all infection control practices is mandatory (e.g., those regarding hand hygiene, standard precautions, medical and nursing instructions, PPE).
5. Non-compliance with isolation policies will lead to removal of sitters from the isolation room.
6. It is the responsibility of the hospital staff to educate the isolated patient and provide the sitter with information on infection control rules and recommendations.

PROCEDURE

A. Healthcare Workers

1. The Most Responsible Physician (MRP) or his/her designee is responsible for ensuring that the necessary education is given to the patient and sitter.
2. Each patient and sitter will be provided with specific information and will be given positive educational reinforcement in their language.
 - a. Evidence that this education has taken place will be documented in the patient's medical record by the physician.
 - b. The approved sitter will be informed at this time that sitter authorization will be withdrawn if isolation regulations are not followed.
 - c. The patient, sitter, and physician will sign the education consent form, and this form will be kept in the medical record as evidence that they agree to the isolation conditions.

3. Physicians, infection preventionist (IP), nurses, and health educators will share the responsibility of monitoring the compliance of the patient in isolation and his/her approved sitter
4. The Infection Prevention and Control department (IP&C) should be informed immediately of any breaches of compliance. The IP&C will recommend that further patient education should be given.
5. Any repeated breach of compliance should be referred to the IP&C, and the sitter's authorization can be withdrawn.
6. The Security Department will take whatever actions necessary to ensure that the patient in isolation and his/her approved sitter comply with infection control isolation precautions (if necessary).

B. Patients and Sitters

1. It is the responsibility of every patient and his/her approved sitter to comply with all infection control rules and regulations (listed on the sign on the door or conveyed through medical/nursing instructions).
2. It is the responsibility of the hospital staff to monitor the compliance of the patient in isolation and his/her allowed sitter with infection control isolation recommendations.
3. Patients and their sitters who receive education from the staff regarding infection control isolation recommendations and still do not comply with these recommendations will be subject to measures to enforce the standards and ensure their compliance.

TITLE/DESCRIPTION:

NEGATIVE PRESSURE ROOM MONITORING

INDEX NUMBER

ICM - III - 11

EFFECTIVE DATE:

01/01/2009
01/01/2013
01/01/2018

APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

GULF COOPERATION COUNCIL – CENTRE
FOR INFECTION CONTROL (GCC-CIC)

DEFINITION

To provide instructions on the monitoring and maintenance of the negative pressure rooms or airborne infection isolation room (AIIR) to the Nursing Services, Utilities and Maintenance (U&M) Department, and Infection Preventionist (IP).

REFERENCES

1. Association for Professionals in Infection Control (APIC) and Epidemiology, Inc. (2014). Chapter 29: Isolation precautions. In APIC Text of infection control and epidemiology (4th ed.).
2. Infection Prevention and Control Manual, **ICM-III-02** Isolation Precautions.
3. Infection Prevention and Control Manual, **ICM-III-09** Transporting Patients on Isolation Precautions.
4. Guideline for Design and Construction of Healthcare Facilities. The Facility Guidelines Institute 2010 edition.
5. Center for Diseases Prevention and Control; National Center for Preparedness, Detection and Control of Infectious Diseases; and Division of Healthcare Quality Promotion, uploaded on 29 December 2009. Healthcare Infection Control Practices Advisory Committee Glossary. http://www.cdc.gov/hicpac/2007IP/2007ip_glossary.html

COMMENTS

1. Negative pressure room or AIIR is defined as a single-occupancy patient-care room used to isolate persons with a suspected or confirmed airborne infectious disease. AIIRs provide negative pressure in the room (so that air flows under the gap into the room) with a pressure differential of ≥ -2.5 Pa (Pascal) or ≥ -0.01 " water gauge; an air flow rate of ≥ 12 air changes per hour (ACH) for renovation or new construction; and direct exhaust air from the room to the outside of the building; or recirculation of air through a HEPA filter before returning to circulation.
2. High-efficiency particulate air (HEPA) filter is an air filter that removes $>99.97\%$ of particles $>0.3\mu\text{m}$ at a specified flow rate of air. HEPA filters may be integrated into the central air handling systems, installed at the point of use above the ceiling of a room, or used as portable units.
3. Maintenance Log: Used for keeping records of all malfunctions of negative pressure room monitors. The log should be kept in the ward and be accessible to all staff. Forms must be completed whenever the alarm system is activated (See **Form 1-III-11** Negative Pressure Room or (AIIR) Maintenance Log).
4. Activation of the alarm system when negative pressure ventilation fails: Visible red flashing lights and/or audible sound comes from the monitor.
5. For the safety of healthcare workers, patients, and visitors, negative pressure rooms occupied by patients requiring airborne isolation must be checked daily (refer to step A.2.a).

PROCEDURE

A. Routine Monitoring of Negative Pressure Rooms

1. Negative pressure room and ventilation requirements. Facility Management's utilities and maintenance (U&M) section must:

- a. Conduct and document monthly checks on all negative pressure rooms for air pressure and air changes.
 - b. Conduct daily check of all negative pressure room when patient needing airborne isolation occupy this room.
 - c. Use a manual device to monitor pressure differentials in rooms where no monitor is installed.
 - d. Follow the procedure of this policy if any room fails inspection.
 - e. All documentation must be forwarded to an environmental health section of the Infection & Prevention Control (IP&C) Department.
2. Negative pressure rooms in use:
Nursing staff must:
- a. Conduct visual checks for the direction of air flow (using flutter strips) on all rooms where patients are in airborne isolation for query and confirmed airborne transmissible diseases (e.g., Pulmonary Mycobacterium tuberculosis, measles, chicken pox) when patients are in this room.
 - b. Prior to admitting patients needing airborne isolation, check and ensure that negative pressure rooms are functioning well. For those designated isolation rooms without monitor, call U&M to check if the room is maintaining its negative pressure.
 - c. Follow the procedure of this policy in any room that fails inspection.
 - d. All documentation must be sent to the IP&C Department.

B. Negative Pressure Ventilation Failure

1. Unit staff must respond to negative pressure failure.
2. Nursing staff will:
 - a. Place a surgical mask on the patient in airborne isolation.
 - b. Keep the door closed at all times.
 - c. Notify the Utilities & Maintenance (U&M) Department of the location and problem.
 - d. Notify IP&C during the regular work week by paging the IP that is covering the unit/area.
 - i. If an event occurs at night or on weekend, IP&C will be notified on the next working day.
 - ii. Follow steps listed in item #3 below.
 - e. Document all information on the Negative pressure room or AIR Maintenance Log form.
 - f. Notify IP&C regarding the findings and required follow-up.
3. U&M staff must respond immediately to the area and
 - a. Assess whether the room(s) is/are maintaining negative pressure.
 - b. Communicate their findings to the Nurse Manager or designee.
 - c. Document their findings on the Negative Pressure Room Maintenance Log form.
4. Nursing staff
If U&M declares the occupied room is no longer maintaining negative pressure, follow these steps:
 - a. For patients who are in airborne isolation (for pulmonary MTB, chicken pox, measles or hemorrhagic fever), contact IP&C immediately.
 - i. The patient must be transferred to another negative pressure room immediately.
 - ii. Put a surgical mask on the patient before transporting. Refer to policy **ICM- III-09** Transporting Patients on Isolation Precautions.
 - iii. U&M can then proceed with repairs.
 - b. If the patient is not in isolation:
 - i. The patient can be moved to another room.
 - ii. U&M can proceed with repairs.
 - c. If the room is unoccupied, then U&M can proceed with repairs immediately.

5. The IP&C Department will:
 - a. Assess the patient/situation with regard to infectious risk.
 - b. Provide infection control recommendations based on the risk assessment to minimize transmission of the disease.
 - c. Document all information on the Negative Pressure Room Maintenance Log form and patient chart (as required).
 - d. Complete any follow-up with the unit staff and the maintenance log form is kept in the Infection Prevention and Control Department.



GCC Centre for Infection Control
Infection Prevention & Control Department

**Form 1-III-11:
Negative Pressure Room Maintenance Log**

DEPARTMENT:

DATE	TIME	ROOM	DESCRIBE PROBLEM	ACTION TAKEN	
				UTILITIES AND MAINTENANCE	INFECTION CONTROL

INSTRUCTIONS:

1. The initiating department must document all information clearly, including initials and badge number.
 - a. Notify U&M of the problem.
 - b. Notify the Infection Prevention and Control Department.
2. U&M staff must respond and troubleshoot the problem.
 - a. Assess whether the room is maintaining negative pressure.
 - b. Findings must be explained to department staff and documented on this form, including initials and badge number.
3. Department staff must notify Infection Prevention and Control.
 - a. IP&C will assess any infectious risk.
 - b. Findings (i.e., whether there is a transmission risk) must be explained to department staff and documented, including initials and badge number.

TITLE/DESCRIPTION:

MANAGEMENT OF INFLUX OF AIRBORNE INFECTION DISEASES

INDEX NUMBER

ICM - III - 12

EFFECTIVE DATE:

01/01/2018

APPLIES TO:

All GCC Countries

ISSUING AUTHORITY:

GULF COOPERATION COUNCIL – CENTRE FOR INFECTION CONTROL (GCC-CIC)

DEFINITION

To provide clear guidelines for managing an influx of airborne infections in a setting where there is shortage of negative pressure rooms. A separate bioterrorism plan is to be utilized, if there is suspected bioterrorism incident, and is part of the disaster plan.

REFERENCE

1. American Institute of Architects. Guidelines for Design and Construction of Hospital and Health Care Facilities, 2010.
2. Rebmann T, Carrico R, and English JF. Hospital Infectious disease emergency preparedness: a survey of infection control professionals. American Journal of Infection Control. February 2007;35(1);25–32.
3. Recommended guidance for extended use and limited reuse of N95 filtering face piece respirators in healthcare settings. Downloaded on 13 March 2014 from <http://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.htm>

COMMENTS

Hospitals will face the challenges of caring for large influx of patients following an outbreak of an emerging infection which can pose a threat to the safety and health of our patients and health care workers. Thus, having an adequate supply of resources for managing a sudden, unexpected increase in patients requiring Airborne precautions and immediate treatment must be addressed.

Preparedness for emerging infectious emergencies is imperative for local, regional and national response planning.

Secondly, patient management issues which include rapid identification, transport and isolation of potentially infectious patients are important factors in the prevention of the spread of infection.

TERMINOLOGIES

1. **Airborne Infection Isolation Room (AIIR)** - is defined as a patient room meeting the following criteria:
 - a. Private room;
 - b. Provide a negative pressure in the room;
 - c. An air flow rate of 12 changes per hour (supplement with high efficiency particulate air (HEPA) filtration system if insufficient dilutional ventilation; and
 - d. Direct exhaust to the outside of the building from an air intake or exhaust through a HEPA filtration system before returning to circulation.

- e. Influx of infectious patients - presentation of a large number of probable or confirmed infectious patients at the hospital that is in excess of the hospital's ability to provide patient care during a specified time period.
2. **Epidemic** - an excess over the expected incidence of disease within a geographical area during a specified time period.
3. **Surge capacity** - having adequate resources for managing a sudden, unexpected increase in patients requiring acute medical care.
4. **Surge capability** - having adequate specialized resources to treat specific patient groups such as highly contagious patients.
5. **Extended use of N95 respirator**- refers to the practice of wearing the same N-95 respirator for repeated close encounters with several patients, without removing the respirator between patient encounter.
6. **Reuse of N95 respirator**- refers to the practice of using the same N95 respirator for multiple encounters with patients but removing it after each encounter. The respirator is stored in between patients to be put again prior to the next encounter with the same patient.

PROCEDURE

In order for the hospital to be better prepared in managing an influx of airborne infectious diseases or emerging new pathogens the following steps are necessary to take:

A. Facility Assessment

1. Assess the current ventilation system in the facility.
 - a. Maintain a record of the number and location of the different HVAC (heating, ventilation, air conditioning) zones and air handling units.
 - b. Ensure all systems are functioning as designed.
2. Identify and maintain a current list of all AIIRs and isolation rooms throughout the whole hospital and ensuring that they are all functioning well.
3. Utility & Maintenance staff:
 - a. Document optimal HVAC control settings for normal use and take the necessary steps to modify the system as per IP&C advice in the event of an emergency.
 - b. Ensure that there is effective communication plan between IP&C, clinical staff and Engineering Department to initiate system modifications, if needed.
 - c. Implement immediate environmental controls as per IP&C advice, or as deemed necessary.
 - d. HEPA filter is made available in the event of lack of negative pressure rooms.

B. Infectious Disease Epidemic Plan (IDEP)

1. IP&C will monitor potential epidemics or influx of airborne infectious disease through routine surveillance of admission provided by Emergency Department (ED), syndrome surveillance, and surveillance of microbiology results.
2. IP&C will coordinate with Microbiology Department to identify the infectious agent and establish the likely mode of transmission. This must be a priority in order to implement the appropriate control measures at the point of entry into the hospital facility. These measures will include droplet, contact, and airborne precautions, as indicated.
3. An IDEP of a specific emerging pathogen will be developed by IP&C as the need arises. The IDEP will be made available and accessible to all healthcare workers through the intranet website.

C. Patient Management

1. Emergency Department (ED) Responsibilities:
 - a. In the event of an increase in the number of suspected and confirmed airborne infectious diseases cases, ED Unit Manager will immediately notify the responsible persons as indicated in Section "H" Notification.
 - b. Place signage in English and Arabic that would direct sick patients to a designated isolation room or waiting area, thereby, minimizing exposures among patients in the waiting area.
 - c. If possible, have a separate waiting area for patients with respiratory symptoms.
 - d. Provide direction for patients with respiratory symptoms to wear a surgical mask and use alcohol-based hand rubs (ABHR).
 - e. Ensure surgical masks, ABHRs and waste containers are readily available for patients with respiratory symptoms to prevent aerosolization of infectious particles.
 - f. Have enough supply of N95 masks, surgical masks, and ABHRs for healthcare providers.
 - g. An N95 mask/respirator is single use and is to be disposed after a patient encounter. In the event of a shortage such as in an outbreak, reuse of N95 mask/respirator is allowed as long as it remains functional. Refer to below recommendations:
 - i. Follow manufacturer's specific guidance on the use of their product.
 - ii. If no guidance is available, limit the number of reuse to no more than five uses per device per shift.
 - iii. Discard any respirator that is damaged or became hard to breathe through.
 - iv. Instruct HCW to perform hand hygiene after putting the respirator on and following removal/placement in a storage location.
 - v. Pack or store respirator in a breathable container such as a paper bag in between uses.
 - vi. Label containers used for storing respirators or label the respirator itself (e.g., on the straps) with the user's name to prevent accidental usage of another person's respirator.
 - vii. The container bag is a single use item because the inner part can become contaminated due to storing used respirator. Therefore, the container bag should be discarded after the respirator is redonned.
 - h. Prioritize placement of patients in AllRs or isolation rooms based on the risk of transmission, suspected diagnosis, and severity of symptoms.
 - i. Limit patients' movement to medically essential procedure.
 - j. Notify receiving units prior to transport of patients and observe appropriate precautions during the transfer.
 - k. Elective admissions will be cancelled until epidemic of influx of infections is determined to be under control, in order to utilize the beds to house these patients.
 - l. ED staff will be asked to consider alternate levels of care for patients presenting to triage ED.
2. Infection Prevention & Control Responsibilities:
 - a. Notify U&M and Engineering Departments to prepare a back-up site for non-infectious patients if the ED capacity is exceeded with infectious patients.
 - b. Notify U&M to convert designated wards/rooms to negative pressure rooms in the event of an emergency and build barriers if deemed necessary.
 - c. All AllRs rooms will be under the control of IP&C. Security officers will be placed to provide traffic and crowd control.
 - d. Determine where to house the infectious patients depending on the infectious agent and needs of the patients.
 - e. Provide consultation on the cohorting of patients with similar symptoms or diagnosis as appropriate to allow for increase in bed capacity.

- f. Advise the medical staff to review inpatients to assess patients that can be discharged to the next level of care.
- g. Coordinate with Unit Managers and Bed Coordinators in the discharge planning process.
- h. Ensure appropriate cleaning and disinfection of medical equipment and environmental surfaces are strictly followed as per hospital policy.
- i. Ensure proper management of infected waste.
- j. Ensure proper management of soiled linens.
- k. To conduct contact tracing and risk assessment for exposed healthcare workers and families.

D. Patient Transport

When a patient needs to be transferred, appropriate barriers should be used, such as placing a surgical mask on the patient and leak proof dressings to reduce potential contamination of the environment and the spread of infection. Please refer to **ICM-III-09** Transporting Patients on Isolation Precautions.

E. Employee Health Services

To provide exposed HCWs with the recommended post exposure prophylaxis specific to the suspected or confirmed pathogen.

F. Nursing Services Responsibilities

1. Implement staffing plans to provide adequate patient care.
2. Ensure appropriate staff have the authority to place suspected and confirmed cases on appropriate isolation precautions.
3. Initiate possible transfer of inpatients or initiating discharge of patients to offsite facilities.

G. Visitor's Management and Exclusion

Visitors should be strictly limited. Exemptions may be considered on a case to case basis.

H. Notification

The following notifications are mandatory if there is an increase in the number of airborne infectious diseases are admitted in the ED:

1. The Admitting ED Physician notifies the:
 - a. Infectious Disease Consultant
 - b. Nurse-in-Charge of Emergency Department and ward where patient is to be admitted.
2. The Infectious Disease Consultant notifies the:
 - a. Chairman of the Infection Control Committee who will then notify the:
 - i. Medical Services Director
 - ii. Executive on Duty
 - iii. Hospital Director
 - iv. Infection Control Coordinator or Infection Preventionist (IP)
 - v. Laboratory and Radiology Departments
 - vi. Family Medicine Department / Employee Health Clinic

3. The Nurse-in-Charge in ER notifies the:
 - a. Nursing Supervisor or Duty Administrator
 - b. ICU Head Nurse or Nurse-in-Charge if to be admitted to the ICU
4. The Nursing Supervisor notifies the:
 - a. Director of Nursing
 - b. Nurse Manager to consult on staffing
 - c. Materials department for equipment for strict isolation.
5. Infection Control Coordinator or IP notifies the:
 - a. Housekeeping Manager
 - b. CSSD Manager
 - c. Ministry of Health
 - d. Utilities and Maintenance for ventilation modification in patient rooms, if needed.

I. Education

1. Contents of patient education on specific pathogens translated in both English and Arabic will be developed by IP&C and provided to the patients and families.
2. IP&C to provide the necessary training and education to all HCWs on the proper management of the specific pathogen.

J. Resources

A list of supplies will be provided by Nursing Services and Logistics to IP&C on a daily basis to monitor surge capacity.