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**Healthcare organization  
management — Pandemic response —  
Temporary medical facility**

*Management des organisations de soins de santé — Réponse en cas de  
pandémie — Centre médical temporaire*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by ISO/TC 304, *Healthcare organization management*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

Governments undertook various initiatives to liberate, to expand, or to build capacity to treat COVID-19 patients, to isolate infected individuals, to quarantine contacts, and to protect workers and vulnerable populations, such as homeless people. These structures may have taken a variety of forms including purpose-built (e.g. hospitals), requisitioned (e.g. hotels), and temporary (tents). Some of these facilities were used extensively, some saw little use, and some were not needed.

This document focuses on the operation of temporary isolation and quarantine facilities. They may be operated separately or as a combination facility; some may also be used to treat mild cases while serious cases are transferred to hospitals. This document does not address collateral interventions necessary to mobilize the personnel needed to staff them, nor the equipment, supplies, and other resources needed to operate them. The success of all such initiatives, when needed, hinges on the availability of qualified personnel and other resources. Further, this document does not address aspects of pandemic preparedness planning pertaining to policies and preparations to cope with a possible rapid increase in the number of pandemic cases, contacts, etc. Pertinent policies, which may vary by jurisdiction, include:

- a) design of facilities, including construction or conversion plans;
- b) empowerment to requisition land, facilities, etc.;
- c) ability to contract for or to arrange construction or conversion;
- d) rapid licensing of facilities to operate.

Similarly excluded is decommissioning, including facilities' re-purposing, re-conversion, deactivation, or demolition. Appropriate pandemic response management depends, in part, on the characteristics of the infectious agent. Necessarily, this document assumes a future pandemic agent with COVID-19-like characteristics in a similar contextual background to that which existed during the COVID-19 pandemic.

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# Healthcare organization management — Pandemic response — Temporary medical facility

## 1 Scope

This document describes the requirements, operational principles, and procedures of the temporary medical facility (TMF) regarding:

- a) planning;
- b) staffing;
- c) patient management;
- d) discharge and termination of isolation for patients with infectious diseases in the context of ongoing widespread community transmission.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### **confirmed case**

person confirmed to be infected with the pathogen of the infectious disease according to the testing criteria for diagnosis, irrespective of clinical signs and symptoms

[SOURCE: ISO 5472:2022, 3.2]

### 3.2

#### **information technology**

##### **IT**

resources (especially computers and telecommunication) used to acquire, process, store, and disseminate information

[SOURCE: ISO/IEC 38500:2015, 2.12, modified — "(especially computers and telecommunication)" has been added.]

### 3.3

#### **pandemic**

worldwide spread of an infectious disease

[SOURCE: ISO/PAS 45005:2020, 3.5, modified — "a disease" has been changed to "an infectious disease".]

### 3.4 personal protective equipment PPE

device or appliance designed to be worn by an individual for protection against one or more health and safety hazards

Note 1 to entry: PPE includes, but is not limited to, gowns, gloves, respirators, safety glasses, helmets and goggles.

Note 2 to entry: While generally not considered PPE, masks (and other face coverings) can provide a level of protection for the user, in addition to their primary purpose as a public health measure to control the spread of transmission and infection.

Note 3 to entry: In many countries PPE is required to conform to national regulations.

[SOURCE: ISO/PAS 45005:2020, 3.8]

### 3.5 temporary medical facility TMF

isolation facility with defined infrastructure also known as temporary hospital for mild or asymptomatic *confirmed cases* (3.1) which guarantees medical basic support

Note 1 to entry: Mild or asymptomatic confirmed cases are often transferred to the TMF for the purpose of isolation and prevention of widespread community transmission.

Note 2 to entry: The TMF is made for those who find it difficult to gain medical support and care at home.

### 3.6 shared patient information system

system with a standardized information model, accessible by authorized users, that provides patient information

### 3.7 working area

area defined for use by medical or operational personnel, separated from the *infection area* (3.8)

### 3.8 infection area

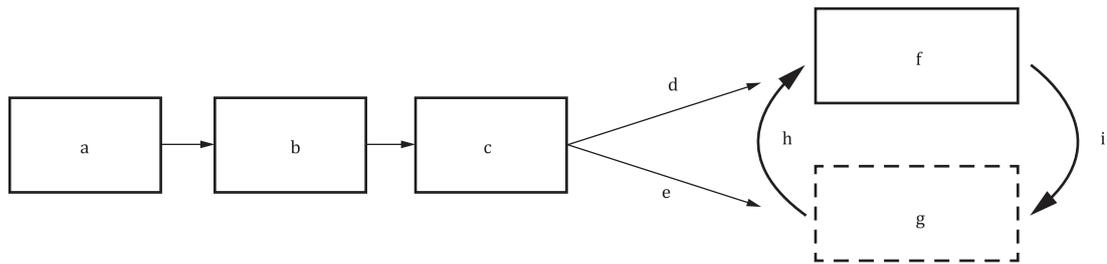
infection zone

area, space, or building separated physically from the *working area* (3.7)

## 4 Utilization of temporary medical facility

### 4.1 General

The TMF may temporarily act as hospitals to alleviate burdens imposed on hospital resources better reserved for severe cases, to prevent disease spreading and to isolate confirmed cases. Patients in the TMF are cared by medical professionals and transferred immediately to a hospital if the symptoms/signs are aggravated (Figure 1). When a patient's symptoms/signs improve, he or she is discharged in accordance with the criteria set in place for lifting isolation. The main function of the TMF focuses on monitoring rather than intensive treatment. Existing facilities can be utilized as TMFs, such as idle public centres, training centres, religious educational centres and resorts, provided that they are inspected and approved by the designated authority according to 4.3 list items a) to d). After opening for operations, TMFs should be inspected regularly, throughout their lifetime, by the designated authority. Non-conformity with requirements laid down in 4.4 to 4.18 may result in request of adjustments/modifications in the TMF for conformity, temporary or permanent closure of the TMF.

**Key**

- a screening station (testing)
- b confirmed case
- c triage
- d severe symptoms/signs
- e mild/asymptomatic
- f hospital
- g temporary medical facility
- h severe case
- i mild case

**Figure 1 — Admission route to TMF**

## 4.2 Purpose of operation

The TMF provides temporary medical care and resources in lieu of the regular health system in a massive disease outbreak for the following purposes:

- a) prevention of transmission of highly contagious pathogens within the community by providing isolation facilities;
- b) securing hospital beds for the treatment of patients with severe symptoms/signs by offering an isolation place for mild cases when the caseload overwhelms in the community;
- c) offering patients with the opportunity for timely transfers to hospitals in case of aggravation or medical deterioration of symptoms/signs.

## 4.3 Designation and operation

The TMF shall be designated by authorities and be operated with resources to meet the needs.

- a) Adequate human resources and expenses should be in place to designate and operate a TMF by the appropriate authority or jurisdiction (city mayor/provincial governor/private organization's CEO).
- b) The TMF designated within a jurisdiction should be inspected to ensure that it is immediately available; and detailed operating plans should be developed.
- c) The TMF should be provided with human resources, including medical professionals and operational/support personnel necessary for operating the TMF.
- d) The TMF should support medical devices, healthcare products and other basic materials, such as PPE when necessary. PPE shall be assigned depending on risk analysis and evaluation.

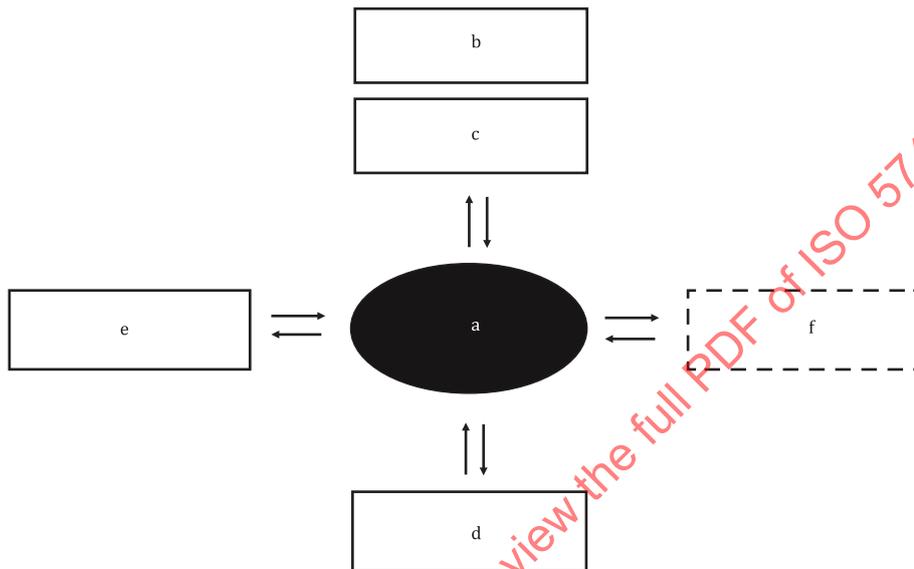
## 4.4 Public notice and communication

Rapid and accurate sharing of information in times of emergency is indispensable for infection prevention and control. This is the reason why IT shall be utilized in sharing medical resources quickly

and accurately among all the parties involved. In this context, the location and operation of the TMF should be announced promptly to screening stations, hospitals, public health centres and related organizations using shared communication channels (Figure 2).

The availability of the TMF shall be shared with the stakeholders.

- a) Patient information sharing programs shall be operated at national and regional levels, including national public health agencies, local governments and hospitals.
- b) If the available IT infrastructure is not sufficient, one may resort to fax and telephone communications.



- Key**
- a shared patient information system
  - b central government
  - c local government
  - d hospital/public health centre
  - e screening station
  - f temporary medical facility

**Figure 2 — Public communication schemes for TMF**

#### 4.5 Operational principles

The principles enable the TMF to abide by the core operational mandates.

- a) A TMF should be a dedicated, shared or exclusive facility that ensures facilitated patient transfer to a healthcare organization.
- b) The working area for medical and operation personnel shall be completely isolated from the infection area (Annex A).
- c) The working area for medical and operation personnel should have a separate entrance that cuts off any overlap with the path designated for patients.
- d) In case that the minimum level of protection must be used, as in a pandemic or endemic, donning and doffing room for PPE shall be separated.
- e) The air from the infection area shall be blocked off from entering the working area.

- f) Ventilate the air in the infection area by opening the windows.
- g) One room should accommodate one patient, equipped with a separate washroom, in principle; however, one room may accommodate two or three patients if there are no available single rooms. The precise implementation of such rooms depends upon the nature of the disease and follows the guidelines from the WHO or the national public health agency of each country.
- h) Each sectioned area or room shall have a shower facility.
- i) The TMF shall have an examination room or space and nurse station, which shall be installed in the infection area.

NOTE 1 An examination room is a space with external ventilation where the physician routinely examines patients.

NOTE 2 A treatment room is a room equipped with an emergency kit (CPR), a portable oxygen concentrator and other equipment, and is used for oxygen saturation checking, and oxygen supply in an emergency.

NOTE 3 A nurse station is a room equipped with intercom equipment, call system, information system, video monitoring system, etc.

- j) A dedicated and physical separation area shall be assigned to specimen collection and X-ray imaging.

NOTE 4 ISO 15189 specifies quality requirements for point-of-care testing.

- k) The TMF shall have water supply and drainage systems.
- l) The TMF shall have an area and means for waste disposal.
- m) The TMF shall have laundry facilities.
- n) The TMF shall have disaster preparedness facilities.
- o) The TMF shall install a fire-fighting system with necessary equipment and emergency exits.

#### 4.6 Admission criteria

To assist the effective management of the TMF, admission criteria should be developed.

- a) Severity classifications applied to infectious diseases can evolve over time and differ among jurisdictions. Therefore, each jurisdiction exercises discretion in implementing admission criteria and the most likely references used are the guidelines from the WHO or the national public health agency. A mild case requires continual monitoring and is decided to be the case in patient triage.
- b) Admit a patient with difficulties in practicing appropriate home isolation (a patient having trouble living in isolation at home, without proper residence or living together with others who fall under the high-risk group, etc.).
- c) Admit a patient who meets the requirements for discharge, and for whom the physician determines that he/she needs to be admitted to a TMF for further observation.
- d) Take into account any other cases determined by the local government that admission to a TMF is required.

#### 4.7 Discharge criteria

In principle, one should be lifted from isolation if either the clinical criteria or test criteria are satisfied.

- a) Clinical criteria: The clinician or medical doctor determines that the symptoms/signs of the patient have improved or disappeared or alleviated.

- b) Test criteria: The patient tests negative. However, she or he can be discharged without satisfying the test criteria if the clinical criteria are satisfied.

NOTE Discharge criteria follow the WHO or national public health agency guidelines.

#### 4.8 Exclusion criteria

If a medical staff member determines that the patient requires hospitalization, it is considered an exceptional case. A patient in the high-risk group is considered a severe case and should be assigned to a hospital bed.

NOTE Exclusion criteria follow the WHO or national public health agency guidelines.

#### 4.9 Staffing

The TMF shall be staffed with medical and operational personnel.

- a) A medical staff member shall be appointed as an infection control manager for the purpose of patient management.
- b) The medical staff should be stationed 24 hours in rotation of 4 or 6 shifts, while taking into consideration the number of patients, their health status, and the current supply and demand for medical staff.
- c) Operation personnel should be available who are in charge of administration, security, facility and material management, preventive measures and disinfection, cleaning, laundry, meal distribution, and other tasks pertaining to uninterrupted operation.
- d) The emergency contact network is set up to communicate with the public health centres, city/province offices, fire stations, and healthcare organizations for the purpose of immediate response when a patient shows aggravated symptoms/signs and needs to be hospitalized.

#### 4.10 Staff management

A roster of healthcare and operation personnel shall be prepared and updated periodically.

- a) A medical staff member shall be exclusively appointed to manage the health status of the workers.
- b) The staff members check and record their own health status on a daily basis while both in service and after the termination of their duties in the facility in line with the WHO or national public health agency guidelines.
- c) The staff members measure their body temperature twice a day, in the morning and in the evening, and check if the temperature is 37,5 °C or higher or if there is any significant symptom/sign consistent with staff health (such as respiratory symptom: cough, shortness of breath).
- d) In the case of a significant symptom/sign, it shall be reported to the infection control manager without delay. The infection control manager shall ensure that the member is excluded from the duty and immediately report it to the public health centre. The member shall receive a diagnostic test in consultation with the public health centre. If the member develops such symptoms after off-duty, the member shall report it to the health manager of the hospital the member works for.
- e) Training shall be provided to the personnel regarding the rules for preventing the infectious disease, using PPE, and health management.
- f) A person entering the infection area shall wear PPE suitable for the circumstance and comply with the rules for using the PPE. In the staff working area located in the same building as the infection area, workers are always required to wear medical masks. It is worth noting that the use of masks during a pandemic or endemic greatly varies among nations; guidelines on the use of masks from the WHO or local authority are followed.

- g) During a shift, medical professionals should take a break in the resting area for the medical staff where partitions are installed between the seating areas.

#### 4.11 Patient management

The TMF shall develop patient management plans.

- a) It should not be allowed for a patient to leave the TMF or get visitors during the isolation period.
- b) Movement paths shall be controlled or isolated from each other to minimize contact between medical staff members.
- c) If a patient must communicate with a medical staff member or others, he/she shall wear a mask and maintain the distance of at least 2 m.
- d) The medical staff members shall check the physical, mental condition and clinical symptoms/signs of the patients at least twice a day and keep a record in the daily symptom log.
- e) A medical staff member measures the body temperature of a patient twice a day (morning, afternoon) and observes the presence of any respiratory symptom, etc.
- f) Psychological support programs or mental healthcare should be implemented to prevent depression and anxiety.
- g) When a patient exhibits an aggravated symptom/sign, the medical staff member reports the case to the appropriate authority and has the patient transferred to an affiliated healthcare organization.
- h) If there is no bed available in the affiliated healthcare organization, report it to the city/provincial patient management team to request a bed.
- i) A patient is transferred in an ambulance (public health centre ambulance, healthcare organization ambulance, etc.) assigned by the public health centre. The patient shall keep wearing a medical mask during the transfer.
- j) A dedicated and physical separation area shall be assigned to specimen collection and X-ray imaging.

#### 4.12 Infection prevention rules

The TMF shall develop and implement infection prevention measures and rules.

- a) Ventilation should be strengthened in the infection area during admission.
- b) Wear appropriate level PPE when entering the infection area.
- c) Strictly comply with the rules when wearing and removing PPE.
- d) Wash and disinfect hands in the following cases:
  - before and after contact with a patient;
  - after being in contact with any object around a patient;
  - immediately after removing gloves or other PPE.
- e) Open all the windows for ventilation after the patient is discharged from the room and disinfect.
- f) Change clothing and don't use clothes used in public transport, home or any other place.
- g) Throw away waste in designated locations only.

#### 4.13 Meal management

The TMF shall develop and implement meal plans.

- a) Meal boxes using disposable containers should be served at least three times a day for the patient; and the patients should have their meals in their own rooms.
- b) Drinking water shall be supplied to each room; and snacks shall be provided when necessary.
- c) The TMF should develop meal distribution plans and rules for consumption of water and, if necessary, snacks.

#### 4.14 Materials

The TMF shall be equipped with the following materials:

- a) medical device and healthcare products;
  - medical masks;
  - thermometers;
  - automatic blood pressure monitors;
  - oxygen saturation meters;
  - appropriate level of PPE and others;
  - CPR equipment, including a portable oxygen tank, saline solution, etc.;
  - ambulances for patient transport;
  - chest x-ray imaging;
  - materials for specimen collection;
- b) point of care technology (POCT), if applicable for monitoring patients.

#### 4.15 Hygiene and laundry management

Hygiene is a top priority and the TMF shall develop plans for hygiene and laundry control.

- a) Toiletries, such as soap and towels, and bedclothes are provided to the patients. Patients' clothing may be provided by themselves or be supplied by the TMF.
- b) A specialized laundry service provider collects laundry for washing.

#### 4.16 Visitors

In principle, visitors should not be allowed into the TMF. However, TMF should define and share the communication protocols with the family of patients to inform them of the patients' health status.

#### 4.17 Disinfection after discharge

The TMF shall develop disinfection plans after discharge to be employed within the facility.

- a) Use only proved virus disinfectants.
- b) Wipe the inside of the booth with a mop sufficiently moistened with disinfectant so that the disinfectant remains on the surface for the contact time specified in the manufacturer's instructions.

- c) Disinfection shall be started from the less contaminated surface; therefore, disinfect in the order of the door, both walls and the glove wall.
- d) The disinfection staff wear proper PPE according to the public health guidance.
- e) The disinfection staff should clean and disinfect wearing PPE, such as isolation clothes, medical protective masks, goggles, and disposable gloves.
- f) The staff should not wear or use the same mask longer than recommended by the mask manufacturer or specified by organizational guidelines for the use of such masks.
- g) Used mops shall be disinfected prior to being disposed. Mops may be reused when they are adequately disinfected.

#### 4.18 Waste disposal

The TMF shall develop and implement waste disposal plans.

- a) Manage and dispose of waste generated at the TMF in a safe manner in cooperation with the public health centre and the local government.
- b) Check and place medical waste-only bags or containers, disinfectants, etc.; and use them when waste is generated.
- c) Put waste used by a patient in a medical waste-only bag and seal it; and put it in a standard waste bag and dispose of it.
- d) Contact the public health centre to have a medical waste disposal service provider, designated by the local environmental office, and collect and dispose of the waste.

### 5 Termination of TMF

#### 5.1 Disinfection of the facility, cleaning and waste disposal

When the operation of the centre comes to an end, disinfect and clean all the facilities and ventilate the facilities naturally. Dispose of medical waste generated in the process of disinfection and cleaning. After disposing of waste during the termination of the centre, record the volume of waste discharge/disposal.

#### 5.2 Restoration of the facility

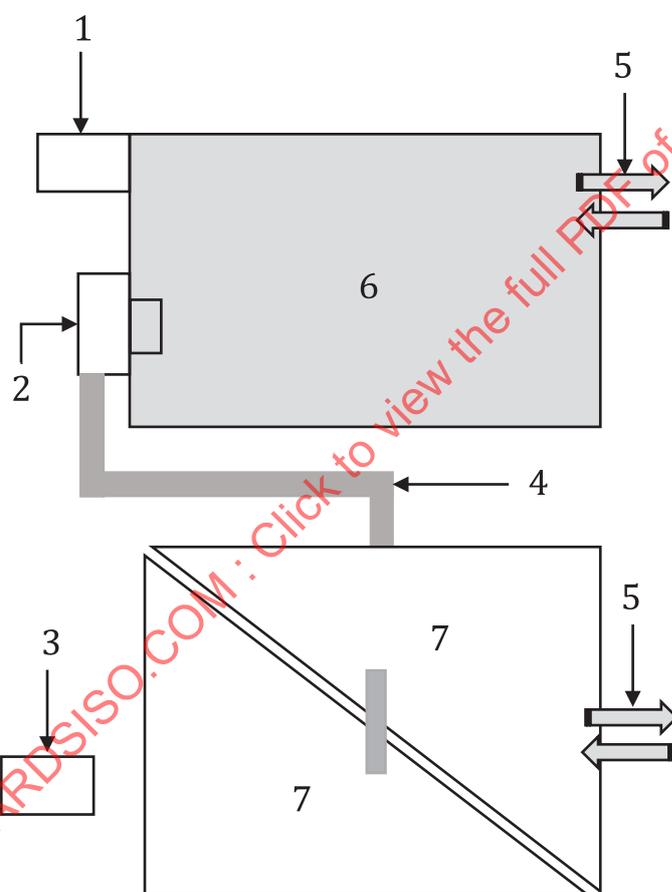
Demolish all temporary installations installed to guide the movement path and take safety measures (temporary walls, locks, window opening/closing device, container, etc.); and restore the facility to the original state.

## Annex A (informative)

### Example of TMF in South Korea

#### A.1 Space separation of TMF

If there are multiple buildings available in the facility, as shown in [Figure A.1](#), separate buildings are used for an infection area (for isolation) and a non-infection area (for workers). Air from the infection area should not be mixed with that of the non-infection area.

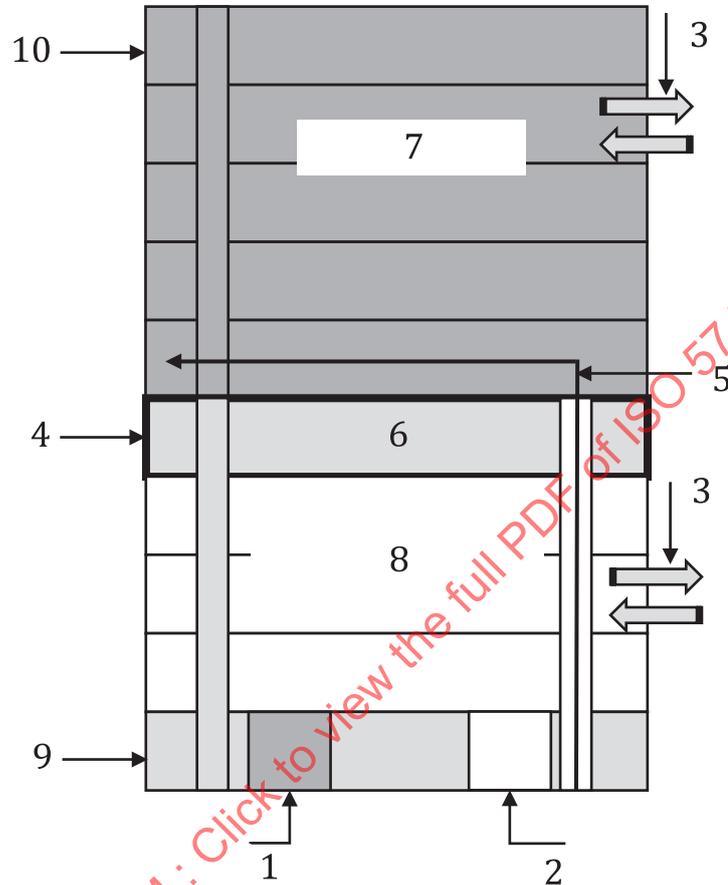


**Key**

- 1 temporary waste storage
- 2 entrance/movement; path for patients; PPE removal area
- 3 stock room
- 4 movement path for uninfected persons
- 5 air conditioning system; exhaust type and natural ventilation
- 6 isolation facility (infection area)
- 7 worker's facility (non-infection area)

**Figure A.1 — Example of separation in case of multiple buildings**

If there is a single building, as shown in [Figure A.2](#), the isolation area and workers' area are on different floors. The movement of and the entrance for infected and non-infected individuals is unconnected (two or more entrances, stairways, and elevators), taking into consideration the movement paths of both patients and workers. Air from one area should not be mixed with that from the other area. Workers may use external accommodations.



#### Key

- 1 movement path for patients
- 2 movement path for uninfected persons
- 3 air conditioning system; exhaust type and natural ventilation
- 4 movement between floors by uninfected persons, used during admission
- 5 movement between floors by uninfected persons
- 6 safety floor (PPE removal area, storage room, etc)
- 7 isolation facility (infection area)
- 8 worker's facility (Non-infection area)
- 9 first/ground floor
- 10 top floor

**Figure A.2 — Example of separation in case of a single building**

## A.2 Detailed facility setup

### A.2.1 General

[Table A.1](#) details how the isolation facility, work facility and living facility for workers are set up.