

Assessment of infection prevention and control practices in isolation areas in acute healthcare settings in the context of the novel coronavirus (COVID-19)

PAHO/PHE/IM/Covid-19/20-006
(interim recommendations, April 14 2020)

Objective

- To provide a tool for assessment of infection prevention and control practices in isolation areas in acute healthcare settings* in the context of the novel coronavirus (COVID-19).

These recommendations are preliminary and subject to review as new evidence becomes available.†

Key considerations

- Infection prevention and control practices need to be implemented to guarantee the safety of healthcare workers and patients in healthcare settings, it is fundamental to prevent cross contamination and containment of spread of COVID 19.
- As of the day of this publication, the following precautions are recommended for the care of patients with suspected or confirmed cases of COVID-19‡:
 - For any suspected or confirmed cases of COVID-19: **standard + contact + droplet precautions**
 - For any suspected or confirmed cases of COVID-19 and Aerosol Generated Procedure: **standard + contact + airborne precautions**
- The results of the application of this evaluation tool, in addition to other tools§, will provide an overview regarding compliance with the activities of prevention and control of infections associated with provision of care in acute healthcare services in a health setting, without making judgments about the individual risk of patients, nor on particular cases. By its nature, this tool is only an external diagnostic to support IPC professionals and managers to assess the gaps and take corrective measures.

Structure of the checklist

This checklist is divided in four components and those components are divided into nine areas for assessment of infection prevention and control practices in isolation areas related to COVID-19:

- Human resources
 - Healthcare workforce
 - Education and training
 - Health care workers health status and follow up
- Administrative strategies / governance
 - Infection prevention and control activities
 - Patient containment and isolation in the healthcare facility

* Based on Pan American Health Organization. *Rapid Evaluation Guide for Hospital Programs for Prevention and control of Nosocomial Infections*. Washington, D. C.: OPS, 2011, available at <https://www.paho.org/hq/dmdocuments/2011/HAI-Evaluation-guide-2011-ENG.pdf>, access date 04/08/2020.

† Updated information on COVID-19 can be obtained at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.

‡ For the most update information available for infection prevention and control for the COVID-19, please refer to <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance>.

§ World Health Organization. (2018). Infection prevention and control assessment framework at the facility level. World Health Organization. <https://apps.who.int/iris/handle/10665/330072>. License: CC BY-NC-SA 3.0 IGO access date 04/08/2020.

- Hospital environment and sanitation
 - Hand hygiene
 - Isolation area
 - Medical waste management
 - Environmental cleaning
- Cleaning, sterilization and high-level disinfection of medical devices

How to use the assessment tool and interpret the results

- For each of the indicator, evaluate its status through the suggested verification document and check if it is “present” or “absent/no”. Use the “comments” space to provide additional relevant information.
- Transfer your results to the [data form collection](#). As data is inserted, an automated radar graph will be generated, plotting all results of the different components in the same graph. This method allows the visualization of quality improvement and display ongoing performance metrics of the isolation area.
- Any “absent/no” response should be addressed in the short-term, implementing corrective measures.
- Ideally, the evaluation should be performed by the same professional or group on a regular basis (weekly), depending on the baseline assessment.
- A summary report is also suggested to present results in the format of an executive summary.
- For the final score all indicators have the same weight. The expected result is 100% compliance with the indicators proposed in this tool.
- For each isolation area or area for COVID 19 care use one assessment tool, because the gaps can be different from one area to another and need to be addressed locally.
- A glossary for key terms is provided at the end of the document.

Infection prevention and control practices in isolation areas in acute healthcare settings in the context of the novel coronavirus (COVID-19)

Description of the healthcare facility – isolation area

Facility information	
<i>Evaluation date</i>	
<i>Name of the facility</i>	
<i>Identification of isolation area</i>	
<i>City</i>	
<i>Country</i>	
<i>Triage area</i>	present <input type="checkbox"/> absent <input type="checkbox"/>
<i>Number of beds in the isolation area</i>	
<i>Number of intensive care unit beds</i>	

Human resources

Healthcare workforce

- Suggested verification documents: shift program

<i>Indicator</i>	<i>Number</i>	<i>Comment</i>
<i># of nursing professionals**</i>		
<i># of physicians**</i>		
<i># cleaners**</i>		

Education and Training

- Suggested verification documents: training program evaluation forms, attendance reports

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Is there an orientation about infection prevention and control for healthcare workers and this program is implemented? (1)</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Training of healthcare workers in prevention of percutaneous exposures to blood or body fluids is in place (2)</i>	<input type="checkbox"/>	<input type="checkbox"/>	

(1) Organized training activities to ensure that health care personnel are familiar with the hospital's infection prevention and control protocols and standards including standard precautions and use of PPE. (2) Prevention and monitoring of specific biological risks, injection safety.

Healthcare workers health status and follow-up

- Suggested verification documents: standards

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Is there a program to follow up health status of HCW exposed to COVID 19 patients? (3)</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Is there a program in place to follow up percutaneous exposures to blood or body fluids accidents (4)</i>	<input type="checkbox"/>	<input type="checkbox"/>	

(3) Program in place to follow-up the health status of HCW including type of exposure, onset of symptoms and recommendation about separation of work and return to work after the disease. (4) Follow up measures and prophylaxis available for HCW with exposure to blood and body fluids.

** Rate between nurse and patient will varies depending on the level of care needed but need to establish at each HC setting.

** The number of doctors required will depended on number of patients and severity but need to establish at each HC setting.

** At least 1 dedicated worker per shift.

Administrative strategies / Governance

Infection Prevention and Control activities

- Suggested verification document: standards and procedures manuals; check list or assessment tool

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Existence of a complete regulatory technical basis – standard precautions (5)</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Existence of a complete regulatory technical basis – transmission-based precautions (6)</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Oversight compliance by the staff</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Availability of check list or tools for supervision for standard precautions</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Availability of check list or tools for supervision for transmission-based precautions</i>	<input type="checkbox"/>	<input type="checkbox"/>	

(5) minimal information: hand hygiene, use of PPE based on risk assessment, respiratory etiquette, injection safety, cleaning, disinfection and sterilization of medical devices, environmental cleaning and waste management. (6) minimal information: handwashing before and after patient care and, use of PPE (gloves, waterproof gown, masks, respirators and goggle or face shield) for contact precaution, droplet precautions and airborne precautions.

Patient containment and isolation into the healthcare facility

- Suggested verification document: standard operational procedures, manual

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Policies for admission and discharge of patient in COVID 19 isolation area are in place?</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Policies for containment and flow of patients into the health care settings are in place?</i>	<input type="checkbox"/>	<input type="checkbox"/>	

Environmental cleaning

- Suggested verification document: standard operational procedures, manual

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Policies for environmental cleaning of isolations areas/rooms are defined</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Policies for storage of cleaning supplies of isolations areas/rooms are defined</i>	<input type="checkbox"/>	<input type="checkbox"/>	

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Policies on transportation and final destination of patient used linen and cloths are defined</i>	<input type="checkbox"/>	<input type="checkbox"/>	

Isolation area environment and sanitation

Hand hygiene

- Suggested verification document: direct observation of the procedure

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Potable water is available on an ongoing basis with a minimum of eight hours supply</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Accessible and operational washbasins with soap and supplies for drying hands in all patient care areas (7)</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Alcohol hand hub solution in all patient care areas (8)</i>	<input type="checkbox"/>	<input type="checkbox"/>	

(7) Washbasins should be inside and outside the patients' hospital rooms or isolation area. (8) Alcohol dispenser accessible from each bed.

Isolation physical area

- Suggested verification document: direct observation of the procedure

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Separation of a meter or more between beds in cohort area or multiple patient room</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Availability of pre-room area for donning the PPE, and personal protection equipment, operational washbasins, or alcohol hand hub solution</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Availability of room for isolation of individual patients or groups, with closed doors, operational washbasins, and alcohol hand hub solution</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Availability of a bathroom, toilette and sluice for use of patient</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Areas for isolation and patients in isolation are signed</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Enough and correct PPE available for HCW and janitors</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Exit area for PPE doffing, with operational washbasins, or alcohol hand hub solution and waste bin.</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Permanent environmental ventilation in patient care areas is available (9)</i>	<input type="checkbox"/>	<input type="checkbox"/>	

(9) Natural ventilation 160L/per min/person or mechanical ventilation with 12 ACH for aerosol generated procedure area. 60L/ per min/person in room for patients under droplet precautions.

Medical waste management

- Suggested verification document: direct observation of the process, standards and procedures manuals

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Disposal of sharp in waterproof, puncture-resistant containers</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>The containers for sharps are in a safe place adequate for guaranteeing the safety of patients and health workers</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Policies on segregation of medical waste are defined</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Policies on transportation of medical waste are defined</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Policies on final destination of medical waste are defined</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Training of professionals involved in management of medical waste is in place</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Personnel handling waste use protective barriers</i>	<input type="checkbox"/>	<input type="checkbox"/>	

Environmental cleaning

- Suggested verification document: standards and procedures manuals^{§§}

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Cleaning material are kept inside the isolation area</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Only disinfectants with proven efficacy are used</i>	<input type="checkbox"/>	<input type="checkbox"/>	

^{§§} Water, sanitation, hygiene, and waste management for the COVID-19 virus. Available at: <https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19>, access date 04/08/2020.

Cleaning, sterilization and high-level disinfection of medical devices

- Suggested verification document: direct observation, standards and procedures manuals

<i>Indicator</i>	<i>Status</i>		<i>Comment</i>
	<i>Present</i>	<i>Absent</i>	
<i>Only detergent for hospital use is used</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Cleaning of medical equipment is done before disinfection or sterilization</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Only sterilization methods of proven efficacy are use (10)</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Standards and procedures have been established for all processes related to sterilization</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Only high-level disinfection of methods of proven efficacy are used (11)</i>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Standards and procedures are established for all processes related to disinfection</i>	<input type="checkbox"/>	<input type="checkbox"/>	

(10) As of the date this document was prepared: autoclaves, dry heat, ethylene oxide in automated equipment, formaldehyde in automated equipment, hydrogen peroxide plasma in automated equipment, per acetic acid in automated equipment. (11) 2% glutaraldehyde, per acetic acid, orthophthalaldehyde (OPA).

Glossary

Disinfection	Procedure designed to eliminate pathogenic agents from articles and other patient care equipment in order to decrease the risk of infection. microbial spores are not usually eliminated. different levels are distinguished using Spaulding’s classification. High-level disinfection processes are of particular interest.
Health care workers	In the context of this documents, health care workers are all workers working inside the isolation area including professionals or other categories.
High level disinfectants with proven effectiveness	Formulations based on glutaraldehyde, >2%; orthophthalaldehyde (OPA), 0.55%; hydrogen peroxide, 7.5%; peracetic acid, >0.2%; hydrogen peroxide, 7.35%. and peracetic acid, 0.23%; hydrogen peroxide, 1%, and peracetic acid, 0.08%.
Management of personnel exposed to infectious agents	Perform rapid diagnosis and appropriate post-exposure prophylaxis following accidents in the workplace.
Manual	Reference document that organizes and summarizes the regulations, instructions, procedures, or any other type of information, usually operational, on a specific subject.
Professional	Worker with a university education and degree.
Standard	Standing order that must be complied with.
Sterilization	Procedure designed to eliminate all forms of microbial life from articles and other patient care equipment in order to decrease the risk of infection.
Supervision	Process of observation for measuring compliance with standards, instructions, care procedures, or other characteristics of daily practice.