Operational Considerations for Community Isolation Centers for COVID-19 in Low-Resource Settings

The coronavirus disease 2019 (COVID-19) pandemic has presented numerous challenges to health systems, including large numbers of patients with COVID-19 that can overwhelm health facilities and staff. The World Health Organization (WHO) estimates that about 80% of people with COVID-19 have mild or moderate symptoms[1] [1]. Treatment for mildly to moderately ill patients may not require hospitalization, but some people may not be able to isolate safely at home, putting household contacts and, in turn, community members at risk of COVID-19 [2, 3]. Isolation shelters, or community isolation centers (CICs), can provide people with mild to moderate symptoms, who are not at increased risk for severe disease, with a safe space to voluntarily[2] isolate until they are no longer considered infectious according to Ministry of Health guidelines [1, 2]. Such centers can reduce household transmission and reserve health facility resources for more seriously ill patients.

People with increased risk for severe disease or severe symptoms should seek care at a health facility or hospital where advanced care and treatment can be provided, if beds are available. If no hospital beds are available, it is preferable for these people to be isolated in a CIC rather than staying at home. People with mild or moderate illness who have been tested and are awaiting a diagnosis should isolate at home until they know their status to avoid becoming infected from other patients at a CIC. However, in cases where safely isolating at home is not possible, people who are awaiting a diagnosis may isolate in a CIC. CICs should ensure that people with suspected COVID-19 (either awaiting test results or unable to be tested due to lack of tests) and those with confirmed cases are placed in separate areas.

This document provides operational considerations for CDC Country Offices, Ministries of Health, and partners about establishing and operating CICs for people with suspected or confirmed COVID-19 who are remaining in the CIC voluntarily, and ensuring that people in CICs are safe and have access to adequate healthcare, food, water, sanitation, and hygiene products and services. It is intended for non-US settings. While this document is most relevant for low-resource settings, it may also be applicable to other settings.

Guiding principles:

- Each community is unique, and CDC Country Offices, Ministries of Health, and partners may wish to consider local context, local health system capacity, and other factors which may preclude people being able to isolate safely at home.

- CICs may be implemented at any time, regardless of the level of community transmission, based on guidance from public health officials, and may be scaled up or down as needed.

- While specific considerations may vary by country and location within a country, locating CICs close to the community they are intended to serve may facilitate support from patients' families and encourage use of these centers.

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[1] Mild illness may include: uncomplicated upper respiratory tract viral infection symptoms such as fever, fatigue, cough (with or without sputum production), anorexia, malaise, muscle pain, sore throat, dyspnea, nasal congestion, or headache. Rarely, patients may also present with diarrhea, nausea, and vomiting.

[2] Considerations regarding involuntary quarantine can be found here: World Health Organization, Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19), Interim Guidance, March 19, 2020
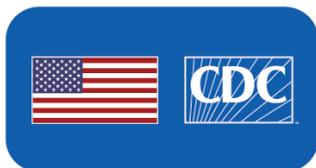
cdc.gov/coronavirus

www.cdc.gov/coronavirus/2019-ncov/global-covid-19

COMMUNITY ENGAGEMENT AND PLANNING

Establishing connections at the community level in the early stages of planning may facilitate adequate resources, community buy-in, and support, which may help ensure that operations are sustainable. Arrangements and organization of CICs may vary according to the local context, so local adaptations should be considered.

CDC Country Offices, Ministries of Health, and partners may wish to consider setting up a community advisory board focused on COVID-19 planning and response early in the planning process. This group may include:

- Local, state, provincial, or regional health departments
- Local government and community leaders
- Healthcare workers
- Religious leaders
- Traditional healers
- Emergency management
- Law enforcement
- Nonprofit organizations

Collaboration with the community advisory board may help to identify sites (e.g., schools, hotels, gymnasiums, convention centers, other large covered structures) that can be converted to CICs to safely isolate and manage people with mild or moderate COVID-19. A community advisory board can help draft plans to ensure that the CICs will be safe and secure, appropriately staffed, and stocked with the necessary supplies. These advisory boards can continue to meet to address any challenges or issues in the implementation and use of CICs, make operational decisions, and provide advice as needed.

Depending on the specific setting, the community advisory board may prefer to set up fewer, larger CICs, as this will likely be easier to manage than many smaller CICs and require fewer staff members to run. Rural areas may require a larger number of smaller CICs to ensure that facilities are close to the communities they serve, so that patients' families can help provide support. Densely populated settlements and displaced persons camps may require multiple, smaller CICs, as no suitable, larger spaces may exist. Security may be of particular concern in these areas, and facilities should consider employing a full-time guard to ensure safety of patients and staff.

ESTABLISHING A COMMUNITY ISOLATION CENTER

The physical set-up of a CIC takes time, planning, and specific resources to meet the needs of both patients and staff. A variety of settings can be adapted to support a CIC, including a hotel, school, church, or other area able to host groups of people; the size of space needed will depend on the size of the community the CIC is meant to support and the number of active COVID-19 cases in the community [3]. If no suitable buildings exist, it may be necessary to use a tent, construct one, or convert shipping containers to be used as a CIC.
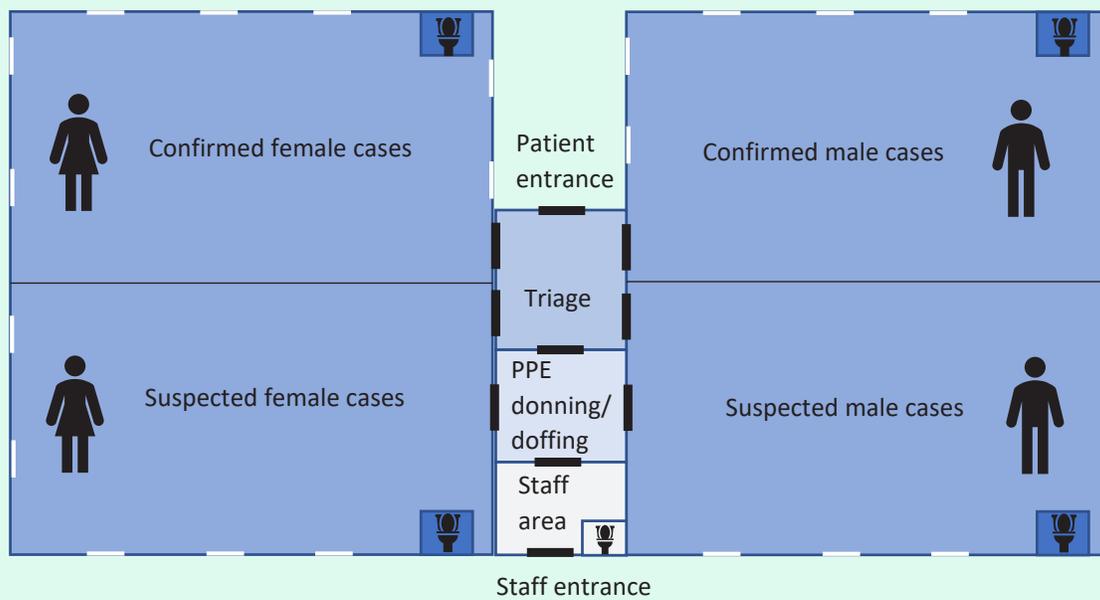
Communities should consider locating the CIC next to a COVID-19 designated health facility to facilitate transfer in case a patient develops more severe symptoms or complications. If this is not possible, the community should consider the availability of mobile telephone service to enable the use of telemedicine [1]. Other considerations include: ensuring good access and guaranteed security for those at the CIC, avoiding flood areas or areas with a danger of landslides, and choosing locations with the option to connect to basic services such as water and electricity [2].

In the process of preparing a CIC, some adaptations to the space are needed to reduce the risk of spread of SARS-CoV-2 (the virus that causes COVID-19) among staff, patients, and visitors. These include

- Designating areas for the following purposes:
  - Intake and patient assessment.
  - Area for staff to don and doff personal protective equipment (PPE; equipment, such as masks, gloves, goggles, gowns designed to protect the wearer from exposure to or contact with infectious agents).
  - Staff respite area separate from the patient care area with a bathroom for staff use only; an area where staff can store personal belongings, take breaks, and eat. PPE should not be worn in this area, but masks should be worn whenever possible. If more than one staff member is using the area, there should be at least 2 meter distance between staff.
  - Patient care area or rooms with access to patient bathrooms/shower areas.
  - If the facility has shared rooms, consider a private changing area for patients next to the bathrooms, or ensure that the bathrooms are big enough to allow patients to change.
  - Designated area in the patient care area where staff monitor patients and document key vital signs; depending on the size of the CIC, it may be reasonable to use the same area for intake and routine monitoring.
  - Clean supply storage area.
  - Dirty utility area.

- Using physical barriers to protect staff who will interact with patients. For example, placing an additional table between staff and patients at reception or marking the ground with tape may help maintain a distance of at least 2 meters between them. Clear plastic sheeting can be used to separate areas for staff and patients, allowing staff to provide oversight but preserving PPE.

- Patient housing areas
  - Women and men should have separate rooms, while children/families should either be housed in private rooms (one per family) or a third room that is only for mixed gender families, with at least 2 meters of space between family units.
  - In shared spaces, keep mats/beds of people who are not part of a family unit at least 2 meters apart [2].
  - Patients can be housed in individual rooms, if that is an option. If individual rooms are not available, multiple patients can be housed in a large, well-ventilated room [4].
  - If limited individual rooms are available, specific considerations should be given to placing patients with suspected COVID-19 (i.e., never tested or waiting on test results) or families in individual rooms.
  - If patients with suspected COVID-19 (i.e., never tested or waiting on test results) are admitted to the facility, they should be housed in areas that are physically separated from confirmed cases (and ideally in individual rooms), and keep 2 meters distance between themselves and other patients.

- Ensuring adequate potable water (25 liters/patient per day).
- Ensuring adequate toilet facilities.
  - One per 20 patients, with at least one for females and one for males, in addition to a designated staff toilet.
  - Toilets have convenient handwashing facilities close by.
  - Toilets are easily accessible (i.e., no more than 30 meters from all users).
  - There is a cleaning and maintenance routine in operation that ensures that clean and functioning toilets are available at all times [5].

Possible layout for Community Isolation Shelter

Confirmed female cases	Patient entrance	Confirmed male cases
	Triage	
Suspected female cases	PPE donning/ doffing	Suspected male cases
	Staff area	

Staff entrance

DEVELOPING A STAFFING PLAN

As these facilities are not intended to provide care for severely ill patients, the staff are there primarily to ensure the orderly functioning of the center and triage patients. A staffing plan for a CIC may include patient care and, where applicable, administrative, cleaning staff, and food preparation staff; the number of staff will depend on resources and the size of the facility/ intended number of patients. Having patient care staff with at least some medical training (e.g., nurses, nursing assistants, or community health workers) onsite to perform patient assessments may be beneficial. If these are not available, consider training community volunteers in the correct, and appropriate use of PPE, and assessment of patients.

Additional considerations include:

- Include at least one person with infection prevention and control (IPC) training who is regularly available to address questions and concerns, and provide training for staff.
- Develop a plan to monitor for infectious diseases (e.g., infectious diarrhea) and to provide regular cleaning and disinfection of the facility (see table).
- While the number of staff required at any given time may depend on the capacity of the CIC, consider having at least one staff member available at the CIC 24 hours per day to perform intake of patients, monitor patients, and ensure patient safety.
- While one staff member may be enough to manage the CIC, having two staff present at all times may be beneficial.
- The staffing plan may need to take into account that staff members may need to take sick days or emergency leave for other reasons. In addition to at least one staff to provide oversight and assessment of patients, depending on the setting, it may be prudent to have a guard to ensure that the patients and staff are safe.

Flexible and non-punitive sick leave policies for staff/employees will ensure that people do not present to work with illness, helping to maintain the health of the overall workforce. Developing a written protocol/ log for identifying, monitoring, and reporting COVID-19 among staff may be useful. The following reporting protocol may be considered.

- All staff must self-assess for fever and/or a defined set of COVID-19 symptoms [6]. If fever or respiratory symptoms are present, staff should:
    - Remotely report this information to their supervisor.
    - Be provided with immediate medical assessment and follow-up actions.
    - Determine with the supervisor whether they should report to work, depending on whether they are in contact with only confirmed cases, how ill they are, and whether they feel comfortable coming to work (ensuring that they are not penalized for deciding NOT to come to work).

Develop a procedure and inform staff who to contact if they have a work-place exposure or become ill, and ensure that there is a process in place for reporting staff exposure and infections to the authority responsible for operating the CIC and the Ministry of Health.

Image of a community isolation center and 3 workers; one worker has a fever and should not report to the center for work.

SUPPLIES

The following supplies should be considered when setting up a community care center:

- **Bedding:** Cots, mats, etc., depending upon what is most available and acceptable in the local context. Ideally, cots, mats, or mattresses will be covered in plastic sheeting or covering to enable easy cleaning and disinfecting or laundering between patients [7].

- **Bed linens:** depending on the local context, these may be supplied by the CIC, or patients may be asked to bring their own sheets/blankets.
    - If supplied by the CIC, consider a plan for laundering these properly between patients. Upon discharge or if linens become soiled, patients may be asked to place linens in a clean laundry bag. Linens should be washed with regular laundry soap and water or machine-washed at 60–90 °C (140–194 °F) with common household detergent, and dried thoroughly [3].
    - If staff wash patient bed linens, they should do so wearing gloves and protective clothing (e.g., plastic aprons) [3].

- **Medicine:** CICs should not be caring for patients with severe disease or multiple comorbidities, thus should not be expected to supply a full range of medications. However, CICs should consider having a supply of anti-pyretics (paracetamol/acetaminophen, ibuprofen) and oral rehydration solution. Patients requiring more advanced medical management should be referred to a healthcare facility.

- **Food:** The CIC should ensure that patients have enough food; this may entail having food prepared at the CIC, having food delivered from outside, or having patients' families bring food to the CIC. Food should be dropped off outside the facility and picked up by staff to limit visitors entering the facility. Use disposable food service items, including utensils and dishes, if possible. If disposable items are not feasible or desirable, ensure that all non-disposable food service items are handled with gloves and washed with dish soap and hot water or in a dishwasher, or having each patient keep their own dedicated plate and utensil, which they could wash for themselves.
    - Consider having pre-packaged boxes or bags for each patient and avoiding any self-serve food or drink options.

- **Water:** Provision of potable drinking water (25 liters/patient per day) at the facility for cooking, cleaning, bathing, and drinking must be assured; this may require procuring water jugs and purifying tablets.

- **Pulse oximetry:** Consider having at least one pulse oximetry machine available in each facility.

- **Oxygen:** All facilities should consider having oxygen cylinders and single-use nasal cannula tubing on site; this is especially important in facilities which are not located near a health facility. The amount of equipment should reflect the needs in the population seeking care at the facility, which may vary based on sociodemographic factors; as a starting point, CICs could consider ensuring sufficient equipment to allow for 5%-10% of patients to be using oxygen at any given time. However, oxygen use in the facility should be monitored and scaled up as needed. Ensure there is a strategy for maintaining and refilling the oxygen cylinders. Patients receiving oxygen therapy should be monitored every 4-6 hours and oxygen saturation and respiratory rate documented. Patients should be instructed in the safe use of oxygen.
    - Facilities which have oxygen should not allow smoking or lighting matches/fire in patient care areas.

- **Automatic blood pressure monitors:** Where possible, consider having 1-2 automatic blood pressure monitors.

- **Personal protective equipment (PPE):** Ensure medical masks, face shields/goggles, gloves, and gowns/aprons are available for staff and volunteers. If feasible, medical masks should be available for patients.

- **Masks:** If it's not feasible to supply enough masks for patient use, consider providing at least two masks meeting WHO standards [8] for each patient on entry to the facility; masks are not PPE but can be used for source control.

- **IPC/cleaning/sanitation supplies:** An adequate supply of alcohol-based hand sanitizer, soap and paper towels, tissues, no-touch trash cans, personal hygiene supplies, disinfectants, mops, buckets and other cleaning supplies (e.g., detergent, cloths, spray bottles, gloves) should be planned.

- **Personal hygiene products:** While patients should be expected to bring the personal supplies they need for a presumed 14-day stay, a small supply of personal hygiene products should be available at the CIC to provide to people who do not arrive with such supplies, including toothbrushes, soap, and sanitary napkins.

DEVELOPING FACILITY PROCEDURES

The following should be considered [2,4]:

Intake, Referral, and Discharge Considerations

- Developing a written protocol/log book for tracking numbers of patients admitted/discharged from the facility every day, and for identifying, monitoring, and reporting COVID-19 among volunteers and staff.

- Registering each patient on admission. Contact information for family members should be collected so they can be notified if a person is transferred, dies, or is ready to go home. Similarly, date and disposition (transfer or discharge) should be recorded for each person who leaves the facility.

- Developing written standard operating procedures to guide staff on how and where to transfer patients who deteriorate.

- Developing procedures for dealing with minor children, if they will be accepted by the facility.
  - If both a parent and a child are patients, they should be placed together in a family room, as described above. However, if a child is the patient, and the parent/guardian is not ill, additional procedures may need to be considered.
  - Depending on the setting, age of the child, parent comfort level, and staffing capacity of the CIC, minor children may be: left without a parent in the care of facility staff, cared for in the CIC by a designated friend or family member who is also a patient, or, potentially, a family member who is not ill may need to stay at the CIC to care for the child.
  - In cases where a family member who is not ill stays with an ill child, every effort should be made to provide the family with a private room, or, if not possible, to place them as far away from other suspected/confirmed cases as possible.
  - In cases where a minor child is the only affected member of the household and is unable to be left alone in a CIC or given a private family room, careful consideration should be given to whether home care is feasible, including considering who else is present in the household and might be exposed to infection if the child remained at home. At the present time, and based on very sparse data, it appears that children may be less likely to transmit SARS-CoV-2 than adults. Thus it might be reasonable to keep the child at home to prevent a family member from needing to stay at the CIC.
  - If the facility accepts minor children, there may be additional considerations regarding the children's physical safety and mental/emotional health; consideration should be given to hiring staff with experience dealing with children.

INFECTION CONTROL CONSIDERATIONS

- Infection control standard operating procedures may reduce the transmission of SARS-CoV-2 at the facility. These infection prevention and control (IPC) measures may help staff, patients, and visitors safely navigate the CIC.
  - To reduce exposures, limit entrance to the CIC to patients and staff; provide a visiting area for visitors to interact with patients, ideally outdoors.

- IPC measures and job-specific IPC training may prevent staff infections and disease transmission within the facility. Measures may include identification of IPC focal points, education on hand hygiene, proper selection and use of (PPE) [9], physical distancing, and avoiding work when sick.
  - Provide guidance on cleaning and disinfecting frequently touched surfaces [10].
  - Ensure safe and correct use and storage of disinfectants, including storing products securely away from children.

- Handwashing stations and protocols for staff, patients, and visitors should be available at the entrance and exit of the CIC.

- **Hand hygiene should occur upon entering/exiting the facility, entering/exiting patient care areas**, before putting on PPE and after removing it, when changing gloves, after any contact with a patient with suspected or confirmed COVID-19, their waste, or the environment in the patient's immediate surroundings, after contact with any respiratory secretions, before food preparation and eating, and after using the toilet [11].
  - **Hands should be washed with soap and water for at least 20 seconds when visibly soiled, before eating, and after using the toilet.**
  - **If using alcohol based hand rubs, these should contain greater than 60% ethanol or 70% isopropanol [12].** Hand rub formulations can be locally manufactured following WHO recipes. Methanol based hand rubs should not be used as they are toxic.

- Consider giving patients entering the CIC a mask immediately [3]. If the person has a confirmed case of COVID-19, they should use masks to avoid infecting others, but for suspect cases, consider using a medical mask to prevent getting infected at the CIC in case they do not have COVID-19. Provide appropriate PPE for staff members.

- Communicate clearly with staff and clients.
  - Post signs at entrances and in strategic places providing instruction on hand washing and cough etiquette, use of masks, donning/doffing PPE, and physical distancing.
  - Provide educational materials about COVID-19 in the local language(s). Additional resources can be found here.

- Developing procedures for handling people who present at the facility while their test result is pending. Patients with suspected COVID-19 need to be housed separately from confirmed cases, and if possible, from each other, to avoid exposing them to the confirmed cases. If a few single rooms are available, consider using them for suspect cases.
  - Suspect cases practice physical distancing, keeping 2 meters from the other patients.

- If testing is not available, consider grouping suspected cases separately from confirmed cases, ensuring masking as appropriate and maintaining distancing of 2 meters between patients [13]. All patients older than 2 years should wear medical masks if available, or masks if medical masks are unavailable, at all times while awake. Masks should not be placed on young children under age 2, anyone who has trouble breathing, or anyone who would be unable to remove the mask without help [14].
  - If patients are placed in private rooms, or if all patients in a shared room are confirmed cases, masks may be removed except when staff are in the room [11].

- Consider limiting visitors who are not clients or staff.
  - If visitors are permitted, designate a "visiting area" outside of the area patients are cared for, ideally outdoors. Ensure 2 meter distancing is observed during the visit, masks are worn as appropriate, and time spent in visiting area is limited.

- Food should be dropped off outside the facility and picked up by staff to limit visitors entering the facility. Consideration should be given to using disposable plates and utensils, or having each patient keep their own dedicated plate and utensil, which they could wash for themselves.

- Other supplies for patients such as clean clothes, personal hygiene products, or other personal items should be dropped off outside of the facility in the visitors' area. Dirty clothing should be placed in a laundry bag; staff members should give this to family members to launder at home when possible.

MEDICAL MANAGEMENT CONSIDERATIONS

- A medical screening checklist may be developed to ensure that admitted patients are appropriate for the CIC.
  - Patients with mild disease who are at greater risk for severe disease, should preferentially be isolated in a formal health facility and not a CIC, however, if there are no hospital beds available, it is preferable to isolate in a CIC than at home.
  - Patients requiring medication should bring a sufficient quantity of any medication they take routinely for a presumed 14-day stay.

- All patients in the CIC should be screened for COVID-19 symptoms.

- Consider checking pulse oximetry and respiratory rate on arrival and then twice a day. Patients requiring oxygen may need more frequent assessment (e.g., every 4-6 hours).

- Identifying a designated medical facility to refer patients who may develop more severe illness. If a patient deteriorates, ensure rapid referral to a medical facility.
  - Emergency signs and symptoms may include:
    - Trouble breathing
    - Persistent pain or pressure in the chest
    - New confusion or inability to arouse
    - Bluish lips or face
    - Pulse oximetry reading <94%
  - Notify the designated medical facility and personnel (or family members) when transferring clients that have severe COVID-19.

- Ideally, consider locating CICs close to a formal health facility where patients who deteriorate can be referred. However, in remote areas, this may not be feasible. In these instances, consider developing a formal written plan to access medical support via telemedicine. Additional information on establishing telemedicine can be found here [15].
  - If immediate access to a referral center is not possible, facilities should consider having oxygen tanks available to provide respiratory support in case a patient deteriorates.
  - Consider developing a written plan to guide the management/transfer of patients who deteriorate.

Discharge Criteria[3] Considerations

- Facilities should consider criteria to determine when patients may be released from the CIC; this should follow local Ministry of Health (MOH) guidance. If MOH guidance is not available, maintain isolation for **symptomatic patients** for at **least 10 days after illness onset AND at least 1 day (24 hours) after symptoms resolve[4]** [16, 17].

- Patients with laboratory-confirmed COVID-19 who never developed **any** symptoms (i.e., identified through contact tracing) may discontinue isolation if at least 10 days have passed since the date of their first positive COVID-19 diagnostic test. As there have been reports of prolonged detection of RNA without viral culture, it may be preferable to use the symptom-based method, particularly for people who remained asymptomatic throughout [17].

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[3] While negative results from testing at least two consecutive respiratory specimens collected ≥24 hours apart (total of two negative specimens)* can also be used to discontinue isolation, this may not be practical in settings where tests are limited. Further, prolonged viral shedding has been demonstrated without direct correlation with replication competent virus, thus it is possible that use of a test-based strategy may lead to a longer period of isolation [14].

[4] Symptom resolution is defined as resolution of fever without the use of fever-reducing medications **and** improvement in respiratory symptoms (e.g., cough, shortness of breath).

SECURITY CONSIDERATIONS

- In cases where single rooms are not available, consider housing patients in large rooms grouped by gender, with separate rooms for women, men, and families.

- Consider ensuring that each patient has access to a secure cabinet which can be locked to ensure security of small personal items; if this is not available, patients should be instructed to send any valuables home with a family member.

- A staff member should be present at all times to ensure that no unauthorized people enter the facility.

- Depending on the setting, it may be prudent to have at least one security guard on duty at all times.

ENVIRONMENTAL SERVICES

- Environmental services can be provided regularly and safely by trained staff wearing appropriate PPE for exposure to disinfectants and patients with COVID-19.
  - When working in places where suspected or confirmed COVID-19 patients are present, or where screening, triage, and clinical consultations are carried out, cleaners should wear the following PPE: gown, heavy-duty gloves, medical mask, eye protection (if risk of splash from organic material or chemicals), and boots or closed work shoes [18].

- Follow the disinfectant manufacturer's instructions for safety (such as wearing gloves and ensuring adequate ventilation), concentration, and application method for routine cleaning and disinfection, and pay close attention to the recommended contact time to ensure proper disinfection.

- After an initial cleaning with regular soap, detergent, or disinfectant, as appropriate for the surface, perform a second cleaning with regular household disinfectant containing 0.1% sodium hypochlorite (i.e. equivalent to 1000 ppm) [3]. Diluted household bleach solutions may also be used if appropriate for the surface [7].
  - Check the label to see if your bleach is intended for disinfection and has a sodium hypochlorite concentration of 5%–6%. Ensure the product is not past its expiration date. Some bleaches, such as those designed for safe use on colored clothing or for whitening, may not be suitable for disinfection.
  - Unexpired household bleach is effective against coronaviruses when properly diluted.
  - **Follow manufacturer's instructions** for application and proper ventilation. Never mix household bleach with ammonia or any other cleanser. **Leave solution** on the surface for **at least 1 minute**.
    - To make a bleach solution, mix:
      5 tablespoons (1/3rd cup) bleach per gallon of room temperature water
      OR
      4 teaspoons bleach per quart of room temperature water
    - Bleach solutions will be effective for disinfection up to 24 hours.
    - **Alcohol solutions with at least 70% alcohol may also be used.**

- Protocols are in place for cleaning spills of blood or other body fluids.
  - For cleaning blood or body fluid spills of 10 ml or more, a concentration of 0.5% (5,000 ppm) sodium hypochlorite is recommended.

- Responsibility for reprocessing reusable medical equipment, if applicable, is assigned to appropriately trained personnel.

- Clean the "clean" areas, such as staff respite areas and staff restrooms, first, and then move to the "dirty" areas, such as triage and suspected COVID-19 patient areas, followed by confirmed COVID-19 patient areas.

- Clean and disinfect staff respite areas at least daily.

Table: Proposed frequency of cleaning of environmental surfaces in Community Isolation Centers [18]

Patient area	Frequency[a]	Additional guidance
Screening/triage area	At least twice daily	• Focus on high-touch surfaces, then floors (last)
Inpatient rooms/cohort – occupied	At least twice daily, preferably three times daily, in particular for high-touch surfaces	• Focus on high-touch surfaces, starting with shared/common surfaces, then move to each patient bed; use new cloth for each bed if possible; then floors (last)
Inpatient rooms – unoccupied (terminal cleaning)	Upon discharge/transfer	• Low-touch surfaces, high-touch surfaces, floors (in that order); waste and linens removed, bed thoroughly cleaned and disinfected
Outpatient/ambulatory care rooms	After each patient visit (in particular for high-touch surfaces) and at least once daily terminal clean	• High-touch surfaces to be disinfected after each patient visit • Once daily low-touch surfaces, high-touch surfaces, floors (in that order); waste and linens removed, examination bed thoroughly cleaned and disinfected
Hallways/corridors	At least twice daily[b]	• High-touch surfaces including railings and equipment in hallways, then floors (last)
Patient bathrooms/toilets	Private patient room toilet: at least twice daily Shared toilets: at least three times daily	• High-touch surfaces, including door handles, light switches, counters, faucets, then sink bowls, then toilets and finally floor (in that order) • Avoid sharing toilets between staff and patients

[a] Environmental surfaces should also be cleaned and disinfected whenever visibly soiled or if contaminated by a body fluid (e.g., blood);
[b] Frequency can be once a day if hallways are not frequently used.
Reproduced from WHO: Cleaning and disinfection of environmental surfaces in the context of COVID-19

V. COMMUNICATION CONSIDERATIONS

To effectively plan for potential surges, consider providing regular updates to CICs on the local level of transmission of COVID-19 through local, state, provincial, and/or regional health departments. CICs may also wish to regularly communicate to local officials about the number of patients being admitted and discharged from the CIC, to ensure local officials have a complete picture of the numbers of local cases. Updated information and local guidance should be regularly shared among staff and with the established community advisory board. Changes to guidance should be addressed immediately through adaptations to operating procedures, staffing, and other processes, as needed [19, 20].

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