1. Introduction

1.1 Background

Current evidence shows that 80% of patients with coronavirus disease 2019 (COVID-19) exhibit mild symptoms and do not require hospitalization. The World Health Organization (WHO) has issued guidance for care of patients with mild symptoms who can conduct self-isolation at home. However, under circumstances where safe and appropriate home care is not available, or where vulnerable people are present in the home, patients with mild symptoms should be properly isolated and managed to prevent further community transmission.

Some countries have developed novel strategies in transforming public facilities and hotel accommodations into temporary isolation facilities for mild cases of COVID-19. These strategies have proven effective in supplementing the limited health-care resources more efficiently.

This interim guidance provides recommendations on minimum standards of repurposing existing premises into isolation facilities to cope with the surge of patients with mild COVID-19 symptoms who do not require immediate hospitalization.

1.2 Target audience

Subnational, provincial and district health managers involved in responding to the COVID-19 outbreak and coordinating local health systems, especially in low-resource settings.

2. Recommendations

2.1 Eligible patient groups

2.1.1 Definition of mild cases

Mild cases may present with non-specific symptoms such as fever, fatigue, cough (with or without sputum production), anorexia, malaise, muscle pain, sore throat, shortness of breath, nasal congestion and headache. Rarely, patients may also present with diarrhoea, nausea or vomiting.

Patients with altered mental status, shortness of breath, hypoxia (blood oxygen saturation [SpO2] < 94%), systolic blood pressure < 90 mmHg (for adults), or other signs of shock or complications should be referred to designated hospitals for care and management.

2.1.2 Types of eligible patients for repurposed non-health-care facilities

- Confirmed COVID-19 patients with mild symptoms who are evaluated as low risk, with no impending need for hospitalization but needing basic health care and monitoring.
- Confirmed COVID-19 patients with no or mild symptoms who are evaluated as low risk but not fit for home isolation and meeting one or more of the following criteria:
  1. Household contains high-risk family members (elderly, infants and young children, pregnant women, and immunosuppressed patients).
  2. Household lacks basic isolation facilities and means to support livelihood needs, such as a single-person bedroom, individual toilet, isolation measures, and food or other necessities.
3. Household is in a remote area with limited access to health facilities.
4. Patients are experiencing homelessness and cannot be discharged to a congregate setting.
   • Hospitalized COVID-19 patients who have recovered, with no or minimal symptoms, but who do not fulfil the discharge criteria.

2.2 Demand estimation and capacity review

• Review the epidemiological projections of COVID-19 transmission inside the country, region and municipalities.
• Calculate the expected number of mild cases over the course of the outbreak at national and subnational levels. Consider cross-jurisdiction collaboration to alleviate the burden on the health system.
• Obtain the number and spaces of existing facilities possible for repurposing. In doing so, collaborate with relevant public and private sectors including social services, civil affairs, tourism, commerce and municipal/provincial/ regional governments.

2.3 Identification, selection and requisition of facilities

Non-health-care facilities could be repurposed into isolation facilities if the minimum requirements are met:
• Large space with levelled floors to enable a rapid construction and installation of essential accommodation facilities such as temporary beds, mattresses, and essential medical and livelihood supplies including water and electricity.
• Able to cope with a surge in patient inflow and outflow on a massive scale, ranging from hundreds to thousands.
• Able to isolate patients in either single rooms or with a spatial distance of at least 1 metre (if possible, 2 metres) to facilitate access and movement of health-care workers.5
• Able to house distinct clean zones, semi-clean zones and contaminated zones.
• Located in areas with road connection, security and telecommunications signal coverage.

Examples of facilities

Example 1: Stadiums, exhibition centres, museums and other premises that have an open layout to accommodate a surge in the number of patients and that allow limited numbers of health-care personnel to monitor and manage patients needing care, including referrals.

Recommended characteristics include:
• large space;
• flat and level floor(s);
• water, sanitation and hygiene (WASH) facilities;
• easy to move patients on trolleys; and
• parking space available for patient referral and logistic arrangements.

Example 2: Hotels, hostels, inns, student dormitories and other facilities with existing accommodation conditions and WASH facilities, making immediate isolation possible.

These facilities should be allocated to patients who could take care of themselves without additional assistance due to limited monitoring or access by medical staff.

Repurposed facilities should be equipped with staff capable of carrying out basic health-care functions, including:
1. monitoring vital signs – temperature, pulse rate, respiratory rate and blood pressure;
2. measuring oxygen saturation using pulse oximeter;
3. providing symptom-relieving aids – antipyretics, cooling packs, and nutrition and fluid intake advice;
4. detecting deteriorating patients and conducting timely communication and referral to higher-level health facilities; and
5. providing access to mental health and psychosocial support care (on-site services, telephone-based support and other remote service options) and circulating information to assist patients with coping strategies, as well as protection from stigma, discrimination and violence.
2.4 General principles of repurposing facilities

Operational plans should be developed with minimum requirements for ensuring patient safety and infection prevention and control (IPC). The following is a list of critical areas and minimum standards for consideration.

2.4.1 Space allocation and infrastructure

- Clearly define and distance respective entrances for patients and staff.
- Allocate zones by functions and degrees of contamination. For example, have a “contaminated zone” for patients, a “clean zone” for receiving supplies and a “semi-clean zone” for health-care workers and support staff to put on and take off and properly dispose of their personal protective equipment (PPE).
- Separate staff toilets and amenities from those designated for patients to prevent cross-contamination.
- Designate separate passages or corridors by functions:
  1. patient entry and referral
  2. movement of health workers
  3. escape passages for emergencies.
- In multistoried accommodation facilities such as hotels and dormitories, clearly distinguish stairways and elevators for patients and staff.
- Install fire extinguishers in abundance per local requirements.
- Take into account privacy considerations. For example, partitions that separate bed units into spaces resembling hospital rooms and wards are recommended to ensure basic privacy between patients. If conditions permit, accommodate women and men in separate areas on the same floor, or on separate floors, including separate toilets/amenities for personal hygiene by gender.

2.4.2 Essential supplies and equipment

- Bed linens adapted to local preference and availability.
- Essential PPE for health-care workers, including:
  1. clean work uniforms
  2. disposable gowns
  3. medical masks
  4. eye protection
  5. gloves.
- Essential PPE for non-health-care staff, including:
  1. gloves
  2. disposable gowns
  3. closed shoes
  4. if doing procedures that generate splashes (e.g. while washing surfaces), additional protection such as face shields and impermeable aprons.
- Safe and clean drinking water, as well as water and drainage for personal hygiene, should be easily accessible at all times. If piped water is not available, water trucks, buckets and other available means can be provided, making sure to abide by IPC standards.
- Basic and essential medical supplies and equipment, such as pulse oximeters, thermometers, blood pressure monitors, stethoscopes, emergency kits and antipyretics.
- Food and nutrition support.
- Stress-relieving aids adapted to local context, such as books, television sets and toys for children. IPC precautions should be observed when exchanging and sharing such objects.
- Menstrual hygiene supplies for female patients and staff.
- Mosquito nets and insect repellent in areas affected by malaria and dengue.

2.4.3 Human resources

- Develop standard operating procedures, team compositions and work rosters for continuous operation.
- Record staff presence and work logs at the beginning and end of each shift.
- Ensure health-care workers are present who can monitor the conditions of patients on a regular basis.
- Provide sufficient information and training about COVID-19 to non-health-care workers so that they can carry out assigned tasks with minimum risks and prevent the possible spread of COVID-19 within the establishment.

These include concierge staff, receptionists, etc.

*Oxygen supply, masks, Ambu bag, intubation kit, epinephrine, automated external defibrillator (AED), syringe, normal saline, gloves, etc.
dormitory managers, cleaners, drivers, cooks and security guards.

- Leverage existing networks and groups in the community to staff ancillary positions such as faith-based organizations and local women’s or youth unions and networks.

2.4.4 Infection prevention and control

- Ensure all staff implement precautions, including appropriate use of PPE, and apply strict IPC measures per local guidance.
- Manage the use of medical devices and equipment, laundry, food service utensils, and medical waste in accordance with safe routine procedures.⁸
- Restrict staff from unnecessarily entering patient rooms if they are not involved in direct care. Encourage patients to perform personal hygiene and ensure environmental hygiene within their own rooms/spaces. Staff can provide additional assistance, if required.
- Ideally, prevent visitors. Telecommunication with family members is recommended.
- Place soiled linens in clearly labelled leak-proof bags or containers after carefully removing any solid excrement. Collect excreta in a covered bucket before disposal in a toilet or latrine. Consider concentrated laundry services through certified contractors for handling infectious linens.
- Allocate waste zones, including cleaning and disinfection points, temporary waste storage, organic pits and sharp pits. Ensure three categories of medical waste containers at point of care.

2.4.5 Information, communication and social engagement

- Governments are advised to engage in two-way communication with the public to inform about isolation facilities with detailed explanations of the purpose and function and to alleviate community concerns. This will help elicit public awareness and support.
- Each facility should keep a clear and complete logbook on patient registration, medical records and discharge records.
- Local coordination bodies and isolation facilities should communicate on a timely basis to exchange information. This could include the number of newly admitted, discharged and referred patients in each isolation facility, the number of beds occupied, the number of vacant beds, the operational status, and adverse events, if applicable.
- Social engagement and support are vital to patients recovering and alleviating their anxiety during isolation. Health workers, non-health-care workers and patients can provide emotional support to each other. Experiences from different countries demonstrate group activities – observing proper physical distancing and IPC measures – are conducive for fostering solidarity among the community. For example, they could dine together, watch television, discuss in book clubs, dance and celebrate birthdays.³

3. Guidance development

3.1 Acknowledgements

This document was developed by a guideline development group composed of staff and consultants from the Division of Health Systems and Services of the WHO Regional Office for the Western Pacific. It serves as an integrated section of a series of health systems preparedness and response guidance issued by the Regional Office.

3.2 Guidance development methods

This document was developed based on a review of relevant literature and WHO guidelines. The guideline development group reached consensus on the recommendations through group discussion.

3.3 Declaration of interests

Interests have been declared in line with WHO policy, and no conflicts of interest were identified from any of the contributors.
Repurposing Facilities for Isolation and Management of Mild COVID-19 Cases

References