Home-based care for patients with COVID-19

Peter Eriki reviews infection prevention and control for delivering home-based care for patients with suspected or confirmed COVID-19

The COVID-19 pandemic has now evolved from isolated imported cases to Phase IV of widespread community transmission in many African countries. Initially the cases identified were managed in health facilities, which have limited capacity to handle the rising number of cases. It has become clear that not all cases present with severe forms of the disease requiring intensive care. Experience from several African countries shows that a majority of cases present only with mild symptoms or remain asymptomatic. This calls for engaging innovative ways of managing cases outside health facilities, such as communities and home-based levels.

Experience gained from home-based care programmes for HIV/AIDS and the Directly Observed Therapy Shortcourse (DOTS) for tuberculosis demonstrated that healthcare can be delivered in the community homes by community health workers. The cadres required for such programmes include: traditional medicine practitioners, social care workers or other community-based providers, and parents, spouses and other family members or friends.[2]

For these efforts to be effective, it is critical that all caregivers have appropriate training and guidance on how to care for patients and how to minimise the risk of infection. The training should include drilling on hygiene procedures and on recognising signs that a patient's condition is worsening and needs referral to a health facility. In addition, health workers and caregivers providing support in the home should be provided with appropriate personal protective equipment (PPE).

Decision-making

The decision to isolate and monitor COVID-19 patients at home should be made on a case-by-case basis. Their evaluation should include clinical presentation and any requirement for supportive care and risk factors for severe disease, such as age, smoking, obesity and presence of non-communicable diseases (e.g. cardiovascular disease, diabetes mellitus, chronic lung disease, chronic kidney disease, immune-suppression and cancer). Patients who are asymptomatic or those with mild or moderate disease without risk factors for poor outcome may not require hospitalisation, and could be suitable for home isolation and care provided that conditions for implementing appropriate infection prevention and control are met and that close monitoring for any signs or symptoms of deterioration in their health status by a trained health worker is feasible.[3]

A trained health worker should assess whether the home is suitable for the isolation and provision of care. Such assessment should establish the need for hand and respiratory hygiene supplies, environmental cleaning materials, the ability to impose and adhere to restrictions on people's movement.

Children should remain with their caregivers wherever possible and this should be decided in consultation with the caregiver and the child. To prepare families with children for potential illness within a family, community protection focal points should help families plan and agree in advance on how they will care for children in case the primary caregivers become ill. Children living with primary caregivers who are elderly, disabled or have underlying health conditions should be prioritised.[4] If these or other vulnerable persons are present in the home setting and cannot be kept apart from the patient, then the health worker should offer to arrange for an alternative location for isolation for the patient.[5]

The ability to monitor the clinical evolution of a patient with COVID-19 at home is also critical. Home-based care should be provided by health workers if possible. Lines of communication between the caregiver and trained health workers or public health personnel, or both, should be established for the duration of the home-care period, until the patient's symptoms have completely resolved.

What measures should health workers take when providing care in the home?

- Do a risk assessment to determine the appropriate PPE needed when caring for the patient.[6,7]
- Patient must be placed in a naturally ventilated room with enough fresh and clean outdoor air to control contaminants and odours.[8]
- Use of fans for air circulation should be avoided, unless it is in a single occupancy room.
- Limit the number of household members present during any visits and request that they maintain a distance of at least one metre from the health worker.
- When providing care or working within a metre of the patient, request that the patient wears a medical mask. Individuals who cannot tolerate a medical mask should practise rigorous respiratory hygiene; that is, coughing or sneezing into a bent elbow or tissue and then immediately disposing of the tissue followed by hand hygiene.[6,9]
- When washing hands with soap and water, use disposable paper towels to dry hands. If paper

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Community worker visiting a patient

towels are not available, use clean cloth towels and replace them frequently.[10]

- Provide instructions to caregivers and household members on how to clean and disinfect the home.[11]
- Clean and disinfect any reusable equipment used in the care of the patient before using on another patient.[12]
- Dispose waste generated from providing care to the patient as infectious waste in strong bags or safety boxes as appropriate: close completely and remove from the home.[7]

The World Health Organization (WHO) recommends that patients with COVID-19 receive treatment for their symptoms, such as antipyretics for fever and pain, as well as adequate nutrition and appropriate rehydration. The WHO advises against antibiotic prophylaxis for patients with mild symptoms. Antibiotics should only be prescribed if there is clinical suspicion of a bacterial infection. In areas with other endemic infections that cause fever (such as influenza, malaria, dengue, etc.), febrile patients should be tested and treated for those endemic infections in accordance with routine protocols.[3]

Efforts should be made to ensure that patients with non-communicable diseases or other chronic conditions receiving home-based care have an adequate supply of medication. Older people should have at least a two-week supply of critical medicines and supplies. Repeat prescriptions and mechanisms for delivering refills should be readily available.[13]

Caregivers for children with COVID-19 should also monitor their patients for any signs and symptoms of clinical deterioration requiring an urgent re-evaluation. These include difficulty in breathing/fast or shallow breathing, blue lips or face, chest pain on pressure, confusion and inability to wake up, interact when awake, drink or keep liquids down. For infants these include: grunting and an inability to breastfeed.(3) Home pulse oximetry is a safe, non-invasive way to assess oxygen saturation in the blood and can support the early identification of low oxygen levels in patients with initially mild or moderate COVID-19 or silent hypoxia. Home pulse oximetry can identify individuals in need of medical evaluation, oxygen therapy or hospitalisation, even before they show clinical danger signs or worsening symptoms.[14]

Palliative care at home

Palliative care is not limited to end-of-life care. Palliative care is a multifaceted, integrated approach to improving the quality of life of adults and paediatric patients and their families facing problems associated with life threatening illness. All health workers caring for COVID-19 patients should be able to offer basic palliative care, including relief of shortness of breath or other symptoms, and social support, when such care is required.[3] Efforts should be made to ensure that palliative interventions are accessible for patients, including access to medicines, equipment, human resources and social support at home.

Discharging COVID-19 patients from isolation

COVID-19 patients who have been discharged from hospital may continue to be cared for at home. This may include individuals who have clinically recovered

from severe or critical illness and who may no longer be infectious. Patients who are cared for at home should be isolated until they are no longer infectious.[6] COVID-19 patients who receive home-based care or have been discharged from hospital should remain in isolation for a minimum of 10 days after symptom onset, plus at least three additional days without symptoms.[15] Health workers need to establish a means of communicating with the caregivers of individuals with COVID-19 for the duration of the isolation period.

Management of contacts

A contact is a person who has experienced any one of the following exposures during the two days before and 14 days after the onset of symptoms of a probable or confirmed case:

1. Face-to-face contact with a probable or confirmed case within 1 metre and for at least 15 minutes;
2. Direct physical contact with a probable or confirmed case;
3. Direct care for a patient with probable or confirmed COVID-19 disease without using recommended personal protective equipment.

Contacts should remain in quarantine at home and monitor their health for 14 days from the last day of possible contact with the infected person.[16] Guidance on follow up and management of contacts can be found in the Public health surveillance for COVID-19. IPC advice for caregivers providing care at home: Caregivers, household members and individuals with probable or confirmed COVID-19 should receive support from trained health workers.

Recommendations for caregivers

- Limit the patient's movement around the house and minimise shared space. Ensure that shared spaces (e.g. kitchen, bathroom) are well ventilated.[6]
- Household members should avoid entering the room where the patient is located or, if that is not possible, maintain a distance of at least one metre from the patient (e.g. sleep in a separate bed).[6]
- Visitors should not be allowed in the home until the person has completely recovered, shows no signs or symptoms of COVID-19 and has been released from isolation.
- Hand hygiene should be performed before and after preparing food, before eating, after using the toilet, and whenever hands look dirty. If hands are not visibly soiled, an alcohol-based hand rub can be used. For visibly soiled hands, always use soap and water.
- A medical mask should be provided to the patient, worn as much as possible by the patient and changed daily and whenever wet or dirty from secretions.
- Materials used to cover the mouth and nose should be discarded or cleaned appropriately after.
- Caregivers should wear a medical mask that covers their mouth and nose when they are in the same room as the patient. If the mask gets wet or dirty it must be replaced immediately with a new clean, dry mask.
- Avoid direct contact with the patient's body fluids particularly oral or respiratory secretions, and stool. Use disposable gloves and a mask when providing oral or respiratory care, and when handling stool, urine and other waste.[6]
- Clean and disinfect at least once daily all surfaces that are frequently touched in the room where the patient is being cared for, such as bedside tables and bed frames.[11]
- Waste generated at home while caring for a COVID-19 patient during the recovery period should be packed in strong bags and closed completely before disposal and eventual collection by municipal waste services. If such a service does not exist, waste may be buried.[11]

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