

Infection prevention and control guidance for long-term care facilities in the context of COVID-19

Interim guidance

8 January 2021



This document is an update of the guidance published on 21 March 2020 and contains new evidence and guidance, including the following:

- updated results from published studies on:
 - the epidemiology and extent of SARS-CoV-2 infection among residents and staff in long-term care facilities (LTCFs);
 - the effectiveness of infection prevention and control (IPC) precautions to prevent SARS-CoV-2 transmission in LTCFs;
 - the impact of IPC precautions on mental and physical health and well-being of older people, and in particular people with dementia or other mental health or neurological disorders;
- updated advice on IPC precautions to prevent the spread of SARS-CoV-2 and to protect health workers and caregivers of patients with suspected or confirmed COVID-19 in LTCFs;
- advice on early detection of and testing for SARS-CoV-2 among residents and staff in LTCFs;
- advice on policies for visitors to LTCFs and additional considerations on minimizing the mental and physical health impacts of restrictions and IPC precautions implemented in the context of COVID-19.

Key points

- LTCFs are high-risk settings for transmission of COVID-19 to and among residents and staff. Residents of these facilities are at a higher risk of developing severe disease and death because they tend to be older and to have underlying medical conditions and/or functional decline. Early detection of COVID-19; adequate IPC training and education for all employees, residents and visitors; and consistent implementation of appropriate IPC policies and measures can significantly reduce the risk of SARS-CoV-2 transmission among residents, staff and caregivers in LTCFs.
- IPC measures may affect the mental and physical health and consequently the well-being of residents and staff – in particular the use of personal protective equipment (PPE) and restrictions of visitors and group activities. Thus, compassionate, respectful, people-centred care should be provided consistently, while ensuring adequate protection of residents, visitors and staff from COVID-19.
- In the context of the COVID-19 pandemic, the following critical IPC policies and procedures should be in place in LTCFs, irrespective of whether SARS-CoV-2 infection has occurred among residents and/or staff. LTCFs should:
 - ensure the existence of an IPC programme and team or at least a trained IPC focal point;
 - implement standard IPC precautions for all residents (in particular, appropriate hand hygiene according to the [WHO five moments](#) and thorough, regular cleaning and disinfecting throughout the facility) and SARS-CoV-2 transmission-based precautions when indicated;
 - in areas of known or suspected community or cluster transmission of COVID-19, implement universal masking for all health workers (HWs), caregivers, other professionals, visitors, service suppliers and residents;
 - in areas with known or suspected sporadic transmission of COVID-19 implement targeted continuous masking for HWs in clinical areas;
 - ensure physical distancing;
 - ensure adequate ventilation in the LTCF;
 - vaccinate residents and staff for influenza and COVID-19, and residents for *Streptococcus pneumoniae*;
 - implement IPC policies for visitors to LTCFs;
 - ensure adequate staffing levels and staff organization, appropriate working hours and protection of HWs from occupational risks.
- The following measures are critical to ensure early detection of COVID-19. LTCFs should:
 - ensure early detection of SARS-CoV-2 infection among HWs through syndromic surveillance and/or laboratory testing among staff and residents;
 - ensure appropriate management of exposure and SARS-CoV-2 infection among HWs;
 - expand testing to all HWs and residents when a positive case of SARS-CoV-2 is identified in a resident or staff member;
 - test residents for SARS-CoV-2 on admission or readmission to the LTCF in areas with community or cluster transmission, if resources permit.
- When a resident is identified as a suspected or confirmed COVID-19 case, the following IPC precautions should be implemented immediately. LTCFs should:
 - implement contact, droplet and/or airborne precautions (when indicated) during care of the affected resident(s);

- follow specific procedures for environmental cleaning and disinfection, waste and laundry management;
- isolate suspected or confirmed COVID-19 cases in single rooms or, if that is not possible, cohort them with other cases, while keeping suspected and confirmed cases separate;
- conduct careful clinical assessments of patients by medical professionals – particularly for those with risk factors for rapid deterioration such as older age or underlying medical conditions – and include early treatment as appropriate and evaluation of potential resident transfer to an acute health care facility;
- quarantine all contacts of confirmed COVID-19 cases in their rooms or separated from other residents, and monitor them for 14 days since the last contact.
- In the event of a COVID-19 patient death, safe procedures for management of the dead body should be applied.

Methodology for developing the guidance

This updated interim guidance is based on published WHO guidance for IPC in the context of COVID-19 (WHO guidance on IPC for health care settings; on mask use; and on prevention, identification and management of HW infections (1-3), ongoing reviews of the available scientific evidence on COVID-19 in LTCF settings and on the effectiveness of IPC precautions in these settings. During emergencies WHO publishes interim guidance, the development of which follows a transparent and robust process of evaluation of the available scientific evidence, including evidence on benefits and harms of specific interventions. The WHO ad hoc COVID-19 Infection Prevention and Control Guidance Development Group (COVID-19 IPC GDG) (see the acknowledgement section for a list of members) evaluates available scientific evidence through expedited systematic reviews and discusses guidance through a consensus-building process in weekly COVID 19 IPC GDG consultations, facilitated by a methodologist and, when necessary, followed up by surveys. This process also considers, as much as possible, potential resource implications, values and preferences, feasibility, equity and ethics. Draft guidance documents are reviewed by an internal and external review panel of experts prior to publication.

Purpose of the guidance

This document provides updated guidance for LTCF managers and IPC focal points to prevent SARS-CoV-2 from entering a facility and from spreading within and beyond the facility, and to support safe conditions for visiting through the rigorous application of IPC procedures, for the residents' well-being.

WHO will update the guidance as new information becomes available.

Background

Types of LTCF may vary by country or even at a subnational level. Nursing homes, skilled nursing facilities, assisted

living facilities, residential facilities and residential long-term care facilities – collectively known as LTCFs – provide a variety of services, including medical and assistive care, to people who are unable to live independently in the community. The term “long-term care facilities” does not include home-based long-term care, community centres, adult day care facilities or respite care (4, 5).

HWs are all people engaged in work actions whose primary intent is to improve health. For LTCFs, HWs include personal care workers and social workers employed by the facility (6, 7).

LTCFs are high-risk settings for transmission of COVID-19 to and among residents and staff. HWs who are in contact with and/or care for COVID-19 patients are at a higher risk of infection than the general population (3, 8). A recent large multicentre study conducted in the United States of America reported that 1.3 cases of COVID-19 were found in HWs for every 3 cases identified among residents in LTCFs (9). In other studies that measured COVID-19 prevalence among HWs in LTCFs, values ranged from 2.2% to 62.6% (10).

Residents of these facilities are at a higher risk of developing severe disease and death because they tend to be older and to have underlying medical conditions and/or functional decline (4, 11).

People living with dementia have higher direct and indirect risks related to COVID-19 because of reduced capacity to adhere to public health recommendations and IPC measures, including isolation (11). LTCF residents with dementia also face a risk from adverse events resulting from disruption of regular care, including disruption of social support (11).

According to one review of published studies on COVID-19 in LTCFs, SARS-CoV-2 testing positivity rates ranged widely (4% to 77%), with an average of 37%, which increased to 42.9% during outbreaks (10).

People who are infected with SARS-CoV-2 can transmit when they have symptoms and when they do not have symptoms, and there is evidence from some studies that patients present with “atypical symptoms” in LTCFs (4, 12, 13). Studies of outbreaks showed that 7% to 75% of residents and 50% to 100% of staff who tested positive were presymptomatic or asymptomatic. Between 57% and 89% of asymptomatic positive residents developed symptoms later; this emphasizes the importance of implementing adequate IPC precautions (4).

Older adults are the population group accounting for the large majority of severe COVID-19 cases, hospitalizations and deaths (14). Residents of LTCFs usually represent a vulnerable population owing to their advanced age and frequent underlying diseases such as diabetes; cardiovascular, chronic respiratory and cerebrovascular diseases; malignancy; and dementia, which independently increase the risk of COVID-19 progression, including severe outcomes, and death (15).

A recently published European Centre for Disease Prevention and Control (ECDC) risk assessment summarized the factors that directly contributed to an increased likelihood of spread of COVID-19 to and within LTCFs. These include high community prevalence of COVID-19, the congregate nature of LTCFs, larger care home size (>20 beds), higher occupancy rates, missed opportunities to identify early warnings in safety data (such as staff absence, single positive

cases), staff without symptoms who unknowingly work while infected, delayed recognition of COVID-19 in residents because of a low index of suspicion and delayed case identification due to limited availability of timely testing and/or delayed test result reporting (11).

Many LTCF residents require hospitalization following COVID-19 diagnosis due to disease severity. According to the Gmehlin & Munoz-Price review, the average hospitalization rate of residents testing positive across all studies was 44% and the average mortality rate was 21%. It should be noted that the rate of hospitalization was in part inflated by the need to isolate positive residents from others (10).

A review of the available data on mortality in LTCFs found that approximately 46% of COVID-19 deaths were from care homes (based on 21 countries) (16). Other reviews have evaluated infection fatality rates (IFRs) by age, all reporting that the IFR increased with age (17-19). One study found that the IFR in those aged 80 years and over was 8.29% (10.83% in men) compared to 0.001% in children aged 5–9 years and 0.79% in the overall population (17), while another found an IFR of 13.4% (18) and a third found an IFR of 15% in residents over 85 years old (19). IFRs among residents in LTCFs varied across countries, with some as high as 22.2% (17).

Given the magnitude of the impact of COVID-19 in LTCFs, WHO has issued a policy brief on preventing and managing COVID-19 across long-term care services (4), outlining ways to modify health and long-term care services so that the latter are readily integrated and provided as part of the continuum of care that includes health promotion, prevention, treatment,

rehabilitation and palliation, to ensure that people in need of long-term care can receive quality, equitable and sustainable care. The policy brief (4) identifies a number of actions to address these issues, including the need to:

- establish joint steering committees and information- and data-sharing systems between sectors and subnational policy levels to ensure a coordinated response;
- ensure effective monitoring and evaluation of the impact of COVID-19 on long-term care and ensure efficient information channelling between health and long-term care systems to optimize responses;
- establish a mechanism to support unregulated providers, focusing on cooperative support rather than punitive measures;
- establish a mechanism to plan, prioritize support for, and monitor implementation of measures to protect staff and people receiving long-term care from infection or spread of COVID-19;
- ensure integrated person-centred care pathways spanning the health and long-term care continuum to enable people with long-term care needs to receive comprehensive care.

General key principles for prevention and early detection of SARS-CoV-2

Available evidence shows that consistent and rigorous implementation of appropriate IPC policies and measures significantly reduces the risk of SARS-CoV-2 infection among both residents and staff in LTCFs (Box 1) (20).

Box 1. Evidence base on the prevention and control of infection in LTCFs

In April 2020 WHO commissioned a rapid review of prevention of COVID-19 in LTCFs (available in part in a scientific peer-reviewed publication by Rios et al. (20) and updated to 9 October 2020. The updated review included six observational studies (21-26) and 10 clinical guidelines (20, 27), and found that IPC measures in LTCFs should aim to prevent the introduction of SARS-CoV-2 into LTCFs and that, if the virus is introduced, immediate and comprehensive measures must be taken to control its spread.

Available data, though limited, from **observational studies** on the most effective interventions to prevent and control the spread of SARS-CoV-2 in LTCFs suggest that effective IPC strategies include the following.

- In areas of community transmission of SARS-CoV-2, regular testing of all residents and staff allows early detection and isolation of positive patients and staff (including asymptomatic and presymptomatic infected individuals) and their appropriate management, as well as prevention of an outbreak in the facility. A separate study found that testing of all residents and staff after a case is identified in the facility can identify 10–100 additional cases for each initial case diagnosed (28).
- Staff compartmentalization (organizing the work so that the team works in small groups in one area of the LTCF with no physical connection or mixing with other members of the team) and staff cohorting (assignment of staff to care separately for infected and uninfected residents) lowered the risk of SARS-CoV-2 cases in LTCFs.
- Providing paid sick leave for LTCF staff increased the rate of staff presenting for testing and isolating if they had symptoms of COVID-19, ultimately reducing the risk of transmission in the facility.
- Maintaining physical distancing of at least 1 metre, including at mealtimes, decreased the risk of transmission.
- Maintaining maximum communal room occupancy limits in facilities (with signage as reminders) was associated with lower prevalence of COVID-19 infection.
- Appropriate use of PPE during care of all infected residents, signage to remind HWs about droplet and contact precautions, and training and frequent audits to ensure proper mask use by HWs were associated with a statistically significantly lower prevalence of infection among residents and staff.
- Cleaning of communal areas less than twice daily was significantly associated with higher prevalence of SARS-CoV-2 infection among residents and staff.
- LTCFs that have bathrooms and sinks in the residents' rooms had significantly lower infection rates.

Additional findings from the observational studies included in the review were as follows.

- Employment of temporary staff significantly increased the risk of SARS-CoV-2 transmission in the LTCF and among HWs (23). Compared to facilities that never employ temporary staff, those employing temporary staff on most days had an almost twofold increase in the prevalence of COVID-19 infection among residents; were almost twice as likely to report a case of COVID-19 or a large outbreak; and had significantly higher prevalence of COVID-19 infection among the staff.
- Inability to isolate residents – for example, due to dementia – was associated with increased risk of SARS-CoV-2 infection in residents. The evidence review was inconclusive on the effectiveness of screening (temperature and symptom monitoring) of residents and staff as a strategy to reduce the risk of infection.

The most common recommendations identified in published **clinical practice guidelines** included in the rapid evidence review (20), in order of frequency of citation, are:

- establishing surveillance, monitoring and evaluation of symptoms among staff, caregivers and residents;
- use of appropriate PPE for staff, residents and visitors;
- physical distancing and isolation measures;
- isolating in single rooms (or cohorting) patients with confirmed or suspected COVID-19;
- applying routine or increased disinfection of surfaces in the facility;
- promoting and enforcing hand hygiene measures among staff, residents and visitors;
- promoting and enforcing respiratory hygiene measures among staff, residents and visitors;
- implementing staffing policies to promote and enforce mandatory sick leave for staff with symptoms or suspected COVID-19 and ensuring adequate compensation for staff on sick leave, as well as policies to restrict the movement of staff within or between facilities;
- ensuring appropriate communication between LTCFs and local/regional health authorities;
- educating staff, caregivers and residents on appropriate infection control, hand and respiratory hygiene;
- ensuring adequate supplies of PPE, medications and other medical equipment (e.g. for oxygen supplementation) to manage COVID-19 cases;
- consulting with and notifying relevant health professionals of positive COVID-19 cases;
- implementing policies restricting visitor hours or limiting to “essential” visitors only;
- mandating the use of droplet precautions (including appropriate PPE) when treating any patient with suspected or confirmed COVID-19;
- cohorting specific equipment to only be used with COVID-19 patients, and testing all symptomatic staff, caregivers and residents for COVID-19.

IPC programme and activities

The national IPC programme and COVID-19 response should consider supporting and strengthening IPC in LTCFs to be a high priority. LTCFs should have a facility-level IPC programme with a dedicated and trained team, with at least a trained IPC focal point with delegated responsibilities, supported by the senior management of the facility and the local health jurisdictions. Ideally, the team or focal point should be advised by a multidisciplinary committee on the strategic approach and action plan to ensure adequate IPC implementation. WHO recommendations for effective IPC programmes can be found [here](#) (29). Having an IPC focal point is recommended by WHO as a minimum requirement for IPC in all health care facilities, including LTCFs (30). Ensuring access to information and resources in the form of guidelines, guidance and procedures on the prevention and control of COVID-19, as well as access to appropriate equipment, will support staff and ensure that all facilities establish safe routines for care (11).

Adequate training for a number of critical target audiences should be provided and refreshed regularly;

- COVID-19 IPC training (31) should be provided to all those working in the LTCF, including employees, caregivers and other visiting professionals providing services to residents. This should encompass at a minimum:
 - an overview of COVID-19;
 - standard precautions, with particular emphasis on hand hygiene, respiratory etiquette and environmental cleaning and disinfection;
 - correct use of masks;
 - contact and other transmission-based precautions and COVID-19 outbreak management procedures, including how to put on and remove PPE correctly;
 - key principles of occupational health and safety.
- Repeated information sessions on COVID-19 should be provided for residents and their visitors to inform them about the virus, the disease it causes and how to protect themselves from infection. Information reinforcement and simplification are required, especially in view of high proportion of residents with cognitive impairment/dementia. Emphasis should be placed on using inclusive communication (for example, communication suited to sensory-impaired residents).

Through the work of the IPC focal point or team, at a minimum the following IPC standards should be ensured in LTCFs.

- Triage, early recognition and source control (isolating suspected and confirmed COVID-19 cases among both residents and employees) should be ensured.
- Adequate and well equipped areas for putting on and removing PPE should be available.
- IPC practices (such as hand hygiene compliance, donning and doffing practices) should be audited regularly, feedback provided to employees (both facility staff and visiting professionals) and strategies to achieve improvement implemented as needed.

- Particular emphasis should be given on hand hygiene and respiratory etiquette by:
 - ensuring adequate supplies of alcohol-based hand rub (ABHR) (containing at least 70% alcohol) and availability of soap and clean water, with hand hygiene stations placed at all entrances, exits and points of care;
 - encouraging hand washing with soap and water for a minimum of 40 seconds, or hand hygiene with ABHR for a minimum of 20 seconds (32);
 - requiring HWs to perform hand hygiene frequently, in particular according to the [WHO five moments](#), (33, 34) and at the beginning of the work day, before and after using the toilet, before and after preparing food and before eating (32, 35);
 - encouraging and supporting residents and visitors to perform hand hygiene frequently, in particular when hands are soiled, before and after touching other people (although this should be avoided as much as possible), after using the toilet, before eating and after coughing or sneezing;
 - ensuring adequate supplies of disposable tissues and appropriate waste disposal (in a bin with a lid);
 - posting reminders, posters and flyers around the facility, targeting employees, residents and visitors with information about regularly performing hand hygiene, physical distancing, mask use, sneezing or coughing into the elbow or using a tissue and disposing of it immediately in a bin with a lid, and how to put on and remove PPE appropriately.
- Adequate stocks of PPE and products for environmental cleaning should be supplied.
- High standards of cleaning and disinfection of the environment and equipment, waste management and sanitation should be maintained in the LTCF. Guidance on water, sanitation, laundry and waste management for COVID-19 is available (36).
- Residents and staff should be vaccinated for influenza (37-39) and COVID-19, and residents for *Streptococcus pneumoniae*, according to local policies.

LTCFs can undertake self-assessment to help identify, prioritize and address any gaps in IPC capacity when preparing for and managing their response to COVID-19 (40, 41).

The IPC focal point and those responsible for the prevention and management of COVID-19 in the LTCF should also ensure coordination with existing systems and services providing long-term care, in particular to provide:

- coordination with relevant authorities (e.g. Ministry of Health, Ministry of Social Welfare, Ministry of Social Justice, etc.) in charge of long-term care;
- activation of the local health and social care network to facilitate continuous care in support to LTCFs (clinic, acute care hospital, day care centre, volunteer group, etc.);
- additional support (resources, health care providers) if any older person in LTCFs is confirmed with COVID-19.

COVID-19 vaccination in LTCFs

WHO recommends that LTCFs should be a high priority for COVID-19 vaccine deployment, and clear plans should be made in advance (42). WHO and the United Nations Children's Fund (UNICEF) have published information to guide national governments in developing and updating their national deployment and vaccination plans for COVID-19 vaccines. The advice is that the initial high-priority targets for immunization should be HWs (including those working in LTCFs and the private sector), older people and those with underlying health conditions (42). Thus, timely communications and plans between LTCFs and the local health authorities to determine the logistics of how these vaccines will be deployed in their jurisdictions are of the utmost importance. Considerations should include communications with residents and next of kin, consent needs, storage, administration, disposable supplies, waste management, management of side-effects, maintaining data and ensuring timely provision of second doses.

It is important that anyone eligible for the COVID-19 vaccine receives all recommended doses at the recommended interval. It is also vital that staff, caregivers and residents continue to adhere to precautions to minimize the spread of infection while more data become available on the effectiveness of COVID-19 vaccines. Staff and residents should therefore continue to wear medical masks, maintain physical distancing and undertake frequent hand hygiene and follow other essential IPC precautions mentioned above. Where COVID-19 vaccination is being administered in LTCFs, hand hygiene with ABHR between vaccinations is recommended (35). Gloves do not need to be worn for vaccination.

Universal and targeted continuous masking

WHO has issued guidance on mask use in the context of COVID-19 (2), which includes scientific evidence to support the advice given. In areas of known or suspected community or cluster transmission of COVID-19, universal masking¹ is advised as follows.

- HWs and caregivers should wear a medical mask for any activity in care areas (COVID-19 or non-COVID-19 residents) or in any common areas (such as a cafeteria or staff rooms).
- Other professionals, visitors or service suppliers should wear a medical or non-medical mask for any activity or in any common area.
- Residents should wear a medical mask when physical distance of 1 metre cannot be maintained or when the resident is outside their room or care area within the facility.

Where there is known or suspected sporadic transmission of COVID-19, HWs and caregivers should wear a medical mask in all care areas (targeted continuous masking)² (2).

The WHO guidance on mask use (2) also sets out the harms and risks of universal masking and recognizes that the use of masks can cause communication difficulties, especially for

those who are deaf or have impaired hearing and rely on lip reading. Additionally, it notes that there might be disadvantages in mask wearing for individuals who are developmentally challenged, those with mental illnesses, with cognitive impairment decline or with asthma or other chronic respiratory illnesses where mask wearing has elicited severe breathing problems. Given the importance of wearing a mask by older people to protect themselves, however, in these categories of people a case-by-case assessment should be done, weighing adverse event risks and the protective effect of wearing a mask. In the context of difficulties with wearing a mask, face shields may be considered as an alternative, although it should be noted that they are inferior to masks with respect to prevention of droplet transmission (for protection or source control). If face shields are to be used, proper design to cover the sides of the face and below the chin should be ensured.

It is critical to ensure staff training and education for residents and visitors on appropriate mask wearing, including hand hygiene before putting it on and removing it, proper mask fitting and instructions about avoiding mask sharing and disposing of the mask.

More details on the use of masks are included in the WHO guidance on masks use in the context of COVID-19 (2) and videos can be found [here](#).

Physical distancing in the facility

Physical distancing of at least 1 metre between people should be instituted to reduce the risk of SARS-CoV-2 transmission. In the context of LTCFs, WHO advises the following measures.

- For group activities physical distancing should be ensured, with alternatives such as virtual/video activities (43). Where feasible, the same few people could be grouped together in all group activities. Such activities should also be undertaken outside as much as possible.
- Meals should be staggered to ensure that physical distance is maintained between residents. If this is not feasible, dining halls should be closed and residents served individual meals in their rooms.
- A minimum distance of at least 1 metre between residents should be enforced.
- Anyone in the LTCF should avoid touching (including shaking hands, hugging or kissing) unless touching is part of care. Touch can be very important to some residents for non-verbal communication, especially those with dementia or other complex conditions, depression or sensory impairment. When necessary, it should be done using adequate precautions (i.e. hand hygiene before and after touching, and use of gloves if needed as part of standard or droplet precautions) (44).

¹ Universal masking in health facilities is defined as the requirement for everyone (staff, patients, visitors, service providers and others) to wear a mask at all times except when eating or drinking.

² Targeted continuous medical mask use is defined as the practice of wearing a medical mask by all HWs and caregivers working in clinical areas during all routine activities throughout the entire shift.

Conversely, discontinuation of group activities was not reported as significantly associated with a decreasing risk of COVID-19 in LTCFs (22).

Note: these measures may have serious implications for residents' mental health and well-being, and should be implemented with caution (see below).

It should be noted that although no specific evidence is available, the WHO Global Network on Long-term Care emphasized the importance of promoting resilience to reconcile residents' personal preferences with risk management. If residents are forced into physical confinement and their movement is restricted for long periods, measures should be instigated to manage these risks and support safe forms of social interaction and events that they can look forward to. For example, residents making small gifts for each other and creating special occasions can contribute to renewal of mood and build resilience. Furthermore, opportunities for safer interaction between residents in outdoor spaces and gardens should be offered as much as possible, provided physical distancing and other IPC measures are adhered to.

Adequate ventilation

Adequate ventilation is important to reduce SARS-CoV-2 transmission. WHO provides guidance on ventilation requirements in health care facilities in the context of COVID-19 in the guidance on "IPC during health care when coronavirus disease (COVID-19) is suspected or confirmed" (1).

A well-designed, maintained, and operated system can reduce the risk of COVID-19 spread in indoor spaces by diluting the concentration of potentially infectious aerosols through ventilation with outside air and filtration and disinfection of recirculated air. Proper use of natural ventilation can provide the same benefits.

Residents' rooms and common areas should be well ventilated, with large quantities of fresh and clean outdoor air to control contaminants and odours. This can be achieved by using natural ventilation, by opening windows and doors to create airflow and exchange, if possible and safe to do so (45).

For mechanical systems, the percentage of outdoor air should be increased using economizer modes of heating, ventilation and air-conditioning (HVAC) operations, potentially to as high as 100%.

If HVAC systems are used, they should be inspected, maintained and cleaned regularly. Rigorous standards for installation and maintenance of ventilation systems are essential to ensure that they are effective and contribute to a safe environment (46).

Any decision on whether to use natural, hybrid (mixed-mode) or mechanical ventilation should take into account climate, including prevalent wind direction, floor plan, need, availability of resources and the cost of the ventilation system.

In particular in areas of the facility where COVID-19 cases are cared for, specific ventilation requirements are needed. When aerosol-generating procedures are not performed, adequate ventilation is considered to be 60 litres/second per patient (L/s/patient) for naturally-ventilated areas or 6 air changes per hour (ACH) (equivalent to 40 L/s/patient for a 4x2x3 m³ room) for mechanically-ventilated areas.

In rooms where aerosol-generating procedures are performed, specific requirements should be met. Health-care facilities using natural ventilation systems should ensure that contaminated air exhaust is piped directly outdoors, away from air-intake vents, clinical areas and people. The recommended average natural ventilation rate is 160 L/s/patient. In health-care facilities where a mechanical ventilation system is available, negative pressure should be created to control the direction of airflow. The ventilation rate should be 6–12 ACH (e.g. equivalent to 40–80 L/s/patient for a 4x2x3 m³ room), ideally 12 ACH for new constructions, with a recommended negative pressure differential of ≥ 2.5 Pa (0.01-inch water gauge) to ensure that air flows from the corridor into the patient room.

More details are included in the WHO guidance on IPC in health care (1).

Specific considerations for residents with dementia and/or those with cognitive decline

IPC activities may affect the mental and physical health and well-being of residents and staff – especially the use of PPE and restriction of visitors and group activities (47). Physical distancing and quarantine restrictions may reduce physical activity and potentially increase unhealthy lifestyles (48).

Changes to a resident's routine can increase their anxiety.

Social isolation can contribute to worsening of neuropsychiatric symptoms or lead to behavioural changes, with apathy, anxiety and agitation the most common symptoms (49).

People with dementia in particular may not fully understand the significance of, and need for, isolation or physical distancing. They may become more anxious, angry, stressed, agitated and withdrawn during the outbreak or while in isolation.

Non-pharmacological/psychosocial interventions are the recommended first-line treatment for behavioural and psychological symptoms in dementia (50), but these may be more difficult to realize in the context of implementation of COVID-19 IPC measures. Importantly, the use of certain psychotropic medications such as haloperidol and diazepam is associated with increased risk for stroke and mortality in people with dementia, and should therefore be avoided, as should the use of physical restraints for agitated residents (51).

Special attention should be paid to the evolution of residents' mental health conditions during the implementation of COVID-19 containment or mitigation measures, and referral and consultation with mental health specialists should be arranged as required and when available. Mental health of residents should be monitored, ideally, using simple screening tools to identify those at risk of serious mental health issues, or suicide. Staff should be aware that people with dementia or other cognitive decline may be less able to report symptoms because of communication difficulties, and should therefore be alert to the presence of signs and symptoms of COVID-19. This could include delirium, which people with dementia are more prone to suffer from if they develop an infection.

Visitors

In this document visitors to the LTCF refer to the following anyone who is not an employee or resident of the LTCF, including:

- family members or next of kin or person designated by the resident;
- those providing clinical services not provided by the LTCF (e.g. physiotherapy);
- those providing informal (possibly unpaid) care;
- those providing services for the well-being of residents (e.g. art therapy, musicians, hairdressing or religious services).

In the initial phases of the COVID-19 pandemic, most country policies and guidance –including the previous edition of this document – recommended avoiding or restricting visitors to LTCFs as much as possible. This was in consideration of the increased risk of SARS-CoV-2 infection, higher frequency of severe clinical presentation and serious complications, and higher mortality for older people.

It is generally recognized, however, that visits by family members or next of kin are essential for the well-being of residents, and contribute significantly to residents' care by providing social interaction, engagement and activities. Furthermore, lessons learned from guidance implementation and emerging evidence have shown that cessation of visiting has had a significantly negative impact on the well-being of both LTCF residents and their families, along with mental health consequences. In particular, where the resident has dementia, a lack of understanding of why the visits have stopped may generate additional distress. It is also acknowledged that compassion in health and well-being is central to the delivery of quality care, including in maintaining essential health services in the context of COVID-19. Finally, restricting visitors' access to LTCFs has also led to some important medical and social care activities being stopped.

Therefore, the IPC GDG unanimously agreed that criteria and considerations for a safe policy for visiting residents in LTCFs for personal, social or medical reasons should be identified and provided. The IPC GDG also unanimously agreed that if it is demonstrated that such a policy is implemented effectively, visitors can be allowed in LTCFs. As a necessary condition, any policy or standard operating procedure allowing visits to LTCF residents should build on

- continuous access to adequate PPE;
- adequate staffing available to support interaction between residents and visitors;
- a designated individual to educate and assist visitors on IPC precautions on an ongoing basis;
- a monitoring system in place to check on visitors' compliance with IPC precautions;
- access to COVID-19 vaccine where available.

Regarding surveillance, all visitors should be screened for signs and symptoms of acute respiratory infection or significant risk for COVID-19 (see below), and no one who presents as positive at this screening should be allowed to enter the premises. A record of all visitors allowed into the facility should be maintained.

In addition to the measures above, the following additional precautions are considered important.

- The LTCF should have an arrangement to enable booking/appointments for visitors: ad hoc visits should be avoided.
- Each resident should have a single constant visitor wherever possible.
- Face masks must be used throughout the visit, including around the LTCF building and grounds. This is especially important for visitors who are also caregivers. Additional PPE should be used if needed according to risk assessment.
- Physical distancing of a minimum of 1 metre (between visitors and residents, staff and visitors from other households) should be maintained at all times unless the resident is receiving care or physical or close contact is needed.
- The designated visiting space should be used by only one resident and visitor at a time, and should be subject to enhanced cleaning and disinfection between each visit.
- The visiting space must be well ventilated.
- Where there is a single access point to the space, the resident and visitor should enter the space at different times to ensure that safe distancing and seating arrangements can be maintained effectively.
- A screen or transparent plastic sheet may be used between the resident and visitor.
- Visits should happen in the open air wherever possible (recognizing that for many residents and

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_24150

