Caring for adults with COVID-19 in the home

Introduction

As NSW resumes services such as surgery, appropriate community management of people with COVID-19 will continue, which will contribute to preserving hospital capacity during the pandemic response.

People who have been risk stratified as having mild to moderate COVID-19 can be safely managed in the community. Virtual care models use telehealth, video consultation and remote monitoring devices to support the person to receive care in their home. Care can be provided by the person's GP, a COVID-19 specific service, community team or Hospital in the Home (HITH), preventing unnecessary presentation to hospital.

Purpose of this guideline

The purpose of this guideline is to support the implementation of clinical models for the management of COVID-19 positive adults in the community. It prescribes minimum standards of care based on current COVID-19 evidence and guidance on the ongoing utilisation and implementation of virtual COVID-19 healthcare delivered by NSW Health facilities.

This document should be read in partnership with policy documents addressing clinical care of people with COVID-19, virtual care and infection control:

- Communicable Disease Network of Australia (CDNA) Coronavirus Disease 2019 (COVID-19) National Guidelines for Public Health Units
- NSW Health Guidance for community-based and outpatient health services
- CEC Primary and Community Care Infection Prevention and Control information
- Detection of the deteriorating patient program
- Adult and Paediatric Hospital in the Home Guideline
- ACI telehealth resources
- Virtual Care Community of Practice resources.

Definitions for the purpose of this document

Self-management

At a broad level, self-management is defined as the day-to-day management by the individual of their condition over the course of their illness.

Virtual care or telehealth

Virtual care or telehealth refers to the clinical care that takes place via communications technology. Video and audio connectivity supports assessment, ongoing management and provision of clinical advice while the person and clinician are in separate locations.

Remote monitoring

The use of technology to collect and send medical and healthcare data to an app, device or service outside the traditional clinical setting. This includes:

- wearable devices
- mobile equipment and devices that include peripherals
- smartphone apps that are used to collect patient measures
- online portals used to enter personal health data.

Hospital in the Home (HITH)

Hospital in the Home services provide **hospital level care** in the person's own home as a substitution for hospitalisation. People are admitted and under the care of the admitting officer. They receive daily clinical care in the home as they would in the hospital from staff who have skills in acute care management.

Principles

The principles underpinning this guideline are:

- The person and their carer are at the forefront of all decisions.

- Due to the nature of this novel virus, elements of this document are based on the best evidence available and clinician experience with the virus to date.

- This guideline outlines the minimum standards for monitoring people with COVID-19 in the community as a guide. It does not address all elements of standard practice and is not a substitute for clinical judgement. In the absence of available evidence, these standards have been developed based on consensus through a consultation process with clinicians, communities of practice, NSW Health and pillar agencies.

- This guideline outlines the community-based care for people with COVID-19 when virtual care modalities have been determined to be appropriate.

- Models of care used in NSW for the surveillance and care of people with COVID-19 is dependent on local factors such as location, remoteness, resourcing, staffing mix, access to specialist advice and maturity of virtual care set up.

- Clinical governance arrangements, monitoring and escalation pathways, and arrangements for people with COVID-19 should be locally agreed and documented between all service providers, including general practices and primary health networks.

- Local policy and procedures in relation to clinical care, medication safety, clinical handover, clinical deterioration and advanced care directives underpin this document.

- Effective partnerships between general practice and local health districts ensure safety, continuity of care, integration and quality health outcomes. GPs typically hold the most comprehensive health record and this shared information provides a strong foundation for continuity of care.

- Virtual care teams, Hospital in the Home and community nursing may be separate services or delivered under a broader ambulatory umbrella, which shares clinicians across different service modalities.

- This is a living document that will be updated as more evidence about management of people with COVID-19 in Australia and elsewhere becomes available.

Methodology

The main sources of information were the National COVID-19 Clinical Evidence Taskforce and Oxford COVID-19 Evidence Service site for clinical criteria.[1,2]

A Google search was conducted on 5 May 2020 using the following search terms:

- telehealth
- virtual care
- remote assessment
- in home monitoring
- deteriorating patients with COVID
- respiratory assessment
- acute respiratory distress syndrome
- home visiting
- COVID assessment.

Australian and NSW Government sites were used to source relevant policies that support the document.

A working group consisting of policy, clinical, patient safety and quality and telehealth experts supported the development of the document.

Expert advice was also sought from RPA Virtual Hospital,[3,4] Sydney LHD, the Ministry of Health Prevention and Response to Violence Abuse and Neglect (PARVAN) Unit and Aged Care Unit (Health and Social Policy Branch), Hospital in the Home (HITH), ambulatory care, mental health services and emergency care specialists, and the Executive of the Virtual Care Community of Practice.

Consultation on the draft guideline was sought from the Clinical Excellence Commission, Primary Care, Community Health, Emergency Care, Virtual Care, and Respiratory Communities of Practice.

Managing adults with COVID-19 in the home

NSW has adopted the use of virtual care models to provide monitoring of people who are COVID-19 positive and clinically safe to be managed in the community.

The Australian guidelines developed by the National COVID-19 Clinical Evidence Taskforce states, 'People infected with the COVID-19 virus are most likely to only experience mild symptoms and recover without requiring special treatment. However, some people will experience moderate or severe disease. Older people and those with underlying diseases or medical conditions (such as cardiovascular disease, diabetes, chronic respiratory disease and cancer) are more likely to develop serious illness that require special care and treatment.[5]

Residential aged care is considered to be the resident's home and is in scope of this document. People living in residential aged care facilities are vulnerable to severe COVID-19 infections and have a higher risk of mortality.[6]

When treating people with COVID-19 in place in residential aged care, the resident's wishes (advance care directive), availability of control measures and the wellbeing of other residents must all be taken into account. Decisions in regard to care in place should be made on a case-by-case basis by the individual with capacity, or the person responsible, and the treating team (including the GP).

For additional information, refer to to the NSW Health Guidance for **Residential Aged Care Facilities** and the **Aged Care Community of Practice page**.

Where a person with COVID-19 is identified as being at the end of life, and they (or the person responsible) have expressed a wish for no further life extending procedures, palliation should be supported in place, where possible.

Palliative care is not detailed in this document and further information and guidance can be found on the NSW Health web page for **palliation in the community**.

Paediatric populations are not within scope of this document.

Disease severity

As COVID-19 spreads across the globe, more information is being gathered regarding how the infection presents and what type of course it may run. The anecdotal evidence to date indicates the clinical course is highly variable. Some people spontaneously improve and other people deteriorate. The deterioration can progress within a few days or weeks, rather than a stepwise deterioration from the time of presentation.[7]

Therefore people with suspected or confirmed COVID-19 should be assessed for:

- features of severe disease
- risk factors for progression to severe disease.

This will assist to determine whether a person can be managed in the community or if they will require referral and admission to a facility for acute inpatient care or critical care.[8]

The National COVID-19 Clinical Evidence Taskforce recommends that people with likely or confirmed COVID-19 be managed out of hospital, where possible.[1] However, people with moderate illness or with risk factors for progressive disease will require careful monitoring and early referral to hospital for any signs of clinical deterioration.

Those at high risk for severe illness from COVID-19 are:

- Aboriginal people 50 years and older with one or more chronic medical condition
- People 65 years and older with chronic medical conditions
  - chronic renal failure
  - coronary heart disease
  - congestive cardiac failure
  - chronic lung disease such as severe asthma, cystic fibrosis, bronchiectasis, suppurative lung disease, chronic obstructive pulmonary disease or chronic emphysema
  - poorly controlled diabetes
  - poorly controlled hypertension.
- People 70 years and older

- People with compromised immune systems
  - due to haematologic neoplasms such as leukemias, lymphomas and myelodysplastic syndromes
  - post-transplant, if they had a solid organ transplant and are on immunosuppressive therapy
  - post-transplant, if they had a haematopoietic stem cell transplant in the last 24 months or are on treatment for graft versus host disease (GVHD)
  - by primary or acquired immunodeficiency including HIV infection
  - by having chemotherapy or radiotherapy.

- Medical treatments that put people at greater risk

  There is increased risk for people who take any biological disease-modifying anti-rheumatic drug (bDMARD) or any of the following immunosuppressive drugs:
  - azathioprine, more than 3mg/kg per day
  - 6–mercaptopurine, more than 1.5mg/kg per day
  - methotrexate, more than 0.4mg/kg per week
  - high-dose corticosteroids (20mg or more of prednisone per day or equivalent) for 14 days or more
  - tacrolimus
- cyclosporine
- cyclophosphamide
- mycophenolate
- any combination of these or other DMARDs.[8]

Table 1. Definition of disease severity[5]

Mild illness	No clinical features suggesting of moderate or severe disease or a complicated course of illness. Characteristics: - no symptoms - mild upper respiratory tract symptoms, or - cough, new myalgia or asthenia without new shortness of breath or a reduction in oxygen saturation.
Moderate illness	Stable, presenting with respiratory and/or systemic symptoms or signs. The person is able to maintain oxygen saturation above 92% (or above 90% for people with chronic lung disease) with up to 4L/min oxygen via nasal prongs. Characteristics: - prostration, severe myalagia fever >38°C or persistent cough - clinical or radiological signs of lung involvement - no clinical or laboratory indicators of clinical severity or respiratory impairment.
Severe illness	If the person meets any of the following criteria: - respiratory rate ≥30 breaths/min - oxygen saturation ≤92% at a rest state - arterial partial pressure of oxygen (PaO_2)/inspired oxygen fraction (FiO_2) ≤300.
Critical illness	If the person meets any of the following criteria: **Respiratory failure** - occurrence of severe respiratory failure (PaO_2 and FiO_2 ratio <200), respiratory distress or acute respiratory distress syndrome (ARDS). This includes deterioration despite advanced forms of respiratory support (NIV, HFNO), or - requiring mechanical ventilation. **Or other signs of significant deterioration** - hypotension or shock - impairment of consciousness - other organ failure.

Table 2. Clinical risk rating based on disease severity, symptoms and risk factors[3]

Risk rating	Disease severity	Symptoms	High risk factors*	Model of care
Low	Mild	No symptoms or mild upper respiratory tract symptoms	Nil	**Self-monitoring and clinical contact** day 5-10 after symptom onset
Medium	Mild	No symptoms or mild upper respiratory tract symptoms but a high level anxiety regarding disease	Nil	**Virtual care** and remote monitoring
Medium	Mild	No symptoms or mild upper respiratory tract symptoms	Present	**Virtual care** and remote monitoring
High	Moderate	Stable adult patient presenting with respiratory and/or systemic symptoms or signs	Nil	**Hospital in the Home or hospital**
High	Moderate	Respiratory and/or systemic symptoms or signs	Nil or present	**Hospital in the Home or hospital**

* **High risk factors:**
- Aboriginal people 50 years and older with one or more chronic condition
- 65 years and older with chronic conditions
- 70 years and older
- Comprised immune system
- Medical treatments (bDMARD) or immunosuppressants

Notification process for people confirmed as COVID-19 positive

COVID-19 is a notifiable disease and positive cases are notified to the local public health unit (PHU) based on the person's usual place of residence. On receipt of notification of a positive case, PHUs carry out a number of actions aimed at:

- providing advice to the person regarding isolation
- identifying and following up with the person's close contacts and providing advice regarding the need to isolate
- identifying the likely source of infection.

PHUs are responsible for arranging ongoing clinical and welfare support. This may be provided by the person's general practitioner or a local health district (LHD) service, such as a COVID-19 team, a community team or Hospital in the Home, which will:

- assess clinical status and need for further clinical review
- assess compliance with isolation and infection control requirements
- identify welfare needs.

Identified issues will be managed within the LHD as per local arrangements.

Shared care by an interdisciplinary team

The team that is responsible for the care of a person with COVID-19 will vary according to disease severity, local resourcing and service models.

Health services should collaborate and consult with the person's nominated GP or practice staff, such as practice nurses. There should be an agreed position on medico-legal and governance issues, such as who has responsibility for the transfer of care, who takes the lead, who the person should contact at signs of deterioration and how escalation of care will be managed. These arrangements will vary in each LHD.

Managing the course of a person's illness with COVID-19 may also include specialist involvement from services such as pharmacy, mental health, psychology and other allied health services, infectious diseases, aged care, palliative care, intensive care and respiratory medicine.

A collaborative approach will ensure the delivery of safe, efficient and integrated healthcare.

Assessment of appropriateness for home-based virtual care and remote monitoring

A healthcare professional should assess whether the home setting is appropriate for care.

Considerations for care at home include whether:

- The person consents to receiving care and isolating at home during the period required.
- The person is stable enough to receive care at home.
- There is an absence of significant risk factors.
- Appropriate caregivers are available at home.
- The person and their caregivers have the capacity to recognise signs of deterioration (as explained to them) and escalate care.
- There is a separate bedroom where the person can recover without sharing immediate space with others.
- Resources for access to food and other necessities are available.
- Others at higher risk (refer to risk factors) of illness live in the household.
- Proximity to a facility with an intensive care unit.
- In the absence of an advance care directive, the risk of delirium associated with hospitalisation should be balanced against the risk of remaining in place.

- The person and other household members have access to appropriate, recommended personal protective equipment (at a minimum, gloves and face masks) and are capable of adhering to precautions recommended as part of home care or isolation (e.g. respiratory hygiene and cough etiquette, hand hygiene).[10]

The following additional factors should be considered when deciding whether a person in a residential aged care facility receives care in place.

- The person's advance care directive or their known wishes.
- Whether hospital admission will add value to the care that can be delivered, particularly for palliative residents.
- The RACF setting and ability to separate or cohort residents with suspected or confirmed COVID-19.

Decisions in regard to care in place should be made on a case-by-case basis by the individual with capacity, the person responsible and the treating team (including their normal GP).

Considerations for virtual care

Availability of reliable communication, including devices such as a telephone, tablet, or computer, as well as internet connectivity and data.

The person and their carer have adequate health literacy, communication and language skills. Virtual care requires the person or their carer to be able to describe or report symptoms and use remote monitoring devices where they are available.

A person's capacity to participate may be impacted by physical or intellectual disability or low level of English language proficiency.

For example, a video consultation may be inappropriate for people with vision or hearing impairments without additional modified equipment and platforms, or for people from culturally and linguistically diverse (CALD) backgrounds who have low levels of English proficiency and where regular interpreter services are difficult to secure.

Exclusion criteria for consideration

- Features of severe disease and risk factors for progression to severe disease.

- Household members who may be at increased risk of complications from COVID-19 infection, for example, older people and people with severe chronic health conditions such as heart disease, lung disease and diabetes.

- Domestic and family violence has been disclosed or identified by a health clinician.

- The person lives a significant distance from a hospital (one hour from hospital).

- The person lives alone with no local supports.

In these circumstances, alternative accommodation should be considered, such as a medi-hotel or care in hospital as clinically appropriate.

Hospital admission

The National COVID-19 Clinical Evidence Taskforce's guideline, *Caring for people with COVID-19,* recommends hospital admission 'for people with likely or confirmed COVID-19 if they are haemodynamically unstable, hypoxaemic (SaO_2 on room air ≤92%)' or have comorbidities.[1]

The person's advance care directive should be considered prior to any decision to transfer the person to a hospital facility.

Caring for people using home-based virtual care and remote monitoring

Virtual care models and technology have significant potential to minimise a person's exposure to COVID-19 and ease demand on hospitals by enabling remote assessment, monitoring and care.

While people in the mild-moderate disease severity are appropriate for virtual care in their homes, clinicians must be mindful that due to the variable disease trajectory, frequent and thorough clinical monitoring is required to detect any clinical deterioration.

Initial clinical assessment

Assessment is recommended to determine the person's disease severity and suitability for care in the home environment. Depending on the clinical model, this assessment may occur in the emergency department, face-to-face in the person's home or via virtual care. If virtual care is being used, this assessment is preferably conducted via videoconference to allow for visual assessment of the person and their home environment.

The assessment should include:

- suitability for home-based care as described above
- medical history
- current medications
- allergies
- smoking history
- onset of symptoms.

The healthcare record should note that the person has received information about their care in the home, requirements for isolation and consents to treatment by the designated health services.

Violence, abuse and neglect risks and vulnerabilities

Media coverage on the impact of COVID-19 has identified concerns around the increased risks to people experiencing, or at risk of, violence, abuse and neglect. For example, reports from China have highlighted that during COVID-19 and self-isolation, there was increased incidence of domestic violence and increased neglect of children and vulnerable people. This is consistent with evidence that shows the risk and impacts of violence, abuse and neglect increase during and after natural and other disasters as usual routines and supports are disrupted.[11]

The mental health implications of living through natural and other disasters can be cumulative and can intensify existing experiences of trauma. The complex coping responses to violence, abuse and childhood neglect, such as alcohol and other drug use, or the impacts on existing mental health issues, may increase during times of natural and other disasters, requiring enhanced healthcare.

There are additional risks relating to provision of telehealth (virtual care) services to people who are experiencing, or at risk of violence, abuse and neglect. Therefore, screening questions regarding violence, abuse and neglect via telehealth is not recommended because privacy cannot always be established. However, where violence, abuse or neglect is disclosed, or practitioners identify concerns and suspicions, they need to respond in accordance with NSW Health and relevant district guidance.

For more information please refer to the [NSW Health Violence, abuse and neglect COVID-19](#) advice.

Daily assessment

Regular measurement and documentation of physiological observations is essential when assessing a person. It allows for early identification of clinical deterioration, optimised supportive care, and safe, rapid admission to a hospital facility. The frequency of observations should be consistent with the clinical situation.

Virtual home monitoring is delivered via telephone, video and with the use of remote monitoring devices. Video consultation with the person using monitoring devices is the most sophisticated form of virtual care. However, the modality of care will depend on each district or clinical or primary care service and the availability of hardware, monitoring devices and connectivity.

Frequency of daily assessment

The following tables suggest the minimum monitoring requirements for each clinical risk. However, a person's individual characteristics and circumstance should be considered when developing a schedule that meets their preferences, needs and ability to self-manage, while also ensuring that any deterioration is escalated in a timely manner.

Table 3. Minimum frequency of clinical assessment and monitoring

Risk rating	Frequency of clinician assessment and clinical observations	Frequency of medical review
Low	Once a day from days 5-10 after onset of symptoms	At the point of any changes in symptoms or deterioration as escalated by nursing staff or the person
Medium	2 times per day Recommend using videoconference at least once per day for visual assessment	At the point of any changes in symptoms or deterioration as escalated by nursing staff or the person
High	2-4 times per day, depending on the person or carer's ability to self-escalate Recommend using videoconference at least once a day for visual assessment	Once per day At the point of any changes in symptoms or deterioration as escalated by nursing staff or the person

The clinical team should establish and document a schedule of monitoring with the person, their carer and the extended clinical team. The schedule should ensure the person receives sufficient monitoring to detect any deterioration, but the frequency of monitoring should not overwhelm them.

The minimum frequency of clinical assessment and monitoring is prescribed in the Table 3.

Daily contact must continue though the isolation period. If the person is uncontactable, refer to section 9.3 of the [Adult and Paediatric Hospital in the Home Guideline](#).

If a breach of isolation is disclosed during contact with the person, this must be escalated to the local PHU.

Daily assessment method

1. Monitoring of symptoms

Monitoring of symptoms can occur via telehealth (phone or video) or via a smartphone app for COVID-19 symptom tracking

Specific questions should be asked regarding:

- the presence of any of the symptoms listed below
- any changes in current symptoms
- the development of new symptoms.

Respiratory symptoms – breathing and shortness of breath

- How is your breathing today?
- Are you so breathless that you are unable to speak more than a few words?
- Are you breathing harder or faster than normal when doing nothing at all?
- Are you so ill that you have stopped doing all of your usual daily activities i.e. showering, getting dressed?
- Is your breathing faster, slower, or the same as normal?
- What could you do yesterday that you can't do today?
- What makes you breathless now that didn't make you breathless yesterday?[11]

Interpret any reported breathlessness in the context of the wider history and physical signs.

Other symptoms

- Fever or chills
- Cough
- Sputum
- Severe fatigue
- Headache
- Muscle aches
- Coughing up blood
- Other symptoms such as headache, tiredness, muscle pain, runny nose, loss of sense of taste or smell, diarrhoea, nausea, vomiting or loss of appetite).

If symptoms do worsen, this is most likely to occur in the second or third week of illness.[1]

2. Virtual A–G

The A–G method provides a systematic and structured assessment approach. This version is modified specifically for virtual monitoring of community-based people with COVID-19.

The frequency of the A–G assessment will be dependent on the person's clinical presentation, disease severity and risk rating.

Assessment questions should be modified depending on the type of remote monitoring devices available and in use. For example, if Bluetooth remote monitoring provides automatic results of temperature, do not ask the person to provide this information again. The virtual A–G requires a level of clinical judgement from the clinician, who should be informed by the outcome of the assessment of symptoms. Any change or worsening symptoms should be further assessed with the A–G.

3. Mental health screening

Discussions and concerns around the coronavirus outbreak and practising self-isolation can be stressful and impact on the individual's mental health and wellbeing. People having to self-isolate may struggle with the unpredictable nature of the illness and its impact on the length of time having to isolate. People may feel a range of emotions, such as stress, worry, anxiety, boredom, or low mood. People who have not previously experienced a mental health problem can also be susceptible during a pandemic or other disaster.

Table 4. A-G method for virtual monitoring of community-based people with COVID-19

Airway	Airway patency.
	Appearance - sitting, lying in bed, state of dress.
	People in respiratory distress may voluntarily sit up or lean over by resting arms on their legs to enhance lung expansion.[12]
Breathing	**Look** for the general signs of respiratory distress, such as sweating, the effort needed to breathe, abdominal breathing and central cyanosis.[13]
	Count the person's respiratory rate. The normal respiratory rate in adults is between 12–20 breaths per minute.[14] The respiratory rate should be measured by counting the number of breaths a person takes over one minute by observing the rise and fall of the chest. A high respiratory rate is a marker of illness or an early warning sign that the person may be deteriorating.
	Assess the depth of each breath the person takes, the rhythm of breathing and whether chest movement is equal on both sides, ease and comfort when talking, breathlessness, ability to finish sentences, flaring of nostrils or pursed lips.
	Measure the person's peripheral oxygen saturation using **pulse oximetry**.
	Escalate care immediately if oxygen saturation is below 92% (or below 90% for people with chronic lung disease).
	There is no evidence that attempts to measure a person's respiratory rate over the phone will give an accurate reading and experts do not use such tests. However, it is possible to measure respiratory rate via a good video connection. Video may allow a more detailed assessment and prevent the need for an in-person visit.[15]
Circulation	Skin tone – flushing, pallor, cyanosis. Visual assessment via video link is preferred.
Disability (neurological)	Speech not slurred.
	Orientated to time, place and person.
	Ask: What is the time and day today?
	Early signs of hypoxia are anxiety, confusion and restlessness.[12]
Exposure	Person's temperature.
	Night sweats, feeling feverish or chills.
Fluids	Fluid intake and urine output.
	Ask: Are you urinating as frequently as usual, less frequently as usual, or much less frequently than usual?
Glucose	Normal food intake?
	If diabetic, record of blood sugar level.

Adapted from RPA Virtual Hospital, SLHD.[4]

For people with pre-existing mental health conditions, a pandemic can further heighten their anxious thoughts and compulsive behaviours. Previously managed symptoms can escalate, requiring additional care beyond what was sufficient pre-crisis. Disrupted support systems and social isolation can leave people with mental health conditions, especially those vulnerable to acute stress reactions.

Healthcare staff will need to consider how to link people with services relevant to their presentation. It is important to ensure that people receiving care from a mental health professional are engaged with their care provider.

Following initial assessment, daily mental health review is recommended for all people in isolation where a risk is indicated (see below).

For people in residential aged care facilities (RACF) ask questions 1–2.

Frequently, suicidal behaviours are symptoms of underlying mental health problems or disorders. Therefore, a suicide risk assessment cannot be undertaken in isolation from an overall mental health assessment.

Table 5. Mental wellbeing screening

1. How are you coping with your isolation?	
2. Are you feeling anxious or worried?	No – no further questioning required. **Yes** – go to Q3.
3. How are you managing your anxiety and worries?	
4. Do you think you need any extra support to manage?	No – no further questioning required. **Yes** – depending on level of distress, consider referring them to the Coronavirus Mental Wellbeing Support Service on 1800 512 348. **If level of distress is significant, go to Q5.**
5. Do you have a history of mental health problems?	**Yes** – go to Q6.
6. Are you experiencing any symptoms of your mental health problems?	**Yes** – go to Q7.
7. Are you currently seeing a mental health professional?	
8. Are you having any thoughts of harming yourself?	No – The clinician should have a plan with the person including: • strategies for them to manage their distress and safety until next contact with the health professional • details of their carer or other third party who can provide support or consultation if required • contact details of emergency services and a mental health professional. **Yes** – go to Q10.
10. Have things been so bad lately that you have thought you would rather not be here?	**Yes – indicates warm transfer to the 1800 011 511 Mental Health Line**.

Adapted from RPA Virtual Hospital, SLHD.[4]

Ask the following questions to inform handover to the Mental Health Line.

1. Have you ever thought about harming or killing yourself?
2. Do you have a plan for what you might do? (Check if the people has access to the intended means.)
3. Have you taken any actions outlined in the plan?
4. Do you have access to a firearm? Any such disclosure requires mandatory notification to police.

Some suicidal people may also have thoughts of harming others, e.g. their children or partner. Ask the following questions.

Harm to others screening questions

1. Are you having thoughts of harming others?
2. Who are you are thinking if harming?
3. Is the person living with you?

If there is an immediate risk, ring 000. Activate NSW Ambulance and/or NSW Police Force to take the person to hospital for a comprehensive mental health assessment.

If you have concerns about the person's safety, or evidence of an acute mental illness or other disorder, immediately warm transfer them to the 1800 011 511 Mental Health Line (MHL) and handover using ISBAR guidelines. The MHL is also available for advice around the person or their assessment, or means of transporting a person to hospital. For some people it may be safe for their carers to bring them to the hospital or community mental health service.

[Head to health](#) is a useful mental health resource.

Health literacy considerations

Health literacy is about how well people can access, understand and apply information about health and healthcare, and make decisions about their health. People with lower health literacy skills may experience difficulty understanding their condition, treatment options and care choices. They are more likely to have an adverse health outcome than someone who has higher health literacy.

All people with COVID-19 and those living with them need to understand the associated symptoms, infection control practices, and how to escalate care if they notice any changes in symptoms or condition between assessments from the health team.

Teach-back is a best practice communication method for addressing health literacy and can be used with people to reduce misunderstandings. The method confirms the person understands what they have been told using their own words. The health professional gives information and then asks the person to respond and confirm their understanding before adding any new information.

Written and visual material, including pamphlets, diagrams and models, can reinforce the teaching points and appeal to different learning styles (auditory, visual and tactile learners). The Health Care Interpreter Service and multilingual medication information leaflets should be used for culturally and linguistically diverse people.

Resources for consumers and carers

People with COVID-19 and their carers require information and education specifically about:

- home isolation guidance
- signs of deterioration and how to escalate care in between contacts with the health service
- how to use any remote monitoring devices, troubleshooting and how to record and report results if not automatically uploaded.

COVID-19 resources for consumers and carers:

- [COVID-19 symptoms, spread and home isolation guidance](#)
- [COVID-19 Frequently Asked Questions](#)
- [Hygiene at home](#)
- [Information for carers](#).

Models of care

1. Self-monitoring and clinical contact

Self-management refers to the ability of the individual, in conjunction with family and primary care, to manage symptoms of COVID-19.

Mode of management	Self-monitoring and clinical contact
Clinical risk	**Low**
Disease Severity	- Mild illness - No presenting clinical features suggesting a complicated course illness - No symptoms or mild upper respiratory tract symptoms or cough, new myalgia or asthenia without new shortness of breath or a reduction in oxygen saturation - Stable clinical picture
Assessment	Refer to assessment for suspected COVID-19 (Appendix 1)
Criteria for self-management	- Able to monitor their condition, or have a carer who can - Able to self-isolate - Aware of criteria for when they should consult with their GP or the COVID-19 service - Knows how to escalate any concerns
Schedule of care	- Person assessed as suitable for self-management, counselled and educated at time of confirmation of COVID-19 positive status - Self-management until day 4 after onset of symptoms. From day 5, provide daily contact for assessment of any changes or new symptoms, and monitoring of mental wellbeing. - From day 11, self-management until discharge if the person is well - If the person's condition changes, clinical risk category escalates to moderate risk - Management of symptoms with paracetamol - Maintain hydration
Clinical governance	Person's usual GP in conjunction with public health unit or COVID-19 service
Signs of deterioration	New or worsening symptoms - especially breathing difficulties
Escalation of care	Onset of any new or worsening symptoms, the person to contact their GP during working hours or the COVID-19 service after hours, or as locally agreed Call 000 for presentation to emergency department (state COVID-19 status) if the following symptoms experienced: - symptoms or signs of pneumonia - shortness of breath or difficulty breathing - blue lips or face - pain or pressure in the chest - cold, clammy or pale and mottled skin - new confusion or fainting - becoming difficult to rouse - little or no urine output - coughing up blood

2. Virtual care and remote monitoring

Virtual care (teleconference or videoconferencing) and remote monitoring devices or platforms can be used to monitor a person's symptoms and identify changes in symptoms or health status for escalation of care.

Guiding principles for virtual home monitoring

1. Clinicians determine the most appropriate modality to support the clinical needs of the person.

2. Concerns for people at risk of deterioration are escalated via an agreed documented process.

3. Vital sign measures are measured intermittently.

4. Biometric devices such as an oximeter is provided, depending on clinical needs and availability of devices.

5. Devices are automated and have limitations compared to direct manual measurements performed by a skilled health professional. If there are concerns over technological or measurement inaccuracy, arrange for a face-to-face assessment.

6. The person or their carers are trained to self-measure at home at intermittent intervals suggested by their healthcare team.

7. Telehealth modalities of telephone and videoconference to audio-visually connect with the person are dependent on the level of care and equipment available. This will vary. Where possible, undertake initial screening, and training with the person in the use of devices and assessment by video. Video is preferred as it provides additional visual cues and therapeutic presence and may prevent the need for an in-person visit.

Adapted from WNSW Remote Monitoring Scope Summary 2020.[16]

Mode of management	Virtual care and remote monitoring (non–admitted care)
Clinical risk	**Medium**
Disease Severity	• Mild illness • Not presenting clinical features suggesting a complicated course illness • No symptoms or mild upper respiratory tract symptoms or cough, new myalgia or asthenia without new shortness of breath or a reduction in oxygen saturation • Stable clinical picture
Assessment	• COVID-19 medical officer (e.g. HITH doctor, relevant physician) • Refer to assessment for suspected COVID-19 (Appendix 1)
Criteria for self-management	• Able to monitor their condition • Aware of criteria for when they should consult with their GP • Know how to escalate any concerns • Do not require home oxygen (unless already on this pre-morbidly)
Schedule of care	Person assessed as suitable for virtual home monitoring, counselled and educated at time of confirmation of COVID-19 positive status Team-based care with nursing observation and medically led assessment, where required 2 x daily clinical phone or video call Telephone or videoconference wellness checks including: • symptom questionnaire (e.g. via app, telephone or videoconference) • A-G assessment, including temperature and oximetry (either self-measured and reported or technology assisted) • monitoring of mental health wellbeing
Clinical governance	• LHD led with a COVID-19 medical officer taking primary responsibility of the person
Signs of deterioration	• Symptoms, signs of pneumonia • Severe shortness of breath or difficulty breathing • Blue lips or face • Pain or pressure in the chest • Cold, clammy or pale and mottled skin • New confusion or fainting • Becoming difficult to rouse • Little or no urine output • Coughing up blood
Escalation of care	• On call hospital-based COVID-19 response team • After hours, call 000 for ambulance to hospital

3. Hospital in the Home or hospital

Hospital in the Home is admitted hospital level care in the person's home as a substitution of inpatient hospital care. The person is an admitted patient of the LHD. If the service is not available, the person would be in hospital.

Clinical model	Hospital in the Home or hospital (admitted care)
Clinical risk	**High**
Disease Severity	Moderate
Assessment	Meet moderate severity criteria: • prostration, severe asthenia, fever >38°C or persistent cough • clinical or radiological signs of lung involvement • no clinical or laboratory indicators of clinical severity or respiratory impairment • discharged from ICU, hospital ward or ED and still COVID-19 positive or unwell and requires oxygen • may include stable people with low level oxygen (<3L/min to maintain SpO_2 >92% or SpO_2 88-92% for people with chronic lung disease) Have a carer at home Able to escalate any concerns The person's preference to be treated at home or remain as a resident of a residential aged care facility
Criteria for self-management	• COVID-19 medical officer (e.g. HITH doctor, relevant physician) • Refer to assessment for suspected COVID-19 (Appendix 1)
Schedule of care	Person assessed as suitable for HITH, counselled and educated at time of confirmation of COVID-19 positive status or on transfer from hospital 2-4 x daily clinical phone or video call Telephone or videoconference wellness checks including: • symptom questionnaire (via app, telephone or videoconference) • A-G assessment including temperature and oximetry (either self-measured and reported or technology assisted) • monitoring of mental health wellbeing **Anticoagulants** • Prophylactic doses of anticoagulants. For dosing, refer to the [Australian guidelines for the clinical care of people with COVID-19](#). Virtual medical review by designated COVID-19 physician as required For further clinical management information, refer to the National COVID-19 Clinical Evidence Taskforce - [Management of Adults With Moderate to Severe COVID-19](#).
Clinical governance	• LHD led with a HITH medical officer or COVID-19 medical officer taking primary responsibility of the person
Signs of deterioration	• Symptoms signs of pneumonia • Severe shortness of breath or difficulty breathing • Blue lips or face • Pain or pressure in the chest • Cold, clammy or pale and mottled skin • New confusion or fainting • Becoming difficult to rouse • Little or no urine output • Coughing up blood
Escalation of care	• On call hospital-based COVID-19 response team • After hours, call 000 for ambulance to hospital

Transfer of care

Where the person is cared for by the local health district, formal arrangements for transfer of clinical care back to the GP should be made by the COVID-19 medical team. A formal transfer of care should be given to the GP, including a summary of the person's episode of care and follow up advice.

The Communicable Diseases Network Australia (CDNA) National Guidelines for Public Health Units details the circumstances under which confirmed and probable cases can be released from isolation.

Reporting

For accurate weighting and funding, the level of care delivered to people with COVID-19 should be reflected in the way they are reported. People with COVID-19 managed in the community will either be admitted or non-admitted depending on their disease severity and risk rating.

People receiving hospital level care as hospital substitution, i.e. if the clinical service was not offered in the home the person would be in hospital, should be reported in the Admitted Patient Data Collection as a Bed Type 25 patient. Some districts have established COVID-19 specific virtual wards.

People with a mild disease rating who receive less intense clinical monitoring should be reported in the Non–Admitted Patient Data Collection.

Post discharge specific ICD-10 codes will identify people as positive, suspected or negative COVID-19 status.

Documentation

It is a clinical requirement that all clinical activity, including telehealth consultations, is documented in the person's medical record, regardless of the modality of care. This should also include details of all participants providing advice or participating in a telephone or video consultation.

Documentation timelines and follow up for telehealth consults are consistent with existing clinical processes for face-to-face consultations and should be documented in the person's eMR (electronic medical record).

If a person's observations are not automatically updated in the eMR, services must consider how this information is collected and stored.

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Appendix 1: Virtual home monitoring of people with COVID-19 with mild to moderate disease

SETTING OF CARE HOME

Virtual home monitoring

People with mild to moderate COVID-19 disease who meet inclusion/exclusion criteria can be managed in the community with virtual monitoring.

Low risk

Self-management and clinical contact once a day from days 5-10 from onset of symptoms.

Medium risk/mild disease - x2 daily assessment

Telephone or videoconference wellness checks including:

- symptom questionnaire (via app, telephone, videoconference)
- A-G assessment including temperature and oximetry
- monitoring of mental health wellbeing.

High risk/moderate disease – more than x2 daily assessment (HITH level care)

Telephone or videoconference wellness checks including:

- symptom questionnaire (via app, telephone, videoconference)
- A-G assessment including temperature and oximetry
- monitoring of mental health wellbeing.

Baseline assessment

- Risk appropriateness for virtual home monitoring
- Check status of nasopharyngeal swab results
- Perform CXR and baseline bloods if clinically indicated.

Definition of disease severity (inclusion criteria)

Mild disease

- No clinical features suggesting a complicated course of illness.
- No symptoms or mild upper respiratory tract symptoms or cough, new myalgia or asthenia without new shortness of breath or a reduction in oxygen saturation.
- Stable clinical picture.

Moderate disease

Stable, with respiratory and/or systemic symptoms or signs. Able to maintain oxygen saturation >95% without supplemental oxygen (or above 92% for those with chronic lung disease). Characteristics include:

- prostration, myalagia, fever >38°C
- no clinical or laboratory indicators of clinical severity or respiratory impairment
- persistent cough, mild dyspnoea

Risk factors for severe disease

- Aboriginal people 50 years and older with one or more chronic medical conditions
- People 65 years and older with chronic medical conditions
- People 70 years and older
- People with compromised immune systems
- People taking bDMARDs and some immunosuppressive drugs.

Exclusion criteria

- Those meeting severe criteria
- Oxygen requirement to maintain saturation >95% (or 92% in chronic lung disease)
- Home environment unsuitable for virtual home monitoring
- The person's and/or carer preference to not be managed by virtual home monitoring.

TREATMENT

COVID-19 THERAPIES

Supportive care

Manage symptomatically

- The person should rest, take fluids, use paracetamol for symptomatic relief.
- Encourage current smokers to quit.

Pharmacological support

Refer to the National COVID-19 Evidence Taskforce

THERAPIES FOR PRE-EXISTING CONDITIONS

Refer to the flowcharts for mild disease, and moderate to severe disease on the National COVID-19 Evidence Taskforce web page.

MONITORING AND ESCALATION

Monitoring

Monitor for:
- Worsening of symptoms – especially breathing difficulties and shortness of breath
- The person and their carer's concern
- Worsening of observations collected, especially hypoxemia

ESCALATION

Transfer to hospital is recommended if the person develops symptoms or signs of severe COVID-19, including:
- symptoms and signs of pneumonia
- shortness of breath or difficulty breathing
- blue lips or face
- pain or pressure in chest
- new confusion
- decreased level of consciousness
- coughing up blood
- other significant concerns raised by the person or carer.

Release from isolation

Refer to local public health unit advice

Educate and reassure

- Advise the person and their carer regarding symptoms to monitor at home
- Teach the person and their carer how to utilise remote monitoring technology in their home
- Explain processes for escalation of care
- Reassure the person that 4 out of 5 people have mild symptoms and usually recover within 2-3 weeks of initial onset of symptoms

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For use by	Clinicians delivering virtual and clinical care to people with COVID-19 in the community, including: • Virtual care services • COVID response teams • Community nursing • Hospital in the Home • Integrated care teams • Primary care