Purpose of this guideline

This document outlines guidance for staff to:

- triage patients who can safely be cared for in the community at the time of referral
- predict those who may be at risk of requiring hospitalisation
- detect clinical deterioration
- escalate appropriately.

This guideline outlines the minimum standards for monitoring people with COVID-19 in the community. It does not address all elements of standard practice and is not a substitute for clinical judgement. In the absence of published 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, including the use of virtual care.

It should be read in conjunction with the following state and national documents addressing clinical care of people with COVID-19, virtual care and infection control:

- NSW Health. COVID-19 screening and guidance for NSW Health outpatient and home visiting health services
- Clinical Excellence Commission. COVID-19 Infection Prevention and Control
- Clinical Excellence Commission. Deteriorating Patient Program
- NSW Health. Adult and Paediatric Hospital in the Home Guideline
- NSW Health. Caring for children with COVID-19 in the community
- Agency for Clinical Innovation. Virtual care
- NSW Health. Community of Practice: Virtual Care
- Agency for Clinical Innovation. Model of care for the use of strovimab in adults in NSW

Governance

Use of this guideline and other policy documents will be underpinned by local factors. These include location and demographics, as well as service factors, such as leadership, governance, resources, policies and procedures.
Delta variant of concern

The Delta variant is defined by the World Health Organization as a variant of concern. It poses issues for disease control and management due to increased transmissibility (all household likely to be infected), severity and vaccine resistance. Compared with previous variants, Delta has been more common in younger people. Risk of a hospital admission is approximately doubled in those with the Delta variant when compared to the Alpha strain. The risk of admission is particularly increased in those with five or more relevant comorbidities.

Importantly, COVID-19 and its variants have been found to have a variable disease trajectory and can impact younger people without underlying risk factors. Frequent and thorough clinical monitoring is required to detect clinical deterioration.

Methodology

This guidance is based on current evidence, listed in the references. Expert advice was sought in the development of this guideline from a number of sources, including Royal Prince Alfred Virtual; Sydney Local Health District (LHD) staff; the Ministry of Health Hospital in the Home team; ambulatory care; maternity, mental health and emergency care specialists; and the executive of the Virtual Care Community of Practice.

This guideline has been adapted from documents produced by Royal Prince Alfred Virtual Hospital.  

Outline

This guideline is presented in four parts:

- Part 1: Background – in-home management, risk factors and disease severity
- Part 2: Identification, initial assessment and appropriateness for management of COVID-19 in the home
- Part 3: Assessment, recommended management and deterioration pathway
- Part 4: Transfer of care and reporting

Principles

The following principles underpin this guideline.

- The person and their carer are at the centre 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.
- Clinical governance arrangements and monitoring and escalation pathways for people with COVID-19 should be locally agreed and documented between all service providers.
- 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 LHDs ensures safety, continuity of care, integration and quality health outcomes. General practitioners hold comprehensive health records 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 care umbrella, sharing clinicians across different services. In this document, they are referred to as Community COVID-19 Services.
- 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.
Part 1: Background
In-home management, risk factors and disease severity

Managing adults with COVID-19 in the home

NSW has adopted the use of virtual care to support management and monitoring of people with COVID-19 in the community. To determine appropriateness for care in the community, both severity of illness (symptoms) and risk factors (medical and social) should be considered.

The National COVID-19 Clinical Evidence Taskforce and other international bodies recommend that people with likely or confirmed mild COVID-19 be managed out of hospital and in the community, where possible. The Taskforce also recommends people with moderate COVID-19 are managed in hospital, when possible. People with severe COVID-19 should be managed in hospital or another facility that can provide the necessary level of care.

Clinical judgement should be used to determine where care can best be delivered. This includes consideration of care in the home for:

- patients discharged early from hospital
- those with moderate disease
- pregnant women and their gestation.

When it is necessary to manage those with moderate COVID-19 in the community, medical and social risk factors must be considered to determine the appropriate level of care required.

A patient’s wishes and goals of care (for example, an advance care directive) should be considered and appropriately documented prior to any decision to transfer the person to a hospital facility.

Management should include providing supportive care, taking steps to reduce the risk of transmission, and advising patients on when to contact a healthcare provider to seek further assessment.

The Australian guidelines developed by the National COVID-19 Clinical Evidence Taskforce note that most people infected with COVID-19 only experience mild disease symptoms and will recover without requiring special treatment. However, some people will experience moderate or severe disease.

For people with COVID-19, monitor markers of clinical progression, including early signs of respiratory failure and sepsis, especially on days five to 10 after the onset of symptoms. The threshold for escalating care for older people (and those with existing medical conditions) in the community is much lower due to the risk of progression to severe disease.

Emerging evidence suggests this is also the case for pregnant women, where adverse outcomes increase with gestation.

Importantly, COVID-19 and its variants have been found to have a variable disease trajectory and can impact younger people without underlying risk factors. Rapid deterioration of younger people without any identified risk factors has been observed. Frequent and thorough clinical monitoring is required to detect clinical deterioration (refer to Part 3, p.14 for more information).

The clinical care of children, people in residential aged care and palliative care is not detailed in this document. Further information and guidance for these patient groups can be found via the following links from NSW Health.

- Caring for children with COVID-19 in the community
- Providing palliative care in the community
- COVID-19: Advice for aged care services
- Commonwealth aged care resources
- Residential aged care facility outbreak management
Delta variant

- The Delta variant of COVID-19 is associated with approximately double the risk of hospital admission compared with the Alpha strain.
- Risk of hospital admission with the Delta variant increases in those with five or more relevant comorbidities.14
- Emerging evidence supports that hospitalisation is also more likely for those who are unvaccinated.15
- In Scotland and the United Kingdom, the Delta variant has been recorded mainly in younger people.14 This is consistent with the current Australian experience.

Risk factors associated with severe disease

Some people are at greater risk of experiencing more serious illness from COVID-19. The Australian Government advises that the following people may be at higher risk.16

High risk of severe illness

People who are at high risk of severe illness:

- are 65 years and older*
- have had an organ transplant and are on immunosuppressive therapy
- have had a bone marrow transplant in the last 24 months
- are on immune suppressive therapy for graft versus host disease
- have blood cancer, e.g. leukemia, lymphoma or myelodysplastic syndrome (diagnosed within the last five years)
- are having chemotherapy or radiotherapy
- are pregnant^.

Moderate risk of severe illness

People at moderate risk of severe illness include those with:

- chronic renal failure
- heart disease (coronary heart disease or failure)
- chronic lung disease (excludes mild or moderate asthma)
- a non-haematological cancer (diagnosed in the last 12 months)
- diabetes
- chronic liver disease
- severe obesity with a body mass index greater than 40kg/m²
- some neurological conditions, such as stroke or dementia
- some chronic inflammatory conditions and treatments
- other primary or acquired immunodeficiency
- poorly controlled hypertension.

Other risk factors

Having two or more conditions can increase a person’s risk, regardless of age.

Other factors can also increase the risk of severe illness for a person who contracts COVID-19, including:

- age (risk increases for people as they get older; even for those under 70)
- being male
- lower socioeconomic status
- smoking.

Specific communities and groups

Some specific communities and groups may be more at risk of exposure to COVID-19, or severe illness. These include:

- Aboriginal and Torres Strait Islander people
- people living in aged care facilities
- people with disability
- people with severe mental health conditions.

* While the National guidelines recommend 70 years and above, this guidance recommends 65 years and above based on modelling for NSW.
^ Added in addition to national guidelines and based on emerging evidence.
Pregnancy and COVID-19

Current evidence indicates that pregnant women do not appear to be at higher risk of contracting SARS-CoV-2; the virus that causes COVID-19. However, studies have shown that pregnant women are at increased risk of developing severe COVID-19 if they are infected, compared with non-pregnant women of a similar age.\textsuperscript{17}

Compared to non-pregnant women of reproductive age, pregnant women with COVID-19 attending or admitted to the hospital for any reason are:

- less likely to manifest symptoms such as fever, dyspnoea and myalgia
- more likely to be admitted to the intensive care unit (ICU) or need invasive ventilation.

Pregnant women with COVID-19 are more likely to deliver preterm and have an increased risk of being admitted to the ICU or maternal death. Their babies are more likely to be admitted to the neonatal unit.\textsuperscript{18}

Risk factors for severe illness from COVID-19 in pregnant women include:

- pre-existing comorbidities
- non-Caucasian
- chronic hypertension
- pre-existing diabetes
- advanced maternal age
- high body mass index.
Definitions of disease severity

The National COVID-19 Clinical Evidence Taskforce defines COVID-19 disease severity in the following categories.12

Table 1: Definition of disease severity

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Mild illness</td>
<td>No clinical features suggesting of moderate or severe disease or a complicated course of illness.</td>
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<tr>
<td>Moderate illness</td>
<td>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.</td>
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<tr>
<td>Severe illness</td>
<td>If the person meets any of the following criteria:</td>
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<tr>
<td>Critical illness</td>
<td>If the person meets any of the following criteria:</td>
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</tbody>
</table>
Part 2: Identification, initial assessment and appropriateness for management of COVID-19 in the home

Notification and identification of COVID-19 positive people in the community
COVID-19 is a notifiable disease. Positive cases are reported via the Notifiable Conditions Management System, based on the person’s usual place of residence and provided on the NSW Health Patient Flow Portal. People who test positive are notified by a text message from the public health unit.

All patients who have tested positive in the last 28 days are visible in the Patient Flow Portal. New cases appear as unregistered. Community COVID-19 Services are responsible for onboarding all unregistered patients to be monitored for the duration of their illness. Patients should be contacted within 24 hours of appearing on the Patient Flow Portal and receive monitoring for 14 days, or as appropriate for the course of their illness.

The patient should be advised to self-isolate until they have recovered and have been cleared by NSW Health. This advice should be provided in their first interaction with a healthcare provider following their diagnosis (e.g. when the patient contacts their own general practitioner (GP) or when the Community COVID-19 Service makes initial contact).

The person should inform their close contacts that they have tested positive for COVID-19. This includes advising household members and other people they have been in contact with to self-isolate for 14 days. Any further cases in the household will re-start the requirement to isolate for 14 days. Close contacts must be tested on (or after) day 12 of isolation and will be required to provide evidence of the negative result to police if asked.

Shared care by a multidisciplinary 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. It must include access to rapid medical review.

Safe clinical care requires clear lines of responsibility and accountability. 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, respiratory medicine and maternity.

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

Determining level of risk and appropriateness for care in the community
For people diagnosed with COVID-19, patient care is tailored to individual risk. During the initial phone call with new patients, follow the flow chart (figure 1 on p.09) using the patient’s information.

Once the level of risk is determined, see associated box for care package appropriate to the patient’s current level of risk.

NOTE: DAYS ARE CALCULATED BASED ON THE DAYS THAT SYMPTOMS COMMENCED (DAY 0).
If the patient is asymptomatic, count from positive swab day (day 0).
Caring for adults with COVID-19 in the community

Figure 1: New COVID-19 risk stratification patient flowchart

**Initial intake triage assessment**

**YES**

- Vaccinated with 2 doses (2nd dose >1 week ago?)

- <65yrs No risk factors
  - ASYMPTOMATIC OR MILD SYMPTOMS
  - Initial consult (Day 1)
  - Wellbeing checks daily
  - Discharge check (Day 14+)

- <65yrs No risk factors
  - MODERATE SYMPTOMS
  - Initial consult (Day 1)
  - Video call twice daily**
  - Discharge check (Day 14+)

- Any high-risk medical or social factors AND/OR
  - Risk of hospitalisation score >0.10*
  - HIGH CARE PROTOCOL
  - Initial consult (Day 1)
  - Video call twice daily**
  - Discharge check (Day 14+)

- Any high-risk medical or social factors AND/OR
  - Risk of hospitalisation score >0.15*
  - VERY HIGH CARE PROTOCOL
  - Initial consult (Day 1)
  - Video call twice daily**
  - Discharge check (Day 14+)

**NO**

- Medical review should take place when there is clinical concern, symptoms change or there is any deterioration to ensure appropriate clinical escalation and assessment of ongoing suitability for home-based care

- If a vaccinated patient is deemed at higher risk at the initial consult, they should be re-triaged into a higher risk category

- MILD SYMPTOMS
  - Low grade fever <38
  - Mild cough or upper respiratory tract symptoms
  - No breathlessness
  - Mild gastrointestinal symptoms

- MODERATE SYMPTOMS
  - Fever >38
  - Marked cough and/or sputum
  - Mild breathlessness
  - Diarrhoea >4x/day
  - Dizziness on standing up
  - Has required emergency department or hospital admission during illness

- HIGH-RISK SOCIAL FACTORS
  - Low health literacy
  - Socially isolated
  - Large household and/or other members at risk, including children
  - Low digital literacy
  - Risk of violence, abuse or neglect
  - Specific communities and groups:
    - Aboriginal and Torres Strait Islander people
    - People living in aged care facilities
    - People with disability

- HIGH-RISK MEDICAL FACTORS
  - Age ≥65 years
  - Organ transplant or immunosuppression
  - Chronic lung disease
  - Cardiovascular disease
  - Active cancer
  - Chronic kidney disease
  - Diabetes (type 1 and 2)
  - Liver disease
  - Significant frailty or disability
  - Severe mental health conditions
  - Pregnancy
  - Obesity

A PULSE OXIMETER is delivered to patients at home as soon as possible with follow-up education provided virtually.

For patients under 50 years, who are fully vaccinated, have no medical or social risk factors and who are asymptomatic or have only mild symptoms, it is not necessary to provide a pulse oximeter.

*The risk of hospitalisation is a validated algorithm that presents a meaningful prediction of a patient’s clinical deterioration. It is based on demographic and socioeconomic factors, as well as hospitalisation and medical history. The risk of hospitalisation algorithm has been built into the Patient Flow Portal and is automatically calculated daily. The risk of hospitalisation score should be used in conjunction with clinical judgement.

** Video call is recommended, wherever possible.
Initial clinical assessment

Initial assessment is required to determine the person’s disease severity, risk factors and suitability for care in the home environment. 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, the assessment should be conducted via videoconference (where possible) to allow for visual assessment of the person and their home environment.

The assessment should include:

- suitability for home-based care (as described below)
- medical history
- current medications
- allergies
- smoking history
- onset of symptoms
- pregnancy gestation (if applicable).

Initial assessment must include thorough education on the signs and symptoms of deterioration and processes for escalation when any changes are observed.

Details for the person’s regular GP and other key care providers (e.g. maternity, mental health, drug and alcohol) should also be captured. If the person consents, these providers should be informed of the person's COVID-19 diagnosis and their management plan.

During the initial clinical assessment, the person should also be screened for appropriateness of sotrovimab in line with the Model of care for the use of sotrovimab in adults in NSW.4

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

A healthcare professional should assess whether the home setting is appropriate for care. This should take into account the COVID-positive patient, children and the extended family unit or others living in the place of residence.

The decision to monitor a patient in the community setting should be made on a case-by-case basis.

Where it is deemed that the patient or the family unit cannot be managed in the home because the environment is unsuitable and/or there are welfare concerns, patients should be transferred to special hotel accommodation when available.

Considerations for care to be delivered appropriately in the home include whether the person:

- consents to receiving care and isolating at home, as required
- is stable enough to receive care at home
- has risk factors that cannot be managed in the home
- has other medical conditions that cannot be managed in the home
- has appropriate caregivers at home
- has caregivers with the capacity to recognise signs of deterioration (as explained to them) and escalate care.
- is living with other people at higher risk of illness
- has access to food and other necessities
- lives within one hour of a hospital with an ICU (refer to additional considerations for rural patients on p.13)
- has access to appropriate, recommended personal protective equipment (at a minimum, gloves and face masks).

The person and other household members must also be able to adhere to precautions recommended as part of home care or isolation (e.g. respiratory hygiene and cough etiquette, hand hygiene, etc).19
In the following circumstances, alternative accommodation should be considered (such as a special health accommodation or care in hospital), as clinically appropriate:

- Family units where both parents are COVID-19 positive with young dependents.
- Domestic and family violence has been disclosed or identified by a health clinician.
- The person lives alone or is socially isolated without local supports who can assist with frequent monitoring, in addition to the health service.

**Considerations for virtual care**

Reliable mechanisms for communication must be available, including devices such as a telephone, tablet, or computer, as well as internet connectivity and data.

The person and their carer need to have adequate health literacy, digital 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 backgrounds who have low levels of English proficiency and where regular interpreter services are difficult to secure.

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

Virtual care, including remote monitoring devices and platforms, can be used to monitor a person’s symptoms and identify changes in symptoms or health status for escalation of care. There are a range of different technologies and devices that may be considered. Clinicians must determine the most appropriate modality and/or device to support the clinical needs of the person.

Due to the variable disease trajectory, frequent and thorough wellbeing and clinical monitoring is required to detect any clinical deterioration.

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

Where possible, video call is preferred, as it provides additional visual cues and therapeutic presence.

**Onboarding and provision of monitoring devices**

All COVID-positive patients being cared for in the home should have a pulse oximeter (along with any other devices used in the local model of care) delivered to their home as soon as possible. As a minimum, a family unit should be provided with one oximetry device. It is recommended that a thermometer is also provided, where possible.

Education and support regarding the use of a pulse oximeter (and any other devices) must be provided to the person and/or their carers.

Resources developed by RPA Virtual Hospital can be found on the ACI website. These include guidance on how to use a pulse oximeter to check oxygen and heart rate; ranges for measurements; and actions to take if a measurement is out of range.

**Resources for consumers and carers**

People with COVID-19 and their carers should be provided with information and education about:

- care in the home and consent to treatment by the designated health service
- home isolation
- how to use remote monitoring devices, troubleshooting and how to record and report results (if not automatically uploaded)
- what symptoms to monitor and when and who to call for help.
COVID-19 resources for consumers and carers

- **NSW Health Fact sheet for confirmed COVID-19 cases** – provides key information for people who have COVID-19, including what to do, how COVID-19 is managed, symptoms, support for access to food and mental health support (available in more than 25 languages).

- Australian Department of Health. **COVID-19 frequently asked questions** – answers to common questions for patients, their families and carers about spread, testing, isolating, etc.

- NSW Health. **Hygiene at home** – information on cleaning and handwashing to prevent the spread of COVID-19.

- Healthdirect. **Caring for people with COVID-19** – information for people caring for someone with COVID-19, including preventing the spread of illness to others in the household.

Information and education provided to patients should be noted in the person’s medical record.

Social factors and considerations

Health literacy

Health literacy describes 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 have trouble 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.

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.

Violence, abuse and neglect risks and vulnerabilities

COVID-19 may exacerbate risks related to people experiencing, or at risk of, violence, abuse and neglect. Emerging evidence suggesting that during COVID-19 lockdowns and self-isolation, there is an increased incidence of family violence and increased neglect of children and vulnerable people.\(^\text{20,21}\) This is consistent with evidence that shows the risks and impacts of violence, abuse and neglect increase during and after natural and other disasters as usual routines and supports are disrupted.\(^\text{22}\)

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 virtual care services to people who are experiencing, or at risk of violence, abuse and neglect. The use of screening questions regarding violence, abuse and neglect via virtual care is not recommended because privacy cannot always be established.

Where violence, abuse or neglect is disclosed, or clinicians identify concerns and suspicions, they should respond in accordance with NSW Health and relevant district guidance.

For more information, please refer to the NSW Health Violence, abuse and neglect and COVID-19 advice.\(^\text{22}\)

**Culturally and linguistically diverse communities**

People who speak a language other than English at home may experience lower health literacy. This could include:

- a reduced understanding of COVID-19 symptoms
- a reduced ability to identify and adhere to household behaviours that prevent infection
- difficulty understanding government messaging about COVID-19.

Culturally and linguistically diverse communities may also be less likely to rate physical distancing as important.
Verbal information and health resources should be translated, as required.

The ACI Virtual care in practice guide provides advice on undertaking virtual consultations, including the use of interpreters. The guide also briefly explains the functions of CALD Assist, which can provide timely and effective interactions with culturally and linguistically diverse patients when an interpreter is not available.

Large households

Care teams should seek to understand household structures that may include multiple generations or families within one home. For managing infectious diseases and household transmission in larger inter-generational households, consider the following:

- Isolation within a household immediately following onset of symptoms is associated with a significantly reduced risk of transmission of COVID-19.
- Expect that the whole family unit is likely to be infected, including children.
- Ensure behavioural reminders for reducing transmission within large households are prominent.

People living in rural areas

For people living in rural and remote areas, additional factors should be considered when determining the best place for a person to receive care. These factors include:

- logistics and distance to receiving definitive care, including access to an intensive care or high dependency unit
- underlying risk of deterioration
- patient and/or family wishes
- severity of illness.

For people with moderate illness who have a high or very high baseline risk, consideration of proactive transfer closer to a hospital that can support definitive care is required. This may include transfer to special hotel accommodation, other supported accommodation or admission to a COVID-designated health facility located less than one hour away.
Part 3: Assessment, recommended management and deterioration pathway

Assessment

Regular measurement and documentation of physiological observations is essential to allow early identification of clinical deterioration; optimised supportive care; and safe, rapid admission to a hospital facility, if required. The frequency of observations should be consistent with the clinical situation.

Virtual home monitoring is delivered via telephone and videoconference, along with the use of remote monitoring devices. The modality of care will depend on the service and the availability of hardware, monitoring devices and connectivity.

Frequency of assessment

Table 2 identifies minimum monitoring requirements. However, a person’s individual characteristics and circumstances should be considered when developing a schedule that meets their preferences, needs and ability to self-manage, while ensuring that any deterioration is escalated in a timely manner.

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 monitoring either by devices, clinical checks, or carer observation to detect any deterioration as early as possible. Frequency of monitoring should not overwhelm the person.

Table 2: Minimum frequency of clinical assessment and monitoring

<table>
<thead>
<tr>
<th>Care protocol</th>
<th>Frequency of clinician assessment and clinical observations</th>
<th>Frequency of medical review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low or medium care protocol</td>
<td>• Initial consult – day 1</td>
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<tr>
<td></td>
<td>• Wellbeing check – daily</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Discharge check – day 14+</td>
<td></td>
</tr>
<tr>
<td>High care protocol</td>
<td>• Initial consult – day 1</td>
<td>Medical review should take place when there is clinical concern, symptoms change or there is any deterioration to ensure appropriate clinical escalation and assessment of ongoing suitability for home-based care</td>
</tr>
<tr>
<td></td>
<td>• Video call – twice daily*</td>
<td></td>
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<tr>
<td></td>
<td>• Discharge check – day 14+</td>
<td></td>
</tr>
<tr>
<td>Very high care protocol</td>
<td>• Initial consult – day 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Video call – twice daily*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Discharge check – day 14+</td>
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</tbody>
</table>

* Video call is recommended, where possible.
Pregnant women

For pregnant women, risk of adverse outcomes from COVID-19 increases with gestation. In addition to the above clinical assessment and monitoring, pregnant women should receive care from their maternity care provider/s, based on the following gestation:

- Less than 14 weeks gestation: general supportive care and should be linked with their local maternity service.
- 14 to 28 weeks gestation: maternity support, including initial contact and weekly follow up (as a minimum) by their maternity care provider.
- From 28 weeks gestation: maternity initial triage assessment, and maternity support and assessment every third day (as a minimum).

If there are any concerns identified by Community COVID-19 teams relating to pregnancy, the person's maternity care provider should be contacted for advice.

Wellbeing check

For low or medium risk patients, wellbeing checks should include the following:

- Reiteration of public health advice.
- Management of pre-existing conditions.
- Social support needs, for example the need for medical or food supplies, connection to income support services.
- Questions about the persons wellbeing, such as:
  - how are you coping with isolation
  - are you feeling anxious? If yes refer to mental health screening below.
- The presentation of any symptoms such as fever, cough, breathlessness and gastrointestinal symptoms.

If mild symptoms worsen to moderate symptoms, the patient’s care should be escalated to high risk.

Assessment method

For high and very high-risk patients, twice daily assessment should occur focusing on signs and symptoms and any changes which indicate the onset of deterioration. If presentation worsens, this is most likely to occur on days five to 10 after onset of symptoms.

Monitoring symptoms

Monitoring of symptoms can occur via virtual care (phone or videocall) 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, such as breathing and shortness of breath

Ask the following questions (as relevant).

- How is your breathing?
- Is it worse today than yesterday?
- What does your breathlessness prevent you from doing?
- How independent are you with activities of daily living?

The Guide to undertaking virtual respiratory assessment for adults has more detailed information.24

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

In most adult patients, if dyspnea develops, it tends to occur between four and eight days after symptom onset, although it can also occur after 10 days. While mild dyspnea is common, worsening dyspnea, worsening and severe dyspnea and severe chest pain or tightness suggest the development of progression of pulmonary involvement.

Adult patients with dyspnea should be followed closely; particularly during the first few days following the onset of dyspnea, to monitor for worsening respiratory status.
Pulse oximetry

A pulse oximeter should be provided to all patients to help assess overall clinical status.

Research has shown patients most at risk of becoming very unwell from COVID-19 are best identified by oxygen levels. Using a pulse oximeter means rapid deterioration and silent hypoxia are more likely to be identified rapidly, and people can be escalated as quickly as possible. Silent hypoxia (when people have low oxygen levels in the absence of significant shortness of breath) has been noted in some COVID-19 patients.25

Patients should be provided with information on how to use oximeters correctly. See the ‘onboarding and provision of devices (on p.11)’ section for further details.

Recommendations for healthcare teams

- Become familiar with the equipment before use.
- Ensure patients know the difference between oxygen saturations and heart rate on the oximeter.
- Ensure patients know to respond to changes from baseline, rather than a single reading in isolation.
- Use clinical judgement when interpreting readings provided by patients.
- Tailor support based on the patient’s and carers’ individual needs and circumstances.

Signs and symptoms for assessment

- Fever or chills
- Cough
- Sputum
- Runny nose
- Tiredness or severe fatigue
- Headache
- Muscle aches and pain
- Coughing up blood
- Loss of sense of taste or smell
- Diarrhoea
- Nausea or vomiting
- Loss of appetite.

For any of the following, call 000 to attend an emergency department (state COVID-19 status):

- 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.

Virtual A-G Systematic Assessment

- The A-G method provides a systematic and structured assessment approach and can be used in addition to the above assessment of symptoms. The following version is modified for virtual monitoring of community-based people with COVID-19.
- The frequency of the A-G assessment depends 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 clinical judgement from the clinician.
Table 3: 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.  

| Breathing       | • **Look** for the general signs of respiratory distress (such as sweating), the effort needed to breathe, abdominal breathing and central cyanosis.  
|                | • **Count the person’s respiratory rate.** The normal respiratory rate in adults is between 12 and 20 breaths per minute. 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 pursing of lips.  
|                | • **Measure** the person’s peripheral oxygen saturation using pulse oximetry, including oxygen saturation upon exertion.  
|                | • **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.  

| 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.  

| 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.  

Source: adapted from RPA Virtual Hospital, Sydney Local Health District.
Mental health screening

The coronavirus outbreak and self-isolation can be stressful and impact on the individual’s mental health and wellbeing. People who are self-isolating may struggle with the unpredictable nature of the illness and long isolation periods. They may experience a range of emotions, such as stress, worry, anxiety, boredom or low mood. People who have not previously experienced a mental health problem may also be at risk.

For people with pre-existing mental health conditions, a pandemic can further heighten anxious thoughts or compulsive behaviours. Previously managed symptoms may escalate, requiring additional care. Disrupted support systems and social isolation can leave people vulnerable to acute stress reactions.

Healthcare staff should 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.

Mental health resources for consumers and carers

- **Your mental wellbeing** – links from NSW Health to a range of mental health and wellbeing programs and services, including specific support related to COVID-19.
- **Head to Health** – a federal government initiative with links to digital mental health resources and services, and advice for health professionals to support patients.
- **COVID-19 and Mental Wellbeing - Resources for CALD Communities** – translated information and resources for patients from the Transcultural Mental Health Centre.

Refer to resources for consumers and carers on page 12 for additional resources.

Screening tools

Regular mental health review is recommended where risks are identified in daily wellbeing checks.

Suicidal behaviours may be symptoms of underlying mental health problems or disorders. A suicide risk assessment cannot be undertaken in isolation from an overall mental health assessment.

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 person 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.)

Harm to others screening

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

1. Are you having thoughts of harming others?
2. Who are you thinking of 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 and handover using ISBAR guidelines. The Mental Health Line is also available for advice around the person, 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.

People with severe mental health conditions

Identify whether the person is currently receiving care or known to a mental health professional. If so, a combined team approach between the COVID-19 team and the mental health team is recommended.

Escalation pathways for mental health deterioration should be clearly defined by both teams.
## Table 4: Mental wellbeing screening

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How are you coping with your isolation?</td>
<td>No – no further questioning required.</td>
</tr>
<tr>
<td></td>
<td>Yes – go to Q3</td>
</tr>
<tr>
<td>2. Are you feeling anxious or worried?</td>
<td>No – no further questioning required.</td>
</tr>
<tr>
<td></td>
<td>Yes – go to Q3</td>
</tr>
<tr>
<td>3. How are you managing your anxiety and worries?</td>
<td>No – no further questioning required.</td>
</tr>
<tr>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>4. Do you think you need any extra support to manage?</td>
<td>Yes – go to Q6</td>
</tr>
<tr>
<td>5. Do you have a history of mental health problems?</td>
<td>Yes – go to Q6</td>
</tr>
<tr>
<td>6. Are you experiencing any symptoms of your mental health problems?</td>
<td>Yes – go to Q7</td>
</tr>
<tr>
<td>7. Are you currently seeing a mental health professional?</td>
<td>No – the clinician should have a plan with the person including:</td>
</tr>
<tr>
<td></td>
<td>• strategies for them to manage their distress and safety until next contact with the health professional</td>
</tr>
<tr>
<td></td>
<td>• details of their carer or other third party who can provide support or consultation, if required</td>
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<tr>
<td></td>
<td>• contact details of emergency services and a mental health professional.</td>
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<tr>
<td></td>
<td>Yes – go to Q10</td>
</tr>
<tr>
<td>9. Have things been so bad lately that you have thought you would rather not be here?</td>
<td>No – no further questioning required.</td>
</tr>
</tbody>
</table>

Source: adapted from [RPA Virtual Hospital, Sydney Local Health District](#)

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**Caring for adults with COVID-19 in the community**

October 2021

**Agency for Clinical Innovation**

www.aci.health.nsw.gov.au
COVID-19-positive patient clinical escalation pathway

The Delta variant may be associated with rapid deterioration. This may be detected by healthcare staff or by the patient, family or carers.

Figure 2: Escalation pathway

SIGNS and SYMPTOMS of CLINICAL DETERIORATION in COVID-19-positive patients

- Vital signs in the yellow or red zones
  - Isolated fever without other red flags consider medical review

  OR the following symptoms

- Syncope
- Chest pain
- Vomiting, abdominal pain or diarrhoea >4x/day
  - All patients with these symptoms should have medical officer review and be discussed with the designated senior medical

Vomiting and diarrhoea or gastrointestinal symptoms and looks unwell, or vital signs Yellow or Red Zone, requires urgent escalation. If diarrhoea alone, patient doesn’t look too unwell, and vital signs Between the Flags, consider medical review.

- Hospital in the Home, community or virtual care nurses or medical officer concerned patient is very unwell

VITAL SIGNS in Red Zone on Between the Flags chart

- Patient critically unwell
  - Refer to local LHD escalation protocols or call 000
  - Please notify Ambulance that patient is COVID-19-positive

VITAL SIGNS in Yellow Zone OR normal plus symptoms

- Medical officer review of patient by telephone or video call

  - Refer to local LHD escalation protocols or call 000
  - Provide verbal and written handover to accepting team
  - Ensure discharge summary written if transferring patient out of LHD
  - Document assessment and management plan
  - Update HITH, community or virtual care nurse unit manager
  - Ensure patient is handed over if repeat review required

ALL COVID-19-positive patients with clinical deterioration and/or RED FLAGS should be discussed with the designated senior medical officer.
Uncontactable patients

Daily contact must continue through the isolation period. All services must have an escalation process if a patient cannot be contacted.

Patients and carers must be informed of their responsibilities and obligation to be at home throughout their isolation period, and to be contactable at agreed times for daily assessments. They must understand what will happen if they cannot be contacted at these times.

If all attempts to contact the person or their carer have failed (for example, if the person does not answer a text message stating ‘if you do not respond within 30 minutes the police will be called’), emergency services must be contacted.

If a person is absconding or a breach of isolation is disclosed during contact with the person, this must be escalated to the local public health unit or police.

Refer to section 9.3 of the Adult and Paediatric Hospital in the Home Guideline for further information.6

Managing people who refuse daily wellbeing and health checks

Patients refusing care should initially be assessed in relation to capacity (ruling out hypoxia) and counselled regarding the risks of rapid clinical deterioration. Patients should be encouraged to contact the service if they experience new or changes in symptoms and advised that the COVID-19 service will conduct a welfare check in a couple of days.

The patient lack of compliance and counselling advice to patient should be clearly documented.

If a person is absconding or a breach of isolation is disclosed during contact with the person, this must be escalated to the local public health unit or police.
Part 4: Transfer of care and reporting

Transfer of care from acute care

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 general practitioner, including a written summary of the person’s episode of care and follow-up advice.

Release from isolation criteria

The Communicable Diseases Network Australia National Guidelines for Public Health Units outline Australia’s national minimum standard for de-isolation.3

NSW community COVID-19 teams are responsible for releasing patients from isolation based on the following criteria.

- If not significantly immunocompromised and has remained asymptomatic – release from isolation 14 days after the positive test.
- If not significantly immunocompromised and symptomatic – release from isolation 14 days after the onset of symptoms, if no fever for at least 72 hours and acute respiratory symptoms have been substantially improved for 72 hours.
- If not significantly immunocompromised and symptomatic but fever not resolved and/or acute respiratory symptoms not substantially resolved for three days, release from isolation:
  - 20 days after onset of symptoms OR
  - at least 14 days after onset and no fever for 72 hours and substantial improvement in respiratory symptoms and two consecutive nose and throat swabs taken at least 24 hours apart after day 10 from symptom onset are negative.
- If significantly immunocompromised, any of the above criteria plus two swabs taken at least 24 hours apart at least 10 days after symptoms are negative.

While under the self-isolation public health order, the person’s release must be approved by a medical officer or registered nurse. This may occur through criteria-led discharge with authorisation from the designated medical officer.

Documentation

It is a clinical requirement that all clinical activity, including virtual care consultations, is documented in the person’s health record.

Any incidents related to the care of COVID-19 patients in the community should be reported through the ims+ system.

Reporting

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

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 specific COVID-19 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 classification of diseases (ICD-10) codes will identify people as positive, suspected or negative COVID-19 status.
References


### Consultation
- Expert advice was sought from Hospital in the Home, Ambulatory Care, Maternity, Mental Health, Ministry of Health Prevention and Response to Violence Abuse and Neglect (PARVAN) Unit and Aged Care Unit (Health and Social Policy Branch), emergency care specialists and the Executive of the Virtual Care Community of Practice.
- Consultation was sought from the Clinical Excellence Commission, Primary Care, Community Health, Emergency Care, Virtual Care, and Respiratory Communities of Practice.
- This document has been informed by existing clinical NSW COVID-19 services and in particular Sydney Local Health District RPA Virtual Hospital. The Guideline is informed by their COVID-19 Remote Monitoring Clinical Protocol and Model of Care written collaboratively by SLHD’s RPA Virtual, Respiratory, Infectious Diseases, Emergency Care, Paediatric, Public Health and Mental Health disciplines and shared with the Virtual Care COP.

### Endorsed by
- Dr Nigel Lyons

### Review date
- 1 October 2021

### Reviewed by
- Clinical experts managing the care of people with COVID-19 in the community including infectious disease, emergency care and hospital in the home specialists.

### 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