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Emergency department assessment and management of COVID-19 in adults (Delta variant)

NSW quick reference guide

This information is for staff attending to adults presenting to NSW emergency departments with suspected or confirmed COVID-19 infection.

When a patient arrives at emergency

Wear PPE according to local facility and current NSW COVID-19 guidance.

Patients meeting case definition criteria should be streamed into a dedicated 'high-risk' zone, ensuring immediate isolation from other waiting patients.

When considering whether there is a high epidemiological risk use this document in combination with your clinical assessment of the following to determine whether this is suspected COVID-19.

- The rate of COVID-19 infection in your area.
- Is the patient, or any household members known close or casual COVID-19 contacts?
- Is the patient, or any household members essential workers, working in high-risk areas?

Well recognised COVID-19 symptoms	Emerging Delta strain COVID-19 symptoms
• Respiratory symptoms including cough, runny nose, sore throat • Fever • Change in taste or smell • Fatigue	• Gastrointestinal (GIT) symptoms, including vomiting and diarrhoea • Headache • Abdominal pain • Chest pain • Mild haemoptysis

This table of symptoms is based on recent experience of Delta in Sydney and South Western Sydney Local Health Districts.

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Initial assessment

Observations	Mild	Moderate	Severe
Oxygen saturations (room air) Undertake an ambulatory SpO2 for exertional hypoxia	>95% If any exertional hypoxia noted discuss with your inpatient admission team	92-95% including exertional desaturations	<92%
Respiratory rate	10-25	8-10 and 25-30	< 8 and > 30
Heart rate	50-120	40–50 or 120-140	<40 or >140
GCS	15	15	≤14

RED FLAGS – A person presenting with these signs and symptoms should be flagged as a higher risk for further deterioration

- Some people are deteriorating rapidly and significantly within 6-12 hours.

Severe GI symptoms – diarrhoea, vomiting, abdominal pain > 4x/day	**Hypotension including symptomatic postural hypotension**
Syncope	**Transient hypoxia** – mild hypoxia is escalating to major hypoxia quickly with the Delta strain
Chest pain	**Silent hypoxia** – without tachypnoea **OR** subjective symptoms of shortness of breath – **more prevalent in older populations**
Persistent tachycardia	**Confusion**

Risk factors for increased severity of disease in COVID-19
These are only a guide for complexity of disease and should not replace clinical judgement.

- Age, over 65
- Chronic respiratory disease
- Chronic kidney disease
- Hypertension
- Chronic cardiovascular disease
- Diabetes
- Immunosuppression
- Unvaccinated people
- Obesity, BMI greater than 40
- Cancer
- Dementia
- Social factors
- Significant mental health conditions
- Pregnancy
- Vulnerable populations
- Aboriginal background

Check if your patient has had a recent previous positive COVID-19 diagnosis and belongs to a community care team or is allocated to a virtual service.

Investigations

Mild	Moderate	Severe
COVID-19 nucleic acid detection swab +/- other viral panels as indicated (use local protocol)		
Investigations to be determined as clinically necessary	• FBC, EUC, COAGs, D-dimer, Ferritin • Troponin (if chest pain present) • VBG (including lactate and glucose) • LFT, CRP, LDH, Ca, Mg, PO4 • Blood culture if febrile equal to or more than 38.5 degrees • ECG • Chest x-ray	

Severe disease has been correlated with:

- Lymphopenia (<1.1 × 10^9 cells/L)
- Thrombocytopenia (<50 x109 cells/L)
- D-dimer >1.0mg/L
- New acute kidney injury
- Raised ALT/AST
- Raised inflammatory markers (CRP, WCC)
- Raised troponin
- Lactate (VBG) >3.0mmol/L

Management

Mild

Consider administration of Sotrovimab according to hospital or local health district supply and policy.
For clinical guidance see *Model of care for the use of sotrovimab in adults in NSW*.

Consider if the patient has an advanced care directive and whether referral to palliative care is appropriate.

	Moderate	Severe
Respiratory support	Aim for >/= 92% - 95% Commence oxygen via nasal prongs and titrate to SaO2 92% - 95%	If unable to maintain SaO2>/=92% on 6L/min or if RR remains >30/min, then escalate support to HFO2, or NIV Consult respiratory or ICU Consider intubation as clinically necessary Use appropriate PPE as per guide for aerosol generating procedures (AGPs)
Consider your fluid therapy For those with GI symptoms – do not withhold fluid therapy	250mL boluses up to 3 times if SBP <100mmHg **If not responsive commence on severe pathway as clinically indicated** No maintenance fluids unless specific indication	250mL boluses up to 3 times if SBP <100mmHg **If not responsive, then commence vasopressors** No maintenance fluids unless specific indication
Steroid use	Commence dexamethasone 6mg IV/PO daily for 10 days if requiring supplemental oxygen to maintain SpO2 >/=92% **For those already on steroids, increase current dose accordingly**	Commence dexamethasone 6mg IV/PO daily for 10 days if requiring supplemental oxygen to maintain SpO2 >/=92% **For those already on steroids, increase current dose accordingly**
Position	Consider awake prone position to increase saturations for those desaturating	Consider prone position to increase oxygen saturations for those desaturating
Venous Thromboembolism (VTE) prophylaxis	Start VTE prophylaxis as soon as possible, unless contraindicated	Start VTE prophylaxis as soon as possible, unless contraindicated
Supportive anti-infectious therapy **Further information available at NSW TAG**	**Consider other pharmacological therapies in consultation with ID, respiratory or ICU specialists** For example: Remdesevir	**Consider other pharmacological therapies in consultation with ID, respiratory or ICU specialists** For example: 1. Baricitinib OR 2. Tocilizumab (only indicated in most severe cases and for pregnancy)
Additional therapies	Treat suspected bacterial pneumonia	Treat suspected bacterial pneumonia

Disposition and transfer

Mild	Moderate	Severe
Discharge – if no oxygen required or if weaned off oxygen and SpO2 is at, or above, 95% on room air **If exertional oxygen saturation drop is equal to, or more than 3% discuss with inpatient admissions team**	Admit patient For rural regions, consider presence of red flags or risk of severe disease when determining if a patient requires transfer to a facility with ICU	Admit patient and discuss with ICU For rural facilities consider transfer to a facility with HDU/ICU onsite, unless an Advanced Care Directive is in place
Transfer of care to local COVID community care team for ongoing care **Educate patient about signs of deterioration and escalation**	For rural patients consider the critical care network for patient transfer in conjunction with local surge plans within the LHD	For rural patients consider the critical care network for patient transfer in conjunction with local surge plans within the LHD
If accommodation is required, follow local process		
NSW Health guidance document – Caring for adults with COVID-19 in the community	Intrahospital transfer processes. See current guidance, Intrahospital transfer of COVID-19 positive and suspected COVID-19 positive patients from the emergency department.	Intrahospital transfer processes. See current guidance, Intrahospital transfer of COVID-19 positive and suspected COVID-19 positive patients from the emergency department.

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For use by	This document is a quick reference guide for ED clinicians treating adults presenting to ED with symptoms consistent with suspected or confirmed COVID-19. This advice should be considered in conjunction with local guidelines.
Feedback	Feedback on this document can be provided to aci-ecis@health.nsw.gov.au

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