Canterbury District Health Board
Te Poari Hauora ō Waitaha

West Coast District Health Board
Te Poari Hauora a Rohe o Tai Poutini

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5 October 2021

Paul Jones

**Email:** fyi-request-16754-ec8d79af@requests.fyi.org.nz;

Dear Paul Jones

**RE Official Information Act request CDHB 10713**

I refer to your email dated 14 September 2021 requesting the following information under the Official Information Act from Canterbury DHB. Specifically:

1. **The Triaged Protocol used for Covid-19 cases in Hospitals under your district used for assessing patient case severity.**
2. **For each level of severity, provide the treatment protocol given including medicines and dosage prescribed.**
3. **What Antivirals, Immune-Modulators, Anti-inflammatory, Anti-coagulant, and Convalescent plasma's are used along with their Indications.**

Canterbury DHB follows the guidance published on the Ministry of Health website (refer to link below) and we also refer to the Middlemore Hospital guidance (please find attached as **Appendix 1**).

https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-information-health-professionals/covid-19-advice-all-health-professionals

I trust this satisfies your interest in this matter.

Please note that this response, or an edited version of this response, may be published on the Canterbury DHB website after your receipt of this response.

Yours sincerely

Tracey Maisey
**Executive Director**
**Planning, Funding & Decision Support**

# Management of COVID-19 in Adults

## Introduction

Initial clinical assessment for potential COVID-19 in all patients should be guided by the Clinical Assessment Tool. Further guidelines on infection control precautions, bed management etc. are also found at the same link.

This guideline has been adapted from the Australian National COVID-19 Clinical Evidence Taskforce, jointly revised by Respiratory and Infectious Diseases, for use at Counties Manukau Health. It refers to ongoing clinical management **FOR ADULTS ONLY** in the following patient groups:

| Confirmed COVID-19 | Probable COVID-19 |
|---|---|
| *(SARS-CoV-2 test positive during current illness)* | *(tested negative, but ID decision to treat as COVID)* |

***i.e. does not apply to 'Suspected', 'Surveillance', 'Acute respiratory infections' or 'Exposed' groups.***



## Initial Management

| | MILD | MODERATE | SEVERE / CRITICAL |
|---|---|---|---|
| **DEFINITION** | No symptoms<br>**OR** URTI symptoms only<br>**OR** cough, new myalgia or asthenia without new shortness of breath or reduction in oxygen saturation | Stable adult patient presenting with shortness of breath and/or systemic symptoms or signs.<br>Able to maintain oxygen saturation ≥92% (or ≥90% for patients with chronic lung disease) with up to 4 L/min oxygen via nasal prongs. | Adult patients meeting any of the following criteria:<br>• Respiratory rate ≥30/min<br>• Oxygen saturation <92% on 4L/min oxygen via nasal prongs<br>• Clinically deteriorating |
| **BASELINE TESTING & WORK-UP** | • Only as clinically indicated.<br>• Low value testing is discouraged. | • FBC, Creat, electrolytes, LFTs, CRP<br>• ECG only if specific indication<br>• Chest x-ray<br>• ABG<br>• Investigations for CAP (urinary antigens, sputum PCR panel) if CXR shows focal consolidation.<br>• Blood cultures if febrile or shocked<br>• d-dimer & ferritin | • FBC, Creat, electrolytes, LFTs, CRP<br>• ECG<br>• Chest x-ray<br>• ABG<br>• Investigations for CAP (urinary antigens, sputum PCR panel) if CXR shows focal consolidation.<br>• Blood cultures if febrile or shocked<br>• Coag screen, d-dimer, LDH, ferritin, BNP, Troponin |
| **TREATMENT ESCALATION PLANNING** | • Assess ability to manage in a quarantine (hotel) setting.<br>• Consider & document risk factors for severe COVID. | • Early decision & documentation of ceiling of therapy (including respiratory support modalities).<br>• Consider & document risk factors for poor COVID outcome.<br>• Complete blue resuscitation decision form for all patients. | |
| | • NOTE – any new deterioration >7 days post onset of illness requires careful assessment, observation & judgement. Severe COVID-19 frequently develops with a rapid deterioration. | | |
| **DISPOSITION DECISION** | • Encourage discharge (discuss with JetPark via ID).<br>• Liaise with Public Health. | • Admit to Ward 7 under Gen Med.<br>• Admit under Respiratory if requiring oxygen >2L/min and/or comorbid respiratory disease. | • Admit to ICU or Ward 7.<br>• Discuss with ICU and/or Respiratory regarding destination. |
| **PROBABLE ONLY** | Collect serum sample in acute phase, repeat ≥2 weeks later, for 'COVID serology' | | |
| **MONITORING & MARKERS OF CLINICAL DETERIORATION** | • Monitor for progressive respiratory failure and sepsis, especially on days 5 to 10 after onset of symptoms.<br>• Only repeat CXR in people with suspected or confirmed COVID-19 if clinically indicated (e.g. in cases of clinical deterioration or recent intubation).<br>• Do not routinely perform CT scanning - only if clinically indicated.<br>• Anticipate complications such as pulmonary embolism, other thromboembolism, arrhythmias, cardiac impairment, acute kidney injury, sepsis, shock and multi-organ dysfunction, and address using existing standards of care. Also be aware of potential complications from trial drugs, if applicable.<br>• Repeat baseline investigations (see above) periodically in patients who are not clearly improving, in order to detect & manage the above complications. | | |
| **NOTIFICATION** | • Discuss all cases with ID at the earliest opportunity<br>• If not already notified, send e-ref to Auckland Regional Public Health AND notify by telephone (09 623 4600) | | |
| **CLINICAL TRIALS** | • All patients should be screened for eligibility for one of two clinical trials currently recruiting at CMH<br>• 'REMAP-CAP' is recruiting patients admitted to ICU, and 'ASCOT-ADAPT' is recruiting hospitalised patients outside of ICU. Discuss with ID in the first instance. | | |


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| **Document Owner:** | **COVID-19 Response Manager** | **Next review date:** | **25/08/2021** |
| **Approved by:** | **Infection Services / Respiratory** | **Date first issued:** | **05/09/2020** |

**This information is correct at date of issue. Always check on Counties Manukau DHB Controlled Documents site that this is the most recent version.**

# Management of COVID-19 in Adults

## Treatment

***NOTE:- the standard-of-care for patients with COVID-19 is to be offered enrolment in one of our clinical trials. This table indicates which treatment modalities are affected if the patient is enrolled in a trial:***

| MODALITY | PATIENT SUB-GROUPS | RECOMMENDATION |
|---|---|---|
| **STEROIDS** | Adults who do not require oxygen | Do not use steroids to treat COVID-19 |
| | Adults requiring oxygen and/or ventilatory support to maintain oxygen saturation ≥92% | Dexamethasone 6mg daily IV/PO for up to 10 days or until discharge. |
| | Adults with another evidence-based indication for steroids (e.g. asthma/COPD exacerbations) | Steroids as per usual practise. |
| **ANTI-VIRAL THERAPY** | ***All patients enrolled in ASCOT-ADAPT trial (anti-viral domain)*** | ***As per trial protocol & randomisation (in addition to remdesivir, if indicated below)*** |
| | Adults with mild COVID-19 | Do not use remdesivir or any other anti-viral outside of a clinical trial |
| | Adults with moderate to severe COVID-19 who do not require ventilation<br>• *Note – must have ALT <5 x ULN and/or ALT <3 x ULN and bilirubin <2 x ULN* | Commence Remdesivir:<br>• Contact on-call pharmacist - an access form needs to be completed; stock is held at Auckland Hospital<br>• 200mg IV on day 1, then 100mg q24h for a further 4 days (up to 10 days may be considered in selected severe cases)<br>• Dose made up in 250mL 0.9% NaCl, infuse over 30-120min<br>• Monitor LFTs daily; discuss with ID if eGFR <30 or AKI |
| | Adults with critical COVID-19 who require ventilation (invasive or non-invasive) | Do not use remdesivir or any other anti-viral outside of a clinical trial |
| **IMMUNE MODULATION THERAPY** | ***There are no trials of immune modulation therapies currently recruiting at CMH*** | |
| | Adults with COVID-19:<br>• AND receiving oxygen + steroids<br>• AND CRP ≥75mg/L OR other evidence of severe systemic inflammation<br>• AND there is not another active, severe secondary infection | Give Tocilizumab:<br>• ID will need to apply to Pharmac for a 'rapid NPPA' but the dose can be given prior to this; stock is held at MMH<br>• 8mg/kg (actual body weight) rounded to nearest 200mg (max dose 800mg), as a single dose<br>• A second dose may be considered 12-24 hours later if the patient's condition has not improved<br>• *Notes:– cytotoxic precautions are not required if used for COVID-19; risk of secondary infection is significantly increased; CRP response is inhibited.* |
| | COVID-19 not meeting the criteria above | Do not use immune modulation therapy |
| **VTE PROPHYLAXIS** | ***All patients enrolled in ASCOT-ADAPT trial (anticoagulation domain)*** | ***As per trial protocol & randomisation (in addition to standard VTE prophylaxis below)*** |
| | Adults with mild COVID-19 plus any additional VTE risk factors OR all cases of moderate to severe/critical COVID-19 AND no contra-indication to anticoagulation e.g. risk for major bleeding | Enoxaparin 40mg SC once daily<br>• Reduce to 20mg if eGFR <30 mL/min/1.73m$^2$<br>• *NOTE:- Higher dosing strategies, or d-dimer-guided treatment, are not currently supported by the balance of evidence (outside of clinical trials)* |
| | Pregnant or postpartum women with any severity of COVID-19 | Enoxaparin as above<br>• *NOTE:- Discuss dosing & duration with Obstetrics* |
| **ANTIBIOTIC THERAPY** *(not routinely indicated to treat COVID-19)* | Mild or moderate COVID-19 without specific evidence of concurrent bacterial infection (which is rare in the first 7 days of illness) | Do not use antibiotics |
| | Any severity of COVID-19 AND specific evidence of concurrent bacterial infection (e.g. positive culture/antigen, purulent sputum, focal/unilateral consolidation, unilateral pleural effusion, neutrophilia) | Calculate CURB-65 score:<br>• 0-2 = Doxycycline 200mg PO once daily for 5 days<br>• ≥3 = Ceftriaxone 2g IV once daily for 5 days<br>• Review decision/results at 48-72 hours |
| | Severe/critical COVID-19, especially with any deterioration occurring >7 days post onset | Discuss with ID (in hospitalised COVID-19 it is common to develop late, severe, secondary bacterial sepsis) |

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| **FLUID MANAGEMENT** | • Use a restrictive fluid management strategy<br>• Avoid: 'maintenance' IV fluids, high volume enteral nutrition, and repeated fluid boluses for hypotension. | |
| **RESPIRATORY SUPPORT** | All patients | Switch nebulisers to metered dose inhalers via spacer if possible. |
| | $SpO_2$ <92% or significantly below baseline | • Administer dry oxygen (1-4 L/min) via standard nasal prongs<br>• Aim for $SpO_2$ 92–96% (88–92% for those at risk of hypercapnic respiratory failure)<br>• Use Hudson mask (5-10 L/min) if higher flow rates required<br>• Consider use of self-proning after consulting with Respiratory Physiotherapy |
| | Unable to maintain SpO2 ≥92% on conventional oxygen at 6 L/min | • Consider High Flow Nasal Oxygen (HFNO)<br>• *Note that this is a potential aerosol-generating procedure*<br>• Consider use of self-proning after consulting with Respiratory Physiotherapy |
| | Hypercapnic patients with underlying COPD or OHS | • Discuss with Resp about Non-Invasive Ventilation (NIV)<br>• *Note that this is a potential aerosol-generating procedure* |
| **ICU CARE** | Patients with any of the following signs of deterioration should be discussed with ICU:<br>• Increasing oxygen requirement (requiring FiO2 of 0.4 to maintain $SpO_2$ >92% on HFNO, or 10-15L/min conventional $O_2$ therapy)<br>• Increased work of breathing with impending respiratory failure<br>• Haemodynamically unstable<br>• Rapidly worsening tachypnoea or hypoxaemia<br>Detailed clinical guidelines for ICU care of COVID-19 is beyond the scope of this guideline. | |
| **THERAPIES FOR EXISTING INDICATIONS** | • ACE-inhibitors / ARBs<br>• Oral contraceptive pill (with or without oestrogen)<br>• Antenatal steroids for high risk of preterm birth | • Usual care (i.e. may be continued in COVID-19 unless otherwise contra-indicated) |
| | • Corticosteroids for asthma/COPD (inhaled or oral, with or without bronchodilators) | • Usual care<br>• Do not use a nebuliser |
| | • Oral menopausal hormone therapy / HRT | • Consider stopping until after recovery |
| **SURGERY** | • Do not routinely perform elective surgery within eight weeks of recovery from COVID-19 infection, unless outweighed by the risk of deferring surgery, such as disease progression or clinical priority.<br>• For people undergoing elective surgery following COVID-19 infection, consider carrying out multisystem preoperative assessment in consultation with ID and/or Respiratory. | |
| **PREGNANCY & PERINATAL CARE** | • Out of scope for this local guideline; detailed guidance is included in the Australian COVID-19 guidelines<br>• Input from Obstetrics, in discussion with ID and/or other relevant specialties, is essential. | |

## Discharge Planning:

Patients with Suspected, Probable or Confirmed COVID-19 who are being considered for discharge need to have specific decisions made about the following aspects of post-discharge care:

1. Further investigations (for Suspected)
2. Discharge destination:
   - Suspected cases being discharged before results are available should be notified to the Medical Officer of Health, who may request discharge to a quarantine facility.
   - Most Probable/Confirmed cases who remain in isolation will be discharged to Jet Park.
3. Clearance from isolation:
   - Mild cases can be released from isolation after ≥10 days have passed since the onset of symptoms AND there has been resolution of the acute symptoms for ≥72 hours.
   - Most hospitalised moderate & severe cases will require a further 10 days of isolation after discharge.
   - Patients with prolonged illness, long hospital stay, or major immunosuppression will require case-by-case review by ID.
   - Note – repeat swabs are generally discouraged (but may be requested by ID on a case-by-case basis).
4. Appropriate follow-up:

- Patients who have had significant respiratory failure and/or persistent dyspnoea or hypoxia may require respiratory follow up and support on discharge e.g. pulmonary rehabilitation, short-term oxygen.

All cases should be discussed with ID in advance to individualise the plan.