Safer Care Victoria

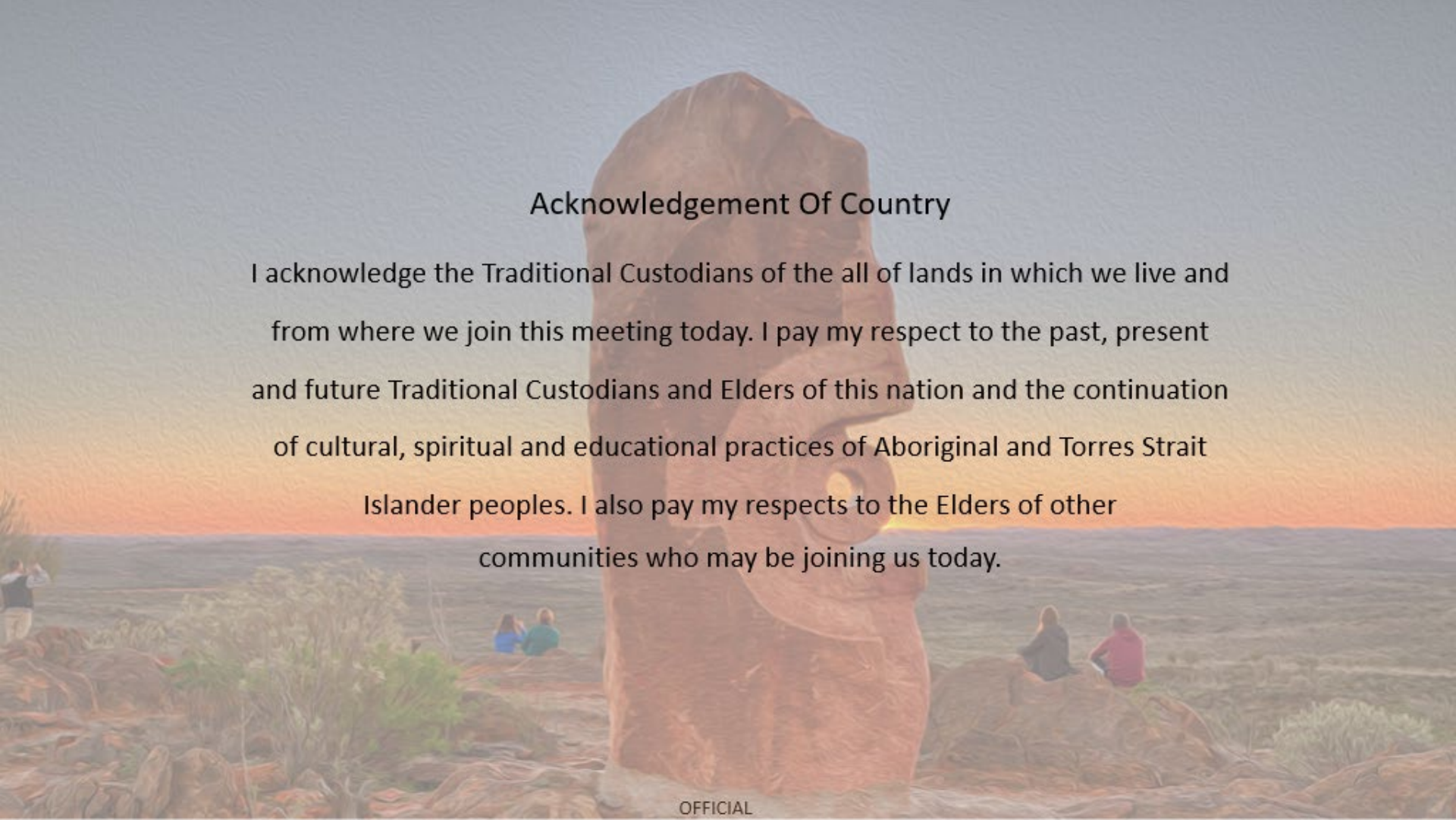
Wednesday 16 March, 2022

COVID+ Pathway Learning Network webinar series

Webinar 17: NHS London Omicron Experience and Learning - GP & Home Oximetry

OFFICIAL

VICTORIA State Government



Acknowledgement Of Country

I acknowledge the Traditional Custodians of the all of lands in which we live and from where we join this meeting today. I pay my respect to the past, present and future Traditional Custodians and Elders of this nation and the continuation of cultural, spiritual and educational practices of Aboriginal and Torres Strait Islander peoples. I also pay my respects to the Elders of other communities who may be joining us today.

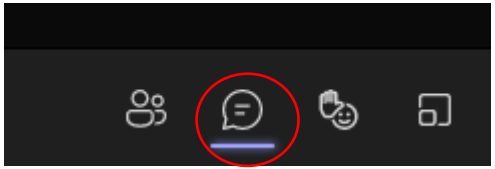
Webinar series purpose

- Showcase local clinicians who will share their experiences delivering the COVID+ Pathways model
- Provide a forum for sharing and collaboration to support the delivery of best practice

* To share your services' experiences, innovations and learnings in delivering the COVID+ Pathway at an upcoming webinar email centresofclinicalexcellence@safercare.vic.gov.au

Before we start

Throughout the webinar you can ask questions by typing your question into the chat.



There will also be a dedicated time for questions and discussions.

The presenters will do their best to answer your questions at the end of the presentation.

This session will be recorded and made available on the SCV website https://www.bettersafercare.vic.gov.au/support-training/learning-networks/covid-pathways

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Overview

Topic	Presenter
National Clinical Evidence Taskforce update	A/Prof Steve McGloughlin
NSW ACI BA2 Update	Jean-Frederic Levesque, *Chief Executive of the Agency for Clinical Innovation and the Executive Lead of the COVID-19 Critical Intelligence Unit in New South Wales*
UK Presentation: Omicron experience and learning – GP experience and home oximetry / virtual ward experience	Jo Sauvage, G*eneral practitioner leading on home oximetry and integrated care system lead for North central London*
Respiratory Management and experience of Omicron – new challenges and experience	Yogini Raste, *consultant respiratory consultant, Croydon University Hospital* Sarah Logan, *Lead of Infectious Diseases, University College Hospital*
Long Covid experience	Timothy Nicholson, *Kings College London*

National COVID-19 Taskforce Update

A/Prof Steve McGloughlin,

Director Department of Intensive Care & Hyperbaric Medicine Alfred Health: Associate Professor, School of Public Health and Preventive Medicine: Executive Director, National COVID-19 Clinical Evidence Taskforce

Safer Care Victoria Webinar
Taskforce Update

A/Prof Steve McGloughlin

Executive Director

March 16, 2022

NATIONAL COVID-19 CLINICAL EVIDENCE TASKFORCE

To be published later today…

NATIONAL COVID-19 CLINICAL EVIDENCE TASKFORCE

- **NEW Risk classification tool for adults with mild COVID-19**
- The available evidence is not sufficient to enable the Taskforce to determine which individual patients are most likely to benefit from treatment.
- But recommended drugs are likely to be most effective in preventing severe illness and mortality in those people who are at highest risk of these outcomes.
- Matrix has been developed to guide clinicians making decisions about which people are most likely to benefit from these drugs.
- Examples are based on the clinical expertise of the Taskforce, and not definitive nor exhaustive.

NATIONAL COVID-19 CLINICAL EVIDENCE TASKFORCE

RISK CLASSIFICATION TOOL FOR ADULTS WITH MILD COVID-19

The available evidence is not sufficient to enable the Taskforce to determine which individual patients are most likely to benefit from treatment. However, the recommended drugs are likely to be most effective in preventing severe illness and mortality in those people who are at highest risk of these outcomes.

The Taskforce has developed this matrix to guide clinicians making decisions about which people are most likely to benefit from these drugs. Examples are based on the clinical expertise of the Taskforce, and not definitive nor exhaustive.

Immunocompromising conditions

Primary or acquired immunodeficiency:
- Haematologic neoplasms: leukaemias, lymphomas, myeloproliferative syndromes
- Post-transplant: solid organ (on immunosuppressive therapy), haematopoietic stem cell transplant (within 24 months)
- Immunocompromised due to primary or acquired (HIV/AIDS) immunodeficiency or Down syndrome

Immunosuppressive therapy (current or recent):
- Chemotherapy, whole body radiotherapy or total lymphoid irradiation
- High-dose corticosteroids (>20 mg of prednisone per day, or equivalent) for >14 days
- All biological disease-modifying anti-rheumatic drugs (bDMARDs) and most other (e.g. conventional synthetic) DMARDs

Adults with mild COVID-19 at highest risk of severe illness

START HERE

Comorbidities

Vaccination Status

Age 18+ 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90+

- Immunocompromised
  - Highest risk of severe illness
- Aboriginal and Torres Strait Islander people
  - with no comorbidity
    - Up-to-date: Lower risk of severe illness; Risk depends on context and frailty
    - Not up-to-date: Lower risk of severe illness; Risk depends on context and frailty; Highest risk of severe illness
    - Unvaccinated: Risk depends on context; Highest risk of severe illness
  - with a comorbidity
    - Up-to-date: Lower risk of severe illness; Risk depends on context, frailty and extent of comorbidities; Highest risk of severe illness
    - Not up-to-date: Risk depends on context, frailty and extent of comorbidities; Highest risk of severe illness
    - Unvaccinated: Risk depends on context, frailty and extent of comorbidities; Highest risk of severe illness
  - with multiple comorbidities
    - Up-to-date: Risk depends on context, frailty and extent of comorbidities; Highest risk of severe illness
    - Not up-to-date: Risk depends on context, frailty and extent of comorbidities; Highest risk of severe illness
    - Unvaccinated: Highest risk of severe illness
- General population
  - with no comorbidity
    - Up-to-date: Lower risk of severe illness; Risk depends on context and frailty
    - Not up-to-date: Lower risk of severe illness; Risk depends on context and frailty; Highest risk of severe illness
    - Unvaccinated: Risk depends on context; Highest risk of severe illness
  - with a comorbidity
    - Up-to-date: Lower risk of severe illness; Risk depends on context, frailty and extent of comorbidities
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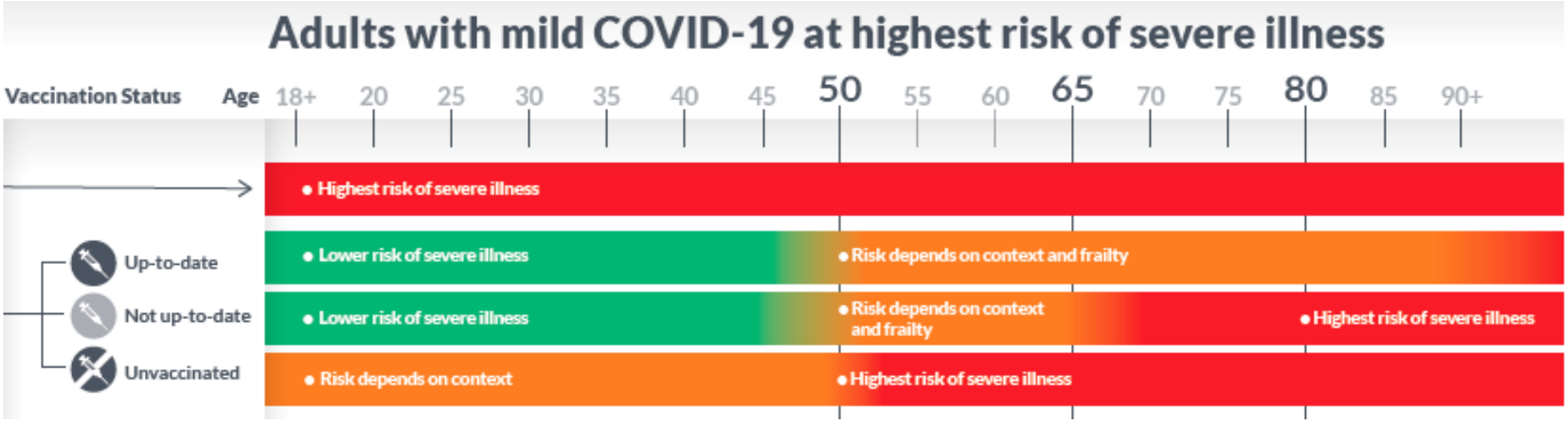
    - Unvaccinated: Risk depends on context, frailty and extent of comorbidities; Highest risk of severe illness
  - with multiple comorbidities
    - Up-to-date: Risk depends on context, frailty and extent of comorbidities
    - Not up-to-date: Risk depends on context, frailty and extent of comorbidities
    - Unvaccinated: Highest risk of severe illness

Comorbidities include:
- Respiratory compromise, including COPD, asthma and bronchiectasis
- Cardiovascular disease, including hypertension
- Obesity (BMI >30 kg/m2)
- Diabetes
- Renal failure

- Also consider whether people are unlikely to be able to access higher level care due to geographical remoteness or other factors

Risk classification tool for adults with mild COVID-19

NATIONAL COVID-19 CLINICAL EVIDENCE TASKFORCE



Stay up to date with Taskforce news

NATIONAL COVID-19 CLINICAL EVIDENCE TASKFORCE

- Subscribe to our mailing list at https://covid19evidence.net.au/#subscribe

OR

Follow us on twitter 

@evidenceCOVID19

aci.health.nsw.gov.au

Positive Pathways Webinar
Update from NSW

Jean-Frederic Levesque, MD, PhD, FRCP

16 March 2022

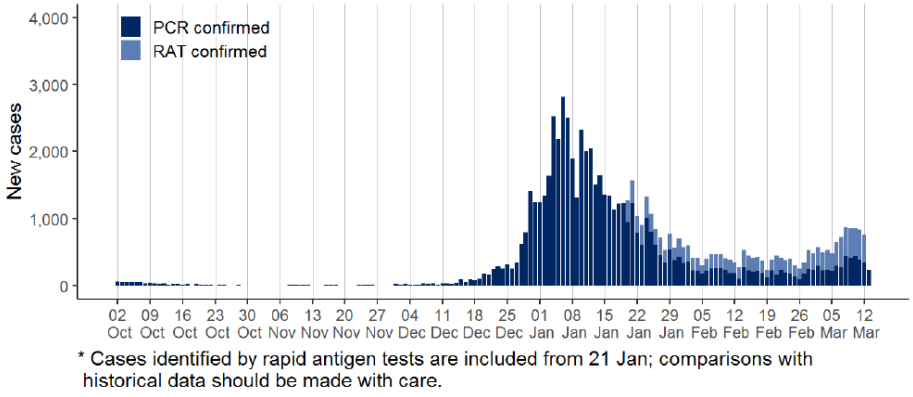
NSW GOVERNMENT

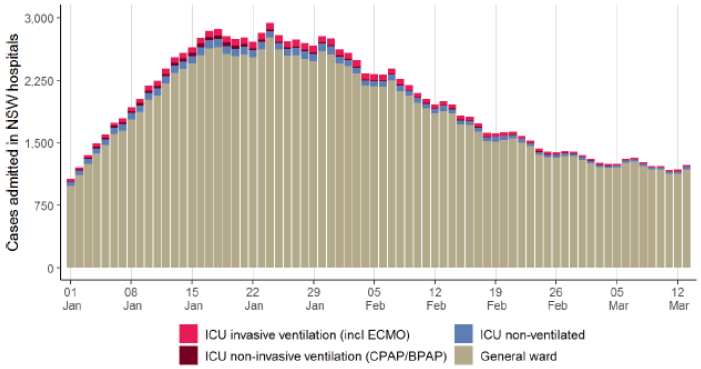
AGENCY FOR CLINICAL INNOVATION

@nswaci

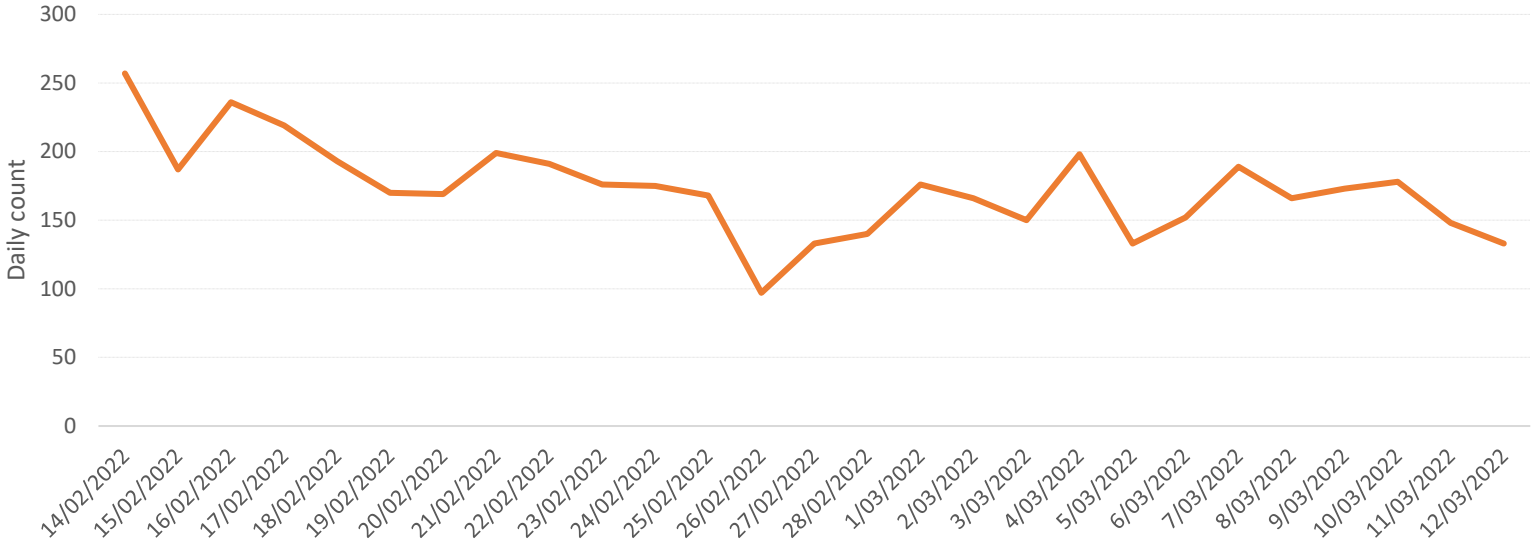
Current situation

- Increases across a range of metrics, indicate greater community transmission
- 7-day average daily cases 13,053 (from 9,734 last week)
- The NSW growth factor has remained at 1.05 for the past 7 days. High growth rates in Northern Sydney (1.09) and Sydney (1.08)
- Conversion rates of cases to hospital admission are decreasing 1.77% from 2.27% last week
- Furloughed staff re-increasing (2,558 today from 1,833 last week)
- Case fatality rates are low and decreasing
- PCR tests and PCR test positivity are both increasing
- BA2 increasing – potentially at 50% of cases

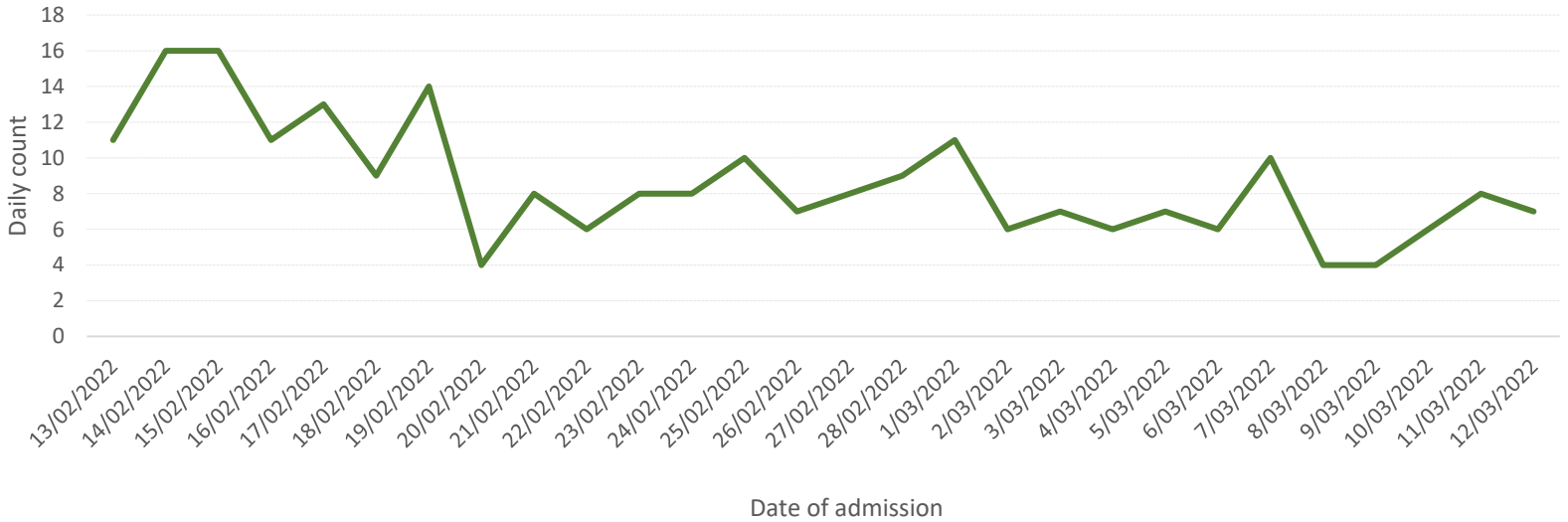




Number of people with COVID-19 admitted to hospital per day, NSW, in four weeks to 12 March



Number of people with COVID-19 admitted to ICU per day, NSW, In four weeks to 12 March



Models of care and Clinical guidance produced

Models of care

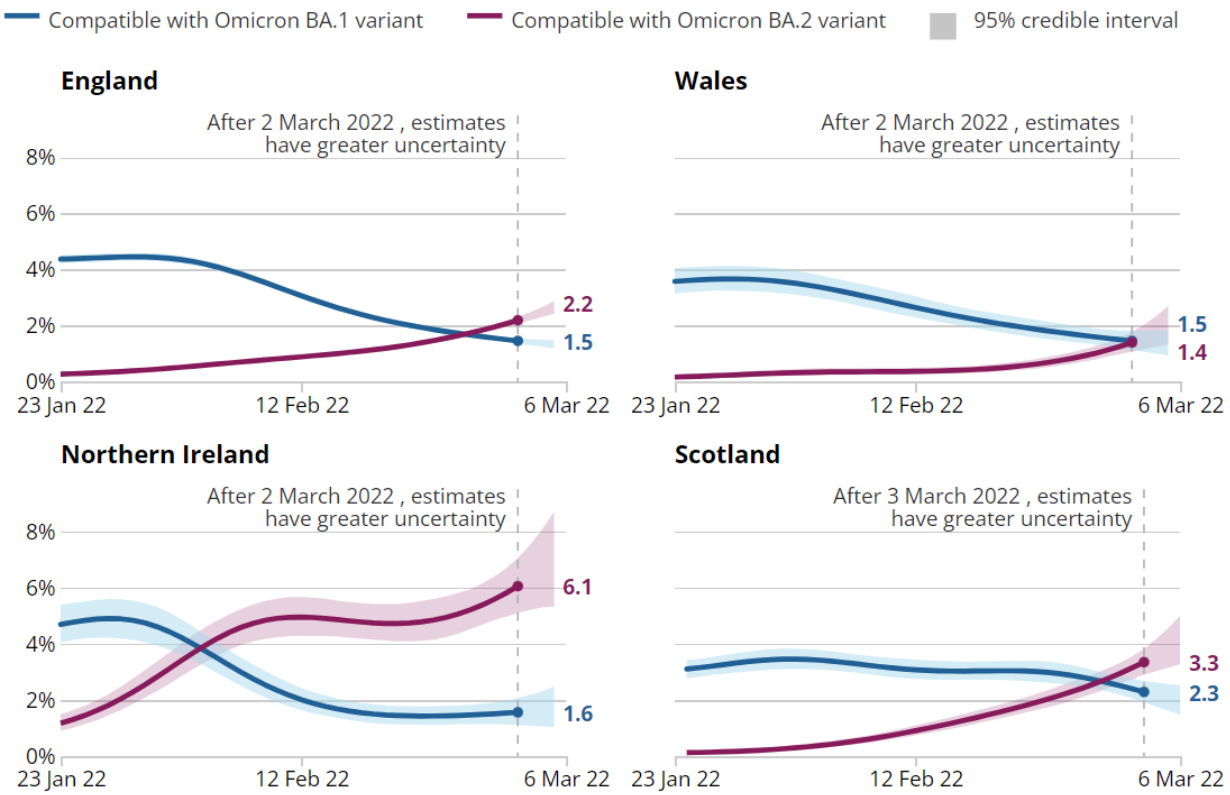
- Management of adults with COVID-19 in the post-acute phase
- Care of adult patients with COVID-19 in acute inpatient wards
- The use of anti-SARS-CoV-2 monoclonal antibodies and oral antivirals for people with mild to moderate COVID-19

Clinical guidance

- Respiratory support in adults with COVID-19
- Assessment and management of adults with post-acute sequelae of COVID-19
- Medicine management for pregnant patients with COVID-19
- Caring for adults and children in the community with COVID-19; flow chart, protocols, clinical and risk assessment.
- Intrahospital transfer of COVID-19 positive/suspected patients from the emergency department

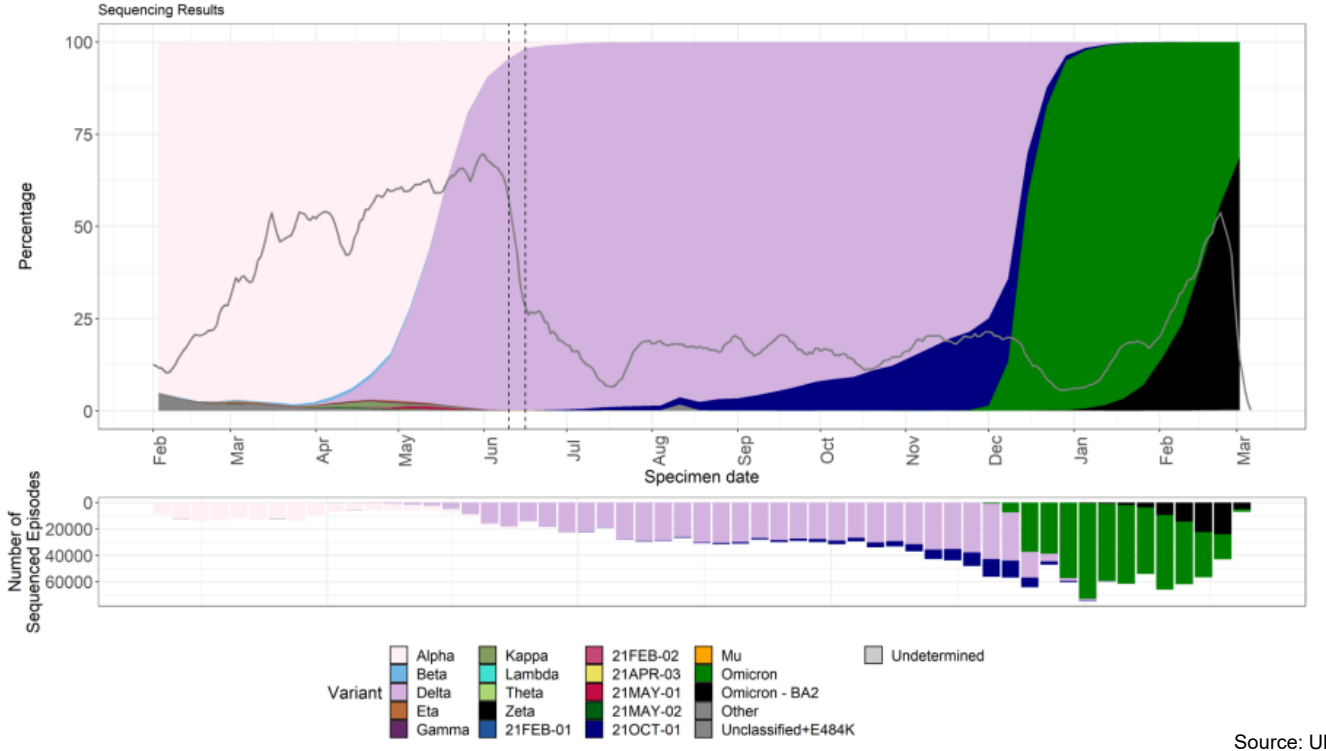
Omicron BA.2

- Omicron includes four Pango lineages: the parental B.1.1.529 and the descendent lineages BA.1, BA.2 and BA.3.
- BA.2 does not contain the deletion at S:69-70 and is S-gene target positive (SGTP) on PCR diagnostic assays
- Increased growth rate compared to BA.1. Preliminary data from Denmark suggests BA.2 may be 1.5 times more transmissible than BA.1. The reproduction number of BA.2 estimated 1.4-fold higher than BA.1
- Preliminary analysis suggests a mean serial interval of 3.27 days compared to 3.72 days for BA.1. Both are shorter than the mean serial interval for Delta of 4.09 days
- Preliminary analysis from the UKHSA suggests a 13.4% secondary attack rate for BA.2 compared to 10.3% for other Omicron cases. Estimates from Denmark are 29% and 39% in households with BA.1 and BA.2, respectively, and data suggests increased transmissibility from unvaccinated primary cases in BA.2 households.
- Early assessments do not suggest a difference in vaccine effectiveness against symptomatic disease for BA.2 compared to BA.1. One study suggests vaccine effectiveness against symptomatic disease is similar for BA.1 and BA.2.
- Early evidence suggests BA.2 reinfections can occur shortly after BA.1 infections, however reinfection is rare. A Danish study identified 47 cases of BA.2 reinfection after BA.1 infection, mostly in unvaccinated individuals with mild disease not resulting in hospitalisation or death. Another study suggests protective effectiveness of BA.1 infection against reinfection with BA.2 is ~94.9%
- Early data from Denmark suggests there is no difference in the risk of hospital admissions between BA.1 and BA.2.
- BA.2 exhibits marked resistance to monoclonal antibodies including Sotrovimab, which retained neutralising activity against BA.1



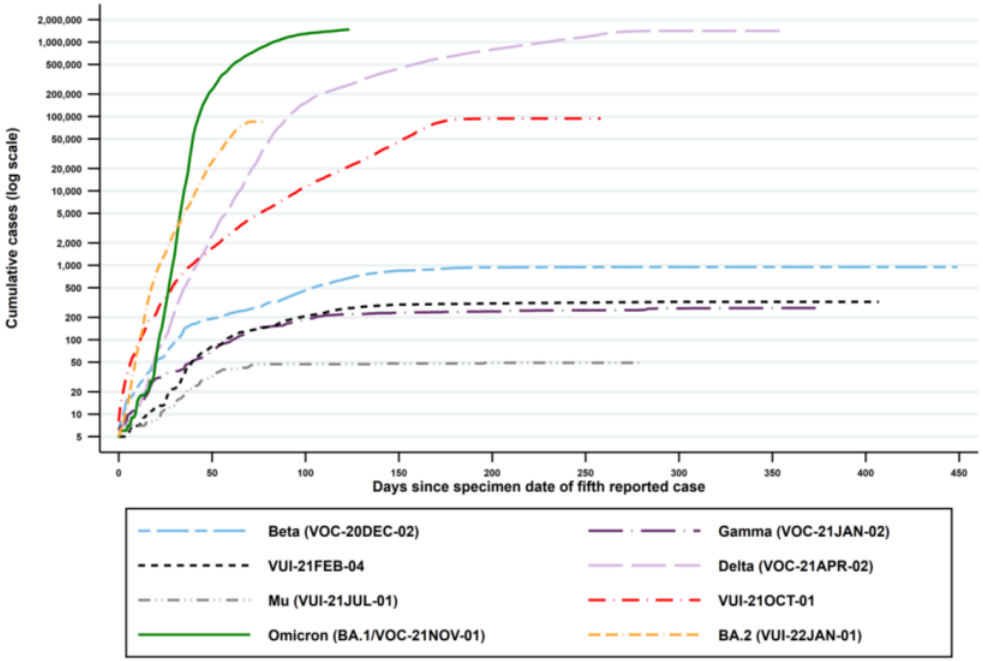
Source: Office for National Statistics – Coronavirus (COVID-19) Infection Survey

Figure 2. Variant prevalence of available sequenced cases for England from 1 February 2021 as of 8 March 2022
(Find accessible data used in this graph in underlying data. Dashed lines indicate period incorporating issue at a sequencing site. Grey line indicates proportion of cases sequenced.)



Source: UK Health Security Agency

Figure 1. Cumulative cases in England of variants indexed by days since the fifth reported case as of 6 March 2022



Source: UK Health Security Agency

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Questions?

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Presentations

Dr. Josephine Sauvage, G*eneral practitioner leading on home oximetry and integrated care system lead for North central London*

COVID Oximetry @home; London's journey

UK experience of a respiratory support unit

Dr Yogini Raste

Consultant Chest Physician

Croydon University Hospital

Background

Croydon University Hospital – a busy district general hospital serving a large diverse population of ~390,000 in south London

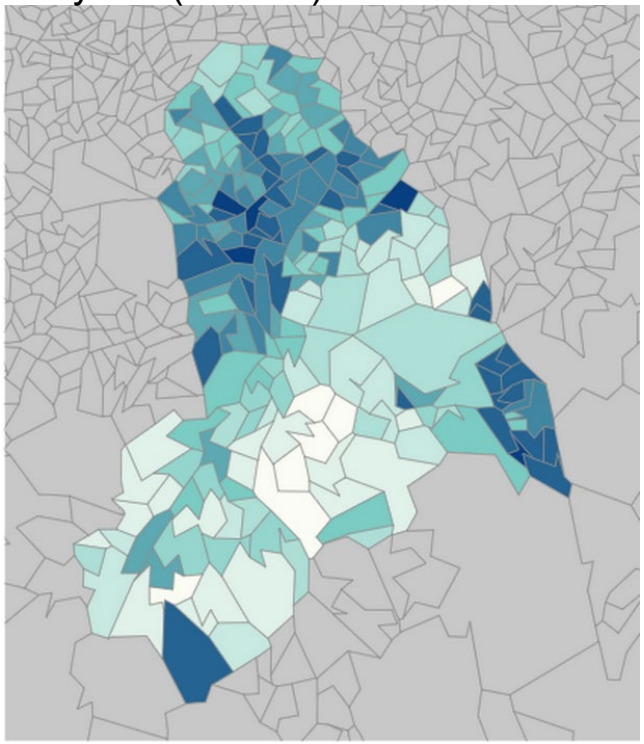
Small Critical Care Unit (8 ITU/7 HDU)

50.7% - Black, Asian and Minority Ethnic (BAME); significance in COVID-19

Co-morbidities (diabetes, cardiovascular disease)

North Croydon and New Addington – high areas of deprivation

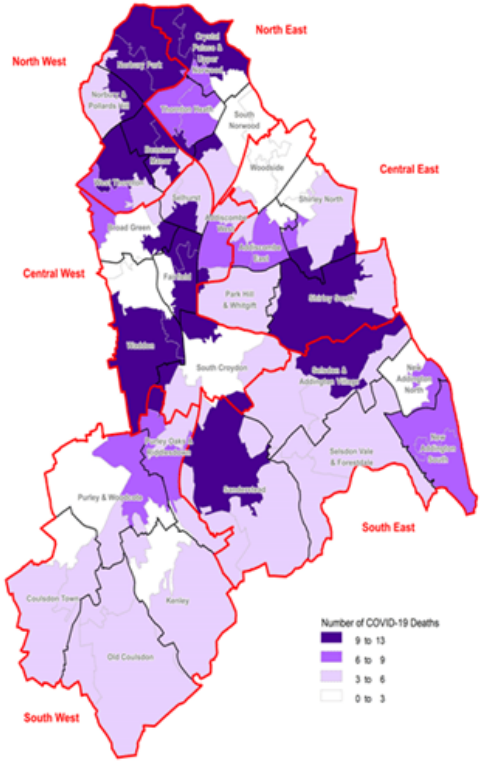
Social deprivation and COVID-19 deaths in Croydon (wave 1)



Darkest = most deprived (2019)

Total deaths where COVID-19 was underlying cause or stated on the death certificate as a contributory factor

ONS. Deaths occurring between 1 March to 17 April



Wave 1 & 2

Similar challenges – huge influx of patients requiring respiratory support with limited critical care capacity

Higher than expected failure rate of IMV (wave 1)

?CPAP as bridge to IMV or where IMV not appropriate due to co-morbidities

What to do???

Respiratory HDU

Converted our Respiratory ward to an HDU

1 ward quickly became 2

Maximum of 30 CPAP patients at height of each wave

Consultants on partial shift rota (full days and night cover by phone)

24 hour junior doctor staffing

Respiratory ward nurses with Critical Care Outreach support

Challenges

Lack of equipment

Lack of experience

Lack of oxygen

Lack of staff (including illness – COVID-19)

Fear of the unknown

Deteriorating patients

Positives

Team work – multidisciplinary

Rapid upskilling of staff – true experts in COVID-19 management

Management of O2, PPE and CPAP capacity despite intense pressures

Bravery and resilience of staff - OUTSTANDING

COVID-19

Adaptation of a respiratory service to provide CPAP for patients with COVID-19 pneumonia, outside of critical care setting, in a district general hospital

Authors: James Talbot-Ponsonby,[A] Alvin Shrestha,[B] Anitha Vijayasingam,[C] Stuart Breck,[D] Reza Motazed[E] and Yogini Raste[F]

ORIGINAL RESEARCH

Future Healthcare Journal 2021 Vol 8, No 2: e302–6

ABSTRACT

Introduction

One-hundred and forty patients at Croydon University Hospital received continuous positive airway pressure (CPAP) on a specialist respiratory ward, as a bridge to invasive mechanical ventilation (IMV) or as a ceiling of care for COVID-19. This retrospective study aimed to outline service expansion, patient characteristics and explore risk factors in outcomes.

Results

Mean age of patients on CPAP was 64 years (standard deviation 12). The median number of days from admission to CPAP initiation was 1 day (interquartile range (IQR) 0–3), and time before successful wean off CPAP was 4 days (IQR 2–6). Twenty-eight-day mortality was 64%. Thirty-four per cent of patients went onto require IMV, 24% improved off CPAP and 41% were palliated. The 28-day non-survivor group were of older age, had statistically significant higher admission creatinine and higher peak oxygen requirement. Age above 65 years was associated with higher mortality (odds ratio 5.9; 95% confidence interval 2.63–13.3).

Conclusion

CPAP is a viable ceiling-of-treatment option in those unsuitable for ventilation, and may even avoid the need for ventilation in others. Duration on CPAP may be useful for service provision to predict resource allocation. The rapidity from admission to CPAP initiation highlights the need for early ceilings of care to be established.

Table 1. Characteristics of continuous positive airway pressure recipients separated by 28-day mortality

	Survived	Died	
Individuals with COVID-19, n[a]	51	88	
Swab PCR positive, n	41/51	79/85[b]	
Mean age, years	58	66	p<0.001 (T test)
Male, n (%)	37 (73)	64 (73)	
Ethnicity, n (%)			p=0.93 (chi-squared test)
Asian	9 (18)	17 (19)	
Black	13 (25)	2 1 (24)	
White	13 (25)	26 (30)	
Other	16 (31)	24 (27)	
Comorbidity, n (%)			
Cardiovascular	4 (8)	16 (18)	
Respiratory	6 (12)	6 (7)	
Hypertension	25 (49)	38 (43)	
Diabetes mellitus	14 (27)	36 (41)	
Clinical frailty scale <5, n (%)	48 (94)	77 (88)	p=0.21 (chi-squared test)
Admission creatinine, µmol/L	103	131	p=0.02 (T test)
Admission C-reactive protein, mg/L	154	162	p=0.67 (T test)
Highest FiO_2 required	0.69	0.83	p<0.001 (T test)
Highest PEEP required, cmH_2O	10.1	10.8	p=0.13 (T test)

[a]one data point missing for 28-day mortality, omitted during analysis; [b]three data points missing for swab results in 'died' group; CPAP = continuous positive airway pressure; FiO_2 = fraction of inspired oxygen; PCR = polymerase chain reaction; PEEP = positive end-expiratory pressure.

Table 2. Comparison of CPAP-to-IMV and straight-to-IMV groups

	CPAP-to-IMV, n=48	Straight-to-IMV, n=22
Male, n (%)	38 (79)	14 (64)
Female, n (%)	10 (20)	8 (36)
Mean age, years	59	54
Comorbidities, n (%)		
Hypertension	19 (40)	10 (45)
Diabetes mellitus	16 (33)	10 (45)
Respiratory disease	4 (8)	5 (23)
Cardiac disease	2 (4)	0
28-day mortality, n (%)[a]	28/47 (60)	12/20 (60)

[a]Missing data (one for CPAP-to-IMV; two for straight-to-IMV); CPAP = continuous positive airway pressure; IMV = invasive mechanical ventilation.

CPAP-to-IMV vs straight-to-IMV

There was no difference in 28-day mortality between those requiring IMV after CPAP failure (CPAP-to-IMV) and those who went straight-to-IMV in our institution (chi-square test p=0.90; Table 2).

The age of Omicron

Far less demand for respiratory support; admitted with rather than for COVID-19

VACCINATION

Therapeutics – Dexamethasone, Tocilizumab, nMABs, anti-virals

EXPERIENCE

University College London Hospitals
NHS Foundation Trust

UCLH -COVID-19 experience Winter 20/21 and 21/22

Dr Sarah Logan

Consultant in Infectious Diseases

Sat 11 Jan at 06:06

How worried should we be about this?

First death from China mystery illness outbreak

First death from China mystery illness outbreak
theguardian.com

Sat 11 Jan at 07:31

Doesn't sound as bad as Sars

Cohort of ED admissions over winter 20/21 and winter 21/22

Period 1.12.20-28.2.21 & 1.12.21-28.2.22

Swab PCR +ve or recorded as diagnosis

20/21= 721

21/22= 407

Similar gender split

Median age 64 in 20/21 and 59 in 21/22

33% had had a 3rd booster vaccination more than 14 days before admission this winter.

Charlson comorbidity index

20/21= 10% of admissions had 1 comorbidity

- 6% had 2 or more

21/22= 15% of admissions had 1 comorbidity

- 33% had 2 or more

What sort of beds do you need?

Ratio of admissions whose stay included ICU

6:1 in 20/21

9:1 in 21/22

Deaths

16% mortality if admitted through ED 20/21

3% mortality if admitted through ED 21/22

Treatment options

O_2

Ventilation and organ support

Antivirals, remdesivir, molnupiravir, paxlovid,

Monoloclonals

Ronapreve, Sotrovimab
Immunomodulation

Steroids, Tociluzimab, Sarilumab
Trials - RECOVERY, HEAL,

Workforce

Staff testing approaches

Changing policy on isolation

Expectation of working from home whilst off.

NHS

This article is more than **2 months old**

NHS in England hit by highest Covid absences since vaccine rollout

Average of 35,596 staff were sick with coronavirus in past week, figures show, a level last seen a year ago

Coronavirus - latest updates

See all our coronavirus coverage

The number of NHS England staff off sick due to Covid rose by 41% in the week to 2 January. Photograph: Tejas Sandhy/Sopa Images/Rex/Shutterstock

Pamela Duncan, Niamh McIntyre, Denis Campbell *and* Ashley Kirk

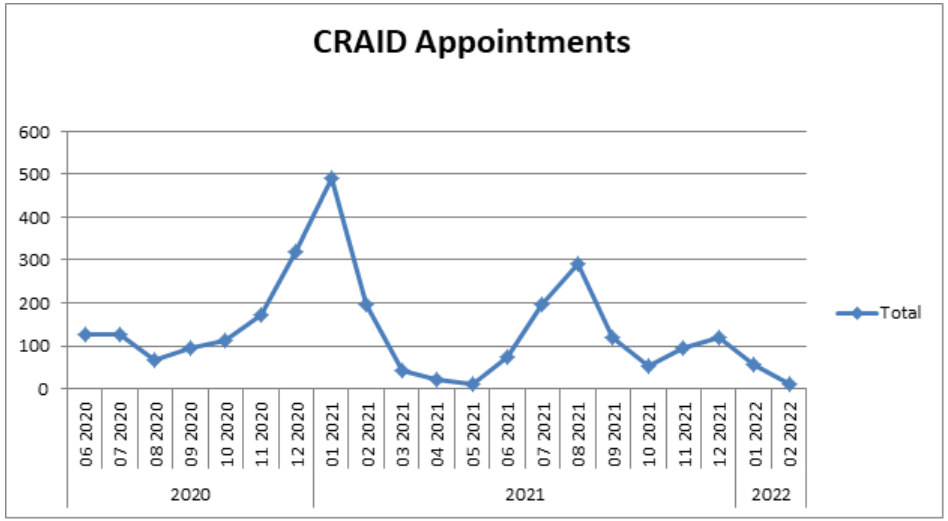
Fri 7 Jan 2022 13.49 GMT

Supporting patients at home with COVID-19

Remote monitoring

Same workforce

Different population this winter



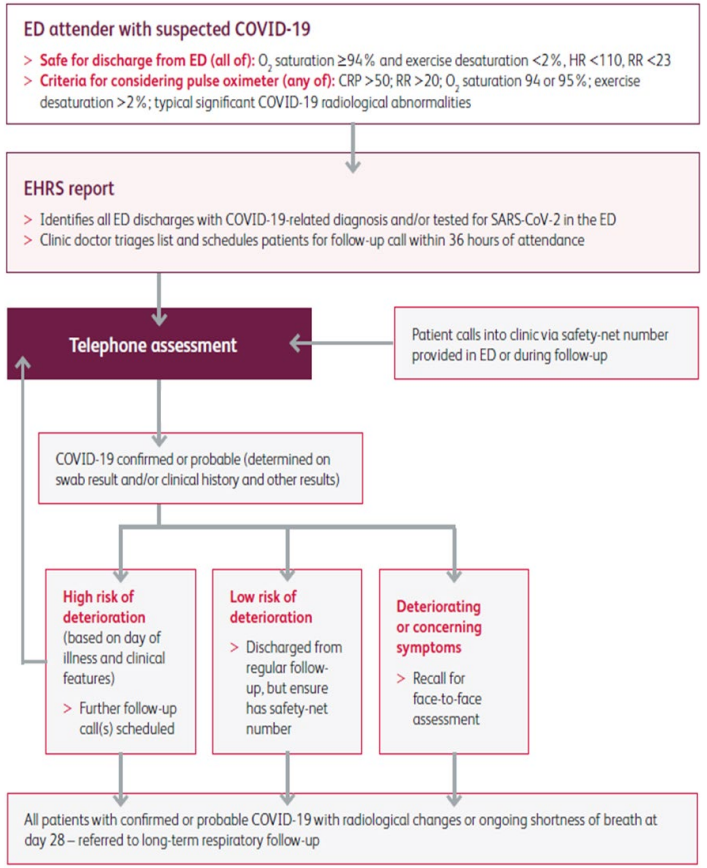
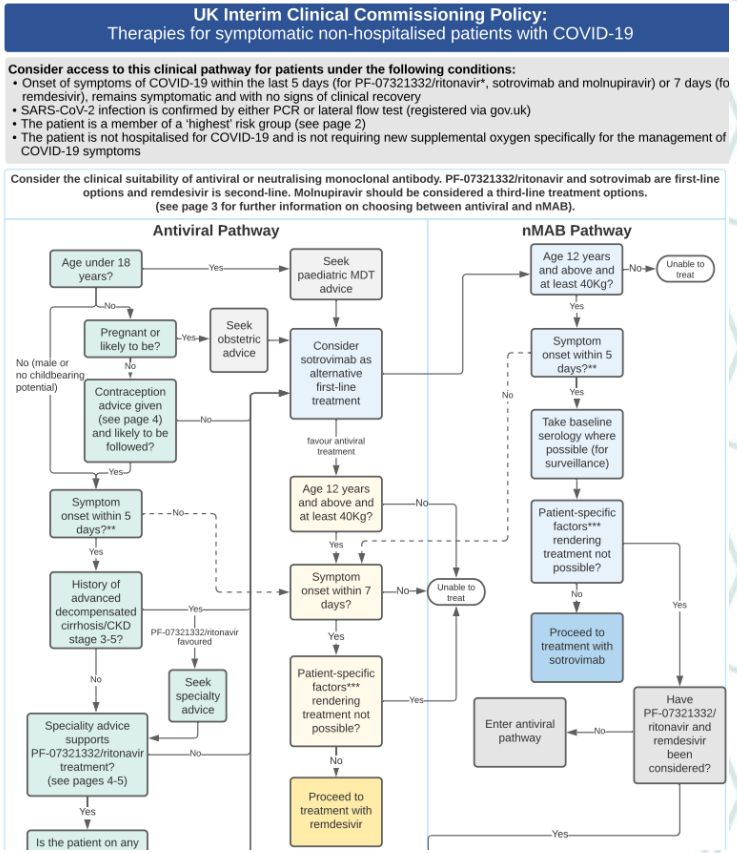


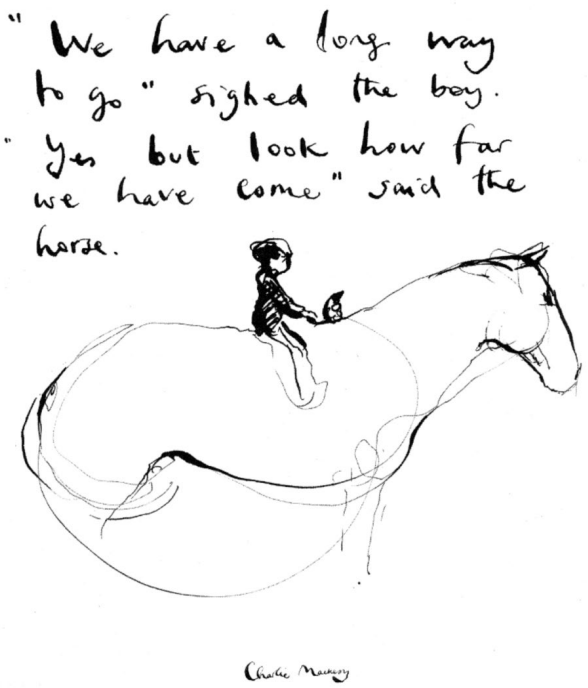
Fig 1. Rapid remote follow-up pathway. CRP = C-reactive protein; ED = emergency department; HR = heart rate; RR = respiration rate.

Covid19 medicines delivery units

- Run by acute trusts
- Different delivery models
- All use same workforce
- Health economic analysis needed



Conclusions



Questions

Please type your question in the chat

Get in contact

- Please complete our poll questions that will appear on your screen or in the chat
- To register for future webinars email us: centresofclinicalexcellence@safercare.vic.gov.au
- If you have specific questions relating to the COVID+ Pathways please email the Department of Health at covid+pathways@health.vic.gov.au

Resources

- Learning Network webinar recordings and slides
- COVID Clinical Shared Resources SharePoint page - Secure site for sharing, with permission, health service developed COVID-19 resources.
  - To register for access and to share resources contact centresofclinicalexcellence@safercare.vic.gov.au
- Department of Health COVID-19 clinical guidance and resources