

Canterbury
District Health Board
Te Poari Hauora o Waitaha

CORPORATE OFFICE

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10 May 2022

9(2)(a)



RE Official Information Act request CDHB 10851

I refer to your email dated 5 April 2022 requesting the following information under the Official Information Act from Canterbury DHB. Specifically:

The period I am requesting this information is from March 1 until April 5, 2022.

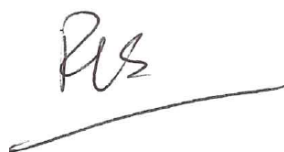
- 1. I request copies of any winter illness preparedness reports, briefing documents or modelling for influenza, RSV, measles or whooping cough illness that's held by Canterbury District Health Board in relation to the upcoming 2022 winter season. (This should include any planning or staffing reports relating to Christchurch Hospital's Emergency Department in relation to the upcoming winter season.)**

Please find attached as **Appendix 1** the 2022 Covid and Winter Planning preparedness modelling for Canterbury DHB as at 28 March 2022. This document is continually updated.

I trust that 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



Ralph La Salle
Senior Manager, OIAs
Canterbury DHB & West Coast DHB

2022 COVID & Winter Planning

Current COVID Situation Update

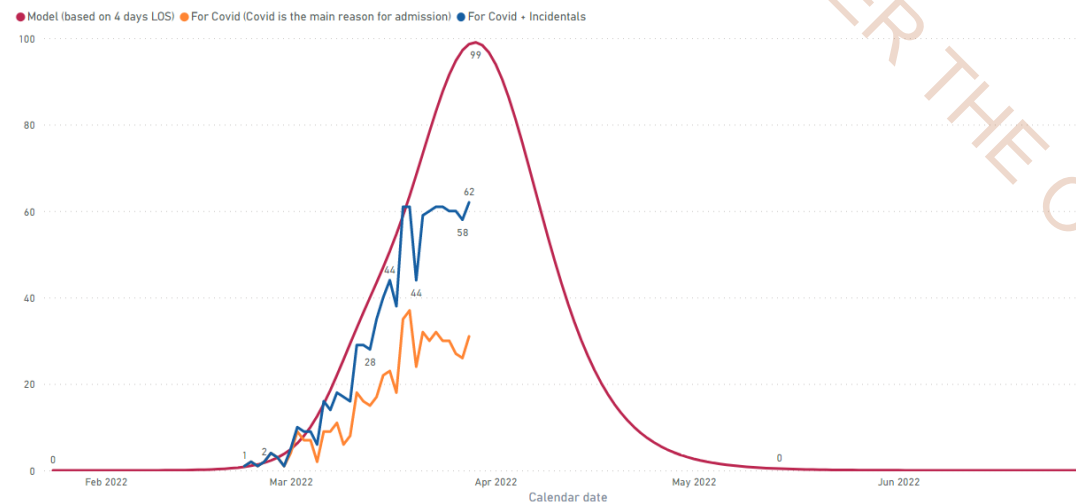
Scenario planning for second non-COVID winter outbreak

Current COVID Situation

Current Covid Hospitalisation Status – 28 March 2022

Actual vs Modelling PowerBI dashboard:

Hospital occupancy at 10am



Occupancy End 28 March:

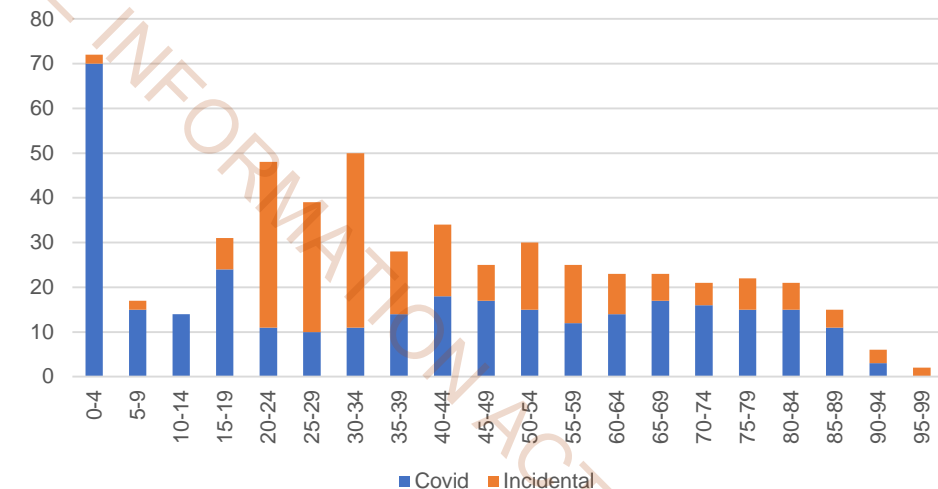
Covid Cases	Total
Adult	26
Child	9
Total	35

Incidental Cases	Total
Med/Surg	22
Maternity	3
Burwood	4
Ashburton	1
SMHS	1
Total	31

There have been 546 Covid-related admissions in the current outbreak so far, with average length of stay on discharge <2 days for admissions for Covid:

Group	Type	ALOS
For Covid	Adult	1.83
	Child	0.80
	Total	1.45
Incidental	Other Med/Surg	2.25
	Maternity	2.51
	Other	4.28
	Total	2.43

Covid-Related Admissions By Age Group



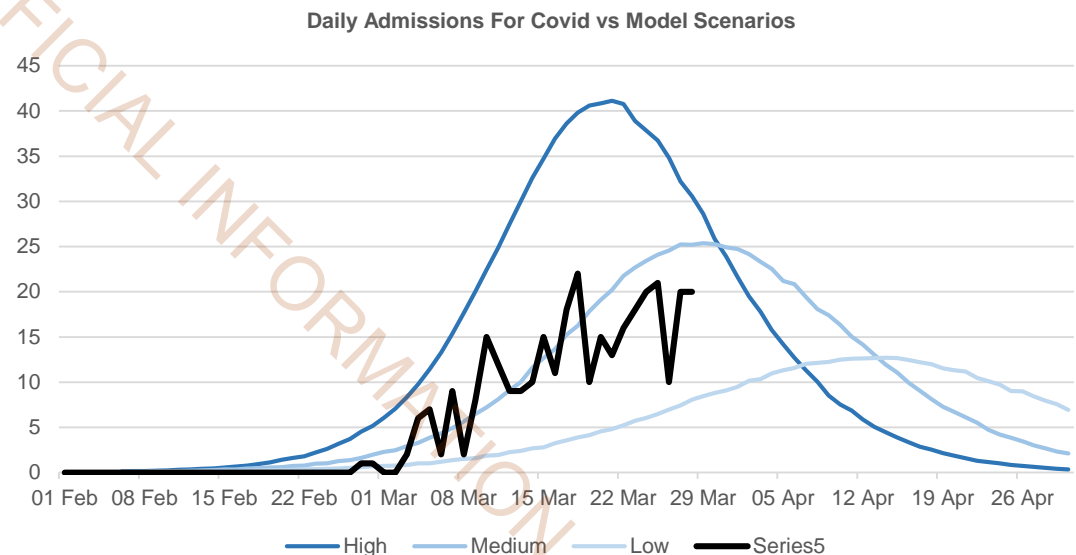
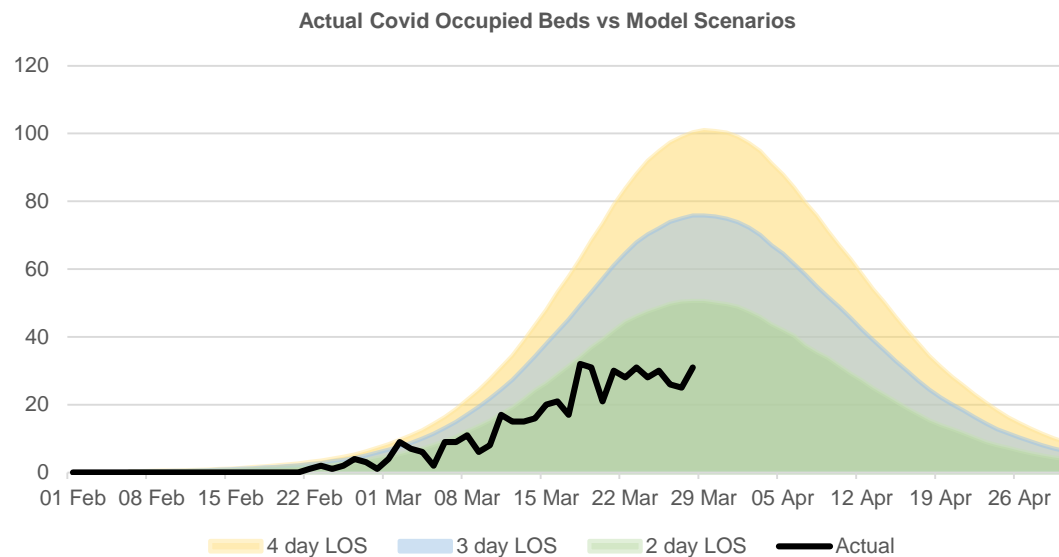
Inpatient Admissions For Covid

CMA/TAS model for admissions per day suggests we are still in a medium transmission scenario (left chart)

- Timeline for model pushed back 10 days to reflect later start to outbreak in Canterbury

Current data suggests admissions for Covid average a length of stay of about 2 days

Severity of cases seen may still increase leading to longer LOS and higher occupancy.



* Admissions and occupied beds for patients admitted because of Covid, does not include incidental cases

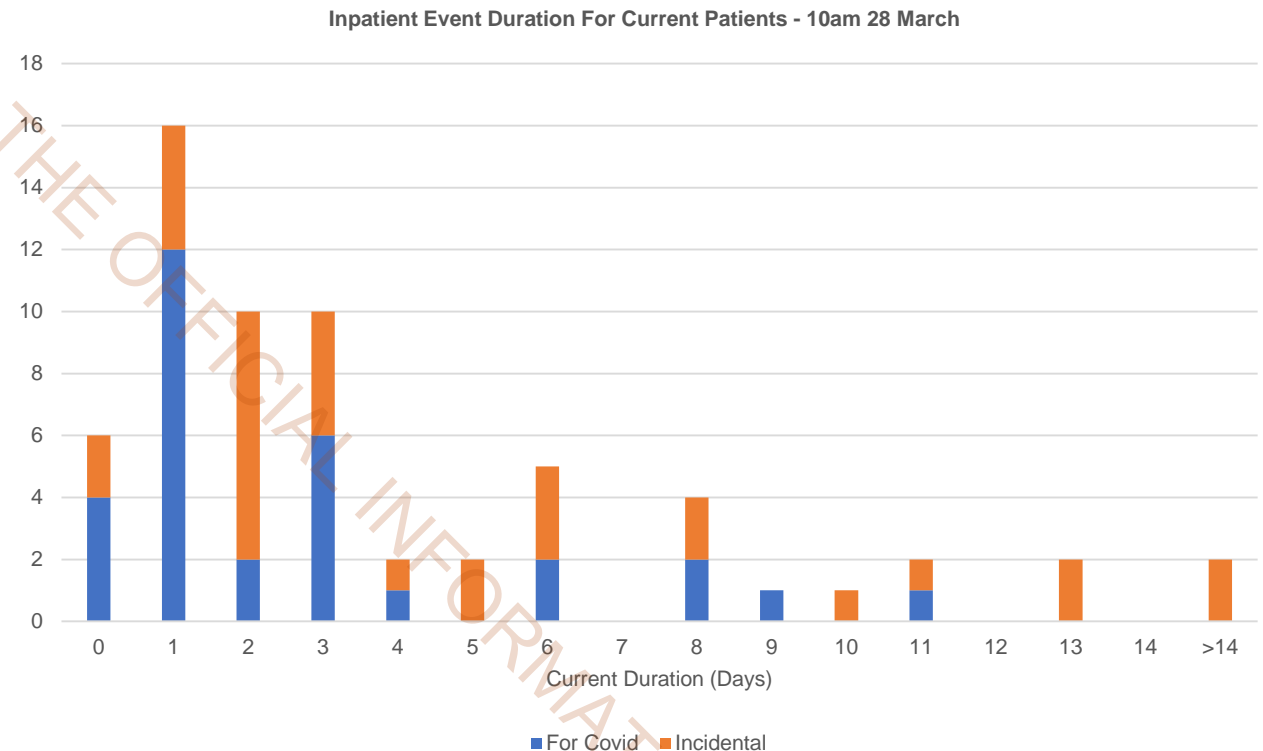
Duration of Current Inpatient Events 10am 28 March

Inpatient events for patients admitted for Covid have typically experienced short stays.

Most discharged events (85%) have a duration of 2 days or less.

Beginning to see signs of longer durations in patients currently in hospital.

Longer events are incidental Covid admissions in the main. Early indication of some in hospital transmission / delayed indication (but work needed on the data).

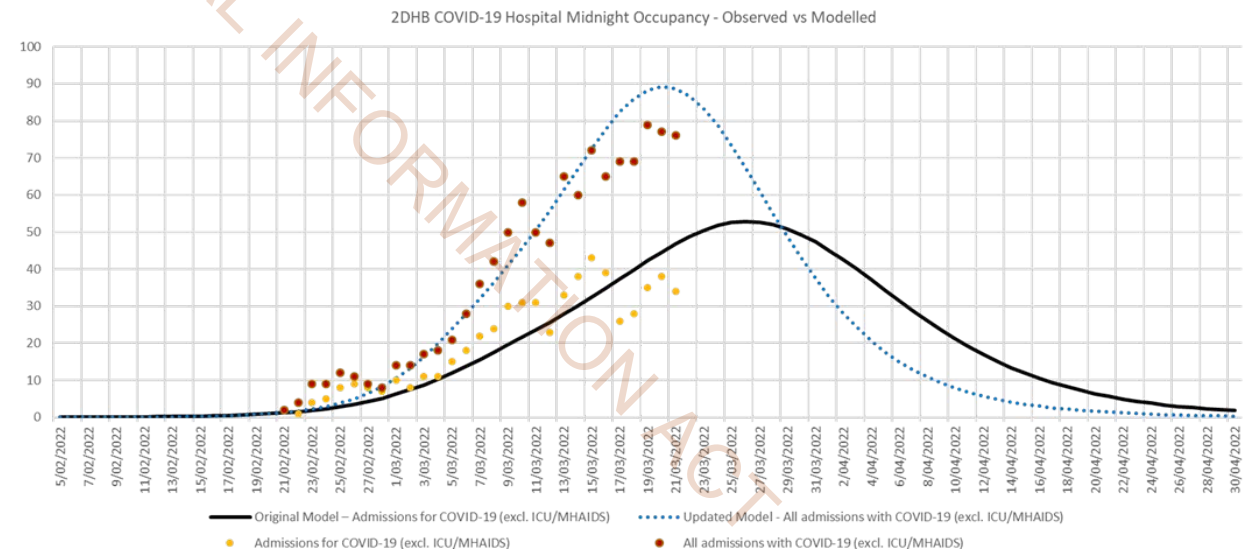
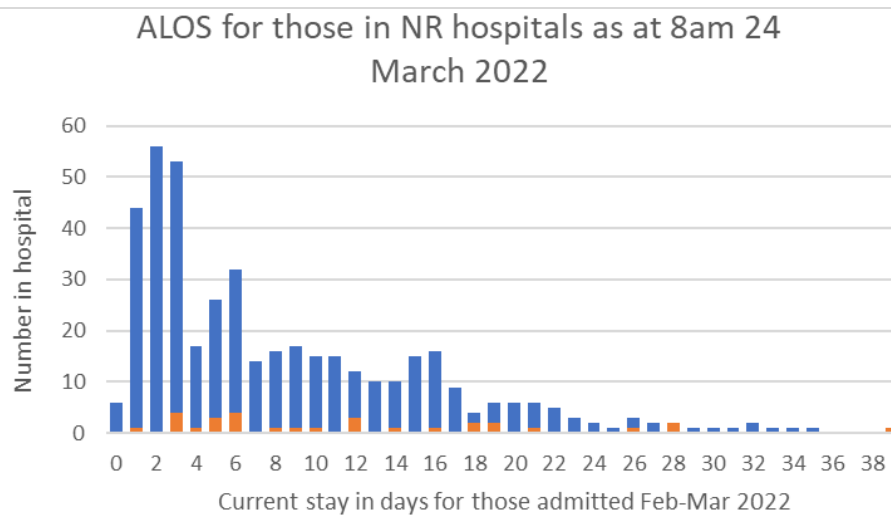
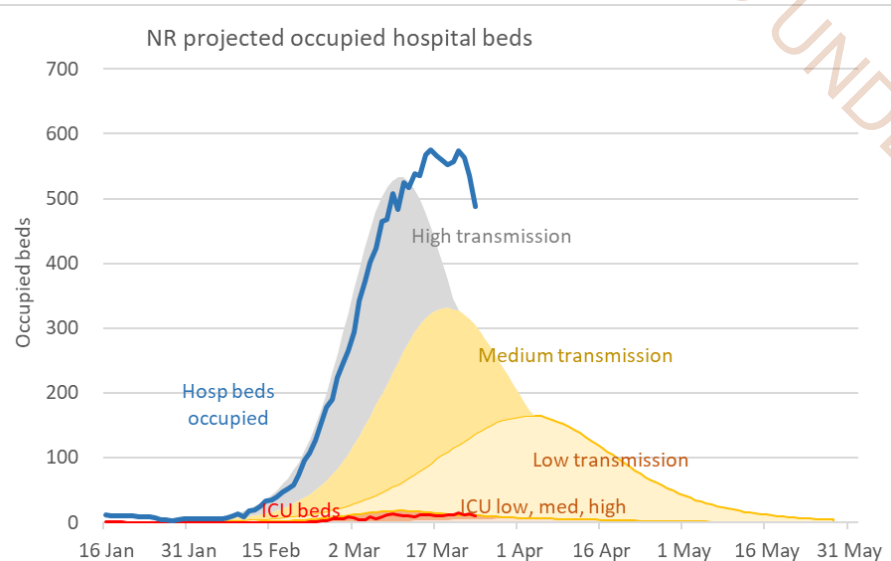


Status of Other DHBs: Northern Region & 2DHB

Northern Region (left) had 488 in hospital at 6am 24 March, 11 in ICU. Overall LOS (inc incomplete events) for ward stays is 3.25.

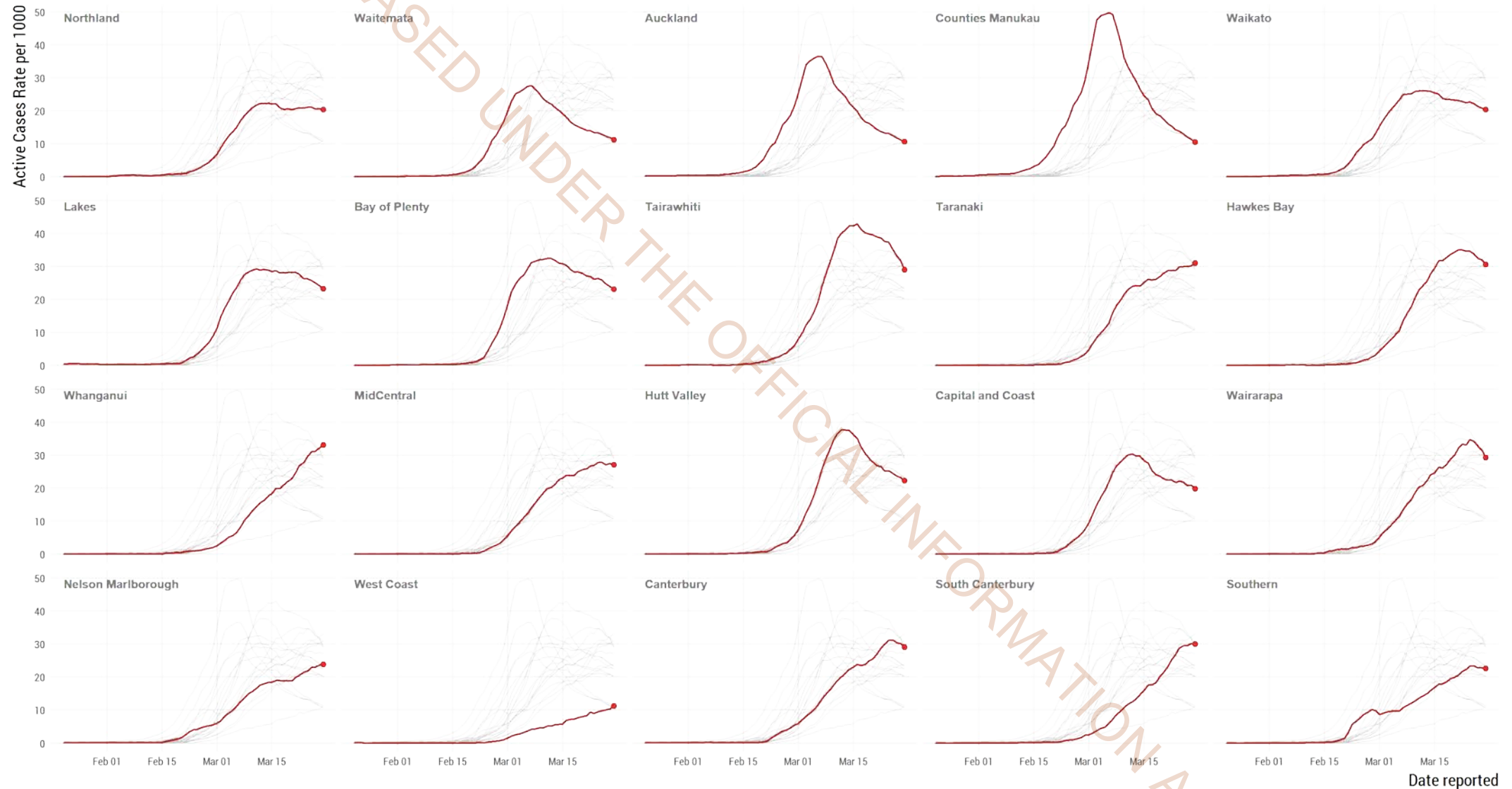
Capital & Coast and Hutt DHBs may be peaking at 80 beds now (ex ICU), have been starting to see longer LOS esp. among Maori & Pacific patients.

Clinical audit by NRR suggests they are seeing 35% cases For Covid, 37% With Covid, 20% delayed inpatient positive.



Active Reported Covid Cases: Directly Age Standardised Rate per 1000 By DHB

Data as of 2022-03-28



COVID in Hospital Context

Key Delivery Plan Notes

- Predictive methodology in line with operational planning methodology used for several years
 - **Step 1: Review key assumptions**
 - **Step 2: Unplanned (acute/arranged) daily bed** requirements forecasted from sfn historic operational activity profiles, with adjustments
 - **Step 3: Planned daily bed** requirements modelled by service based on: four week theatre schedule; historically observed events per theatre session; observed length of stay profiles for each scheduled session. Turn off public holidays
- Ongoing impacts of COVID-19 beyond post May/June 22 **not accounted** for
- Gen Med Occupancy Forecasts exclude Influenza (ICD J9-J11) which is modelled and added in separately
- All modelled outbreak patients assumed to be cared for by Gen Med (which is not strictly true)
- Only includes Christchurch Campus: Adult services, Med/Surg and Gynae, non-day case, non-ICU beds

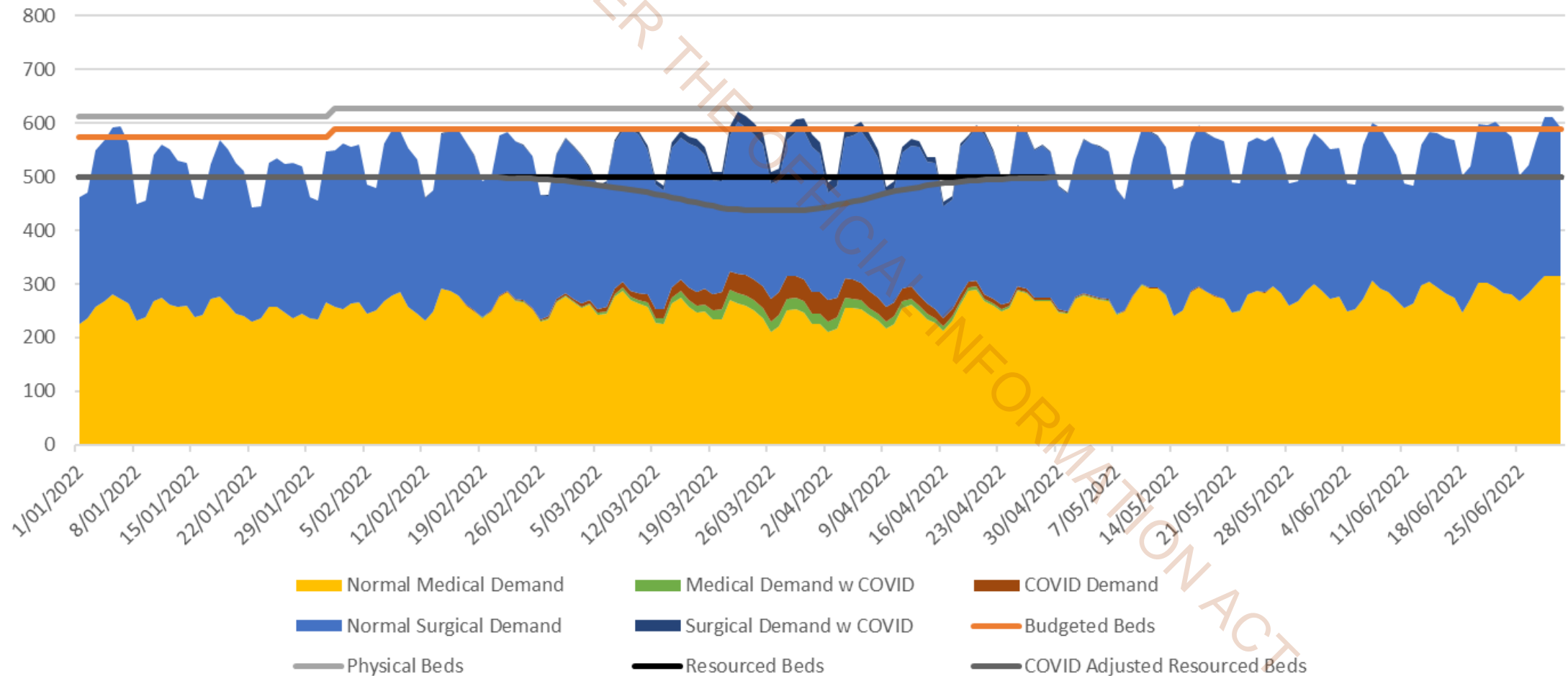
COVID Scenario

Med/Surg Adult Total Occupancy Projection

Notes

- Daily peak loading 10am
- Definition of lines:
 - **Black line: 500 beds** represents beds open based on current nursing levels (175 FTE vacancy)
 - **Dark grey line:** represents beds open adjusted for expected staffing reductions
 - **Orange line: 589 beds** represents budgeted beds
 - **Light grey line: 627 beds** are the current physical beds available

Med/Surg/Gynae Christchurch Hospital 10am Bed Requirements



COVID Scenario

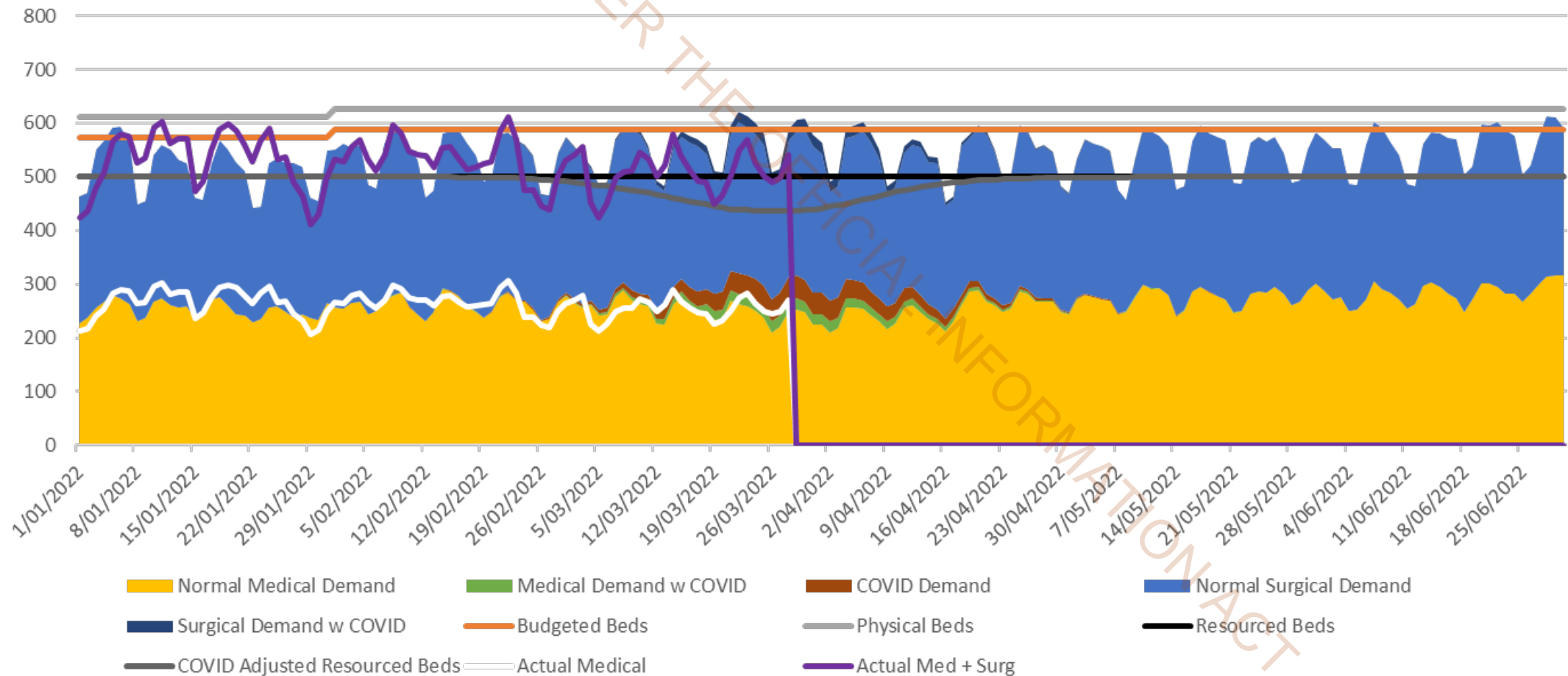
Med/Surg Adult Total

Occupancy Projection w Actuals

Notes

- Daily peak loading 10am
- Definition of actuals:
 - Patients under the care of Medical and Surgical Specialties inc. Gynae
 - Non-Day Cases
 - At Christchurch Hospital
 - Adults >16 years old

Med/Surg/Gynae Christchurch Hospital 10am Bed Requirements



Infectious Disease in Hospital Winter Context

Non-COVID Infectious Disease Winter Scenarios

- Outbreak most likely to be influenza but could be any of a number of viruses (e.g. RSV)..
- Guidance sought from Virology on likely scenario's. It was decided a July start to season likely based on current population conditions with three scenarios tested:
 - Scenario 1: No outbreak
 - Scenario 2: Small outbreak (2017 levels)
 - Scenario 3: Large outbreak (2019 levels)
- Challenging factors:
 - No influenza circulating for 2 years therefore low immunity
 - Low influenza vaccination rates; vaccination fatigue amongst the population
 - Low international numbers so difficult to predict strain to vaccinate against
 - Staff burnout
- Helping factors:
 - COVID-19 prevention measures in place also effective against other influenza like illnesses
 - Northern hemisphere low influenza activity
 - COVID-19 interference making it more difficult for another illness to take hold
 - Proposed extended age range for subsidised influenza vaccinations in 2022

Flu Tracking 2022

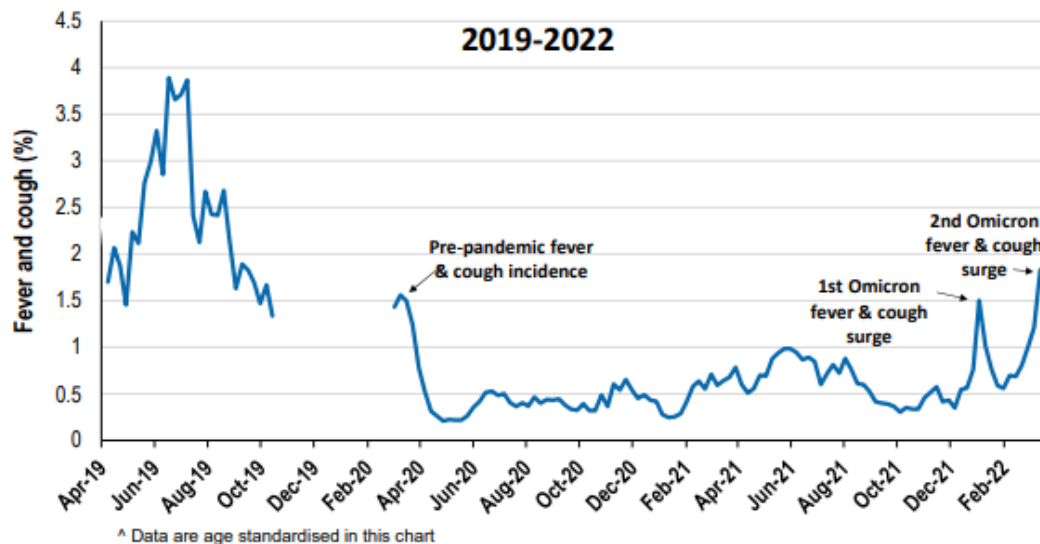
Reports from Australia of a “Super Cold” circulating, with similar symptoms to Covid but without positive test results – similar event seen in UK in November.

Flu Tracking Australia w/e 20 March Report

Respiratory illness activity*:

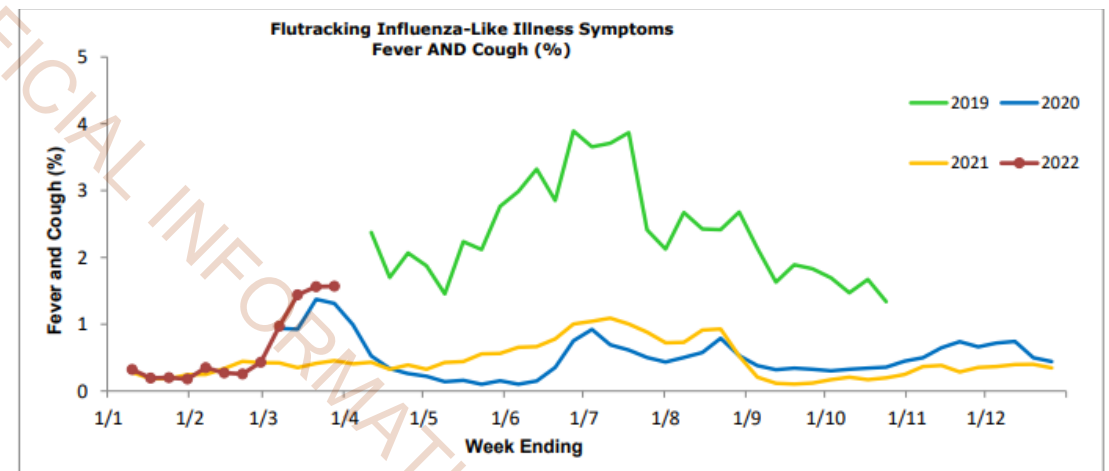
*Respiratory illness activity is defined as fever & cough for this report

1.8% this week: respiratory illness activity is low



NZ flu tracking also showing increase in reports of fever and cough, may be mostly Omicron-related symptoms for now:

Flu Tracking New Zealand w/e 20 March Report



Quantifying The Gap

Scenario 1: No Outbreak

90 resourced beds short per day

- ❖ Equiv. **35** less patients admitted per day
- ❖ Equiv. **0.38** days Length of Stay reduction (12%)
- ❖ Equiv. **92** FTE of additional nurses
- ❖ Equiv. **26** surgeries postponed or delivered by alternative means

Scenario 2: Small Outbreak

110 resourced beds short per day

- ❖ Equiv. **42** less patients admitted per day
- ❖ Equiv. **0.45** days Length of Stay reduction (15%)
- ❖ Equiv. **112** FTE of additional nurses
- ❖ Equiv. **32** surgeries postponed or delivered by alternative means

Scenario 3: Large Outbreak

120+ resourced beds short per day

- ❖ Equiv. **46** less patients admitted per day
- ❖ Equiv. **0.49** days Length of Stay reduction (17%)
- ❖ Equiv. **122** FTE of additional nurses
- ❖ Equiv. **35** surgeries postponed or delivered by alternative means

Scenario 1

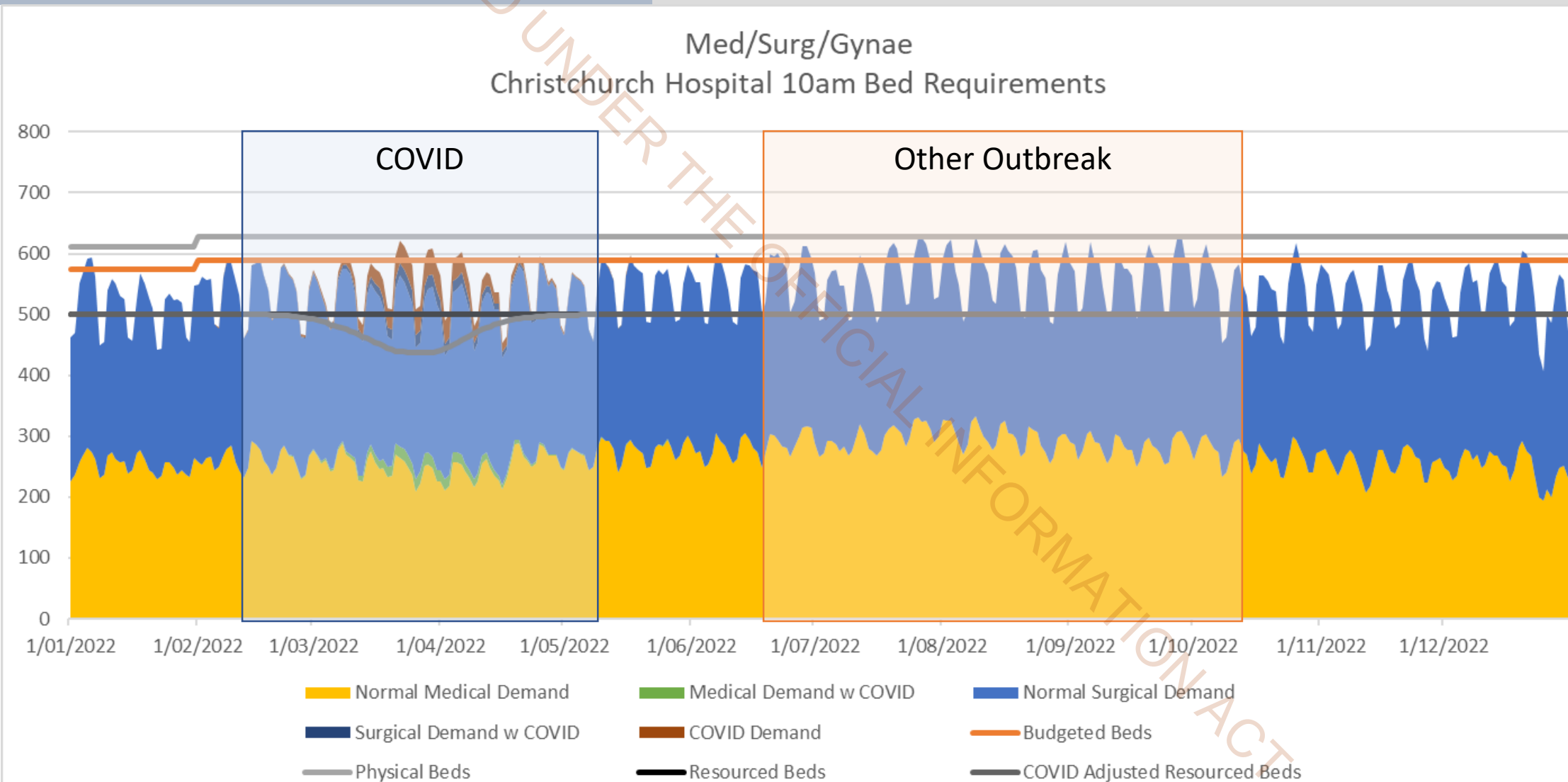
No Winter Outbreak

Scenario 1: No Outbreak

Med/Surg Adult Total Occupancy Projection

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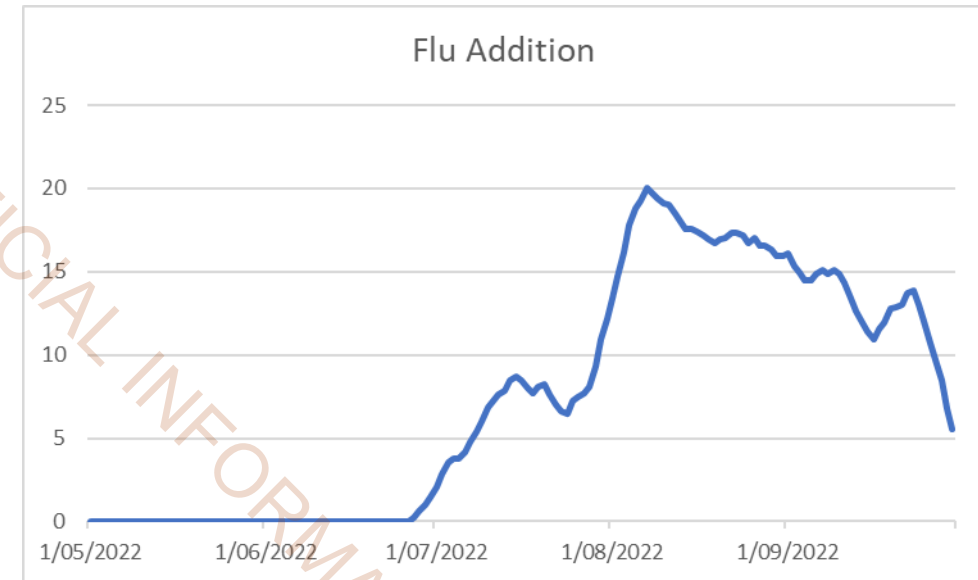
Scenario 2

Small Winter Outbreak

Scenario 2: Small Outbreak

Key Notes

- Outbreak start = late June
- Profile = fast rise to peak and sustained occupancy for some time
- Maximum beds required = 20
- Peak time = early August



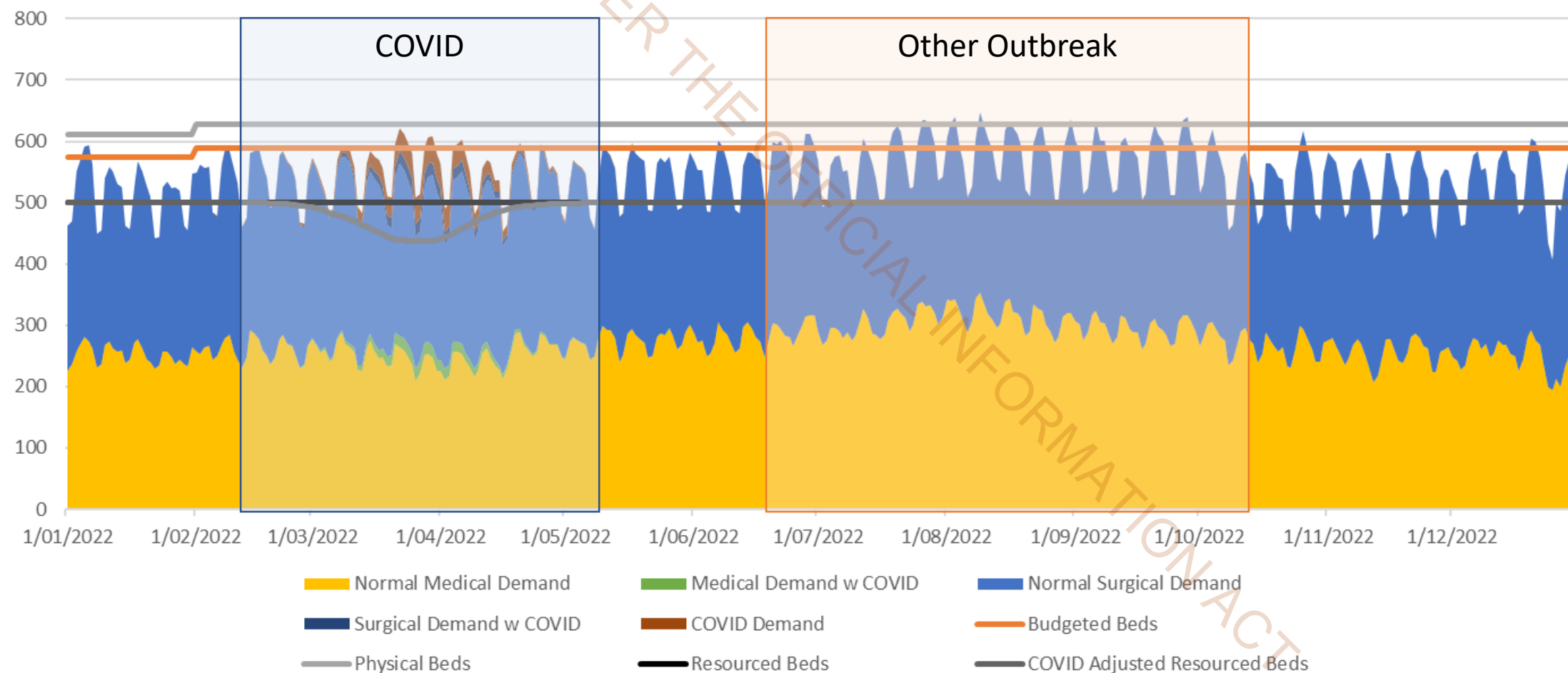
Scenario 2: Small Outbreak

Med/Surg Adult Total
Occupancy Projection

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Med/Surg/Gynae
Christchurch Hospital 10am Bed Requirements



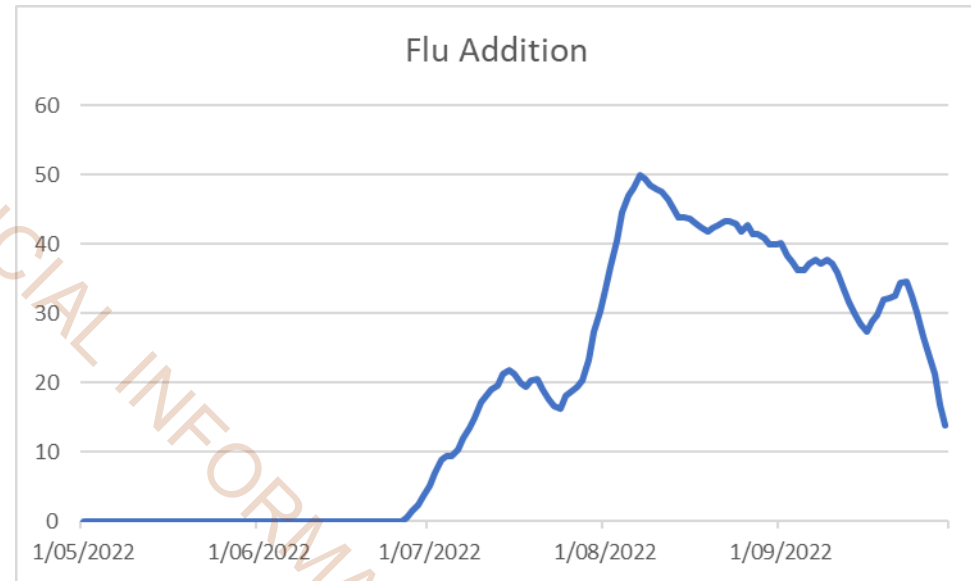
Scenario 3

Large Winter Outbreak

Scenario 3: Large Outbreak

Key Notes

- Outbreak start = late June
- Profile = fast rise to peak and sustained occupancy for some time
- Maximum beds required = 50
- Peak time = early August



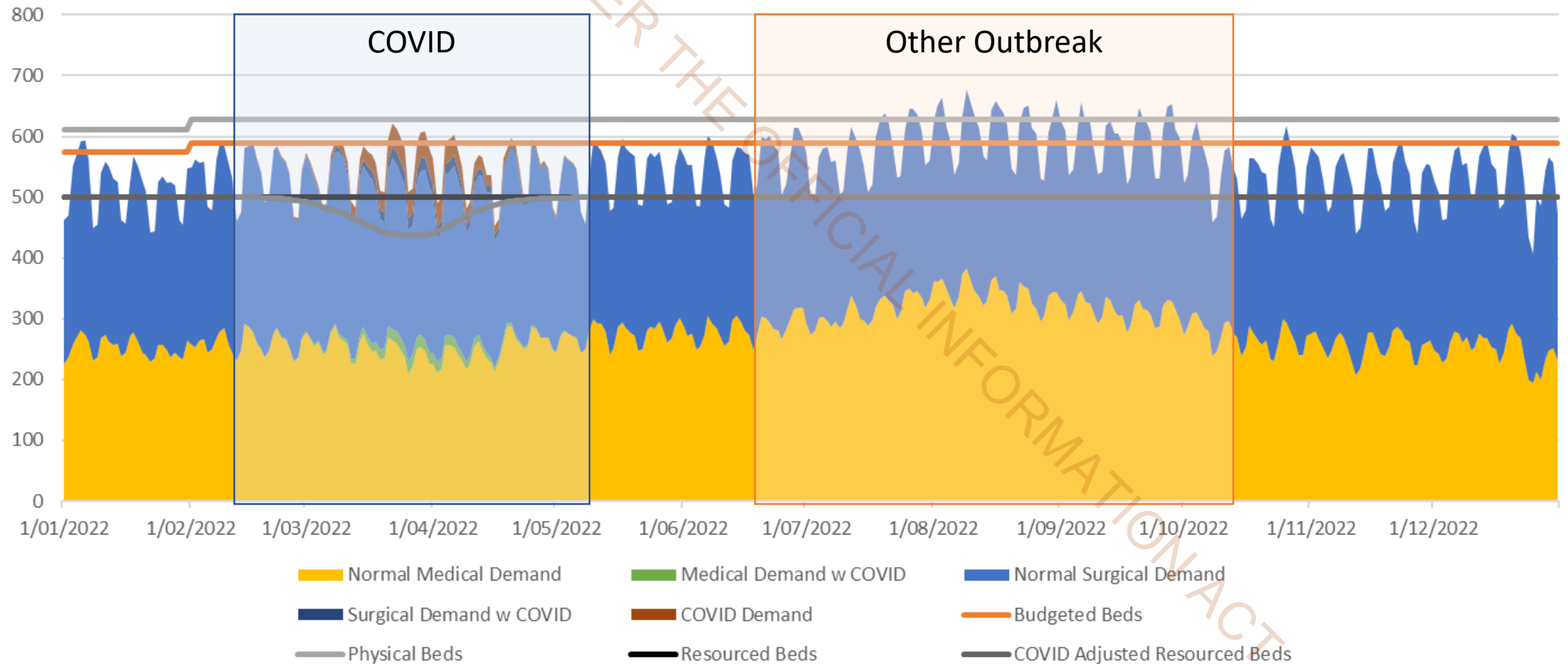
Scenario 3: Large Outbreak

Med/Surg Adult Total
Occupancy Projection

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Med/Surg/Gynae
Christchurch Hospital 10am Bed Requirements



Winter Outbreak Understanding the Gap

Operational implications

Quantifying The Gap

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Operational Response Options

A hybrid response of all these options needed

Reduce Occupancy

- Prevent admissions
- Shorten Length of Stay
- Postpone or deliver planned care surgeries which require overnight beds via alternative means including substituting some as day cases.

Increase Capacity of Inpatient Workforce

- Increase nursing workforce
- Increase the ratio of patients to nurses*
- Transfer staff from other areas to support inpatient nursing

**High risk to patients and staff safety; increased individual workload*