

Table 1. Scenarios considered in this report.

Jurisdiction	Pop size ('000)	Daily new infections at time of achieving threshold	Vaccine coverage threshold (%)	Level of PSHM and TTIQ
NSW	8176.4	Medium = 300–1000	70	Baseline + Partial
				Low + Partial
			80	Baseline + Partial
				Low + Partial
		High = 1000–4500	70	Med/Low + Partial
Victoria	6648.6	Medium = 300–1000	70	Baseline + Partial
				Low + Partial
			80	Baseline + Partial
				Low + Partial
		High = 1000–4500	70	Med/Low + Partial
Queensland	5206.4	Low = 30–100	70	Baseline + Partial
				Low + Partial
			80	Baseline + Partial
				Low + Partial
		Medium = 300–1000	70	Baseline + Partial
				Low + Partial
Western Australia	2675.8	Low = 30–100	70	Baseline + Partial
				Low + Partial
			80	Baseline + Partial
				Low + Partial
			70	Baseline + Partial
				Low + Partial
South Australia	1771.7	Low = 30–100	70	Baseline + Partial
				Low + Partial
			80	Baseline + Partial
				Low + Partial
			70	Baseline + Partial
				Low + Partial
Tasmania	542.0	Low = 30–100	70	Baseline + Partial
				Low + Partial
			80	Baseline + Partial
				Low + Partial
			70	Baseline + Partial
				Low + Partial
ACT	431.8	Low = 30–100	70	Baseline + Partial
				Low + Partial
			80	Baseline + Partial
				Low + Partial
		Medium = 300–1,000	70	Baseline + Partial
				Low + Partial
NT	247.0	Low = 30–100	70	Baseline + Partial
				Low + Partial
			80	Baseline + Partial
				Low + Partial
			70	Baseline + Partial
				Low + Partial

Table S1. Disease severity assumptions for *unvaccinated individuals*

Parameter	Description	Source	Value(s)	
Wildtype severity parameters				
Pr(symptoms wt)	Probability of symptomatic disease given wildtype infection	Davies et al. Nature Medicine (2020) [1] Clinical fractions estimated for 10-year age groups.	Age group	Symptomatic fraction
			0-9	0.28
			10-19	0.20
			20-29	0.26
			30-39	0.33
			40-49	0.40
			50-59	0.49
			60-69	0.63
			70+	0.69
Pr(hosp symptoms)	Probability of hospital admission given symptomatic wildtype infection	Knock et al. Pre-print [2]. Prepared for UK roadmap modelling by Imperial group. UK data first wave.	Age-specific. See Tables S6 and S8 of Knock et al.	
Pr(ICU hosp)	Probability of ICU admission given hospital admission	Same as above.	Same as above.	
Pr(death ward)	Probability of death for ward patients (no ICU stay)	Same as above.	Same as above.	
Pr(death ICU)	Probability of death for ICU patients	Same as above.	Same as above.	
Pr(death post-ICU ward)	Probability of death for post-ICU patients	Same as above.	Same as above.	
Alpha severity parameters (versus wildtype)				
Pr(symptoms alpha)	Probability of symptomatic disease given Alpha infection	A number of studies using UK data suggest that the probability of reporting symptoms is consistent for wildtype and Alpha Walker et al. Pre-print [3].	RR=1	

Graham et al. Lancet
Public Health (2021) [4].

Pr(hosp alpha)	Probability of hospitalisation given Alpha infection	Bager et al. Lancet Infect Dis (2021) [5]. Denmark data.	OR=1.42
Pr(ICU alpha)	Probability of ICU admission given Alpha infection	Patone et al. Lancet ID [6]. UK data.	HR=2.15
Pr(death alpha)	Probability of death given Alpha infection	Davies et al. Nature (2021) [7]. UK data.	HR=1.61
Delta severity parameters (versus Alpha)			
Pr(hosp delta)	Probability of hospitalisation given Delta infection	Bager et al. Lancet ID (2021) [8]. Denmark data.	RR = 3.01
Pr(ICU delta)	Probability of ICU admission given Delta infection	Fisman & Tuite. Pre-print [10]. Canada data.	OR = 1.86
Pr(death delta)	Probability of death given Delta infection	Fisman & Tuite. Pre-print [10]. Canada data.	OR = 1.51

References

- Davies NG et al. Age-dependent effects in the transmission and control of COVID-19 epidemics. *Nat Med.* 26, 1205–11 (2020). <https://doi.org/10.1038/s41591-020-0962-9>
- Knock ES et al. The 2020 SARS-CoV-2 epidemic in England: key epidemiological drivers and impact of interventions. *medRxiv* (2021). <https://doi.org/10.1101/2021.01.11.21249564>
- Walker AS et al. Increased infections, but not viral burden, with a new SARS-CoV-2 variant. *medRxiv* (2021). <https://doi.org/10.1101/2021.01.13.21249721>
- Graham MS et al. Changes in symptomatology, reinfection, and transmissibility associated with the SARS-CoV-2 variant B.1.1.7: an ecological study. *Lancet Public Health* 2021; 6: e335–45. [https://doi.org/10.1016/S2468-2667\(21\)00055-4](https://doi.org/10.1016/S2468-2667(21)00055-4)
- Bager P et al. Risk of hospitalisation associated with infection with SARS-CoV-2 lineage B.1.1.7 in Denmark: an observational cohort study. *Lancet Infect Dis* 2021. S1473-3099(21)00290-5. [https://doi.org/10.1016/S1473-3099\(21\)00338-8](https://doi.org/10.1016/S1473-3099(21)00338-8)
- Patone M et al. Mortality and critical care unit admission associated with the SARS-CoV-2 lineage B.1.1.7 in England: an observational cohort study. *Lancet Infect Dis* 2021. [https://doi.org/10.1016/S1473-3099\(21\)00318-2](https://doi.org/10.1016/S1473-3099(21)00318-2)
- Davies NG et al. Increased mortality in community-tested cases of SARS-CoV-2 lineage B.1.1.7. *Nature.* 2021. <https://doi.org/10.1038/s41586-021-03426-1>
- Bager P, et al. Hospitalisation associated with SARS-CoV-2 delta variant in Denmark. *Lancet Infect Dis* (2021). [https://doi.org/10.1016/S1473-3099\(21\)00580-6](https://doi.org/10.1016/S1473-3099(21)00580-6)
- Twohig KA, et al. Hospital admission and emergency care attendance risk for SARS-CoV-2 delta (B.1.617.2) compared with alpha (B.1.1.7) variants of concern: a cohort study. *Lancet Infect Dis* (2021). [https://doi.org/10.1016/S1473-3099\(21\)00475-8](https://doi.org/10.1016/S1473-3099(21)00475-8)
- Fisman DN & Tuite AR. Progressive increase in virulence of novel SARS-CoV-2 variants in Ontario, Canada. *medRxiv* (2021). <https://doi.org/10.1101/2021.07.05.21260050>

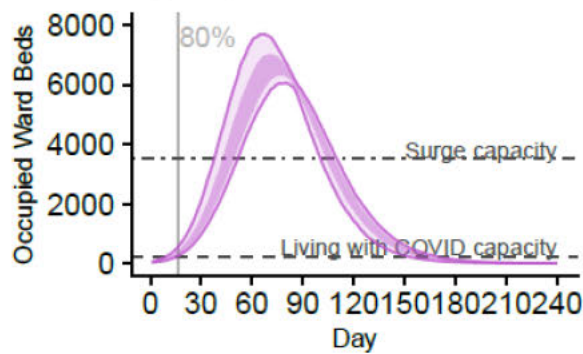
New South Wales

Population size 8,176,400

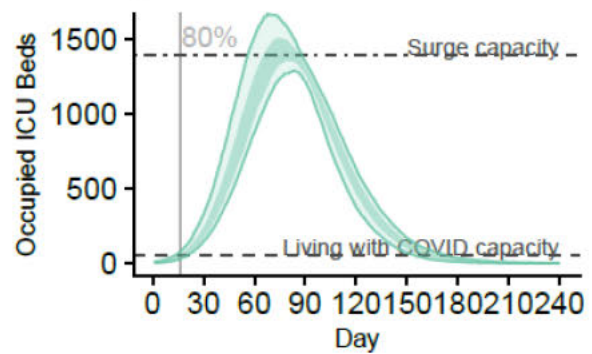
NSW Scenario 1:

Vaccination	70%	PHSM	Baseline
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



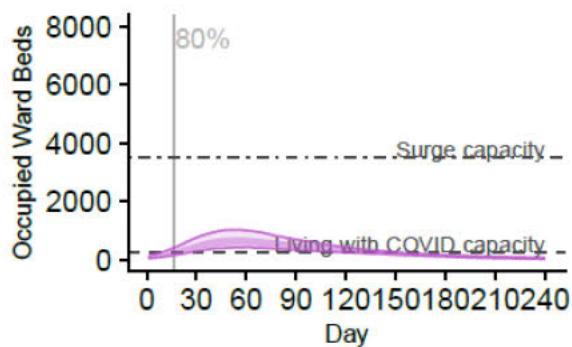
ICU Occupancy



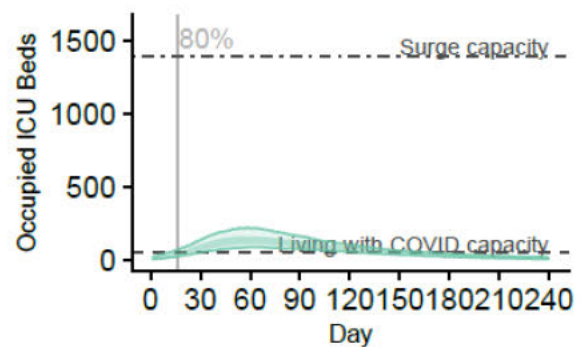
NSW Scenario 2:

Vaccination	70%	PHSM	Low
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



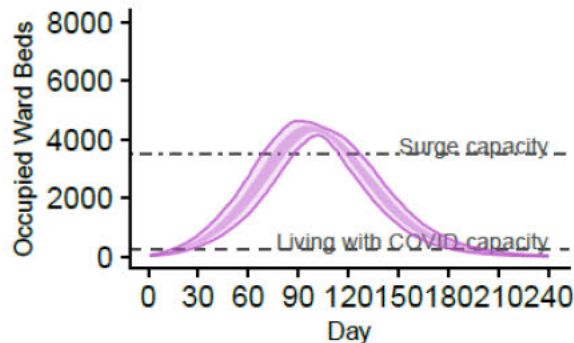
ICU Occupancy



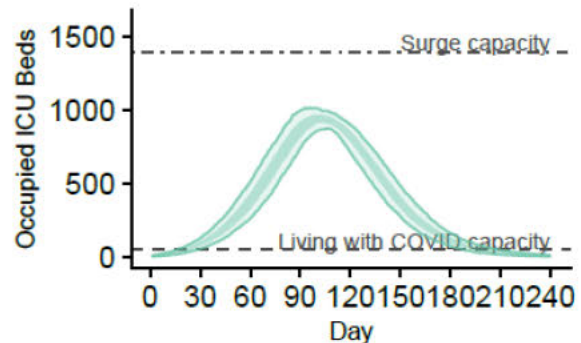
NSW Scenario 3:

Vaccination	80%	PHSM	Baseline
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



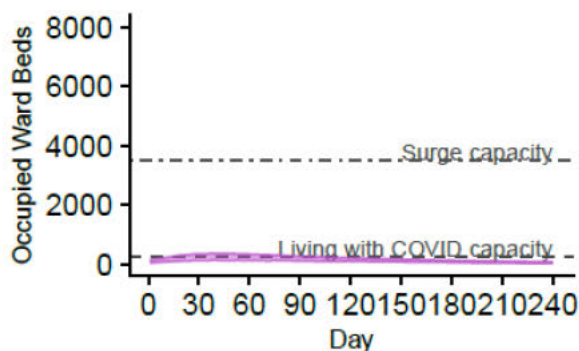
ICU Occupancy



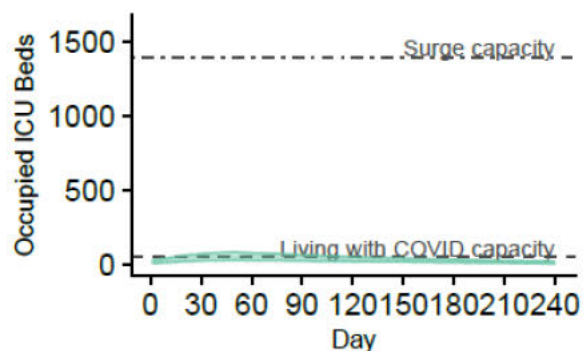
NSW Scenario 4:

Vaccination	80%	PHSM	Low
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



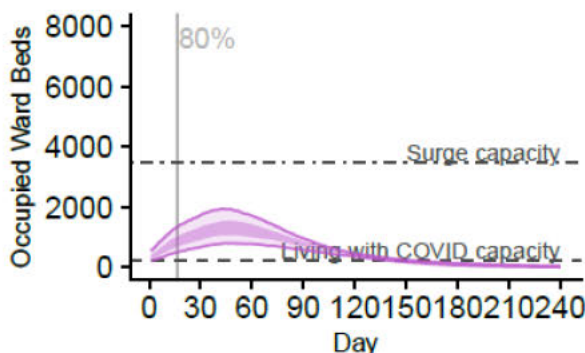
ICU Occupancy



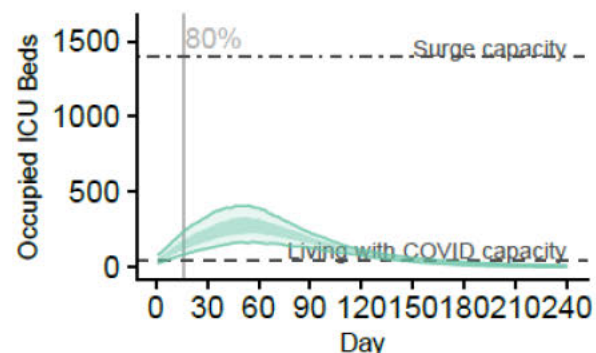
NSW Scenario 5:

Vaccination	70%	PHSM	Medium, shifting to Low at 80% vaccination
Daily infections at transition	High 1000 - 4500	TTIQ	Partial

Ward Occupancy



ICU Occupancy



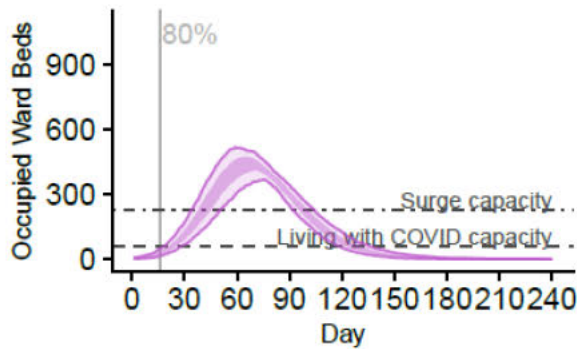
Australian Capital Territory

Population size 431,800

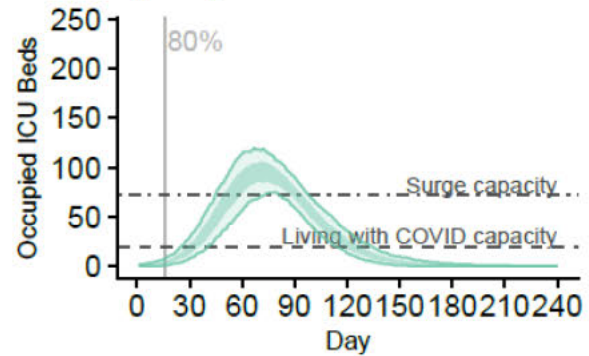
ACT Scenario 1:

Vaccination	70%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



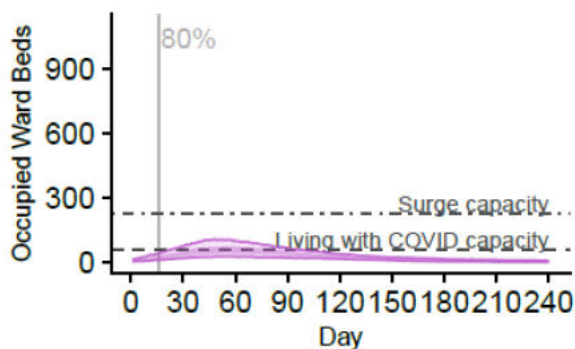
ICU Occupancy



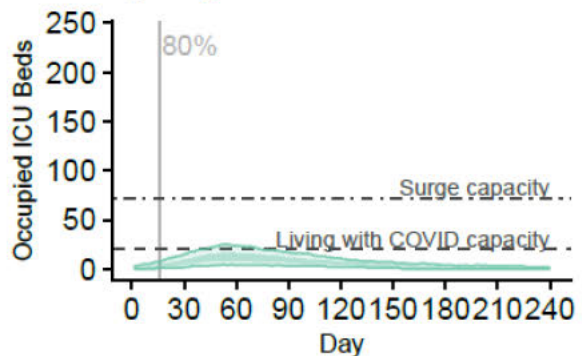
ACT Scenario 2:

Vaccination	70%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



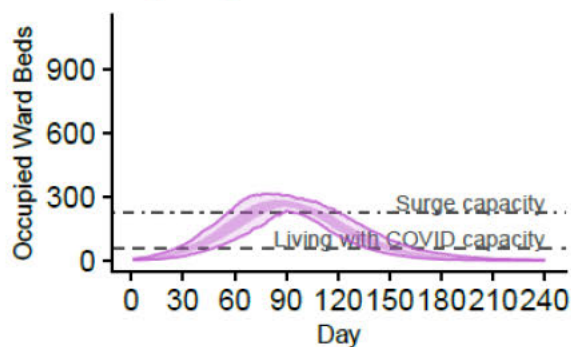
ICU Occupancy



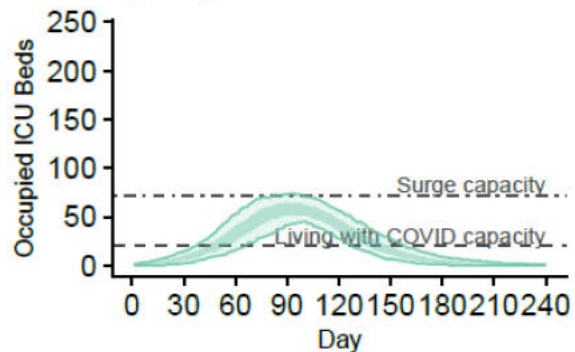
ACT Scenario 3:

Vaccination	80%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



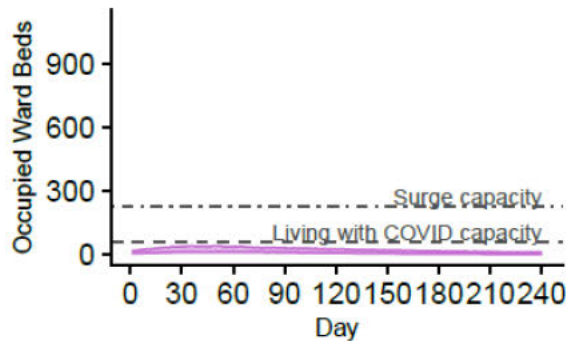
ICU Occupancy



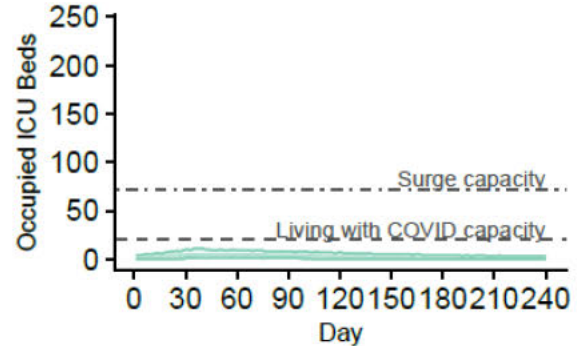
ACT Scenario 4:

Vaccination	80%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



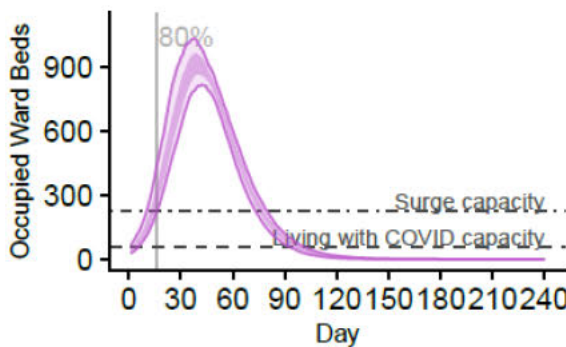
ICU Occupancy



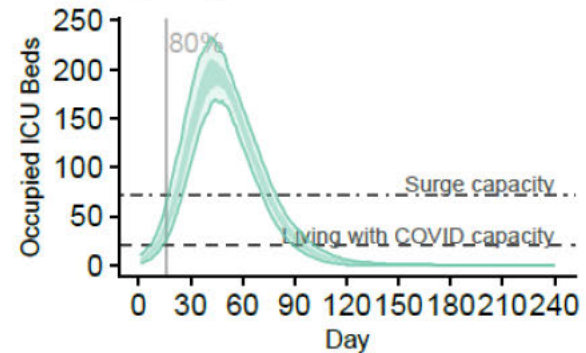
ACT Scenario 5:

Vaccination	70%	PHSM	Baseline
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



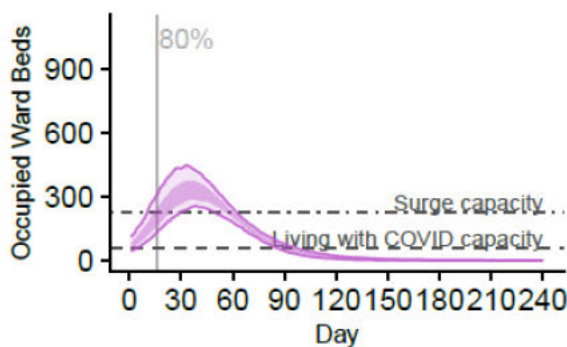
ICU Occupancy



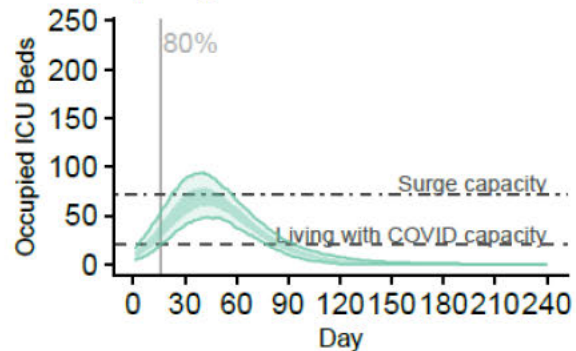
ACT Scenario 6:

Vaccination	70%	PHSM	Low
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



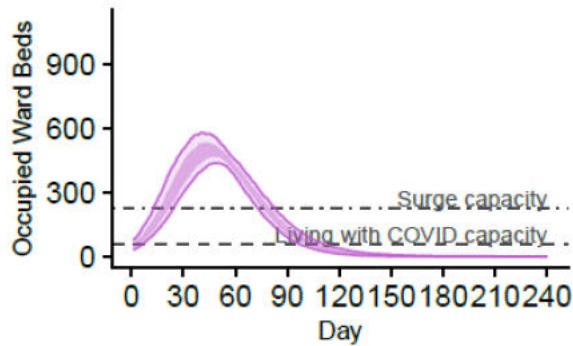
ICU Occupancy



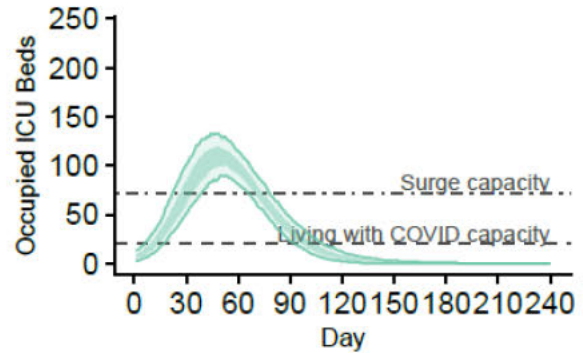
ACT Scenario 7:

Vaccination	80%	PHSM	Baseline
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



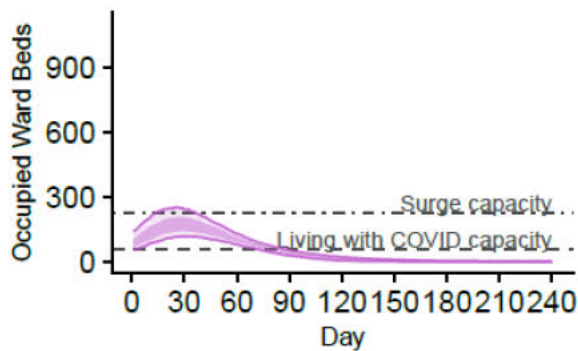
ICU Occupancy



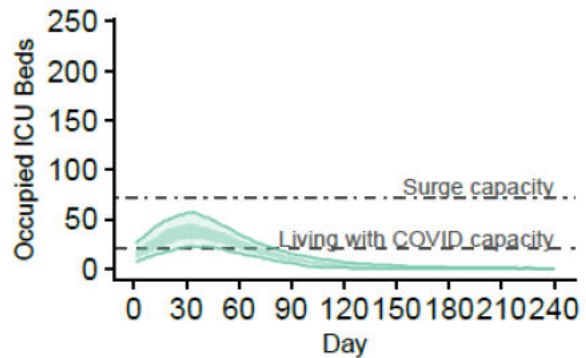
ACT Scenario 8:

Vaccination	80%	PHSM	Low
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



ICU Occupancy



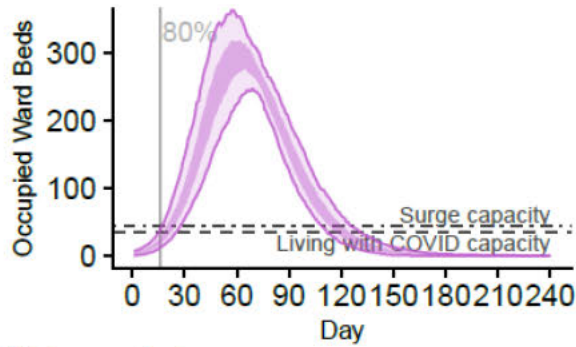
Northern Territory

Population size 247,000

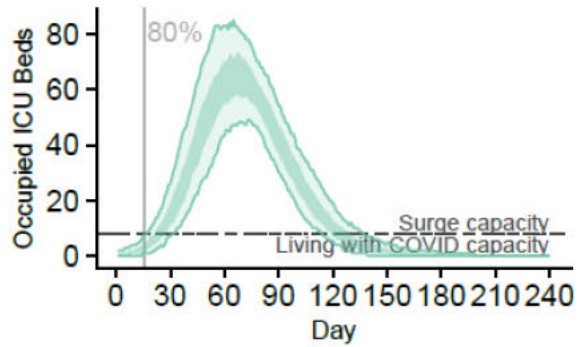
NT Scenario 1:

Vaccination	70%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



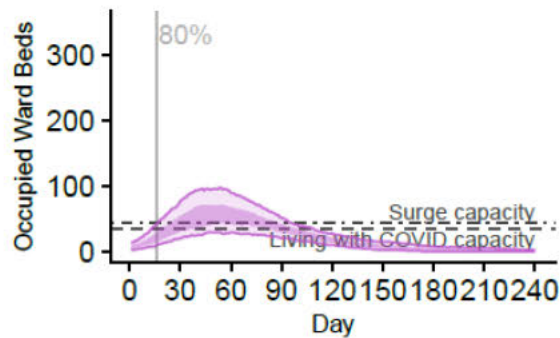
ICU Occupancy



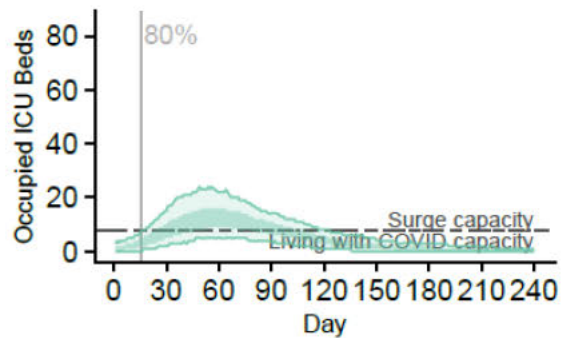
NT Scenario 2:

Vaccination	70%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



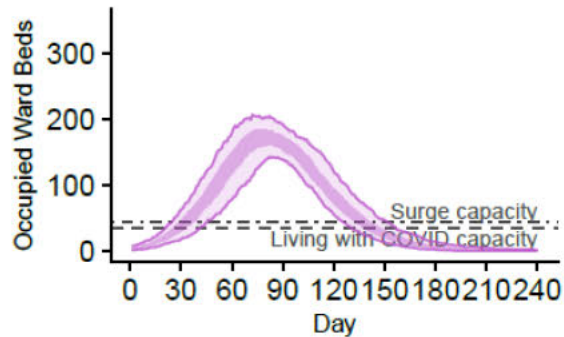
ICU Occupancy



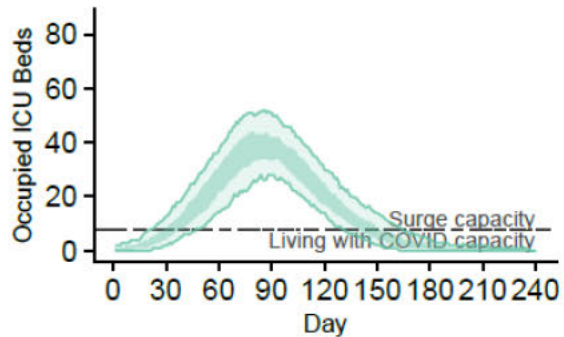
NT Scenario 3:

Vaccination	80%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



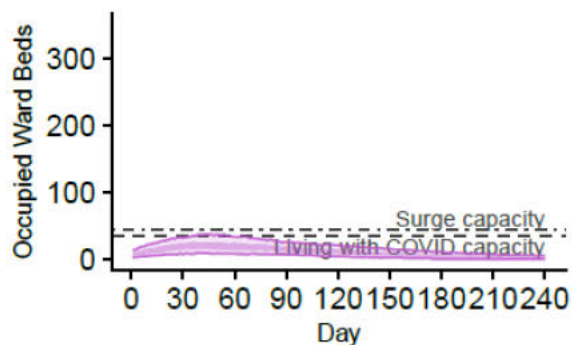
ICU Occupancy



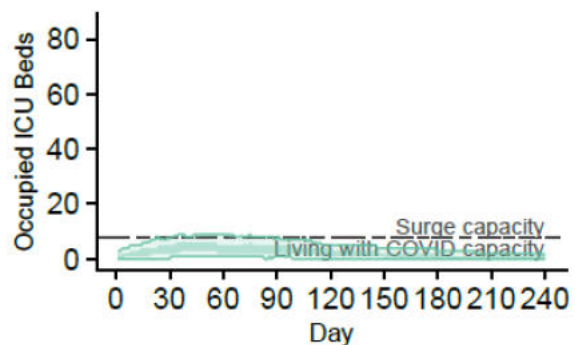
NT Scenario 4:

Vaccination	80%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



ICU Occupancy



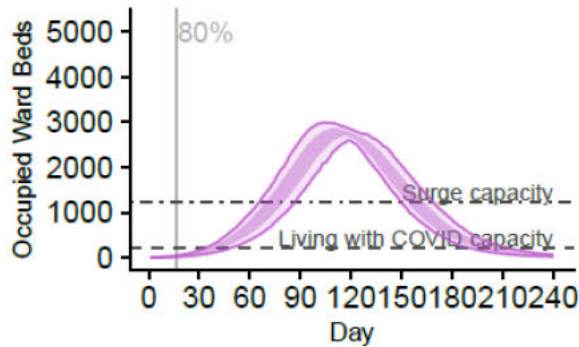
Queensland

Population size 5,206,400

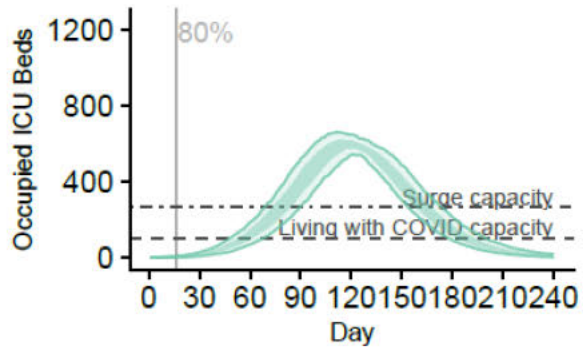
QLD Scenario 1:

Vaccination	70%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



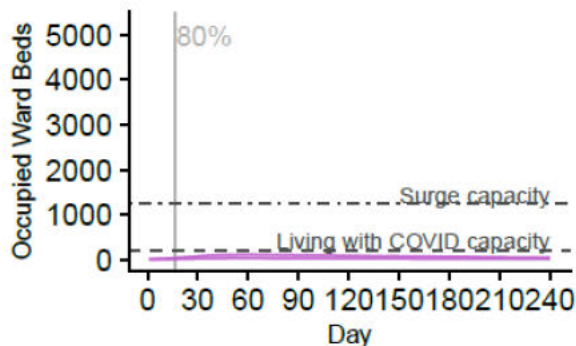
ICU Occupancy



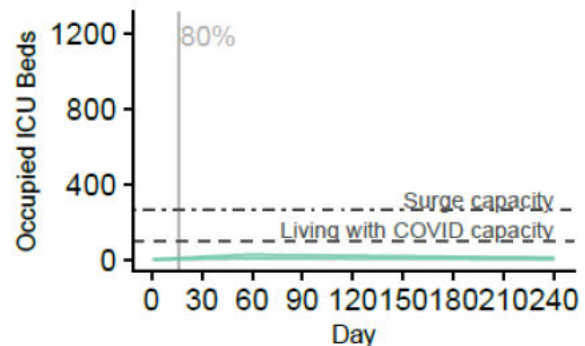
QLD Scenario 2:

Vaccination	70%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



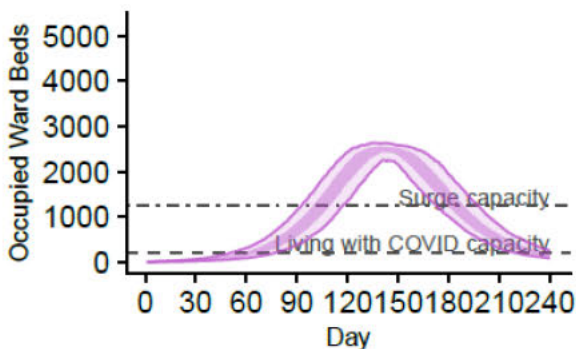
ICU Occupancy



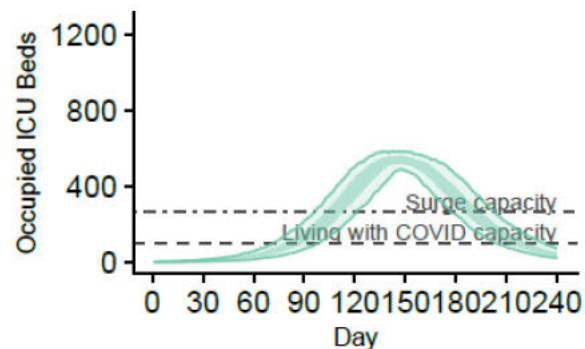
QLD Scenario 3:

Vaccination	80%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



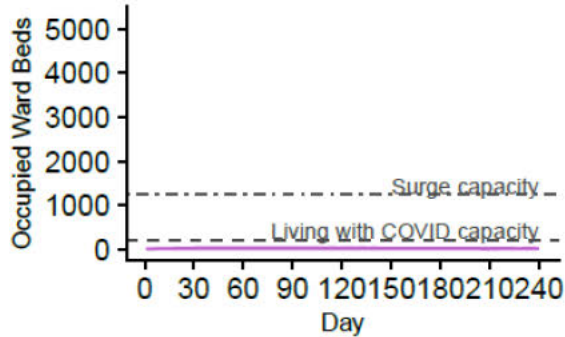
ICU Occupancy



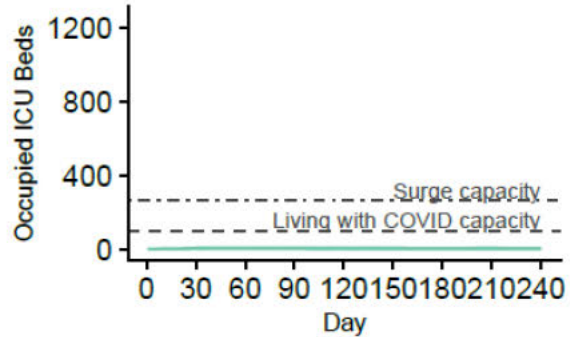
QLD Scenario 4:

Vaccination	80%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



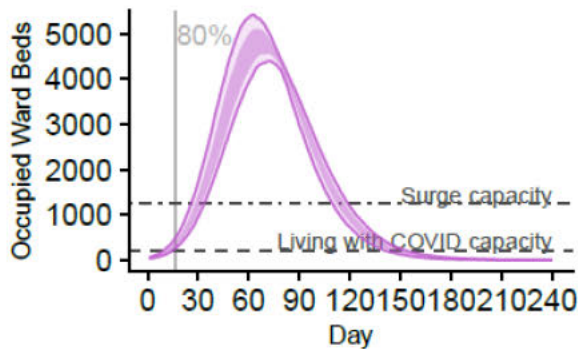
ICU Occupancy



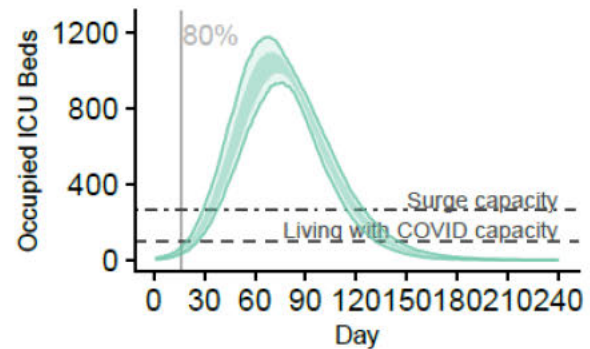
QLD Scenario 5:

Vaccination	70%	PHSM	Baseline
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



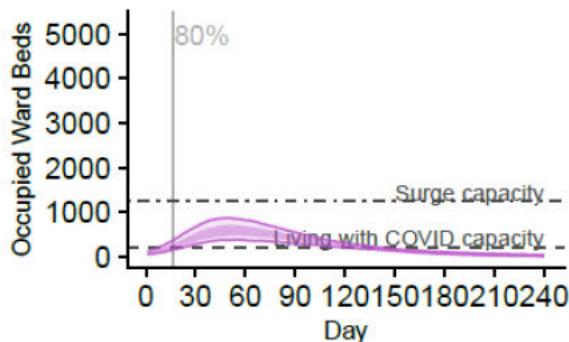
ICU Occupancy



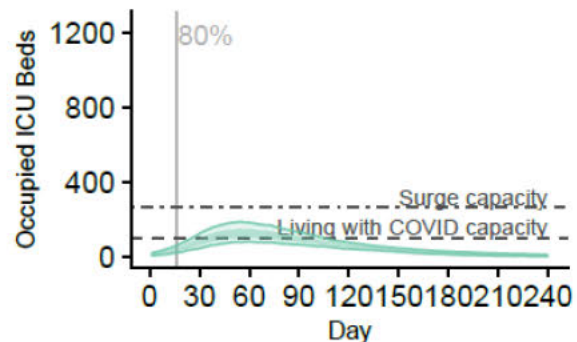
QLD Scenario 6:

Vaccination	70%	PHSM	Low
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



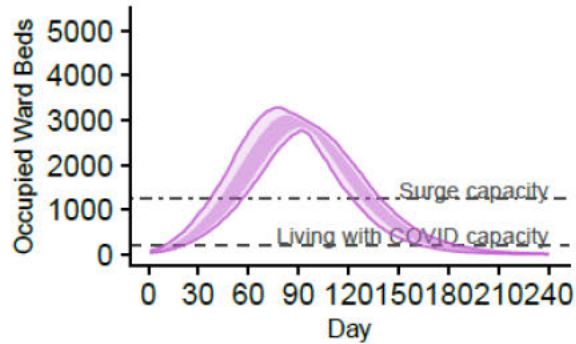
ICU Occupancy



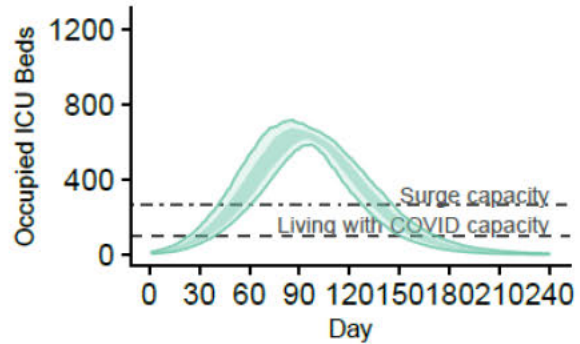
QLD Scenario 7:

Vaccination	80%	PHSM	Baseline
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



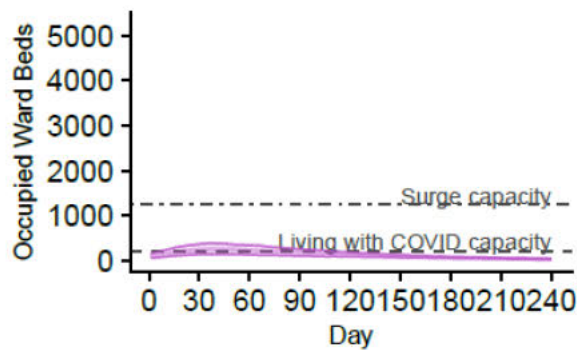
ICU Occupancy



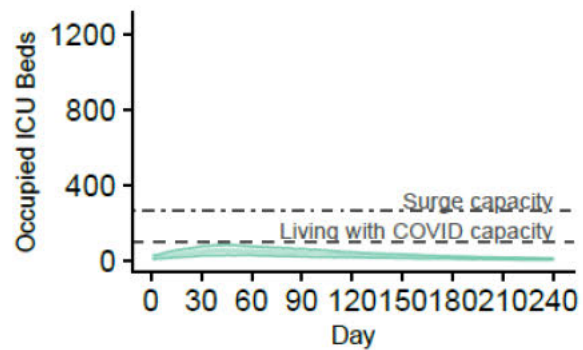
QLD Scenario 8:

Vaccination	80%	PHSM	Low
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



ICU Occupancy



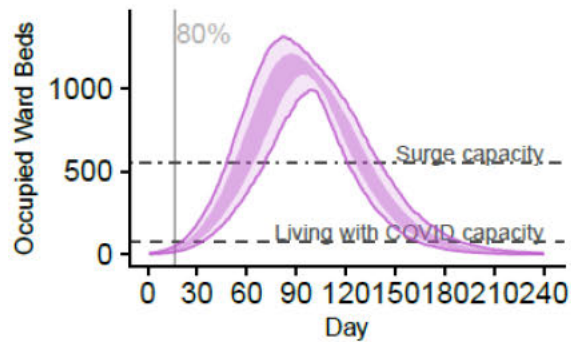
South Australia

Population size 1,771,700

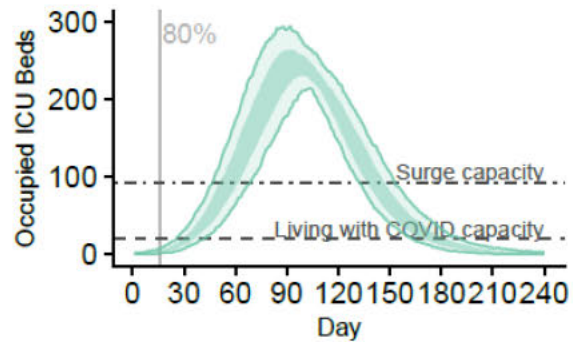
SA Scenario 1:

Vaccination	70%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



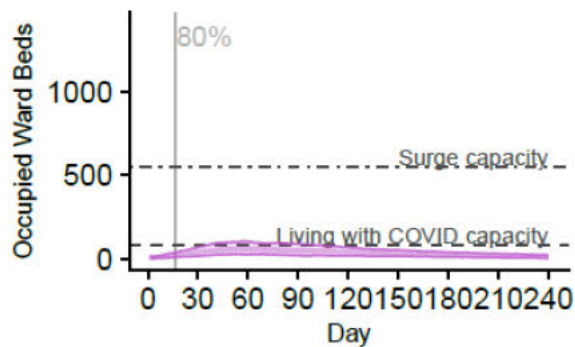
ICU Occupancy



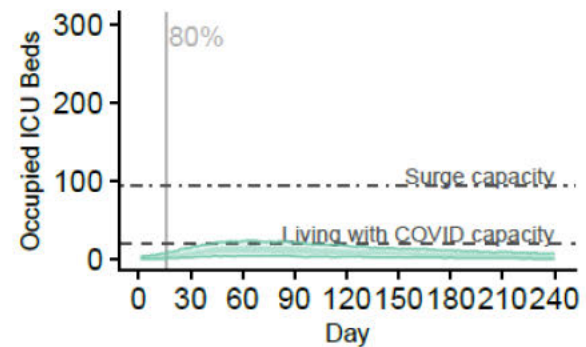
SA Scenario 2:

Vaccination	70%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



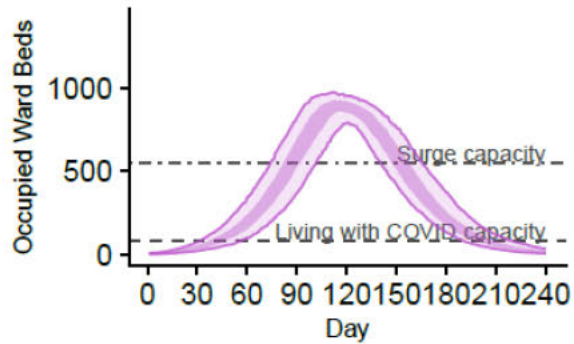
ICU Occupancy



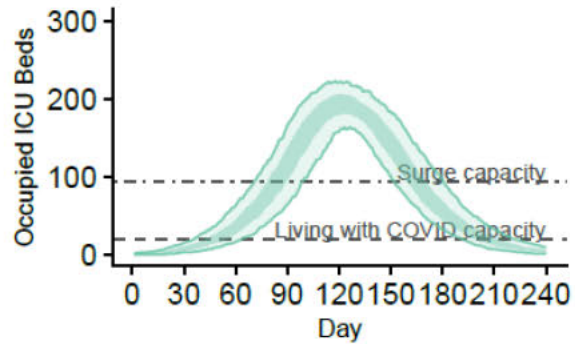
SA Scenario 3:

Vaccination	80%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



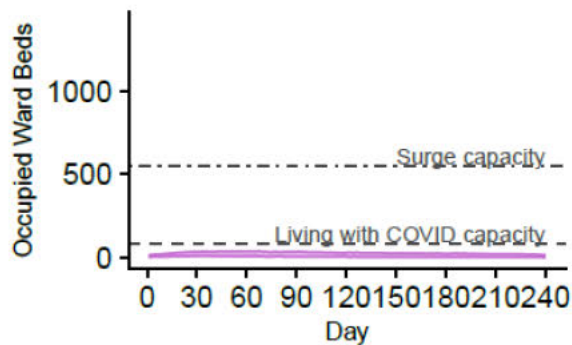
ICU Occupancy



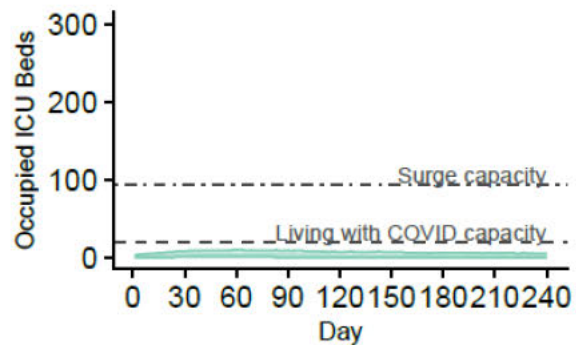
SA Scenario 4:

Vaccination	80%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



ICU Occupancy



Tasmania

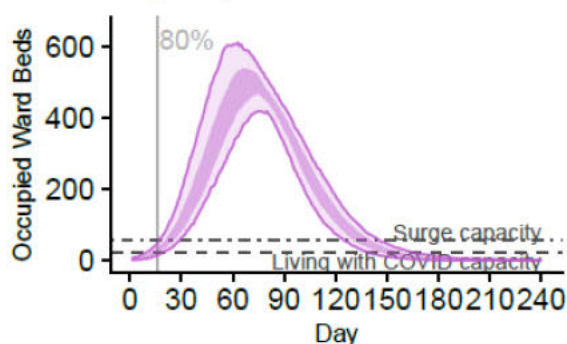
Population size 542,000

Note: Tasmania have indicated amendments will be made to capacities – particularly an increase in Surge capacity on Wards, since capacities were confirmed on 24th September 2021 for the production of these figures.

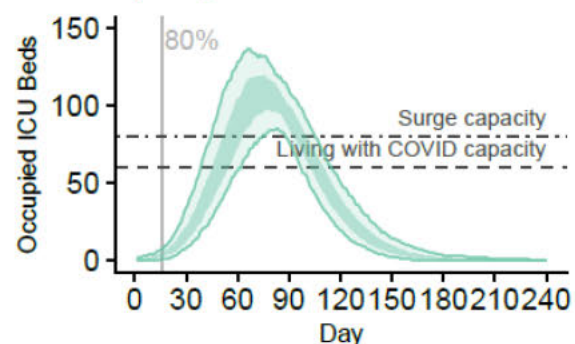
TAS Scenario 1:

Vaccination	70%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



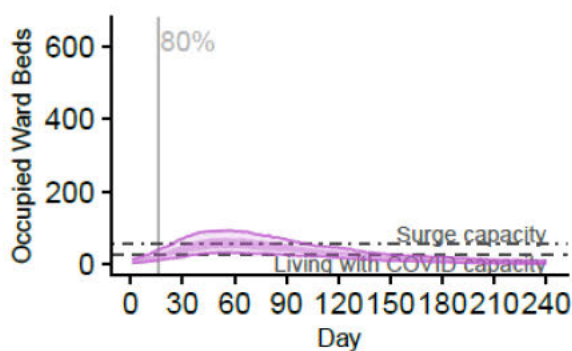
ICU Occupancy



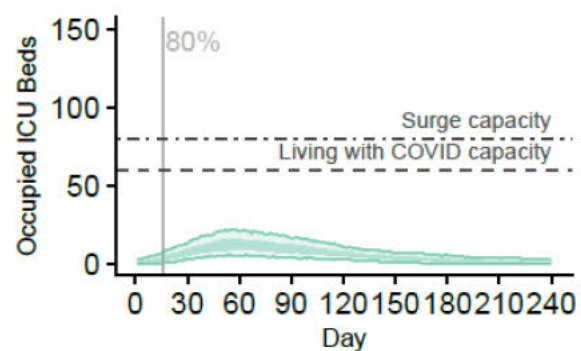
TAS Scenario 2:

Vaccination	70%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



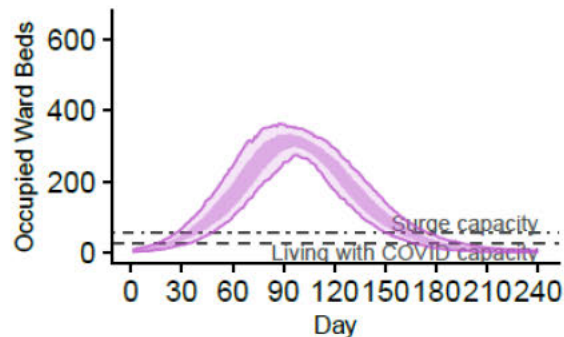
ICU Occupancy



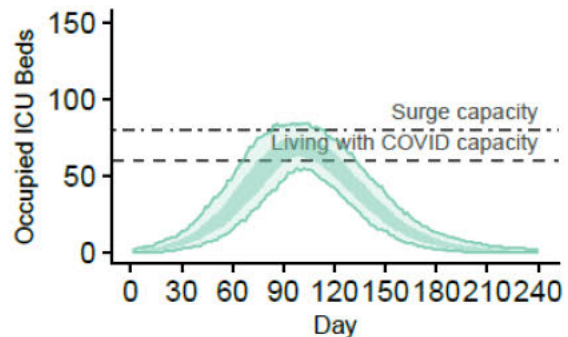
TAS Scenario 3:

Vaccination	80%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



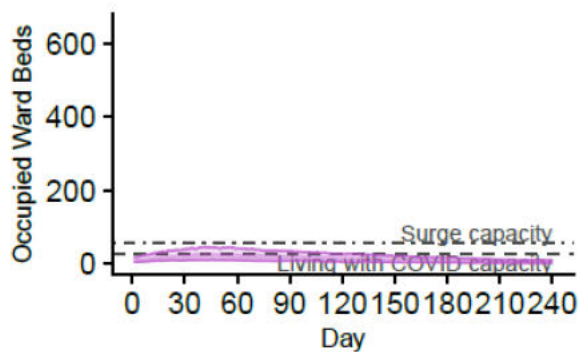
ICU Occupancy



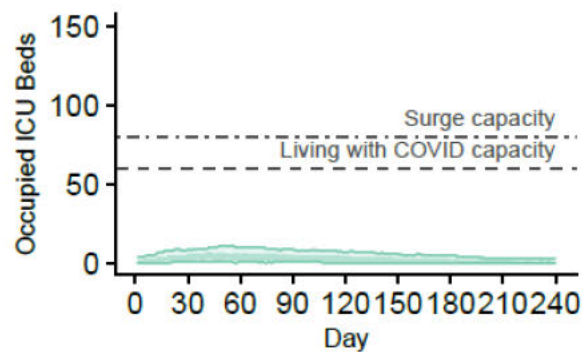
TAS Scenario 4:

Vaccination	80%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



ICU Occupancy



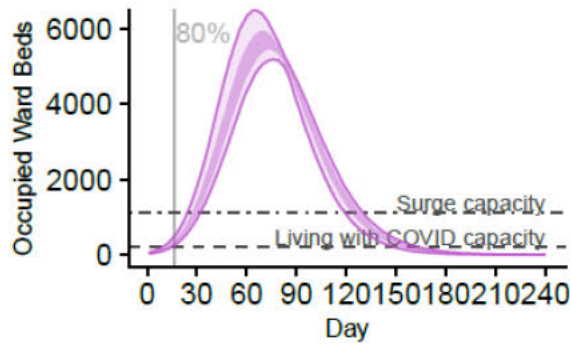
Victoria

Population size 6,648,600

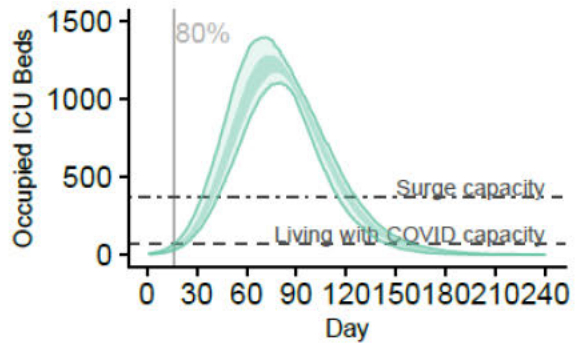
VIC Scenario 1:

Vaccination	70%	PHSM	Baseline
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



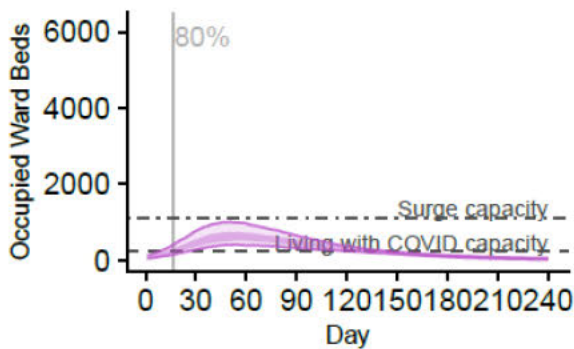
ICU Occupancy



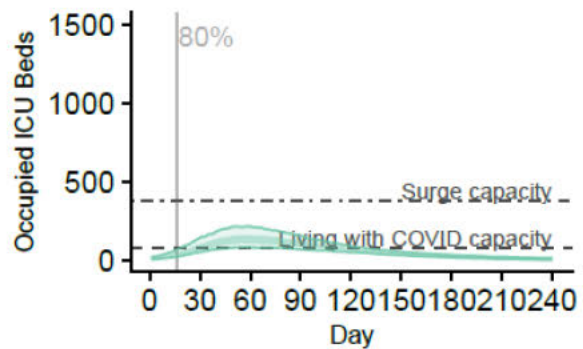
VIC Scenario 2:

Vaccination	70%	PHSM	Low
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



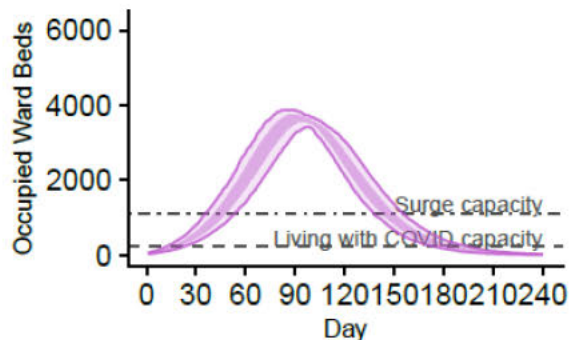
ICU Occupancy



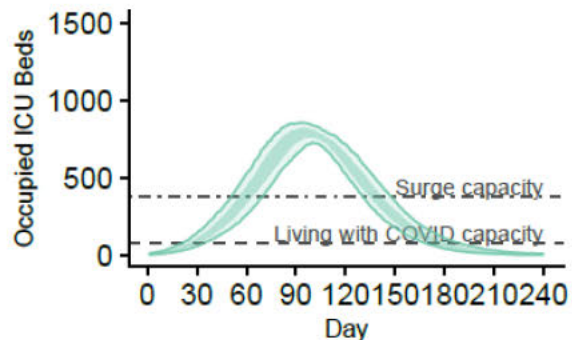
VIC Scenario 3:

Vaccination	80%	PHSM	Baseline
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



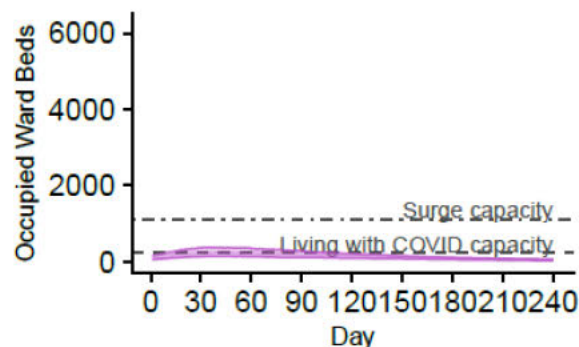
ICU Occupancy



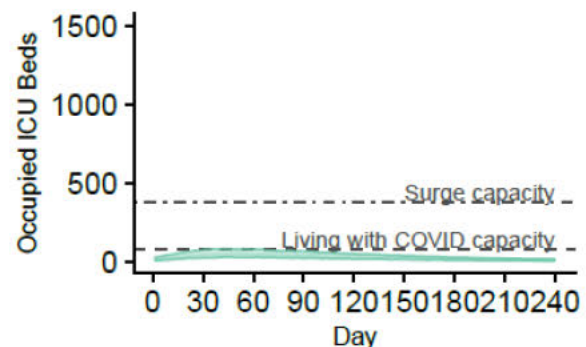
VIC Scenario 4:

Vaccination	80%	PHSM	Low
Daily infections at transition	Medium 300 – 1000	TTIQ	Partial

Ward Occupancy



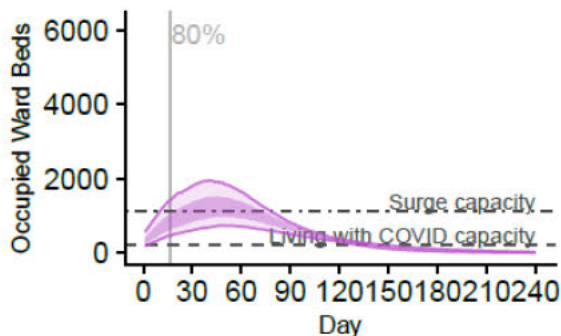
ICU Occupancy



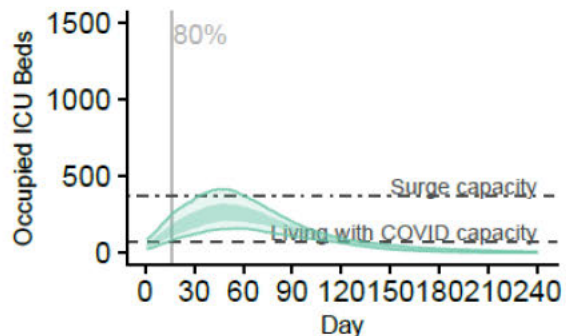
VIC Scenario 5:

Vaccination	70%	PHSM	Medium, shifting to Low at 80% vaccination
Daily infections at transition	High 1000 - 4500	TTIQ	Partial

Ward Occupancy



ICU Occupancy



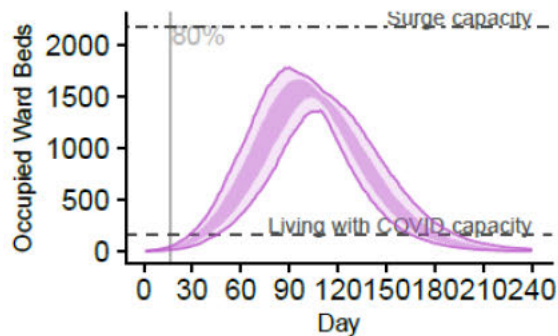
Western Australia

Population size 2,675,800

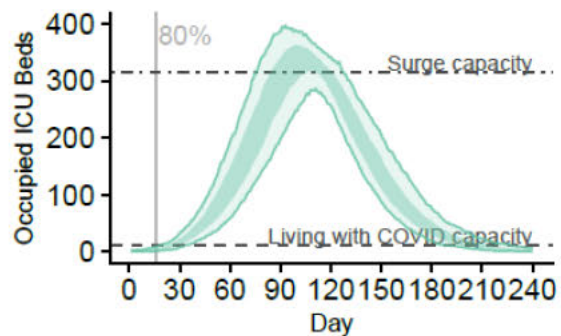
WA Scenario 1:

Vaccination	70%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



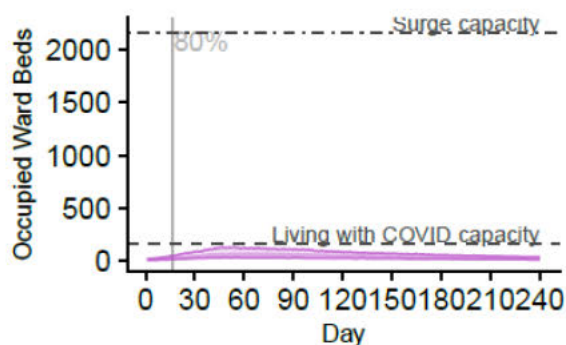
ICU Occupancy



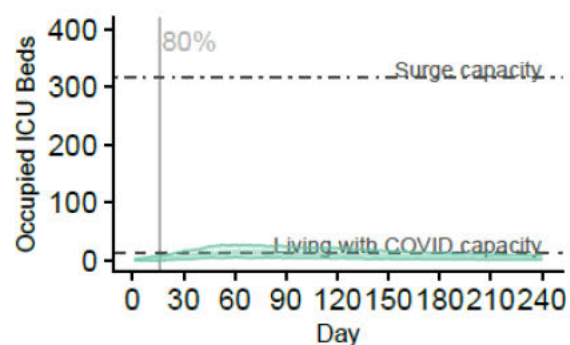
WA Scenario 2:

Vaccination	70%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



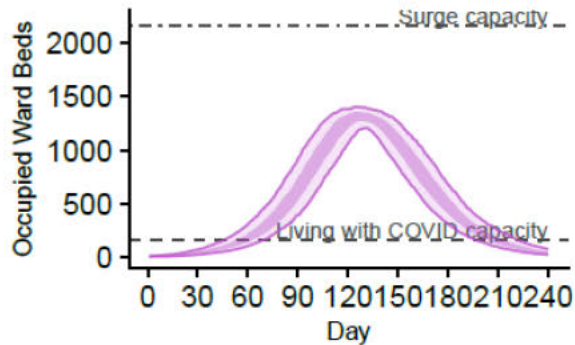
ICU Occupancy



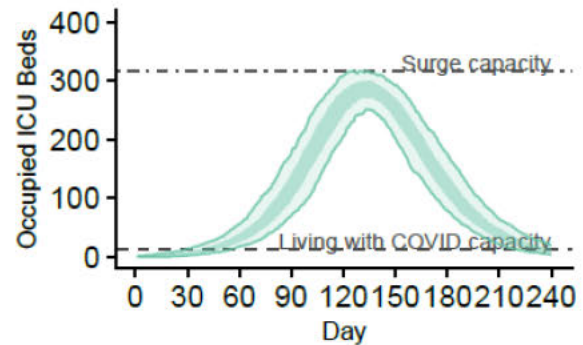
WA Scenario 3:

Vaccination	80%	PHSM	Baseline
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



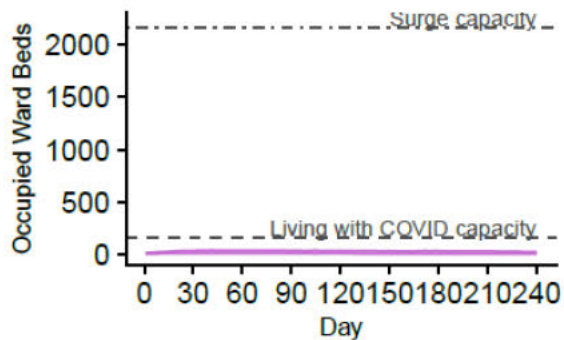
ICU Occupancy



WA Scenario 4:

Vaccination	80%	PHSM	Low
Daily infections at transition	Low 30 - 100	TTIQ	Partial

Ward Occupancy



ICU Occupancy

