



Health
Hunter New England
Local Health Network



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

Winter preparedness – COVID-19

Tony Merritt
Hunter New England Population Health

Richard Broome
Central Coast Public Health Unit

June 2023



Acknowledgement of Country



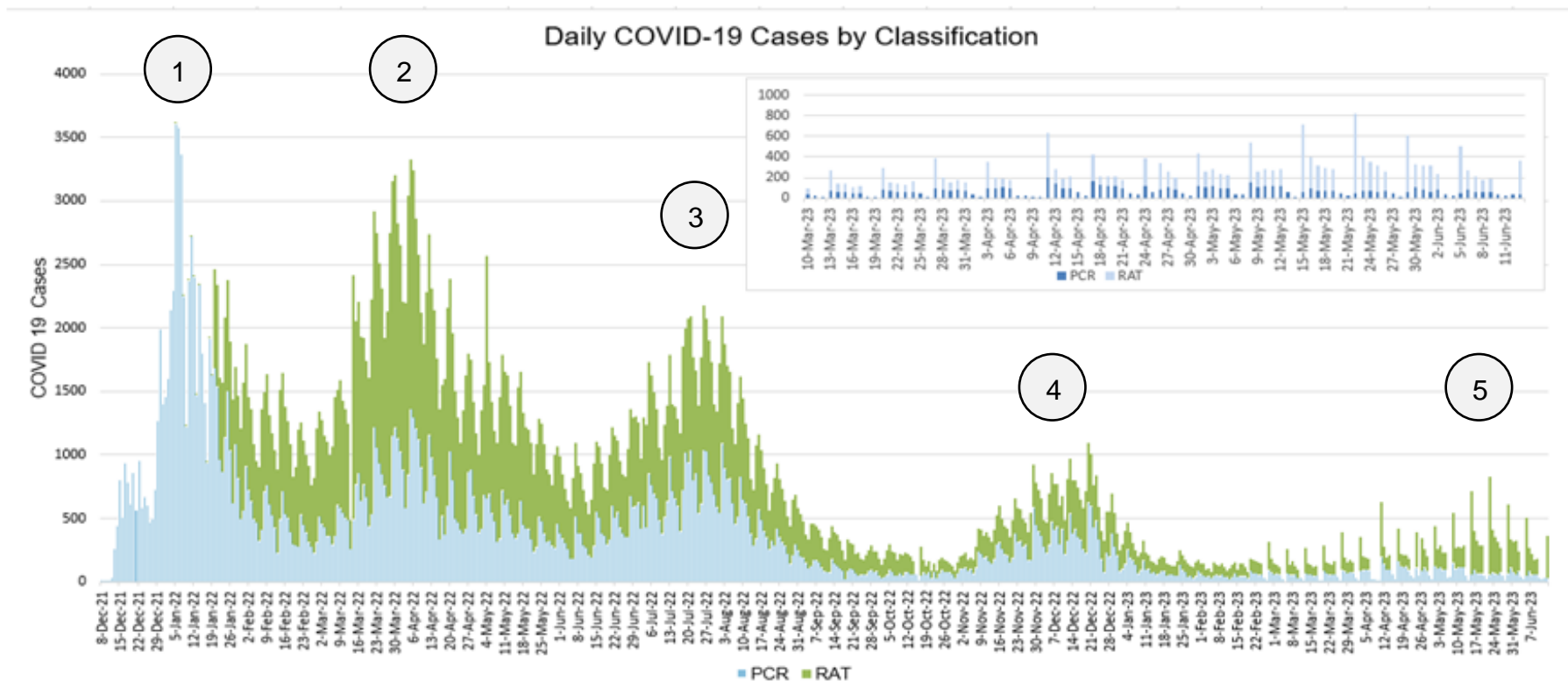
I acknowledge the people of the many traditional countries and language groups of New South Wales, and acknowledge the wisdom of Elders past and present, and pay respect to all Aboriginal communities of today.



Omicron waves continue – notification data



Figure 1: Testing type of confirmed COVID-19 cases (RAT and PCR) by notification date in Hunter New England local health district, 8 December 2021 to 13 June 2023, and in-focus 10 March – 13 June 2023, at 16:00 hrs



- Omicron wave 5 at present
- HNE notification data, similar for CC
- RAT test notifications in green
- Reduced PCR availability from 13 May 2023

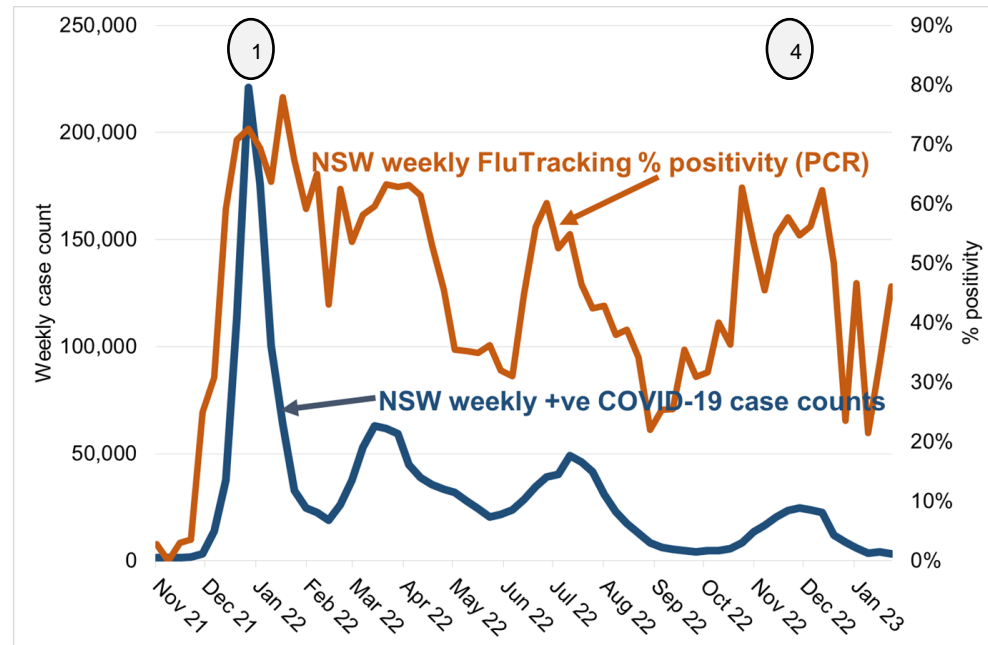
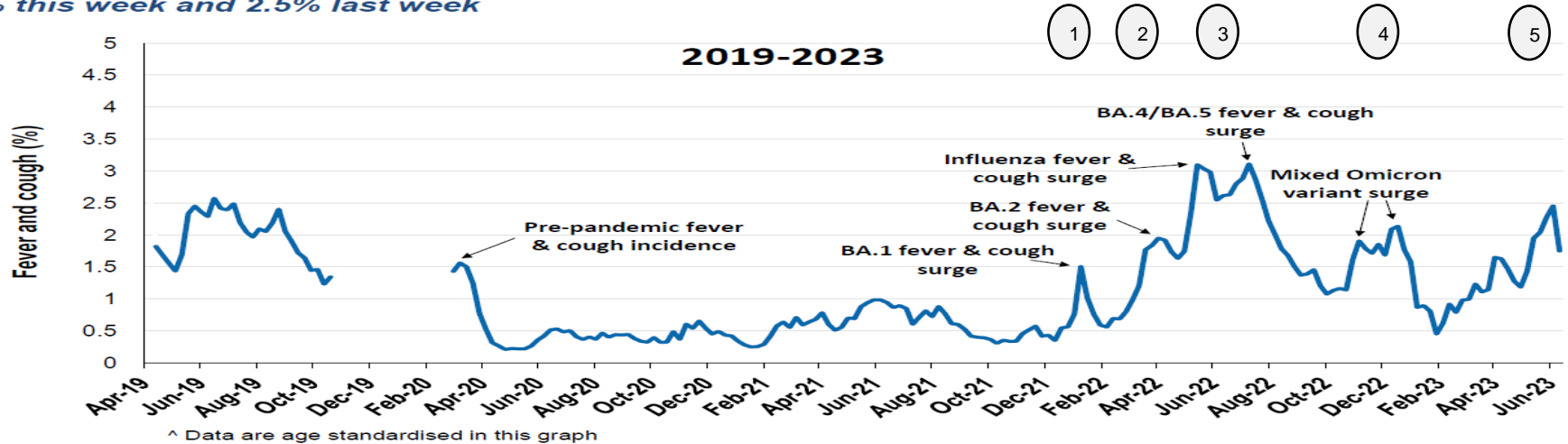
Omicron wave 5 – Flutracking data



Respiratory illness activity*:

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

1.8% this week and 2.5% last week



Hospital admissions and RACF outbreaks



Figure 2: Number of COVID-19 Hospital and ICU inpatients Hunter New England Public hospitals by notification date, 12 December 2021 – 16 June 2023 and in-focus 1 March 2023 – 16 June 2023 at 09:00 hr

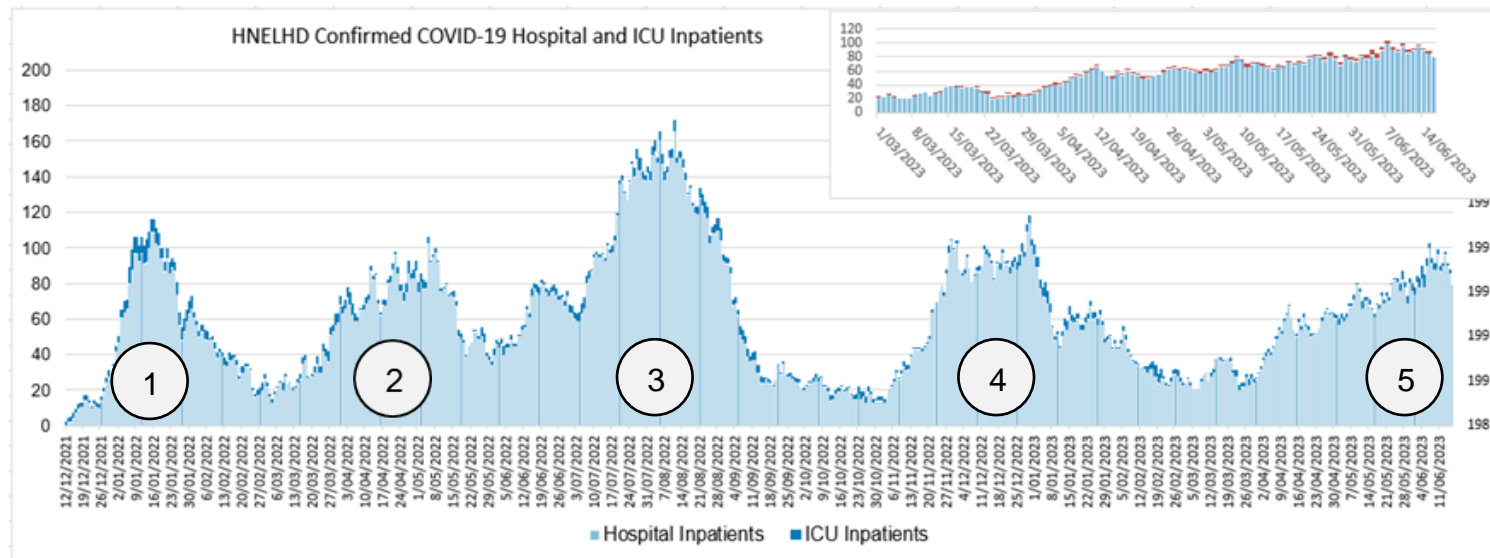
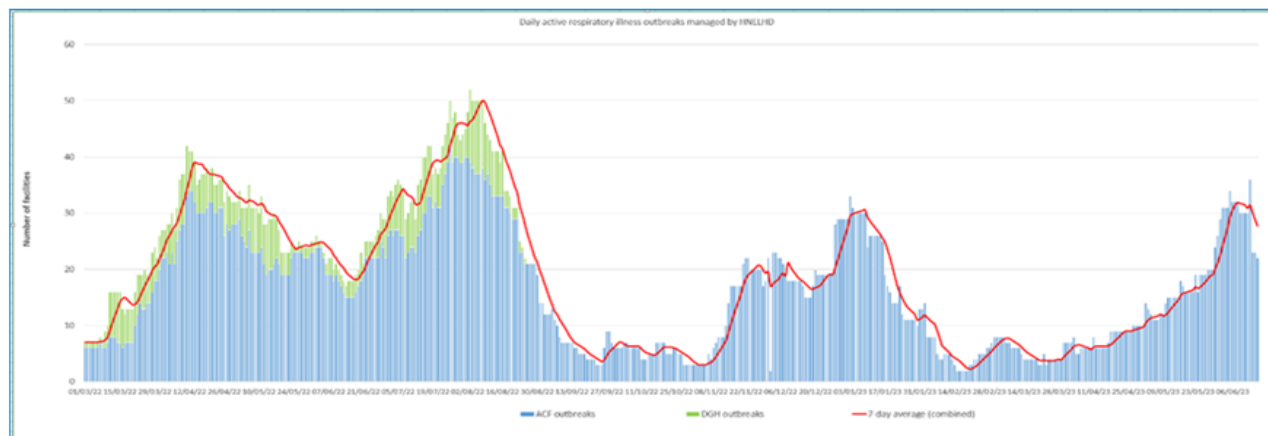
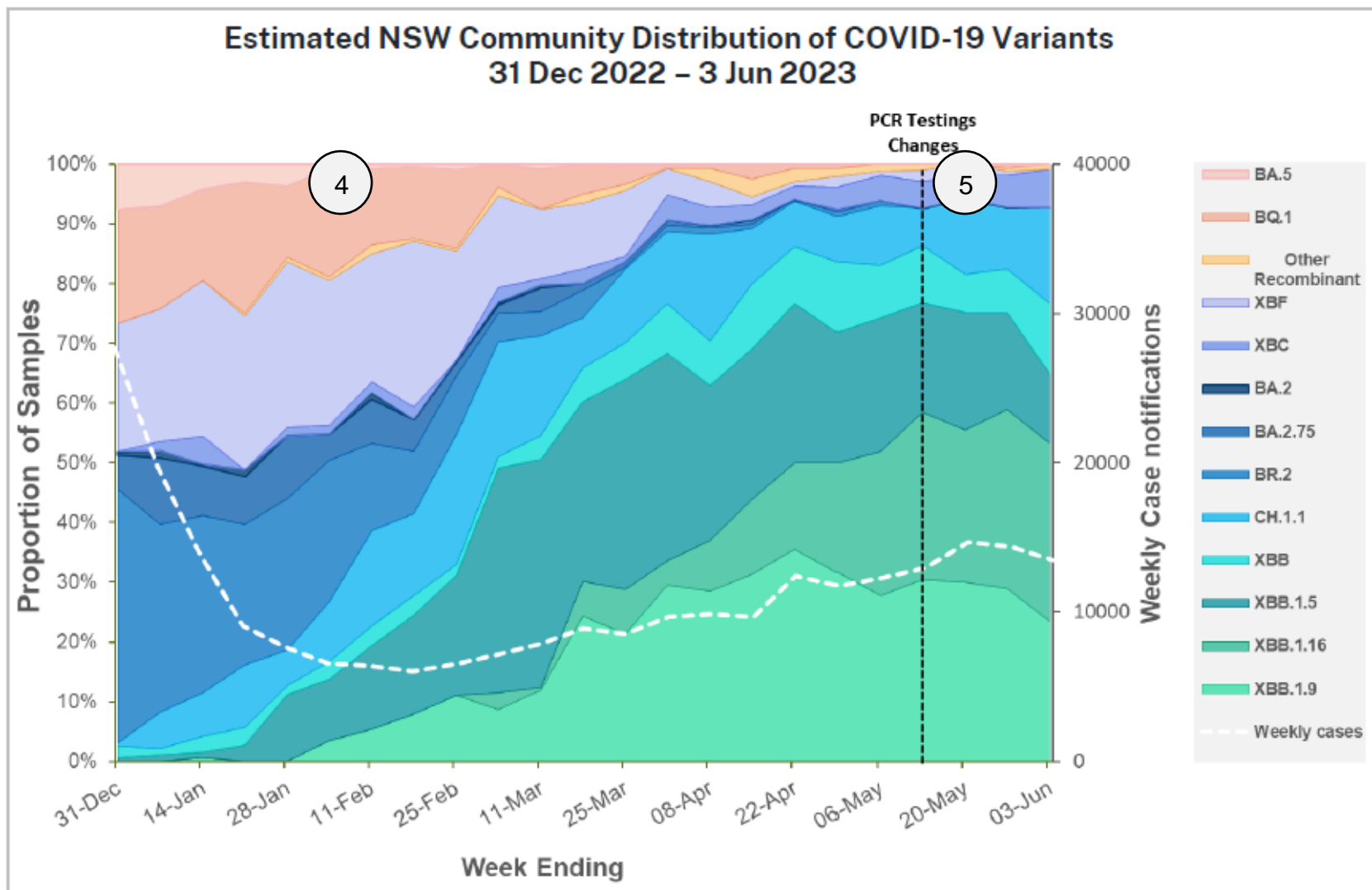


Figure 5: Epi curve of Aged Care Facilities (ACFs) and Disability Group Homes (DGHs) in Hunter New England local health district with active respiratory illness outbreaks, 01 March 2022 to 16 June 2023 at 09:00 hrs



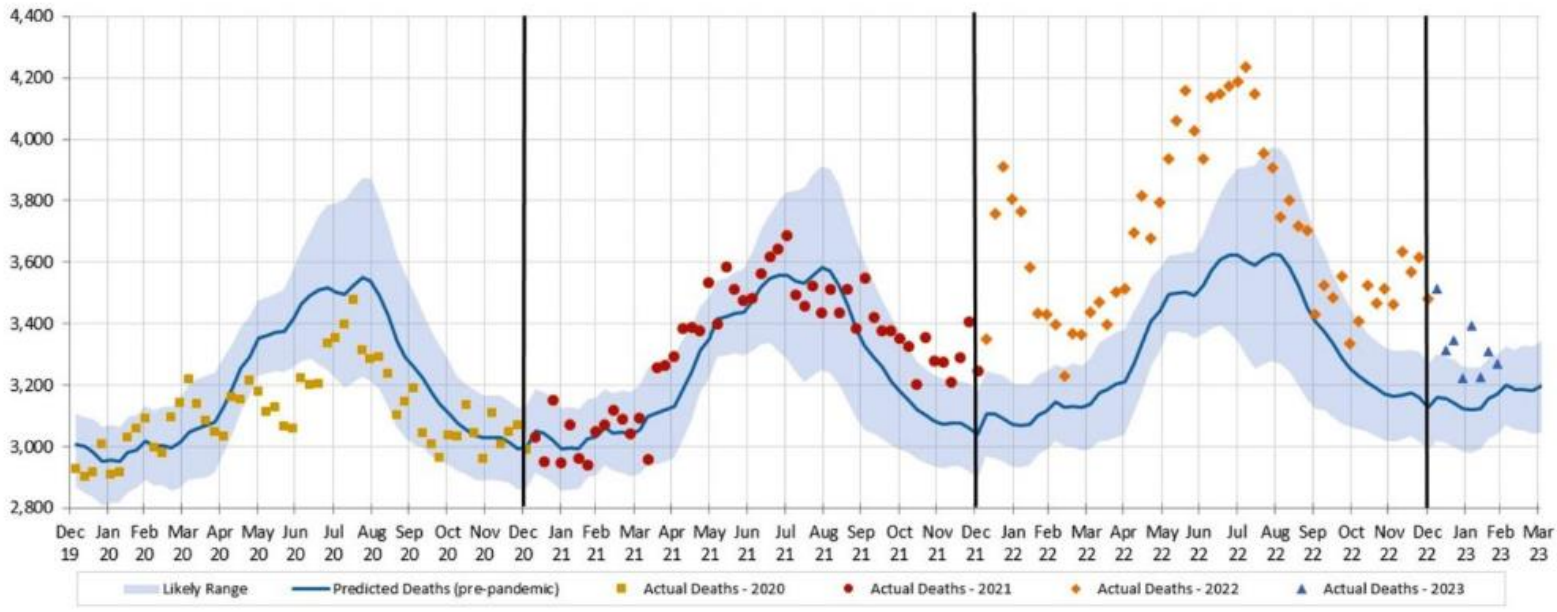
ACF outbreak: two or more residents test positive to COVID-19 or influenza within a 72-hour period at the ACF during their infectious period.
 DGH outbreak: A DGH with two or more cases in the past week and/or any DGH with positive clients.

Genomics



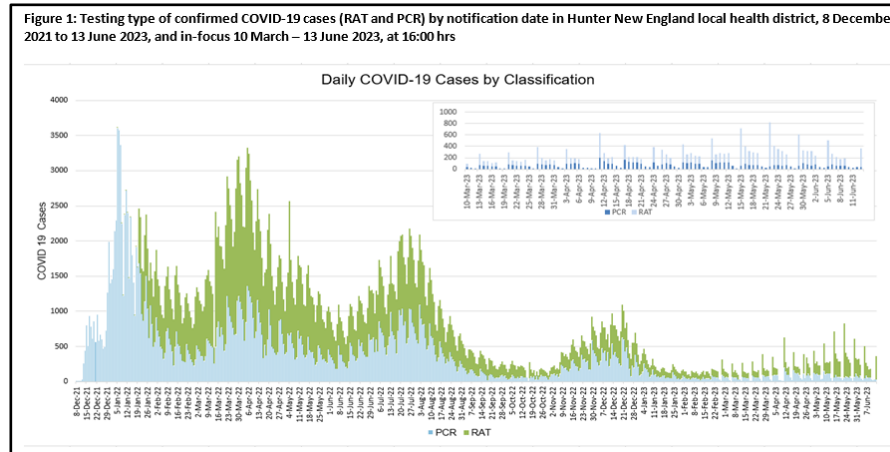
COVID-19 Mortality Working Group: Almost 20,000 excess deaths for 2022 in Australia

Figure 1 – Weekly actual and predicted deaths – All Causes



2020-2022 actuals include allowance for late reporting
Predicted deaths and ranges come from the fitted trend in each week's standardised death rate

What next?



6?

We're in another COVID wave. But it's not like the others

Published: June 13, 2023 6:01am AEST

Authors



James Wood

Professor, epidemiological modelling of infectious diseases, UNSW Sydney



Freya Shearer

Research Fellow, Epidemic Decision Support, The University of Melbourne



James McCaw

Professor in Mathematical Biology, The University of Melbourne

How about future waves?

Future COVID waves are likely to become much more predictable, and coincide with winter. While this is somewhat speculative, it is consistent with how other respiratory viruses behave.

THE CONVERSATION

Academic rigour, journalistic flair

Prevention – ATAGI booster advice



- ATAGI **recommends** a 2023 COVID-19 vaccine booster dose for adults in the following groups, if their last COVID-19 vaccine dose or confirmed infection (whichever is the most recent) was 6 months ago or longer, and regardless of the number of prior doses received:
 - All adults aged 65 years and over
 - Adults aged 18-64 years who have medical comorbidities that increase their risk of severe COVID-19, or disability with significant or complex health needs.
- ATAGI advises the following groups should **consider** a 2023 booster dose if their last COVID-19 vaccine dose or confirmed infection (whichever is the most recent) was 6 months ago or longer, and regardless of the number of prior doses received, based on an individual risk benefit assessment with their immunisation provider.
 - All Adults aged 18-64 years without risk factors for severe COVID-19
 - Children and adolescents aged 5-17 years who have medical comorbidities that increase their risk of severe COVID-19, or disability with significant or complex health needs.
- **Booster for all adults if last encounter with COVID (vaccine or infection) is over 6 months**
- **Prefer mRNA bivalent BA4/5 vaccine**



Effectiveness of COVID-19 vaccination against COVID-19 specific and all-cause mortality in older Australians: analysis by vaccine dose and time since receipt in 2022

Bette Liu^{1,2}, Sandrine Stepien¹, Timothy Dobbins^{2,3}, Heather Gidding^{1,2,3}, David Henry^{2,3,4}, Rosemary Korda⁵, Lucas Mills⁵, Sallie-Anne Pearson^{2,3}, Nicole Pratt^{3,7}, Claire M. Vajdic^{3,8}, Jennifer Welsh⁵, Kristine Macartney^{1,9}

- NCIRS preprint (Lancet)
- Australian population data on 65yo+ in 2022 (BA1/2, BA4/5)
- Significant hybrid immunity
- Recency of booster most important in preventing death, rather than total number of doses
- Vaccine Efficacy for COVID mortality 70-90% within 3 months, still over 50% at 6m

NPIs – NSW Health



3.4 NSW Risk Matrix

Green Alert
Low transmission risk

Yellow Alert
Low to moderate transmission risk

Amber Alert
Moderate to high transmission risk

Red Alert
High transmission risk

- Yellow alert level
- Surgical masks in clinical areas
- N95 masks/eye protection for suspected COVID

Yellow Alert
Low to moderate transmission risk

of cases and community transmission
Standard precautions apply at all times – tra

Hand hygiene and physi

- All patients to wear a mask on admission and during transit if able
- HWs managing suspected or confirmed COVID-19 patients to wear P2/N95 respirator and eye protection
- Testing of symptomatic patients and HWs including targeted screening
- Surgical mask for HWs in clinical areas (wards/clinics) including ED
- Surgical Mask for all visitors on entry
- Masks required in all clinical and publicly accessible spaces in the hospital
- Eye protection to be used when providing clinical care for patients with an ARI (within 1.5m)
- Enhanced cleaning of high touch points, shared toilet, and shower facilities

COVID-19 and other ARI - Managing health worker exposures and return to work in a healthcare setting

- CEC guidance for workplace and high risk household exposures
- Mostly RAT-based testing
- Where possible, recovering cases work from home and return day 10 if asymptomatic

Table 3 – Occupational exposure to COVID-19 - Health Worker Risk Matrix

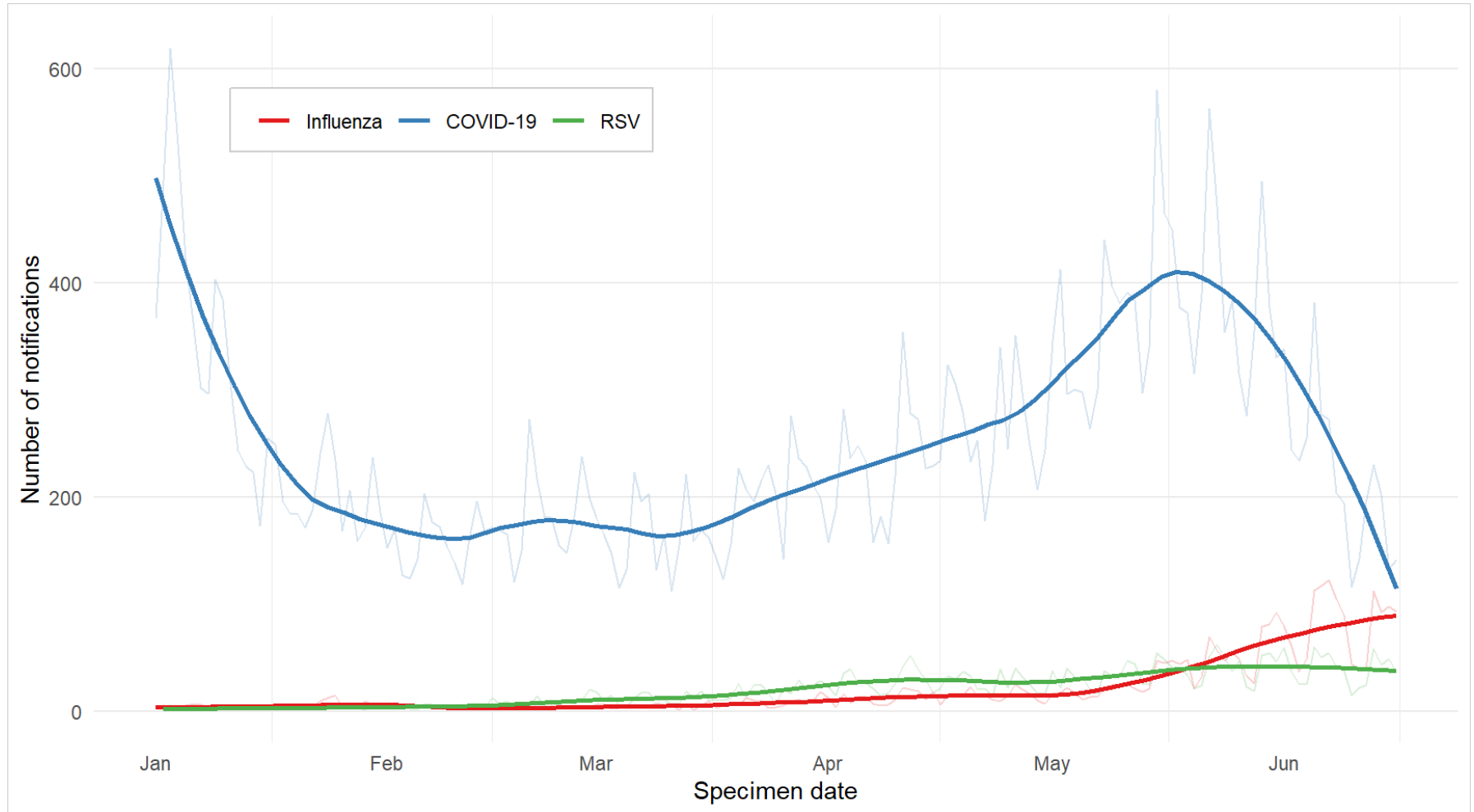
Note: A breach happens with an occupational exposure refer to 'PPE Breach Risk Assessment key principles'

• Case = Any confirmed positive case of COVID-19 (co-worker, patient or other)

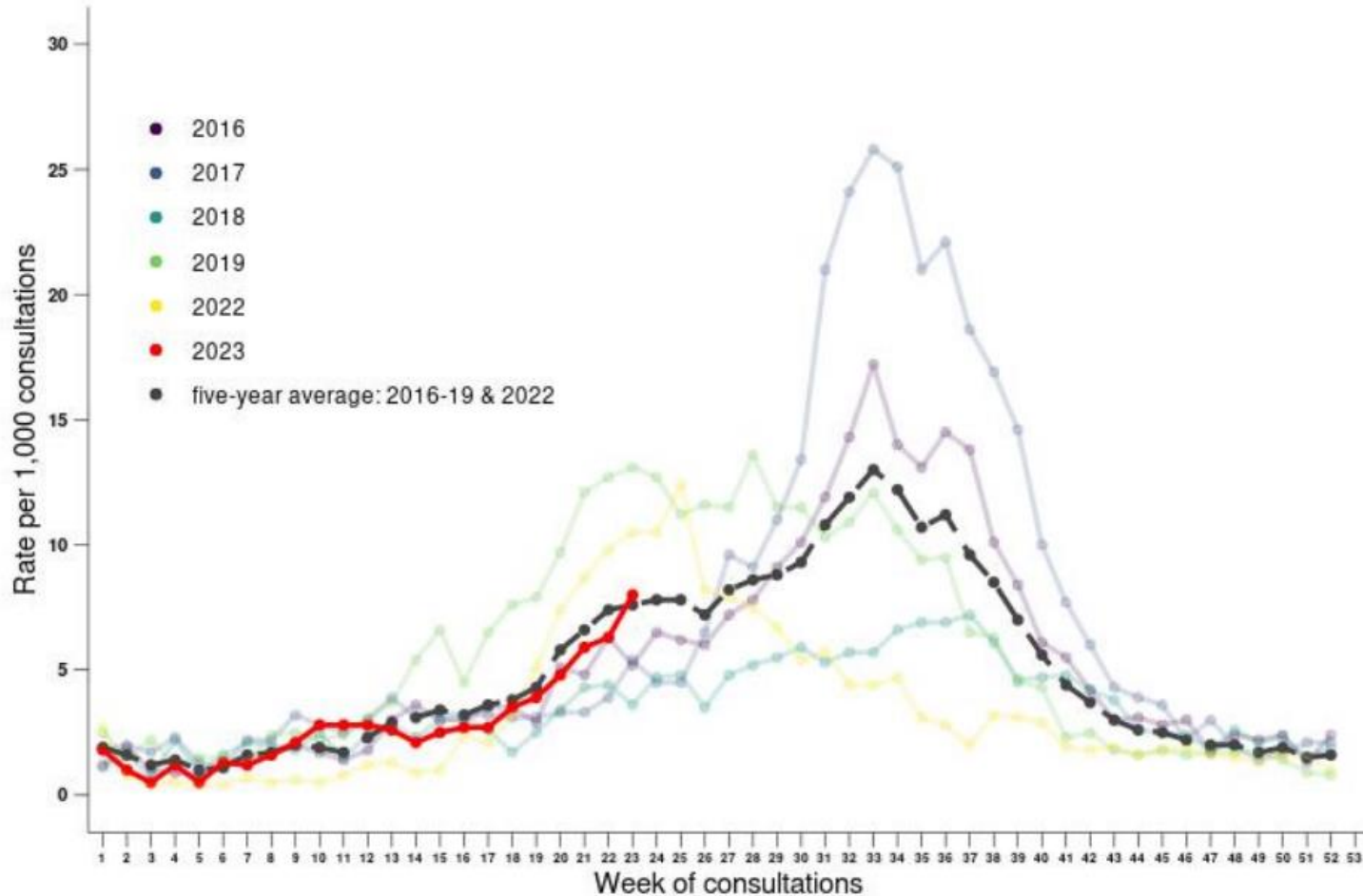
• NB: The use of eye protection for contact tracing is applied for droplet precautions when within 1.5m of a positive case (where a mask is not being worn by the case). The absence of eyewear outside of this setting will not increase risk

		CONTACT TYPE – See page 5 for more detailed assessment of a breach		
		Transient Contact – Low Risk <small>Transient, not face-to-face, limited contact that does not meet the definition of face-to-face contact</small>	Moderate Risk Scenarios <small>Contact within 1.5m up to 4 hours with a COVID-19 case</small>	Highest Risk Scenarios <small>Contact within 1.5m for more than 4 hours cumulative with a COVID-19 case</small> OR <small>Involved in AGPs and AGBs</small>
PPE worn during contact between health worker and case	1. No effective PPE worn by staff member or case e.g., such as mask below nose	Low	Moderate [#]	High [#]
	2. Surgical or P2/N95 mask worn by staff member i.e., no eye protection → Case with no mask	Low	Low OR Moderate [#]	Moderate [#] OR High [#]
	3. Surgical or P2/N95 mask worn by staff member i.e., no eye protection → Case wearing mask	Low	Low	Low OR Moderate [#]
	4. Staff member in surgical mask or P2/N95 and eye protection with no concerns or breaches → Case with no mask	Low	Low	Low
	5. Staff member in surgical mask or P2/N95 and eye protection with no concerns or breaches → Case wearing mask	Low	Low	Low

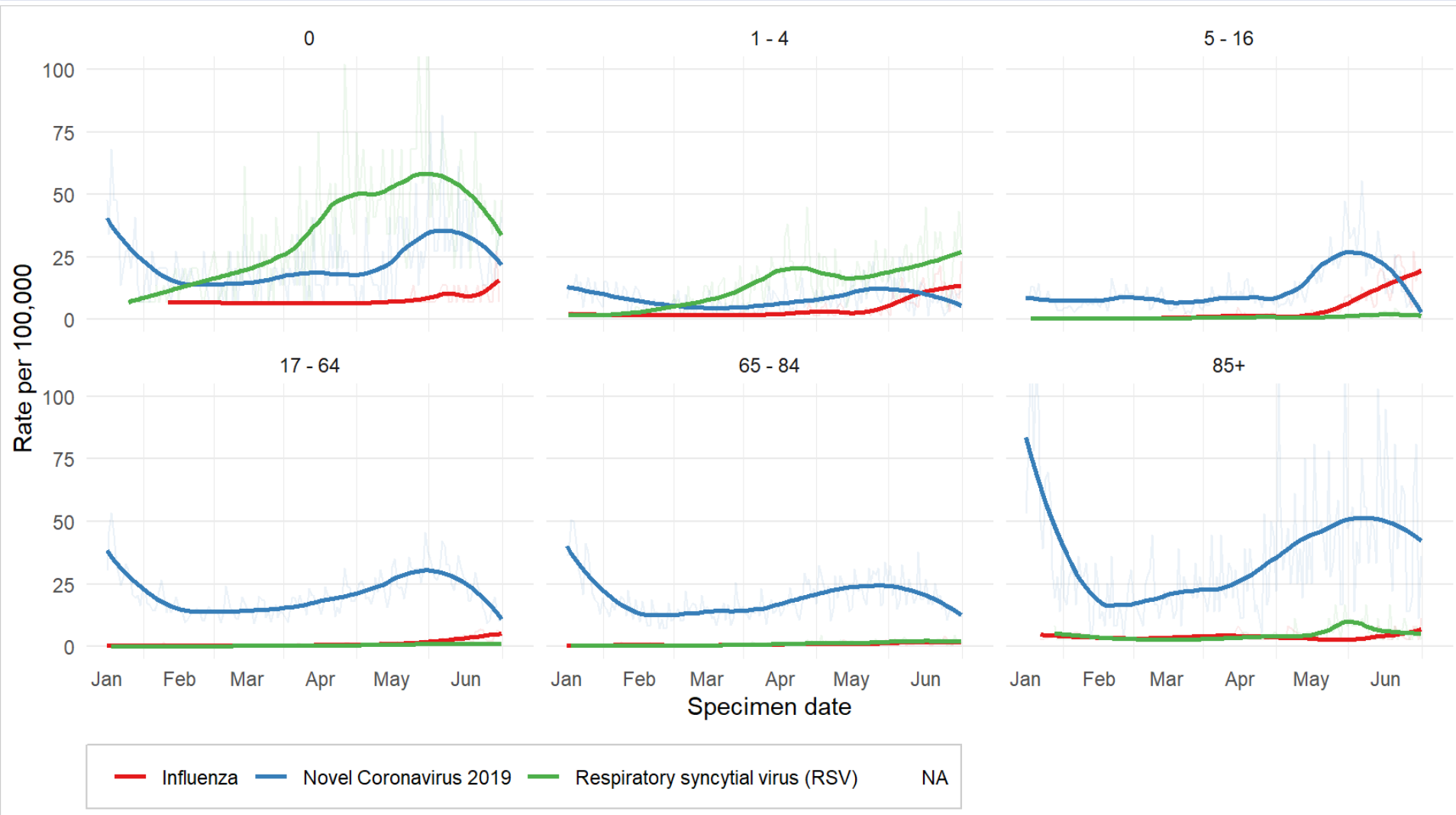
Other ARI notifications



GP ILI visits



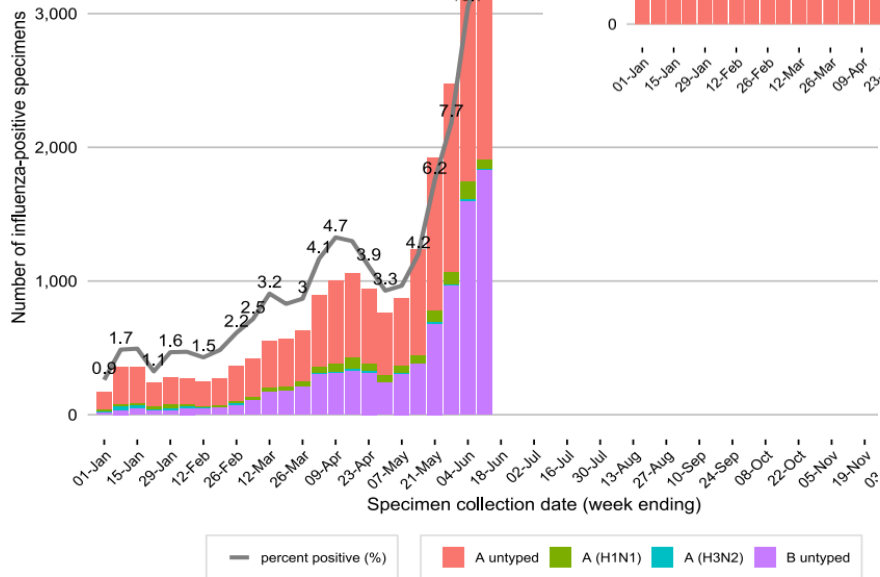
ARI notifications by age groups



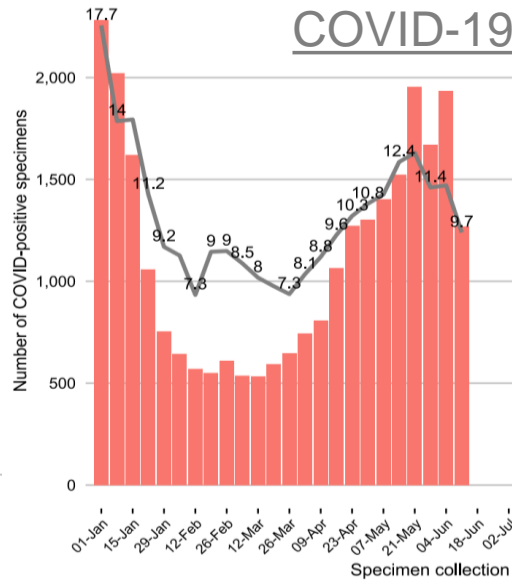
ARI test positivity



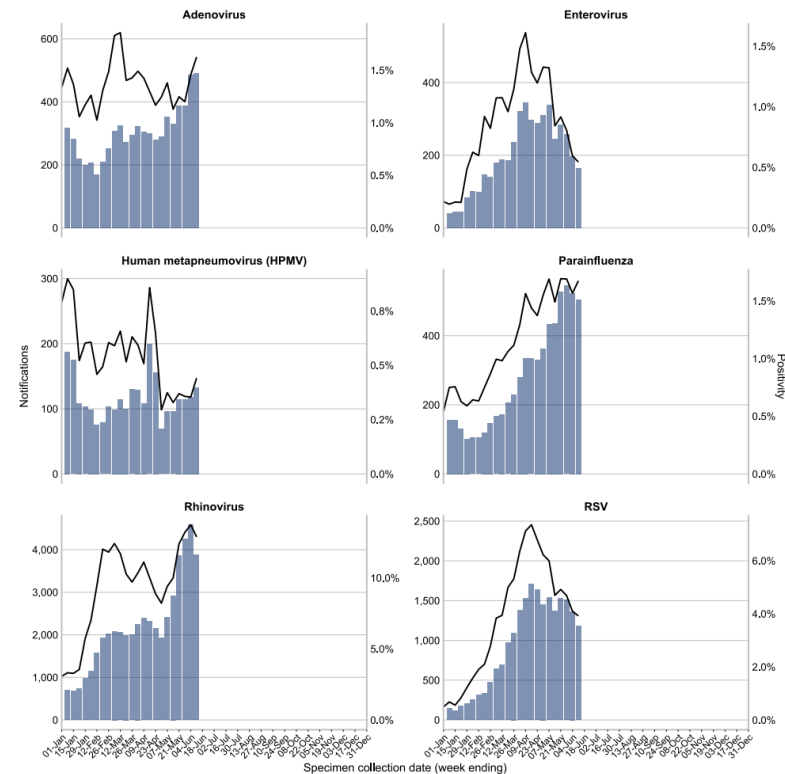
Influenza



COVID-19



Other viruses



Influenza vaccine coverage



Influenza vaccination % coverage* - by jurisdiction - all people

	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	AUS
6 mo - < 5 yrs	37.4	20.1	24.0	16.3	19.7	18.7	21.5	18.4	20.4
5 - < 15 yrs	19.1	11.3	13.8	9.8	12.0	14.3	11.3	9.0	12.1
15 - < 50 yrs	28.9	17.8	21.3	16.5	21.5	18.3	21.0	16.0	19.0
50 - < 65 yrs	42.2	30.7	34.5	31.3	36.5	33.4	39.6	22.5	32.8
≥ 65 yrs	64.1	57.0	60.2	59.8	64.5	60.8	65.9	32.3	59.5

Influenza vaccination % coverage* - by jurisdiction - Aboriginal and Torres Strait Islander people

	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	AUS
6 mo - < 5 yrs	17.9	12.6	14.8	10.0	10.5	10.9	16.8	19.6	12.3
5 - < 15 yrs	11.9	9.5	9.8	8.4	8.8	9.9	10.5	13.8	9.6
15 - < 50 yrs	20.0	13.7	15.5	12.9	14.6	12.5	17.1	19.8	14.3
50 - < 65 yrs	37.6	34.2	34.7	32.0	34.1	28.7	43.5	33.1	33.2
≥ 65 yrs	65.3	59.8	59.8	55.4	56.7	47.8	71.2	39.9	55.9

* Coverage calculated using vaccinations given 01 Mar - 17 Jun 2023 (inclusive) AIR data as at 18 Jun 2023.

Coverage data in these tables may differ slightly from estimates published elsewhere due to differences in calculation methodologies and/or the AIR data being used in the calculation having been downloaded on different dates.



RSV vaccine update



The screenshot shows the FDA website header with the FDA logo, a search bar, and a menu icon. Below the header, it says "IN THIS SECTION: Press Announcements" and a link to "Press Announcements". The main heading is "FDA NEWS RELEASE" followed by "FDA Approves First Respiratory Syncytial Virus (RSV) Vaccine". A sub-heading reads "Arexvy Approved for Individuals 60 Years of Age and Older". There are social media sharing buttons for Facebook, Twitter, LinkedIn, Email, and Print. Below that, it says "For Immediate Release: May 03, 2023" and a button for "Español". The main text begins with "Today, the U.S. Food and Drug Administration approved Arexvy, the first respiratory syncytial virus (RSV) vaccine approved for use in the United States. Arexvy is approved for the prevention of lower respiratory tract disease caused by RSV in individuals 60 years of age and older." A quote follows: "Older adults, in particular those with underlying health conditions, such as heart or lung disease or weakened immune systems, are at high risk for severe disease caused

- US FDA and European Medicines Agency have recently approved Arexvy (GlaxoSmithKline) for use in those aged 60 and over.
- Reported efficacy is 83% against lower respiratory tract disease and 94% against severe LRTD.
- FDA has also recently approved Abrysvo (Pfizer) for those 60 and over.
- Arexvy, Abrysvo and a Moderna mRNA vaccine are under evaluation by the Australian TGA for use in those 60 and over.

A microscopic image showing numerous blue, circular structures, likely cells or microorganisms, scattered across a brown, textured background. The structures have a distinct outer boundary and a darker, more granular interior. The text "Thank you" is overlaid in the center of the image.

Thank you



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Table 2 – Excess deaths in Australia – By Cause of Death for the first two months of 2023 and for 2022

Cause of Death	2023 (Year to Date)						2022 (52 weeks)					
	Actual			Predicted	Excess	% Excess	Actual			Predicted	Excess	% Excess
	Non-Covid	Covid	Total				Non-Covid	Covid	Total			
From COVID-19												
Doctor-certified	-	932	932	-	932	100%	-	9,818	9,818	-	9,818	100%
Coroner-referred	-	49	49	-	49	100%	-	487	487	-	487	100%
All From COVID-19	-	982	982	-	982	100%	-	10,305	10,305	-	10,305	100%
Doctor-certified other respiratory disease												
Influenza	9	-	9	34	(24)	-73%	283	6	289	680	(390)	-57%
Pneumonia	290	-	290	360	(70)	-20%	2,350	-	2,350	2,770	(420)	-15%
Lower respiratory	1,060	8	1,060	1,170	(110)	-9%	7,990	66	8,050	8,350	(290)	-4%
Other respiratory	560	6	570	530	40	7%	3,750	29	3,780	3,710	80	2%
All doctor-certified respiratory	1,920	14	1,930	2,100	(170)	-8%	14,370	102	14,470	15,500	(1,030)	-7%
Doctor-certified other diseases												
Cancer	7,980	84	8,070	8,160	(100)	-1%	49,820	780	50,600	50,030	580	1%
Ischaemic heart disease	1,950	30	1,980	1,960	20	1%	14,770	236	15,000	13,160	1,840	14%
Other cardiac conditions	1,470	25	1,500	1,310	180	14%	10,130	175	10,310	9,320	980	11%
Cerebrovascular disease	1,360	9	1,370	1,340	30	2%	9,210	132	9,350	8,860	480	5%
Diabetes	860	6	870	720	150	20%	5,510	118	5,630	4,800	830	17%
Dementia	2,460	69	2,520	2,600	(70)	-3%	17,110	581	17,690	17,820	(120)	-1%
Other unspecified diseases	5,200	76	5,270	4,920	350	7%	34,960	611	35,570	32,210	3,360	10%
All other doctor-certified disease	21,280	301	21,580	21,030	550	3%	141,520	2,632	144,150	136,200	7,950	6%
Coroner-referred excl. From COVID-19	3,460	20	3,480	3,390	90	3%	22,560	222	22,780	20,760	2,010	10%
Total	26,700	1,316	28,000	26,500	1,500	6%	178,400	13,261	191,700	172,500	19,200	11%

* Figures shaded green indicate that the observed values are below the 95% prediction interval while figures shaded red are above the 95% prediction interval



Table 2 – Excess deaths in Australia – By Age/Gender*

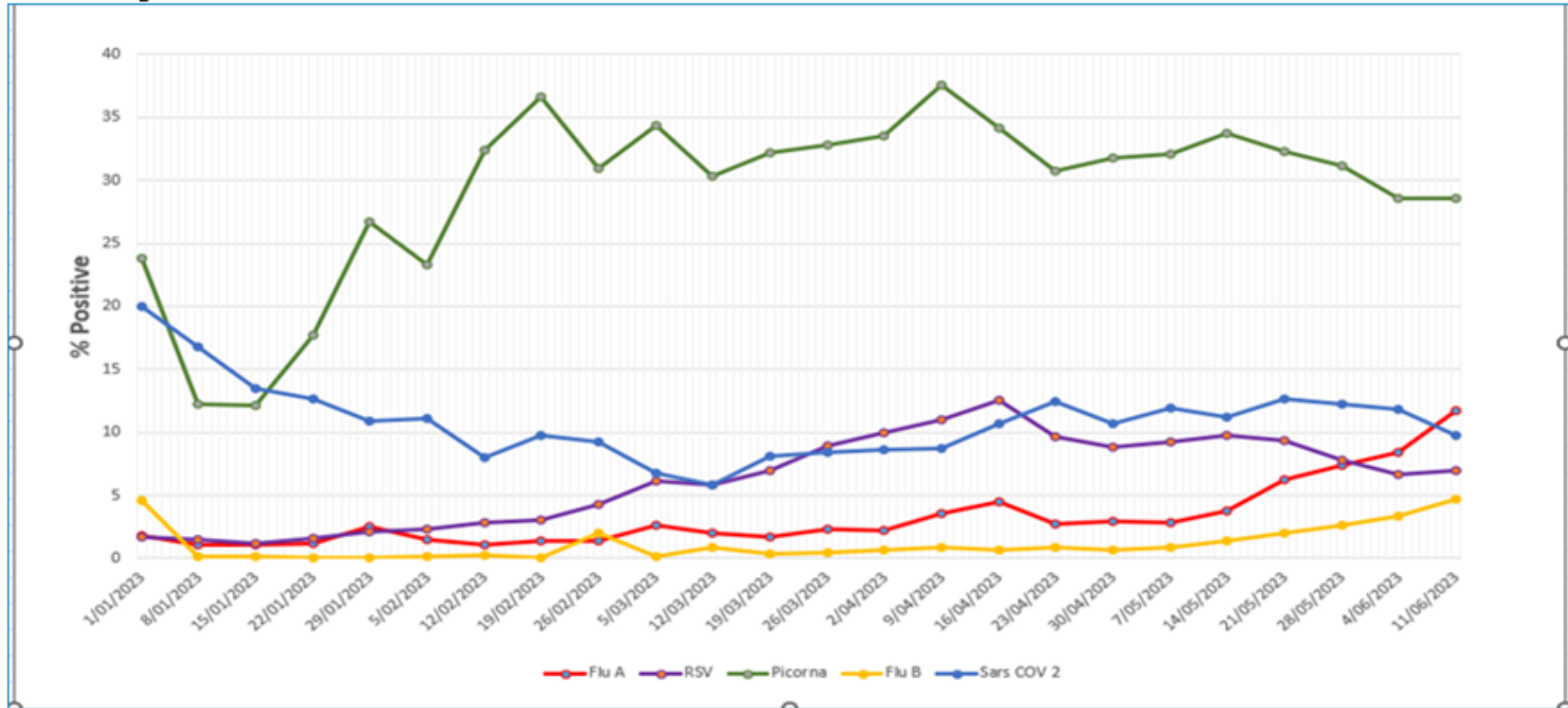
Age Band and Gender	2022 Year to Date (47 weeks)						2021				2020			
	Actual	Predicted	Excess	% Excess	Covid-19	% Net	Excess	% Excess	Covid-19	% Net	Excess	% Excess	Covid-19	% Net
Males, 0-44	4,670	4,570	100	2%	122	0%	-80	-2%	36	-2%	-120	-2%	7	-2%
Males, 45-64	12,650	12,120	530	4%	409	1%	-80	-1%	145	-2%	-360	-3%	26	-3%
Males, 65-74	16,190	14,960	1,230	8%	922	2%	390	2%	176	1%	-210	-1%	61	-2%
Males, 75-84	26,600	22,950	3,650	16%	1,992	7%	1,010	4%	248	3%	-570	-2%	126	-3%
Males, 85 and over	30,640	26,990	3,650	14%	2,959	3%	570	2%	209	1%	-820	-3%	212	-4%
Males, All ages	90,700	81,600	9,100	11%	6,403	3%	1,800	2%	814	1%	-2,100	-2%	432	-3%
Females, 0-44	2,560	2,340	220	9%	77	6%	100	4%	28	3%	10	0%	0	0%
Females, 45-64	7,970	7,460	510	7%	312	3%	-50	-1%	76	-1%	-150	-2%	19	-2%
Females, 65-74	10,590	10,010	580	6%	501	1%	250	2%	100	1%	-420	-4%	23	-4%
Females, 75-84	20,280	17,660	2,620	15%	1,235	8%	770	4%	143	3%	-390	-2%	112	-3%
Females, 85 and over	41,640	36,110	5,530	15%	3,213	6%	1,310	3%	220	3%	-1,370	-3%	300	-4%
Females, All ages	83,000	73,600	9,400	13%	5,338	6%	2,400	3%	567	2%	-2,300	-3%	454	-3%
Person, 0-44	7,230	6,910	320	5%	198	2%	20	0%	64	-1%	-110	-1%	7	-2%
Person, 45-64	20,620	19,580	1,040	5%	721	2%	-120	-1%	221	-2%	-510	-2%	45	-3%
Person, 65-74	26,780	24,980	1,800	7%	1,422	2%	640	2%	275	1%	-630	-2%	84	-3%
Person, 75-84	46,870	40,610	6,260	15%	3,227	7%	1,770	4%	391	3%	-970	-2%	238	-3%
Person, 85 and over	72,270	63,100	9,170	15%	6,173	5%	1,880	3%	429	2%	-2,190	-3%	512	-4%
Person, All ages	173,800	155,200	18,600	12%	11,741	4%	4,200	2%	1,381	2%	-4,400	-3%	886	-3%

* Figures shaded green indicate that the observed values are below the 95% prediction interval while figures shaded red are above the 95% prediction interval

NSW respiratory virus data



Figure 10: Percent positivity of selected respiratory viral infections (by PCR) at Pathology North laboratories[^], week ending 1 January 2023 to week ending **11 June 2023**



Other data sources - sewage



Figure 11. Gene concentration, per 1,000 people in each sewage catchment, 1 January 2023 to 02 June 2023.

