

COVID-19 and other causes: excess mortality estimated at 15% for first two months of 2022, Actuaries Institute

8 June 2022

- Excess mortality for the first two months of 2022 was 15% (+4,000 deaths) above pre-pandemic levels, with 10% (+2,500) due to COVID-19 alone.
- Deaths from Ischaemic heart disease (11%), diabetes (18%) and dementia (16%) all higher than predicted.
- Excess mortality due to COVID-19 deaths in March-May 2022 (figures for non-COVID-19 deaths are not yet available) is estimated to be around 6% (+2,500).
- Deaths in May expected to almost reach the highs of early 2022.

There were 4,000 more deaths than expected in Australia during the first two months of 2022, according to the latest modelling from the Actuaries Institute.

This equates to excess mortality of 15% above pre-pandemic levels, revising previous excess mortality estimates upwards by 50%.

While 2,500 deaths (10% excess mortality) were due to COVID-19 alone, deaths from other causes accounted for 1,500 excess deaths, including:

- ischaemic heart disease (220 more deaths than expected);
- diabetes (130 more); and
- dementia (370 more).

The Institute's new figures follow the latest release of detailed data from the Australian Bureau of Statistics on all causes of death, including COVID-19. Institute modelling measures actual deaths against predicted deaths, adjusted as the population ages and grows, and allowing for trends in mortality improvement. "These adjustments are important because a simple comparison with historical averages can be misleading," said Jennifer Lang, spokesperson for the Australian Actuaries Institute's COVID-19 Mortality Working Group.

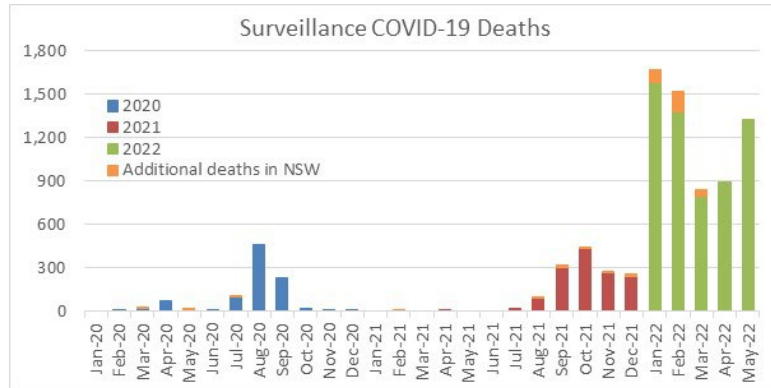
Comparing actual deaths against predicted deaths gives a view of the impact of the pandemic on the mortality of the Australian population.

Cause of Death	Jan and Feb 2022				2021 (52 weeks)		2020 (53 weeks)	
	Actual	Predicted	Excess	% Excess	Excess	% Excess	Excess	% Excess
Doctor-certified deaths								
COVID-19	2,559	-	2,559	100%	1,240	100%	855	100%
<i>Respiratory disease</i>								
Influenza	-	20	(20)	-100%	(800)	-100%	(700)	-94%
Pneumonia	320	380	(60)	-16%	(970)	-31%	(890)	-29%
Lower respiratory	1,070	1,120	(50)	-5%	(810)	-10%	(1,250)	-15%
Other respiratory	530	540	(20)	-3%	(110)	-3%	(520)	-14%
All Respiratory Disease	1,920	2,080	(150)	-7%	(2,690)	-17%	(3,360)	-21%
Cancer	8,080	8,000	90	1%	160	0%	(680)	-1%
Ischaemic heart disease	2,230	2,010	220	11%	840	6%	(90)	-1%
Cerebrovascular disease	1,430	1,350	80	6%	330	4%	(70)	-1%
Diabetes	870	740	130	18%	380	8%	390	8%
Dementia	2,700	2,340	370	16%	(540)	-3%	(820)	-5%
Other unspecified diseases	6,900	6,260	640	10%	2,440	6%	(610)	-2%
All Other Disease	22,230	20,690	1,540	7%	3,600	3%	(1,890)	-1%
All doctor-certified deaths	26,700	22,800	3,900	17%	2,100	1%	(4,400)	-3%
Coroner-referred deaths	3,510	3,400	110	3%	1,130	6%	(50)	0%
Total	30,200	26,200	4,000	15%	3,200	2%	(4,500)	-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



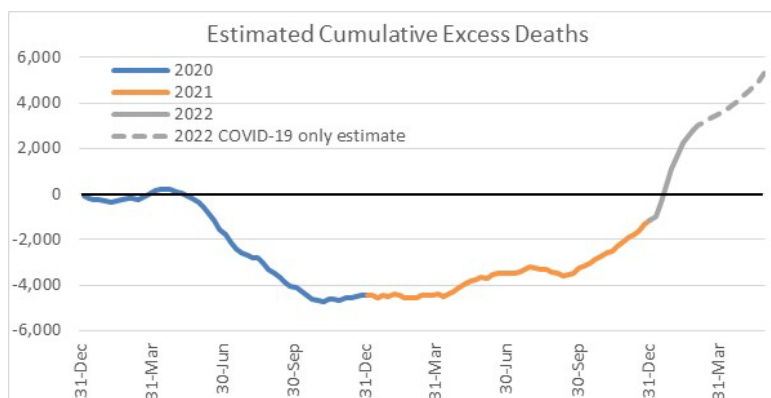
Using daily reported COVID-19 deaths for March to May, the Institute estimates that May deaths will be much higher than those in March and April, and almost at the levels seen in January and February.



Note: a reconciliation of NSW data showed additional deaths for January to March (marked in orange)

In the last three months, there were 3,054 COVID-19 deaths. Adjusting the figures to reflect ABS data on deaths 'with' rather than 'from' COVID-19, the Institute estimates that around 2,500 of these deaths were due to COVID-19. This will result in excess COVID-19 mortality of around 6%. Total excess mortality is expected to be higher, when detailed data is available.

The following graph shows detailed excess death data up until February and the preliminary estimate (of COVID-19 deaths only) to May 2022.



"We conservatively estimate Australia's excess deaths cumulatively across the pandemic to be at least 5,500 by the end of May 2022," Ms Lang said.

Jennifer Lang is available for interview. Actuaries Digital article can be viewed [here](#).

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Note: Excess mortality (actual deaths minus expected deaths) is generally recognised as the best way of assessing the mortality impact of a pandemic. The Institute has used historical data to project an estimate of the deaths that would have been expected in the absence of a pandemic and has adjusted actual deaths to allow for those not yet reported.

About the Actuaries Institute

As the sole professional body for Members in Australia and overseas, the Actuaries Institute represents the interests of the profession to government, business and the community. Actuaries assess risks through long-term analyses, modelling and scenario planning across a wide range of business problems. This unrivalled expertise enables the profession to comment on a range of business-related issues including enterprise risk management and prudential regulation, retirement income policy, finance and investment, general insurance, life insurance and health financing.