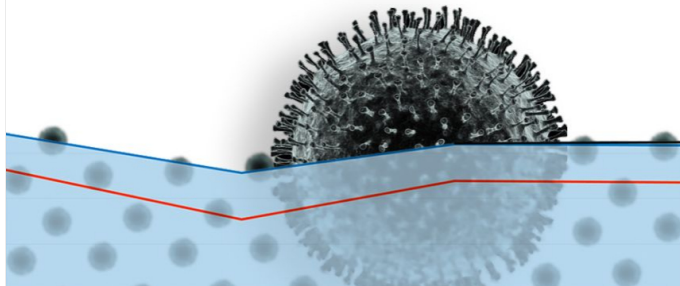


How accurate are Australia's coronavirus numbers? The answer lies in our death data

Story Lab / By Matt Martino

Posted Mon 22 Jun 2020 at 9:11pm, updated Tue 23 Jun 2020 at 4:01am



Many European countries have recorded excess deaths that are not explained by the official COVID-19 count. Does Australia have the same problem? (Story Lab)

Share   

Since the onset of the coronavirus pandemic, many questions have been raised about the reliability of the official COVID-19 statistics given by each country.

In the United Kingdom, for example, [some estimates suggest](#) that official testing has only picked up 14 per cent of cases.

If such a vast number of cases of this sometimes-lethal disease are being undercounted, they're bound to show up in the most morbid of places — a country's death data.

COVID accounting reveals 'excess deaths'

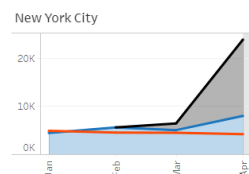
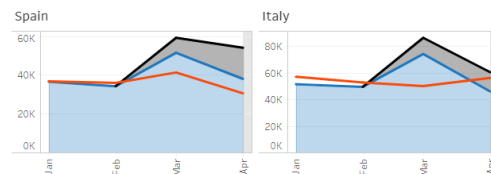
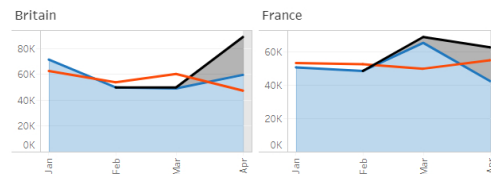
A recent analysis from [The Economist](#) found that in a number of countries, there were a substantial number of excess deaths above what would normally be expected.

But not all of those deaths were reflected in the official COVID-19 statistics. For example:

- In March, France and Italy recorded 15,433 and 24,091 additional deaths which are unexplained by the official COVID-19 statistics.
- In Spain, there were 10,151 that same month.
- In Britain, there were an extra 12,197 deaths in April, over and above those officially registered as COVID-19 deaths.
- And in New York City, where the largest outbreak in the US has occurred, there were 3,799 excess deaths recorded in April.

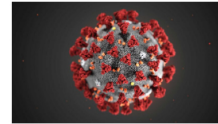
How many excess deaths are there during COVID-19?

■ Expected deaths ■ COVID-19 deaths ■ Other deaths



Sources: European and New York data from The Economist, expected deaths recalculated as a median by Story Lab except Spain, which is a model from the government MoMo mortality dataset
Credit: ABC News Story Lab

More on coronavirus



See our full coverage of coronavirus

Other languages

[ABC中文 | 新冠疫情特别报道](#) →

[Pandemik virus corona](#) →

What's being done nationally to prevent coronavirus outbreaks in aged care?



I've had a coronavirus test. How long will it take to get my results back?



Millions of Aussies have been told to isolate. Here's what that means for you



The Australians who are sick of hearing 'you should have come home earlier'



Three months on, does Australia need a new coronavirus contact tracing app?



Top Stories

Second survivor from missing ship found as typhoon approaches

Tony Abbott appointed to Britain's Board of Trade despite heavy criticism

Riot squad swarms Sydney street after man shot dead in broad daylight

Why hasn't Europe locked down despite its COVID-19 second wave?

Coronavirus update: Russian vaccine candidate produces antibody response

UN says China's Hong Kong security law infringes on human rights

Will I be able to go interstate by Christmas? Here's the plan for borders in seven states and territories

Victoria Police arrest another online supporter of anti-lockdown protests

A children's inflammatory illness associated with COVID-19 has emerged in Australia. Here's what we know

National Cabinet has 'ambition' for reopening by Christmas

Two Richmond AFL players sent home from Queensland after Gold Coast brawl

Rescue workers have renewed hope for survivors one month after deadly Beirut blast

So, what happened in Australia?

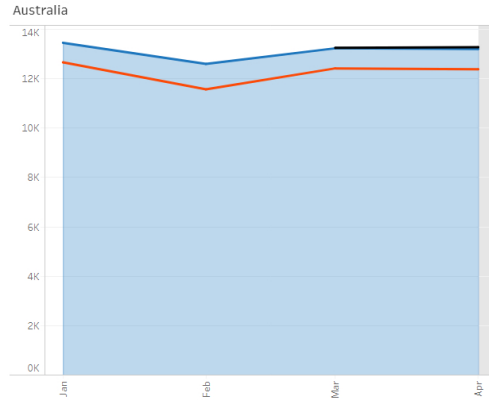
To see whether Australia has any unreported 'excess deaths', we've analysed Australian Bureau of Statistics data from the past five years to find a baseline of 'expected deaths' — the median number of deaths in each month of those five years.

We then compared that baseline against the number of deaths so far in 2020, as reported by each of the states and territories.

The data shows the number of people dying in Australia in 2020 follows the trend of expected deaths, but at a slightly higher level.

How many excess deaths are there during COVID-19?

Expected deaths COVID-19 deaths Other deaths



Sources: State and territory births, deaths and marriages registries, Australian Bureau of Statistics. Calculations: Professor Jake Olivier. Credit: ABC News Story Lab

However, the number of deaths has been above average all year, not just since the start of the pandemic. So what's going on?

Catherine Bennett, the chair in epidemiology at Deakin University, noted that while Australia's deaths might seem elevated in the graph, there was little to worry about.

"Our monthly increase in deaths compared with previous years is constant since January, and consistent with that expected with our annual population growth of 1.6 per cent, and our aging population."

She noted that France, for example, has only 0.2 per cent population growth by comparison.

"Australia does not show the uplift in deaths from the start of the COVID pandemic seen in the other countries, and given these are all coming off winter where we normally see higher death rates, this is even more notable as we do expect some rise as we enter our flu season. The fact that our COVID deaths are not even visible as a fraction of our reported deaths on this scale is a reminder of how successful we have been in keeping our COVID-related death rate so comparatively low," she added.

Jake Olivier, a professor of statistics from the University of New South Wales, concurred that Australia's elevated deaths this year were little to worry about.

"Other countries did not have large increases in deaths due to COVID-19 until March, so it is unlikely the excess deaths in January and February are due to the current pandemic," he said.

And he noted that the increases were not consistent across the states and territories.

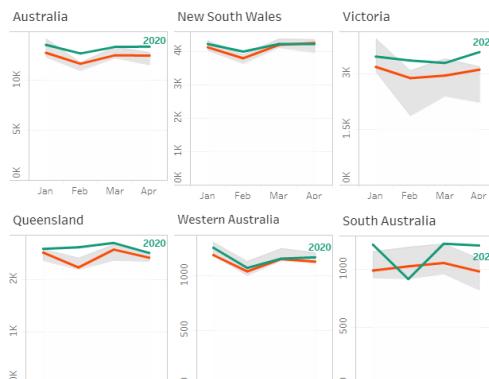
[For the latest news on the COVID-19 pandemic read our coronavirus live blog.](#)

State of the states

Indeed, the picture across Australia's eight jurisdictions is mixed, with Victoria playing an outsized role in inflated deaths for the start of this year.

Most jurisdictions followed their expected death lines closely in 2020

2020 Expected deaths Range 2015 - 2019



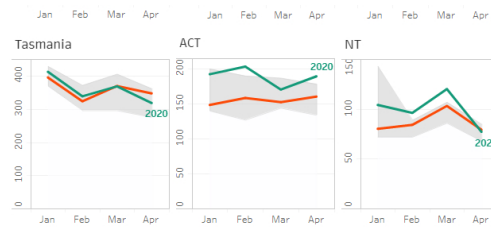
Brisbane Lions conquer Collingwood but lose Harris Andrews to injury

WA economy going 'gangbusters' behind coronavirus border, Premier says

Melbourne Storm snap Rabbitohs' winning streak, Knights overcome Sharks

Popular Now

1. Why hasn't Europe locked down despite its COVID-19 second wave?
2. Victoria Police arrest another online supporter of anti-lockdown protests
3. Second survivor from missing ship found as typhoon approaches
4. Tony Abbott appointed to Britain's Board of Trade despite heavy criticism
5. MasterChef contestant Ben Ungeremann to fight allegations he sexually assaulted teenage girl
6. Riot squad swarms Sydney street after man shot dead in broad daylight



Sources: State and territory births, deaths and marriages registries, Australian Bureau of Statistics.
 Calculations: Professor Jake Olivier
 Credit: ABC News Story Lab

+ a b | e a u ← → ⏪ ⏩ 🏠 📄 🗨️

[Victoria] had 815 more deaths for March and April than its five-year median which was nearly half of all Australian excess deaths during that period," Professor Olivier said. "On the other hand, NSW had fewer than expected deaths for those months."

Without these Victorian deaths, Australia's 2020 death line would track much closer to the expected line. In NSW, Tasmania and WA, 2020 deaths track close to what is expected.

Professor Bennett said that given Victoria's population growth, the excess deaths attributed to that state are "not a big discrepancy, especially when we do see some variation year to year".

"But the other reason for not thinking this is COVID-related is that it is so consistent across all months, where in other settings we see the excess deaths appear in March or so."

Professor Olivier noted that April was a time when "many countries saw large increases in deaths".

Read more about coronavirus:

- [What does being in a recession mean and how does it affect me?](#)
- [COVID has seen the 2020 AFL grand final moved to the Gabba. Here's what you need to know](#)

At this time, NSW, Tasmania, WA and Queensland recorded values close to the expected. NT's deaths in April were lower than expected.

SA's data was higher in April than expected, but Professor Olivier said the volatility of its death data could be attributed to the way it is collected.

For 2019 and 2020, Victoria, SA, Tasmania and the NT were only able to provide Story Lab with data by the month of when it was registered, rather than when it actually occurred, which other states were able to supply.

"Registration data can lead to clumping in the death time series; peaks in data if there is an accumulation of deaths that are registered around the same time followed by a trough as deaths accumulate again before deaths are registered again in clumps," Professor Olivier said.

"There may be some evidence of this in SA for January and February, higher than expected in January and lower than expected in February. However, this would not explain the consistently higher than expected deaths in VIC for all months in 2020"

What does this mean?

This would seem to suggest that Australia's testing regime is picking up the majority of COVID-19 cases, and that there are very few if any coronavirus-related deaths that are not reflected in the official statistics.

Professor Bennett said the data was more good news for Australia and its reporting of coronavirus figures.

"[It] backs up what not only our confirmed COVID-19 cases suggest regarding epidemic containment, but also that this is not an artefact of incomplete COVID-19 death capture," she said.

"It also looks like it will back up claims that there have not to date been significant additional deaths indirectly associated with COVID-19 due to sub-optimal care in overstretched health services, people unwell from other causes avoiding health care settings to avoid COVID-19 exposure and therefore putting their own health at risk, or increases in other deaths such as violence, suicides etc that we fear might rise under lockdown and economic hardship conditions."

She added that what deaths there might have been from COVID-19 may have been offset by fewer deaths from other causes, for example, influenza or road accidents.

Days since the last reported case of COVID-19							
NSW	VIC	QLD	WA	SA	TAS	NT	ACT
0	0	1	7	12	24	34	56

Last updated 21:24 PM AEST on Friday, September 4

Good death data is hard to find

To assemble this dataset, Story Lab had to liaise with eight different jurisdictions around Australia, all with different ways of reporting the data.

The Australian Bureau of Statistics' death dataset is incomplete for December of 2018, its most recent year, due to the way data is reported.

NSW, Western Australia, the ACT and Queensland all had accurate death data by date of occurrence readily (though not always publicly) available, while the other

four jurisdictions did not.

Professor Bennett said Australia was an outlier when it came to timely reporting of death data.

She said in the work she is doing for a forthcoming international study of excess deaths in 14 countries, "Australia is one of only two countries with the issues of delays in death data reporting, and access to data breakdowns, say by gender and age and specific time periods such as is of interest here".

"These are critical data to monitoring and understanding Australian health and mortality patterns."

Both she and Professor Olivier said inconsistencies in the reporting of the most recent data caused problems for timely analysis.

"Another issue is the inconsistency in the way counts are reported — occurrence and register dates — and it would be helpful to standardise this across states so that data collation is easier at the national level, and the data can be reported by date of death," Professor Bennett said.

A spokesman for the ABS told Story Lab that one of the reasons for the lag in the release of data was that state and territory legislation required burial or cremation to be finished before a registration was finalised.

"This creates a lag between when a death occurs and when it is registered and reported. The ABS will be working with the registries to look for ways to enhance the timeliness of reporting without compromising any of the key requirements of the registration system," he said.

"The ABS has been changing existing processes to produce more timely mortality data, and will be releasing an initial report on 24 June ... the ABS has focused on developing methods that enable accurate comparison of 2020 data against historic benchmarks by individual causes of death."

Story Lab will continue to monitor this data across states and territories during the COVID-19 pandemic, and report on any substantial changes as they arise.

About the data:

- The graph showing international comparisons of 'excess deaths' takes [The Economist's figures](#) but uses the median, rather than the average, for the years 2015 to 2019 for expected deaths, to smooth out some of the averages. For Spain, we have taken the official expected deaths model from the government MoMo mortality dataset
- Mortality data for 2015 to 2018 sourced from the Australian Bureau of Statistics. For NSW, WA, Queensland and the ACT, data was categorised by date of occurrence. For other jurisdictions, date of registration was used.
- For 2019 and 2020 in NSW, WA, Queensland and the ACT, data was sourced from individual births, deaths and marriages registries and was reported by date of occurrence
- For 2019 and 2020 in Victoria, SA, Tasmania and the NT, data was sourced from individual births, deaths and marriages registries and was reported by date of registration
- In these states, a registration can lag the date of occurrence from weeks to, in the case of the NT, a year

What you need to know about coronavirus:

- [When and how to wear a face mask](#)
- [The symptoms](#)
- [The number of cases in Australia](#)
- [Global cases, deaths and testing rates](#)

Posted 22 Jun 2020, updated 23 Jun 2020

Share   

More on:

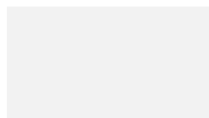
[COVID-19](#) [DEATH](#)

Coronavirus questions answered

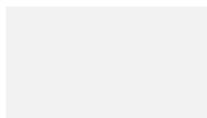
Breaking down the latest news and research to understand how the world is living through an epidemic, this is the ABC's Coronacast podcast.

[Read more](#) →

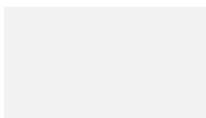
Top Stories



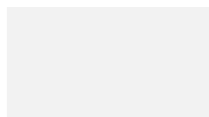
Second survivor from missing ship found as typhoon approaches



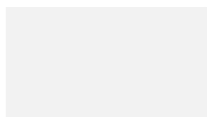
Tony Abbott appointed to Britain's Board of Trade despite heavy criticism



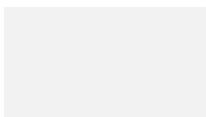
Riot squad swarms Sydney street after man shot dead in broad daylight



Why hasn't Europe locked down despite its COVID-19 second wave?



Coronavirus update: Russian vaccine candidate produces antibody



UN says China's Hong Kong security law infringes on human rights

Just In

UN says China's Hong Kong security law infringes on human rights

Posted 32m ago

England vs Australia: Live scores, stats and commentary

Posted 56m ago

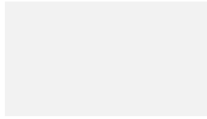
Tony Abbott appointed to Britain's Board of Trade despite heavy criticism

Posted 1h ago / Updated 1h ago

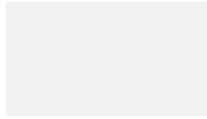
Why hasn't Europe locked down despite its COVID-19 second wave?

Posted 2h ago

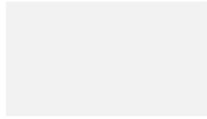
response



Will I be able to go interstate by Christmas? Here's the plan for borders in seven states and territories



Victoria Police arrest another online supporter of anti-lockdown protests



A children's inflammatory illness associated with COVID-19 has emerged in Australia. Here's what we know

Coronavirus update: Russian vaccine candidate produces antibody response

Posted 2h ago

Brisbane Lions conquer Collingwood but lose Harris Andrews to injury

Posted 5h ago

[More Just In →](#)

[Back to top ↑](#)

ABC NEWS

[More From ABC NEWS →](#)

SECTIONS

[ABC NEWS](#)

[CORONAVIRUS](#)

[WORLD](#)

[ANALYSIS](#)

[SCIENCE](#)

[ARTS](#)

[OTHER](#)

JUST IN

[POLITICS](#)

[BUSINESS](#)

[SPORT](#)

[HEALTH](#)

[FACT CHECK](#)

NEWS IN LANGUAGE

[中文](#)

[BERITA BAHASA INDONESIA](#)

[TOK PISIN](#)

CONNECT WITH ABC NEWS

[FACEBOOK](#)

[MESSENGER](#)

[TWITTER](#)

[INSTAGRAM](#)

[YOUTUBE](#)

[APPLE NEWS](#)

MORE FROM ABC NEWS

Contact ABC NEWS

This service may include material from Agence France-Presse (AFP), APTN, Reuters, AAP, CNN and the BBC World Service which is copyright and cannot be reproduced.

AEST = Australian Eastern Standard Time which is 10 hours ahead of GMT (Greenwich Mean Time)

