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13 March 2023

s 9(2)(a)

By email: s 9(2)(a)
Ref: H2023020120

Tēnā koe s 9(2)(a)

Response to your request for official information

Thank you for your request under the Official Information Act 1982 (the Act) to Manatū Hauora (the Ministry of Health) on 13 February 2023 for information regarding all-cause mortality. You requested:

“Please provide a copy of information held on any analysis completed regarding New Zealand’s all-cause mortality rate between 1 January 2020 and 31 January 2023. Please provide a copy of any advice provided to Ministers regarding all-cause mortality, produced between 1 January 2020 and 31 January 2023.”

The briefing entitled ‘Excess Mortality Update – September 2022’ has been found within scope of your request. This is being released to you with some information withheld under section 9(2)(a) of the Act to protect the privacy of natural persons. I have considered the countervailing public interest in releasing information and consider that it does not outweigh the need to withhold at this time

I trust this information fulfils your request. Under section 28(3) of the Act, you have the right to ask the Ombudsman to review any decisions made under this request. The Ombudsman may be contacted by email at: info@ombudsman.parliament.nz or by calling 0800 802 602.

Please note that this response, with your personal details removed, may be published on the Manatū Hauora website at: www.health.govt.nz/about-ministry/information-releases/responses-official-information-act-requests.

Nāku noa, nā



Andrew Old
Deputy Director-General
Public Health Agency | Te Pou Hauora Tūmatanui

Briefing

Excess Mortality Update – September 2022

Date due to MO:	8 September 2022	Action required by:	N/A
Security level:	IN CONFIDENCE	Health Report number:	20221430
To:	Hon Dr Ayesha Verrall, Minister for COVID-19 Response		
Consulted:	Health New Zealand: <input type="checkbox"/> Māori Health Authority: <input type="checkbox"/>		

Contact for telephone discussion

Name	Position	Telephone
Dr Fiona Callaghan	Lead Science Advisor, Intelligence Surveillance & Knowledge, Public Health Agency	s 9(2)(a)
Dave Henderson	Group Manager and Lead, Intelligence Surveillance & Knowledge, Public Health Agency	s 9(2)(a)

Minister's office to complete:

- | | | |
|---|------------------------------------|--|
| <input type="checkbox"/> Approved | <input type="checkbox"/> Decline | <input type="checkbox"/> Noted |
| <input type="checkbox"/> Needs change | <input type="checkbox"/> Seen | <input type="checkbox"/> Overtaken by events |
| <input type="checkbox"/> See Minister's Notes | <input type="checkbox"/> Withdrawn | |

Comment:

Excess Mortality Update – September 2022

Security level: IN CONFIDENCE **Date:** 8 September 2022

To: Hon Dr Ayesha Verrall, Minister for COVID-19 Response

Purpose of report

1. This report responds to your request for an update on excess mortality for 2022, analysis on how Aotearoa is tracking in comparison to previous years and an international comparison for year to date.
2. This report discloses all relevant information.

Background

3. The most recent update on excess mortality was provided to you on 7 June 2022, in a memorandum titled, *Mortality Data and Excess Mortality for the COVID-19 Pandemic in Aotearoa New Zealand* [HR20221003]. This paper highlighted that, "...while there has been an increase in the number of deaths from COVID-19 since the start of the Omicron outbreak, particularly among people over 90, New Zealand has still experienced significantly lower cumulative COVID-19 mortality overall than most countries."
4. Further advice was provided to you on 1 July 2022, in a briefing titled, *COVID-19 Mortality Reporting and Analysis in Aotearoa* [HR20221169]. This summarised the discussions had with the COVID-19 Strategic Public Health Advisory Group and actions taken with regards to mortality and excess mortality data.
5. As you will be aware, StatsNZ are the lead government agency for excess mortality data, and Manatū Hauora work closely with them on matters relating to the impact of the pandemic. They provide public information on their website regarding deaths; a running total of all-cause mortality on their COVID-19 portal¹, as well as more broadly on mortality patterns in Aotearoa and the aging population.

Excess mortality for year to date

6. An analysis conducted by StatsNZ below provide a summary of the situation that is current as of 21 August 2022². As can be seen in the table and graph below, deaths above expectations are mostly observable in the oldest age groups.

¹ <https://www.stats.govt.nz/experimental/covid-19-data-portal/> Select: Health>total death rates

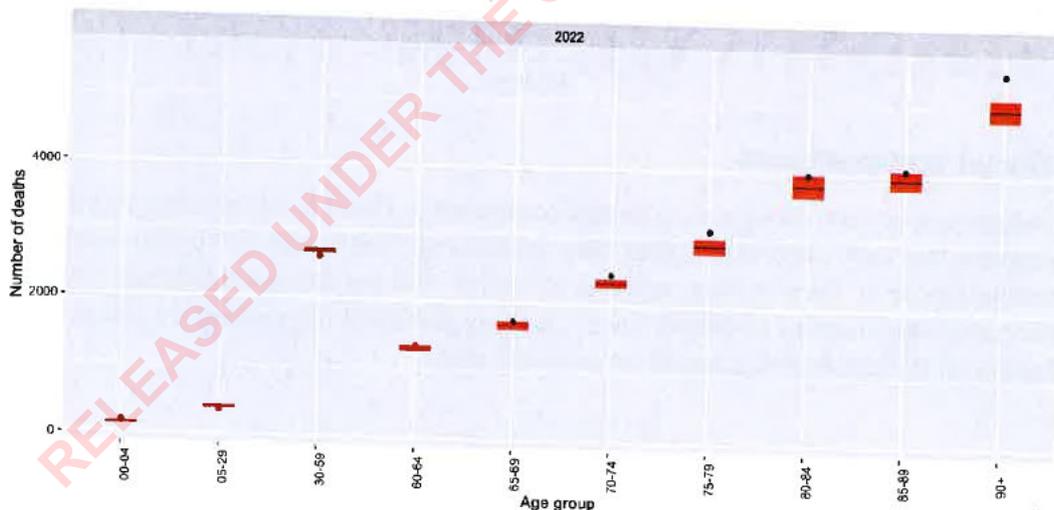
² An average of 5% of Deaths are registered 2 weeks or more after Date of Death therefore weekly totals are expected to increase over time as Death Registrations are submitted and processed. Weekly deaths data are based on Date of Death and differ from other deaths statistics based on date of registration. These data are provisional and subject to revision during the full process of producing death statistics.

7. In total there have been 1,204 excess deaths this year. A majority of them have occurred in the 90 years and older age group, followed by 75–79-year-olds and 80- to 84-year-olds.
8. In the **figure 1**, the red bands give an approximate range of the expected number of deaths for that age group based on pre-pandemic years, with +/- 1 standard deviation. Therefore, they give an approximate direction of positive or negative excess mortality, but not strong evidence of excess mortality, either positive or negative. There are some additional age groups for whom their excess mortality for 2022 is above the expected pre-pandemic range (e.g., 70–74-year-olds) and some where the excess mortality is somewhat lower (e.g., 30–59-year-olds), but the only strong trend for excess mortality in 2022 is in the 75–79 and 90+ age groups.

Table 1 – Observed deaths compared to expected deaths during the pandemic 2022-08-21

Age group	Observed deaths	Expected deaths	1 S.D Expected deaths	Excess deaths	Mean population
00-04	191	164	18	27	304,190
05-29	370	415	26	-45	1,663,572
30-59	2,627	2,711	38	-84	2,020,766
60-64	1,370	1,330	45	40	302,398
65-69	1,748	1,680	62	68	256,481
70-74	2,439	2,319	65	120	219,886
75-79	3,128	2,884	114	244	157,981
80-84	3,970	3,810	178	160	108,428
85-89	4,057	3,927	137	130	57,559
90+	5,540	4,996	161	544	34,964
Total	25,440	24,236	844	1,204	5,126,225

Figure 1 – Observed deaths compared to expected deaths during the pandemic 2022-08-21



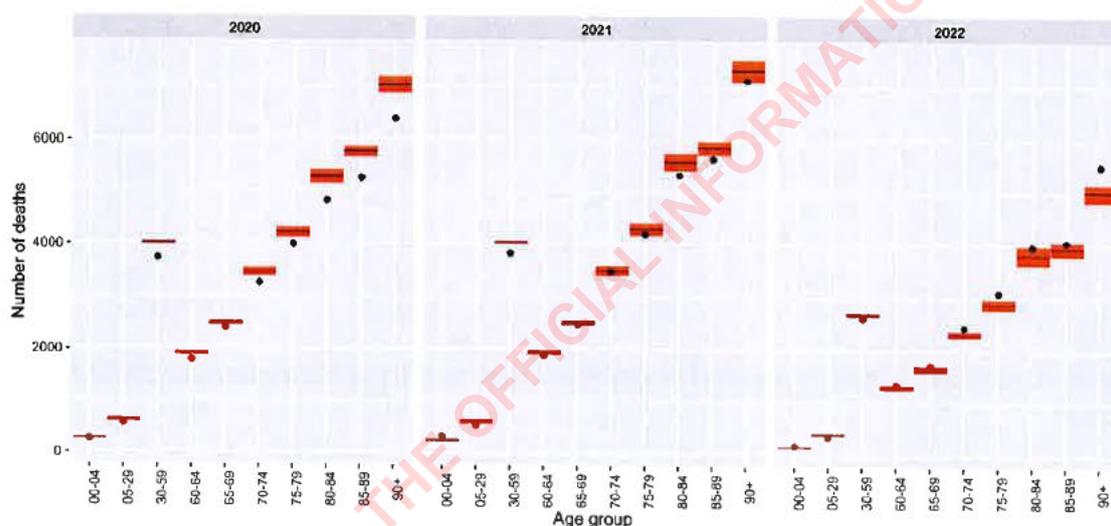
9. It should be noted that as people live longer, the population is aging and this plays a role in shifting the mortality patterns to the older age groups moving forward, compared to pre-pandemic patterns. This means that, in general, there is a general trend to having a higher mortality risk in the older age groups (in addition to the pandemic effect) which likely contributes in part to some of the excess mortality in the very elderly. Historically,

mortality rates have been dropping in older age groups, so a levelling off or an increase represents a structural change in prior observation.

Comparison to excess mortality before and during the pandemic?

10. Excess deaths tended to be suppressed in most age groups in the first two years of the pandemic compared to 20t22 as seen below in **Figure 2**.
11. Death rates across 2012 – 2021 show that in almost all older age groups there is a trend of a slight decrease in death rates over time (**appendix**). The 90+ group shows a that as the population ages, the mortality risk for most age groups decreases; however, the risk in the most elderly (90+) does not have shown this effect.
12. It is observed (though it is only one data point) that in 2021, death rates are already starting to revert to average expectations after the clear decrease in 2020. However, they are still typically on or below -1 standard deviation of the extrapolated rates.

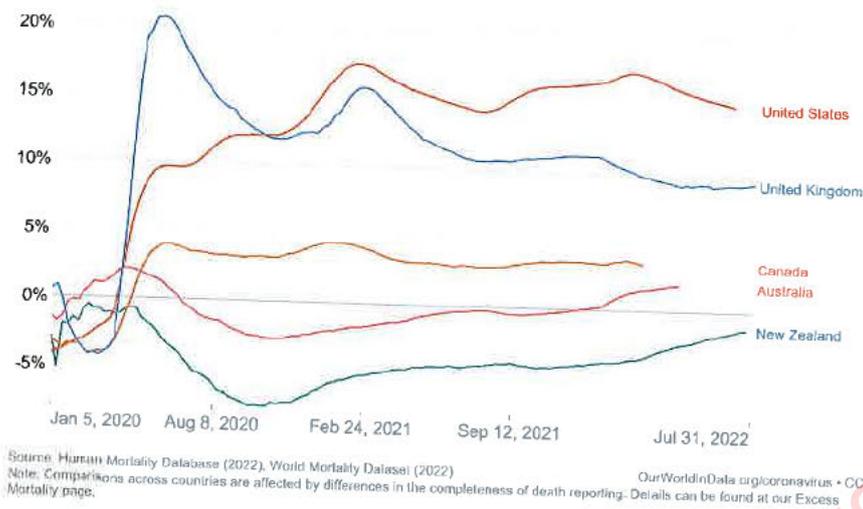
Figure 2 – Expected (extrapolated) deaths vs. Observed deaths through pandemic



International comparisons

13. Comparison of cumulative excess deaths compared to those of other jurisdictions indicates that with most recent data, New Zealand has the lowest cumulative excess deaths (Figure 3). Current data indicates a small (~ 1%) percentage difference between the cumulative number of deaths since 1 January 2020 and the cumulative projected deaths for the same period based on previous years.

Figure 3 – Cumulative deaths from all causes compared to projection based on previous years



Equity

14. With the increase in COVID-19 attributed deaths, it is increasingly important to consider the direct health inequities in the impact of COVID-19.
15. As you will be aware, the Intelligence, Surveillance and Knowledge (ISK) Group of the Public Health Agency (PHA) has undertaken exploratory analysis of COVID-19 attributed mortality to identify and quantify inequities in the burden of COVID-19 mortality Aotearoa [refer to *Inequities in COVID-19 Mortality HR20221246*].
16. The results of the analysis will be publicly released and shared with wider health agencies to inform decisions and actions to improve health outcomes. We plan to release the report in late September and will work with your Office to ensure you have the opportunity to review prior to release.

Next Steps

17. Manatū Hauora will continue to work closely with StatsNZ to understand data on excess mortality as it is released. We will update you regularly.

Recommendations

We recommend you:

- a) **Note** the most recent information outlined in this report regarding excess mortality due to COVID-19 in Aotearoa for 2022 and how this compares internationally.

Noted



Dr Andrew Old
Deputy Director-General of Health
Public Health Agency
Date: 8 September 2022



Hon Dr Ayesha Verrall
Minister for COVID-19 Response

Date:

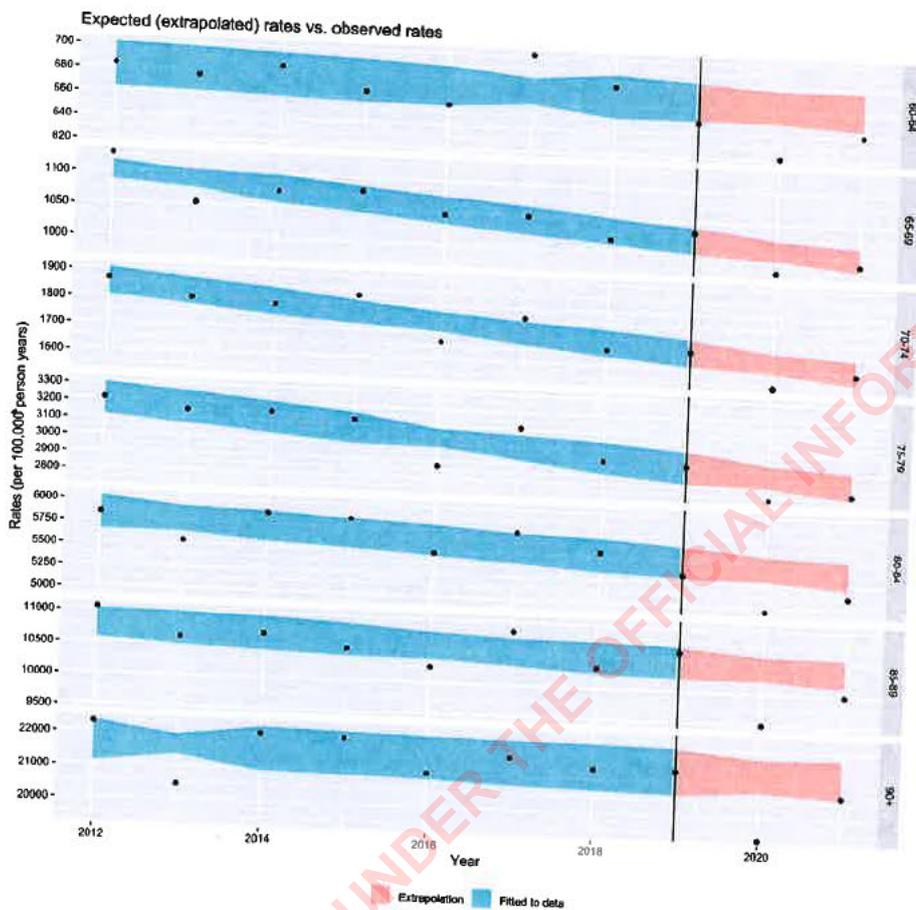
8/9/22

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Appendix: Changes in death rates in age groups across time

The plots below show the death rates across 2012 – 2021. The bands show the linear fit and extrapolation, with uncertainty (± 1 s.d.). As we can see almost all older age groups show a slight decrease in death rates. The 90+ group shows a levelling effect.

We observe (though it is only one data point) that in 2021, death rates are already starting to revert to average expectations after the clear decrease in 2020. However, they are still typically on or below -1 standard deviation of the extrapolated rates.



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