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24 February 2025

s 9(2)(a)

By email: s 9(2)(a)
Ref: H2024058399

Tēnā koe s 9(2)(a)

Response to your request for official information

Thank you for your requests under the Official Information Act 1982 (the Act) to the Ministry of Health – Manatū Hauora (the Ministry) on 10 and 16 December 2024 for information regarding COVID-19 deaths, hospitalisations and comorbidities. You requested:

1. *A copy of H2023031662 dated 24 October 2023.*

2. *I refer to the MOH publication 'Covid-19 Mortality in Aotearoa New Zealand, Inequities in Risk, September 2022' and in particular to Table 2 screenshot below. https://www.health.govt.nz/publications/covid-19-mortality-in-aotearoa-new-zealand-inequities-in-risk. Please advise how many of the 78 deaths under 60 years and the 136 deaths in the 60-69 age band had M3 hospital identified co-morbidity. Please provide a list of the M3 hospital identified comorbidities for the people in these two age bands.*

3. *Please supply the definition used for the term 'Covid-19 attributed death' count in Table 2. Where a person died within 28 days of a positive Covid-19 test, was their death counted as a Covid-19 attributed death for the purposes of Table 2? How was Covid-19 infection determined to be the cause of death for a person dealing with a chronic condition under a M3 hospital identified comorbidity? Where the medical specialist considered Covid-19 was a contributing factor (to a small or large extent) in their death, would such a case meet the definition of a Covid-19 attributable death?*

4. *With regard to the age bands under 60 years and 60-69 years, how many of the deaths relate to a person originally hospitalised for their comorbidity and who then died in hospital with Covid-19. How many of the deaths counted in these age groups relate to a person who was tested for Covid-19 after their death? Were all people in the 'Covid-19 attributable death count' actually tested for Covid-19 or were assumptions made based on their symptoms? If this data was not collected, please advise why these questions were considered not relevant to ask in the study.*

5. *How many of the 1,146 deaths where covid was the underlying cause (rather than a contributory cause) were in the age bands 0 - 59, 60 - 69 and 70 - 79 years. Please provide a breakdown of these deaths (where covid was the underlying cause) by M3 hospital identified comorbidities in each age band. Please supply the comorbidity severity score for each of the deaths in these 3 age bands.*

6. *What was the median and average age of covid attributable deaths in the study period.*

7. For the purposes of this study, I understand vaccination status on 1 March 2022 was defined by the number of doses (fewer than 2 doses, 2 doses or 3 or more doses). Please confirm these were the definitions used in the study. In the age bands 0 - 59, 60 - 69 and 70 - 79 years, can you please provide the number of deaths where there were no doses, that is unvaccinated rather than one dose.
Where a person dies within 0 - 14 days after the second dose and covid is deemed an underlying or contributory cause, would their death be counted in the two dose category or the no dose/one dose category? Similarly where a person dies within 0 -14 days (or other similar time frame) of their first booster, was their death counted in the two dose or 3 or more dose group? Please provide an explanation

In response to your first question, please find a copy of OIA response H2023031662 attached to this letter. Please note some information has been withheld under section 9(2)(a) of the Act for privacy reasons. I have considered the countervailing public interest in release in making this decision and consider that it does not outweigh the need to withhold at this time.

Please note that in the attached response, the term "unvaccinated" has been used to refer to those who have received fewer than 2 doses, unlike in the original report that more accurately states "fewer than 2 doses" throughout.

Your remaining questions all pertain to *'Covid-19 Mortality in Aotearoa New Zealand, Inequities in Risk, September 2022"*.

It is important to note that the analysis presented in this report used data that is routinely collected within the health system ("health administration data"). This means the data was not collected as part of a study that was specifically designed to answer all questions of interest. Consequently, some research questions could not be addressed if the information was not collected within the routine health administration data. For example, data about symptoms, testing processes and non-pharmaceutical prevention measures were not available.

For context, the following further methodological details regarding M3 comorbidity were not provided in the report and are of relevance.

The data used to calculate the M3 scores was sourced from the National Minimum Dataset (hospital events) 'NMDS'. NMDS is a national collection of public and private hospital discharge information, including clinical information, for same day and multi day inpatients. M3 comorbidity index draws on NMDS "in-hospital diagnosis codes" but relates to hospitalisations over the previous 5 years rather than the reason for any particular hospitalisation (so M3 comorbidity does not provide specific information about hospitalisation close to the time of death).

The data was merged with separately extracted information from other sources, including demographics, vaccination and deaths, generating a large and complex dataset. Therefore, decisions were made early in the analysis process about which variables to extract and then retain in a more manageable "reduced" dataset.

No information on individual comorbidities was retained in the reduced dataset. The same applies to the number of doses of vaccine which was separately extracted from the Covid Immunisation Register; information regarding the exact number of doses at various time points was not required for the analysis, and therefore only a summarised vaccination status was retained in the reduced dataset.

The reduced dataset was then used for the analysis. Consequently, further detailed analysis using variables about individual M3 comorbidities and/or vaccination status are not possible using this dataset.

For ease of reference, I will now respond to each of these specific questions in order:

> *"I refer to the MOH publication 'Covid-19 Mortality in Aotearoa New Zealand, Inequities in Risk, September 2022' and in particular to Table 2 screenshot below. https://www.health.govt.nz/publications/covid-19-mortality-in-aotearoa-new-zealand-inequities-in-risk. Please advise how many of the 78 deaths under 60 years and the 136 deaths in the 60-69 age band had M3 hospital identified co-morbidity.*

Among the 78 deaths in those aged under 60 years 72 had underlying M3 comorbidities detected in the 5 years prior. Please refer to page 3 of the report for the methods, and 14 of the report for these results. We have separately tabulated for you the data for the 60-69 year age-band, as this was not part of the original analysis: 114 of the 136 deaths in the 60-69-year age-band had an M3 identified comorbidity.

> *Please provide a list of the M3 hospital identified comorbidities for the people in these two age bands*

As detailed above, further detailed analysis using variables about individual M3 comorbidities is not possible using the reduced dataset. This is therefore refused under section 18(g)(i) of the Act as the information is not held.

> *Please supply the definition used for the term 'Covid-19 attributed death' count in Table 2. Where a person died within 28 days of a positive Covid-19 test, was their death counted as a Covid-19 attributed death for the purposes of Table 2?*

At the time of the analysis the Ministry's approach for identifying COVID-19 deaths was multifaceted and included recording every death that occurred within 28 days of having a positive COVID-19 test result. However, this analysis did not use this "28 days" definition, which was more commonly used in rapid reporting situations and for internationally comparable reporting. Instead COVID-19 attributed death was determined from death certificates. As death certificate data take more time to process and are not available from all countries, they are not always used for standardised reporting. If COVID-19 was identified as the underlying or a contributing cause on a death certificate (or by the Coroner, in some cases where the death was referred), this met the definition for a COVID-19 attributed death.

> *How was Covid-19 infection determined to be the cause of death for a person dealing with a chronic condition under a M3 hospital identified comorbidity? Where the medical specialist considered Covid-19 was a contributing factor (to a small or large extent) in their death, would such a case meet the definition of a Covid-19 attributable death?*

Death certificates in New Zealand are completed by a medical practitioner or a nurse practitioner, following a standardised process (see www.tewhatuora.govt.nz/health-services-and-programmes/burial-and-cremation-act-1964/completing-death-documents/medical-certificate-of-cause-of-death). Causes of death are therefore determined by those involved in patient care or by the Coroner in cases where the death was referred), and the Ministry plays no role in the completion of death certificates or coronial investigations. If you want to request further information on this topic, the Ministry of Justice can be contacted at: OIA@justice.govt.nz.

With regard to the age bands under 60 years and 60-69 years, how many of the deaths relate to a person originally hospitalised for their comorbidity and who then died in hospital with Covid-19.

As detailed above, further analysis using variables about individual M3 comorbidities or reason for hospitalisation prior to death is not possible using the reduced dataset. This is therefore refused under section 18(g)(i) of the Act as the information requested is not held by the Ministry and there are no grounds for believing it is held by another agency subject to the Act.

How many of the deaths counted in these age groups relate to a person who was tested for Covid-19 after their death?

The date of testing is not always recorded in routinely collected data, but the date a test result is reported is available. The date that a test is reported may be some days after testing, so it is not possible to accurately ascertain the order in which testing and death occurred based on the data available. Monitoring testing/diagnoses after death is not performed by the Ministry (these are therefore not held by the Ministry. This request is therefore refused under section 18(g)(i) of the Act.

Were all people in the 'Covid-19 attributable death count' actually tested for Covid-19 or were assumptions made based on their symptoms?

Prior to November 2022 swabs were required to be taken as part of preliminary inspection after death where the deceased was suspected to have had COVID-19 at the time of death. Attribution of deaths to COVID-19 was based on Death Certificate data (or on Coroner's findings in some cases). Causes of death were therefore determined by those involved in patient care or by the Coroner in cases where the death was referred). The Ministry cannot comment on any assumptions made. This request is therefore refused under section 18(g)(i) of the Act.

If this data was not collected, please advise why these questions were considered not relevant to ask in the study.

As previously noted, this analysis was performed using routinely collected data. Consequently, specific questions of interest could not be answered with the available data.

How many of the 1,146 deaths where covid was the underlying cause (rather than a contributory cause) were in the age bands 0 - 59, 60 - 69 and 70 - 79 years.

Please refer to the table below:

Age group	Underlying cause	Contributory cause	Total attributable to COVID-19
0-59 years	36	42	78
60-69 years	82	54	136
70-79 years	207	144	351

Please provide a breakdown of these deaths (where covid was the underlying cause) by M3 hospital identified comorbidities in each age band. Please supply the comorbidity severity score for each of the deaths in these 3 age bands"

As detailed above, further analysis using variables about individual M3 comorbidities is not possible using the reduced dataset. This is therefore refused under section 18(g)(i) of the Act.

What was the median and average age of covid attributable deaths in the study period

Death counts by age group were provided in Tables 2 and 3 on page 9 of the report. Median and average age for people whose death was attributed to COVID-19 were not reported, but we have calculated this for you: the median was 85 years and the mean was 83 years.

For the purposes of this study, I understand vaccination status on 1 March 2022 was defined by the number of doses (fewer than 2 doses, 2 doses or 3 or more doses). Please confirm these were the definitions used in the study.

Please see page 4 of the report for a full description of how vaccination status was defined.

In brief, for most analyses, vaccination status was "<2 doses" and "2 or more doses". For a limited number of analyses that examined effects of booster doses, vaccination status was defined as "<2 doses", "2 doses", and "3 or more doses". The date on which vaccination status was assessed varied somewhat, so is described below for clarity.

COVID-19 cases

For all case-based analyses (those where the denominator was "number of cases", whether the analyses were about booster doses, or not) the vaccination status of cases (the denominator) was defined based on their vaccination status when reported as a case. Noting that those cases who then have a COVID-19 attributed death (numerators) are a subset of the cases (denominator).

General population

For population-based analyses (those where the denominator was "number of people in the whole population") the vaccination status for population members was calculated on different dates depending on analysis. For those analyses looking at booster doses, vaccination status for the population (the denominator) was defined based on vaccination status (< 2 doses, 2 doses, or 3 or more doses) on 1 March 2022. For other analyses, vaccination status for members of the population was defined based on vaccination status (fewer than 2 doses, or 2 or more doses) 1 January 2022. Noting as above that members of the population who then have a COVID-19 attributed death (numerators) are a subset of the population (denominator).

In the age bands 0 - 59, 60 - 69 and 70 - 79 years, can you please provide the number of deaths where there were no doses, that is unvaccinated rather than one dose.

As detailed above, further analyses regarding number of vaccination doses are not possible using the reduced dataset. This request is therefore refused under 18(g)(i) of the Act.

Where a person dies within 0 - 14 days after the second dose and covid is deemed an underlying or contributory cause, would their death be counted in the two dose category or the no dose/one dose category? Similarly where a person dies within 0 -14 days (or other similar time frame) of their first booster, was their death counted in the two dose or 3 or more dose group? Please provide an explanation

In this analysis/report, for pragmatic reasons, vaccination status was updated based on the date a vaccination dose was received. Therefore, in the first scenario where a person died within 0–14 days after the second dose and COVID-19 was deemed an underlying or contributory cause, they would be counted as having had two doses. Similarly, they would be counted as having had three or more doses if they died within 0–14 days of receiving their first booster dose.

I trust this information fulfils your request. If you wish to discuss any aspect of your request with us, including this decision, please feel free to contact the OIA Services Team on: oiagr@health.govt.nz.

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

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24 October 2023

s 9(2)(a)

Email: s 9(2)(a)
Ref: H2023031662

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 12 September 2023 for information regarding Covid-19 Mortality in Aotearoa New Zealand. I apologise for the delay in communicating a decision on your request.

Pursuant to section 9(2)(a) of the Act, Manatū Hauora is unable to provide breakdowns of information where there are small numbers involved (i.e., between 1 and 4 deaths) in order to protect the privacy of these individuals. However; in order to supply you with a response, the age brackets for under 40-year-olds have been merged to maintain the privacy of individuals concerned. Please also note of the following caveats when interpreting this information:

- For case-based analyses in this report vaccination was defined as having had two or more vaccination doses before being reported as a case, and unvaccinated was less than two doses.
- The numbers provided in these breakdowns are small and, therefore, subject to random variation and should not be considered evidence.

Parts of your request have been responded to below:

> *"Are you able to provide extended information regarding the report "Covid-19 Mortality in Aotearoa New Zealand"*
> *https://www.health.govt.nz/system/files/documents/publications/covid-19_mortality_in_aotearoa_inequities_in_risk_september_2022_29_sept.v2.pdf*

1. *The vaccination status of the 78 deaths under 60*

I can confirm that there were 19 deaths in unvaccinated (< 2 doses) individuals and 59 in vaccinated (≥2 doses) individuals.

2. *A breakdown of the deaths under 60 by age*
    0-9
    10-19
    20-29
    30-39
    40-49
    50-59

This information is outlined in the following table:

Table 1: Number of deaths by age (Under 60yrs)

Age (years)	Deaths
<40	9
40-49	16
50-59	53

* 10-year age bands below 40 years have been merged due to small numbers

3. *How many among the 6 deaths under 60 that had no M3 hospital identified Comorbidity were unvaccinated*

None of the six deaths were unvaccinated.

4. *Can you clarify if the Comorbidities of the 72 who died of Covid under age 60 were identified before infection, or on admission to hospital*

The M3 hospital-based co-morbidities were identified in the five-year period up to 31 December 2021, therefore, comorbidity status was assigned before the case reports and death notifications. For reference the analysis only included deaths in the time period from 1 January 2022 to 26 August 2022. As such, your request is refused under section 18(g)(i) if the Act as the information requested is not held by the Ministry and there are no grounds for believing it is held by another agency subject to the Act.

5. *The number of unvaccinated people and the number with hospital identified comorbidities who died from Covid in the following categories*
    0-59 quintile 1 (least deprived)
    0-59 quintile 2
    0-59 quintile 3
    0-59 quintile 4
    0-59 quintile 5”

Please see table 2 and 3 below for information in response to this part of your request

Table 2: Number of Deaths by deprivation among those with comorbidity

NZ Dep Quintile	Deaths
<3	10*
3	15
4	12
5	34

*Deprivation quintiles 1-3 merged due to small numbers. Deprivation was not available for 1 person.

Table 3: Deaths by deprivation among those who were unvaccinated

NZ Dep Quintile	Deaths
<5	8
5	11

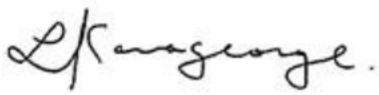
*Deprivation quintiles 1-4 merged due to small numbers. Deprivation was not available for 1 person.

I trust this information fulfils your request. If you wish to discuss any aspect of your request with us, including this decision, please feel free to contact the OIA Services Team on: oiagr@health.govt.nz.

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



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