

IN THE HIGH COURT OF NEW ZEALAND  
WELLINGTON REGISTRY

I TE KŌTI MATUA O AOTEAROA  
TE WHANGANUI-A-TARA ROHE

CIV-2022-485-013

**IN THE MATTER** of an application under the Judicial Review  
Procedure Act 2016

**BETWEEN** **DCB**  
First to Eighth Applicants

**AND** **THE MINISTER OF HEALTH**  
First Respondent

**AND** **THE GROUP MANAGER OF THE NEW  
ZEALAND MEDICAL DEVICES SAFETY  
AUTHORITY (MEDSAFE)**

Second Respondent

Continued on next page

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**REPLY AFFIDAVIT OF LISA JANE MITCHELL  
IN SUPPORT OF JUDICIAL REVIEW APPLICATION**

Dated 20 June 2022

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*Lisa Jane Mitchell*

*[Signature]*

AND

THE COVID-19 RESPONSE MINISTER

Third Respondent

'the hood  
TODAY + TOMORROW + ALWAYS

*Angela Bell*

[www.thehoodnz.com](http://www.thehoodnz.com)



I, **LISA JANE MITCHELL**, B.Sc M.App.Stats MBA FAICD, of Lavender Bay, New South Whales, Australia, swear/affirm:

1. I am a qualified statistician, in my own company, Corporate Transformation Services (CTS) Pty Ltd.
2. I have been asked to provide my reply to Mr. James' affidavit dated 10 June 2022. A copy of my reply is annexed hereto **marked "A"**.
3. I confirm that I have read the Code of Conduct for Expert Witnesses in Schedule 4 of the High Court Rules and agree to comply with it. I confirm that the evidence I give is within my area of expertise.

Sworn/Affirmed at  
this 20<sup>th</sup> day of June 2022  
before me: Peter Halim Fam, Lawyer



) Sydney  
)  
) *Angus Russell*

[Person of appropriate office or occupation that is able to take oaths or affirmations in the jurisdiction that you are in at the time of swearing/affirming this affidavit]

'the hood'  
TODAY \* TOMORROW \* ALWAYS

*Angus Russell*

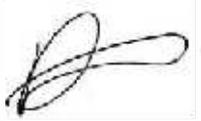


EXHIBIT "A" Report

Exhibit stamp

This is the exhibit marked with the letter "A" referred to in the annexed affidavit of Lisa Jane Mitchell sworn/affirmed at New South Wales this 20<sup>th</sup> day of May 2022 before me: Peter Halim Fam, Lawyer



[Person of appropriate office or occupation that is able to take oaths or affirmations in the jurisdiction that you are in at the time of swearing/affirming this affidavit]

'the hood'  
TODAY + TOMORROW + ALWAYS



“A”

Expert Report prepared by Lisa Mitchell B.Sc, M.App.Stats, MBA, FAICD

### Introduction

1. Further to my report of 11 May 2022 (**Report**), I have been provided and read the affidavit of Mr. Christopher James dated 10 June 2022 (**Mr. James’ affidavit**).
2. In this further Report, I reply to Mr. James’ affidavit and also provide details of the rates of adverse events reported from myocarditis to CARM, and updating information on further deaths reported to DAENS in the 5-11 year old age group following COVID Vaccine since my last report.
3. In this reply, I use the same definitions as in my Report. Source documents are attached.
4. From paragraphs 125-135 of Mr. James affidavit, Mr. James criticises the manner in which I have set out the statistical information from CARM and MedSafe.
5. My Report summarised the publicly available data from the CARM website (in CSV format) and MedSafe reports (as the two contain different information) of adverse events reported following delivery of the COVID vaccines.
6. From there, I drew conclusions from the New Zealand data and the New Zealand Article for NON-covid vaccines adverse event reports (for reasons explained at paragraphs 8.2 and 8.3 of my Report). I also drew comparisons with the Australian data.

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7. My analysis of the adverse events data for both NON-covid and COVID Vaccines shows that there has been a substantial increase in adverse event reporting to CARM following the introduction of COVID-vaccines. For:
  - a. NON-COVID vaccines, CARM was receiving 2.6 adverse event reports per day (between 2005 to 2009); and
  - b. COVID Vaccines, CARM was receiving 137 adverse event reports per day.
8. This change in number of reports per day is more than a fifty-fold, or 5207% increase in adverse event reports from NON-covid to COVID Vaccines.

***Quality of the CARM and MedSafe data***

9. Throughout my Report I have explained concerns and shortcomings with the CARM data, see paragraphs 6.9, 6.10, and 9.10. From a statistical analysis perspective, the CARM data is not good quality or analysable data for reasons I have described.
10. At paragraph 135 of Mr. James' affidavit, he has identified a potential further shortcoming in the data that the CARM data namely "records reported events which may or may not have been medically confirmed." This is not information that is available from the publicly available CARM data.

**Reply to Mr. James' affidavit**

11. Mr. James makes five criticisms of the analysis in my Report, namely:
  - a. failure to standardise the number of adverse events against the number of vaccines administered – paragraphs 125-130 of Mr. James' affidavit;
  - b. failure to take into account extra public interest in the COVID Vaccines over NON-covid vaccines – paragraph 131 of Mr. James' affidavit;
  - c. different population sizes between New Zealand and Australia - paragraphs 132-133 of Mr. James' affidavit;
  - d. Mr. James' analysis of adverse event reporting as plotted - paragraph 134 of Mr. James' affidavit; and
  - e. identification of serious adverse events - paragraph 135 of Mr. James' affidavit.
12. I deal with each criticism under their own heading below.

***a. Adverse reaction reports not standardised using number of vaccine doses administered***

13. As to the criticism that my Report does not adjust the number of adverse events reported by the number of vaccine doses administered, I repeat my comments above. Also, I was not asked to standardise my analysis of the CARM data, rather I was asked to report on what the CARM and

MedSafe data showed. The data indicates that during the COVID Vaccine period there is a 50-fold increase in reporting, or 50 times the rate of adverse events being reported to NON-covid times.

14. Mr. James suggests that the reason for the increase is the great number of COVID Vaccine doses being administered.
15. Even standardising the figures using the numbers of vaccine doses Mr. James' has identified for each period there is still a significant increase in adverse event reports for the NON-covid period and the COVID Vaccine period, see Table 1:

Vaccine	Doses per Day (information below provided by Mr James)	Adverse events reported to CARM/day	Adverse Events per 10,000 doses Administered
NON-Covid	3,780	2.6	6.8
COVID Vaccine	26,451	137	51.7

**Table 1: NON-covid and COVID vaccines standardised against number of vaccines administered, respectively**

16. In addition to standardising the number of adverse events reported by the number of vaccines delivered, I have further adjusted these to 10,000 doses for easier comparison. For the COVID Vaccine period of February to December 2021 the number of adverse events reported is a 660% increase (compared with NON-covid vaccines). Even standardising the number of adverse events against the number of COVID Vaccines administered, the increase is statistically noteworthy.

***b. Increased public interest and media scrutiny leads to increased adverse event reporting***

17. Mr. James' is also critical that my analysis does not take into account the likelihood of increased public interest, media scrutiny, and changes to the reporting environment in the COVID Vaccine period which could explain the increased in adverse events reported.
18. I was not, nor was I asked to conduct a detailed review of possible reasons behind the data for the substantial increase in adverse events per day from NON-covid to COVID Vaccines.
19. Further, such data or information is not available from the CARM and MedSafe publicly available information.

**c. Different population sizes between Australia and New Zealand**

20. Similar to the first criticism Mr. James has suggested my comparisons of the New Zealand adverse event reports with the Australian data fails to take into account the respective population sizes of New Zealand and Australia.
21. I have not done a per capita analysis as this would not provide useful data. Instead, I have conducted my comparative analysis on a per dose administered basis (as described at paragraph 9.31. and Table 11 of my Report).
22. Data from both countries forms a useful comparison. From a statistical analysis perspective, I used the Australian data as a means to compare and understand more about the New Zealand data. It is not unreasonable to compare the Australian data with the New Zealand data because both countries:
- a. faced similar COVID infection timeframes;
  - b. started a similar vaccination campaign at a similar time;
  - c. have similar voluntary reporting systems for adverse events;
  - d. are both western countries with similar underlying population health issues (relative to each other and distinct from a comparison to a second or third world country for instance)
  - e. ease of access – I have completed a similar analysis for Australia using the TGA database so it makes sense to use that data as a sensible comparison (especially in light of poor quality MedSafe data).
23. Another reason for using the Australian data was where there were shortcomings in the New Zealand data and I could not replicate the work I had done on the Australian data, ie as explained at paragraph 7.7 of my Report.
24. As mentioned above, my Report does not expressly take into account a per capita comparison because to do so would be irrelevant. More appropriately, I have analysed the number of adverse events reported per country per 10,000 doses, see Table 2:

Geography	Adverse Events per 10,000 doses
New Zealand	57.01
Australia	18.99 (rounded up to 19.00)

**Table 2: comparison of adverse events reported to New Zealand CARM and Australian DAENS per 10,000 doses of COVID Vaccines administered**

25. From my analysis, New Zealand is reporting three times, or 200%, the number of adverse events than Australia for every 10,000 doses administered.

**d. Mr. James' adverse events analysis**

26. Mr. James' has conducted his own adverse events analysis at paragraph 134 of Mr. James' affidavit and is unable to identify the significant spike in adverse event reporting I identified in December 2021 and explain at paragraph 9.16, 9.17 and 9.18 and illustrate in Table 6 and Figure 16, of my Report.
24. Mr. James' analysis is different to mine. His analysis reviews all adverse events, whereas I am reviewing the number of serious adverse events that are being reported.
25. When plotted over the four time periods I have been asked to review, there is a spike in the number of serious adverse events as a percentage of total adverse events. Namely, there was a twofold increase in the number of serious adverse events as a percentage of total of adverse events reported in mid-December 2021, see Table 3:

Serious Adverse Events as a percentage of TOTAL Adverse Events Over Time			
2005-2009 NON-covid vaccines	1 Feb 2021 to 16 Dec 2021 COVID-Vaccine	17 Dec 2021 to 16 Jan 2022 COVID-Vaccine	17 Jan 2022 to 31 March 2022 COVID Paediatric Vaccine
3.6%	4.0%	8.1%	8.1%

**Table 3: serious adverse events as a percentage of total adverse events over time**

30. Finally, Mr. James' graph plots adverse events following the first dose (blue line), second dose (brown line) and all doses (black line). There is no explanation as to what the black line all doses means. However, all doses appears to be an average of the first and second dose rather than a tally of all doses.

**e. Identification of Serious Adverse Events\***

31. Mr. James' is critical of the classification I have made for serious adverse events from all adverse events reported to CARM.
32. Because the CARM and MedSafe data and information that is publicly available does not give such classification, I have identified a selection of adverse events as "potentially" or "likely" serious based on their description. I explained and identified this at section 6 of my Report, specifically paragraph 6.9 and 6.10 and as dealt with at paragraph 12.2, and following table 19 in my Report.
33. If CARM and MedSafe have this categorisation data available, I am prepared to rerun my analysis. However, absent it, I rely upon the analysis carried out in my Report.

## Reports of myocarditis to CARM versus expected background rates of myocarditis

26. Further to my analysis of serious adverse events, in children in paragraph 12.2 of my Report and the comments throughout the Mr. James' affidavit with respect to rates of myocarditis being reported to CARM, I have conducted some further analysis.
27. Myocarditis is inflammation of the heart muscle (myocardium). The inflammation can reduce the heart's ability to pump blood. A severe case can weaken the heart, which can lead to heart failure, abnormal heartbeat and sudden death.
28. Treatment may include medication to regulate the heartbeat and improve heart function. In rare but severe cases, a device may be required to help the heart function.

Source: <https://www.mayoclinic.org/diseases-conditions/myocarditis/symptoms-causes/syc-20352539>

### ***Expected Background rate of Myocarditis in NZ per 100,000 Population 2008 to 2009 vs Actual Rate AEFI's due to the Pfizer vaccines 2021***

29. Figure 4 below shows the expected rate of Myocarditis in the New Zealand population from 2008 to 2019 sourced from the GVDN (Global Vaccine Data Network). I have added the current rate of myocarditis for 2021.

## Expected Background Rate of Myocarditis in NZ per 100,000 Population 2008 to 2019 vs Actual Rate AEFI's due to Pfizer Comirnaty Vaccines 2021

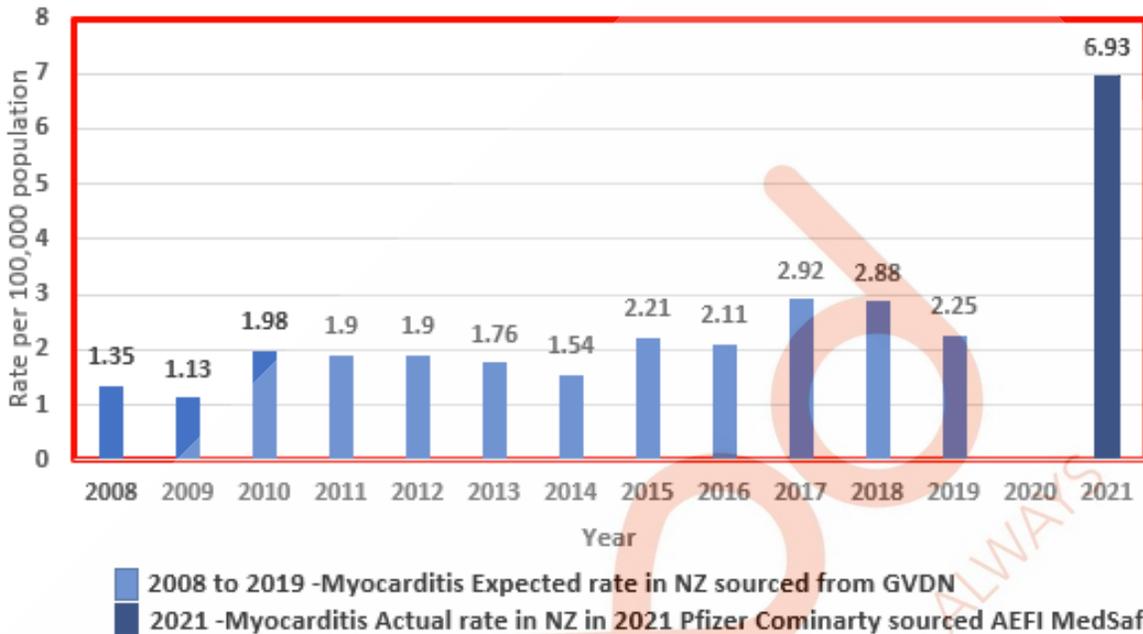


Figure 4: expected background

background rate of myocarditis in New Zealand per 100,000 population from 2008 to 2019 versus actual rate of adverse events reported due to the Pfizer Vaccines.

Source: Expected background rates are sourced from Global Vaccine Data Network.

30. The 2021 actual rate is calculated as 12 months of myocarditis adverse event cases divided by total NZ population x 100,000. The New Zealand population statistics. There is no information for 2020.

Source: [View table - Infoshare - Statistics New Zealand \(stats.govt.nz\)](https://www.stats.govt.nz)

31. The figures 2008 to 2019 are NON-covid years. They show an underlying increasing level of myocarditis in the New Zealand population. This underlying level will continue to increase independent of COVID Vaccines, unless the root cause can be identified and addressed. The actual figures for 2021 as presented are simply those diagnosed with myocarditis as the result of the adverse event reporting following a Pfizer Comirnaty Vaccine per 100,000 population.

32. The actual level in 2021 (COVID Vaccine period) is showing more than double the expected rates of myocarditis than for 2017, 2018 and 2019 (NON-covid Vaccine period).

33. The myocarditis actual rate for 2021 is sourced from MedSafe adverse events reporting from February 2021 to April 2022, which has been adjusted to 12 months. The 2021 figure, does not

include any additional underlying causes of myocarditis in the population. This figure could include at least the weighted average of historical myocarditis in the population which existed before COVID. For example, assuming the underlying level in 2021 is the same as it was in 2019, this would take the actual rate for 2021 to 2.25 plus 6.93 which is 9.22 – suggesting that a more likely figure is around 9 cases of myocarditis for every 100,000 people in New Zealand.

- Adding the weighted underlying average of myocarditis to the number of reports of myocarditis reported to CARM in 2021 sees an increase of 4 times the background level of myocarditis per 100,000 population ( $9.22/2.25=4.09$ ) when compared to the NON-covid vaccine years which is significant.

**Expected Background Rate of Myocarditis in NZ per 100,000 Population 2008 to 2019 vs Actual Rate AEFI's due to COVID vaccines 2021 by Gender**

- Figure 5 below show the expected rate of myocarditis in the New Zealand populations from 2008 to 2019 now reported by gender. I have added the current rate of myocarditis for 2021.



**Figure 5: expected rate of myocarditis in NZ per 100,000 population 2008 to 2019 vs actual rate of adverse events due to Pfizer COVID Vaccines 2021 by gender**

Source: Expected background rates are sourced from Global Vaccine Data Network.

- The myocarditis actual rate for 2021 in New Zealand is sourced from MedSafe adverse events reported by gender, from February 2021 to April 2022, adjusted to 12 months.

37. The actual rate for males is 12 months of myocarditis cases divided by New Zealand population of males x 100,000. Similarly, the actual rate for females is 12 months of Myocarditis cases divided by New Zealand population of females x 100,000.

Source: [View table - Infoshare - Statistics New Zealand \(stats.govt.nz\)](#)

38. Figure 5 above shows clearly a higher expected rate in males than females and this is also evident in the actuals.

39. Adding the baseline 2019 information, to reflect the underlying level of myocarditis in the population already, to the actuals gives a new male figure of 10.27 cases of myocarditis for every 100,000 population and for females 7.76 cases of myocarditis for every 100,000 population.

40. As per Figure 5, the actual levels of myocarditis in males reported to CARM in 2021 is just under 3 times ( $7.4/2.97=2.5$ ) the background level of myocarditis per 100,000 population and in females just 4 times ( $6.17/1.53=4$ ) the background level of myocarditis per 100,000 population. Both figures are statistically significant.

***The expected background rate of myocarditis in New Zealand per 100,000 population 2008 to 2019 vs actual rate adverse events from COVID Vaccines in 2021 by age range***

41. Figures 6 below shows the expected rate of myocarditis in the New Zealand population from 2008 to 2019 by age range. I have added the current rate of myocarditis for 2021. I have included two figures for figure 6 to assist with reading the numbers on the bar graphs.

Expected Background Rate of Myocarditis in NZ per 100,000 Population 2008 to 2019 vs Actual Rate AEFI's from Pfizer Comirnaty Vaccines 2021 by Age Range

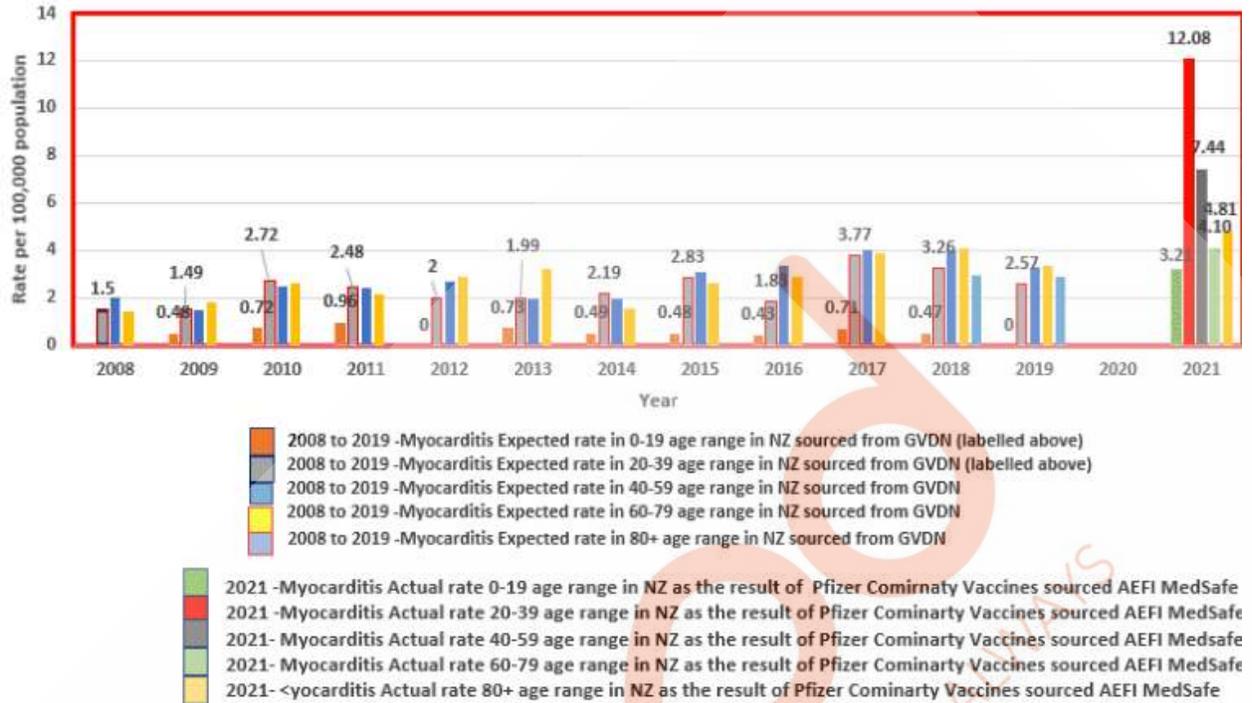


Figure 6.1: The expected background rate of myocarditis in New Zealand per 100,000 population 2008 to 2019 vs actual rate adverse events from COVID Vaccines in 2021 by age range

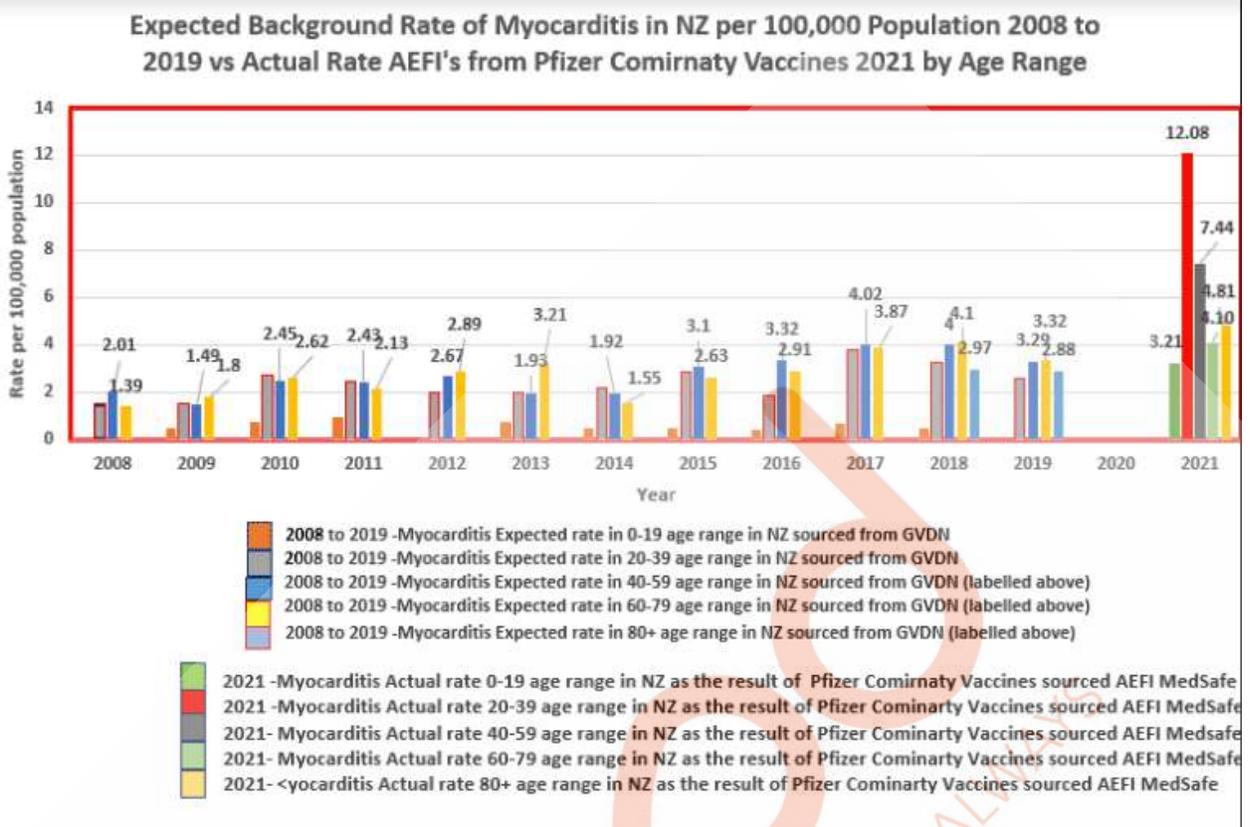


Figure 6.2: The expected background rate of myocarditis in New Zealand per 100,000 population 2008 to 2019 vs actual rate adverse events from COVID Vaccines in 2021 by age range

- 42. Looking at Figure 6 above, the expected background rates for years 2008 to 2019, show no myocarditis in the 0-19 age group compared to the other age ranges. As at 2017,2018 and 2019 (NON-covid period) the highest incidence of myocarditis is in 40-59 and 60-79 year age groups.
- 43. As per the actual rates in 2021, which have not been adjusted for any underlying level of myocarditis that might exist in the population, I note the significant incidences of myocarditis now in 0-19, 20-39 and 40-69 age groups. The number of adverse events of myocarditis reported to CARM and adjusted for the NZ population, per 100,000 population, in these age groups is statistically significant.
- 44. I repeat my comment from above, the reports for 2021 I have graphed are conservative because they include no underlying level of myocarditis in the population. At least the weighted average of historical myocarditis in the population which existed before COVID, could be added to better estimate the overall rate of myocarditis in the New Zealand population.

## Update on the DAENS reporting since my Report

45. At paragraph 12.3 and table 20 of my Report I set out a selection of adverse events reported to DAENS in Australia since 10 January 2022, when the roll out to children 5-11 began. At that time, 3 deaths were reported by the TGA to children 5-11 since 10 Jan 2022 and up to 24 April 2022.
46. Since my Report, there have been a further two deaths following Pfizer Cominarty Vaccines in 5-11 years reported to DAENS up to 29 May 2022.
47. This takes the number of deaths reported to five in the 5-11 year old age group. See table below with screenshots following.
48. A complication associated with reviewing the death information in the TGA DAEN web site is deaths are routinely reported in the TGA DAEN website with no age details. From February 2021 to 10 January 2022, there were 65 cases identifiable by case number (and screenshots) that had a death as a reported outcome but had the 'AGE 'omitted. Of these cases 22 were reportedly related to Pfizer Vaccines. There may be children aged 12-18 included in these deaths. Children 5-11 were provisionally approved to be vaccinated in Australia from 10 January 2022. Refer link below for screenshots which evidence the death entry of these records with no ages identified.  
<https://1drv.ms/b/s!Al71AGIGLVzgzkevoHbinghCrSN3?e=M32spM>

Date	Case Number	Gender	Age	Adverse Event	Result
11 March 2021	719838	M	7	<ul style="list-style-type: none"> <li>• Cardiac Arrest</li> <li>• Generalised tonic-clonic seizure</li> </ul>	Death as reported Outcome
25 March 2021	724023	F	9	<ul style="list-style-type: none"> <li>• Cardiac Arrest</li> </ul>	Death as reported Outcome
28 March 2021	724925	M	6	<ul style="list-style-type: none"> <li>• Adverse Event Following Immunisation</li> </ul>	Death as reported Outcome
6 May 2021	733723	M	10	<ul style="list-style-type: none"> <li>• Adverse Event Following Immunisation</li> </ul>	Death as reported Outcome
10 May 2021	734187	M	5	<ul style="list-style-type: none"> <li>• Abdominal Pain</li> <li>• Cardiac arrest</li> </ul>	Death as reported Outcome

**Table 7: summary of deaths reported to DAENS following COVID-19 Vaccine in 5-11 year olds since the roll out to this age group on 10 January 2022**

5 medicines selected between 11/03/2022 - 11/03/2022.

**Selected medicines**

Trade name	Active ingredients
COMIRNATY COVID-19 vaccine	tozinameran
COVID-19 vaccine (116)	COVID-19 vaccine (type not specified)
COVID-19 Vaccine AstraZeneca	ChAdOx1-S (Viral vector)
NUVAXOVID COVID-19 vaccine	SARS-CoV-2 S (MVA-COV2373)
Spivax COVID-19 vaccine	Elisomer (mRNA)

1 MedDRA Reaction Terms selected.

**Search results**

The results are shown in two tabs.

Number of reports (cases): 1  
 Number of cases with a single suspected medicine: 1  
 Number of cases where death was a reported outcome: 1

More information on the search results

Medicine summary | List of reports

**Medicine summary**

The medicine summary groups reported adverse events together. Patients may have reported multiple adverse events.

Further information about the medicine summary

Information on printing search results

Sort by:  Print version of this case

Number of cases - highest first

MedDRA system organ class	MedDRA reaction term	Number of cases	Number of cases with a single suspected medicine	Number of cases where death was a reported outcome
Cardiac disorders	Cardiac arrest	1	1	1

**Death number 1 reported after covid-19 vaccination on 11<sup>th</sup> March 2022 for a 7 year old boy**

Case number	Report entry date	Age (yrs)	Gender	Medicines reported as being taken	MedDRA reaction terms
719838	11/03/2022	7	M	• COMIRNATY COVID-19 vaccine (tozinameran) - Suspected	• Cardiac arrest • Generalised tonic-clonic seizure

*There was only one case of cardiac arrest on this day and it had a death reported also. Therefore this 7 year old boy was the death reported. This is a screenshot from the TGA database proving it was reported*

5 medicines selected between 25/03/2022 - 25/03/2022.

**Selected medicines**

Trade name	Active ingredients
COMIRNATY COVID-19 vaccine	tozinameran
COVID-19 vaccine (116)	COVID-19 vaccine (type not specified)
COVID-19 Vaccine AstraZeneca	ChAdOx1-S (Viral vector)
NUVAXOVID COVID-19 Vaccine	SARS-CoV-2 S (MVA-COV2373)
Spivax COVID-19 vaccine	Elisomer (mRNA)

1 MedDRA Reaction Terms selected.

**Search results**

The results are shown in two tabs.

Number of reports (cases): 1  
 Number of cases with a single suspected medicine: 1  
 Number of cases where death was a reported outcome: 1

More information on the search results

Medicine summary | List of reports

**Medicine summary**

The medicine summary groups reported adverse events together. Patients may have reported multiple adverse events.

Further information about the medicine summary

Information on printing search results

Sort by:  Print version of this case

Number of cases - highest first

MedDRA system organ class	MedDRA reaction term	Number of cases	Number of cases with a single suspected medicine	Number of cases where death was a reported outcome
Cardiac disorders	Cardiac arrest	1	1	1

**Death number 2 reported after covid-19 vaccination on 25<sup>th</sup> March 2022 for a 9 year old girl**

Case number	Report entry date	Age (yrs)	Gender	Medicines reported as being taken	MedDRA reaction terms
724023	25/03/2022	9	F	• COMIRNATY COVID-19 vaccine (tozinameran) - Suspected	• Cardiac arrest

*There was only one case of cardiac arrest on this day and it had a death reported also. Therefore this 9 year old girl was the death reported. This is a screenshot from the TGA database proving it was reported*

5 medicines selected between 28/03/2022 - 28/03/2022

**Selected medicines**

Trade name	Active ingredients
COMIRNATY COVID-19 vaccine	tozinameran
COVID-19 Vaccine (TMS)	COVID-19 Vaccine (Type not specified)
COVID-19 Vaccine AstraZeneca	ChAdOx1-S (Viral vector)
NUVAXVID COVID-19 Vaccine	SARS-CoV-2 IS (NVX-CoV2373)
Spikevax COVID-19 vaccine	Baseneran (mRNA)

1 MedDRA Reaction Terms selected.

**Search results**

The results are shown in two tabs.

Number of reports (cases): 1  
 Number of cases with a single suspected medicine: 1  
 Number of cases where death was a reported outcome: 1

More information on the search results

Medicine summary [List of reports](#)

**Medicine summary**

The medicine summary groups reported adverse events together. Patients may have reported multiple adverse events.

Further information about the medicine summary  
[Information on getting search results](#)

Sort by:  Print version of this report

Number of cases - highest first

MedDRA system organ class	MedDRA reaction term <small>Click on a term below to search the MedDRAPlus medical dictionary</small>	Number of cases	Number of cases with a single suspected medicine	Number of cases where death was a reported outcome
Injury, poisoning and procedural complications	Adverse event following immunisation	1	1	1

**Death number 3 reported after covid-19 vaccination on 28<sup>th</sup> March 2022 for a 6 year old boy**

Case number	Report entry date	Age (yrs)	Gender	Medicines reported as being taken	MedDRA reaction terms <small>Click on a term below to search the MedDRAPlus medical dictionary</small>
724925	28/03/2022	6	M	COMIRNATY COVID-19 vaccine (tozinameran) - Suspected	Adverse event following immunisation

*There was only one case of AEFI on this day and it had a death reported also. Therefore this 6 year old boy was the death reported. This is a screenshot from the TGA database proving it was reported*

*\*This case has since been removed by the TGA. Why?*

5 medicines selected between 06/05/2022 - 16/05/2022

**Selected medicines**

Trade name	Active ingredients
COMIRNATY COVID-19 vaccine	tozinameran
COVID-19 Vaccine (TMS)	COVID-19 Vaccine (Type not specified)
COVID-19 Vaccine AstraZeneca	ChAdOx1-S (Viral vector)
NUVAXVID COVID-19 Vaccine	SARS-CoV-2 IS (NVX-CoV2373)
Spikevax COVID-19 vaccine	Baseneran (mRNA)

1 MedDRA Reaction Terms selected.

**Search results**

The results are shown in two tabs.

Number of reports (cases): 1  
 Number of cases with a single suspected medicine: 1  
 Number of cases where death was a reported outcome: 1

More information on the search results

Medicine summary [List of reports](#)

**Medicine summary**

The medicine summary groups reported adverse events together. Patients may have reported multiple adverse events.

Further information about the medicine summary  
[Information on getting search results](#)

Sort by:  Print version of this report

Number of cases - highest first

MedDRA system organ class	MedDRA reaction term <small>Click on a term below to search the MedDRAPlus medical dictionary</small>	Number of cases	Number of cases with a single suspected medicine	Number of cases where death was a reported outcome
Injury, poisoning and procedural complications	Adverse event following immunisation	1	1	1

**Death number 4 reported after covid-19 vaccination on 6<sup>th</sup> May 2022 for a 10 year old boy**

Case number	Report entry date	Age (yrs)	Gender	Medicines reported as being taken	MedDRA reaction terms <small>Click on a term below to search the MedDRAPlus medical dictionary</small>
733723	06/05/2022	10	M	COMIRNATY COVID-19 vaccine (tozinameran) - Suspected	Adverse event following immunisation

*There was only one case of AEFI on this day and it had a death reported also. Therefore this 10 year old boy was the death reported. This is a screenshot from the TGA database proving it was reported*

5 medicines selected between 10/05/2022 - 10/05/2022

**Selected medicines**

Trade name	Active ingredients
COMIRNATY COVID-19 vaccine	tozinameran
COVID-19 Vaccine (TIG)	COVID-19 Vaccine (Type not specified)
COVID-19 Vaccine AstraZeneca	ChAdOx1-S [viral vector]
NUVAKOVID COVID-19 Vaccine	SNF6-COV-2-RS (NYS-CoV2373)
Spivax COVID-19 vaccine	Fosamnet (mRNA)

1 MedDRA reaction terms selected

**Search results**

The results are shown in two tabs.

No. of cases (10/05/2022 - 10/05/2022): 1  
 Number of cases with a single suspected medicine: 1  
 Number of cases where 5 year old was a reported outcome: 1

More information on the search results

Medicine summary [List all reports](#)

**Medicine summary**

The medicine is primary groups records adverse events together. Patients may have reported multiple adverse events.

Further information about the medicine summary

Information on existing search results

Sort by:  [First version of this report](#)

Number of cases: highest first

MedDRA reaction class	MedDRA reaction terms Click on a term below to search the MedDRA medical dictionary	Number of subjects	Number of subjects with a single suspected medicine	Number of subjects where death was a reported outcome
Cardiac disorders	Cardiac arrest	1	1	1

**Death number 5 reported after covid-19 vaccination on 10<sup>th</sup> May 2022 for a 5 year old boy**

Case number	Report entry date	Age (yrs)	Gender	Medicines reported as being taken	MedDRA reaction terms Click on a term below to search the MedDRA medical dictionary
734187	10/05/2022	5	M	<ul style="list-style-type: none"> <li>COMIRNATY COVID-19 vaccine (tozinameran) - Suspected</li> </ul>	<ul style="list-style-type: none"> <li>Abdominal pain</li> <li>Cardiac arrest</li> </ul>

*There was only one case of cardiac arrest on this day and it had a death reported also. Therefore this 5 year old boy was the death reported. This is a screenshot from the TGA database proving it was reported*

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## Table of Contents Sources

1. Expected background rate of Myocarditis per 100,000 population in NZ Pages 1-17
  - a. Overall population – sourced from Global Vaccine data Network
  - b. Segmented by gender
  - c. Segmented by age range
2. Calculation of Actual Incidence of Myocarditis per 100,000 population in NZ as follows”
  - Adverse events following immunization as provided by Medsafe downloaded (11.44am on 3<sup>rd</sup> May 2022)
    - Includes 14 months of data from Feb 2021 to April 2022. Page 18
  - Population statistics sourced from NZstats. [View table - Infoshare - Statistics New Zealand \(stats.govt.nz\)](https://stats.govt.nz) Pages 19-23
    - Overall, population
    - by gender,
    - by age range (insert screenshots here.)
3. Actual rates for 2021 Pages 25-27
  - a. calculated from incidence of Myocarditis adverse events divided by population numbers,
  - b. reported per 100,000 population.

## CONTENT 1

Expected background rate of Myocarditis per 100,000 population in NZ overall population – sourced from Global Vaccine data Network

Link [View table - Infoshare - Statistics New Zealand \(stats.govt.nz\)](https://stats.govt.nz)

GVDN data – overall NZ

Graph Table Further Information Download

Show 25 entries Search:

	Site	Year	Combined	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
1	New Zealand	2008	Total	4455567	60	1.35	1.01	1.69
2	New Zealand	2009	Total	4503939	51	1.13	0.82	1.44
3	New Zealand	2010	Total	4545375	90	1.98	1.57	2.39
4	New Zealand	2011	Total	4567437	87	1.9	1.5	2.31
5	New Zealand	2012	Total	4580166	87	1.9	1.5	2.3
6	New Zealand	2013	Total	4608678	81	1.76	1.37	2.14
7	New Zealand	2014	Total	4668561	72	1.54	1.19	1.9
8	New Zealand	2015	Total	4751934	105	2.21	1.79	2.63
9	New Zealand	2016	Total	4842942	102	2.11	1.7	2.51
10	New Zealand	2017	Total	4934094	144	2.92	2.44	3.4
11	New Zealand	2018	Total	5008535	144	2.88	2.41	3.35
12	New Zealand	2019	Total	5065929	114	2.25	1.84	2.66

Showing 1 to 12 of 12 entries Previous 1 Next

**CONTENT 2**

**Expected background rate of Myocarditis per 100,000 population in NZ by gender**

GVDN (Global Vaccine data Network) NZ background rates by Gender



Site: New Zealand AESI: Myocarditis Grouping Factor: Sex Subgroups: Male, Female, Missing

[Graph](#) [Table](#) [Further Information](#) [Download](#)

Show 100 entries Search:

	Site	Year	Sex	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
1	New Zealand	2008	Male	2192055	42	1.92	1.34	2.5
2	New Zealand	2008	Female	2263338	18	0.8	0.43	1.16
3	New Zealand	2008	Missing	174				
4	New Zealand	2009	Male	2217228	36	1.62	1.09	2.15
5	New Zealand	2009	Female	2286543	18	0.79	0.42	1.15
6	New Zealand	2009	Missing	171				
7	New Zealand	2010	Male	2237844	57	2.55	1.89	3.21
8	New Zealand	2010	Female	2307366	30	1.3	0.83	1.77
9	New Zealand	2010	Missing	165				
10	New Zealand	2011	Male	2248069	60	2.67	1.99	3.34
11	New Zealand	2011	Female	2319234	27	1.16	0.73	1.6
12	New Zealand	2011	Missing	141				
13	New Zealand	2012	Male	2254365	57	2.53	1.87	3.18
14	New Zealand	2012	Female	2326642	30	1.29	0.83	1.75
15	New Zealand	2012	Missing	156				
16	New Zealand	2013	Male	2270796	45	1.98	1.4	2.56
17	New Zealand	2013	Female	2337744	33	1.41	0.93	1.89
18	New Zealand	2013	Missing	141				
19	New Zealand	2014	Male	2304561	54	2.34	1.72	2.97
20	New Zealand	2014	Female	2363856	18	0.76	0.41	1.11
21	New Zealand	2014	Missing	141				

2012, to 2017

15	New Zealand	2012	Missing	156				
16	New Zealand	2013	Male	2270796	45	1.98	1.4	2.56
17	New Zealand	2013	Female	2337744	33	1.41	0.93	1.89
18	New Zealand	2013	Missing	141				
19	New Zealand	2014	Male	2304561	54	2.34	1.72	2.97
20	New Zealand	2014	Female	2363856	18	0.76	0.41	1.11
21	New Zealand	2014	Missing	141				
22	New Zealand	2015	Male	2351049	75	3.19	2.47	3.91
23	New Zealand	2015	Female	2400729	30	1.25	0.8	1.7
24	New Zealand	2015	Missing	156				
25	New Zealand	2016	Male	2399607	60	2.5	1.87	3.13
26	New Zealand	2016	Female	2443206	42	1.72	1.2	2.24
27	New Zealand	2016	Missing	129				
28	New Zealand	2017	Male	2446413	90	3.68	2.92	4.44
29	New Zealand	2017	Female	2487516	54	2.17	1.59	2.75
30	New Zealand	2017	Missing	162				
←								

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still finishing off by gender - 2017

## Background rates of AESIs in New Zealand 2008–2019 project

As with other countries, New Zealand did not have the baseline data required to form the basis of robust vaccine safety monitoring prior to the COVID-19 pandemic and introduction of COVID-19 vaccines. The outcomes of the [Background rates of AESIs in New Zealand 2008–2019 project](#), the data for which are available in the data dashboard below, helped prepare New Zealand for local assessment of COVID-19 vaccine safety by establishing baseline rates for 20 adverse events of special interest (AESIs) extracted from the [Brighton Collaboration SPEAC](#) (Safety Platform for Emergency Vaccines) project prioritised list, and myocarditis, pericarditis, multisystem inflammatory syndrome, a range of haematological conditions potentially associated with the newly identified thrombosis with thrombocytopenia syndrome (TTS), herpes zoster (shingles), narcolepsy, and sudden death for the New Zealand population overall and key subgroups from 2008–2019. These background rates may be used as a first step to contextualise data from prospective monitoring studies, spontaneous reports from the Centre for Adverse Reaction Monitoring (CARM) and other databases, and case reports, and thereby form a basis for identifying potential COVID-19 vaccine safety signals. With the baseline established, signals may be verified through the conduction of observed over expected analysis with the same population cohort.

GLOBAL VACCINE DATA NETWORK

Site: New Zealand | AESI: Myocarditis | Grouping Factor: Sex | Subgroups: Male, Female, Missing

Graph | Table | Further Information | Download

Show 100 entries | Search: 2017

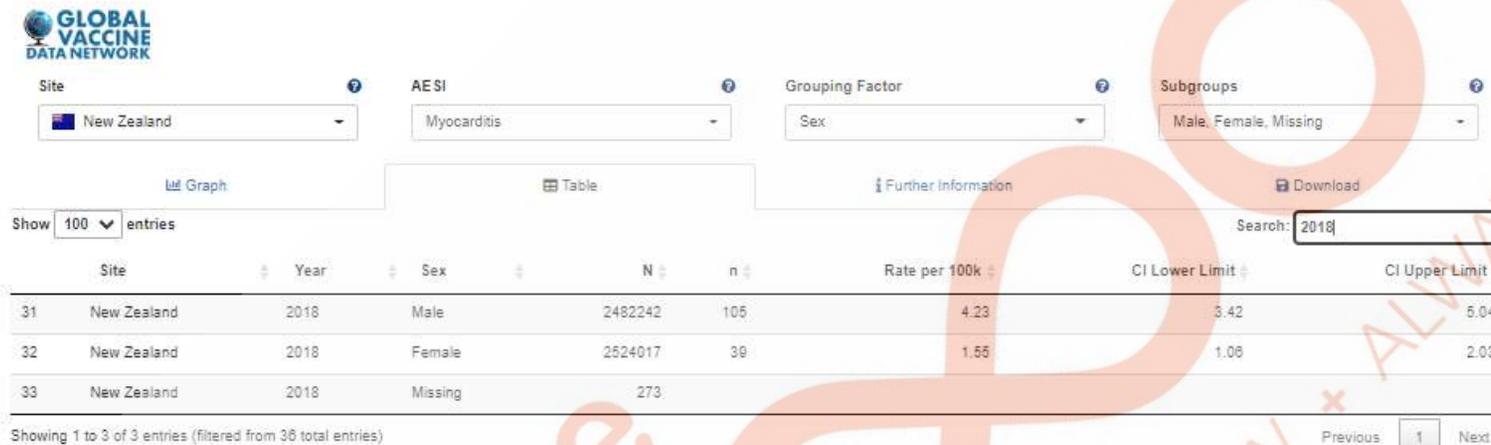
	Site	Year	Sex	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
28	New Zealand	2017	Male	2446413	90	3.68	2.92	4.44
29	New Zealand	2017	Female	2487516	54	2.17	1.59	2.75
30	New Zealand	2017	Missing	182				

Showing 1 to 3 of 3 entries (filtered from 36 total entries) | Previous | 1 | Next

still finishing off by gender

## Background rates of AESIs in New Zealand 2008–2019 project

As with other countries, New Zealand did not have the baseline data required to form the basis of robust vaccine safety monitoring prior to the COVID-19 pandemic and introduction of COVID-19 vaccines. The outcomes of the Background rates of AESIs in New Zealand 2008–2019 project, the data for which are available in the data dashboard below, helped prepare New Zealand for local assessment of COVID-19 vaccine safety by establishing baseline rates for 20 adverse events of special interest (AESIs) extracted from the Brighton Collaboration SPEAC (Safety Platform for Emergency Vaccines) project prioritised list, and myocarditis, pericarditis, multisystem inflammatory syndrome, a range of haematological conditions potentially associated with the newly identified thrombosis with thrombocytopenia syndrome (TTS), herpes zoster (shingles), narcolepsy, and sudden death for the New Zealand population overall and key subgroups from 2008–2019. These background rates may be used as a first step to contextualise data from prospective monitoring studies, spontaneous reports from the Centre for Adverse Reaction Monitoring (CARM) and other databases, and case reports, and thereby form a basis for identifying potential COVID-19 vaccine safety signals. With the baseline established, signals may be verified through the conduct of observed over expected analysis with the same population cohort.



The screenshot shows the Global Vaccine Data Network dashboard. The filters are set to Site: New Zealand, AESI: Myocarditis, Grouping Factor: Sex, and Subgroups: Male, Female, Missing. The search filter is set to 2018. The table displays the following data:

	Site	Year	Sex	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
31	New Zealand	2018	Male	2482242	105	4.23	3.42	5.04
32	New Zealand	2018	Female	2524017	39	1.55	1.08	2.03
33	New Zealand	2018	Missing	273				

Showing 1 to 3 of 3 entries (filtered from 36 total entries)

still finishing off by gender

## Background rates of AESIs in New Zealand 2008–2019 project

As with other countries, New Zealand did not have the baseline data required to form the basis of robust vaccine safety monitoring prior to the COVID-19 pandemic and introduction of COVID-19 vaccines. The outcomes of the Background rates of AESIs in New Zealand 2008–2019 project, the data for which are available in the data dashboard below, helped prepare New Zealand for local assessment of COVID-19 vaccine safety by establishing baseline rates for 20 adverse events of special interest (AESIs) extracted from the Brighton Collaboration SPEAC (Safety Platform for Emergency Vaccines) project prioritised list, and myocarditis, pericarditis, multisystem inflammatory syndrome, a range of haematological conditions potentially associated with the newly identified thrombosis with thrombocytopenia syndrome (TTS), herpes zoster (shingles), narcolepsy, and sudden death for the New Zealand population overall and key subgroups from 2008–2019. These background rates may be used as a first step to contextualise data from prospective monitoring studies, spontaneous reports from the Centre for Adverse Reaction Monitoring (CARM) and other databases, and case reports, and thereby form a basis for identifying potential COVID-19 vaccine safety signals. With the baseline established, signals may be verified through the conduct of observed over expected analysis with the same population cohort.

The screenshot shows the Global Vaccine Data Network interface. At the top left is the logo. Below it are filters for Site (New Zealand), AESI (Myocarditis), Grouping Factor (Sex), and Subgroups (Male, Female, Missing). There are options for Graph, Table, Further Information, and Download. A search bar contains '2019'. Below the filters is a table with columns: Site, Year, Sex, N, n, Rate per 100k, CI Lower Limit, and CI Upper Limit. The table shows three rows of data for 2019. At the bottom, it says 'Showing 1 to 3 of 3 entries (filtered from 38 total entries)' and has navigation buttons for Previous, 1, and Next.

	Site	Year	Sex	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
34	New Zealand	2019	Male	2513073	72	2.87	2.2	3.53
35	New Zealand	2019	Female	2550989	39	1.53	1.05	2.01
36	New Zealand	2019	Missing	1887				

### CONTENT 3

Expected background rate of Myocarditis per 100,000 population in NZ by age range

age range

Site: New Zealand AESI: Myocarditis Grouping Factor: Age Group Subgroups: 5 items selected

[Graph](#) [Table](#) [Further Information](#) [Download](#)

Show 100 entries Search:

	Site	Year	Age Group	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
1	New Zealand	2008	0-19	1249704				
2	New Zealand	2008	20-39	1202988	18	1.5	0.81	2.19
3	New Zealand	2008	40-59	1194312	24	2.01	1.21	2.81
4	New Zealand	2008	60-79	647022	9	1.39	0.48	2.3
5	New Zealand	2008	80+	161541				
6	New Zealand	2009	0-19	1253598	6	0.48	0.1	0.86
7	New Zealand	2009	20-39	1208826	18	1.49	0.8	2.18
8	New Zealand	2009	40-59	1209444	18	1.49	0.8	2.18
9	New Zealand	2009	60-79	666690	12	1.8	0.78	2.82
10	New Zealand	2009	80+	165381				
11	New Zealand	2010	0-19	1254525	9	0.72	0.25	1.19
12	New Zealand	2010	20-39	1212660	33	2.72	1.79	3.65
13	New Zealand	2010	40-59	1222035	30	2.45	1.58	3.33
14	New Zealand	2010	60-79	686157	18	2.62	1.41	3.84
15	New Zealand	2010	80+	169995				
16	New Zealand	2011	0-19	1246857	12	0.96	0.42	1.51
17	New Zealand	2011	20-39	1208391	30	2.48	1.59	3.37
18	New Zealand	2011	40-59	1232088	30	2.43	1.56	3.31
19	New Zealand	2011	60-79	705393	15	2.13	1.05	3.2
20	New Zealand	2011	80+	174711				

age range 2011

Site:  AESI:  Grouping Factor:  Subgroups:

[Graph](#) [Table](#) [Further Information](#) [Download](#)

Show  entries Search:

	Site	Year	Age Group	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
16	New Zealand	2011	0-19	1246857	12	0.96	0.42	1.51
17	New Zealand	2011	20-39	1208391	30	2.48	1.59	3.37
18	New Zealand	2011	40-59	1232088	30	2.43	1.56	3.31
19	New Zealand	2011	60-79	705393	15	2.13	1.05	3.2
20	New Zealand	2011	80+	174711				

Showing 1 to 5 of 5 entries (filtered from 60 total entries) Previous  Next

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Age range 2012

Site: New Zealand AESI: Myocarditis Grouping Factor: Age Group Subgroups: 5 items selected

[Graph](#) [Table](#) [Further Information](#) [Download](#)

Show 100 entries Search: 2012

	Site	Year	Age Group	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
21	New Zealand	2012	0-19	1237581				
22	New Zealand	2012	20-39	1201289	24	2	1.2	2.8
23	New Zealand	2012	40-59	1237200	33	2.67	1.76	3.58
24	New Zealand	2012	60-79	726147	21	2.89	1.66	4.13
25	New Zealand	2012	80+	177989				

Showing 1 to 5 of 5 entries (filtered from 60 total entries) Previous 1 Next

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Site: New Zealand AESI: Myocarditis Grouping Factor: Age Group Subgroups: 5 items selected

[Graph](#) [Table](#) [Further Information](#) [Download](#)

Show 100 entries Search: 2013

	Site	Year	Age Group	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
26	New Zealand	2013	0-19	1228781	9	0.73	0.25	1.21
27	New Zealand	2013	20-39	1207752	24	1.99	1.19	2.78
28	New Zealand	2013	40-59	1243050	24	1.93	1.16	2.7
29	New Zealand	2013	60-79	748206	24	3.21	1.92	4.49
30	New Zealand	2013	80+	180909				

Showing 1 to 5 of 5 entries (filtered from 80 total entries)

Previous 1 Next

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2014 age range

Site: New Zealand AESI: Myocarditis Grouping Factor: Age Group Subgroups: 5 items selected

[Graph](#) [Table](#) [Further Information](#) [Download](#)

Show 100 entries Search: 2014

	Site	Year	Age Group	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
31	New Zealand	2014	0-19	1230867	6	0.49	0.1	0.88
32	New Zealand	2014	20-39	1230078	27	2.19	1.37	3.02
33	New Zealand	2014	40-59	1250046	24	1.92	1.15	2.69
34	New Zealand	2014	60-79	772572	12	1.55	0.67	2.43
35	New Zealand	2014	80+	184995				

Showing 1 to 5 of 5 entries (filtered from 60 total entries) Previous 1 Next

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2015 age range

Site:  AEIS:  Grouping Factor:  Subgroups:

[Graph](#) [Table](#) [Further Information](#) [Download](#)

Show  entries Search:

	Site	Year	Age Group	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
36	New Zealand	2015	0-19	1237350	6	0.48	0.1	0.87
37	New Zealand	2015	20-39	1270344	36	2.83	1.91	3.76
38	New Zealand	2015	40-59	1257507	39	3.1	2.13	4.07
39	New Zealand	2015	60-79	798717	21	2.63	1.5	3.75
40	New Zealand	2015	80+	188016				

Showing 1 to 5 of 5 entries (filtered from 60 total entries) [Previous](#)  [Next](#)

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2016 age range

Site: New Zealand AESI: Myocarditis Grouping Factor: Age Group Subgroups: 5 items selected

[Graph](#) [Table](#) [Further Information](#) [Download](#)

Show 100 entries Search: 2016

	Site	Year	Age Group	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
41	New Zealand	2016	0-19	1248027	6	0.48	0.1	0.87
42	New Zealand	2016	20-39	1313508	24	1.83	1.1	2.56
43	New Zealand	2016	40-59	1264107	42	3.32	2.32	4.33
44	New Zealand	2016	60-79	825453	24	2.91	1.74	4.07
45	New Zealand	2016	80+	191847				

Showing 1 to 5 of 5 entries (filtered from 60 total entries) Previous 1 Next

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2017 age range

Site: New Zealand | AESI: Myocarditis | Grouping Factor: Age Group | Subgroups: 5 items selected

Graph | Table | Further Information | Download

Show 100 entries | Search: 2017

	Site	Year	Age Group	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
46	New Zealand	2017	0-19	1260957	9	0.71	0.25	1.18
47	New Zealand	2017	20-39	1353141	51	3.77	2.73	4.8
48	New Zealand	2017	40-59	1270098	51	4.02	2.91	5.12
49	New Zealand	2017	60-79	852879	33	3.87	2.55	5.19
50	New Zealand	2017	80+	197019				
55	New Zealand	2018	80+	201777	6	2.97	0.59	5.35

Showing 1 to 6 of 6 entries (filtered from 60 total entries) | Previous | 1 | Next

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2018 age range

Site: New Zealand AESI: Myocarditis Grouping Factor: Age Group Subgroups: 5 items selected

[Graph](#) [Table](#) [Further Information](#) [Download](#)

Show 100 entries Search: 2018

	Site	Year	Age Group	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
51	New Zealand	2018	0-19	1271244	6	0.47	0.09	0.85
52	New Zealand	2018	20-39	1380723	45	3.28	2.31	4.21
53	New Zealand	2018	40-59	1273719	51	4	2.91	5.1
54	New Zealand	2018	60-79	879069	36	4.1	2.78	5.43
55	New Zealand	2018	80+	201777	6	2.97	0.59	5.35

Showing 1 to 5 of 5 entries (filtered from 60 total entries) Previous 1 Next

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2019 age range

Site:  AESI:  Grouping Factor:  Subgroups:

[Graph](#) [Table](#) [Further Information](#) [Download](#)

Show  entries Search:

	Site	Year	Age Group	N	n	Rate per 100k	CI Lower Limit	CI Upper Limit
56	New Zealand	2019	0-19	1278066				
57	New Zealand	2019	20-39	1401549	36	2.57	1.73	3.41
58	New Zealand	2019	40-59	1274754	42	3.29	2.3	4.29
59	New Zealand	2019	60-79	903516	30	3.32	2.13	4.51
60	New Zealand	2019	80+	208047	6	2.88	0.58	5.19

Showing 1 to 5 of 5 entries (filtered from 60 total entries) Previous  Next

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Analysis from the aefi listing which shows the incidence of myocarditis adverse events from feb 2021 to apr 2022

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Age Group	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80 to 89	90 to 99	100 and over	Grand Total	Gender
Myocarditis (10028606)	1	47	87	114	65	47	27	17	8	1		414	All
Myocarditis (10028606)	1	13	35	45	36	30	11	9	5			185	Female
Myocarditis (10028606)		33	49	65	27	17	16	8	3	1		219	Male
Myocarditis (10028606)		1	3	4	2							10	Unknown

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Female all ranges  
Population screenshots

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View table

Group: Population Estimates - DPE  
 Table: Estimated Resident Population by Age and Sex (1991+) (Annual-Dec)

Edit table Save table  
 --Please select-- Table on screen

[Footnotes](#) | [Information](#) | [Print table](#) | [Help](#) | [Status flags](#)

Estimated Resident Population by Age and Sex (1991+) (Annual-Dec)																		
	Mean year ended																	
	Female																	
	0-4 Years	5-9 Years	10-14 Years	15-19 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-44 Years	45-49 Years	50-54 Years	55-59 Years	60-64 Years	65-69 Years	70-74 Years	75-79 Years	80-84 Years	85-89 Years
2021	148,530	158,370	163,800	153,000	160,390	180,470	192,190	172,010	157,780	164,480	169,310	166,270	153,430	130,330	112,490	79,650	57,050	32,870

**Table information:**  
 Units:  
 Number, Magnitude = Units

**Footnotes:**  
 All population estimates at 30 June 2018 and beyond use the 2018-base ERP.  
 Estimates flagged as provisional are subject to revision, mainly to incorporate revisions to external (international) migration estimates.

Male all ranges  
 Population screenshots

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View table

Group: Population Estimates - DPE  
 Table: Estimated Resident Population by Age and Sex (1991+) (Annual-Dec)

Edit table: --Please select--  
 Save table: Table on screen

[Footnotes](#) | [Information](#) | [Print table](#) | [Help](#) | [Status flags](#)

Estimated Resident Population by Age and Sex (1991+) (Annual-Dec)																		
Mean year ended																		
Male																		
	0-4 Years	5-9 Years	10-14 Years	15-19 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-44 Years	45-49 Years	50-54 Years	55-59 Years	60-64 Years	65-69 Years	70-74 Years	75-79 Years	80-84 Years	85-89 Years
2021	156,340	167,080	173,450	161,050	171,170	189,740	191,290	168,700	154,760	158,660	161,460	157,410	144,010	122,550	106,230	71,850	46,740	23,560

**Table information:**  
 Units:  
 Number, Magnitude = Units

**Footnotes:**  
 All population estimates at 30 June 2018 and beyond use the 2018-base ERP.  
 Estimates flagged as provisional are subject to revision, mainly to incorporate revisions to external (international) migration estimates.

Overall population of NZ Q4 2021

← <https://infoshare.stats.govt.nz/ViewTable.aspx?pxID=3ec8d50d-bf5f-476c-ba4d-fc090ad3250c>

# Stats NZ Infoshare

Tauranga Aotearoa

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**View table**

Group: Population Estimates - DPE  
 Table: Estimated Resident Population (Mean Quarter Ended) by Sex (1991+) (Qrtly-Mar/Jun/Sep/Dec)

Edit table: --Please select-- Save table: Table on screen

[Footnotes](#) | [Information](#) | [Print table](#) | [Help](#) | [Status flags](#)

Estimated Resident Population (Mean Quarter Ended) by Sex (1991+) (Qrtly-Mar/Jun/Sep/Dec)	
	Total
<b>2021Q4</b>	5,120,200

**Table information:**  
 Units:  
 Number, Magnitude = Units

**Footnotes:**  
 Population estimates include the latest migration estimates published in the same month.  
 All population estimates at 30 June 2018 and beyond use the 2018-base ERP.

Male population

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## View table

Group: Population Estimates - DPE  
Table: Estimated Resident Population (Mean Quarter Ended) by Sex (1991+) (Qrtly-Mar/Jun/Sep/Dec)

Edit table: --Please select--  
Save table: Table on screen

[Footnotes](#) | [Information](#) | [Print table](#) | [Help](#) | [Status flags](#)

Estimated Resident Population (Mean Quarter Ended) by Sex (1991+) (Qrtly-Mar/Jun/Sep/Dec)	
	Male
2021Q4	2,541,300

**Table information:**  
Units:  
Number, Magnitude = Units

**Footnotes:**  
Population estimates include the latest migration estimates published in the same month.  
All population estimates at 30 June 2018 and beyond use the 2018-base ERP.

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## View table

Group: Population Estimates - DPE

Table: Estimated Resident Population (Mean Quarter Ended) by Sex (1991+) (Qrtly-Mar/Jun/Sep/Dec)

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### Estimated Resident Population (Mean Quarter Ended) by Sex (1991+) (Qrtly-Mar/Jun/Sep/Dec)

	Female
2021Q4	2,578,900

**Table information:**

Units:  
Number, Magnitude = Units

**Footnotes:**

Population estimates include the latest migration estimates published in the same month. All population estimates at 30 June 2018 and beyond use the 2018-base ERP.

## CONTENT 5

**Actual rates calculated from incidence of Myocarditis adverse events divided by population numbers, reported per 100,000 population**

Calculating the myocarditis incident rate for 2021 - overall

No of myocarditis cases - 414

Period of time Feb 2021 to Apr 2022 - 14 months

Equivalent myocarditis cases in 12 months - 355

Population of NZ is 5120200 – see nzstats link.

Answer:  $355/5120200*100,000=6.93$

Calculating the Myocarditis incident rate for 2021 by gender

No of myocarditis cases - 414

No of Male myocarditis cases -219

No. of Female Myocarditis cases - 185

unknown - 10 cases

Period of time Feb 2021 to Apr 2022 - 14 months

Equivalent myocarditis cases in 12 months - 355

Equivalent Myocarditis cases in males in 12 months - 188

Equivalent Myocarditis cases in females in 12 months - 159

Population of NZ is 5120200 - [https://infoshare.stats.govt.nz/default.aspx?RedirectReason=session\\_expired](https://infoshare.stats.govt.nz/default.aspx?RedirectReason=session_expired)

Male population in Nz end of 2021 -2541300

Female population in Nz end of 2021- 2578900

Answer:male  $188/2541300*100,000=7.4$

Answer female  $159/2578900*100,000=6.17$

Calculating the background rate for 2021 by age range

No of myocarditis cases - 414

	14 months	12 months
0-19	48	41
20-39	201	172
40-59	112	96
60-79	44	38
80+	9	8
Total	414	355

Population of NZ is 5120200 - [https://infoshare.stats.govt.nz/default.aspx?RedirectReason=session\\_expired](https://infoshare.stats.govt.nz/default.aspx?RedirectReason=session_expired)

	Females	Males	Total
0-19	623700	657920	1281620
20-39	705060	720900	1425960
40-59	657840	632290	1290130
60-79	475900	444640	920540
80+	89920	70300	160220
	2552420	2526050	5078470 marginally short of total pop - probably rounding in original Nzstats database

Answer: 0-19  $41/1281620*100,000=3.21$

20-39  $172/1425960*100,000=12.08$

40-59  $96/1290130*100,000=7.44$

60-79  $38/920540*100,000=4.1$

80+  $8/160220*100,000=4.81$

'the hood  
TODAY \* TOMORROW \* ALWAYS

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