MDHB Responses to OIAs received October to December 2021

Puberty Blockers (OIA Y21-1517)
Contractors over 1 year (OIA Y21-1530)
Mental Health statistics (OIA Y21-1531)
PET CT referrals (OIA Y21-1535)
Births data (OIA Y21-1567)
MDHB Committees (OIA Y21-1695)
Trans vaginal ultrasounds (OIA Y21-1478)
COVID Protocols (Y21-1485)
Sentinel events resulting in death of baby (OIA Y21-1597)
Health Professional recommendations rejected (OIA Y21-1598)
Fully staffed ICU beds (OIA Y21-1603)
Covid Vaccinations - Maori (OIA Y21-1605)
Pharmacy - Merit applications (OIA Y21-1633)
Pharmacy staff - numbers hired (OIA Y21-1634)
Pharmacists - numbers (OIA Y21-1635)
Live-in treatment services (OIA Y21-1636)
Covid and refrigerated containers (OIA Y21-1675)
ADHD diagnosis and services (OIA Y21-1676)
COVID updates to district representatives (OIA Y21-1677)
Gender affirming surgeries (OIA Y21-1679)
Staff not received first Vax (OIA Y21-1696)
Ernst & young project costs (OIA Y21-1698)
SUDI funding (OIA Y21-1701)
Secondary care funding obstetrics scans (OIA Y21-1738)
Fire Suppression Systems (OIA Y21-1744)
DHB formal apologies (OIA Y21-1746)
CA-125 blood tests (OIA Y21-1917)
Opportunistic vaccinations (OIA Y21-1896)
COVID costs (OIA Y21-1905)
COVID-19 vaccination communications (OIA Y21-1864)
COVID setup costs (OIA Y21-1750)
Declined referrals internal & external requests for gastro dept (OIA Y21-1760)
Incidents re Nurses (OIA Y21-1834)

Guidelines or procedures for various treatments (OIA Y21-1869)
RMO Locum Costs (OIA Y21-1870)
Cancelled surgeries procedures assessments (OIA Y21-1859)
Guidelines or procedures for epigastric pain urgent x-rays colon disorders (OIA Y21-1923)
Assaults on DHB Staff (OIA Y21-1925)
Diabetes research (OIA Y21-1926)

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

4 November 2021

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[redacted]
E-mail: [redacted]

Dear [redacted]

Official Information Act (OIA) Request – Y21-1517

Your OIA request of 7 September 2021 to the Ministry of Health, a of which part two has been transferred to District Health Boards for their response, is acknowledged.

The information you have requested follows.

Please provide (or where the DHB's hold the figures forward to each of them) the following information as a matter of urgency - they are being used for a submission to the Select Committee on the BDMRR Bill closing 14 September.

Information relating to the use of blockers for young either trans related or increase in central precocious puberty. Please provide the figures divided into these 2 separate categories.

Please break down as to:
numbers,
ages,
birth sex
ethnicity
for all people under the age of 20 enrolled in gender clinics - including by DHB over last 5 years.

Please also advise how many of the above have gone on to be prescribed cross sex hormones and/or gone on to have transition surgery or be placed on the surgery waiting list."

The table below highlights the data for young people under the age of 20 enrolled in gender clinics at MidCentral DHB over the last five years.

It is important to note that this information is available through individual patient medical files, therefore, there may be some discrepancies in the numbers given. In addition, information is not available for ethnicity and, progress to gender affirming hormones for 16 -20 year olds in adult services without a clinician manually reviewing all files. This would be a very time-consuming task that would necessarily take the clinician away from their primary function of treating patients. Therefore, we have determined to refuse your request under section 18(f) of the Official Information Act as making the information available would require substantial collation and research.

You have a right to seek an investigation by the Ombudsman about this decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Blocker Used		Trans-related	CPP Related
Numbers	10-16 years	24	Nil in gender clinics
	16-20 Years	32	Nil in gender clinics
Ages (at commencement)		Ranged 10-16 years	N/A
		Ranged 16-20 years	N/A
Birth Sex	10-16 years	17 Female, 7 Male	N/A
	16-20 years attending adult services for gender affirming hormone therapy	21 Female, 11 Male The majority of patients will not have had prior puberty blockers either because of service access or referral after puberty has occurred	N/A
Ethnicity 10-16 years	10-16 years	18 NZE 6 NZM 3 Other Euro 1 unknown (some patients advised more than one ethnicity)	N/A
	16-20 years	This data requires manual extraction and is therefore not able to be provided	

Note: 10-16 data is provided by paediatric services with transfer to adult services at 16 years so some cross over may be noted.

Seven young people have progressed to gender affirming hormones in our clinic. It is unknown how many have gone on to hormones in other clinics or gone on to surgery (we do not refer for surgery from MidCentral DHB's paediatric clinic).

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website 10 working days after your receipt of this response.

Yours sincerely

Sarah Fenwick
Operations Executive
Healthy Women Children and Youth

MIDCENTRAL DISTRICT HEALTH BOARD
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10 November 2021

[redacted]

Ref: Y21-1530

Dear [redacted]

In response to your recent Official Information Act 1982 request regarding:

- *Over the last 5 years what are the names of contractors, who have worked for longer than one year, in a DHBs tier 1,2 or 3 management position, and what was the daily or weekly or year rate paid to each of these contractors?*

We advise for MidCentral DHB as follows:

Contractors who have been employed for longer than one year and amount paid:

Contractor	**Tier**	**$ 2017/18**	**$ 2018/19**	**$ 2019/20**	**$ 2020/21**	**$ 2021/22**
Director of the Office of the Chief Executive Employed from 30/7/20 to 22/10/21	2	0	0	0	286,165	77,254

If you are not satisfied with this response you have the right to raise any concerns regarding our response with the Ombudsman – www.ombudsman.parliament.nz or 0800 802 602.

Please note that this response, or an edited version, may be published on the MidCentral DHB website ten working days after your receipt of this response.

Yours sincerely

Neil Wanden
General Manager, Finance & Corporate Services

MIDCENTRAL DISTRICT HEALTH BOARD
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8 November 2021

[redacted]

Dear [redacted]

We are in receipt of your Official Information request dated 22 September 2021 to the Ministry of Health. The Ministry has transferred question numbers 10 and 19 to the DHB for response on 12 October 2021.

You advised that you like the following information as stated below:

10. How long does a 'vulnerable' person remain in the system post discharge, so that access to support can be expedited quickly should the need arise.

On discharge a clinician would review the progress the person had made as a consequence of the treatment and support they had received along with a risk assessment associated with their overall condition and the factors that had made them and/or could cause them again to become vulnerable. These could potentially include changing national event's such as COVID, recession, natural events such earthquakes or war among a considerable range of psycho-social factors more specific to their condition and proximal to their circumstances. Those identified would be included in their care plan and arrangements made accordingly for their receiving particular attention in the follow-up period.

19. What risk/benefit model is utilised to assess a person's vulnerability who has been discharged from 'active' support when changing national events could potentially trigger a relapse in their mental ability.

There is no particular "risk/benefit model", locally, nationally or internationally that we are aware of, that is used to assess a person's vulnerability after discharge to "potentially triggering of a relapse in their mental ability" as a consequence of "changing national events".

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website ten working days after your receipt of this response.

Yours sincerely

Scott Ambridge
Operations Executive

Te Uru Rauhī - Mental Health & Addictions Services
PN Hospital, Private Mail Bag 11036, PALMERSTON NORTH
Phone: + 64 (6) 350 8354

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29 October 2021

[redacted]

Email: [redacted]

Dear [redacted]

Official Information Act (OIA) request – OIA Y21-1535

Thank you for your request for information dated 14 October 2021. Your request is acknowledged and has been passed onto me for a response.

You have requested MidCentral District Health Board (MDHB) provide you with information to the following questions:

1. **Which PET CT suppliers do you use for your PET CT referrals?**

   MDHB uses Pacific Radiology for PET scans.

2. **How are the tenders for these referrals accessed and when are they put out to tender?**

   MDHB uses the MBIE Government Procurement Rules and process for tendering for services. This is a regional contract that is being administered by TAS.

3. **Are any of your PET CT referrals currently under contract with your suppliers and if so when are the contracts up for renewal?**

   The current supply contract is in the process of being renewed by TAS and will be through to 30 June 2022.

4. **Are there any extra costs to the DHB for providing PET CT scans to patients, eg travel costs, accommodation?**

   In addition to the scan, there may be costs to the DHB for travel and accommodation for PET scanning. Typically, the National Travel Assistance guidelines are applied to these patients.

Please note that this response, or an edited version may be published on the MDHB website ten working days after your receipt of this letter. Please let me know if you have any objections to this as soon as possible.

I hope this information is what you require.

Yours sincerely

Sarah Fenwick
Operations Executive
Te Uru Mātai Matengau
Cancer Treatment, Screening and Support

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

18 November 2021

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Email: [redacted]

Dear [redacted]

Official Information Act (OIA) request – Y21-1567
Maternity services data

Thank you for your request for information dated 20 October 2021. Your email has been acknowledged and passed onto me for a response.

You have requested MidCentral District Health Board (MDHB) provide you with information to the following questions:

1. **Data on the raw number of caesarean sections conducted at the DHB?**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Elective	234	225	246	244	226	220	253	254	225	234	212
Emergency	378	340	328	335	353	333	335	300	243	257	267

2. **Data on the number of episiotomies conducted at the DHB since 2010, broken down by year?**

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
240	253	172	187	247	224	232	201	222	182	226

3. **Data on the number of epidurals conducted at the DHB since 2010, broken down by year?**

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
401	490	450	471	435	410	423	438	439	408	448

4. **Data on the number of births at DHB facilities, broken down by year, since 2010?**

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2230	2166	2044	1986	1976	1968	1920	1957	1878	1886	2000

5. Data on the average number of FTE core midwifery positions (NOT community midwives) employed at the DHB per year, broken down by year since 2010?

Average FTE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Core Midwife	16.97	17.14	18.59	18.51	17.61	19.55	21.77	22.69	22.89	19.61	21.36

6. Data on the average number of FTE community midwifery positions employed at the DHB per year, broken down by year since 2010?

Average FTE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Community Midwife	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.40	2.00	2.40

7. Data on spending/cost of maternity services per year, broken down by year since 2010 (NOT including building maintenance and upgrades, just staffing and the costs of actually running the services)?

	Year	Cost $
1	1 July 2011 to 30 June 2012	9,288,024
2	1 July 2012 to 30 June 2013	9,478,250
3	1 July 2013 to 30 June 2014	9,698,105
4	1 July 2014 to 30 June 2015	9,483,354
5	1 July 2015 to 30 June 2016	10,558,712
6	1 July 2016 to 30 June 2017	11,358,121
7	1 July 2017 to 30 June 2018	11,966,635
8	1 July 2018 to 30 June 2019	13,344,418
9	1 July 2019 to 30 June 2020	12,644,263
10	1 July 2020 to 30 June 2021	14,789,187

8. Data on the average number of FTE obstetrician positions/ average hours worked by obstetricians employed at the DHB per year, broken down by year since 2010?

	FTE Hours	FTE
2010	168.00	4.20
2011	208.00	5.20

2012	208.00	5.20
2013	150.00	3.75
2014	154.00	3.85
2015	176.00	4.40
2016	290.00	6.1
2017	310.60	6.4
2018	358.60	6.9
2019	324.60	7.4
2020	300.60	7.4
2021	290.60	6.6

Note this calculation does not account for vacancies

9. Data on the number of code reds that have occurred at the DHB maternity unit/birthing unit/maternity service per year, broken down by year since 2010?

Red VRM's	Maty	Birthing Suite
2013	3	1
2014	1	
2015	2	1
2016		1
2017	1	
2018	1	1
2019		
2020		
2021	1	2

10. Data on the number of code blacks that have occurred at the DHB maternity unit/birthing unit/maternity service per year, broken down by year since 2010?

MidCentral DHB (MDHB) does not have a code black status.

11. Data on the average number of beds within the DHB maternity unit/birthing unit/maternity service per year, broken down by year since 2010?

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Maternity + Horowhenua	26	26	26	26	26	26	26	26	26	26	25
Birthing Suite	8	8	8	8	8	8	8	8	8	8	8
Te Papaieoa Birthing Centre											8

12. Data on maternal deaths during or shortly before/after labour (within 7 days), broken down by year since 2010

MDHB is unable to provide any data for the period of 2010 to January 2013. The patient management system changed in November 2012 to an electronic system and recording of incidents related to maternal deaths did not begin until January 2013. The information prior to this date was not captured. In June 2017 the Health Quality and Safety Commission alongside the Ministry of Health developed the National adverse event policy in which all DHB's were to report serious adverse events against a severity assessment code (SAC). MDHB has reported since this time and therefore numbers reflected since June 2017 are more reliable than the years previous to this.

2013	Nil
2014	Nil
2015	Nil
2016	Nil
2017	Nil
2018	Nil
2019	One
2020	Nil
2021	to date Nil

13. Data on deaths of babies during or shortly before/after birth (within 7 days), broken down by year since 2010

2013	Nil
2014	One
2015	Five
2016	Nil
2017	Nil
2018	One
2019	Nil
2020	Four
2021	Three

Note: these events include deaths that did not occur at MDHB but were confirmed in the hospital.

Please note that this response, or an edited version may be published on the MDHB website ten working days after your receipt of this letter. Please let me know if you have any objections to this as soon as possible.

I hope this information is what you require.

Yours sincerely

Sarah Fenwick

Operations Executive
Te Uru Pā Harakeke
Healthy Women Children and Youth

MIDCENTRAL DISTRICT HEALTH BOARD
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17 November 2021

[redacted]

[redacted]

MDHB Ref Y21-1695

Tēnā koe

The following response is provided in relation to your Official Information Act 1982 (OIA) request received on 15 November 2021.

Your request states:
Please provide information, including but not limited to emails, applications, reports, meeting minutes, memos, data, audiovisual materials and correspondence to/from the DHB about:

The names of any committees which involve the taking of minutes where these minutes are not made public.

Our understanding of your question is that you are seeking the names of MidCentral District Health Board and Committee meetings where minutes are not made public.

MidCentral District Health Board (MDHB) and its sub-committees, the Health and Disability Advisory Committee and the Finance, Risk and Audit Committee hold 'public excluded' sessions. Topics discussed at these sessions are subject to various provisions of the Official Information Act 1992, section 9. A list of these topics is included in the papers for the public session of the meeting and these are available on the MDHB website – www.midcentraldhb.govt.nz.

If you require details of all meetings held within the organisation (such as management and operational meetings), such a request would be declined under OIA section 18(f) – that the information requested cannot be made available without substantial collation or research.

If you are not satisfied with this response you have the right to raise any concerns with the Ombudsman – www.ombudsman.parliament.nz or by phoning 0800 802 602.

Please note that this response, or an edited version, may be published on the MidCentral District Health Board website 10 working days after your receipt of this response.

Yours sincerely

Kathryn Cook
Chief Executive

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

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27 October 2021

[redacted]

E-mail: [redacted]

Dear [redacted]

Official Information Act (OIA) Request

Your OIA request of 29 September 2021 to MidCentral District Health Board (MDHB) is acknowledged and has been passed on to me for response.

You have asked if a person responsible for triaging ultrasound referrals would be so kind as to tell us what priority (urgent, semi urgent, routine, declined) and timeframe (in days or weeks) your clinicians would put on the following 12 referral scenarios for a trans vaginal ultrasound from a community General Practitioner (GP) (under a COVID Level 1 scenario)?

- **Premenopausal 36 year old women with new onset bowel habit changes and bloating of;**
  - A. **1 month's duration, normal pelvic exam, negative family history – with CA-125 of 15.**
    This would be a routine priority seen in approximately five months.
  - B. **3 months' duration, normal pelvic exam, negative family history – with CA-125 of 15 (stable).**
    This would be a routine priority seen in approximately five months.
  - C. **3 months' duration and new onset urinary frequency, normal pelvic exam, negative family history – with CA-125 of 18 (previously 15).**
    This would be a semi-urgent priority seen in approximately 2-3 months.
  - D. **1 month's duration, normal pelvic exam, negative family history – with CA-125 of 37.**
    This would be a routine priority seen in approximately five months.
  - E. **1 month's duration, normal pelvic exam, negative family history – with CA-125 of 205.**
    This would be an urgent priority seen within 1-2 weeks.
  - F. **1 month's duration, mass on pelvic exam, negative family history – with CA-125 of 205.**
    This would be an urgent priority seen within 1-2 weeks.

Operations Executive, Acute & Elective Specialist Services
MidCentral District Health Board, PO Box 2056, Palmerston North 4440
Telephone (06) 356 9169

- **Menopausal 50 year old woman presenting with new bowel habit changes and bloating of;**
  A. **1 month's duration, normal pelvic exam, negative family history – with CA-125 of 15.**
  This would be a routine priority seen in approximately 5 months
  B. **3 months' duration, normal pelvic exam, negative family history – with CA-125 of 15 (stable).**
  This would be a routine priority seen in approximately 5 months.
  C. **3 months' duration and new onset urinary frequency, normal pelvic exam, negative family history – with CA-125 of 18 (previously 15).**
  This would be a semi-urgent priority seen in approximately 2-3 months.
  D. **1 month's duration, normal pelvic exam, negative family history – with CA-125 of 37.**
  This would be a routine priority seen in approximately 5 months.
  E. **1 month's duration, normal pelvic exam, negative family history – with CA-125 of 205.**
  This would be an urgent priority seen within 1-2 weeks.
  F. **1 month's duration, mass on pelvic exam, negative family history – with CA-125 of 205.**
  This would be an urgent priority seen within 1-2 weeks.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website 10 working days after your receipt of this response.

Yours sincerely

Lyn Horgan
Operations Executive
Acute & Elective Specialist Services

MIDCENTRAL DISTRICT HEALTH BOARD
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29 October 2021

[redacted]

Dear [redacted]

Thanks for your request for information. I have added some comments below to the questions you are asking. I would point out a couple of considerations first –

- COVID is a rapidly changing environment with information coming available daily (currently there are over 180,000 per review scientific articles ono the American Pubmed web site related to COVID)
- We are amid a global pandemic equal in intensity to the Influenza pandemic of 1918 and the HIV pandemic of 1980's. The way scientific information is actioned may occur of that reflective of the global emergency that we are in (even if we are in relative isolation in New Zealand).

1) What is the Covid-19 treatment protocol for hospitalised cases?
Each case is assessed on a case by case basis but following the general guidelines provided by the following site –
interim_guidance_-_clinical_management_of_covid-19_in_hospitalised_adults_2 (health.govt.nz)

2) Are some DHB's following different treatment protocols from others?
Most DHB's will be following the nationally set guidelines. Some hospitals can manage different levels of complexities than others and so variations between the hospitals can be expected. Some hospitals for example don't have ICU facilities and hence patients might be expected to be transferred into facilities that do.

3) Are DHB's free to make decisions about treatments for individuals with Covid-19?
Yes, as each case is managed on a case to case basis. Individual patients have their own level of complexities and have to be managed accordingly. The overall general principles will be consistent throughout.

4) To what extent are patients able to participate in decision-making about their treatment programmes?
This is strongly encouraged and partnership between patient / whanau and clinician demonstrates the best outcomes.

5) If a patient requests a blood test for Vitamin D and/or the administration of high dosage Vitamin C, are hospital staff able to provide these?
Where this is evidenced base through the peer reviewed literature, most clinicians would be supportive. I would think that an open two way conversation between both parties occur from a position of mutual respect and sharing of information and knowledge.

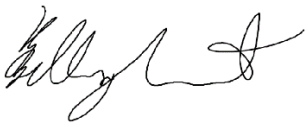
However not all medications, procedures and processes that are available in other countries have passed through the regulatory process that exists in New Zealand.

6) Do hospital staff have the right to refuse a patient's request and, if so, is there a process for a patient to appeal the decision?
Clinicians follow the best available evidenced based practice in their respective professions. Usually, the first point of discussion when a major "disagreement" between patient and treating clinician occurs is to get a second opinion. This may occur on treatment modalities, prognosis estimates and planning around discharge.

I trust these answer your issues or concerns.

Please note that this response, or an edited version may be published on the MDHB website ten working days after your receipt of this letter. Please let me know if you have any objections to this as soon as possible.

Yours sincerely



Dr Kelvin Billinghurst

Chief Medical Officer, Primary Public & Community Health Executive
MidCentral District Health Board

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

18 November 2021

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Dear-

Official Information Act Request Y21-1597

Thank you for your email of the 9 October 2021, in which you ask for information from MidCentral District Health Board (MDHB) relating to:

How many sentinel events during treatment resulting in the death of a baby in utero, or within the first months of birth have been notified to the Director General of Health along with how many serious events that resulted in major permanent loss of function (aka disability) in a child at or about the time of birth for the last 5 years?

And what is the most common resulting loss of function ie: cerebral palsy.

Please find below a table of events for the last 5 years-. As discussed via email we have interpreted your request as seeking the number of SAC 1 and SAC 2 events (**events** MDH B classify as sentinel events against the Health Quality & Safety Commission (HQSC) national policy) reported by MDHB.
This would include intra-uterine deaths at term (as classified under the HQSC policy) or deaths at birth to within three months of birth.

Year	Death of baby in utero	Death in first months of birth
1 July 2017 - 31 June 2018	0	0
1 July 2018 - 31 June 2019	0	1
1 July 2019 - 31 June 2020	0	2
1 July 2020- 31 June 2021	4	1
1 July 2021- 9 Nov 2021	0	1
Totals	**4**	**5**

With regard to how many of these **events** have resulted in major permanent loss of function (aka disability), MDHB does not keep a register of disabilities linked to adverse **events** and are therefore unable to provide this information.

Please note that this response, or an edited version may be published on the MDHB website ten working days after your receipt of this letter. Please let me know if you have any objections to th is as soon as possible.

Yours sincerely

Sarah Fenwick
Operations Executive
Te Uru Pa **Harakeke, Healthy Women Children and Youth**
MidCentral District Health Board, PO Box 2056, Palmerston North

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26 November 2021

[redacted]

Dear [redacted]

Official Information Act (OIA) Request

Your e-mail of 25 November 2021, in response to our letter of 24 November 2021, is acknowledged and has been passed on to me for further response. The updated response to your last question follows.

- **Of those, how many health professional recommendations were rejected, where;**
  - **(a) service is funded**
  - **(b) the patient has a Community Services card, and**
  - **(c) the patient has met the criteria for funded treatment.**

Department	1 – 31 July 2021	1 – 15 August 2021
Dental	32	16
Diabetes	2	1
Ear Nose & Throat	64	22
Endocrinology	14	8
Gastroenterology	1	1
General Surgery	24	3
Gynaecology	1	2
Dermatology	7	7
Neurology	14	8
Ophthalmology	16	1
Rheumatology	2	1

The table above identifies those patients that have been declined from a funded service where the patient has met the threshold for an FSA (first specialist assessment) but, due to current capacity, we are not in a position to accept the referral due to us being unable to give the patient a commitment of being seen within four months.

Community Services card information has not been captured within MDHB for many years, ceasing when Health Care User Part Charges were abolished.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website 10 working days after your receipt of this response.

Yours sincerely

Lyn Horgan
Operations Executive
Acute & Elective Specialist Services

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

Phone (06) 350 8061
Fax (06) 355 0616

Postal Address:
PO Box 2056
Palmerston North Central
Palmerston North 4440
New Zealand

Physical Address:
Gate 2
Heretaunga Street
Palmerston North
New Zealand

18 November 2021

[redacted]

Dear [redacted]

Official Information Act (OIA) Request

Your OIA request of 28 October 2021 to MidCentral District Health Board (MDHB) is acknowledged and has been passed on to me for response.

The information you have requested for MDHB – Palmerston North Hospital follows.

- **The current number of fully-staffed ICU beds for mechanically ventilated patients or multiple organ support for adult and/or children.**

  MDHB has eight (8) ICU beds for mechanically ventilated patients, whether they be adults or children. The number of resourced beds is six (6).

- **The typical occupancy rate of these beds during alert level 1 or zero.**

  MDHB's typical occupancy rate for ICU beds in alert Level 1 or zero averages between three to four patients.

For this response, MDHB have excluded high acuity beds for coronary care and high dependency care beds with oversight. We have only included beds that have direct oversight by the ICU team, as requested.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website 10 working days after your receipt of this response.

Yours sincerely

Lyn Horgan
Operations Executive
Acute & Elective Specialist Services

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

26 November 2021

Phone (06) 350 8061
Fax (06) 355 0616

Postal Address:
PO Box 2056
Palmerston North Central
Palmerston North 4440
New Zealand

Physical Address:
Gate 2
Heretaunga Street
Palmerston North
New Zealand

[redacted]

Dear [redacted]

Official Information Act Request: Y21-1605
[redacted] COVID-19 Vaccination Programme & Planning for Māori

The information below is in response to your Official Information Act request dated 29 October 2021.

1. Copies of any plans formulated to vaccinate Māori in the region against COVID-19

Attached are three plans that underpin the delivery of COVID-19 to Māori in the MDHB region.

1.1 MidCentral Pacific and Maori CC
1.2 Vaccine Delivery Plan 01 July 2021_Re
1.3 MidCentral District Health Boarc

2. Details of measures the DHB has taken to provide vaccinations to Māori in the region, including staffing and resourcing

MidCentral DHB has partnered with iwi and Māori providers across the region since the inception of the vaccination programme to ensure iwi and Māori had increased access to vaccinations. These providers are pivotal in determining the most appropriate approach to ensure increased uptake of vaccinations by Māori. This includes being guided by iwi and Māori with the appropriate locations of clinics. Iwi and Māori led vaccination clinics are being delivered across the entire DHB region with both physical and mobile sites. The physical sites routinely operate across the rohe are shown in Appendix 1.

Additionally, the following drive through clinics frequently operate in partnership with iwi and Māori providers, MidCentral DHB, THINK Hauora and general practice teams:

- Ōtaki Racecourse, Ōtaki
- Manfield Park, Feilding
- AMP Showgrounds, Dannevirke
- Arena Drive Through, Palmerston North

There are 12 vaccination coordinator roles present in iwi and Māori providers across the region. There are roles in every locality; Tararua has two roles, Manawatū has one role, Palmerston North has five roles, Horowhenua has two roles, and Ōtaki has one role. The distribution of these roles across the iwi and Māori provider network and across localities supports iwi and Māori autonomy with design and delivery of appropriate vaccination approaches across the district. These vaccination coordinator roles are vital in the

engagement and vaccination uptake of Māori, with a key focus on education across communities.

3. Reports, briefings, memos, or other updates provided to the DHB's senior leadership on the progress of COVID-19 vaccine rollout to Māori in the region since the immunisation programme began.

The embedded document is a communication used to connect with senior leadership and key community stakeholders and community groups. It was aimed at driving the equitable delivery of the COVID-19 vaccination programme across the MDHB rohe.

3.1 Social Media Stats.pdf

The following is a briefing prepared for the visit of Minister Peeni Henare to MDHB on Tuesday 5 October 2021

3.2 MDHB Board Chair Briefing Paper

And finally, a report prepared for Manawhenua Hauora, a consortium of all four Iwi who have Manawhenua status in Manawatu, Horowhenua, Tararua and Otaki districts.

3.3 Final Manawhenua Hauo

4. Details of any data the DHB is collecting to monitor the vaccination of Māori against COVID-19 in the region.

MDHB collects a range of data relating to Māori vaccination against COVID-19, examples of which are embedded.

4.1 GIS analysis.pdf

4.2 Weekly update 7th Nov.pdf

4.3 Uptake analysis.pdf

5. High-level correspondence between senior leadership and the Ministry of Health relating to the vaccination of Māori against COVID-19.

There has been the following correspondence with the Ministry of Health:

5.1 Changes to boost COVID-19 vac

5.2 Email Supporting Maori a

5.3 Email Decision on the request for i

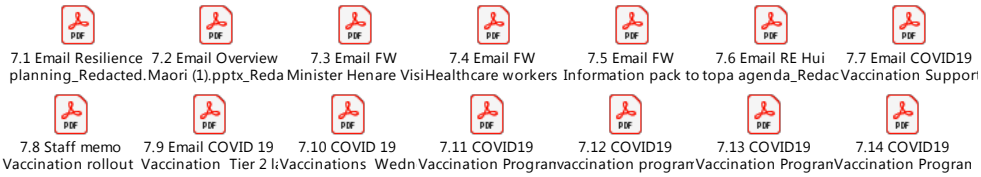
5.4 Email COVID-19 Vaccination rollout

6. High-level correspondence between senior leadership and other DHBs relating to the vaccination of Māori against COVID-19.

I am not aware of any correspondence with other DHBs relating to the vaccination of Māori against COVID-19.

7. High-level correspondence between senior leadership and Māori health providers, experts and/or iwi relating to the vaccination of Māori against COVID-19.

The following constitute the high-level correspondence between our senior leadership and Māori health providers, experts and/or iwi relating to the vaccination of Māori against COVID-19.



I trust that this satisfies your interest in this matter.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website ten working days after your receipt of this response.

If you are not satisfied with our response to your information request, you have the right to seek a review by way of complaint by the Ombudsman of your decision. Information about how to make a complaint is available at ww.ombudsman.parliament.nz or freephone 0800 802 602.

Yours sincerely,

Deborah Davies
Operations Executive
Te Uru Kiriora, Primary Public and Community Health

Appendix 1

	Clinic Name	Location	Target population	Who is involved
Palmerston North	Best Care (Whakapai Hauora) Charitable Trust	Iwi office in Awapuni, Palmerston North	Māori	Iwi provider, staff from other iwi and Māori providers and MDHB staff (Māori) and Māori Wardens are routinely involved.
	Te Wakahuia o Manawatū Trust	Māori provider office in Highbury, Palmerston North	Māori	Māori provider supported by MDHB staff (Māori).
Tararua	Eketāhuna Community Centre	Community Centre in Eketāhuna	Rural. Māori	Iwi and Māori provider staff, Eketāhuna Health Centre

				staff, kaumātua, MDHB staff, Primary Health Organisation staff and Māori Wardens.
	Rangitāne o Tāmaki Nui A Rua	Iwi office in Dannevirke	Māori	Iwi provider, staff from other iwi and Māori providers and MDHB staff (Māori) are routinely involved with support from PHO and the local General Practice.
	Ngāti Kahungunu ki Tāmaki nui-a-Rua	Iwi office in Dannevirke	Māori	Iwi provider, staff from other iwi and Māori providers and MDHB staff (Māori) are routinely involved with support from PHO and the local General Practice..
Horowhenua	Raukawa Whānau Ora	Iwi office in Levin	Māori	Iwi provider staff, supported by MDHB staff (Māori)
	Muaūpoko Tribal Authority	Iwi office in Levin	Māori	Iwi provider staff, staff from other iwi and Māori providers and MDHB staff (Māori) are routinely involved with support from PHO and the local General Practice.
Otaki	Te Wānanga o Raukawa – Ngā Purapura	Facilities of Te Wānanga o Raukawa, Ōtaki	Māori	Iwi and Māori provider staff, MDHB staff (Māori), Primary Health Organisation staff and Māori Wardens

[redacted]

From: [redacted]
Sent: Thursday, 18 November 2021 7:35 PM
To: [redacted]
Cc: [redacted]
Subject: RE: COVID Immunisation DHB Quality and Safety Sign off for COVID Vaccination mobilisation
Attachments: Van guidelines.docx; ColdChainOffSiteTemplog20181008V01Final (1).pdf; Dilution Record COVID-19 - MDHB.pdf; Emergency Check List-Form 5-11-2021 (1).pdf; national-standards-for-vaccine-storage-and-transportation-for-immunisation-providers-sep19.docx; OFFsite vaccination procedure. pdf; operating-guidelines-dhbs-providers-covid-19-vaccine-immunisation-programme-Snov2021.pdf

Kia ora koutou.

Attached is the documentation to familiarise yourselves with. Within this is a simplified rundown for operating the COVID-19 vaccine in your mobile RV. This simplified run down is essentially what is necessary for you to administer the vaccine in your mobile vehicles.

Also attached are the national standards for vaccine storage and transportation, and the vaccine operating guidelines. Both of these need to be read an understood by whoever is responsible for leading the operation. Your leads will likely be familiar with these documents already.

The templates attached, cold chain and dilution record, are for throughout the duration of the vaccine operation and need to be completed, and returned to MDHB Pharmacy. These can be scanned in an emailed to pharmacy to avoid an unnecessary trip over. The templates (logs) demonstrate safe cold chain management and vaccine dilution, which is required when we have an audit.

- I have spoken with you about these requirements, and have also spoken with the lead operator for your vehicle. I will speak to [redacted] and [redacted] (on behalf of [redacted]) tomorrow. [redacted], please let me know if I am to speak to [redacted]

As previously mentioned, vaccine is only able to be dispensed from places holding a wholesale license, which I understand is difficult to obtain. This means only MDHB Hospital Pharmacy and Te Wakahuia o Manawatu Trust have a license to hold and distribute vaccines to other providers. Those who have an accredited vaccine fridge can have vaccine delivered by MDHB Hospital Pharmacy to be used for their vaccine operation. Raukawa Whanau Ora and Best Care (Whakapai Hauora) Charitable Trust have accredited fridges, which is great, and we have secured an accredited fridge from MDHB for Tararua, which will ensure the vaccine can be stored there. This will be delivered on November 29th. Feidling is not far from the hospital, which is ok for now, but we can look at an alternative for Feilding if you think necessary.

There has been changes to the guidelines for transportation of the COVID-19 vaccine and it is unable to be transported for longer than 3 hours now. This is 3 hours of continuous travel without stopping, therefore we are unlikely to have an issue with this aspect.

As you are aware, the vehicles already have a cold chain and data loggers. The loggers need to be docked with MDHB Pharmacy, or the data sent to the pharmacy if you have your own docking station. Without a docking station on hand the loggers can remain on and will last for roughly 66 days. Therefore they can be taken to MDHB Pharmacy once a month or every two months for the data to be transferred and the loggers reset. The loggers just beep when they are outside the required temperature, which is why keeping them in the vehicle or inside an office is ideal (the noise is annoying).

We have equipped the Tararua vehicle with the additional required materials and will ensure the remaining vehicles are equipped before the are released. Could you please let me know when you intend to take the other vehicles so I can ensure everything required is on board. The additional items are:

- Oxygen and regulator
- Adrenalin (this has an expiry date and needs to be routinely replaced if not used)
- Sharps containers
- LDS needles
- Cotton balls/gauzes
- COVID-19 vaccination flags, bases and banners
- Vaccination cards, consent forms and information sheets

Please have a look through the documentation and come back to me if you have any questions, and I will touch base with you all tomorrow.

Please refer to the SharePoint link [redacted] has provided for further detailed information. Do not hesitate to sing out if you have any questions.

Ngā mihi

[redacted]
Tumu Rautaki | Strategy & Integration Lead
Pae Ora Paiaka Whaiora Hauora Māori Directorate
MidCentral District Health Board
[redacted]

From: [redacted]
Sent: Wednesday, 17 November 2021 21:22 PM
To: [redacted]
Cc: [redacted]
Subject: RE: COVID Immunisation DHB Quality and Safety Sign off for COVID Vaccination mobilisation

Kia ora koutou.

Thank you for this [redacted].

I will make contact with you all tomorrow to work through what exactly it is that is needed for this to be signed off. Apologies I haven't got to it today. [redacted] I'll start with you given the situation in Tararua, however I intend to move through everyone quickly so you can all mobilise as quickly as possible.

Ngā mihi

[redacted]
Tumu Rautaki | Strategy & Integration Lead
Pae Ora Paiaka Whaiora Hauora Māori Directorate
MidCentral District Health Board
[redacted]

From: [redacted]
Sent: Wednesday, 17 November 2021 14:25 PM
To: [redacted]

[redacted]

Cc: [redacted]

Subject: COVID Immunisation DHB Quality and Safety Sign off for COVID Vaccination mobilisation

Tena Koutou Katoa

Hope the sun is shining on you

I just wanted to reach out to you as the leads for the camper vans and where we are at with the arrangements required for the DHB Quality and Safety Sign off for COVID Vaccination mobilisation. This is what is required for the actual mobilisation of the RVs to undertake vaccinations for some of you it may be an addition to what you already have in place for vaccinations, for some of you it could also mean partnering with and IFHC to take the lead on vaccinations or having the DHB take the lead for the vaccinations.

This process requires a large amount of documentation which includes various guidelines and polices procedures we have placed these in this link [redacted] so that you can have a look. Some of these have been provided by [redacted] and some have been provided by [redacted]. We will also drop all these docs into the laptop that is provided with the RV.

In discussion with- it would seem the best way forward is for- to now contact you all and establish what exactly it is that would be needed for this sign off. -has kindly offered to assist with getting them all up and running,. has the best knowledge for what is required by the DHB and therefore is best placed to do this work. At this time I am sure everyone would appreciate that Tararua requires to be up and running pretty quick not that we will be to far behind with the others.

We are still working on some of the other contents that is to go in the Manual including inventory etc.
It is also likely that not all the contents for the van will be completed

Lastly- is still available to help as needed to get this all across the line.

Mauri Ora

[redacted] • Upoko Whakarae | CEO
Ngāti Porou, Ngāti Whatua, Ngāpuhi
[redacted]
200 Broadway Avenue, Palmerston North, 4410

Van/Mobile Covid Vaccine Clinic Guidelines

The Ministry expects all providers will continue to meet all existing requirements when delivering the vaccine. Based on community requirements, you may need to vary your workforce, communications, and site set-up to make the model/site appropriate for the population you're catered to.

Workforce recommendations

20-60 doses	61-120 doses	121+ doses
• 1x Supervisor* (RN) • 2x vaccinators • 1x medical professional for obs • 1x admin • 1x draw up RN or pharmacist** (2 x cold chain accredited people required – included above)	1x supervisor*(RN) 3x vaccinators 1x admin 1x medical professional for obs 1x draw up RN or pharmacist** (2 x cold chain accredited people required – included above)	Not suitable for mobile vaccine site (2 x cold chain accredited people required – included above)

*needs to be available to assist vaccinator immediately if required, can screen and consent pts when used in a CVWUS environment.

**if drawing up is required

+competency- RN needs to be experienced with working in a COVID19 vaccination setting, preferably the RN supervisor will be an AUTHORISED vaccinator or PROVISIONAL vaccinator who has in depth experience in the vaccine clinics.

All parties need to understand the roles and responsibilities of the on-site workforce. This includes the people in the site lead, logistics lead, clinical lead and supporting roles. Each role is specific to the requirements and it is important that all those involved are aware that Team Lead on the day has oversight of running of the clinic.

If you need support in any form regarding workforce then please make contact with [redacted] who can supply vaccinators and administrators if you need assistance. All other workforce recruited for this clinic is the responsibility of the iwi provider. Please ensure any contractual arrangements are sorted with the workforce and their organisation before the clinic day.

If you have the capacity to upskill others within your community then please make contact with the DHB in order for this to happen. Send an email to [redacted] with your request and someone will be in touch to help you navigate the process.

Re-ordering of stock.

From time to time the vans will require additional stock to be replenished. Please let us know what it is you require in an email and a date these are required by. It would be appreciated if we had 72 hours' notice to allow us to provide the best support for you.

Vaccine logistics

You must have cold chain accreditation and comply with the standards in the New Zealand Immunisation Handbook 2020 for existing vaccination programmes. These standards are complementary to the Ministry's Operating Guidelines for DHBs and Providers. This means you must always have two persons on board who have this accreditation. This accreditation is covered in the provisional vaccinator training so adherence to the workforce guidelines on page one will ensure cold chain accreditation compliance.

This information is important to know as you will be required to order and collect the vaccine and vials from the hospital pharmacy. Having the ability to collect vials and draw up on site significantly reduces the amount of waste. This, however, does require the skills and expertise to be able to do this onsite.

Drawing up vaccines

Only a Provisional/Authorised/Pharmacist can draw up. Please refer to the clinical guidelines for instructions on how to draw up a vial and the waste / disposal protocol. All empty vials should be returned to the pharmacy at some point. It is ok to keep these in a small container until you accumulate so many and return a few at a time. Please ensure you follow the protocols of how to dispose of these.

Ordering of vaccines

Vaccines need to be ordered via [redacted], at least 7 days (one week) in advanced (prior to clinic date). A confirmation email will be sent once you order has been received and confirmed.

Data Loggers

Data loggers are configured with pharmacy. Providing the logger is not switched off, the configuration will last 66 days. After 66 days, these need to be returned to pharmacy for the data to be downloaded and the logger to be reset.

During the 66 days it is the responsibility of the iwi to manage the temperature of the cold chain box in which the data logger is attached to. Your cold chain accredited person will be responsible for this. Remember the logger should not at any stage be switched off.

Storage and transportation

Vaccine storage and handling needs to be in compliance with MoH national standards for vaccine storage and transportation. Please see the latest guidelines around storage and transport of vaccines.

https://www.health.govt.nz/publication/national-standards-vaccine-storage-and-transportation-immunisation-providers-2017

You will need to ensure that any vaccine transported from the Hospital elsewhere does not exceed this 3.5 hour limit. This 3.5 hours is for movement of the vaccine itself. The time does not continue when vaccine is still at a location.

Facility	**Transport Time Remaining**
Palmerston North Hospital	3.5 hours

Once you order your vaccine through Adele, arrangements will be made around the collection and return of it. This information will include the date/time of collection which will be organised with you input.

Your cold chain and data logger will need to be taken with you to the Hospital Pharmacy. Access to the pharmacy is restricted to pharmacy staff so it is important that you are waiting outside to be let in at the agreed time for vaccine collection.

Once you have arrived to collect the vaccines from the pharmacy, you will need to check your temperature on the data logger and record this information on Chilly Bin Log which you need to have printed off and accompany the chilly bin as per cold chain protocols.

To get to the pharmacy, enter Gate 1 on Heretaunga Street and drive straight through to the night staff carpark on the left (refer to map, carpark Q highlighted in yellow) there are stairs and an entrance to the left of the carpark.

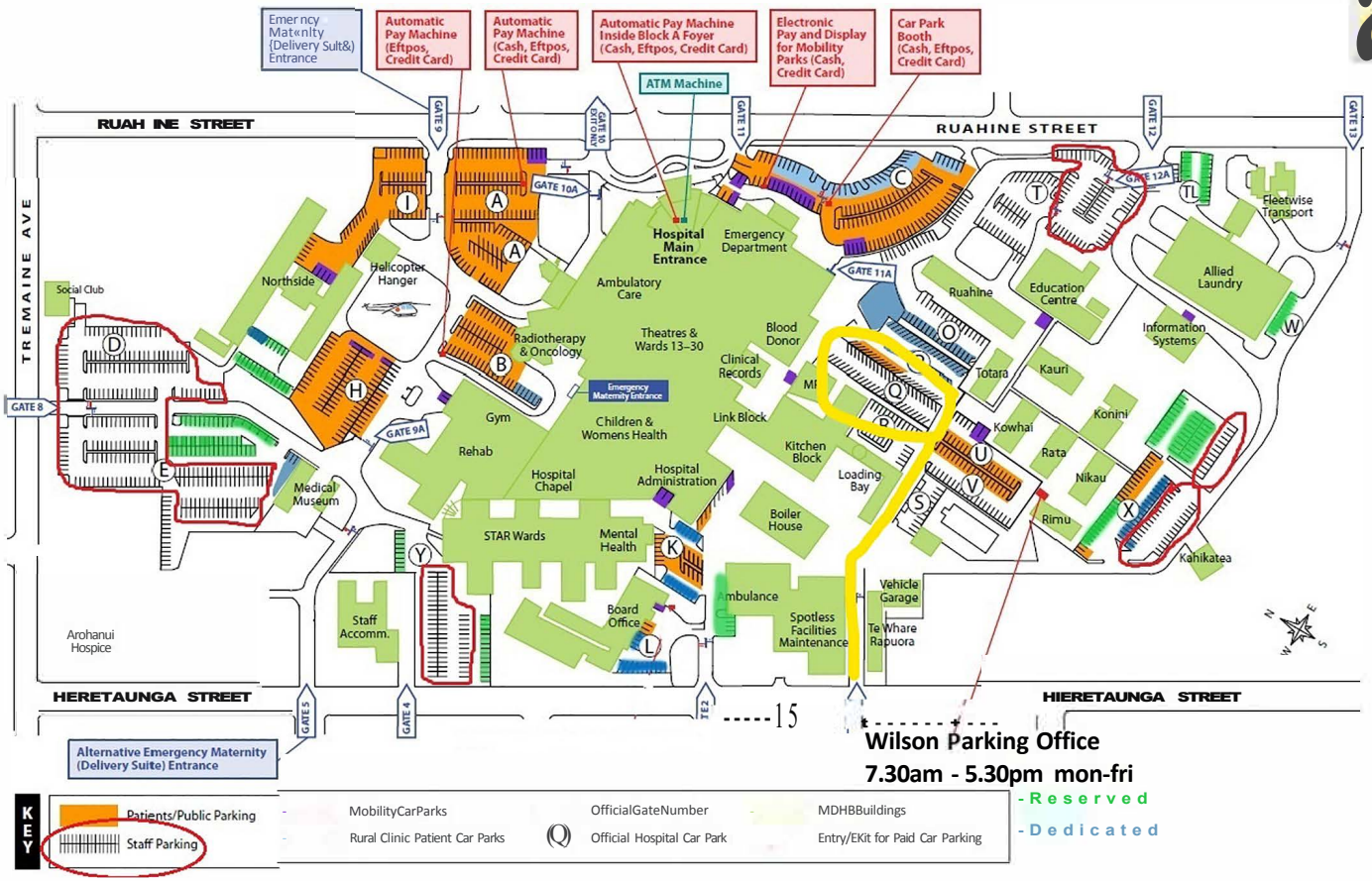
The Hospital Covid Pharmacist can be contacted on [redacted] if they are not at the door to let you in. If you have any concerns or hold ups then please phone [redacted] or [redacted] to confirm things.

All consumables will also be provided with the vaccine. It is also recommended that you have a small supply as a back-up option on your impress. Please also note that if you require larger needles these will not be supplied, but something you should have in stock for your perusal.

If you have vaccine vials that need to be returned to the pharmacy after your clinic, please phone the pharmacist to arrange drop off.

CIR / Sites

The site that you use needs to be confirmed with your team lead on the day. It is expected that they have had a discussion around which CIR site to use. Usually, it should reflect the organisation you represent. This is because it will capture data on the vaccines that you administer on the day.



15

Wilson Parking Office
7.30am - 5.30pm mon-fri

- Reserved
- Dedicated

MapP:Communications 26/1/11

OFF-SITE IMMUNISATION PROGRAMME – CHILLY BIN LOG

Temperature is maintained at +2°C to +8°C and monitored using an electronic data logger

Date:	Cold chain person:
Data logger number:	Site:

Time	Temperature			Comments
	Max	Min	Current	

Cold chain checked prior to leaving base

Signature _____ **Signature** _____

Cold chain checked on arrival at venue

Signature _____ **Signature** _____

The Immunisation Advisory Centre

Designed in collaboration with Hawkes Bay DHB Immunisation Team October 2018

Guide for temperature monitoring within chilly bin after leaving base

Temperature	Actions	Who to notify
0.5°C or below	**Stop immunising immediately**	Discuss with Immunisation/Cold Chain Coordinator
0.6°C – 2°C	Open chilly bin lid until temperature is above 2°C Monitor continuously until temperature above 2°C	Discuss with Immunisation/Cold Chain Coordinator
2.1°C – 4°C	Consider removing an ice pack Monitor every 5–10 minutes	
4.1°C – 8°C	Monitor every 20–30 minutes	
8.1°C – 12°C	Consider adding an ice pack Monitor every 10 minutes	Once over 30 minutes discuss with Immunisation/Cold Chain Coordinator
12°C or above	Add an ice pack Monitor every 5–10 minutes	Discuss with Immunisation/Cold Chain Coordinator

Immunisation/Cold Chain Coordinator

Phone:

Regional Immunisation Advisor

Phone:

The Immunisation Advisory Centre

COVID-19 EDUCATION

DILUTION RECORD

Today's Date: __ _/__ _, /__ _

Vial#	Time vial taken out of fridge*	Batch number (from vial)	Vial expiry (from box)	Time vial diluted	Diluent batch number	Diluent expiry	Syringe dose expiry (6hr after dilution)	# of doses from vial	Initials person diluting	Initials of 2nd check**

**Undiluted vial may be stored for up to a maximum of 2 hours at room temp before diluting. If cumulative time undiluted vaccine stored at room temp exceeds 2 hours, is a cold chain breach.*

**Second check completed by another vaccinator: visually confirm 1.8ml of diluent and 0.3ml of diluted vaccine per syringe and of appearance.*

DILUTION RECORD

Today's Date: __ _/__ _, /__ _

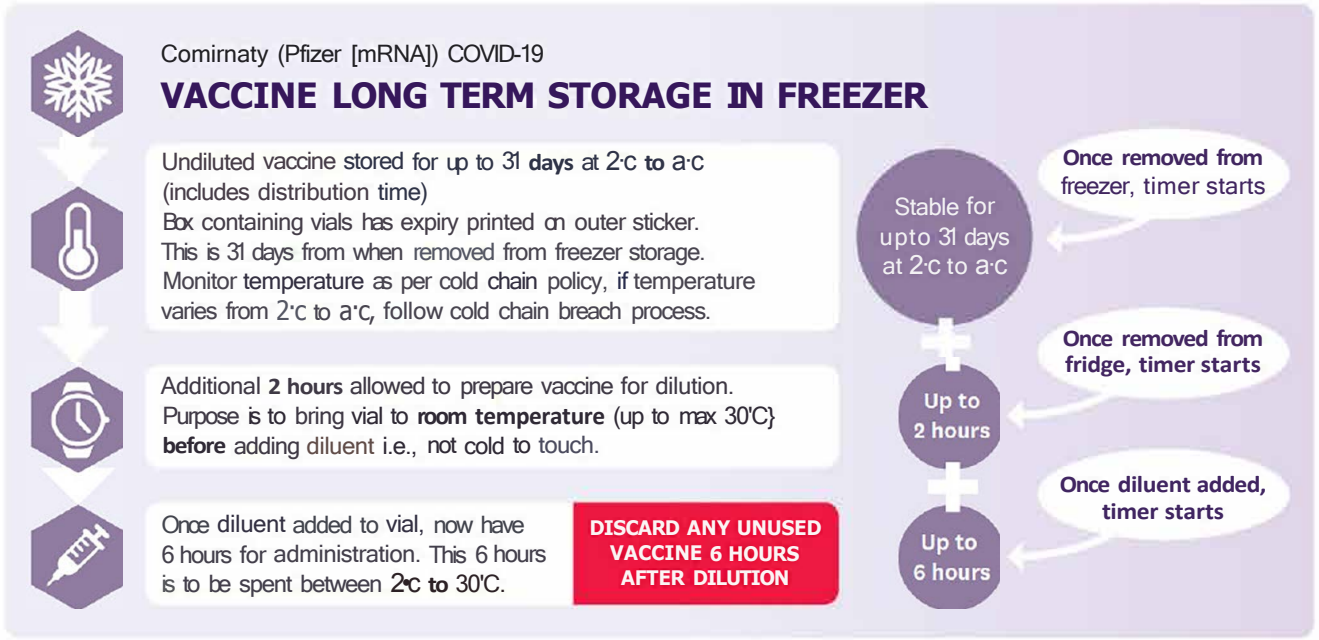
The Immunisation Advisory Centre

COVID-19 EDUCATION

Dilution expiry time guide

Time now	+ 6 hours
6am | 0600	12pm I 1200
7am | 0700	1pm I Boo
8am | 0800	2pm I 1400
9am | 0900	3pm I 1500
10am | 1000	4pm I 1600
11am | 1100	5pm I 1700
12pm | 1200	6pm I 1800
1pm | Boo	7pm I 1900
2pm | 1400	8pm I 2000
3pm | 1500	9pm I 2100
4pm | 1600	10pm I 2200
spm | 1100	11pm I 2300
6pm | 1800	12am I 2400

Summary for storage of vaccine



Number each vial, corresponding with the number in column 1
Record details on label with the set of doses from each vial, including the number of doses and syringe dose expiry time
Vaccinator checks all details, including the number of doses in the set from the vial and expiry time
Vaccinator notes number of wasted doses
Vaccinator notes time last dose from this set administered, initials and returns label to draw-up room to be stored with this form

MidCentral District Health Board
Te Pae Hauora o Ruahine o Tararua

Emergency Check List - Covid-19 Response

Date Cl1ecked.....

Naine of site .....

Item	Pre-Vaccination	Post Vaccination
Oxygen Cylinder (PSI)		
0 2 Regulator Serial Nu1nber		
Face Masks - Adult x 3 Rebreathers		
Airways - Size 2 x 2		
Airways - Size 3 x 2		
Airways - Size 4 x 2		
Alnbubag - single use		
6 x Adrenaline Syringes (Pre-drawn by MDHB Phar1nacy ung/unl - 1.1000) -Add needle to ad1ninister (stored in light protective pouch) Expiry date		
Tl1er1no1neter		
Sphyginon1ano1neter		
BP cuff (range of sizes)		
Stethoscope		
Pulse Oxiineter		
Sharps Container		
Paperwork for 1nonitoring		
Pen		
Scissors		
Cell phone to call a1nbulance		
AEDCheck		
Name		
Signature		

MINISTRY OF HEALTH
MANATŪ HAUORA

New Zealand Government

National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017 (2nd edition)

Released 2017 – updated September 2019

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HP 7226

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Definitions and abbreviations

Buffered probe: a temperature monitoring device in which the sensor is placed in a buffering medium (eg, glycol, solid nylon or glass beads) to slow the thermal response rate to more closely match the product being monitored.

Calibration: the comparison of measurement values delivered by a device under test with those of a calibration standard of known accuracy; adjustments are made as necessary. This test is usually carried out by a service accredited by International Accreditation New Zealand.

CCA reviewer: a person or organisation contracted by a DHB to review an immunisation provider's cold chain management practices and processes and confirm its achievement of meeting the National Standards requirements via CCA or CCC (if appropriate). Reviewers should have completed an appropriate assessor's programme (eg, NZ2752 New Zealand Certificate in Assessment Practice) and be locally approved by the Medical Officer of Health. (Note: the CCA reviewer may be an immunisation or cold chain coordinator.) For community pharmacies, the reviewer is a Medicines Control auditor.

CFA: Crown Funding Agreement.

Chilly bin: a generic term for a portable insulated container.

Cold chain: the system of transporting and storing vaccines within the required temperature range of +2°C to +8°C from the place of manufacture to the point of vaccine administration.

Cold Chain Accreditation (CCA): a tool used to ensure immunisation providers' cold chain management practices and processes meet the standard's requirements for safe vaccine storage and transportation.

Cold Chain Compliance (CCC): issued when an immunisation provider achieves all of the standards for CCA but is unable to show the refrigerator's three-month continuous temperature monitoring records.

Cold chain breach: an event that has led to vaccines being stored or transported in temperatures outside the required +2°C to +8°C range, without compromising the potency or stability of the vaccines.

Cold chain excursion: an event that has led to the vaccines being stored or transported in temperatures outside the required +2°C to +8°C range and, as a result, vaccines are compromised and need to be returned for destruction.

Cold chain failure: an event in which vaccines involved in a cold chain excursion are administered to patients.

Continuous monitoring services: also called cloud-based monitoring, web-based monitoring, external monitoring or real-time monitoring. Such services send temperature information from a sensor in a provider's refrigerator to software that can be viewed through a website. They may be in-built or separate, like a datalogger; records must be downloaded/accessed and reviewed weekly.

Datalogger: an electronic device that measures the current refrigerator temperature at preset intervals and records information that can then be downloaded/ accessed and reviewed weekly. Datalogger is used as the generic term for all devices that sample and store/transmit temperatures from within the refrigerator.

Digital thermometer: a digital minimum/maximum thermometer with a visible display used to measure the temperature range vaccines are being stored at and/or during transport.

DHB: district health board.

IMAC: Immunisation Advisory Centre.

Immunisation/Cold chain coordinator: referred to as 'immunisation facilitator' in some areas. This document uses 'coordinator' to refer to any roles that sit under the CFA, including CCA reviewer.

Immunisation provider: any provider storing and/or administering vaccines to individuals in New Zealand. Examples include but are not limited to: general practices, public health units, community pharmacies, corrections facilities, outreach immunisation services, travel clinics, emergency medical services, public and private hospital wards and departments/pharmacies, and occupational health services.

Medicines Control: a regulatory team within Medsafe at the Ministry of Health. Medicines Control regulates licence holders within the pharmaceutical supply chain in New Zealand, including community pharmacies and pharmaceutical wholesalers. Medicines Control regulates cold chain management in community pharmacies as part of the pharmacy licensing framework it administers.

National Cold Chain Audit (NCCA): an audit that monitors National Immunisation Schedule vaccines through the cold chain, from the regional distribution stores to immunisation providers over a set period of time.

National Immunisation Programme: aims to prevent diseases through vaccination and achieve immunisation coverage that prevents outbreaks and epidemics. The Programme provides national oversight of immunisation services, providers and agencies. It is managed by the Ministry of Health.

National Immunisation Schedule: the series of vaccines funded by PHARMAC for babies, children, adolescents and adults.

National Vaccine Store: manages the National Immunisation Schedule vaccine supply on behalf of PHARMAC. The National Vaccine Store is responsible for all vaccines from when they arrive at the store until they are distributed to the regional distribution stores or directly to immunisation providers.

Offsite clinic: any site at which multiple vaccines are required to be stored and dispensed from a chilly bin.

PHARMAC: Pharmaceutical Management Agency Ltd.

Pharmaceutical refrigerator: a refrigerator designed and constructed for the specific purpose of storing pharmaceuticals and vaccines between +2°C and +8°C, and has a built-in alarm set to activate if temperatures go outside this range. In this document, 'refrigerator' refers to a pharmaceutical refrigerator unless otherwise noted.

PHO: primary health organisation.

Refrigerator technician: A person employed and trained to install, service and repair refrigeration systems.

RIA: IMAC regional immunisation advisor.

Regional distribution store: stores and distributes vaccines at a regional level.

Validation: the act of checking or proving the validity or accuracy of temperature monitoring equipment, to confirm that a sensor is recording accurately. To do this the device needs to be checked alongside a known accurate device (calibrated) of the same medium (air or buffer).

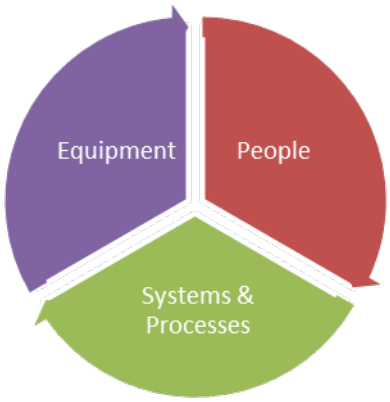
Introduction

This document defines the National Standards for Vaccine Storage and Transportation for all immunisation providers in New Zealand and outlines the requirements for providers to achieve the standards. The standards were reviewed and updated in 2019.

Cold chain is the process used to maintain required temperatures for vaccines. All vaccines must be stored within the +2°C to +8°C temperature range at all times during storage or transport, from the point of manufacture through to the point they are administered to an individual.

These standards may also be used to support cold chain management for the storage of other refrigerated medicines.

The integrity of the cold chain depends on three essential elements, which underpin the standards:



1. the **people** managing vaccine manufacture, storage and distribution and those managing the cold chain at the provider level
2. the **systems and processes** providers use to ensure they monitor the vaccine storage conditions and actions taken if the vaccines are exposed to temperatures outside the required range
3. the **equipment** used for storing, transporting and monitoring vaccines from the time the vaccine is delivered to an immunisation provider to the time the vaccine is administered to an individual.

All immunisation providers are required to achieve cold chain accreditation (CCA) or cold chain compliance (CCC) to confirm their ability to meet the required standards. Immunisation or cold chain coordinators assess immunisation providers' achievement of CCA or CCC. Previously, they also assessed community pharmacy compliance; this now occurs through the auditing activities of Medicines Control, the team within Medsafe that issues pharmacy licences. Immunisation or cold chain coordinators still provide community pharmacies with advice and support concerning the cold chain, and follow-up of cold chain breaches or excursions. They should report any concerns about a community pharmacy's cold chain management that poses a patient safety risk to Medicines Control.

The review of these standards has been informed by the earlier versions of the National Standards, the National Review of Cold Chain Management Practices commissioned by the Ministry in 2014/15; current evidence-based practice, including international policies; and feedback received from the immunisation sector. For more information, see the National Review of Cold Chain Practices Summary on the Ministry's website (**www.health.govt.nz/coldchain**).

1 National Standards for Vaccine Storage and Transportation for Immunisation Providers

Aim: To improve the health of all New Zealanders by protecting them from vaccine preventable diseases through an effective immunisation programme.

Objective: To ensure immunisation providers in New Zealand safely store and transport vaccines, using the 10 standards below to ensure all vaccines administrated are safe and effective.

1. All immunisation providers must hold cold chain accreditation or cold chain compliance before offering immunisation services.

2. All clinical staff must ensure continuity of the cold chain. They must also:
   - be competent in all aspects of vaccine storage and transportation to ensure that vaccines are kept within the required +2°C to +8°C temperature range at all times
   - take appropriate action when the cold chain is not maintained
   - take responsibility for ensuring that the vaccines they administer have been correctly stored
   - have read and understood, and comply with, the provider's cold chain policy.

   See **section 5** for more information.

3. All immunisation providers must have a cold chain policy containing the required information outlined in **section 6.1**. The Ministry of Health has provided a cold chain policy template that providers can adapt and use for their facility (see **www.health.govt.nz/coldchain**).

4. All immunisation providers must have a stock management process that ensures they are not over- or under-stocked.

   See **section 6.2** for more information.

5. All immunisation providers must use one or more pharmaceutical refrigerators for vaccine storage that:
   - stores only medicines and vaccines
   - is appropriately maintained and serviced
   - contains only vaccines and medicines stored in their original packaging and properly spaced within the pharmaceutical refrigerator.

   See **section 7.1** for more information.

6. All immunisation providers must have two systems for monitoring the temperature that vaccines are being stored at:
   - a daily check device that records the minimum and maximum temperatures reached – for example, an inbuilt refrigerator monitor or digital minimum/maximum thermometer
   - a weekly check device that records the temperature at least every 10 minutes – for example, a datalogger. Every week the provider must then download/ access and review this information against other temperature recordings taken, take appropriate action and store the week's information.

   See **section 7.2** for more information.

7. All providers must have a cold chain process and equipment for ensuring safe temporary storage of vaccines if a power outage occurs or a refrigerator fails.

   See **section 6.3**, **section 7.3** and **Appendix 2** for more information.

8. All equipment used for storing, transporting and monitoring vaccines must be fit for the purpose, and appropriately maintained and tested. As part of this maintenance and testing, providers must:
   - arrange for annual servicing of pharmaceutical refrigerators
   - trial and test the capacity of their portable storage equipment
   - ensure that spatial logging of pharmaceutical refrigerators occurs at least every three years.

   See **section 7.1** and **Appendices 2**, **3** and **4** for more information.

9. All documentation associated with vaccine temperature monitoring must be kept for at least 10 years. This includes:
   - daily minimum and maximum temperature recordings
   - weekly datalogger downloads or records
   - temperature recordings from vaccines transported and stored in chilly bins
   - actions taken when a cold chain breach, excursion or failure occurs.

10. All immunisation providers who offer offsite immunisation clinics – for example, occupational health, school-based immunisation programmes and outreach immunisation services – must have appropriate, tested equipment for this purpose.

    Note: this situation is different from that involving temporary storage or transport following a power outage or refrigerator failure.

    See **section 7.3** and **Appendix 2** for further information.

For details on how providers can meet these 10 standards, see sections 2–7. If an immunisation provider fails to comply with the standards, it should refer to its district health board (DHB)'s Cold Chain Provider Non-Compliance Policy. Thereafter, the relevant DHB, primary health organisation (PHO) or medical officer of health; Medicines Control; or the Ministry will review the provider's access to vaccines. Vaccine supply may be suspended until the provider is able to meet the standards.

2 Background

2.1 Vaccine arrival and distribution

All vaccines used in New Zealand are manufactured overseas and shipped by air or sea in such a way that they remain at their required temperature for the entire journey. The National Immunisation Schedule vaccines are delivered to the National Vaccine Store, where temperature monitoring continues to ensure that the vaccines remain within the required +2°C to +8°C range.

Vaccines are distributed from the National Vaccine Store to the regional distribution stores in Whangarei, Auckland, Hamilton, Wellington, Christchurch and Dunedin, and from there to local immunisation providers. In some instances, the National Vaccine Store distributes vaccines (eg, influenza vaccines) directly to immunisation providers.

The National Vaccine Store and regional distribution stores have standard operating procedures to ensure the vaccine cold chain is maintained at all times during storage at their sites and during vaccine transportation to providers. Medicines Control audits licensed premises involved in the cold chain of medicines in New Zealand (including wholesalers and pharmacies).

Both the National Vaccine Store and regional distribution stores audit the maintenance of the cold chain during the delivery process by inserting dataloggers in some vaccine deliveries. Information is provided for immunisation providers when a datalogger has been included in a delivery. Any other wholesalers transporting vaccines are also expected to audit their cold chain processes including during delivery.

2.2 Vaccines are temperature sensitive

Vaccines can become less effective or be destroyed if they are:

- stored outside the +2°C to +8°C range
- exposed to sun or fluorescent light.

Temperatures above 8°C have a cumulative effect on the potency and stability of vaccines, and a temperature at or below 0°C will cause irreparable damage to some vaccines. In the event of either type of breach, it is important to advise the coordinator of the breach as soon as it is identified. All affected stock must be quarantined and the vaccines labelled as not for use until a decision on whether to use them has been made.

Coordinators have access to thermostability data for vaccines on the National Immunisation Schedule. However, when temperature exposures are significant or occur over an extended period, the coordinator will need to obtain further information from the vaccine manufacturer. See section 6.4 for the process for managing vaccines stored outside the required +2°C to +8°C range.

The impact of thermal damage (temperatures outside +2°C to +8°C) on vaccine potency is complex, and our knowledge of it is based on limited human data. The impact varies for each vaccine. Once a vaccine has been thermally compromised, its loss of potency cannot be reversed.

2.3 Cold chain excursion costs

PHARMAC procures vaccines on the National Immunisation Schedule on behalf of DHBs. Vaccines can cost up to $170 a dose. Even a small immunisation provider stores thousands of dollars' worth of vaccines at one time.

Tables 1 and 2 give examples of cold chain excursion costs based on past cold chain excursions. The 'total costs' row in each table indicates what the vaccines' total cost is to DHBs.

Table 1: Example of vaccine costs at a medium-sized general practice

Vaccine	No. of doses in stock
ADT	6
Tdap	5
23PPV	4
MMR	20
RV1	25
Infarix-Hexa	26
PCV10	24
Infarix-IPV	34
Varicella	23
Zostervax	16
HPV9	5
HepB 20 mcg	6
HepB 5 mcg	2
Total costs	**$6,200**

Key: D = diphtheria, T = tetanus, aP = acellular pertussis, IPV = inactivated polio vaccine, Hib = *Haemophi/us inf[uenzae* type b, HepB = hepatitis B, RV = rotavirus vaccine, PCV = pneumococcal conjugate vaccine, MMR = measles, mumps and rubella, d = adult type diphtheria, ap = adult type pertussis, HPV = human papillomavirus vaccine, ADT = adult type tetanus-diphtheria vaccine.

Table 2: Example of vaccine costs at a youth clinic

Vaccine	No. of doses in stock
Tdap	8
ADT	8
HPV	9
HepB 10 mcg	8
MMR	9
Total costs	**$1,650**

Key: D = diphtheria, T = tetanus, aP = acellular pertussis, IPV = inactivated polio vaccine, Hib = *Haemophilus inf/uenzae* type b, HepB = hepatitis B, RV = rotavirus vaccine, PCV = pneumococcal conjugate vaccine, MMR = measles, mumps and rubella, d = adult type diphtheria, ap = adult type pertussis, HPV = human papillomavirus vaccine, ADT = adult type tetanus-diphtheria vaccine.

Note: The costs above were calculated in 2019.

The costs outlined in the tables above are only one part of the costs associated with a cold chain failure when compromised vaccines have been administered to patients. When these vaccines need to be re-administered, the same unit cost is again incurred. There is also the cost of staff time to contact and explain the events to patients, and the cost of time, equipment and possibly extra staff to re-vaccinate patients. Additionally, intangible costs may arise, such as loss of public confidence in the New Zealand Immunisation Programme and in the immunisation provider.

3 Cold Chain Accreditation

Cold chain management of an immunisation provider is assessed through the use of the audit tool Cold Chain Accreditation (CCA). In order to achieve CCA, an immunisation provider is required to demonstrate it has appropriate cold chain management practices and processes in place to meet the standards' requirements. The provider must be able to demonstrate it meets the requirements to hold CCA prior to offering immunisation services and at any point while offering an immunisation programme.

All immunisation providers who store vaccines continuously must have current CCA. This includes but is not limited to general practices, outreach immunisation services, public health units, community pharmacies, corrections facilities, travel clinics, emergency medical services, public and private hospital wards and departments/ pharmacies, and occupational health services. In a secondary care services setting, the National Standards apply to all departments storing vaccines, and can also be used to support cold chain management for the storage of medicines. For general practices it is important to note that CCA is required to meet the Royal New Zealand College of General Practitioners Cornerstone® Standard (section 2, indicator 16) and the Foundation Standard.

All community pharmacies are deemed to hold CCA through their Licence to Operate Pharmacy, unless there are specific operating conditions preventing the pharmacy from offering this service (or refrigerated products in general).

In assessing CCA, a CCA reviewer will assess the provider's past performance and current cold chain knowledge. These findings help to determine the length of time CCA is awarded for; other considerations are the stability of the provider's workforce, the age of the equipment and the provider's cold chain history. CCA can be awarded for up to three years. Community pharmacies must apply for a Licence to Operate Pharmacy annually, and if they continue to provide immunisation services must ensure they continue to meet the requirements of the standards at all times.

CCA assessment is based on the following five components:

1. the provider has copies of or online access to appropriate vaccine reference information
2. the provider has an appropriate and documented cold chain policy
3. the provider carries out appropriate vaccine stock management
4. the provider understands requirements for temperature monitoring and refrigerator performance, and monitoring devices and processes are appropriate
5. storage and transport equipment meets the requirements of the National Standards.

Immunisation providers must meet **all** the National Standards for cold chain management and **all** staff must be responsible for the cold chain.

If a provider fails to meet the requirements, or is found to be noncompliant, of the National Standards, the CCA reviewer will work with the provider to develop a remedial plan to achieve the requirements. The provider may administer vaccines while the remedial plan is in place, if the required temperature range of +2°C to +8°C can be maintained at all times and the provider works within the agreed timeframes outlined in the plan. The maximum recommended timeframe for completing the remedial plan is three months.

If a provider is not willing to work on a remedial plan or does not keep to the agreed timeframes, the CCA reviewer will notify the PHO, DHB and medical officer of health, as appropriate. Medicines Control will manage the remedial process for community pharmacies. Where pharmacies are unable to demonstrate compliance with the National Standards, this may result in actions such as a condition being placed on a pharmacy's licence, which, for example, may prohibit the pharmacy from providing vaccination services.

Each DHB should work with the CCA reviewer and/or coordinator, PHO, medical officer of health, the Immunisation Advisory Centre (IMAC) and other immunisation stakeholders to develop a process for working through issues where providers are not achieving or maintaining CCA. This process may include steps such as:

- developing a provider remedial plan and timeframes
- undertaking a CCA reassessment
- following up appropriately if the provider does not complete requirements of the National Standards
- discussing issues with the IMAC regional immunisation advisor, medical officer of health and PHO clinical lead
- formally notifying and making recommendations to the provider
- revoking the existing CCA
- placing vaccine deliveries to the provider on hold.

All DHBs must have a Cold Chain Non-Compliance Policy; which documents the local process for addressing provider cold chain non-compliance. Each DHB must review this process annually and make the documentation available to the Ministry on request.

The Ministry publishes a *CCA Provider Self-Assessment Form* and a *CCA Immunisation Provider Review Form*. To access these, go to the Ministry of Health's cold chain webpage (**www.health.govt.nz/coldchain**).

4 Cold Chain Compliance

The existence of the category called 'Cold Chain Compliance' (CCC) acknowledges that a number of immunisation providers offer only short-term services for influenza vaccine.

CCC is issued only when an immunisation provider meets all of the requirements for CCA but are unable to show the three-month continuous temperature monitoring records, and when a new immunisation provider is setting up. It may also be applied in hospital settings for areas stocking influenza vaccine only.

CCC is issued through the same process as CCA: that is, the provider conducts a self-assessment, and then the CCA reviewer undertakes a review of the immunisation provider's cold chain management. A local certificate or letter is issued for CCC; this is valid for up to nine months. The expectation is that the CCC process will be undertaken before the provider begins its immunisation programme each year; where this is not feasible, the provider must complete the CCA self-assessment to confirm they meet the standards requirements and return this to the CCA reviewer for review prior to recommencing/ continuing the immunisation service.

If a provider offered an immunisation service in the previous year, it must produce its temperature recordings (daily recordings and datalogger downloads/records) for that year for the CCC review. All recordings from the previous year should be available, and the reviewer should be able to randomly select dates to view off-site clinic data and on-site refrigerator recordings (note: where the company is the same but the vaccinator contract to provide the services is not, this may not be possible).

CCC is not relevant to community pharmacies providing immunisation services, as their compliance with the National Standards is audited as part of Medicines Control's regulatory activities.

5 People

People play a key role in ensuring that vaccines are kept within the required +2°C to +8°C temperature range when they are stored and transported. All vaccinators are responsible for ensuring the vaccines they administer have been stored correctly.

All clinical staff need a high level of knowledge about cold chain principles and equipment. However, each provider must nominate at least two people to hold overall responsibility for vaccine storage and temperature monitoring.

All clinical staff must have read and understood, and must comply with, their provider's cold chain policy.

All relevant clinical staff must review cold chain records prior to accessing any vaccine, to ensure vaccine thermostability.

All relevant clinical staff are expected to take appropriate action if the cold chain is not maintained.

5.1 Requirements for all immunisation providers

All immunisation providers must:

- ensure that the minimum and maximum refrigerator temperatures are checked and recorded daily on a temperature recording chart and that the minimum/maximum thermometer is reset at this time
- check the temperature recording chart for variations in temperature before using vaccines
- store the minimum/maximum temperature recording chart by the refrigerator so that all vaccinators can check the recordings before taking the vaccines out of the refrigerators
- keep the temperature records for 10 years, consistently with the Health (Retention of Health Information) Regulations 1996
- ensure that all relevant clinical staff know how to download/access, save and file the datalogger recordings; can review the data and compare it with the minimum/maximum thermometer readings every week
- immediately act on temperature readings outside the required +2°C to +8°C range by following the process outlined in their cold chain policy; see **section 6.4** for more information
- document actions taken and reasons why temperature readings were outside the required +2°C to +8°C range.

5.2 Designated cold chain management leads

The provider's designated cold chain management leads (a minimum of two people) should be authorised vaccinators, general practitioners or pharmacist vaccinators. Where this is not possible, the provider should discuss the issue with the CCA reviewer and appoint the most appropriate people.

The designated cold chain staff are responsible for:

- ensuring the daily and weekly temperature monitoring checks are undertaken and documented, including ensuring the datalogger is rotated within the refrigerator
- reviewing records at the end of each month to check for seasonal fluctuations and trends
- ensuring that any cold chain breaches, excursions or failures have been followed up
- ensuring all relevant clinical staff are trained on how to check and reset the minimum/maximum thermometer and how to record the minimum and maximum temperatures, and know what to do if the temperature is outside the +2°C to +8°C range
- following up privately purchased vaccine thermostability following a cold chain breach (this should be discussed with the coordinator)
- ensuring all relevant clinical staff know how to download/access and review the datalogger information and know the actions to take if the recordings are outside the required range
- changing, when required, the refrigerator set point, only on advice from the pharmaceutical refrigerator technician, manufacturer or coordinator (this must be documented)
- ensuring the refrigerator performance and daily temperature monitoring equipment are checked for accuracy on an annual basis as part of the refrigerator service
- ensuring spatial logging of the provider's refrigerator occurs every three years by the coordinator.

5.3 Immunisation/cold chain coordinators

Immunisation coordination services are defined through the Crown Funding Agreement (CFA) Immunisation Coordination Services service specification between the Minister of Health and DHBs. This service specification outlines the DHB's role in ensuring that all those involved in immunisation provision offer a high-quality and safe vaccination experience. DHBs either directly contract/employ immunisation/cold chain coordinators or contract another organisation (eg, a PHO) to do so. Coordinators provide cold chain education, advice and support, and review cold chain management practices for all immunisation providers, under the CFA. This document uses 'coordinator' to refer to any roles that sit under the CFA, including CCA reviewer.

Coordinators need to be familiar with the standards – and, in particular, the principles behind the standards – so they are able to advise in situations that the standards do not specifically cover.

The standards identify certain roles and requirements for coordinators. In summary, coordinators:

- support providers to implement the standards, and ensure they have appropriate information
- assess providers' compliance with the standards (other than community pharmacies) using CCA/CCC
- spatially log all immunisation providers' refrigerators at least every three years (including community pharmacies), or at the time of CCA/CCC assessment
- provide advice to all immunisation providers in the event of an equipment or power failure
- respond and provide advice to all immunisation providers in the event of a cold chain breach, excursion or failure, including by providing thermostability advice on funded vaccines and by supporting providers to seek advice for privately purchased vaccines
- report all cold chain excursions to the IMAC Regional Immunisation Advisor (RIA) within one week, in addition to local PHO or DHB incident reporting processes
- report all suspected or confirmed cold chain failures to the RIA within one working day, in addition to local PHO or DHB incident reporting processes
- discuss issues of concern with appropriate contacts (eg, DHB, PHO, RIA, Ministry of Health)
- follow the Ministry's process in the event of a possible or confirmed cold chain failure (**section 6.4**).

6 Systems and processes

The systems and processes that immunisation providers use ensure the continuity of the cold chain and provide helpful information for all staff in the facility on the appropriate actions to take if a cold chain breach occurs in order to prevent a cold chain failure (that is, to prevent compromised vaccines from being administered to patients). These systems and processes may also support cold chain management for the storage of other refrigerated medicines.

All immunisation providers must have a cold chain policy that contains the required information outlined in the cold chain policy template (**www.health.govt.nz/coldchain**).

6.1 Provider cold chain policy

All immunisation providers storing and/or transporting vaccines must have a written, current cold chain management policy that is:

- dated and signed by relevant staff
- reviewed at least annually
- reviewed when the designated cold chain staff, vaccine equipment or processes change, a copy of the this should be supplied to the coordinator.

The policy should specify:

- the names of (at least two) designated staff members responsible for cold chain management
- vaccine and stock requirements for the provider's programme or clinic
- vaccine ordering and stock taking processes
- processes for receiving and storing vaccines
- action to be taken if the provider receives a distributor's temperature monitoring device with their vaccine order (eg, influenza or non-funded vaccines)
- the plan and schedule for cold chain equipment maintenance (including refrigerator annual service according to the manufacturer's recommendations and cleaning schedule)
- processes for monitoring the refrigerator's temperature, including instructions on datalogger use
- details of equipment to use for offsite vaccination clinics, including chilly bins, insulation material and temperature monitoring equipment
- processes for temperature monitoring while vaccines are being stored in chilly bins for offsite immunisation clinics
- action to be taken when the temperature recordings of the refrigerator or chilly bins are outside the + 2°C to + 8°C range

- emergency plans and equipment to use if a refrigerator fails and/or a power outage occurs, including a nominated back-up provider (if practical, one that would not be affected by a local power outage, such as a power line being down). If a provider is in an area regularly affected by power outages, it should consider using uninterruptable power supply devices (eg, generators)
- processes for vaccine disposal
- the date when the next annual cold chain policy review is due
- a cold chain orientation plan for new staff, including how to download/access and read the datalogger, what to do and who to contact if there is a cold chain issue, and how to pack a chilly bin and move vaccines to an alternative provider
- a cold chain equipment replacement plan. All pharmaceutical refrigerators have a limited life span, usually around 10 years – immunisation providers must actively plan for replacement, and replace their refrigerator at or before 10 years of age rather than wait until the refrigerator fails to maintain temperature
- action to be taken when the provider receives a National Cold Chain Audit monitor (this only applies to providers who hold National Immunisation Schedule vaccine stock).

The policy should also include space for all relevant staff to sign confirming that they have read and understood the cold chain policy.

6.2 Key requirements for immunisation providers for vaccine stock management

Stock management principles

All immunisation providers should know how much vaccine stock they require at any one time, according to the size of their clinics, the population they are vaccinating and the size of the refrigerator.

Where a provider works with a defined population, it should base its vaccine stock requirements on the known population base, using a similar method to that of general practice.

Overstocking can lead to increased wastage in the event of cold chain breaches, vaccines reaching their expiry dates and insufficient airflow in the refrigerator.

If a provider finds that it is regularly returning expired vaccines, it should review its stock numbers and ordering process and adjust accordingly.

The coordinator can help with working out minimum and maximum stock levels.

General practice

General practices should keep a minimum of two weeks' supply but no more than four weeks supply of vaccines. Tables 3 and 4 can help to calculate appropriate levels.

Many vaccines are dispatched in boxes with multiple doses. Table 4 takes this into account.

When ordering Tdap for the 11-year immunisation, providers should also consider the number of vaccines they require for their population of pregnant women.

School-based immunisation programmes

School-based immunisation programmes should order vaccines taking into account school roll, consent form return and absenteeism.

Immunisation providers with non-defined populations, such as pharmacies and drop-in clinics

These providers should base their vaccine order volumes on minimum order numbers, previous numbers administered and space available in the refrigerator.

General practice dose requirements

General practices can use the calculation tables below to help them estimate the volumes of National Immunisation Schedule vaccines (excluding influenza) they need for their practice population. These calculations are based on:

- the number of people enrolled in the practice at a particular time, who are aged under five years, 11 years or 12 years (depending on whether a school-based immunisation programme is delivered in the region) and 45 years and 65 years, assuming 100 percent coverage for all scheduled vaccines
- the number of times each vaccine is used on the schedule.

Table 3: Two weeks' vaccine supply (number of doses), per population served by the general practice

<5-year-old population	50	100	250	500	1,000	1,250
DTaP-IPV-Hib/HepB	2	3	6	12	24	29
RV1	1	2	4	8	16	20
PCV	2	4	8	16	31	39
DTaP-IPV	1	1	2	4	8	10
Hib and varicella[1]	1	1	2	4	8	10
MMR	1	2	4	8	16	20
Single-year age group (eg. 11-year-olds)	**10**	**20**	**50**	**100**	**200**	**250**
Tdap[2,3]	1	1	2	4	8	10
HPV[2,4] (2 doses)	1	2	4	8	16	20
45- and 65-year-old population (combined)	**20**	**40**	**100**	**200**	**400**	**500**
ADT[5]	2	2	4	8	16	20
VZV (65-year-old population only)[6]	1	1	2	4	8	10

Key: D = diphtheria, T = tetanus, aP = acellular pertussis, IPV = inactivated polio vaccine, Hib = *Haemophilus influenzae* type b, HepB = hepatitis B, RV = rotavirus vaccine, PCV = pneumococcal conjugate vaccine, MMR = measles, mumps and rubella, d = adult type diphtheria, ap = adult type pertussis, HPV = human papillomavirus vaccine, ADT = adult type tetanus-diphtheria vaccine.

Notes

1 The calculation for varicella is for the 15-month event only; providers need to consider the number of vaccines doses required for eligible 11-year-olds.

2 Tdap and HPV numbers will depend on the number of children vaccinated in a school-based programme.

3 When ordering Tdap, providers should consider the number of vaccines the practice requires for pregnant women.

4 When ordering HPV, providers should consider the number of vaccines the practice requires for 14-year-old catch-ups.

5 The volume of ADT stock required will depend on how many people aged 45 and 65 years are enrolled at the practice and the number of patients seen for acute wound management. The numbers in the table apply to a combined population number for people aged 45 and 65 years of age.

6 The volume of VZV stock is based on vaccinating only a population of people turning 65 years; providers need to consider how many vaccines they require for those eligible for catch-up.

Table 4: Four weeks' vaccine supply (number of doses), per population served by the general practice

<5-year-old population	50	100	250	500	1,000	1,250
DTaP-IPV-Hib/HepB	12	13	16	32	54	59
RV1	11	12	14	18	36	40
PCV	12	14	18	36	71	79
DTaP-IPV and Varicella [1]	11	11	12	14	18	20
Hib	2	2	4	8	16	20
MMR	11	12	14	18	36	40
Single year age group eg, 11-year-olds	**10**	**20**	**50**	**100**	**200**	**250**
Tdap [2,3]	11	11	12	14	18	20
HPV [2,4] (2 doses)	12	13	16	32	54	59
45- and 65-year-old population (combined)	**20**	**40**	**100**	**200**	**400**	**500**
ADT [5]	12	12	14	18	36	40
VIN (65-year-old population only) [6]	11	12	14	18	36	40

Key: D = diphtheria, T = tetanus, aP = acellular pertussis, IPV = inactivated polio vaccine, Hib = *Haemophilus influenzae* type b, HepB = hepatitis B, RV = rotavirus vaccine, PCV = pneumococcal conjugate vaccine, MMR = measles, mumps and rubella, d = adult type diphtheria, ap = adult type pertussis, HPV = human papillomavirus vaccine, ADT = adult type tetanus-diphtheria vaccine.

Notes

1 The calculation for varicella is for the 15-month event only; providers need to consider the number of vaccines doses required for eligible 11-year-olds.

2 Tdap and HPV numbers will depend on the number of children vaccinated in a school-based programme.

3 When ordering Tdap, providers should consider the number of vaccines the practice requires for pregnant women.

4 When ordering HPV, providers should consider the number of vaccines the practice requires for 14-year-old catch-ups.

5 The volume of ADT stock required will depend on how many people aged 45 and 65 years are enrolled at the practice and the number of patients seen for acute wound management. The numbers in the table apply to a combined population number for people aged 45 and 65 years of age.

6 The volume of VIN stock is based on vaccinating only a population of people turning 65 years; providers need to consider how many vaccines they require for those eligible for catch-up.

Influenza vaccine volume requirement

The number of influenza vaccine doses an immunisation provider requires depends on its service and/or enrolled population, and whether it provides:

- funded influenza vaccine to pregnant women, those aged under 65 years with certain medical conditions and those aged 65 years and over
- privately purchased influenza vaccines, or
- an occupational health vaccination service.

Providers should consider the size of their pharmaceutical refrigerators when ordering influenza vaccines, because overstocking a refrigerator places **all** the vaccines in the refrigerator at risk from a cold chain excursion.

Ordering vaccines

Immunisation providers are entitled to two free deliveries each month for National Immunisation Schedule vaccines.

For online schedule vaccine order forms, go to the regional distribution stores' National Immunisation Schedule Funded Vaccines website (**www.fundedvaccines.co.nz/vaccines**). Ordering vaccines online provides an audit trail, is less susceptible to errors and is faster than faxing.

Healthcare Logistics distributes influenza vaccine orders to immunisation providers once the vaccine becomes available at the start of the funded influenza programme (from 1 April each year).

Providers can order influenza vaccine from the Healthcare Logistics website (**www.hcl.co.nz**). Ordering vaccines online provides an audit trail, is less susceptible to errors and is faster than faxing. For more information about ordering influenza vaccine, see **www.influenza.org.nz**.

Receiving vaccines

When a vaccine delivery arrives at an immunisation provider's premises, a designated staff member should:

- check the vaccines have arrived within the designated timeframe (check the packing label for time dispatched and timeframe)
- check whether any vaccines have monitoring devices included (eg, a distributor datalogger) and follow any instructions provided on using/returning those devices
- where no monitoring device is included in the delivery, check the vaccines for any visible signs of exposure to high or freezing temperatures (eg, melted ice packs, damp packaging or ice visible on packaging or inside the vaccine). See the end of this section for more information on what to do in this situation
- check the vaccines delivered are those the provider ordered
- check all vaccines are at least one month before their expiry date
- record vaccine details (including date received, batch number and expiry date) in a vaccine register/log or stock management system
- document the date the vaccines arrived at the provider on the vaccine box or have a documented system for identifying when vaccines were delivered
- leave the vaccines in their original boxes but remove them from the transport container.

If a provider has concerns about the condition of the delivered vaccines (eg, there is evidence of exposure to high temperatures such as melted ice packs and the vaccines are warm to touch, or the vaccines are extremely cold), they should:

- quarantine the vaccines in the pharmaceutical refrigerator
- label the vaccines as not for use until a decision on whether to use the vaccines has been made
- notify the regional distribution store (or Healthcare Logistics in the case of influenza or non-funded vaccines)
- contact the coordinator
- not return vaccines until they have authorisation to do so from the distributor
- advise coordinators of all returned vaccines.

If providers are unsure of how to read a monitoring device transported with a vaccine order they should contact the appropriate distributor or their coordinator for more information. They must keep the vaccines in quarantine within the cold chain while this occurs.

Placing vaccines in a pharmaceutical refrigerator

Place vaccines (and other refrigerated pharmaceuticals) in the pharmaceutical refrigerator:

- without any packing material except their original box
- with a 2–3 cm gap between vaccine boxes and the refrigerator walls or plates
- with the delivery date written on the box or a documented system for identifying when vaccines were delivered
- with the expiry dates visible (where possible), to ensure vaccines with the shortest expiry date are used first.

In addition:

- if the vaccines are put into plastic containers, these containers must have holes in the side and bottom to allow air to flow
- other refrigerated pharmaceuticals may be packaged in such a way that the packaging will not interfere with airflow in the refrigerator. A large interior space may be required to ensure adequate airflow; this should be discussed with the refrigerator technician
- the refrigerated vaccines must not exceed 90 percent of available refrigerator storage space.

No food, drink or laboratory specimens should be stored in the pharmaceutical refrigerator.

6.3 During a power outage or equipment failure

Pharmaceutical refrigerators do not hold their temperatures when the power supply is interrupted, so it is important to monitor the temperature and to respond to rising temperatures. The following practices are recommended when a power outage occurs or equipment fails.

- Use an external digital minimum/maximum thermometer or datalogger with external display to monitor the internal refrigerator temperature (this should be checked and documented every 30 minutes).
- If the internal refrigerator temperature rises above +7.5°C, seek alternative storage, following the provider's cold chain policy.
- If the internal temperature of the refrigerator falls below +2°C, remove the vaccines and place them in alternative storage, following the provider's cold chain policy.
- If the power outage is widespread, such as across the region or city, contact the coordinator before moving vaccines; there needs to be a priority system for back-up vaccine storage.

6.4 Process for vaccines stored outside +2°C to +8°C

When a provider finds vaccines have been stored in temperatures outside the required +2°C to +8°C range, it must collect information on the temperature breach and discuss the issue with the coordinator to confirm vaccine stability before using the vaccines or returning them for destruction. The steps below outline the initial process a provider should follow.

Vaccine temperatures are recorded outside required temperature range (below +2°C or above +8°C)*

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Quarantine the vaccines.

- Label and quarantine all the vaccines involved.
- Ensure the vaccines are kept within the required temperature range of +2°C to +8°C. Seek alternative storage arrangements, if required, as per the providers cold chain policy.
- Communicate with colleagues to ensure the vaccines are not used until further notice.
- Document the incident.

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Confirm and define the incident.

- Review the refrigerator temperature records and download/access information from the datalogger to clarify the cold chain before this event.
- Confirm current refrigerator temperatures.
- Check the refrigerator's service history to date.

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Collect as much information as possible.

- What monitoring has taken place (maximum, minimum and/or current thermometer readings)?
- How long were the vaccines stored outside of the required +2°C to +8°C range (minutes, hours or days)?
- Identify all vaccines stored in the refrigerator, the length of time they were stored, usual stock turnover and expiry dates.
- Identify any previous events involving these vaccines where the temperature has gone outside the required+2°C to +8°C range.
- Check whether it is likely that any individuals received a compromised vaccine.

⇩

Contact the coordinator, provide them with all of the available information and work with them through to resolution. Complete all required documentation.

Note

* When one-off temperature variations of up to 12°C for less than 30 minutes occur for known reasons (eg, stocktake), a provider does not need to notify the coordinator; however, it must document the variations in its records. This does not apply to buffered probes.

If staff do not follow up cold chain breaches and the provider does not contact the coordinator, CCA or CCC may be withheld or revoked and vaccine delivery suspended. If a provider fails to take actions following a cold chain excursion and this failure leads to a cold chain failure (ie, vaccines in a cold chain excursion are administered to patients), then the coordinator, along with the provider, is required to inform the IMAC regional immunisation advisor, PHO clinical lead, DHB lead and the local medical officer of health (as appropriate). The coordinator must notify the Ministry of Health immunisation team by email, on **immunisation@health.govt.nz,** when a cold chain failure has occurred.

Failure to follow up and document temperatures that are outside the required range may result in clinical staff (and, in the case of community pharmacy, the pharmacy premises) being referred for competence review by their regulatory body (in the case of community pharmacy, to Medicines Control), particularly where a cold chain failure could have been prevented if appropriate action had been taken.

6.5 Vaccine disposal

Providers must return all unwanted, discontinued, expired or thermally compromised vaccines to their regional distribution store for secure destruction, including private market vaccines.

Regional distribution stores use a medical waste facility in which vaccines are heat sterilised to make them inactive, and then crushed and buried in a sterile landfill, consistent with requirements under the Resource Management Act 1991.

Providers must contact their immunisation coordinator before disposing of any vaccines, and for help in managing events that result in vaccine wastage, except in cases where vaccines have expired or been discontinued.

To prepare the vaccines for return to the regional distribution store, providers should:

- clearly label them and attach the regional distribution store's 'Vaccines for Destruction' sticker (which providers can download from the regional distribution stores' website: **www.fundedvaccines.co.nz/vaccines**)
- pack them using the standard health and safety precautions that apply to medical sharps waste (eg, using an approved sharps container, or the insulated container in which the vaccines were delivered, and removing all needles other than those attached to unused prefilled syringes; the latter should remain sheathed)
- mark them with the reason the provider is sending them for destruction; for example, due to a cold chain excursion or because they have expired
- record the vaccines as returned for destruction in the provider's vaccine register.

7 Equipment

All equipment used for storing, transporting and monitoring vaccines must be fit for the purpose, appropriately maintained and tested according to the manufacturer's recommendations and the requirements outlined in the National Standards.

All immunisation providers must have a pharmaceutical refrigerator for vaccine storage at each site where they store vaccines. They must replace it every 10 years.

All immunisation providers must have appropriate equipment for transporting and storing vaccines if a power outage occurs or equipment fails. For more information refer to **section 6.4**.

All immunisation providers who offer offsite immunisation clinics – for example, occupational health, school-based immunisation programmes and outreach immunisation services – must have appropriate, tested equipment for this purpose. For more information refer to **section 7.3**.

7.1 Pharmaceutical refrigerator

All immunisation providers must use a pharmaceutical refrigerator to store vaccines.

The refrigerator must:

- be used to store medicines and vaccines only, consistent with the Medicines Act 1981, section 47
- be left on at all times (unless empty of stock; in this case, before storing vaccines again, a provider must monitor the temperature for a minimum of 24 hours with a datalogger)
- be plugged into an independent power point
- have a plug protected through a power point protector and/or a large, bright notice that tells people not to unplug the refrigerator
- not be in direct sunlight or against a heat source
- be in a ventilated room and operated in ambient temperature conditions according to the manufacturer's recommendations
- be installed at least 4 cm but preferably 10 cm away (or according to the manufacturer's requirements) from surrounding surfaces, to allow air to circulate around the condenser
- be levelled in a way that allows the door to close automatically if left ajar
- have door seals in good condition to allow the door to close easily and securely

- have grille-type shelves to allow the air to circulate
- be serviced annually (including validation of refrigerator temperature monitoring equipment) by an approved/licensed refrigerator technician and documented.

Note: External surge protectors should be in place for all pharmaceutical refrigerators. In addition, providers (particularly community-based providers) should put a notice at the meter box advising staff not to turn off the power before consulting the person responsible for vaccine management.

All pharmaceutical refrigerators have a limited life span: usually around 10 years. Immunisation providers must actively plan for their replacement, and replace their refrigerator at or before 10 years rather than wait until the refrigerator fails to maintain temperature. See **Appendix 1** for more information about pharmaceutical refrigerators.

7.2 Monitoring the temperature of the pharmaceutical refrigerator

Either the manufacturer or the provider must monitor every new refrigerator on site using a minimum/maximum thermometer and datalogger for a minimum of 24 hours before use, to ensure that the refrigerator is maintaining the +2°C to +8°C range, before placing vaccines into it. Where this is not practical (eg, due to ongoing vaccine storage requirements), the provider should download/access the datalogger at the end of the business day after the refrigerator has been installed, and again prior to the vaccines being used in the morning of the next day, to confirm that cold chain has been maintained.

The provider should keep temperature recordings for the pharmaceutical refrigerator for at least 10 years.

Each refrigerator must have two forms of temperature monitoring equipment, as follows.

1. **The daily check device using a minimum/maximum thermometer with externally visible display**
    - If the manufacturer considers it appropriate, the provider may use the inbuilt refrigerator temperature recording device.
    - Otherwise the provider can use an external digital minimum/maximum thermometer with audible alarm (placing the probe inside a vaccine box (or skillet) in glycol solution or a foam block).

    Staff should take minimum and maximum temperature readings and record them once a day – ideally first thing in the morning – and then reset the monitoring device.

2. **The weekly check device using an electronic temperature recording device**

The weekly check device (datalogger or equivalent: see 2a and 2b below) does not override the need for the provider to check and record the daily minimum and maximum temperatures.

Providers should also be aware of where the sensor is for both daily and weekly check devices. The devices should measure the temperature in different parts of the refrigerator, and must not share a sensor.

Providers must ensure that the electronic temperature recordings device data is reviewed weekly and also whenever the daily check minimum/maximum recordings indicate that the refrigerator temperatures have been outside the +2°C to +8°C range. Please note that buffer materials (eg, glycol solution) are less sensitive to short-term changes in temperature.

The data from the weekly check device may be stored electronically (provided it is backed up) or on a paper system recording daily minimum and maximum recordings (the system must allow access to the actual logger's readings at a later date).

2a. **A datalogger**

Dataloggers are self-contained temperature recording devices; they come in many shapes and sizes. It is necessary to configure them on a computer before placing them in the refrigerator. Dataloggers:

- measure the current refrigerator temperature at preset intervals and record that information, which can be downloaded/reviewed
- are powered separately from the refrigerator and the minimum/maximum thermometer (and have a back-up power system if they are not battery operated)
- should be preset to record the current temperature at least every 10 minutes (a five-minute interval is recommended if the logger has the capacity)
- must have their information downloaded/accessed every week and compared with the daily minimum and maximum recordings to check for any unexplained temperature variations; in this case providers should take appropriate action, including informing the coordinator
- should have the rollover function enabled to ensure the most recent data is kept if their memory becomes full (this usually occurs if the data is not downloaded/accessed regularly)
- should be rotated through the interior of the refrigerator to check for any temperature variations unless the manufacturer instructs otherwise
- although not required, should be calibrated according to manufacturers' requirements
- should have their battery checked and replaced before it runs out. If a provider is unable to change the battery, it should replace the datalogger (according to the manufacturers' recommendations) before it runs out of battery.

2b. **Continuous monitoring services**

A number of suppliers offer online (external or cloud storage-based) temperature monitoring and alerting services. These devices record refrigerator temperature and store/send the resulting recordings at set intervals (not more than 10 minutes; a five-minute interval is recommended). Providers can set up these services to send SMS or email alerts if the system picks up recordings outside the preset range.

The service should offer:

- detailed and accurate records of temperature history that the provider can access
- the ability for the provider to download/access and review the data every week and compare it with daily minimum and maximum recordings, to allow them to check for any unexplained variations in temperature
- an indicator for when the battery in the monitoring device needs replacing, if applicable
- a monitoring device powered separately from the refrigerator and the minimum/maximum thermometer (or have a back-up power system)
- back-up of information for at least 10 years.

3. **Cold room temperature monitoring**

Some sites, including DHB hospital pharmacies, may use a cold room or large walk-in chiller to store vaccines. These storage rooms/chillers do not need to be replaced every 10 years. However, to meet the requirements for CCA they must have:

- a suitable continual monitoring plan (eg, specifying documented six-monthly maintenance checks by the service provider)
- 24-hour-a-day monitoring systems via either a datalogger or an external monitoring (cloud-based) system that allows daily minimum and maximum recordings to be downloaded weekly and reviewed
- an external alarm system set to activate if temperatures go below +2°C to or over +8°C degrees
- an appropriate documented response process, back-up power supply and processes in place for alternative storage if the room/chiller malfunctions and cannot store the vaccine within the required temperature ranges.

For more information on minimum/maximum thermometers and dataloggers, see Appendix 3.

7.3 Transporting vaccines using a chilly bin

Immunisation providers must use temperature-monitored chilly bins to store vaccines when:

- transporting vaccines to another provider
- defrosting refrigerators
- a power outage occurs or equipment fails
- running offsite clinics, for example school-based immunisation programmes, outreach immunisation services or workplace settings.

General principles

General principles providers should adhere to when using chilly bins are as follows.

- Store vaccines between +2°C and +8°C at all times.
- Only use polystyrene or hard-walled chilly bins for temporary storage during refrigerator maintenance or for transport to another provider (either planned or as a result of a power outage or equipment failure).
- A hard walled/robust chilly bin must be used for offsite clinics.
- For each chilly bin, use sufficient ice packs and insulation material.
- For each chilly bin, monitor the temperature using either a digital minimum/maximum thermometer with an audible alarm or a datalogger with a probe and an external display (depending on the reason for using the chilly bin: for further guidelines on chilly bins used at offsite clinics, see the following section). It must be possible to read the temperature without opening the chilly bin. If using a datalogger:
  - providers should consider pursuing the ability to download/access the datalogger remotely, if a review function is not available on the logger
  - providers should set dataloggers to record the temperature every five minutes, and should download/access, review and save the data after returning to clinic.
- Carry out trials of the equipment, and be able to show that it can maintain temperatures between +2°C and +8°C at all times.

See Appendix 2 for more information on storing ice packs and preparing chilly bins. If a provider has any questions as to which type of chilly bin and monitoring system it requires, it should discuss this with its coordinator, who can advise on the most appropriate equipment that meets both the principles underlying the standards and the needs of the provider.

Note: The provider will need to start cooling the chilly bin at least 30 minutes (depending on the size of the chilly bin) before putting vaccines inside it.

Monitoring chilly bins at offsite immunisation clinics

To monitor vaccines stored in chilly bins for offsite immunisation clinics:

- use a datalogger with a probe, external display and alarm to monitor the temperature of the vaccines throughout the time they are stored in a chilly bin, and consider using a secondary back-up device (eg, digital minimum/maximum thermometer), in case the datalogger gets damaged
- record the minimum, maximum and current temperatures at least every 30 minutes after putting the vaccines in the chilly bin
- set the datalogger to record the temperature every five minutes, and download, review and save the data after returning to the clinic (an exception to this is that a minimum/maximum digital thermometer with audible alarm can be used to measure the temperature of a vaccine during transport to a single patient (eg, an influenza vaccine for an elderly person at home) when the time the vaccine will be in the chilly bin is expected to be less than 120 minutes).

Providers must keep documentation associated with monitoring the temperature of vaccines in chilly bins for 10 years, along with the rest of the cold chain documentation.

Monitoring chilly bins for transport or temporary storage

Providers should adhere to the following principles when monitoring chilly bins for transport or temporary storage.

- Providers must have a minimum/maximum digital thermometer with audible alarm to measure the temperature of vaccines when using chilly bins to transport or temporarily store vaccines.
- Staff should check and record the minimum, maximum and current temperatures of vaccines:
  - before transporting the vaccines
  - before unpacking them at the alternative storage area
  - at least every 30 minutes while transporting or temporarily storing them (when it is safe to do so).
- In addition, providers can use a minimum/maximum digital thermometer with audible alarm to monitor temperature in the following circumstances:
  - transport within a hospital setting/site when a vaccine is being transferred from the pharmacy to a ward (or vice versa) within 120 minutes or less. In this setting, where transport time is expected to be less than 30 minutes, providers may consider the use of pre-cooled chilly bins with ice packs removed and no monitoring equipment, if trials show the temperature remains above 2˚C and below +12°C.
  - vaccines stored in a chilly bin for no more than four hours in a clinical room (in this situation, the provider must transfer the vaccine doses back to the refrigerator if the chilly bin is not maintaining the required temperature range).

Note: in all these situations, providers need to record the minimum/maximum temperature and store this documentation for 10 years.

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Appendix 1: Vaccine pharmaceutical refrigerator

What is a pharmaceutical refrigerator?

A pharmaceutical refrigerator has been designed and constructed for the specific purpose of storing pharmaceuticals and vaccines between +2°C and +8 °C, and has a built-in alarm set to activate if temperatures go outside this range.

What to consider when buying a new pharmaceutical refrigerator

When looking to buy a new pharmaceutical refrigerator, providers should consider the following.

- What are the requirements for vaccine stock, including seasonal vaccines?
  - Is it possible to add more shelves within the refrigerator?
  - Can the shelf height be varied?
  - What space is available in the facility? For example, will two small refrigerators fit better than one large one?
  - What size does the manufacturer recommend for the provider's maximum stock levels and influenza vaccine requirements?
- An alarm system is required. Consider an alarm system that can notify the provider of temperature breaches when staff are offsite.
- The refrigerator must have a 'door left open' alert.
- It must be possible to adjust the refrigerator's feet so the door self-closes.
- An inbuilt minimum/maximum thermometer with external display is preferable to an additional device.
- Ensure the refrigerator can operate in a local variable ambient room temperature – can it maintain internal temperatures between +2°C and +8°C in that environment?
- Does the refrigerator have a solid or a transparent door? Remember vaccines need to be protected from light.

- Can it be cleaned easily? Does it have any special cleaning requirements?
- What is covered in the warranty, and what time period does the warranty cover?
- What are the refrigerator's service requirements, and what is the service provider's response time?
- Does the supplier offer a recycling service for old refrigerators?
- What is the expected lifetime of the refrigerator? Remembering that they need to be replace at or before 10 years of age.
- Does the manufacturer carry out spatial temperature logging (mapping of the warmer and cooler spots in the refrigerator), and provide a report on its findings? This must be completed before a provider stores vaccines in the refrigerator.

Appendix 2: Transporting or storing vaccines in chilly bins

Immunisation providers must consider the following factors when transporting or storing vaccines in chilly bins, to ensure the vaccines are kept at +2°C to +8°C. Providers will need a datalogger(s), ice packs, insulation sheets and a chilly bin to transport the vaccines, or any other trialled system (eg, Cryopaks).

For advice on selecting the right equipment, providers can refer to IMAC's website at **www.immune.org.nz/health-professionals/cold-chain**, where they can read the COOL Project stakeholder summary.

Datalogger probe placement in a chilly bin

Providers should set datalogger alarms at +2°C (low alarm point) and +8°C (high alarm point).

The logger probe can be placed in a block of polyethylene foam approximately 60 x 60 x 40mm or an empty vaccine box or in glycol solution, and placed in the chilly bin.

Providers should monitor the temperature in the middle of, and ideally at the same level as, the boxes of vaccine closest to the cooling product in the chilly bin.

If an audible low temperature alarm sounds, or a manual temperature reading is at +3°C or lower, the provider should remove ice packs and continue to monitor every 3–5 minutes until the temperature stabilises at a higher point. If the temperature continues to drop, they should remove all ice packs and leave the chilly bin open until the temperature stops dropping and increases to +3°C or higher (but below +7°C).

If an audible high temperature alarm sounds, or a manual temperature reading is at +7°C or higher, the provider should add ice packs and continue to monitor every 3–5 minutes until the temperature stabilises at a lower point (but above +3°C).

Note: The datalogger temperature reading should be used as an early warning as to what could happen inside the boxes of vaccine if action is not taken to either reduce or increase the chilly bin's temperature.

Storing and using ice packs and other cooling products

Large sheets of gel pack ice replacement are the recommended cooling product (the generic term 'ice pack' is used throughout this document). Where traditional ice packs are used, they should be the flat bottle type, about 35 mm thick. Slimmer models tend to thaw out more quickly.

Ice packs must be frozen, not refrigerated. When freezing traditional ice packs, set them on their edge in the freezer and space them to allow for even freezing.

The number of ice packs needed to keep the vaccines at +2°C to +8°C throughout the time they are transported or stored will depend on:

- the size of the container
- the length of time storage is required
- environmental conditions.

Providers should have enough ice packs to ensure the temperature within the chilly bin remains within the +2°C to +8°C range.

Ice packs should be frost-free before the provider places them in the chilly bin (ie, ice should no longer form on the surface).

There is a risk of vaccines freezing if ice packs are not used correctly. Note that fewer commercial ice packs may be required to achieve the required temperature range of +2°C to +8°C. Additives in some commercial ice packs depress their melting point.

To transport vaccines over longer periods (eg, for a school-based immunisation programme or an outreach immunisation service), providers should take an extra transport container of ice packs to top up the chilly bin containing the vaccines as necessary to maintain the temperature in the +2°C to +8°C range.

Packing vaccines for transport or storage in chilly bins

The amount of vaccine to be transported or stored will determine the size of the chilly bin required.

In hotter weather, additional ice packs may be needed for precooling to reach the acceptable temperature within 30 minutes. Alternatively, precooling ice packs can be left in the chilly bin overnight.

Providers need to trial any alternative equipment and show that they can maintain a temperature of between +2°C to +8°C at all times.

Packing requires two pieces of insulation mat: one for below the vaccine and one for above. The bottom mat should fit the chilly bin; the top mat should be cut larger to allow for 1–2 cm to go up the sides of the chilly bin. A full packing and monitoring protocol can be found in the COOL Project stakeholder summary on the IMAC website: **www.immune.org.nz/health-professionals/cold-chain**.

Appendix 3: Dataloggers and digital minimum/maximum thermometers

Dataloggers

Electronic temperature recording devices (dataloggers) and continuous monitoring systems are recommended as the gold standard for immunisation providers to monitor the cold chain of the vaccines they store and/or transport. If a power outage or a cold chain breach occurs, dataloggers provide a means of identifying how long the vaccines have been exposed to temperatures outside the required range.

Dataloggers are a self-contained temperature recording device; they come in many shapes and sizes. It is necessary to configure them on a computer before placing them in the refrigerator.

Dataloggers should be preset to record the current temperature every 10 minutes in refrigerators (a five-minute interval is recommended, if the logger has the capacity) and every five minutes in chilly bins. Providers need to reconnect the datalogger to a computer to download/access and save the information the datalogger records. They must review the information every week and compare it with recordings from the minimum/maximum thermometer.

With a cloud-based continuous monitoring system, providers need to log in via the web portal to review the information being sent via the logger in the refrigerator. Providers with cloud-based monitoring must review this data at least weekly and compare it with recordings from the minimum/maximum thermometer; they should document this in their cold chain records.

Providers should be aware that because dataloggers and digital thermometers usually monitor different areas of the refrigerator, the recordings should be consistent but will not be exactly the same.

Immunisation coordinators or CCA reviewers use their own calibrated dataloggers (three) to concurrently monitor different areas within a refrigerator during the CCA or CCC process (or three-yearly for community pharmacies). This concurrent monitoring indicates if the temperature varies within the refrigerator, and is an independent validation of the refrigerator temperature monitoring system that is required for CCA. Other monitoring equipment can be validated at the same time (eg, a minimum/maximum thermometer or datalogger could be put into the fridge during the same time period).

An increasing number of brands of electronic dataloggers are available. They have the following characteristics in common. (Note that providers should always be aware of the individual manufacturer's specifications.)

- The manufacturers' guarantees range from one to three years, usually.
- The loggers' accuracy at 0°C ranges from ±0.2°C to ±0.3°C at temperatures of –10°C to +70ºC.
- The life span for loggers will depend on the environment in which they are being used (eg, the temperature range they are exposed to, the sample rate/logging interval and the number of uses) and whether they are being used correctly.

When buying a datalogger, providers should request a manufacturer's certificate of accuracy – either an in-house certificate or through International Accreditation New Zealand. Note: Use of a datalogger does not replace the requirement for minimum/maximum daily recordings; both are required to monitor refrigerator temperatures.

Community pharmacies must be able to demonstrate that they check all devices they use for temperature monitoring for accuracy on a regular basis. Method and frequency of validation will be specific to the device, and should be based on reputable information, where available, or a commonly accepted method, where reputable information is not available. Pharmacies should refer to the current Medsafe 'Pharmacy Equipment' document. Coordinators will spatially log community pharmacy refrigerators every three years; if it is a vaccinating pharmacy, it is the pharmacy's responsibility to contact the coordinator to arrange this.

Calibration of dataloggers

These standards do not require but recommend that immunisation providers to have their dataloggers calibrated. However, a provider may wish to do so to gain additional certainty their equipment is accurate.

If there is a concern about the cold chain process or a significant difference between the two monitoring systems (minimum/maximum thermometer and the datalogger), a provider will be required to send its logger for calibration or checking.

If dataloggers are calibrated, an independent laboratory that is International Accreditation New Zealand accredited should undertake the task and issue a certificate.

The dataloggers of immunisation coordinators and CCA reviewers must be calibrated annually or according to the manufacturer's recommendations and be able to provide evidence of calibration if requested by a provider.

Digital minimum/maximum thermometers

Providers must have a digital minimum/maximum thermometer available to:

- measure their daily refrigerator temperatures if the manufacturer considers that the refrigerator display function is not appropriate
- use during a power outage (if their datalogger does not have a visible display)
- use when transporting vaccines if equipment fails or a power outage occurs.

Such thermometers are a low-cost means of monitoring the ambient air temperatures of refrigerators.

A number of digital minimum/maximum thermometers are available. Most have the following characteristics in common.

- The manufacturer's guarantee often applies for one year only.
- Their accuracy at 0°C ranges from ±0.5°C to ±1.0°C.
- The battery must be replaced every one to two years.
- Their life span will vary depending on use.

Note: Providers may opt to use their digital minimum/maximum thermometers for additional refrigerator monitoring when they are not in use to monitor chilly bins. This is very helpful during a power outage if the datalogger does not have a display, as in this case the fridge display will not be visible either. A battery-powered digital thermometer will continue to monitor and display the current and minimum/maximum temperatures during a power outage. If using digital minimum/maximum thermometers in this way, providers should reset the min/max memory daily.

Accuracy testing (ice pointing)

Providers should test the accuracy of all minimum/maximum thermometers and dataloggers (if possible) after buying them, after the battery is changed and every 12 months.

Performing an ice point test

Providers can perform an ice point test as follows.

- Take about a cup of ice and remove any white frosty parts by rinsing it in water.
- Crush the ice cubes to pea size.
- Place the ice cubes in a cup without water.
- Place the probe in the ice.
- Leave for approximately five minutes, or until the reading stabilises.
- The thermometer should read 0°C (ice point) plus or minus the manufacturer's stated accuracy specification.

Appendix 4: Key contacts

Regional immunisation advisors (IMAC)

Northern:	Phone: 027 497 6971 Email: **rianorthern@auckland.ac.nz**
Midland:	Phone: 027 232 4567 Email: **riamidland@auckland.ac.nz**
Central:	Phone: 027 292 4174 Email: **riacentral@auckland.ac.nz**
South Island:	Phone: 027 242 2451 Email: **riasouth@auckland.ac.nz**

For contact details of immunisation coordinators and CCA reviewers, see **www.immune.org.nz/health-professionals/regional-advisors-and-local-coordinators**.

Immunisation Advisory Centre (IMAC)

Phone: (0800) IMMUNE (466 863)

Regional distribution stores

ProPharma provides a vaccine distribution service only, not a technical inquiry and assistance service. Direct all technical inquiries to your local immunisation coordinator or IMAC regional immunisation advisor in the first instance.

For ProPharma vaccine order forms and to place vaccine orders, go to: **www.fundedvaccines.co.nz/vaccines**.

Alternatively, providers can get National Immunisation Schedule vaccine order forms from ProPharma regional stores and fax them to the following numbers:

ProPharma Whangarei	(09) 438 9681
ProPharma Auckland	(09) 915 9581
ProPharma Hamilton	(07) 957 3840
ProPharma Palmerston North	(06) 952 0035
ProPharma Wellington	(04) 576 1811
ProPharma Nelson	(03) 547 6455
ProPharma Christchurch	(03) 389 5459
ProPharma Dunedin	(03) 474 5061

Healthcare Logistics

The Healthcare Logistics customer service number is 09 918 5100.

Healthcare Logistics distributes seasonal influenza vaccine orders on behalf of the manufacturers.

To order influenza vaccine online, go to: **www.hcl.co.nz**.

Alternatively, you can use the seasonal influenza vaccine order form in the annual *Everything you need to know about FLU* kit, which you can download from **www.influenza.org.nz**.

Medicines Control

To contact Medicines Control please call 0800 163 060 or email **medicinescontrol@health.govt.nz**.

Vaccine manufacturers

The vaccine manufacturing companies also provide technical assistance with cold chain problems. The coordinator is responsible for requesting and following cold chain advice from vaccine companies for National Immunisation Schedule vaccines on behalf of the provider.

The companies supplying vaccines for the National Immunisation Schedule are:

- GlaxoSmithKline (GSK) (phone 0800 822 2463)
- Merck, Sharp & Dohme (NZ) Ltd (MSD) (phone 0800 500 673)
- Sanofi-Aventis (NZ) Ltd (phone 09 580 1810)
- Seqirus (New Zealand) (phone 0800 502 757)

- Pfizer (New Zealand) (phone 0800 736 363)
- Mylan (phone 0800 737 271).

OFF-SITE VACCINATION PROCEDURE
(National Schedule Immunisations delivered outside of Medical Centre)

Name of Practice:

Name of Person Responsible for procedure:

List of vaccination to be delivered off-site	• National Schedule vaccines for eligible children and adults • Influenza vaccine • Hep A, Hep B, Menactra and DTap out of schedule • On & Off-site vaccination procedure for children within Kura/Schools & Kohanga Reo/Preschools in accordance with Public Health Services • On & Off-site vaccination procedure for community out-reach services in accordance with Te Waka Huia Services
What is the reason/rational for off-site delivery of these vaccinations?	To provide immunisation to whānau/clients who are unable to attend General Practice such as the elderly, children under the Outreach Immunisation Service or those yet to enrol with a General Practice Team (GPT).
List the settings where the off-site vaccination is delivered	General practice team, rest home, community setting, school, kura, kohanga reo, home, halls, marae, or community meeting place
Describe how the suitability of a setting for vaccination is determined including: • Privacy • Resting Space • Waiting Space • Maintenance of privacy of records • Emergency personnel access • Hand Hygiene	Vaccinations will occur in the privacy of a client's home or in a designated area such as a hall, school, marae, or rest home. The designated area will ensure the safety of the clients and others while the vaccine is drawn up and administered. All emergency equipment will be taken to the site.
What staff attend an off-site vaccination event?	An authorised vaccinator, the second person will also be an authorised vaccinator or a provisional vaccinator or a community worker with current CPR certificate
Indicate the equipment taken to the setting or available at the setting • Cell phone/phone access • Oxygen Clinder, flow meter, tubing, and paediatric/adult masks (in accordance with immunisation guidelines) • Airways- infant through to adult • Ambubag (Adult/Infant) • Adrenaline • Syringes (1ml, 2.5ml, 5ml), Needles (1.58 to 3.8cm)	 Yes Yes Yes Yes Yes Yes

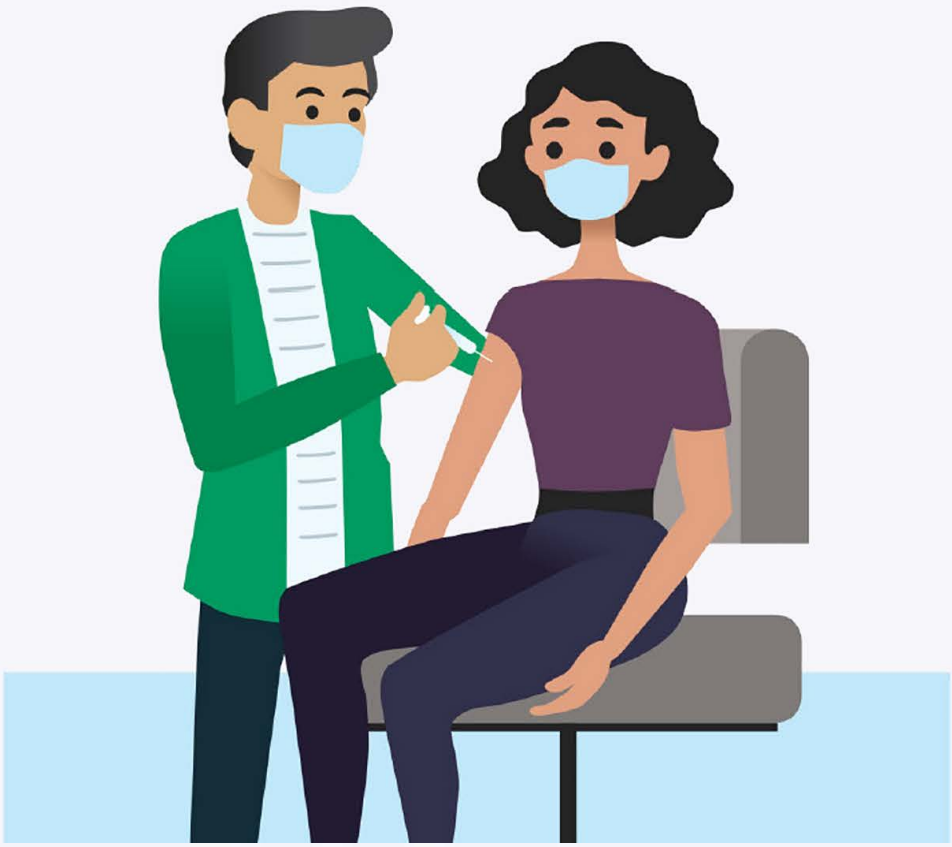
Name of provider: Date:
Review Date:

• Sharps box • Alcohol swabs, cotton wool balls/gauze etc • Thermometer • Sphygmomanometer • Vaccines • Appropriately monitored vaccine storage • Min/Max thermometer or recording device for monitoring • Gloves • Approved Biohazard bag • *0.5% Hypocholorite* • *Intravenous Cannula and administration sets* • *Intravenous fluids* • *Hydrortisone for injection* • *Soda bicarbonate* • *Saline flush*	Yes Yes Yes Yes Yes Yes Yes Yes Yes *Yes, site specific* *Yes, site specific* *Yes, site specific* *Yes, site specific* *Yes, site specific* *Yes, site specific*
Do you have a policy for cold chain maintenance when off-site?	Yes, according to the National Standards for vaccine storage and transportation for immunisation providers 2017
Describe the process and documentation for: • Pre-vaccination including informed consent, eligibility for free vaccination and suitability for individual to receive vaccine in the setting • Post-vaccination including vaccination records and info provided	A consent form will be completed by the client or caregiver. This will be checked with the client of caregiver for contraindications. Privacy will be maintained in all settings. If whānau/client are eligible for any scheduled vaccinations, they will be offered an opportunity to receive the vaccination off-site, other community vaccination teams or connections to their general practice team. Post vaccine information will be given including a vaccination information and after care with appropriated after hours contact details. A copy of the consent form will be sent to the GPT with the client's/whānau consent (if applicable).
How is an adverse event following immunisation managed and documented?	A CARM form will be completed, a copy sent to client/whānau and GPT (if applicable) including the reply letter. The adverse event will be documented according to the company/site policy and procedures e.g., Riskman, Health and Safety reporting.

Signed: Printed Name:

Date:

Name of provider: Date:
Review Date:



Operating Guidelines for DHBs & Providers

COVID-19
Vaccine Immunisation Programme

Version 27.0

Last Updated 5 November 2021

New Zealand Government

Unite against COVID-19

MINISTRY OF HEALTH
MANATU HAUORA

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MANATŪ HAUORA

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Section C: Summary of Changes

Version	Date	Section/Appendix	Summary of Changes
27.0	05/11/21	Chapter 21	New chapter for 'Vaccination and Surveillance Testing'
		Chapter 22	New chapter for 'Vaccination in Hospital'
		Chapter 25	Section 'Legislative context of the Amended Vaccination Order' amended

Appendices: Summary of Changes

Version	Date	Section/Appendix	Summary of Changes
27.0	05/11/21	Appendix B	New facility/site setup form updated with changes to categorisation of site types and provider types.

Previous revision history can be found at the end of the appendices section.

Document Approval

COVID-19 Vaccine Immunisation Programme	Date	Signature
Joanne Gibbs, National Director	November 2021	Electronic Approval Given

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These Operating Guidelines provide guidance on establishing and managing a COVID-19 vaccination site, including guidelines for the vaccination workforce and how to provide a clinically safe and quality vaccination service.

Purpose

The Operating Guidelines are designed to assist District Health Boards and providers to maintain public safety and to ensure consistent and equitable COVID-19 vaccination practices are established and maintained throughout New Zealand/Aotearoa. The Operating Guidelines are to be read and interpreted in conjunction with the ***New Zealand/Aotearoa COVID-19 Vaccine Immunisation Service Standards*** (the Standards).

The Operating Guidelines are published on the **Ministry of Health's website** for DHBs and providers. We expect regular iterations based on learnings from the delivery of the COVID-19 vaccine programme. Please ensure the most updated version is used.

Notes on guidance:

- The Operating Guidelines provide operational guidance for the COVID-19 vaccination programme. Clinical guidance is available in the Immunisation Handbook, available at: **https://www.health.govt.nz/publication/Immunisation-Handbook-2020**.
- See in particular **Chapter 2 Processes for Safe Immunisation** and **Chapter 5 Coronavirus disease (COVID-19)**.

Whakatauki

Me mahi tahi tātou mō te oranga o te katoa

We should work together for the wellbeing of everyone

Current version focus

The Operating Guidelines are designed for administering the BioNTech/Pfizer COVID-19 Vaccine (Pfizer COVID-19 Vaccine) and will be updated should other vaccine types become available and approved for administration to consumers.

Abbreviations

Abbreviation	Full Name
A&I	Adoption and Improvement
AEFI	Adverse Event Following Immunisation
BWTR	Border Worker Testing Register
CARM	Centre for Adverse Reactions Monitoring
CICS	COVID-19 Immunisation Consumer Support
CVIP	COVID-19 Vaccination Immunisation Programme
CIR	COVID-19 Immunisation Register
DHB	District Health Board
DNS	Did not show
IMAC	Immunisation Advisory Centre
IPC	Infection prevention and control
MIQF	Managed isolation and quarantine facility
Ministry	Ministry of Health
NHI number	National Health Index number
NIBS	National Immunisation Booking System (Book my Vaccine)
ULT	Ultra-low temperature (-90°C to -60°C)

Key contacts

Issue Type	When to Contact	Contact Details	Hours of Operation
IT hardware or non-CIR software issues	Logging technology hardware or software issues that aren't CIR-related	Contact your local IT ServiceDesk	Ensure after-hours support is available for sites operating outside of business hours
CIR issues	For help on using CIR Logging-in issues, password resets, or after hours help	Refer to the *Where to get help* poster*	8am-6pm, weekdays and weekends
Vaccine or consumables supply issues	To raise an issue with supplies	Refer to the *Where to get help* poster*	Email: 9am-Spm, weekdays Phone: 8am-8pm, weekdays and weekends
Clinical vaccine queries	To receive clinical advice on the vaccine or vaccination process	**0800 IMMUNE (466 863),** option 1 (health professionals) and then option 2 (COVID-19 vaccinator support)	Available during site operating hours
Order vaccination collateral	To request additional pamphlets or other collateral	The DHB communications manager	
Privacy Incident or Concern	In the event of a known or suspected privacy breach	Refer to the *Where to get help* poster*	9am-Spm weekdays
Adverse Event Following Immunisation (AEFI)	Reporting an adverse reaction to the vaccine	**https://report.vaccine.covid19.govt.nz** Phone: (03) 479 7247 Email: **carmnz@otago.ac.nz**	
Interwaste vial disposal bin requests/collection	To arrange first delivery of vial disposal bin and collection of full bins	Phone: 0800 102 131	8am-Spm, weekdays
Programme Incidents	See serious adverse event process **Appendix** I	**cvip.incidentnotification@health.govt.nz**	

*A **Where to get help** poster is available in the Ministry's drop box for vaccination sites. The poster includes the CIR helpdesk number and email address details, and the Ministry's logistics team's contact number and email address.

Roles and responsibilities

Activity	Ministry of Health	DHBs & Providers	Group 1 Employers	IMAC	CARM	Distribution Provider
Purchasing	• Purchase vaccine from Pfizer • Purchase consumables including PPE	N/A	**N/A**	**N/A**	**N/A**	**N/A**
Distribution	• Arrange distribution of vaccine and consumables to vaccination sites/DHB facilities	• If needed. arrange secure distribution from DHB facility to vaccination site	**N/A**	**N/A**	**N/A**	• Thaw and repack vaccine into sub-batches as needed • Distribute vaccine & consumables
Inventory Management	• Coordinate allocation schedule • Order vaccine & consumables for DHBs	• Plan vaccine demand to minimise wastage • Report stock on hand, stock movement & exceptions • Ensure vaccine handling & storage requirements are met	**N/A**	**N/A**	**N/A**	• Perform QA checks on receipt of vaccine from Pfizer • Ensure secure storage of vaccine prior to distribution
Workforc,e & Training	• Provide guidance on workforce model and training requirements • Provide access to CIR for vaccinators & admin staff • Provide CIR support/factsheets	• Hire and roster vaccinators and required site support staff • Provide info to MoH and IMAC for user on-boarding & provision of training • Ensure staff are appropriately trained	**N/A**	• Provide vaccine preparation & delivery training • Provide CIR training	**N/A**	N/A
Site Operations	• Provide guidance on preparing and running vaccination sites • Disseminate process improvements (e.g. via updated Operating Guidelines)	• Prepare & run vaccination sites, incl. providing IT equipment and disposing waste • Werle with Group 1 employers to schedule vaccinations of staff • Schedule appts for household contacts • Engage with Maori & Pacific Island partners around vaccination of household contacts	• Liaise with DHBs if vaccination site is on employer premises to ensure site is set-up and secured	• Provide clinical support to vaccinators as needed	N/A	N/A
Post-Event	• Monitoring adverse event data	• Dispose of expired, empty or broken vaccine vials and used consumables • Pack down site as needed	• Where vaccination on employer premises. support pack down of site • Provide employee support	N/A	• Receive and investigate adverse event reports	N/A
Comms& E.ngagement	• Coordinate national vaccine engagement campaign • Provide key messages to OHBs to share with Group 1 employers • Engage with household contacts • Provide collateral files to DHBs/providers & distribute site banners/cards • Manage adverse event comms	• Engage with Group 1 employers re: sites & schedule • Print and circulate collateral to vaccination sites as required • Engage with household contacts	• Engage with employees re: vaccination plan	N/A	N/A	• Include 'Instructions for the Pfizer Vaccine - Preparation and Administration' info sheet in vaccine shipments
Reporting	• Produce programme and operational reporting	• Complete weekly stock on hand and stock movements reporting • Report exceptions to plan, as they occur	**N/A**	• Provide data on vaccinators trained to date	• Provide adverse event data to MedSafe	• Provide stock on hand and orders out reporting to MoH

Section A:
Ready to vaccinate

Section guidance

This section should be read and interpreted in conjunction with **the Standards**. For onboarding sites, this section should be used alongside the Ministry's **Onboarding Guidelines**.

This section provides operational guidance, including equity, site considerations, onboarding, vaccination workforce, IPC guidance, ordering, planning, vaccine handling and storage, logistics, and site closure; to ensure consistent, equitable and quality vaccination.

Purpose

This section is designed to be applicable from the preparation of a vaccination site (from the selection and setting up of a suitable site), through to the closing of a site.

Appendices relevant to this section

- **Appendix A: Site checklist**
- **Appendix B: New facility/site setup**
- **Appendix C: Facility/site closure**
- **Appendix D: Logistics and Inventory Management**
- **Appendix E: CVIP logistic overview/ cheat sheets**

1 Equity

Providers must ensure vaccination sites are accessible to all members of the community and there is equitable opportunity for Māori and Pacific people, other ethnic communities, and disabled people.

1.1 Equitable access

Reasonable steps must be taken to improve access and reduce potential inequalities. Steps to enable equitable access may include:

- Providing access to translation and interpretation services to support the consent and immunisation processes. For more information on interpreter services see **https://www.healthnavigator.org.nz/languages/i/interpreter-services/**
- Ensuring key written material and any signage is in easy-to-read formats.
- Providing supporting literature available in a range of languages and resources/support for those who have low health literacy. This may include access to New Zealand Sign Language (NZSL) if needed.
  Note: The Ministry has prepared translations of COVID-19 vaccine information (see section **Ordering site collateral** below).
- Considering how the service delivery model caters for the support people consumers may bring to the vaccination event (such as friends, whānau, carers).
- Encouraging site staff to greet consumers in Te Reo or the language the consumer uses where possible.

1.2 Te Tiriti and Māori

Actively incorporate Te Tiriti o Waitangi considerations, including:

- ensuring Māori are not disadvantaged
- mitigating the impact to Māori as a result of COVID-19
- establishing and maintaining effective partnerships with Māori stakeholders including iwi, hapū and whānau
- seeking Māori-specific advice from the outset
- resourcing and investing where it is required the most
- starting and ending the day with a karakia.

1.3 Māori and Pacific peoples

- Ensure as far as reasonably practicable, the site workforce reflects the demographic make-up of the likely consumer group or local area.
- Consider which site locations can best meet the community's needs in terms of both ease of access and comfort or familiarity with the location (such as marae, churches).
- Where drive-in sites are planned, ensure consumers can attend the site if they do not have a car or have access to a non-drive-in site.
- Build early and regular engagement with Māori and Pacific partners into the service delivery model to ensure design to the community's needs.

1.4 Disability and/or Impairments

Ensure access for disabled consumers and others, including venue accessibility and accessible information. For more information on venue accessibility, see the **Ministry's website**. Equity steps and processes to follow include:

- Designing site support processes to support consumers with visual or hearing impairments. For example, providing a card to ask consumers advise site staff if they have a hearing impairment to ensure their needs can be met during the vaccination or any follow up interactions.
- For Deaf or hard of hearing consumers, there may be a need to arrange a New Zealand Sign Language (NZSL) Interpreter. Information on working with NZSL Interpreters can be found at **https://www.odi.govt.nz/nzsl/tools-and-resources/**
- Ensuring staff are educated in disability equity issues and know how to employ a rights-based approach. A 30-minute Disability Equity eLearn is available through the **Ministry's LearnOnline website**.
- Enabling consumers to access appropriate support and accommodations they may need for a successful vaccination, for example, are there any measures as a site or team that can be implemented to support mobility constraints, or accommodate individuals, families and whānau if a consumer has an anxiety or phobia, or may need a quiet and low stimulation environment?
- Supported decision-making is an important process for consumers needing support to make decisions. This may be due to a consumer's communication needs, learning disability, acquired brain injury, neurodiverse needs, mental health issues or other cognitive or physical condition.
- Supported decision-making is a way for consumers to make their own decisions based on their will and preferences, so they have control of their life, ensuring the consumer needing support is at the centre of decision making that concern them. Training on supported decision making is available on **IMAC's website**.

2 Site considerations

2.1 Environmental considerations and safety controls at the vaccination site

Assess the layout of the building or area identified for vaccination delivery to ensure the following features are in place supporting appropriate IPC implementation:

- Clearly marked one-way foot traffic flow, with clear entry and exit areas through the vaccination clinic; these should be separate when the vaccination area or clinic is in a health care facility.
- Adequate screening area (ideally, private spaces) at the entry where consumers are assessed, including questioning for signs/symptoms of COVID-19 and other criteria for inclusion.
- Sufficient space to allow **at least** one metre of physical distancing between all staff and individuals; including between health workers and at all stations – at the entrance, at the screening stages, while waiting to be vaccinated, and during the observation period post-vaccination.
- Adequate ventilation (mechanical, natural or hybrid) of all areas, including the screening, waiting, post-vaccination observation, and vaccination areas. Where a mechanical ventilation system is operating in these areas, the ventilation rate should be six air changes per hour or according to national or local requirements for healthcare facilities.
- A medically equipped post-vaccination observation area for dealing with possible vaccine adverse reactions.
- Adequate number of hand hygiene stations in strategic areas supporting appropriate hand hygiene for public and staff (such as, at entrance and exit areas, in the waiting areas, and in each vaccination station).
- Laminated signage/posters including reminders regarding:
  - reporting COVID-19 signs and symptoms
  - hand and respiratory hygiene
  - physical distancing (including floor markings, seating arrangements, tapes, ropes, and cones).
- Adequate space for vaccine storage and preparation – a clean and hygienic environment, with adequate ventilation and equipment to adhere to specific COVID-19 vaccine cold chain requirements.
- Vaccination stations **at least** one metre apart, ideally with installation of physical barriers between the vaccination stations.
- Adequate cleaning ability for screening areas, vaccination stations, waiting areas (such as removing items that cannot be readily decontaminated and minimising clutter to aid effective cleaning).
- Appropriate waste management systems, including safe disposal of waste (such as vials and masks) and sharps at each vaccination station (see also the **Disposal of consumables, vaccine and vaccine packaging** section below).

2.2 Business continuity

A business continuity plan is required for each site to guide recovery from events that may interrupt service delivery such as a power failure.

Hard copies of the following forms and documents should be available on site in the event of the CIR being unavailable:

- **Consent form** (required consumer data fields that will need to be added to CIR are included on the back of the form)
- **COVID-19 Vaccine Adverse Event Report form.** This form is used to submit adverse event information to the Centre for Adverse Reactions Monitoring (CARM). If CIR is unavailable this form may be used to capture relevant information; noting on-site adverse events must in any event be reported in CIR as soon as practicable (in addition to submitting the form to CARM).
- **Reviewing early COVID-19 AEFIs** (found on the **IMAC website**)
- **Reviewing late onset AEFIs** (found on the **IMAC website**)

See the **Ordering site collateral** section below for obtaining these forms.

Note: Any hard copy forms must be entered into CIR as soon as practicable and in any event by close of business on the **following day**. Ensure any printed copies of information are locked away when not in use.

2.3 Site access and traffic management

Waka Kotahi NZ Transport Agency has provided the following advice to support site location and traffic management planning.

In addition to the considerations below, the **Waka Kotahi Journey Planner** is useful for assessing how people will safely access your sites. Similarly, regional council websites also contain valuable information about local public transport provision.

Access considerations

When choosing your location, consider how easily people might be able to access the site. For example, consider the following:

- How easily people with mobility issues can access your site
- Is a public transport stop within 500m of your site?
- Are there multiple routes and/or multiple modes of public transport within 500m?
- Does the site provide cycling or walking access?
- Is adequate parking available for people using a private vehicle?
- Are there opportunities to locate the site in place that will reduce the number of additional trips people need to make?
- Is any additional signage required to direct people to the location of the centre?
- How would consumers living in areas not serviced by public transport reach your site?
- How would a change in alert levels affect the site?

Traffic management considerations

Consider how the numbers of people receiving vaccines increases will impact the traffic network. For example, consider:

- How will the increase in road users impact vehicle congestion?
- How many different routes can consumers use to access the site?
- The impact to current levels of congestion at different times of the day.
- Is the site close to major arterial roads or state highways, which may give greater access?
- Does your site location provide easy access to public transport to mitigate impacts on road congestion?
- Are there any planned roadworks, road closures, or events that may impact access?
- Will any potential queues to your facility affect access to key services such as emergency services, health centres or schools?
- Could you provide multiple small sites instead of a few major locations servicing large numbers of people to better disperse demand across the transport system?
- Can your booking system be used to manage demand on the facility and consider peak traffic times?

2.4 Site physical security

To ensure the safety of consumers and staff, all vaccination sites should have a security presence to control access and to be available to support in the event of attempted unauthorised access, such as queue jumping to obtain a vaccination, or protest action.

Vaccinators will not require security to travel to the immunisation sites but secure parking and how vaccinators gain access to the site should be considered (such as separate access from the public).

Site security assessment

Each vaccination site must provide for:

- Staff safety
- Consumer safety
- Visitor safety
- Vaccine security including storage facilities and in-transit
- Information security – particularly paper-based information such as spreadsheets
- Contingency plans addressing a disturbance/potential protest event.

A documented risk assessment should be conducted for every individual vaccination site. This should include, but is not limited to, the following considerations:

- How will staff travel to the vaccination location?
- Will secure parking be provided for vaccinators and administrators?
- How is site access controlled?
- How is the vaccine transported to and from the vaccination site?
- How is the vaccine securely stored at the vaccination site?

- How are consumables, including items such as needles, securely stored at the vaccination location?
- How is hard copy information (if any) securely stored at the vaccination site?
- How staff respond to disruptions (such as attempted unauthorised access like queue jumping to obtain a vaccination, or to protest action).

2.5 Planning for adverse events

Some consumers who have a history of allergy or hypersensitivity, following administration of vaccines or injectable medicines, will require additional monitoring at the time of receiving their first vaccine dose. Similarly, consumers who experienced an adverse event after receiving their first dose of the vaccine may require clinical monitoring at the time of the second dose.

The Ministry expects vaccination sites to have appropriate protocols, equipment, settings, and workforce in place to support those who may require enhanced care following vaccination. Consider arranging any enhanced or additional consumer care requirements at the time of booking, or prior to these consumers attending a vaccination site.

It is recommended simulation scenarios are used to prepare staff to respond to adverse events.

2.6 Mobile vaccination set up

Mobile vaccination teams may be established to attend several different locations rather than being based at a single site. For example, this may be how vaccinations are delivered to aged residential care settings or workplaces. Mobile teams may be useful in the outreach setting with difficult to reach vulnerable families or small communities.

When setting up a mobile vaccination team, provide for the following:

- **Equipment and connectivity:** Ensure mobile vaccination teams have the required equipment, both medical equipment and technology, to enable the use of CIR onsite. Check the connectivity at the site before attending.
- **CIR recording:** Ensure the mobile team know the name of their facility and team (site) to select in CIR.
- **Planning:** Establish a location plan for the mobile team with the logistics required for vaccine stock. Ensure a record is kept of where and when the mobile team has been vaccinating.
- **Vaccine storage and transport:** All appropriate and standard cold chain requirements must be met when transporting and storing vaccine. See guidance on transporting and storing vaccine in the **Vaccine storage and handling** section below for more information.
- **Business continuity:** Ensure a business continuity plan is in place for the team to manage unexpected events and appropriately record vaccination events, such as having a stock of printed event forms on hand if access to CIR is unavailable.
- **Site readiness:** Refer to the **Site readiness and closure** section below for completing a dry run with your mobile team before commencing vaccinations.

3 Preparing the vaccination workforce

3.1 Vaccinating the workforce

Before commencing vaccinations, the Ministry recommends all vaccination site staff have an opportunity to receive a COVID-19 vaccination. This includes all staff who have contacts with consumers, from health professionals to receptionists and security staff.

3.2 Clinical leadership

Every multi-vaccinator vaccinator site should have a named lead clinician each shift. The onsite lead clinician should be an appropriately experienced clinician who is able to lead the vaccination team, manage and investigate adverse events and incidents, and provide onsite clinical advice.

3.3 Preparation and planning phase

- Appoint a facility IPC lead for the planning, deployment, and monitoring of the vaccination activities.
- Identify an adequate number of vaccinators to ensure sufficient staff and time is available to support correct implementation of IPC practices required to safely administer the vaccine.
- Identify trained staff to deliver IPC training to others involved in vaccination activities (including managers, logistical support vaccinators, cleaners and health workers dedicated to screening), and to provide information to consumers to be vaccinated.
- Identify health workers for the supervision of vaccination activities and define a monitoring and evaluation process of IPC practices, including providing feedback to vaccinators and other staff as required.

3.4 Quality and safety

There is an expectation that each DHB region has quality and safety oversight of the vaccination programme rollout through their existing quality and safety and/or clinical governance mechanisms. For clarity, this includes adverse events, complaints and incident management. **Note:** In this context, 'adverse event' does not refer to an adverse reaction following immunisation.

3.5 Occupational health and safety requirements

Appropriate occupational health and safety policies and procedures are required for each site. This will include an accessible needlestick injury protocol which staff are familiar with.

3.6 Staff training and reference materials

Training will be provided to CIR users and vaccinators through a combination of eLearning Modules and quick step guides. The quick step guides will be available within the eLearning system, as well as within the knowledge tab of the CIR for continued availability and reference.

The eLearning modules and quick step guides include:

- Working with the COVID-19 Immunisation Register (eLearning)
- COVID-19 vaccinator education course (eLearning)
- COVID-19 vaccination for prescriber health professionals (eLearning)
- CIR quick step guides: reception, vaccination, recovery, quick adverse event, adverse event
- Inventory management (eLearning)

In addition to these training materials, staff have access to a range of reference materials. Please refer to the IMAC website for vaccinator training materials. These include:

- IMAC written resources: **https://covid.immune.org.nz/faq-resources/written-resources**. This includes COVID-19 vaccinator guidelines and instructions for preparing doses.
- IMAC video resources: **https://covid.immune.org.nz/faq-resources/video-resources**
- IMAC FAQs: available on the IMAC website at: **https://covid.immune.org.nz/faq**
- ***The Immunisation Handbook*****:** provides clinical guidance for administering vaccines. IMAC has also prepared a COVID-specific chapter in the Handbook. This information is updated regularly. See **https://www.health.govt.nz/publication/immunisation-handbook-2020**

See the **Ordering site collateral** section below for details regarding collateral to be given to consumers.

3.7 Access to training, CIR classroom, and CIR

Staff are required to complete the IMAC training by registering at **lms.immune.org.nz**. Users will complete CIR and/or Pfizer eLearning modules. CIR users will also be invited to attend a drop-in session where they can ask any CIR questions they may have.

To support their training, CIR users will be granted access to CIR classroom to practice using the system. To gain access to CIR classroom, the DHB or provider workforce lead must send a list of all staff requiring CIR Classroom access to the Ministry.

Once staff have completed the required training, the DHB or provider workforce lead must confirm to the Ministry that the staff member is 'approved'; the Ministry will then provide access to the live CIR environment.

Note: An organisation email address must be supplied for any CIR user to obtain access to the live CIR environment.

3.8 On site functions

The Ministry has identified the following functions for the onsite team. Note that someone with a clinical role (such as a vaccinator) may perform non-clinical functions, particularly in smaller sites.

The list below outlines the functions required to assist workforce planning. It is not intended to be a prescriptive list of all functions and expectations of different roles.

Clinical functions

- Preparing the vaccination dose
- Obtaining consent to receive the vaccination
- Asking health questions prior to administering the vaccine
- Vaccinating the consumer
- Monitoring consumers in an observation area for any adverse events
- Attending to adverse events and recording them

Staff performing clinical functions must be appropriately trained by **the Immunisation Advisory Centre (IMAC)**.

Non-clinical functions

- Greeting consumers and answering questions
- Identifying any accommodations and additional support consumers may require, such as mobility support, low sensory/quiet spaces, interpreters (including New Zealand Sign Language interpreters)
- Confirming consumer identity
- Entering consumer information into CIR
- Providing COVID-19 factsheets and FAQs
- Directing the consumer to the Privacy Statement
- Recording the vaccine details in CIR

- Advising the consumer when they can depart the observation area
- Providing the vaccination record card
- Capturing household contact information from Border and managed isolation and quarantine facility MIQF workers where this information has not already been provided
- Completing or arranging daily cleaning of the site
- Arranging collection of medical waste
- Decommissioning the site when it is no longer needed
- Providing reporting back to the ministry or DHB or provider leads as needed.

3.9 Workforce modelling

The size of the vaccination site and volume of vaccinations expected to be delivered on site will determine the size of the workforce required. The following tables outline staffing models for consideration as the vaccination workforce is planned.

Note: The framework below is only a suggestion and site workforce requirements will depend on matters such as expected site volumes, the service delivery model adopted and the likely needs of the consumers (for example, low health literacy or low English skills), more support throughout the process may be required which may in turn affect timing and resourcing.

Refer to **Appendix 4** in the ***Immunisation Handbook*** for further guidance on criteria for authorised vaccinators and minimum staff and equipment requirements for the provision of vaccination services.

Table 3.1 - activities and associated staffing

Waiting room	Immunisation event	After the event
Activity • Consumer checked in; may watch a consent video in the waiting room (~10mins)	• Consumer and vaccinator will have a clinical conversation about the vaccination and consumer will provide consent • Immunisation occurs • Administrator will enter details into CIR as the vaccinator performs the vaccination	• Consumers must remain onsite for 15 mins after the event for monitoring.
Staffing • 1 x Administrator	**Staffing** • 1 x Administrator • 1 x Vaccinator	• 1 x Registered health professional **minimum specifications in Appendix 4.2** of the ***Immunisation Handbook.*** • 1 x support person with CPR training

Based on the activities and staffing numbers above, the Ministry recommends the following site staffing numbers:

Table 3.2 - site staffing number recommendations

If 20 vaccinafons/day	If 120 vaccinafons/day	If 360 vaccinations/day
Staffing • **2 x vaccinators working at the site who will undertake all roles**	**Staffing** • 1 x Admin in waiting room • 3 x Vaccinators • 3 x Admin support • 1 x Vaccinator drawing up • 1 Registered Health Professional and 1 x Support person monitoring during observative period	**Staffing** • 1 x Admin in waiting room • 9 x Vaccinators • 9 x Admin support • 3 x Vaccinators drawing up • 2 x Registered Health Professionals and 1 x Support person monitoring during observative period
Note 1: If COVID-19 vaccinators are being used, there must be one (1) dedicated vaccination clinical supervisor for every six (6) COVID-19 vaccinators. **Note 2:** Dedicated vaccination clinical supervisors are not simultaneously responsible for any other roles or processes that prevent them from being immediately available while supervising COVID-19 vaccinators. **Note 3:** DHBs and providers will need to be prepared to adjust their site staffing requirements as administering the COVID-19 vaccine will likely vary from these assumptions as delivery progresses and lessons learned		

3.10 Mobile and home vaccinator workforce

For fixed sites, providers should consider the number of vaccinators and administrators that are needed for home or mobile vaccinations to ensure safety of both consumers and staff. Staff delivering home vaccination will need to meet the standards as set out in the COVID-19 Vaccine and Immunisation Programme Service Standards and have completed the required training.

4 Infection prevention and control (IPC)

The key IPC principles to consider and the precautions for safely delivering COVID-19 vaccines are described below. These principles and recommendations have been derived from the World Health Organization (WHO) guidance.[1]

This guidance is intended for policy makers, immunisation programmes and IPC Lead for vaccination delivery venues. This section covers the IPC measures required to support all vaccination activities, and as such, some aspects may also be covered in other sections of the operating guidelines.

4.1 Key IPC principles for COVID-19 vaccine deployment

Standard precautions to be applied during any vaccination activity are also valid for COVID-19 vaccine delivery, considering the population to be vaccinated consists of individuals **not** presenting signs and symptoms of infection.

Perform regular environmental cleaning and disinfection of areas and sites where vaccination occurs at least twice daily with special attention to high touch surfaces. Use recommended detergent and disinfectant products.

Additional IPC precautions may be necessary in the context of the COVID-19 pandemic to reduce the risk of transmission (such as PPE usage in line with IPC guidelines per the Alert Level).

It is imperative health workers are provided with specific training and the public is provided with targeted information regarding IPC measures for safe COVID-19 vaccine delivery.

A clean, hygienic, and well-ventilated environment, with appropriate waste management and adequate spaces to facilitate best IPC practices (such as physical distancing) are necessary for safe COVID-19 vaccination activities.

National guidance and protocols for IPC measures should be consulted and adhered to.

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[1] Aide-Memoire Infection prevention and control (IPC) principles and procedures for COVID-19 vaccination activities, 15 January 2021. ***https://apps.who.int/iris/handle/10665/338715***

Local IPC guidance

Include the following details, when developing your local IPC guidance and standard operating procedures for COVID-19 vaccination:

- Screening policies for COVID-19 signs and symptoms for staff and consumers arriving for vaccination along with clear exclusion criteria.
- Key IPC measures to be taken by anyone in the vaccination area or clinic.
- Key IPC measures for safely administering COVID-19 vaccines.
- Cleaning and disinfection of the environment.
- Appropriate waste management, taking into consideration the increase of waste associated with COVID-19 vaccination activities. Where possible, include environmentally sound approaches to manage both general and medical waste at point of use, segregation, disposal and collection.
- Visual reminders emphasising hand hygiene, safe injection practices, respiratory hygiene, and other IPC measures.
- Training materials for relevant staff.
- Communication material to inform and educate consumers.

IPC supplies

Ensure there is a continuous and sufficient supply of the following:

- PPE, including eye protection and long-sleeve fluid resistant gowns and gloves for the vaccination team's protection in the event of dealing with a vaccine adverse event or other incidents such as support to an unwell consumer or clean-up of body fluids.
- Other IPC supplies including alcohol-based hand sanitisers, thermo-scans for temperature screening, tissues, waste bins and bin liners, sharps disposal bins, cleaning and disinfection products, visual reminders, and signage and physical barriers to aid spatial separation.

Identify a suitable secure area for storage of supplies.

5 COVID-19 Immunisation Register

The COVID-19 Immunisation Register (CIR) is a centralised, browser-based system used to record all vaccination details. CIR uses email address, phone number and six identifiers to match consumer records with NHI records.

Once a site has joined the COVID Vaccination Immunisation Programme (CVIP), request access to CIR for vaccinators and administrators, following the process outlined below.

For any questions or support on new user onboarding, the regional account manager should be contacted.

5.1 Logging in to CIR

Access request is made to the CIR location and inventory portal by contacting the Ministry, email **help@C-19imms.min.health.nz** or call **0800 223 987**.

- To access to the live CIR Location and Inventory portal follow the link **https://ncts.force.com/cir/s/**
- Email **help@C-19imms.min.health.nz** or call **0800 223 987**, for assistance with forgotten passwords or logging in problems.

Further details regarding how to log into the CIR can be found in the quick guides, videos, and detailed training guide at **https://circlassrm-ncts.cs116.force.com/cir/s/article/CIR-Inventory-Orders-Portal-Quick-Step-Guide**.

5.2 Pre-loading immunisation event records in CIR

CIR is linked to consumers' NHI numbers, meaning any consumer with an NHI will automatically be available in CIR (they will have a CIR profile). Where consumers are in the border worker testing register (BWTR), the Ministry will extract that information to create immunisation event records (or cases) and add these to the consumer's CIR profile.

If consumers aren't in the BWTR, vaccinators or site administrators can add the immunisation event record/case to the consumer's profile on site at the time of vaccination.

5.3 Where the consumer does not have an NHI number

Where a consumer does not have an NHI in CIR, confirm the consumer is in the eligible cohort to receive their vaccine, then create a new NHI number for that consumer. If you do not have the ability to create an NHI number in Health UI, contact the Ministry contact centre on 0800 855 066 to request an NHI number be set up.

When making contact with the centre:

1. Provide the payee number for the DHB or hospital
2. Identify the COVID-19 vaccination clinic
3. Provide the name of the consumer
4. Once the NHI is created, make sure it is linked to CIR using the NHI retrieval function. Retrieving the NHI will create a person profile in CIR which can then be used to create immunisation case records as normal.

Note: It is not mandatory to collect information on the consumer's residency status when setting up new NHI numbers. Experience has demonstrated that collecting residency information can be a barrier for consumers both in their uptake and receipt of healthcare services.

5.4 Recording vaccine waste

It is important for vaccine sites to record vaccine waste in the CIR Logistics Portal, but only to the unopened vial level (the recording of vaccine wasted at the opened vial level is yet to be determined). This is so that vaccine vial waste can be tracked at a local, regional, or national level.

Further details regarding how to log into the CIR can be found in the quick guides, videos, and detailed training guide at **https://circlassrm-ncts.cs116.force.com/cir/s/article/CIR-Inventory-Orders-Portal-Quick-Step-Guide.**

See the Standard operating procedure (SOP) for inventory management on this **SOP for inventory management CIR link**

5.5 CIR support

If the site team requires CIR support, they should contact their super user in the first instance or join a drop-in session before contacting the CIR ServiceDesk.

CIR eLearning modules and quick step guides are available to all staff (see the **Staff training and reference materials** section above).

5.6 Recording in CIR

CIR reports

The CIR portal provides a centralised place for operational reporting, including demand forecast, inventory management (including stock on hand), and orders approved for sites.

These operational reports can be generated for providers by the Ministry of Health CVIP logistics customer services team and will be made available to providers in the future.

Available hard copies

Hard copies of the following forms should be available on site, in the event of CIR being unavailable:

- **Consent forms**
  the required consumer data fields that need to be added to CIR are included on the back of the form
- **COVID-19 Vaccine Adverse Event Report**
  this is the form used to submit adverse event information to CARM. In the event of CIR being unavailable, this form can be used to capture relevant information, noting that on-site adverse events must be reported in CIR as soon as practicable (as distinct from submitting the form to CARM).

See the **Ordering site collateral** section below regarding obtaining these forms.

6 Logistics

6.1 Logistics

The Ministry will maintain the COVID-19 Immunisation Register (CIR) logistics module to support ongoing monitoring of inventory and demand. **Appendix D** shows the current process for distributing the vaccine to vaccination sites. **Appendix E** provides CVIP logistics overview/ cheat sheets.

Logistics support

The Ministry provides two levels of customer support.

1. Level one is the Ministry's IT helpdesk.
   The helpdesk deals with log-in and access issues and can be contacted by emails: **help@C-19imms.min.health.nz** or by phone on **0800 223 987**.
2. Level two is the CVIP logistics customer services team.
   This team can assist with support for order placing and approval, inventory management, and use of the CIR inventory portal. Once the vaccination site has been onboarded, contact details for this team will be provided.

Quality Assurance Approval Step of Orders

Supplier orders made by Inventory users at a DHB level will be sent to their Quality Assurance (QA) user to be reviewed and approved before being sent to the Ministry for approval. The QA user can add and remove products from the order as well as edit the quantity of these products in the order. The QA user can also reject the order or accept the order. Accepting the order will send it through to the Ministry's Logistics team for approval. Each DHB and Provider using the inventory portal will need to have dedicated QA users to review these orders. If a supplier order is created by a QA user, it will go straight to the Ministry's logistics team for approval.

Further detail about how to log into the CIR can be found in the quick guides, videos, detailed training guide on **https://circlassrm-ncts.cs116.force.com/cir/s/article/CIR-Inventory-Orders-Portal-Quick-Step-Guide**

7 Equipment ordering and demand planning

7.1 Ordering IT equipment

Provide the IT requirements, outlined in table 7.1 below, at vaccination sites to ensure staff can access the COVID-19 Immunisation Register. Before starting vaccinations, ensure all IT equipment has been tested, and all staff have received the necessary training to use the devices and CIR. Advise each site team where they can access additional IT support (for non-CIR issues such as hardware issues), including after-hours support if your vaccination site is operating outside standard business hours.

Table 7.1 - IT requirements

Requirement	Details
Network	• A secure network (Wi-Fi, hard wired, or 4G) with connectivity to the device running CIR, and to the user's mobile phone or computer. • Site Wi-Fi specifications: Coverage ranging to reception, vaccination and waiting areas Highly available network (such as fibre and 4G backup)
Internet Browser	• Chrome is the recommended internet browser. Other browsers support CIR, but Internet Explorer is not supported (use Microsoft Edqe if needed). For further information see: **https://help.salesforce.com/articleView?id=sf.getstart_browsers_sfx.htm&type=S**
Computer or Tablet Device	• Any laptop from the last five years should be compatible with CIR providing it has the appropriate browser access. • For further information see: **https://help.salesforce.com/articleView?id=sf.getstart_browser_recommendations.htm&type** =5
Mobile Phone	• CIR users require an iOS or Android mobile phone to download the Salesforce Authenticator application. This can be downloaded from the App Store on iOS and the Play Store on Android. • You can scan the QR code on the right to locate the Salesforce Authenticator app in the relevant App Store.

COVID-19 Tracer App QR codes

The Ministry recommends using posters that have a site-specific COVID-19 vaccination Tracer App QR code.

- QR code posters can be created using the current **self-service webform.** More information about QR code posters is available on the **Ministry's website.**

7.2 Ordering personal protective equipment (PPE)

Table 7.2 - information required when ordering PPE

Details	Process
• **PPE provided will be based on the current COVID-19 Alert Level settings**	• Order via the existing PPE portal via HealthCare Logistics or Onelink
• **Healthcare providers should hold contingency stock of PPE which can be used in the event of Alert Level changes**	• If you are a new provider or currently do not hold continqency stock, please contact **COVID.healthsupplychain@health.govt.nz** to discuss your requirements

7.3 Ordering site collateral

The Ministry has prepared the following collateral to support the vaccination programme. Files will be shared with DHB communications managers via an existing All of Government (AoG) Dropbox or via a Ministry weblink. These can then be printed and supplied to sites.

Translations are now available in the following languages on the Ministry's website; additional languages will be added:

- Maori
- Hindi
- Samoan
- Simplified Chinese
- Tongan
- Cook Island Maori
- Fijian
- Tagalog
- Niuean
- Tokelauan

IMAC has also prepared a consent video which can be displayed in site reception areas if desired. This video is available on the **IMAC website.**

Note: A translator may be arranged to be available on site to assist consumers who speak languages other than English, including New Zealand/Aotearoa Sign Language. See the **Equitable access** section above for more information about translators.

Table 7.3 - site collateral ordering and purpose

Collateral	Purpose	How to Order
COVID-19 Vaccine Information and Consent Pack, which includes: • **Getting your COVID-19 Vaccine: What to Expect** • **Consent form** • **After your immunisation** • **Privacy statement**	To share with consumers on site or before attending the vaccination site	Contact the DHB communications manager
COVID-19 Vaccine FAQs	To provide answers to FAQs	Available on the **Ministry's website**
Vaccination record card	To provide appointment information after the consumer has been vaccinated	The Ministry will arrange distribution of physical cards to sites.
Household contacts of Border workers form	To collect household contact information on site (only to be used if consumers cannot access the online form or 0800 number)	Contact the DHB communications manager
Consent form (which includes fields to capture required consumer data)	For use if CIR is unavailable	Contact the DHB communications manager
COVID-19 Vaccine Adverse Event Report	To provide information, and to enable accurate record keeping	Available on the Centre for Adverse Reactions Monitoring (CARM) website: **https://report.vaccine.covid 19.govt.nz**
Vaccine Error Reporting Form	To enable accurate record keeping	Contact the DHB communications manager
Pull-up banners for site (2 designs: 'Vaccinations here' and 'Protecting our people')	To be displayed on site	The Ministry will arrange distribution of banners to sites.
Teardrop flag for outside site	Visibility to consumers	The Ministry will arrange distribution of flags to sites.
COVID-19 vaccine posters (A3/A4 size)	Provide information to consumers	Contact the DHB communications manager
Large vaccination site poster (AO size)	To provide information simply and quickly	The Ministry will arrange distribution of these large posters to sites.
Instructions for the BioNTech/pfizer COVI D-19 Vaccine - Preparation and Administration	For vaccinators and staff on site	Included in vaccine shipments and are available on the **IMAC website.**
'Where to get help' poster	To provide information simply and quickly	• Contact the DHB communications manager • Also available via the CIR homepage

7.4 Vaccine ordering/demand planning

Table 7.4 - site and facility set up for vaccine delivery

Information required	Details	Process
Site and facility set up information	• Site and facility information must be provided to the Ministry five (5) days in advance of any initial deliveries.	• Use the **New facility site set up form (found in Appendix B)** to submit site or facility details • Return the completed form via email to **help@c-19imms.min.health.nz**

Table 7.5 - demand planning

Information required	Details	Process
Demand plan - appropriate to cater for the upcoming four weeks	• The plan should represent the expected number of vials to be consumed each day, in each location, for the upcoming four-week period. • The plan should be maintained at the facility level on the vial's product. • 21 days of demand forecast must be loaded for a location to place an order.	• Upload and maintain the plan in the CIR Inventory Portal using the demand upload functionality. • Please update forward forecasts on a weekly basis.

7.5 Ordering Interwaste vial disposal bins

As part of site preparations, Interwaste must be contacted to arrange the delivery of an Interwaste vial disposal bin (see the **Disposal of consumables, vaccine and vaccine packaging** section below).

Contact Interwaste on 0800 102 131 (business hours) as soon as the site is approved. Provide at least five business days' notice before the container is required to arrive. Interwaste will collect the relevant details such as the site manager's name and contact details, the delivery date for the first container, and the site delivery address information.

7.6 Ordering other Ministry supplied consumables

Table 7.6 - other consumables

Information required	Details	Process
Order for other consumables (such as sharps bins, bio bags for waste disposal, or 21G 38mm needles)	• This stock will be shipped through a standard courier network, expect delivery between two and four days from the time of order.	• Order consumables via the CIR Portal.
Order for other individual items (such as boxes of plasters).	• This stock will be shipped through a standard courier network, expect delivery between two and four days from the time of order.	• Order consumables via the CIR Portal.

7.7 CIR and inventory management

The COVID-19 Immunisation Register (CIR) provides a centralised place for vaccine and consumables orders, managing stock on hand (SOH), arranging transfers, and recording consumption and wastage of unopened vaccine vials.

The CIR inventory module is where movement (transactions) and use of stock is managed and recorded. (The term inventory is used to describe how much product or stock (in this case vaccine and consumables) is at a location at any point in time.) These records provide effective stock management at each location, ensuring optimum use - and minimum wastage - of vaccines and consumables.

The Ministry's logistics team will continue to monitor demand and allocation using data from CIR along with information provided by DHBs or providers. DHB and provider logistics leads must supply daily reporting (as required) on:

- Stock on hand (daily stock takes)
- Stock movements, including ordering, transfers, wastage, consumption, and stock adjustments
- Stock consumption
- Stock waste
- Quarantine of and repacking of stock.

The Ministry's logistics team will liaise with logistics leads to collect this information through an agreed mechanism.

DHBs or providers may wish to collate daily reporting back from sites on inventory and/or operations to aid the supply of information back to the Ministry.

Please contact your regional liaison if you have feedback on the immunisation process or recommendations for operational improvements.

7.8 Operational reporting

DHBs or providers need to report significant events on sites such as a significant adverse reaction, or a protest to the Ministry on a daily basis.

8 Vaccine storage and handling

8.1 Vaccine security

To ensure the security of the vaccine, the following minimum standards must be met:

- Vaccines must be stored in a work area that has the constant presence of an authorised person (such as an administrator, or security guard or vaccinator) during the hours of operation.
- If the vaccine is to be stored overnight at the vaccination site, the building should be in a controlled-access environment (such as Maritime Port or MIQF).
- If the building is not in a controlled-access environment (such as a community hall), the building should be able to be secured and have a monitored alarm.
- In the event of the vaccines being stored at a vaccination site without controlled access and not a building (such as a tent), an overnight onsite security guard must be present.

8.2 Cold chain storage

All facilities must hold cold chain accreditation as per the ***National Standards for Vaccine Storage and Transportation for Immunisation Providers* 2017** (the National Standards).

Vaccine must be stored and transported in cold chain accredited conditions. The Ministry requires any individuals responsible for handling the vaccine to have completed the appropriate cold chain training.

Further information on cold chain management is available in **section 2.1** of the ***Immunisation Handbook***. See also the manufacturer's specifications for approved product handling, available at: **https://www.medsafe.govt.nz/profs/datasheet/c/comirnatyinj.pdf**.

8.3 Handling refrigerator temperature excursions

The following advice applies to handling the Comirnaty™ vaccine (mRNA vaccine by Pfizer/BioNTech). In its thawed and undiluted state, it can be stored at room temperature (+S°C to +30°C) for up to two hours (120 minutes). This includes any breaches above +S°C that occur during storage in the vaccine refrigerator.

In the event of refrigeration failure and your data logger reading confirming the vaccine has been exposed to temperatures between +S°C and +30°C for more than two hours (120 minutes), or to temperatures below 0°c follow the steps below:

Table 8.1 - refrigeration failure procedure

[-st-ep-,---------- [
Label the vaccines 'not for use' and in the event:
• The refrigerator is currently running within the +2°C to +8°C range, the labelled vaccines are to be retained in your refrigerator.
• The refrigerator is not within the +2°C to +8°C range, reversible causes should be considered (door open, power interruption). If no cause found, the labelled vaccines are to be packed into a chilly bin, with a temperature monitoring device and transported to the nearest back-up provider (details for this are in your cold chain policy).

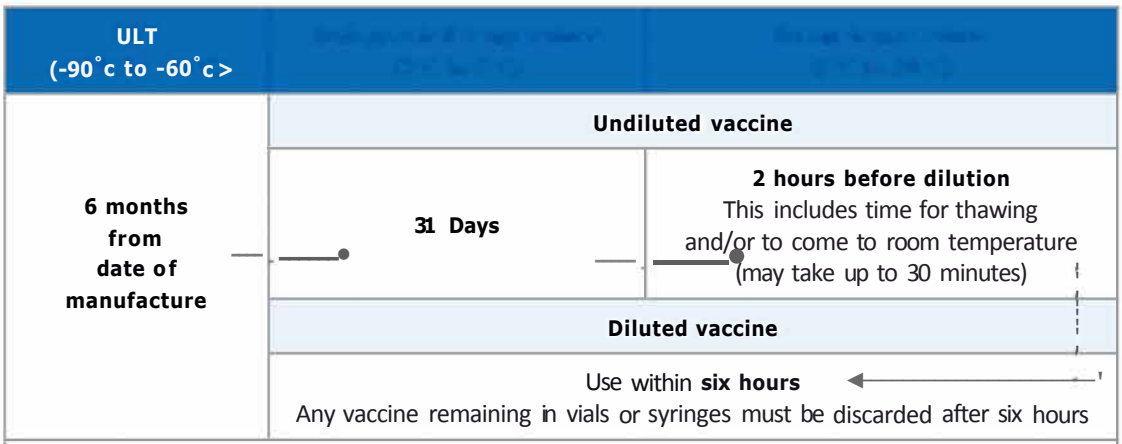
[Step 2
Contact your local immunisation coordinator for advice and further actions.
• Email is monitored from 8.30am to 5.00pm weekdays or contact the Clinical Advice line on **0800 IMMUNE (466 863)** for guidance up to 8.00pm weekdays or on weekends.
• Northern: Lisa Box **(lisa.box@auckland.ac.nz)** • Midland: Olivia Haslam **(Olivia.Haslam@auckland.ac.nz)** • Central: Melanie Miller **(Melanie.Miller@auckland.ac.nz)** • Southern: Sue Rogers **(Sue.Rogers@auckland.ac.nz)**

Step 3
Document the steps and actions taken.

Table 8.2 - vaccine shelf life

Size	-90°C to -60°C	At +2°C to+8°C	At ambient temperature (up to +30°C)
Frozen tray or vial	6 months from date of manufacture	**Note:** In preparing to transport, based on current stability studies, a tray of 195 vials may take up to three hours to thaw in the refrigerator. A smaller number of vials will thaw in less time.*	• **Closed lid trays:** Up to five minutes for transfer between ULT environments. • **Open lid trays:** Up to three minutes for transfer between ULT environments. **Note:** Following room temperature exposure, trays must be returned to the ULT -70°C freezer for two hours before they can be removed again.
Thawed tray or vial (undiluted)	N/A	**31 days** from removal from ULT **Note:** Transportation time at +2°c to +8°C is included in the 31-day limit. Expiry time is midnight on day 31. Vaccines can be administered on day of expiry. Time removed from ULT is not applicable.	**Two hours**
Prepared dose	N/A	**Six hours**	**Six hours**
***Note:** If you are transferring vials from -20°(to a +2°(to +8°(, expect vials to take approximately 30 minutes to thaw, provided they are spaced apart and not in a tray. In this scenario, vials would be spaced approximately 2.5cm apart in the +2°(to +8°C refrigerator.			

Figure 8.1 - vaccine shelf-life diagram



Note: As each of these 'stages' are separate, there is a 2-hour window for undiluted vaccine where the vaccine may be kept at room temperature once removed from refrigerated temperature. In the event the vaccine is diluted in 30 minutes, it does not provide an additional 1.5 hours of expiry to diluted vaccine in room temperature; once the vaccine is diluted; it only has a six-hour expiry.

Vaccine in an ULT environment has an expiry of six months from the date of manufacture (the expiry date is recorded on the vial and tray). Total time, from each stage after the **maximum allotted time,** is as follows:

- Post-ULT
  31 days in refrigerated temperature (not diluted)
  2 hours in room temperature (not diluted)
  6 hours in refrigerated or room temperature (diluted); that is **31 days+** 2 hours+ 6 hours.

8.4 Movement of vaccine

Vaccine can be moved around a vaccination facility carefully if required (for example, walking vaccine from one floor to another within a facility if required carefully is acceptable, but running with it is not). Avoid any unnecessary movement or handling.

The vaccine must not be shaken at any stage of transportation, preparation, or administration.

Note: If vials are dropped, or there is another reason for concern about whether the vaccine is still viable, contact **IMAC for advice on 0800 IMMUNE (466 863),** option 1 (health professionals) and then option 2 (COVID-19 vaccinator support).

8.5 Repacking vaccine at DHB facilities

- **Who can re-pack vaccines?**
  Only a DHB hospital pharmacy department can repack the vaccine packs down to distribute to a vaccinator or site. This function is actioned under their hospital pharmacy licence and only able to do so for supply within their DHB. In this circumstance, DHB means within the DHB legal entity.
- **Who cannot re-pack vaccines?**
  DHB hospital pharmacy departments are not able to re-pack the vaccine packs for supply to providers outside of their DHB.
- **What if a hospital pharmacy is required to repack the vaccine packs?**
  The DHB hospital pharmacy department will need a packing licence issued to them by Medicines Control.

8.6 Transportation of vaccine to other locations

- **What stock movement permissible?**
  Sites who have received their vaccine stock from a DHB Pharmacy can contact the pharmacy to organise a stock movement. The DHB Pharmacy can move whole packs, under their wholesale licence. **Note:** all movements must comply with the National Standards for Vaccine Storage and Transportation.
  This has significant resource implications for the DHB Pharmacy therefore tight stock management is important to minimise waste, and if a stock transfer is necessary please plan ahead to provide maximum time to support DHB Pharmacy processes.
- **What stock movement is not permissible?**
  Non DHB sites who have received stock from either DHL or HCL are unable to move stock from these sites. Ie, once stock is at the site it must be used.
  Non DHB sites are therefore asked to tightly manage their stock on hand and replenishment requests to minimize waste.

- **Does the transport time reduce available days to use thawed vials?**
  Yes. Any hours used for transport of unopened vials at 2°C to 8°C counts against the 31-day limit for storage at 2°C to 8°C.
- **Is there a limit to how long the vials can be transported?**
  Yes. The total allowable transit time of an unopened vial is at 2°C to 8°C is 12 hours. This includes the original transit from our warehouse to you, and any further transport the vial undertakes after that.

8.7 Transportation of diluted or drawn-up vaccine

- **When is moving pre-drawn syringes permitted?**
  Within a facility for immediate use, such as across a carpark to another vaccinating tent/marquee, or to another floor in the building/hospital, for administration to a patient.
  Note: The syringes must be appropriately labelled (content, volume, batch and expiry).
- **Is bulk preparation of pre-drawn syringes permitted?**
  The bulk preparation of pre-drawn vaccine to be transported to another location is regarded as compounding and is not permitted unless it is undertaken in an approved facility (such as a hospital pharmacy aseptic unit, or a third party commercial compounder) with appropriate checks, documentation, and regulator audit.
  Note: Compounding diluted vaccine can be in transit for up to six hours at 2°C to 30°C.
- **Do transportation hours count against expiry limits?**
  Yes, in all circumstances, any hours used for transportation counts against the six-hour expiry limit for storage at 2°C to 30°C.
  Note: Microbiological risks and package integrity, particularly for prepared dosing syringes, are the responsibility of the preparer during transportation of diluted vaccine.

9 Vaccine ordering and delivery

9.1 Vaccine ordering

Inventory order

Vaccine stock (inventory) can be ordered using the CIR in two ways:

1. Direct from the national distribution hubs using a supplier order (see section below), or
2. From another vaccine site using a **transfer order** (see section below).

See the Standard Operating Procedure (SOP) for order fulfilment at this **SOP for order fulfilment CIR link**

Supplier order

This is an order where the stock will come directly from a national distribution hub and the order must be approved by the Ministry's team. Users must be associated with a location to place a supplier order.

Further details regarding how to log into the CIR can be found in the quick guides, videos and detailed training guide at this **link**.

See the Standard Operating Procedure (SOP) for order fulfilment at this **SOP for order fulfilment CIR link**

Cancelling orders

Orders can be cancelled before they are approved by the Ministry. This is to allow corrections to an order that might be incorrect or orders that are no longer required.

Transfer orders

This is a transfer between two locations. It is used routinely to transfer stock between DHB Hospital Pharmacies and mobile vaccination sites. For fixed vaccination sites, the transfer order process is only used for surge/back-up transfers for delivery from DHB Hospital Pharmacies, or end of day returns between two locations. Users must be associated with a location to place a transfer order.

See the Standard operating procedure (SOP) for inventory management on this **SOP for inventory management CIR link**

Table 9.1 - ordering information required

Details	New Process
• **Each site will be allocated a day of the week for delivery. High volume sites may have more than one designated delivery day per week** • **Vaccine orders must be submitted before 10am the day before your allocated delivery day.** • **Facilities should consider the size of the packs they are ordering and their ability to break down packs to avoid unnecessary vaccine movement or wastage.**	• Vaccine orders must be made through the CIR inventory portal. • The CIR inventory portal will only allow orders for deliveries on the allocated delivery day(s). • If orders are **not placed before** 10am the day before your allocated delivery day, the DHB will need to submit a request for an 'out-of-cycle' delivery to the Ministry's CST Logistics Desk.

Vaccine delivery schedule

- **How often will I receive vaccine deliveries?**
  The frequency will depend on your typical volume and frequency. For example, a site with higher volumes can receive more regular shipments while lower volume sites or sites only operating on one day a week may choose to receive only one shipment per week.
- **Can my delivery schedule change?**
  The schedule will be discussed and agreed with DHBs or providers and can be reviewed when required.
- **What if I miss the cut off (by 10am the day before) for ordering vaccines?**
  If you need to order vaccine urgently prior to your next designated delivery day, notify your DHB and they will need to send an 'out-of-cycle' delivery request to the CST Logistics Desk.
- **Where will the vaccine be shipped to?**
  To the location agreed with the DHB or provider.
- **How will I know what vaccines I am due to receive?**
  Each site receiving shipments from the Ministry will receive a notification containing details of the amount of vaccine and/or consumables due to be delivered the following day.
- **What if I don't receive a shipment when I am expecting one?**
  Delivery tracking will be managed centrally by the Ministry. Please contact the Ministry's logistics customer services team.
- **What support can the designated receiver expect?**
  There is a 30-minute call made to the designated receiver to support the delivery process.

Vaccine quantities and unit sizes

- **Full tray (195 vials)**
  290 x 290 x 40 mm
- **15 vial pack**
  130 x 130 x 45mm
- **5 vial pack**
  130 x 65 x 45mm

Consumables kits

There are two kits available based on the size of the vaccine order

- Kit 1 for 100 doses
- Kit 2 for 700 doses

Table 9.2 - consumable kits

Item	Material number	Notes	100 Dose Kit	700 Dose Kit
One of the following: 1. **BD 25G Standard Needle (until stocks are used)** 2. **Agani 25G Standard Needle (supplied by HCI)** 3. **Nipro 25G Standard Needle (supplied by DHI)**	1. 1165011 2. 1170096 3. 1170095	Drawing-up needle for saline - 1 syringe per vial dilution	20 (partial pick)	200 (2 cartons)
BD 3 ml Syringe	1165009	Drawing syringe for saline - **1** syringe per vial dilution	20 (partial pick)	100 **(1** carton)
Vernacare IDS Needle	1165446	Administering needle - **1** per dose	100 (1 carton)	700 (7 cartons)
Unifix 1 ml Syringe	1169565	Administering syringe - 1 per dose	100 (1 carton)	700 (7 cartons)
10 ml Saline	1165013	1.8ml per vial	50x10ml (1 carton)	100x10ml (2 cartons)

Table 9.3 - order as required

Item	Material number	Carton size
BO 21G 38 mm Standard Needle	1165010	100
Biohazard Yellow Bags	1165007	SO
Sharps Containers - 15 L (5 pack)	1165447	5 x 15L
Antiseptic Swabs	1165005	200
Non-Woven Swab	1165004	100
Oermaplast Sensitive Injection Plaster	1165006	250

Table 9.4 - consumables kits sizes and weights:

Kit Type	Carton Size	Carton Weight
• **Kit 1-100 dose kit - via HCL**	250 x 250 x 200mm	1.6kg
• **Kit 2 - 700 dose kit - via HCL**	455 x 305 x 305mm	6.4kg
• **Kit 1-100 dose kit - via OHL**	255 x 250 x 250mm	1.57kg
• **Kit 2 - 700 dose kit - via OHL**	520 x 290 x 385mm	6.405kg

9.2 Delivery to sites

Figure 9.1 - delivery security

 **Warehouse/distribution provider**	 **DHB facility or vaccination facility**	 **Vaccination site**
Role of the Ministry	**Role of DHB**	**Vaccine handover**
The Ministry will arrange secure transportation of the large quantities of vaccine from the vaccine distribution provider to the cold chain storage facility (such as DHB facility or vaccination site) using a Ministry-contracted courier and security firm.	• If the vaccine is transported to a DHB cold chain storage facility, secure transportation of the vaccines from that facility to the vaccination sites becomes the responsibility of the relevant DHB or provider. • In the event vaccines are to be transported from a local facility to the vaccination site, the unique circumstances of such transportations should be considered in the site risk assessment. • In the event couriers or authorised personnel (such as vaccinators, administrators, or security) are conducting the transport, the Ministry recommends there should be direct travel to the vaccination site (that is, no transit points).	**Note:** There should be a local procedure in place to ensure the person responsible for transporting the vaccine can be identified. This is to ensure the DHB, or provider has complete confidence they are handing over the vaccine for delivery to the appropriate person. There is no requirement for the person to be a vaccinator.

Shipper boxes that may be used for transportation from warehouse/distribution provider

Credo Cube

Woolchill

Cool Green Cell

Please note the placement of the MonT2 temperature tracking device used in the shipping box is now placed on the side of the box beside the TrackIT temperature logger (see below):

Delivery temperature and use-by dates

- The vaccine will be shipped under cold chain conditions at +2°C to+8°C from the distribution provider (*Credo Cubes* for the upper North Island, or Cool Green Cell boxes in the lower North Island and South Island)
- Vaccines will be labelled with a use-by date once they are removed from ULT (-90°C to -60°C) and begin thawing.
- The use-by date will be 31 days after removal from ULT and will be on the vaccine carton. Vaccine can be administered until end of day/midnight on day of expiry.

Vaccine stock/inventory management

- Stock should be used on a **first to expire first out** (FEFO) basis, to ensure waste due to expire is minimised.
- If there is any concern that a site has excess stock, this should be reported to the DHB who can arrange redistribution.
- Sites should hold two weeks of stock cover.

Process

Site stock on hand should be managed through the CIR Inventory.

1. Once stock is delivered to a site:
    - Check and verify batch details against details on the order record. Report any discrepancy to the CVIP logistics team.
    - Mark stock as receipted in the CIR Inventory once the site has accepted the stock
2. A physical record should also be kept of any vials consumed or wasted
3. Check the vial and 31-day removed from ULT expiry dates:
    - During the preparation of doses and document this on the drawn-up doses label
    - Before administration of the vaccine
    - At the end of the day check stock
4. Discard any expired vaccines and record this as waste in the CIR Inventory (see section '**Recording vaccine waste**').

5. Any consumption and wastage must be recorded in the CIR Inventory daily.
6. Once consumption is recorded in the CIR Inventory, all remaining stock on site must be checked against the stock showing in the CIR Inventory to ensure that there are no discrepancies.
7. Any discrepancies must be investigated and captured in the CIR Inventory as stock adjustment.

For more detail see the Standard operating procedure (SOP) for inventory management on this **SOP for inventory management CIR link**

Table 9.5 - site delivery and receipt process

Step	Action
 **DHB/provider logistics lead provides site contact and delivery details**	**Site checklist** The site checklist must be completed prior to the site commencing vaccinations (see **Appendix A).**
	Site contact • The DHB or provider logistics lead must provide the Ministry with: o a site contact (a named role and a phone/mobile number) o detailed delivery instructions, including address and any special instructions (such as separate entrances and so on). • Submit this information using the New facility/ site set-up form **(Appendix B)** *at least 5 days prior* to ordering vaccines for that site.
	Availability of site contact • The site contact should be regularly available on site to accept deliveries. This will minimise the administration involved changing the site contact person, for example. • Please notify **urgent** site contact changes to the Ministry's logistics team.
	Cold chain accreditation • The Ministry recommends individuals handling vaccines are cold chain accredited; however, this is not a requirement.
 **Vaccine distribution provider packs and ships vaccine**	**Ship under cold chain conditions** • The vaccine distribution provider will pack and ship the vaccine under cold chain conditions in shipping boxes, depending on delivery destination, at +2°C to +8°C.

Step	Action
 **Site contact receives the package**	The courier will hand the package to the site contact. Before signing for the package, the site contact will: • Confirm the shipping box is addressed to them/their site • Provide their identification to the courier for the courier's confirmation • Conduct a check of the order immediately while the courier is present (see below)
 **Site contact checks the temperature logger** If the temperature datalogger shows: **Green light** flashing once every 10s • The temperature has remained within limits **Red light** flashing once every 10s • Excursion has occurred	**Check for a temperature excursion** The site contact must check the temperature datalogger included in the shipping box to confirm whether a temperature excursion has occurred in transit. The site contact must follow the process below: • Retrieve the temperature logger immediately • Do not attempt to stop the temperature logger • Check the temperature logger as soon as you remove it before any other action (such as removing vials). Checking the temperature datalogger needs to happen immediately as the box containing the vials is opened. **Temperature excursion** When an excursion occurs, a photo should be taken of the datalogger showing the excursion and emailed to the Ministry's logistics team. ***Quarantining a shipment*** Where an excursion has occurred, the site contact must quarantine the shipment in cold chain conditions while the logger is returned to the vaccine distribution provider for reading. The site contact must call the Ministry's logistics team.
 **Note:** A tick in the area indicated means the temperature has remained within limits. A cross means that a temperature excursion has occurred.	**Temperature excursion - next steps** The Ministry's logistics team will talk the site contact through the actions to be taken, such as urgent orders being placed and what will happen once the temperature data has been read.

Step	Action


Site contact conducts visual check
	Visual check
	• The site contact will open the shipping box and the internal vaccine packaging and conduct a visual check of the outer packaging of the five and 15 packs to check for damage and/or leakage. If there is no damage store directly in the fridge.
	• Each site should check the packing slip to make sure all vaccines have been received
	• If there are any signs of damage to the outer container, inspect the vials inside the package:
	  • Broken vials or waste needs to be recorded in the CIR logistics module, but only to the unopened vial stage
	  • Vaccine wasted in opened vials is not required to be recorded in the CIR logistics module.
	  • Please see the **Standard Operating Procedures** in the **Inventory orders** section regarding how to record vial consumption and waste.

 **Site contact signs for vaccine package**	**Vials intact** • Where the vials are intact and there are no concerns, the site contact will sign for the package.
 **Site contact stores vaccine in cold chain accredited conditions**	**Store vaccine** The site contact will then store the vaccine at cold chain conditions in the internal packaging carton it arrived in (not the *Credo Cube/Cool Green Cell* box, but the white vaccine box) until the use-by date and time marked on the vaccine box is reached. Any vials no longer viable must be disposed of following the disposal process detailed below.
D **Receipting orders**	When a vaccine or consumables order is received, it must be receipted into the CIR. This enables the movement of the stock from in transit to available for use in the stock on hand. Further details regarding how to log into the CIR can be found in the quick guides, videos, and detailed training guide at **https://circlassrm-ncts.cs116.force.com/cir/s/article/CIR-Inventory-Orders-Portal-Quick-Step-Guide.** See the Standard Operating Procedure (SOP) for order fulfilment at this **SOP for order fulfilment CIR link**

Equipment returns

Table 9.6 - temperature monitoring, *Shipping boxes* equipment return

Details	Process
***Shipping* boxes and temperature monitoring equipment should be returned in a timely manner - preferably on the same day as receipt - to ensure there are no interruptions of subsequent vaccine deliveries.**	• Pre-paid stickers will be included with the delivery for returns. • The number on the instructions should be called to arrange collection. • Any fault or damage to the packaging equipment should be reported at the time of return. • **Note:** Ensure correct removal or crossing-out of the original courier label and original address details to avoid any confusion.

Table 9.7 - daily reporting information required

Vaccination events	Significant events	Stock on hand / stock movements
• Sites must ensure vaccination events are recorded in CIR at the time of administration. This enables accurate data for operational reports, such as number of vaccinations completed and other trends.	• Providers need to report significant events on sites such as a significant adverse reaction, or a protest to the Ministry daily as required.	Providers must ensure the following information is recorded in the CIR inventory portal daily as required: • Facility stock on hand • Stock movements from facility to facility • Stock movements from facility to site

Table 9.8 - asset management recommended practice

Recommended practice	Details
Collation of site inventory and operations	DHBs or providers may wish to collate daily reporting back from sites on inventory and/or operations to aid the supply of information back to the Ministry.
Demand planning	Maintain a 4-week forward demand plan.
Continuous process improvement	The Ministry welcomes feedback on the immunisation process or recommendations for operational improvements. Please contact your regional liaison to pass on your feedback

9.3 Reports available to DHBs

- **What information is available in reports?**
  As the COVID-19 vaccine reporting is linked to the NHI database, requesting any existing NHI data fields (such as ethnicity) to track vaccination rates and meet other reporting needs is valid.
- **How do I request reports?**
  Contact your DHB or provider reporting team, who will then submit your request to the Ministry's reporting team.
- **Where can I find my reports?**
  Once the report is prepared, it will be available in CIR as both a dashboard and downloadable report.
- **Will my reports be refreshed?**
  Reports will be updated in real-time.
- **What if I want reports for multiple DHBs?**
  Please specify this at the time of requesting the report.

9.4 Vaccine and consumables assets and asset management

An asset is an instance of vaccine stock and vaccine consumables, such as: five pack of vaccine, 15 pack of vaccine, 195 pack of vaccine, or consumable kit.

Assets at a location can be updated through:

- Stock re-work
- Stock adjustment
- Quarantine stock
- Recording consumption, or
- Stock on hand.

Further details regarding how to log into the CIR can be found in the quick guides, videos, and detailed training guide at **https://circlassrm-ncts.cs116.force.com/cir/s/article/CIR-Inventory-Orders-Portal-Quick-Step-Guide.**

See the Standard operating procedure (SOP) for inventory management at this **SOP for inventory management CIR link**

Recording consumption

It is important to record the consumption of vaccine stock and consumables as stock in consumed or, as a minimum, as part of the daily stocktake. The purpose of this is to give an accurate local, regional, and national view of vaccine stock on hand.

Consumption can be recorded in two ways:

1. Consumption – entering directly what has been consumed
2. Stock on hand – entering a physical count of the stock on hand as part of the daily stock take

Further details regarding how to log into the CIR can be found in the quick guides, videos, and detailed training guide at **https://circlassrm-ncts.cs116.force.com/cir/s/article/CIR-Inventory-Orders-Portal-Quick-Step-Guide**.

See the Standard operating procedure (SOP) for inventory management at this **SOP for inventory management CIR link**

Recording vaccine waste

It is important for vaccine sites to record vaccine waste in the CIR Logistics Portal, but only to the unopened vial level (the recording of vaccine wasted at the opened vial level is yet to be determined). This is so that waste can be tracked at a local, regional, or national level.

Further details regarding how to log into the CIR can be found in the quick guides, videos, and detailed training guide at **https://circlassrm-ncts.cs116.force.com/cir/s/article/CIR-Inventory-Orders-Portal-Quick-Step-Guide.**

See the Standard operating procedure (SOP) for inventory management at this **SOP for inventory management CIR link**

10 Disposal of consumables, vaccine, and vaccine packaging

Vaccine disposal and other inventory management topics (outlined below) are available as elearning modules.

10.1 Disposal of consumables

DHBs and providers are responsible for the disposal of consumables. Consumables should be disposed of according to existing procedures (such as disposal into sharps bin and/or biohazard bags). Local procedures are to be followed to arrange collection of the sharps bin and other medical waste.

10.2 Disposal of damaged, empty, and expired vaccine vials

As part of site preparations, Interwaste must be contacted at least 5 business days in advance of your site going live to request a vial disposal bin to be delivered to the site. Contact Interwaste on 0800 102 131 (their call centre is available from 8am-5pm weekdays). For more information see the **Ordering Interwaste vial disposal bin** section above.

Interwaste will provide a 20-litre sized container in which to dispose empty, broken or damaged vials. When the container is almost full, contact Interwaste on 0800 102 131 to arrange its pick-up. Interwaste will deliver a new disposal container at the same time they remove the existing container. Interwaste will destroy the vials in an appropriate manner.

Ensure the lid of the Interwaste disposal container remains closed when not in use.

Figure 10.1 - disposal bin

10.3 Disposal of vaccines drawn up but not administered and empty vaccine syringes

Vaccine doses that have been drawn up but not administered must be disposed of in the sharps bin provided. Similarly, empty/used vaccine syringes should be disposed of in the sharps bin. Seal and remove sharps bins when filled and stored in a secure area for transportation and final disposal

Manage sharps waste as per NZS 4304:2002 *Management of Healthcare Waste*.

10.4 Vaccine packaging disposal

Ensure all packaging that the vaccine is sent in is appropriately destroyed to ensure packages cannot be replicated.

Once all vials in a packet have been used, black-out all vaccine-related information on the label, using a permanent marker. The vaccine box must be securely destroyed. It can be disposed of in a secure document destruction bin if one is available or a biohazard bag. Packaging must not be disposed of in household waste collection or recycling centres. If additional biohazard bags are required, please advise Ministry logistics when placing the next consumables order.

11 Site readiness and closure

11.1 Site setup form and site checklist

Complete the site checklists included in **Appendix A** to assess whether the vaccination site is ready to commence vaccinations. Site checklists, upon completion, must be signed by the DHB or provider chief executive, or their delegate, to approve the site is ready. The checklist is then submitted to either the regional account manager or the Ministry's logistics team. Primary care providers may be asked to submit site checklists to their DHB rather than the Ministry directly.

The new facility/ site set up form (v1.4) form (see **Appendix B**) must be submitted ***at least five days prior*** to the site commencing vaccinations. This information is used to set up the facility or site in CIR and ensure deliveries are made to the correct address. Care is required to provide accurate information on this form.

11.2 Completing a dry run

The Ministry recommends a site trial or dry run before beginning vaccinations on site to ensure staff are familiar with their roles and consumer flow can be tested. The Ministry's logistics team do not provide dry run packs however, an optional order of consumables can be ordered from the Ministry's logistics team which can be used to complete a dry run.

11.3 Facility/site closure form

Complete the facility/site closure form (see **Appendix C)** as a part of the site and facility closure protocol, and to assess and return stock.

A stocktake of all consumables relating to the COVID-19 Vaccination Rollout must be completed upon site/facility closure. Submit the completed facility and site closure form to the Ministry's logistics team and your DHB logistics Lead. This should be submitted a week before the closure or as soon as the closure of the location is known.

12 Becoming a COVID-19 Vaccination site

12.1 Onboarding

Becoming a COVID-19 vaccination site can be complex, involving engagement with both your local DHB and/or PHO and the Ministry. To ensure consumer safety, vaccination sites will need an appointed Clinical Site Lead to navigate the onboarding process. The Clinical Site Lead is accountable for meeting **clinical safety and quality standards** at their site, as well as supporting **planning, clinical governance, quality, and safety management** processes.

Primary Care providers are a critical component of the New Zealand COVID-19 vaccination rollout.

The Ministry-prepared Primary Care Onboarding Guide provides simple step-by-step guidance on how to become a COVID-19 vaccination site. Specifically, the guide incorporates:

- A sequential view of the steps required to set-up a COVID-19 vaccination site
- Links to supporting documents for each step of the process
- Contact details for support and assistance for each step of the process
- A simple checklist to track progress.

12.2 Additional resources

The following supporting documents found on the Ministry's website sit alongside the Primary Care Onboarding guide:

- **Technology, User Roles, and Training Matrix**
- **User Onboarding Journey for Book My Vaccine** (also known as NIBS)
- **User Onboarding Journey for COVID-19 Immunisation Register (CIR)**

Section B: Pathway to vaccination

Section guidance

This section provides operational guidance on the vaccination pathway, from booking and scheduling to vaccine preparation onto vaccine administration and observation.

Purpose

The purpose of this section is guiding the vaccinating workforce to *do the right thing* and have the right resources and information available to provide a safe quality vaccination journey for every consumer.

It is designed to be applicable to all sites delivering the COVID-19 vaccine and provide guidance and assistance to providers, to maintain public safety and ensure consistent and equitable vaccination practices are in place across New Zealand/Aotearoa.

This section should be read and interpreted alongside the ***Immunisation Handbook 2020,*** the Standards, and **IMAC resources**.

Appendices relevant to this section

- **Appendix G: Vaccination site screening questions**
- **Appendix H: Supported decision-making process**
- **Appendix I: Serious Adverse Event Process** (process steps, SAC examples, notification form)

13 Booking and scheduling

Arrangements for the booking and scheduling of Group 1 consumers, including household contacts, will take place at the DHB or provider level. This will include booking and scheduling appointments for consumers to receive their second dose of the BioNTech/Pfizer COVID-19 Vaccine. This should also include rescheduling second dose visits, if required, and providing a mechanism for people to reconfirm their appointment time (for example, if they lose their record card).

It is a requirement that electronic booking systems are used by providers to book consumer vaccination appointments alternatively consumers can book appointments via Whakarongorau Aotearoa on 0800 28 29 26. Where a provider (including general practice, hauora providers, urgent care (primary care/hauora providers) and community pharmacy) does not have an operational electronic booking system, the provider must book appointments through the National Immunisation Booking System (NIBS).

While providers with existing electronic booking systems may continue to book vaccination appointments through their own electronic booking systems, they may choose to opt-in to the NIBS. The Ministry will support NIBS onboarding and training for providers planning to use the NIBS.

For more information, see **Section C: Additional Programme Guidance, Variations, and Incidents** for:

- Vaccinating Border or MIQF Workers
- Vaccinating Household Contacts
- National Immunisation Booking System (NIBS)

Ensure that the scheduling of vaccination appointments avoid over-crowding and allow for physical distancing and other IPC measures. Also, limit the number of accompanying people to only those who need assistance, whether physical or psychosocial.

13.1 Booking second doses

Do not vaccinate less than 21 days

- The administration of the BioNTech/Pfizer COVID-19 Vaccine at an interval of less than 21 days is not approved by Medsafe and is considered off-label use and must be reported to CARM.
- In the context of the current Delta outbreak, the Ministry recommends receiving the second dose as soon as practical after the minimum 21 days.
- New bookings made through bookmyvaccine.nz and the COVID-19 Vaccine Whakarongorau Aotearoa 0800 28 29 26 is set to three weeks between the two doses.
- If consumers have existing vaccination bookings, they can keep their second appointment as it is, or choose to change it. Either way the important thing is that consumers receive two doses of the vaccine to be fully vaccinated.
- Doses can be booked for any time after day 21.

Administering leftover vaccines

To minimise wastage, the Ministry recommends the preparation of a back-up/stand-by list of consumers aligning to the sequencing framework. Leftover diluted and/or drawn vaccine unused at the end of the shift that would expire before the next clinic, may be administered to consumers on the back-up/stand-by list.

The Ministry does not require visibility of the back-up/stand-by list; use best judgement to manage this list as to align with the sequencing framework.

14 Protecting security and privacy

The vaccination process requires personal, identifying information be collected. In the health sector, NHIs are considered identifiable information as well as standard identifiers such as name, address, and date of birth.

Protecting and treating sensitive health information with respect is important.

- All medical records (such as written consent forms) at vaccination sites are required to be securely stored out of the sight (for example, in a drawer).
  - It is preferable this storage area is locked, or in the constant presence of an authorised person, such as an administrator, a security guard, or a vaccinator.
- At the conclusion of the vaccination event, the Ministry recommends that the personal information documentation is taken directly (that is, no transit points) by an authorised person (such as an administrator, a security guard or a vaccinator) to the site where the record will be held.

In addition to ensuring the security of health records as per above, the following security and privacy factors should be considered:

- Informing consumers why their information is being collected and what it will be used for (for example, that it will not be used for immigration or law-enforcement purposes)
- Consider who may be able to the see computer screens that are likely to be used to input personal information
- Ensure passwords and log-in details are kept confidential
- In the event of a likely security or privacy breach advise the relevant DHB or provider privacy officer or contact the Ministry's Privacy team as soon as possible
- Securely dispose unnecessary duplicate information
- Ensure confidential conversations occur away from areas where other consumers or members of the public might also access.

Note: Use secure methods when transferring information outside of the core vaccine systems such as USB encryption or accredited online services. Data should be password protected.

15 Operational phase

- Use a daily checklist to monitor and ensure IPC and other safety measures are adhered to.
- Consider a daily 'huddle' to enhance teamwork and to highlight any IPC issues.
- Screen all staff for signs and symptoms of COVID-19 at the start of each shift.
- Screen all people arriving for vaccination for COVID signs and symptoms, especially those people who meet the New Zealand/Aotearoa Government 'higher index of suspicion' (HIS) criteria. For additional screening questions see **Appendix G**.
- Ensure the scheduling of vaccination appointments avoids over-crowding and allows for physical distancing and other IPC measures. Also, limit the number of accompanying people to only those who need assistance, whether physical or psychosocial.
- Ensure the appropriate processes are in place to prevent under-age vaccinations – **this is a never event**.
- Ensure the appropriate processes are in place to prevent second dose vaccinations earlier than 21 days – **this is a never event**.

Note: In the rare occurrence where a medical practitioner deems the vaccine clinically indicated for a consumer, the medical practitioner who is an authorised prescriber can prescribe the vaccine as off label/ unapproved use. This must be documented clearly including the rationale for early second dose and the informed consent process. A CARM report does not need to be completed if the vaccine has been prescribed by a medical practitioner. Written consent is advised.

Key IPC measures to implement

Prepare each injection in a clean, designated area.

Hand hygiene

- At the start of the shift, all vaccination team members are required to wash their hands thoroughly with soap and water and dry them thoroughly or use hand sanitiser.
- Facilitate attending consumers' hand hygiene (as above).
- Vaccinators should perform hand hygiene before putting on and removing PPE, before preparing the vaccine, and between each vaccine administration, preferably using alcohol-based hand sanitisers.
- Gloves are not required and, if used, do not replace the need for hand hygiene between each vaccine administration and for other indications. The use of alcohol hand sanitisers on gloves is strongly discouraged.

PPE

- PPE is to be selected based on risk assessment as a part of standard precautions.
- In the context of the COVID-19 pandemic, vaccinators should wear PPE appropriate to the public health risk and current COVID-19 Alert Level settings.

Preparation and administration IPC

- Sterile, single use syringes and needles should be used. These should only be removed from their packaging immediately before use.
- Perform hand hygiene before preparing vaccine for delivery
- Prevent contamination of the vials by wiping the access diaphragm (septum) with 70% alcohol (isopropyl alcohol or ethanol) on a swab or cotton wool ball before piercing the vial and allow to air dry. If the top of the vial is accidentally touched during drawing up it must be re-wiped (repeat this step).
- Adhere to IMAC guidance for the drawing up of vaccine and skin preparation at the site of injection.
- Discard used syringes and needles as a single unit into a sharps container immediately after administering the vaccine

Vaccination Practice in COVID-19 Alert levels

Generic risk mitigations for vaccination sites (applicable to any Alert level) can be found in **Appendix J.**

Vaccination practice variation according to COVID-19 Alert level changes can be found in **Appendix K**. All guidance will be regularly reviewed. This should be read in conjunction with COVID-19 Readiness Plans, **Community Response Framework (PDF, 422 KB)** and **Primary care quick reference guide.**

16 Vaccinating consumers aged 12 to 15 years

For information on informed consent please see section **Obtaining informed consent** below.

16.1 Vaccine safety and additional considerations for consumers aged 12 to 15 years

The most common side effects in young people aged 12 to 15 years are like those in people aged 16 years and above. They include pain and swelling at the injection site, tiredness, headache, muscle, and joint pain, enlarged lymph nodes, chills, nausea, vomiting and fever. These effects are usually mild or moderate and improve within a few days from the vaccination**.**

Similarly, with consumers over the age of 16 years, it is important to assess the administration site and select the correct needle length. Most commonly, the same needles used for adults would be used for consumers aged 12-15 years.

Interaction with other vaccines

If possible, the COVID-19 vaccination should be given 7-days before or after administering the live-attenuated shingles vaccine (Zostavax). Other vaccines on the National Immunisation Schedule can be given before, after or at the same time as the COVID-19 vaccination.

Ensuring young people have adequate understanding of the vaccine and can provide informed consent

IMAC and the Ministry are working on training and guidance material to support vaccinators to gauge a consumer's ability to provide informed consent. It is important that a robust conversation occurs prior to vaccination, where the consumer has an opportunity to have any questions answered and concerns addressed.

17 Preparation of doses

The BioNTech/Pfizer COVID-19 Vaccine comes as a concentrate and **must be diluted on site,** following the instructions provided by IMAC. These instructions are included in vaccine shipments and available on the **IMAC website**.

- **Note:** These instructions are regularly updated. Please ensure you are using the most recent version.

BioNTech/Pfizer COVID-19 Vaccine should be brought to room temperature prior to dilution, as noted in IMAC's preparing vaccine instructions. It should not feel cold to the touch. The actual time to get the vial to room temperature will vary depending on when you take vials out of the fridge and the temperature of the room. Approximately 30 minutes should be sufficient time.

Please note the BioNTech/Pfizer COVID-19 Vaccine is fragile and **must not be shaken** during preparation. However, once the vial has been fully thawed, it can be gently inverted ten times to reduce condensation.

If during the preparation of the vaccine a foreign body (such as a black particle) or discolouration is identified, the vial should be discarded and recorded as an open vial-quality issue in CIR.

Once the vaccine has been diluted, it **must be administered within six hours**. Any prepared doses not used within this time period must be discarded. Prepared doses cannot be transported to other sites.

For quality and safety purposes, after diluting the vaccine, it is recommended that each vial and/or syringes (made from that vial), are labelled with the:

- diluent name
- date and time of dilution
- expiry time after dilution.

Only draw up one vial at a time, each vaccine from that vial should go into one container with the original vial for vaccine delivery. **Do not mix doses from different vials**.

At all times, **avoid exposing the vaccine to direct sunlight or UV light** (when as a concentrate and as a prepared dose).

During the preparation of the vaccine standard local IPC policies should be followed.

Note: During the preparation of the vaccine both expiry dates must be double checked. This includes the vial and the 31-day removal from ULT expiry date. Vaccines can be administered until the end of the expiry day.

17.1 Number of doses per vial

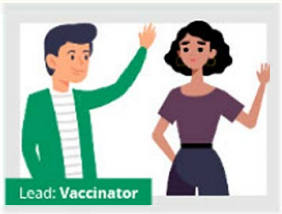
The expected number of doses from each vial remains at six, but there is technically enough vaccine in a vial to draw up seven doses using LDS needles. It is safe to use the vaccine in the seventh dose providing you are totally confident that you have measured the saline correctly for dilution, that each dose of vaccine has the full 0.3mls, and that you are drawing up and giving the vaccine using the same needle as instructed.

Note: Incorrect volume of diluent may be detected by identifying you have drawn up less than six or more than seven doses from the vial. Should this occur, quarantine, and discard all doses from that vial. This error must be documented as waste in CIR and reported as an incident in the local organisation's quality and safety reporting system.

18 Vaccine administration and observation

For more information see **IMAC guidelines** found on the IMAC website and the ***Immunisation handbook*** **Section 2.2** for the correct vaccine administration process.

Table 18.1 - pre-vaccination greeting and verify identity

Step	Action
 **Greet consumer, conduct COVID-19 health check**	On arrival at the vaccination site, the vaccinator/site administrator will greet the consumer and ask whether they have any COVID-19 symptoms as per standard site practices*. **Please note:** • People who have symptoms of COVID-19 should be advised to stay at home and get a test. They can be vaccinated once they have a negative test result and symptoms are mild only. • People who have been to a current location of interest according to the Ministry's website, are advised to go home and follow the specific advice for the site of interest they attended. • People who are significantly unwell are advised to wait until they are better before getting the vaccine; however, note that mild symptoms are not a contra-indication. People in this situation are advised to discuss their symptoms with their GP or vaccine provider. • People who have been advised to self-isolate, stay at home or are waiting on a test result, should have their appointment deferred. • Please see the **Vaccination Site screening questions** below for questions related to clinical assessment.
 **Verify consumer's identity**	The vaccinator/site administrator will also verify the consumer's identity using name, DOB, address, and locate their record in CIR. Check the consumer's DOB and confirm age. If underage do **not** vaccinate. • If the consumer has presented for their second vaccination and their first dose was given less than 21 days ago do **not** vaccinate. **Note:** Photo ID is not required to confirm the consumer's identity.

*Especially those people who meet the New Zealand/Aotearoa Government 'higher index of suspicion' (HIS) criteria.

Table 18. 2 - pre-vaccination provide collateral

[step	I_A_c_t-io-n-----------[
 **Provide collateral**	The vaccinator/site administrator will provide the consumer with the COVID-19 vaccination information and consent pack, which includes the Getting your COVID-19 vaccine: What to expect factsheet, consent form, privacy statement, and after your immunisation factsheet. • You may also choose to provide the COVID vaccine FAQs sheet, which is available on **the Ministry's website.** You may also display the privacy statement in the reception area as well as supplying the information in hard-copy.

18.1 Sharing information on the vaccine

The Medicines Regulations (1984) requires written information is provided in the form of a data sheet, available at **https://www.medsafe.govt.nz/medicines/infosearch.asp;** the COVID-19 Vaccine data sheet can be found by searching 'COVID-19'. There is no legal requirement for any hard copy data sheets or medicine packaging inserts to be provided on site.

Table 18.3 - vaccination process: pre-vaccination clinical assessment

Step	Action
 **Complete a pre-vaccination clinical assessment**	Pre-vaccination clinical assessment The vaccinator undertakes a pre-vaccination clinical assessment. This encompasses whether the consumer has medical reasons why they should not receive the vaccine, any history of allergy, whether they had an adverse event after receiving the first dose of the COVID-19 vaccine, any current symptoms, and other relevant precautions. This includes checking that the consumer is not underage or if the consumer has presented for their second vaccination dose and it has not been 21 days since their first vaccination dose. Interaction with other vaccines If possible, the COVID-19 vaccination should be given 7-days before or after administering the live-attenuated shingles vaccine (Zostavax). Other vaccines on the National Immunisation Schedule can be given before, after or at the same time as the COVID-19 vaccination. The outcome of this clinical assessment must be recorded in CIR (in the medical screening section). • If you record the consumer as medically unfit to receive the vaccine, CIR will prompt you to either cancel or reschedule the immunisation event. If the consumer is temporarily unable to receive the vaccine (that is, they are unwell today), select reschedule to ensure you can use the same CIR case record in future to capture details of the first and second doses. • Only select cancel if the consumer will *never* be able to receive the vaccine. Cancelling the event record means you cannot go back to record a first or second dose on this record in future.

Table 18.4 - vaccination process: informed consent

[-s-t-ep------	I_A_c-ti_o_n-----------[
 **Obtain informed consent**	**Obtain informed consent before vaccine** The vaccinator (or vaccinator support person) must obtain the consumer's informed consent to receive the vaccine prior to the administering of the vaccine. Where appropriate, consent may be given by a proxy such as a guardian or person with power of attorney. • **Note:** IPC guidance must be observed when dealing with hard-copy consent forms and obtaining consent. For example, consumers should use hand-sanitiser before or after handling a pen to sign the form or bring along their own pen.
 **Record consent in CIR**	**Consumer consent record** The vaccinator or an administrative support person must record the consumer's consent to receive the vaccine in CIR. Do not vaccinate if the interval is less than 21 days. • If the person does not wish to receive the vaccine, record their decline in CIR.

18.2 Obtaining informed consent

Prior to administering the vaccination, the registered health professional must obtain informed consent, per the *Code of Health and Disability Services Consumers' Rights* (the Code). The steps to recording the outcome of the informed consent question is:

1. The vaccinator or an administrative support person must record in CIR the consumer's consent to approve or decline the administration of the vaccine.
2. The programme assumes verbal consent is agreeable in most situations.
3. Written consent can be considered in the following situations below:
    a. Written consent must be obtained where there are significant risk of adverse effects to the consumer, per **clause 7(6c) of the Code,** or if it is being prescribed outside of the programme (e.g. unapproved use).
    b. Written consent may be used if this is the provider's or vaccinator's preference, for example, in aged residential care settings.
4. Where written consent is recorded under points a. and/orb. above, the forms do not need to be uploaded to CIR; rather, the provider is responsible for ensuring the forms are archived as a part of that consumer's clinical record.
5. If written consent forms are unable to be archived in the consumer's clinical record, then this must be uploaded onto CIR. Once this is complete the record can be destroyed.

Where a consumer is not competent to make an informed choice and give consent for their vaccine, someone who has the legal right can make decisions on the consumer's

behalf; namely a legal guardian or someone who currently holds Enduring Power of Attorney for personal care and welfare.

See **Appendix H** which displays the process for consumers requiring support to consent to the COVID-19 Vaccination. Any supported decision-making conversations should be documented in the notes section of CIR.

For more information regarding obtaining informed consent, see the ***Immunisation Handbook*, chapter 2**.

For more information regarding supported decision making, or to access the training module specific to COVID-19 Vaccine Supported Decision Making, see IMAC Learning Courses at **IMAC Learning**.

Informed consent for consumers aged 12 to 15 years

Under the code of rights, every consumer, including a child, has the right to the information they need to make an informed choice or to give informed consent. Therefore, a young person aged 12-15 years can provide their own informed consent or refusal to consent if they are deemed competent to give consent, and a parent or guardian does not need to provide consent or be present. Some of these young people may choose to have their parent or guardian consent on their behalf and that is fine.

Verbal or written consent for consumers aged 12 to 15 years

Informed consent for consumers aged 12-15 years can be verbal. However, written consent can be required if it is the provider's or vaccinator's preference, and like with all consumers, must be obtained if there is significant risk of adverse effects.

Written consent forms

Written consent forms must be managed on-site or by a centralised administration team. Given the information on the written form contains personal information, **forms must be always held and transported securely** (for example, in a locked cabinet/drawer, a tracked courier bag, or other secure container when transported between locations). The consumer may also decide to take the written consent form with them.

If providers choose to upload written consent forms the person uploading, for example the administrator, must scan each form to their computer, locate the consumer's CIR record, then upload the scanned form/s to the consumer's CIR record; delete the local copy and securely destroy the written form. When necessary, the written form may be kept for a few days or weeks to check for inaccuracies in transcribing before the written forms are destroyed.

Note: Instructions for uploading files to CIR are included in the CIR eLearning module.

Variations to consent forms

As of 6 May 2021, there is now only one Ministry of Health consent form (the Group 1a version m has been withdrawn). This is available via the Ministry's Dropbox.

Where a variation of the Ministry's consent form is used, it must still include the standard information, *please let your vaccinator know* bullet points and the *informed consent* declarations.

- **Note:** Modified consent forms must be submitted to the Ministry for review and approval before making it available for use.

Table 18.5 - vaccination process: administering the vaccination

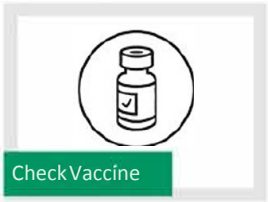
Step	Action
 **Check vaccine**	**Check vaccine** Check: • The label and confirm that the time after dilution (a six-hour window) has not expired. • The vial and the 31-day expiry date. **Note:** Vaccine can be administered until end of day/midnight on day of expiry
 **Administer vaccination**	**Administer the vaccination** • **Note:** Use your clinical judgement to determine if a longer needle is required (38mm). Use of a shorter needle risks delivering the vaccine subcutaneously as opposed to intramuscularly, which has the potential to underdose. For more information on needle length, refer to the ***Immunisation Handbook.*** • IMAC are creating clarified preparation and administration guidance for this situation, including the importance of priming.
 • **Record information**	**Record vaccination information in CIR** Once the vaccination is complete the vaccinator or administrative support person must update the consumer's record in CIR with complete and accurate record of the vaccination event This enables accurate data for operational reports (such as number of vaccinations completed and other trend data). This must include: • The batch and sub-batch number, for example AB1234-567 (the first part is the batch number, the second part is the sub-batch number; these are recorded on the vaccine box.) • Details of the injection site and the date and time of the vaccination event. In situations where this is not possible, such as CIR being unavailable, or insufficient internet connectivity at the vaccinating location, ensure an administrative process is in place to enter information into CIR on the same day as the vaccination event. This is essential clinical information; it is a requirement to ensure it is not lost and that it is transcribed correctly.

Table 18.6 - vaccination process: after vaccination

[-s-t-ep-------	I_A_c-ti_o_n----------[
 **Consumer waits 15 minutes in observation area**	**Observation** The consumer must remain on site under observation for at least 15 minutes. If the vaccinator determines it necessary, they may ask the consumer to wait for longer than 15 minutes, for example, if the individual is in a rural or remote area or has a history of anaphylaxis. Post-vaccination advice should be given to consumers both verbally and in writing. More information and resources can be found on the Ministry's 'COVID-19 vaccine: After your vaccination' poster found on **the Ministry's website.** For further information on post vaccination, see **section** 2.3 in the ***Immunisation Handbook.***
Vaccination card	The vaccinator or site administrator must provide the consumer with a card to record the date/time of their vaccination and the date when they will be expected to receive their second dose. **Note:** The vaccination record card currently serves as an appointment reminder and must be provided to the consumer. Please encourage consumers to retain their record card and keep it somewhere safe or take a photo of the card. The Ministry is exploring a digital certificate for proof of vaccination.
 **Record exit in CIR**	Consumer exit time record The site administrator/vaccinator must record the time of the consumer's exit from the site in CIR. Any hard copy forms must be entered into CIR by close of business on the following day. Ensure any printed copies are locked away when not in use.

18.3 Observation following vaccination

Consumers should remain under observation for at least 15 minutes following vaccination in an observation area. This is to ensure that any adverse reactions that may occur can receive prompt treatment.

All vaccinators must be able to distinguish anaphylaxis from fainting, anxiety, immunisation stress-related responses, and breath-holding spells and seizures. For further information on post-vaccination procedures, see **section 2.3** in the ***Immunisation Handbook.***

Active monitoring: Post Vaccine Symptom Check

As part of the pharmacovigilance activities for the COVID-19 Vaccine, the Ministry is conduction active monitoring for side effects after vaccination. This is called Post Vaccine Symptom Check and is sent to approximately 10% of consumers.

The Post Vaccine Symptom Check, enquiring if the consumer has experienced side effects since the vaccination, is via an SMS text-based survey to a randomly selected sample of the vaccinated population. The consumer can reply YES or NO – or STOP should they wish to opt out of the survey. Where the consumer replies with YES, a unique and secure link to a mobile-friendly survey form that will capture the side effect/s experienced is sent.

- Post Vaccine Symptom Check will provide additional understanding of the vaccine side effects. The results will be published on the Medsafe website.

18.4 Consumers' record of vaccination

COVID-19: Requesting proof of vaccination for overseas travel

Consumers should be supplied with a COVID-19 Vaccination record card detailing the vaccine administered and the date their second dose is due. This card is not designed as a vaccination certificate – and as such, may not be recognised as proof of vaccination by other countries.

In the case where formal proof of vaccination is required for international travel, request a vaccination confirmation letter from the Ministry. For more information please see the **Ministry's website**.

Section C: Additional programme guidance, variations and incidents

Section guidance

This section provides additional guidance to vaccination, including vaccinating border/MIQF workers, vaccinating household contacts, NIBS, and incidents.

Purpose

It is designed to provide additional programme information and support, to help maintain public safety and ensure consistent and equitable vaccination outcomes across New Zealand/Aotearoa.

Appendices relevant to this section

- **Appendix F: Links to NIBS**

Section C: Summary of Changes

Version	Date	Section/Appendix	Summary of Changes
27.0	05/11/21	Chapter 21	New chapter for 'Vaccination and Surveillance Testing'
		Chapter 22	New chapter for 'Vaccination in Hospital'
		Chapter 25	Section 'Legislative context of the Amended Vaccination Order' amended

Previous revision history can be found at the end of the appendices section.

19 Vaccination in high-risk or screened 'positive' consumers

The following is operational guidance for vaccinating consumers who are considered high-risk for being exposed to COVID-19 and are willing to be vaccinated.

While this is not advised as a general delivery model to unknown consumers, in the context of community transmission, it is important to have guidance to support this service.

'Screen positive' means that they have answered yes to any of the standard COVID-19 risk assessment/screening questions asked at vaccination reception (see Operating Guidance Appendix G). This means that the consumer is considered high risk for being exposed to COVID-19. These people are not suitable to be vaccinated according to the usual service design model (physical set-up of vaccination sites, workforce, and PPE guidance) as these settings are designed to be a low-risk environment. Vaccination of screen positive consumers requires additional considerations (as outlined below) as is currently recommended in only a home visit context, or in a controlled healthcare facility.

Note: Using this type of consumer screening, is to ensure a safe vaccination process of vaccination sites or events. It is different to the High Index of Suspicion (HIS) criteria, and its associated public health actions such as Notification to the local Medical Officer of Health.

It is recommended that this section should be used in conjunction with:

- Ministry of Health COVID-19 Vaccine Operating Guideline.
- Ministry of Health National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017.
- 2021 Addendum to National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017.
- Ministry of Health's Immunisation Handbook 2020.
- Local DHB Standard Operating Procedures.

This 'vaccination in high risk/screen positive consumers' approach should **only** take place in the following two scenarios:

Scenario 1: Home Vaccination

In addition to above it is recommended that providers have Standard Operating Procedures (SOP) specific for home vaccination to support safe delivery processes.

Home visits for vaccination may be required for consumers who are unable to leave their residence because they have been required to isolate (I.e., attendance at a location of interest or contact of a confirmed case). It may also be required for those who have barriers to access due to mobility, disability, comorbidity or another reason that means they are unable to access vaccination at a site including improving equity.

Outside the scope of this section are additional considerations which would likely be part of a DHB standard operating procedure (SOP). This could include but is not limited to a SOP on vaccine transportation and administration, staff requirements and medical emergency equipment.

Scenario 2: Controlled Healthcare Facility

Vaccination for screen positive consumers and/or accompanying whanau in a controlled healthcare facility may be appropriate. This should only be performed in a controlled healthcare facility, where the flow of consumers and staff is controlled, such as a Hospital Emergency Department or General Practice Clinic.

This excludes dedicated vaccination sites and other settings where there is a risk of uncontrolled flow of people and workforce who are not in appropriate PPE, and so therefore is a transmission risk with other consumers and staff.

Requirements for Scenario 1 & 2

In addition to usual vaccination processes, including the Alert Level Guidance **(Appendix K),** the following table is the requirements for the scenarios above.

	Screen Positive Requirements for Scenario 1 & 2
Location	• Only pre-arranged home vaccination or vaccination in a controlled residence or healthcare facility.
Workforce	• Staff should follow the 'At risk staff' section, in **Appendix K,** for their appropriateness to work. • Staff must be fully immunised. • Home visit must have at least one authorised vaccinator and one staff on site has a CPR certificate and adrenaline administration certified. Limit staff in enclosed environment where practical
PPE	• Consumer: Must wear a medical mask (these could be provided). All staff: P2/N95, eye protection, gown and gloves.

	*In 'screen positive' environments, where there may also be 'screen negative' consumers, e.g., during a home vaccination, all consumers in this environment should be treated as 'screen positive'. **In home environments, staff should change PPE if they are moving between different houses. ***Donning and doffing PPE outside in a home environment requires an appropriate space and transporting contaminated PPE back to base for proper disposal, this may be covered in the DHB SOP.
Physical Environment	• Review the physical environment and consider ventilation is adequate. Discuss with local DHB IPC team if unsure. Home vaccinations • Vaccination outside the home wherever practically possible and weather permitting. This could include in a carport, open deck area, or in their parked car. Ensure they can be observed appropriately. • If the environment/location does not have mechanical ventilation, improve ventilation through dilution (I.e., opening windows and doors to outside air). • If completing vaccination indoors, use a room with at least one window and keep the window(s) open for as much time as possible (outdoor temperature and safety permitting). Healthcare Facilities • Please see section '**Environmental considerations and safety controls at the vaccination site**'. Adequate ventilation (mechanical, natural or hybrid) of all areas, including the screening, waiting, post-vaccination observation, and vaccination areas. Where a mechanical ventilation system is operating in these areas, the ventilation rate should be six air changes per hour or according to national or local requirements for healthcare facilities. • Some older facilities may not meet the ASHRAE Standard. It is then recommended they discuss ways to improve ventilation with their local DHB IPC team.

20 Third primary dose for severely immunocompromised

A third primary dose is recommended for severely immunocompromised consumers. It is evident that some severely immunocompromised people do not mount a sufficient immune response to provide adequate protection against COVID-19.

The **Third Primary Dose of the Pfizer/BioNTech Vaccine Policy Statement and Clinical Guidance** outlines the requirements to be eligible for the third primary dose of the Pfizer/BioNTech.

20.1 Inclusion criteria

Only those who are severely immunocompromised are recommended to have a third primary dose and this must be discussed with a medical practitioner and written consent obtained. The inclusion criteria has four categories:

1. Consumers with primary or acquired immunodeficiency states at the time of vaccination.
2. Consumers on immunosuppressive or immunomodulating therapy at the time of vaccination.
3. Consumers with chronic immune-mediated inflammatory disease who were receiving or had received immunosuppressive therapy prior to vaccination.
4. Consumers who had received high-dose steroids for any reason in the month before vaccination.

The supporting detail for each category is outlined in the **Third Primary Dose of the Pfizer/BioNTech Vaccine Policy Statement and Clinical Guidance**.

20.2 Dose interval

For those meeting the requirements, the third primary dose should be administered more than eight weeks after the second dose, with special attention paid to current or planned immunosuppressive therapies. Where possible, the third primary dose should be delayed until two weeks after the period of immunosuppression, in addition to the time for clearance of the therapeutic agent. If not possible, consideration should be given to vaccination during a treatment 'holiday' or at a nadir of immunosuppression between doses of treatment.

20.3 Prescription

The third primary dose must be prescribed by a medical practitioner, and in accordance with **Section 25 of The Medicines Act 1981**, as it is considered off label use, informed consent must be obtained prior.

Note: There is information available on the Health Pathways site under COVID-19 Vaccination > Supporting the decision > Medical Conditions >Immunocompromised.

21 Vaccination and Surveillance Testing

The following section is operational guidance for providers who may wish to perform surveillance testing and vaccination at the same site, for the same consumer.

While this is not advised as a general delivery model, it is important to have guidance to support this service in the context of widespread community transmission.

Surveillance testing for COVID-19 has been used to identify cases in a community where there may be a concern around undetected transmission and infection. This would be particularly relevant in the context of a small 'community of risk' where there may be a need to both test and vaccinate consumers within a short timeframe and with an overlapping workforce.

There are differences between the processes of vaccination and testing, even in low-risk groups. Swabbing for COVID-19 is a higher transmission procedure (potentially droplet producing) than vaccinating and thus has additional PPE requirements and recommendations around physical distancing, as well as encompassing the process for swab labelling and sending to a lab.

In addition to any operational guidance, it is recommended that providers have Standard Operating Procedures (SOP) specific for vaccination and surveillance testing to support safe processes.

Due to the complexity of this process, **this model requires approval and support via the Ministry of Health Clinical Quality and Safety team.**

Requesting approval to set up

Contact the CVIP regional account manager to request approval to set up a vaccination and surveillance testing model.

22 Vaccination in Hospital

22.1 Introduction

The following is guidance for vaccinating consumers (including whānau of patients) against COVID-19 in a hospital setting.

Vaccination is hospital offers an opportunity to reach those who may not otherwise have access to vaccination.

Providing this service should be in accordance with local standard operating procedures, and consider local logistic, dispensing and clinical requirements.

Consumers and/or whānau are not required to stay in hospital for the purpose of vaccination.

22.2 Screening

Screening for COVID-19 follows the same process outlined elsewhere in the Operating Guidelines, however the location and timing would need to be in accordance with local guidance.

Consumers that are 'screen negative' means that they have answered 'no' to all the standard COVID-19 risk assessment/screening questions (see Operating Guidance Appendix G). This means that the consumer is considered low risk for being exposed to COVID-19 and providers can follow the standard vaccination process outlined elsewhere in the Operating Guidelines.

Consumers that are 'screen positive' means that they have answered yes to any of the standard COVID-19 risk assessment/screening questions (see Operating Guidance Appendix G). This means that the consumer is considered high risk for being exposed to COVID-19 and providers should follow the Operational Guidance section "Vaccination in high-risk / screened 'positive' consumers".

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23 Mobile vaccination team

23.1 Setting up mobile vaccination teams

You may choose to deliver vaccinations using a mobile vaccination team who will attend a number of different locations rather than being based at a single site. For example, this may be how you deliver vaccinations in aged residential care settings or workplaces.

As for fixed vaccination sites, you will need to consider how many vaccinators and administrators are needed for each mobile vaccination team.

23.2 Setting up in CIR

Mobile vaccination teams must be correctly set up in CIR so they are linked to a facility and to track the vaccinations the mobile team have delivered.

Steps to set up mobile vaccination teams in CIR:

Complete the COVID-19 facility and site set-up details form (the regional account manager can provide a copy), with the following information:

1. List each mobile team separately using a standard naming convention to identify these as mobile teams and to enable the Ministry to identify the DHB or provider linked to the team. For example, use a naming convention such as:
   CDHB outreach 1, MedPro mobile 2, or ADHB team 3.
2. Identify the facility/facilities that will be the parent for the mobile team/s.

Send the completed form to the regional account manager.

The Ministry will load the facilities and sites into CIR so users can select them.
Ensure each mobile team member required to access CIR knows which facility/site they belong to. When users create vaccination events in CIR, they'll need to ensure each event record is correctly linked by checking the related contacts field under site/facility.

24 Home vaccinations

Vaccines can be delivered in or near a consumer's home or place of residence when they are unable to attend a vaccination site.

When administering a vaccine in a consumer's home, providers must meet the minimum requirements to safely administer the vaccine. This includes meeting the **National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017** and the *COVID-19 Vaccine and Immunisation Programme Service Standards* throughout the entire process.

Providers must have a home vaccination delivery plan that includes standard operating procedures (SOPs). Prior to home based vaccinations being implemented, the plan must be approved by the DHB's CVIP clinical leads and the associated lead professional advisors.

24.1 Transportation of vaccine for household vaccinations

Due to regulatory restrictions on compounding and manufacturing of medicines (see section '**Transportation of diluted or drawn-up vaccine**', if a provider is utilising home vaccinations usually only one vial of vaccine can be transported and administered on each trip. This means that for each trip, the vaccinator can only transport the minimum number of doses required to vaccinate the household. This is an important consideration when planning for home vaccinations **Medicines Act 1981**. This restriction on number of vials/doses does not apply to mobile vaccination services as these will have the required resources on board to support dilution and draw up on site see section '**Mobile vaccination team**' above. All transportation of vaccine regardless of whether it is diluted or not should meet the **National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017**.

The home vaccination or mobile delivery plan and SOP must cover the following:

- Maintaining staff and consumer safety, privacy and well-being
- Respect to the consumers home and whānau
- Processes to mitigate the risk of cold-chain breaches
- Safe vaccine preparation and administration. It is recommended that preparation is carried out back at an approved vaccine preparation site. However, if not possible, preparation in a person's home should follow correct processes (i.e., double checking processes).
- Process to minimise waste
- Documentation and use of CIR
- Management of AEFI in a home environment including the immediate availability of adrenaline and phone access to call emergency services

- Operations at raised alert levels
- Risk register associated with home vaccine delivery

24.2 Consumer Considerations

The preferred method of vaccine delivery is at a fixed COVID-19 vaccination site. Providers should have a process to appropriately identify and approve consumers for vaccine delivery in their home.

Considerations should include:

- Consumer normally has their medical care provided in their home or place of residence.
- Does not normally leave their home or place of residence.
- Not able to be safely transported from their home to a vaccination site.
- Transport to vaccination site requires significant logistical requirement, such as multiple staff and equipment to aid transfer.
- Consumer would benefit from a home vaccination due to a disability barrier to receiving a vaccination at a site.

25 Vaccinating border or MIQF workers

Group 1 border workers and the COVID-19 Public Health Response (Vaccinations) Amendment Order 2021 (Vaccination Order)

Group 1 border and MIQF workers were prioritised at the beginning of the COVID-19 vaccination rollout in order to protect them from COVID-19. This group (including their household contacts) are at the highest risk of exposure to COVID-19. Therefore, this group of workers are prioritised for vaccination to protect them from COVID-19 and prevent the virus from spreading into the community.

Legislative context of the Amended Vaccination Order

On 1 May 2021, the **COVID-19 Public Health Response (Vaccinations) Order 2021** (Vaccination Order) required a narrow group of border workers and Government officials working at the border or an MIQF to be vaccinated against COVID-19.

On 14 July 2021, following an amendment to the Vaccination Order, the requirement to be vaccinated against COVID-19 was broadened to most border workers (at affected airports and ports).

On 17 October 2021, three additional COVID-19 vaccines were included in the amendment, including COVID-19 vaccine Moderna, COVID-19 vaccine AstraZeneca or COVID-19 vaccine Janssen.

25 October 2021, three additional groups of affected persons were added in Schedule 2 as an amendment to the Vaccinations Order:

- Groups in relation to health and disability sector
- Groups in relation to prisons
- Groups in relation to affected education services

The Vaccinations Order is a legally binding health instruction which requires certain groups of workers to be vaccinated in order to undertake 'certain work'.

25.1 Border workers subject to the Amended Vaccination Order

All workers who are required to be tested for COVID-19 on either a 7-day or 14-day schedule will now also require vaccination before they perform required duties on the border.

The amended Vaccination Order applies to people working at:

- managed isolation and quarantine facilities (MIQFs) and managed isolation facilities (MIFs)
- airside area of affected airports and some other higher-risk work at airports
- affected ports
- accommodation services where specified aircrew members are self-isolating

It also includes individuals doing work:

- that involves handling affected items removed from ships, aircraft, MIQFs or MIFs,
- where the job is for a company that is routinely engaged to provide services for an aircraft, ship, MIQF or MIF
- where the person 'has contact with' people who belong to different groups in the Vaccination Order

Note: Identification of these workers are managed through their employers and regulatory bodies.

25.1.1 Scheduling appointments for all Group 1 Border or MIQF Workers

It is the responsibility of the DHBs to ensure access to a priority appointment is available to Group 1 border or MIQF workers (and their household contacts).

It is recommended that DHBs work closely with border sites in their regions to establish an effective method of ensuring priority vaccination.

25.1.2 Use of the CIR Cohort Report

DHBs can use the CIR Cohort Report to extract details of new border workers using the **'T1 employees'** cohort by DHB region and border site type. The DHB can liaise with the border worker to schedule an appointment and complete their vaccination.

The CIR Cohort Report can be used to invite border workers to book a vaccination appointment. If direct arrangements are made with the border sites/employers, the CIR Cohort Report can be used as a quality assurance tool to check the appropriate consumers (i.e., unvaccinated border workers on the BWR) are able to access a vaccination appointment.

For help with accessing the CIR Cohort Report refer to the CIR Cohort Report Guide_15Jul21.

25.1.3 Alternative vaccines

On 17 October 2021, three additional vaccines were added to the Vaccination Order including COVID-19 vaccine Moderna, COVID-19 vaccine AstraZeneca and COVID-19 vaccine Janssen. This amendment enables border workers who were vaccinated overseas with one of the three additional vaccines or Pfizer to carry out work.

For further detail on the requirements contact **IMAC on 0800 IMMUNE (466 863),** option 1 (health professionals) and then option 2 (COVID-19 vaccinator support) and refer to the **Vaccination Order** and the Ministry's **Immunisation Handbook**.

26 Vaccinating household contacts

Household contacts of staff working at border or MIQF are eligible to receive vaccination in Group 1.

26.1 Definition of a household contact

A household contact is defined as someone who usually resides in a household or household-like setting with a border or MIQF worker (including people who may reside part-time in the household). Household contacts are eligible, regardless of whether they are related or unrelated to the workers.

Partners and dependents of eligible workers are also included (dependents 12 years or older, as per Medsafe approvals). Refer to **Table 21.1** below for collecting household contact information.

26.2 Scheduling appointments

Responses will be compiled by the Ministry and subsequently shared with the appropriate DHB via a report. DHBs can then liaise with the household contact to schedule an appointment and complete the vaccination event.

- **Note**: The Ministry intends to move to a self-service reporting model; this will enable DHBs to generate the report with household contact details (rather than the Ministry).

26.3 Vaccinating household contacts without appointment

In the case where household contacts accompany workers to their vaccination event, a digital (or hardcopy) form should be provided for completion to enable the scheduling of their vaccination. Household contacts need to provide information confirming a link to an eligible worker (such as name and phone number). The information provided will be loaded into CIR manually.

In some instances, it may be possible to provide a walk-in vaccination scenario. This will be at the discretion of the site manager, based on their scheduled vaccine supply.

Table 21.1 - collecting household contact information

Channel	Description	Timing
 **Digital**	• In the first instance, the Ministry will directly contact staff with eligible household contacts using information in the border worker testing register. • Contact will be made with those staff to invite them to provide details of their household contacts (this will include an approximate geographic location field to support delivery planning).	Prior to event and ongoing
 **Phone 0800 2VAXCOVID**	• An 0800 phone line - **0800 2VAXCOVID** -will also be available for workers with an eligible household contact to call. This will be operated from 8am to 8pm. Multiple lanquaqe options will be available. Callers will be verified and asked to provide details for themselves and their household contacts. • These details will be passed on to DHBs for scheduling per the following point. • Please provide the **0800 2VAXCOVID** number in your engagements with Border or MIQF workers so they can proactively supply household contact information.	Prior to event and ongoing
 **During current interactions**	• DHBs currently have a presence in the border and MIQ facilities. DHBs may choose to collect contact information during their current interactions with border and MIQ workers. For example, this may include collecting household contact information at the next mandatory test.	During regular testing
 **At the time of vaccination**	• At the time of vaccination, the vaccination team should remind border and MIQ workers to submit the details of their household contacts. The preference is for consumers to use the digital link to complete the online form. The hard copy form should only be provided as a backup for completion in such cases where the consumer is unable to access either the online form or contact the **0800 2VAXCOVID.** • Where hard copy forms are completed, administration staff must transfer these details into an online form for the Ministry to collate to help reduce the risk of a privacy breach. This also provides for sharing information regarding the household contacts (if they are living in different regions for example). Any hard copy forms must then be destroyed.	At event

27 National Immunisation Booking System

27.1 Introduction

The National Immunisation Booking System (NIBS) known as **Book My Vaccine** is being implemented to support a national-led approach to immunising New Zealand/Aotearoa against COVID-19. **Book My Vaccine** will support vaccination sites down to Community Hub level. Primary care sites are optional in this first deployment, as they are only servicing their own enrolled populations using their own electronic booking systems.

This section provides an operating guide for **Book My Vaccine,** including the key stakeholders, staff roles, systems, processes, and guides related to running the **Book My Vaccine** tool.

This section should be used as the first point of reference for all **Book My Vaccine** related activities by any DHB staff member responsible for running vaccination sites and managing bookings. A detailed guide including process flows (the Detailed Booking System Guidelines document), training and user guides are also provided and can be accessed via the links provided in **Appendix F**.

27.2 Booking system principles

The **Book My Vaccine** creation and operating model is based on the four guiding principles shown below, regarding responsibility and Governance between the Ministry, Whakarongorau Aotearoa (Whakarongorau) and DHBs. These principles are intended to promote consumer safety, equity, and trust in the system. These are detailed in the four steps below:

1 Setup

- The **Book My Vaccine** tool will support the nationally led and locally delivered vaccination programme.
- The Ministry has overall coordination and monitoring responsibility, including key messaging and leading nationwide booking campaigns.
- DHBs have responsibility for vaccinating their populations, including localising their campaigns to meet vaccination targets.

2 Setup

- The **Book My Vaccine** tool will be implemented by all DHBs.

- The **Book My Vaccine** tool will be the trusted source of available booking slots for the public, the DHBs and for Whakarongorau call centre to see what appointments are available for booking.
- All vaccination site types down to Community Hub level will use the **Book My Vaccine** tool. GPs and Pharmacies will initially have the option of using either their own system for vaccination scheduling or the **Book My Vaccine** tool.

3 Pre-event

- The **Book My Vaccine** tool will be provided as a package with Whakarongorau as the National Call Centre
- Whakarongorau will only support the **Book My Vaccine** tool and no other booking systems once the **Book My Vaccine** tool is operational. Legacy booking systems will be phased out or replaced.
- Whakarongorau will provide a consumer supporting role for public queries (inbound) and assisted booking for all DHBs and sites available on the **Book My Vaccine** tool.
- The Ministry is responsible to analysing booking system failures (failsafe) and developing operational process, guidelines including communication with all stakeholders.

4 Post-event

- The management of following up individuals for missed vaccination appointments will be a mixed model.
- Whakarongorau can provide the follow-up service for missed appointments (outbound calling) if agreed with the DHB before passing on to the DHB teams for intensive outreach follow-up. This agreement will be defined between the DHB and Whakarongorau in the engagement plan.
- Otherwise DHBs will follow-up on missed appointments (outbound calling), or they can be supported by local models with PHOs or Iwi providers.

27.3 Book my Vaccine system roles

The following key roles have been identified to support the **Book My Vaccine** tool. These roles include staff from the vaccination site, DHB, the Ministry and Whakarongorau. Further information related to the expected support, behaviour and outcomes of these roles is detailed above in the **roles and responsibilities table.**

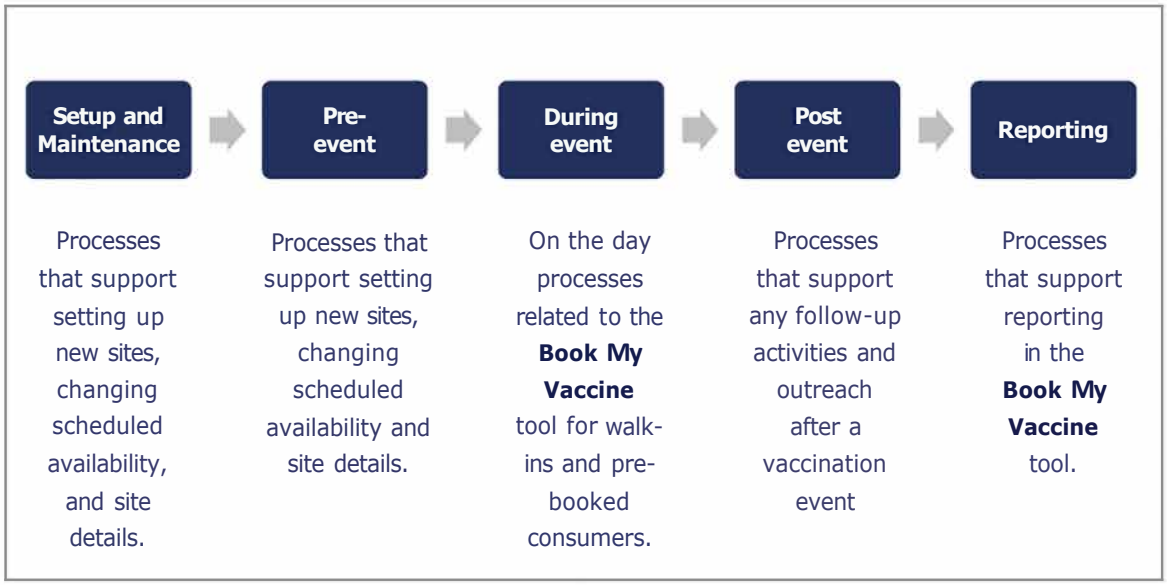
Table 22.1 – Book my vaccine tool key roles

Key roles	Role description
Site receptionist	The site receptionist manages on-site check-in procedures and performs health checks prior to vaccination. The site receptionist is provisioned the role of concierge in the **Book My Vaccine** tool.
Whakarongorau Aotearoa national call centre advisor	The Whakarongorau national call centre advisor is the inbound point of entry for all bookinq queries. They are responsible for assistinq consumers with creatinq, cancellinq, and amendinq bookinqs, completing follow-up activities where commissioned to do so, and answerinq qeneral vaccine related queries. They are provisioned the role of special concierge in the **Book My Vaccine** tool. Whakaronqorau conduct outbound call campaiqns based on direction from the Ministry's Operations Team.

Key roles	Role description
Whakarongorau DHB liaison	The Whakarongorau DHB liaison is the primary point of contact for communications and escalations by DHBs for booking-related processes that require Whakarongorau interactions. They will escalate issues with the Ministry's operations leads and the DHB operations leads, as required. The Whakarongorau DHB liaison and details regarding how to contact them will be agreed as part of the engagement plan.
Site lead	The site lead manaqes the day-to-day operation of their site and is the primary point of communication for the site. The site lead is responsible for identifyinq and escalatinq any schedulinq chanqes to the DHB site admin.
Site admin	The DHB site admin acts as the first point of escalation for managing system technical operations for the sites they oversee (one site lead per ten sites is the recommended ratio). The DHB site admin is responsible for triaging and escalating impactful (minor/major event) site schedule changes. The DHB site admin is provisioned the role of site admin in the **Book My Vaccine** tool.
DHB operations lead	The DHB operations lead is accountable for manaqinq the operational activities for a DHB. Their key functions include generating reports to identify DHB follow-up activities, managing all escalations required for a DHB's attention, and sharinq escalations with the Ministry and Whakarongorau as required. They are accountable for the accuracy of all site schedules.
The Ministry's Operations Lead	The Ministry's operations lead is the primary point of contact for escalations into the Ministry. Their key obligation is managing communications between the Ministry and Whakarongorau/DHBs. They are provisioned the role of super user in the **Book My Vaccine** tool, and are responsible for onboarding users, creating DHBs and initial site creation in the system. The Ministry's Operation Team are responsible for failsafe reporting, tableau analysing data, organising outbound call campaigns to reach consumers.

27.4 Booking system processes and best practice

Figure 22.1 - booking tool processes:



27.5 Setup and maintenance

Creating a new site

Creating a new site relates to setting up a greenfield site after the initial DHB deployment on the booking system. DHBs will be asked to nominate one individual for this process in each batch of new sites being set up, who will be responsible for sending information and communicating between parties. If possible, it is preferable new sites are set up in batches (such as all sites going live in a two-week period are grouped together) to minimise duplication of processes.

Once the requirement for a new site has been identified, the DHB will begin to define their engagement plan with the DHB liaison. Whakarongorau requires up to seven working days of lead time from this initial discussion before booking can be made on the new site.

The DHB will populate the new site CIR and NIBS setup forms already completed by DHBs for the initial go-live deployment. The nominated DHB staff member is then required to email the forms to the Ministry's central help desk. A seven-day lead time for receiving the completed forms prior to site going live is required by the Ministry. The information within this form is used by teams within the Ministry to setup the new site in CIR and NIBS. It will take up to 72 hours for these sites to be created in the respective systems, after form submission. System users will be provisioned in the classroom environment.

After this information has been received by the Ministry, the adoption and improvement (A&I) team will contact the nominated DHB staff member to begin user training for both NIBS and CICS (if the DHB is using CICS, its use will be optional). System users will be

trained for the site admin and concierge roles in NIBS and the system user role for CICS. The nominated DHB staff member will inform the Ministry once system user training has been completed (it is mandatory for the training to be completed before users are provisioned). The Ministry will then provision the appropriate users for the site. The nominated DHB staff member will receive a confirmation of this task completion via email.

The DHB and Whakarongorau DHB liaison will agree an engagement plan for the new site. It is best practice that a QA approval process is then undertaken by the Ministry to ensure the site has been set up correctly. Upon approval, NIBS will be ready to take bookings. Further information regarding this process will be provided to the DHB if necessary.

Amend site schedule

Amending a site schedule involves updating the capacity and availability of appointment slots for a site. The site lead or site administrator is responsible for identifying major schedule changes, escalating these to the DHB operations lead, and making necessary system changes. The thresholds for escalation will be set and be maintained by each DHB.

Note: Changing the schedule in NIBS does not cancel or reschedule any existing bookings. Refer to the **event rebooking** section below for details.

It is crucial the site lead or site administrator performs an impact assessment regarding bookings when amending a site schedule, specifically when the number of appointment slots are reduced.

Event rebooking

In the case of an event causing a disruption to a site, where an existing schedule is set, and appointments are cancelled, consumers must be rebooked in the system. Event severity, minor or major as be determined by the site and DHB staff, will dictate the applicable escalation path to ensure key stakeholders have visibility of the event, and can assist with implementing appropriate resolution measures. When a major event occurs such as a bulk cancellation or a bulk reschedule, this must be approved by the Ministry. Further information is outlined in the Detailed Booking Systems Guidelines document found in **Appendix F**.

Note: Rescheduling is not automatic function. Consumer appointments will not be cancelled or rescheduled when a site schedule change is created.

Amend site details

Amending site details involves updating the site location and other site properties. These changes do not affect scheduling. The site lead, site administrator or DHB operations lead is responsible for identifying such changes are necessary. The site administrator is responsible for making the changes in the system. The Ministry requires notification of the change if it impacts the location of a site, to inform Google Maps of the change.

Pre-event

Booking an appointment

Where a consumer is eligible to be vaccinated, they will be able to either book two appointments in the **Book My Vaccine** tool, or one appointment if they have already

received their first vaccine dose (if the booking date is after 21 days of their first dose). They will be asked to provide their personal details, allowing the system to send a booking reference and confirmation to the consumer. Bookings can also be made by an individual on behalf of a consumer (for instance a family member or friend), or through Whakarongorau. Where a consumer is not eligible, they can register for updates on the website or end the assisted booking process.

Update and/or cancel an appointment

Consumers can update the time and/or location of their vaccine appointment/s or cancel their appointment/s through the **Book My Vaccine** tool; consumers must access the link in the confirmation message received when they made the original booking. If a consumer does not have this link, they should contact Whakarongorau for assistance. If there is less than two hours until the start time of an appointment, or the appointment start time has already passed, the option to rebook will be removed, and shown as grey on the tool.

During the vaccination event

Consumer arrival

Where a consumer arrives at a site without an appointment (walk-in), providing the DHB has capability to take walk-in consumers and the site has availability, the consumers must be booked into the **Book My Vaccine** tool for both their first and second appointment, prior to vaccine administration. This process ensures consumers receive a second vaccine dose.

- Note: **Book My Vaccine** tool dictates the first and second dose appointments be booked into the same site.

If the site does not have capacity to book a consumer for a vaccination, the concierge will the consumer to book their appointments at another site.

Post event: follow-up

Booking did not show (DNS) follow-up

DHBs remain accountable to ensure DNS also known as did not attend (DNA) consumers are contacted. DHBs may utilise Whakarongorau to undertake any follow-up activities to rebook consumers. This process to request follow-up services will be defined in the engagement plan between Whakarongorau and each DHB. This can be a mixed model, where each party may be responsible for following up with different groups of consumers within the DHB. When a consumer does not show to their appointment, they will be contacted on three separate occasions. The best practice for following-up is to contact a consumer the day after the missed appointment, followed by two more attempts, at the fourth day and seventh day. Where the consumer remains uncontactable, the DHB is responsible for executing the most suitable follow-up response (further outbound calls or ceasing follow-up communications).

28 Incidents

28.1 Incident management

The site team should be trained and prepared to respond to three possible medical emergencies associated with COVID-19 vaccination: fainting, hyperventilation, and anaphylaxis. The appropriate medication and equipment must be on site to manage these incidents.

Refer to **section 2.3 of the *Immunisation Handbook*** for guidance on emergency equipment required to manage post-vaccination medical emergencies.

Adverse events should be managed in accordance with HQSC ***Guide to the National Adverse Events Reporting Policy 2017***.

In the event of a serious adverse event or incident it is important to follow organisational process to report, review, and learn from the incident.

- **Appendix I** outlines the process steps for notifying serious incidents to the programme. This includes the COVID-19 Vaccine related severity assessment codes (SAC) and the form required to notify the programme of incident and serious adverse events.

28.2 Adverse events during observation period

If any consumer has an adverse event during the 15-minute observation period at the vaccination site, appropriate medical attention must be provided. The on-site adverse event must be recorded and submitted in the CIR to support reporting on adverse events following COVID-19 vaccine immunisation.

For more information regarding managing medical emergencies and anaphylaxis, please see **section 2.3 of the *Immunisation Handbook***.

28.3 Recording an anaphylaxis event

Where a suspected anaphylaxis event occurs following a vaccination event, it is important to record and submit consumer details of the event in the CIR. The person who handled the event must complete the anaphylaxis checklist record (found on the **IMAC website**) as soon as practical. The anaphylaxis checklist should be completed and uploaded via the Dropbox to the CARM **link**.

Adverse events should be notified to the site lead clinician, who can undertake a clinical review and determine appropriate actions with the site manager (such as pausing vaccinations for a time, should this be required).

28.4 Adverse events after observation period

Where the consumer has an adverse event after the observation period, as in when they've left the vaccination site, they will be advised (as detailed in the 'After your immunisation' flyer) to contact Healthline and submit an adverse reaction report to CARM. A dedicated COVID-19 Vaccine adverse event report is available on the **CARM website**. This may be completed by the consumer or a health practitioner.

28.5 COVID-19 treatment injury claims

ACC is sharing advice with providers regarding lodging ACC claims for a physical injury resulting from a COVID-19 Vaccination. Such injuries may be covered by ACC if the injury criteria for treatment are met. Under ACC legislation, the injury must be clearly caused by the vaccination and must not be a necessary part or ordinary consequence of the treatment. For example, inflammation around the site of the injection is common with COVID-19 Vaccination (an ordinary consequence) and is unlikely to be covered. Infections (such as cellulitis or septic arthritis) due to the vaccination, and anaphylaxis resulting in injury are not ordinary consequences and are more likely to be covered.

Where a consumer has an injury that meets these criteria, they may require further treatment or support. In such cases, providers should lodge an ACC2152 treatment injury claim form with ACC as well as an electronic or manual ACC45 injury claim form. These forms and more information can be found on **ACC's website**.

Providers will need to include the vaccine brand and identifying dose number (for example, whether it the first or second BioNTech/Pfizer COVID-19 Vaccine dose).

Note: Health providers should keep good clinical records of reactions and complications and arrange appropriate clinical management and follow up. Treatment injury claim forms can be completed at the time or any time after the event. However, if longer than 12 months additional information is required. Time should be taken to obtain consumer consent for a claim to be lodged with ACC, as it involves providing their personal and private information to ACC. Consumers should be reassured the health system will manage their treatment regardless of an ACC claim.

28.6 Recording vaccine errors

A vaccine administration error is any preventable event that may cause or lead to, inappropriate use of a vaccine or consumer harm. Administration errors can occur at any stage of the vaccination process (such as storage or handling, site/route of administration, or dosage given).

Some known vaccine errors include unauthorised age group vaccinations, shorter than recommended dosing intervals, injecting errors, dosage errors, vaccine administration errors, or when the consumer has an adverse event due to a vaccine error.

In the event of a vaccine administration error

1. Inform the consumer/s involved. This should occur within **seven working days**.
2. If guidance/advice is needed, consult **IMAC on 0800 IMMUNE (466 863)**, option 1 (health professionals) and then option 2 (COVID-19 Vaccinator support)
3. Record the error in CIR under adverse events error to provide for reporting on vaccine administration errors.
4. Determine how the error occurred to provide for strategies to be implemented to prevent a recurrence.

Providers should report all COVID-19 Vaccine administration errors, including those not associated with an adverse event. Upon submitting the adverse event/medical error form to CIR, data will go to the medical assessment team at CARM. The medical assessment team review adverse events and medical errors to help inform any follow up required. Adverse event and medical error reports also inform vaccine safety monitoring.

28.7 Early second doses

If the first and second dose of the BioNTech/Pfizer COVID-19 vaccine is administered at an interval of **less than 21 days**, this is considered an early second dose.

In the event of an early second dose, please follow the instructions below with respect to the reported cases:

1. Verify the case ID entry - if wrong, then correct the CIR record.
2. If correct, complete a CARM medication error report as this is a 'never event' use of the vaccine.
3. Inform the affected person of the error and ask them to report any reactions – refer to the handout 'After your vaccination'.
4. Clinical advice (e.g., by the medical advisors at 0800IMMUNE) may be required. This will depend on the timing of the second dose and the characteristics of the individual.
5. Identify improvements to local practice and process to avoid early second doses and share the learnings as soon as possible.
6. On investigation, and if in the event the person reports possible harm, then follow your DHB or provider's adverse event process and or complaints process.
7. If an adverse reaction or injury is experienced by the individual following the event, submit an additional CARM AEFI report and arrange ACC treatment injury claim per **ACC2152 form**.

29 Variations

29.1 Missing or incorrect information in the CIR

When a consumer has missing or incorrect information documented in the CIR, this must be corrected as it is a legal record. The CIR can be modified by the provider or health professional within 24 hours after it was entered. After this time the CIR can only be modified by contacting **help@C-19imms.min.health.nz** or **0800 223 987**.

29.2 Where the consumer has received vaccination overseas

In some instances, individuals may have received a COVID-19 vaccine overseas (which may not be of the Pfizer vaccine). Clinical protocols for all of these situations are still under discussion; however, if the consumer had dose 1 of a two-dose regimen (Pfizer or other two-dose vaccine), they are able to receive the Pfizer COVID-19 vaccine as dose 2 provided it is at least 4 weeks after their overseas vaccination. Please consult 0800 IMMUNE or the IMAC website for specific clinical advice.

The consumer must provide evidence of their overseas vaccination (eg, a vaccine receipt card or other documentation) and you must create immunisation records in CIR and upload the evidence they have provided.

Note: The CIR record of the New Zealand-based dose administered is automatically notified to the individual's GP through the existing CIR GP notification functionality. In the next CIR release (available June 3), new functionality will be added to allow notification of overseas vaccination to GPs. Any overseas-based event records created before 3 June will be retrospectively picked up and notified to the consumer's GP.

Section D: Appendices

Section guidance

This section provides the appendices for the Vaccine Operating Guidelines.

Purpose

It is designed to provide additional information and support, to help maintain public safety and ensure consistent and equitable vaccination outcomes across New Zealand/Aotearoa.

Appendix A: Site checklist

As a general principle, the site and staff should be prepared and adhere to standard operating policies and standards, including the clinical governance and health and safety, expected in a clinical environment to ensure staff and consumer safety.

Tables A1 to AS below, provide an overview of the minimum requirements to deliver COVID-19 vaccinations safely and efficiently.

Table A1 - plan checklist

Plan	Y / N	Comments
Vaccination volume plan Vaccination sites have planned for expected daily volumes of vaccine recipients, considering: • Staffing numbers • Space and distancing • Privacy and confidentiality	YD ND YD ND YD ND	
Workforce plan To maintain the staff roster including manaqinq unavailability, illness, and other absences.	YD ND	
The list of **Key Contacts** is up to date and accessible.	YD ND	
Clinical Quality and Safety oversight is on site.	YD ND	
Local development of: • Infection Prevention • Control guidance • SOPs	YD ND YD ND YD ND	
Site locations consideration: • Location/traffic/access/parking/signage • Availability of public transport • Accessibility (including disability access to parking and to vaccination site building) • Traffic management	YD ND YD ND YD ND YD NO	
The site can maintain temperature requirements of the vaccination preparation space.	YD ND	
A **documented risk assessment** has been conducted for every individual vaccination site including business continuity plan covering changes in COVID response alert levels	YD ND	

Site-specific COVID Tracer App QR codes have been created.	YD ND	
A plan is in place to maintain adequate and appropriate resources including: • PPE supplies • Vaccine and consumables • IPC supplies • Waste management • Signage	YD ND YD ND YD ND YD ND YD ND	
A plan is in place to **maintain daily supplies** of consumer collateral, including: • Getting your COVID-19 Vaccine: What to Expect • Consent form • After your Immunisation • Vaccination receipt and second appointment card • Privacy Statement • Hard-copy form to collect household contacts.	YD ND YD ND YD ND YD ND YD ND YD ND	
A plan is in place for **equitable access,** including: • Access to translation and interpretation services • Written material and siqnaqe in easy-to-read formats • Supporting resources/literature is available in a range of languages/formats for those with low health literacy. • Service delivery model provides for whanau/support people accompanying consumers. • Venue access caters for disabled people and support for those with visual or hearinq impairments.	YD ND YD ND YD ND YD ND YD ND	
A plan is in place to manage the transition from locally managed booking systems to the national immunisation booking system or programme accepted bookinq solution.	YD ND	
A site evacuation plan is in place.	YD ND	
A dry run has been completed for all vaccination sites.	YD ND	

Table A2 - place site checklist

Physical site	Y / N	Comments
Adequate space (including also for whanau/support persons) and associated capacity for: • Screening • Registration • A private space for consultation, family groups, and vulnerable people requiring support • Waiting (seated) • Vaccination (including drawing up and administrating) • Post-vaccination observation.	YD ND YD ND YD ND YD ND YD ND YD ND	
Access to secure storaqe for medical records (including consent forms).	YD ND	
Appropriate signage to identify as vaccination site for consumers, including COVID-19 vaccination campaign posters/banners/flags. Signage should also include Code of Consumer Rights.	YD ND	
Site has clearly marked one-way foot traffic flow with clear entry and exit areas.	YD ND	
Adequate number of hand-hygiene stations in strategic areas for public and staff	YD ND	
Appropriate emergency medication, equipment, and space to respond to medical emerqencies. All equipment in the site to be well maintained, in good workinq order, calibrated/monitored as required and with current electrical safety compliance testing/certificates as necessary.	YD ND	
Appropriate cold chain provisions that are applicable for the site are in operating order, including having appropriate refrigerators and opaque containers to store supplies.	YD ND	
Adequate space for vaccine storage and preparation.	YD ND	
Adequate security (e.g. alarm, overnight security guard) if vaccine is to be stored at vaccination site overnight.	YD ND	
Appropriate waste manaqement facilities, includinq facilities in place to safely dispose of sharps and unused, damaqed or empty vaccine vials (e.q., Interwaste vial disposal bin ordered).	YD ND	
Vaccination stations at least one metre apart.	YD ND	

Access to CIR-compatible IT hardware including tablets, laptops or desktop computers with screens positioned out of sight of unauthorised persons.	Y D N D	
IOS or Android smartphones with Salesforce Authenticator app available to CIR users.	Y D N D	
High-speed wireless or 4G coverage.	Y D N D	
Access to appropriate internet browser (Note: Internet Explorer is not supported).	Y D N D	

Table A3 - process checklist

Process	Y / N	Comments
Scheduling of vaccination appointments avoids over-crowding and allows for physical distancing.	Y D N D	
Booking and scheduling system includes arranging for consumers to return for a second dose of the vaccine at least three weeks after receiving the first dose.	Y D N D	
All staff have access to the Operational Guidelines.	Y D N D	
Procedures are in place for identifying vaccine recipients.	Y D N D	
Process in place for screening all staff for signs and symptoms of COVID-19 at the start of each shift.	Y D N D	
Standardised screening processes are in place for contraindications, receipt of previous dose of COVID-19 vaccine or other vaccines, and COVID-19 symptoms.	Y D N D	
'Where to get help' poster is accessible to all staff.	Y D N D	
Consumer information processes in place, including the provision of consumer collateral.	Y D N D	
Cold chain process in place, site delivery and receipt.	Y D N D	
Processes in place for infection prevention and control including: • Hand hygiene • PPE protocols • Injection safety • Needlestick injury protocol	Y D N D Y D N D Y D N D Y D N D	
Processes in place to safely manage waste and for safe disposal of sharps and unused, damaged, or empty vaccine vials.	Y D N D	

Process in place for monitoring, managing, and reporting adverse events following immunisation, including anaphylaxis.	Y D ND	
Appropriate process in place to respond to medical emergencies associated with the vaccination.	Y D ND	
Incident management procedures are in place and staff know how to report any clinical incident.	Y D ND	
SOP available for accessing and operating CIR and completing inventory reporting requirements.	Y D ND	
Business continuity plans in place, including access to hard-copy versions of: • Consent forms with CIR data fields on the reverse and associated secure storage. • COVID-19 Vaccine Adverse Event Report	Y D ND Y D ND	

Table A4 - workforce checklist

Workforce	Y / N	Comments
Staffing levels (including trained and accredited as required) are appropriate for delivering the scheduled vaccination volume. At a minimum, the following functions need to be allocated: • Consumer welcome • Preparation and administration of doses • Obtaining informed consent • Events recording in CIR by a CIR-trained person • After-immunisation observation	Y D ND Y D ND Y D ND Y D ND Y D ND	
Site workforce encourages equitable access and the workforce demographic, as reasonably practicable, reflects of the likely consumer population or local area.	Y D ND	
Staff are educated in disability equity access and know how to apply supported decision-making approach.	Y D ND	
Staff inducted to the site and to have completed all relevant training including cold chain and IMAC/vaccine training, adverse event training, and CIR training.	Y D ND	
Appropriate staff training to respond to three possible medical emergencies associated with the vaccination (fainting, hyperventilation, and anaphylaxis).	Y D ND	
Staff roles and responsibilities are clearly defined.	Y D ND	

Multi-vaccinator sites have a named Lead Clinician.	YD ND	
An appropriate people has been identified to receive vaccine delivery as part of cold chain provisions.	YD ND	
Infection Prevention and Control staff have been identified including: • IPC Lead • IPC trainers	 YD ND YD ND	
Security presence available to control access to the site and be available for support in the event of attempted unauthorised access.	YD ND	
All vaccination site staff have been given the opportunity to receive a COVID-19 vaccination.	YD ND	

Table AS - other considerations checklist

Other considerations	Y / N
• Staff working in or near MIQ or other locations that may require additional infection prevention controls, must adhere to the standard SOPs and associated protocols for such locations, including physical distancing requirements.	YD ND
• In the event of a change in Alert Levels, adherence to the relevant PPE SOPs and associated protocol is required to operate under the Alert Level, including physical distancing requirements.	YD ND
• Where a mobile vaccination team is being set up, in addition to the above also consider the following: • Staff numbers to match expected demand as well as site health and safety requirements • Site security • Appropriate training • Correct set up in CIR, including completion of the 'COVID-19 Facility and Site Set-up Details'. • Reliability of supply of resources and equipment • Internet connectivity to enable use of CIR • Logistics, including vaccine storage and transport • Business continuity	 YD ND YD ND YD ND YD ND YD ND YD ND YD ND YD ND
• Drive through vaccinations: • Some disabled people use modified vehicles that seat the driver/passengers higher - potentially making it more difficult for vaccinators to reach • A reminder that car doors can also be opened if proper needle positioning can't be achieved through the window	 YD ND YD ND

Appendix B:
New facility/site setup

This information must be provided to the Ministry five days in advance of any initial deliveries. Please use the following template to complete the information required to enable us to set up a vaccination facility or vaccination site. Please take care and provide detail when completing the form, as accurate information is required to ensure successful delivery of vaccines and consumables.
Return the completed form to **he1p@c-19imms.min.hea1th.nz** and CC your Regional Area Manager

Version	Date	Section/Appendix	Summary of Changes
27.0	05/11/21	Appendix B	New facility/site setup form updated with changes to categorisation of site types and provider types.

Previous revision history can be found at the end of the appendices section.

Has the site been signed off by the DHB CE?	Please attach a copy of signed authorisation
Please tick if yes	Please tick to confirm

Location details section	New site set up - part one of three

A **Site** ***Only complete Section A if a site is being set up.*** **Note: Sites are where vaccines are administered**

DHB	Enter the DHB in which the vaccination facility/site is located
Site name	Please provide the site name
Site address	Please provide the delivery address. Please include floor number/buildinq number/qate number if relevant.
Confirm	Suburb and post code of this site
City	Enter city in which this site is located
Site type details	
Please tick	y D N D Is this vaccination site also a facility?
Site type Please tick	D GP D Hospital D Marae D Mobile or Pop-up Site *(short term vaccination site)* D Permanent Vaccination Centre *(long term vaccination site)* ☐ Drive Through D Community Pharmacy D Urgent Care Clinic D Residential Facilities (e.g. Aged Care Facility, Residential Care etc.) D Place of Worship D Workplace (Vaccination for staff and whanau) D Bus D Other:
Equity focus	D Not applicable D Maori D Pacific Island D Disability D Mixed
The following information relates to the Provider(s) responsible for the site.	
Primary Provider name	Please provide the name of the primary provider
Provider type	D DHB D Occupational Health D Community Pharmacy D GP D PHO D Hauora D Pacific Health Provider D Urgent Care Facility D Other If other, please add details
Provider equity focus	D No Specific Equity Focus (General population) D Maori D Pacific Island D Disability
Collaborating provider name	Please provide the name of the collaborating provider (if applicable)
Collaborating provider type	D DHB D Occupational Health D Community Pharmacy D GP D PHO D Hauora D Pacific Health Provider D Urgent Care Facility D Other If other, please add details
Collaborating provider equity focus	D No Specific Equity Focus (General population) D Maori D Pacific Island D Disability

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Facility details section	New site set up – part two of three

B	Facility	Please provide Facility or Associated Facility details. Note: Facilities are where vaccines are shipped, stored and distributed to sites.
Facility	DHB	Please provide the DHB where the facility is located
	Facility name	Please provide the facility name if different to site name in Section A
	Facility type	Please provide the facility type, such as hospital, pharmacy, clinic
	Facility address	Please include suburb, city and postcode
	Delivery address (if different from facility address)	Please advise the delivery address - include floor number/building number/gate number if relevant.
	Facility ID (HPI ID)	What is this facility's ID (if unknown, state 'unknown')

Delivery information

Please provide the available delivery times for the facility, such as 7am to 5pm, Monday to Sunday.

	D Mon		D Tue		☐ Wed		D Thu		D Fri		D Sat		D Sun	
Available delivery times														
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Delivery Notes	Please add any comments which may assist the delivery driver in successfully													

Storage, capacity, and contact details		New site set up - part three of three
C	Which of the following storage accreditations does the facility provide?	
Storage, capacity and contact details	Type	Select
	Ultra-cold (-70C)	YO NO — If yes, please provide details of how many vials can be stored
	Frozen (-20C)	YO NO — If yes, please provide details of how many vials can be stored
	Cold chain (2-SC)	YO NO — If yes, please provide details of how many vials can be stored
	Ambient	YO NO — If yes, please provide details of how many vials can be stored
	Consumables	Y D N D — If yes, please provide storage details
	Is there a data logger reader at location?	Y D N D — If yes, please provide details about brand/type
	Pay per dose contract	
	Pay per dose contract number	If this contract is a Pay per Dose contract - Please provide the contract number.
	Regional Anniversary	In which region will you be observing Regional Anniversary days?
	Pay per dose contract	
	Named role	Please confirm the **named role** at this vaccination facility/site who will be available and is authorised to receive the vaccine/consumables upon delivery, for example lead nurse, clinic manager.
	Named role name and contact phone number/s	Name: Confirm name
		Phone: Confirm phone number/s
	[redacted] Name and contact phone number/s of other team members who fit the named role	Name: Confirm name alternate 1
		Phone: Confirm phone number/s alternate 1
		Name: Confirm name alternate 2
		Phone: Confirm phone number/s alternate 2
	Completed/signed by	
	Name	Add name
	Title	Add title
	Signature	Insert signature

Appendix C:
Facility/site closure

This information must be provided to the Ministry in the event a facility or site ceases vaccinations and distribution.

Please take care and provide detail when completing the form below. Upon completion, please email this form to: **covid-19.logistics@health.govt.nz**

The following definitions apply specifically to this form

- **Vaccination facility**
  Where vaccines are shipped, stored and distributed to sites.
- **Vaccination site**
  Where vaccines are administered.

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Facility and site closure form

DHB location	Please state the DHB in which the vaccination facility/site is located

A	**Site closure**	
Site	Site name	Enter site name
	Site address	Enter site address
	Closure date	Enter closure date
	Reason for closure	Please enter reason for site shut down
B	**Facility closure (if applicable)**	
Facility	Facility name	Enter facility name
	Facility address	Enter facility address
	Closure date	Enter closure date
	Reason for closure	Please enter reason for site shut down

Return of excess consumables

Please conduct a stocktake of all consumables relating to the COVID-19 Vaccination Rollout upon site/facility closure. Please send copies of this form to the Ministry's logistics team and your DHB Lead.

1. The DHB lead should arrange a transfer of any remaining consumables from the site which is closing to another site and capture this through raising a transfer order in CIR Inventory.
2. Once there is zero stock on hand visible in CIR Inventory, the DHB logistics Lead should notify the Ministry's logistics team to change the site status in CIR from Active to Closed.
3. **Note:** Once closed the site will not be accessible by inventory users in the system.

Consumable item	**Material** code	Stock on hand (boxes)	Other comments (if any)
Consumable Kit **1** (100 doses)	1166307	Enter number of boxes	Comment/s?
Consumable Kit 2 (full tray of 195 vials)	1166308	Enter number of boxes	Comment/s?
Biohazard Bags	1165007	Enter number of boxes	Comment/s?
Plasters	1165006	Enter number of boxes	Comment/s?
25G 1in Needles	1165011	Enter number of boxes	Comment/s?
Non-Woven Swabs	1165004	Enter number of boxes	Comment/s?
15L Sharps Containers	1165447	Enter number of boxes	Comment/s?
Sodium Chloride (5ml)	1165012	Enter number of boxes	Comment/s?
Sodium Chloride (10ml)	1165013	Enter number of boxes	Comment/s?
1ml Syringes	1166706	Enter number of boxes	Comment/s?
3ml Syringes	1165009	Enter number of boxes	Comment/s?
Alcohol Swabs	1165005	Enter number of boxes	Comment/s?
25G LDS Needles	1165446	Enter number of boxes	Comment/s?
21G Needles	1165010	Enter number of boxes	Comment/s?

Providers must adhere to guidance provided in *National Standards for Vaccine Storage and Transportation Providers 2017* when closing down a vaccine site/facility. Please refer to the links below for a copy.

https://www.health.govt.nz/system/files/documents/publications/national-standards-for-vaccine-storage-and-transportation-for-immunisation-providers-sep19.pdf

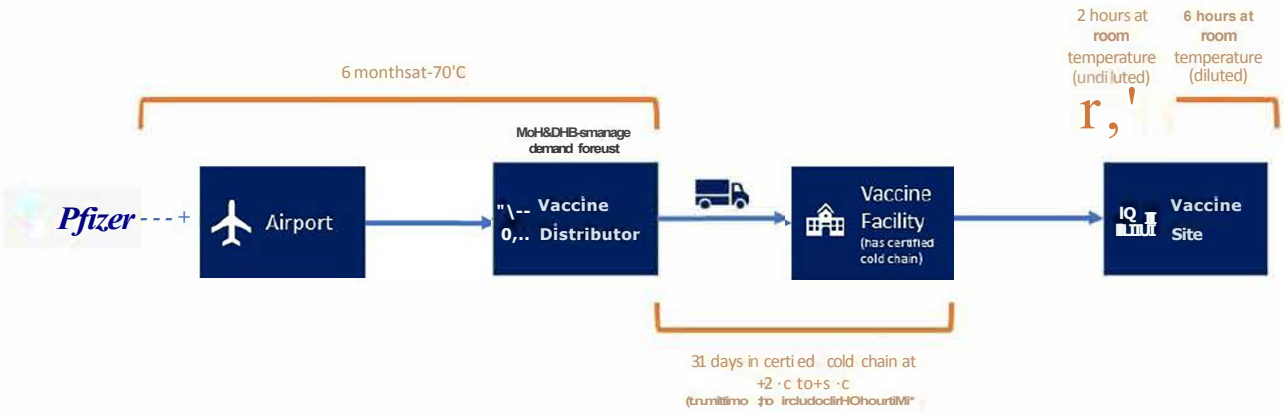
https://www.health.govt.nz/system/files/documents/publications/2021_addendum_to_ns_for_vaccine_storage_and_transportation_for_immunisation_providers_2017_-_final_1.pdf

Please tick to confirm these guidelines have been adhered to	Y D	Please tick to confirm

Appendix D: Logistics and inventory management

The Ministry will maintain the COVID-19 Vaccination Immunisation Register (CIR) logistics module to support ongoing monitoring of inventory and demand. The image below shows the current process for distributing the vaccine to vaccination sites.

Figure 0.1 - vaccine distribution process



oles & Responsibilities				
	Pfiurwill ship trays to NZ's vaccine distributer, confirm temperature, then transfer ownership	The Vaccino Distributor will store at -70'C and break down trays into packs of 5, 15, and 195 vials	The **V:accino Distributor** will pick and pack and arrange transport to the vaccine facility for storage at +Zto +a·c	**Sit. .** will forecast their daily volumes on a rolling weekly basis
	MoH will own the supply from here	**OHBs** will advise MoH of a rolling monthly demand plan	**Facilities** will receive and store vials at +2 to +s·c in certified cold chain for later distribution to sites without cold chain	**OHBs or providers** may transports vials from their facilities to vaccination sites
	The **Vaccine Distributor** will confirm the vaccine is undamaged and transfer to Ultra Low Temperature & inventory management	**MoH** will conflnm the order with the distributor to pack and transport to each delivery site	**Sites** may also receive and store vials at +2 to +S'C in certified cold chain	

Appendix E:
CVIP logistics overview/cheat sheets

Regulations

- **COVID-19 Vaccine ownership**
  All COVID-19 vaccine stock is owned by the Ministry of Health.
- **Pharmacy licence**
  This allows DHB hospital pharmacies to pack down full trays of 195 vials and packs of five or 15 of the BioNTech/Pfizer COVID-19 Vaccine into smaller quantities, but only for vaccination sites run by the DHB legal entity; that is, DHB hospital pharmacies can only pack down into smaller pack sizes for vaccination sites run by DHB employees.
- **Wholesale Licence**
  This allows DHB hospital pharmacies to supply the BioNTech/Pfizer COVID-19 vaccine by wholesale, in full trays of 195 vials and original packs of five and 15 to non-DHB vaccination sites outside their DHB legal entity. For the purposes of this, the definition of DHB means the DHB legal entity, not the geographical DHB boundary.

Cold chain standards

- The **National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017,** describes the standards and requirements for providers.
  The integrity of the cold chain is dependent upon:
  - the people who maintain and monitor the cold chain
  - the systems and processes used
  - and the equipment in which the vaccines are stored.
- **Cold chain accreditation**
  All immunisation providers are required to achieve accreditation (or Cold Chain Compliance, where applicable) if they need to store vaccine overnight. Assessors use this tool to ensure providers' cold chain practices and processes meet the required standards. See the **National Standards** for full details.
  - An **Addendum** for ultra-cold vaccine storage of COVID-19 vaccine stock has been developed. Cold Chain Accreditation as per the addendum must be met before vaccines can be received.
- **Cold chain review group**
  Where a DHB hospital pharmacy needs to function outside of the boundaries of the national standards for cold chain storage and transportation, they can request the Ministry's cold chain review group to be convened under urgency for advice. Any advice provided by this group will always be safe and ensure no compromise to the cold chain.

Vaccine ordering

- **Registering new site/facility**
  All sites/facilities need to be registered at least five days prior to the first required vaccine delivery. It is recommended the first delivery is used as a 'wet run' to vaccinate the vaccinators and to validate the delivery processes.
- **Order deadline**
  It is best practice to order at least two days ahead.
  For HCL, DHL, and NZ Post Pace Couriers, the deadline for urgent orders is 10am (seven days) for deliveries the next day.
  Note: If DHBs need to check/QA vaccine site orders, ensure there is sufficient time for this process to be completed by 10am.
- **Consumable packs**
  Consumable packs containing needles, syringes, saline, and alcohol swabs are automatically added to match the number of doses (to the nearest 100).

Vaccine shelf life

- -60˚c to -90˚c
  At this temperature range the BioNTech/Pfizer COVID-19 Vaccine has a **shelf-life of six months** from the date of manufacture.
- **-15˚C to -25˚C**
  At this temperature range the BioNTech/Pfizer COVID-19 Vaccine has a **shelf life of 14 days.**
  Additionally, the vaccine can be held at this temperature range once and then be placed back into -60˚C to -90˚C without affecting the six-month shelf life.
- **2˚c and 8˚C**
  Once thawed to this temperature range, the BioNTech/Pfizer COVID-19 Vaccine has a shelf life of 31 days.
- For more information about temperature range and vaccine shelf life, please see **table 8.2** and **figure 8.1** above.

Vaccine handling

- **Receiving/sending at 2˚C to 8˚c**
  Vials of the BioNTech/Pfizer COVID-19 Vaccine arrive in Comirnaty™ boxes within a *Credo* box with a datalogger.
- **Receiving/sending at -60˚C to -90˚C**
  The vaccine will arrive in Comirnaty™ boxes within a *Credo* box with dry ice. Providers do not need to handle dry ice as NZ Post/Pace couriers handle trays and remove all dry ice from the *Credo* box. All delivery details at the two different temperature ranges can be found in 'Delivery to Sites' **section above.**
- **Redistribution/transfers**
  Vaccine stock is not to be redistributed between facilities and sites, unless requested by the Ministry or DHB Hospital pharmacy.
  Note: only HCL, DHL, and DHB hospital pharmacies have wholesale licences to support distribution of vaccine stock.

Vaccine handling

- **Chilly bin**
  Providers must use temperature-monitored chilly bins to transport vaccines. A hard walled/robust chilly bin must be used for off-site clinics. For each chilly bin, monitor the temperature using either a digital minimum/maximum thermometer with an audible alarm, or a datalogger with a probe and external display. It must be possible to read the temperature without opening the chilly bin. Full details can be found in **section 7.3 of the national standards.**
- **Dataloggers**
  Use a data logger with a probe, external display and alarm to monitor the temperature of the vaccines throughout the time they are stored in a chilly bin. Set the datalogger to record the temperature every five minutes, and download, review and save the data after returning to the clinic. Full details can be found in **section 7.3 of the national standards.**

Appendix F: Links to the National Immunisation Booking System

COVID-19 Immunisation Register (CIR)

- All CIR training material can be found at **https://circlassrm-ncts.cs116.force.com/cir/s/recordlist/Knowledge__kav/00B5O000001CNbyUAG**

Individual guides

NIBS

- **https://circlassrm-ncts.cs116.force.com/cir/s/article/CIR-Bookings**
- **https://circlassrm-ncts.cs116.force.com/cir/s/article/CIR-Bookings-Not-NHI-Matched-Quick-Step-Guide**

Accenture Vaccine Management System (AVMS)

- **https://circlassrm-ncts.cs116.force.com/cir/s/article/NIBS-Site-Admin-Managing-Overrides-exceptions-Guide**
- **https://circlassrm-ncts.cs116.force.com/cir/s/article/NIBS-Site-Admin-Managing-Capacity-Guide**

Other information

For any information which is not included in these documents, the DHB is advised to communicate with the Ministry.

This guide will be amended as required and the latest version will be made available via:

- **https://circlassrm-ncts.cs116.force.com/cir/s/recordlist/Knowledge__kav/00B5O000001CNbyUAG**

Appendix G:
Vaccination site screening questions

We encourage you to screen both staff and consumers for risk of exposure to COVID-19 and COVID-19 symptoms. Screening is critical to breaking the chain of transmission of COVID-19 and maintaining staff and consumer safety. Figure G1 below details the recommended screening questions and process.

Please note: In the event of COVID-19 Alert Level changes, additional advice will be formulated by local public health units and the Ministry.

Figure G.1- recommended screening questions

Q1 - Do you have symptoms of COVID-19?	
Follow link to **COVID-19 Case definition**	If a client has any symptoms suggestive of COVID-19, defer vaccination and do not permit entry to the site. Recommend they get a test and self-isolate pending the result.

- **If no symptoms, continue to the next question.**

Q2 - Have you been to any contact tracing locations of interest within time periods of concern?	
Follow link to **Current contact tracing locations of interest**	If an individual has attended any locations of interest within the defined time periods; defer vaccination, do not permit entry to the site, and advise them to follow recommendations and guidance from the Ministry/public health services.

- **If no symptoms, continue to the next question.**

Q3 - Have you been requested to stay at home or to self-isolate?
If yes, defer vaccination and do not permit entry to the site. Recommend continuing to follow the stay at home/self-isolation plan.

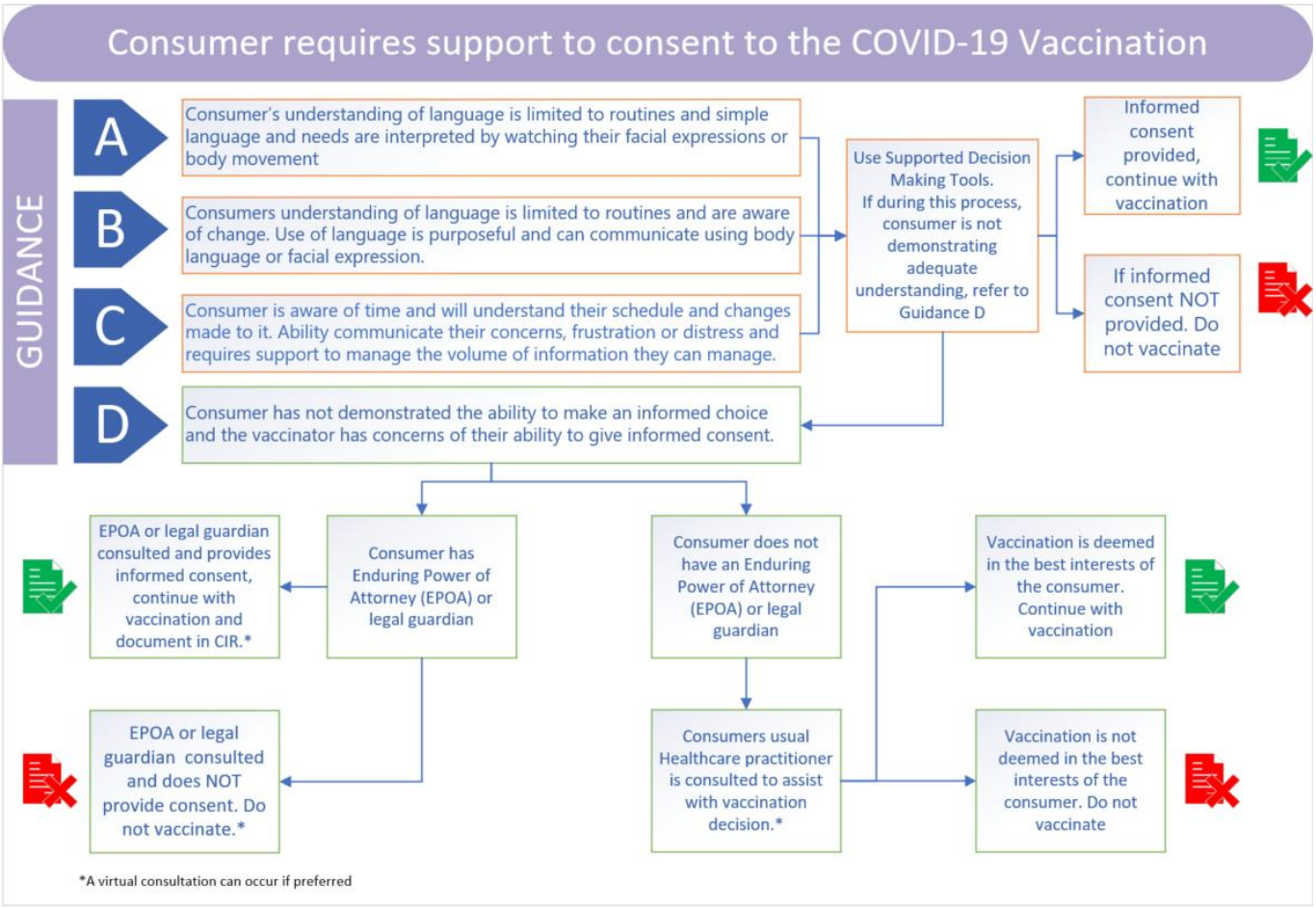
- **If no symptoms, continue to the next question.**

Q4 - Are you currently waiting on a COVID-19 test result?
If yes, defer vaccination and do not permit entry to the site. Recommend rebooking once a negative test result has been received, and they have been told they no longer need to stay at home/self-isolate.

- **If no, proceed to vaccinate as per the Operating Guidelines.**

Appendix H:
Supported decision-making process

Figure H.1 – support to consent



Appendix I:
CVIP Serious Adverse Event Process

This Appendix includes

1. Introduction
2. Process Steps
3. Severity Assessment Code (SAC) examples
4. Provider with the Ministry, initial serious incident/adverse event notification form.

Updated 24 September 2021

Provider and Programme Lead Clinicians

Purpose

The COVID-19 Vaccine Immunisation Programme (CVIP) implementation phase is based on a devolved service delivery model. The CVIP Clinical Lead is committed to supporting a person-centred, safe and high-quality programme with all programme providers.

To support a provider when a serious adverse event occurs, the following process includes timely notification to the programme and consideration of CVIP support to the provider.

The following detail outlines the notification process and describes roles/responsibilities of CVIP provider lead clinicians in relation to COVID-19 vaccination-related serious adverse event[2] or a serious adverse event following immunisation[3].

Scope

This process pertains to the notification of CVIP serious adverse events, using severity assessment code (SAC) ratings which are defined as:

- SAC 1 (death or severe loss of function).
- SAC 2 (permanent major or temporary severe loss of function and multi consumer events).
- SAC 3 (permanent moderate or temporary loss of function).
- Multiple similar or close sequenced SAC 3/ 4 events.
- Near miss with likely significant consequences

This protocol aligns with existing expectations of health and disability service providers under the Health and Disability Services (Safety) Act 2001, as articulated by the Health Quality & Safety Commission, whereby those who voluntarily comply are expected to:

1. Report serious adverse events (SAC rating 1 and 2) and events on the Always Report and Review list to the Commission, using the adverse event brief – part A reporting form. This report should be made within 15 working days of notification of the event to the provider.

2. Undertake formal investigation of serious adverse events (SAC 1 and 2) and events on the Always Report and Review list and send review findings and recommendations to the Commission, using the adverse event brief – part B reporting form. This report should be made within 70 working days of notification of the event to the provider.

Exclusions

This CVIP serious adverse event process does not apply to other CVIP non-clinical incident types e.g., equipment or vaccine damage/loss.

The notification process is not a substitute for the provider's responsibility concerning a serious adverse event including their normal processes of reporting, reviewing and open communication with the affected person. The outcome may recommend clinical and quality continuous improvement actions.

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[2] An adverse event is an incident resulting in harm, or with the potential to result in harm to a health consumer.

[3] Adverse event following immunisation (AEFI) - an untoward medical event which follows immunisation and does not necessarily have a causal relationship with the administration of the vaccine. The adverse event may be an unfavourable or unintended sign, abnormal laboratory finding, symptom or disease

Process Steps

Pharmacovigilance	Timeframe
Ensure COVID-19 CARM report is completed for any suspected AEFI. CARM Resource **https://nzphvc.otago.ac.nz/report/**	Day 1 (< 8 hours)
Participate in follow-up activities with CARM if required.	On contact by CARM

Next

Notification to the Ministry and provider leads	Timeframe
Commence reporting process. You should use the attached provider or organisation process steps and ensure you identify a preliminary SAC rating. Programme Resource **CVIP SAC events below** HQSC resource **Guide to the National Adverse Events Policy 2017**	Day 1 (< 8 hours)
Notify CVIP programme via email address: cvip.incidentnotification@health.govt.nz • **Attach the completed: Provider with MoH initial serious incident & adverse event notification form (sections A and B)** • Email Subject: CVIP Adverse Event Notification Programme Resource **Provider with MoH Initial serious incident & adverse event notification form[4]**	Expedited (<48 hours)

Next

Plan and execute open communication with affected consumer/s [5]	Within 7 working days

Next

Investigation and reporting outcomes	Timeframe
• Investigate the incident using the provider or organisation's clinical quality and safety governance process, and in accordance with HQSC expectations. • Inform CVIP on investigation findings and recommendations. • This includes confirming the final SAC rating. HQSC resource **https://www.hsc.govt.nz/our-programmes/adverse-events/projects/adverse-events-reports/**	Commenced (<24 hours) Reporting to HQSC according to timeframes above.
If required please arrange ACC treatment injury claim per ACC2152 form: **https://www.acc.co.nz/assets/provider/3e3bd2aded/acc2152-treatment-injury-claim.doc**	
Updating of CVIP incident form and send an update to the Ministry of Health	Ongoing/ until closed

[4] This is the notification form all incident types including serious adverse events & AEFI.
[5] As a guide, the Health Quality and Safety Commission's "Root Cause Analysis for clinical incidents - A Practical Guide" have the expectation for communication with affected consumers during week 1 - 2 of the incident investigations.

Provider please:

As an adverse event, either following immunisation or other cause, please arrange for open communication with the affected person/s.

If required, please arrange ACC treatment injury claim per ACC2152 form: **https://www.acc.eo.nz/assets/provider/3e3bd2aded/acc2152-treatment-injury-claim.doc**

SACt	SAC2 Permanent major or temporary severe loss of function
• Medication or dose error resulting in death or causing renal failure and need for permanent renal replacement therapy • Anaphylaxis resulting in death or permanent loss of function • Wrong site of vaccine resulting in removal of healthy limb or organ • Delayed referral, treatment resulting in treatment options limited to palliation (delay direct contributor) • Delayed recognition of patient deterioration resulting in permanent disability or death	• Fall resulting in fracture • Serious adverse reaction with delayed administration of adrenaline or delayed presence of emergency services • Delayed recognition of patient deterioration resulting in unplanned transfer to intensive care or to another hospital for higher acuity care, cardiopulmonary resuscitation and/or intubation • Medication or vaccine dose error resulting in major harm (e.g., requiring dialysis, intervention to sustain life, anaphylaxis) • Consumer serious assault occurring within vaccination care setting when a known safety plan is not upheld (e.g., protection order) • A vaccination incident affecting > 1 consumer
SAC3 **Permanent moderate or temporary major loss of function**	**SAC4** **Requiring inc:re.ed level of care** **OR no injury, no inc:re.ed level of care; includes near misses**
• Fall resulting in laceration requiring sutures • Failure of essential service with moderate consequence to consumer • Medication, vaccine dilution, or dose error resulting in increased level of care and moderate consequences to the consumer • Temporary nerve damage or pain from vaccine administration • Severe injection site infection • Vasovagal event following immunisation resulting in injury • Never events: early second doses & underage vaccination	• Additional monitoring, investigations, or interventions due to the event • Medication, vaccine dilution or dose error resulting in no increased level of care • Breach of confidentiality • Near miss events

Version 3: Adapted for the COVID-19 Vaccine Programme (CVIP) from Severity Assessment Code (SAC) examples 2019-20 I Health Quality & Safety Commission 2019. This list is guidance only.

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Serious incident/adverse event notification form

Section A - Provider notification details		
Provider or DHB to complete information below		
Incident time/date	Add incident date	Add incident time
Time/date reported	Add date reported	Add time reported
Person reporting incident		
Name	Add name of person reporting incident	
Contact phone number/s	Contact number 1	Contact number 2
Email address	Add email address	
Approved by:	Add name of a Clinical/Quality Lead I Add date approved	
Notify and attach this completed form to: **cvip.incidentnotification@health.govt.nz** Email Subject: CVIP Adverse Event Notification		

Ministry to complete information below		
Date and time received	Add date received	Time received
Person receiving notification	Add name of person receiving notification	

Section B - Description (Provider to complete)	
Type of incident/ adverse event/ AEFI (it's possible two of the four options apply)	
D **Near miss** D **incident** D **Serious adverse event** D AEFI	
Please provide a brief description	
If adverse event following immunisation, has this been reported to CARM?	Y D N D
Has a preliminary investigation been undertaken?	Y D N D
Has a preliminary SAC rating for an adverse event been assigned?	Y D N D
Preliminary SAC rating	Add SAC

- **Incident** means any unplanned event resulting in, or having a potential for injury, ill health, damage or other loss, an incident includes an accident.
- **Adverse event** is an incident resulting in harm, or with the potential to result in harm to a health consumer. Please assign an adverse event SAC rating. Report a SAC 1,2 or 3 SAC event, a cluster of SAC 3/ 4 events+/- near misses.
- **Adverse event following immunisation (AEFI)** is an untoward medical event which follows immunisation and does not necessarily have a causal relationship with the administration of the

vaccine. The adverse event may be an unfavourable or unintended sign, abnormal laboratory finding, symptom or disease.

Provider please note:

- Include information reqardinq open communication with an affected consumer, includinq date completed
- Include your findings in the actions you will take to mitigate this risk going forward
- Update this section of the form over time as incident investigation is progressed and then closed

Section C: Initial assessment and actions by Ministry of Health investigation team

Initial Assessment and actions by Ministry of Health investigation team

Actions taken by Ministry's investigation team

Action	Description	By whom	By when
Add action	Add description	Add whom	Add when
Add action	Add description	Add whom	Add when
Add action	Add description	Add whom	Add when
Add action	Add description	Add whom	Add when
Add action	Add description	Add whom	Add when
Add action	Add description	Add whom	Add when
Add action	Add description	Add whom	Add when

Section D: Decision making

Based on the assessment by the Ministry's assessment team and information qathered, outline the decisions made. Add rows as required

Date	Decision	By whom	By when
DD/MM/YY	Add decision	Add whom	Add when
DD/MM/YY	Add decision	Add whom	Add when
DD/MM/YY	Add decision	Add whom	Add when
DD/MM/YY	Add decision	Add whom	Add when
DD/MM/YY	Add decision	Add whom	Add when
DD/MM/YY	Add decision	Add whom	Add when

Decision matrix		
Incident type	**Assessment team**	**Decision maker**
Clinical	[Clinical Lead CVIP (lead)] [SME] [Operations lead] [Risk] [Communications] [Privacy or security advisors]	Add decision maker
Operational	[GM operations] [SME] [Operations lead] [Risk] [Communications] [Privacy or security advisors]	Add decision maker
Logistics	[GM Logistics] [SME] [Operations lead] [Risk] [Communications] [Privacy or security advisors]	Add decision maker

Section E: Notification checklist			
Role	**Required – Y / N and reason**	**Date**	**Time**
National Director	D Y O N If no, add reason	DD/MM/VY	Time
Communications involved	D Y O N If no, add reason	DD/MM/VY	Time
Minister's office	D Y O N If no, add reason	DD/MM/VY	Time
Director-General	D Y O N If no, add reason	DD/MM/VY	Time
DHB/Organisation CEO	D Y O N If no, add reason	DD/MM/VY	Time
DHB/Organisation SRO	D Y O N If no, add reason	DD/MM/VY	Time
DHB/Organisation clinical lead	D Y O N If no, add reason	DD/MM/VY	Time
DHB/Organisation Operations lead	D Y O N If no, add reason	DD/MM/VY	Time
GM operations	D Y ☐ N If no, add reason	DD/MM/VY	Time

Section F: Other
Please add any other comments/information

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Appendix J:
Risk mitigations for vaccination sites

The table below is applicable to any Alert Level.

Table L1 - risk mitigations

Actions Required at all levels	Supporting Document
• Adapt processes as required for screening of staff, consumers, and support people to capture COVID-19 symptoms, travel history, and/or attendance at locations of interest, if they have been directed to have a test or are awaiting a test result Redirect symptomatic consumers or those with contact history for testing in line with Ministry of Health guidance.	• **COVID-19 Alert System** • **Operating Guidelines for COVID-19 Vaccination** • Refer to the **Vaccination Site Screening Questions** section above.
• Ensure contact tracing NZ COVID app QR codes and alternate contact tracing system (i.e., paper based) are in place and encourage their use.	• **COVID Tracer QR Codes** • **Tips for displaying NZ COVID tracer poster**
• Robust communication strategy to regularly inform staff and consumers of programme and service delivery changes.	• **COVID-19: Q&A for primary health care workers.**
• Promote staff awareness of resources to maintain up-to-date knowledge of national COVID-19 related information.	• **Awhina App** • **NZ COVID Tracer App**
• Oversee and manage safe access to the site and queue management with ability to adapt to changes in alert level.	• **Operating Guidelines for COVID-19 Vaccination**
• Orientation and Adherence to Infection Prevention and Control (IPq guidance, including hand hygiene, and Personal Protective Equipment (PPE) guidelines for various situations and alert levels. These must be available and understood.	• **Five Moments of Hand Hygiene** • **FAQ regarding IPC and PPE** • **PPE use in Health and Disability Care Settings**
• Plans to support adequate and safe staffing to deliver services depending on the COVID-19 alert level. This is not limited to but includes work bubbles, green/red streams, and staff cohorts.	• **Operating Guidelines for COVID-19 Vaccination and Planning considerations for various vaccination settings**
• Regular training in place for current and (any extra staff) around changes in approach for different alert levels.	• **Operating Guidelines for COVID-19 Vaccination and Clinical Guidance** • **IMAC COVID-19 information and training**
• Ensure there is sufficient internet connectivity to enable use of the CIR and other technology in all relevant areas of the site. It may be necessary to use mobile Wi-Fi hotspots.	• **Operating Guidelines for COVID-19 Vaccination and Planning considerations for various vaccination settings**
• Staff wellness: Staff must be discouraged from attending work when unwell and must be encouraged to be up to date with occupationally relevant vaccinations.	
• Ensure that environmental safety considerations, including ventilation, are adequately appraised.	

Appendix K: **Vaccination practice variation according to COVID-19 Alert Level changes**

This appendix provides guidance in the event of any alert level changes. All guidance will be regularly reviewed. This should be read in conjunction with COVID-19 Readiness Plans **Community Response Framework** (PDF, 422 KB) and **Primary care quick reference guide.**

Category	COVID-19: Readiness Alert Level 1	COVID-19: Readiness Alert Level 2	COVID-19: Readiness Alert Level 3	COVID-19: Readiness Alert Level 4
Environmental and Operational				
Physical distancing	Not mandated	2 metre physical distancing between bubbles for consumers/public being vaccinated where reasonably practical and possible otherwise 1m 1 metre 0hvsical distance for Staff	2 metre physical distancing	2 metre physical distancing
Record keeoina	Must have a way for consumers to record their visit (e.g., NZ COVID Tracer code)			
Physical barriers	Not mandated	Not mandated	Perspex/physical barriers between staff and consumers. where possible, i.e., at receotion and screenina.	Perspex/physical barriers between staff and consumers, where oossible i.e. at receotion and screenina.
Gathering restrictions	No mandated restrictions	Site planning must apply the Physical distancing guidance The hospitality guidance does not apply to vaccination sites (Including car park drive through sites)	Restrict number of consumers within the vaccination site, including use of restricted/monitored entry (i.e., one-in. one-out) paying attention to minimising numbers in physically restricted spaces such as the observation area. and mitigation strategies such as outdoor/carpark waiting and observation areas, and observation of physical distancing requirements for consumers. Restrict staff numbers to those essential for core tasks.	Restrict number of consumers within the vaccination site, including use of restricted/monitored entry (i.e., one-in. one-out) paying attention to minimising numbers in physically restricted spaces such as the observation area, and mitigation strategies such as outdoor/carpark waiting and observation areas and physical distancing requirements for consumers. Restrict staff numbers to those essential for core tasks.
Support people	No restrictions	As above. to apply Physical distancing guidance	Not permitted in the vaccination site unless extenuating circumstances (for instance, disability. lanauaae. or cultural support).	Not permitted in the vaccination site unless extenuating circumstances (for instance, disability. lanauaae. or cultural support).
Flow	No restrictions	1-way flow through vaccination site. if possible.	1-way flow through vaccination site, if possible.	1-way flow through vaccination site. if possible.
Staff cohorting	Not required	Staff limited to one work site per day as much as possible. Staff should keep at least 1 metre apart between staff. Avoid unnecessary congregations, like break rooms, avoiding being in confined spaces unless necessary	Staff limited to one role/shift (as much as possible) and one site per day. In the setting of extended site opening hours, should be limited to working with a defined team of staff (i.e., working within a defined group and not mixing across shifts). Avoiding unnecessary congregations, like break rooms, avoiding being in confined spaces unless necessary	Staff limited to one role/shift (as much as possible) and one site per day. and in general encourage consistency in site and work bubble. In the setting of extended site opening hours. should be limited to working with a defined team of staff (i.e. working within a defined group and not mixing across shifts). Avoiding unnecessary congregations, like break rooms, avoiding being in confined spaces unless necessary.
At risk staff	No restrictions	At risk staff should avoid direct consumer contact. At risk staff should work from home.	At risk staff should work from home.	At risk staff should work from home.
Parking on site	No change required.	Additional parking space between vehicles if possible (ie. block alternate oarks off with cones).	Additional parking space between vehicles if possible (ie, block alternate oarks off with cones).	Additional parking space between vehicles if possible (ie, block alternate oarks off with cones).
Infection Prevention and Control				
Staff PPE including masks	Standard precautions. Staff may elect to wear a face covering if they prefer.	In addition to standard precautions, Use of a medical mask only for staff vaccinating In addition to standard precautions, all staff to wear a medical mask continuously. Medical mask can be worn for duration of session up to four hours.	In addition to standard precautions, all staff to wear a medical mask continuously. Medical mask can be worn for duration of session, up to four hours. Optional to wear eye protection when administering vaccine (can be worn for the duration of a session and cleaned if reusable).	In addition to standard precautions, all staff to wear a medical mask continuously. Medical mask can be worn for duration of session. up to four hours. Optional to wear eye protection when administering vaccine (can be worn for the duration of a session and cleaned if reusable).
Consumer *Masks*	Consumers may wear a face covering if they choose.	Consumers must wear a face covering (their own or a medical mask always provided).	Consumers must wear a face covering (their own or a medical mask provided) at all times.	Consumers must wear a face covering (their own or a medical mask provided) at all times.
Surfaces & site cleaning	Clean and disinfect as per local cleaning oolicv	Clean and disinfect environmental surfaces in the vaccination and vaccine preparation areas at least twice daily. Soecial attention to high touch surfaces.	Clean and disinfect environmental surfaces in the vaccination and vaccine preparation areas at least twice daily. Special attention to high touch surfaces.	Clean and disinfect environmental surfaces in the vaccination and vaccine preparation areas at least twice daily. Special attention to hiah touch surfaces.
Vaccination Process				
Screening auestions	At reception	Before entering site.	Before entering site.	Before entering the site.
Consenting	At reception	At reception	Remote consent (telephone or on line) prior to entering site. where possible. May consider consent outside in a separate resourced space.	Remote consent (telephone or online) prior to entering site, where possible. May consider consent outside in a separate resourced space.
Vaccination record card	Must be provided to the consumer as a hard copy record			

•Usina COVID 19 C,,mmunitv Rewonse Frameworlc v2 General Guidance. This auide wi((be uodoted os reouired accordina to new advice or alert level reouirements.

Document version control

Revision History

Version	Date	Section/Appendix	Summary of Changes
23.0	09/09/21	Appendix I	Alert Level Guidance updated for new Alert Level 2 changes
24.0	23/09/21	**Section A**	
		Loaistics Section	Clarified that full trays include 195 vials throuahout
		Section 8.2	After 31 days from removal from ULT expiry time is midniqht on day 31. Vaccines can be administered on day of expiry. Time removed from ULT is not applicable
		Section 9.1	SOPs loaded into CIR, links to CIR added. **Note:** This is not searchable but can access if you have the link.
		Section 9.1 (Table 9.1)	Change to vaccine ordering process, reflecting designated delivery days
		Section 9.1	Q&A added relating to missing the time cut off for orders on desiqnated delivery day.
		Section 9.1 (Table 9.1-9.4)	Pack size change: 600s changed to 700s
		Section 9.2 (Figure 9.1)	Delivery temperature and use-by dates: Packaging change for A2 size in South Island and lower North Island.
		Section 9.2 Vaccine stock/invento ry manaaement	New section and process hiqhliqhtinq that stock should be used on a first to expire first out basis (FEFO)
		Section 9.2 (Table 9.5)	Visual check: • Each site should check the packing slip to make sure all vaccines have been received Vials intact: • Chanqed from 80% of vials to all vials
		Section 9.2 (Table 9.7)	Added "as required" for reports to the Ministry and CIR reports for facility stock on hand
		Section B	
		Section 15	'Written consent is advised' added to the note around authorised prescribers prescribing the vaccine as off label/ unapproved use.
		Section 16 & Section 18 (Table 18.3)	Interaction with other vaccines information updated throughout
		Section 17 Section 18 (Table 18.5)	Both vial and 31-day removal from ULT expi ry date must be double check during the preparation of the vaccine and
		Section 18.2	Obtaining informed consent updated with clearer steps where written consent is considered

		Section 18.4	New 'Consumers' record of vaccination' section
		Section C	
		Section 20	New 'Home vaccinations' section
		Section 24.6	Updated timeline for the event of a vaccine administration error (7 working days)
		Section 24.7	New Section 'Early second doses'
		Section D	
		Appendix A	New and updated site checklist
		Appendix B	Site set up form includes a new email update
		Appendix I	Added 'Near miss with likely siqnificant consequences' Process added: • 7 working day timeline for plana and execution of open communication with affected consumers • Updatinq of CVIP incident form and send an update to the Ministry (ongoing/until closed) Updated incident form
		Appendix J	Added Internet connectivity information
		Appendix K	Alert Level physical distancinq and vaccination record card sections updated
25.0	08/10/21	**Section A**	
		Section 7.4 Table 7.5	Updated content in the demand planning table
		Section 8.6	Q&A 'Transportation of vaccine to other locations' updated
		Throughout the logistics section	Changes to reflect that WoolChill being replaced by Cool Green Cell. Reference to generic 'shipping box' or full range of boxes - Credo, WoolChill, Cool Green Cell.
		Section B	
		Section 13.1 Table 18.4	Booking second doses section updated to reflect the recommendation of receiving the second dose as soon as practical after the minimum 21 days.
		Section 18.2	'Uploading written consent forms section changed to 'Written consent forms'. With content updated
		Section C	
		Section 25.2	Added overseas vaccinations section
		Section D	
		Appendix I	Typo fixed in the SAC matrix

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

1 December 2021

Phone (06) 350 8061
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Postal Address:
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Palmerston North Central
Palmerston North 4440
New Zealand

Physical Address:
Gate 2
Heretaunga Street
Palmerston North
New Zealand

[redacted]

Via email: [redacted]

Dear [redacted]

I refer to your Official Information Act request received by email on 4 November 2021 with regard to pharmacist prescribers, pharmacy technicians who hold PACT or a level 6 qualification and merit applications made at MidCentral DHB, and respond as follows:

- *The number of pharmacist prescribers employed at the DHB*
  One

- *The number of pharmacy technicians who hold PACT or a level 6 qualification*
  Three (will be four shortly)

- *The number of merit applications broken down into pharmacists, pharmacy technicians, and pharmacy assistants at your DHB*
  Nil

- *The number of successful merit applications broken down into pharmacists, pharmacy technicians, and pharmacy assistants at your DHB*
  Nil.

Please note that this response, or an edited version of it, may be published on the MidCentral DHB website ten working days after your receipt of this letter.

Yours faithfully

Keyur Anjaria
General Manager
People & Culture

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

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Gate 2
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Palmerston North
New Zealand

1 December 2021

[redacted]

Via email: [redacted]

Dear [redacted]

I refer to your Official Information Act request received by email on 4 November 2021 with regard to Pharmacy staff hired, experience and salary scale at MidCentral DHB, and respond as follows:

- *The number of staff hired in the above positions since 1 November 2020 i.e. headcount and FTE.*
- *How many years of experience in the same or substantially similar role of each new hire*
- *Where they started on the salary scale?*

    - Pharmacy Intern: 2 headcount – 2 FTE
        - 1 x qualification completed October 2020; on Intern scale (Intern scale has 1 step only)
        - 1 x offered position – commences January 2022. Has had final assessment, results pending. On Intern Scale.

    - Pharmacy Assistant: 5 headcount – 2 FTE (note 3 are casual employees)
        - 3 x nil experience; commenced on step 2 (note – step 1 rate was below minimum wage from 1 April 2021)
        - 1 x 12 yrs pharmacy retail experience; commenced on step 4 (top step)
        - 1 x nil pharmacy experience (had customer service/hospitality experience); commenced on step 4.

    - Pharmacy Technician: 3 headcount – 2 FTE
        - 1 x 9yrs experience; commenced on step 5 (Qualified – Merit scale)
        - 1 x 15yrs experience up until 2005; commenced on step 4 (top of Qualified scale)
        - 1 x 5yrs experience up until 2013; commenced on step 4 (top of Qualified scale)

    - Pharmacist: 2 headcount – 1 FTE
        - 1 x 12 yrs experience; commenced on step 12

Please note that this response, or an edited version of it, may be published on the MidCentral DHB website ten working days after your receipt of this letter.

Yours faithfully

Keyur Anjaria
General Manager
People & Culture

MIDCENTRAL DISTRICT HEALTH BOARD
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1 December 2021

[redacted]

Via email: [redacted]

Dear [redacted]

I refer to your Official Information Act request received by email on 4 November 2021 with regard to Pharmacy Assistants, Trainee Pharmacy Technicians, Pharmacy Technicians, Intern Pharmacists, and Pharmacists at MidCentral DHB, and respond as follows:

- *The actual number of Pharmacists – i.e. headcount and FTE*
  15 headcount
  13.11 FTE

- *The actual number of Pharmacy Technicians – i.e. headcount and FTE*
  11 headcount
  8.81 FTE

- *The actual number of Pharmacy Assistants – i.e. headcount and FTE*
  5 headcount
  3.95 FTE

- *The number of resignations and pending resignations since 4 November 2020 broken down into pharmacists, pharmacy technicians, and pharmacy assistants.*
  - Pharmacists: Nil
  - Pharmacy Technicians: Nil
  - Pharmacy Assistants: 2

Please note that this response, or an edited version of it, may be published on the MidCentral DHB website ten working days after your receipt of this letter.

Yours faithfully

Keyur Anjaria
General Manager
People & Culture

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29 November 2021

[redacted]

Dear [redacted]

We are in receipt of your Official Information request dated 6 October 2021 to the Ministry of Health. The Ministry has transferred question numbers 1-7 and 10-11 to the DHB for response on 4 November 2021.

You advised that you like the following information as stated below:

1. How many government funded Live-in treatment services (Residential services & Support houses) were there between 2015 and 2021 broken down by year? What was the number of beds abatable in these services, broken down by year?
2. What were the names, and locations of these facilities?
3. How many government funded Live-in treatment services (residential services & support houses) closed between 2015 and 2021.
4. What were the names of the facilities that closed, and locations of these facilities?
5. How many people have been on the waiting list for these facilities between 2015, and 2021. Broken down by year?
6. What is the average amount of time between 2015 and 2021, a person has been expected to wait for a place in these facilities?
7. How many of these centres both live in treatment services and detox beds closed during lockdown periods? At what level are these services allowed to operate?

The table overleaf responds to questions 1-7. Please note that these are services specifically contracted by MDHB. It is anticipated that details for Region Services (provided by CCDHB and HBDHB) will be covered in those DHB responses; and that details of national Detox services will be provided by the Ministry of Health.

			Years							
Provider	Service	Location	2015	2016	2017	2018	2019	2020	2021	Available during lockdown
Dalcam	Yaxley	Feilding	8	8	8	8	8	8	8	Yes
	# on wait list	Feilding	0	0	0	0	0	0	0	
	wait time	Feilding	0	0	0	>3mnths	0	0	0	
Dalcam	Sleep/wake over	Feilding	27	27	27	27	34	34	34	Yes
	# on wait list	Feilding	0	0	0	3	4	2	0	
	wait time	Feilding	0	0	0	>3mnths	>3mnths	0	0	
Dalcam	Adult Crisis Respite	Feilding	6	6	6	6	6	6	6	Yes
	# on wait list and wait time	Feilding	There are no wait lists or wait times for crisis respite services							
MASH	Adult Planned Respite	P Nth	2	2	2	2	2	2	2	Closed at Level 4
	# on wait list and wait time	P Nth	There are no wait lists or wait times for crisis respite services							
MASH	Sleep/wake over	P Nth	34	34	34	34	34	34	34	Yes
	# on wait list	P Nth					4	2	0	
	wait time	P Nth					1-3 mnths	1-3 mnths	0	
MASH	Youth Crisis Respite	P Nth	6	6	6	6	6	6	3	Temporary closure at Level 4. Re-opened part way through.
	# on wait list and wait time	P Nth	There are no wait lists or wait times for crisis respite services							
MASH	Supportive Landlord	P Nth	22	22	22	22	22	22	22	Yes
	# on wait list	P Nth				2	4	0	0	
	wait time	P Nth				4 weeks	8 weeks	6 weeks	0	
MASH	AOD Programme	P Nth	6	6	6	6	6	6	6	Closed to new admissions at Level 4
	# on wait list	P Nth	This data has not been collected							
	wait time	P Nth	This data has not been collected							
Emerge	Extended Care/Rehab	P Nth	This service will open in November 2021						5	n/a
Lonsdale	Extended Care Inpatient	Foxton			2	2	2	2	2	Yes
	# on wait list and wait time	Foxton	0	0	0	0	0	0	0	

10. What was the average wait time for a drug and alcohol detox bed, between 2015 and 2021?

The average wait time for a detox bed is 1-3 weeks for planned medical admissions – these will be current clients of the AOD service at Midcentral and also NGO and iwi providers who require specialist input to support with a planned pathway to a medical detox bed. During the wait time risk in the community will be managed by the withdrawal management team in consultation with GP practices and working collaboratively with whānau and other recovery supports to provide reassurance and support. Clients and whānau will always be advised to present to the Emergency Department if the risk increases and if the client requires more immediate medical review and admission.

11. On average how many people have been on the waiting list for drug and alcohol detox bed, between 2015 and 2021? Broken down by year?

Information relating to the average number of people on the wait list has not been captured. In discussion with the Withdrawal Management Team in 2020 and 2021 there has been an average of 5-7 people on the wait list at any given time.

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website ten working days after your receipt of this response.

Yours sincerely

Scott Ambridge
Operations Executive

Te Uru Rauhī - Mental Health & Addictions Services
PN Hospital, Private Mail Bag 11036, PALMERSTON NORTH
Phone: + 64 (6) 350 8354

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

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2 December 2021

[redacted]

Ref: Y21-1675

Dear [redacted]

In response to your recent Official Information Act 1982 request regarding:

- *Copies of any reports, documents, memoranda, correspondence, legal advice, aide memoires, or emails, both internal and external discussing using a refrigerated container or refrigerated containers to respond to Covid deaths*

We advise for MidCentral DHB as follows:

There are no reports, documents, memoranda, correspondence, legal advice, aide memoires, or emails, both internal and external discussing using a refrigerated container or refrigerated containers to respond to COVID-19 deaths.

General guidance for DHB's on the management of bodies in a pandemic is available in the New Zealand Influenza Pandemic Plan – Ministry of Health. This can be found at www.health.govt.nz / documents / publications on Page 137.

The MidCentral DHB Pandemic Plan

This document is an internal reference document for any pandemic. A lot of which is taken from the Ministry pandemic plan and then adjusted to suit the local situation. Refrigeration and storage references as follows:

Refrigeration and storage

If bodies need to be stored, because they cannot be prepared for burial or cremation in a timely manner or because the remains are unidentified, the following practices should be followed until appropriate identification and/or disposal can take place:

Long-term storage (five or more days)

To preserve bodies indefinitely, they should be stored in refrigerated containers that can maintain temperatures below –24°C. Care should be taken to avoid thawing and re-freezing remains.

Short-term storage (less than five days)

Unembalmed bodies may be stored in refrigerators of temperatures above 0°C for up to five days before muscle and bone is likely to decompose.

If you are not satisfied with this response you have the right to raise any concerns regarding our response with the Ombudsman – www.ombudsman.parliament.nz or 0800 802 602.

Please note that this response, or an edited version, may be published on the MidCentral DHB website ten working days after your receipt of this response.

Yours sincerely

Neil Wanden
General Manager, Finance & Corporate Services

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

6 December 2021

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[redacted]

Dear [redacted]

Official Information Act (OIA) Request – Y21-1676

Thank you for your request for information dated 8 November 2021. Your email has been acknowledged and passed onto me for a response.

You have requested MidCentral District Health Board (MDHB) provide you with information to the following questions:

1. ***Do you diagnose ADHD for those under the age of 18, and for those over 18? If so, what is the process to getting a diagnosis, and who does the diagnosis? If not, please explain why not.***

Yes, MDHB diagnoses ADHD for those under 18 and those over 18.

The Child, Adolescent, and Family Service (CAFS) diagnose ADHD up to the age of 18yrs. For CAFS, once a referral is received an assessment is undertaken initially by any of the CAFS team, who will ensure that a full history is taken, school reports are checked and family, school and young person (if of age) will then be given psychometrics to complete (these are scored by our Psychologist team). Once this is complete and ADHD is indicated then the young person will be discussed at the Multi-disciplinary Team meeting and then offered an appointment with one of the CAFS medical team.

Paediatrics accept referrals for ADHD up to the age of 16yrs (without co-morbid mental health issues or extreme behavioural issues.) Referrals are prioritised at the weekly meeting and the child and family seen in clinic for a full assessment, with psychometric testing completed as part of diagnosis.

Adult mental health services also accept referrals for ADHD diagnosis over 18yrs. Any referral indicative of an ADHD diagnosis is sent to the psychology team for triage, with all moderate to severe cases assessed.

2. ***What is the waiting list/average time frame to be diagnosed over the last 12 months? (for under and over 18)***

This is dependent on the service. Currently the average wait from referral to appointment is 105 days for paediatrics. For CAFS, the wait time may be up to eight weeks. For adult community services, there is no wait list currently; referrals are allocated once they are received, however there may be a delay in being seen once accepted, dependent on clinician capacity.

3. What support do you provide once they are diagnosed?

For all services psychopharmacology is provided. If assessed as needing more than psychopharmacology, then a number of services may be offered including CAF service, family therapy, behavioural activation programmes, Cognitive Behavioural Therapy or Alert group for help with emotional regulation skills. If a child/young person is out of school because of behavioural or other issues the Central Regional Health School can be accessed until reintegrated back into the classroom. For adults, psychological support may be available.

4. Do you have the ability to cope with an ADHD person in crisis? What care is provided?

All young people and adults have access to crisis intervention via the duty/Access team during working hours Monday to Friday and via the out of hours crisis team. During a crisis situation the relevant team will triage and can offer either phone support, referral through to a more appropriate service or assessment (for instance NGO or Oranga Tamariki). If the child/young person or adult has previously been in the service and has already had a comprehensive assessment, risk issues may have already been identified and a plan agreed with the family. Where acute safety concerns are identified admission to the inpatient unit may be an option where safety is required to be maintained.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website 10 working days after your receipt of this response.

I hope this information is what you require.

Yours sincerely

Sarah Fenwick
Operations Executive
Te Uru Pā Harakeke - Healthy Women Children and Youth

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

3 December 2021

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[redacted]

Dear [redacted]

Official Information Act Request: Y21-1677
[redacted] **OIA Y21-1677 Provision of COVID-19 Case Numbers**

I refer to your email dated Monday 8 November 2021 requesting the following information under the Official Information Act from MidCentral DHB (MDHB). Specifically:

Information relating to the provision of COVID case numbers and daily updates to district representatives, including and not limited to elected members, stakeholders and third parties.

For clarity, RNZ seeks information on:

- *Who is given information on the daily COVID cases in each DHB region in advance of any Ministry of Health or government statement, or briefing?*
- *Which stakeholders and/or partner organisations are given information?*
- *The nature of the information; what information about the COVID cases are people given?*

Our Chief Executive briefs key relevant community stakeholders (including iwi and local government) in confidence when a case is identified in a community.

Our Public Health Service produces a daily (written) situation report at around 10.00 am. This is specific to the MDHB region.

This report is sent to members of MidCentral District Health Board's (MDHB) Incident Management Teams, which include:

Internal MDHB Employees

- Our Chief Executive
- Senior Leadership Team
- Senior Clinicians
- Communications Service
- Emergency Management Service

MDHB Board:

The situation report **is not** sent to the elected board members, but they are briefed on a regular basis on matters pertinent to our DHB.

The daily Sitrep is also sent to:

External parties
- THINK Hauora (our local Primary Health Organisation).
- Ministry of Health (only sent when the MDHB EOC has been stood up).

Our Iwi leads have been receiving verbal updates around COVID-19, based on information provided to our Incident Management Teams. These include representatives of:

Rangitane o Manawatu; Ngati Raukawa ki te Tonga; Muaupoko Tribal Authority; Ngati Kahungunu ki Tamaki nui a Rua; Rangitane ki Tamaki Nui a Rua; Ngati Kauwhata; Manawhenua Hauora.

The information provided includes:

1. **A summary of:**
- The number of unconfirmed cases (still under investigation)
- Number of confirmed cases in the previous 24 hours
- Confirmed cases (total)
- Active and recovered cases
- Number of cases isolating at home, in SIQ or in MIQ
- Number of households with cases
- Number of cases in hospital
- Number of cases in ICU

2. **Recent case details including their:**
- Gender
- Age range (in 10-year cohorts)
- The local authority (City or District Council) area in which they reside
- Their vaccination status
- Their status (active or recovered)

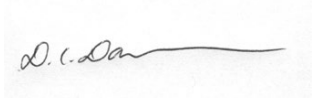
Further breakdown is not provided in order to preserve patient privacy.

I trust that this satisfies your interest in this matter.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website ten working days after your receipt of this response.

If you are not satisfied with our response to your information request, you have the right to seek a review by way of complaint by the Ombudsman of your decision. Information about how to make a complaint is available at ww.ombudsman.parliament.nz or freephone 0800 802 602.

Yours sincerely,



Deborah Davies
Operations Executive
Te Uru Kiriora, Primary Public and Community Health

MIDCENTRAL DISTRICT HEALTH BOARD
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29 November 2021

[redacted]

E-mail: [redacted]

Dear [redacted]

Official Information Act (OIA) Request

Your OIA request of 9 November 2021 to MidCentral District Health Board (MDHB) is acknowledged and has been passed on to me for response.

You have requested the following information.

- **Total funding allocated towards gender affirming surgeries in the MidCentral DHB, particularly with regards to transmasculine 'top' surgery (bilateral mastectomy) for gender transition.**

  Top Surgery (bilateral mastectomy) for Gender Transition is not a procedure performed at MDHB. MDHB has no specific funding assigned for this procedure.

- **Copy of financial reports or relevant information.**

  MDHB has no financial reports to provide.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website 10 working days after your receipt of this response.

Yours sincerely

Lyn Horgan
Operations Executive
Acute & Elective Specialist Services

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

15 December 2021

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[redacted]

Via email: [redacted]

Dear [redacted]

I refer to your Official Information Act request received by email on 17 November 2021 with regard to vaccination rates at MidCentral DHB, and respond as follows:

- *How many staff did not receive their first Pfizer vaccination in the Nov 15 timeframe listed by number and service area and occupation type.*

Senior Medical Officers	1
Resident Medical Officers	1
Registered Nurses	14
Enrolled Nurses	0
HCA	6
Midwives	3
Allied Health	7
Management	2
Admin/Clerical	9
Total	43

Please note that this response, or an edited version of it, may be published on the MidCentral DHB website ten working days after your receipt of this letter.

Yours faithfully

Keyur Anjaria
General Manager
People & Culture

MIDCENTRAL DISTRICT HEALTH BOARD
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17 December 2021

[redacted]

Ref: Y21-1698

Dear [redacted]

In response to your recent Official Information Act 1982 request regarding:

1. *In each of the financial years ended 30 June 2014, 2015, 2016, 2017, 2018, 2019, 2020 and 2021 were Ernst & Young (EY New Zealand) engaged by MDHB to undertake any reviews, projects or other activities or work (excluding repatriation work arising out of the application of the Holidays Act), what was the purpose of each review, project, or other activity or work, and how much was paid to EY for each review, project, or other activity or work?*

2. *Is Ernst & Young (EY New Zealand) presently engaged by MDHB to undertake any reviews, projects or other activities or work (excluding repatriation work arising out of the application of the Holidays Act), what was the purpose of review, project, or other activity or work, when did each review, project, or other activity or work first commence, and what is the amount to be paid to EY for each review, project, or other activity or work when completed?*

We advise for MidCentral DHB as follows:

1. Excluding the Holidays Act project, MDHB has engaged Ernst & Young in three activities since 1 July 2013. These are as follows:

Financial Year	Activity	Cost (ex GST)
2017/18 & 2018/19	Central Region Cancer Planning	$152,370
2017/18	Operating Model and Organisational Design	$69,957
2016/17	Advisory Services related to Strategic Challenges	$128,630

2. Excluding the Holidays Act project, no.

If you are not satisfied with this response you have the right to raise any concerns regarding our response with the Ombudsman - www.ombudsman.parliament.nz or 0800 802 602.

Please note that this response, or an edited version, may be published on the MidCentral DHB website ten working days after your receipt of this response.

Yours sincerely

Neil Wanden
General Manager, Finance & Corporate Services

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

17 December 2021

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[redacted]

Email: [redacted]

Dear [redacted]

Official Information Act (OIA) request – Y21-1701 SUDI prevention funding data

Thank you for your request for information dated 19 November 2021. Your email has been acknowledged and passed onto me for a response.

You have requested MidCentral District Health Board (MDHB) provide you with information to the following questions:

1. The allocation of funding for SUDI Prevention in MidCentral?

The funding for SUDI for both the 2021/22 and 2022/23 year is $151,532.04 per annum.

2. How is the funding broken down and whom is it going to?

Funding is broken down into personnel and non-personnel costs.

Costing breakdown	2021 / 2022 Budget with expected costs
Personnel	$ 112,440
Non personnel	73,092
Total costings	$185,532

Note: Non personnel costs include wahakura, pēpi-pod, mattresses, sheets and blankets. They also include wānanga.

3. MoH have secured funding for SUDI prevention in MidCentral till 2023, if this has been allocated to organisations already, or will be a yearly discussion. Has 2022/23 already been allocated to SUDI providers and amounts

Funding for 2022/23 has not yet been finalised or allocated.

Please note that this response, or an edited version may be published on the MDHB website ten working days after your receipt of this letter. Please let me know if you have any objections to this as soon as possible.

I hope this information is what you require.

Yours sincerely

Sarah Fenwick
Operations Executive
Te Uru Pā Harakeke
Healthy Women Children and Youth

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

29 November 2021

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[redacted]

Dear [redacted]

Official Information Act (OIA) Request – Y21-1738

Thank you for your request for information dated 25 November 2021. Your email has been acknowledged and passed onto me for a response.

You have requested MidCentral District Health Board (MDHB) provide you with information to the following questions:

Can I please have the information on what the MOH has funded Midcentral DHB for Secondary Care Obstetric scans for pregnant woman, from Jan 2020 to Nov 2021.

There is no specific funding for secondary care obstetric scans. Secondary care services are funded via population based funding. Service provision is based on clinical prioritisation and need.

Questions I would like answered please are:

1. ***What is the amount funded to Secondary care for scans, in the hospital, and when referred to the community? Ie Pacific Radiology and Broadway Radiology.***

Please refer to the answer for the previous question. In relation to funding for referred community scans, this information has been withheld under section 9(2)(j) of the Official Information Act due to commercial sensitivity.

2. ***What is the breakdown of costs, and is all funding by MOH retained for its proposed purpose, ie scans.***

As previously advised, there is no specific funding for secondary obstetric scanning.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website 10 working days after your receipt of this response.

Yours sincerely

Sarah Fenwick
Operations Executive
Healthy Women Children and Youth

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

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7 December 2021

[redacted]

Ref: Y21-1744

Dear [redacted]

In response to your recent Official Information Act 1982 request regarding:

- *Please advise how many of your electrical switch rooms have fire suppression systems*
- *If there is a fire suppression system what type of system, e.g. water sprinklers, gas flood, or other system ?*
- *If nothing, then NIL.*

We advise for MidCentral DHB as follows:

Of the 213 switchboards
164 have fire suppression systems
25 have active detection systems for either heat or smoke but no suppression system
24 have no suppression or detection systems in place.

All suppression systems are water sprinkler types.

If you are not satisfied with this response you have the right to raise any concerns regarding our response with the Ombudsman – www.ombudsman.parliament.nz or 0800 802 602.

Please note that this response, or an edited version, may be published on the MidCentral DHB website ten working days after your receipt of this response.

Yours sincerely

Neil Wanden
General Manager, Finance & Corporate Services

MidCentral District Health Board
Te Pae Hauora o Ruahine o Tararua

21 December 2021

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[redacted]

Email: [redacted]

Dear [redacted]

Official Information Act Request Y21-1746

On 26 November 2021 you made an Official Information Act request to all DHBs. Your original request was as follows:

Under the Official Information Act, please provide information, including but not limited to emails, applications, reports, meeting minutes, memos, data, audiovisual materials and correspondence to/from the DHB about:

- *The number of formal apologies, including apologies in writing, offered by senior management, including but not limited to the chief executive, deputy chief executive(s), executive managers and board members to:*
- *Any DHB staff member*
- *Any former DHB staff member*
- *Anyone employed, contracted, or working in any capacity for the DHB*
- *Any patient*
- *Any former patient*
- *Any family of a patient or former patient*
- *Any member(s) of the public*
- *Any other government agency*
- *No date range – please provide information as far back as is reasonably practicable.*

The Technical Advisory Service (TAS), on behalf of the DHBs, corresponded with you via telephone and email to discuss refining the scope of the request. This is because the DHBsconsidered it would be difficult to respond to your original request due to its broad scope, and we anticipated that your request may need to be partially or fully refused because the

information requested could not be made available without substantial collation or research (ie section 18(f) Official Information Act 1982 (**OIA**)).

On 15 December 2021, you refined the scope of your Official Information Act request for all DHBs as follows:

Under the Official Information Act, please provide information, including but not limited to emails, applications, reports, meeting minutes, memos, data, audiovisual materials and correspondence to/from the DHB about:

- *The number of formal apologies, including apologies in writing, offered by senior management, including but not limited to the chief executive, deputy chief executive(s), executive managers and board members relating to:*
- *to Health and Disability Commission (HDC), Privacy Commission and Ombudsman's complaints over the past 5 years*
- *Any DHB staff member*
- *Any former DHB staff member*
- *Anyone employed, contracted, or working in any capacity for the DHB*
- *Any patient*
- *Any former patient*
- *Any family of a patient or former patient*
- *Any member(s) of the public*
- *Any other government agency*

You also confirmed that you would limit the scope of your request to the last 5 years, and that:

> *"I do not need information from, for instance, what we might call "auto-generated" apologies. By that, I mean if for example when someone complains on social media and the DHB replies with "Sorry for the inconvenience" messages. That's not what I'm interested in.*
>
> *I am interested in more serious cases, in which for example, a chief executive or senior manager has apologised to staff, former staff, or a member of the public, or another government agency, for any mistake or wrongdoing."*

MDHB has reviewed your request. MDHB has interpreted your request as a request for the number of formal apologies to the groups and individuals specified. MDHB is therefore providing you with information in the form of data relating to complaints from patients, former patients, family members of patients or former patients or other members of the public in the last 5 years.

To the extent that your request is for detail of the actual complaints and copies of the responses and any apologies:

- MDHB refuses this request because it considers that the information requested cannot be made available without

substantial collation or research (section 18(f) OIA), because this would involve reviewing 1,923 complaints (refer table below); and

- MDHB has withheld that information because it considers there is good reason for withholding it because it is necessary to protect the privacy of natural persons, including that of deceased natural persons (section 9(2)(a) OIA), and it does not consider that the public interest outweighs the need to withhold this information.

MDHB also notes that the terms 'formal apology' and/or 'serious cases…for any mistake or wrongdoing' in your request are open to interpretation. It may be that each DHB will interpret your request differently. We have explained how we have interpreted this below.

MDHB's response is set out below, and is separated into three categories in accordance with how it manages and records complaints.

Number of formal apologies relating to complaints (including but not limited to, Health and Disability Commissioner, Privacy Commissioner and Ombudsman) to any patient, former patient, family of a patient or former patient, member(s) of the public.

It is MDHB's standard that all formal written responses express sentiments of regret and apologies for the patient's feelings of distress as a result of what happened. All formal written complaint responses are signed off by an Executive member of the relevant service and include a response to concerns raised, an indication of the outcomes of the review and identify any actions that have or will be taken.

Complaints are classified according to severity as a minor, moderate or major complaint. Minor complaints are where the resolution is straightforward consisting of an explanation, clarification of policy or procedure, investigation or an apology/phone call/response letter to the consumer/family/whānau (e.g. no system issue is identified). Moderate complaints are where resolution requires investigation, meetings with consumer, family/whānau and other providers, and includes an apology and the completion of some corrective actions. Major complaints include all complaints from the Health and Disability Commissioner, complaints received by the office of the Chief Executive, complaints to a MDHB Board Member, and all complaints received from the Ministry or a member of parliament.

For the purposes of this OIA request, only moderate and major complaint numbers have been included.

The table below provides the data relating to the above by category and year:

2017		
Number of moderate complaints	**Number of Major complaints (excluding HDC)**	**Number of HDC Complaints**
321	1	40
TOTAL FOR YEAR:		**362**

2018		
Number of moderate complaints	**Number of Major complaints (excluding HDC)**	**Number of HDC Complaints**
246	53	16
TOTAL FOR YEAR:		**315**

2019		
Number of moderate complaints	**Number of Major complaints (excluding HDC)**	**Number of HDC Complaints**
336	39	45
TOTAL FOR YEAR:		**420**

2020		
Number of moderate complaints	**Number of Major complaints (excluding HDC)**	**Number of HDC Complaints**
308	30	34
TOTAL FOR YEAR:		**372**

2021 (01/01/2021 – 16/12/2021)		
Number of moderate complaints	**Number of Major complaints (excluding HDC)**	**Number of HDC Complaints**
367	55	32
TOTAL FOR YEAR:		**454**

Number of formal apologies relating to staff, former staff or contractors

You requested the number of formal apologies, including apologies in writing, offered by senior management, including but not limited to the chief executive, deputy chief executive(s), executive managers and board members relating to:

- Any DHB staff member
  None
- Any former DHB staff member
  None
- Anyone employed, contracted, or working in any capacity for the DHB
  None

Our response is based on the following assumptions:

1. The formal apology is in writing and has been provided by senior management, including but not limited to the chief executive, deputy chief executive(s), executive managers and Board members
2. The apology is for a mistake or wrongdoing – our definition of 'mistake or wrongdoing' is an action that has been found to breach the DHBs Code of Conduct, is a serious misconduct event in accordance with the DHBs polices, or a breach of Ministerial/Government directive.
3. The apology is not covered by confidentiality clauses within any enforceable agreements between parties (ie MDHB is withholding any apology contained within a confidential settlement agreement because

it considers there is good reason for withholding that information because it is necessary to protect the privacy of natural persons, including that of deceased natural persons (section 9(2)(a) OIA), and it does not consider that the public interest outweighs the need to withhold this information).

Number of formal Apologies to Government Agencies

MDHB has interpreted this to mean the 118 government agencies (including Crown entities) listed by the Public Services Commission.

MDHB has not made any formal apologies to any of these agencies in the last five years.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website ten working days after your receipt of this response.

You have the right to seek an investigation and review by the Ombudsman of our decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

If you wish to discuss this decision with us, please feel free to contact me.

Yours sincerely

Judith Catherwood
General Manager, Quality & Innovation

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

23 December 2021

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[redacted]

Email:[redacted]

Dear [redacted]

Official Information Act (OIA) request – OIA Y21-1917

Thank you for your request for information dated 20 December 2021. Your request is acknowledged and has been passed onto me for a response.

You have requested MidCentral District Health Board (MDHB) provide you with information to the following questions:

1. **What the total requests during the 12 months of 2020 were for CA-125 blood tests in your DHB region?**

There were 1139 requests for CA-125 blood tests in the MDHB region across the hospital and the community.

2. **The estimated total population your DHB serves.**

The estimated MDHB population is 186,000.

Please note that this response, or an edited version may be published on the MDHB website ten working days after your receipt of this letter. Please let me know if you have any objections to this as soon as possible.

I hope this information is what you require.

Yours sincerely

Dr Claire Hardie
Clinical Executive
Cancer Screening, Treatment and Support
Te Uru Mātai Matengau

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

31 January 2022

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[redacted]

Dear [redacted]

Official Information Act Request: Y21-1896: Childhood Vaccinations

The information below is in response to your Official Information Act 1982 (the Act} request to the Ministry of Health dated Wednesday 24 November 2021.

This request has been partially transferred to MidCentral District Health Board (MDHB) under section 14 of the Act.

The information that you have requested from us is as follows:

1. *a list of all district health board emergency departments that have a policy to provide COV/0 -19 vaccinations to unvaccinated people who attend the emergency department*
2. *a list of all district health board emergency departments, paediatric debarments or wards that have a policy to provide childhood immunisations to all unvaccinated children who attend the department or ward*
3. *what plan each district health board has to connect people or children not currently enrolled in primary care who attend the emergency department or other departments - in primary care (registered with a PHO) - currently only 84% of Miiori are enrolled in primary care {PHO).*

Our response is as follows:

1. MDHB has no policy around provision of COVID-19 vaccinations to unvaccinated people who attend our Emergency Department;

2. There is no policy for paediatric wards or departments, however the department will provide vaccination upon request

3. A Community Enrolment Connector (CEC) is employed through our PHO, THINK Hauora. This role has strong relationships with Iwi providers, the MDHB Emergency Department, general practices and other clinical service providers across the community to ensure early identification of unenrolled individuals/whanau and prioritization of enrolment (especially for priority populations - including infants/children} within the Rohe.

   There are several localities within the Rohe that have ongoing significant workforce shortages (and therefore restricted enrolment capability), but the relationships built through the CEC ensure priority populations get connected with a PHC provider (be that through enrolment or prioritized waitlist for enrolment) to ensure immunisations are easily accessible. In addition, the THINK Hauora Childhood Immunisation Team provide community-based vaccination clinics in the Horowhenua and Palmerston North

localities for those unable/unwilling to access general practices. The team then supports these whanau to engage with a PHC team for ongoing care.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website ten working days after your receipt of this response.

If you are not satisfied with our response to your information request, you have the right to seek a review by way of complaint by the Ombudsman of your decision. Information about how to make a complaint is available at ww.ombudsman.parliament.nz or freephone 0800 802 602.

Yours sincerely,

Deborah Davies
Operations Executive
Te Uru Kiriora, Primary Public and Community Health

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

31 January 2022

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[redacted]

Dear **1111**

Official Information Act Request: Y21-1905: Cost of COVID-19 Cases and Incentives

The information below is in response to your Official Information Act 1982 (the Act) request to the Treasury on Sunday 7 November 2021.

On 30 November 2021 the request was partially transferred to the Ministry of Health.

The request was further transferred (in part) to District Health Boards around the country under section 14 of the Act, on Thursday 16th December 2021.

MidCentral District Health Board (MDHB) has been asked to supply a response to the following questions:

1. *Costs to the DHBs for health care provided to the Covid-positive patients, including HOU and ICU, and -*
2. *Costs of the incentives/ bribes, music, food, and other draw-cards at testing and vaccination centres implemented to entice people to get tested and vaccinated"*

Our response is as follows:

1. MDHB has had only one COVID-19 positive patient admitted since the pandemic began. The cost to the DHB was $2,721.

2. The costs of incentives for people to get tested or vaccinated total $75,000.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website ten working days after your receipt of this response.

If you are not satisfied with our response to your information request, you have the right to seek a review by way of complaint by the Ombudsman of your decision. Information about how to make a complaint is available at ww.ombudsman.parliament.nz or freephone 0800 802 602.

Yours sincerely,

,,.f.borah Davies
Operations Executive
Te Uru Kiriora, Primary Public and Community Health

MIDCENTRAL DISTRICT HEALTH BOARD
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21 January 2022

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Dea

Official Information Act Request Y21-1864
Information and Communications on the Design of COVID-19 Related Visual Material

The information below is in response to your Official Information Act request dated 8 December 2021.

Under section 12 of the Official Information Act 1982 your request is as follows:

[redacted] *I am researching the use of visual imagery used by district health boards to communicate COVID-19 related legal information to the public. I am seeking the same information from all the district health boards as part of my research into visual jurisprudence and the communication of COV/0-19 related information in visual form.*

I am making this request under the Official Information Act 1982, for all written and visual material, communications, emails, design drafts, final papers and decisions related to all visual material created for COVID-19 vaccination communications from the DHB, since January 2021, including:

- *The COVID-19 vaccination design briefs developed by DHB staff, advisors and contractors; all relevant internal and external communications in relation to the development of the design briefs, all decision-making papers, notes, emails, minutes and agendas in relation to the design briefs; and*
- *all external communications in relations to COVID-19 vaccination design briefs, including draft and final visual material, responses from and to external agencies and creatives concerning the COVID-19 design material; all communications seeking advice from and giving advice to internal and external partners and parties on the COVID-19 visual and design material.*

MidCentral DHB engaged with a communications contractor to support the COVID-19 response, including some design from April 2021. MidCentral DHB also contracted with Te Tihi to help engage with Maori communications.

A majority of the concepts from the Unite Against COVID-19 campaign from the Ministry of Health were used through MidCentral DHB facilities to ensure the continuation of branding throughout. This included the branding and content for Make Summer Unstoppable and Super Saturday.

A majority of the concepts were present from the beginning and evolved gradually over time to keep up with changes to the campaign. For example, reporting vaccination numbers began with reporting vaccinations given per week, to a statistic breakdown for first and second doses and by locality, Maori and Pasifika, followed by a break down to include boosters, immunocompromised doses and number of cases in the rohe.

As detailed in the first part of the request the scope of this request is large and would require dedication of an unreasonable amount of resources and incur significant cost. Therefore, we are

declining the first part of this request under section 18(f) of the OIA; the information requested cannot be made available without substantial collation or research.

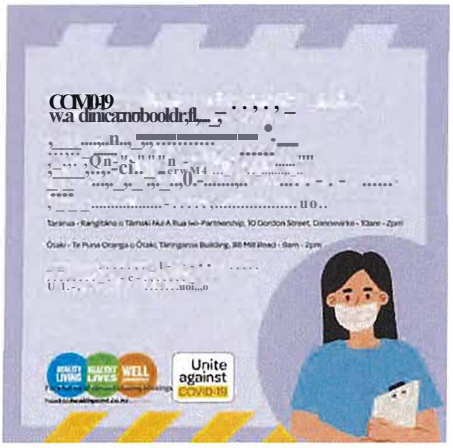
Enclosed is an overview of the communications perceived as relevant, produced by external agencies during the two-year COVID-19 response to date.

Social Media - General Information

General COVID-19 information would be posted with a generic social media tile that supported the content.

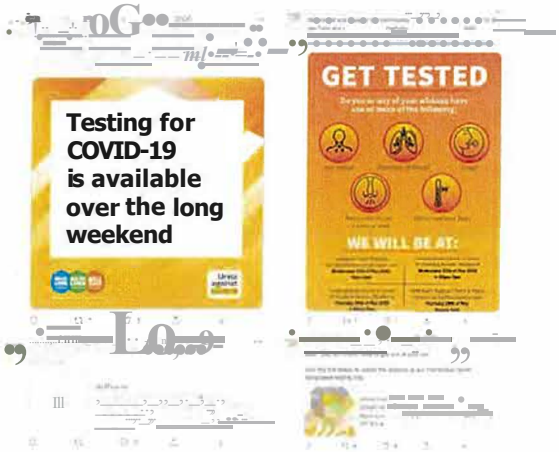
Social Media Daily Clinic Briefs

Daily clinic lists were published every morning during the vaccination roll out.



Twitter

Twitter was used to push certain information relating to cases and misinformation.



Instagram

Social Media tiles were published on Instagram to support information being posted on other channels. Content either came from the Unite Against COVID-19 website, or was designed inhouse following COVID-19 branding guidance.

Linked In

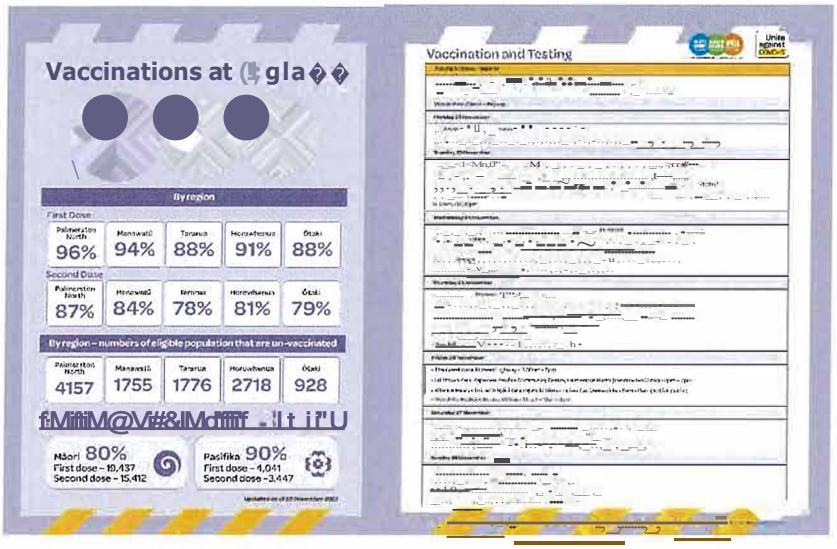
Business related information was posted to Linked In, predominantly media stories

Statistics Update

Published weekly, how this looked developed over time.

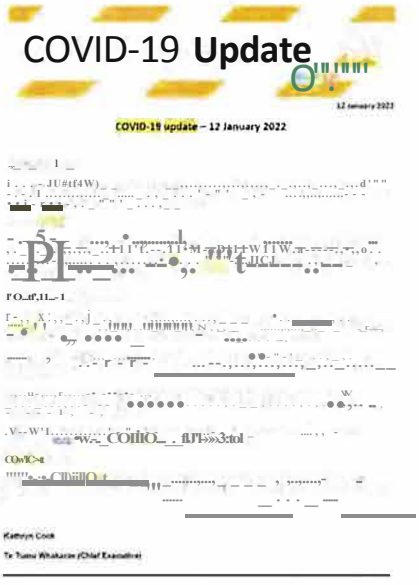
Stakeholder Update

Published weekly, communications to local stakeholders about vaccination and testing in the rohe.



Staff Newsletter

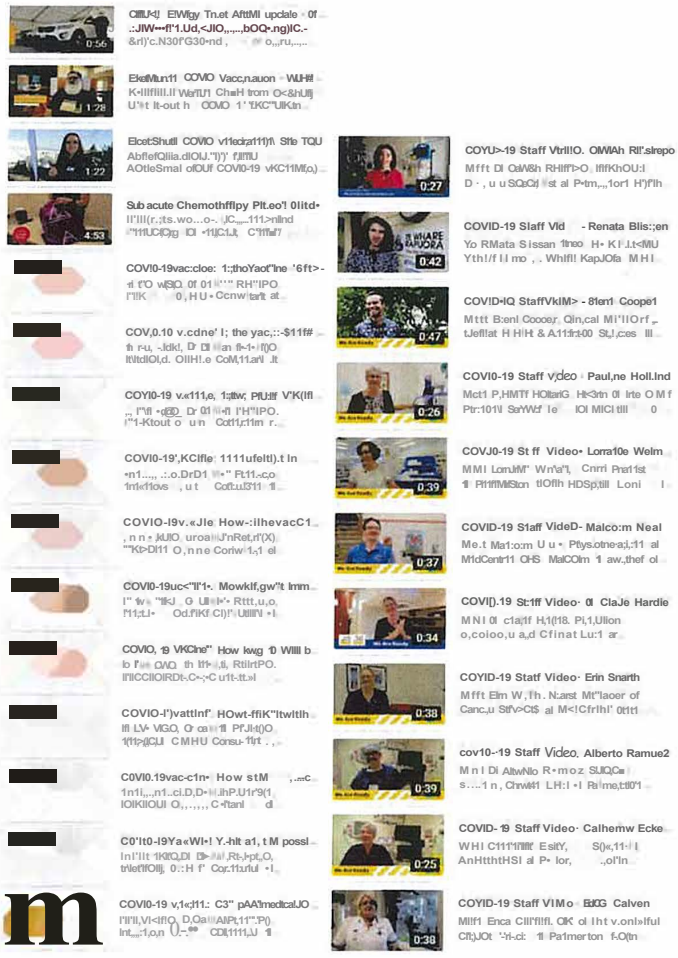
Weekly publication to all staff to update them on the situation in MidCentral



YouTube Video Content

Video content was used to support a number of Mid Central DH B's messaging around COVID-19:

- Drive through vaccination clinic walk through
- FAQ's with Dr Dalilah Restrepo
- Vaccination clinic walk through with a number of public health nurses
- Interviews with local Iwi leaders around the COVID-19 vaccination
- COVID-19 staff profiles
- COVID-19 messages to the community from the CEO
- Interview with Manawatu Turbos rugby about getting the vaccine



Visitor Policies

Reporting New Cases

Reporting cases began as it's own graphic, once there were no cases we reported them individually, and will now be reported with the vaccination statistics.

Super Saturday

Content for super Saturday used Unite Against COVID-19 branding. The target was 15,000 vaccinations in the week leading up to Super Saturday

Pasifika TikTok Challenge

To engage with the Pasifika youth community, a tiktok challenge was created to get Pasifika youth to do a video about the COVID-19 vaccine (their choice).

Bus Backs

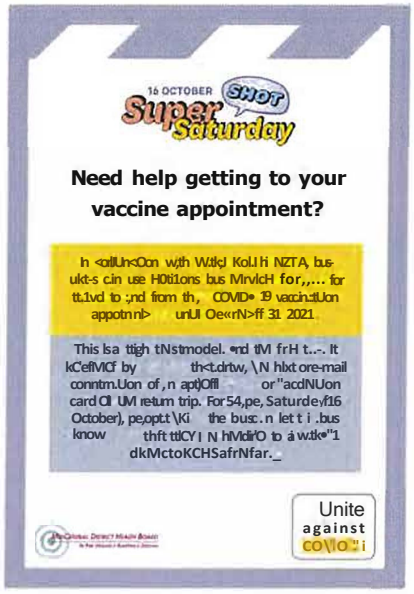
Engage with the community when out and about in the community.

Digital Billboard

Used in a number of locations in the rohe, following the same message as the bus backs

Specific Event Posters

From time to time, posters were created for one off or regular events that supported the MDHB vaccination teams.



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If you are not satisfied with our response to your information request, you have the right to seek a review by way of complaint by the Ombudsman of your decision. Information about how to make a complaint is available at ww.ombudsman.parliament.nz or freephone 0800 802 602.

Yours sincerely,

Deborah Davies
Operations Executive
Te Uru Kiriora, Primary Public and Community Health

MIDCENTRAL DISTRICT HEALTH BOARD
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19 January 2022

[redacted]

Ref: Y21-1750

Dear [redacted]

In response to your recent Official Information Act 1982 request sent to the Prime Minster, your request has been transferred to all DHBs to answer. Your request regarding:

1. *The total cost of every set-up including contractors, security, workforce, hireage, purchases, administration, equipment, computer connections, stationery and any other expense associated with these checkpoints at all hospitals and any otherfacilities across the nation?*

We advise for MidCentral DHB as follows:

1. The financial management information system does not separately identify the level of detail requested and this level of information would not be readily retrievable.

   Differentiating between the setup costs of specific COVID-19 related facilities and checkpoints and the ongoing operational costs is difficult to determine because there was a significant cross-over between these two phases of operation. In addition, the separation of expenditure on existing and new COVID-19 related facilities for COVID preparedness is difficult without further significant work.

   The initial response to the treatment of COVID-19 commenced in early March 2020. Based on an analysis of expenditure over the ten-week period from this point, we estimate $266,425 was spent on the initial setup and operation of facilities.

If you are not satisfied with this response you have the right to raise any concerns regarding our response with the Ombudsman - www.ombudsman.parliament.nz or 0800 802 602.

Please note that this response, or an edited version, may be published on the MidCentral DHB website ten working days after your receipt of this response.

Yours sincerely

Darryl Ratana
Deputy Chief Financial Officer

Finance & Corporate Services
MidCentralDHB, PO Box 2056, Palmerston North Central, 4440.
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20 January 2022

[redacted]

E-mail: [redacted]

Dear [redacted]

Official Information Act (OIA) Request

Your recent OIA request to the Ministry of Health, part of which has been transferred to District Health Boards, is acknowledged.

The information you have requested follows.

- **The percentage of patients that have been declined referrals from multiple internal and external requests for gastrointestinal department – multiple being more than three separate GP/Doctor referrals.**
- **The timeframe is from 1 January 2021 through to 1 November 2021.**

  MidCentral District Health Board (MDHB) had no reported cases of patients having more than three rejected referrals for the Gastroenterology Service over the timeframe stipulated.

Please note that this response, or an edited version of this response, may be published on the MDHB website 10 working days after your receipt of this response.

Yours sincerely

Lyn Horgan
Operations Executive
Acute & Elective Specialist Services

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

26 January 2022

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[redacted]

Dear [redacted]

I refer to your Official Information Act request received by email on 7 December 2021 with regard to the incidents involving nurses, midwives and health care assistants from 1 January 2017 to date, and respond as follows:

1. *The number of incidents related to nurses, midwives and health care assistants being abused, harassed or physically assaulted/ attacked at their workplace since 1 Jan 2017 to date, broken down by location and calendar year.*

   Please see attached information.

2. *Brief description of the incidents and what the incidents related to e.g. verbal abuse, physical assault, sexual assault, physical threat or otherwise*

   - Verbal threats of harm
   - Hitting
   - Kicking
   - Biting
   - Scratching
   - Punching
   - Abusive racist comments
   - Sexual overtones about staff's private parts
   - Spitting
   - Slapping
   - Abusive Language
   - Throwing items at staff eg cups

3. *How many 'code orange'* events that occurred? Brief description of the events*

   MidCentral DHB does not have 'Code Orange' events.

4. *Where did the incidents happen? e.g. the emergency department, mental health/addictions, obstetrics?*

   Please see attached information.

5. *How many incidents were notified to WorkSafe?*

   Nil.

6. *How many incidents required police interventions e.g. Police report, statements from DHB employees?*

Year	Location (ED - Emergency Department, MHA – Mental Health & Addictions)	
2017	ED 1 event MHA Inpatient 10 events	2 of these required statements to police
2018	ED 1 event MHA inpatient 5 events	
2019	ED 2 events MHA inpatient 5 events	1 of these required statements to police
2020	ED 3 events MHA inpatient 2 events	
2021	ED 4 events MHA inpatient 6 events	2 of these required statements to police

7. *How many incidents required an ACC claim?*

Year	Number
2017	7
2018	7
2019	7
2020	12
2021	13

8. *How many incidents resulted in working days lost? And if so, how many?*

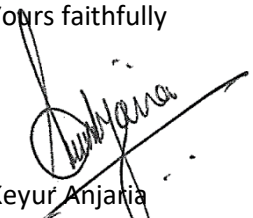
   This information is only available on individual personal files and would only show time off for a registered injury – not a non-physical injury.

   In the time frame given, we have not had an opportunity to gather this information which will involve many files over many years.

   MDHB are declining/refusing this information under Section 18(f) of the OIA, that the information requested cannot be made available without substantial collation or research.

Please note that this response, or an edited version of it, may be published on the MidCentral DHB website ten working days after your receipt of this letter.

Yours faithfully



Keyur Anjaria
General Manager
People & Culture

UHij: MidCentral DHB

2017 - Incidents - Dec

Nursing Field/ Location	Physical threats	Physical assaults	Verbal abuse incidents	Sexual abuse incidents	Other aggressive or violent incident		Total number of reported incidents	
Emergency & Trauma	9	5	25		10		49	
Assessment and Rehabilitation			3		3		6	
Community Mental Health	4		7		5		16	
Community Nursing Services							0	
Child Health including Neonatology		1	3		5		9	
District nursing			2		2		4	*all *incidents* reported here are refering to **reported** cases of nurses, midwives and health care assistants being abused, harassed or physically assaulted/attacked at their workplace (as per OIA letter)
Intensive or Coronary Care/ HDU	1	2			1	See details sheet for incident descriptions	4	
Maternity					1		1	
Mental Health / Addictions	118	59	81	5	113		376	
Medical	3	12	3	1	20		39	
Older Adult	15	27	12		100		154	
Outpatients Department		1	3		4		8	
Perioperative Care/ Theatre			1		1		2	
Surgical	4	3	9		7		23	
Other								
Totals per annum	154	110	149	6	272		691	

Nursing Field/ Location	Physical threats	Physical assaults	Verbal abuse incidents	Sexual abt,Jse incidents	Other aggressive or violent incident		Total number of reported incidents	
Emergency & Trauma	6	15	34		11		66	
Assessment and Rehabilitation	1	9	5	1	4		20	
Community Mental Health	10	5	17		5		37	
Community Nursing Services							0	
Child Health including Neonatology		1	3		3		7	
District nursing		1	9		10	See details sheet for incident descriptions	20	*all *incidents* reported here are refering to **reported** cases of nurses, midwives and health care assistants being abused, harassed or physically assaulted/attacked at their workplace (as per OJA letter)
Intensive or Coronary Care/ HOU		1	1		3		5	
Maternity			3		1		4	
Mental Health / Addictions	96	58	83	9	59		305	
Medical	4	14	11		12		41	
Older Adult	54	123	48		142		367	
Outpatients Department			9	1	6		16	
Perioperative Care/ Theatre	1		1		2		4	
Surgical	5	10	10	1	14		40	
Other								
Totals per annum	177	237	234	12	272		932	

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Nursing Field/ Location	Physical threats	Physical assaults	Verbal abuse incidents	Sexual abuse incidents	Other aggressive or violent incident		Total number of reported incidents	
Emergency & Trauma	9	5	24		10		**48**	
Assessment and Rehabilitation	1	9	16		7		33	
Community Mental Health	4	11	13	1	6		35	
Community Nursing Services							0	
Child Health including Neonatology	1		5		5		11	
District nursing		1	13		4		18	*all *incidents* reported here are refering to **reported** cases of nurses, midwives and health care assistants being abused, harassed or physically assaulted/attacked at their.workplace (as per OIA letter)
Intensive or Coronary Care/ HOU	2	8	4		3	See details sheet for incident descnptron s	17	
Maternity			1		1		2	
Mental Health/ Addictions	115	53	SO	2	70		290	
Medical	7	23	9	1	14		54	
Older Adult	12	68	20		90		190	
Outpatients Department			8		4		12	
Perioperative Care/ Theatre					2		2	
Surgical	6	7	27	2	14		56	
Other								
Totals per annum	157	185	190	6	230		768	

Introduction

Nursing Field/ Location	Physical threats	Physical assaults	Verbal abuse incidents	Sexual abuse incidents	Other aggressive or violent incident		Total number of reported incidents	
Emergency & Trauma	7	10	18		19		54	
Assessment and Rehabilitation		6	3	1	10		20	
Community Mental Health	2	2	S	1	6		16	
Community Nursing Services							0	
Child Health including Neonatology		2	4		8		14	
District nursing			14	1	2		17	*all *incidents* reported here are refering to **reported** cases of nurses, midwives and health care assistants being abused, harassed or physically assaulted/attacked at their workplace (as per OIA letter)
Intensive or Coronary Care/ HOU	1	7	2		8		18	
Maternity			1		3	See details sheet for incident descriptions	4	
Mental Health / Addictions	131	69	82		85		367	
Medical	S	33	15		28		81	
Older Adult	25	84	13		210		332	
Outpatients Department	1		5		5		11	
Perioperative Care/ Theatre		2	3		5		10	
Surgical	2	11	7	1	16		37	
Other								
Totals per annum	174	226	172	4	405		981	

Nursing Field/ Location	Physical threats	Physical assaults	Verbal abuse incidents	Sexual abuse incidents	Other aggressive or violent incident		Total number of reported incidents	
Emergency & Trauma	3	7	42		36		88	
Assessment and Rehabilitation		2	4		3		9	
Community Mental Health		2	7		3		12	
Community Nursing Services							0	
Child Health including Neonatology		3	1		2		6	
District nursing			3		3		6	*all incidents reported here are refering to **reported** cases of nurses, midwives and health care assistants being abused, harassed or physically assaulted/attacked at their workplace (as per OIA letter)
Intensive or Coronary Care/ HOU	1				1		2	
Maternity					1	See details sheet for incident descriptions	1	
Mental Health / Addictions	83	40	60		75		258	
Medical	7	36	20	1	26		90	
Older Adult	12	28	6		161		207	
Outpatients Department	1	4	5		3		13	
Perioperative Care/ Theatre					1		1	
Surgical	3	7	11		7		28	
Other								
Totals per annum	110	129	159	1	322		721	

Nursing Field	PARTICULARS, RESPONSE AND OUTCOMES	
Emergency & Trauma	Verbal threats of harm	
	hitting	
	kicking	
	biting	
	scratching	
Assessment and Rehabilitation	punching	
	abusive racist comments	
	sexual overtones about staff's private parts	
	spiting	
	slapping	
Community Mental Health	abusive language	
	throwing items at staff such as cups	
Child Health including Neonatology		
District Nursing		
Intensive or Coronary care/ HOU		
Maternity		
Mental Health/ Addictions		
Medical		
Obstetrics		

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

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26 January 2022

[redacted]

Dear -

Official Information Act (OIA) Request

As you are aware, your OIA request of 25 November 2021 was transferred to District Health Boards by the Ministry of Health under section 14(b)(ii) of the Official Information Act. This transfer is acknowledged and the OJA has been forwarded on to me for response.

The following information is provided as it pertains to MidCentral District Health Board (MDHB).

- **Guidelines/procedure for the management of postoperative Urinary Retention (POUR).**

  MDHB has a clinical guideline which is used across all specialty areas that refers to the management of Urinary Retention. Please find attached a copy of the document MDHB-5989: **Clinical Guideline - Urology Pathways for ED**

- **Guidelines/procedure for the management/prevention of persistent Postsurgical Pain.**

  Please find attached the following documents that are used across MDHB;

  - MDHB-147: **Clinical Guideline - Pain Management in Adults**
  - MDHB-4184: **Clinical Guideline - Pain, Acute: Pharmacological Management in Adults**
  - MDHB-1408: **Guideline- Post-operative Care: General Surgical Procedures**

- **Guidelines/ procedure differentiating subtypes of primary (idiopathic) constipation.**

  MDHB does not have a specific guideline for investigating colonic motility dysfunction/defecatory disorders or anorectal dysfunction.

- **Guidelines/procedure in the treatment of patients after a suicide attempt and/or suicidal ideation.**

  Please find attached the following documents;

  - MDHB-7326: **Policy- Suicide Risk Assessment- Emergency D'epartment**
  - MDHB-5224: **Emergency Department Suicide Risk Assessment**

  The policy document makes reference to the publication **Preventing suicide: Guidance for emergency departments** which was issued by the Ministry of Health in April 2016. The development of the suicide risk assessment form was based on this guidance.

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website 10 working days after your receipt of this response.

Yours sincerely

Lyn Horgan
Operations Executive
Acute & Elective Specialist Services

Encl

MIDCENTRAL HEALTH

CLINICAL GUIDELINE

UROLOGY PATHWAYS FOR ED	
Applicable to: **Urology/ED**	Issued by: **Urology**
	Contact: **Urologist**

UROLOGY PATHWAYS

Contained within are pathways for common urological presentations to the Emergency Department and include guidelines on urinary catheters. They are intended to provide guidance in accordance with modern urological thinking on initial management, as well as outlining which patients require acute admission and outpatient follow-up. Every patient and scenario is different and they are not intended to replace good clinical judgment:

- Acute Scrotal Pain
- Guidelines on Urinary Catheters
- Haematuria
- Renal Colic
- Urinary Retention
- Urosepsis

These guidelines have been prepared and approved by the Department of Urology in consultation with the Emergency Department, for use at Palmerston North Hospital.

APPENDICES

Appendix 1	Acute Scrotal Pain
Appendix:2	Guidelines on Urinary Catheters
Appendix 3	Haematuria
Appendix4	Renal Colic
Appendix 5	Urinary Retention
Appendix6	Urosepsis

KEYWORDS

Urology Pathways, Acute Scrotal Pain, Guidelines on Urinary Catheters, Haematuria, Renal Colic, Urinary Retention, Urosepsis

ACUTE SCROTAL PAIN

Considerations

- Testicular torsion is a urological emergency (viability decreases dramatically after 6 hours).
- Testicular torsion is a clinical, not a radiological, diagnosis.
- Scrotal pain has a wide differential diagnosis, including referred abdominal complaints.
- Incidence of testicular torsion decreases dramatically after age 30 years.
- A significant number of cases of epididymitis are associated with Chlamydia and Gonorrhoea.

Pathway for the patient with suspected testicular torsion

Triage category

- 2 - patient requires medical assessment within 10 minutes

Assessment

- Dipstick urine and send away (an abnormal urine suggests an alternate diagnosis)
- Obtain history:

Features suggestive of torsion:	acute onset pain severe/worsening pain nausea and vomiting
Features suggesting alternate pathology:	infective symptoms resolving pain recent STI or UTI high-risk sexual behaviours

- Perform physical examination of abdomen and scrotum:

Features suggestive of torsion:	global testicular pain/swelling elevated testicular lie
Features suggesting alternate pathology:	focal tenderness/swelling fever scrotal wall abnormalities (red, hot) normal cremasteric reflex

- If there is clinical suspicion of torsion, **urgent urological opinion is mandated** phone on call Urology Registrar on cellphone 027 497 0750.
- Keep patient nil by mouth and administer analgesia

Imaging

- Scrotal ultrasound delays definitive management of testicular torsion.
- Ultrasound should not be requested routinely, nor before discussion with Urology.
- Testicular trauma: ultrasound is mandatory if testicular rupture is suspected.

Management of epididymo-orchitis

- Send swabs and urine for Chlamydia and Gonorrhoea.
- Ciprofloxacin 500 mg bd po for 2 weeks - if thought to be non STI related (ie older men).
- If at risk for STI - Azithromycin 1 g po stat, Ceftriaxone 1 g IV stat, and DC on 10 days of Doxycycline 100 mg BD Admission criteria: patients should be referred for admission in the presence of sepsis and an ultrasound performed if a scrotal abscess is suspected.

Note: This pathway is not intended to replace good clinical judgment.

Appendix 2

GUIDELINES ON URINARY CATHETERS

Important notes

- **Never** pass or replace a catheter in a man who has undergone radical prostatectomy in the preceding three weeks - this situation **always** warrants urological expertise.
- **Always** replace the foreskin after male catheterisation: failure will lead to paraphimosis.

Standard catheterisation technique

- Prepare skin with aqueous Chlorhexidine solution.
- Prepare urethra with 10 mL Lignocaine 2% gel instilled slowly.
- Place 16 G Fr catheter - using aseptic technique. Right hand clean: left hand dirty.
- Always insert catheter to the hilt and don't inflate balloon until urine is draining.
- Fill balloon with 10 mL sterile water.
- Beware inflating catheter in urethra: check it slides freely after inflating.

Useful tips for difficult male catheterisation

- Note the urethral level where obstruction to catheter passage seems to occur.
- Is there any relevant history, such as urethral stricture or bladder neck contracture?
- Suggestions, based on site of difficulty passing catheter:
  Prostatic urethra: try a larger catheter, such as 18 G Fr or 20 G Fr;
  Penile urethra (suspect stricture): try a smaller catheter, such as 12 G Fr or 14 G Fr.
- After **two unsuccessful attempts,** obtain help from senior ED registrar or ED consultant.
- If urethral catheterisation is not achieved, place suprapubic catheter, if expertise is available (Consult Urology Registrar at this point).

Useful tips for difficult female catheterisation

- This is almost always due to difficulty in locating the external meatus.
- True urethral obstruction is exceedingly rare in women.
- Suggestions:
  Ensure lighting and patient positioning (frog-leg) is optimal;
  Use a single arm of a disposable vaginal speculum to retract labia;
  In post-menopausal women, the meatus may migrate posteriorly into the vaginal introitus. It may not be possible to visualise, but a catheter can be guided into position over the index finger.

IMPORTANT PRINCIPLES

Suprapubic catheterisation (SPC)

- **Never** place an SPC unless the bladder is full: confirm with an ultrasound if possible.
- Exclude coagulopathy. Beware of mesh hernia repairs and lower abdominal surgery.
- **Always** aspirate urine with a needle prior to placing trocar.
- Ultrasound is mandatory with previous lower abdominal, pelvic or vascular surgery.
- **Avoid** placing an SPC if there is a history or suspicion of bladder cancer.
- **Do not use** Bonanno catheters.

Appendix 3

HAEMATURIA

Considerations

- Most patients with haematuria can be reassured and be subsequently managed in an outpatient setting.
- Haematuria can herald serious underlying pathology and should never be ignored, even in the anticoagulated patient.

Pathway for the patient presenting with haematuria

Microscopic

- Obtain MSU.
- Complete yellow referral form and fax to Urology Clinic (fax 8641).

Macroscopic

- Collect blood for FBC and creatinine.
- Fluid resuscitation if appropriate (rarely required).
- Admission criteria:
  - Clot retention (inability to pass urine with preceding gross haematuria);
  - Haemodynamically significant bleeding;
  - Anaemia requiring transfusion or likely to in short-term future.
- Patients not meeting admission criteria:
  - Complete yellow referral form and fax to Urology Clinic (fax 8641);
  - Advise GP to follow-up if not settled in one week.

Urethral catheterisation (indicated for all patients in clot retention)

- Discuss with Urology Registrar if patient has had recent Urological intervention.
- Routine catheterisation should not be performed in the absence of urinary retention.
- Clot retention mandates insertion of a indwelling catheter:
  - Use a 22 G Fr 3-way catheter and instill 30 mL water in the balloon;
  - Initially manually washout bladder with a catheter-tip syringe until clots are exhausted (haematuria will not settle if clots are left in bladder);
  - Connect continuous bladder irrigation with sterile saline and titrate rate until the irrigation effluent is a light rose colour;
  - Phone on call Urology Registrar on cellphone 027 497 0750 to discuss inpatient admission.

Note: This pathway is not intended to replace good clinical judgment.

RENAL COLIC

Considerations

- Loin pain is not automatically renal colic and is not diagnostic of urinary tract stone disease until proven on CT KUB.
- Consider serious alternative pathology, such as AAA, ectopic pregnancy and appendicitis, all of which are commonly misdiagnosed as renal colic.
- The majority of patients presenting with stones can be managed conservatively on an outpatient basis and will never require operative intervention. Over 90% of stones <10 mm will pass spontaneously.
- Plain abdominal x-ray (KUB) is not a diagnostic study (follow-up only).
- NSAIDs provide the best analgesia in renal colic (Voltaren).
- Expulsive therapy. Doxazosin improves spontaneous stone passage rates by 20%. Tamsulosin has less side effects but will cost the patient approx $28 for one month's supply from the Pharmacy in the hospital foyer.
- Stone disease in the presence of sepsis or a solitary kidney is a urological emergency.

Pathway for the suspected urinary tract stone

Initially

- Test urine - if negative for blood, much less likely to be renal colic.
- Request CT KUB (plain film is important for follow-up purposes):
  - In the absence of sepsis, patients presenting to ED overnight can be managed conservatively and await imaging in the morning;
  - In pregnancy, perform an ultrasound.
- Collect blood for creatinine.
- Obtain MSU.
- Prescribe (if not contraindications):
  - Doxazosin 4 mg po (beware of postural hypotension) or Tamsulosin 0-4 mg po od; **NB: modify dose if elderly, cardiac disease or already taking antihypertensives;** and
  - Paracetamol 1g po; **and**
  - Diclofenac 100 mg po/pr (dose reduce in renal impairment);
  - Opioid analgesia if required (oral route preferred): avoid as first line.

On confirmation of stone by CT KUB:

Patients suitable for conservative management

- Manage in ED if pain not settled or settling. At 3 hrs call on call Urology Registrar on cellphone 027 497 0750.
- Discharge when comfortable with outpatient follow-up and analgesia:
  - Complete yellow referral form and fax to Urology Clinic (fax 8641);
  - Prescription for Doxazosin 4 mg daily po or Tamsulosin 400 mcg nocte for 6 weeks, Paracetamol 1g qid po and Diclofenac 50 mg tds po prn (if no contraindications).

Patients mandating urological referral (phone on call Urology Registrar on cellphone 027 497 0750)

- Sepsis.
- Discuss if creatinine elevated.

- Infected obstructed collecting system.
- Patient with a functional single kidney or significant renal impairment.
- Unremitting pain after three hours of conservative management in ED.
- Patients presenting to ED for the third time for the same stone presentation.
- On discharge advise patients to sieve urine with the strainer (if they can catch stone further radiation may be necessary and stone can be sent for analysis).
- Advise to obtain thermometer and to seek further advice if they have "the pain **and** a temperature (the combination of obstruction and infection is a urological emergency).

Note: This pathway is not intended to replace good clinicaljudgment.

URINARY RETENTION

Considerations

- Patients requiring catheterisation usually require urological follow-up.
- Urinary retention associated with renal failure can lead to a post-obstructive diuresis, a potentially life-threatening scenario.
- It is vital to record the initial volume drained. There is no role for clamping and releasing catheter.

Pathway for the patient presenting with urinary retention

- Confirm diagnosis (palpation of distended bladder or bladder scan)
- If retention has been preceded by gross haematuria, see Haematuria pathway
- Place at least a 16 G Fr urethral catheter (see Guideline on Urinary Catheters pathway)
- Allow bladder to empty and record volume drained
- Send clean catch urine for microscopy, culture and sensitivities
- Collect blood for creatinine
- If creatinine is normal, discharge (see below)
- If creatinine is abnormal, observe patient for two hours:
  - if urine output, after initial drainage, is > 200 mL per hour, commence treatment for post-obstructive diuresis - see below and phone on call Urology Registrar on cellphone 027 497 0750 to arrange admission);
  - if urine output, after initial drainage, is < 200 mL per hour, encourage oral fluid intake, discharge patient and arrange repeat creatinine in 2 to 3 days with GP.

Management protocol for post-obstructive diuresis

- Weigh the patient as a baseline.
- Prescribe intravenous fluid replacement at a rate of mL for mL urine output per hour.
- Urine needs hourly measurement and the IV fluid rate adjusted accordingly by nursing staff.
- Use alternate one litre bags of Normal Saline and Dextrose 4% Saline.

Discharging a patient who is catheterised

- Supply patient with night bag and give catheter education.
- Complete District Nursing referral: a District Nurse should attend the next day.
- Complete yellow referral form and fax to Urology Clinic (fax 8641).
- Include on the form the initial volume drained and the serum creatinine level.

Note: This pathway is not intended to replace good clinical judgment.

UROSEPSIS

Considerations

- Urosepsis is a serious condition and should be aggressively managed. It has a significant mortality.
- Gram negative organisms account for 90% of sepsis but Enterococci (which are inherently resistant to cephalosporins) account for the remaining 10%.
- Urosepsis in the presence of obstruction in the urinary tract requires urgent decompression.
- Patients with urosepsis and flank pain require urgent imaging.

Pathway for the patient with urosepsis

- Have a low threshold for suspecting urosepsis for any patient who is febrile or describes rigors and meets one of the Urology referral criteria (see below).
- Obtain intravenous access with a good sized cannula.
- Collect blood for FBC, urea, electrolytes, creatinine and culture.
- Commence intravenous fluid resuscitation, as appropriate.
- Obtain MSU (culture urine from catheter or nephrostomy if appropriate).
- Commence empiric antibiotics (see below).
- If flank pain is a feature, or obstruction is suspected obtain urgent CT KUB to exclude obstruction.
- Refer the patient to an appropriate inpatient specialty (see below).

Attempt to obtain urine and blood cultures prior to antibiotic therapy, but do **not** delay administration of antibiotics if the patient is unable to provide a urine sample.

Empiric antibiotic treatment (intravenous)

- Gentamicin 5 mg/kg q24h AND Amoxycillin 1 g q8h. Do not repeat without levels.
- In penicillin allergy: Gentamicin 5 mg/kg q24h AND Vancomycin (see MDHB-3807 for dosing).
- In renal failure (eGFR < 20mL/min): Ceftriaxone 1 g q24h AND Amoxycillin 1 g q8h.

Urology referral criteria

The following patients with urosepsis should be referred to the Urology Service. The list is not exhaustive. Ask if in doubt:

- Any patient who has recently had urological surgery or undergone a urological procedure (within approximately 10 days - discuss if unsure).
- Post-TRUS prostate biopsy.
- Any patient with a reconstructed lower urinary tract or urinary diversion (such as ileal conduit/urostomy or orthotopic neobladder).
- Any patient with a known ureteric stone.
- Any patient with a spinal injury.
- Any patient with a JJ stent or a nephrostomy tube in situ.
- Any patient also presenting in urinary retention.
- Any patient with a significant urological history (discuss if unsure).

Patients not falling into the above categories should generally be referred to the Medical Service. If there is uncertainty, phone the on call Urology Registrar on cellphone 027 497 0750 to discuss.

CLINICAL GUIDELINE

PAIN MANAGEMENT IN ADULTS	
Applicable to: **MidCentral District Health Board**	Issued by: **Anaesthetics**
	Contact: **Nurse Practitioner - Pain Management**

1. PURPOSE

To ensure timely, appropriate and effective pain management for all adult patients.

2. SCOPE

All MDHB staff involved in the provision of direct patient care.

3. ROLES & RESPONSIBILITIES

3.1 All Clinical Staff are responsible for:

- Assessment and evaluation of patients level of comfort following intervention utilising a patient appropriate **0-10** visual/numerical pain intensity assessment scale/tool. For patients who are unable to articulate their needs through verbal impairment/language barrier/intellectual disability please utilse the appropriate recommended assessment tool.
- Communicating/educating patients/family/whanau in a culturally competent manner regarding appropriate expectations for pain management.
- Seeking and utilising all available resources to develop individualised pain management plans in partnership with the patient/family/whanau.
- Location of pain management policies, procedures, guidelines, protocols, tools and resources

The pain assessment process is to include:

- following the **MDHB** Pain Management Flow Chart (Appendix 1).
- implementing appropriate pain management interventions within time frame acceptable to the patient. (Include non-pharmacological/complementary techniques in pain management where appropriate).
- evaluating all pain management interventions utilising a patient appropriate **0-10** visual/numerical pain intensity scale or an assessment tool desi$_{g\,n}$ed for patients who cannot articulate their pain. (Ensure adequate time frame for intervention to be effective).
- documenting assessment made including patient's pain intensity score, interventions and evaluation, in a clear and concise manner in patient's clinical record. (Include a

pain management plan when pain is identified as focus of care in the patient care plans and review daily).

- consulting with other members of the health care team/pain resource staff when additional information/expertise is required to establish and/or maintain patient comfort.

3.2 Charge Nurse in conjunction with the Nurse Educator/ Clinical Nurse Specialist/Nurse Practitioner Pain Management are responsible for:

- providing area specific orientation to all new nursing and medical staff on pain management policies, procedures, guidelines, protocols and resources.
- annual review and update of pain management policies, procedures, guidelines, and protocols specific to their area.
- identification of individual and/or collective staff knowledge deficits and implementation of appropriate education to address identified learning needs.
- facilitation of multidisciplinary meetings to review complex pain management situations and feeding back outcomes to relevant staff.
- facilitation of attendance at **MDHB** pain management education sessions.

3.3 Provision of Services Available at MDHB
The Acute Pain Service (APS)

The Palmerston North Hospital Acute Pain Service (APS) functions from the Post Anaesthetic Care Unit (PACU). The service consists of three Acute Pain Clinical Nurse Specialists (CNS) and a Nurse Practitioner (NP) who work collaboratively with the Specialist Anaesthetists, Anaesthetic Registrars, Post Anaesthetic Care Unit Staff, Clinical Pharmacists and the multi-disciplinary team. The Acute Pain Team provide a consultative, educational and monitoring service for inpatients with acute pain. Its primary goal is to ensure safe, timely and effective analgesia consistent with evidence based practice. The APS can be contacted by paging the Acute Pain Clinical Nurse Specialists/Nurse Practitioner on **pager 168** or **via Operating Theatre extension 8500 for the Anaesthetist on call.**

Criteria for referral: An APS team member will review patients who are receiving Advanced Analgesia modalities such as PCA or an epidural on an acute pain team round each day.

For an inpatient acute pain specialist review please ensure:

1) A comprehensive pain assessment has been completed on admission and follow the MidCentral District Health Board Clinical Guideline "Pain Management in Adults" MDHB-147 and the "The intial assessment of a patient in acute pain".
2) Admitting team are aware of referral
3) Pharmacological considerations within scope have been considered
4) Non-pharmacological techniques have been tried where appropriate

For an outpatient acute pain (Telehealth) specialist clinic appointment please follow the below:

Triage referral for Acute Pain Service Telehealth clinic

Referral must be completed by nursing/medical personnel.
For patients to be seen as outpatients (Tele Health clinic), please complete 'specialist nursing & allied health referral form; MDHB-2559 and write C for community/outpatients in 'other box and write Acute Pain Telehealth clinic in space provided.

Criteria to be seen at Acute Pain Telehealth clinic.

Acute Pain Service CNS/NP must have reviewed patient as an inpatient and must meet two of the following criteria. Please note: The patient will NOT be accepted for Telehealth if a member of the APS team have not reviewed the patient as an inpatient.

- Acute pain following - surgery/ trauma
- Requires Specialist Acute Pain Management ad\ice in the acute period prior to discharge back to PHC team
- Requiring weaning (deprescribing) of opioids and/or other analgesics prior to discharge back to PHC team

If complex conditions or a history of chronic pain please contact the Acute Pain Service on pager 168 to discuss appropriateness of referral. Patients may benefit from referral to Wellington Regional Pain Service.

Please include the following within your referrals:

- Diagnosis or provisional diagnosis
- A comprehensive pain assessment
- What strategies have been put in place to manage the pain
- Medication/s prescribed and effects
- Relevant investigations.
- What service you are requiring ie: weaning from opioids or gabapentinoids.

4. GUIDELINE

See attached Flow Chart

5. DEFINITIONS

"**Pain** is whatever the experiencing person says it is, existing whenever the experiencing person says it does." McCaffery and Beebe 1989

"**Pain** is an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage'
International Association for the Study of Pain 2020

6. RELATED MDHB DOCUMENTS

MDHB-4184: Pain, Acute: Pharmacological Management in Adults
MDHB-1034: Adult IV Opioid Protocol for Patients in Pain with Existing IV Access (Including Wahine in Labour) - Procedure

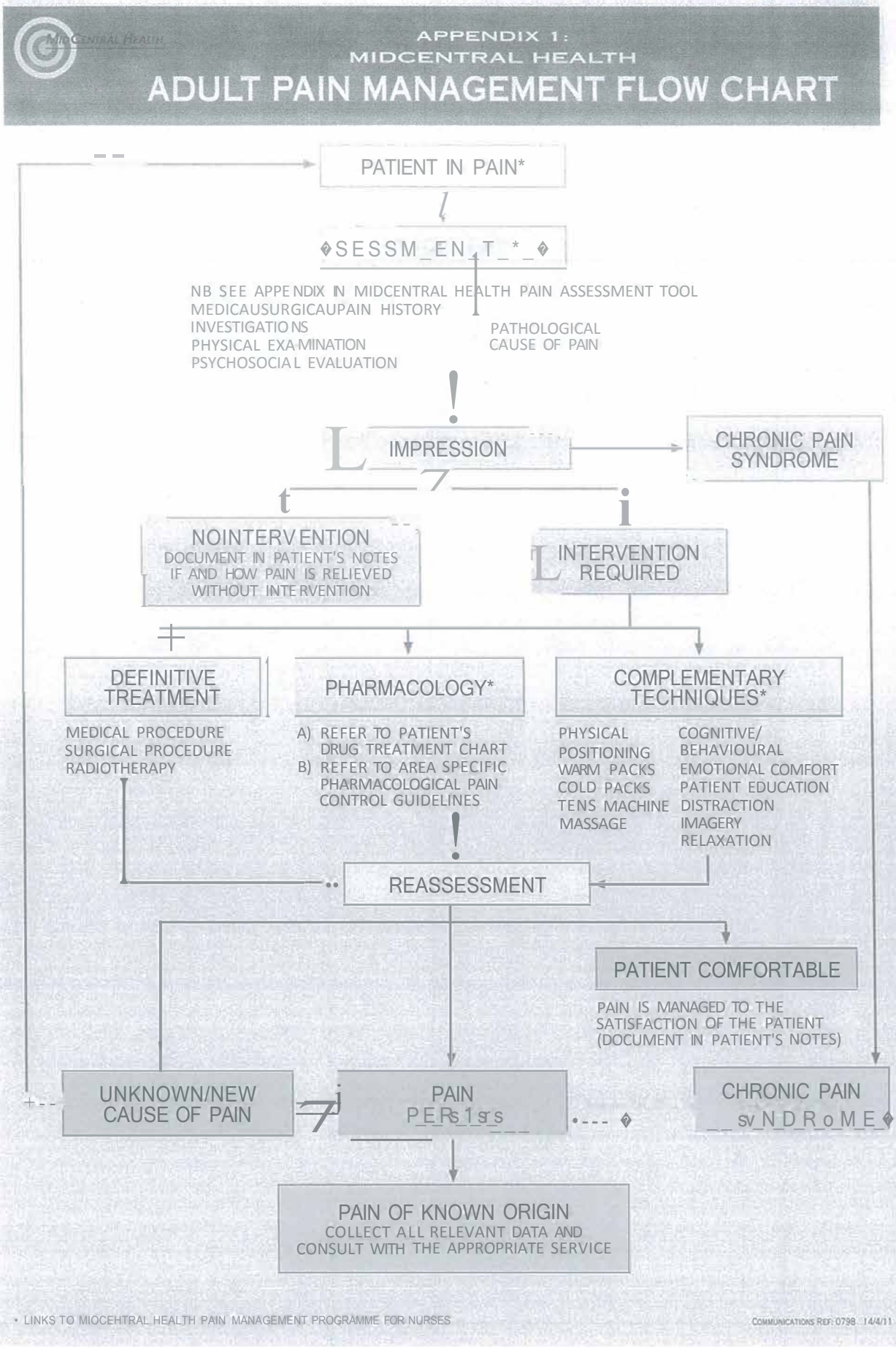
7. APPENDICES

Appendix 1 Adult Pain Management Flow Chart

8. KEYWORDS

Pain management, Adults, Acute Pain Service

APPENDIXt


APPENDIX 1:
MIDCENTRAL HEALTH
ADULT PAIN MANAGEMENT FLOW CHART
PATIENT IN PAIN*
ASSESSMENT*
NB SEE APPENDIX IN MIDCENTRAL HEALTH PAIN ASSESSMENT TOOL
MEDICAUSURGICAUPAIN HISTORY
INVESTIGATIONS
PHYSICAL EXAMINATION
PSYCHOSOCIAL EVALUATION
PATHOLOGICAL CAUSE OF PAIN
IMPRESSION
CHRONIC PAIN SYNDROME
NOINTERVENTION
DOCUMENT IN PATIENT'S NOTES IF AND HOW PAIN IS RELIEVED WITHOUT INTERVENTION
INTERVENTION REQUIRED
DEFINITIVE TREATMENT
MEDICAL PROCEDURE
SURGICAL PROCEDURE
RADIOTHERAPY
PHARMACOLOGY*
A) REFER TO PATIENT'S DRUG TREATMENT CHART
B) REFER TO AREA SPECIFIC PHARMACOLOGICAL PAIN CONTROL GUIDELINES
COMPLEMENTARY TECHNIQUES*
PHYSICAL
POSITIONING
WARM PACKS
COLD PACKS
TENS MACHINE
MASSAGE
COGNITIVE/ BEHAVIOURAL
EMOTIONAL COMFORT
PATIENT EDUCATION
DISTRACTION
IMAGERY
RELAXATION
REASSESSMENT
PATIENT COMFORTABLE
PAIN IS MANAGED TO THE SATISFACTION OF THE PATIENT (DOCUMENT IN PATIENT'S NOTES)
UNKNOWN/NEW CAUSE OF PAIN
PAIN PERSISTS
CHRONIC PAIN SYNDROME
PAIN OF KNOWN ORIGIN
COLLECT ALL RELEVANT DATA AND CONSULT WITH THE APPROPRIATE SERVICE
• LINKS TO MIOCEHTRAL HEALTH PAIN MANAGEMENT PROGRAMME FOR NURSES
COMMUNICATIONS REF: 0798 14/4/11

t:11DCENTRAL DISTRICT HEALTH BOARD
,. Po6 Hauora o ftuahlne O TOIOIUO

CLINICAL GUIDELINE

PAIN, ACUTE: PHARMACOLOGICAL MANAGEMENT IN ADULTS	
Applicable to: **MidCentral District Health Board**	Issued by: **Acute Pain Service - Anaesthetic Department**
	Contact: **Nurse Practitioner - Pain Mana◆ement**

1. PURPOSE

To provide guidance to the clinical staff in the pharmacological management of adult patients experiencing acute pain.

2. SCOPE

This guideline refers to the management of patients with an acute onset and painful condition, with an expected recovery from the pain in the short term. This scope includes post-operative surgical patients, trauma patients, and patients with other acute and painful conditions.

3. CLINICAL GUIDELINE

3.1 The Acute Pain Service (APS)

The Palmerston North Hospital Acute Pain Service (APS) functions from the Post Anaesthetic Care Unit (PACU). The service consists of three Acute Pain Clinical Nurse Specialists and a Nurse Practitioner who work collaboratively with the Specialist Anaesthetists, Anaesthetic Registrars, Post Anaesthetic Care Unit Staff, Clinical Pharmacists and the multi-disciplinary team. The Acute Pain Team provide a consultative, educational and monitoring service for inpatients with acute pain. Its primary goal is to ensure safe, timely and effective analgesia consistent with evidence based practice. The APS can be contacted by paging the Acute Pain Clinical Nurse Specialists/Nurse Practitioner on **pager 168** or **via Operating Theatre extension 8500 for the Anaesthetist on call.**

Criteria for referral: An APS team member will review patients who are receiving Advanced Analgesia modalities such as PCA or an epidural on an acute pain team round each day.

For an inpatient acute pain specialist review please ensure:

1) A comprehensive pain assessment has been completed on admission and follow the MidCental Health Clinical Guideline "Pain Management in Adults" MDHB-147 and the "The intial assessment of a patient in acute pain" **appendix one.**
2) Admitting team are aware of referral
3) Pharmacological considerations within scope have been considered

4) Non-pharmacological techniques have been tried where appropriate

For an Outpatient acute pain (Telehealth) specialist clinic appointment please follow the below:

Triage referral for Acute Pain Service Telehealth clinic

Referral must be completed by nursing/medical personnel.
For patients to be seen as outpatients (Tele Health clinic), please complete 'specialist nursing & allied health referral form; MDHB-2559 and write C for community/outpatients in 'other box and write Acute Pain Telehealth clinic in space provided.

Criteria to be seen at Acute Pain Telehealth clinic. Acute Pain Service CNS/NP must have reviewed patient as an inpatient and must meet two of the following criteria. Please note: The patient will NOT be accepted for Telehealth if a member of the APS team have not reviewed the patient as an inpatient.

- Acute pain following - surgery / trauma
- Requires Specialist Acute Pain Management advice in the acute period prior to discharge back to PHC team
- Requiring weaning (deprescribing) of opioids and/or other analgesics prior to discharge back to PHC team

If complex conditions or a history of chronic pain please contact the Acute Pain Service on pager 168 to discuss appropriateness of referral. Patients may benefit from referral to Wellington Regional Pain Service.

Please include the following within your referrals:

- Diagnosis or provisional diagnosis
- A comprehensive pain assessment (follow the Midcentral Health Clinical Guideline "Pain Management in Adults" MDHB-147)
- What strategies have been put in place to manage the pain
- Medication/s prescribed and effects
- Relevant investigations.
- What service you are requiring ie: weaning from opioids or gabapentinoids.

3.2 General Principles of acute pain

- Acute pain pathways can be pharmacologically modulated at several sites relating to transduction, transmission, endogenous modulation and perception. A multi-modal approach to analgesia is recommended utilising medications that target specific sites in the pain pathway, e.g. an opioid in combination with a non-steroidal anti-inflammatory drug.
- To maximise effectiveness, analgesic medicines must be given at the optimal dosage, at the optimal frequency, and by the optimal route.
  - Small doses given frequently produce effective analgesia with limited side effects in comparison to larger doses given infrequently.

- Regular administration of analgesic medication for acute pain is recommended. The administration of PRN analgesia should be restricted to the management of breakthrough pain.
- Use the oral route of administration whenever possible for mild to moderate pain.
- Intravenous administration of analgesia is recommended in severe acute pain and doses may be titrated to individual response.

- Achieving effective analgesia may also require the assessment and effective management of the side effects of analgesic agents, e.g. nausea and vomiting, constipation, urinary retention, and pruritus and of accompanying symptoms or signs such as dehydration.
- Providing thorough explanation and reassurance to patients and their relatives may also enhance the effectiveness of an analgesic regime. This helps to relieve any anxiety or fear that may lessen the efficacy of the pain relief.
- Non pharmacological pain management strategies should be considered and included as appropriate.

3.3 Overview of Analgesia

Patients who are assessed with mild pain (1-3/10 pain intensity) will require simple analgesics. **Analgesics should be administered regularly rather than PRN.** A pyramid approach using the simple analgesics as a base (rather than a 'ladder' or replacement approach is recommended) - combinations are used to gain an additive or synergistic effect, thereby reducing opioid dose, duration of use, and minimising side effects.

Recommended Analgesics for Acute Pain

Pain Score	**Simple Analgesics (e.g. paracetamol, NSAID, Cox-II inhibitors)**		**Tramadol**		**Strong Opioids (e.g. morphine)**
0-10	PRN	Rerular	PRN	Regular	Rerular or PRN
MILD 1 2 3					
MODERATE 4 5 6					
SEVERE 7-10					

3-4 Simple Analgesics

- Paracetamol is often effective for simple intermittent pain, which does not have a substantial inflammatory component.
- Nonsteroidal anti-inflammatory drugs (NSAIDs) are particularly useful when inflammation contributes to the pain of musculoskeletal disorders.
- Paracetamol can be combined with NSAIDs for synergistic effect.

PARACETAMOL

The registered dose of paracetamol PO/PR is 500mg to 1000mg every four to six hours regularly to a maximum dose of 4g/day. This may be inadequate in acute pain, especially in patients >70 kg; short term use (max 48 hours) of paracetamol at 60 mg/kg/day in 4 or 6 divided doses (e.g. 10 mg/kg q4h or 15 mg/kg q6h) may provide better analgesia in such patients (www.nzf.org.nz accessed May 2021).

Paracetamol dosing should be adjusted in the context of liver impairment, proportional to it's severity. Please seek advice from APS re details for dosing.

If patient is <50kg then a reduction of dose base on actual body weight is recommended. (15mg/kg q6h, round to nearest 100mg for ease of administration)

NON-STEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDs)

Non-selective cyclooxygenase (COX) inhibitors:

- The main differences, between these NSAIDs are in the incidence and the type of side effects. Selection may be influenced by factors such as route of administration, the patient's age, renal function and previous experiences with particular NSAIDs (see comments below table).

Ibuprofen	Initially 1200 to 1800mg PO daily in three divided doses. Maintenance dose is 600 to 1200mg daily. Maximum total daily dose is 2400mg. For sustained release tablets maintenance of 1.6g daily as a single dose. Preferably in the evening. Maximum total daily dose of 2400mg daily in 2 divided doses for severe cases only.
Diclofenac	PO/PR 75 to 150mg daily in divided doses. Dose is dependent on indication. See NZF Sustained release preparations can be given once or twice daily. Maximum daily dose should not exceed 150mg by any route of **administration.Note:** IM administration of diclofenac is discouraged because of the associated risk of tissue necrosis and Nicolau syndrome.
Naproxen	Usual dose range 500 to 1000mg daily in divided doses. Dose is dependent on indication. See NZF Sustained release preparations are given once daily.

Selective Cyclo-oxygenase inhibitors (Cox-2 NSAID's)

Parecoxib	For IV: 4omg/day can be used in acute pain, for 48 hours **ONLY,** Maximum total daily doses up to 80mg (divided 40mg BD) Beware of drug-drug interaction as metabolised by CYP enzyme Relatively contraindicated in patients post coronary artery bypass surgery, ischaemic heart disease, PVD, and moderate/severe heart failure. Caution as per all NSAID's
Celecoxib	Oral dose: 100-2oomg BD dependant on indication maximum total daily dose 400mg. Caution as per all NSAID's

- Route of administration:
  - Sustained release preparations should not be used to initiate therapy for acute pain relief due to the slow onset of action. They can however be used for maintenance once comfort is achieved.
  - Suppositories are very well absorbed and should be considered when oral administration of analgesia is not possible.
  - If parenteral administration of an NSAID is warranted then IV Parecoxib can be considered following consultation with an APS, consultant and/or clinical pharmacist.
- NSAIDs should be used at the lowest effective dose for the shortest possible time in order to reduce the risk of adverse effects, particularly gastrointestinal haemorrhage.
- Co-prescribing of a PPI is warrented if given orally on regular basis, especially with sustained release formulation
- Use NSAIDs with caution:
  - In those over age 65
  - Avoid combinations of the following medications classes - can cause renal imparimentdiuretic, ACE inhibitor, NSAIDs.
  - During pregnancy and breast feeding
  - In patients with cardiac impairment (especially congestive heart failure)
  - In patients with coagulation defects and on anticoagulation therapy, antiplatelet (may increase risk of bleeding in patients on long term anti-coagulation therapy)
  - In patients with hepatic impairment
  - In patients with pre-existing renal impairment (may result in deterioration of renal function therefore use lowest dose possible and monitor renal function)
  - In patients with a history of GI ulceration or bleeding
- Refer to the NZ Formulary for a list of drug interactions, adverse effects, and contraindications of NSAID's.

3.5 Tramadol

Tramadol hydrochloride	Moderate to severe pain: 50 to 100mg PO every four hours to a maximum daily dose of 400mg. Elderly >75yo: 50 to 100mg PO every 6 hours up to a maximum of 300mg per day IV: Post-operative pain: Doses of 50 to 100mg evely four to six hours to a maximum daily dose of 400mg. Caution if discharging patients on tramadol due to withdrawel side effects. Please consider and consider weaning and liase with PHC team.

Note: Higher doses outside the registered dose have been used in specific instances, however these are at the discretion of the prescribing consultant and should be reviewed regularly.

- Tramadol is an atypical opioid analgesic because in addition to its weak activity at the mu opioid receptors it also inhibits neuronal noradrenaline and serotonin uptake and enhances serotonin release.
- Tramadol is not as effective as morphine in the treatment of severe pain, although in comparison to other opioids it is less likely to cause opioid-like adverse effects such as constipation, respiratory depression and dependence *(the latter has not been fully evaluated therefore any signs of dependence should be reported).*
- Tramadol may owe its analgesic effect to O-desmethyltramadol (M1), metabolised by the CYP2D6 isoenzyme. This enzyme pathway does not operate in about 5% of the Caucasian population (can be higher in other ethnic groups as it is a genetic polymorphism). Inhibitors (e.g. quinidine, fluoxetine) and substrates (e.g. codeine) of this enzyme could lower concentrations of tramadol's active metabolite and therefore its analgesic effect. Interaction checks can be access through NZF or phone pharmacy.
- Adverse effects: Nausea, dizziness, vomiting, dysphoria (unpleasant light headedness), sweating and dry mouth.
- Tramadol can be used in addition to paracetamol and a NSAID. Used concurrently with other opioids (e.g. codeine, morphine) an increased risk of CNS depression exists. Patients on tramadol and a CNS depressant should be closely monitored for signs of CNS depression (respiratory depression and over sedation).
- Prolonged Tramadol use may result in withdrawal syndrome if discontinued abruptly.

- Precautions and Warnings:
  - Tramadol must not be used for narcotic withdrawal treatment.
  - Tramadol is not suitable as a substitute in opioid-dependent patients.
  - Tramadol has been reported to cause convulsions at therapeutic doses and the risk may be increased at doses exceeding the usual dose limit. Patients

with a history of epilepsy or those susceptible to seizures should only be treated with tramadol if there are no other alternatives. The risk of convulsions may increase in patients taking tramadol and concomitant medication that can lower seizure threshold, e.g. sodium Valporate.
- Tramadol is not recommended for patients with severe renal impairment and/or severe hepatic impairment.
- Refer to recent reference material or call Dmg Information (Ext. 8270) for information on the use of tramadol in pregnancy or breastfeeding.

3.6 Opioid Analgesics

GENERAL POINTS

- Opioid analgesics are used to relieve moderate to severe pain paiticularly of visceral origin.
- The inter-individual opioid requirements for post-operative pain may vary by a factor of 10 (i.e. for 2 patients who have had the same operation, one might need 5mg of morphine and the other might need 50mg). **Individualised assessment of pain and effectiveness of analgesia administered is vital.**
- Remember to adjust dose of opioids in the elderly, in patients with hepatic or renal impairment and also be aware of drug interactions.
- The various opioids utilised at MidCentral Health share many side effects although qualitative and quantitative differences exist. It is important to note that many of the side effects from opioids are dose rather than drug related. Respiratory depression, over sedation and hyp otension are the most serious side effects and patients receiving opioid analgesia must be observed closely. The most frequently reported side effects however include nausea, vomiting, constipation, all of which can and should be managed with effective prescribing of analgesia. (Appendix 2)
- There is synergism of paracetamol or NSAIDs with opioids (opioid dosage requirements can be reduced by 30-50%).
- Some opioids (oxycodone, morphine) comes in a variety of formulations, including immediate and slow release preparations. It is recommended that when prescribing the release characteristics are clearly indicated.

DECIDE WHICH OPIOID TO PRESCRIBE

- Prescription of opioid analgesia is contraindicated for patients with airway obstruction, respiratory failure, raised intracranial pressure.
- All full conventional opioid agonists can produce the same level or analgesia once the dose isappropriately adjusted (see table below)
- For most severe acute pain situations the administration of morphine is recommended.
- Renal function:
  - Calculated CrCl >3oml/min: morphine as first line
  - Calculated CrCl 10-3oml/min: oxycodone or fentanyl
  - Calculated CrCl <10/min: fentanyl

- Check for opioid na'ive status. Defined as those who have not received opioids in the 30 days prior to the acute event or surgery.
- For conversion between different opioids, see Table 1:

Table 1: Ratio of Equipotency of Opioid Analgesics*

Original	Target	Conversion factor	Example
Codeine	Morphine (oral)	0.1	60mg codeine = 6mg po morphine
Tramadol	Morphine (oral)	0.1	50mg Tramadol = 5mg po morphine
morphine (oral)	morphine (IV)	0.3	30mg po morphine = 1omgIV morphine
morphine (oral)	oxycodone (oral)	0.5	20mg po morphine = 1omgpo oxycodone
codeine	oxycodone (oral)	0.05	60mg codeine = 3mg oxycodone

* This data is approximate but can be used for converting patients from one route of drug administration to another. Adjustments may need to be made for individual patients.

ROUTE OF ADMINISTRATION, DOSE RANGE AND DOSE INTERVAL

Codeine Phosphate

Use of codeine phosphate is no longer a recommended form of analgesia due to interpatient variability and cases of toxicity in patients who are ultra rapid metabolisers.

Do not give codeine concurrently with any of the strong opioids.

Morphine

Morphine	For acute severe pain - see IV opioid protocol - MDHB-1034. For non-emergency and maintenance of acute pain: • Whenever possible use oral route. Oral tablets or solution: If converting from parenteral (IV, IM or SC) to oral morphine, the oral dose should be 3 times the parenteral dose. If starting the patient on oral morphine: • Initially prescribe 5 to 10 mg of short-acting tablets or solution every two-four hours. • Lower initially dose of 2.5mg may be indicated for elderly patient. • Reassess pain (and side-effects) after 30 minutes to ensure patient comfort. If pain is not adequately controlled, add an extra dose of morphine - do not wait until the next dose is due. If pain is adequately controlled by this extra dose then the new 2-hourly dose should be the original dose plus the extra dose. In general, increase the dose of short-acting morphine by 100% if daily dose under 50mg, by 50% if daily dose 50-100mg, and by 25% if daily dose 100mg or higher (NB if the dose required is greater than 100mg review should be considered). If the severe acute pain is persistant,commence long-acting morphine tablets by dividing the total daily short-acting morphine requirements by two and giving that dose as a long-acting/controlled release morphine tablet every 12 hours. When giving controlled release morphine tablets, always consider co-prescribing short-acting PRN morphine to control "breakthrough pain" at a four-hourly dose of about 20% of the total daily long-acting morphine dose. If the patient requires regular short-acting morphine doses then increase the long-acting morphine dose. Do this by adding the total daily requirement of short-acting morphine to the daily dose of long-acting morphine, then divide by two to get the new long-acting morphine dose. PCA: Refer to Acute Pain Service

Oxycodone

Oxycodone should not be a first line opioid. Morphine should be utilised unless contraindicated e.g documented current or past history of intolerable morphine (fast release or slow release).

Oxycodone is approximately twice as potent as morphine. It is a synthetic opioid that has both locally and internationally become more commonly utilised however an e,idence based approach is encouraged. There is no evidence that ox:ycodone is superior to morphine in its efficacy or has less side effects. There is however increasing evidence of abuse of oxycodone internationally. If the patient satisfies the criteria for the use of oxycodone the following prescribing advice can be used.

Oxycodone	Oral tablets: **If starting the patient on oral oxycodone:** • Initially prescribe 2.5 to 5 mg of short-acting solution or capsule every two-four hours, then up titrate every 3-4 days • Lower initial dose of 1.25mg may be indicated for elderly patient. • Reassess pain (and side-effects) after 30 minutes to ensure patient comfort. If pain is not adequately controlled, add an extra dose of oxycodone - do not wait until the next dose is due. If pain is adequately controlled by this extra dose then the new 2-hourly dose should be the original dose plus the extra dose. Do not halve, crush oxycodone long acting tablet due to biphasic formulation - can cause dumping effect leading to toxicity. If pain not controlled by above regimen and persists despite assessment and intervention contact APS team - see criteria for referral page 1.

OBSERVATIONS REQUIRED WHILST ON OPIOID THERAPY

Prior to administration carry out baseline observations. Pulse, blood pressure, respiration rates, sedation score and pain intensity at rest and on movement are the recommended minimum. More frequent observation may be required in some patients.

ROUTE	FREQUENCY
IV	Prior to administration, during administration and then post at S minutes and 30 minutes then continue routine observations if patient comfortable and stable (MDHB - 1034)
Oral route	At 30 minutes then hourly for the first four hours in opioid na'ive patients. If there is an increase in sedation, decrease in respiratory rate or blood pressure review of prescription prior to administration of further dose should be considered and observations again repeated at 30 minutes and one hour post administration. If stable routine four hourly observations should continue for 24 hours. At any time if a patient receiving opioids appears sedated more frequent observations are required. NB - use the modified Macintyre scale for assessment of sedation

REASSESSMENT OF PAIN

Reassess at patient comfort at regular intervals and adjust prescriptions accordingly.

Review doses up or down in relation to:

- Patient comfort (pain intensity at rest or on movement 0-10)
- Development of side effects
- Illness states - primary diagnosis and previous disease states
- Other drug use (current and previous)

MANAGEMENT OF SEVERE COMPLICATIONS

Refer to MDHB-1034 for emergency protocols and standing orders.

PRESCRIBING ON DISCHARGE

- Not all of the above analgesics may be subsidised on an outpatient prescription. Please refer to the NZ Formulary www.nzf.org.nz. This also needs to be discussed with the patient.
- Prescriptions for supply of opioid analgesics (except codeine) for outpatient supply should be hand written on a triplicate copy Controlled Drugs Prescription form (H572).

- Please consider specify quantity of supply i.e 5/7 or 10 tablets and make this overt in the discharge summary to guide community prescribers.
- Please refer/ consult/liase with the patients Primary Health care team if patients are discharged on opioids.
- Please co-prescribe a laxative if discharging a patient on an opioid

4. REFERENCES

Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine (2015). Acute Pain Management: Scientific Evidence 4th Edition. Victoria
International Association for the Study of Pain.(2010) Pharmacology of Pain. IASP Press, Seattle USA
Therapeutic Guidelines, Analgesic, Edition 6, 2012, Victoria, Australia.
www.nzf.org.nz accessed July 2017

5. RELATED MDHB DOCUMENTS

MDHB-147	Pain Management in Adults -Clinical Guideline-
MDHB-1034	Adult IV Opioid Protocol for Patients in Pain with Existing IV Access (Including Women in Labour) -Procedure-
MDHB-7120	Guideline for Management and Prevention of Opioid Related Constipation

6. APPENDICES

Appendix 1	Initial Assessment of the Patient in Acute Pain
Appendix 2	Prevention of Adverse Effects

6. KEYWORDS

Pain, Analgesia, Paracetamol, NSAIDs, Tramadol, Codeine, Morphine, Fentanyl, Oxycodone, Opiates, Constipation, Sedation

Appendix 1:

THE INITIAL ASSESSMENT OF THE PATIENT IN ACUTE PAIN

Factors to be considered when assessing a patient in acute pain:

- Cause and physiological response
- Location
- Intensity of the pain at rest and at movement with a score of 1- 10
- Quality
- Onset and Duration
- Precipitating factors
- Modifying factors
- Psychological response to pain
- Behavioural response to pain
- Previous response to analgesia - Re assessment
  Existence of factors that might affect the patient's absorption distribution, metabolism and elimination of opioids, e.g. weight, age, hepatic or renal disease, drug dependence, or clinical condition.

Appendix 2:

PREVENTION OF ADVERSE EFFECTS

Always chart medicines for the management of anticipated side effects, i.e. nausea, vomiting and constipation. Do not wait for these side effects to occur. Constipation is defined as BNO for 3 days (HSQC, 2017). Recomendation is to co-prescribe a laxative if a patient is on an opioid. Exception to this a a patient undergoing colorectal surgery or bowel obstruction. Always consult with admitting team. Consider non-pharmacological alternatives such as increasing fibre.

Refer to MDHB - 7120: Guideline for Management and Prevention of Opioid Related Constipation

Anti-emetics		Cautions
Cyclizine (Central-acting)	50mg PO/IV q8h	Sedation, BPH, severe heart failure.
Domperidone	10mgPOq8h	Prolonged QT
Ondansetron	4-8mg PO/IV q8h	Constipation, prolonged QT, reduce effect of tramadol
Metoclopramide	10mg PO/IV q8h	Extrapyramidal effects, Parkinson's disease, prolonged QT.

Laxatives		Cautions
Laxsol (Docusate & Senna)	1-2 tabs PO twice daily *regular*	Drink plenty of fluids, stimulant
Docusate	120mg PO twice daily *regular*	
Bisacodyl	5-1omg PO twice daily, or 1omgPRSTAT	Drink plenty of fluids, stimulant
Molaxole ® Sachets	1sachet dissolved in 125mL water twice daily. Max 8 sachets a day if faecally impacted	Fluid and electrolyte disturbance, Use with caution in patients with congestive heart failure and renal impairment.
Kiwicrush	1cup PO 3 x daily	Hyperkalaemia, NOT funded in community, Use in combination with other laxative
Lactulose	15mL PO 2 x daily, Adjusted according to response	May take up to 48 hours to act. Drink plenty of fluids **Ineffective in opioids-induced constipation**

(9?CENTRAL HEALTH

GUIDELINE

POST-OPERATIVE CARE: GENERAL SURGICAL PROCEDURES

Applicable to: **Nursing Staff - Surgical Wards**	Issued by: **Surgical Services**
	Contact: **CN/ACN/NE/ Surgical Services**

t. PURPOSE

To monitor patients for early detection of post-operative complications and plan a return to normal function as quickly, safely, and comfortably as possible.

2. SCOPE

Applies to all Mid Central Health nursing staff working with general surgical patients.

3. ROLES AND RESPONSIBILITIES

Nursing staff caring for patients following surgery must follow this guideline.

4. GUIDELINE

4.1 Abdominal Aorta Aneurysm Repair
4.2 Amputation of a Limb
4.3 Arterial Bypass Surgery for Acute Arterial Occlusion
4-4 Femoral-Popliteal Bypass
4.5 Parotidectomy
4.6 Perforated Gastric Ulcer
4.7 Splenectomy
4.8 Thyroidectomy/Parathyroidectomy
4.9 Oesophagectomy

Health and Safety

Staff are required to prevent injury to self and others by:

- Complying with MDHB Hospital and Associated Services Policies particularly
  - Standard Precautions Protocol MDHB-963
  - Prevention of Manual Handling Injury MDHB-1898
- Using Protective Equipment/ Actions as required
  - Identify necessary gloves, eye protection, and gowns/ aprons* (see Standard Precautions).
- Using appropriate aids/ equipment for the task
  - Ensure sufficient lighting is available to safely undertake the procedure.
  - Adjustable height bed/ couch or trolley as appropriate and adjust patients as

required.

- If patient movement is necessary take appropriate preventive precautions
  - o Assess patient mobility status and refer to manual handling assessment in patient's care plan before moving.
  - o Ensure appropriate personnel (trained in Manual Handling techniques including Semi Squat) are available to assist.
  - o Manual handling transfer equipment, e.g. slippery sheet.

- Be aware of possibly that patients may behave unpredictably thereby presenting physical risk.
- Training using of Health and Safety techniques and equipment is required for all activities.
  * If there is any uncertainty about selection of personal protective equipment consult Infection Control Manual, Departmental Hazard Control Plan or Infection Control or Occupational Health Staff (as relevant to the particular issue).

44 ABDOMINAL AORTA ANEURYSM REPAIR

Definition

An **Aneurysm** is a localised sac or dilatation of an artery formed at a weak point in the vessel wall.

Assessment

- Patient is transferred to ICU for initial post-operative period and transferred to the ward.
- Observations- Blood pressure, heart rate, temperature, respiratory rate, pulse oximetry, urine output and level of consciousness should be assessed hourly for 4/24, then if stable, four hourly according to patient status and as per Early Warning Score.
- Neurovascular observations assessed and record on observation chart
- Record urinary output on Fluid balance chart.
- Review the wound and document in the notes. Commence wound assessment chart if wound changes.
- Assess for nausea as per nausea/appetite scale and record on observation chart.
- Risk assessments completed on trendcare and actioned accordingly

Pain Management

- Complete a comprehensive pain assessment. Document patient's response to analgesia intervention using Pain Assessment Tool
- Administer analgesia/medication as prescribed by medical staff - this may include PCA/Epidural analgesia
- Ensure adequate alternative analgesia is given prior to PCA/Epidural infusion being discontinued

Medications

- Administer anticoagulant as prescribed.
- Administer medications as prescribed.

Input

- IV fluids as prescribed by medical staff
- Commence diet as instructed by Medical team.

Output

- Monitor and record urinary output 1/24 - 2/24 depending on amount of urinary output/ medical staffs request: Goal> 30ml/hr or as documented by medical staff
- Maintain an accurate fluid balance chart
- Empty catheter bag 8/24 and record output
- Report passing of flatus and when bowels open

Wound

- Observe, report and document amount and type of wound ooze/swelling and signs of infection.

- Check Redivac drain 2-4/24 for patency, mark bottle at 1400 hrs daily and record amount of drainage on wound drainage chart

Hygiene/Comfort Cares

- Assist patient with daily hygiene cares until mobile, encourage patient to participate in personal cares.
- Assess patient for pressure area management and change patient's position frequently - at least 2/24 if patient has an epidural infusion in progress.
- A pressure relieving mattress may be required in accordance with Braden score
- Remove anti embolic stockings for hygiene cares and check skin integrity each shift

Mobilisation

- Encourage early mobilisation using aids as required e.g. walking stick, rolator frame.
- Patient to sit in a chair at least twice a day until fully mobile
- Advise patient to support wound when coughing or sneezing
- Encourage deep breathing/leg exercises
- Physiotherapist to assist with mobilisation
- Patient to wear anti embolic stockings while in hospital

4.2 AMPUTATION OF A LIMB

Definitions

Amputation: Removal of a limb designed to improve the patient's quality of life. It is used to relieve symptoms and to facilitate improved function.

Return of Body Parts

- Ensure patient/family/Whanau has knowledge of the process for the safe return of the requested body parts and knowledge of the danger of biohazardous waste and of the poisonous medium it may be in.
- Body parts will be returned as requested on the operation consent form and disclaimer form in a safe manner which prevents risks to patients and staff as per MDHB-148 and MDHB-3323.

Assessment

- Observations- Blood pressure, heart rate, temperature, respiratory rate, pulse oximetry, urine output and level of consciousness should be assessed hourly for 4 /24, then if stable, four hourly according to patient status and as per Early Warning Score.
- Neurovascular observations assessed and record on observation chart
- Record urinary output on Fluid balance chart.
- Review the wound and document in the notes. Complete a wound assessment chart.
- Assess for nausea as per nausea/appetite scale.
- Risk assessments completed on trendcare and actioned accordingly
- Consider Psychological assessment of patient and emotional state due to loss of limb.

Pain Management

- Complete a comprehensive pain assessment. Document patient's response to analgesia intervention using Pain Assessment Tool.
- PCA, Epidural or Sciatic nerve block infusions as prescribed by medical staff.

Surgical Pain

- This is located at the incision and can be readily controlled with analgesia, or evacuation of the haematoma or accumulated fluid.

Phantom Pain

- Described as pain or unusual sensation in the part that has been amputated. The sensation creates a feeling that the extremity is present and possibly crushed, cramped, or twisted in an abnormal position.

Muscle Spasm

- This may add to the patient's discomfort during convalescence.
- Administer pain relief as prescribed by medical staff.
- Involve members of the multidisciplinary team: Physiotherapist, Acute Pain Service.
- Changing patient's position may improve the patient's level of comfort.

Input

- Fluids - light diet - normal diet as tolerated by the patient or instructed by medical staff.
- IV fluids or GIK infusion as prescribed.
- Refer to dietician for high protein diet to facilitate wound healing.

Output

- Report first micturition.
- Indewelling catheter maybe in situ - monitor and record urinary output.
- Maintain an accurate fluid balance chart.
- Empty catheter bag 8/24 and record output.
- Report when passed flatus or bowels open. Monitor to prevent constipation.

Wound Care

- Check wound and report amount and type of ooze - reinforce dressing as necessary.
- Leave tegaderm undisturbed until instructed by the surgeon.
- Notify medical staff if signs and symptoms of infection: patient feeling unwell, elevated temperature, pain, swelling of the affected area, redness, smelly discharge.
- No stump bandaging until the sutures are all removed.
- Removal of sutures is at the discretion of the surgeon. Usually 14-21 days post-op.
- Elevation of stump, by elevation of end of bed.

Hygiene/Comfort Cares

- Assist patient with hygiene cares, encourage patient to participate wherever possible.
- Pressure area cares 2-4 hourly.
- A pressure relieving mattress may be required in accordance with Braden score

Mobilisation

- Refer to Physiotherapy.
- Mobilise into chair/wheelchair as instructed by the surgeon - early if lower limb amputation.
- Ensure patient safety while in bed.
- Encourage deep breathing/leg exercises to prevent or decrease chest complications.

Discharge Planning

- This is to commence when the patient attends preadmission clinic and continue when the patient is transferred to the ward post-operatively.
- Involve members of the multidisciplinary team - e.g. Social worker, ACC, occupational therapist, physiotherapist, District Nurse, meals on wheels, home help.
- Referral to Star for rehabilitation as soon as possible.
- Offer patient information on Amputation Society.
- Discharge summary and information must be provided to the patient prior to leaving the hospital.

Discharge Advice

- An outpatient appointment will be posted to the patient.
- Give patient information sheet "You and Your Wound" which outlines advice for wound care.
- Ensure home has been assessed in terms of the patient's continuing care, safety and mobility.

- Physical therapy and occupational therapy may continue in the home.
- Transportation to continuing health care appointments must be arranged.

4,3 ARTERIAL BYPASS SURGERY FOR ACUTE ARTERIAL OCCLUSION

Definitions

Embolic occlusion an embolus is a body which is foreign to the bloodstream and which may become lodged in a vessel and cause obstruction.

Simple emboli are due to blood thrombus. Emboli may lodge in any organ with resultant ischaemia and symptoms.

Endarterectomy
A direct opening is made into the artery to remove the obstruction.

Embolectomy
Removal of an embolus from an artery.

Femoral-femoral b$_{y\ p}$ ass
A graft from one femoral artery to the other.

Axillo-femoral b$_{y\ p}$ ass
A graft from the axillary artery to the femoral artery. It is created subcutaneously on the side of the chest.

Femoral-popliteal b$_{y\ p}$ ass
A graft from the femoral artery to the popliteal artery.

Aorto-illiac b$_{y\ p}$ ass
A graft from the aorta to the iliac arteries.

Post Op Assessment

- Observations- Blood pressure, heart rate, temperature, respiratory rate, pulse oximetry, urine output and level of consciousness should be assessed hourly for 4 /24, then if stable, four hourly according to patient status and as per Early Warning Score.
- Neurovascular observations on affect limb hourly x 8 hours, two hourly x 24 hours and then four hourly. Record on observation chart.
- Record urinary output on Fluid balance chart.
- **Disappearance of a pulse may indicate thrombotic occlusion of the graft: Notify Surgeon immediately.**
- Monitor all incision and arteriogram sites for bleeding/swelling.
- Assess for nausea as per appetite/nausea scale.
- Risk assessments completed on trendcare and actioned accordingly.

Pain Management

- **Complete a comprehensive pain assessment.** Document patient's response to analgesia intervention using Pain Assessment Tool
- Administer analgesia as prescribed.

Input

- IV fluids as prescribed.
- Free fluids - normal diet.

Medication

- May be prescribed Heparin infusion for a short time therefore, often progress to clexane or warfarin and discharged home on this. Involve haematology Nurse.

Output

- Monitor and record urinary output: Goal >30 ml/hr/
- Maintain an accurate fluid balance chart.
- Report passing of flatus and when bowels open.

Wound

- Observe, report and document amount and type of wound ooze, site of wound and signs of infection.
- Remove dressing according to doctor's instructions - either replace dressing or leave open.
- Check redivac drain 1/24 for patency, mark bottle towards end of shift and record amount of drainage on fluid balance chart.

Hygiene/comfort cares

- Check with Surgeons regarding any bed rest for patient
- Assist patient with hygiene cares, encourage patient to participate wherever possible
- Provide air mattress depending on Braden Score and bed-cradle on bed.
- Assess patient for pressure areas and change patient's position 2-4 hourly.
- Anti embolic stockings may be worn on the unaffected leg (remove each duty to check skin integrity)

Mobilisation

- Check with Surgeons regarding mobility.
- Patient to sit in a chair at least twice a day until fully mobile.
- Advise patient not to cross legs when lying in bed or sitting in a chair.
- Encourage deep breathing/leg exercises.
- Physiotherapist will assist with mobilisation.
- Advise patient to avoid flexion in the graft area.
- Do not put on anti embolic stockings on unless charted or advised by Surgeon. Anti embolic stockings can go on unaffected leg.
- Encourage deep breathing/leg exercises to prevent or decrease chest complications.

4.4FEMORAL-POPLITEALBYPASS

Definitions

Femoral-Popliteal Bypass: A graft from the femoral artery to the popliteal artery.

Doppler: An ultrasound device to hear the blood flow in vessels when pulses cannot be palpated.

Assessment

- Observations- Blood pressure, heart rate, temperature, respiratory rate, pulse oximetry, urine output and level of consciousness should be assessed hourly for 4/24, then if stable, four hourly according to patient status and as per Early Warning Score.
- Neurovascular observations on affect limb hourly x 8 hours, two hourly x 24 hours and then four hourly. Record on observation chart.
- Doppler evaluation distal to the bypass graft should be performed as it is more sensitive than digital palpation. Loss of pulse may indicate thrombotic occlusion of the graft - notify surgeon immediately.
- Check groin wound for swelling/ooze one hourly x 12/24 and then 2-4 hourly.
- Complete wound assessment.
- Severe oedema of extremity, pain or decreased sensation to toes may indicate Compartment Syndrome.
- Assess for nausea as per appetite/nausea scale.
- Risk assessments completed on trendcare and actioned accordingly

Pain Management/Medication

- **Complete a comprehensive pain assessment.** Document patient's response to analgesia intervention using Pain Assessment Tool
- Administer pain relief as prescribed by medical staff - this may include PCA/Epidural analgesia.
- Ensure adequate alternative pain relief is given when PCA/Epidural discontinued.
- Administer medication as prescribed by medical staff.

Input

- IV fluids as prescribed by medical staff.
- Light diet - normal diet as tolerated.

Output

- Monitor and record urinary output - may be catheterised initially. Maintain >30 ml/hr.
- Report first micturition if urinary catheter not present.
- Maintain an accurate fluid balance chart.
- Report passing of flatus and when bowels open.

Wound

- Observe, report and document amount and type of wound ooze.
- Remove tegaderm according to Doctor's instructions - either replace tegaderm or apply dry dressing to ensure wound remains dry - **very important.**
- Observe wound for signs and symptoms of infection.
- Check wound drain 1/24 for patency, mark bottle at 14:00 hours daily and record amount on fluid balance chart.

Hygiene/Comfort Cares

- Check with Surgeons regarding any bed rest requirements for patient.
- Assist patient with hygiene cares, encourage patient to participate wherever possible
- Place bed-cradle on bed - requirement if epidural infusion in progress.
- Assess patient for pressure area management and change patient's position frequently - at least 2 hourly if patient has an epidural infusion in progress.

Mobilisation

- Encourage gentile mobilisation using aids as required e.g. walking stick, rolator frame.
- Patient to sit in a chair at least twice a day until fully mobile. Elevate extremities when sitting in chair.
- Encourage deep breathing/leg exercises to prevent or decrease chest complications.
- Advise/educate patient not to cross legs and avoid sharp flexion in area of graft.
- Physiotherapist will assist with mobilisation.

Discharge Advice

- An outpatient appointment will be posted to the patient.
- Give patient information sheet "You and Your Wound"
- GP will remove sutures
- Advise patient to increase gentle mobilisation.
- Limit activity for 5-7 days.
- Restrict heavy lifting and strenuous exercise for 4-6 weeks.

PAROTIDECTOMY

Definition

Parotidectomy: Surgical excision of the parotid gland.

Assessment

- Check wound and report type and amount of ooze.
- Assess facial movement for facial nerve damage - ask patient to smile.
- Complete Risk assessments.

Pain Management/Medication

- Assess patient's level of comfort using Pain Assessment Tool.
- Administer analgesia/medication as prescribed by medical staff.
- Document patient's response to analgesia using Pain Assessment Tool.

Input

- IV Fluids as prescribed by medical staff
- Initially patient to be NBM - fluids - soft diet as tolerated.

Output

- Report first post operative micturition.
- Maintain an accurate fluid balance chart.
- Report passing of flatus and when bowels open.

Wound

- Observe, report and document amount and type of wound ooze.
- Remove tegaderm according to Doctor's instructions - either replace tegaderm or apply d_{ry} dressing to ensure wound remains d_{ry} - **very important.**
- Observe wound for signs and symptoms of infection.
- Check wound drain 1/24 for patency, mark bottle at 14:00 hours daily and record amount of drainage on wound drainage chart.

Hygiene/Comfort Cares

- Encourage patient to participate in personal cares wherever possible.
- Assist patient with daily hygiene cares until mobile, then daily shower.
- Provide mouthwashes and assist with oral cares.

Mobilisation

- Encourage gentile mobilisation using aids as required.
- Patient to sit in a chair at least twice a day until fully mobile.
- Encourage deep breathing/leg exercises.

Discharge Advice

- An outpatient appointment will be posted to the patient.
- Give patient information sheet "You and Your Wound"

PERFORATED GASTRIC ULCER

Definition

Perforation: Is the erosion of the ulcer through the gastric serosa into the peritoneal cavity without warning.

Assessment

- Observations- Blood pressure, heart rate, temperature, respiratory rate, pulse oximetry, urine output and level of consciousness should be assessed hourly for 4 /24, then if stable, four hourly according to patient status and as per Early Warning Score.
- Report abdominal distension, hyperactive or absent bowel sounds, passing flatus, bowels opening.
- Risk assessments completed on trendcare and actioned accordingly

Pain Management/Medication

- **Complete a comprehensive pain assessment.** Document patient's response to analgesia intervention using Pain Assessment Tool.
- Administer analgesia/medication as prescribed by medical staff this may include PCA analgesia.

Input

- IV Fluids/medications as prescribed by medical staff
- Initially patient to be NBM - fluids - increase oral intake as instructed by medical staff.
- It is likely the patient will require TPN, refer to dietitian
- Once flatus has been passed then oral fluids increasing to light/normal diet as requested by medical staff and as tolerated by the patient.

Output

- Monitor and record urinary output initially 1/24 - 2/24 depending on amount of urinary output/medical staff's request - inform medical staff if urinary output low i.e. <30 ml/hr.
- Report nausea and vomiting.
- Maintain an accurate fluid balance chart.
- Report passing of flatus and when bowels open.
- Naso-gastric tube in situ - free drainage. **Aspirations only** if **instructed by medical staff.**

Wound

- Assess and observe wound, report and document amount and type of wound ooze.
- Observe wound for signs and symptoms of infection.
- Check wound drain 1/24 for patency, mark bottle at 14:00 hours daily and record amount of drainage on fluid balance chart.

Hygiene/Comfort Cares

- Assist patient with hygiene cares, encourage patient to participate wherever possible .
- Provide mouthwashes and assist with oral cares.
- Assess patient for pressure areas and change patient's position 2-4 hourly.
- Remove anti embolic stockings each duty to check skin integrity.

Mobilisation

- Encourage gentile mobilisation using aids as required .

- Patient to sit in a chair at least twice a day until fully mobile.
- Encourage deep breathing/leg exercises to prevent or decrease chest complications.
- Physiotherapist will assist with mobilisation.

Discharge Advice

- An outpatient appointment will be posted to the patient.
- Nutritional advice - ensure patient seen by a dietitian prior to discharge.
- Give patient information sheet "You and Your Wound"
- Continue to increase mobilisation.
- GP to remove sutures.
- Avoid heavy lifting x 4-6 weeks.

SPLENECTOMY

Definitions:

Spleen: A soft, highly vascular, roughly ovoid organ situated between the stomach and the diaphragm in the left hypochondriac region of the body.

Splenectomy: Surgical removal of the spleen.

Pre-operative Cares

NB: Young patients are at increased risk of pneumoccal infections for several years after splenectomy and should receive triple vaccine two weeks prior to surgery - discuss with surgeon. In the acute situation Pneumovax will be administered before surgery if possible.

Assessment

- Observations- Blood pressure, heart rate, temperature, respiratory rate, pulse oximetry, urine output and level of consciousness should be assessed hourly for 4/24, then if stable, four hourly according to patient status and as per Early Warning Score.

Pain Management/Medication

- **Complete a comprehensive pain assessment.** Document patient's response to analgesia intervention using Pain Assessment Tool.
- Administer analgesia/medication as prescribed by medical staff - this may include PCA/Epidural analgesia.
- Ensure adequate alternative pain relief is given when PCA/Epidural discontinued.

Input

- IV Fluids/medications as prescribed by medical staff
- Initially patient to be NBM - until instructed by medical staff.
- Once flatus has been passed then oral fluids increasing to light/normal diet as requested by medical staff and as tolerated by the patient.

Output

- Monitor and record urinary output initially 1/24 - 2/24 depending on amount of urinary output/medical staffs request - inform medical staff if urinary output low i.e. >30 ml/hr.
- Maintain an accurate fluid balance chart.
- Empty catheter bag 8/24 and record output.
- Report passing of flatus and when bowels open.

Wound

- Observe, report and document amount and type of wound ooze/swelling.
- Remove tegaderm according to Doctor's instructions - either replace tegaderm or apply dry dressing to ensure wound remains dry - **very important.**
- Observe wound for signs and symptoms of infection.
- Check wound drain 1/24 for patency, mark bottle at 14:00 hours daily and record amount of drainage on fluid balance chart.

Hygiene/Comfort Cares

- Assist patient with hygiene cares, encourage patient to participate wherever possible

- Provide mouthwashes and assist with oral cares.
- Remove anti embolic stockings each duty to check skin integrity.
- Provide air mattress depending on Braden Score

Mobilisation

- Encourage gentile mobilisation using aids as required .
- Patient to sit in a chair at least twice a day until fully mobile.
- Encourage deep breathing/leg exercises to prevent or decrease chest complications.
- Physiotherapist will assist with mobilisation.

Discharge Advice

- An outpatient appointment will be posted to the patient.
- Nutritional advice - ensure patient seen by a dietitian prior to discharge.
- Give patient information sheet "You and Your Wound"
- Continue to increase mobilisation.
- GP to remove sutures.
- Advise patients to seek prompt medical attention when even relatively minor symptoms of infection occur.
- Patients with high platelet counts are often found to have even higher counts after splenectomy and this can predispose to serious thrombotic or haemorrhagic problems.
- Avoid heavy lifting x 4-6 weeks

THYROIDECTOMY/PARATHYROIDECTOMY

Definition:

Partial or Complete Thyroidectomy: Surgical excision of the thyroid gland, may be carried out as a primary treatment of thyroid carcinoma or hyperparathyroidism. The type and extent of the surgery depends on the diagnosis, goal of surgery and prognosis.

Parathyroidectomy: Removal of the parathyroid glands which are attached to the dorsal surfaces of the lateral lobes of the thyroid gland.\

Assessment

- Observations- Blood pressure, heart rate, temperature, respiratory rate, pulse oximetry, urine output and level of consciousness should be assessed hourly for 4 /24, then if stable, four hourly according to patient status and as per Early Warning Score.
- Observe and report neurological signs - headache, vision changes, anxiety, altered levels of consciousness, twitching, convulsions.
- Patient may experience hoarseness, weak voice due to laryngeal nerve involvement. If this has occurred as a result of intubation it gradually clears. Laryngeal nerve damage can result in vocal cord spasm and respiratory obstruction.
- Airway obstruction may result from laryngospasm, laryngeal oedema due to surgical manipulation, tracheal compression from haematoma formation, or laryngeal obstruction due to bilateral cord paralysis.
- Monitor and report difficulty in swallowing/coughing/tremors/restlessness.
- Monitor wound for swelling/inflammation or sensation of pressure or fullness.
- Signs of respiratory distress.

CalciUill deficiency - (tetany) tingling around the mouth, fingers or toes, cramps.

- Serum calcium levels may decline in the first 24 hours post surgery. Sub normal levels may persist for 4-5 days. Serum calcium levels are checked the evening of operation and the next morning or more frequently if required.
- **Thyroid Storm** - Thyroid Storm or severe thyrotoxicosis is a life threatening crisis. It is characterised by extremely exaggerated signs and symptoms of hyperthyroidism. Usually occurs intra operatively or up to 18 hours post operatively.

NB: Ensure suture cutters/clip removers are with the patient at all times.

Pain Management/Medication

- **Complete a comprehensive pain assessment.** Document patient's response to analgesia intervention using Pain Assessment Tool.
- Administer analgesia/medication as prescribed by medical staff.

Input

- IV fluids as prescribed by medical staff.
- Initially patient to be NBM - check swallowing reflex prior to commencement of oral fluids then light/soft food diet as requested by medical staff.

Output

- Monitor and record urinary output.
- Report first micturition
- Maintain an accurate fluid balance chart.

Wound

NB: Ensure suture cutters/clip removers are with the patient at all times.

- Observe, report and document amount and type of wound ooze/swelling.
- Observe sides and back of the neck as well as the anterior dressing for bleeding.
- Remove tegaderm according to doctor's instructions - either replace tegaderm or apply a dry dressing to ensure wound remains dry.
- Observe wound for signs and symptoms of infection.
- Check wound drain 1/24 for patency, mark bottle at 1400 hours daily and record amount of drainage on fluid balance chart.

Hygiene/Comfort Cares

- Assist patient with hygiene cares, encourage patient to participate wherever possible
- Nurse the patient in semi-fowler's position with the head elevated and supported by pillows.
- Assess patient for pressure area management and change patient's position frequently - at least 2/24 - if patient unable to do so independently.
- Provide air mattress depending on Braden Score
- Remove anti embolic stockings for hygiene cares and to check skin integrity each duty.
- Turn patient carefully so as to support the head and avoid tension on the suture line.
- Advise patient to talk as little as possible to reduce oedema to vocal cords.
- Support the head when moving/turning.

Mobilisation

- Encourage early mobilisation using aids as required, e.g. walking stick, rolator frame.
- Encourage patient to sit in a chair at least twice a day until fully mobile.
- Encourage deep breathing/leg exercises to prevent or decrease chest complications.
- Physiotherapist will assist as required.
- Patient to wear anti embolic stockings while in hospital.

Discharge Advice

- An outpatient appointment will be posted to the patient.
- Give patient information sheet "You & Your Wound".
- GP will remove sutures.
- Give advice of who to contact should they notice any tingling.

A& OESOPHAGECTOMY

Definition:

Oesophagectomy
The removal of the tumour plus a wide tumour free-margin of the Oesophagus and the l$_{y\ m}$ ph nodes in the area. Surgical approach may be through the thorax or the abdomen depending on the location of the tumour.

Post-Operative Cares

- Patient transferred to ICU for initial post-operative assessment and treatment.
- Patient will require close monitoring in the ward, following transfer from ICU.
- Follow Guideline for Post-operative Cares for a Surgical Patient.
- Explain and discuss all cares with patient obtaining their consent.

Assessment

- Observations- Blood pressure, heart rate, temperature, respiratory rate, pulse oximetry, urine output and level of consciousness should be assessed hourly for 4 /24, then if stable, four hourly according to patient status and as per Early Warning Score.
- Report abdominal distension, h$_{y\ p}$eractive or absent bowel sounds, passing flatus, bowels opening.
- Nasogastric tube is usually sutured in place - record amount of drainage accurately on fluid balance chart
- Under Water Seal Drain maybe in situ - Refer to Chest Drain (Intercostal Catheter) Insertion Underwater Seal Drain Management and Catheter Removal MDHB -1073
- Risk assessments completed on trendcare and actioned accordingly.

NB: Do not remove nasogastric tube unless instructed to do so by medical staff.

Pain Management/Medication

- **Complete a comprehensive pain assessment.** Document patient's response to analgesia intervention using Pain Assessment Tool.
- Administer analgesia/medication as prescribed by medical staff this may include PCA/Epidural analgesia.
- Ensure adequate alternative analgesia is given prior to PCA/Epidural infusion being discontinued.

Input

- IV Fluids/medications as prescribed by medical staff
- Strictly NBM -until instructed by medical staff.
- **Patient only ever starts drinking when dye study performed to ensure that suture line is not leaking - follow surgeon's instructions.**
- It is likely the patient will require TPN or jejunostomy feeding, refer to dietitian

Output

- Monitor and record urinary output initially 1/24 - 2/24 depending on amount of urinary output/medical staffs request - inform medical staff if urinary output low i.e. <30 ml/hr.
- Maintain an accurate fluid balance chart.

- Report nausea and vomiting.
- Report passing of flatus and when bowels open.
- Naso-gastric tube in situ - free drainage. **Aspirations only** if **instructed by medical staff.** Record type/amount of drainage/aspirate.

Wound

- Assess and observe wound, report and document amount and type of wound ooze.
- Observe wound for signs and symptoms of infection.
- Check wound drain 1/24 for patency, mark bottle at 14:00 hours daily and record amount of drainage on fluid balance chart.

Care of Jejunostomy/Gastrostomy Tube

- Refer to Procedures for Gastrostomy Feeding Tube (PEG/PEJ/BRT) Management and Troubleshooting (MDHB-429).
- Tube clamped until ordered by Consultant - then warm water flushes as instructed by Surgeon
- Commence feeds once instructed by medical staff.

Hygiene/Comfort Cares

- Assist patient with hygiene cares, encourage patient to participate wherever possible.
- Provide mouthwashes and assist with oral cares.
- Assess patient for pressure areas and change patient's position 2-4 hourly.
- Remove anti embolic stockings each duty to check skin integrity.
- Provide air mattress depending on Braden Score
- Always raise head of bed for swallowing food and liquids.

Mobilisation

- Encourage gentile mobilisation using aids as required.
- Patient to sit in a chair at least twice a day until fully mobile.
- Encourage deep breathing/leg exercises to prevent or decrease chest complications.
- Physiotherapist will assist with mobilisation.
- Bending or stooping should be avoided.
- Care of right shoulder if had Thoracotomy.

Discharge Advice

- An outpatient appointment will be posted to the patient.
- Ensure support services are organised prior to discharge from hospital, e.g. District Nurses, Home Help, Oncology, Hospice referral etc.
- Nutritional advice - ensure patient seen by a dietitian prior to discharge.
- Give patient information sheet "You and Your Wound"
- Continue to increase mobilisation.
- GP to remove sutures or arrange at outpatient clinic
- Avoid heavy lifting

5. REFERENCES

Brunner, L. S. (2010). Brunner & *Suddarth's textbook of medical-surgical nursing* (Vol. 1). S. C. C. Smeltzer, B. G. Bare, J. L. Hinkle, & K. H. Cheever (Eds.). Lippincott Williams & Wilkins.

McCance, L., Huether, S., Valentina L., & Brashers, N. (2010). *Pathophysiology: the biologic basisfor disease in adults and children.* Mosby Elsevier Maryland Heights.

6. DEFINITIONS

GIK Glucose, Insulin, Potassium infusion

PCA_Patient Controlled Analgesia

7. RELATED MDHB DOCUMENTS

- Clinical Guideline for Pre & Post-Operative Care of the Surgical Patient (MDHB-1368)
- Clinical Guideline for Pain management in Adults (MDHB-147)
- Procedure for Anti-Embolism Stockings (T.E.D.) (MDHB-36)
- Chest Drain (Intercostal Catheter) Insertion Underwater Seal Drain Management and Catheter Removal (Procedure) (MDHB-1073)
- Gastrostomy Feeding Tubes (PEG/PEJ/BRT) Management and Troubleshooting (Adults) (MDHB-429)

8. FURTHER INFORMATION/ ASSISTANCE

MidCentral Health General Surgeons
Ward 29
Tissue Viability Nurses

9. KEYWORDS

Abdominal Aortic Aneurysm, Post-operative, acute arterial occlusion, thyroidectomy, parathyroidectomy, occlusion, amputation, arterial bypass, femoral, popliteal, partidectomy, splenectomy, oesophagectomy

HEALTH

POLICY

SUICIDE RISK ASSESSMENT - EMERGENCY DEPARTMENT

Applicable to: **Emergency Department staff**	Issued by: **Emergency Department**
	Contact: **Service Manager/Clinical Director**

1. PURPOSE

To maintain safety and minimise risk to patients presenting with suicidality in the Emergency Department.

2. SCOPE

Applies to all medical and nursing clinicians in the Emergency Department.

3. ROLES & RESPONSIBILITIES

Clinical Director, ED - Emergency Department concordance to Ministry of Health suicide prevention guidelines for ED.
Registered Nurse - completing the Initial Assessment also completes MDHB-5224 Emergency Department Suicide Risk Assessment for indicated patients.
ED coordinator - provides guidance for Triage Disposition
Registered Nurse - Levels of Observation and continued assessment post initial Risk Assessment

4. INDICATIONS

Patients in the Emergency Department requiring a suicide risk assessment.
This includes (but is not limited to):
Suicide attempt
Suicidal self-directed violence
Suicidal thoughts and suicidal behaviour
Non-suicidal self-directed violence
Self Harm Injury
Self-harming behaviour

5. PROCESS

- The patient is Triaged using ED Triage Scale on arrival
- Environmental safety considerations applied to patient safety and allocation in the ED setting (i.e. code 1& 2 inside disposition)
- Check whether patient has an ED management plan
- Consider whether a Level 3 Safety Companion is appropriate (Special or Security).
- Refer to Australasian [ED Mental Health] Triage Scale for Observed Behaviours
- Complete MDHB-5224 Emergency Department Suicide Risk Assessment

- Contact mental health services: refer and fax to Acute Care Team and as per form

6. REFERENCES

Ministry of Health. 2016. *Preventing suicide: Guidance for emergency departments.* Wellington: Ministry of Health. www.health.govt.nz

7. RELATED MDHB DOCUMENTS

MDHD-5224	Emergency Department Suicide Risk Assessment Form
MDHB-6734	Level 2 Behavioural Observation Form

8. KEYWORDS

Suicide
Risk
Assessment
Safety
Emergency Department

eCENTRAL HEALTH

Name: _____ NHI: _____

Address: _____

Date of Birth: _____ Male/ Female

GP or Consultant: _____ Area: _____

OR PATIENT ID /ABEL HERE

EMERGENCY DEPARTMENT SUICIDE RISK ASSESSMENT

ACT informed phone: 8162 fax: 8163 **Consult Liaison informed (0272831786)**

DATE: _____ **TIME:** _____

CAN YOU TELL ME HOW YOU ARE FEELING AT THE MOMENT?

☐ Yes ☐ No

If yes, how? (Brief Description)

SUICIDE ASSESSMENT

Have you had thoughts that life isn't worth living?	☐ Yes	D No
Have you thought of harming yourself?	☐ Yes	D No
Do you intend to act on your thoughts?	☐ Yes	☐ No
Have you got a plan?	☐ Yes	D No
Do you feel safe at present?	☐ Yes	☐ No
Have you thought of harming others?	☐ Yes	☐ No
Are we safe?	☐ Yes	D No
Are you thinking of suicide at present?	☐ Yes	☐ No

HAVE YOU? .....

Access to guns, weapons, medicines, or other lethal means?	☐ Yes	☐ No
Do you have any weapons, blades, medications, drugs on you?	☐ Yes	☐ No

HAVE YOU? .....

Harmed yourself in the past?	☐ Yes	☐ No
Attempted suicide in the past?	☐ Yes	D No

WHAT WOULD MAKE A DIFFERENCE AT THE MOMENT?

Is there something we can do to help you? ☐ Yes ☐ No

If yes, what?

_____

_____

ANY RELEVANT MEDICAL HX? _____

_____

IS ANYONE ELSE WITH THEM?

D Yes No

If yes, who? _____

Are they prepared to stay with patient whilst in ED?

☐ Yes ☐ No

IS THERE ANYONE YOU WANT TO CALL?

Yes ☐ No

Have you a working cell phone? D Do you need support to make a call?

ecENTRAL HEALTH

NHI _____

BARCODE AREA

WHAT DOES THE PERSON WANT?

D Someone to talk to
D They don't know
D Medication
D Detox
D Accommodation
D Psychiatric input
D Inpatient treatment
D Outpatient treatment

Is the patient prepared to wait in ED for assessment and treatment? ☐ Yes ☐ No

---

OBSERVER ARRANGED: D Yes D No D N/A

TRIAGE CODE: 1 2 3 4

WHAT IS THE PROBLEM?

Suicidal ideation
Suicide attempt
Thoughts Disordered
Depressed
Hallucinating
Stress
Delusional
Self-harming behaviour
Agitation
Anxiety/Panic attacks
Bizarre Behaviour
Intoxication
Aggression
Drug + Alcohol Withdrawal
Substance use/non prescribed drugs
Persistent pain condition

WHY PRESENTING AT ED?

☐ Self Referral
☐ Personal Crisis
☐ Police Presentation
D Concern from others
D GP Referral
D Deliberate Self Harm

IS THERE A PSYCHIATRIC HISTORY?

D Yes D No
D Currently under mental health services
D CMHT & Key worker

GENERAL APPEARENCE: Build Attire Distinguishing features

FORM FAXED TO ACT (8163) Time:

SIGNED: _____ **DESIGNATION:** _____

BINDING MARGIN - NO WRITING

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

Phone (06) 350 8061
Fax (06) 355 0616

Postal Address:
PO Box 2056
Palmerston North Central
Palmerston North 4440
New Zealand

Physical Address:
Gate 2
Heretaunga Street
Palmerston North
New Zealand

28 January 2022

[redacted]

Via email: [redacted]

Dear [redacted]

I refer to your Official Information Act request received by email on 10 December 2021 with regard to the costs of RMO Locums hired between 1 April 2020 – 31 March 2021 and 1 April 2021 – 31 October 2021, and respond as follows:

The amount paid to RMO locums hired through agencies or bureaus outside of the management of District Health Board (i.e. not including casual employees of the District Health Board) in the period 1 April 2020 to 31 March 2021 and 1 April 2021 to 31 October 2021

Apr 20 to Mar 21	Apr 21 - Oct 21
$1,276,160	$104,908

You will see a noticeable drop in contracted RMO costs over this period. This is due to the fact that MDHB was better recruited to for the April 2021 – October 2021 period and did not require the number of locums previously needed.

Additionally, MDHB did not get the usual number of UK SHOs in August 2020 so in a period when it would have usually been fully recruited, MDHB had more vacancies and therefore used more locums.

Please note that this response, or an edited version of it, may be published on the MidCentral DHB website ten working days after your receipt of this letter.

Yours faithfully

Keyur Anjaria
General Manager
People & Culture

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

Phone (06) 350 8061
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21 January 2022

[redacted]

Dear [redacted]

Official Information Act (OIA) Request

Your recent OIA request to the Ministry of Health, part of which has been transferred to District Health Boards as follows, is acknowledged.

- **How many surgeries/procedures/assessments have been cancelled across the country in the past year?**
- **Is it possible to break that number down by month.**
- **How many surgeries/procedures/assessments were cancelled in 2019 and 2017?**

This information as it relates to MidCentral District Health Board (MDHB) follows. Please note that this information excludes patient cancellations.

MDHB captures theatre cancellations under 14 cancellation codes and some examples follow;

- Patients who have a scheduled date for surgery several weeks in advance may be cancelled due to an urgent cancer surgery.
- Patients cancelled as the case before them unexpectedly takes longer than scheduled.
- Patients may be unwell on the day but still present to our Day of Surgery Admissions unit.
- COVID-19 national restrictions.

2017

Month/Year	Surgeries Cancelled by Hospital	First Specialist Assessment Cancelled	Endoscopy Procedure Cancellations
01/01/2017	66	15	13
01/02/2017	44	10	24
01/03/2017	50	36	20
01/04/2017	60	8	19
01/05/2017	53	10	33
01/06/2017	61	28	17
01/07/2017	74	29	30
01/08/2017	62	23	31
01/09/2017	37	26	28
01/10/2017	38	38	29
01/11/2017	54	59	18
01/12/2017	59	13	16

Operations Executive, Acute & Elective Specialist Services
MidCentral District Health Board, PO Box 2056, Palmerston North 4440
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2019

Month/Year	Surgeries Cancelled by Hospital	First Specialist Assessment Cancelled	Endoscopy Procedure Cancellations
01/01/2019	107	40	5
01/02/2019	121	60	6
01/03/2019	139	14	6
01/04/2019	106	33	7
01/05/2019	88	36	7
01/06/2019	72	31	3
01/07/2019	105	53	7
01/08/2019	142	45	10
01/09/2019	107	44	8
01/10/2019	100	22	7
01/11/2019	83	47	10
01/12/2019	96	39	1

2021

Month/Year	Surgeries Cancelled by Hospital	First Specialist Assessment Cancelled	Endoscopy Procedure Cancellations
01/01/2021	56	18	6
01/02/2021	73	35	9
01/03/2021	107	43	4
01/04/2021	63	16	7
01/05/2021	79	38	5
01/06/2021	104	66	16
01/07/2021	111	42	14
01/08/2021	329	422	126
01/09/2021	143	188	10
01/10/2021	70	89	9
01/11/2021	115	64	11
01/12/2021	25	28	5

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website 10 working days after your receipt of this response.

Yours sincerely

Lyn Horgan
Operations Executive
Acute & Elective Specialist Services

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

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10 February 2022

[redacted]

Dear -

Official Information Act (OIA) Request

As you are aware, your consolidated OJA requests of 24 November 2021 were transferred to District Health Boards by the Ministry of Health under section 14(b)(ii) of the Official Information Act

The following information is provided as it pertains to MidCentral District Health Board (MDHB).

- **What are the guidelines/procedures for patients repeatedly admitted to Emergency Department with severe epigastric pain/and upper right and left quadrant pain?**

  The Emergency Department generally does not have specific guidelines based on presenting complaint or diagnosis. Each patient is approached as an individual based on their presenting complaint, past medical history, findings on exam and investigations, and risk factors.

  As an individual department, the Emergency Department does have an Acute Back Pain guideline. A copy of this document (MDHB-6712: **Guideline - Acute Back Pain In Emergency Dept)** is attached.

- **What are the official guidelines/procedures for urgent x-rays (24 hour)?**

  The attached document (Ml-0483: **Policy- Patient Priority)** is the guideline used for prioritising urgent x-rays at MDHB.

- **Guidelines/procedures for investigating possible Colonic Motility Dysfunction/Defecatory Disorders/ Anorectal Dysfunction.**

  MDHB uses Hospital HealthPathways MidCentral guidelines, copies of which are attached.

  - Inflammatory Bowel Disease (IBD)
  - Constipation in Adults
  - Acute Pain in Adults

Please note that this response, or an edited version of this response, may be published on the MidCentral DHB website 10 working days after your receipt of this response.

Yours sincerely

Lyn Horgan
Operations Executive
Acute & Elective Specialist Services

Encl

GUIDELINE

ACUTE BACK PAIN IN EMERGENCY DEPT

Applicable to: **Emergency Department**	Issued by: **Emergency Department**
	Contact: **Chris Underwood- ED Consultant**

1. PURPOSE

1. To promote consistent and effective assessment and management of Acute Back Pain.
2. Use a Risk Assessment approach for early identification of those patients v„jth risk factors for serious pathology in whom further investigation is warranted.
3. Enhance the clarity of documentation of back pain presentations.

2. SCOPE

For use in the Emergency Department assessment of presentation with Acute Back Pain.

3. GUIDELINE

Pathways are guidelines and must be in conjunction with sound clinical judgement.
This guideline has been designed through the combined efforts and endorsements of the departments of Emergency Medicine and Orthopaedics.

Context

Back pain is a common presenting symptom in Emergency Departments worldv„jde.
>80% of the population experiences back pain at some point.
Most commonly, the cause is mechanical rather than serious pathology.
However, a wide differential diagnostic list exists.

Some potential diagnoses are more serious than others, and may require urgent, specific, inpatient management to prevent poor outcomes.

eg infective spinal causes
cauda equina
fractures
AAA
Malignancy

Risk assessment helps to identify patients with risk factors that increase the likelihood of serious pathology being present, in whom further investigation is warranted.

Risk Assessment

Red Flags	D	Drug use, IVDU
	R	Rest pain, pain worse at night or lying down
	A	Age> 65
	S	Steroid use, especially long term, or immunosuppressant use
	T	Trauma of significance (fall >patient height, MVA >low speed)
	I	Infection in recent days
	C	Cancer
	W	Weight loss, especially unintentional
	0	Osteoporosis
	F	Fever or raised inflamm markers, especially unexplained.

Intractable Pain - either severe unremitting pain, or pain persisting > 6 weeks.

Neurology - LL weakness, bladder or bowel dysfunction (incontinence or retention)

ALL patients with Red Flags or Intractable Pain or Neurology should be discussed with the ED Consultant with a view to further investigation including CT or MRI.

Exaniination Documentation

Must ensure clear, serial documentation of the following.

Observations, gait style and capacity, spinal tenderness, straight leg raise
Lower limb sensation, power and reflexes.
Perianal sensation and anal tone
Abdominal examination

Investigations

Baseline investigation in ALL patients presenting with Acute Back Pain

Obs full set
Bloods FBC, CRP, Ca, ALP
Urine urinalysis+/- culture
Plain films of spinal region of interest, including CXR if thoracic spine.

Indications for CT - after D/W ED Consultant

Bony abnormality on plain films
Significant trauma
Where bone pathology is suspected as the cause of symptoms.

Indications for MRI - after D/W ED Consultant

Patients with Red Flags, Intractable Pain or Neurological Deficits.
Where spinal infection or cauda equina is suspected as the cause of symptoms

Management

Supportive

Analgesia
a. Simple- paracetamol, NSAID, codeine
b. Opiate-early PO / N morphine to help quickly reduce pain score
c. Pain modulation in D/W ED Senior eg gabapentin, amitriptyline

Specific

According to the prima1y diagnosis found on assessment.
Positive CT or MRI findings must be discussed vvith ED Consultant, then consultation with appropriate inpatient team.

Disposition

Most presentations with Acute Back Pain can be successfully treated and discharged home. Must ensure that any cases with Red Flags, Intractable Pain or Neurological Deficits are discussed with an ED Consultant prior to making this decision.

Patients in whom serious pathology is identified as the cause of symptoms should be discussed with the appropriate inpatient team after discussion with ED Consultant.

Patients without serious pathology, but in whom ongoing pain or inability to mobilise despite adequate analgesia, time to allow symptoms to settle, and assessment by physiotherapy, prevents their safe discharge should be referred to the orthopaedic team for consideration of admission.

Advise patient to return urgently to ED if develops symptoms of acute LL weakness, or bladder or bowel dysfunction. Ensure adequate follow up - usually GP initially.

All representing cases of Acute Back Pain should be discussed with the ED Consultant.

4. KEYWORDS

Back pain

MidCentral District Health Board
Te Pae Hauora o Ruahine o Tararua

POLICY

PATIENT PRIORITY	
Applicable to: Medical Imaging	Issued by: Medical Imaging
	Contact: Manager, Medical Imaging

1.0 PURPOSE

To provide a guide for prioritising patients x-ray examinations when there is insufficient Medical Imaging staff and equipment to cover all referring requests.

2.0 SCOPE

All technical staff in the Medical Imaging Department.

3.0 ROLES & RESPONSIBILITIES

All technical staff to adhere to the policy set out below.

4.0 POLICY

Communication with all referrers must occur immediately when a conflicting situation has occurred. If there is conflict between examination times or insufficient staff or equipment, the order in which examinations are carried out should be determined by the clinical judgment of referring clinicians. The MIT(s) involved must assess the situation; seek alternatives such as timing of examinations or timing of staff starting shifts/call. Once all the options have been explored, they should liaise with the referring medical staff who will make the final decision as to patient priority.

Communication with all referrers must occur immediately when a conflicting situation has occurred.

No staff MIT shall cancel any cases. This must be done by the Manager, Grade MITs, Clinical Co-ordinator (NM), or Radiologist.

The priority is as follows:

1 **ED Resus, NNU**
If calls come at the same time or are close, ask the second consultant / referring doctor to liaise with the first and be guided by them.

2 **Theatre, ED and ICU**
Same principle as above -Consult and be guided

3 **CCU and MCH Inpatients**

4 **MCH Outpatients**

5 **GP patients,** with non acute conditions, will be attended to if sufficient staff and resources are available.

NOTE FOR ED ORDER ENTRY VIA CP
Examine patients as they entered onto the ordered work list
UNLESS
Emergency Department notify directly by phone or in person.

<u>During the day:</u>

- Ensure you manage the Orthopaedic workflow so ED patients are not delayed.
- Ensure the GP and ambulatory care clinic patients are alternated so each group do not wait too long and clinic times are met.

5.0 DEFINITION

MIT: Medical Imaging Technologist
NNU: Neo Natal Unit
ED: Emergency Department
ICU: Intensive Care Unit
CCU: Coronary Care Unit

6.o RELATED DOCUMENTS

Mio463 - CT contingency plan
Mio465 - DSA contingency plan
MI 0215 - Business Continuity plan

7.0 KEYWORDS

Patient, Communication, Priority, Clinical decision.

Hospital HealthPathways MidCentral

Inflammatory Bowel Disease (IBD)

Caution: This page is in development. STYLE-ALIGNED DRAFT PHASE Second

region's changes
Streamlners· changes
queries

Red flags

- Fever
- Tachycardia
- Hypotension
- Abdominal pain
- Diarrhoea
- Rectal bleeding

Background

v About inflammatory bowel disease (IBD)

About inflammatory bowel disease (IBD)

Inflammatory bowel disease (IBD) includes Crohn's disease (CD), ulcerative colitis (UC), and indeterminate colitis (IC). All are characterised by inflammation of the gut mucosa with diarrhoea, rectal bleeding, abdominal pain, and weight loss. The location and type of inflammation distinguishes CD from UC:

- UC affects the colon only with continuous mucosal inflammation extending proximally from the anus.
- CD can affect the terminal ileum and/or colon with transmural inflammation and is often discontinuous.
- IC or IBD-U (IBD-type unspecified) is when the bowel is inflamed but there are no features to definitively diagnose UC or CD.

Peak incidence is between 15 and 35 years but may occur at any age.

Diagnosis is made by colonoscopy and biopsy, with further radiological investigations as required.

Assessment

1. Consider either inflammatory bowel disease or colorectal cancer if:
    - persistent (e.g. 3 weeks) diarrhoea with urgency, rectal bleeding, abdominal pain, and weight loss > 4.5 kg.
    - nocturnal symptoms such as diarrhoea or abdominal pain are waking the patient. Functional diarrhoea e.g., irritable bowel syndrome, usually stops at night.
2. Take a history:
    - Family history of IBD, colorectal cancer, coeliac disease, autoimmune disease
    - Drugs, especially NSAIDs (e.g., NSAID enteropathy), antibiotics, laxatives
    - v Smoking

> **Smoking**
>
> Check the timing relative to IBD symptoms, as there is a paradoxical relationship between smoking and IBD:
>
> - Smoking increases the risk of developing Crohn's disease.
> - Smoking reduces the risk of ulcerative colitis. Smoking cessation can precipitate ulcerative colitis.

    - Travel history
    - v Extra-intestinal manifestations of IBD

> **Extra-intestinal manifestations of IBD**
>
> - Skin, e.g. erythema nodosum, pyoderma gangrenosum
> - Arthritis
> - Eye, e.g. episcleritis, iritis
> - Mouth ulcers
> - Night sweats
> - Primary sclerosing cholangitis

3. Examination:
    - Check temperature, pulse, and blood pressure.
    - Examine the abdomen.
    - Examine the rectum for PR bleeding or perianal disease e.g., abscesses, fistula, or fissures.
4. Arrange initial investigations

Initial investigations

- CBC, CRP, LFT, electrolytes
- Coeliac markers
- Faecal culture, including ova/parasites
- *Clostridium difficile* (C. *diff)* toxin
- Faecal calprotectin

Management

v First presentation

1. If acutely unwell, arrange acute gastroenterology assessment.
2. Otherwise, review once v blood results are back.

Blood results

- If blood results show anaemia, leucocytosis, thrombocytosis or increased CRP, this suggests IBD:
  - Request specialised assessment, as below.
  - It is not necessary to arrange a faecal calprotectin.
- If the investigations above are normal and there is still a clinical suspicion of IBD, a faecal calprotectin can be done. A negative faecal calprotectin, i.e. less than 50 micrograms/L makes IBD extremely unlikely.

3. Arrange a v colonoscopy , noting the likelihood of IBD on the form.

Colonoscopy

Send the yellow internal referral form (MDHB-3101) to the gastroenterology department, requesting a colonoscopy.

4. Consider starting the patient on either of the following medications:
   - aminosalicylates (ASA).
   - other treatments e.g., steroids.

v Ongoing management

Ongoing management is usually in association with a gastroenterologist. However, it depends on the severity of the IBD and medications used.

1. Review medications:
   - Check compliance, side-effects, and drug monitoring.
   - See IBD Medications for specific information.
2. If the patient is a young woman:
   - discuss v contraception

Contraception

- Combined oral contraceptive pill (COC) absorption may be reduced if there is small bowel involvement in Crohn disease.
- Large bowel involvement does not affect absorption.
- Do not use COC in patients prone to severe hospitalised exacerbations, as their risk of venous thromboembolism (VTE) is increased.
- IBD increases the risk of osteoporosis, and the effect of Depo-Provera on bone density may be additive. Alternative, progestogen-only contraceptives that do not affect bone density may therefore be better.
- For more information on contraception in IBD see Table 3, page 7 in Sexual and Reproductive Health for Individuals with Inflammatory Bowel Disease

- discuss v medication risks and benefits in pregnancy and while breastfeeding.

Medication risks and benefits

- It is safe to continue aminosalicylates (ASA) in pregnancy and breastfeeding.
- Steroids may be associated with cleft palate in first trimester but should be used if required to control disease. Discuss with a gastroenterologist if unsure.
- Thiopurines, e.g. azathioprine (AZA), 6 mercaptopurine (6 MP), are used in pregnancy.
  - Local gastroenterology specialist advice is that mercaptopurine is widely used in pregnancy.
  - For risks in pregnancy and breastfeeding, see G mercaptopurine and G azathioprine.
- Biologics - no significant abnormalities to date.
  - May need to stop at 32 weeks as they cross the placenta.
  - Specialist input required.
  - No live vaccines for babies for the first 6 months.

When a pregnancy is confirmed, request a gastroenterology assessment. The gastroenterologist may arrange a further specialist obstetric assessment for women with active

disease.

3. Address lifestyle management:

- Recommend smoking cessation. Smoking significantly worsens the course of Crohn's disease.
- Check bone density as there is a risk of osteoporosis due to repeated courses of prednisone, or low vitamin D levels.
- Check for immunosuppression (increased by use of immunomodulators and biologics, and long-term steroid use, especially if on more than one medication) as it increases the v risk of opportunistic infections such as varicella. Encourage early presentation if the patient is unwell.

Risk of opportunistic infections

- Possibility of varicella due to immunosuppression (increased by immunomodulators, long-term steroids, and biologics, especially if on more than 1 medication).
- Encourage early presentation if unwell.

- Be aware that depression is more frequent in IBD, affecting confidence and self-image.
- Educate the patient about v nutrition specific to IBD.

Nutrition

In active Crohn's disease, malnutrition with weight loss, protein deficiency, and specific deficiencies in vitamins, minerals, and trace elements are common. Patients in clinical remission are more likely to be malnourished than healthy patients. Malnutrition can coexist with obesity. [1] Malnutrition has a negative impact on clinical course, rate of postoperative complications, and mortality.

- Encourage a healthy balanced diet. Diet may be helpful in reducing symptoms and lessening the effects of IBD complications. [1]
- Consider and treat any nutritional deficiencies e.g., iron, vitamin B12, vitamin D. Less common are vitamin K, zinc, and folate deficiencies.
- If the patient has active Crohn's disease and is on a high fibre diet, consider reducing fibre intake.
- If coexisting functional gut symptoms, consider low FODMAP diet.
- If the patient has unintentional weight loss or nutrient deficiencies, consider dietitian services.

- Check for v extra-intestinal manifestations of IBD.

v Flare-ups

In ulcerative colitis and Crohn's disease, long-term use or recurrent courses of prednisone is not appropriate. Request non-acute gastroenterology assessment for steroid-sparing treatments.

1. If v acutely unwell , arrange acute gastroenterology assessment.

Acutely unwell [2]

The criteria for an acutely unwell patient with ulcerative colitis includes:

- More than 6 bloody bowel motions per day, plus
- One or more of the following:
  - Temperature> 37.8°C
  - Heart rate > 90
  - Hb < 105
  - CRP > 30

- Look for red flags.
- Specialised gastroenterology advice is available.

2. Investigations:
   - Faecal culture and *Clostridium difficile* (C. *diff)* toxin. Relapses are often associated with pathogens or due to *C.* diff after antibiotics.
   - Blood tests - CBC, CRP, LFT, electrolytes.
3. In ulcerative colitis, optimise 5-Aminosalicylate (5-ASA):
   - Increase oral 5-ASA, e.g. Pentasa 4 g per day which can be taken as a once daily dose.
   - Start rectal 5-ASA, e.g. Pentasa enemas if left-sided disease. Can be difficult to hold but encourage patient to persist.
   - Use suppositories for proctitis.
   - If on maximal 5-ASA or limited response after one week, start v prednisone and request non-acute gastroenterology assessment to consider starting an immunomodulator or changing the current medications.

Steroids

For example, prednisone

Indications

- Steroids can be used to obtain remission either initially for more severe disease or in flare-ups for both ulcerative colitis (UC) and Crohn's disease (CD).
- Give prednisone for a long enough course, usually 8 weeks and slowly reduce, otherwise an early relapse can occur.

- Consider using topical treatment, such as G hydrocortisone acetate (Colifoam/Cortifoam) and $hydrocortisone acetate+ pramoxine hydrochloride (Proctofoam) enemas in those with proctitis (inflammation in the rectum).
- Note that steroids have no role in maintenance therapy.
- Consider the adverse effects of steroids and an increased risk of infection.

Dose

- Use prednisone at full dose, e.g. 40 mg per day, and wean over about 8 weeks reducing by 5 mg per week.
- Offer bone protection with calcitriol (0.5 micrograms daily) and calcium carbonate (depending on dietary calcium intake) at the same time as the steroid course.
- Consider budesonide in those where prednisone use is contraindicated or previously poorly tolerated. Seek gastroenterology advice.
- For all patients with recurrent courses of steroids or longer courses, request a non-acute gastroenterology assessment for consideration of immunomodulator or biologic.

4. In Crohn's disease, start v prednisone and request non-acute gastroenterology assessment to consider starting an v immunomodulator or v biologic , or changing the current medications.

Biologic

- Biologics or tumour necrosis factor (TNF) blockers have potent anti-inflammatory effects.
- Only two are currently available in New Zealand, Ginfllximab (Remicade) and (3 adalimumab (Humira).

Immunomodulators

Two groups:

- Thiopurines e.g., 13azathioprine, G mercaptopurine (6MP) and Gthioguanine
- G Methotrexate (second-line), oral or subcutaneous

This content is used in other pages on this site - ask your writer for details.

5. If unsure about the best medication to use, seek gastroenterology advice. It may be more appropriate to arrange an urgent gastroenterology assessment, especially if a patient is already on an immunomodulator or biologic.

Request

- If any red flags, request acute gastroenterology assessment.
- Seek gastroenterology advice about first presentation, flare-ups, or medication issues.
- Request non-acute gastroenterology assessment if:
  - first presentation of inflammatory bowel disease is highly likely (i.e., patient has symptoms and suspicious blood results, or positive faecal calprotectin) or diagnosis by colonoscopy.
  - flare-ups, especially if steroids are used.
  - medication problems.
  - pregnancy is planned or has been confirmed.
- If the patient has unintentional weight loss or nutrient deficiencies, consider dietitian services.

Information

v For health professionals

Further information

- Faculty of Sexual & Reproductive Healthcare Clinical Guidance:
  - Sexual and Reproductive Health for Individuals with Inflammatory Bowel Disease
  - Drug Interactions with Hormonal Contraception
- Gastroenterological Society of Australia (GESA):
  - Inflammatory Bowel Disease: Updated 2018
  - Inflammatory Bowel Disease in Pregnancy Fact Sheets:
    - GP and Obstetrician Fact Sheet
    - IBD Medication Fact Sheet

v For patients

- HealthInfo - Inflammatory Bowel Disease
- Crohn's & Colitis New Zealand - national support group

P.ARALLEL PAGES

DRAFT 1nnammato'y Bowel Disease (IBD)

1nnarnmatory Bowel Disease (IBD)

SOURCES

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PAGE INFORMATION

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crohn's
crohns

Topic ID: 917178

Hospital HealthPathways MidCentral

Constipation in Adults

See also Constipation in Oncology and Palliative Care.

Red flags

- Weight loss
- Abdominal mass
- Iron deficient anaemia
- Blood mixed with stool
- Palpable or visible rectal mass

Background

v About constipation in adults

About constipation in adults

Constipation is difficulty passing small hard stools or not passing stool of any consistency for 3 days or longer. The consistency of the stool rather than the frequency of defecation should be the focus.

Most patients with idiopathic constipation are otherwise asymptomatic.

Assessment

1. History - assess constipation and associated features:
   - Frequency and consistency of motions, presence of alternating diarrhoea. See Irritable Bowel Syndrome {IBS).
   - Difficulty defecating, e.g. straining, sense of incomplete evacuation, inability to pass stool despite urge
   - Duration of symptoms - lifelong or recent change
   - Blood, lumps, pain, soiling of underwear
   - v Constipating drugs

Constipating drugs

Constipating drugs commonly prescribed in hospital patients include:

- opioids, especially codeine.
- atypical antipsychotics, e.g. clozapine, olanzapine.
- tricyclic antidepressants.
- anticholinergics.
- antiemetics, e.g. ondansetron.
- calcium channel blockers.
- aluminium hydroxide.

History will suggest a cause in the vast majority of cases.

2. Consider whether primary constipation. This is most commonly caused by anismus (failure of normal relaxation of pelvic floor muscles during attempted defecation), and more rarely by slow colonic transit.
3. Consider v secondary causes .

Secondary causes

- Tumour - colorectal or pelvic mass
- Hypothyroid
- Depression
- Hypercalcaernia
- Eating disorder
- Pregnancy

4. Examine abdomen and rectum. If anal tone is increased or pelvic floor muscles fail to relax when the patient is asked to simulate defecation, consider animsus.
5. Arrange investigations if indicated:
    - Plain abdominal X-rays are not automatically indicated for investigating constipation. If there is suspicion of significant faecal loading or an alternative diagnosis (e.g. bowel obstruction) an abdominal X-ray is indicated.
    - Blood tests are not usually necessary but will depend on differential diagnosis. Consider calcium, phosphate, and thyroid function tests if clinically indicated.
    - If v red flags or colorectal symptoms suspicious for malignancy are present, consider further investigations, e.g. colonoscopy or CT colonography.

Red flags

- Weight loss

- Abdominal mass
- Iron deficient anaemia
- Blood mixed with stool
- Palpable or visible rectal mass

- If abdominal or rectal mass present, seek general surgery advice.

Management

Specialist assessment is not usually required, unless a specific underlying cause or a red flag is identified.

1. If animsus is suspected, consider requesting non-acute gastroenterology assessment for biomechanical feedback treatment.
2. Provide patient education resources.
3. Avoid giving the patient v constipating drugs if possible.
4. Advise v simple measures to help relieve and prevent recurrence of idiopathic constipation.

Simple measures

- Maintain adequate dietary fibre. Warn the patient that this can worsen abdominal pain or bloating if constipation is moderate to severe.
- Avoid dehydration. Excess fluid will be ineffective.
- Respond rapidly to urge to defaecate
- Go to the toilet at least once a day, even if no urge to pass stool.
- Exercise regularly.

5. Consider medications:
   - Initial trial of v bulk-forming laxatives

Bulk-forming laxatives

Increase faecal mass, which stimulates peristalsis.

Only suitable for mild constipation. Avoid in moderate to severe constipation as may cause abdominal pain and bloating.

Full effect may take some days to develop.

Valuable in patients with small hard stools, if increase in dietary fibre is not sufficient to relieve constipation.

Adequate fluid intake must be maintained to avoid intestinal obstruction. Avoid in pre-existing intestinal obstruction.

Common side effects include flatulence and abdominal distension.

Common preparations include:

- G psyllium, e.g. Mucilax, Metamucil, Konsyl-0.
- Gsterculia, e.g. Normacol, Normacol Plus (also has stimulant action).

- If constipation is due to opioids, see Canterbury District Health Board Palliative Care Service Guidelines - Management of Constipation Associated with Opioid Use flow chart.
- If hard stool is filling the rectum, or oral treatment is ineffective, consider suppositories and/or enemas:
  - G Glycerol suppositories
  - G Bisacodyl suppositories
  - G Micolette or Micro lax enema
  - G Phosphate enema - should usually be avoided in the elderly or those with chronic kidney disease as there have been cases of phosphate nephropathy and acute kidney injury, some of which have been fatal. However, if non-phosphate enema products are not available, phosphate enema may be used with precautions, including ensuring adequate hydration and minimising the number of doses used.
- Other options include:
  - v Bulk-forming laxatives
  - v Stimulant laxatives

Stimulant laxatives

These laxatives:

- increase intestinal motility and often cause abdominal cramps.
- should be avoided in intestinal obstruction.
- can cause electrolyte disturbance.
- are mainly for patients with soft stools.
- are recommended for opiate-induced constipation.

Common preparations include:

- G bisacodyl, e.g. Lax-tabs, Dulcolax, Fleet.
- G dantron (only in terminally ill patients due to potential carcinogenicity).
- G senna, e.g. Laxsol, Coloxyl (docusate sodium) and senna, Senokot.
- G glycerol suppositories.

  - v Osmotic laxatives

Osmotic laxatives

These:

- increase the amount of water in large bowel, either by drawing fluid from the body into the bowel or retaining the fluid the laxative was administered with.
- should be avoided in intestinal obstruction.

Common preparations include:

- oral Glactulose, rectal Gsodium citrate (e.g. Micolette).
- second-line option - oral Gmacrogols (e.g. Molaxole). These are cheaper on prescription rather than over the counter.

o v Stool softening agents

Stool-softening agents

Docusate sodium probably acts as both a stimulant and a softening agent.

They should be avoided in intestinal obstruction.

Combination products with additional stimulants often cause abdominal cramps.

Common preparations include Odocusate sodium, e.g. Coloxyl.

6. If the patient is pregnant, and dietary and lifestyle changes fail to control constipation, advise the patient to use moderate doses of poorly absorbed laxatives.
   - A bulk-forming laxative (e.g. psyllium husks) should be tried first.
   - An osmotic laxative (e.g. 0 lactulose, Molaxole) can also be used.

Request

- Consider requesting non-acute gastroenterology assessment if animsus is suspected.
- Seek general surgery advice if rectal or abdominal mass present.

Information

v For health professionals

Education

BMJ Learning - The Royal New Zealand College of General Practitioners Modules [requires registration] - Constipation: A Guide to Diagnosis and Management

v For patients

- HealthInfo- Constipation in Adults
- Health Info - Fibre and Fluid for Healthy Bowels
- Ministry of Health - Constipation
- Patient - Constipation

Search My Medicines for patient information leaflets for any medications not listed in this section.

Contact the Hea/thInfo team at info@healthinfo.org.nz if you have any resources that you would like us to consider for this section.

KEY LINKS

C:-) Management of Constipation Associated with Opioid Use

PARALLEL PAGES

Constipation in Adults

DRAFT Constipanon in Adults

Constipation in Adult

PAGE INFORMATION

Last Updated:	05 May 2021
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	Faecal impaction
	Laxative

Laxatives

Opiate

Opiates

Topic ID: 234359

Hospital HealthPathways MidCentral

Acute Pain in Adults

Caution: This page is in development. STYLE-ALIGNED DRAFT PHASE First

region's changes
Streamliners' changes
queries

See also:

- Chronic or Persistent Pain
- Pain in Palliative Care and Cancer

Background

v About acute pain in adults

About acute pain in adults

Acute pain is pain of recent onset and probable limited duration. It usually has a causal relationship to injury or disease.

It requires thorough evaluation and appropriate management. The aim is to do all the following:

- control pain while continuing to diagnose and treat the primary disease.
- improve functional ability.
- minimise side-effects of therapy.

Appropriate management of acute pain can:

- improve patient comfort.
- improve mobility.
- reduce physiological stress.
- reduce progression to persistent pain.

Multimodal analgesia involves using several different analgesics (with different mechanism of action) simultaneously to improve analgesia and reduce side-effects, by lessened dosing of any one agent.

A wide range of modalities is used to manage severe acute pain. These include:

- oral, transdermal, or parenteral analgesics.
- patient-controlled analgesia (PCA).
- ketamine infusions.
- lignocaine infusions.

- regional nerve blocks and wound blocks or catheters.
- intrathecal morphine.
- epidural infusions.

Opioids are the most potent analgesics and should be considered where there is a diagnosis of severe pain. Morphine remains the gold standard and is generally well tolerated, although nausea and constipation can be a problem.

A summary of the opioid dosing guidance used in this pathway is available as a quick reference card for attaching to a lanyard.

Assessment

1. Take a history.
   - Pain history:
     - Character, severity (pain score), and cause of pain.

Pain score

Rating	Pain level
0	No pain
1 to 3	Mild pain (nagging, annoying, interferes little with ADLs*)
4 to 6	Moderate pain (interferes slightly with ADLs)
7 to 10	Severe pain (disabling, unable to perform ADLs)
	*ADLs is the abbreviation for activities of daily living

This content is used in other pages on this site - ask your writer for details.

     - Functional impact of pain, e.g. ability to sleep, mobilise, breathe.
     - Duration of pain. Acute pain for more than 2 months increases the risk of developing chronic pain.
   - Any factors that might affect the patient's pharmacodynamics, e.g. weight, age, liver or renal disease, chronic opioid use or misuse.
   - Drugs:
     - Current medications, especially opioids and sedatives.
     - Previous adverse effects or allergic reactions to any analgesic drugs.

- Patients already enrolled in an opioid substitution programme, as the use of opioid analgesia can be challenging.

- Co-morbidities, e.g. obesity, obstructive sleep apnoea, respiratory failure, hypovolaemia, raised intracranial pressure.

- Recent surgery:
  - If the acute pain presents after surgery, assess v risk factors for persistent pain after surgery .

Risk factors for acute persistent pain after surgery

Preoperative risk factors:

- Female, younger age
- Pain before surgery
- Preoperative chronic pain
- Multiple sites of pain
- Preoperative anxiety, fear, depression, or catastrophisation
- Low income, low self-rated health, lack of education
- Genetic risk factors

Intraoperative risk factors:

- Site, e.g. thoracotomy, sternotomy, major limb amputation
- Extent and duration of surgery
- Incision type
- Nerve damage
- Lack of multimodal analgesia use

Postoperative risk factors

- Unrelieved pain
- Severe pain
- Surgery in a previously injured area
- Amount of analgesics consumed (in the first 7 days)
- Re-operations
- Lack of follow-up in at-risk patients

  - Identify v psychological risk factors for developing chronic pain.

Psychological risk factors

A patient's understanding and interpretation of symptoms (beliefs and cognition) can modulate their pain experience. Psychological risk factors include:

- fear avoidance
- catastrophising
- pain behaviour
- low self-efficacy
- anxiety and depression

2. Look for factors that might predispose the patient to adverse effects from analgesics:
   - Obesity
   - Obstructive sleep apnoea
   - Old age
   - Respiratory disease
   - Pregnancy or breastfeeding
3. Look for specific signs and symptoms of v complex regional pain syndrome {CRPS)

Complex regional pain syndrome (CRPS)

It is essential to make an urgent referral to a pain specialist for assessment.

Diagnosis:

- History of a harmful event or immobilisation
- Signs and symptoms, not necessarily isolated to the affected limb, such as:
  - pain
  - sensory changes e.g. paraesthesia, hyperaesthesia, allodynia
  - skin temperature changes
  - skin colour changes
  - altered sweating
  - weakness, tremor, dystonia
  - changes to texture or growth of skin, hair, nails

This content is used in other pages on this site - ask your writer for details.

4. Consider specific causes of the acute pain:
   - Renal colic
   - Abdominal pain
   - ain
   - Acute scrotal pain
   - Neuropathic pain {e.g. herpes zoster, spinal cord injury, peripheral nerve injury)

- Malignancy

Management

Practice point

Do not stop methadone or buprenorphine + naloxone

When managing acute pain, do not stop methadone or buprenorphine + naloxone without consulting the Acute Pain Management Service. If a patient's treatment is stopped without support they are likely to relapse into illicit opioid use, and re-establishing treatment is complex.

1. Give simple analgesia to all patients unless contraindicated:
   - v Paracetamol

Paracetamol

- G Paracetamol orally 1 g four times daily.
- Consider dose reduction if any of:
  - elderly
  - frail
  - low weight
  - malnutrition
  - liver disease
- Use the intravenous {IV) route only when other routes are unavailable, impractical, or where there is reduced oral absorption. Reassess use every 24 hours.

   - v NSAIDs

NSAIDs

Relative contraindications include:

- advanced age (consider avoiding or dose reduction)
- bleeding disorders
- renal dysfunction
- upper gastrointestinal dysfunction
- asthma (may cause bronchospasm or angioedema)
- fractures (may impair bone healing)
- bowel surgery (increases risk of anastomotic leak)

Options include:

- ibuprofen orally 400 mg to 600 mg every 6 to 8 hours, up to maximum of 2400 mg per day.
- Gdiclofenac orally up to 150 mg per day in divided doses.
- G naproxen orally up to 1000 mg per day in divided doses.
- selective inhibitors of cyclo-oxygenase-2 (COX-2).

Selective inhibitors of cyclo-oxygenase-2 **(COX-2)**

These have a lower incidence of serious upper gastrointestinal side-effects, including bleeding.

- Gcelecoxib orally 100 mg to 200 mg every 12 hours. Community funding by application only.
- G Parecoxib IV is often given in theatre for post-operative analgesia. Withhold further NSAIDs for a minimum of 12 hours after parecoxib administration.

See NZ Formulary - G NSAIDs for further guidance.

2. If the patient is on an opioid substitution programme and opioid analgesia is being considered:
   - Continue the G methadone, or G buprenorphine + naloxone, at the patient's usual dose. Do not stop, decrease, or increase the dose.
   - Discuss dosing of opioid analgesia with the patient's registrar or consultant. Consider seeking acute pain management advice.
3. Manage according to **severity** of pain:
   - Severe acute pain ***[SNZ query Inside]***

1. Decide the most appropriate medication:
   - v Opioids

Opioids [1]

- See Opioid Dosing for Severe Acute Pain in Adults.
- Avoid co-administration of other opioids or sedatives, except:
  - tramadol, which may be used with other opioids.
  - pre-existing background opioids, which should be continued.
- Ensure you know where naloxone is stored on the ward.
- Use morphine as the first line opioid for intermittent or as required dosing, unless renal impairment.

- If renal impairment (creatinine clearance less than 30 ml/min) or history of morphine intolerance, consider:
  - fentanyl IV or subcutaneous.
  - oxycodone orally.
- v Pethidine is not routinely recommended.

Pethidine

Not recommended because:

- it does not have any specific benefit in smooth muscle spasm.
- it is almost never used in chronic or persistent pain, as there are more effective and less toxic alternatives, e.g. transdermal fentanyl, oxycodone, methadone.
- toxicity with convulsions can be an issue.

- v Other options

Other options

- Patient-controlled analgesia (PCA):
  - If needing more than a short period of intermittent IV opioid analgesia, consider PCA.
  - Seek acute pain management assessment.
- Entonox:
  - Entonox (G 50% nitrous oxide and 50% oxygen) may be a useful analgesic for:
    - moderate to severe pain while awaiting definitive analgesia, particularly for fractures, dislocations, and traumatic wounds.
    - short-term severe pain, e.g. wound dressings.
  - The practitioner must be trained in its use.
- Regional anaesthesia:
  - Local anaesthetic agents can be useful for providing sensory block of specific dermatomes, e.g. femoral nerve block for fractured femur, abdominal wound catheters.
  - Seek acute pain management assessment.
- Gabapentin or pregabalin:
  - Consider if:
    - major surgery.
    - the patient has anxiety or sleep problems.

- acute neuropathic pain (e.g. peripheral nerve injury, spinal cord injury, herpes zoster, amputation).
- trauma, especially if neuropathic features.
- the patient is opioid-tolerant and non-opioid analgesics may be more beneficial.

- See Adult Gabapentinoid Acute Pain Prescribing Advice

2. If the patient has rib fractures, see the Adult Chest Trauma Analgesic Pathway
3. Consider v dosing *.[SNZ query inside]*

Dosing considerations

- Consider:
  - Weight
  - Age
  - Obstructive sleep apnoea
  - Respiratory disease
  - Renal or liver disease
  - Pregnancy or breastfeeding
- v Predict the dose .

Dose prediction

- Age is the best dose predictor. Lower doses are usually required with increasing age.
- In renal impairment, morphine metabolites may accumulate.
  - If mild to moderate renal impairment, consider lower dose and longer dosing interval.
  - If more severe renal impairment (v creatinine clearance ***[CE comment inside shared DB]*** less than 30 ml/min) consider alternatives, e.g. oxycodone or fentanyl.

eGFR

In practice GFR is estimated either by the v Cockcroft and Gault formula or laboratory eGFR . ***[CE comment within]*** Both provide a guide to GFR which is adequate for most clinical situations. These formulae are unreliable at extremes of weight and/or when the creatinine is changing. Seek advice from Medicines Information.

Estimated glomerular filtration rate (eGFR)

- eGFR is an estimate ot renal tunction. A stable plasma creatinine improves the validity of the eGFR.
- Use the creatinine clearance (Cockcroft and Gault calculator) or the laboratory eGFR. Either actual, ideal, or adjusted weight can be used for the calculation and will generate differing creatinine clearance results. Use the result that is the lowest creatinine clearance value generated by the Cockcroft and Gault calculator.
- For further guidance, see the Mid Central DHB guidelines:
  - Prescribing in Chronic Kidney Disease
  - Prescribing in the Obese Adult

  {CE to ***provide MCDHB links]***

This content is used in other pages on this site - ask your writerfor details.

This content is used in other pages on ***this site - ask your writerfor details.***

- Dose adjustment may be required at extremes of body weight, e.g. underweight patients may require less, overweight patients may require more.
- Assess general physical condition and frailty. Give less opioid if frail or poor general condition.
- For opioid-naive patients, begin at the lower end of dose range.
- If pre-existing opioid use, tolerance occurs, so larger doses are often required.

This content is used in other pages on ***this site - ask your writerfor details.***

- Individualise the therapy:
  - Titrate agent and aim for minimum side-effects.
  - Use low-dose multi-modal medication to reduce the likelihood of side-effects.
  - If the patient has liver disease, renal disease, or is elderly, drug metabolism and excretion may be reduced. Consider reducing dose and frequency, or changing to a more appropriate analgesic.
  - If obesity or obstructive sleep apnoea, be cautious with opioids as these patients are at increased risk of sedation and respiratory depression.

- If the patient is pregnant or breastfeeding, see Medications in Pregnancy and Breastfeeding.[SNZ: ***'Medications in Pregnancy and Breastfeeding' pathway not on MidCentral HHP - remove bullet point?)***
- For further guidance, see The Pink Book ***.[SNZ: Remove? Are there MidCentral DHB Guidelines instead?]***

4. Chart the medication, v method of administration , safe dose range, and dose interval according to hospital protocols (available on a lanyard card).

Method of administration

- Oral administration is usually the route of choice.
- If oral absorption is compromised, e.g. ileus, consider subcutaneous route as an alternative.
- Consider intravenous (IV) administration in the initial treatment of severe acute pain when other routes would be inappropriate, e.g. rapid analgesia is required.
- If ongoing IV therapy is required, request acute pain management assessment to consider patient-controlled analgesia (PCA).

This content is used in other pages on this site - ask your writer for details.

- If prescribing opioids:
  - Administer simple analgesics as well, unless contraindicated, e.g. paracetamol, NSAIDs.
  - Prescribe antiemetic and laxative medications, unless contraindicated.
  - Only give intermittent opioids by one route at a time.
- If in the emergency department, higher initial doses may be used with close monitoring. See ED Adult Acute Pain Dosing Guide, available in the department. ***{SNZ: Is there a link for this guide?]***

- v Mild to moderate acute pain

If mild to moderate pain, or when stepping down from stronger opioids, consider:

- Adding a weak opioid:
  - v Codeine

Codeine

- *1$>* Codeine phosphate orally 15 mg to 60 mg every 4 to 6 hours. Maximum total daily dose is 240 mg.

- It is slow to act and has low analgesic potency, so is less useful for severe pain.
- About 10% of people are poor metabolisers and do not benefit from codeine. Others are rapid metabolisers and get much greater effects.
- If taking a selective serotonin re-uptake inhibitor (SSRIs}, codeine phosphate may be less effective.
- Constipation is a common side-effect, so consider regular laxatives.

- v Tramadol

Tramadol

- Avoid if:
  - history of seizures.
  - monoamine oxidase inhibitor (MAO!} use within 14 days.
- Use with caution if taking other agents that increase serotonin, e.g. SSRI, tricyclic antidepressant.
- GTramadol orally:
  - immediate release 50 mg to 100 mg every six hours, or
  - slow release 50 mg to 100 mg every twelve hours.
- Intravenous injection 50 mg to 100 mg every four to six hours.
- Maximum 400 mg total daily dose. Lower maximum dose if elderly or renal impairment.
- Less constipating than codeine and has a quick onset of action.
- May cause nausea, vomiting, and confusion, particularly in elderly patients.
- Serotonin toxicity is a rare adverse effect.
- Note that ondansetron and tramadol have opposing actions on the 5-HT3 receptor, resulting in reduced efficacy if given together.

- v Entonox

Entonox

Entonox (G 50% nitrous oxide and 50% oxygen} may be a useful analgesic for:

- moderate to severe pain while awaiting definitive analgesia, particularly for fractures, dislocations, and traumatic wounds, or
- short-term severe pain, e.g. wound dressings.

The practitioner must be trained in its use.

4. Prevent or treat any side-effects:
   - v Respiratory depression and sedation

Respiratory depression and sedation

Respiratory depression and sedation are potentially life-threatening complications of opioids. Sedation is an early warning sign as it usually precedes respiratory depression. Calculate the v NZEWS score .

New Zealand Early Warning Score (NZEWS)

Score	Call clinical emergency team	3	2	1	0	1	
Zone	Blue	Red	Orange	Yellow	White	Yellow	Ora
Respiratory rate (per minute)	5 4	5-8		9-11	12-20		21·
Oxygen saturation (%)		591	92-93	94-95	,:96		
Supplemental oxygen			Yes		No		
Temperature (OC)			34.9	35-35.9	36-37.9	38-38.9	≥
Systolic blood pressure {mmHg)	5 69	70-89	90-99	100-109	110-219		
Heart rate (per minute)	s; 39		40-49		50-89	90-110	11 1:
Level of consciousness	Unresponsive or fitting	Voice or pain			Alert		

Source: Canterbury DHB. Reproduced with permission.

All scores are added together for aggregate score (total NZEWS).

Total NZEWS:

- 10 or more, or any single blue parameter - Blue zone, immediately life-threatening critical illness

- 8 to 9 - Red zone, likely to deteriorate rapidly
- 6 to 7, or any red parameter - Orange zone, acute illness or unstable chronic disease
- 1 to 5 - Yellow zone
- 0 - White zone, no additional action required

See New Zealand Early Warning Score .

Act on single blue or red parameters according to the escalation pathway for response.

This content is used in other pages on this site - ask your writer for details.

- If life-threatening:
  - Call for help and activate a clinical emergency.
  - Stimulate the patient.
  - Support ventilation and airway with bag and mask.
  - Give oxygen.
  - Stop opioid administration.
  - Give v naloxone .

Naloxone

- G Naloxone IV injection 100 micrograms to 200 micrograms repeated every 2 to 3 minutes until desired effect.
- May need up to 10,000 micrograms (10 mg).
- Monitoring is essential as the effect of naloxone can wear off before that of the opioid - the half-life of naloxone is approximately 1 hour, which is shorter than most opioids.
- A naloxone infusion may be required. Seek acute pain management advice and see the Canterbury DHB's Adult Naloxone policy for further details.

  - After resuscitation, seek acute pain management advice to manage ongoing analgesia.
- If non-life-threatening:
  - Stop opioid administration.
  - Give oxygen by mask.
  - Increase monitoring as per EWS management protocol.
  - Consider low dose G naloxone intravenous (IV) in 40 microgram increments. If more than two doses of naloxone are required or any ongoing concerns, seek acute pain management advice.

- Nausea and vomiting. See Postoperative Nausea and Vomiting for antiemetic guidance.
- v Constipation

Constipation

- Prescribe prophylactic laxatives when starting opioids, unless contraindicated.
- Docusate + sennoside B orally 1 or 2 tablets twice a day.
- Second line options include:
  - C paraffin liquid (e.g. Mineral Oil) enema once daily as required.
  - C glycerol suppositories rectally 1 or 2 once daily as required.
  - G sodium citrate (e.g. Micolette) enema once daily as required. Microlax is no longer a funded brand.
  - **Goral** macrogols (e.g. Molaxole) 1 to 2 sachets as required, up to every 12 hours.
- See also Constipation in Adults.

- v Opioid-induced hyperalgesia

Opioid-induced **hyperalgesia**

- A clinical syndrome where a patient experiences increased pain, usually to touch, as a result of too high a dose of opioid, or where the opioid has been increased too rapidly. 2
- May improve on dose reduction.
- If required, seek acute pain management advice.

5. v Individualise the therapy ***[SNZ query inside]*** and monitor response to any new medication.

Individualise the therapy

The optimum dose of analgesic can vary quite widely between similar patients and in the same patient from time to time.

- Do not change a drug until it has been fully evaluated.
- If the patient is receiving opioids for chronic or persistent pain and presenting with an acute episode of pain, ✓ higher dosing may be needed. Reassess at regular intervals and adjust prescription accordingly.

Higher dosing for patients on **long-term opioids**

- Higher doses of breakthrough analgesia may be needed to gain effect compared to opioid-naive patients.

- Seek acute pain management advice or acute palliative care advice, as appropriate.

- If the patient has liver disease, renal disease, or is elderly, drug metabolism and excretion may be reduced. Consider reducing dose and frequency, or changing to a more appropriate analgesic.
- For further guidance, see controlled document MDHB ***4184.{SNZ: Link for this?]***

6, If the patient has cancer, see Pain in Palliative Care and Cancer.

Discharge

Opioids are not recommended for routine prescription on discharge due to v risks in the community .

Risks of opioids in the community

- Persistent opioid use - risk factors for this include smoking, alcohol abuse, substance abuse, mood disorders, anxiety, history of pain disorders
- Accidental overdose
- Drug diversion

1. Ensure the patient is ready for discharge. High opioid requirements may mean that they are not suitable for discharge.
2. If the patient was on opioids before admission:
   - It is usually more appropriate for the patient's general practitioner to arrange ongoing opioid prescriptions.
   - If they are on an opioid substitution programme, do not prescribe opioids or benzodiazepines without discussing with the Community Alcohol and Drug Service.
3. If opioids are required:
   - Discuss with the patient's general practitioner by phone, and record clearly in the discharge summary that the patient is on opioids, and the plan for tapering.
   - v Prescribe the opioids for discharge .

Prescribe the opioids for discharge

- Use weaker opioids such as Gtramadol and Gcodeine instead of strong opioids such as C morphine and C oxycodone, if appropriate. Strong opioids are unlikely to be appropriate on discharge if they have not been required in the previous 12 hours.
- Prescribe doses at equal or less than those required in the 24 hours before discharge.
  - If it is necessary to prescribe strong opioids, give at a maximum frequency of every 4 hours after discharge (not every 2 hours as in hospital).

- Prescribe tramadol and G codeine at a maximum frequency of four times a day.
- Do not prescribe slow release preparations of opioids.

- Specify the total amount to be dispensed, e.g. number of tablets, volume of liquid:
  - Prescribe up to 7 days' supply. If considering a longer duration:
    - discuss with the patient's registrar or consultant.
    - arrange a general practitioner review.
  - Anticipate a need for opioid analgesia that reduces each day. Adjust the total amount to be dispensed by V prescribing half the number of tablets that would be required for the maximum dose through the whole time period.

> Prescribing half the number of tablets
>
> Examples of number of tablets to supply at discharge:
>
> - Codeine phosphate oral 30 to 60 mg up to four times daily as required for 7 days would mean a maximum of 56 tablets (30 mg strength) are dispensed (8 tablets times 7 days). Halve this and supply 28 tablets.
> - Morphine oral 10 mg up to every four hours as required for 5 days would mean a maximum of 30 tablets {10 mg strength) are dispensed (6 tablets times 5 days). Halve this and supply 15 tablets.

- Prescribe laxatives, unless contraindicated.
- Arrange general practice team review within 2 weeks if:
  - CRPS suspected.
  - the patient has any risk factors for developing chronic pain.
  - the patient is likely to require ongoing prescription analgesia.

4. Provide v patient education .

> **Patient education**
>
> - For all patients, provide the Pain relief for adults on discharge from hospital information.
> - For patients on opioids, ensure they receive verbal and written education about the opioids, including clear dosing instructions and possible side-effects:
>   - Codeine
>   - Morphine (long-acting)
>   - Morphine (short-acting)
>   - Oxycodone (short-acting)
>   - Oxycodone (long-acting)
>   - Tramadol

Request

- Seek acute pain management assessment for:
  - any advice, including the appropriate analgesic technique.
  - patient-controlled analgesia (PCA) or regional anaesthesia.
  - acute pain in patients on regular opioids.
  - opioid-related sedation or respiratory depression, including naloxone infusions and ongoing pain management.
  - CRPS.
- If acute severe pain with cancer, seek acute palliative care advice.

Information

v For health professionals

Further information

- Australian and New Zealand College of Anaesthetists and Faculty of Pain Medicine - Acute Pain Management: Scientific Evidence
- Canterbury DHB:
  - Adult Surgical-based Intravenous (IV) Incremental Opioid Protocol
  - Emergency Department Acute Pain Guideline (available in department)

v For patients

- Canterbury DHB - ED Adult Pain Relief Patient Information
- HealthInfo:
  - Pain Relief After an Injury
  - Pain Relief for Adults on Discharge from Hospital
- Health Navigator - Acute Pain
- My Medicines:
  - Codeine
  - Diclofenac

- Ibuprofen
- Morphine (Long-acting)
- Morphine (Short-acting)
- Naproxen
- Oxycodone (Long-acting)
- Oxycodone (Short-acting)
- Paracetamol
- Tramadol

PARALLEL PAGES

- Analgesia in Adults with Acute Injuries
- DRAFT Analgesia in Adults with Acute Injuries
- Analgesia in Adults with Acute Injuries

SOURCES

References

1. Choosing Wisely. Tests, Treatments and Procedures Health Professionals Should Question. Choosing Wisely New Zealand; 3. Do not prescribe opioids for the treatment of acute or chronic pain without assessing the patient's clinical condition, potential side effects, alternative analgesic options, work status, and capacity to perform safety-critical activities such as driving a motor vehicle. 2019. [cited 2019 Mar 31]. [Abstract!

2. Silverman SM. Opioid induced hyperalgesia: clinical implications for the pain practitioner. Pain physician. 2009;12(3):679-684. [Abstract]

PAGE INFORMATION

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morphine

opiate

oxycodone

oxycontin

oxynorm

pain

paracetamol

PCA

tramadol

Topic ID: 951543

MIDCENTRAL DISTRICT HEALTH BOARD
Te Pae Hauora o Ruahine o Tararua

11 February 2022

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[redacted]

[redacted]

Dear [redacted]

I refer to your Official Information Act request received by email on 22 December 2021 with regard to assaults on DHB staff and days lost due to staff taking time off after being assaulted in 2021, and respond as follows:

1. *How many recorded assaults on health staff have there been in 2021?*

   129 physical assaults were recorded.

2. *How many recorded incidents of verbal abuse or threats have there been on health staff in 2021?*

   159 incidents of verbal abuse or threats have been recorded.

3. *How many days have been lost due to staff taking time off after being assaulted in the same time frame?*

   MDHB records lost time due to injury for its staff, however in order to answer this question, to segregate time lost due to assaults, the DHB would need to conduct an extensive administrative investigation. Accordingly, MDHB is declining/refusing this information under Section 18(f) of the OIA, that the information requested cannot be made available without substantial collation or research.

Please note that this response, or an edited version of it, may be published on the MidCentral DHB website ten working days after your receipt of this letter.

Yours faithfully

Keyur Anjaria
General Manager
People & Culture

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9 February 2022

[redacted]

Dear -

Official Information Act (OIA) Request

Your recent OJA request to the Mid Central District Health Board (MDHB) is acknowledged.

You have requested the following;

(1) Does your DHB provide Kaupapa Maori foot protection services? (This is defined as a podiatry service for Maori that embodies Maori values and principles.)

(a) Is this service available/funded in your DHB (Yes or No)?

Yes. In the Horowhenua there is a primary care service run specifically for Maori.

(b) If this service is funded, for each foot risk 'category' how many sessions are funded per year per patient?

The clinic is run weekly and is open to anyone who fits the criteria.

(c) Who would qualify for each of the funded services based on NZSSD referral pathway for diabetic foot?

It is open to Low to intact High risk patients

(d) Who is able to refer (e.g. GPs, Community Podiatrists, Emergency Departments, inpatient wards, Diabetes Nurse Educators, outpatient clinics)?

They receive referrals from all clinical staff from both primary and secondary services.

(e) If available, what is the number of Podiatrists employed/ contracted in this position?

One contracted Podiatrist.

(f) What is the total FTEs of Diabetes Podiatrists?

0.8 FTE

(g) Of these, what is the number of Maori podiatrists and their total FTEs?

Zero

(h) Are off-loading services provided in this setting (e.g., medical grade footwear, orthotics, casts, removable casts, etc.)?

Not applicable within this service.

(i) If a Multi Disciplinary Team Diabetes Foot Clinic (MDTDF) is available at your DHB, please list the staff (specialists) who are members of MDT (e.g., Diabetes Specialist, Diabetes Registrar, Infectious Diseases Specialist, Vascular Surgeon, Podiatrist, Orthopaedic.

Not applicable within this service - Podiatry only for this service.

(j) How often are the MDT Diabetic Foot Clinics held (e.g. weekly, fortnightly, etc.)?

Not applicable for this service.

(k) Following limb revascularisation, where does physical rehabilitation occur (e.g. DHB hospital or out-of-DHB facility) and who is involved (e.g. physio, OT, etc.)?

Not applicable for this service.

(I) Whether this service is available or not in your DHB, are patients referred for this service/utilised by your DHB for diabetic foot ulcer treatment?

Not applicable for this service.

(m) How are these foot care services provided during COVID-19 restrictions?

Guidelines for the care of patients in response to COVID-19 are in place.

(n) What impact has COVID-19 had on waiting times and the delivery of foot care services?

Under Level 3 and Level 4 theses services were suspended and patients were consulted with via Telehealth. Patients with significant concerns were referred to the Hospital HRFS/MDT which were still functional for acute and active presentations.

{2) <u>Funded Community Podiatry Services</u> {based on NZSSD pathway for Diabetic Foot Screening and Assessment for people with *MODERATE, IN-REMISSION or HIGH RISK foot* provided with a number of sessions with a community podiatrist).

(a) Is this service available/funded in your DHB (Yes or No)?

This service is available/funded in our DHB by the PHO.

(b) If this service is funded, for each foot risk 'category' how many sessions are funded per year per patient?

For each foot risk 'category' - the number of sessions are at the discretion of the clinician and based on the clinical need of the patient.

(c) Who would qualify for each of the funded services based on NZSSD referral pathway for diabetic foot?

High Risk patients and those in remission. These are managed in the community and are funded via WINZ or privately. We work closely with our private Community Podiatrists to ensure that they are familiar with referral criteria and pathways.

(d) Who is able to refer (e.g. GPs, Community Podiatrists, Emergency Departments, inpatient wards, Diabetes Nurse Educators, outpatient clinics)?

All clinical staff from primary and secondary care can refer into the service. Also, patients can self refer if they have a major concern. Telephone consultation is always available to triage need in these cases.

(e) If available, what is the number of Podiatrists employed/ contracted in this position?

Two employed and one contracted.

(f) What is the total FTEs of Diabetes Podiatrists?

2.0 FTE

(g) Of these, what is the number of Maori Podiatrists and their total FTEs?

Zero

(h) Are off-loading services provided in this setting (e.g. medical grade footwear, orthotics, casts, removable casts, etc.)?

Basic chair side off-loading is available in Community Podiatry services. This is supported and provided by the secondary care service which works in collaboration with primary care. The requirement for specialist services will be determined by patient complexity.

As above - questions (i) to (m) are not applicable to this service.

(n) How are these foot care services provided during COVID-19 restrictions?

Guidelines for the care of patients in response to COVID-19 are in place.

(o) What impact has COVID-19 had on waiting times and the delivery of foot care services?

Under Level 3 and Level 4 theses services were suspended and patients were consulted with via Telehealth. Patients with significant concerns were referred to the Hospital HRFS/MDT which were still functional for acute and active presentations.

(p) Any further comments/suggestions related to the Diabetic Foot Services at your DHB

The high risk foot/diabetic foot services work at full capacity and there is high demand. Currently the HRFS works collaboratively using the medium of ZOOM to include the Orthotist. Basic chair side off-loading is available in Community Podiatry. This is also provided in the secondary care clinics working in collaboration with primary care. This has proven very successful and reduces cost to the service in terms of travel and dedicating staff time which may not be required for all consultations.

(3) <u>In-remission diabetic foot services</u> (in-remission refers to a *foot with previous amputation, previous ulceration or consolidated Charcot foot).*

(a) Is this service available/funded in your DHB (Yes or No)?

This service is available/funded in our DHB by the PHO.

(b) If this service is funded, for each foot risk 'category' how many sessions are funded per year per patient?

For each foot risk 'category', the number of sessions are at the discretion of the clinician and based on the clinical need of the patient.

(c) Who would qualify for each of the funded services based on NZSSD referral pathway for diabetic foot?

All patients in remission are eligible for preventative management in Primary care.

(d) Who is able to refer (e.g., GPs, Community Podiatrists, Emergency Departments, inpatient wards, Diabetes Nurse Educators, outpatient clinics)?

All clinical staff from primary and secondary care can refer into the service.

(e) If available, what is the number of Podiatrists employed/contracted in this position?

Two employed and one contracted.

(f) What is the total FTEs of Diabetes Podiatrists?

2.0 FTE

(g) Of these, what is the number of Maori Podiatrists and their total FTEs?

Zero

(h) Are off-loading services provided in this setting (e.g., medical grade footwear, orthotics, casts, removable casts, etc.)?

Basic chair side off-loading is available in Community Podiatry services. This is supported and provided by the secondary care service which works in collaboration with primary care. The requirement for specialist services will be determined by patient complexity.

As above - questions (i) to (m) are not applicable to this service.

(n) How are these foot care services provided during COVID-19 restrictions?

Guidelines for the care of patients in response to COVID-19 are in place.

(o) What impact has COVID-19 had on waiting times and the delivery of foot care services?

Under Level 3 and Level 4 theses services were suspended and patients were consulted with via Telehealth. Patients with significant concerns were referred to the Hospital HRFS/MDT which were still functional for acute and active presentations.

(p) Any further comments/suggestions related to the Diabetic Foot Services at your DHB.

The high risk foot/diabetic foot services work at full capacity and there is high demand. Currently the HRFS works collaboratively using the medium of ZOOM to include the Orthotist. Basic chair side off-loading is available in Community Podiatry. This is also provided in the secondary care clinics working in collaboration with primary care. This has proven very successful and reduces cost to the service in terms of travel and dedicating staff time which may not be required for all consultations.

(4) <u>High risk diabetic foot clinics</u> (accepts patients with *active diabetic foot problems* such as ulceration, infection, critical limb ischaemia, suspected Charcot foot).

(a) Is this service available/funded in your DHB (Yes or No)?

This service is available/funded in our DHB by the PHO.

(b) If this service is funded, for each foot risk 'category' how many sessions are funded per year per patient?

All patients with active foot conditions have access to this service. We have a Hospital based HRFS which provides services at the main hospital and a satellite site in Horowhenua. Specialist clinics are provided in the Renal unit and inpatient consultation is provided.

(c) Who would qualify for each of the funded services based on NZSSD referral pathway for diabetic foot?

All patients with an active foot condition.

(d) Who is able to refer (e.g. GPs, Community Podiatrists, Emergency Departments, inpatient wards, Diabetes Nurse Educators, outpatient clinics)?

All clinical staff from primary and secondary care can refer into the service.

In addition, patients who have been previous consumers of this service are able to self refer if they have concerns that they may be heading for recrudescence. Telephone consultation is available to triage need in these cases and then face to face consultation is arranged based on urgency.

(e) If available, what is the number of, Podiatrists employed/ contracted in this position?

One employed, one contracted.

(f) **What is the total FTEs of Diabetes Podiatrists?**

0.9 FTE.

(g) Of these, what is the number of Maori podiatrists and their total FTEs?

Zero

(h) Are off-loading services provided in this setting (e.g. medical grade footwear, orthotics, casts, removable casts, etc.)?

All off-loading strategies are available in this service as clinically indicated; casting of many types, both full BK, backslap and bivalve, cast walkers, cast shoes, crutches, therapeutic footwear temporary and custom orthotics, custom footwear and OTC orthopaedic footwear. We also offer specialist wound care, extensive debridement and specialist dressings including VAC dressings.

As above - questions (i) to (m) are not applicable to this service.

(n) How are these foot care services provided during COVID-19 restrictions?

Guidelines for the care of patients in response to COVID-19 are in place.

(o) What impact has COVID-19 had on waiting times and the delivery of foot care services?

Under Level 3 and Level 4 theses services were suspended and patients were consulted with via Telehealth. Patients with significant concerns were referred to the Hospital HRFS/MDT which were still functional for acute and active presentations.

(p) Any further comments/suggestions related to the Diabetic Foot Services at your DHB

The high risk foot/diabetic foot services work at full capacity and there is high demand. Currently the HRFS works collaboratively using the medium of ZOOM to include the Orthotist. Basic chair side off-loading is available in Community Podiatry. This is also provided in the secondary care clinics working in collaboration with primary care. This has proven very successful and reduces cost to the service in terms of travel and dedicating staff time which may not be required for all consultations.

(5) Specialist Multidisciplinary Team Diabetic Foot {MDTDF} clinics (a clinic that occurs regularly and staffed by a combination of specialists such as a Diabetes Physician, Podiatrist, Vascular Surgeon, Orthopaedic Surgeon, Infectious Diseases Physician, Diabetes Registrar or Orthotist, etc.).

(a) Is this service available/funded in your DHB (Yes or No)?

This service is available/funded in our DHB.

Our core MDT is composed of HRFS Secondary care specialist Podiatrist and the Vascular surgeon with other members of the team collaborating in care as needed.

(b) If this service is funded, for each foot risk 'category' how many sessions are funded per year per patient?

Not applicable.

(c) Who would qualify for each of the funded services based on NZSSD referral pathway for diabetic foot?

As decided by the HRFS Podiatrist, Diabetes Physician at a Diabetes Centre/service.

(d) Who is able to refer (e.g. GPs, Community Podiatrists, Emergency Departments, inpatient wards, Diabetes Nurse Educators, outpatient clinics)?

All clinical staff from primary and secondary care can refer into the service. In addition patients who have been previous consumers of this service are able to self refer if they have concerns that they may be heading for recrudescence. Telephone consultation is always available to triage need in these cases and then face to face consultation is arranged based on urgency.

(f) If available, what is the number of Podiatrists employed/contracted in this position?

One employed, one contracted.

(f) What is the total FTEs of Diabetes Podiatrists?

0.9 FTE

(g) Of these, what is the number of Maori podiatrists and their total FTEs?

Zero

(h) Are off-loading services provided in this setting (e.g. medical grade footwear, orthotics, casts, removable casts, etc.)?

All off-loading strategies are available in this service as clinically indicated; casting of many types, both full BK, backslap and bivalve, cast walkers, cast shoes, crutches, therapeutic footwear temporary and custom orthotics, custom footwear and OTC orthopaedic footwear. We also offer specialist wound care, extensive debridement and specialist dressings including VAC dressings.

(i) If a Multi Disciplinary Team Diabetes Foot Clinic (MDTDF) is available at your DHB, please list the staff (specialists) who are members of MDT (e.g. Diabetes Specialist, Diabetes Registrar, Infectious Diseases Specialist, Vascular Surgeon, Podiatrist, Orthopaedic Surgeon, etc.).

CORE MDT: HRFS Secondary care specialist Podiatrist; vascular Surgeon; with the following specialties involved as needed, Radiologist, Microbiologist, Renal team specialist Orthotist, footwear provider, New Zealand Artificial Limb Centre, District Nursing team and an interdisciplinary collaboration with the Diabetes and Endocrinology service, Orthopaedic service; Physiotherapy and Occupational Therapist as needed.

(j) How often are the MDT Diabetic Foot Clinics held (e.g. weekly, fortnightly, etc.)?

Weekly

As above - questions (k) to (m) are not applicable to this service.

(n) How are these foot care services provided during COVID-19 restrictions?

Guidelines for the care of patients in response to COVlD-19 are in place.

(o) What impact has COVID-19 had on waiting times and the delivery of foot care services?

Under Level 3 and Level 4 theses services were suspended and patients were consulted with via Telehealth. Patients with significant concerns were referred to the Hospital HRFS/MDT which were still functional for acute and active presentations.

(6) <u>Designated Charcot foot clinics</u> (this is often an MDT clinic staffed by a Podiatrist, Orthotist, Orthopaedic Surgeon/Registrar and/or Diabetes Specialist and specifically manage patients with Acute or Chronic Diabetic Charcot Foot).]

(a) Is this service available/funded in your DHB (Yes or No)?

We do not have a specified or dedicated clinic for Charcot's foot. These cases are managed as an active foot presentation and the specialties involved in care are dictated by the clinical findings.

Questions (b) and (c) are not applicable to this service.

(d) Who is able to refer (e.g. GPs, Community Podiatrists, Emergency Departments, inpatient wards, Diabetes Nurse Educators, outpatient clinics).

All clinical staff from primary and secondary care can refer into the service. In addition patients who have been previous consumers of this service are able to self refer if they have concerns that they may be heading for recrudescence. Telephone consultation is always available to triage need in these cases and then face to face consultation is arranged based on urgency.

Questions (e) to (h) are not applicable to this service.

(i) If a Multi Disciplinary Team Diabetes Foot Clinic (MDTDF) is available at your DHB, please list the staff (specialists) who are members of MDT (e.g. Diabetes Specialist, Diabetes Registrar, Infectious Diseases Specialist, Vascular Surgeon, Podiatrist, Orthopaedic Ssurgeon, etc.).

CORE MDT ACTIVE FOOT: HRS secondary care specialist Podiatrist, Vascular Surgeon with the following specialties involved as needed; Radiologist, Microbiologist, Renal team specialist Orthotist, footwear provider, New Zealand Artificial Limb Centre, District Nursing team and an interdisciplinary collaboration with the Diabetes and Endocrinology service, Orthopaedic service, Physiotherapy and Occupational Therapy as needed.

(j) How often are the MDT Diabetic Foot Clinics held (e.g. weekly, fortnightly, etc.)?

Weekly

As above - questions (k) to (m) are not applicable to this service.

(n) How are these foot care services provided during COVID-19 restrictions?

Guidelines for the care of patients in response to COVID-19 are in place.

(o) What impact has COVID-19 had on waiting times and the delivery of foot care services?

Under Level 3 and Level 4 theses services were suspended and patients were consulted with via Telehealth. Patients with significant concerns were referred to the Hospital HRFS/MDT which were still functional for acute and active presentations.

(7) Hyperbaric oxygen therapy

MidCentral DHB does not provide hyperbaric oxygen therapy.

(8) Vascular services for diabetic foot disease

Angioplasty and stents are provided locally - more complex cases are referred to Wellington.

Please note that this response, or an edited version of this response, may be published on the MDHB website 10 working days after your receipt of this response.

Yours sincerely

Lyn Horgan
Operations Executive
Acute & Elective Specialist Services