Document 1

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Te Whatu Ora
Health New Zealand

Te Pae Hauora o Ruahine o Tararua / MidCentral Palmerston North Hospital

February 2023

HSS Acute Demand & System Pressures

Acute flow programme of work 9(2)(a) @health.govt.nz)

Regional profile

- MidCentral provides a range of secondary and tertiary services to the central region, including Wairarapa, Whanganui and Hawke's Bay. It also provides cancer services for Taranaki. The Palmerston North Regional Hospital is a teaching hospital with 365 beds.

- The local population is 191,000 and this is expected to increase to 219,000 over the next 15 years (source: Infometrics, Feb 22). The wider area served (central region north of Kāpiti) has a population of 501,000 (forecast to be 570,000 by 2037), of which 31% are Māori.

- Over the past 15 years, MidCentral has invested heavily in primary care, establishing integrated family health centres across the district. These include key enablers such as specialist primary care nursing and collaborative clinical pathways. The integrated health centre approach plays a significant role in improving equity and the delivery of services closer to home.

- MidCentral has also invested heavily in community mental health services, community child health services, older persons services and cancer services. The cancer screening, treatment and support service has an outreach model.

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Local profile

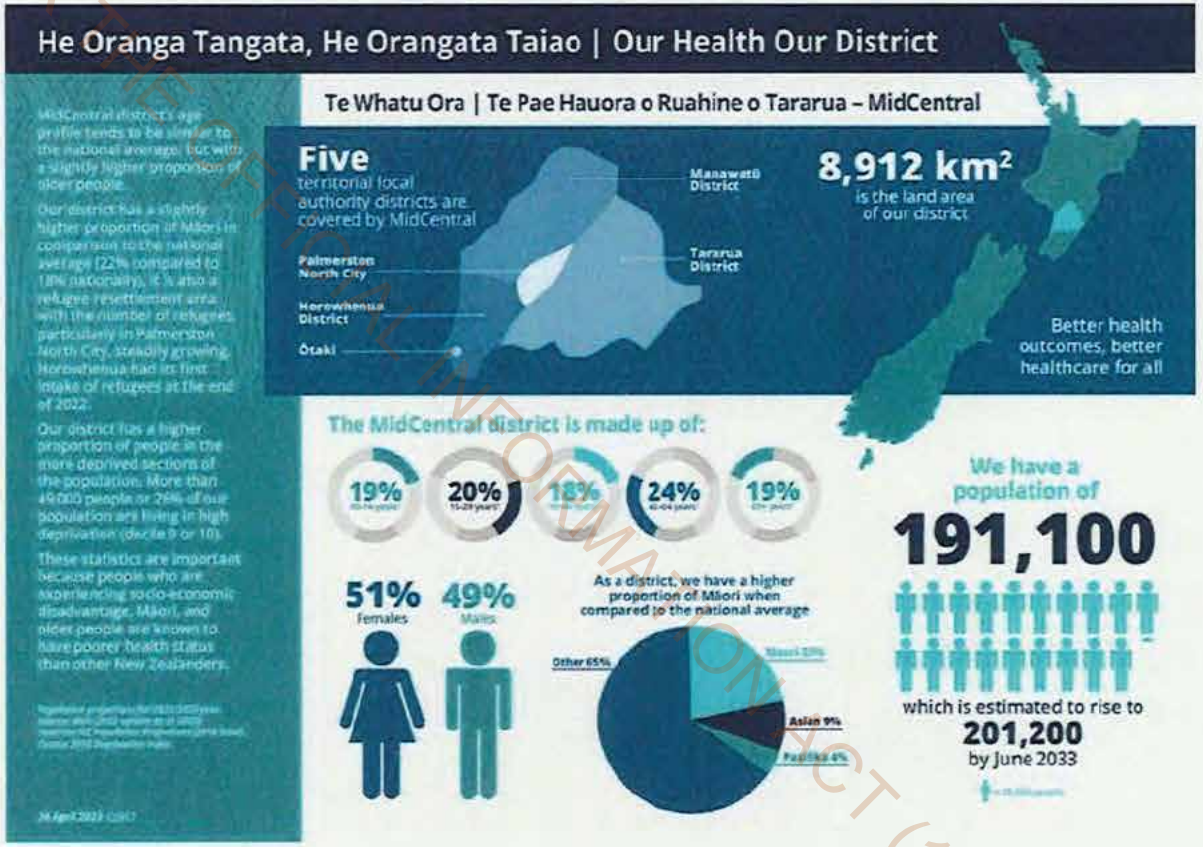
Geographic Area and Population

Te Whatu Ora Health NZ - MidCentral stretches across the North Island of New Zealand from the west to the east coast and is distinguished by the Tararua and Ruahine ranges that traverse the centre of the district. Te Whatu Ora Health NZ - MidCentral district comprises the following territorial local authority districts:

- Horowhenua district, Manawatu district, Palmerston North city Tararua district and the Otaki ward of the Kapiti coast district.

Te Whatu Ora Health NZ - MidCentral Population

Te Whatu Ora Health NZ - MidCentral population is around 190,000 people, and the majority live in Palmerston North City. Around 19% of the population are aged 65 years or older. Māori make-up over 22% of MidCentral's population.



Palmerston North hospital facilities

Main Hospital

- The main hospital was built in 1970 and clinical care capacity now falls short of what is required
- Facilities are significantly undersized as evidenced by national benchmarking (National Asset Management Programme)
- Midcentral ranks in the bottom 4 nationally for ED, ICU, and inpatient wards floor area per bed. The facilities cannot safely accommodate further capacity
- Temporary changes to air management systems and negative pressure rooms in the wake of COVID-19 now need to be made permanent

ED

- ED was designed in the late 1990s, and built in the early 2000s based on 17,000 presentations per year. The number of presentations in 2021/22 was 45,760.
- A new 20 bed MAPU and 10 bed EDOA was opened in February 2023. The existing 6 bed EDOA will transition into a paediatric area in the ED
- The ED does not meet standards relating to resuscitation rooms, whānau and privacy requirements, central workstation, and computers

Critical care

- The critical care funding initiative supported the establishment of an additional 2 critical care beds – these will be operational in late 2023
- There is a concept design underway for the expansion of ICU from 6 beds to 8, improving lines of sight for clinical staff, and improving storage areas

Mental Health

- A 28 bed acute mental health unit is being designed and foundation work will commence April 2023. There will be two de-escalation beds and potential for further expansion (8 beds)
- The planned acute mental health unit is based on a contemporary model of care and is inspired by the concepts of Tiaho Mai. It is also part of a wider strategy which includes community-based step-down services to support discharge of patients from acute care.

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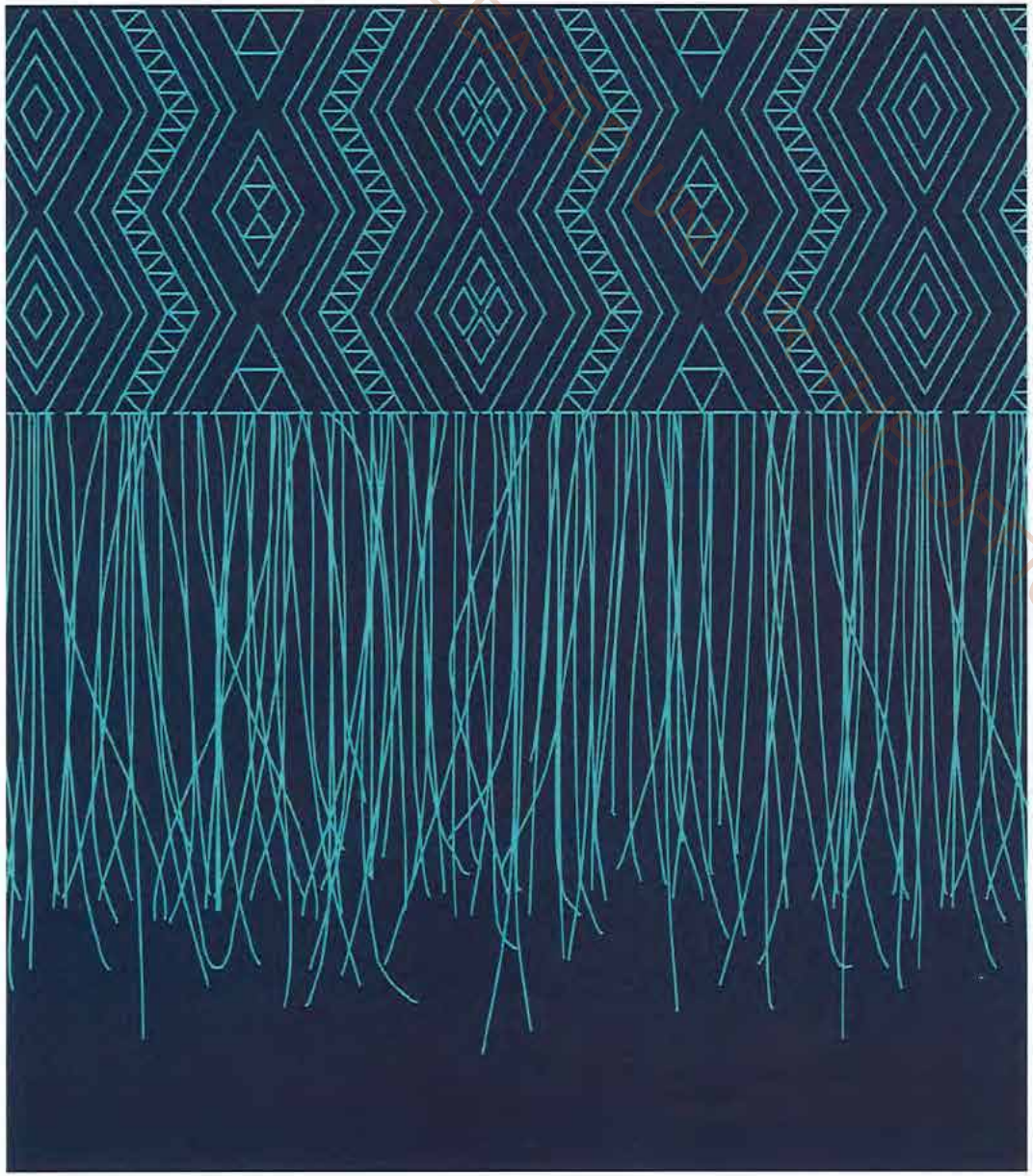

Wider challenges

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Palmerston North primary and community environment

General Practice

- A national analysis of closed books in June 2022 showed that 81% of facilities in Mid Central has closed books/are not taking new enrolments, compared with a national average of 33%.
- The region has the highest Nurse Practitioner per population ratio in the country
- Only four of the 30 practices under THINK Hauora have open books. There are 14 Māori/Iwi providers in the district.
- Palmerston North district has the lowest GP:Population ratio in the country, and an aging GP workforce who generally do not support after hours care provision. The only after hours facility after 8pm is the hospital emergency department.

Rurality

- Due to the geographical size of the district, after 10pm, rural elderly patients with no transport or who live alone are supported in the ED overnight to ensure a safe transition home when a hospital admission is not indicated.

Aged Residential Care

- ARC facilities quite full although not as under pressure as other districts. There are minimal delays in hospital-level facilities accepting patients, but there is difficulty in finding dementia bed placements.
- ARC staffing numbers are adequate, but capability and skill level to care for increasingly complex patients can be an issue
- There are time constraints around transferring patients home to ARC facilities – if these are not arranged to occur prior to midday the patient often has to stay in hospital another night.
- Agreements are in place with ARC facilities to take patients from hospital although these beds are not ringfenced.

Community pharmacy

- Rural community pharmacies continue to struggle with a lack of pharmacists and locum support. This is impacting on pharmacist health and wellbeing.
- Across the district we have 30 community pharmacies, with Palmerston North being well serviced with 19.
- The rollout of the Minor Ailments Service, as part of the System Pressures 2023 work has been well received by community pharmacies, with all but 1 community pharmacies participating across the district
- Data for MidCentral reports there are 6.35 pharmacists per 10,000 population, which is lower than the national average of 8.04 pharmacists per 10,000 people.

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Palmerston North Equity considerations

Clinicians outlined the high representation of Māori coming through the ED. This is due in part to access to primary care (significant wait times) as well as the cost barriers for some whānau to general practice providers, or what is referred to as pharmacy debt.

There was mention of the importance and critical enablement of the Māori Health, Pae Ora team which support Māori whānau from admission through to discharge from ED and into the community. This team was seen as a key enabler to decrease potential readmission and to focus on a more interdisciplinary and holistic model of care to keep whānau within their own community and avoid hospital admission.

The use of kaiāwhina within communities to check on people recently discharged as a mechanism for both greater follow up support as well as a model of service delivery was also discussed.

There was brief discussion on what the data is currently demonstrating for Māori versus non- Māori receiving planned care, with feedback suggesting there are no notable differences currently.

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Palmerston North barriers to acute flow

Workforce

- Staff are fatigued
- High levels of kaimahi sick leave
- High numbers of staff vacancies, particularly nursing, mental health, and allied health

Patient presentations

- Rise in trauma presentations
- Patients presenting to hospital have higher levels of acuity and complexity than historically. This is resulting in longer inpatient stays and challenges with discharge
- Due to the geographical size of the district, after 10pm, rural elderly patients with no transport or who live alone are supported in the ED overnight to ensure a safe transition home when a hospital admission is not indicated.

Outflow into community

- At any one time, 30% of medical patients are medically fit for discharge but remain in hospital primarily because a facility or service isn't available to provide ongoing care. Main cohorts in this group are:
  - Acute Mental health
  - Rehabilitation
  - Residential care – mainly aged care
  - PPPR (awaiting legal authority to discharge)

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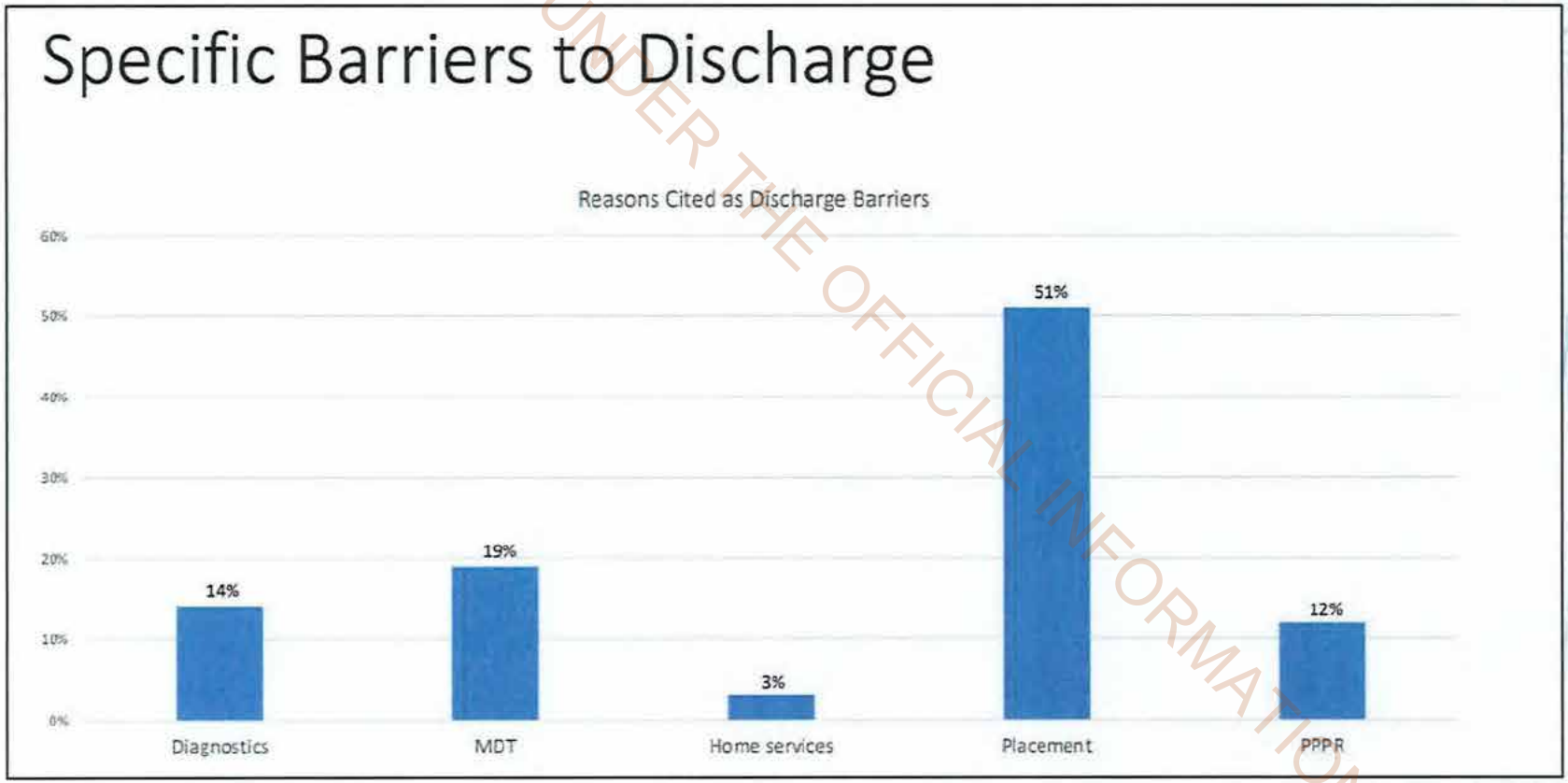
Palmerston North In-hospital flow



A two-week audit conducted in September 2022 showed an average census of 111 medical patients per day, 30 of which were deemed to be medically stable for discharge – barriers to discharge are shown in the graph above.

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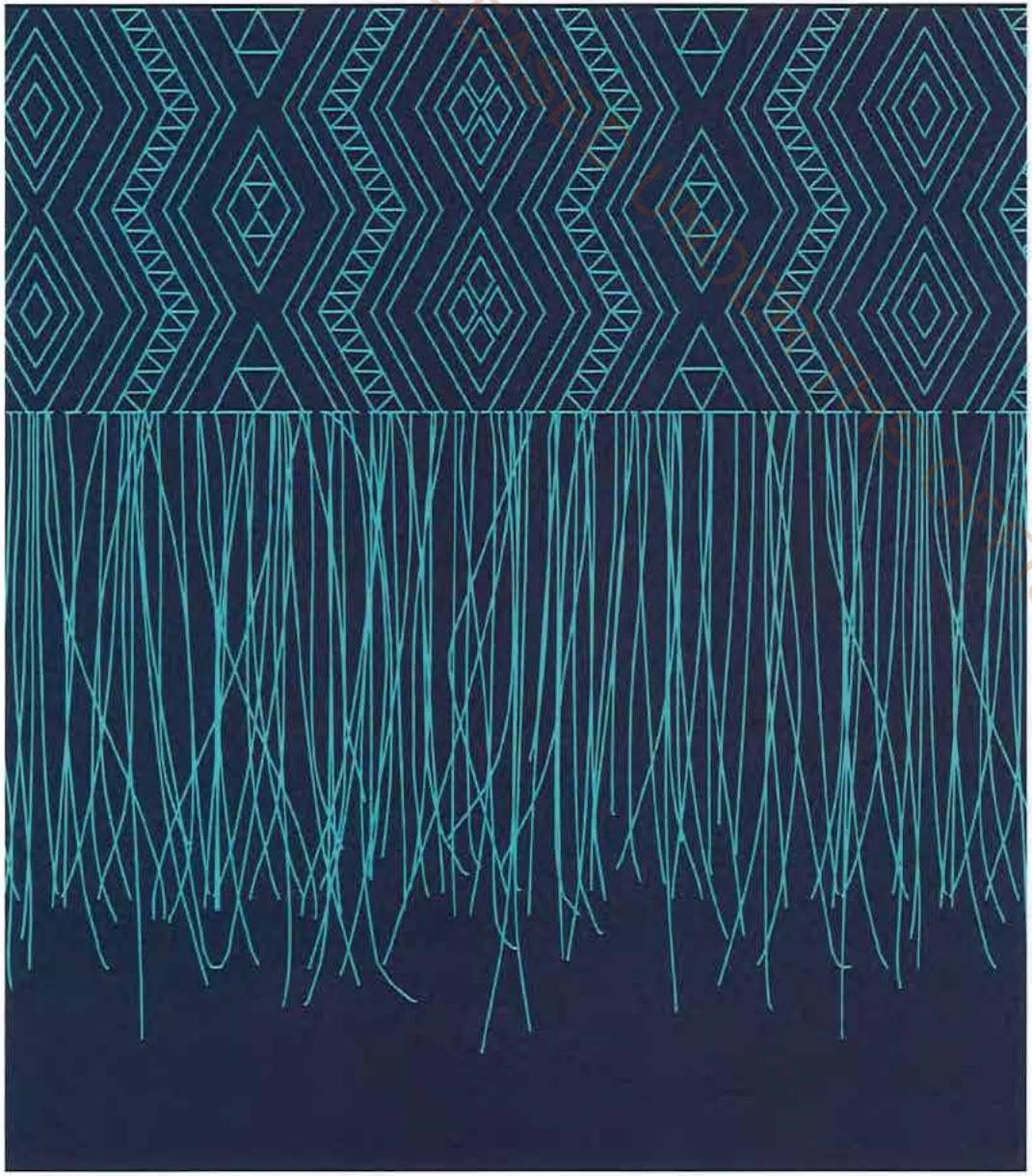

Site visit

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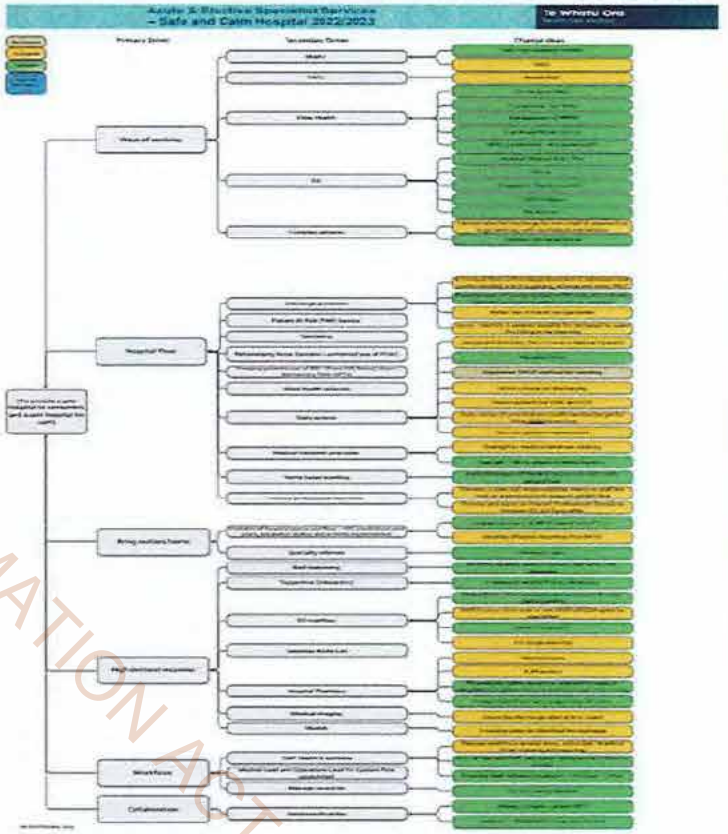
Palmerston North workplan – Safe and Calm Hospital

Palmerston North hospital has strong leadership buy-in and focus on acute flow across the system. Investment has been made into a 0.5 FTE System Flow Clinical Lead to drive acute flow priorities.

The Integrated Operations Centre has good real-time data on demand and capacity flows, and this is used by all teams in the hour-by-hour running of the hospital (rather than just for reporting).

There is a hospital workplan for 2023 as shown in this driver diagram (further detail on next slide).



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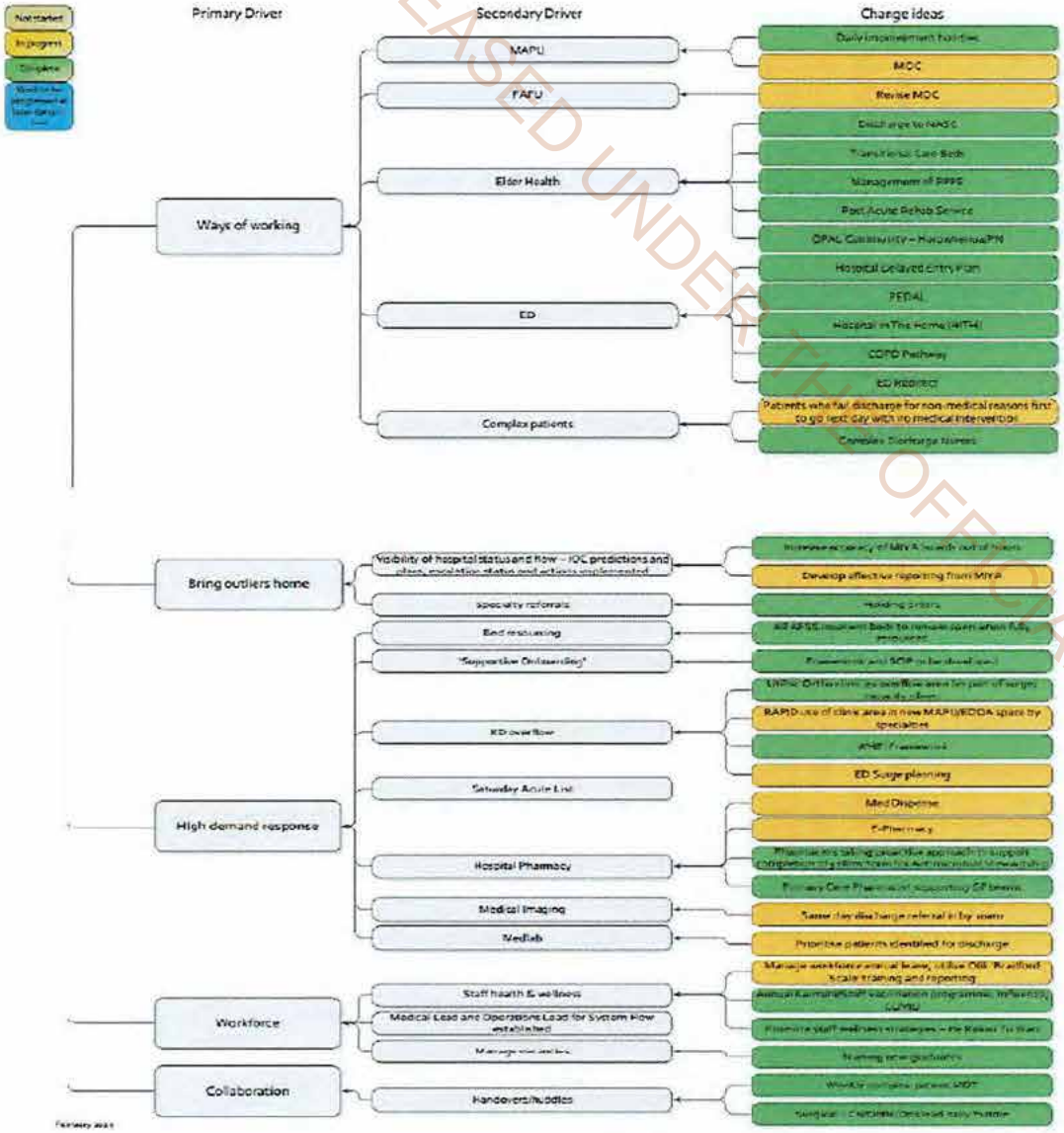
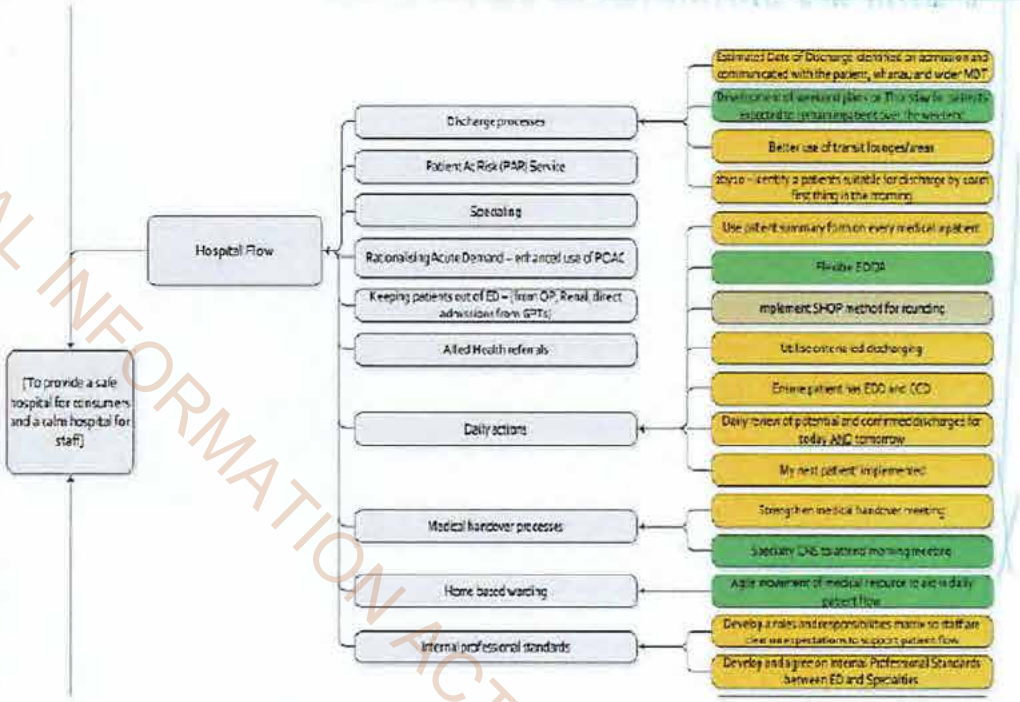


Safe and Calm Hospital

This hospital workplan focuses on:

Ways of working
Hospital flow
Home warding (reducing medical outliers in surgical beds)
High demand response
Workforce
Collaboration



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Palmerston North current flow work underway

- A system flow clinical lead (0.5 FTE) position started in February to drive acute flow priorities
- Specialty holding orders have been agreed from ED to the wards
- Proactive pulling patients from ED into inpatient wards (where able) using IOC data
- Pathways agreed and in place for diagnostics (MRI, ECHO), and treatment (collies, # NOF)
- ED bed requests – process improvements to take place prior to winter
- Bradford Wellness Tool has been introduced to address kaimahi sickness
- Review of the care pathways of patients with frequent ED attendances to be undertaken prior to winter

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Palmerston North current flow work underway

There are a multitude of hospital efficiency and quality improvement pieces of work underway or already implemented in Palmerston North

Pre-hospital:
- ED/POAC redirection

ED:
- Development of an ED escalation plan for 'code blue' and 'code black' connecting to a whole of organisation response at times of significant surge
- The establishment of a Clinical Nurse Specialist – Equity for ED is being progressed given high Māori 'did not wait' rates.
- Development of non clinical workforce so that these staff members can take on duties such as phlebotomy, ECGs, basic plasters, particularly within ED.

Inpatient:
- Weekend discharge improvements including
  - Package of treatment support
  - Weekend and extended hours for allied health – dietitian, SLT, social work
  - PAR nurse role to cover all shifts 7 days per week
  - Weekend registrar for discharging on Saturday
- Employment of a patient flow nurse (who also assesses improvement opportunities)
- Two dedicated RNs to support the discharge of patients with complex needs
- Establishment of a surgical SSU to assist with day case surgery and system flow
- Additional acute theatre list on Saturdays

Community and step-down:
- Significant work has been done in the 'ways of working' area, including the establishment of telehealth in Horowhenua and Dannevirke community health centres to support outpatient consultations, funded by the Planned Care Funding initiative, as was a community infusion service. The infusion service operates from three major community health centres – Kauri HealthCare, The Palms and Tararua Health Group (Dannevirke). Discussions are underway with community health centres in Feilding and Horowhenua to commence the service at those localities.
- An Older People's Assessment and Liaison Community Service (OPAL CS) commenced in 2022. This service focuses on reducing avoidable displacement of older people from their home. It shifts more care from the hospital setting closer to people's homes, incorporating Kaupapa Māori approaches. A specialist multidisciplinary team of allied health and nursing with medical support works with general practice teams and other community-based and Iwi providers to proactively manage frailty, supporting kaumatua to live well for longer in their communities. OPAL CS also interfaces with ED and inpatient wards, including our OPAL Unit (acute ward for older people with frailty) to facilitate supported transfers of care back out into the community. The service operates from three locations – Horowhenua, Manawatū and Palmerston North, with a planned extension into Tararua mid-year.

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Palmerston North improvement ideas / opportunities

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Data analytics

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Executive summary

- ED attendances:
  - ED attendances have been declining over the last two years but the number of patients presenting at triage levels 1-3 is increasing
  - Attendance rates are highest between 10am – 1pm
  - ED attendances are highest on a Monday (for the non-admitted cohort), and on a Wednesday (admitted cohort)
  - Māori patients are over-represented in triage 1, 4, and 5 presentations
  - Pacific Peoples are over-represented in tirage 4 and 5 presentations
- SSED: 10.9% drop in SSED over the last financial year, from 52.28% to 41.37%
  - Patients arriving between 8pm – 1am have the longest length of stay
  - Triage levels 2 and 3 spend the longest time in ED
  - MidCentral do not 'stop the clock' for their ED patients, the SSED data accurately reflects the length of time patients spend in the ED
- ED admission rate has increased from 31.1% in the 21/22 financial year to 33.1% in the 22/23 financial year
- DNW:
  - Patients who do not wait are generally triage 3 and 4, and have been in the department for an average of 8 hours before they leave.
  - Those who present in the evening are more likely to not wait.
  - Māori patients comprise the largest proportion of DNWs, followed by Pacific peoples.
- Wait time for triage, and to see a clinician, is rising
- Māori patients are the most likely to re-present within 3 days of leaving the ED
- Of the major hospitals, MidCentral is consistently in the top 4 for ED occupancy; hospital inpatient occupancy is also consistently >90%
- Patients in hospital with a length of stay >7 days has risen significantly in the last year
- Inpatient discharges are highest between 1-4pm on weekdays

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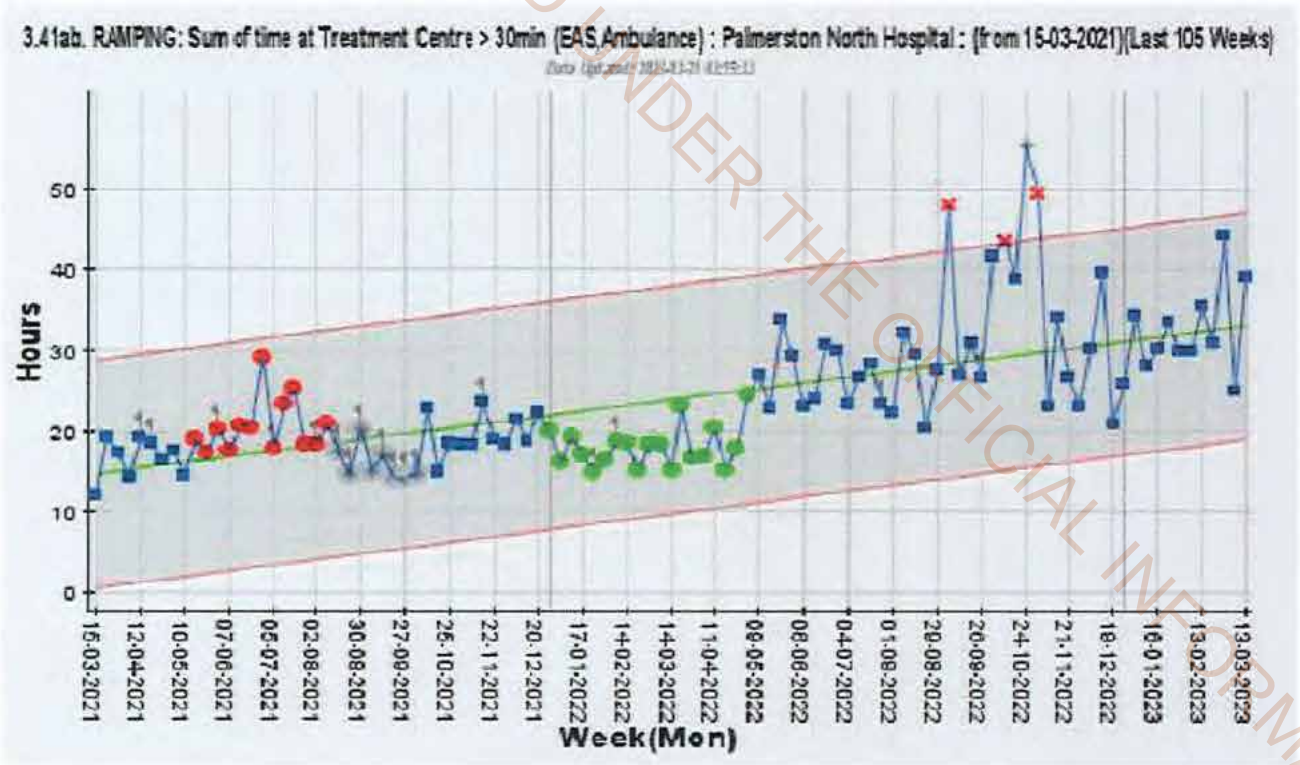

Source: Hato Hone St John

- MidCentral senior leadership currently meet weekly with St John regional leadership to discuss monitoring, emergent issues and opportunities for ongoing improvement.
- MidCentral currently average a 34 minute ambulance turn around time.

Note: Ambulance crews have a 30-minute handover time built into their allocated patient transfer time. Any time spent in the ED that exceeds 30 minutes contributes toward this ramping graph. This data does not show the incidences of ambulances being 'ramped' outside the ED unable to admit patients.

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Source: NNPAC, accessed 26 June, note: Q4 data is not complete

Over the last two years, ED attendances have not increased, however the SSED target has markedly declined, particularly for the admitted cohort of patients.

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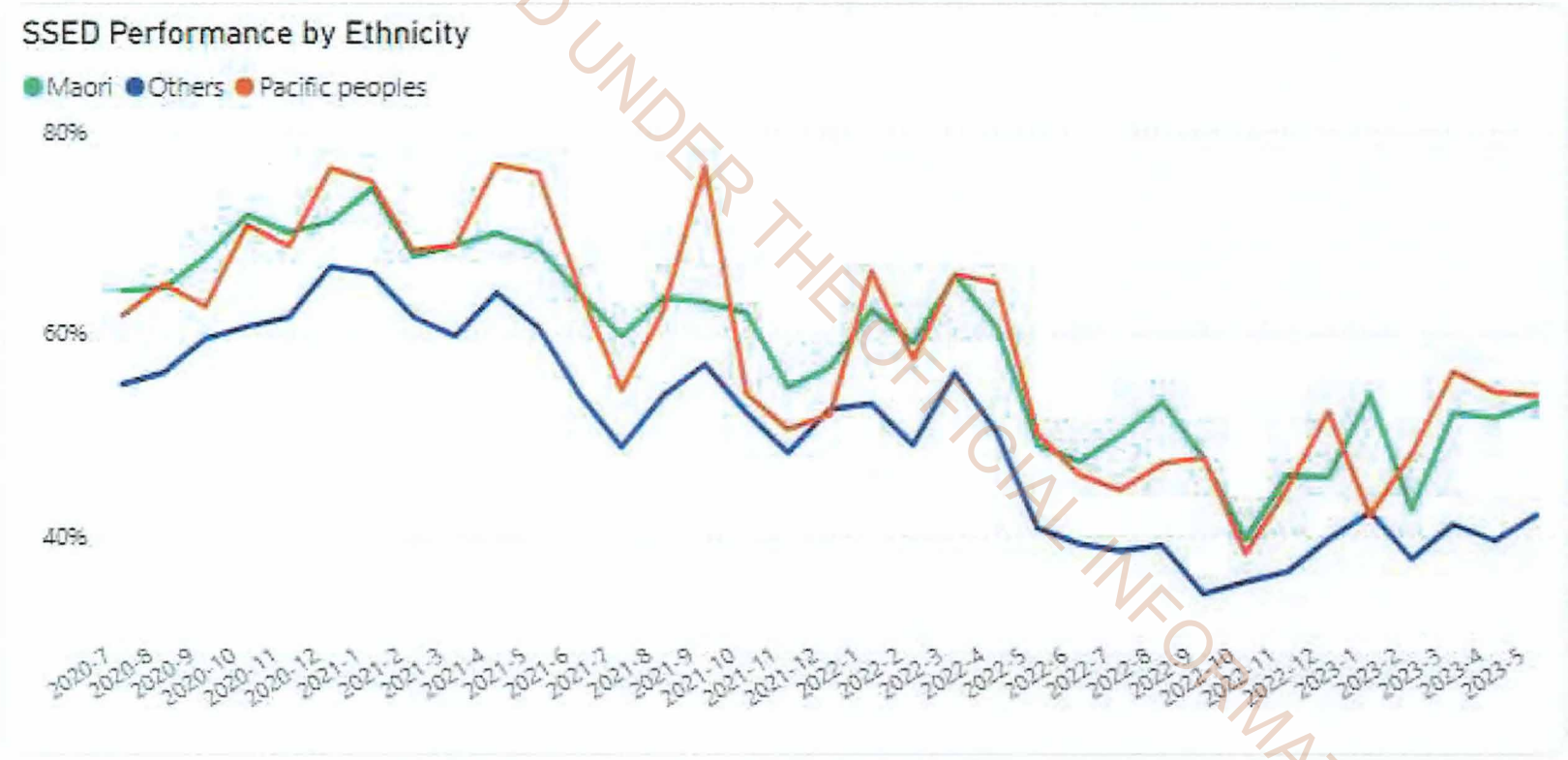

Source: NNPAC, accessed 26 June, note: June data is not complete

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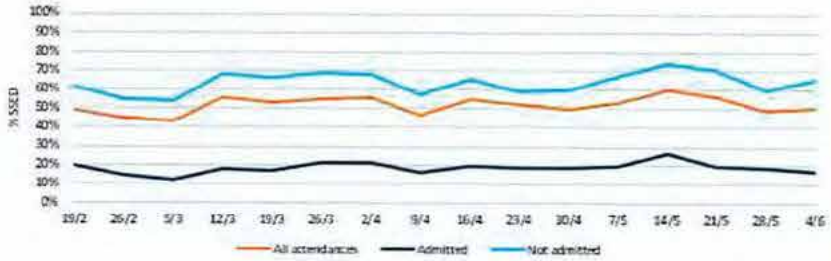
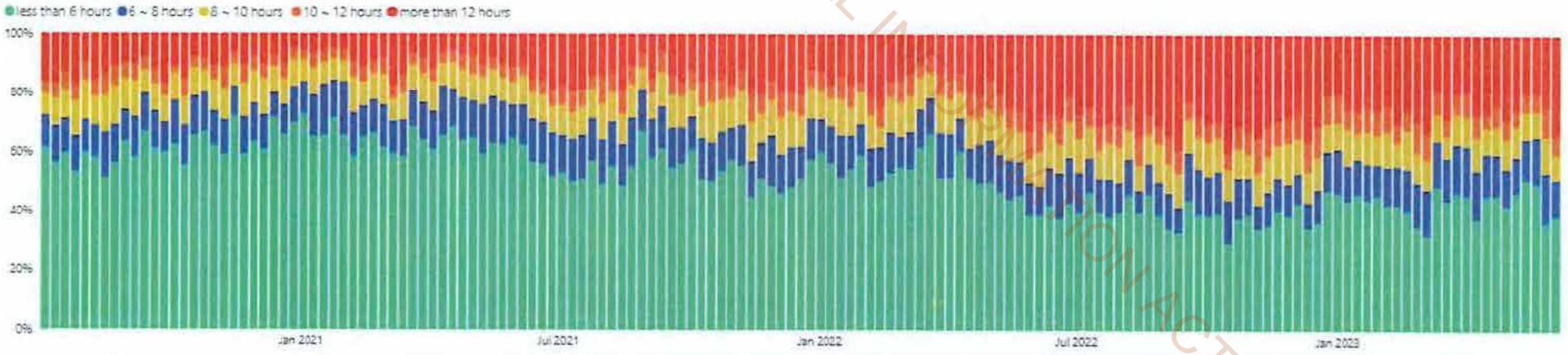
- The proportion of patients spending more than 12 hours in the ED is growing significantly.
- The graph to the right shows SSED from February – June 2023. The admitted cohort of patients spend the longest amount of time in the emergency department.

MidCentral

Week ending	19/2	26/2	5/3	12/3	19/3	26/3	2/4	9/4	16/4	23/4	30/4	7/5	14/5	21/5	28/5	4/6
All attendances	43%	45%	43%	56%	53%	55%	56%	47%	54%	52%	50%	54%	60%	56%	49%	50%
Admitted	19%	15%	12%	18%	17%	21%	21%	16%	19%	19%	18%	19%	26%	19%	19%	17%
Not admitted	61%	55%	54%	68%	66%	69%	68%	57%	65%	59%	60%	67%	74%	70%	60%	65%



Proportions of ED Attendances Length of Stay Weekly Breakdown



Source: NNPAC, accessed 26 June

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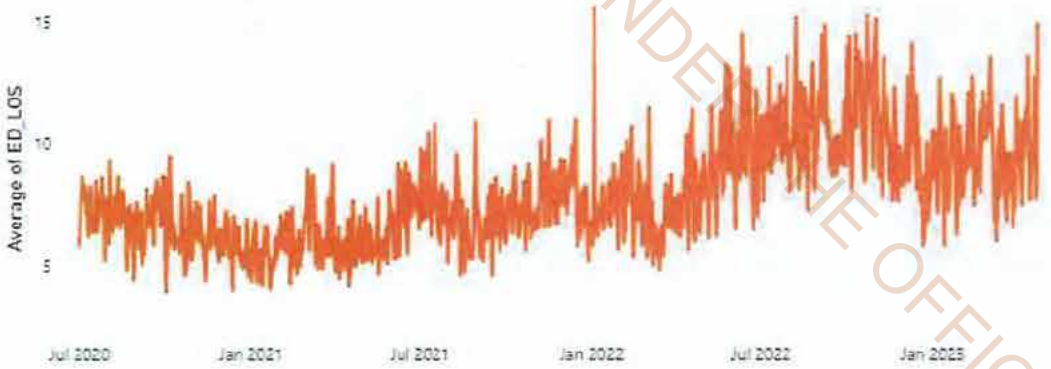
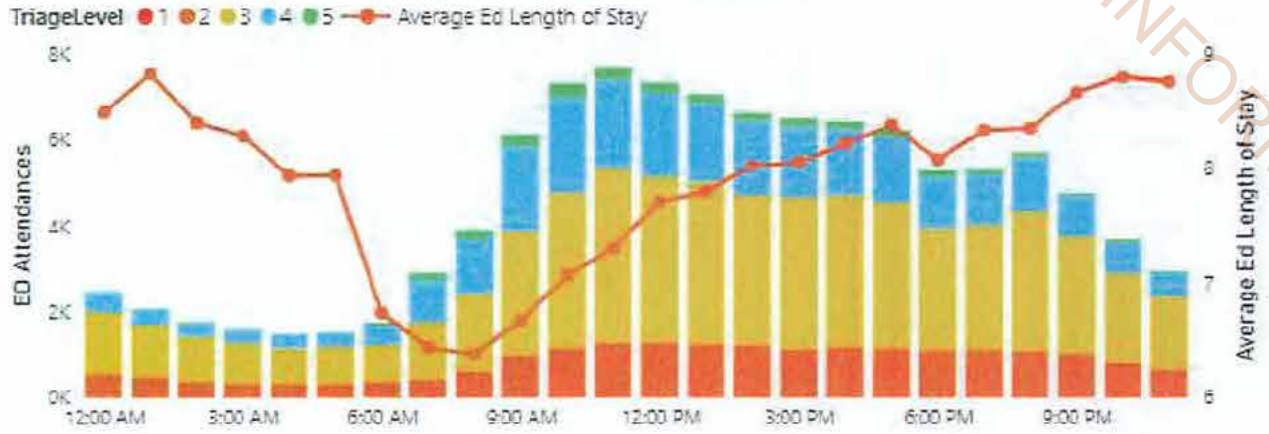
Average ED Length of Stay Trend



Source: NNPAC, accessed 26 June. Date range is July 2020 – June 2023, all patients

ED Attendances and Average ED Length of Stay by Time of the Day



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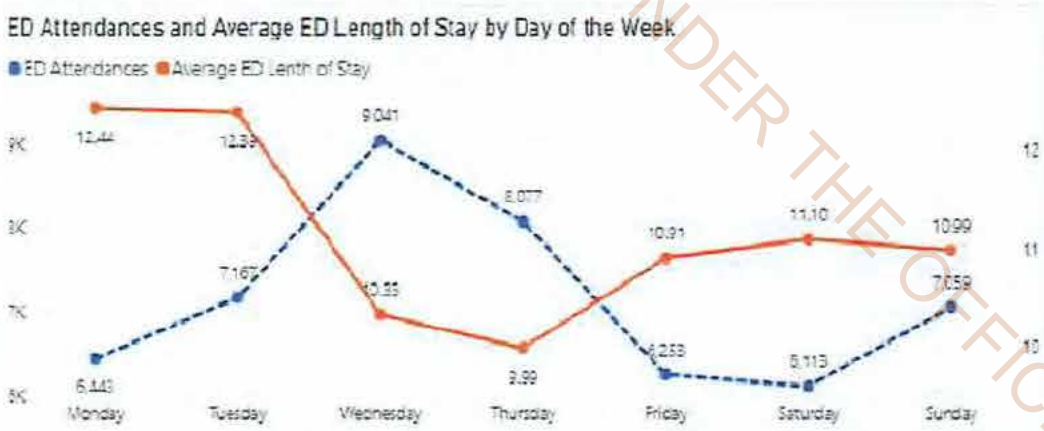
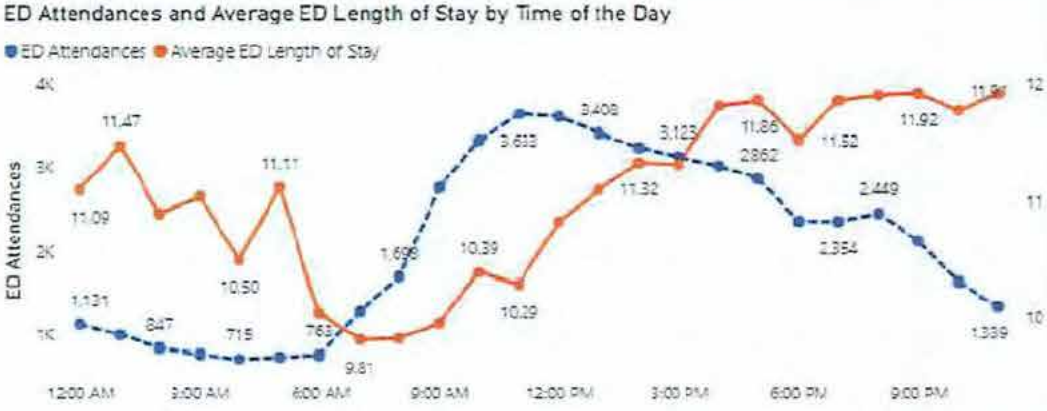
Attendance trends for admitted patients





Attendance trends for non-admitted patients

Source: NNPAC, accessed 26 June. Date range is July 2020 – June 2023

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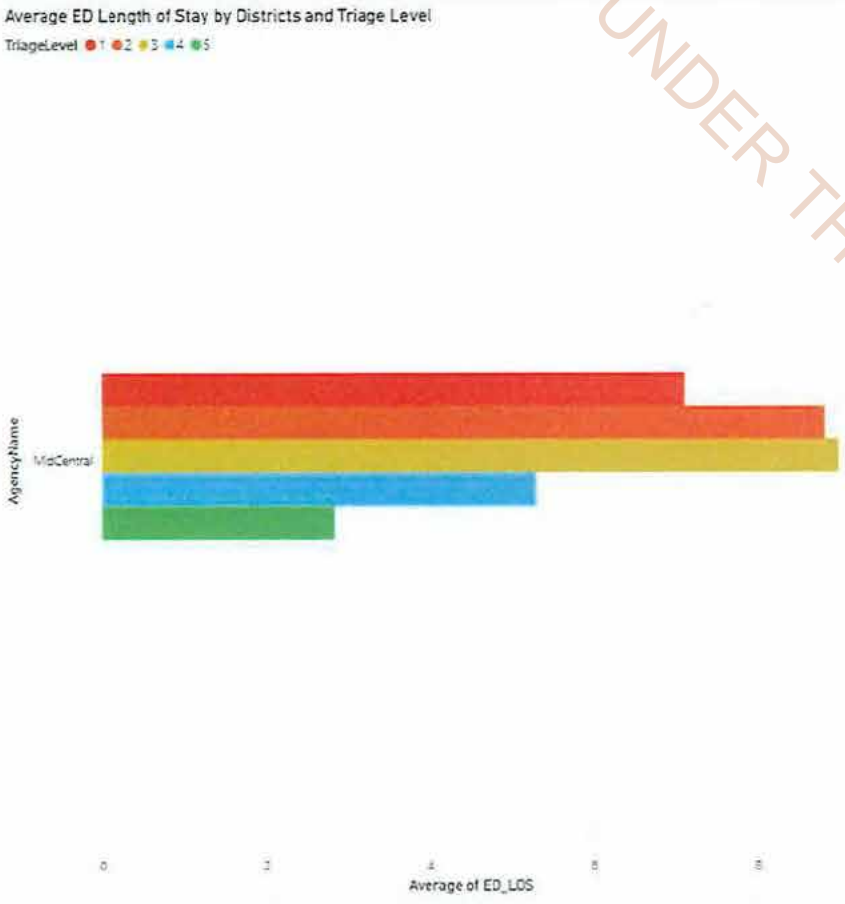

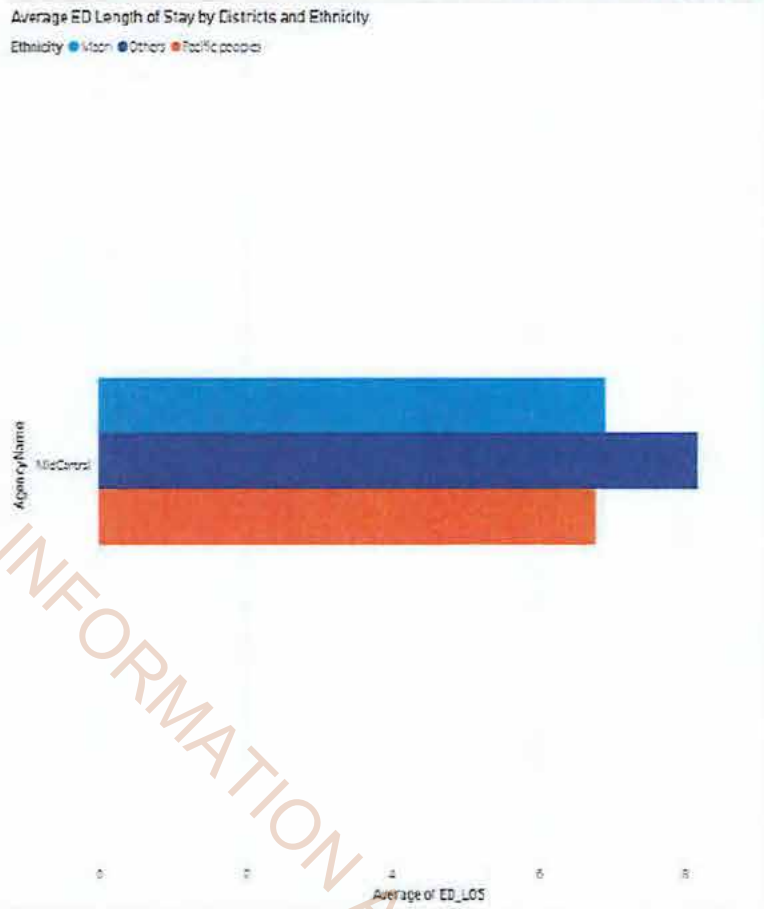

Source: NNPAC, accessed 26 June. Date range is July 2020 – June 2023, all patients

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Source: Qlik, accessed 26 June, 2022/23 financial year, note: not complete

% Maori in MidCentral
21.89%
3.37% % Pacific Peoples

Based on SNZ Population Projections 2021

Maori
Pacific
Other

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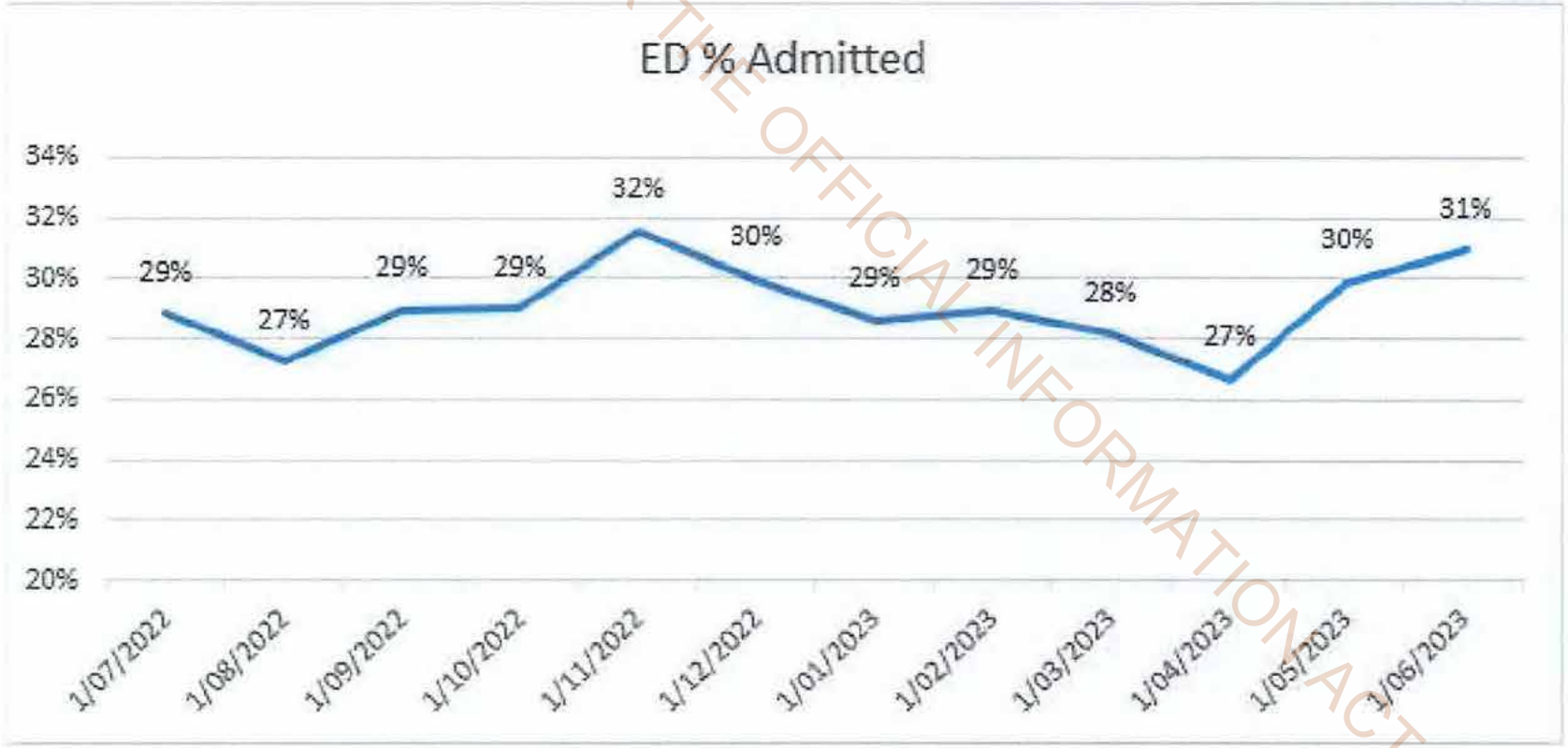
Inpatient admission rate by month



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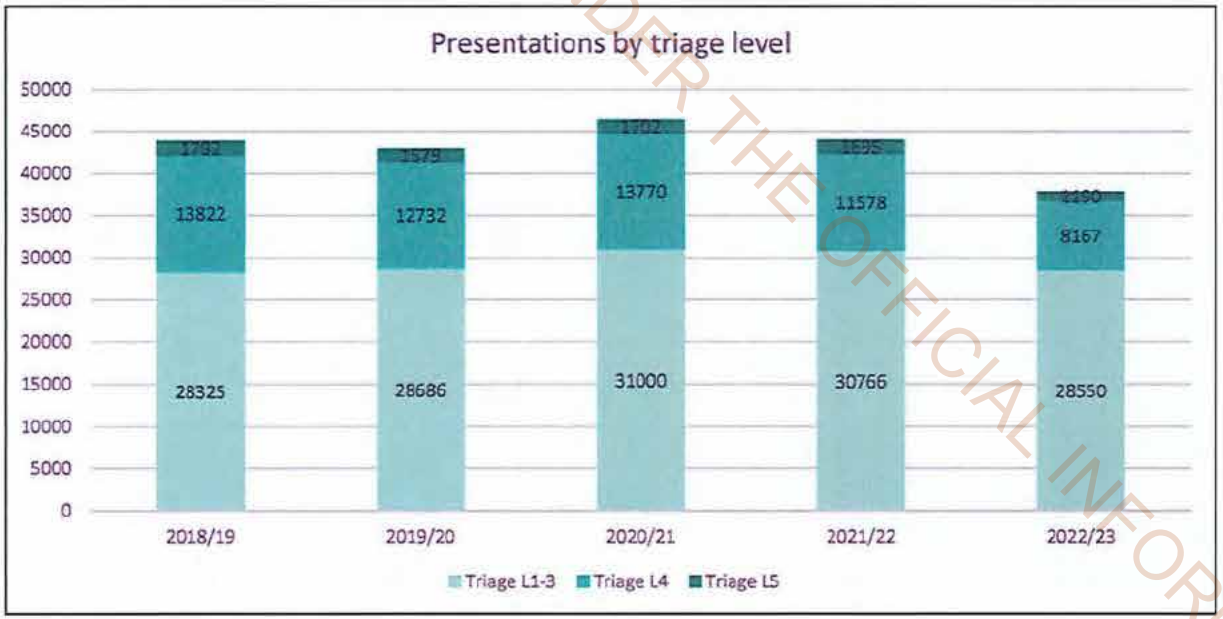

Source: Qlik, accessed 26 June. Note: current financial year is not complete

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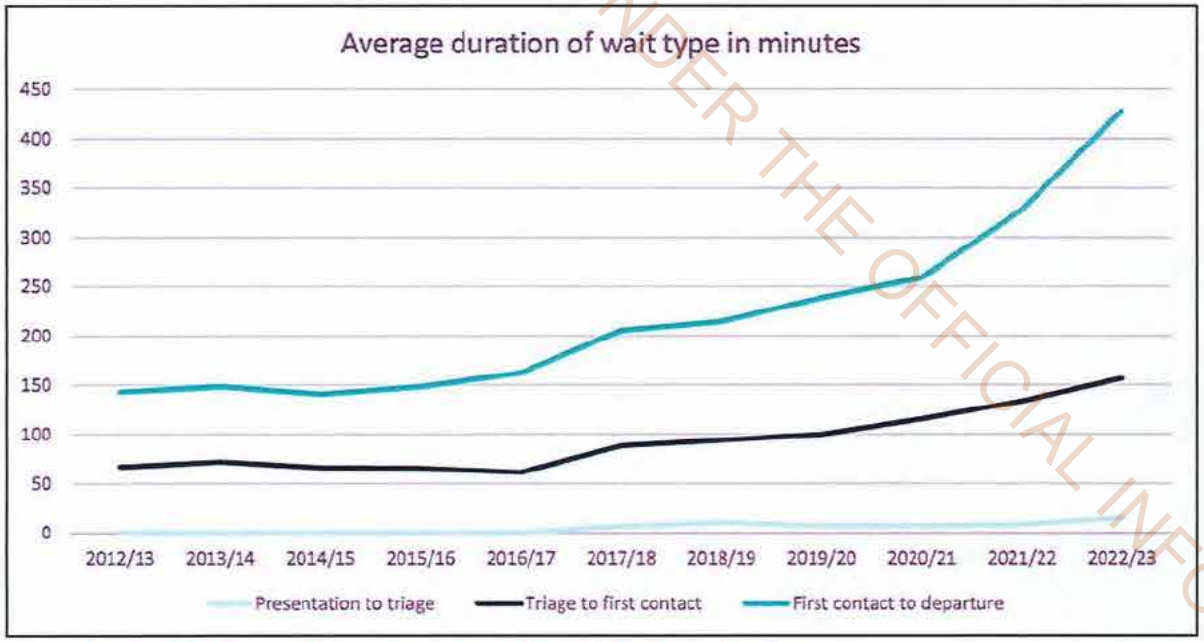

Source: Qlik, accessed 26 June. Note: current financial year is not complete

- Wait time has increased over time, and in the current financial year:
  - Average presentation to triage time is 14.9 minutes (8.0 in the previous year)
  - Average triage to first contact time is 156.8 minutes (133.7 in the previous year)
  - Average first contact to departure time is 428.0 minutes (327.8 in the previous year)

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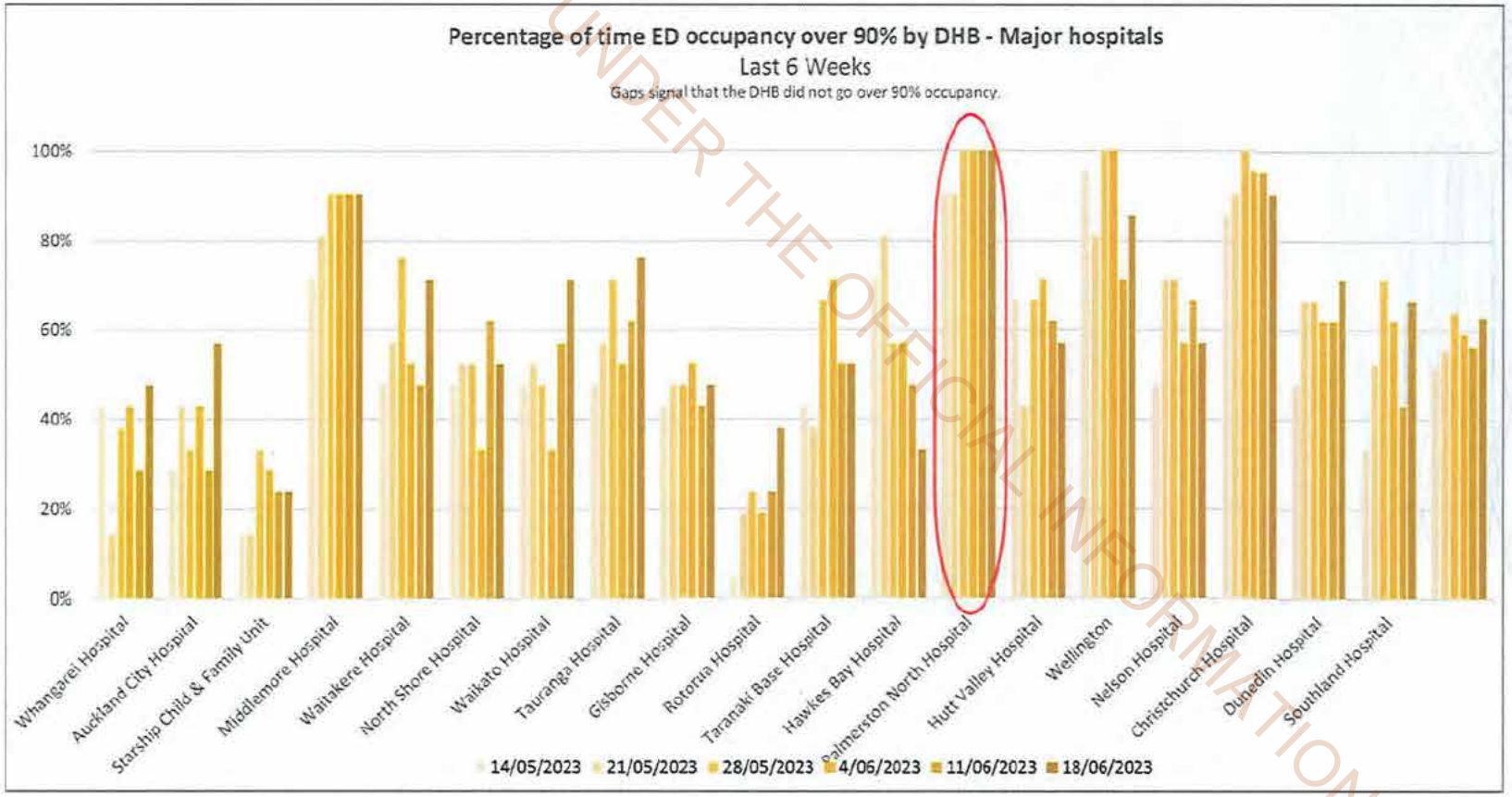

The occupancy in Palmerston North ED is high compared with other major hospitals.

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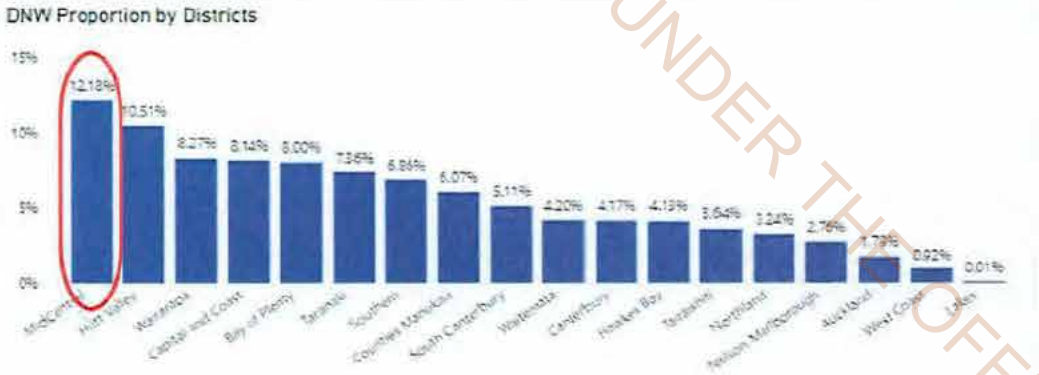

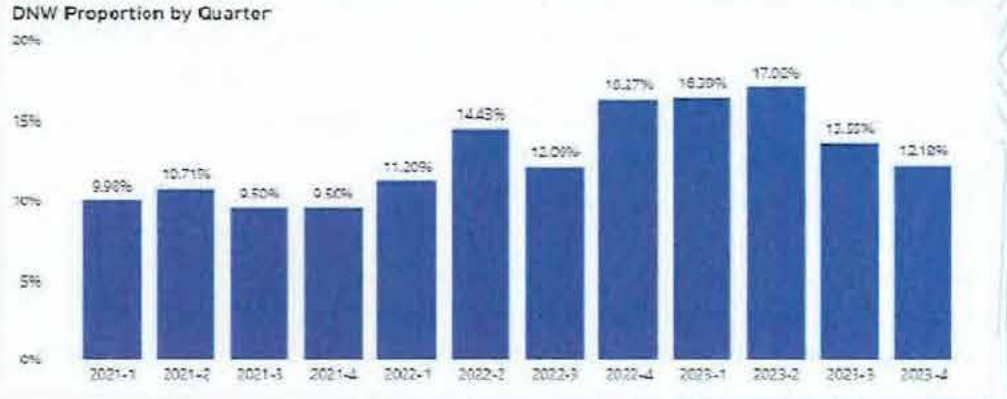

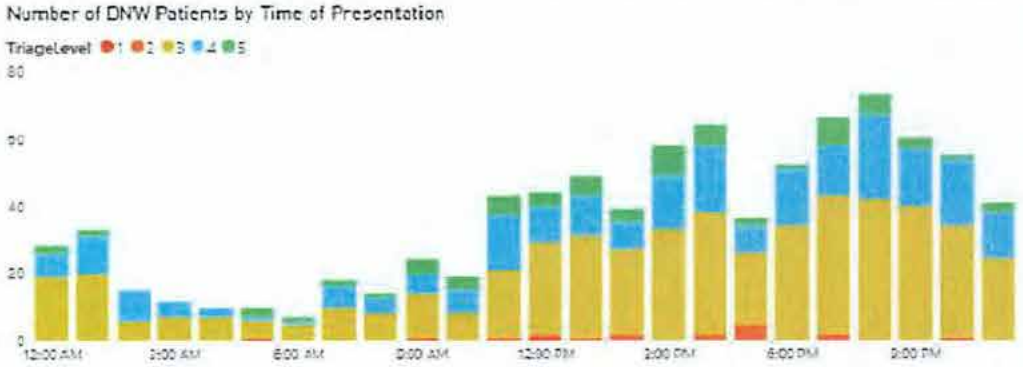

Source: NNPAC, accessed 26 June, note: most recent financial quarter not complete

Patients who do not wait are generally triage 3 and 4, and have been in the department for an average of 8 hours before they leave. Those who present in the evening are more likely to not wait. Māori patients comprise the largest proportion of DNWs, followed by Pacific peoples.

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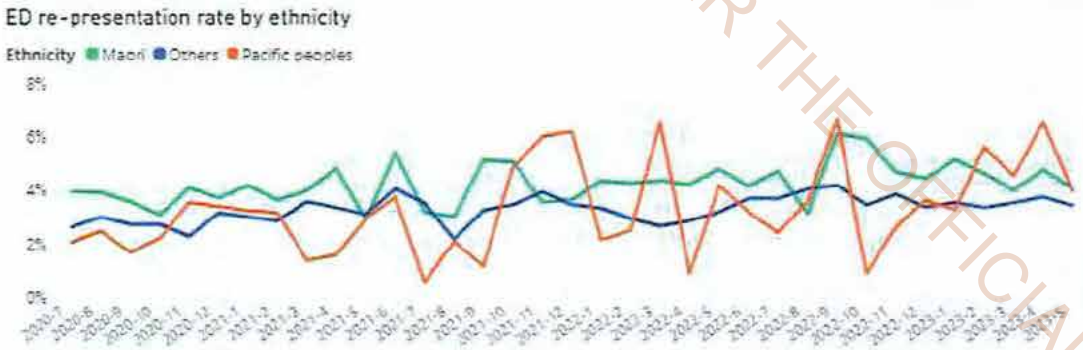

Source: NNPAC, accessed 26 June

Re-presentation rate within 24 hours is 3.52% for MidCentral, 4.24% nationally

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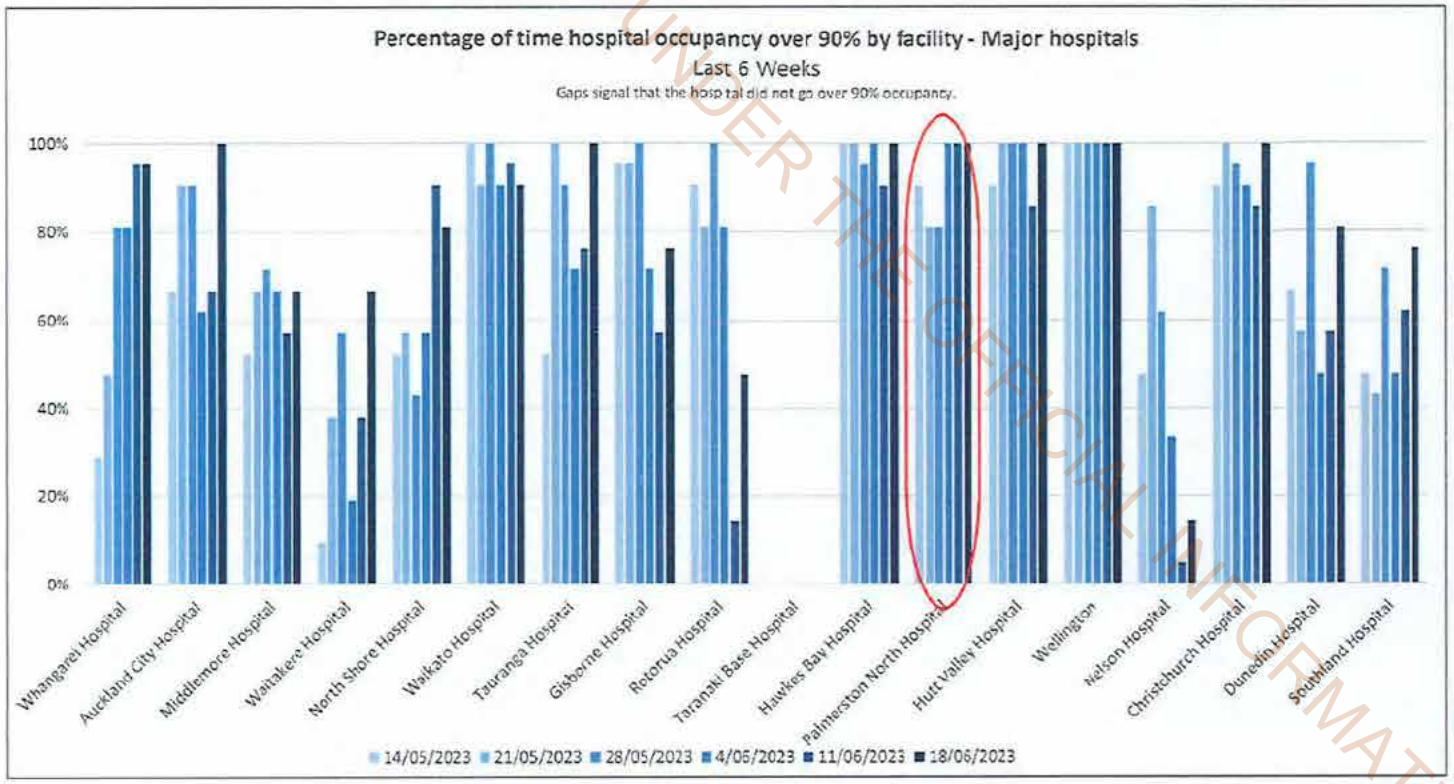
Palmerston North In-hospital flow



Occupancy in Palmerston North hospital is often over 90%

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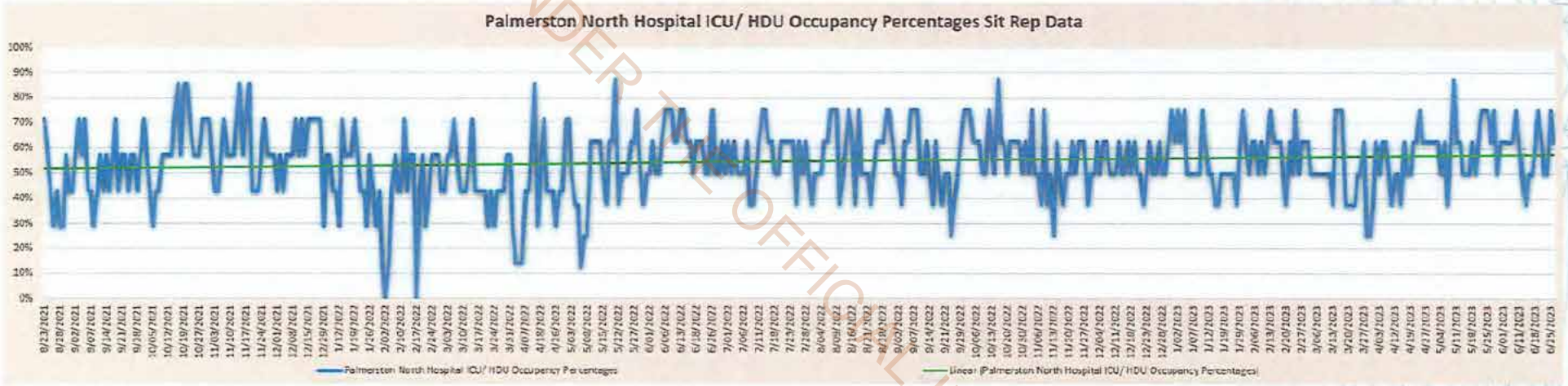

Daily sitrep
HDU/ICU

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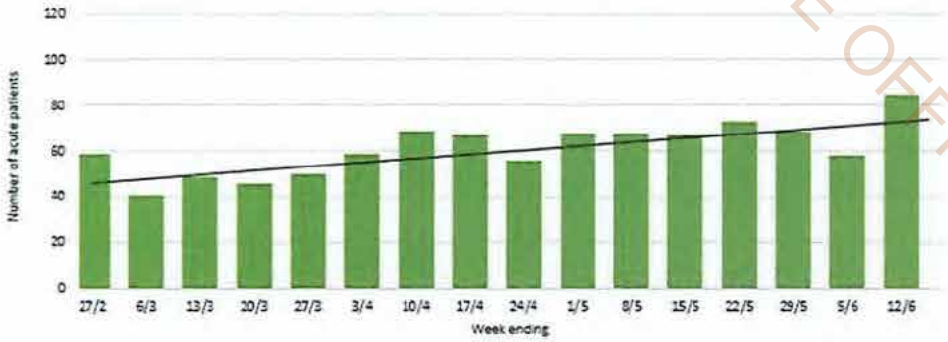
Palmerston North In-hospital flow

Patients in hospital with an acute length of stay of 7 days or more Feb 2022 – Jun 2022

MidCentral

Week ending	27/2	6/3	13/3	20/3	27/3	3/4	10/4	17/4	24/4	1/5	8/5	15/5	22/5	29/5	5/6	12/6
Acute patients	57	39	47	44	48	57	67	65	54	66	66	65	71	67	56	83



Patients in hospital with an acute length of stay of 7 days or more Feb 2023 – Jun 2023

MidCentral

Week ending	19/2	26/2	5/3	12/3	19/3	26/3	2/4	9/4	16/4	23/4	30/4	7/5	14/5	21/5	28/5	4/6
Acute patients	88	88	81	85	81	72	78	72	80	85	93	68	62	69	66	72

Source: weekly acute data, accessed 27 June 2023

The number of acute patients in Palmerston North hospital with a length of stay of 7 days or more has increased in the last year.

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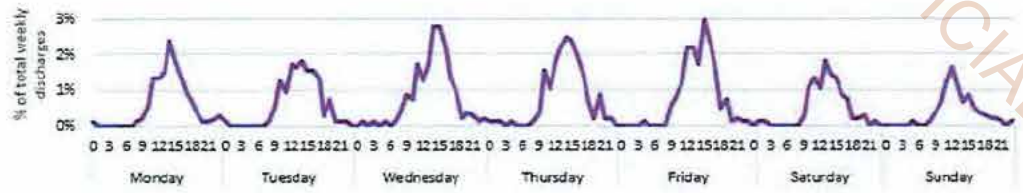
Palmerston North In-hospital flow

MidCentral

	24 hour time																						
Day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Day total
Monday	1	0	0	0	0	0	0	0	1	2	6	14	14	16	25	19	14	10	7	3	1	1	2	3	139
Tuesday	1	0	0	0	0	0	0	0	1	6	13	10	18	17	19	16	16	14	3	8	1	1	1	0	145
Wednesday	0	1	0	1	0	1	0	1	4	9	8	18	13	18	29	29	23	14	10	2	4	3	1	2	191
Thursday	1	1	1	0	1	0	0	0	1	4	16	11	19	23	26	25	20	15	8	2	9	2	2	0	187
Friday	0	0	0	0	1	0	0	0	0	6	9	12	23	23	18	31	24	18	5	8	1	2	1	1	183
Saturday	0	1	1	0	0	0	0	0	0	3	11	14	11	19	15	14	9	8	2	2	3	0	1	0	114
Sunday	0	0	0	0	0	1	0	0	1	4	7	12	17	11	7	9	5	4	3	2	2	1	0	1	87
Hour total	3	3	2	1	2	2	0	1	8	34	70	91	115	127	139	143	111	83	38	27	21	10	8	7	1,046



Source: NMDS data on inpatient discharges with the admission type 'acute'. Data is provided by district.
This month of data is April 2023.

The data table above shows the number of weekly acute inpatient discharges by day and hour. Darker grey cells indicate hours with more discharges. The chart shows the percentage of total weekly acute inpatient discharges by day and hour. Similarly to other hospitals, discharge volumes are lower on Saturday and Sunday.

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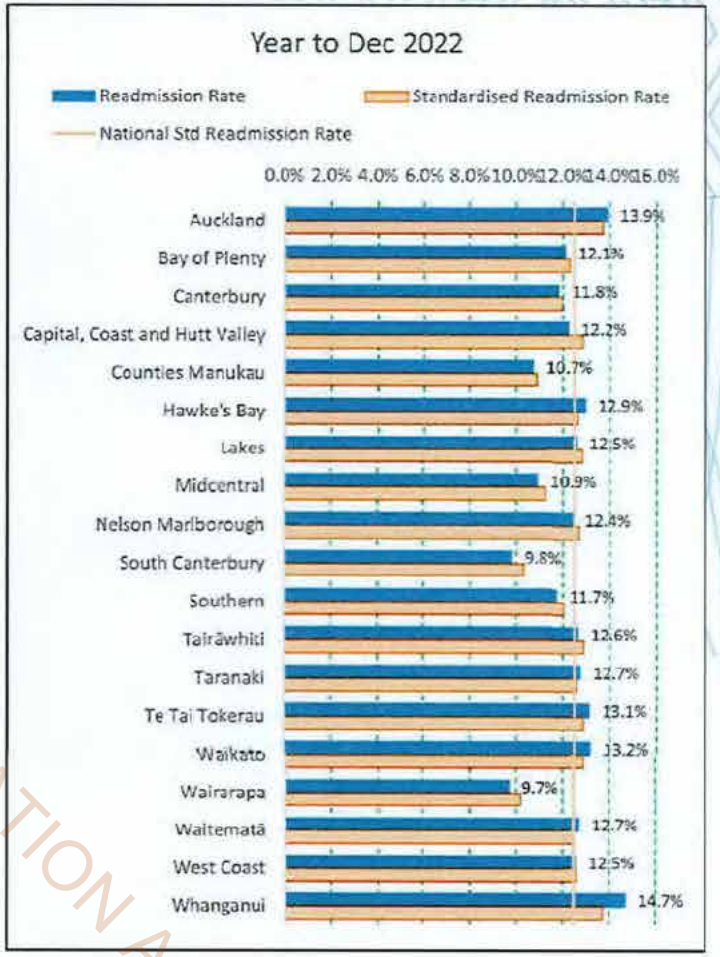
Palmerston North In-hospital flow

District of Service	Year to Dec 2020 Readmission Rate	Year to Dec 2020 Standardised Readmission Rate	Year to Dec 2021 Readmission Rate	Year to Dec 2021 Standardised Readmission Rate	Year to Dec 2022 Stay Discharges	Year to Dec 2022 Readmission Rate	Year to Dec 2022 Standardised Readmission Rate
Out of Scope							
Midcentral	12.4%	12.6%	11.7%	12.0%	33,063	10.9%	11.3%
Out of Scope							

Source: Manatū Hauora, re-admission measure of 0-28 days, all patients. National standard readmission rate is 12.5%



Māori standardised readmission rate 0-28 days in MidCentral has decreased from 13.4% in 2020 to 11.3% in 2022 (national standard is 12.8%)

Pacific Peoples standardised readmission rate have decreased from 12.5% in 2020 to 10.7% in 2023 (national rate is 12.3%)

28-day readmission rate can be associated with a combo of discharge and coordination issues, 0-3 days is usually associated with clinical and discharge issues.

MidCentrals **0-3 day standardised readmission** rate is 1.9% for Pacific (3.0% nationally), 2.2% for Māori (3.3% nationally) and 2.5% for all ethnicities (3.3% nationally)

National support required

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Palmerston North potential areas for national assistance

Discharge planning. The current IT platform is not fit for purpose. A new system would help significantly with releasing clinician time and improving flow.

E-pharmacy. There are well developed plans to introduce e-Prescribing and this could be in place prior to winter. This would help with releasing clinician time and improving patient safety. However there has been a national directive from Data and Digital to not progress further.

Bed modelling. Sharing of methodology used in other regions to predict future demand and the capacity required to meet it. This will also help to inform regional planning discussions and load balancing across sites.

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ORGANISATIONAL LEADERSHIP TEAM

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Health New Zealand

Te Pae Hauora o Ruahine o Tararua | MidCentral

For:

	Decision
	Endorsement
X	Noting

To	Organisational Leadership Team
Author	Margaret Bell, EA to Acting Group Director Operations, Hospital and Specialist Services
Endorsed by	
Date	1 December 2023
Subject	**Acute flow reports**

RECOMMENDATION

It is recommended that the Organisational Leadership Team:

- **note** the acute flow reports prepared by Jeremy Dryden and Debbie Hailstone (September 2023) and Kate Brockman (October 2023)
- **note** both reports have been shared with the Medical Lead, System Flow, who will discuss with clinicians.

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Summary of findings from visit to Palmerston North Hospital

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Executive Summary

Recent media reports including comments from senior Emergency Department (ED) clinicians at Te Pae Hauora o Ruahine o Taraua MidCentral, highlighted frustrations with ED overcrowding and lack of staffing to meet clinical demand. A team of two senior ED clinicians went to review the situation at the request of Te Whatu Ora Hospital and Specialist Services (HSS). Their brief was to inform the National Director of Hospital and Specialist Services on how to best support MidCentral.

The main findings include:

1. Serious vacancies in the medical work force for both emergency medicine and general medicine, despite best efforts to recruit. This makes both services at risk if further vacancies occur.

2. Te Pae Hauora o Ruahine o Taraua MidCentral has an active system flow program of work commensurate to any flow program across the motu, that this review team are aware off.

3. Te Pae Hauora o Ruahine o Taraua MidCentral, is facing an increasingly aging population, who are driving the longer length of stay for general medicine. This is one of the key drivers to the current access block the emergency department is facing.

4. While hard to quantify there is an element of increased risk to both patients and clinical staff when addressing this immediate demand.

Team members

Dr Jeremy Dryden, Emergency Physician, Clinical Director of Acute and Critical Services Te Whatu Ora Counties Manukau. Relevant previous roles include Fly In Fly Out Director Bundaberg Hospital, Queensland, locum Senior Medical Officer (SMO) supporting a regional ED under threat in Western Australia.

Debbie Hailstone, Associate Charge Nurse Manager, Quality improvement facilitator, Te Whatu Ora Counties Manukau. Relevant roles, SSED target champion, in patient flow diagnostician.

Team members visited Palmerston North Hospital Thursday, 7th September and Friday, 8th September. A welcome pōwhiri was greatly appreciated. The hospitality of the team and closing words were taken with sincere appreciation.

Meeting held with

Dr Jeff Brown, Interim District Director
Lyn Horgan, Operations Executive, Acute and Elective Services
Carrie Naylor Williams Operations Lead, Integrated Operations Centre (IOC), ED and System Flow
Rachael Timutimu, Nurse Manager, IOC, ED and CCDM Health Informatics Nurse
Dr David Prisk, Clinical Lead Emergency Department
ED SMO team at SMO meeting - 9 present
Kellie Stockney, Charge Nurse ED
ED senior nursing team
Lee Welch, Quality and Service Improvement Lead

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Nicky Falleni, Project Manager, System Flow (absent Dr Jason Prior, General Medicine Physician and Medical Lead, System Flow)
Janine Jackson, Charge Nurse Medical Specialty Ward, Flexible Assessment and Flow Unit.

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Medical Workforce

The ED has been unable to recruit to budgeted SMO/Resident Medical Officer (RMO) FTE; this leaves the service with a significant short fall and is the main contributor to shifts being uncovered. Without an appropriate ED workforce, patients have extended delays to be seen which contributes to ED overcrowding and the very high did not wait rate. This rate is especially high for Māori.

Provider	Budgeted	Current	Benchmark
SMO	16 (18)	13 dropping to 11	
RMO	24	13 increasing to 18	
NP	5	3	
Total	45	26	
Patients per provider (43k)	950	1633 – 1343(Oct)	800 – 1100 (3 metro Auckland ED's)

Ensuring a sustainable workforce pipeline for both SMOs and RMOs is the main concern of the team. At this stage despite active recruitment there is only 1 additional SMO scheduled to join the team, with 2 SMOs scheduled to leave. RMO recruitment is expected to improve mid-October to 18. Accreditation for emergency medicine training is expected next year and is vulnerable. Wellington does not generally feed its trainees to Palmerston North Hospital instead preferences Hutt hospital for ACEM regional training requirement.

There are a large number of medical vacancies across MidCentral, SMO (33) and RMO (20.6). Due to active recruitment 25 new SMO new arrivals are expected over the next 6 months. However, the General Medicine (2 SMOs, 6.6 RMOs) vacancies at this stage are unfilled. This will continue to impact hospital flow and cause access block contributing to ED overcrowding as general medicine accounts for 80 % of the admissions.

The ED Nursing FTE is now fully recruited however is a very junior workforce requiring a lot of additional nurse educator and coaching input.

Executive support

A clinical lead for system flow (0.5 FTE General Physician) has been in role since February 2023 alongside an existing flow team. There is a supportive and innovative executive team who support flow initiatives and invest in successful ones.

Hospital Flow

MidCentral has a progressive and innovate flow program. The suite of initiatives has been targeting a reduction in ED demand and decreasing the hospital length of stay. Since the Te Whatu Ora visit in February, the winter preparedness plan and national flow collaborate system has given additional capacity to the flow system and the team could not identify any additional projects over and above the MidCentral acute flow program.

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Community support to reduce demand

Current highlights include:

- Free GP Telehealth by way of Practice Plus, close to 100 appointments per day by end of August 2023
- Minor ailments via pharmacies
- Enhancing Primary Options for Acute Care (POAC) with a focus on keeping people out of hospital even if not in scope
- Looking to expand Hospital in the Home
- 6 GP practices are now recently taking on new patients (10,000 patients remain unenrolled with a GP)

Data to support these initiatives include a drop in triage 4 and 5 ED presentations, accounting for an overall reduction in ED presentations. When nationally benchmarked and corrected for age, the ED presentation rate per 100,000 population is low. This would indicate the population presenting to the emergency department has a higher acuity. This is also backed by the increased age and ALOS for General Medical patients. Demand reduction strategies targeted towards lower acuity patients will not solve MidCentral hospital capacity. Long term investment in General Practice will reduce hospitalisation over the longer term.

Emergency Department

The heart of the ED team is their community and there is a deep sense of commitment to improving emergency care for patients.

The ED nursing team have had a recent change in senior roles and now on track to be fully recruited. TrendCare has been implemented and the team are trying to capture acuity data. The physical environment, recent high staff turnover and lack of options within the facility for computer stations make this a challenge.

When meeting with the SMO team the biggest hurdle they see is lack of recruitment and retention. They feel as a region more could be done to support their vacancies and looking to some extraordinary recruitment techniques to assist. They also feel that other districts are offering additional enhancements, and so lose good candidates after interview. The SMO team are exhausted filling roster vacancies and have little head space to try new things, although they are open to it. The ED team want acknowledgement that they are taking on additional risk by continuing to operate in this environment. Several case stories highlighted this, though was not explored in detail. Leadership and support will be crucial to get the team reengaged in system flow initiatives once the work force is stabilised.

Integrated operations centre

A modern purpose-built patient allocation and tracking system is in place. This gives good visibility and transparency across the system and is fit for purpose.

Inpatient wards

During the visit the wards were at 100% occupancy with 20 patients waiting for a bed in ED. Patient flow is further reduced as there are only 6 isolation beds across the system. Note was made that as a regional centre cardiac patients can wait some time as inpatients for tertiary cardiac care in Wellington and that as a regional cancer centre, they do take on a number of other districts' acute and planned care workload. This includes major cancer surgeries requiring ICU post operative care.

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The General Medicine service also carries large vacancies. The medical teams are operating with well over 20 patients per SMO. The average length of stay for General Medicine patients is increasing in line with its aging demographic to 5.7 days. Bench marking using Health Round Table data was not available at the time.

The ward teams have Multidisciplinary Team (MDT) huddles and use Expected Date of Discharge (EDD) based on health round table data. The patient flow system also allows visibility of those patients waiting e.g. investigations to progress care, and transfer to Wellington. This data is used to predict daily ward discharging and patients are queued to the appropriate ward.

Other strategies such as over census beds are used. The only area to stand up additional capacity is the current area dedicated to Ambulance Waiting Area.

Executive Team

The executive team are open and willing to try new ways of working to improve patient flow. They are prepared to invest in leadership development and actively trying to improve the care for patients within the current constraints. The executive team are clear in their expectations of the acute flow program. The executive had one request that Cortex (used in Waitaha Canterbury) business case that was submitted as part of the Acute Flow Initiatives be supported based on its reduction in clinical time spent on paper-based systems.

Summary

Overcrowding in the Palmerston North Hospital ED is compounded by significant staff shortages making working in the ED challenging. There is an active patient focused system flow program trialling and implementing multiple initiatives to try reducing hospital length of stay and support community care. The flow program includes good use of data, culture change and trialling, then funding successful initiatives. As recruitment to ED improves, the ED will be expected to participate in this program.

A fundamental shift in acute care is occurring at MidCentral. More patients with higher acuity issues are presenting to ED, with those admitted requiring hospital care for longer. Addressing this requires a larger societal change in expectations, support for secondary care as well as long term investment in primary care.

Recommendations

1. Stabilise the ED and General Medicine workforce: there are a number of strategies over and above usual recruitment strategies that could be applied including

    - Fly in Fly out locums: these can be a double-edged sword, however, they will often stabilise a tired workforce and draw in a percentage of people who will convert to permanent FTE. Short term enhancements to match Australia will be required for a defined period followed by normalising of rates and conditions.

    - Review how Te Whatu Ora can support locum work while employees are on leave from a substantive Te Whatu Ora role. Strict application of no Te Whatu Ora work while on leave policy, will drive New Zealand medical staff employed by Te Whatu Ora to Australia for locum work.

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- Consider short term contractual enhancements for regional/rural work, especially those under threat. At a minimum review parity of SMO remuneration across the region to prevent escalating offers undercutting each other.

2. If further loss of ED or General Medicine staff is anticipated, then with some urgency a regional approach will be needed to maintain services at Palmerston North Hospital. While not explored in any detail, patient load sharing with close regional EDs, redeployment of staff across sites or consolidation of services to Palmerston North Hospital should all be considered.

3. Urgent approval be given to implementing the Cortex system at Palmerston North Hospital.

4. Te Whatu Ora to consider sponsoring an Emergency Department network meeting to allow some collegial discussion of how to support each other across regional and national networks. While there are informal ED CD and ED Senior nursing networks, having Te Whatu Ora HSS as part of the stakeholder group will solidify its purpose

5. Some acknowledgment to the clinical teams who are in a position where taking clinical risk is unavoidable

6. An external flying squad to advise on system flow/change methodology is **not** recommended. The system flow program is supporting internal improvements that need time to embed and leadership development needs time to blossom. There is a risk that external help will be misconstrued, potentially disrupting the work already undertaken.

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Te Whatu Ora
Health New Zealand

Site visit Palmerston North Hospital October 2023

Background

Recently Senior Emergency Department staff have been interviewed by the media citing overcrowding in the Emergency Department and have expressed frustration at a perceived lack of a wider response to this issue. The Regional Director of the MidCentral Region, and the Te Whatu Ora Hospital and Specialist Services team requested a site visit by the author to Palmerston North Hospital (PNH). The objective was to identify current and future opportunities for improvement in whole of hospital system patient flow and access to care across the hospital. There were also some opportunities noted during the visit regionally.

The visit was undertaken on the 5th and 6th of October and entailed meeting with multiple key stakeholders, reviewing reports from previous visitors, and reviewing data provided by the internal hospital team. It should be noted that the report was written based on stakeholder feedback, observational studies, and limited data due to time constraints.

The author is an Emergency Nurse with experience in reviewing and supporting over 55 hospitals across New Zealand and Australia with regards to patient flow and access to care, both operationally and from a reform and innovation perspective.

The author thanks all stakeholders for their time and the opportunity to provide candid feedback on matters regarding access and flow across the hospital and region and was grateful for the welcome powhiri.

Executive summary

The author acknowledges the challenges for PNH in terms of workforce, infrastructure, and community supports for the Palmerston North population. An ageing population across a widespread region presents a different mix of challenges comparative to their urban organisations. There were however notable opportunities in the organisation identified to improve patient flow/access to care.

Opportunities were noted across the areas of ED, IOC/bed management (related to systems and processes), organisational wide innovation and improvement focus and strategies, clinical engagement, clarity of roles and responsibilities as relates to patient flow and clinical areas/ownership, overall hospital operational management, and overall hospital wide ownership of the issues of ED overcrowding and perceived bed shortages.

Improvements in these areas will be best developed and implemented by continuing to support the current service improvement team and ensuring local change capability remains within the organisation.

Meetings with stakeholders

Russell Simpson, Regional Director
Dr Jeff Brown, Interim District Director
Lyn Horgan, Operations Executive, Acute and Elective Services (Zoom)
Neil McKelvie, Operations Lead, Unplanned Care
Chris Simpson, Operations Lead, Planned Care
Dr Daniel Nistor, Medical Lead, ICU
Carrie Naylor Williams Operations Lead, Integrated Operations Centre (IOC), ED and System Flow
Rachael Timutimu, Nurse Manager, IOC, ED and CCDM Health Informatics Nurse
Dr David Prisk, Clinical Lead Emergency Department

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Kellie Stickney, Charge Nurse ED
Lee Welch, Quality and Service Improvement Lead
Nicky Falleni, Project Manager, System Flow
Dr Jason Prior, General Medicine Physician and Medical Lead, System Flow (Zoom)
Commissioning team (Zoom)
Yvonne Stillwell, Executive Director Nursing (Acting, Zoom)
Debbie Perry, Charge Nurse, MAPU

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Emergency Department

The ED internal flow is significantly impacted by the current structure and number of available treatment spaces and design of cubicles and resuscitation bays, and the waiting room. There is currently a practice of "waiting room medicine" that poses a clinical risk to patients and a practicing risk to the clinical staff. There is a dedicated labelled ambulance corridor area within the ED.

The author did not undertake workforce analysis or benchmarking however it was noted that previous reports have outlined opportunities around improving staffing to within benchmarks. Concerns from stakeholders regards both ED and General Medicine staffing shortages were noted. A meeting scheduled during the visit with the ED SMO group was cancelled due to staff availability.

The change in ED Nursing leadership was noted and the FTE is now fully recruited. The plans to support the junior workforce with increased training and education were noted as a positive for the ED. Triage processes were noted as a particular improvement area for the ED, the ED CN has carriage of this and a plan in place to support this.

The relationships between some specialties within the hospital and the ED team were noted by stakeholders as being somewhat strained. The staff interviewed noted a general lack of a hospital wide and executive escalation response to the ED overcrowding and the perceived lack of inpatient ward beds.

Recommendations:

1. Improve ED environment – accelerate work with Infrastructure and Investment Group to establish, with urgency, a better facility for ED and acute care.
2. Review the hospital wide escalation response to periods of overcrowding in the ED, including actions and the role of the executive, and supporting priority investigations for the ED during these times of surge (radiology and pathology).
3. Along with already identified actions to improve SMO culture, address specific admission criteria with certain specialties through a facilitated workshop/meeting, identify an SRO for this, implement and ensure consistent use.
4. Review ED medical and nursing staffing rosters to align with peaks of demand (workforce permitting).

Improvement and Innovation

The hospital has a capable and well qualified innovation lead, project manager and a dedicated Clinical Lead for system flow at 0.5 FTE, presenting a significant opportunity to support existing and ongoing improvements in access and flow. The current national plan to centralise improvement resources presents a risk to the ongoing capability for PNH, particularly with regards to acute flow.

The current and previous data analytics undertaken to support focus areas for improvement would benefit from a deeper dive and some observational studies around process. The current workplan for improvement is robust however has multiple work areas and initiatives which might not necessarily line up with the priorities of the organisation required at this time.

Recommendations:

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5. Undertake detailed data analytics with a manual Diagnostic approach:
    a. ED timeline study
    b. Ward audit
    c. IOC and bed mapping
6. Review current improvement initiatives against the Diagnostic outcomes, reconcile against current work, and develop an implementation and change plan to support improved performance (access and flow), identify the top 3-5 initiatives for focus. Refine current plan and implement.
7. Maintain appointment of local improvement lead (S) and project officer within the organisation reporting to the Executive Leadership Team.
8. Support a site visit to the Northern Region for the improvement team for lessons learned from their Acute Flow Program and viewing different models of care.
9. Deliver an acute flow training program to key stakeholders, including the executive team.

Integrated operations centre/bed management

The MIYA (Alcidion) IT system provides an ability for organisational wide patient flow management of beds and overview of staffing at PNH. This system, like all other IT systems, is only effective if the data entry is timely and accurate. The view of available beds in the IT system versus physical bed availability was noted to be variable at PNH.

The hospital wide escalation response/ownership to overcrowding in the ED and perceived lack of beds was unclear. This was also noted for regional escalation and patient flow. There were several patients waiting for transfer to Wellington for interventional cardiology that had waited 7+ days for availability of these procedures. These delays take up significant bed days.

Recommendations:

10. Undertake a manual snapshot study of IT beds available versus physical beds available.
11. Develop clear local (PNH) and regional escalation pathways with feedback loops, actions and defined roles and responsibilities for local and regional barriers to patient flow, including the executive and management teams.

Inpatient wards/specialties

The current bed plan for the organisation has been reviewed multiple times with numerous iterations of short stay unit implementation. The author is unaware of the methodology used for development of the short stay units however from observation these are not necessarily fit for purpose in terms of space and facilities.

The approach to patient flow and ownership of bed base by inpatient teams was observed to be siloed and departmentally focused. There was not an observable "whole of system/organisation" approach and narrative to bed management and use of beds, particularly of note from the medical leaders within the organisation.

Recommendations:

12. Develop a communication and engagement strategy aimed to dissolve siloes between the inpatient and ED SMO group.
13. Hold an SMO workshop to agree on admissions to each speciality and ward at an organisational level. Document, ratify and implement.
14. Use opportunities with Te Whatu Ora restructuring to consider the current organisational structure of clinical and operational leads.

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Other general

The ALOS for general medicine was described by stakeholders as increasing, data provided were not clear on the reasons for this.

There was a general interest and request for implementation of the CORTEX IT platform as a strategy to decrease paper-based documentation.

There were general commentary regards lengthy delays for investigative procedures required to support treatment or discharge decisions (MRI, ECHO). This is not unique to PNH.

There was a common theme from stakeholders regards the availability/lack of community services, the data were not conclusive in some areas to support some of the perceived root causes.

The executive team are highly supportive of and aware of the need for innovation and improvement across the system as relates to patient flow and access to care/services. There was, however, a common theme from stakeholders regards a generic lack of communication about infrastructure changes, feedback from previous reviews/visits to the hospital and operational responses to current system pressures.

Resounding feedback regards an external "flying squad" of unknown entities to support/advise next steps or revision to the current innovation and improvement strategies was in the negative. Stakeholders outlined that there have been multiple visits (including this by the author), with little feedback and plans for next steps. Whilst the organisation welcomes support, this would be best welcomed with consultation and an agreed plan for what this support would entail to ensure an environment of trust and collegiality and implementation success.

Recommendations:

15. Develop a specific hospital wide strategy to address LOS with a particular focus on general medicine. Include timeframes, actions with owners, escalation for regional issues as required – define local v regional ownership.
16. Continue work on a proof of value implementation of CORTEX in General Medicine.
17. Undertake the manual "why am I still here?" study to ascertain the number of patients waiting for investigations.
18. Develop a whole of hospital communication and engagement strategy for reform initiatives and operational issues/strategies.
19. Undertake more detailed data analytics regards community services and identify root causes, agree solutions and escalate outside of organisation as required.
20. Continue to support and expand:
    a. Practice Plus
    b. Pharmacy interventions for minor conditions
    c. Expand as feasible POAC (Primary Options for Acute Care) and HiTH (Hospital in the Home)
21. Escalate the shortage of General Practitioners to appropriate organisational bodies.
22. Provide external support from a trusted team that can build relationships and create the environment for sustainable implementation. Short term assistance will not benefit this organisation.

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