Deloitte.

JUNE 2024

Mackay HHS Regional Transport Solution.

Mackay Hospital and Health Service

Executive Summary.

A FRACTURED HEALTH TRANSPORT SYSTEM...

Transport is a key barrier for patients accessing healthcare and disproportionately affects First Nations people.

Several community organisations are delivering patient transport in the Mackay, Sarina, Isaac and Whitsunday regions. These services are delivered for patients who are not able to transport themselves, or access government health transport services such as the Patient Transport Subsidy Scheme (PTSS).

Local transport providers are operating across a range of regions, with different hours, varying capacity, and servicing different cohorts. To more efficiently deliver transport across vast distances, there is an opportunity to collaborate and find common ground for a better way forward.

AN OPPORTUNITY TO ALIGN WITH PATIENT NEED...

Access to specialist healthcare for patients outside of Mackay is limited, and First Nations people living in more rural areas are currently required to travel large distances to access healthcare. This includes after discharge and outpatient appointments, where patients often find themselves without transport at night or needing to travel up to three hours to go home.

Outside of Mackay, options for transport to and from healthcare are limited. Public transport is minimal and can take over three times longer than trips made by car. Outpatient appointments are often scheduled early or late in the day for patients outside of Mackay, requiring health transport providers to drive large distances before sunrise or after sunset.

PROPOSED OPTIONS GOING FORWARD.

Four key sources of data have been used to inform the way forward for health transport in these regions. This includes transport provider survey responses, PTSS data, patient data and key stakeholder workshop discussions. This report proposes five options to strengthen patient transport:

1. Formation of a local volunteer shared resource pool
2. Formation of a collaborative provider working group
3. Corporate community partnerships
4. Redesigning outpatient appointment scheduling
5. Education for patients and health staff

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Introduction and context.

Introduction and context.

Transport is a key enabler for access to health care for First Nations people. Research has shown that those who are 'transport disadvantaged' are at risk of downstream health challenges[1]. Delaying or missing appointments with a primary care provider can affect how patients manage chronic disease conditions and reduce the chance that a serious illness can be diagnosed early. Transport inaccessibility also reduces access to appointments and can lead to higher failure to attend rates.

Transportation challenges are particularly acute for individuals with low socioeconomic status, which is a key reason why it is often considered a social determinant of health. The Australian Institute for Health and Wellbeing (AIHW) quantified the role of social determinants behind the average health gap between First Nations and non-First Nations Australians using a composite measure of health. Whilst 47% of the gap remained unexplained, factors such as transport and access to healthcare were not included showing that they have a significant impact.

There are currently substantial transport issues in the Mackay, Isaac and Whitsunday region due to the geographic distance between health services and the various communities. This has in particular affected First Nations people who make up 6% of the total population. The issues communities face include transport options being inconsistent across the region resulting in services often being expensive due to a lack of options. Services are also not coordinated, with patients often having to travel multiple days in a week to attend different appointments.

Transport was identified as a key priority as part of the launch of the Our Mob Together Strong Health Equity Strategy, with there now being an opportunity to understand the current state of transport within the region and co-design and co-develop strategies to improve coordination across the system.

HEALTH NEED SNAPSHOT.

- 10,589 identified First Nations within MHHS region
- 6% of the total population identify as First Nations
- 7% of MHHS outpatient appointments
- 62,309 admitted to MHHS facilities
- Top Admissions for First nations:
  - Mental health
  - Obstetrics
  - Renal dialysis
- 33% of the First Nations population received MBS 715 Health Check
- 13% of First Nations people listed transport/distance as a reason for not attending health appointments

Source:
- *Our Mob Together Strong: 2022-2025 Health Equity Strategy*
- *Aboriginal and Torres Strait Islander Health Performance Framework 2020*
- *MHHS Local Area Needs Analysis 2022*

[^]National Indigenous Australians Agency, Aboriginal and Torres Strait Islander Health Performance Framework (2024). https://www.indigenoushpf.gov.au/measures/2-13-transport

Purpose of this project.

The purpose of this project is to review and understand patient transport options for First Nations people within the Mackay HHS catchment.

Building on existing planning

Health transport was identified in the Our Mob Together Strong: Health Equity Strategy 2022-2025 as a key priority for the region as part of a suite of initiatives to increase access to healthcare.

Deliver a co-designed transport project

Through the collaborative workshop, stakeholders have started the process of identifying opportunities to optimise First Nations patient transport for patients, providers and funders across the health system.

Scope of this project

Deloitte was engaged to support Mackay HHS in developing a regional transport solution for First Nations communities within the MHHS catchment. This included a high-level desktop review to develop a current state, a stakeholder workshop and a way forward report to be developed.

Methodology.

Deloitte has been engaged by Mackay HHS to undertake this project. The scope of this review relied on a series of methodologies which are outlined below:

- **Stakeholder survey:** A survey was distributed to all stakeholders to provide information about their organisations current transport arrangements
- **Data analysis:** Analysis of Patient Transport Subsidy Scheme (PTSS) data and hospital data for First Nations patients to develop an accurate view of how they are utilising health services
- **Workshop:** A workshop with these stakeholders was conducted to analyse the current state and co-design a way forward

This report was developed drawing on these inputs to provide an overview of current services and the next steps moving forward to improve patient transport.

Structure of this report.

This report presents analysis of the current state and identifies opportunities and next steps for improved services moving forward. Specifically, this paper is structured as follows:

- **Introduction and context:** an overview of the project including an overview of the First Nations population
- **Current state:** Overview of the current patient transport services through provider profiles, survey analysis, PTSS data analysis and patient data
- **Gap analysis:** Understanding of what the gaps in service provision are based on research and stakeholder input
- **Key considerations and next steps:** overview of factors and enablers that need to be considered in order to achieve success.

Glossary.

Acronym	Definition	Acronym	Definition
AIHW	Australian Institute of Health and Wellbeing	MBH	Mackay Base Hospital
ALOS	Average length of stay	MBS	Medicare Benefits Schedule
BCCA	Bowen and Collinsville Community Alliance	MCVA	Mackay Community Visitors Association
CCHS	Community-controlled health service	MDSS	Moranbah District and Support Services
COAG	Coalition of Australian Governments	MHHS	Mackay Hospital and Health Service
CSCF	Clinical Services Capability Framework	OMTS HES	Our Mob Together Strong Health Equity Strategy
DAMA	Discharged against medical advice	PTSS	Patient Travel Subsidy Scheme
DRG	Diagnosis-related group	SA2	Statistical Area 2
HHS	Hospital and Health Service	SLA	Service level agreements
KPA	Key Priority Area	SRG	Service-related group
KSN	Kidney Support Network		

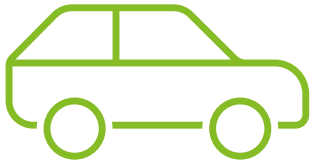
Current state data analysis.

Current state data analysis methodology.

To develop a systems, view of health transport for First Nations people within the Mackay HHS region, four key data sources were analysed to understand the patient need, the provider perspective and the policy context.

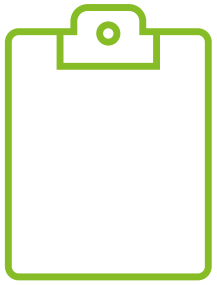
Hospital data.

To develop a profile of First Nations patients in the region, inpatient and outpatient Mackay Base Hospital data from calendar year 2023 was analysed. Inpatient data was analysed at a DRG and SRG level to understand admission trends. Outpatient analysis focused on the Tier 2 clinic codes to understand what types of services patients were accessing.



Patient Transport Subsidy Scheme.

The Patient Travel Subsidy Scheme (PTSS) provides funding to eligible patients who are required to travel for specialist health services not available locally. First Nations PTSS data for the Mackay, Whitsunday and Isaac regions for 2022/23 and 2023/24 (July to September) was analysed to understand trends in access to the scheme.



Provider survey.

To understand health transport in the Mackay, Isaac, Sarina and Whitsunday regions, a survey was disseminated to providers operating within these regions. The survey was sent to 11 people in community-controlled, non-profit and public health organisations between 1st and 19th February 2024 and received 9 responses from 8 organisations.

Policy and provider research.

Desktop research was conducted to understand the relevant policies, strategies and providers within the region's health transport context. Policy and strategy research included documents from various state and local government and non-government bodies, including community-controlled organisations. Provider research included organisations local to the Mackay, Sarina, Isaac and Whitsunday area who had publicly-available information regarding a health transport service.

Importance of access to healthcare.

Healthcare is considered accessible when it is available at the right place and time. As a key determinant of health, accessibility of transport is important for communities, especially those who are less likely to have access to transport. This group of people include First Nations Australians, women, children, disabled people, those in rural and remote areas, those with low socioeconomic status and older people. First Nations people are less likely to access healthcare services, with 56% of First Nations Queenslanders not accessing healthcare, slightly above the national average of 55%.

First Nations Australians are also less likely to have access to a car, a gap most prevalent in remote and very remote areas. Vehicle access enables service access, which has been demonstrated to improve the likelihood of First Nations people who report not having disability, long-term health conditions or low/moderate levels of psychological distress. Individuals with access to a motor vehicle are more likely to rate their health as better than those who couldn't easily travel to where they needed^. Where individuals can't access their own mode of transport, they need to rely on available transport services in their area. Inability to access transport is a barrier faced by First Nations people in health service accessibility, 30% of whom cited not seeing a health care provider due to transport-related issues.

Accessibility of transport to healthcare is important for individuals with chronic illness or for expectant mothers, especially First Nations households where transport options might be restricted. To help these groups access services, it is important transport services are culturally secure in regions with larger populations of First Nations Australians. This need has been raised through several policy and strategy pathways.

^National Indigenous Australians Agency, Aboriginal and Torres Strait Islander Health Performance Framework (2024). https://www.indigenoushpf.gov.au/measures/2-13-transport#implications

Policy and strategy context.

Closing the Gap

Closing the Gap is a response to a call for achieving equality for First Nations people in health and life expectancy within a generation. In 2007, the Coalition of Australian Governments (COAG) committed to closing the gap and in March 2008, a health equity targets were presented at the National Indigenous Health Equality Summit and a Statement of Intent was signed. These targets are intended to influence the social determinants of health, of which transport is a key enabler for access to healthcare, goods, services and support.

Under Closing the Gap, there are 19 national socio-economic targets across 17 areas that impact outcomes for First Nations people. There are two health-specific targets among these:

- to close the gap in Aboriginal and Torres Strait Islander life expectancy within a generation (by 2031); and
- to halve the gap in mortality rates for Aboriginal and Torres Strait Islander children under five within a decade (2018).

The strategy has been refreshed in the years since, with new agreements and partnerships made between Government and Coalition of Peaks to improve the involvement of Aboriginal and Torres Strait Islander people in progressing towards Closing the Gap targets.

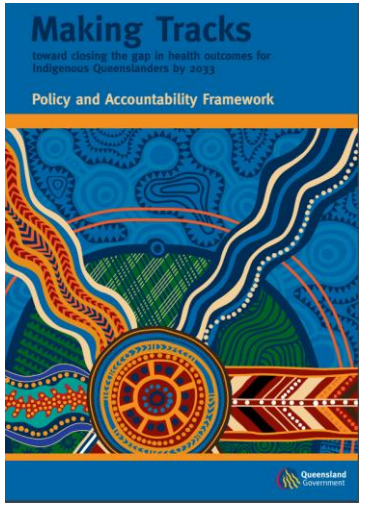
CLOSING THE GAP

Making Tracks

Following the formation of the Closing the Gap targets, the Queensland Government signed a Close the Gap Statement of Intent. This commits signatories to work together to "achieve equality in health status and life expectancy between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians by the year 2030".

In 2010, The Queensland Government developed *Making Tracks toward closing the gap in health outcomes for Indigenous Queenslanders by 2033* to provide a policy and accountability framework in alignment with other policy documents, including the Statement of Intent. Making Tracks also includes implementation plans that are published every three years to reaffirm the Queensland Government's commitment to making sustained health outcome improvements for First Nations Queenslanders.

Several health status trends are highlighted in this strategy, including an ongoing concern around barriers to health care access and the impact of transport in this space. In response, Making Tracks outlines several priorities designed to close the gap in health outcomes. One of these priorities is *Fixing the Gaps and Improving the Patient Journey*, which includes an underlying initiative of new or expanded patient transport options.



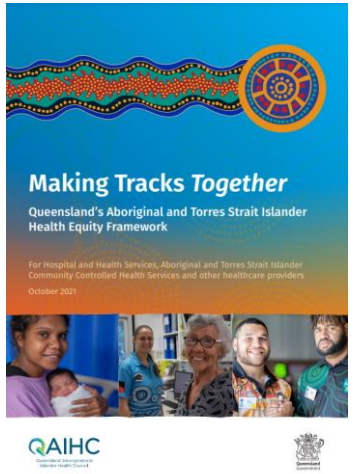
Policies and strategies.

Making Tracks Together – Queensland's Aboriginal and Torres Strait Islander Health Equity Framework

To address First Nations health equity at the health service provider level, Queensland Government released *Making Tracks Together* in 2021. This policy was released to support Hospital and Health Services (HHSs) to develop and implement Health Equity Strategies and include the actions each HHS will deliver to drive progress.

These actions are intended to achieve health equity, actively eliminate racial discrimination and institutional racism, and influence the social, cultural and economic determinants of health by working with First Nations organisations, health services, communities, consumers and Traditional Owners.

Between July 2022 and February 2023, all 16 HHSs released their Health Equity Strategies. Each HHS is also responsible for releasing their accompanying Health Equity Strategy Implementation Plan, no later than six months following the public release of their Health Equity Strategy. These implementation plans outline how the objectives in each HHS's Health Equity Strategy will be translated into action and key performance measures to track progress toward achieving health equity for First Nations people. To capture progress toward these targets, public reports will be released annually.



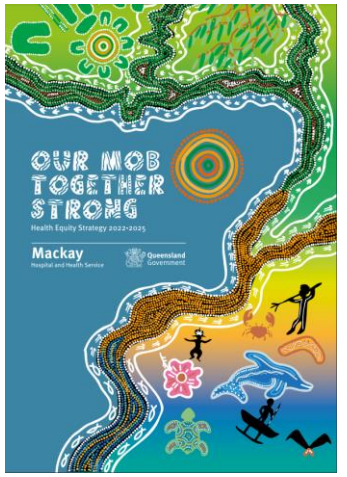
Our Mob Together Strong Health Equity Strategy 2022-2025

In November 2021, initial consultation began to commence work on the Mackay HHS Health Equity Strategy. By January 2022, the Our Mob Together Strong Alliance (OMTSA) was established, with consultation and development of the draft Health Equity Strategy underway. Consultation occurred across the Mackay, Whitsundays and Isaac regions, with co-design including stakeholders from the hospital and health services (HHSs), community-controlled health services (CCHSs) and traditional owners. In April 2022, the Our Mob Together Strong 2022-25 Health Equity Strategy (OMTS HES) was produced, outlining six key priority areas.

One of these areas included *Increasing access to healthcare services* (KPA2). Under KPA2, three KPIs were identified that relate specifically to patient transport:

- Transport and accommodation options are identified and negotiated, and partnership arrangements are established with suitable transport providers
- Culturally safe transport and accommodation models are implemented for Mackay, Whitsunday and Isaac regions
- Improved policy initiatives to enable more flexible patient transport and accommodation options that meet cultural needs of First Nations people

In January 2024, the Implementation Plan for the OMTS HES was released and included KPA2 as a priority initiative for Year 1 (FY24)



Patient data.

Hospital patient data provides key insights into the trends impacting First Nations patients within Mackay Hospital and Health Service. Whilst a population profile provides an overview of the level of density and the burden of disease across the population, hospital data provides a detailed breakdown around trend pertaining to age cohorts accessing care, timing of admissions/appointments and why patients are accessing hospital-based care.

To develop the patient profile, Mackay Base Hospital data from calendar year 2023 was analysed. This included both inpatient and outpatient data for patients identifying as First Nations. Inpatient data was analysed by patient condition (which is represented by DRG's and SRGs) to understand specificities around patient admissions.

For the inpatient data, analysis was conducted primarily by excluding renal dialysis. The reasoning behind this was that although renal dialysis is an admitted care type, it happens in a discrete renal dialysis unit with routine appointments, which is different compared to the rest of inpatient admissions. Also due to the number of appointments in a week, including renal in the analysis distorts the trend as over a year there is nearly double the amount of renal dialysis SRGs as there are the next highest SRG. Analysis was then conducted separately on the renal dialysis admissions in order to understand trends in appointment times, age cohorts and discharge location.

The outpatient analysis was focused on the Tier 2 clinic codes to understand what types of services patients were accessing as well as further analysis on timings and failure to attend rates.

Population needs compared to service provision.

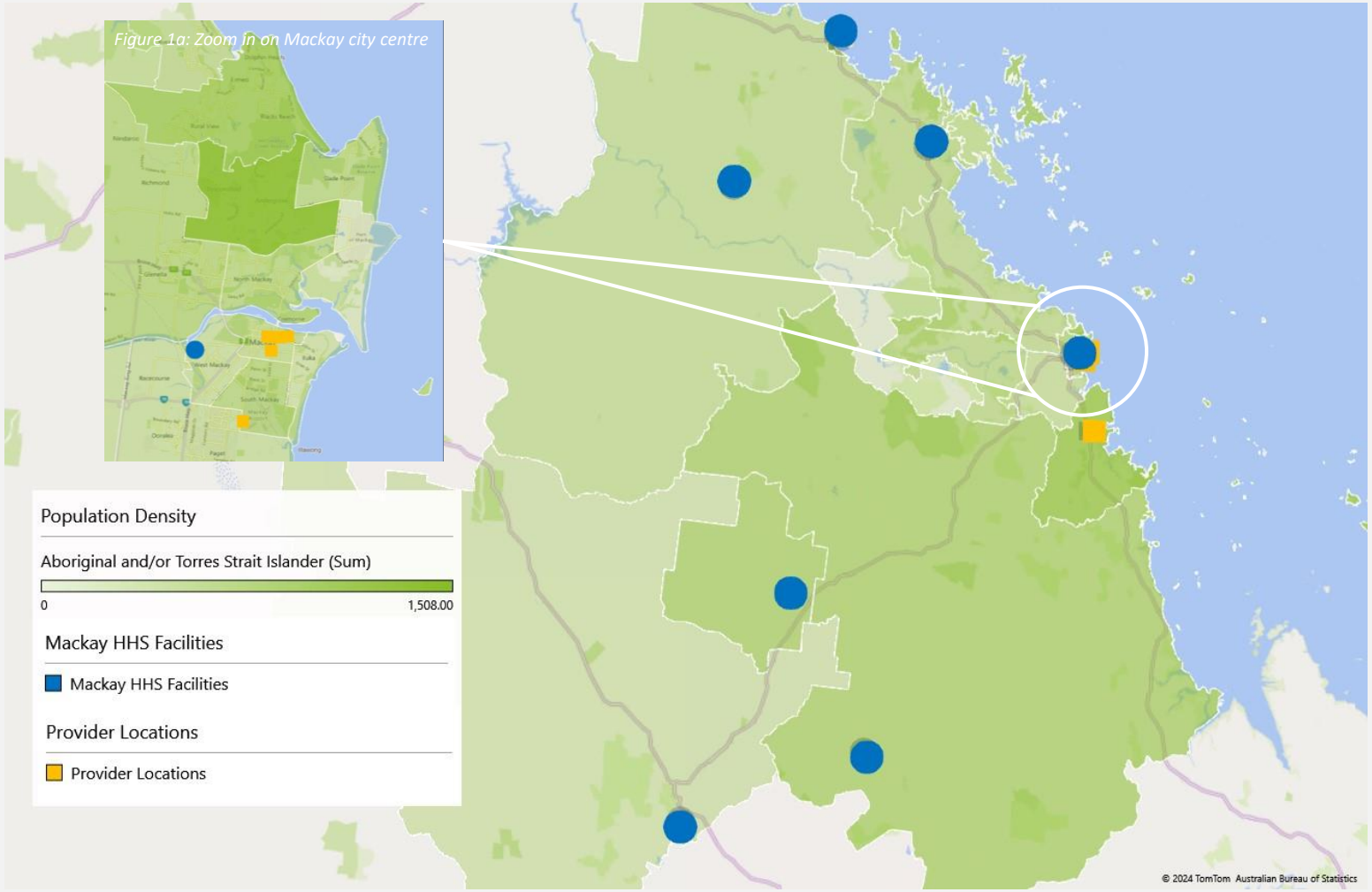
In addition to the patient need, the density of the First Nations population across the region should be considered when analysing the health transport needs.

Figure 1 provides an overview of the density of First Nations by Statistical Area 2 (SA2) level which shows that the areas with the highest density are Andergrove, Bowen, Sarina and Eimeo-Rura. This is compared to where there are Mackay HHS facilities (blue circles) and where there are CCHs and other community providers (yellow squares) nothing that several yellow squares are not visible due to being co-located or very closely located to the hospital facilities.

From this it can be seen that there are services located within both the Bowen and Sarina regions, whilst for Andergrove and Eimeo-Rura the areas are within an approximately 20-minute drive of Mackay Base Hospital.

It should be noted however, that even though Andergrove and Eimeo-Rura are within a 20 minute drive, via public transport this can extend to approx. 50 minutes for Andergrove and over an hour and a half for Eimeo which isn't achievable to be accessing health services on a regular basis (e.g. weekly dialysis trips).

Figure 1: Comparison of First Nations population density to Mackay HHS



Suburb and localities of patients accessing MBH services.

The distance patients have to travel to access care is a large contributor in how likely they are to access care with the relationship between not seeing a specialist rising as the distance increased[1].

Postcode analysis for those accessing care at Mackay Base Hospital showed that the majority of patients lived in the 4740 postcode which includes Mackay and the greater Mackay region. Other populous postcodes included 4737 which includes Sarina and surrounding suburbs.

As postcode analysis was quite broad, suburb and locality analysis was conducted as shown on the right.

1. Coordination of health care: experience of barriers to accessing health services among patients aged 45 and over, Australian Institute of Health and Welfare, 2020

Inpatient admissions profile

Inpatient analysis showed that there were five key suburbs with over 200 patients being admitted (excluding renal and babies) throughout 2023. These suburbs were:

- Andergrove
- Mackay
- South Mackay
- North Mackay
- Sarina

As shown in Figure 2, except for Sarina these suburbs are all within a ~20-minute drive of Mackay Base Hospital and are areas with a higher density of the First Nations population for the region.

Figure 2: Inpatient admissions by suburb

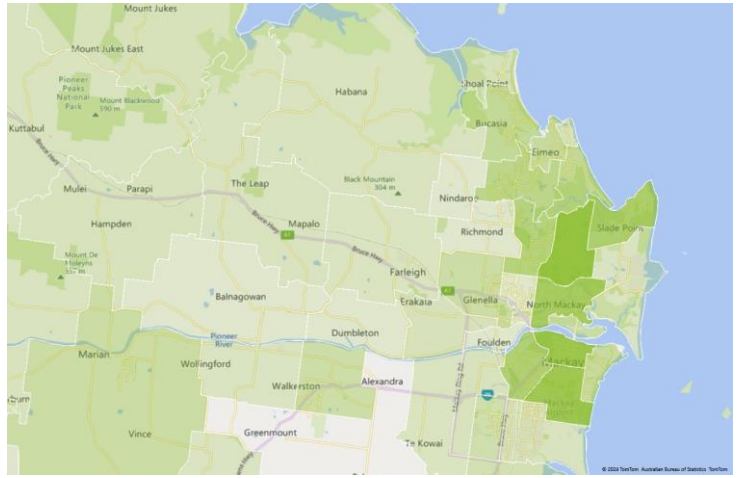
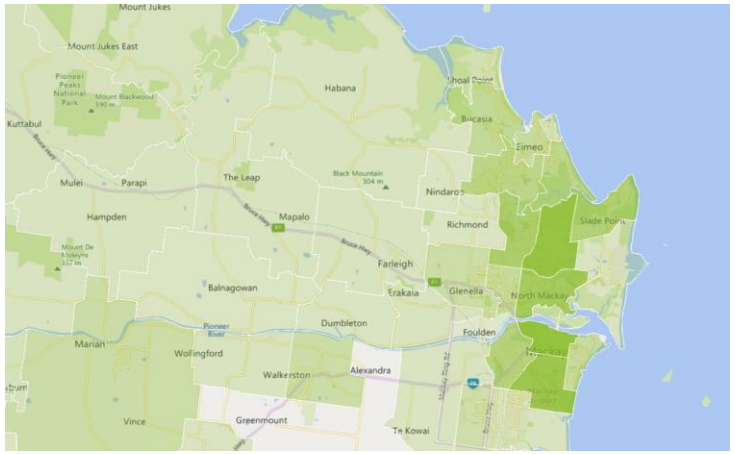


Figure 3: Outpatient appointments by suburb



Outpatient appointment profile

Analysis of place of residence for outpatient appointments showed a similar trend to the inpatient analysis; however, Beaconsfield (northwest of Mackay) had a higher number of outpatient appointments compared to Sarina. This is shown in Figure 3.

Slade Point has also appeared in both analyses with a high number of patients. This is to be expected with Slade Point having a relatively high density of First Nations people within the region.

Age cohorts accessing hospital care.

Within the Mackay HHS catchment, 6% of the population identify as First Nations with 37% of this population being between 0-14, 47% being 15-49 and 16% being 50+ years old.

Analysis of inpatient activity (excluding dialysis patients) show that 19% of patients accessing care are between 0-14, 52% are between 15-49 and 29% are 50+. This difference between the population age profile and the hospital patient profile shows a number of variances and the importance of understanding what patients are accessing care in order to provide transport services that suit the needs of patients.

Analysis also showed that 58% of patients accessing renal dialysis services were within the 50+ age group. This is significant due to the renal dialysis needs increasing as patients age.

Inpatient admissions.

When looking at inpatient admissions across 2023, Figure 4 shows that the 25-34 age cohort has the highest number of admissions. The data shows that 44% of these admissions are obstetrics-related with the next largest SRGs being for general medicine and gynecology. As a result of this the 0-14 cohort is the second largest due to it including all newborns.

The 15-24 cohort which is the third largest which follows the same trend with obstetrics being the main driver of demand, followed by general medicine, general surgery and orthopedics.

The 65-74 cohort is the fourth largest cohort which can be explained by the life expectancy of the First Nations population being 71.9 years for males and 75.6 for females. The main drivers of demand for this cohort include general medicine, chemotherapy and GIT endoscopy.

Figure 4: Age breakdown of inpatient admissions

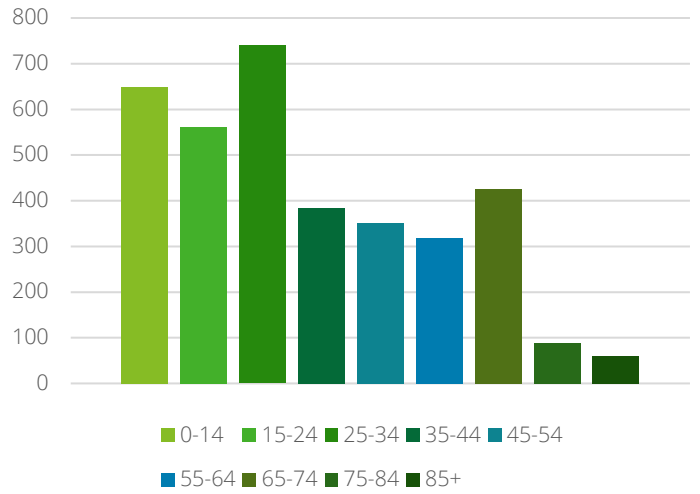
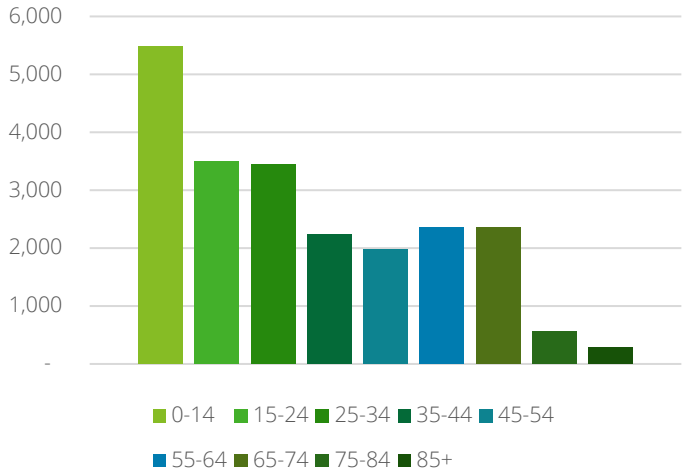


Figure 5: Age breakdown of outpatient appointments



Outpatient analysis

First Nations patients make up 7% of all specialist outpatients' appointments across Mackay HHS. Analysis of appointments at Mackay Base Hospital show that the 0-14 cohort make up 25% of total appointments (see Figure 5). The majority of these are explained through paediatric medicine and paediatric care. 60% of these appointments are to access allied health and/or clinical nurse specialist intervention. In comparison to other facilities across the state this is significant with paedatrics often not the largest cohort for outpatient appointments.

The second and third largest cohort is the 15-24- and 25–34-year-olds. Similar to the inpatient data the majority of this can be attributed to midwifery and maternity outpatient appointments.

Why patients are accessing care.

Analysis of the top 15 SRGs (excluding renal dialysis) shows that obstetrics admissions make up 15% of total admissions for First Nations patients at Mackay Base Hospital (refer to Figure 6). This is closely followed by general medicine at 10% of admissions and babies at 5% of admissions.

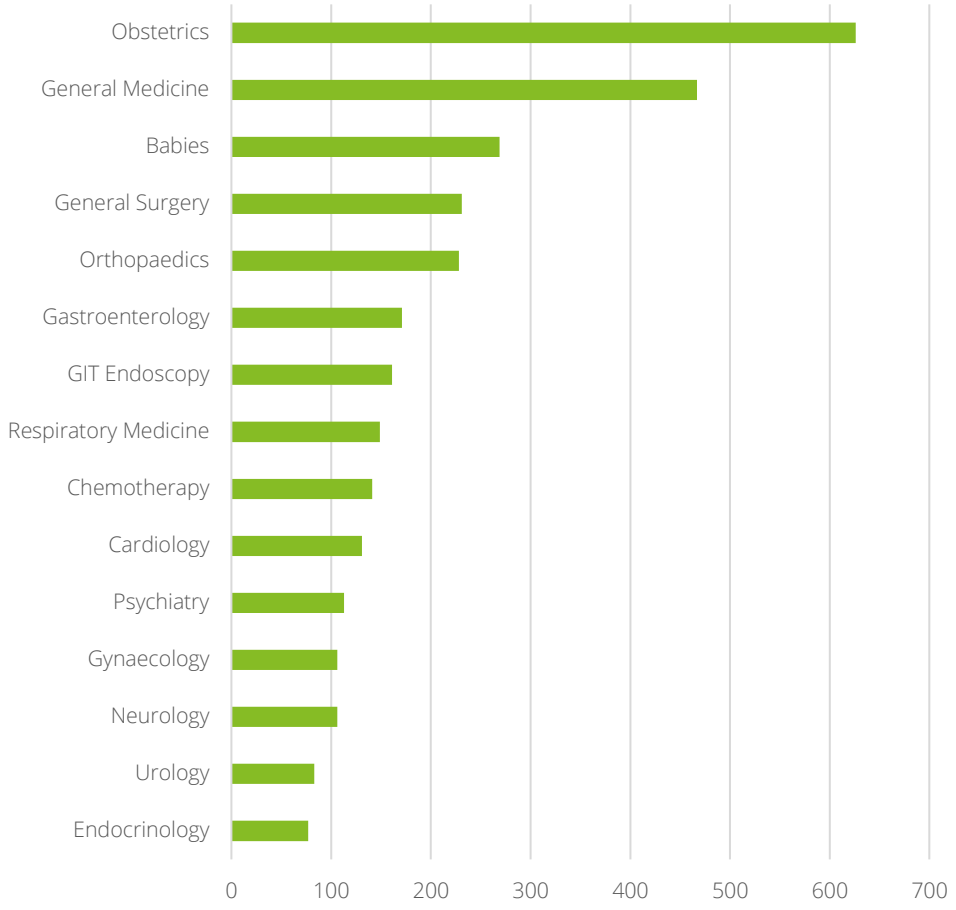
Statewide analysis across all hospital admissions (including First Nations and non-First Nations patients) in Queensland shows that general medicine, obstetrics and cardiology are the most common SRGs[1] (excluding renal dialysis). This shows that Mackay Base Hospital is seeing a higher rate of obstetrics appointments which is consistent with the birth rate for First Nations females being higher than non-First Nations females. In 2020, national figures showed that First Nations females had a birth rate of 75 per 1,000 females of reproductive age in comparison to the 55 per 1,000 for non-First nations females.

General medicine being the second highest SRG is consistent with the national findings. General surgery and orthopaedics being fourth and fifth respectively is different from national figures where they are the ninth and fifth most common SRGs for admissions. The biggest difference from the national trends is cardiology in national numbers having the third highest number of admissions whereas for First Nations patients at Mackay Base Hospital it is tenth.

When analysing the DRGs of the general medicine SRG it can be seen that 38% of admissions are for *Other factors influencing health status (Minor and Major complexity)* and 19% are for *Cellulitis (minor and major complexity)*.

Whilst excluded from Figure 6, renal dialysis had the largest number of admissions in 2023 with 1,507 which was significantly larger than obstetrics. This is due to patients often needing multiple renal dialysis sessions in a single week. This is consistent with statewide figures where renal dialysis has the highest number of admissions.

Figure 6: Mackay Base Hospital inpatient admissions by top 15 SRGs (excluding Renal Dialysis)



1. Table C S.3: Separations by Service-Related Group based on AR-DRG Version 7.0, public hospitals, states and territories, 2017-18. Australian Institute of Health and Welfare, Hospital Resources 2017-18: Australian hospital statistics

Days of discharge and outpatient care.

Mackay Base Hospital sees most discharges occur between Monday to Friday, with peaks on Tuesday and Friday as showed in Figure 7. While there are slight day-to-day fluctuations, there is a relatively consistent volume of between 549 and 601 discharges between Monday to Friday. Discharges are also occurring on the weekend but to a lesser extent than during the week, in alignment with staffing hours for doctors. This trend is also similar for data that includes renal and babies SRGs.

In comparison, outpatient data shows a peak of appointments on Wednesday each week, marking this as the busiest day in outpatient clinics with almost 5,000 appointments (Figure 8). Tuesday and Thursday also indicate busy days, with over 4,300 appointments occurring. Minimal outpatient appointments are occurring on the weekend, also consistent with doctor staffing hours. This information is important to communicate to health transport providers to assist with resource planning and rostering.

Figure 7: MBH inpatient (excl renal) day of discharge

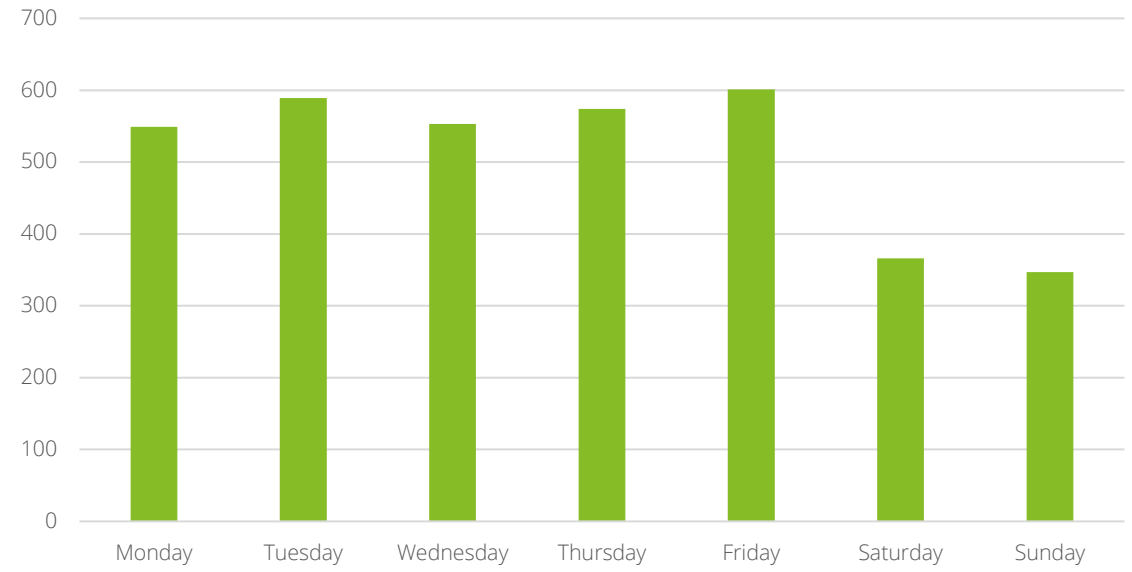
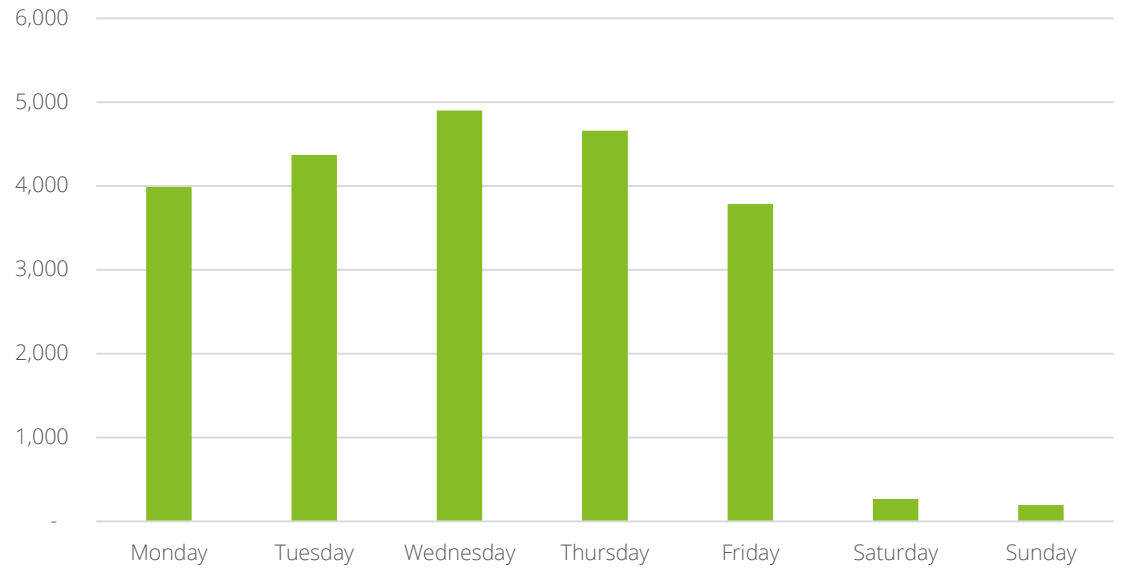


Figure 8: Day of scheduled outpatient appointments



Timing of inpatient admissions and discharge.

As a major hospital, Mackay Base Hospital is operational 24 hours a day, however as Figures 9 shows the majority of admissions occur between 6:00am and 4:00pm (with a gradual decline between 4:00pm and midnight). Considering that Figure 9 displays a mix of planned and unplanned care, this trend is to be expected with the majority for planned care coming between 8:00-5:00pm whilst patients can present at the emergency department at any point of the day. The time of discharge correlates with the timing of doctors shifts and ward rounds with a substantial increase between 9:00am and 6:00pm with a peak between 12:00pm and 2:00pm.

In comparison, when looking at the timing of renal dialysis admissions in Figure 10 it can clearly be seen that there are two set arrival times (7:00am and 2:00pm) with discharge following five hours later for discharge between 12:00pm-2:00pm for the 7:00am admissions and 7:00pm-8:00pm for the 2:00pm session. This is important to note when considering transport timings for patients accessing renal dialysis for the afternoon session.

Figure 9: MBH inpatient (excl renal and babies) hour of admission and hour of discharge

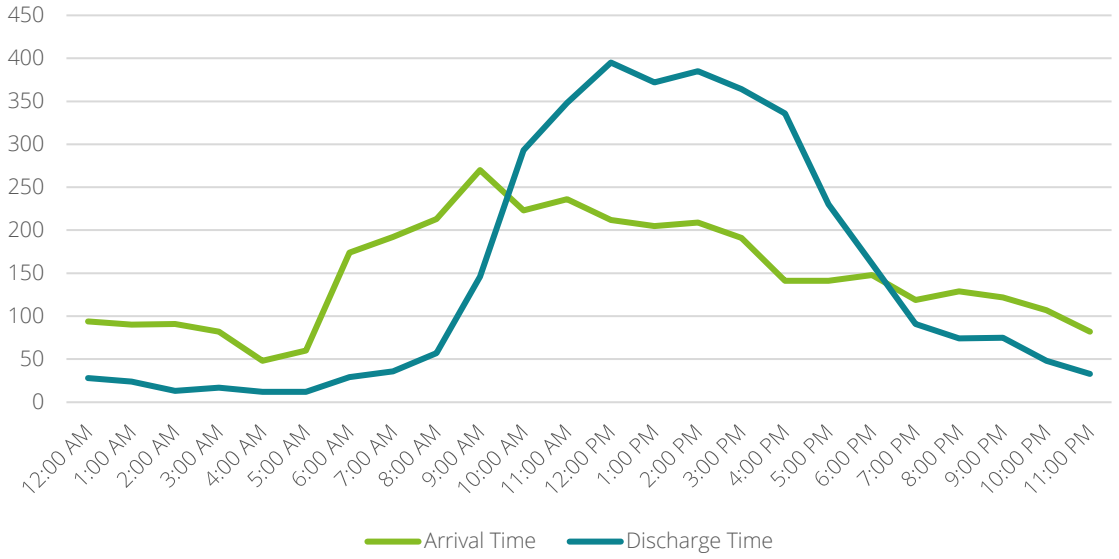
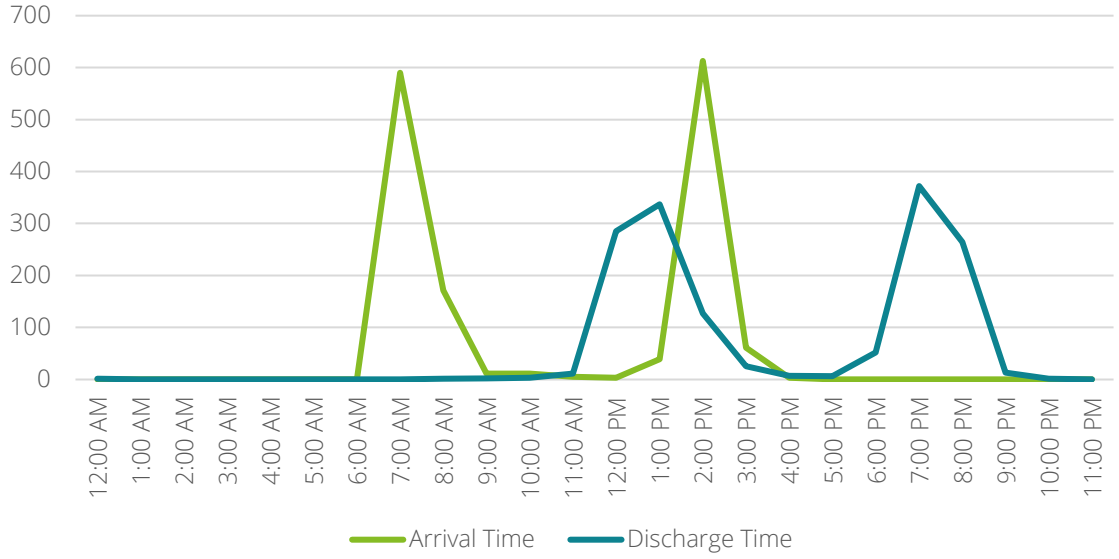


Figure 10: Renal dialysis hour of admission and hour of discharge analysis



Admission source and discharge status analysis.

Analysis of the source for patient admissions can provide insights around how patients travelled to the hospital. Figure 11 shows that of inpatient admissions (excluding renal dialysis) 42% were admitted via the emergency department and 35% were admitted via the outpatient department. When looking at frequent attendees, 19% are a result of routine readmissions and when looking at renal dialysis 100% are routine readmissions. This can be explained through the difference of planned and unplanned care, with frequent attendees and renal dialysis normally being a planned admission rather than an unplanned event which goes through the emergency department.

Figure 12 provides an overview of the discharge status of inpatient admissions. This indicates 91% of patients are discharged to their home/usual residence. 3% of patients discharged against medical advice (DAMA) which is lower than the national average of 4%. However, the age standardised rate of discharge at own risk from admitted patient hospital care was 5.2 times as high for First Nations people as for non-Indigenous Australians between 2019 and 2021 showing it is still an area of significant concern.

Analysis of the DAMA data across SRG and age groups showed no significant trends with the highest area being 25–34-year-olds discharging against medical advice for general surgery however this was only for 5 patients out of 93 showing it is not a significant event. The age groups with the highest likelihood of DAMA were 15–54-year-olds.

Figure 11: Admission source for inpatient (excluding renal dialysis and babies SRGs)

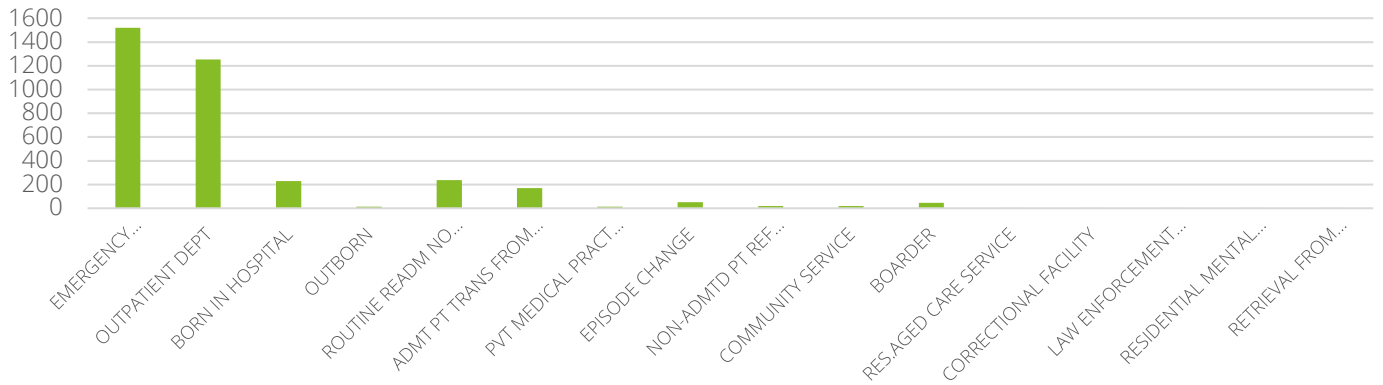


Figure 12: Discharge status of inpatient admissions (excluding renal dialysis and babies SRGs)

Average length of stay for inpatient admissions.

Average length of stay (ALOS) is an indicator of how long patients are admitted in a hospital. The analysis on the right excludes renal dialysis and babies due to the short lengths of stay.

Figure 13 shows that patients admitted on a Saturday have the longest ALOS at 2.50 which can be partially attributed to patients often having to stay until Monday before they can be discharged due to lower staffing levels on the weekend. This reasoning can also be applied to those admitted on a Friday who often may have to be admitted for the whole weekend. This explanation can also be seen with those discharged on a Monday having the second highest ALOS (behind Thursday).

49% of admissions at Mackay Base Hospital are considered same-day (see Figure 14). For this analysis this is defined as being admitted and discharged on the same day. When including renal dialysis however this jumps to 64% of admissions which is consistent with national findings of 53% of hospitalisations being same day.

Figure 15 shows that of these same day admissions, a significant proportion have an ALOS between 0-0.5 days. Looking at the SRG analysis of this, 25% of this is Obstetrics, 10% is Medicine and 8% is for Chemotherapy admissions.

Figure 13: Average Length of Stay (ALOS) by day of admission and day of discharge

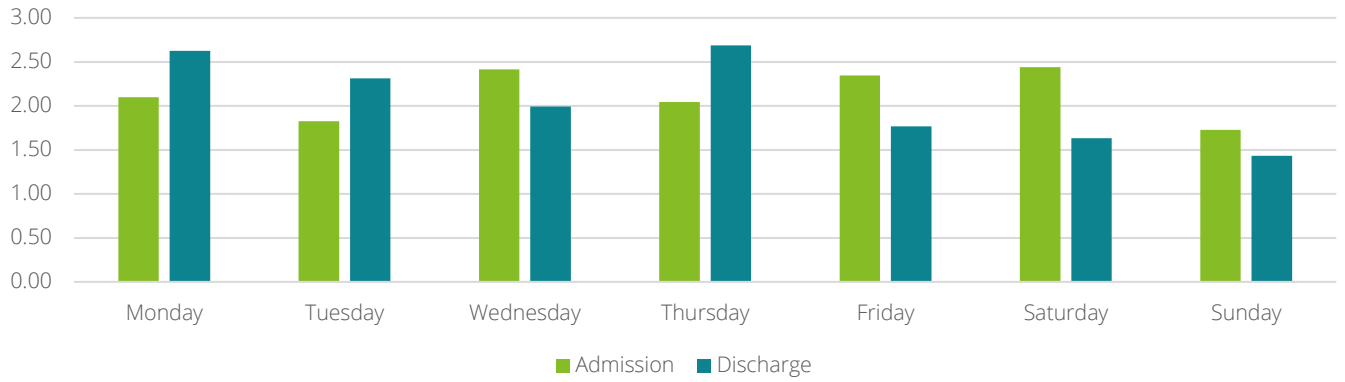


Figure 14: Comparison between same day and overnight admissions

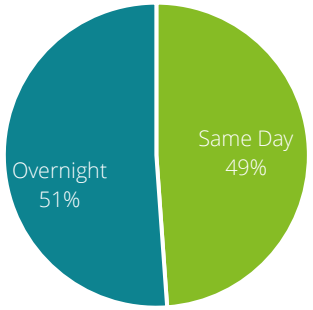
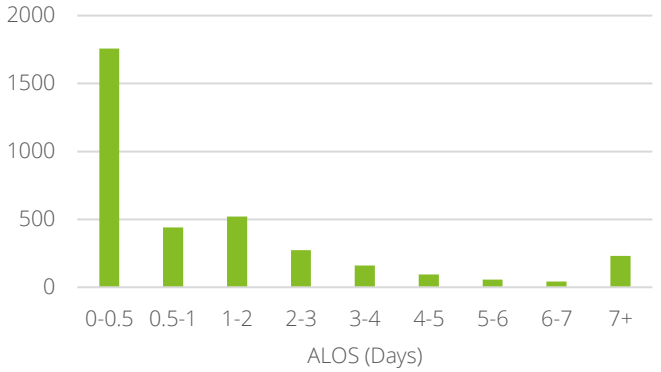


Figure 15: ALOS distribution by fractional days (excl renal)



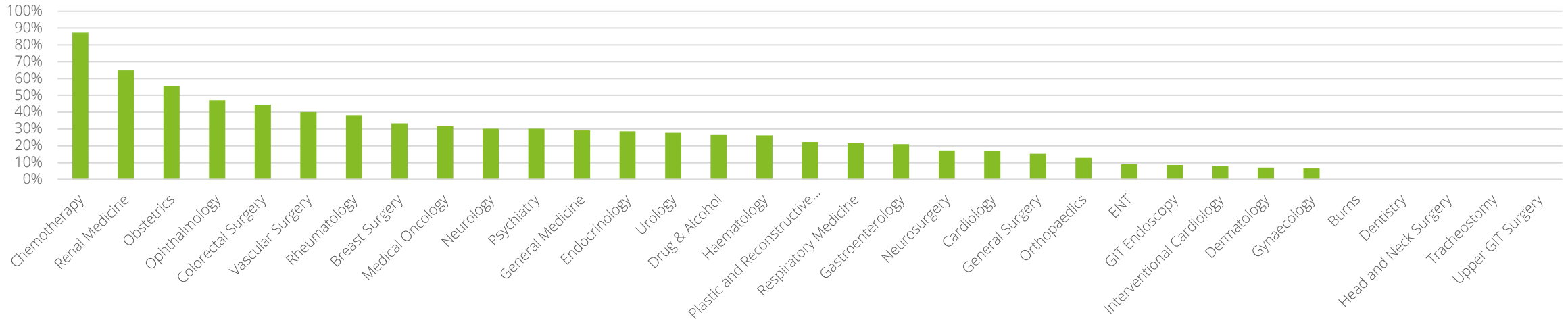
Frequent attendees of inpatient services.

Frequent attendees of inpatient services for this analysis are defined as patients who accessed care more than five times in a single year. Renal dialysis has been excluded due to distorting the analysis by function of renal dialysis being the same patients accessing the service on a consistent basis.

Figure 16 below provides an overview of the SRGs where there was the highest proportion of frequent attendees. The figure shows that chemotherapy, renal medicine and obstetrics have the highest proportion of frequent attendees. This is to be expected due to these specialties requiring repeat attendees by their nature (e.g. multiple chemotherapy sessions, renal medicine being linked to renal dialysis and multiple antenatal appointments).

Analysis of admission numbers showed that consistent with overall trends seen for admissions. Obstetrics (346 admissions) and general medicine (136 admissions) had the highest number of admissions followed closely by chemotherapy (123 admissions). This is important to consider when thinking of transport needs in the region where chemotherapy and obstetrics appointments are more likely to be planned care in comparison to general medicine, and how services can meet this need.

Figure 16: Proportion of frequent attendee admissions by SRG



Why are patients accessing outpatient services.

Outpatient appointments are categorised into classes which are generally based on the nature of the service provided and the type of clinician providing the service. Using Tier 2 codes, clinics are classified into one of the groups detailed below:

- Procedures (10 series)
- Medical consultation services (20 series)
- Diagnostic services (30 series)
- Allied health or clinical nurse specialist intervention series (40 series)
- Community health (70 series)
- Unknown

Figure 17 provides an overview of the breakdown between types of outpatient appointments for First Nations patients at Mackay Base Hospital. The analysis shows that 51% of appointments were for allied health and/or clinical nurse specialist interventions and that 38% were for medical consultation.

Nationally, 38% of patients accessed allied health and or/clinical nurse specialist intervention clinics and 23% accessed medical consultation clinics. The main differentiation from the national figures were in diagnostic services which made up 16% of national clinics but only 3% of clinics at Mackay Base Hospital.

Figure 17: Type of appointment by Tier 2 code

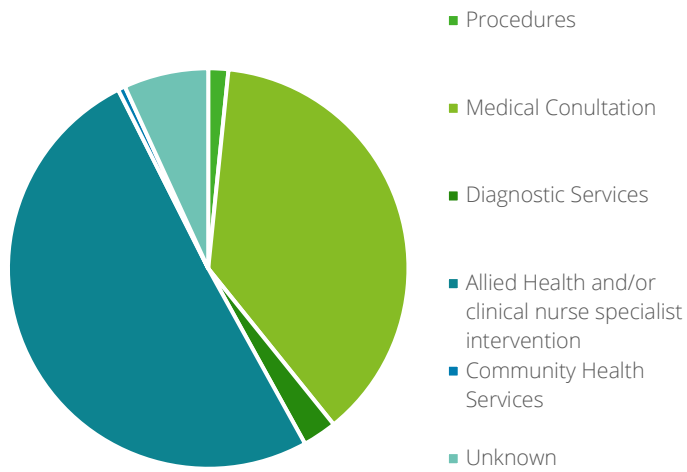


Figure 18: Outpatient reason for visit

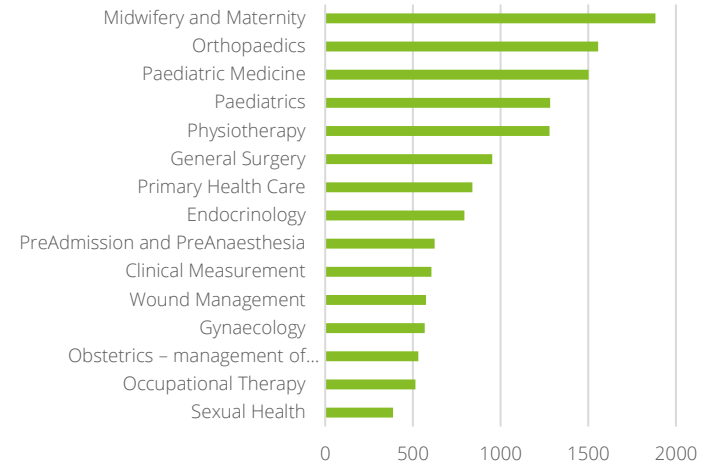


Figure 18 summarises the top 15 reasons for patients visiting outpatient appointments. Consistent with inpatient admissions, midwifery and maternity visits were the most common, some of which can be attributed to the Kem Kem Yanga service. Orthopaedics and paediatrics are also common reasons for accessing outpatient services, consistent with inpatient analysis.

Interestingly, primary health care is the seventh most common reason for visiting an outpatient clinic. Analysis of this shows majority of this can be attributed to immunisations (with a large proportion in schools) and A&TSI Liaison officer reviews.

Timing and outcome analysis for outpatient services.

Outpatient appointments by nature are often repeat visits and are also a form of planned care with an appointment time set (even though anecdotal evidence shows that the time of appointment vs when patients are actually seen are often markedly different).

Figure 19 provides an overview of scheduled outpatient appointments. As expected, the highest number of appointments are scheduled for between 9-10am with 44% of appointments within this period scheduled at 9:00am and 33% scheduled at 9:30am. After lunch there is also a peak later in the day at 1:00pm signifying the afternoon shift of outpatient appointments.

Figure 20 details that for 15% of outpatient appointments, patients fail to attend. Failure to attend rates for First Nations patients is one of the KPIs that is included as part of the service level agreements (SLA) that each HHS signs with the Department of Health to receive hospital funding. Evidence from other jurisdictions shows that the "did not attend" rate is generally 8% across the whole population, demonstrating that the rate for First Nations is significantly higher.

As previously mentioned, outpatient appointments often result in follow up appointments. This is evidenced in Figure 21 which shows that the outcome for 62% of outpatient appointments is a *Follow-Up Appointment Required*. This highlights the regularity and planned nature of outpatient appointments in most cases.

Figure 19: Hour of outpatient appointment

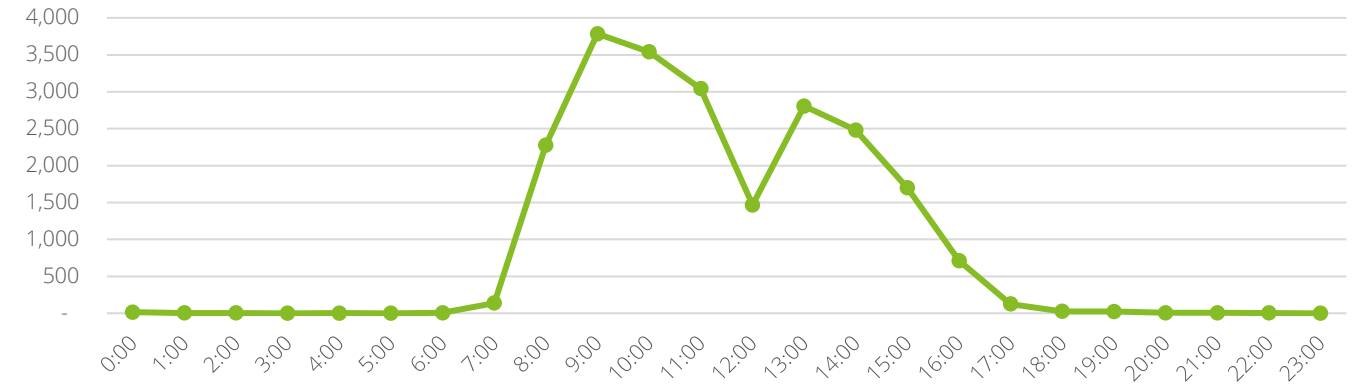


Figure 20: Failure to attend

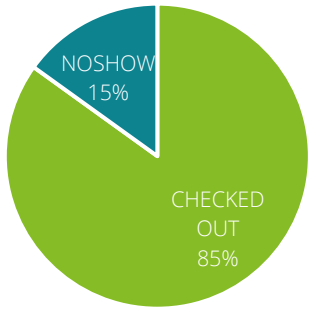
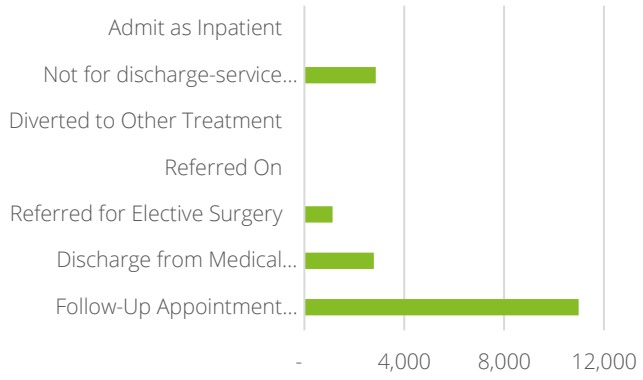


Figure 21: Outcome of outpatient appointment



Health transport ecosystem.

In the Our Mob Together Strong Health Equity Strategy Implementation Plan, the Mackay HHS identified KPA2, *Increasing access to healthcare services* as a key priority outcome. This includes three key performance measures underlying this outcome, which are outlined on page 11.

To support progress toward meeting these metrics, there is a need to identify transport options available in the region. Current state research has been conducted to understand organisations who operate in the region and the extent to which they deliver health transport services. It should be noted that this list is not exhaustive, as there are several organisation who do not publicise their transport service or do not have a website.

There are several organisations providing health transport services in the Mackay, Sarina, Isaac and Whitsunday regions. These organisations range from non-profit or charitable organisations to NDIS and aged care providers, some of whom are providing services to individuals who are outside of their client base. A summary of these organisations is provided in the following three slides, including their purpose, operating geography, funding and any available details of their transport service.

Overview of current transport providers.

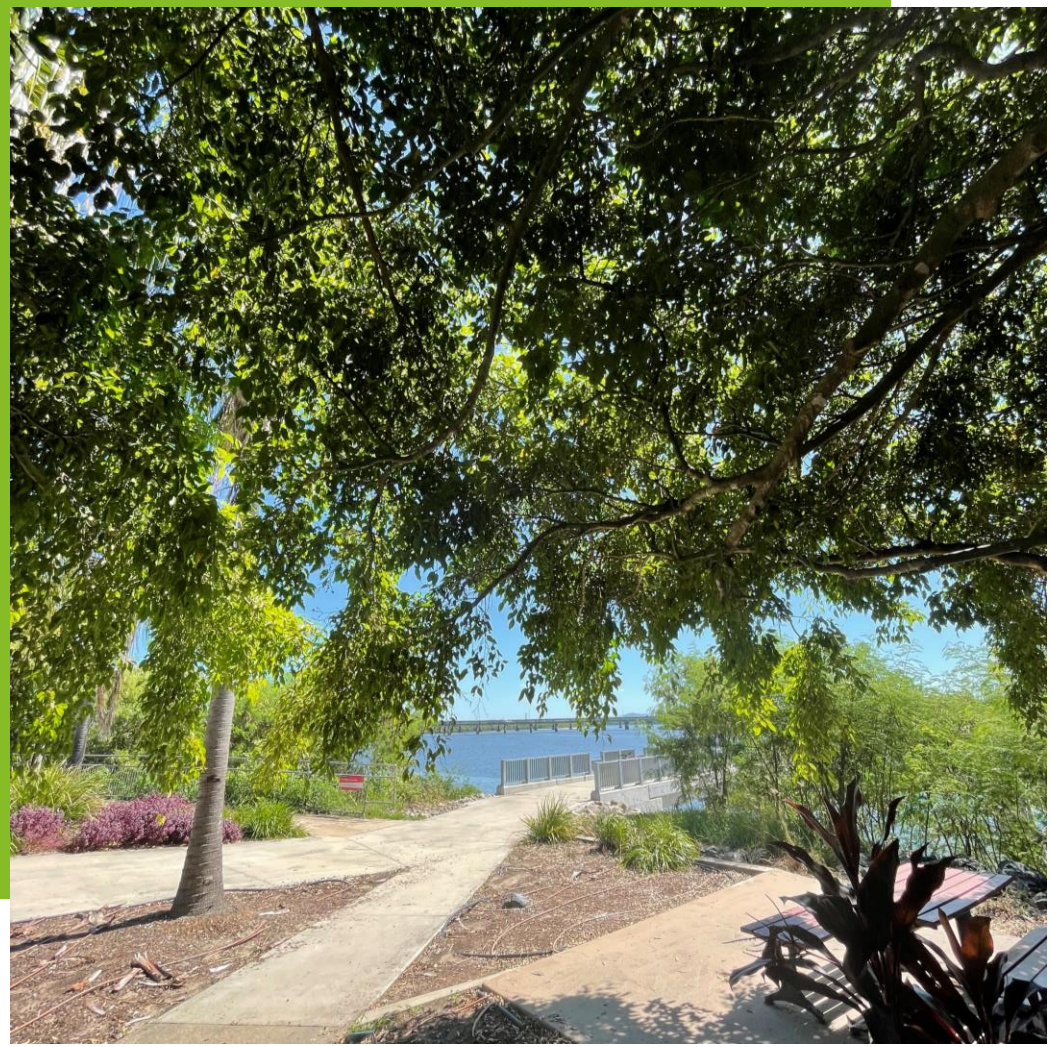
	ATSICHS Mackay	Girudala	Mudth-Niyleta	Yamadi
OVERVIEW OF SERVICE	ATSICHS Mackay is a community-controlled organisation that provides primary health care services to First Nations people living in Mackay and Sarina. ATSICHS operate medical clinics in Mackay and Bucasia. Transport services are provided only to patients who access their services.	Girudala Community Cooperative Society is a community-controlled organisation that runs programs and services in health promotion, Commonwealth Home Support, housing and family wellbeing for First Nations people. Girudala operate a general practice in Bowen, the Herbert Street Family Medical Centre. This clinic provides GP consultations and access to allied health and ancillary services.	Mudth-Niyleta Aboriginal and Torres Strait Islander Corporation is a community-controlled organisation that aims to improve access to essential services for First Nations people living in Sarina. Mudth-Niyleta provide long-term community housing, aged care services and family wellbeing services for vulnerable children and young people up to 18 years of age.	 Mackay Yamadi Lera Yumi Meta Association provides in-home care to Aboriginal and Torres Strait Islander community members to help them remain in their own home for longer.
TRANSPORT SERVICE	ATSICHS Mackay operates in Mackay and Sarina and delivers their service using: • Two cars • Three buses (one with wheelchair access) • Taxi vouchers (for transport outside of operating hours and for dialysis patients) Cars and buses are all leased and are used 5 days per week between 8am-2pm.	Girudala operates in Bowen, Collinsville and Proserpine. They deliver their service for integrated team care consumers using: • 2 vehicles	Mudth-Niyleta operates in Sarina. They do not actively deliver a service at present due to operating cost barriers, however do own: • 4 vehicles • 2 buses	Yamadi operates in Mackay. No information could be found on transport services they might provide.

Overview of current transport providers.

	Mackay Hospital Foundation	Kidney Support Network	ACVVS	MDSS Moranbah & District Support Services
OVERVIEW OF SERVICE	The Mackay Hospital Foundation is a community-driven charity, providing fundraising support to the Mackay Base Hospital and other public hospitals in the Mackay district. The Foundation partners with businesses, individuals and the community to enhance healthcare for patients and families. The foundation is funded by community and government sources.	The Kidney Support Network (KSN) provide support to Queenslanders who are impacted by chronic kidney disease (renal failure). KSN work with major renal hospitals throughout Queensland and rely on a dedicated team of volunteers to deliver their services, including support groups and transport. KSN is funded through private and community sources.	Mackay Community Visitors Association (MCVA) funds organisations to recruit, train and support volunteers to provide friendship and companionship to elderly people residing in aged care facilities. MCVA holds contracts to provide clients of various local organisations with community transport. MCVA is funded through government grants and client contributions.	Moranbah District and Support Services (MDSS) is a not-for-profit organisation that provides support for rural families, community connection via the Moranbah Youth & Community Centre, people experiencing domestic violence and referral to emergency services. MDSS is funded through private and government sources.
TRANSPORT SERVICE	Mackay Hospital Foundation operates across the Mackay, Whitsunday, Isaac and Sarina regions and delivers their service using: • One bus (11 seats) The bus is funded by the Foundation and is used three times per week	KSN operates in Mackay and Sarina and delivers their service through: • Four cars (Nissan Xtrails) Cars were purchased via government grants, and are used two times a day, six days per week. KSN have an annual membership fee of $20 for community members who use their services.	MCVA operates in Mackay and Sarina and deliver their service using: • Three buses (two with wheelchair loaders) • One sedan	MDSS operates in Isaac and deliver their service using: • company cars to transport clients to and from appointments.

Overview of current transport providers.

	Bowen Flexi Care	Stella Life Care	Greater Whitsunday Communities Stronger Together
OVERVIEW OF SERVICE	Bowen Flexi Care provides a range of services to people living with a disability, are frail aged or who may otherwise experience disadvantage. They are a Registered Provider under the NDIS. Bowen Flexi Care is funded through private and NDIS funding.	Stella Life Care provides support to older adults and people living with a disability. They operate across multiple regions of Queensland, including Bowen, Cannonvale, parts of Brisbane and other Queensland locations. Stella Life Care is funded through NDIS and My Aged Care funding.	Bowen and Collinsville Community Alliance (BCCA) is a collaborative partnership formed between two existing local network groups and falls under the Greater Whitsunday Communities group. BCCA aims to connect community, health and other human services. It is funded through a private and government sources, including the Integrated Team Care program.
TRANSPORT SERVICE	Bowen Flexi Care operates in the Mackay and Whitsunday regions and deliver their transport service to NDIS participants. They also provide fee-for-service transportation for other individuals when other transportation could not be found.	Stella Life Care operates in the Whitsunday region and deliver transport services to their clients using support worker-owned vehicles. Support workers are reimbursed at a rate per kilometre.	BCCA operates in the Whitsunday region. There is no private transport service from Bowen and Collinsville.



Provider survey.

To understand the current state of road-based health transport in the Mackay, Isaac, Sarina and Whitsunday regions, a survey was developed and disseminated to providers operating within these regions.

The purpose of this survey was to collect quantitative and qualitative data on:

- Context of each organisation's service,
- Operating metrics, including frequency, utility and costs of delivering the service,
- Service scheduling and accessibility, and
- Reflections on strengths of and challenges facing the individual services and the regions, including barriers for First Nations people and opportunities for improving services.

This survey was disseminated to 11 individuals in various community-controlled, non-profit and public health organisations on 1st February 2024. The survey was closed on 19th February 2024 and received a total of 9 responses from 8 unique organisations, summarised below:

- Kidney Support Network
- Mackay Community Visitors Association
- ATSICHS Mackay
- Moranbah District and Support Services
- Bowen Flexi Care Inc
- Stella Life
- Bowen and Collinsville Community Alliance
- Mackay Hospital Foundation

The following slides contain analysis of survey data to provide a current state of health transport services provided in the Mackay, Isaac, Sarina and Whitsunday regions.

Utilisation gaps in transport provider capacity.

In the survey, transport providers were asked the number of patients they transport in a typical week and the number of patients they would consider as full use of their service. Most organisations reported they have capacity to provide additional patient transport services. This utilisation gap is shown in Figure 22, noting two organisations did not report their full capacity. Providers are using a mix of cars and buses to deliver these services

On average, providers appear to be operating at 33% of their capacity across all areas. Some organisations reported large gaps in utilisation, including one operating at 10% of capacity. Excluding ATSICHS and Bowen Flexi Care, transport is occurring for an estimated 102 patients weekly, compared to an estimated capacity of 204, highlighting a 50% gap in utilisation.

On the whole, survey data indicates there is substantial capacity to provide additional patient transport services across the Mackay, Whitsunday, Isaac and Sarina areas. Providers noted capacity can be influenced by resources available at the time, and patients being transported for organisation-led programs. This will be further explored with providers, as well as understanding if transport is planned to align with need – for example, if transport being delivered on days where outpatients clinics are occurring, how capacity is planned/decided and how capacity is communicated outside of each provider.

Figure 22: Transport provider utilisation gap in patients transported weekly (n=8)

Transport scheduling processes.

Providers were asked if their transport services for patients were planned, ad-hoc or a combination of both. Panel 23A shows most services are planned or as the need arises (ad-hoc).

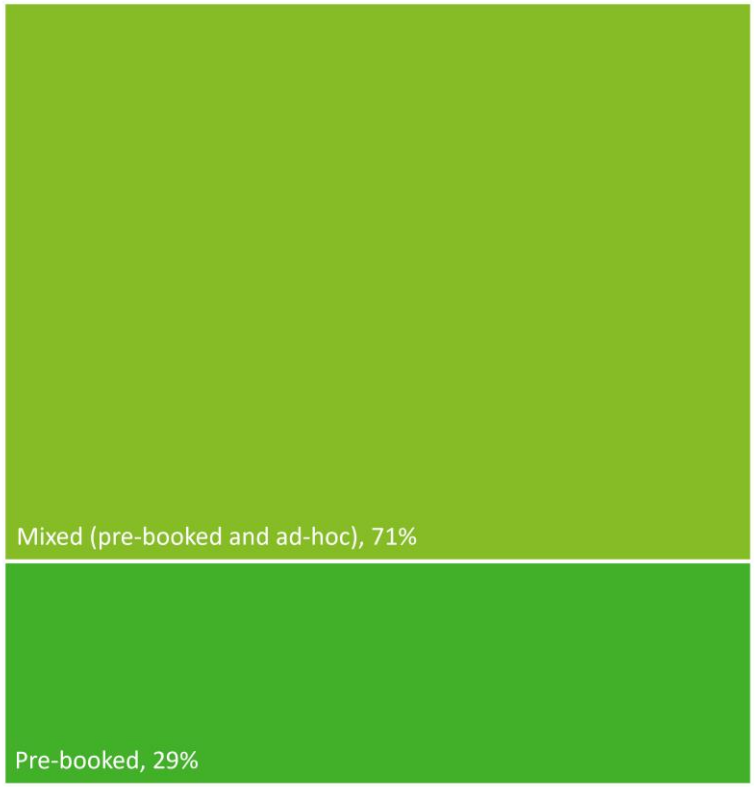
When transport is planned, it is mostly through a combination of phone call and email (Panel 23B). Two providers are using digital platforms, such as apps or websites.

Panel 23C shows scheduled transport to and from appointments is mostly running on-time. Some providers noted patients running late and/or failing to cancel appointments can impact this, as well as attending public-system appointments, which are less likely to be on-time.

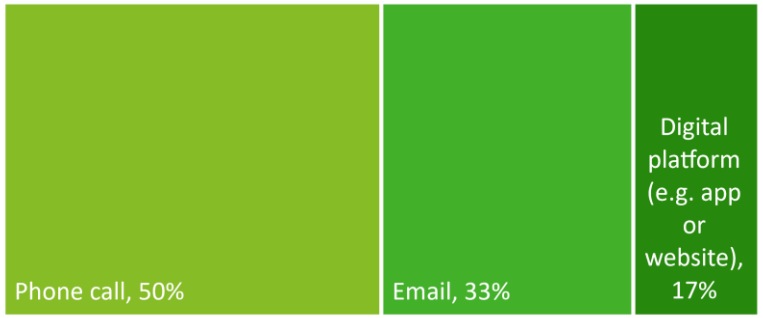
Overall, the majority of providers are using phone or email to schedule patient transport services that are mostly running on time. It would be helpful to discuss the strengths and weaknesses of scheduling methods across providers to understand what process efficiencies might be available.

Figure 23: Extent, modality and timeliness of service scheduling

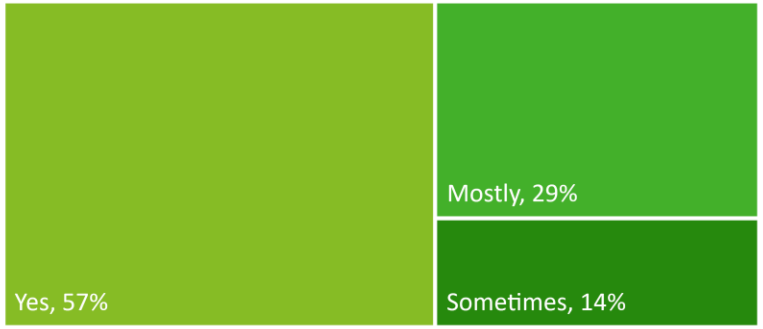
Panel 23A: Is transport scheduled, ad-hoc or both? (n=7)



Panel 23B: How is transport scheduled? (n=7)



Panel 23C: Are scheduled bookings running on time? (n=7)



Strengths and challenges facing providers.

In the current state survey, organisations were asked to reflect on the strengths of and challenges facing health transport services at the provider and regional levels.

Figure 24 shows good alignment between the needs, priorities and values shared by organisations delivering health services across the Mackay, Isaac, Sarina and Whitsunday regions. This indicates these organisations may collaborate well to provide services to patients in a manner that is more efficient.

Feedback provided shows organisations are facing similar challenges at the individual and regional levels, with key issues raised including insufficient funding to cover the costs of providing transport services and a short supply of staff/volunteers to transport patients. While funding is outside the scope of this analysis, given most organisations have capacity to transport more patients than are requesting service, there is a need to discuss opportunities for coordinating services and sharing resources across providers and regions.

Figure 24: Strengths of and challenges facing health transport services

	Strengths	Challenges
Provider-level	• Communication with patients • Reliable, knowledgeable and experienced staff who assist with timely transport • Understanding of patient needs and demographics	• Cost to provide the service • Availability of volunteer drivers to provide transport services, including appointments scheduled outside of driver availability, and • Additional time required to transfer elderly patients from vehicles to their appointments and provide additional support
Regional-level	• Reducing access barriers to healthcare • Providing safe and reliable transport options in the community to reduce reliance on individuals (e.g. family or friends of the patient).	• High costs associated with covering large geographies for a small number of patients • A lack of collaboration between providers increasing reliance on singular organisations • Insufficient resources, including funding and staffing, to adequately provide services

Barriers and opportunities to improve transport.

Barriers facing First Nations patients

In the survey, health transport providers were asked to reflect on their awareness of barriers facing First Nations patients within their regions. Providers referred to several barriers, including:

- Tendency to not utilise mainstream transport services,
- Inability to provide services to those who are not clients of the organisation,
- Language barriers,
- Information and awareness of services and how to access them, and
- Feeling safe to access services.

Providers also referred to barriers discussed previously, such as cost to services across a large area and availability of transport and drivers.

This feedback indicates there is an opportunity to provide better education around availability and accessibility of services among First Nations patients. Patients also need to understand and feel comfortable that services are culturally safe for First Nations community members. Both aspects may be improved through collaboration between organisations that service a higher number of First Nations (such as community-controlled organisations) and those who do not, with the aim of increasing awareness of all transport options available in the regions and their cultural safety.

Opportunities to improve services

Organisations also identified opportunities to refocus existing resources (including staff, administrative or processes) to improve health transport in their regions. The most frequently highlighted opportunity among providers was **collaboration** between organisations and with health service providers:

- Between-organisation collaboration included increasing awareness of services and the spread of information throughout communities.
- More frequent dialogue with health service providers around available transport services, including the need for public sector leadership in this space.
- Discussions with health service providers around resources required to deliver services, including staff, funding and other resources.

Other opportunities included encouraging First Nations people to utilise mainstream services and meeting transport workforce needs by providing incentives for people to live and work remotely.

From this survey, it is clear there is a strong need for better collaboration between health transport providers and health service providers in the Mackay, Isaac, Sarina and Whitsunday regions. Improved collaboration between both groups of organisations is encouraged, as it may lead to efficiencies through better service planning, resource allocation and service awareness.

Patient transport subsidy scheme analysis.

The Patient Travel Subsidy Scheme (PTSS) provides funding to eligible patients who are required to travel for specialist health services not available locally. For this scheme locally is defined as within 50 kilometers of the patient's closest public hospital or public health facility. The PTSS assists with travel and accommodation costs only and not any other costs associated with specialist care.

To be eligible for PTSS funding the patient must be: (a) eligible for Medicare; (b) A permanent Queensland resident; (c) Required to travel more than 50km one way; (d) Have an eligible referral for an approved specialty; and (e) unable to use telehealth.

Most specialties are eligible for PTSS however it should be noted that allied health services are only covered by PTSS when provided as an essential component of other services. Maternity and birthing services are also only covered if the services or level of care is not available at the patient's closest public hospital or health facility.

The analysis conducted of the PTSS data looks at 2022/23 and 2023/24 (July - September) data for patients who identify as First Nations to understand trends in access to the scheme.

Where are patients travelling from.

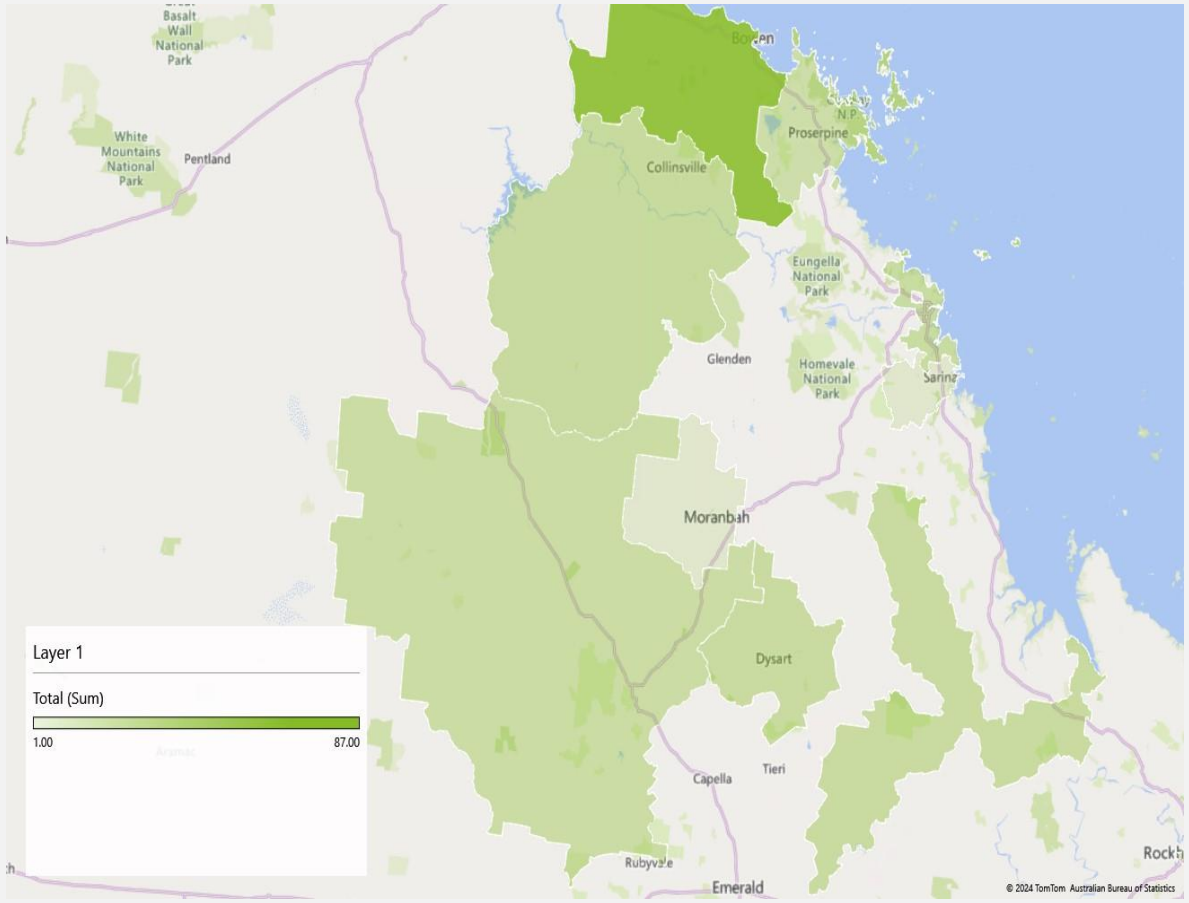
Analysis in Figure 25 shows the majority of patients accessing the PTSS scheme live within the 4805-postcode region. Towns that are part of this postcode region include:

- Bogie
- Bowen
- Brisk Bay
- Gumlu
- Guthalungra
- Merinda
- Queens Beach

The closest hospital for most of this region is Bowen hospital which has 27 beds where it provides general acute care, palliative care, renal dialysis, and oncology services for day patients. The hospital also has several clinics and visiting services however does not have the Clinical Services Capability Framework (CSCF) levels to provide complex specialist care. Due to this patients are required to travel to other facilities such as Mackay Base Hospital or Townsville University Hospital. The distance to these hospitals is over 50km therefore enabling patients to be eligible for the scheme.

Whilst 4805 is the postcode with the most significant use of PTSS (66%), the combination of 4740, 4705, 4745 and 4804 cumulatively make up 24% of the PTSS use. These postcodes include towns such as Middlemount, Dysart, Collinsville and Mackay. Although the majority of PTSS within the region is to Mackay hospital, there is also transfers from Mackay to referral hospitals in Brisbane and Townsville which have higher CSCF levels for certain specialties.

Figure 25: Postcode analysis of PTSS use



Status of patients travelling using PTSS.

To understand the profile of the patients using PTSS, analysis of a number of different aspects was conducted in order to understand how First Nations patients within Mackay HHS were using the scheme. The results of this analysis and explanation are shown in the figures below and the accompanying paragraphs.

Public to private patient ratio

Over the time period, 71% of patients using PTSS were accessing public specialist services (refer to Figure 26). The 29% of patients who travelled to private specialist services are eligible to the subsidy equivalent to the subsidy they would receive to travel to the closest public hospital.

Concession status of patients

57% of First Nations patients who utilised PTSS were concession card holders (refer to Figure 27). Compared to the national approximation of 30% of First Nations population holding a concession card this is a significant proportion of patients. To be eligible for a concession card patients are either pensioners, on Centrelink, are veterans or are over the pension age but not receiving support payments from Centrelink or the Department of Veterans affairs.

Patient escort status

33% of patients travelled with a carer/escort (refer to Figure 28). Patients are eligible for an escort if the patient is a minor; if they require essential assistance; if the patient has a physical or cognitive impairment; or if the escort has an active role in the patients care. A patient may also be approved of an escort for cultural reasons.

Mode of transport

Private motor vehicles were by far the most utilised mode of transport claimed under the PTSS with 93% of patients travelling by this mode (refer to Figure 29). This can be attributed to the majority of patients travelling between Bowen and Mackay (further analysis of this can be found on subsequent pages).

Figure 26: Public to private patient ratio for using PTSS

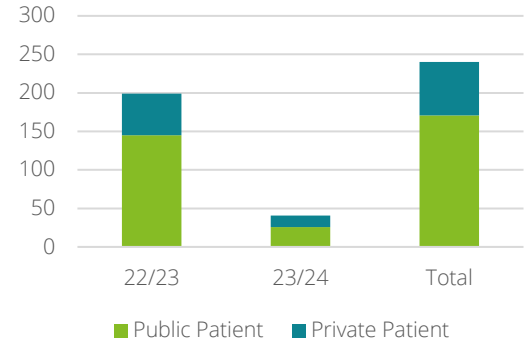


Figure 27: Concession status of patients using PTSS

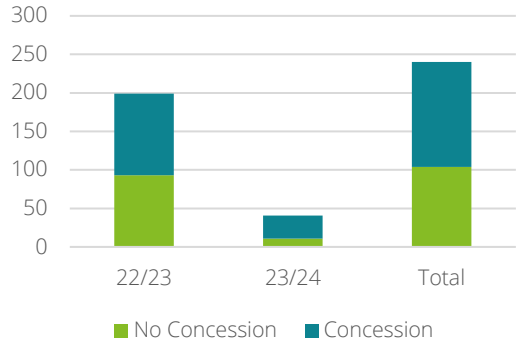


Figure 28: Patient escort status

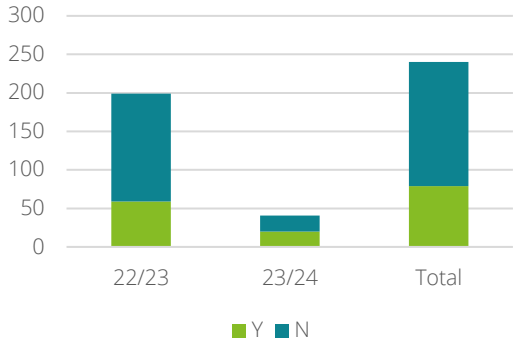
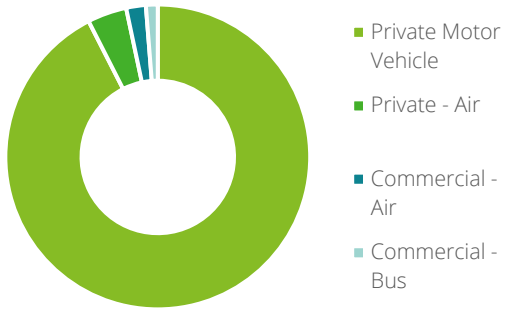


Figure 29: Mode of transport utilised



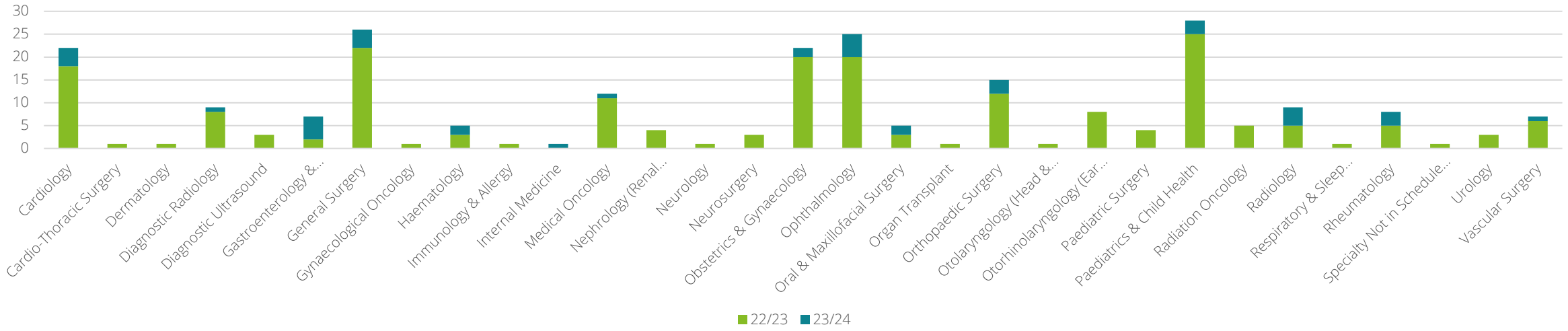
Specialties patients are travelling for.

Analysis of the specialties that patients utilise the PTSS for shows that as expected it is for those where the local hospital does not have the appropriate CSCF level to provide the specialised care. The specialties that PTSS has been used most for within MHHS include Paediatrics & Child Health, Ophthalmology, Obstetrics & Gynaecology, General surgery and Cardiology, shown in Figure 30. All of these are specialties where patients will either have to travel to Mackay Base Hospital or to a different referring hospital (i.e. in Brisbane or Townsville) for services that cannot be provided locally.

Analysis shows that for these five specialisations the majority travel to Mackay Base Hospital for care, however a significant portion also transfer to Townsville University Hospital for Paediatrics & Child Health.

The criteria for the PTSS funding also explain why specialities such as renal or oncology do not appear as high as expected in this analysis. PTSS funding is only provided when patients have to transfer greater than 50km away for treatment from their local health service. As renal and oncology services (such as chemo) are provided at the majority of facilities this means they do not appear in the data to the same extent.

Figure 30: Specialties patients are travelling for



Referring hospital by specialty.

As previous analysis showed, the majority of patients using PTSS have travelled from Bowen hospital. Table 1 provides further detail on the specialties they are travelling for.

The two highest specialties that patients from Bowen are travelling for are General Surgery and Ophthalmology. Bowen Hospital has a CSCF level 2 for surgical services which means they provide low complex inpatient and ambulatory care services. This means that Bowen hospital can provide low risk and low-complex surgery services. This is in comparison to Mackay Base Hospital which has a level 5 CSCF level enabling moderate to high complex services.

Across the table it can be seen there is a relatively even spread across other specialties.

Table 1: Referring hospital by specialty

	Bowen	Brisbane	Clermont	Collinsville	Dysart	Mackay	Middlemount	Moranbah	Proserpine	Sarina	Townsville
Cardiology	10	0	0	1	0	2	0	0	9	0	0
Cardio-Thoracic Surgery	0	0	0	0	0	0	0	0	1	0	0
Dermatology	0	0	0	0	1	0	0	0	0	0	0
Diagnostic Radiology	7	0	0	0	1	0	0	0	1	0	0
Diagnostic Ultrasound	0	0	0	1	2	0	0	0	0	0	0
Gastroenterology & Hepatology	4	0	0	0	0	0	0	2	1	0	0
General Surgery	19	0	2	0	0	3	0	1	0	1	0
Gynaecological Oncology	0	0	0	0	0	1	0	0	0	0	0
Haematology	2	0	1	0	0	0	0	0	2	0	0
Immunology & Allergy	0	0	0	0	0	0	0	1	0	0	0
Internal Medicine	1	0	0	0	0	0	0	0	0	0	0
Medical Oncology	12	0	0	0	0	0	0	0	0	0	0
Nephrology (Renal Medicine)	0	2	0	2	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	1	0	0	0	0	0
Neurosurgery	0	0	0	3	0	0	0	0	0	0	0
Obstetrics & Gynaecology	5	0	0	0	0	4	8	5	0	0	0
Ophthalmology	16	0	0	4	1	4	0	0	0	0	0
Oral & Maxillofacial Surgery	3	0	0	0	1	1	0	0	0	0	0
Organ Transplant	1	0	0	0	0	0	0	0	0	0	0
Orthopaedic Surgery	8	0	4	0	0	1	0	0	2	0	0
Otolaryngology	0	0	0	0	0	1	0	0	0	0	0
Otorhinolaryngology (ENT)	5	0	0	0	1	2	0	0	0	0	0
Paediatric Surgery	3	0	0	0	0	0	0	0	0	1	0
Paediatrics & Child Health	10	0	2	1	0	4	0	5	4	1	1
Radiation Oncology	2	0	0	0	0	0	0	0	3	0	0
Radiology	3	0	2	1	3	0	0	0	0	0	0
Respiratory & Sleep Medicine	0	0	0	0	0	0	0	0	1	0	0
Rheumatology	3	0	0	0	1	3	0	0	1	0	0
Specialty Not in Schedule 1	0	0	0	1	0	0	0	0	0	0	0
Urology	3	0	0	0	0	0	0	0	0	0	0
Vascular Surgery	6	0	0	0	0	0	0	0	0	1	0

Receiving hospital by specialty.

Table 2 provides analysis of where patients are travelling based on the specific specialty.

As expected, the majority of patients are travelling to Mackay Base Hospital due to the higher CSCF level across several specialties such as cardiology, ophthalmology and medical oncology. For those patients that have travelled to Brisbane it is for specialties such as Cardiology, Ophthalmology and Paedatrics & Childrens health. This can be explained through Brisbane having the level 6 CSCF services for these specialties meaning they provide the ultimate high-level service delivering complex care and acting as a referral service for all other lower-level services. It also means that the hospital may be a statewide super specialty service. The same can be said about Townsville hospital for some specialties hence explaining the travel.

Table 2: Receiving hospital by specialty

	Bowen	Brisbane	Collinsville	Emerald	Mackay	Moranbah	Proserpine	Rockhampton	Townsville
Cardiology	1	3	1	0	16	0	0	0	1
Cardio-Thoracic Surgery	0	1	0	0	0	0	0	0	0
Dermatology	0	0	0	0	1	0	0	0	0
Diagnostic Radiology	0	0	0	0	5	0	2	1	1
Diagnostic Ultrasound	1	0	0	0	0	0	0	2	0
Gastroenterology & Hepatology	0	1	0	0	4	0	2	0	0
General Surgery	0	1	0	0	11	0	6	0	8
Gynaecological Oncology	0	1	0	0	0	0	0	0	0
Haematology	0	0	0	0	2	0	0	0	3
Immunology & Allergy	0	1	0	0	0	0	0	0	0
Internal Medicine	0	0	0	0	0	0	0	0	1
Medical Oncology	0	0	0	0	12	0	0	0	0
Nephrology (Renal Medicine)	0	0	2	0	2	0	0	0	0
Neurology	0	1	0	0	0	0	0	0	0
Neurosurgery	0	0	0	0	0	0	3	0	0
Obstetrics & Gynaecology	0	1	0	0	3	0	2	8	8
Ophthalmology	0	4	0	0	14	0	0	0	7
Oral & Maxillofacial Surgery	0	0	0	0	0	0	0	1	4
Organ Transplant	0	1	0	0	0	0	0	0	0
Orthopaedic Surgery	0	0	0	0	11	1	3	0	0
Otolaryngology (Head & Neck Surgery)	0	0	0	0	0	0	0	0	1
Otorhinolaryngology (Ear Nose & Throat)	0	0	0	0	1	0	0	0	7
Paediatric Surgery	0	0	0	0	0	0	0	0	4
Paediatrics & Child Health	0	5	0	0	14	0	1	0	8
Radiation Oncology	0	1	0	0	4	0	0	0	0
Radiology	1	0	0	2	5	0	0	1	0
Respiratory & Sleep Medicine	0	0	0	0	1	0	0	0	0
Rheumatology	0	1	0	0	3	0	1	0	3
Specialty Not in Schedule 1 - See Other	0	0	0	0	0	0	1	0	0
Urology	0	0	0	0	3	0	0	0	0
Vascular Surgery	0	0	0	0	0	0	0	0	7

Cost of travel.

Subsidy payments as part of the PTSS program are calculated using the following rates:

- Commercial (air, bus, ferry or rail) – fully subsidised equal to the lowest available discount fare (including economy/government rates)
- Private motor vehicle (driving) – a rate of $0.34 per kilometer from the street address of the public hospital to the street address of the closest public treatment facility

Tables 3 and 4 provide an overview of the average cost between facilities and for modes of transport for the top 10 most expensive specialties. As table 3 shows the most expensive travel is to Brisbane which can be explained by the distance between Mackay HHS and Brisbane being approximately 980km (Brisbane to Mackay).

The specialties with the average highest cost (refer to Table 4) include organ transplants, gynaecology oncology and immunology. Interestingly, the majority of the most expensive travel over this period was all carried out in a private motor vehicle rather than travelling by other means. As part of the PTSS patients are only subsidised for the most economical mode of transport unless they meet one of the exception criteria (e.g. active clinical management – patients requiring catheterisation or ambulatory oxygen, or restricted mobility).

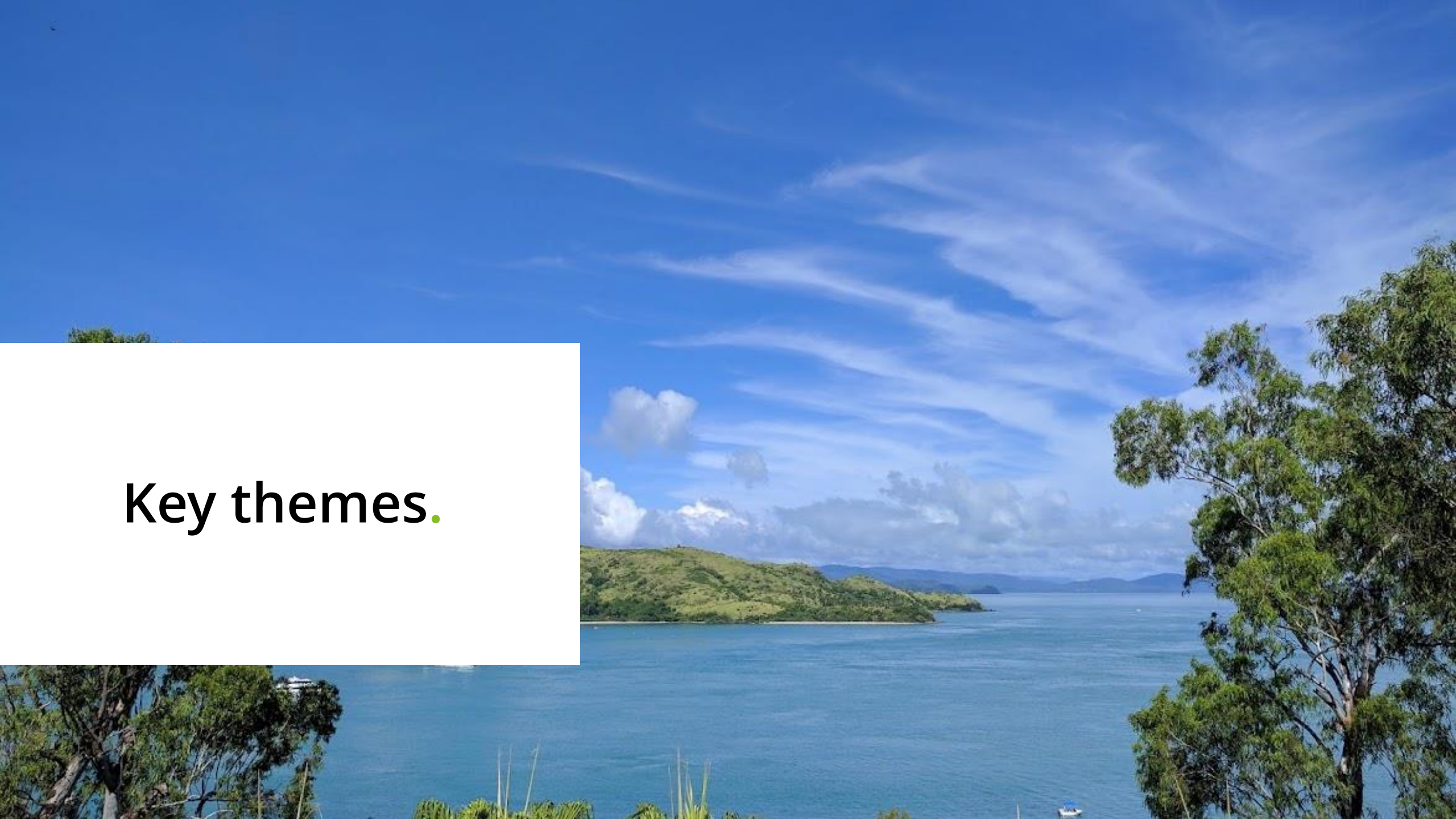
Table 3: Average cost of travel from origin to receiving hospital

	Bowen	Brisbane	Collinsville	Emerald	Mackay	Moranbah	Proserpine	Rockhampton	Townsville
Bowen		$694.26	$26.10		$117.84		$41.21		$119.87
Brisbane			$344.10						
Clermont				$73.44	$175.48				$303.60
Collinsville	$55.68				$151.06		$89.94		$164.40
Dysart					$151.03			$204.51	
Mackay	$63.64	$352.88				$44.00			$183.35
Middlemount								$165.60	
Moranbah		$285.43			$119.04				$316.20
Proserpine		$514.75			$76.72				$176.80
Sarina									$219.98
Townsville					$115.80				

Table 4: Average cost of travel by specialty and mode of transport

	Private Motor Vehicle	Private - Air	Commercial - Air	Commercial - Bus	Average
Organ Transplant	$694.26				$694.26
Gynaecological Oncology	$573.60				$573.60
Immunology & Allergy		$570.85			$570.85
Cardio-Thoracic Surgery			$328.00		$328.00
Neurology		$320.00			$320.00
Rheumatology	$145.38		$361.36		$253.37
Gastroenterology & Hepatology	$96.91		$380.00		$238.45
Otolaryngology (Head & Neck Surgery)	$231.60				$231.60
Ophthalmology	$133.01	$228.15	$320.91		$227.36
Paediatrics & Child Health	$150.37	$160.91	$362.00		$224.43

Key themes.



Process to develop themes.

To review and understand patient transport options for First Nations people in the Mackay, Sarina, Isaac and Whitsunday regions, a workshop was held in Mackay on 16th April 2024. This workshop was planned to validate the current understanding formed of the health transport context, drawn from policy and provider research and current state data analysis. This workshop was also planned to help identify opportunities to optimise transport for patients and providers across the health system. Attendees of this workshop are provided in Appendix 2. During workshop discussions, four key themes were identified that define the current state of patient transport and areas for opportunity, which are summarised on the following page.

The diagram below summarises the process by which themes were developed, including the data sources utilised.

Process of theme development.

POLICY AND PROVIDER RESEARCH

Initial desktop research on current state of health transport in the region:

- Relevant policies and strategies
- Current state of health transport and providers fulfilling transport needs.

CURRENT STATE DATA ANALYSIS

Analysis of data sources:

- Mackay Base Hospital patient data
- Patient Transport Subsidy Scheme
- Provider Survey

CURRENT AND FUTURE STATE WORKSHOP

Validation of current state understanding, derived from research and data analysis.

Discussion of the way forward, including potential solutions.

FORMATION OF KEY THEMES

Key themes were formulated using all data sources outlined, including the workshop.

These themes have been used to guide development of proposed options, discussed in the following section.

Key themes.

Raising patient awareness and choice of transport options

Key factors were identified that impact a safe patient journey that begins and ends at home:

- Education is needed for patients and health service staff to raise awareness of the importance of arranging transport to or from home, what services are available, and how to access these services.
- Large distances are often covered by patients who need healthcare and are living outside of Mackay. These distances can be unsafe to travel, especially at night,
- Providing more culturally appropriate care in hospital settings is important to align with patient need and comfort.

Increasing supply of transport resources (e.g. volunteers)

Volunteers are vital, as they are the primary workforce relied on by health transport providers. The availability of volunteers can impact providers' ability to deliver transport, which can lead to services being cancelled or organisation staff filling in at the last minute.

There is a shortage of available volunteers, however some organisations may have access to additional volunteer pools. These include organisations outside of health service delivery, such as local councils or not for profits. Maintaining a shared pool of volunteers from across Mackay, Sarina, Isaac and Whitsundays is important to maintain the delivery of health transport in the region.

In addition, increasing available vehicles in tandem with volunteer staffing will help to continue providing patient transport.

Maximising utilisation of current supply through coordination

Several organisations are providing health transport to patients across Mackay, Sarina, Isaac and Whitsundays. However, there is an opportunity to more efficiently meet patient and provider needs through improved coordination, in particular:

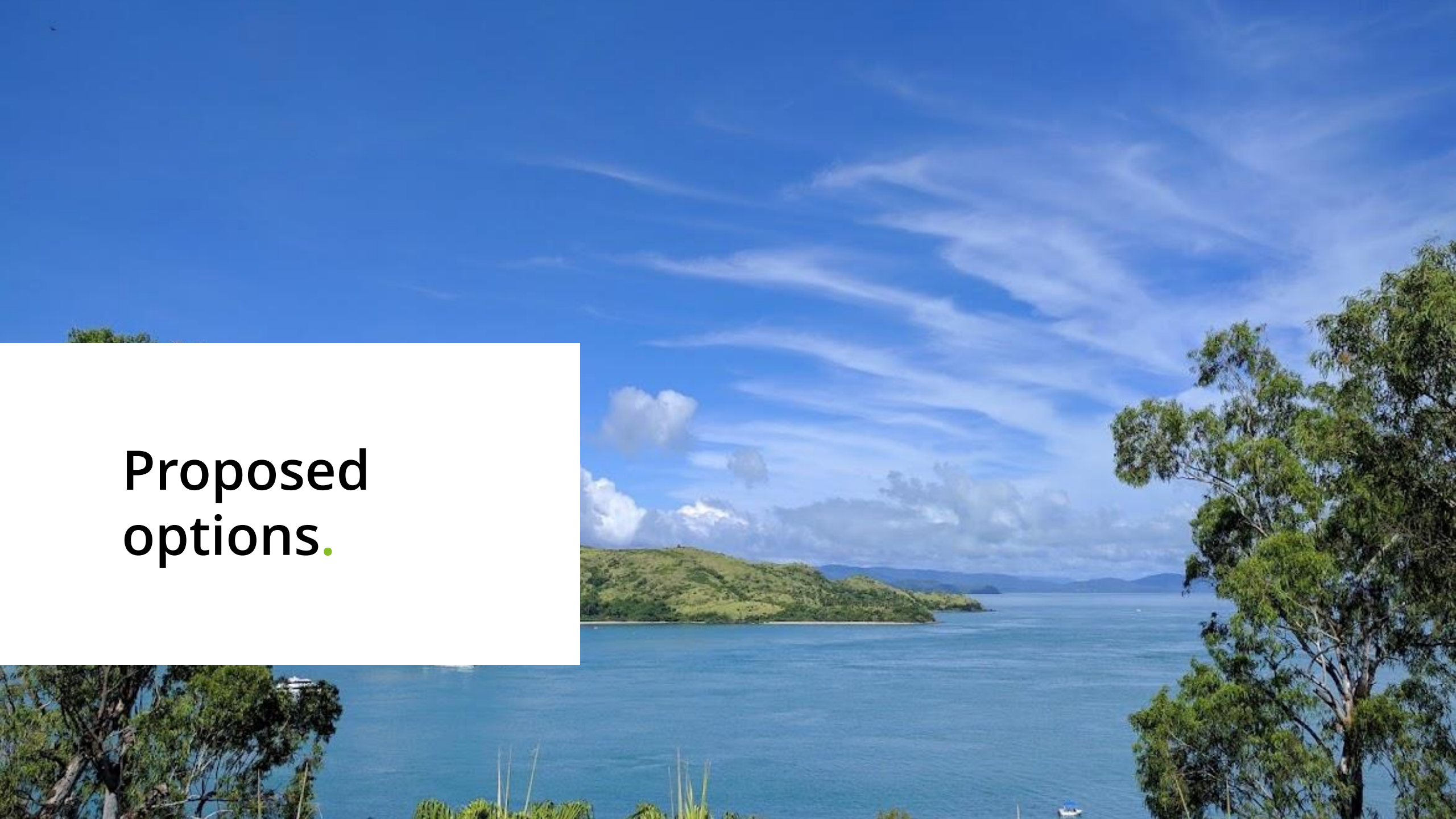
- Providing transport to patients on busy days, where many output appointments or requests for transport are concentrated,
- Filling gaps in service provision for patients when their usual provider is unable to deliver transport services, and
- Helping to provide safe health transport for patients more efficiently while covering a large area.

Planning for health transport services

There are parameters around the transport service that local organisations can provide. These need to be considered, and include:

- Volunteer drivers are not able to assist with patient mobility, including mobilising or lifting patients in and out of wheelchairs,
- Some vehicles may not be equipped for specific patient needs e.g. wheelchair access or child seats, and
- Some providers have designed their services for specific patient cohorts, such as the Kidney Support Network only servicing renal dialysis patients.

In addition, there is an opportunity to better consider patient locations during outpatient appointment scheduling, to ensure appointment times meet patient need.



Proposed options.

Introduction.

In understanding the current state of patient transport in the Mackay, Sarina, Isaac and Whitsunday regions, and key themes raised in the stakeholder workshop, there is an opportunity to discover options for a new future state for health transport.

This section outlines five proposed options to address key themes and considerations that have been raised. These options respond to all areas raised the current state analysis, which are consistent with the key themes raised in the workshop. An icon key has been used throughout to identify which theme each proposed option addresses.

Some of the options outlined in this section were not discussed during the workshop. Each of the following options has been provided for MHHS to review and consider within their knowledge of the local context, and if valuable, take forward with the relevant partners for implementation.

Proposed options.

Local Volunteer Pool

The creation of a shared pool of volunteers would help meet the continued need of local health transport organisers to staff their services. This is also an opportunity to attract volunteers who are not currently engaged in volunteering with health transport providers and are looking for additional hours. This might include people who are volunteering for local councils, not for profits (mention of Meals and Wheels was made) and other local organisations.

Establishing a shared volunteer pool would help the region's community to support each other. There are pathways and options to do this, including:

- Health transport organisations and their volunteers discuss the viability of a pooled resource approach, including who might be available to drive in specific areas and when.
- If volunteers agree, their contact details, preferred areas and availability would be stored in a directory that is only accessible by key provider staff - protecting the privacy of volunteer drivers is very important.
- The opportunity to join the driver volunteer pool is shared with other local organisations, with the intention on understanding if they have additional volunteers who may be interested in joining the pool.
- Cultural safety training would be held for volunteers to help transport services remain safe.

Townsville may have a comparable program known as Active Transport in the Tropics. Exploring the potential application of this model for the Mackay, Sarina, Isaac and Whitsunday regions would be valuable, as well as gaining insights from its implementation and operation.

Health Transport Provider Collaborative

There is a strong need for increased collaboration and communication between providers to address several important considerations:

- Service coverage across the Mackay, Sarina, Isaac and Whitsunday regions,
- The shared understanding of who is providing transport, with what capacity, and when,
- Planning transport during busy outpatient appointment or discharge times (shown in current state patient data analysis, Figures 9 and 19).

There are several options to achieve this, including:

- Providers would meet weekly with a list of patients who have contacted them with a request for transport in the following week. During this meeting, driver rosters could be coordinated based on patient appointments and home locations. This will depend on information being accessible (such as patients who require follow-up appointments) and the capacity to plan transport. This process would also require patients to provide informed consent for their information to be shared with other provider organisations.
- Service schedules are published in a shared location for all providers to access. This enables providers to refer patients between each other, based on service availability.
- For non-dialysis patients, consider shared routes that reduce the distance burden for drivers who are transporting between catchment areas. To connect services, a Mackay driver could meet a Bowen driver at a mid-point and transfer patients for the remainder of the journey.

Proposed options.

Corporate community partnerships

Large private organisations based in regional and rural areas have active corporate social responsibility programs and often looking for more opportunities to support local organisations.

There are several mining and resources sites located near Moranbah, Collinsville and Burton, including sites that are owned by Glencore, BHP and AngloAmerican. To attract additional driver volunteers, there may be an opportunity to collaborate with mining and resource companies and arrange for a regular rotation of employees to volunteer with local organisations as health transport drivers.

Alternatively, organisations might consider donating resources to support safe health transport for patients in the region, such as child seats, mobility aids, fuel vouchers or providing free servicing for cars and buses used to transport patients.

This would encourage stronger ties between these organisations and the communities they often travel to, while also fulfilling patient need for safe health transport in the region.

Redesigning outpatient appointment scheduling

For patients who live outside of Mackay, outpatient appointments scheduled at the start or end of clinic days can be difficult to attend. This is especially important for patients who are travelling two or more hours to reach Mackay Base Hospital, including from Bowen or Moranbah.

For patients travelling large distances to Mackay Base Hospital or other hospitals in the MHHS catchment, using residence as a scheduling criteria would be a patient-first approach to identifying appropriate appointment times. This would help to reduce instances of patients requiring long-distance transport during non-serviced hours and volunteers driving with poor visibility before sunrise or after sunset to transport patients to or from early or late appointments.

There is an opportunity to work with the outpatient scheduling team to identify process modifications that would support meeting patient needs. This might include adjusting processes so consideration can be extended to patients outside of the Mackay catchment with limited transport options. Appointment times should also be considered in context of when patients are seen. If delays between scheduled and actual appointment times are occurring regularly, this should be factored into scheduling processes.

Proposed options.

Education for consumers and health staff

There is an opportunity to enhance awareness of the importance of safe health transport for patients and health service staff.

For patients, understanding the importance of health transport in their own journey will support their ability to self-advocate. Providing patients with transport service and schedule information in an easily accessible format, such as a brochure or directory, is important to help them plan for attending and returning from appointments or discharge. This may also help to reduce instances of patients being unable to attend appointments, which are missed opportunities from both the patient and health service perspectives.

For health service staff, there are several opportunities to increase knowledge and awareness:

- Having regular conversations with inpatients about how they will be returning home after discharge. Having these conversations well before discharge might occur will help suitable arrangements to be made.
- Providing outpatients with written transport information when scheduling occurs. This will help patients to plan if and when they might need transport, and to contact transport providers with plenty of notice, helping to ensure transport is available.
- Integrating an internal patient record flag that identifies those who may need health transport. This may be for outpatients who are First Nations and live outside the Mackay area, as well as those who might regularly require appointments. By knowing when these patients are attending, this flag will help prompt staff to ensure patients have safe transport options arranged.

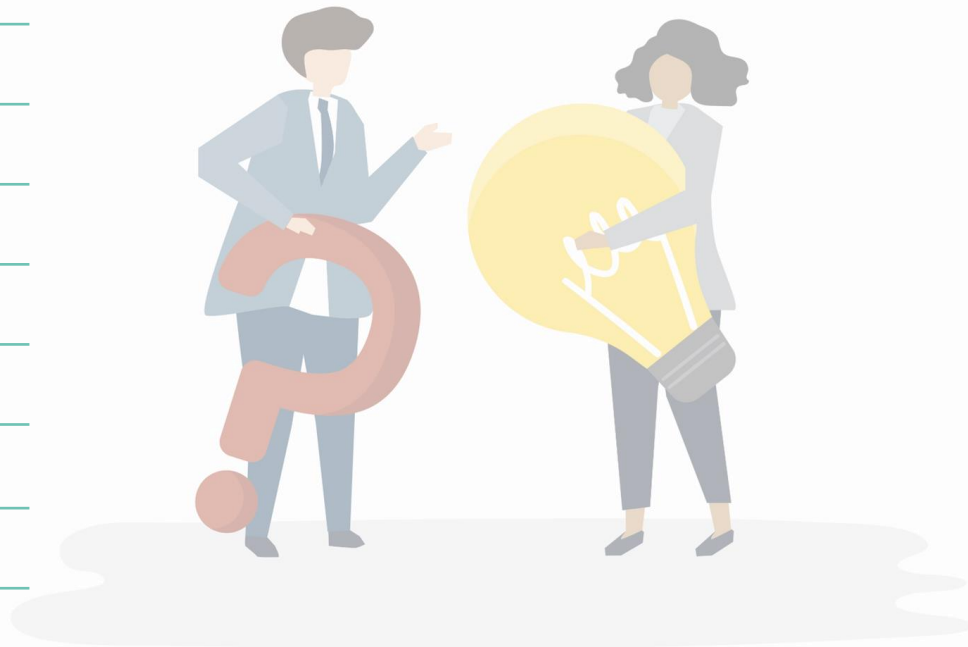
Appendix.

APPENDIX 1

Survey respondents.

Nine representatives from eight health transport providers completed the current state survey. Respondents are summarised in the table below.

Name	Position	Organisation
Paula O'Neill	Operations Manager	Kidney Support Network
Tracey Geaghan	Co-Ordinator	Mackay Community Visitors Association
Allannah Munro	Primary Health Care Manager	ATSICHS Mackay
Sarel Wallace	Wellbeing Practitioner	Moranbah District and Support Serivces
Elise Woodhouse	General Manager	Bowen Flexi Care Inc
Faileen James	CEO	Stella Life
Justine McAllister	Lead for the Health Working Group Sub-Committee	Bowen and Collinsville Community Alliance
Phoebe Walmsley	Wellbeing Practitioner	Moranbah & District Support Services
Kristi Algate	General Manager	Mackay Hospital Foundation



APPENDIX 2

Workshop attendees.

A workshop with stakeholders listed below was conducted in Mackay on 16th April to analyse the current state and co-design a way forward.

Name	Position	Organisation
Terri Beavis	Transport Coordinator	Kidney Support Network
Joslyn Querro	Transport Administrator	Kidney Support Network
Naomi Trusz	Transport Coordinator	Kidney Support Network
Kristi Algate	General Manager	Mackay Hospital Foundation
Mia-Sammut-Landt	Integration and Partnership Specialist	North Queensland Primary Health Network
Josephine Ferguson	Board Chair	Girudala Community Co-Operative Society Ltd
Sam Raciti	CEO	Mudth-Niyleta Aboriginal and Torres Strait Islander Corporation
Kerry Maley	Executive Director, Aboriginal and Torres Strait Islander Health	Mackay Hospital and Health Service
Julie O'Brien	Director Operation, Aboriginal and Torres Strait Islander Health	Mackay Hospital and Health Service
Kerri Whittaker	Project Manager, Health Equity	Mackay Hospital and Health Service

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