North West
Hospital and Health Service

North West Hospital and Health Service Clinical Services Plan

2022-2037

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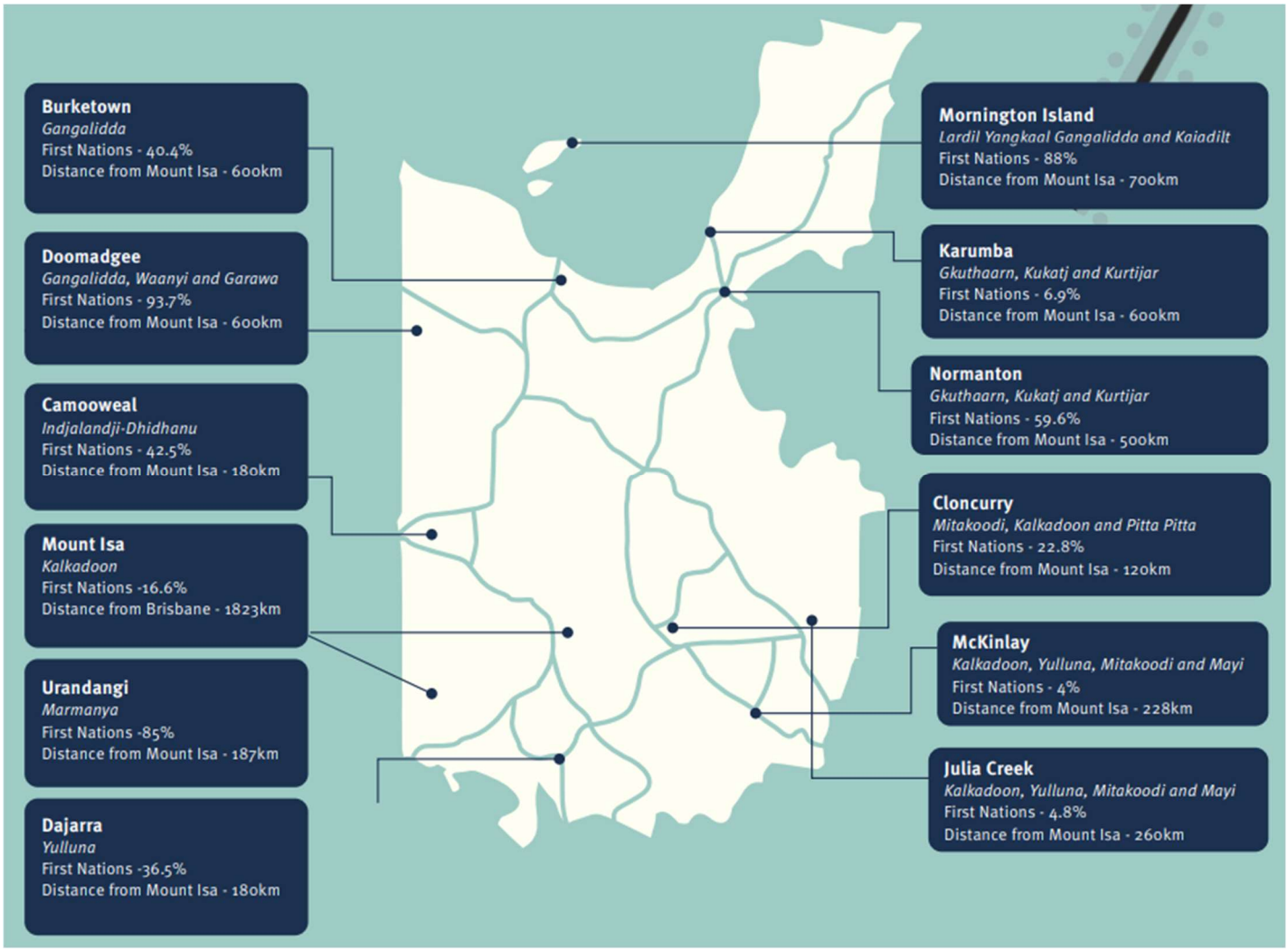
Acknowledgement

The North West Hospital and Health Service (NWHHS) gratefully acknowledges all the Traditional Custodians of the land, air and waterways within the north west region. We pay our sincere respect to the Elders, present, past and yet to come as they hold the wisdom, knowledge and understanding of those that have come before us.

We recognise our connection with Traditional Custodians from 15 proud and strong peoples. Our region is also home to First Nations' people from across Australia.



Executive Summary

The NWHHS Clinical Services Plan 2022-2037 (the Plan) has been developed as part of a broader planning process to ensure high quality sustainable health services for the people of north west Queensland. The scope of the Plan is focused on:

- Informing the Master Planning process for NWHHS facilities, and
- Articulating the clinical service delivery model and key service enhancements for which NWHHS has a lead agency responsibility to address within the broader health system.

The Plan has been informed by a detailed quantitative analysis of the current and projected requirements for clinical services which is documented in the separate NWHHS Technical Paper (Appendix). The Plan also leverages the recent extensive work undertaken for the development of the *NWHHS Local Area Needs Assessment* and *NWHHS Health Equity Strategy 2022-2025* and should therefore be read in conjunction with these documents as it assumes that implementation of the strategies and partnership arrangements for the broader health system will be taken forward through those processes.

As part of the Plan development, a strategic assessment of the issues and opportunities was undertaken; informed by analysis of the burden of disease, current health service utilisation and consultation with key stakeholders. The strategic assessment highlighted the following major issues impacting on clinical service delivery:

- Significant inequity of access for First Nations' population
- High levels of service fragmentation
- Inconsistent delivery of services to full scope of clinical services capability
- Long term issues of workforce availability
- Need for digital transformation
- Ongoing market failure in the private and non-government aged and disability sectors.

At an HHS wide level, the key priorities for service development are:

- Implementation of a networked clinical services model. The model is based on three internal geographic networks.

  Mount Isa – Mount Isa (hub), Dajarra and Camooweal

  Lower Gulf – Cloncurry (hub), Julia Creek and McKinlay

  The Gulf – Normanton (hub), Burketown, Doomadgee, Karumba, Mornington Island.

- Implementation of the *Digital Health Strategy for Rural and Remote Healthcare*. Poor digital infrastructure is inhibiting update of digital technologies to support technology enabled models of care.

Virtual healthcare is critical to the sustainability of the future networked clinical service model, particularly in supporting connection to country and providing care close to home.

- Workforce redesign. Provision of a sustainable future clinical service model is inextricably linked to the implementation of a contemporary workforce model. The priority is to increase service capacity through expansion of allied health, nursing and health worker led models in addition to supporting a sustainable medical workforce.

Essential for sustainability of all NWHHS services is the need for recognition and strengthening of the district wide role of Mount Isa Hospital. As the only provider of Clinical Services Capability Framework (CSCF) Level 4 services, all patient flows for day only procedures, overnight emergency and elective surgical, birthing and complex medical inpatients will continue to be to Mount Isa Hospital from across the whole of NWHHS. In addition, the role of Mount Isa Hospital is to be a hub for provision of NWHHS wide outreach services, virtual health and overarching clinical governance.

A key priority is to promote the role of Mount Isa Hospital, in collaboration with the James Cook University (JCU) Centre for Rural and Remote Health, as a leading provider of rural and remote services. This is a fundamental driver for improved workforce recruitment and retention and essential for sustainability of the networked Level 1 and 2 facilities across NWHHS. To support this role the following service enhancements at Mount Isa Hospital are required:

- Consolidating the provision of CSCF 4 level services particularly for core surgical services
- Increasing day procedure capacity to meet the high levels of unmet need in the First Nations' population for diagnostic procedures, ear, nose and throat (ENT), dental, ophthalmology and gynaecology day procedures
- Creating a collocated ambulatory service which integrates specialist outpatients, community health, sexual health, chronic disease, child health, allied health, renal dialysis and dental
- Establishing a six-bed acute/subacute mental health inpatient unit in accordance with priorities identified in *Better Care Together: a plan for Queensland's state funded mental health alcohol and drug services to 2027*
- Developing a purpose-built subacute unit for inpatient and outpatient rehabilitation, Geriatric Management and Evaluation (GEM) and nonacute patients
- Establishing a Virtual Health Hub and Virtual Ward using a mixed model of standard Hospital in the Home (HiTH) services for Mount Isa residents as well as a process for formal specialist medical oversight of patients in remote facilities
- Expanding the emergency department and emergency department short stay unit capacity to improve patient flow including introduction of a nurse led rapid access model and provision of an appropriate setting for assessment and management of people presenting with acute or behavioural issues
- Enhancing the maternity service model particularly to address the cultural, social, economic and mental health needs of First Nations'' women and families.
- Addressing critical gaps in digital technology to support transformed models of care.

The Level 1 and 2 facilities are a focal point for the implementation of the *NWHHS Health Equity Strategy 2022-2025* and have a key role in delivering partnership arrangements under the Tripartite Agreement (between NWHHS, Gidgee Health and Western Queensland Primary Health Network). It is noted that the current Tripartite Agreement has expired and needs to be re-established. A key partnership that can be leveraged is with the Royal Flying Doctor Services (RFDS). This relationship can be further enhanced to secure consistent services for the Lower Gulf and the Gulf networks. The clinical service enhancements that need to be progressed as a priority in the short to medium term include:

- Developing the roles of Cloncurry Multipurpose Health Service and Normanton Hospital as hubs for the networked clinical service model to address nursing, medical and allied health workforce shortages and support improved patient flow.
- Embedding cultural safety in the model of care in partnership with Gidgee Healing to align the model of care provided by NWHHS facilities with the holistic and family centred Aboriginal Community Controlled Health Organisations model of care.
- Significantly expanding the volume and range of telehealth services particularly for specialist medical outpatient recall and review appointments and allied health services.
- Addressing critical gaps in clinical services for women, children and babies, social and emotional/mental health, oral health, rheumatic heart disease and sexual health.
- Better integrating and coordinating NWHHS Services including communication and discharge planning with Mount Isa Hospital, coordination of outreach services, implementation of case management approaches and use of consistent referral pathways.
- Addressing critical gaps in digital technology to support transformed models of care.

The priorities identified in the Plan inform development of a detailed 15-year Future State Master Plan for all NWHHS facilities which prioritises evidence-based solutions such as digital technology as well as articulating the remaining physical infrastructure priorities required to deliver culturally appropriate, sustainable health services to rural and remote north west Queensland.

This is a dynamic document developed at a point in time. Hence, the services listed may change due to various factors. These include: the increase in capacity and capability of HHS, the services commissioned by Queensland Health, and through agreements with other health service organisations.

Although the NWHHS Technical Paper Appendix 1 details the service modelling, better health analytics capabilities needs to be explored to understand the impact of service modelling, measuring health outcomes and developing cost modelling that better reflects the true cost of delivering remote health services.

1. Introduction

The NWHHS Clinical Services Plan 2022-2037 (the Plan) has been developed as part of broader planning processes to ensure high quality sustainable health services for the people of north west Queensland.

The process also includes a comprehensive current state infrastructure review across all Hospitals, Multi-Purpose Health Services (MPHS) and Primary Health Centres and development of a detailed 15-year Future State Master Plan which prioritises evidence- based non-infrastructure solutions and articulates the remaining infrastructure growth priorities to meet the future needs of the health service.

The scope of the Plan is focussed on:

- Informing the Master Planning process for NWHHS facilities, and
- Articulating the clinical service delivery model and key service enhancements for which NWHHS has a lead agency responsibility to address within the broader health system.

Development of the Plan has been based on:

- A detailed quantitative analysis of the current and projected requirements for clinical services which are documented in the associated NWHHS Technical Paper (Appendix).
- Analysis and collation of national, state and local policy documents and published plans
- Key informant interviews with internal NWHHS stakeholders to understand the current operational level barriers and opportunities for improving clinical service delivery.
- Leveraging the existing extensive recent consultation with a broad range of internal and external stakeholders that was undertaken for the development of the *NWHHS Local Area Needs Assessment 2022* (NWHHS LANA) and *NWHHS Health Equity Strategy 2022-2025* (NWHHS Health Equity Strategy).
- The future directions outlined in the Plan align with broader state-wide strategy including *Advancing health service delivery through workforce: A strategy for Queensland, 2017-2026*, *Queensland Health System Outlook to 2026 for a sustainable health service* and the NWHHS strategic outlook as described in the new *NWHHS Strategic Plan 2021-2025* as well as priorities identified in the NWHHS LANA and the NWHHS Health Equity Strategy. This Clinical Services Plan should therefore be read in conjunction with these documents as it assumes that implementation of the strategies and partnership arrangements for the broader health system will be taken forward through those processes.

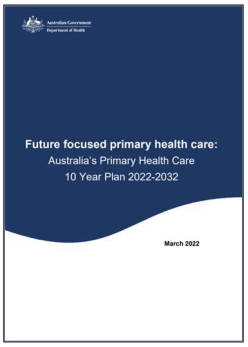
2. Policy and Planning Context

This Clinical Services Plan will be supported by the integrated policy and planning framework and aligns with the Australian Government, QLD Government, QLD Department of Health, and NWHHS's strategic directions. The key strategic drivers will include:

Australian Government

- National Health Reform Agreement (NHRA)
- National Partnership Agreement on Improving Public Hospital Services
- Activity Based Funding
- National Disability Insurance Scheme
- Fifth National Mental Health and Suicide Prevention Plan

Australia's Primary Health Care 10 Year Plan 2022-2032



The Plan is about strengthening primary health care as part of the health system, and identifies 12 action areas that are grouped under 3 reform streams:

- Future focused primary health care
- Person-centred primary health care supported by funding reform
- Integrated care locally delivered.

Specific strategies to improve First Nations' care include:

- Growing the Aboriginal and Torres Strait Islander medical workforce
- Closing the Gap through a stronger community-controlled sector:
  - increasing health checks under MBS 715
  - Safe immunisation
  - Specific actions on ear, eye, renal, acute rheumatic fever and rheumatic heart disease.

QLD Government

Unite and Recover – Queensland's Economic Recovery Plan

In August 2020, the government tabled new objectives for the community based on the Unite and Recover – Queensland's Economic Recovery Plan, focused on continuing to protect the health of Queenslanders, creating more jobs, and working together to strengthen the economy.

The objectives related to improving health outcomes and delivery health care include:

- Safeguarding our health: Safeguard people's health and jobs by keeping Queensland pandemic-ready

- Backing our frontline services: Deliver world-class frontline services in key areas such as health, education and community safety
- Growing our regions: Help Queensland's regions grow by attracting people, talent and investment, and driving sustainable economic prosperity
- Investing in skills: Ensure Queenslanders have the skills they need to find meaningful jobs and set up pathways for the future.

QLD Health

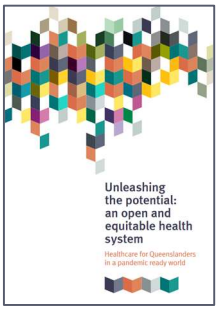
Queensland Government
Queensland Health

Queensland Health Services Plans, Policies, and Procedures, including:

- Department of Health Strategic Plan 2021–2025 (2022 update)
- Advancing health service delivery through workforce: A strategy for Queensland, 2017-2026
- Prevention Strategic Framework 2017 to 2026
- Healthy Ageing: A strategy for older Queenslanders
- Making Tracks toward closing the gap in health outcomes for Indigenous QLDs by 2033
- Queensland Health System Outlook to 2026 for a sustainable health service
- Digital Strategy for Rural and Remote Healthcare

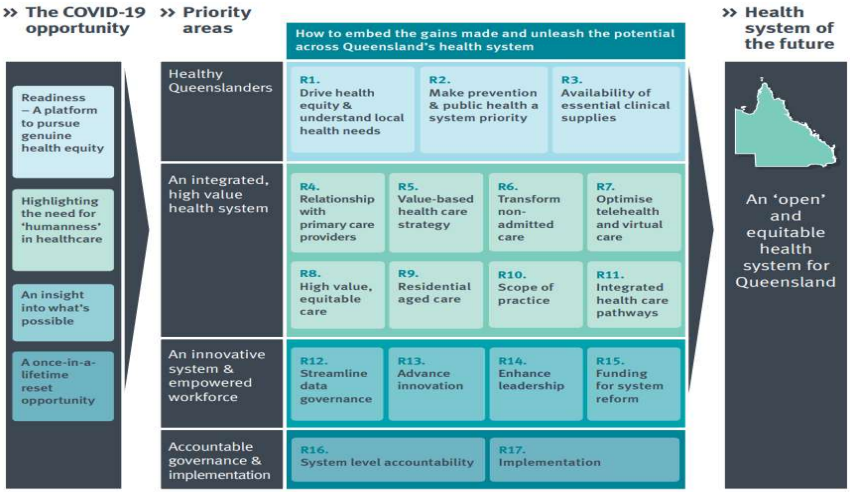
Queensland Health Telehealth Strategy 2021 – 2026

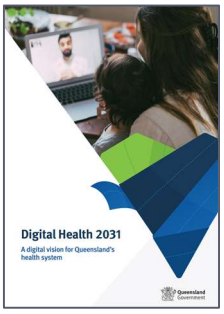
This Telehealth Strategy articulates the future for remote care, adding tools available to health professionals, connecting personal technology, increasing remote monitoring and moving to proactive care in the community. It aims to broaden the range of services offering telehealth, expand telehealth beyond videoconferencing, and connect with innovative models of care. The vision is to enable consumer-centred care delivery for any model of care or physical location.



Unleashing the potential: an open and equitable health system

Unleashing the potential provides a vision for the health system in Queensland post the COVID-19 pandemic as summarised below. In particular, this health service plan focuses on priority areas related to Healthy Queenslanders (in particular R1 and R2) and those related to an integrated, high value health system.





Digital Health 2031 – A digital vision for Queensland's health system

This Digital Strategy provides directions to help continue Queensland's journey to be a world-class provider of safe, quality and sustainable healthcare. The ultimate objective is to enhance outcomes for all Queenslanders that access care with Queensland Health. It seeks to:

- Define the future state for digitally enabled healthcare
- Provide a strategic framework and goals for digital initiatives
- Build on the prior Digital Health Strategic Vision for Queensland 2026
- Facilitate the ultimate realisation of improved healthcare outcomes.

Digital Strategy for Rural and Remote Healthcare

This Digital Strategy aims to support Queensland Health's vision by providing equitable access to healthcare across the state by digitally enabling rural and remote healthcare services to deliver better care now, and for future generations of Queenslanders living in rural and remote areas. The Digital Strategy for Rural and Remote Healthcare forms a critical step in the digital journey to enhance and improve healthcare for patients, by enabling clinicians with new digital technology and sharing information with community healthcare partners.

Advancing rural and remote service delivery through workforce: A strategy for Queensland 2017–2020

This strategy outlines priorities to build a sustainable health workforce in rural and remote Queensland, to improve health outcomes for Queenslanders in non-urban areas of the state, particularly the Torres and Cape York, North West, Central West, and South West Queensland Hospital and Health Services. Aims of the strategy include:

- Combining the skills, knowledge and commitment of the rural and remote workforce with new technology and innovative ways of working to improve the health consumer experience
- Developing workforce models and job designs that enable innovative models of care to flourish
- Building the digital literacy of the rural and remote health workforce to contribute to the success of broader digital health strategies
- Maturing state-wide workforce management approaches to enable the sharing of resources to fill critical workforce gaps in rural and remote locations.

North West HHS Plans

- NWHHS Health Equity Strategy 2022-2025
- NWHHS Local Area Needs Assessment 2022
- NWHHS Strategic Plan 2021-2025
- NWHHS Aboriginal and Torres Strait Islander Workforce Strategy 2019–2026
- NWHHS Health Service Plan 2018-2032

3. Overview of NWHHS

3.1 Geographic Catchment

The NWHHS Primary Catchment spans a large geographical area in the north west of Queensland, extending west to the Queensland – Northern Territory Border, south beyond Dajarra, east beyond Julia Creek and North beyond Normanton, bordering Kowanyama (refer to Figure 1 below).

The Primary Catchment spans the entire Statistical Areas 2 (SA2s) of Mount Isa, Mount Isa Region and Carpentaria, approximately a quarter of Northern Highlands SA2 and a very small proportion of Far Central West SA2.

A list of facilities is outlined below.

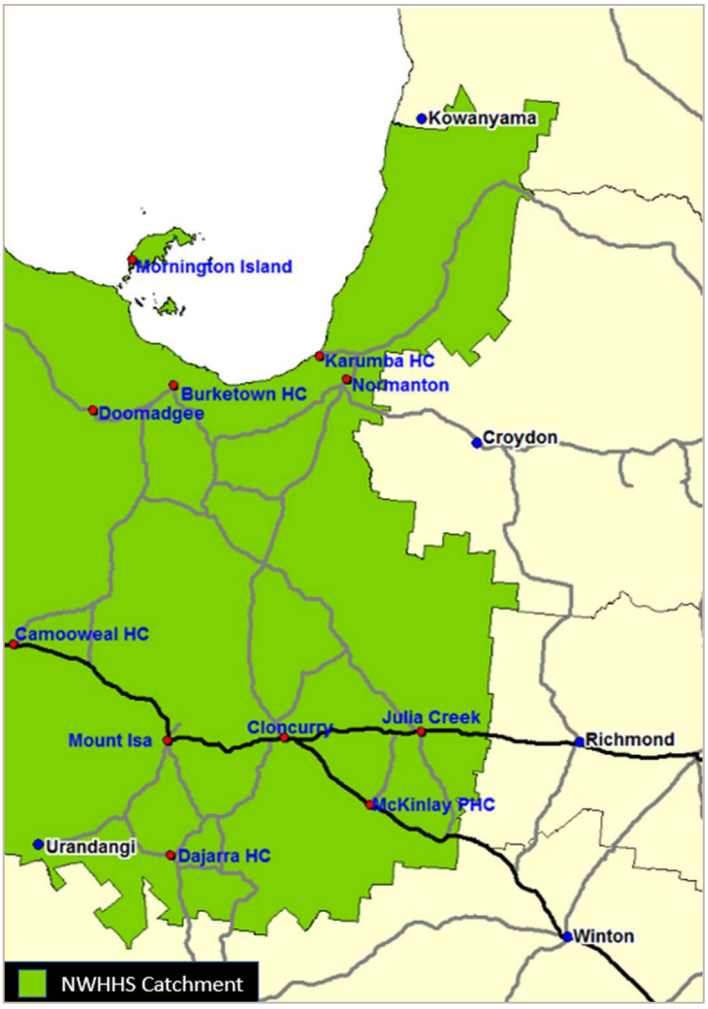
Hospitals

- Mount Isa Hospital
- Cloncurry Multipurpose Health Service (MPHS)
- Normanton Hospital
- Julia Creek MPHS
- Doomadgee Hospital
- Mornington Island Hospital

Community / Primary Health Services

- Burketown Primary Health Clinic
- Camooweal Primary Health Clinic
- Dajarra Primary Health Clinic
- Karumba Primary Health Care Clinic
- McKinlay Primary Health Clinic
- Urandangi Health Clinic

Figure 1 – NWHHS Primary Catchment map



Source: QLD Health, Hospital and Health Service Maps

3.2 Population Profile and Health Status

3.2.1 Current Population

The Primary Catchment Estimated Resident Population (ERP) was 28,893 as at 30 June 2021, with very little population growth since 2016 (0.7% increase).

The composition of the Primary Catchment population by age and sex at 30 June 2021 shows that the proportion of people in the elderly population was lower than that of QLD. Approximately 5% of the population was aged 70 years and over in the Primary Catchment versus 12% across QLD.

As at 30 June 2021, approximately 65% if the NWHHS Primary Catchment resided in Mount Isa SA2, 19% in Carpentaria SA2, 14% in Mount Isa Region SA2 and 3% in Northern Highlands SA2.

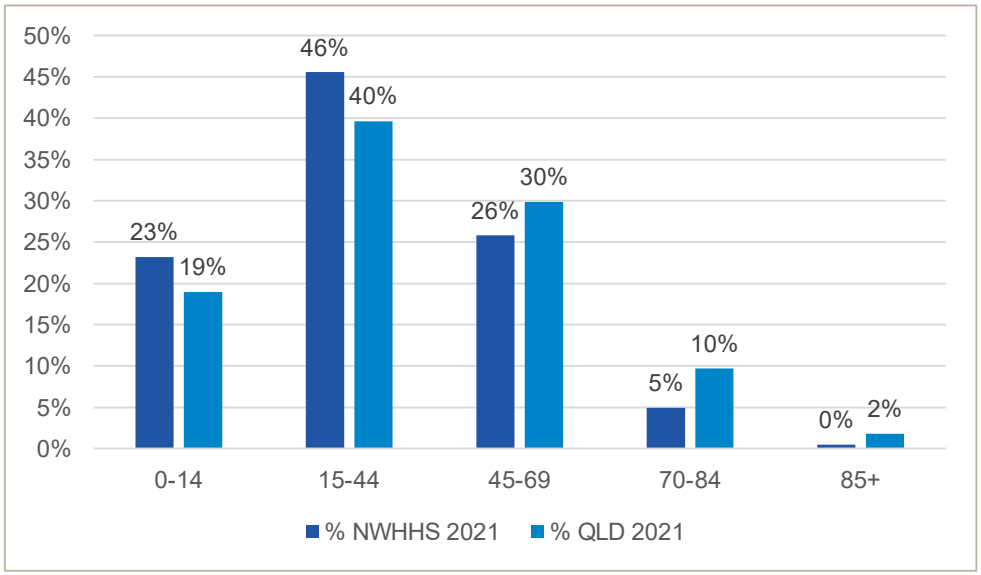
These population numbers are indicative and may vary depending on the transient nature of some populations, e.g., 'grey nomads' and 'fly-in fly-out' workers. Other population groups that need consideration are the residents on stations within the NWHHS catchment that may not be included or may be underestimated within the census data. This document will be updated regularly with local intelligence regarding the potential for population growth as new industry developments occur (mining, housing, and other industry expansions).

Table 1 – NWHHS population profile by age group, 2016 and 2021

Age group	2016	2021	% NWHHS 2021	*% QLD 2021*
0-14	7,004	6,700	23%	*19%*
15-44	13,097	13,163	46%	*40%*
45-69	7,360	7,461	26%	*30%*
70-84	1,138	1,432	5%	*10%*
85+	91	137	<1%	*2%*
Total	**28,691**	**28,893**	**100%**	***100%***

Source: ABS, ERP by SA2 (ASGS 2021), Age and Sex, 2001 to 2021

Figure 2 – NWHHS population profile by age group, 2021



Source: ABS, ERP by SA2 (ASGS 2021), Age and Sex, 2001 to 2021

First Nations'

This section details the proportion of the Primary Catchment population that identified as Aboriginal and/or Torres Strait Islander (First Nations'). This information has been sourced from the August 2021 census (this information is not available for the 2021 ERP detailed in the section above).

As at August 2021, 29% of the Primary Catchment census population, or 8,035 persons, identified as First Nations' people. 75% of the First Nations' population was aged under 45 vs. 68% of the total Primary Catchment population.

Table 2 – NWHHS First Nations' population by age group, 2021

Age group (years)	Primary Catchment	% Primary Catchment	*QLD*	*% QLD*
0-4	859	11%	*25,731*	*11%*
5 - 14	1,719	21%	*54,439*	*23%*
15-44	3,486	43%	*103,035*	*43%*
45-64	1,542	19%	*41,034*	*17%*
65+	430	5%	*13,065*	*6%*
Total	**8,035**	**100%**	***237,304***	***100%***

Source: ABS, 2021 Census, Age and Sex

3.2.2 Projected Population

The latest population projections for Queensland were reviewed by the Queensland Government Statisticians Office in 2019 and are based on the Estimated Resident Population.

The population of the NWHHS Primary Catchment is projected to remain stable from 2021 to 2036. The population is projected to maintain around 27,000 people over this period. However, it is noted that the projected population at the first projection year, 2021, was approximately 1,891 persons lower than the actual 2021 ERP population of 28,893 noted above, therefore the population may be more likely to maintain around 29,000 people.

Population decline is forecast for the paediatric and 15-44 age groups, offset by projected growth in the 45+ age groups.

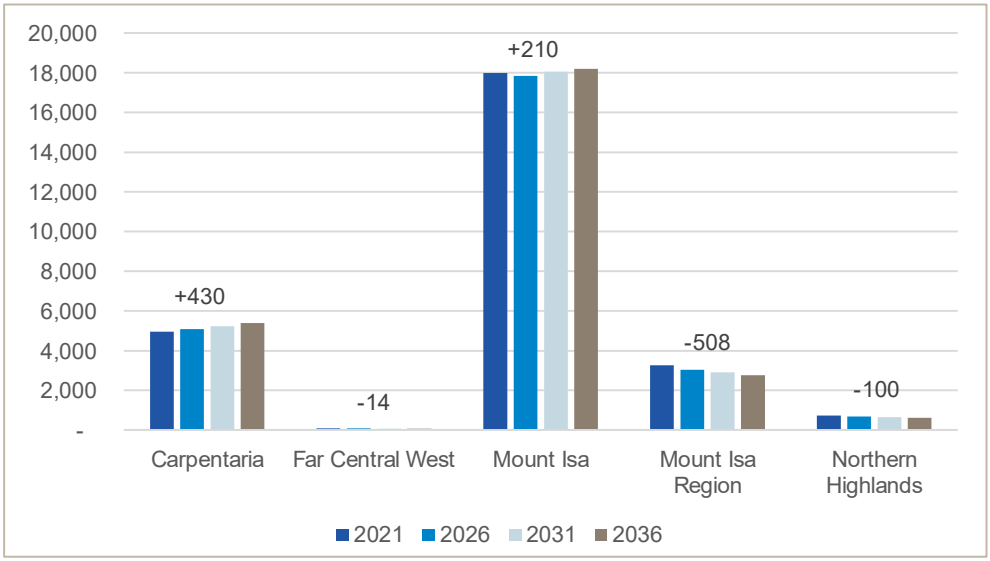
Table 3 – NWHHS population projections by age group, 2021 to 2036

Age group	2021	2026	2031	2036	Change	AGR 2021 - 36
0-14	6,374	6,089	5,964	5,908	-465	-0.50%
15-44	12,145	12,077	12,087	12,045	-100	-0.05%
45-69	7,023	6,966	7,098	7,199	177	0.17%
70-84	1,317	1,414	1,517	1,586	269	1.25%
85+	143	173	233	281	138	4.60%
Total	**27,001**	**26,719**	**26,899**	**27,019**	**18**	**0.00%**

Source: 2019 QGSO Population Projections

From 2021 to 2036, the population of Carpentaria SA2 is projected to increase by 430 people, Mount Isa SA2 increase by 210, Mount Isa Region decrease by 508 and Northern Highlands (approximate proportion within NWHHS) decrease by 100.

Figure 3 – NWHHS population projections by SA2, 2021 to 2036



Source: 2019 QGSO Population Projections

3.2.3 *Health and Wellness Profile*

A high-level summary of the health status of the NWHHS community is outlined below (this is described in significant detail in the *NWHHS Local Area Needs Assessment 2022*) - data sourced from QLD Health and publicly available data via the Planning Portal.

Social Determinants

18% of persons are in the most socio-economically disadvantaged quintile (QLD 18.3%)

61% of population obtained education level of year 11 or higher (QLD 63.5%)

1.5% of persons living in severely crowded dwellings (QLD 0.2%)

20.7% of dwellings do not have internet access (QLD 13.6%)

9% dwellings do not have access to vehicles (QLD 6.0%)

11% unemployment rate (QLD 7.3%)

Adult – Health behaviours and risk factors

57% participation in national cancer screening programs for breast cancer (QLD 54.7%)

37.9% participation in national cancer screening programs for cervical cancer (QLD 46.0%)

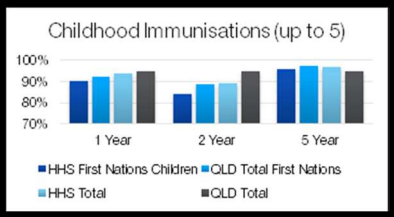
26% participation in national cancer screening programs for bowel cancer (QLD 41.9%)

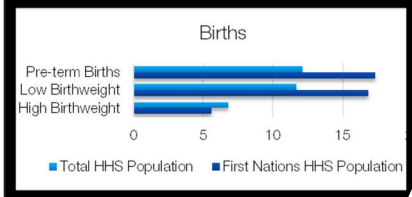
Risk factors- estimated prevalence	HHS	QLD
Obese	37.9%	25.0%
Overweight	33.1%	34.9%
Insufficient physical activity	23.7%	30.3%
Smoking	19%	10.8%
Risky alcohol intake	22.8%	18.2%
High blood pressure	23.9%	16.8%
Psychological distress	16.4%	9.4%

Child – Health behaviours and risk factors

19.5% children developmentally vulnerable on 2+ domains of early childhood development (QLD

47.7% First Nations (and 7.6% Non-First Nations) HHS mothers smoked during pregnancy (QLD 12%)





Health Status

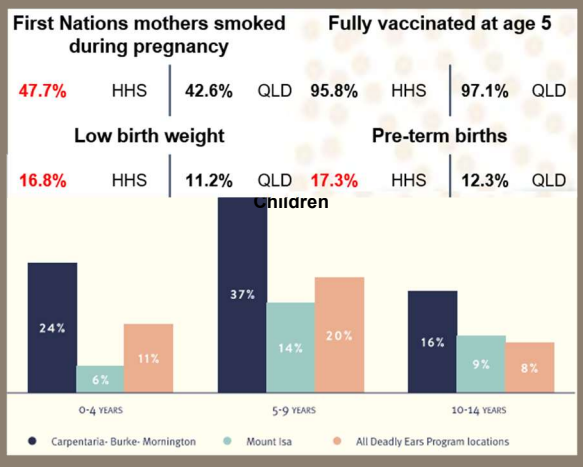
Chronic conditions	HHS	QLD total
Cardiovascular conditions		
Prevalence (% population)	8.9%	4.7%
Premature mortality: circulatory disease Age Standardised Rate (ASR) per 100,000 population	104.2	44
Respiratory conditions		
Asthma: prevalence (% population)	11.9%	11.8%
Chronic obstructive pulmonary disease: prevalence (% population)	4.3%	3.5%
Respiratory diseases: premature mortality ASR per 100,000 population	38.1	16.6
Diabetes mellitus		
Prevalence (% population)	8.9%	4.7%
Premature mortality ASR per 100,000 population	33.4	7.2

Chronic conditions	HHS	QLD total
Cancer		
Prevalence ASR per 100,000 population	546	590
Premature mortality ASR per 100,000 population	137.6	102.4
Mental health		
Mental Health prevalence ASR per 100,000 population	16.4	22.7
Mortality- suicide Rate per 100,000 population(age25-34)	~26	15.6
External causes		
Premature mortality ASR per 100,000 population	58.2	33.4

First Nations

5.4% of First Nations persons living in severely crowded dwellings (QLD 1.7%)

36.9% of First Nations population obtained education level of year 11 or higher (QLD 48.6%)



Note "QLD" rates refer to First Nations Queensland rates.

First Nation's Population		
Chronic conditions	**HHS**	**QLD total**
ARF / Rheumatic Heart Disease		
Prevalence (% population)	3.5%	unavailable
End stage kidney disease		
Prevalence (% population)	0.21%	0.23%
STIs		
Prevalence (% population)	1.6%	unavailable
Vaccine-preventable diseases		
Prevalence Rate per 1,000 population	8.6	9.5
Diabetes mellitus		
Premature mortality ASR per 100,000 population	66.3	23.7
Respiratory Disease		
Premature mortality ASR per 100,000 population	28.9	24.9
Cancer		
Premature mortality ASR per 100,000 population	107.6	83.5
Circulatory system disease		
Premature mortality ASR per 100,000 population	123.6	62.6
External causes		
Premature mortality ASR per 100,000 population	87.9	53.5

3.3 Current Service Activity

This section summarises the current service activity of NWHHS facilities, with some analysis of NWHHS Resident flows. More detailed information can be found in the NWHHS Technical Paper (Appendix).

2020-21 Mount Isa Hospital

Activity Summary

	Daily Av.	Per Year
Inpatient Separations	43	15, 826
Inpatient Bed Days	79	28,905
ED Presentations	92	33,581
Outpatient Occasions	188	46,997

The top 5 Service-Related Groups treated at Mount Isa Hospital (by admissions) in 2020-21 included:

Renal Dialysis (6,309)

Obstetrics (838)

Non-Subspecialty Surgery (756)

Cardiology (635).

Chemotherapy (576).

In 2020-21, NWHHS Rural Hospitals and MPHS completed:

2,208 inpatient separations

4,720 bed days

21,629 emergency department presentations

NWHHS in 2020-21 was

82%

Self-sufficient (excluding renal dialysis) meaning approximately 2 in 10 patients required treatment outside the HHS.

In 2020-21:

3,591 separations

for NWHHS residents for admitted public care were provided outside of the HHS (75% of which, excluding for renal dialysis, were provided at Townsville University Hospital).

Separations at Townsville University Hospital (in 2020-21 for NWHHS residents) were primarily for:

Renal dialysis (1,166)

Orthopaedics (195)

Obstetrics (143)

Urology (142).

2020-21 First Nations People Hospital Admissions

Overall, **47%** of NWHHS admitted patients (excluding renal dialysis) identified as First Nations people

95% of renal dialysis patients identified as First Nations people.

The Ageing Population and Health

In 2020-21, **18%** of all admissions (excluding renal dialysis) across NWHHS Facilities were for people aged 65 and over

In 2020-21, **29%** of all Occupied Bed Days were for people aged 65 years and over.

3.4 Overview of Current Services

3.4.1 Mount Isa

Mount Isa Hospital is a Level 4 facility under the Queensland Health Clinical Services Capability Framework (CSCF) that provides accident and emergency, ambulatory and inpatient medical, surgical, maternity and paediatric services, with 90 overnight beds, two operating theatres, one endoscopy suite and three birthing suites. There is a critical care unit and a neonatal special care nursery. Subacute services include community rehabilitation in partnership with the Centre for Rural and Remote Health and North West Remote Health.

Mount Isa Hospital is the main referral centre within NWHHS and is the most remote Level 4 CSCF facility in Australia. Patients from other facilities across the north west region who require specialist treatment and care are predominantly referred to the Mount Isa Hospital unless more complex care is required at other major hospitals within Queensland, including at Townsville, Cairns and Brisbane.

Specialist services are provided on a general surgery and general medicine model with visiting subspecialty services such as orthopaedics and vascular services provided on an outreach basis predominantly from Townsville University Hospital (TUH).

Ambulatory services include renal dialysis, oral health and allied heath (dietetics, occupational therapy, podiatry, social work, physiotherapy, clinical measurements and speech and hearing). Chemotherapy is provided with support from the Townsville Cancer Service. Mental health and alcohol and drug services are provided on an ambulatory basis with patients requiring admission to a specialist unit being transferred to Townsville.

Specialist outreach patient services are managed from the hospital, which is the hub for telehealth services across the north west service area, with the five primary health care clinics and six hospital sites having access to 24/7 medical and nursing and midwifery support for the advice and management of lower risk emergency department presentations and other outpatient care.

The Mount Isa Hospital radiology diagnostic service is provided by iMED Radiology through a private outsourcing agreement. The radiology department is co-located within the Mount Isa Hospital providing:

- General computerised radiography
- Magnetic resonance imaging
- Echocardiograms
- Ultrasound fluoroscopy, and mobile trauma services through a digitalised picture communication system supporting outlying facilities.

3.4.2 Cloncurry

Cloncurry MPS is a Level 2 CSCF facility that provides rural and remote hospital services with a 15-bed inpatient facility, a ten-bed residential aged care facility, an emergency department, a small ambulatory area and two renal dialysis chairs.

The inpatient service admits medically unwell babies, children and adults who can be managed on a general ward under the care of the local medical staff. Patients requiring surgical and diagnostic

procedures such as endoscopy are all transferred to Mount Isa. The Midwifery Group Practice from Mount Isa visits to provide antenatal and postnatal care.

Community health services are provided from a building offsite and include aged care assessment, sexual health, chronic disease management, diabetes education, mental health, alcohol and drug service, school health, child and youth health, women's health, palliative care, physiotherapy, dietician, and optometry services.

Community based primary care allied health services are provided by North West Remote Health.

A private general practice, the Flinders Medical Centre, is located in Ramsay St. There is currently limited timely availability for appointments which has resulted in increasing ED presentations at the hospital.

3.4.3 Doomadgee

Doomadgee Hospital is a Level 2 CSCF facility that provides rural and remote hospital services with a 7-bed inpatient facility, an emergency department, a small ambulatory area and four renal dialysis chairs (two chairs operating).

Culturally appropriate care is provided by Aboriginal and Torres Strait Islander health workers (AHW), nursing, medical, administration and operational staff.

Main conditions treated include diabetes, sepsis, respiratory, renal and social admissions including alcohol intoxication.

Primary care and community health services are provided by Gidgee Healing under the Tripartite Agreement. Gidgee Healing also operates a 10-bed residential aged care facility at Doomadgee.

The Doomadgee Community Health Centre is staffed by nurses and AHWs who work in partnership with hospital staff and other agencies to provide health assessments, chronic disease management and coordination of visiting services. The model of care includes clinical review, health education and promotion programs.

There are a wide range of visiting outreach programs including Deadly Ears, Indigenous Respiratory Outreach Care Program, women's health and child health, allied health, cardiac and respiratory services; sexual health; alcohol and other drugs counselling; maternal health; mental health; dental; diabetes education, medical physician outreach clinic, gynaecology, dermatology, hearing screening and services, optometrist, paediatric cardiologist, rheumatic heart disease program and renal services. Dental services are provided from Mount Isa once a month

3.4.4 Julia Creek

Julia Creek MPHS is Level 2 CSCF facility that provides rural and remote hospital services with a 2-bed inpatient facility, a 4-bed residential aged care facility, an emergency department and a separate GP clinic.

The facility provides low-risk ambulatory care clinical services predominantly delivered by registered nurses and health workers. An outreach doctor comes two-three days per week, in addition a new GP has been now recruited to start in March 2023. Patients requiring a higher level of care can be managed for short periods before transfer to a higher-level service.

The facility predominantly provides aged care and is the only residential aged care facility in Julia Creek. In addition to the MPHS, there are independent living units which are supported by a community nurse (50% funded by the Council and 50% by the HHS).

The Queensland Ambulance Services (QAS) is staffed by one full-time equivalent (FTE) paramedic position. Nursing staff from Julia Creek MPHS assist QAS with patient transfers to Cloncurry when required, including after-hours. There is currently minimal ability to provide X-ray due to staffing skill mix which increases the number of transfers.

3.4.5 Mornington Island

Mornington Island Hospital is a Level 2 CSCF facility that provides rural and remote hospital services with 11-bed inpatient beds, an emergency department, a small ambulatory area and six renal dialysis chairs (two chairs operating).

Clinical staffing consists of a medical officer and registered nurses on each shift 24 hours a day.

Following transition to community control, Gidgee Healing provides primary and community health care from the community health building. Plans for a new primary care facility are underway. Gidgee Healing also operates a 15-bed residential aged care facility.

The model of care includes clinical review, health education and promotion programs. Examples of programs are Deadly Ears; child and adult respiratory (lung health) care, provided by the Indigenous Respiratory Outreach Care Program; women's health and child health; allied health services; cardiac and respiratory services; sexual health; alcohol and other drugs counselling; maternal health; mental health; dental; diabetes education and renal services.

Several other outreach services are also provided including alcohol and other drugs counselling, maternal health, mental health, dental, diabetic education, nurse practitioner, renal services, Mobile Women's Health Services and sexual health.

3.4.6 Normanton

Normanton Hospital is a Level 2 CSCF facility a that provides rural and remote hospital services with a 14-bed inpatient facility, an emergency department and an outpatient department.

An extensive range of visiting services from Mount Isa, Townsville and Cairns are delivered from the hospital. Outreach clinics include dental, cardiology, respiratory, paediatrics, obstetrics and gynaecology, women's health, general medicine and mental health. Community Health services are also provided from Normanton.

Gidgee Healing provides primary health care, allied health, optometry, hearing, aged care, family wellbeing and alcohol, tobacco and other drug services recovery services in Normanton. Gidgee Healing also operates a 15-bed residential aged care facility.

Planning is underway for a new hospital build at Normanton on the current site.

3.4.7 Karumba

Karumba Primary Health Care Clinic is a Level 1 CSCF nurse led Primary Health Care facility that provides a range of primary health care, emergency stabilisation and pathology collection. The clinic is staffed by a Director of Nursing (DON) and a Registered Nurse.

A visiting medical officer from Townsville performs a General Practitioner clinic 12 hours per week.

The clinic also provides the coordination of a range of other visiting specialist services including the Mobile Women's health nurse, chest physician, cardiologist, dermatologist, dietician, physiotherapist, podiatrist and mental health services.

The population of Karumba escalates by 2,000-3,000 people in the tourist season, many of whom stay for up to six months and place additional demand on services. Access to acute and ambulatory services are provided from Normanton which is around 50 minutes from Karumba by road.

3.4.8 McKinlay

McKinlay Primary Health Clinic is a Level 1 CSCF nurse led Primary Health Care facility that provides low-risk ambulatory, acute and preventative care, including an emergency on-call service. The single-person nurse led clinic also offers pharmacy services, immunisation, dressings, station and home visits, outreach to Kynuna and visiting North West Remote Health podiatry, occupational therapy and dietetics services.

The town population is very small, and few people attend the clinic in person. Those people still able to drive tend to go to Julia Creek or Cloncurry for health and other services.

The clinic services a largely ageing population resident over a large geographic area. The service model is predominantly outreach community nursing provided in people's homes similar to the original Bush Nursing Clinic service. There is a strong focus on keeping older people independent in their homes. The Commonwealth Home Support Program is supported by the clinic.

Telehealth is used extensively by most residents including for General Practitioner appointments.

3.4.9 Burketown

Burketown Primary Health Clinic is a Level 1 CSCF Primary Health Care facility that provides low-risk ambulatory care based on a nurse led and visiting medical officer model of care. The clinic provides:

- A nurse led acute and emergency service with a hospital-based ambulance
- Coordination and care for specialist services, chronic disease management and stabilisation of acute care patients prior to transfer to a higher-level facility
- Pharmacy services, antenatal and postnatal care and community home visits.

Visiting services include allied health services, Mobile Women's Health, Indigenous Cardiac Outreach Program, endocrinology, diabetes nurse practitioner, ophthalmology and breast screening.

The RFDS provides a weekly General Practitioner clinic and fortnightly child health clinic. It was noted that there had been no face-to-face clinics conducted for an extended period due to staffing issues. Both North West Remote Health and Gidgee Healing provide services to Burketown but are also experiencing workforce issues.

The DON also provides an outreach service to the Bidunggu Aboriginal community outstation. RFDS have recently allocated a child health nurse to also participate in these outreach visits.

There is no residential aged care facility in town.

3.4.10 Camooweal, Dajarra and Urandanji

The Camooweal Primary Health Clinic and the Dajarra Primary Health Clinic are both nurse-led Level 1 CSCF Primary Health Care facilities that provide 24-hour acute and emergency on-call and ambulance services in addition to chronic disease management, preventative health, health promotion and health education. Services include pharmacy services, sexual and women's health services, antenatal and post-natal care, child health, immunisation, school-based wellness health checks and community home visits.

Visiting services include the RFDS weekly primary health care clinic, endocrinology, cardiology, mental health, child health nurse, women's health nurse, dentistry, diabetes nurse practitioner and the North West Remote Health team which consists of diabetes nurse educator, podiatry, occupational therapy and exercise physiologist.

The clinics largely service the local indigenous populations, however there is also a large tourist population who seek services from the clinics for basic primary care including medication supplies and treatment of minor illnesses and injuries. Services at Urandangi are primarily provided by RFDS.

Planning is underway for a new build on the current Camooweal site.

4. Key Considerations for Planning Clinical Services

As part of the Clinical Services Plan development, a strategic assessment of the issues and opportunities was undertaken; informed by analysis of the burden of disease, current health service utilisation and consultation with key stakeholders. The findings of the strategic assessment that need to be addressed for the delivery of sustainable clinical services are:

- Significant inequity of access for First Nations' population,
- High levels of service fragmentation,
- Inconsistent delivery of services to full scope of clinical services capability,
- Long term issues of workforce availability,
- Need for digital transformation, and
- Ongoing market failure in the private and non-government primary healthcare, aged care and disability sectors.

4.1.1 Inequity of Access for First Nations' Population

The extent of the burden of disease in the First Nations' population indicates significant inequity of access and under-provision of clinical services, particularly in relation to screening, diagnostic services and early intervention. Of particular note, are the key indicators relating to ear and eye disease, premature deaths from cancer, mental health and suicide and maternal and child health. Stakeholders consistently reported a lack of General Practitioners and inconsistent access to primary care. Poor access to primary care results in a lack of timely and appropriate referrals for a range of core clinical services including endoscopy, cataract surgery and surgical intervention for management of ear infections in children. Consequently, there would appear to be a significant mismatch between the low level of projected growth in supply requirements for these services and population level demand particularly for specialist outpatient and day procedural services.

4.1.2 Service Fragmentation and Gaps

There is a high level of service fragmentation for a range of specialist outpatient, outreach, primary care and community-based services with multiple providers with multiple funding sources in most locations.

A key issue is the lack of clarity in the responsibility and accountability for case management and care coordination. There is also a lack of standardised clinical pathways and risk management processes for frequently presenting conditions including the threshold for patient transfer. Stakeholders report that both temporary staff and the community have a poor understanding and lack of clarity of the availability and scope of services provided by each agency in each location.

The level of service fragmentation is a major constraint for the effective delivery of integrated programs to address priority heath needs for example, aged care and women's, children's and family health.

In addition to poor coordination, the recently completed NWHHS LANA and NWHHS Health Equity Strategy identify key HHS wide gaps in terms of capacity and distribution of clinical services including:

- Women's, Children's and Family Health,

- Mental Health and Alcohol and Drug services,
- Oral Health Services,
- Sexual Health,
- Allied Health services particularly rehabilitation, and
- Access to General Practitioners.

4.1.3 Provision of Services to Full Scope of Clinical Services Capability

Mount Isa Hospital is technically classified as a Level 4 facility under the CSCF and is the most remote Level 4 facility in Australia. The hospital is not functioning to the full scope of a Level 4 facility particularly for a range of surgical services including orthopedics, neurology, rehabilitation and geriatric medicine services. Effective provision of Level 4 services at Mount Isa Hospital is essential to ensuring sustainability of all Level 2 and Level 1 facilities in NWHHS particularly in terms of clinical governance, workforce support and risk management. Maintaining clinical services capability levels requires issues of workforce availability and culture, the quality of the physical infrastructure in some areas and existing processes and relationships between providers to be addressed.

4.1.4 Long Term Issues of Workforce Availability

There are significant long term workforce recruitment and retention issues which have been exacerbated by the impact of the COVID-19 pandemic. A high proportion of the health workforce is very transient. There is an ongoing major challenge to ensure an organisational culture which supports cultural and clinical safety whilst at the same time discouraging creation of “silos” and managing the tendency to normalise a culture of risk avoidance.

Addressing these issues requires major workforce redesign and reprofiling of the workforce. In addition, there is a need to upgrade facilities including staff accommodation and provide for upskilling and training needs as well as professional support and career planning. Reliable access to internet via standard technology that is compatible with the Queensland Health network needs to available in staff accommodation in all locations and is critical factor in attracting workforce. Equally important is addressing the other social needs of employees in each of the communities in terms of childcare, education and transport.

In locations such as Mornington Island and Doomadgee where primary care services have transitioned to Gidgee Healing under the Tripartite Agreement, the partner agencies report that they are also unable to recruit staff and have issues with accommodation. North West Remote Health are experiencing similar issues in the highly competitive workforce market.

The full potential of the relationship with the Mount Isa Hospital and the Centre for Rural and Remote Health is not reflected in the current service capability of the Mount Isa Hospital. The Centre for Rural and Remote Health was established in Mount Isa in 1997. The purpose of the Centre is to attract, build and retain a high-quality health workforce in rural, remote and outback Queensland, and in doing so, improve the health of outback communities. The key to solving workforce issues is for Mount Isa Hospital to be recognised as a Centre of Rural and Remote Health with a reputation for excellence in provision of remote surgical services and management of chronic disease. This could underpin a workforce model of train, onboard, recruit, retain and transfer.

4.1.5 Potential for Digital Health

All stakeholders agree that there is unnecessary movement of patients within the system and enormous potential for use of digital health and further expansion of telehealth services, particularly for non-admitted medical and allied health services. The overarching goal should be to reduce patient travel to essential face to face contact only.

A major constraint to progressing a virtual healthcare model is the lack of adequate digital infrastructure and clarity regarding timing of the implementation of the enterprise integrated electronic Medical Record (ieMR) by eHealth Queensland. Prior to the implementation of ieMR there will need to be major investment in digital infrastructure in all facilities. The *Digital Health Strategy for Rural and Remote Healthcare* highlights that all remote sites in NWHHS require a significant uplift in digital infrastructure capability to ensure a backbone of superfast connectivity. There are varying current levels of ICT infrastructure across the HHS. Most have fibre optic connections but with low bandwidth, others are still operating on copper connectivity or 4G connectivity. Resilience is a key issue as only one facility (Mount Isa) has a fibre optic backup connection, others have 4G or none at all. Mornington Island is trialling a satellite backup service which has provided limited capability, not sufficient to operate the whole facility during outage of the fibre optic service. No sites have inbuilding satellite telephony. 4G services are not a guaranteed service and therefore not recommended as a primary backup service.
Once eHealth Queensland is able to sustainably offer adequate bandwidth and back up services the HHS will be in a position to consider embracing digital transformation to support enhanced clinical care delivery.

4.1.6 Market Failure in Provision of Aged and Disability Home and Residential Care

There is long term and ongoing market failure in the provision of National Disability Insurance Scheme (NDIS) and aged care services across NWHHS. Provision of residential aged care by non-government providers is limited particularly in the remote locations. Currently Gidgee Healing provides home care and residential aged care in Doomadgee, Normanton and Mornington Island but faces ongoing workforce challenges. This in combination with poor access to allied health, rehabilitation and geriatric services is a source of “bed block” in Mount Isa Hospital and a range of needs that are not being met in communities serviced by the Level 1 and 2 facilities. The likelihood of these issues being sustainably addressed by private and non-government providers in the foreseeable future is extremely low.

5. Future Directions

5.1 A Networked Clinical Service Model

To address the major issues of service and workforce sustainability, a networked model for provision of clinical services is proposed.

Essential for sustainability of the networked model is the recognition and strengthening of the district wide role of Mount Isa Hospital. As the only provider of CSCF Level 4 services, all patient flows for day only procedures, overnight emergency and elective surgical, birthing and complex medical inpatients will continue to be to Mount Isa Hospital from across the whole of NWHHS. In addition, Mount Isa will be the hub for provision of NWHHS wide outreach services, virtual health and overarching clinical governance.

Within NWHHS, the network model is comprised of three internal geographic service networks:

1. Mount Isa – Mount Isa (hub), Dajarra and Camooweal
2. Lower Gulf – Cloncurry (hub), Julia Creek and McKinlay
3. The Gulf – Normanton (hub), Burketown, Doomadgee, Karumba, Mornington Island.

The main purpose of the three geographic networks is to ensure a sustainable workforce base across the networked sites. The hub sites will aim to recruit and retain a critical mass of medical and nursing staff in terms of numbers and skill mix and provide a base for the provision of leave relief and outreach services within the local network. The hub sites will also assume an expanded role in terms of communication and service coordination for outreach and visiting services.

In terms of patient flow, the model assumes that all patients requiring transfer for acute inpatient admission will continue to flow directly to Mount Isa and not via a Level 2 hub unless that is the first point of contact. There may however be some ambulatory and outpatient flows within the Lower Gulf network to the Cloncurry hub and within the Gulf network to the Normanton hub depending on the need for clustering of services to achieve critical mass for that visiting specialty. There are physical limitations on road and technology infrastructure that impact people accessing care within the proposed hubs, especially during the wet season where the main highway road from Doomadgee to Normanton may be inaccessible or unsafe for up to 6 months of year causing significant time/costs for patients to access to services. Investment in road upgrades may support consistent and easy access to health services.

The clinical service capability levels will remain unchanged at each site as per the specialty level information in the NWHHS Technical Paper (Appendix). The clinical role of the Level 2 facilities within the networks will continue to be provision of adult and children's inpatient admissions for less complex medical conditions, emergency medicine, retrieval, selected specialist outpatient consultations, medical imaging, medication, and pathology services. A wider range of medical imaging and diagnostic services will be provided from the Cloncurry and Normanton Hospitals. A key focus of Level 2 facilities will be to support further integration of services within the Tripartite Agreement and provide additional infrastructure for delivery of essential primary care and other programs including aged care where required.

Level 1 facilities will continue to provide a range of core clinical services including emergency medicine, retrieval service, adult and children's medical non-inpatient services, selected specialist outpatient consultations, medication, and pathology services.

5.2 Digital Transformation

Implementation of the *Digital Health Strategy for Rural and Remote Healthcare* is critical to the sustainability of the future networked clinical service model, particularly in supporting connection to country by providing care closer to home. The key foundations of a digital health service model are:

- A virtual healthcare hub in Mount Isa incorporating central intake, home based care (HiTH), remote monitoring, virtual emergency department, virtual specialist inpatient care, clinician support and clinical governance.
- A mobile "digitally-literate" workforce. One of the key issues in rural and remote areas is the level and depth of digital capability within the current workforce.
- Sharing of health information between health services. Implementation of the integrated Electronic Medical Record, state-wide primary care solution, digital aged care records with capabilities such as electronic prescribing is critical to effective technology-enabled healthcare in rural and remote areas. The current eHealth Queensland implementation timetable of ieMR with a 5–10-year timeframe will continue to be a major impediment to progressing a digitally transformed health service.
- The need for an uplifted digital infrastructure to underpin the digital transformation by ensuring fast, secure and reliable connectivity. Reliable technology will also support staff wellbeing and access to other communication services.

All stakeholders agree that in the interim, there is enormous potential for further expansion of telehealth services, particularly for non-admitted medical and allied health services. The overarching goal is to reduce patient travel to essential face to face contact only.

An optimal telehealth service model requires:

- In-centre telehealth consistently available in each of the remote locations to ensure access for people whose homes are not technologically enabled.
- All ambulatory clinic consultation rooms in each facility to be telehealth enabled.
- Access to telehealth enabled equipment such as stethoscopes and otoscopes as required.
- Upskilling/training strategies across the region to ensure users are competent and comfortable in the use of telehealth and virtual health platforms, particularly in the remote sites. Training strategies need to include backfill when staff undertake upskilling and training in telehealth and virtual platforms to enable embedding of practice changes.
- Local staff to support Level 1 and 2 facilities. The role is to help schedule appointments, streamline local processes and assist with remote monitoring. Levels of support currently provided vary by type of service. A telehealth nurse position has been maintained in Normanton. Some outreach services have developed their own support model for e.g., sexual health service. Ideally these support roles in most of the remote sites should be provided by health workers, supported by a clinical nurse when required. The importance of AHWs / Indigenous Liaison Officers (ILOs) in supporting and advocating for client needs, building trust with health care providers and reducing cultural barriers needs to be recognised.

5.3 Workforce Redesign

Provision of a sustainable future clinical service model is inextricably linked to the implementation of a contemporary workforce model. The priority is to increase service capacity through expansion of allied health, nursing and health worker led models in addition to supporting a sustainable medical workforce.

The strategies required to address current issues of workforce recruitment and retention are comprehensively detailed in National and Queensland Health state-wide policies and plans. For the purposes of this Clinical Services Plan it is assumed that these documents provide the overarching framework. In line with these policies, NWHHS has recognised the urgent need to upgrade facilities particularly staff accommodation and also to provide greater opportunities for upskilling and training as well as professional support and career planning.

Local stakeholders have also identified the key changes to the workforce model and staffing mix that need to be implemented in NWHHS to support a sustainable delivery of clinical services. Broadly, these changes are:

- Major enhancement of the role and number of First Nations' staff at all levels,
- Increasing the number of nursing positions and implementing a range of nurse led models and enabling nurses to work to full scope of practice,
- Redesign of the allied health model of care and skill mix, and
- Design and implementation of a networked medical model.

5.3.1 First Nations' Workforce

One of the key priorities of the NWHHS Health Equity Strategy is to strengthen the capacity of NWHHS to create and sustain cultural and professional capabilities and improve the attraction, retention and career development of First Nations' staff at all levels.

A key part of the strategy is to emphasise the pivotal role of AHWs in the identification of health issues in communities, setting priorities and identifying culturally safe solutions. An assumption that AHWs will work to their full scope of practice underpins the clinical service model.

The NWHHS Health Equity Strategy details a comprehensive approach to addressing workforce issues in NWHHS including a strong emphasis on strengthening and expanding the existing training infrastructure to increase access to AHW and Health Practitioner qualified training (Certificate III and above). The Strategy also highlights the need for increased local access to high quality training pathways for AHWs delivered in the north west region through flexible workplace and education arrangements, and place-based education.

There are opportunities across all the sites for more generalist workers to increase clinical services capacity and capability in a range of areas including but not limited to:

- Wound care,
- Telehealth services support – coordination, basic clinical observations and measurement,
- Allied health assistant roles,
- Mental health peer support roles, and

- Maternal and child health services.

5.3.2 Nursing Workforce

Identified priorities for redesign and expansion of the nursing workforce are:

- Establishment of nurse-run clinics including rapid access clinics,
- Nurse-initiated discharge processes,
- Nurse Endoscopists,
- Additional Nurse Practitioner position in each of the Level 2 facilities with an initial priority for Doomadgee and Mornington Island, and
- An additional nurse position for the Primary Health Clinics would assist in attracting staff and management of fatigue (e.g., from nurse escorts and driving ambulances).

5.3.3 Allied Health Workforce

The redesign of models of care and workforce skill-mix includes the provision of:

- Health practitioners to work to their full scope of practice (including advanced clinical practice) and extended scope of practice in appropriate contexts including requesting diagnostic investigations and prescribing of medicines,
- Delegation and better use of the allied health assistant workforce,
- Sharing knowledge, skills and responsibilities across professional boundaries in assessment, diagnosis, planning and/or intervention,
- Allied health professional-first clinical care pathways and criteria-led discharge,
- Integrated education, training and clinical governance strategy to support the effective introduction and integration of new roles, and the
- Use of technology to enhance service delivery.

The network service model will need to be underpinned by dedicated discipline specific outreach allied health positions. The model could be resourced by one FTE allied health professional from each discipline based in Mount Isa and an allied health assistant based in each of the remote locations supported by digital technology. A further option to consider where possible, includes flexibly-based allied health professionals across the networked model, especially for those professionals who reside outside of Mt Isa.

There is a major opportunity to grow the First Nations' allied health workforce across the north west region by working with local allied health teams across public, private and community sectors, the Queensland Chief Allied Health Officer and the Chief First Nations' Health Officer and local communities across the NWHHS region to co-design locally appropriate approaches to service delivery.

Critical workforce shortages identified across the region include podiatry, social work, mental health/wellbeing, sonography, women's health, physiotherapy and allied health assistants.

5.3.4 Medical Workforce

A key objective of the networked clinical service model is to maximise the capability of the whole health system by better linking the NWHHS and primary care providers.

Implementation of a sustainable medical workforce model will require the HHS to work in partnership with Gidgee Healing, RFDS and others to develop and implement shared medical workforce strategies for Mount Isa and the remote sites to:

- Provide regular and reliable access to primary health care services,
- Improve integration and coordination between primary, secondary and tertiary services including ensuring that support for remote facilities integrated into the core business and accountabilities for Mount Isa Hospital,
- Improve quality of care,
- Reduce duplication,
- Better manage fatigue among medical officers,
- Formally integrate workforce strategies including Registrar training and opportunities for joint roles across hospital and primary care, and
- Integrate patient record systems and data sharing protocols.

6. Priorities For Enhancing Clinical Services

6.1 Planning Principles

The clinical service model for all facilities in NWHHS will be underpinned by the following service planning principles and assumptions:

- Care will be culturally safe and provided in an environment that respects the rights, values, views and expectations of First Nations' people who are accessing and/or delivering health services.
- The core role of NWHHS services is to provide high quality emergency, acute inpatient and specialist ambulatory services as close to home as possible in terms of safety and sustainability.
- Provision of health promotion and prevention and primary health care services to improve population health outcomes will be through a partnership approach under the Tripartite Agreement where applicable.
- Partner agencies will work together to ensure that care is integrated across the across the primary, secondary and tertiary health sectors to ensure people can seamlessly navigate and access supports required to improve their health and wellbeing.
- There will be targeted approaches to optimise the accessibility of health services to marginalised sub-groups within the population, including those people needing trauma-aware and healing informed care, people with a disability and the Lesbian, Gay, Bisexual, Transgender, Intersex, Queer (LGBTQI+) community.
- The workforce will be culturally capable and have a strong transdisciplinary skill base.
- Use of digital technology and virtual healthcare will be maximised to its full potential to reduce patient travel particularly for non-admitted and ambulatory services.
- Clinical services will be provided to the full scope within the current CSCF level.
- Evidence based standardised clinical pathways and guidelines will be in place for all high-volume services.
- Models of care will be co-designed with local community members to embed First Nations' led models of care, particularly as it relates to social and emotional wellbeing/mental health and chronic disease management.

6.2 Mount Isa Hospital Service Enhancement Priorities

- **Promote the role of Mount Isa Hospital** in collaboration with the JCU Centre for Rural and Remote Health as a leading provider of rural and remote services. This is a fundamental driver of improved workforce recruitment and retention and essential for sustainability of the networked Level 1 and 2 facilities across NWHHS.
- **Consolidate the provision of CSCF 4 level services** particularly for core surgical services. There are opportunities to grow gastroenterology, ENT, ophthalmology, urology and some low complexity elective and emergency orthopaedics including fracture reductions. Provision of Level 4 surgical services is currently limited by theatre availability, surgeon availability, inpatient bed block, equipment, availability of appropriately skilled nursing staff and issues related to theatre utilisation.

- **Increase day procedure capacity** to meet the high levels of unmet need in the First Nations' population for diagnostic procedures, ENT, dental, ophthalmology and gynaecology day procedures.

- **Create a dedicated ambulatory service** which integrates specialist outpatients, community health, sexual health, chronic disease, child health, allied health, renal dialysis, mental health and dental. There is significant potential for major expansion of telehealth services to underpin the integrated model. The existing physical infrastructure is a major constraint to implementation of an integrated ambulatory model of care. There are insufficient outpatient consultation rooms to schedule all the required visiting specialist services. The current Community Health building is offsite and does not allow appropriate access for face-to-face care delivery. The existing renal unit is in a stand-alone building on site which is a risk for security when operating extended hours.

- **Establish a six-bed acute/subacute mental health inpatient unit** in accordance with priorities identified in *Better Care Together: a plan for Queensland's state funded mental health alcohol and drug services to 2027.* There are currently no inpatient mental health beds at Mount Isa and any person requiring admission must be transferred to Townsville. Delays in these transfers due to transport issues are a major issue for the Emergency Department. People with behavioural issues from alcohol and drugs, delirium and dementia are admitted to the medical ward which is not fit for purpose for care of these types of patients. A mental health inpatient unit would reduce the number of patient transfers to TUH and provide a suitable space for patients awaiting transfer.

- **Develop a purpose-built subacute unit** for inpatient and outpatient rehabilitation, GEM and nonacute patients. There are currently no dedicated subacute beds at Mount Isa Hospital with major gaps in service provision relating to allied health and geriatrician input. A dedicated unit in Mount Isa with strong linkages with Townsville (including telehealth) would reduce the number of patient transfers to TUH and enable a shortened length of stay at TUH by facilitating step down care.

  Stakeholders report that there are consistently between six and ten medical ward beds occupied by people waiting community based and residential aged and disability care as a result of ongoing market failure of the private and non-government aged and disability sectors in NWHHS. As a result, patient flow within the hospital is impacted with medical patients being routinely admitted to surgical beds reducing elective surgery capacity and limited access to medical beds for acute medical patients. Projections indicate a need for at least 11 overnight subacute beds (however a 16-bed subacute unit has been recommended to inform master planning).

- **Establish a Virtual Health Hub and Virtual Ward** using a mixed model of standard HiTH services for Mount Isa residents as well as a process for formal specialist medical oversight of patients in remote facilities. A Virtual Health Hub for NWHHS in Mount Isa supported by digitally enabled diagnostic hubs in the Level 2 facilities could enable a number of medical patients from any location in NWHHS to be admitted under a specialist in the Virtual Ward depending on risk assessment and avoid transfer. Further work is required to determine the exact number of virtual treatment spaces and supporting infrastructure, however given the nature of this model, virtual treatment spaces will not offset (i.e., will be in addition to) the physical overnight beds projected/required at Mount Isa Hospital.

- **Expand emergency department and emergency department short stay unit** capacity and improve patient flow. The lack of access to General Practitioners in Mount Isa is reflected in the increasing numbers of Triage Category 4 and 5's presenting to ED. Introduction of a nurse led rapid access model is needed in addition to the existing fast track service. There is also a need to expand the emergency department short stay unit adjacent to the ED to provide an appropriate setting for assessment and management of people presenting with acute or behavioural issues.

- **Enhance maternity service model** - the cultural, social, economic and mental health needs of women and families are not being met within the current model. The need to address these issues particularly in the first 1,000 days of a child's life is a priority for contemporary models of care such as Growing Deadly Families. A review of the current maternity model is underway to assess the feasibility of an expanded Midwifery Group Practice model. It is noted that the model is currently not sustainable within midwifery resources from an overtime and fatigue perspective. In addition, the current maternity unit does not meet contemporary design standards such as access to outdoor space, family support areas etc which impacts on provision of a culturally safe service.

- **Other infrastructure issues** that need to be addressed include:
    - There is no N class isolation capacity.
    - There is no central monitoring for telemetry beds.
    - A Family and Workplace Day Care Unit on the hospital campus would be a major advantage and also provide an opportunity to develop integrated programs with aged care. Access to childcare is a major barrier to recruitment. There is currently a three-year waiting list for day care in Mount Isa.

6.3 Level 1 And 2 Facilities Service Enhancement Priorities

Level 1 and 2 facilities are a focal point for the implementation of the NWHHS Health Equity Strategy and need to have a key role in further developing partnership arrangements under the Tripartite Agreement. It is noted that the current Tripartite Agreement has expired and needs to be re-established. The following list of service enhancements focuses on the key clinical service changes required to fulfil the strategies for which NWHHS has a lead agency responsibility as well as inform master planning for the required infrastructure. The clinical service enhancements that need to be progressed as a priority in the short to medium term are discussed below.

6.3.1 Establish the Networked Clinical Services Model

- Develop the roles of Cloncurry and Normanton as hubs for the networked clinical service model to address nursing, medical and allied health workforce shortages and support improved patient flow.
- Improve access to diagnostics to reduce the number of patient transfers for relatively simple investigations such as echocardiography and Holter monitoring and ensure a critical mass of local workforce has been trained to provide X-ray services.
- Formalise clinical governance support from Mount Isa for remote facilities including development of the virtual hospital model in Mount Isa and implementation of clinical pathways for commonly presenting conditions such as sepsis and chest pain.

6.3.2 Embed Cultural Safety in the Model of Care

- Work in partnership with Gidgee Healing to align the model of care provided by NWHHS facilities with the holistic and family centred Aboriginal Community Controlled Health Organisations model of care.
- Ensure all health staff participate in locally developed and delivered cultural orientation programs.
- Increase recruitment and retention of First Nations' staff at all levels.

6.3.3 *Expand Telehealth Services*

- Significantly expand the volume and range of telehealth services particularly for specialist medical outpatient recall and review appointments and allied health services.
- Provide a telehealth support position for assistance with scheduling appointments, using the equipment and supporting necessary diagnostic assessment such as blood collection, cardiac monitoring etc.
- Provide appropriate telehealth equipment such as otoscopes and stethoscope.

6.3.4 *Address Critical gaps in Clinical Services:*

- **Healthy women, children and babies**

  Work with Gidgee Healing, NWHHS Maternity Services, General Practitioners, visiting specialists and other stakeholders to implement the Growing Deadly Families initiative across the north west region including:

  - A focus on health promotion, early identification and targeted support for reducing risk factors in pregnancy, and
  - Integration and/or co-location of delivery of primary maternity health services with social and emotional wellbeing services, allied health services, and child health and early childhood services in a culturally safe environment.

- **Social and emotional wellbeing/mental health**

  Mental health (including alcohol and other drugs services) services in NWHHS are provided by multiple providers including general practitioners, Headspace, Gidgee Healing and Queensland Health. The core role of Queensland Health is to support people who have severe and complex needs or are in crisis. A place-based co-design approach needs to be taken to planning to improve coordination between providers and better integrate psychosocial services with specialist clinical services. The goal is to ensure access to a stepped care approach to mental health treatment that offers flexible options at every step of an individual's recovery journey, allowing clients to 'step through' different levels of care as their needs change. The stepped care model also needs to include strengthening the capacity of local community members to respond and support the wellbeing of individuals and/or families affected by mental health issues in times of need i.e., First Nations' people mental health first aid, conflict resolution, suicide prevention awareness etc.

- **Oral Health**

  - Increase the frequency of oral health visiting services to remote sites to support enhanced referral pathways, and
  - Further develop sustainable oral health promotion and prevention programs.

- **Rheumatic Heart Disease (RHD)**

- Improve the assessment and treatment of skin and throat infections to prevent acute rheumatic fever (ARF) in people at high risk of the disease and prevent progression of ARF to RHD by early and accurate diagnosis of ARF and delivery of secondary prophylaxis.
- Ensure timely referral to tertiary care for high-quality medical and surgical management for people with existing RHD to prevent complications and improve quality of life.

- **Sexual Health**
  - Train AHWs and registered nurses to provide sexual and reproductive health screening and contraception.
  - Incorporate 'point of care' testing to ensure access to immediate treatment when required.

6.3.5 Better Integrate and Coordinate NWHHS Services:

- Improve communication and discharge planning with Mount Isa Hospital to enable both a reduction in unnecessary patient transfers for post-discharge follow up or step-down care prior to discharge home or placement.
- Investment in a strong primary health service infrastructure through collaborative partnerships and consistent access to care may keep residents healthier in the community and decrease reliance on tertiary hospital services.
- Address issues of coordination and communication of outreach services.
- Develop a case management approach for aged care.
- Use consistent referral pathways which also optimise the use of allied health and nursing for high volume specialties such as:
  - Orthopaedics,
  - ENT,
  - Ophthalmology,
  - Gastroenterology, and
  - Urogynaecology.

6.4 Capital Infrastructure

A key purpose for developing the Clinical Services Plan is to inform Master Planning for the Mount Isa Hospital campus and the Level 1 and 2 facilities to ensure that the built infrastructure aligns with the capacity and functionality requirements of new models of care. As part of this process the current infrastructure has been assessed and a detailed description of the issues can be found in the Current State Report that accompanies the Master Plan. Consultation identified that a number of these building issues are one of the major constraints to development of culturally appropriate contemporary models of care.

The key recommendation is that major redevelopment of the Mount Isa Hospital campus is required to provide facilities that will promote the role of Mount Isa Hospital as a leading provider of rural and remote services. This role is critical for sustainability of the networked Level 1 and 2 facilities across NWHHS

and for provision of contemporary integrated models of care that are culturally appropriate. It is also a fundamental driver for improved workforce recruitment and retention.

The NWHHS Health Equity Strategy recommends that Building Rural and Remote Health Program funding be used to establish new and improved health care facilities to support First Nations' access to health services at:

- Camooweal Primary Health Care Centre (new clinic and staff accommodation)
- Normanton Hospital (new facility on current site)
- Dajarra Primary Health Care Centre (new staff accommodation)
- Doomadgee Hospital (new facility on current site).

There is a major opportunity to address the significant inequities in service access and health outcomes for First Nations' people through a commitment to collaboration and co-design of these new facilities and services. The design process needs to respect the voices, lived experience and cultural authority of First Nations' people, and reflect the stories that are both important to the local community and significant to the history of the local area.

Central to the design on these new health facilities and services should be the concept of wellness which focusses not only on the physical wellbeing of an individual, but also the social, emotional, and cultural wellbeing of the whole community.

Balancing these needs with clinical requirements and an urgent need to ensure digital readiness is essential and will require extensive further consultation. The projected requirements for treatment spaces are detailed in Section 6.4.1 below. It must be noted that these projections will need to be revised as updated data becomes available and implementation of new models of care is progressed. Further, unplanned capital infrastructure needs to be considered through Strategic Asset Management and HHS infrastructure maintenance and investment process.

6.4.1 Treatment Space Projections

Each year the Queensland Department of Health provides projections of future service activity to each Hospital and Health Service based on endorsed planning guidelines. The projections generally assume existing trends will continue including shortening lengths of stay and higher growth rates in same day services, comparative to overnight services. Existing patient flow patterns are also assumed.

These 'Base Case' activity projections (along with a range of 'planning assumptions' for Mount Isa Hospital only), have been utilised to develop a projection of treatment spaces across hospital facilities. A summary of the planning assumptions for Mount Isa Hospital include:

- An increase in self-sufficiency with 154 same day separations (85 of which are antenatal admissions) and 89 overnight separations (34 of which are surgical/procedural, primarily orthopaedics) in 2036-37 flowing back to Mount Isa Hospital
- An increase in day procedure cases (above the base case) to meet unmet need for ENT, ophthalmology, gynaecology, endoscopy and dental, resulting in overall requirement for three theatres and one endoscopy suite at Mount Isa Hospital by 2036-37.

Note, the exact requirements for a Virtual Health Hub and Virtual Ward requires further examination, however the number of virtual treatment spaces that are determined will not offset the physical overnight beds projected at Mount Isa Hospital, given this is not a standard HiTH model.

Regarding the non-admitted infrastructure projections, the exact number of consult rooms, treatment rooms, interview rooms, procedure rooms, meeting rooms, gyms and multipurpose rooms, as well as workstations and offices will need to be further worked through and informed by service patterns and visiting requirements.

To inform master planning, a "Recommended 2036-37" treatment space column has been provided for Mount Isa Hospital (refer to Table 5), taking into consideration efficient ward sizes, medical staffing models and unmet demand.

The preferred treatment space projections are provided below in the tables below. Detailed activity and treatment space projections can be found in the NWHHS Technical Paper (Appendix).

Table 4 – Acute and subacute projected treatment spaces by rural NWHHS facility, 2020-21 to 2036-37

Facility	Physical Beds*	2020-21^	2036-37#	Change Built to 2036-37
Cloncurry MPHS	15	8	10	-5
Doomadgee Hospital	7	2	3	-4
Julia Creek MPHS	2	1	2	0
Mornington Island Hospital	11	3	4	-7
Normanton Hospital	14	4	7	-7

* A physical bed is a hospital bedroom or treatment area that is built, regardless of whether it is available or operational, including shelled spaces. Current physical beds exclude aged care beds.
^ Base year 2020-21 treatment space numbers are calculated on the basis of activity with relevant endorsed planning benchmarks applied.
# Out-years treatment spaces are calculated on the basis of projected activity with relevant endorsed planning benchmarks applied.

Table 5 – Mount Isa Hospital projected treatment spaces, 2020-21 to 2036-37

Service Type	Physical Beds*	2020-21^	2036-37#	Recommended 2036-37	Notes
Overnight medical	28	20	28	28	Overnight medical beds are not offset by Virtual Health Hub / Virtual Ward beds
Overnight surgical / procedural	20	8	8	8	~8 surgical ON beds and ~16 subacute beds to support 24 bed surgical/subacute ward
Overnight subacute	4	11	11	16	
ICU	6	6	8	8	
Obstetrics and Gynaecology	13	7	7	6	6 beds to support 3 LDRP rooms
Paediatric Beds	13	6	6	6	
SCN	3	4	4	4	
Mental Health / AOD Inpatient Unit	0	3	6	6	6 beds *per Better Care Together*
EDSSU	3	4	5	5	5 bed unit to manage acute medical patients and/or people needing behavioural assessment with expected LOS up to 48hrs
Total overnight beds	90	69	83	87	
Same day medical (including chemotherapy)	7 (5 chairs 2 other)	4	6	10	Base case projection is 10 spaces by 2036-37. 80% offset for EDSSU not recommended as would reduce total number to 6. 10 is recommended to reflect unmet need particularly for services such as cancer treatment as evidenced in *Health Equity Strategy*
Same day surgical (Stage 2 recovery)	10	3	6	6	
Renal Dialysis	10	8	8	10	Projections are an underestimate and need to be reviewed in context of state-wide planning. In addition to the unit in Mount Isa, there will be 12 chairs in the remote locations: Cloncurry – 2 chairs (currently operating) / Doomadgee – 4 chairs (2 chairs currently operating) / Mornington Island – 6 chairs (2 chairs currently operating)
Total same day beds / alternatives	27	15	20	26	
Acute Treatment		8	10	10	
Fast Track		9	13	13	
Resuscitation		2	2	2	
Isolation		2	3	3	
Total ED spaces	12	21	28	28	
Operating theatres / procedure room	3	2	2	4	3 theatres and 1 procedure room to service unmet need (additional to base case activity), increasing complexity and subspecialties and to support staffing model
Birthing suites	3	2	2	3	3 LDRP rooms and 6 IPU
Stage 1 Recovery bays	..	3	6	6	
Non-Admitted Consult Areas+	15	17	22	22	See comment above

* A physical bed is a hospital bedroom or treatment area that is built, regardless of whether it is available or operational, including shelled spaces.
^ Base year 2020-21 treatment space numbers are calculated on the basis of activity with relevant endorsed planning benchmarks applied.
# Out-years treatment spaces are calculated on the basis of projected activity with relevant endorsed planning benchmarks applied

7. Implementation

The NWHHS Clinical Services Plan 2022-2037 (the Plan) aligns with Queensland Health broader clinical services planning as well as taking in to account the Queensland Government priorities and strategies. The Plan sits under the umbrella of the annual Service Agreement and the *NWHHS Strategic Plan 2021-2025* and implementation and monitoring will occur through the processes already in place within the NWHHS for operationalising key priorities from these documents.

Specifically, the Plan leverages the recent extensive work undertaken for the development of the *NWHHS Local Area Needs Assessment* and *NWHHS Health Equity Strategy 2022-2025* and the priorities need to be implemented in conjunction with these documents through the development of operational plans for specific clinical programs and each of the health facilities.

The successful implementation of the Plan is also heavily dependent on development of key enabling plans. Extensive further work is required over the next 12 months to develop comprehensive plans for workforce, ICT investment and management of assets.

In the interim, there are several immediate executive level actions that need to be undertaken to facilitate implementation. These are:

- Re-establishment of the Tripartite Agreement between NWHHS, Gidgee Health and Western Queensland Primary Health Network,
- Embedding the networked clinical services model,
- Working with JCU to realise the full potential of the relationship between the Mount Isa Hospital and the Centre for Rural and Remote Health, particularly in relation to developing a reputation for excellence in provision of remote surgical services and management of chronic disease, and
- Endorsement of the Master Plan for Mount Isa Hospital and the outlying facilities and securing the required capital and project funding for creating “digital ready” infrastructure.

A process for regular monitoring and review of the implementation needs to be put in place. Service planning is not a static process. Changes to leadership, government policy, local economies, demographics, technology, funding allocations and identified priorities are almost certain in the coming years. The Plan should be comprehensively reviewed and updated every 3-5 years.