



Digital Strategy for Rural and Remote Healthcare

10 year plan



Queensland
Government

Foreword

More than half of Queenslanders live outside of Brisbane, with a third living in small rural towns and away from large tertiary hospital facilities.

Delivering healthcare in rural and remote communities has many challenges. Factors including distance, extreme weather, transient workforce and inadequate information sharing create barriers for rural and remote healthcare providers.

The key aim of this strategy is to support our clinicians and staff by reducing or eliminating healthcare gaps.

With higher rates of chronic disease than those living in larger centres, for these patients the challenges can be life altering or even life threatening. This includes a 40 percent higher burden of disease, more than double the rate of suicide and more than 50 percent higher rate of potentially preventable hospitalisations.

Queensland Health's rural and remote healthcare facilities and partners do an incredible job of delivering health services to the people and communities they service.

But our healthcare workers still face their own challenges. Specialist skillsets aren't always available. Access to timely and relevant information can be limited. Some resources may be in short supply or not available.

The Digital Strategy for Rural and Remote Healthcare articulates our vision for delivering better care today and into the future by putting in place the right digital infrastructure, systems and solutions.

This strategy is for all Queenslanders—to deliver better care for our patients, support clinicians with the right tools for real time clinical information, and to provide better care and coordination with our healthcare partners.

It will allow us to make significant improvements to our rural and remote patients, giving them the best personalised care and integrating that care across the health system, delivering better care for all Queenslanders today and into the future.



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Digital Strategy for Rural and Remote Healthcare

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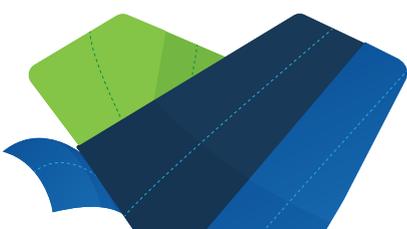
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Our Vision

To improve access to care and support better health outcomes for rural and remote Queenslanders

Principles

- Patient centered, clinically led
- Access to services a fundamental right: No-one left behind
- Delivering care closer to home
- Connected services, empowered communities
- Leveraging what's already in place
- Clinicians are supported with the best digital tools
- Decision support at the point of care
- Tell us once, regardless of provider

Strategies

To address the healthcare challenges impacting Queensland's rural and remote communities.

Focus Areas

To embrace and leverage digital technologies to deliver better care today and into the future in rural and remote areas.



Personalised Care

- Mobile health applications
- Patient portals and applications
- Connected monitoring at home
- Wearables
- Digital Health Hub
- Precision medicine and genomics



Integrated Care

- Telehealth between providers
- Smart Referrals
- Creating one longitudinal record
- Shared Care Planning
- Information sharing



Virtual Care

- Virtual Care Centre
- Virtual Critical Care
- Digital point of care devices
- Drone delivery
- Virtual Home-based Care



Digital Foundations

- Fast, secure and reliable connectivity
- Reliable power and digital infrastructure
- Integrated systems at point of care (incl. EMRs)
- Interoperability
- Mobile enabled
- User friendly digital processes and the ability to use them
- Clinical and business intelligence
- Rural and remote ICT support

Expected Outcomes

Patients

are empowered and informed, experience healthier outcomes, easier access to healthcare and less time spent travelling to and from appointments to manage their health.

Clinicians

have seamless access to information to deliver the best care for their patients. They will have greater mobility and are supported to deliver their full scope of practice with fit purpose systems.

Community and healthcare partners

support healthier populations, targeted preventative care, including chronic disease management, to enable integrated and coordinated care.

The health system

is more efficient, effective and sustainable, reducing patient travel costs and supporting new, innovative models of care. This is achieved through greater access to services, improved patient safety and a digitally skilled workforce.

Executive Summary

The *Digital Strategy for Rural and Remote Healthcare* 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.



Strategic Context

Queensland Health has outlined a vision for healthcare delivery that embraces digital technology to realise successful outcomes. The Digital Health Strategic Vision for Queensland 2026 outlines the system-wide digital solutions, services and digital innovation that builds on the strategic investment priorities outlined in the eHealth Investment Strategy with the aim of enabling world class hospitals and facilities.

The Strategy is aligned to the Queensland Digital Clinical Charter, which outlines the digital health needs of clinicians to ensure the best outcomes for patients.

With this in mind, Queensland Health has outlined a goal of a personalised and integrated health system across all providers, both public and private, working together to make Queenslanders among the healthiest people in the world. A significant part of this is to outline the way forward for rural and remote healthcare providers to leverage and embrace new digital ways of working.

Principle 1 of the Unite and Recover Strategy, “Safeguarding our health”, highlights the importance of ensuring that all Queenslanders can access the healthcare they need. The Digital Strategy for Rural and Remote Healthcare advocates for the use of digital systems and solutions to bridge some of the known gaps in equity of access and outcomes experienced by rural and remote Queenslanders.



Queensland's Digital Health journey

Digitally enabled healthcare is improving the quality of care, patient safety and productivity by harnessing new and emerging technology. Over the next 10 years Queensland's health system will move from digital ready to digital by default, and our rural and remote communities must be supported to ensure that they are not left behind by these ongoing advances.

Today, limited infrastructure and siloed information in rural and remote Queensland impacts the health and

wellbeing outcomes of people living in these communities. If investment in digital enablement of rural and remote healthcare is not made now, the societal and financial costs in these areas will continue to rise.

To deliver meaningful change, it is crucial for rural and remote communities to have the access to health services that meet their needs and that those health services have access to technology that is fit for purpose for such settings.

“ We need a future proof system that has built in resilience & contingency. Solutions must be clinician and consumer co-designed, delivered by a clinically-led roll out. - Rural and remote Health Service Executive

A digitally-enabled future for rural and remote Queensland

The Digital Strategy for Rural and Remote Healthcare (The Strategy) 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.

The Strategy has been developed through an extensive consultation process, engaging over 400 clinical, business and patient representatives across all of Queensland's Hospital and Health Services.

The challenges in the rural and remote setting identified during this consultation process highlight the priorities for change, and the delivery principles needed to guide

the Strategy moving forward. These principles focus on ensuring no-one is left behind in the delivery of care in rural and remote areas, delivering care closer to home and providing decision support at the point of care. They also are grounded in leveraging what's already in place and ensuring clinicians are supported to embrace and leverage the best digital tools available.

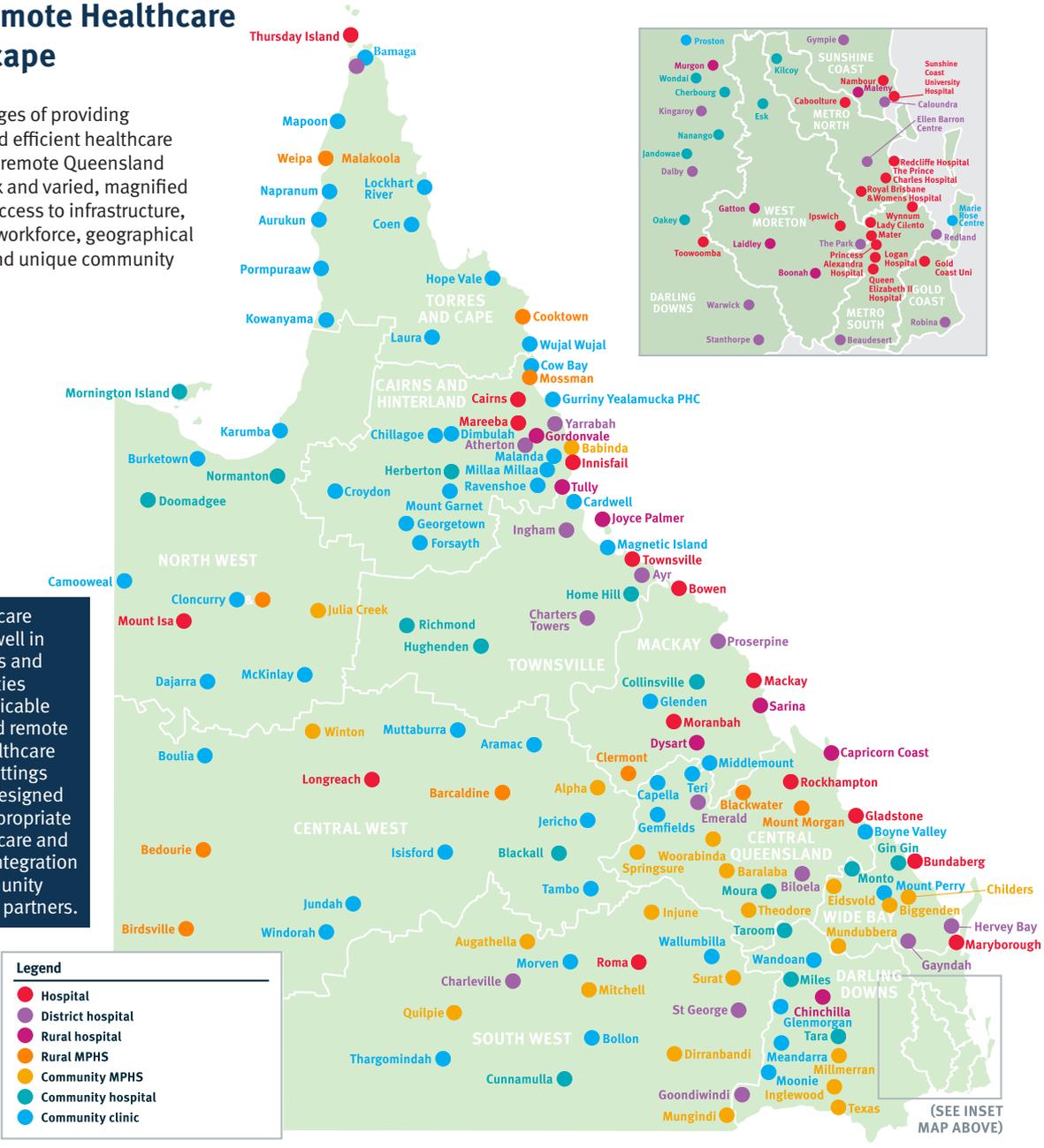
To address these challenges there are four core focus areas; building reliable digital foundations to support and enable more personalised care, integrated care and virtual care. Through The Strategy, clinicians will be enabled to deliver better care today and for future generations of Queenslanders living in rural and remote areas.



Queensland's Rural and Remote Healthcare Landscape

The challenges of providing effective and efficient healthcare in rural and remote Queensland are complex and varied, magnified by limited access to infrastructure, healthcare workforce, geographical distance, and unique community profiles.

Models of care that work well in major cities and large facilities aren't applicable to rural and remote areas. Healthcare in these settings needs to be designed around appropriate models of care and a greater integration with community healthcare partners.



179

rural and remote health facilities.

70%

of Queensland's land surface area is rural and remote.

38%

of Queenslanders live in Regional, Rural and Remote areas.⁷

66%

of First Nations Queenslanders live in Regional, Rural and Remote areas.⁵

Access to healthcare



Annually more than
85,000 patients

receive assistance through Queensland Health's Patient Travel Subsidy Scheme to access health services located more than 50km away from where they live, the majority of these patients live in rural and remote areas.¹



3 in 5

People in remote and very remote areas said not having a specialist nearby stopped them from seeing one.²



90%
cared for locally

however the number of GP services provided per person is about half that of major cities, due mainly to lack of access.^{3,4}

Health Outcomes

Evidence continues to highlight the burdens of people living in rural and remote areas and the impact on their health outcomes.

Population age and disease burden



People living in rural and remote areas have a

2.3 times

higher preventable mortality rate than those who live in major cities.⁷



Hospitalisations that could have been avoided through preventive care and early disease management are

50% higher

in rural and remote areas



Children living in disadvantaged and remote areas incurring a

higher burden of disease

than those in more advantaged areas and cities.²

First Nations health

There is an increased need to provide targeted and culturally appropriate healthcare services.

In Queensland, life expectancy for a First Nations Australian born between 2015–2017 was 72.0 years for males and 76.4 years for females.⁷



72

years for males



76.4

years for females



Life expectancy for First Nations Australians living in remote and very remote areas was lower than those living in major cities.

The general health burdens on First Nations Australians is felt more heavily in rural and remote areas

Leading cause of disease burden

40% increased disease risk

compared to those living in major cities.²

Higher incidence of chronic disease

influenced by smoking, alcohol consumption, low levels of activity and nutritional insufficiency.²



Stroke
Diabetes
Heart Disease
Hypertension
Kidney Failure

Mental health



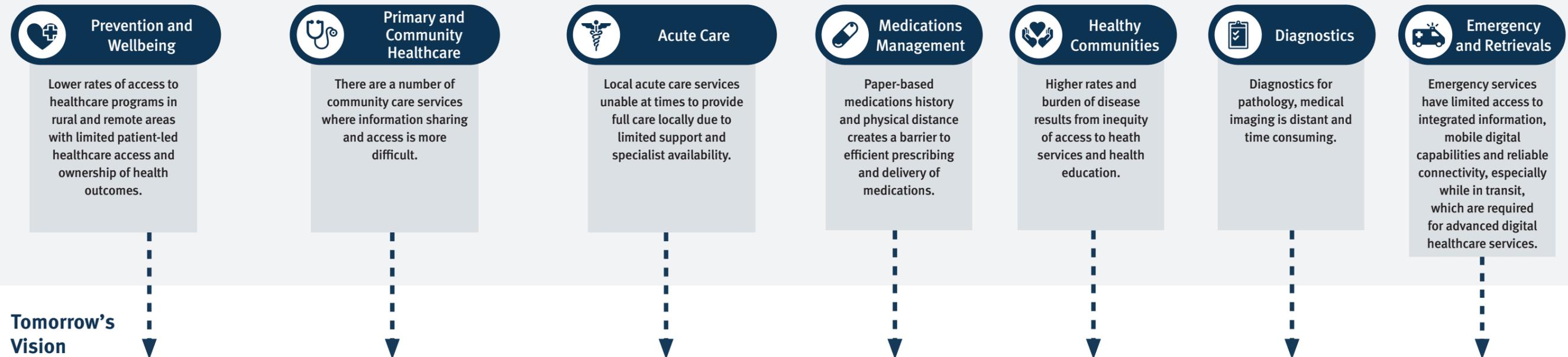
Suicide rates **2.1 times** that of metropolitan areas in Queensland, greatly impacted by a lack of access to mental health professionals in rural and remote.⁶

To leverage the benefits of digitalwe will need to overcome...

Infrastructure and Technology Challenges

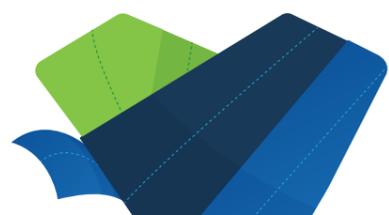
- ! Less access to technology, slower internet, less connectivity
- ! Data-silos and lack of interoperability inhibits sharing of information
- ! Extremes of heat, dirt, dust, salt and weather with significant impact on technology
- ! Scarcity of local, skilled technicians and experienced ICT operators
- ! Less reliable and advanced ICT infrastructure, connectivity. Less funding for contemporary technologies
- ! Long lead times when technology needs repair or replacement

Health Services Challenges



Tomorrow's Vision

- Patients have greater access to services, locally, and are empowered to own health outcomes through digital interactions. Wearable devices, augmented reality and home monitoring provide high quality, integrated care to those with chronic conditions, supported by enhanced infrastructure and interoperability.
- All rural and remote health services across the continuum of care support highly mobile and digitally-enabled workflows. This facilitates better in-hospital patient management, ubiquitous telehealth, virtual and integrated care supporting an increased scope of services closer to home. Access to an integrated electronic medical record at the point of care that supports capture of real-time, digital patient information, integrated with existing diagnostics and other systems, that can be stored, accessed and shared across the continuum of care.
- Electronic Medications management is digitally integrated to create one source of truth, prescribing is possible from any location via digital means and medications are accessible through enhanced logistics such as drone delivery.
- Local, clinical informatics support communities to better manage health based on real-time data analysis and targeted education. Artificial intelligence and predictive analysis support clinicians, patients and the community to access and deliver appropriate healthcare and health education for improved outcomes.
- Diagnostics are more efficient through enhanced digital technology at health facilities and via patient-led devices and services from home or the community. Physical distance between point of collection and analysis no longer impacts access, cost and time.
- Emergency services are digitally enabled to support their rural and remote workforce to deliver care at the right time, in the right place, with the right patient information, supporting an Integrated and connected patient journey.



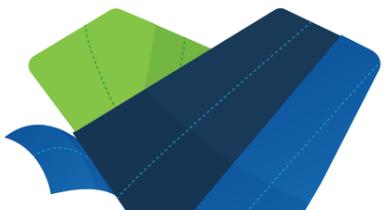
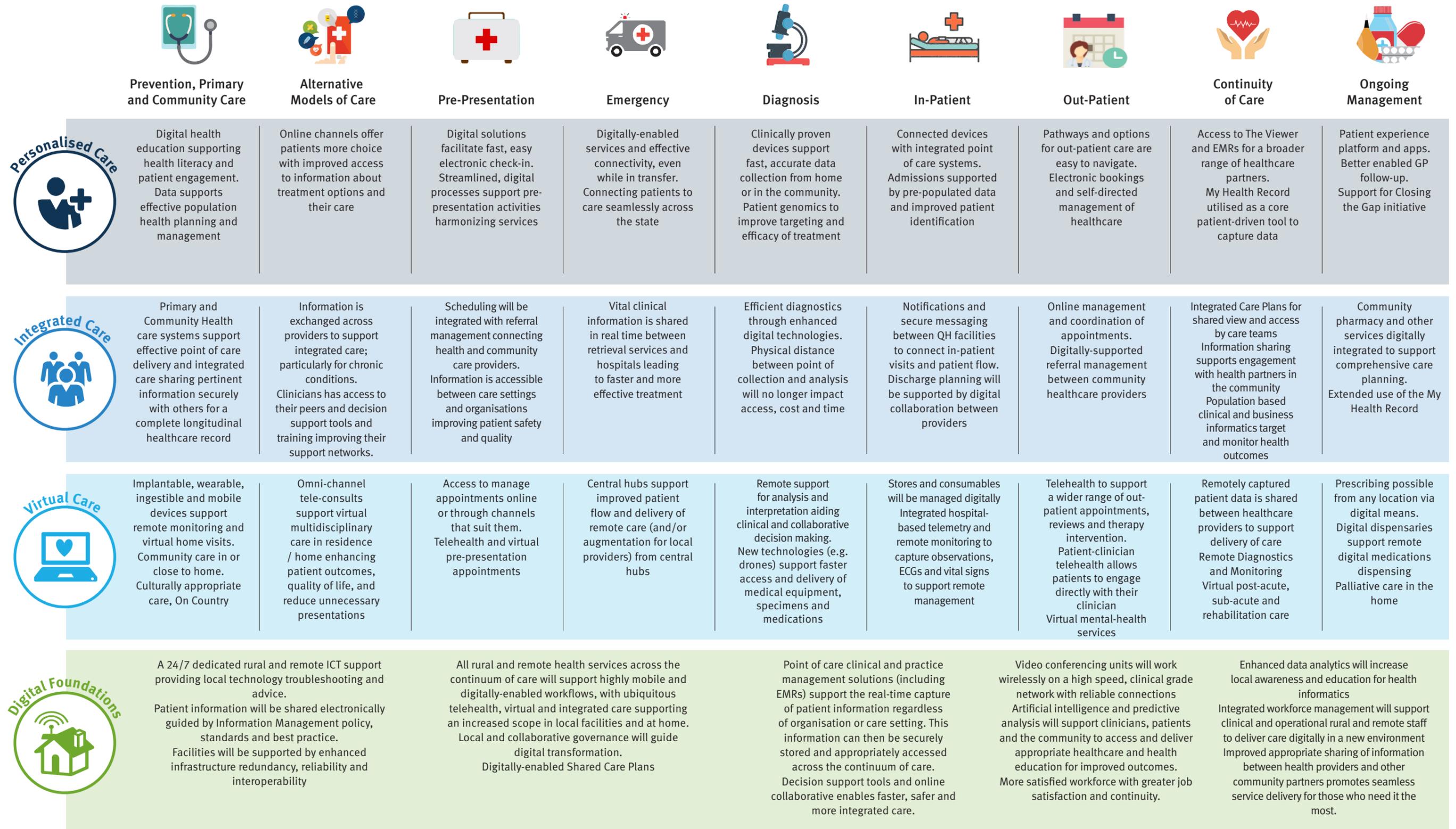
Digitising the Patient Journey

Through digital transformation of our rural and remote healthcare system, patients, clinicians and communities will benefit from new and enhanced digital technology across all stages of the patient journey.

How do you see digital technology could make the most significant improvement to healthcare?

“ Being able to view patient information from multiple sources across the entire patient journey.

- Community Nurse, TCHHS



Expected Outcomes

The future of rural and remote healthcare in Queensland is one where patients are at the centre of the healthcare ecosystem, enabled and empowered through digital interactions across the continuum of care. Healthcare providers and partners will be supported to deliver better care to patients at the right time and at the right place, whether that be within the hospital or in the home with other digitally enabled partners including General Practitioners, The Royal Flying Doctors Service and other visiting or virtual services.



Patients living in rural and remote Queensland

“ I am empowered and informed to participate in my healthcare, to interact with my care team in a way that works for me.

“ Access to healthcare doesn't always mean the need to travel long distances, or even to travel at all with the support of technology.

- Patient, Central West HHS

“ I can stay on top of my health and don't have to put off getting help. I have better access to healthcare and healthcare information.

“ I feel that my clinicians know me, my shared history and my treatment. Time is not wasted trying to piece together past history.

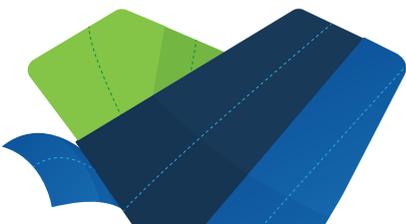
Communities and Healthcare Partners

Information follows the patient throughout their complete care pathways and across providers, for example: QAS, Primary Health Networks, local GPs, RFDS services, providers of healthcare to First Nations Queenslanders and Non-Governmental Organisations.

Healthcare providers can work closely with others in the

community to wrap care around my patients and are enabled by digital collaboration.

Communities are educated and well-informed through online channels about the health of their local population, and are supported to take action to improving health outcomes.



Clinicians and health service staff

I can access the right information for my patients whether in the clinic or hospital, while travelling or at their home. I can support patients in the community or provide care remotely and this saves time and duplication.

I am supported by my colleagues in regional and metropolitan areas to deliver care to my patients in the appropriate settings, enabled by technology and real-time access to information.

Technology is easy to use and enables me to deliver and support healthcare in a faster, more comprehensive way.

“ I can view the full story of my patient’s healthcare history in a simple and streamlined way even if information is in different locations.

- Nurse Unit Manager, West Moreton HHS



Hospital and Health Services

I can be confident that my clinical and administrative staff have access to the health information and business intelligence they need to manage and guide efficient and effective operation of services.

Our health service works closely and collaborates with other HHSs and the broader Department to ensure innovation and best practice is leveraged.

“ We are empowered and supported to deliver digitally-enabled models of care in the ways that suit our communities.

- Torres & Cape HHS





Digital Foundations

To support new or enhanced models of care to rural and remote settings, uplift to core infrastructure capabilities to ensure hospitals and clinics are digital ready, and able to create an effective and efficient environment.

Supporting clinicians to deliver better care today and into the future through digital systems and solutions.

Fast & Reliable Connectivity (Networks and Mobility)

Networks and Mobility need to be highly available, have a high level of redundancy and resilience, and will need to be critically appraised. All solutions need to be highly secure, be scalable both in terms of bandwidth and connected end points and provide clinical grade performance. Future bandwidth needs should account for the hardware and software required for the future digitally enabled environment.

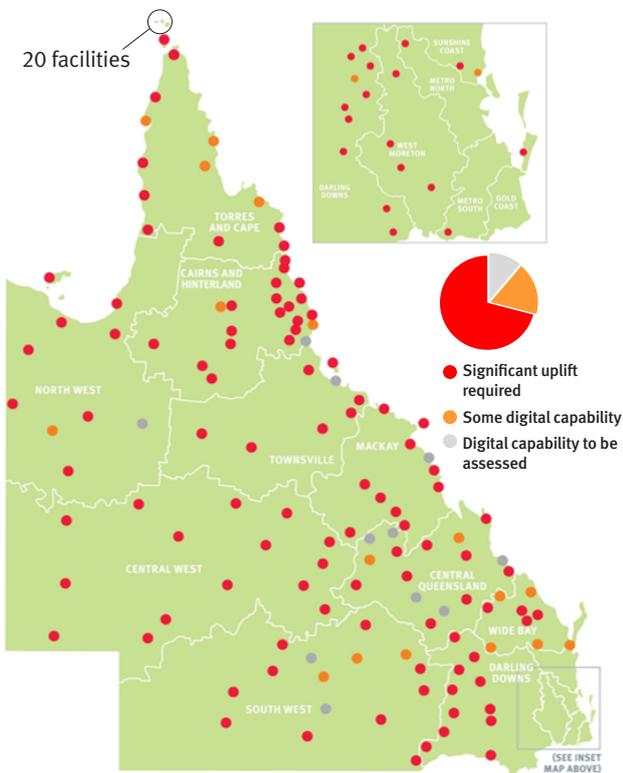
Secure and Safe Environments

The future environment must support clinicians to deliver care in a flexible autonomous way with updated and modern security protocols and procedures. This will be increasingly more important as there will be significantly more data generated into the future, and this rate of increase will be further impacted with the introduction of new digital technology, applications and patient portals. Future environments must remain consistent with standards for Business Continuity, Information Management, security, data quality and integrity.

Digitally empowered facilities

As use of digital technology increases, connected devices and digitally stored information adds greater dependency on power, facilities will need to ensure access to comprehensive uninterruptable power supply (UPS) and back up generators at all facilities. The Physical environment needs to have high reliability and no queued access to workstations, use of mobile telehealth devices, and appropriate communications rooms to support uplifts in servers and other hardware.

Current digital infrastructure capability across Queensland's rural and remote healthcare facilities



Queensland Health's Infrastructure Maintenance Program (IMP) aims to bring Queensland's public health facilities up to a minimum digital baseline to support digitally enabled healthcare.

Creating a digitally enabled environment



Interoperability

In rural and remote healthcare interoperability between Queensland Health and healthcare partners is critical to providing genuine, patient-centred and safe care.

This must be underpinned by a collaborative approach to information for the benefit of the patient, supported by partnerships and agreements for data access, sharing and linkages.



User friendly interfaces and increased digital skills

All digital initiatives must be fit for purpose and emphasise ease of access and use. This should be complemented through engagement, education and support to enhance digital skills within the rural and remote workforce.



Rural and remote ICT support model

A dedicated rural and remote ICT support model that understands the unique requirements of these work environments. This will include local technology support and advice, a priority support hotline and pre-provisioned spare equipment for rapid replacement.

Digital Solutions

Integrated clinical and administrative information systems are key to supporting and delivering healthcare. These solutions improve accuracy and effectiveness in communications, allowing clinicians to focus on patient-centred delivery. This allows better management of patient information including care planning for chronic disease patients and decision support tools to streamline and simplify processes.



Creating a rural and remote electronic medical record

A shared 'virtual' electronic medical record is required that spans all care settings and organisations providing clinicians with the data and decision support tools to provide life saving and life supporting care wherever they are located, and for improving ongoing digitally supported healthcare in these facilities. The digital capture of information will also provide opportunities for increased appropriate sharing of information with other community service providers and for enhanced population health management, (e.g. targeted prevention programs). All rural and remote facilities will require point of care systems able to share relevant patient information and contribute to a longitudinal patient record across all providers.

Community and Primary Healthcare Systems

Community and Primary clinical and administrative information systems (including EMR/s) support clinic-based delivery of health services as well as supporting delivery using new models of care (e.g. hospital in the home), including when connectivity is unavailable.

Emergency, Hospital Inpatient and Aged Care Systems

Clinical and patient management systems (including EMR/s for inpatient, emergency and aged care areas) support rural and remote care delivery models by supporting generalist and specialist needs for nurse and rural generalist care models with real-time data entry.



User friendly, accessible mobile devices

Staff must have access to a range of fit for purpose mobile devices to support a patient-centric experience, efficient capture of clinical documentation, access to decision support systems at point of care and enables communication between providers and with patients.

With the introduction of new digital technology and reduction/removal of paper records, immediate access to a device when and where needed becomes a critical necessity.



Clinical and business intelligence to better support the community

Clinical analytics will enable a better understanding of support opportunities to enhance and expand rural clinical practice and care closer to home.

Clinical and business dashboards for rural and remote staff will enable data analysis and data driven clinical decisions, which is a capability many rural and remote communities have highlighted as a significant opportunity for improved healthcare delivery.

Digitally enabled outcomes



Faster and more reliable connectivity to enable more secure and timely access to information to support care



Greater consistency in services through reliable power and digital infrastructure



Reduced errors and faster, easier adoption of technology through user friendly digital processes and applications



Better population health indicators through greater knowledge and understanding of population health trends and enhanced clinical and business intelligence



Faster time to repair, replace and troubleshoot technology through dedicated rural and remote ICT support



Personalised Care



Karen is a 26 year old Torres Strait Islander woman located on Thursday Island. She is currently 28 weeks pregnant and has been diagnosed with gestational diabetes.



Mobile applications make care more accessible to patients

Karen enrolls in a virtual diabetes service and uses a mobile application to directly connect with her diabetes educator for ongoing support of her gestational diabetes plan. In the future Karen's healthcare will be supported by precision medicine underpinned by genomics that means her care is targeted to her as a unique individual. Clinicians can access Karen's medical record to ensure they make the best decisions for her.



Patient portals engage and involve consumers to be active in their care management

Karen can access her information through a patient online portal and utilises the online education resources to improve her health literacy. She is able to see her appointments and any reminders that her virtual care team have provided.



Connected remote monitoring will improve access to real time patient information

Karen has a WiFi enabled blood glucose monitor that links up to her home WiFi network and providers connected monitoring at home. This information is accessible by her care providers which means she can have care support in her home and less need to travel to a health facility.



Wearable technology will support care at home with trend based alerts and decision support

Karen is provided a wearable device that continually monitors her blood pressure and pulse, providing clinicians with real time information and reducing the risk of pre-eclampsia.



Digital Health Hub will allow patients to interact with clinicians access medications

Karen accesses a digital health hub at her Primary Health Clinic where she is able to connect through telehealth and receive higher level care and scripts for her diabetes medication.

“ I am empowered and informed to participate in my healthcare, to interact with my care team in a way that works for me.

- Health consumer

Digitally enabled outcomes



Greater access to healthcare services and advice through mobile devices to navigate the health system



Improved health outcomes through greater health literacy and understanding of risk factors and initiatives to address these



Reduced need to travel to access healthcare services through point of care monitoring



Increased involvement in health outcomes through integration of healthcare with day to day technology



Mobile applications

Mobile healthcare applications are applications that are available on personal smart devices to support consumers in their self management of their healthcare. They will also support the two-way communication between providers and patients. Applications can be used to promote healthy living, record patient health information and provide access to educational materials.

Patient Portals

A patient online portal is a secure online website that provides patients with 24 hour access to health information. This platform will improve flexibility in the provision of healthcare, allowing patients to better manage their care via two-way communication between providers and patients, wherever they are.



Connected monitoring at home

Remote monitoring at home is digital technology that enables monitoring of consumers outside the traditional clinical environment. Care enabled by mobility and remote monitoring will allow for the management, visibility and real-time transmission of health data such as blood pressure, blood glucose, heart rate etc. These solutions will be leveraged to fundamentally provide care closer to home.

Wearables

Wearables, Ingestibles and Implantables are medical grade devices that are prescribed to patients who need them and support monitoring of health. They also provide key data in order to support more personalised care. These devices support detailed trend analysis of patient, real time emergency care support and ongoing chronic disease care.



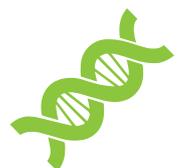
Digital Health Hub

A Digital Health Hub, (known elsewhere as a Digital Dispensary) will be explored for use in remote areas, where nurse-led clinics are supported via telehealth by medical officers who leverage digital technology to help diagnose and prescribe higher level care.

This could complement the provision of primary and emergency healthcare, including consultation, testing, and medicine provision, in very remote locations. This could be supported by direct after hours telehealth support and digital dispensing.

Precision medicine and genomics

Precision medicine and genomics are an emerging approach to healthcare delivery that takes into account the consumers variability in genes, their environment and lifestyle to target care delivery. This will improve the ability for care providers to target treatment for patients and improve overall health outcomes.





Integrated Care



Greg is a male in his 50's, and a farmer from Quilpie. He presents at local GP for ongoing review of his cardiac arrhythmia with increasing symptoms.



Telehealth between health providers and health partners improves patient diagnosis

Greg's GP liaises with Queensland Health Cardiology specialist via telehealth to undertake a detailed cardiac assessment and supported diagnosis. The cardiologist is able to provide recommendations for care to the GP for remote consultation and follow-up.



Patient portals engage and involve consumers to be active in their care management

The GP refers using Smart Referrals to Cardiologist for pacemaker insertion as recommended. Greg is scheduled for a pacemaker insertion which is completed in his closest Cath Lab.



A longitudinal record provides the health providers with access to a full patient story

Greg's healthcare providers use myHealth Record, The Viewer and the electronic Medical Record to seamlessly interlink to create a longitudinal patient record that can be contributed to by multiple health providers, and improve the patient experience.



Shared care planning provides more integrated healthcare and improved communication

There is a multidisciplinary team of Queensland Health and community and primary care partners that complete shared care planning with Greg, providing better and more timely coordination and delivery of his care. He then returns to his GP for ongoing comprehensive primary care.

“ There is a general perception within the community that we as healthcare providers can access all of a patient's information... they're surprised when we tell them we can't.

- West Moreton HHS

Digitally enabled outcomes



Clinicians are better connected with their peers and co-workers, enabling reducing clinical isolation and improving connectedness



Reduced duplicate testing, repeated investigations and gaps in patient history through greater visibility of and access to information across integrated systems



Fewer preventable hospitalisations and mortality rates through greater visibility and traceability of information across the continuum of care



Reduced disparity in alcohol, smoking and obesity rates through targeted and culturally appropriate healthcare services and integrated, personalised shared care plans, contributing toward Closing The Gap initiatives



Enhanced interoperability and fewer siloes between Queensland Health facilities and across healthcare providers in the community



Telehealth

Optimisation of current telehealth processes will be key to enabling enhanced emergency and specialist support to all rural and remote communities. The process to access over 100 telehealth services already available and will be explored at each facility to identify opportunities to connect patients with telehealth options, strengthened by commitment by all providers to support equity of access to these pathways. This includes a combination of current and new online collaboration channels based on clinical need and available technologies.

Smart Referrals

Queensland is progressing introducing an online “Smart” Referral capability that is streamlining and modernising the referral process, allowing referrers to more easily find and appropriately refer their patients for other healthcare Services; improving and standardising the information included in referrals so that the quality and speed of triaging can be improved, and more timely and effective patient care can be planned and delivered.



Creating a longitudinal record

A longitudinal patient record is one where health information is generated in an electronic environment through differing encounters in any care delivery setting. The seamless information sharing between Queensland Health facilities and with other health providers is of paramount importance in the rural and remote settings and will support the delivery of a longitudinal record. This will improve access to important health information for providers.

Shared Care Planning

A shared care plan is a patient care plan which multiple providers can access and contribute to. Shared care planning provides better coordination of care delivery, more timely care, and provide unambiguous information across providers. With multiple healthcare providers supporting care delivery, the ability to plan care that is centered around the patient is of paramount importance. A Shared Care Plan also facilitates communication between patients and health care professionals to support long-term planned care for patients with chronic illnesses.





Virtual Care



Mark is a 44 year old Aboriginal male from a remote community who has Chronic Kidney Disease and requires renal dialysis



Virtual care centre provides specialist support in an emergency

Mark is found unconscious at home and transferred by QAS to his rural health facility. His information is immediately accessible. The Virtual care centre works with the QAS and aeromedical providers on route and the facility on arrival providing specialist life saving support to stabilise Mark. If Mark did require transfer for a life saving procedure then the virtual care centre would work with retrieval services, the local facility and the receiving hospital to ensure Mark gets the treatment he needs.



Integrated point of care devices support remote diagnosis and improve patient care delivery

Digital point of care devices at the rural and remote facilities are connected with the relevant medical record system and shared with the Virtual care centre and able to provide real time remote diagnosis and support. The rural facility is supported with Virtual intensive care and monitoring 24/7 through the state-wide virtual care centre.



A Virtual care centre will increase local facility clinical capability

When Mark requires the implantation of a renal dialysis catheter. Rather than going to the tertiary referral centre, he is able to have this procedure completed at a rural centre that is closer to home by an appropriately qualified clinician who in turn supported by specialists in the Virtual care centre.



Drone technology will reduce the need for patients and staff to travel, bringing care closer to home

Urgent supplies and medications are delivered by drone to Marks home reducing the need for him to travel to his local facility. The Virtual care centre is able to support his family to complete wound care which reduces the need for travel and transport.



The Virtual care centre will enable more care to be delivered in the home

Mark is able to return home, supported by the Virtual care centre, enabled by shared access to patient information and home monitoring devices.

“Knowing when and how telehealth is available is a real challenge. Some patients are offered telehealth whilst others are told to travel 1.5 hrs to see the specialist... There's no consistency.

- GP and Public Health Physician, FNQ

Digitally enabled outcomes



Reduced mortality in rural and remote areas through greater access to specialists and critical clinical advice through virtual care



Reduced need to travel to access healthcare services through closer care to home via virtual means



Reduced burden of disease in children and adults through faster access to medications and remote integration of point of care devices



Greater access to mental health services in rural and remote areas through easier, more private and virtual access



Virtual Care Centre

This service, aligned to the TEMSU model, will support rural and remote clinicians to provide care or advice and support which previously could have only been provided by phone or in a tertiary or district facility. This will complement local ward rounds, procedural, interventional and surgical capability and a range of other care. Some advanced and interventional models will require precision tools, enabled through innovation with technology.

This service will reduce the need for patients to leave their local area when specialist care is required, or allow them to return to their local area sooner for services such as sub-acute care, rehabilitation services, aged care and tele-chemotherapy.

Digital Point of Care Diagnostics

Point of care (POC) diagnostic devices are used to obtain diagnostic results while with the patient. Point of care devices will be integrated with the longitudinal record and be able to share readings in real time to support remote diagnosis, virtual intensive care and monitoring 24/7



Virtual Critical Care

In the Virtual care service model, patients taken to hospital in an emergency can be supported remotely by emergency and other specialist clinicians. This allows clinicians to have access to the support they need, when and where they need it, and is enabled by integrated biomedical equipment, EMR, wireless cameras, Augmented and Virtual Reality. This will build on the services provided by Retrieval Services Queensland to create a seamless support service for critical intervention and advice.

Drone delivery

Drones in technical terms are unmanned aircrafts. In the healthcare arena drones are being successfully used as reliable medical delivery platforms for laboratory specimens, pharmaceuticals, vaccines, and emergency medical equipment.



Virtual Home-based care

The Virtual care hub will encourage collaboration across sectors to better manage the patient journey, strengthen regional autonomy and flexibility in providing healthcare services and greatly benefit patients. This will improve capacity to provide enhanced capability in rural and remote locations to support chronic disease, rehabilitation, post-acute and sub-acute patients.

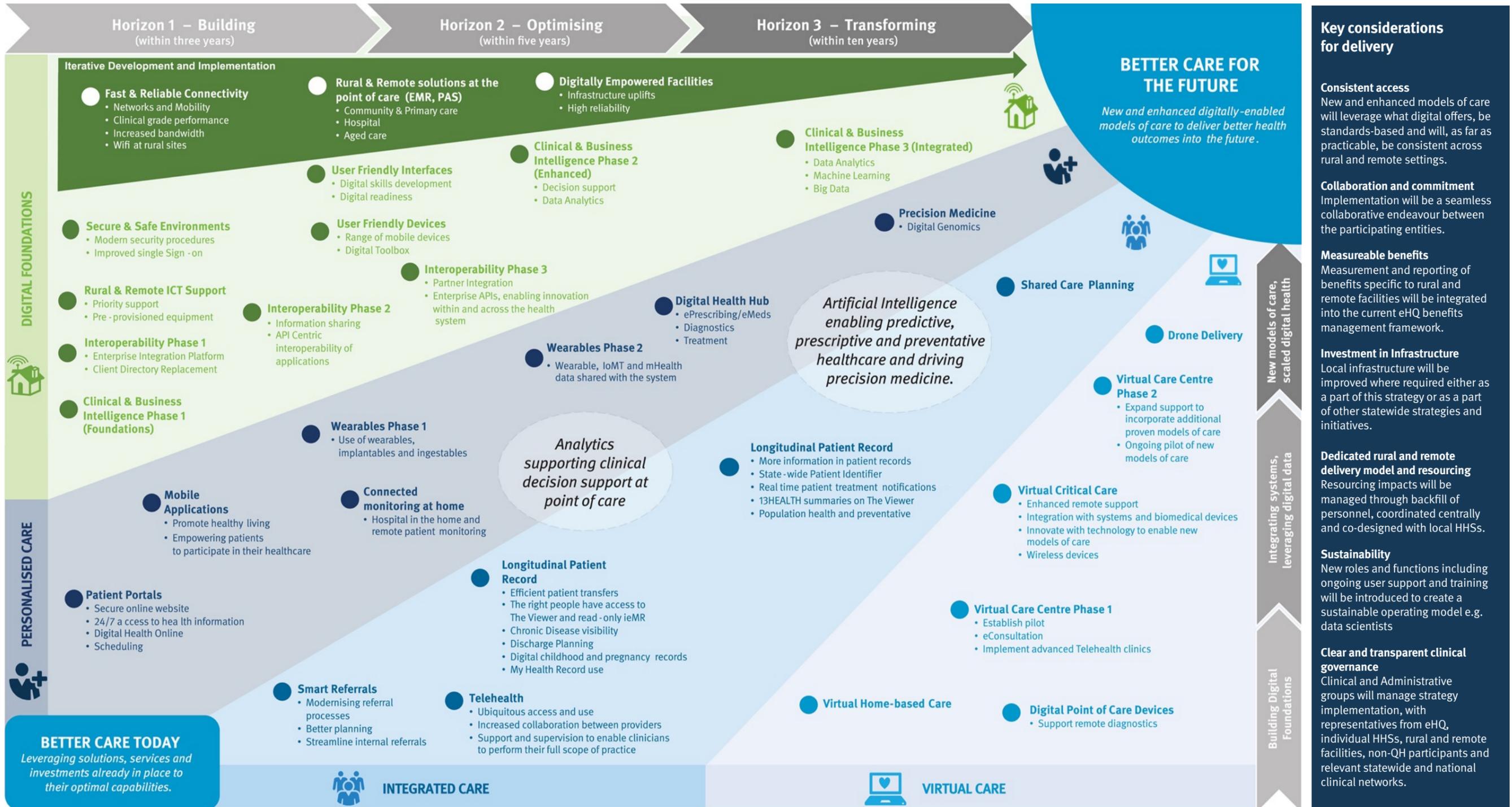
For First Nations populations this will also increase the capacity to provide care and treatment On Country, improving patient experience, reducing impact associated with travel to access care and contributing to Closing The Gap.



How will we get there?

“ Each hospital or clinic will be different in it’s own way, new solutions need to have the flexibility to support this.

- Community MPHS, CWHHS



Stepping into tomorrow, today

The Digital Strategy for Rural and Remote Healthcare provides the strategies and initiatives needed to digitally-enable rural and remote healthcare in Queensland to deliver better outcomes now and into the future. It has been developed with significant input from clinicians, patients and communities from across rural and remote Queensland, and their involvement must continue to drive progress and change within the rural and remote healthcare landscape.

The Strategy has outlined a significant program of change over the next 10 years that will require a clinically led assessment and prioritisation to design an appropriately phased

implementation. This will be supported by an appropriate governance framework. A detailed roadmap will accompany this strategy, articulating the critical next steps, the detail required to deliver on this strategy, the accountabilities for organisations that play a role and benefits and measures of success related to each of the strategic areas.

Commitment and collaboration from all stakeholders will be key to enabling changes to be implemented across the rural and remote landscape and successful outcomes to be realised for these communities.

The case for change is clear

“ Now is the time where digital models of care can truly deliver better healthcare today and for future generations of Queenslanders living in rural and remote areas.



Abbreviations and definitions

CQHHS	Central Queensland Hospital and Health Service
CWHHS	Central West Hospital and Health Service
ECG	Electrocardiogram
ECHO	Extension for Community Healthcare Outcomes
eHQ	eHealth Queensland
EIP	Enterprise Integration Platform
EMR	Electronic Medical Record
GP	General Practice
HHS	Hospital and Health Service
HIM	Health Information Management
ICT	Information Communication Technology
Clinician	Aggregate term for healthcare workers, including doctors, nurses, allied health and others
ieMR	Integrated electronic Medical Record
LAN	Local Area Network
MPHS	Multipurpose Health Service
PHC	Primary Healthcare Centre
PHN	Primary Healthcare Network
POE	Power over Ethernet
POP	Patient Online Portal
RFDS	Royal Flying Doctor Service
QAS	Queensland Ambulance Service
QH	Queensland Health
QOS	Quality of service
TEMSU	Telehealth Emergency Medicine Support Unit
WAN	Wide Area Network

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7. 2018 and 2020 Chief Health Officer report | Queensland Health. <https://www.health.qld.gov.au/research-reports/reports/public-health/cho-report/current/full>.

Strategic Linkages

The Digital strategy for Rural and Remote Healthcare will support the following Queensland Health, Queensland Government and related strategies:

- Advancing Health 2026
- Digital Health Strategic Vision for Queensland 2026
- The health of Queenslanders 2018, Report of the Chief Health Officer Queensland
- Queensland Digital Clinical Charter 2019
- Queensland's COVID-19 Economic Recovery Plan – Unite and Recover
- eHealth Architecture Vision
- eHealth Investment Strategy
- Advancing rural and remote service delivery through workforce: a strategy for Queensland 2017 – 2020
- Queensland Drones Strategy 2018
- Australia's National Digital Health Strategy - Safe, Seamless and Secure: evolving health and care to meet the needs of modern Australia (2019).



Digital Strategy for Rural and Remote Healthcare in Queensland