

Metro North Hospital and Health Service *Putting people first*

RESEARCH STRATEGY

2017–2022

Together we deliver exceptional health outcomes
through globally recognised discovery and translation



MESSAGE FROM THE METRO NORTH CHIEF EXECUTIVE AND BOARD CHAIR

Advances in healthcare take more than a good idea. They require time, funding, innovation and commitment. Importantly, they also need an underlying system of support.

Advances in healthcare take more than a good idea. They require time, funding, innovation and commitment. Importantly, they also need an underlying system of support.

Metro North Hospital and Health Service provides vital urgent and ongoing care for hundreds of thousands of people living in Brisbane and across Queensland. This care is continually evolving, thanks to research happening within Metro North and around the world.

Across our Hospital and Health Service, we are proud to employ, train and partner with some of our country's – and the world's – brightest, most passionate, and innovative health researchers. From evidence-based practice at the bedside, to drug and device trials, through to end to end clinical research and knowledge translation, improving healthcare is part of Metro North's DNA.

Our researchers have made significant inroads to changing the way premature infants are cared for in their first days, improving survival of transplant recipients, reducing the burden of kidney disease and the stigma of mental illness, and decreasing the severity of infection. Our patients have access to novel treatments through cancer care, cardiac device trials, burns and intensive care medicine, and allied health professionals. We have investigated new ways to detect disease with world leading research into medical imaging technology and developing new diagnostic techniques.

Metro North has aligned our strengths with those of our partners in universities, health services and research institutes to ensure the next wave of cutting edge healthcare is within the grasp of today's patients. Currently, Metro North hosts five nationally funded Centres for Research Excellence and is a partner in another two. In the next decade, medicine will surge

THE RESEARCH STRATEGY OUTLINES THREE MAIN THEMES TO FOCUS OUR EFFORTS ACROSS THE RESEARCH CONTINUUM. THESE ARE ACHIEVING EXCELLENCE IN DIAGNOSTICS, THERAPEUTICS, AND HEALTH SERVICES RESEARCH. THESE THEMES GIVE US THE OPPORTUNITY TO HIGHLIGHT OUR EXISTING AREAS OF EXCELLENCE, TO STRIVE FOR BETTER PATIENT OUTCOMES IN OTHERS, TO PROMOTE OCCASIONS FOR COLLABORATION, AND TO DRIVE OUR PUSH FOR SUSTAINABLE RESEARCH FUNDING AND KNOWLEDGE TRANSLATION.

forward thanks to the efforts of researchers working in our future particle treatment centre and biofabrication institute, and undoubtedly other centres to come.

Over the last few years Metro North has made a strong commitment to research. In 2016, we have established the Metro North Office of Research to provide overall vision and guidance, in collaboration with our hundreds of researchers across our health service. Soon after we launched the Metro North Research Excellence Awards to recognise the valuable contribution research plays in advancing healthcare. And now we have developed the Metro North Research Strategy.

The Research Strategy outlines three main themes to focus our efforts across the research continuum. These are achieving excellence in diagnostics, therapeutics, and health services research. These themes give us the opportunity to highlight our existing areas of excellence, to strive for better patient outcomes in others, to promote occasions for collaboration, and to drive our push for sustainable research funding and knowledge translation to directly improve our patient outcomes.

Turning research outcomes into daily practice is a challenge faced by researchers and clinicians across the world. The Research Strategy identifies the need to better understand the link between research, policies and systems to ensure that patients do not experience pain or illness that we could otherwise treat or prevent thanks to researchers.

The other significant challenge faced by all researchers is sustainable funding models. Through the Office of Research, Metro North is working to develop new funding models and to seek out new investment partners to ensure that the next big health breakthrough isn't lost for lack of funding.

With this strategy, we acknowledge the valuable contribution researchers play in improving the health of our local and global community, and the work we as an organisation must now undertake to support it.

Dr Robert Stable AM
Chair, Metro North Board

Ken Whelan
Chief Executive, Metro North Hospital and Health Service

TERMINOLOGY

The Metro North Hospital and Health Service *Putting people first strategy* (2015) outlines patients, people and partners in its organisational frame.

For simplicity and consistency in this document, we have used *patients*, *people* and *partners* to refer to everyone who engages with Metro North HHS Research. We encourage flexibility in the use of terminology, as appropriate to support individual preferences and facilitate strong, healthy connections.

PATIENTS

Refers to our diverse range of consumers in Metro North HHS. A consumer includes patients and potential patients, carers, and people who use healthcare services (NHMRC, 2016). By using *patients* as common terminology, we hope to be inclusive of all who interact with our health service. We encourage the interchangeable use of common language, including patient, client, healthcare consumer or participant, to accommodate and enable meaningful engagement with our strategy.

PEOPLE

Refers to all employees of Metro North HHS and those conducting research within our facilities and services. By using *people* as our common terminology, we hope to be inclusive of all who engage with, contribute to, conduct and benefit from research. We recognise the importance of acknowledging and supporting those employees who actively engage with research and seek to develop research careers by ensuring that our key priorities address the unique needs and interests of career researchers.

PARTNERS

Refers to those external stakeholders with whom we establish both formal and informal relationships, partnerships and collaborations to develop and support research in our mutual best interests. *Partners* can be individuals, groups of people or organisations or communities, and may be connected through either virtual or physical infrastructure.

ACKNOWLEDGEMENTS

This strategy has been developed through extensive consultation and collaboration with people, partners and patients across Metro North HHS. The following Metro North HHS staff members were key contributors:

Professor Scott Bell
Executive Director, Research

Associate Professor Janet Davies
Assistant Director, Research

Dr Roxanne Machen
Project Officer, Research Strategy

Maxine Goulston
Senior Administration Officer, Research

Kate Britton
Business Manager, Research

Metro North Design
Mary Phillips
Darren Hughes

CONTENTS

| | |
|---|----|
| Message from the Metro North HHS Chief Executive and Board Chair | 2 |
| Contents | 5 |
| Welcome | 6 |
| Metro North HHS Research | 8 |
| Strategic Context | 10 |
| Approach | 12 |
| Metro North Research Strategy | 14 |
| Themes | 16 |
| Diagnostics | 17 |
| Therapeutics | 18 |
| Health Services | 19 |
| Direction | 20 |
| Define | 20 |
| Discover | 20 |
| Translate | 20 |
| Implement | 20 |
| Impact | 20 |
| Enablers | 21 |
| Patients | 22 |
| People | 23 |
| Systems | 24 |
| Infrastructure | 25 |
| Partners | 26 |
| Review and Evaluation | 28 |
| Glossary | 29 |
| References | 30 |



WELCOME

Metro North Hospital and Health Service is committed to setting a forward-looking research agenda which embraces novel approaches to diagnostics and therapeutics, and carefully and systematically evaluates our clinical practice and the implementation of new knowledge to deliver world class healthcare.

Research will provide our patients with the best access in Australia to novel diagnostics, innovative therapeutics and advanced health services.

With this, our first Metro North Hospital and Health Service Research Strategy, we seek to enhance the focus on research as core to all we undertake. We are committed to setting a visionary research agenda based on strong leadership, which embraces research in the search for new evidence to advance clinical practice and deliver world class healthcare.

We aim to build our capacity to undertake high quality research across each of our facilities, which in turn will translate to enhanced health outcomes for our patients, healthcare consumers and the community that Metro North HHS serves. Health and medical research advances our fundamental understanding of the complex factors that influence health outcomes and facilitates the discovery and application of innovative solutions. Active research programs are essential to the provision of high quality healthcare through four key perspectives:

Patients – Through direct integration and rapid translation of applied research with clinical practice, we can immediately improve health outcomes by enabling the evidence based adoption of new and proven diagnostics, therapies and approaches to care.

Health Service – Through our demonstrated reputation for research excellence, we can attract and leverage research funding, strategic research partners and industry linkages to enable delivery of state-of-the-art healthcare and facilitate evidence informed health service decision-making.

Clinical teams – Through research embedded within our healthcare practice, the application of contemporary knowledge and evidence will provide opportunities to develop new approaches and models of care. By solving problems and improving practice through research as a clinical team we will enhance cohesion and teamwork.

Researchers – Through research excellence, we can nurture and attract a world-class multidisciplinary team of healthcare providers, recognised for delivering exceptional health outcomes informed by cutting-edge research. Our people will have richly developed skills in critical appraisal, the scientific method, and how to define the clinically relevant and important questions that face our healthcare system.

We will build on our strong engagement with academic, industry and philanthropic partners and grow our participation in both discovery and translational research as a magnet for industry partners who desire to trial new and innovative approaches to healthcare in Metro North HHS. We are living in an era of information explosion. Whilst there are many challenges in linking clinical, health service and research data, this will be a vital aspect of the success of our strategy as we focus on the enormous potential of data linkage, including experimental data, biological material (biobanks) and genomic data.

Within Metro North HHS, we have access to impressive research infrastructure and our facilities host talented researchers across all disciplines, streams and services. As well as celebrating the success of our established and globally recognised researchers, this Strategy seeks to support and nurture the career development of new and emerging researchers who will become our future research leaders.

We have both a responsibility and an opportunity to build on our collective strengths and drive significant advancement in our research excellence that enriches the experience and health outcomes of our patients, our people, and community. In the coming five years, we envisage a health service with increasing numbers of clinician scientists who are globally recognised and the emergence of research groups and programmes that are developing national and international reputations. This will position Metro North HHS as a dynamic leader of world class healthcare into the future.

We have been humbled and inspired by the depth of passion and commitment to research in Metro North HHS, and have witnessed many examples of research innovation, initiative and excellence surfacing across Metro North in the development of this Strategy. We look forward to sharing with you a Strategy that will continue to collectively advance Metro North HHS research excellence in the best interests of our patients, our people and our organisation.

Professor Scott Bell

Executive Director, Research
Metro North Hospital and Health Service



METRO NORTH RESEARCH

Fields of research strength within Metro North HHS can be highlighted in many ways. Traditional metrics of research excellence include high profile internationally and nationally funded grants, fellowships and publications.

Metro North HHS staff are lead investigators on international grants from the Gates Foundation (infectious diseases) and the Wellcome Trust (haematology). At a national level Metro North HHS currently hosts five National Health and Medical Research Council (NHMRC) funded Centres for Research Excellence (CRE) and is actively involved in a further two, which together provide five-year funding (amounting to over \$15 million). These aim to provide support for teams of researchers to pursue collaborative research and build capacity in clinical, population health and health services research. The CREs which include clinicians based in Metro North HHS are in the fields of advanced cardiopulmonary support in the Intensive Care Unit (ICU), cardiovascular outcomes, sustainable healthcare, end of life delivery of care, antimicrobial therapies in the ICU and after transplantation, nursing practice, and chronic kidney disease.

Metro North HHS clinician researchers in haematology and infectious diseases hold large NHMRC program grants valued at over \$25 million. The NHMRC also funds researchers based in Metro North including two Development grants (reproductive science and cystic fibrosis), two Partnership grants (allergy and cardiology) and many project grants including several large clinical trials in the fields of intensive care, maternal and newborn health, gastroenterology, psychiatry, obstetric medicine, allied health (physiotherapy and dietetics), nursing, lung transplantation, lung cancer and cystic fibrosis. In addition to NHMRC funding, there are a number of ARC infrastructure, discovery and linkage grants which include our Metro North HHS researchers.

People support, in the form of research fellowships to clinician researchers, includes NHMRC-funded research fellowships to researchers in the fields of haematology (four), pharmacy, psychiatry, infectious diseases (two), dietetics, nursing and thoracic medicine (two).

From 2009, 20 clinicians have also received Queensland Health Fellowships in the fields of haematology, thoracic medicine, infectious diseases, intensive care medicine, psychiatry, general and geriatric medicine, neurology, allied health, surgery and medical oncology. Each of these fellowships has enabled clinicians to combine clinical practice with an active research program.

Each year Metro North HHS researchers publish approximately 1300 papers in scientific literature. Over the past two years, Metro North HHS has celebrated several landmark publications, many of which have the potential to influence clinical practice globally. Notably, publications in stellar journals such as *Nature* (haematology and lung cancer) *New England Journal of Medicine [NEJM]* (haematology, cardiology and clinical genetics), *Lancet* (gastroenterology, urology and haematology), *Journal of the American Medical Association [JAMA]* (ICU/trauma), *Cell* (haematology) and *Science* (cystic fibrosis) have raised the profile of researchers, their teams and our health service.

Our Strategy aims to continue to support highly experienced and successful researchers. Whilst the above outcomes represent many of the internationally recognised researchers and their programmes of research, it is important to highlight that much of the research undertaken within Metro North HHS also has impacts on the career development of our researchers and patient care locally. It is recognised that there are many other areas of research activity in which Metro North HHS researchers engage and excel. This Strategy aims to encourage early career researchers who are undertaking their initial research endeavours, as well as those already balancing the delivery of clinical care with the demands of pursuing research.



STRATEGIC CONTEXT



Research is deeply embedded in the Metro North HHS Strategic Plan, the vision of which is to change the face of healthcare through compassion, commitment, innovation and connection. The commitment of Metro North HHS to research is articulated as a clear objective to deliver value-based health services through a culture of research, education, learning and innovation.

Metro North HHS delivers responsive, integrated, and connected care to our local communities through highly specialised tertiary/quaternary referral facilities, major community hospitals, regional hospital, and health service wide mental health, oral health, Indigenous health, subacute, community and ambulatory services. Metro North HHS is connected with internationally regarded research institutions and facilities with advanced capacity in health and medical research discovery and translation. We have a unique opportunity to leverage this diversity to deliver globally recognised research that truly advances healthcare and health outcomes for our patients and community.

Metro North HHS is strongly aligned with Brisbane Diamantina Health Partners (BDHP), an alliance of four health services (Metro North HHS, Metro South HHS, Children's Health Queensland HHS and Mater Misericordiae Ltd), four academic partners (University of Queensland, Queensland University of Technology, QIMR Berghofer Medical Research Institute, Translational Research Institute), Brisbane South Primary Health Network and Queensland Health. BDHP has a vision to be recognised as a premier academic health sciences partnership that is a global example of outstanding health services delivery. As well as a BDHP Board member, Metro North HHS are active contributors to several steering groups to harmonise research processes across the partners including ethics and governance (including legal contracting), data management and the establishment of comprehensive biobanks.

The Queensland Government has a specific focus on innovation and partnering with industry to bring expertise to the state and provide employment growth. *Advance Queensland (2016)* offers a comprehensive suite of programs designed to create the knowledge-based jobs of the future, drive innovation, build on natural advantages, and help raise Queensland's profile as an attractive investment destination. The *National Innovation Science Agenda (2015)* offers additional enticement to establish inter-sector partnerships to extend our capacity for translating innovations, including opportunities within health.

In parallel, Queensland Health is building a research and innovation strategy for the future and has recently established a new office, the Health Innovation, Investment and Research Office (HIIRO) within the Office of the Director-General, which aims to improve

"WE AIM TO BE PATIENT-CENTRED IN OUR RESEARCH, COMPETITIVE IN NATIONAL AND INTERNATIONAL RESEARCH FUNDING, AND TO NURTURE THE NEXT GENERATION OF OUR RESEARCHERS."

the health and wellbeing of Queenslanders through a coordinated and collaborative approach to health innovation, investment and research across Queensland Health. Metro North HHS is an active participant in the development of the Queensland Health strategy ensuring its relevance to our researchers.

There are significant opportunities likely to arise from the Commonwealth Government's Medical Research Future Fund (MRFF). The MRFF was established in 2015 with the vision for a health system fully informed by quality health and medical research. The first five-year *Australian Medical Research and Innovation Strategy 2016-2021* prepared by the Australian Medical Research Advisory Board identifies a series of strategic platforms for investment in health and medical research.

Importantly, there is a risk that if we fail to adopt a focus on research in our practice, then our healthcare outcomes will be less successful and we will lose opportunities to maintain a highly skilled workforce which have access to the latest medical advances in patient care. We aim to be patient centred in our research, competitive in national and international research funding, and to nurture the next generation of our researchers.

There are many challenges in delivering excellence in healthcare to our community, including the ageing population and the increasing burden of chronic diseases (and people with complex multiple morbidities). However, rapidly advancing health technologies now provide new opportunities to improve health outcomes. Being both proactive in evaluating the implementation of such technologies and insightful in health service research will be vitally important in the next decade.



WHAT ARE WE WORKING TO ACHIEVE?

Our inaugural Metro North HHS Research Strategy promotes the integration of research with clinical care across the research continuum, and focuses on creating an enabling environment where research is embedded as core health service practice. The Strategy will provide a clear pathway to collectively advance research in the best

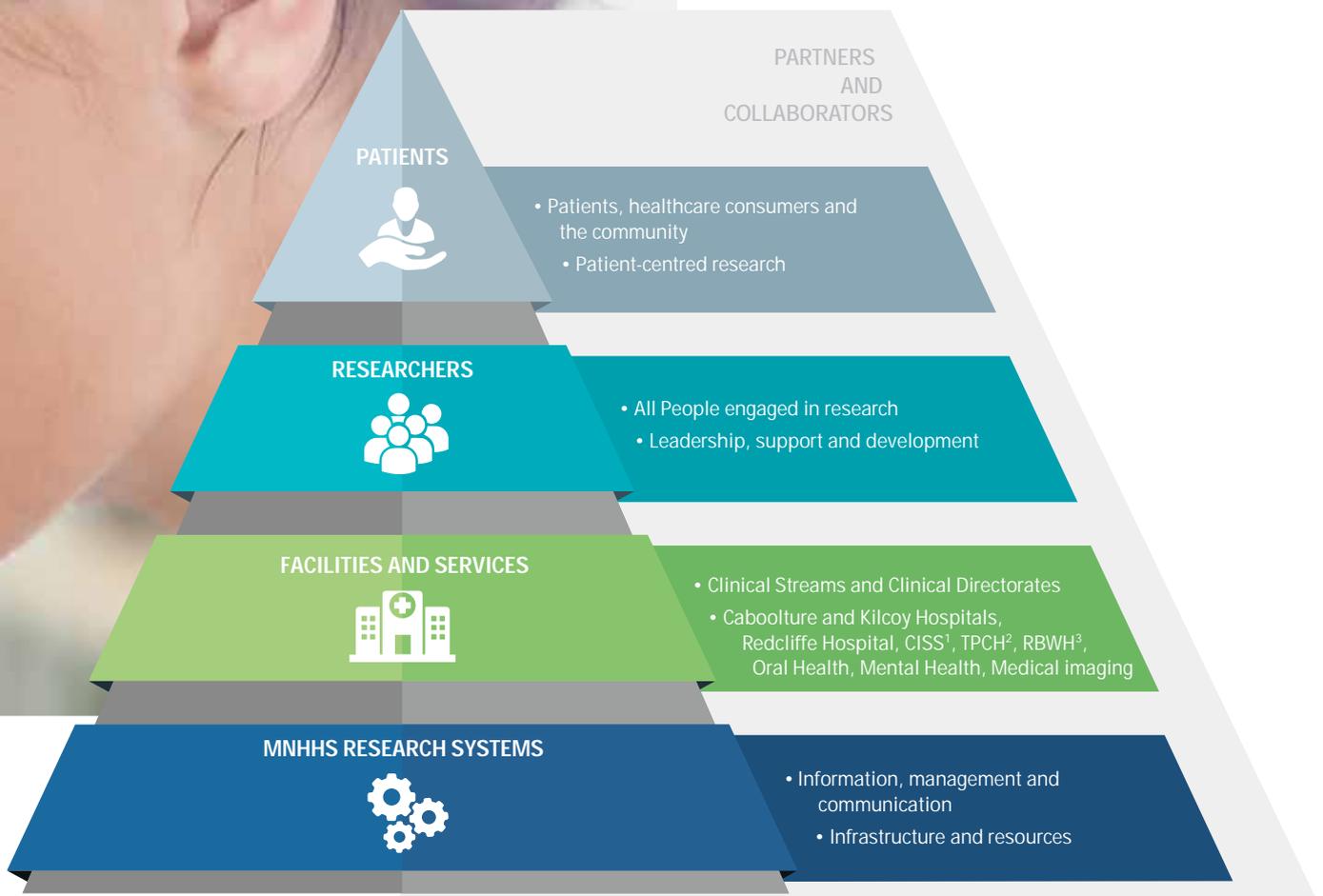
interest of our patients, people, and health service. It will enable us to leverage our collective diversity and connect across streams, disciplines, professions, services and departments, with our patients and our partners to affect positive and productive change in Metro North HHS research capacity by influencing upwards, outwards and beyond.



HOW DID WE DEVELOP THE STRATEGY?

This Strategy has been informed by extensive engagement with a broad range of research, clinical, leadership, partner and consumer representatives throughout Metro North HHS. Targeted discussions with people in key research positions and a series of consultation and feedback forums composed of research leaders and representatives were underpinned by a comprehensive review of research capacity and activity

across Metro North HHS, and a synthesis of local, national and international strategic research context. There was a high level of commonality in the insights provided during consultation from acknowledgement of the many exceptional research program, to the challenges and opportunities that impact capacity to undertake research within a clinical setting.



WHO IS THIS STRATEGY FOR?

This Strategy is for our patients, people and partners to engage with research. It will enable patients, healthcare consumers and the community to engage with the development, conduct and communication of research in Metro North HHS. For our people, this Strategy reinforces the understanding that every individual in Metro North HHS has the potential to contribute to, benefit from and engage with high quality research. It prioritises our researchers, their diverse career pathways, education, training and support needs, and embraces their potential and realised excellence. For our Clinical Streams, Clinical Directorates (Caboolture and Kilcoy Hospitals, Redcliffe Hospital, Community, Indigenous and Subacute Services, The Prince Charles Hospital, Royal Brisbane and Women's Hospital, Oral Health, Medical Imaging and Mental Health) and Metro North HHS Facilities, this Strategy provides a framework through which research can be focused to leverage our collective diversity. For Metro North HHS, this Strategy positions our research systems, infrastructure and resources as core practice within our health service. Finally, through strategic collaborations and partnerships, each facility, clinical directorate and stream will be able to work with internal and external stakeholders across disciplines, professions and sectors to deliver research that delivers exceptional health outcomes through globally recognised discovery and translation.

"THIS STRATEGY REINFORCES THE UNDERSTANDING THAT EVERY INDIVIDUAL IN METRO NORTH HHS HAS THE POTENTIAL TO CONTRIBUTE TO, BENEFIT FROM AND ENGAGE WITH HIGH QUALITY RESEARCH."

¹ Community, Indigenous and Subacute Services

² The Prince Charles Hospital

³ Royal Brisbane and Women's Hospital.

"RESEARCH WILL PROVIDE OUR PATIENTS WITH THE BEST ACCESS IN AUSTRALIA TO NOVEL DIAGNOSTICS, INNOVATIVE THERAPEUTICS AND ADVANCED HEALTH SERVICES."

METRO NORTH HHS RESEARCH STRATEGY

VISION

Changing the face of healthcare through compassion, commitment, innovation and connection.

MISSION

Together we deliver exceptional health outcomes through globally recognised discovery and translation.

ENABLERS

Our **enablers** – **patients, people, systems, infrastructure** and **partners** – will actively support our **themes** and **direction** to deliver excellence in discovery and translation.

THEMES

Our **themes** – **diagnostics, therapeutics** and **health services** – embrace the entire research continuum, from basic discovery through clinical translation to public health and health services research, in the context of our patients' journey through our health service.

DIRECTION

To **define** clinically relevant questions, **discover** and **translate** new knowledge into evidence for patient care and **implement** this knowledge into informed practice that will lead to research **impact**.

TOGETHER WE DELIVER WITH OUR



PATIENTS

Patients, healthcare consumers and the community

Lead excellence in patient centred research



PEOPLE

People engaged with research

Engage our people with a research-active culture to develop attract and retain high calibre research expertise



SYSTEMS

Research information, management and communication systems

Establish integrated research information, management and communication systems



INFRASTRUCTURE

Research infrastructure and resources

Enhance sustainable research capacity through management of infrastructure and resources



PARTNERS

Collaborations and partnerships

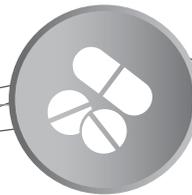
Support strategic collaborations and partnerships to drive globally recognised discovery and translation

EXCEPTIONAL HEALTH OUTCOMES BY EMBRACING



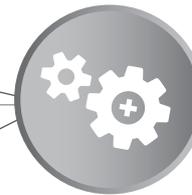
DIAGNOSTICS

From discovery research that advances fundamental understanding of disease-related mechanisms which influence diagnosis, to translational research, which successfully tests the application, efficacy and translatability of diagnostic tests, services and devices.



THERAPEUTICS

Through the integration of therapeutic research and clinical care, we will become leaders in the prevention and management of disease and the specific, highly complex health problems facing our patient population.



HEALTH SERVICES

Through health services research we will embrace the design of sustainable, integrated and safe models of healthcare with the capacity to improve health outcomes, reduce disparities for disadvantaged and vulnerable groups, increase efficiency and provide value-based healthcare.

THROUGH GLOBALLY RECOGNISED DISCOVERY AND TRANSLATION

DEFINE

Continuous data integration and knowledge synthesis

DISCOVER

Address fundamental knowledge gaps

TRANSLATE

Translate new knowledge and innovations

IMPLEMENT

Bring new knowledge into practice

IMPACT

Positively impact long-term health outcomes

THEMES

Our themes embrace the entire research continuum, from basic discovery through clinical translation to public health and health services research, in the context of our patients' journey through, and interaction with, our health service.

We will encourage connected research through collaboration with our patients, people and partners, and strategically position ourselves to pursue and excel across three key themes:

- diagnostics
- therapeutics
- health services

By focusing research in the context of these themes, we will enable discovery and translation in the development and evaluation of novel diagnostic and therapeutic innovations, determination of their effectiveness and clinical application, the systematic and clinically relevant implementation and evaluation of evidence informed clinical practice and the application of rigorous interdisciplinary health services research methodology.

As Metro North HHS strategically positions itself to generate new ideas, knowledge and world-leading discoveries through our themes, research will enable the discovery of new ways of preventing, identifying and treating ill-health, translating into tangible benefits for our patients, health service and our people. To encourage the creation of these new ideas, Metro North HHS has developed an Intellectual Property (IP) policy designed to enhance collaboration with our academic partners and provide direct benefit to our researchers and their teams.

"TO ENCOURAGE THE CREATION OF NEW IDEAS, METRO NORTH HHS HAS DEVELOPED AN INTELLECTUAL PROPERTY (IP) POLICY DESIGNED TO ENHANCE COLLABORATION WITH OUR ACADEMIC PARTNERS AND PROVIDE DIRECT BENEFIT TO OUR RESEARCHERS AND THEIR TEAMS."

The Medical Research Future Fund (MRFF, 2016) outlines a vision for a health system fully informed by quality health and medical research, which emphasises the importance of creating health and economic benefits, embedding research evidence in healthcare, and driving collaboration and innovation across research and healthcare. Through integrated research, Metro North HHS will strategically position itself as a leading health service for the future.



DIAGNOSTICS

From discovery research that advances our fundamental understanding of disease-related mechanisms which influence diagnosis, to translational research which successfully tests the application, efficacy and translatability of diagnostic tests, services and devices, diagnostics are both integral to our health service and form the cutting edge of health and medical research. Through the rapid discovery and translation of novel diagnostics alongside the systematic evaluation of existing diagnostic practices, our patients will benefit from exceptional care. Diagnosis presents a common entry point into our health service, and is imperative to establish effective treatments and preventative strategies.

At the advent of personalised medicine, we have the opportunity to evaluate the roles of new technologies for disease diagnosis, including early detection and into the future for primary prevention of at risk people. We will do

this by capitalising on the advanced skills, expertise and infrastructure of our collocated and local institutes and universities, alongside our extensive capacity for provision of clinical services. Metro North HHS works collaboratively with Pathology Queensland, the state-wide pathology service, to conduct analytical, clinical and forensic research using samples derived from our patients to support the evaluation and implementation of diagnostics into clinical practice.

Centres of Research Excellence including the Herston Imaging Research Facility (HIRF), development diagnostics laboratories at UQCCR and QUT, and the Queensland Genetics Alliance provide a great opportunity for access and evaluation of novel approaches for disease screening and diagnosis across all medical conditions. Through these centres and by our large patient population, we will continue to attract industry, academic and technology partners to bring new methods of diagnosis to be studied within Metro North.



THERAPEUTICS

Our patients will have access to evidence-based, safe and effective healthcare designed to improve health outcomes through our leadership in therapeutic research. Through the integration of therapeutic research and clinical care, we will become leaders in the prevention and management of disease and the specific, highly complex health problems facing our patient population. The rapid development of novel therapies for disease prevention and management through applied research will advance evidence based models of care, such as the delivery of world-class integrated specialist rehabilitation services for our patients. Preventive therapies form crucial part of the healthcare we deliver to our community, particularly for those utilising our healthcare services where secondary prevention disease complications will be increasingly important in a community which is ageing and where multiple morbidities are increasingly recognised.

We will leverage our state-of-the-art facilities, engage industry and academic partnerships, and bring together our advanced clinical expertise and capabilities across

Metro North HHS to undertake therapeutics research which leads to the development, comprehensive evaluation and commercial application of small molecules, biopharmaceuticals, cell therapies and biomarkers. Within Metro North HHS, we are enhancing approaches to studying the role of biofabrication technologies, developing new models of care to allow state-of-the-art specialist rehabilitation, and locally developed immunotherapies and stem cell treatments are being pioneered and evaluated in our clinics.

We will continue to support the productivity of translational health research from the laboratory into clinical trials to deliver novel and improved therapeutics and, more broadly, therapies. We will continue to develop efficient and skilled research support networks to ensure the ability to rapidly engage in early and also pivotal clinical trials. Importantly, we will also grow our research in the fields of comparative effectiveness allowing the study of existing treatments already being delivered to our patients.



HEALTH SERVICES

Patients' interaction with our health service culminates in the delivery of responsive, integrated, and connected care, informed by our world-class research into the development and evaluation of novel diagnostics, therapeutics, and preventative strategies, which drive evidence-based health service delivery, innovation and improvement. Health services research embraces the design of sustainable and integrated models of healthcare with the capacity to improve health outcomes, reduce disparities for disadvantaged and vulnerable groups, increase efficiency and provide value-based healthcare.

Understanding the relationships between health research, policies and system safety and quality in the context of broader determinants of health, requires interdisciplinary, strategically focused health services and health systems research with the capacity to evaluate system and population impact. Metro North HHS is well

placed to leverage our collective diversity, strengths and infrastructure to improve access to and coordination of data management and better inform health service decision-making and systems improvement to ensure an appropriate balance in health investment between prevention, management and treatment.

We have strong links with epidemiological and health economics expertise through our local partners including QIMR Berghofer Medical Research Institute, UQ School of Public Health, and the Australian Centre For Health Services Innovation (AushSI). We will consolidate these external collaborations with strategic internal partnerships across Clinical Streams and Directorates to integrate health service clinical data sets and ensure health services research is integrated with our core practices. By embracing evidence into clinical care we will be well prepared for the hospitals (and health services) of the future.

DIRECTION

As a diverse health service, we have the potential to conduct and become world leaders in basic discovery through clinical translation to public health and health services research with global impact.

Pursuing excellence, innovation and impact across this potential breadth of research within one of Australia's largest Hospital and Health Services will require a robust culture of research excellence in knowledge synthesis, discovery and translation.

The direction is a series of principles, which will guide the development, conduct and communication of research across Metro North HHS and supports our people to *define* clinically-relevant questions, to *discover* and rapidly *translate* new knowledge into evidence for patient care and to *implement* this knowledge into informed practice that will lead to research *impact*.

DEFINE

We will *define* clinically -relevant and patient-centred research questions through continuous data integration and systematic approaches to knowledge synthesis

DISCOVER

We will address fundamental knowledge gaps using basic science *discovery* research into diagnostics, therapeutics and health services.

TRANSLATE

We will *translate* new knowledge and innovations into novel approaches for prevention, diagnosis and treatment of disease

IMPLEMENT

We will bring knowledge into practice and *implement* new evidence to design, deliver and evaluate exceptional and sustainable health services

IMPACT

We will measure the *impact* on long-term health outcomes of our community through better and safer treatments, promotion of wellbeing and the continuous improvement of a value-based healthcare system.

ENABLERS

The *enablers* will actively support our *themes* and *direction* to deliver excellence in discovery and translation.

To gain a competitive advantage in the national and international research landscape, we must leverage our collective diversity through the application of clear, consistent and coordinated research principles. Our enablers will allow Metro North HHS clinical streams, directorates and professional services to set a research agenda with consistency of research theme and direction in a research-active culture.

Through the integration of *themes*, *directions* and *enablers*, we hope to create a more effective research environment which will enable and embed research across our health service. We want to build a resilient research culture that is driven by patient-centred clinical priority setting, supported and developed by highly-skilled and engaged researchers who can function at a high level within the organisation to deliver research with meaningful impact. This requires a system that is easily navigated, allows us to set priorities, adapt and innovate, and which captures metrics to demonstrate change and impact of exceptional research. We need to leverage strategic partnerships, and coordinate the sustainable management of infrastructure and resources to embed research as core practice in Metro North HHS.



PATIENTS

Patients, healthcare consumers and the community

Lead excellence in patient centred research



PEOPLE

People engaged with research

Engage our people with a research-active culture to develop attract and retain high calibre research expertise



SYSTEMS

Research information, management and communication systems

Establish integrated research information, management and communication systems



INFRASTRUCTURE

Research infrastructure and resources

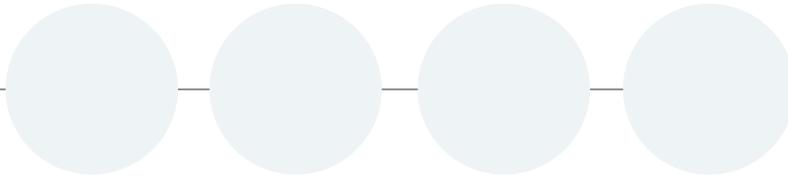
Enhance sustainable research capacity through management of infrastructure and resources



PARTNERS

Collaborations and partnerships

Support strategic collaborations and partnerships to drive globally recognised discovery and translation



PATIENTS, HEALTHCARE CONSUMERS AND COMMUNITY

Lead excellence in patient-centred research

The growing and ageing population in Queensland will result in a 20 per cent increase in the number of people Metro North HHS serves in the next decade. It is predicted that obesity and lifestyle diseases will have a greater burden on health service requirements based on their increasing rates of hospital admissions seen over the past decade. We will focus our research on chronic diseases especially the interactions between multiple health conditions. Linkages between all levels of our health system (including community and primary healthcare networks) and how we deliver care will be important to developing value-based and safe healthcare. We will deliver opportunities for our population to receive access to new and novel therapies by leading their study and implementation into the clinic.

In many areas of our clinical care, patients (healthcare consumers) have ready access to information about research participation, including how to access clinical trial information for their condition(s). We aim to ensure

all patients treated within Metro North HHS have the opportunity to participate in clinical research and this knowledge extends to the broader community. Multimedia approaches to ensure information is communicated to patients at the point-of-care will be a focus of this Strategy.

In Metro North HHS, the median age of death was 19 years younger (63 years) in indigenous people than non-indigenous peoples (82 years). Improving the health outcomes for our indigenous peoples is a high priority. We also wish to ensure that information about our research reaches our whole community including disadvantaged communities through culturally sensitive and diverse communication strategies.

As beneficiaries of advances in healthcare, consumers and community members have an interest in promoting the translation of research into improved policy and practice. It naturally follows that health and medical research should develop processes and systems to incorporate and support sustainable consumer and community involvement (NHMRC, 2016).



KEY PRIORITIES:

- Ensure our research promotes wellbeing and delivers exceptional health outcomes.
- Engage our patients to enable increasing participation in inclusive, responsive and integrated research.
- Advance health outcomes for Aboriginal and Torres Strait Islander populations through targeted research priorities.

We will achieve:

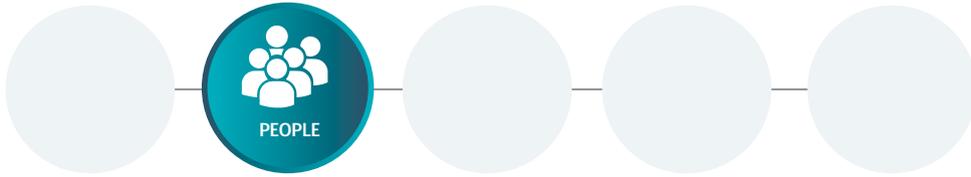
- A 10% annual increase in participation in Metro North HHS clinical trials and clinical research by our patients between 2017 and 2022.

We will establish:

- An integrated Metro North HHS Research Roadmap that is patient-centred and culturally appropriate.

We will measure the:

- Number and proportion of our patients participating in Metro North HHS research and clinical trials.
- Number of research studies demonstrating use of local health service data.
- Number of research studies demonstrating consumer/community engagement.
- Number of patient-centred research outputs published in Metro North HHS communications.
- Number of research studies involving Aboriginal and Torres Strait Islander people and vulnerable populations.



PEOPLE ENGAGED WITH RESEARCH

Engage our people with a research-active culture to develop attract and retain high calibre research expertise

Research conducted within a health service requires highly trained clinician researchers who have sufficient time and support to address the questions raised in the clinic and the ward. In many cases, the pressures of delivering clinical care limit the opportunity to ask the important clinical questions. Healthcare leaders who have the vision to appreciate the value of research will ensure research is integral to the roles of healthcare professionals. This leadership and adoption of a research-active culture within our clinical services and departments will in turn enable access to new diagnostics and therapies, attract and retain high calibre clinical staff and improve morale of the team who contribute to advancing clinical outcomes for our patients.

Mentoring of novice and emerging researchers is vital to maintaining enthusiasm, momentum and focus. We believe this is best achieved where the mentoring and support is based in close proximity to the clinician (e.g. within their department). As a new researcher, a key challenge is from whom to seek advice and how to get 'the research moving forward'. A department internal research champion, that is a Research Lead, should be available. A register of members of the department who have specific research skills is an important way of providing this necessary support.

Clinical practice can often be all consuming given a healthcare professional's key role is to deliver clinical care. We aim to ensure the very talented clinician scientists in our workforce are provided with opportunities for career development through all stages of their career. This can be supported through both Research and Clinical leads and through forward planning for workforce opportunities to maximise the return on (research) investment for the Health Service and for the clinician researcher.



KEY PRIORITIES:

- Develop leadership capacity that provides tangible support for research and our researchers.
- Foster an inclusive culture of research excellence through accessible research advocacy, mentorship and networks.
- Establish accessible and integrated career pathways for all who engage in research.

We will achieve:

- An increase in senior clinical appointments with higher degrees. By 2022, this will reach 50% of new appointment per annum.

We will establish:

- Early-career post-doctoral research fellowships.
- A Metro North HHS research mentor network and communication platform.
- A research/clinical trial coordinator program.
- A research higher degree (RHD) support program.

We will measure the:

- Number of designated leadership positions with research key performance indicators (KPIs) included in annual performance and development reviews.
- Number of designated research leaders and registered research mentors.
- Number of our people with research higher degrees (PhD and Masters).
- Number of our people who are research higher degree students (% enrolled, % completed).
- Number and investigator representation (career stage, discipline, clinical service, institution) of investigator-led HREC and Governance approvals.



RESEARCH INFORMATION, MANAGEMENT AND COMMUNICATION SYSTEMS

Establish integrated research information, management and communication systems

The increasing complexity of research knowledge creation and design in the context of a vastly expanding local, national and international research landscape has created a need to expose both our researchers and our hospital and health service decisionmakers to diverse research information, education and training opportunities. The delivery of exceptional health outcomes through research requires a diverse, highly qualified and research-active workforce. Our current and emerging researchers must develop an appropriate set of research and professional skills that will allow them to adapt to the challenges, needs and directions of the research landscape.

It is our intention to reduce barriers and create an enabling environment that will support our world-class researchers in the pursuit of globally recognised discovery and translation. This strategy seeks to provide researchers the freedom and capacity to pursue innovative ideas, undertake clinically-relevant research within a national and international context whilst focusing their expertise on the health needs of our population. The strategy facilitates the integration and sustainable management of research systems to

support a culture of continuous improvement transparent and accountable systems, processes, information management and research governance. Strengthening the integrity and efficiency of Metro North HHS research systems will require an integrated approach that systematically embeds the consideration of research into priority setting, policies, clinical decision-making and broader organisational processes. We will demonstrate a return on investment through the advancement of our research activities from define to impact.

We have a significant opportunity to design advanced communication strategies that will rapidly promote research outcomes and convey the significance of newly generated knowledge to the community. By prioritising the dissemination of research findings to enhance understanding and knowledge, support best practice, stimulate further research and celebrate achievement we can drive the adoption of evidence informed practice and policy. By leveraging existing communication networks and structures, and building capacity through the development of a comprehensive research communication strategy including an enhanced media profile for Metro North HHS research, we can ensure relevant messages are effectively disseminated and externally promoted for maximum influence and, ultimately, increased health outcomes.



KEY PRIORITIES:

- Provide accessible and consistent research information through integrated training and education.
- Work collaboratively to develop integrated research management processes and systems.
- Implement innovative communication strategies to promote and advance research discovery and translation.

We will achieve:

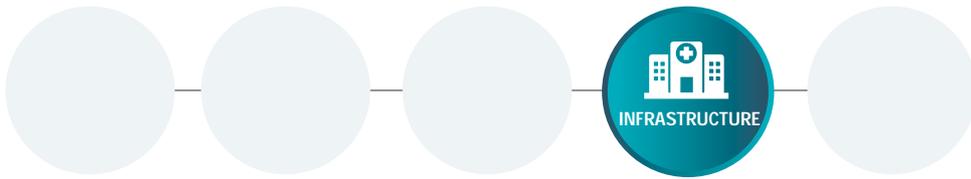
- The most rapid process for human research ethical approval in Australia by 2018.

We will establish:

- An integrated Metro North HHS research roadmap.
- A Metro North HHS Good Clinical Practice course.
- An innovative Metro North HHS research business management model.
- Metro North HHS research policies, procedures and agreements.

We will measure the:

- Number and representation of our people participating in Metro North HHS research education.
- Number and time to completion (median and range) of HREC and Governance approvals.
- Metro North HHS website access and utilisation metrics.



RESEARCH INFRASTRUCTURE AND RESOURCES

Enhance sustainable research capacity through management of infrastructure and resources

The capacity to achieve excellence in clinical research that translates into positive changes in clinical practice requires ready access to facilities and infrastructure that support our research programmes.

We are fortunate to have access to a remarkable suite of world-class facilities and infrastructure to enable integration of clinical practice with research. The availability of these cutting-edge technologies located within our campuses provides a rich and valuable ecosystem for research across our health service. For example UQCCR, QIMR Berghofer Medical Research Institute, QUT Institute for Health and Biomedical Innovation, Herston Imaging Research Facility (HIRF), Medical Engineering Research Facility (MERF), the Oral Health Alliance, Specialist Rehabilitation and Ambulatory Care Centre (SRACC) and the Herston Biofabrication Institute.

As well as state of the art physical resources, within our distributed health service we also possess systems that empower us to excel in health service innovation,

health economics research and implementation science allowing us to lead in the adoption of research evidence into care. Our focus on health system research enables us to respond to the evolving healthcare landscape and capture national and international clinical and scientific research opportunities.

With the emergence and increased application of technologies generating large datasets and the advent of personalised medicine, it is imperative that we establish quality systems for storage, management and synthesis of multiple types of clinical and biomedical data. Such database resources should be integrated with sustainable processes for biobanking of associated clinical specimens.

This research strategy seeks to establish streamlined procedures to ensure equitable access to our research infrastructure for all our clinical researchers, transparent allocation of available resources and to enhance the capacity of our experienced and emerging researchers to attract external funding for their research programmes. We aim to strategically align the management of our research infrastructure and resources to support emergent multidisciplinary research opportunities addressing complex and critical health issues of our community.



KEY PRIORITIES:

- Promote access to and support research infrastructure and facilities.
- Develop and support access to internal and external funding opportunities to enhance research.
- Support integrated data linkages to inform health services research.

We will achieve:

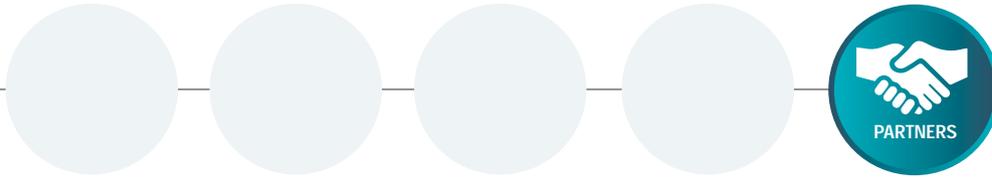
- Formalised clinical trial capacity for each facility by 2019.

We will establish:

- A transparent review process to ensure equitable access and utilisation of research infrastructure across Metro North HHS.
- Metro North HHS grant writing workshops and measure participation rates and investigator representation.
- A Metro North HHS research biobanking system management framework.

We will measure the:

- Number of research studies utilising advanced infrastructure (eg. HIRF, MERF, Biofabrication Institute), data and biomedical resources from our genetic, imaging, biofabrication and clinical trial infrastructure.
- Number of research projects support by the Metro North HHS biostatistics service.
- Number and monetary value of industry-led Metro North HHS research studies.
- Number and monetary value of competitive grants which involve our people.
- Number of our people awarded competitive fellowships which provide personal salary support.



PARTNERSHIPS AND COLLABORATIONS

Support strategic collaborations and partnerships to drive globally recognised discovery and translation

Research collaborations are vital for integration of our diverse approaches, skillsets and expertise with others from within our own organisation and from other organisations. Collaboration enables timely access to knowledge and skills essential at different stages of the clinical research spectrum.

This Strategy seeks to facilitate research collaborations that are mutually beneficial and productive. Multi-disciplinary participation in research activities will synergistically enhance our capacity to achieve positive research outcomes, leading to greater impact and broader relevance. We aim to foster not only interdisciplinary collaborations between departments and facilities within Metro North HHS, but also partnerships between other health services and inter-sector collaborations with academic, industry or non-government organisations. Nurturing such relationships and interactions will enhance our ability to discover and innovate, as well as to translate and implement newly generated clinical research knowledge.

Within Metro North HHS, research is directly supported by two hospital-based foundations: RBWH Foundation and TPCH Foundation. Our Foundations have the specific

purpose to raise funds to support the research agenda. They provide innovative opportunities to seed, leverage and partner to fund research within our health service.

We aim to streamline the administrative and legal processes that underpin collaboration and partnership agreements. The recognition of the benefits of research and innovation, and the awareness of the need for collaboration encourages our researchers to interact with internal and external stakeholders, and to accelerate our capacity for research translation to improve care for patients within Metro North HHS and more broadly for the Australian community. Metro North HHS has established an Intellectual Property (IP) policy where one of our academic partners will manage the IP and part of the distribution will come back to Metro North HHS, and in turn individual researchers and departments will benefit directly.

Addressing current health challenges from a health service perspective will require the involvement of our patients, people, partners, health service leaders, decision-makers, and all levels of government. We will engage decision-makers and researchers at local and regional levels to implement mechanisms to identify and use available knowledge to improve health service performance. Evidence informed policy-making presupposes the availability of high quality, relevant information. Decision-makers may need support to assess what is already known or to articulate specific demands for new evidence.



KEY PRIORITIES:

- Enable and support internal research collaborations.
- Establish new and enhance existing partnerships that encourage innovation and impact on clinical care.
- Leverage strategic collaborations to deliver globally recognised research that defines, discovers, translates, implements and impacts.

We will achieve:

- The integration of academic scientists within 50% of our clinical services by 2022.

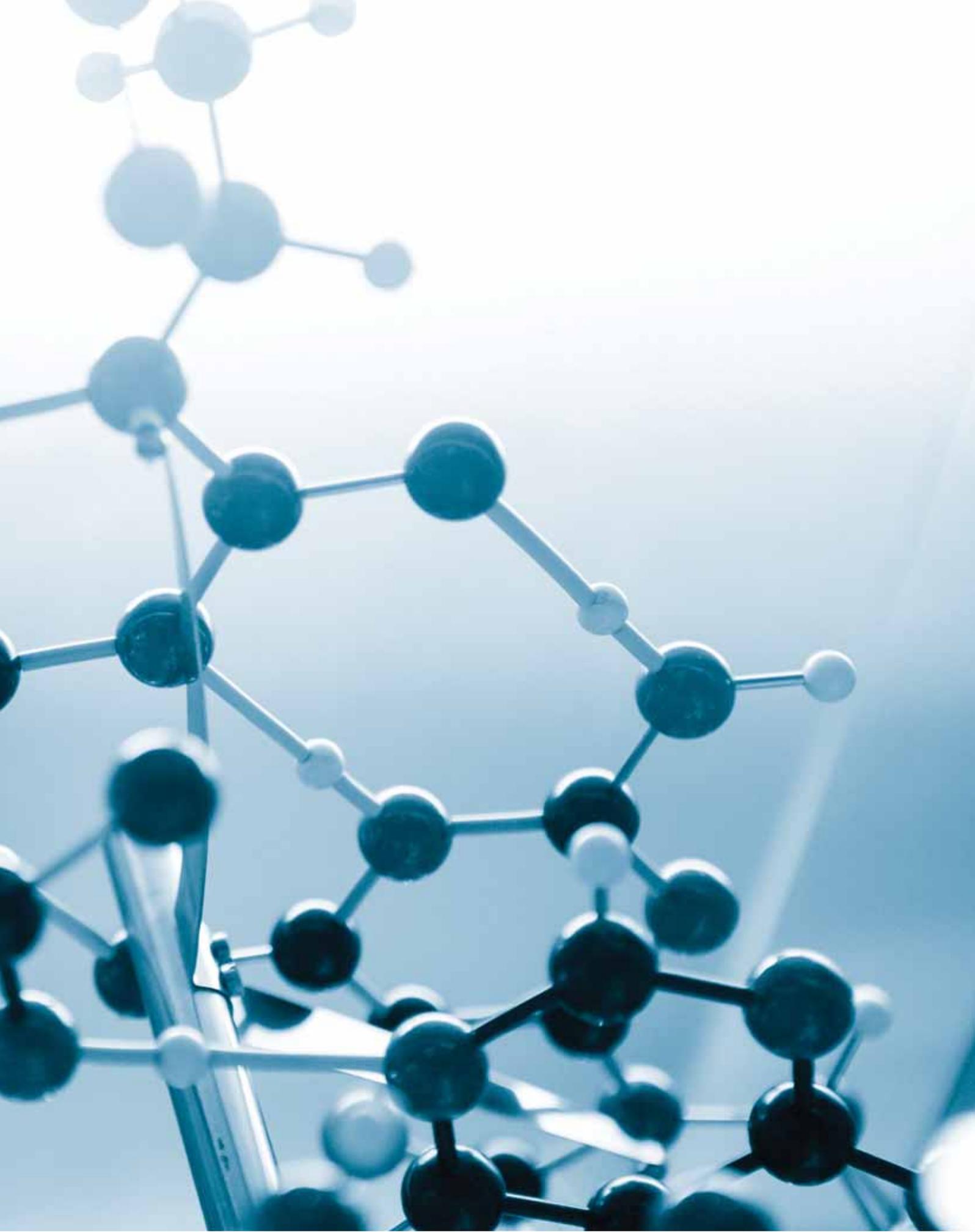
We will establish:

- A Metro North HHS knowledge translation program.
- A Metro North HHS clinical collaboration initiative.
- Honorary research appointments for researchers employed by our academic partners.

- Clinical fellowships based within Community, Indigenous and Subacute Services (CISS).

We will measure the:

- Number of publications, and the number and monetary value of grants and funding which include internal, BDHP, national and international collaborations and partnerships.
- Number of HREC and Governance approvals that utilise BDHP Ethics and Governance umbrella agreements (BDHP Research Passport).





REVIEW AND EVALUATION

The Metro North HHS Research Strategy outlines an agreed vision for the future. Over the lifetime of this strategy (2017-2022) we anticipate growth in research capacity through applied research themes and a clear and consistent direction for research activity in an enabling environment, focused on patients, people, systems, infrastructure and partners. It is both aspirational and inspirational in its vision, and requires a coordinated approach to result in action.

We have a shared responsibility in achieving the key priorities outlined in the Strategy. An Action Plan has been co-developed in parallel to the Strategy, and outlines a targeted set of recommended actions to correspond with the enablers. The Action Plan outlines the actions, performance measures, timeline for delivery, evaluation, roles, and responsibilities. The creation of locally relevant plans aligned with the overarching mission, themes and direction of this strategy will engage our health service, encourage multidisciplinary, integrated health research and knowledge translation.

GLOSSARY

PATIENTS

Refers to our diverse range of consumers in Metro North HHS. A consumer includes patients and potential patients, carers, and people who use healthcare services (NHMRC, 2016). By using patients as common terminology, we hope to be inclusive of all who interact with our health service. We encourage the interchangeable use of common language, including patient, client, healthcare consumer or participant, to accommodate and enable meaningful engagement with our strategy.

PEOPLE

Refers to all employees of Metro North HHS. By using people as our common terminology, we hope to be inclusive of all Metro North employees who engage with, contribute to and benefit from research. We recognise the importance of acknowledging and supporting those employees who actively engage with research and seek to develop research careers by ensuring that our key priorities address the unique needs and interests of career researchers.

PARTNERS

Refers to those external stakeholders with whom we establish both formal and informal relationships, partnerships and collaborations to develop and support research in our mutual best interests. Partners can be individuals, groups of people or organisations or communities, and may be connected through either virtual or physical infrastructure.

COMMUNITY

Refers to a group of people sharing a common interest (e.g. cultural, social, political, health, economic interests), but not necessarily a particular geographic association. Different types of communities are likely to have different perspectives and approaches to their involvement in research (NHMRC, 2016)

HEALTH SERVICES RESEARCH

Health services research is a multi-disciplinary research activity with an implicit objective of improving the health services patients receive (HSRAANZ, 2016). Health services research is the multidisciplinary field of scientific investigation that studies how social factors, financing systems, organisational structures and processes, health technologies, and personal behaviours affect access to healthcare, the quality and cost of healthcare, and ultimately our health and well being (Lohr & Steinwachs, 2002).

HEALTH SYSTEMS

Health systems refers to the virtual and physical system infrastructure that enables and supports the delivery of healthcare. In the context of research, systems refers to the integrated information, management and communication systems that support the conduct of research as a core practice of Metro North HHS.

REFERENCES

Advance Queensland (2017). *Advance Queensland: Universities and researchers*. Retrieved from: <http://advance.qld.gov.au/uni-researchers.aspx>

Brisbane Diamantina HealthPartners (2015). BDHP Strategic Plan 2015-2020.

Commonwealth of Australia (2015). *National Innovation and Science Agenda*, Department of the Prime Minister and Cabinet. Retrieved from: <http://www.innovation.gov.au/system/files/case-study/National%20Innovation%20and%20Science%20Agenda%20-%20Report.pdf>

Health Services Research Alliance of Australia and New Zealand (2017). *What is Health Services Research (HSR)*. Retrieved from: <http://www.hsraanz.org/what-is-hsr/>

Lohr, K. N., & Steinwachs, D. M. (2002). Health Services Research: An Evolving Definition of the Field. *Health Services Research*, 37(1), 15-17.

Metro North Hospital and Health Service (2015). *Putting people first Strategy*. Retrieved from: <http://qhps.health.qld.gov.au/metronorth/docs/mn-putting-ppl-first-strat-plan.pdf>

Metro North Hospital and Health Service (2016). *Strategic Plan 2016–2020*. Retrieved from: https://www.health.qld.gov.au/__data/assets/pdf_file/0027/441369/mnhhs-strategy-corporate.pdf

National Health and Medical Research Council (2016). *Statement on Consumer and Community involvement in Health and Medical Research*. Consumers Health Forum of Australia.

Medical Research Future Fund (2016). *Australian Medical Research and Innovation Strategy 2016-2021*. Retrieved from: [http://health.gov.au/internet/main/publishing.nsf/Content/mrff/\\$FILE/Australian%20Medical%20Research%20and%20Innovation%20Strategy%202016.pdf](http://health.gov.au/internet/main/publishing.nsf/Content/mrff/$FILE/Australian%20Medical%20Research%20and%20Innovation%20Strategy%202016.pdf)



www.health.qld.gov.au/metronorth