

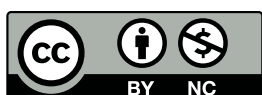
Queensland Advancing Health Research 2026

Healthier Queenslanders through
research-informed healthcare



Queensland Advancing Health Research 2026

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For more information contact:

Health Innovation, Investment and Research Office (HIIRO), Office of the Director-General, Department of Health,
GPO Box 48, Brisbane QLD 4001,
email: HIIRO@health.qld.gov.au

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Message from the Minister

Each year the Department of Health and our Hospital and Health Services invest a significant amount in research to improve health outcomes. This is work that not only makes a difference to communities across Queensland but has the potential to travel the world.

Supporting, integrating and expanding the conduct and translation of research in our health system is what *Queensland Advancing Health Research 2026* is all about.

We enjoy good health by global standards but there are challenges ahead for the health system to maintain this high quality and also find new opportunities to continually improve health outcomes. Advances in health and medical research will play a critical role in delivering quality healthcare services in a more cost effective way.

Queensland Advancing Health Research 2026 is designed to guide Queensland Health's research investment decisions and actions to achieve our vision of healthier Queenslanders through research-informed healthcare.

Realising the overall vision is underpinned by five broad objectives which address priority areas:

- Build our research leaders and research culture
- Boost transdisciplinary collaboration
- Prevent disease and create the healthcare of the future
- Translate research into better health outcomes
- Take our research and health services expertise to the world.

Achieving the vision will take the collective expertise and close collaboration of Queensland Health's clinical professionals, our universities, medical research institutes, health industry partners, health service users and many others.

I am absolutely committed to placing health and medical research and innovation at the heart of the Queensland health system and look forward to hearing your ideas on how we can work together to best achieve our vision.

The Hon. Cameron Dick MP

Minister for Health and
Minister for Ambulance Services

Queensland Advancing Health Research 2026





Healthier Queenslanders through research-informed healthcare



PREVENT DISEASE AND CREATE THE HEALTHCARE OF THE FUTURE

- Support the Queensland Genomics Health Alliance and other national initiatives to pioneer the introduction of genomics into healthcare
- Use the Integrated Care Innovation Fund to trial and implement innovative models of coordinated care
- Support and align with the Digital Health Strategic Vision for Queensland 2026 and Queensland eHealth Investment Strategy
- Develop a governance framework for Queensland biobanks that supports better access for researchers.

Health services and interventions built on new knowledge, technologies and processes offering more effective disease prevention, early intervention and personalised healthcare.



TRANSLATE RESEARCH INTO BETTER HEALTH OUTCOMES

- Prioritise clinical and health system research that readily translates into improvements in clinical practice and better patient outcomes
- Explore initiatives to specifically address translation of research evidence into practice at scale
- Create a Queensland Health research forum—to share ideas across the health system, tackle challenges and shape our future programs
- Improve the coordination, streamlining and access to clinical trials and explore the implementation of new work models such as tele-trials
- Queensland researchers to leverage the full range of Australian Government and International programs funding for translation and clinical trials.

Health and research system connections, processes and funding optimised to ensure new discoveries are translated and applied to deliver improved health outcomes.



TAKE OUR RESEARCH AND HEALTH SERVICES EXPERTISE TO THE WORLD

- Establish a health export and investment advisory council
- Develop a health industry export and investment strategic action plan
- Explore opportunities for increasing clinical trials
- Actively contribute to Queensland Government initiatives and programs relating to health and biomedical commercialisation
- Increase awareness about identifying and protecting research with commercial potential.

Queensland's health and medical research, innovation and service expertise are actively converted into economic growth and jobs.

Introducing *Advancing Health Research 2026*

*My health, Queensland's future: Advancing health 2026*¹ provides a guiding vision for the development of the Queensland health system over the next decade. It sets the goal that by 2026 Queenslanders will be amongst the healthiest people in the world.

Queensland Health delivers high quality care and services to the people of Queensland on a daily basis. However, demand for healthcare is growing and is being transformed by innovation and higher community expectations. These trends are likely to accelerate over the next decade to 2026 and beyond.

To help meet these challenges in the context of finite resources, we need to find and apply new knowledge, discoveries and innovations. Health and medical research is therefore a critical and integral part of the health system.

Queensland Governments have already made significant investments in health and medical research over the past two decades. Working in partnership with others, these investments have created a world-class research infrastructure and hospitals and brought together an impressive pool of internationally recognised talented people.

Advancing Health Research 2026 is Queensland Health's strategy for guiding its research investment decisions and actions that will ultimately lead to better health outcomes for Queenslanders.

It contributes directly to the fourth key direction of *My health, Queensland's future: Advancing health 2026*: 'Pursuing Innovation'.

Health and medical research, and the realisation of its benefits, is a long term endeavour and this commitment is reflected in the strategy's scope and timeframe. The strategy covers the full research continuum from bench to bedside.

Advancing Health Research 2026 aligns with the Queensland Government's transformational innovation agenda, *Advance Queensland*. The strategy complements *Advance Queensland* by promoting partnerships between industry, research organisations and government to invest in innovative research and contribute to developing Queensland's potential as a global innovation hub.

The strategy will be supported by a new \$10 million investment by Queensland Health over four years as announced in the 2017–18 State Budget. The funding will be used to support innovative, collaborative research that has a strong translatable potential to frontline healthcare and Queensland Health's international engagement.

Advancing Health Research 2026 is a call to action for all researchers and clinical professionals to work more closely, collaborate and support each other's endeavours in creating a world class health system in Queensland.

Queensland has an exceptional opportunity to build from its previous investment and current expertise in health and medical research, and to translate this into improved prevention, earlier diagnosis, better healthcare and commercial return.

¹ www.health.qld.gov.au/__data/assets/pdf_file/0025/441655/vision-strat-healthy-qlld.pdf

Queensland has a long history of medical research...



The Australian Institute of Tropical Medicine

was founded in Townsville in 1910 and its new incarnation, the Australian Institute of Tropical Health and Medicine (AITHM) was officially opened in 2016 by the Hon. Annastacia Palaszczuk MP, Premier and Minister for the Arts.

Left: AITHM Townsville

QIMR Berghofer Medical Research Institute

was established in 1945 as the Queensland Institute of Medical Research (QIMR). It began its operations with a staff of just seven looking at infectious disease. Today, almost 900 scientists, students and support staff undertake and support research into four main research themes: cancer, infectious diseases, mental health and chronic disorders.



Above: The first home for the QIMR.



Above: The current complex on the Royal Brisbane and Women's Hospital precinct.



Our Vision

Healthier Queenslanders through research-informed healthcare



Strategic Objectives

The vision of healthier Queenslanders through research-informed healthcare will be realised by taking actions to achieve five underpinning strategic objectives:



Diagram 1: Queensland Advancing Health Research 2026 Vision and Objectives at a glance.

1	BUILD OUR RESEARCH LEADERS AND RESEARCH CULTURE A health system underpinned by a culture of research excellence and learning that attracts, develops and retains a world-class research workforce.
2	BOOST TRANSDISCIPLINARY COLLABORATION A strong and connected research community focused on addressing the key health needs of our community.
3	PREVENT DISEASE AND CREATE THE HEALTHCARE OF THE FUTURE Health services and interventions built on new knowledge, technologies and processes offering more effective disease prevention, early intervention and personalised healthcare.
4	TRANSLATE RESEARCH INTO BETTER HEALTH OUTCOMES Health and research system connections, processes and funding optimised to ensure new discoveries are translated and applied to deliver improved health outcomes.
5	TAKE OUR RESEARCH AND HEALTH SERVICES EXPERTISE TO THE WORLD Queensland's health and medical research, innovation and service expertise are actively converted into economic growth and jobs.

It is recognised that the divisions between these objectives are not absolute and there will be natural overlaps in realising the vision.



1

BUILD OUR RESEARCH LEADERS AND RESEARCH CULTURE

A health system underpinned by a culture of research excellence and learning that attracts, develops and retains a world-class research workforce.

My health, Queensland's future: Advancing health 2026 has set a headline measure of success to *have a strong innovation and research culture across the health system*¹.

A strong health and medical research sector is integral to a high-performing health system that supports disease prevention, early intervention and the delivery of excellent patient care.

Queensland Government investment has been central in delivering world class infrastructure and in developing a strong record of excellence in health and medical research, underpinned by our talented world class researchers.

The *Excellence in Research Australia*² (ERA) 2015 Report assessed Queensland universities as, or above, world-class across multiple health and medical-related domains. Our research institutes are nation leading.

Passionate research leaders, working at the interface of research and clinical practice in Queensland Health and our Hospital and Health Services, are important in bringing together the healthcare and research systems—making new discoveries, creating new technologies and improving patient care.

All health system professionals have a role to play in embedding this research culture. However, our research leaders are pivotal to strengthening the engagement between Hospital and Health Services, universities and research institutes. Growing this capacity, improving capabilities and supporting our clinical leaders is therefore critical.

Strengthening multidisciplinary teams to address priority and emerging health issues is equally important. Our clinical

leaders are uniquely placed to undertake research informed by their service delivery and health intervention experiences.

Queensland Health has supported and grown the number of research leaders through a series of innovative fellowships programs. These fellowships have been important in setting in train a more pervasive research culture across the health system and easing the translation of research into clinical practice.

By retaining the excellence that has been built, and growing the number of health and medical researchers, Queensland will be able to improve the care provided to the community and gain a greater share of nationally competitive grant funding, such as from the NHMRC and the Medical Research Future Fund (MRFF).



Actions

- embed research and research KPIs into service and workforce planning
- design, develop and fund new fellowship programs with a clear focus on translation into clinical practice and improved health outcomes
- continue to support and refine current fellowship programs, such as the Junior Doctor Research Fellowships and Nursing and Midwifery Fellowships
- create new mechanisms to work with our universities and research institutes to improve Queensland's capability and NHMRC performance.

² www.arc.gov.au/excellence-research-australia

Fellowships building our research leaderships

Queensland Health has funded a suite of health and medical research fellowship programs. They have attracted the 'best and brightest' medical researchers and their teams, developed a stronger collaborative culture, leveraging additional health and medical research funding for Queensland. This had led to significant new discoveries, many of which are already being clinically trialled and translated into new treatments and practices.



Professor Claire Wainwright

Children's Health Queensland
Department of Respiratory and Sleep
Medicine and the Child Health Research
Centre, The University of Queensland.

Professor Claire Wainwright's work has led to improved understanding of the evolution of lung disease and assessment in children with cystic fibrosis (CF), as well as new approaches to treatment and earlier access to innovative therapies for children with CF in Australia.



I am extremely grateful for the fellowship as it was absolutely key in enabling me to develop my research program



Professor James McCarthy

Senior Scientist, QIMR Berghofer Medical Research Institute and Senior Consultant Physician in Infectious Diseases, Royal Brisbane and Women's Hospital.



Without the protected time for research that the fellowship gave me, important advances in malaria drug development would not have occurred

Professor James McCarthy has developed an induced human infection model that enables testing of promising antimalarial drugs in healthy volunteers, without putting them at risk. The importance of his work has been recognised by the Bill and Melinda Gates Foundation, who awarded Professor McCarthy's team a grant of \$10 million.



Professor Geoff Hill

Senior Scientist, QIMR Berghofer Medical Research Institute and Transplant Physician, Royal Brisbane and Women's Hospital.

Professor Geoff Hill conducts research into blood cancers, which account for 10 per cent of all cancer deaths. Outcomes of his fellowship include the successful translation of innovative therapeutics from preclinical systems to clinical practice and the development of an internationally recognised academic transplant group based on research and excellence in scientific training.



The fellowship provided the impetus for the introduction of the first gene and immune based therapies into patients undergoing transplantation in Brisbane



Professor Jennifer Fenwick

Professor of Midwifery and Clinical Chair Gold Coast University Hospital and Griffith University.

Professor Jennifer Fenwick's work around childbirth expectations has directly impacted services at the hospital with the introduction of fear of birth classes, universal training for midwives in counselling of women fearful of birth and changes to policy and models of service delivery.



My fellowship was instrumental in helping to establish a research culture within the Women and Newborn Services at the Gold Coast University Hospital



Professor Liz Isenring

Research focused on managing malnutrition. Her work has led to the establishment of collaborative linkages between the Princess Alexandra Hospital Department of Nutrition and Dietetics and The University of Queensland, which have ultimately resulted in better nutritional care for patients and improved health outcomes overall.



This fellowship allowed me to work with clinicians and researchers to directly improve care for patients with cancer



2

BOOST TRANSDISCIPLINARY COLLABORATION

A strong and connected research community focused on addressing the key health needs of our community.

Solving multifaceted, significant and emerging health issues requires serious collaborative effort between and within the research and healthcare sectors.

The great value to be derived from collaboration is based on a relatively simple premise of individuals and organisations working together to address major problems and deliver benefits greater than those achieved through individual effort.

The broader Queensland health system is complex involving multiple organisations, roles and overlapping responsibilities (Diagram 2). Creating collaborative partnerships between Hospital and Health Services, the Department of Health, universities, research institutes, industry and the primary care sector is not an easy task, but is critical for a forward-looking health system.

Strategic collaboration with the Australian Government and other states has the potential to better support Queensland's health and medical researchers and their clinical partners. Furthermore, research is a global effort. There is much to be gained by partnering with research institutes and health systems overseas, particularly with our neighbours in Asia.

Health and medical research, more than ever before, needs to operate across transdisciplinary teams, beyond the traditional biomedical and clinical fields.

Partnerships in complementary areas such as social sciences, behavioural sciences, economics, chemistry, engineering, mathematics and computing are increasingly important.

The NHMRC recognises the strategic imperative of closer collaboration through the designation of Advanced Health Research and Translation Centres (AHRTCs). The new Medical Research Future Fund will also be investing significant funding in large scale, globally collaborative and long term research efforts, complementing NHMRC initiatives.

Queensland has several existing and emerging academic health science partnerships which directly respond to these opportunities, for example Brisbane Diamantina Health Partners and the Tropical Australian Academic Health Centre. Other emerging health and medical precincts, such as those on the Gold Coast and Sunshine Coast, could be integrated to form a large scale statewide network of leading health research clusters.

Health and medical research advances are frequently based on the voluntary participation of patients and other members of the community. Respecting informed consent, ethical guidelines and other principles for the appropriate conduct of research, particularly involving Aboriginal and Torres Strait Islander peoples, is critical for this form of participatory research collaboration.

Collaboration is a prime requirement for success in a heavily competitive funding environment. By building a much stronger culture of genuine collaboration and transdisciplinary networks, Queensland will be better positioned to win major research funding and co-investment.



Actions

- endorse and support Queensland's certified AHRTCs as exemplars of networking healthcare, research and education sectors
- support the establishment of a statewide network of leading research clusters to leverage knowledge, infrastructure and skills
- review and actively target relevant Australian Government funding programs
- investigate the development of a program to seed fund collaborative innovative projects and people to drive connections across the sector in priority areas
- prioritise and streamline research approval processes across organisations.

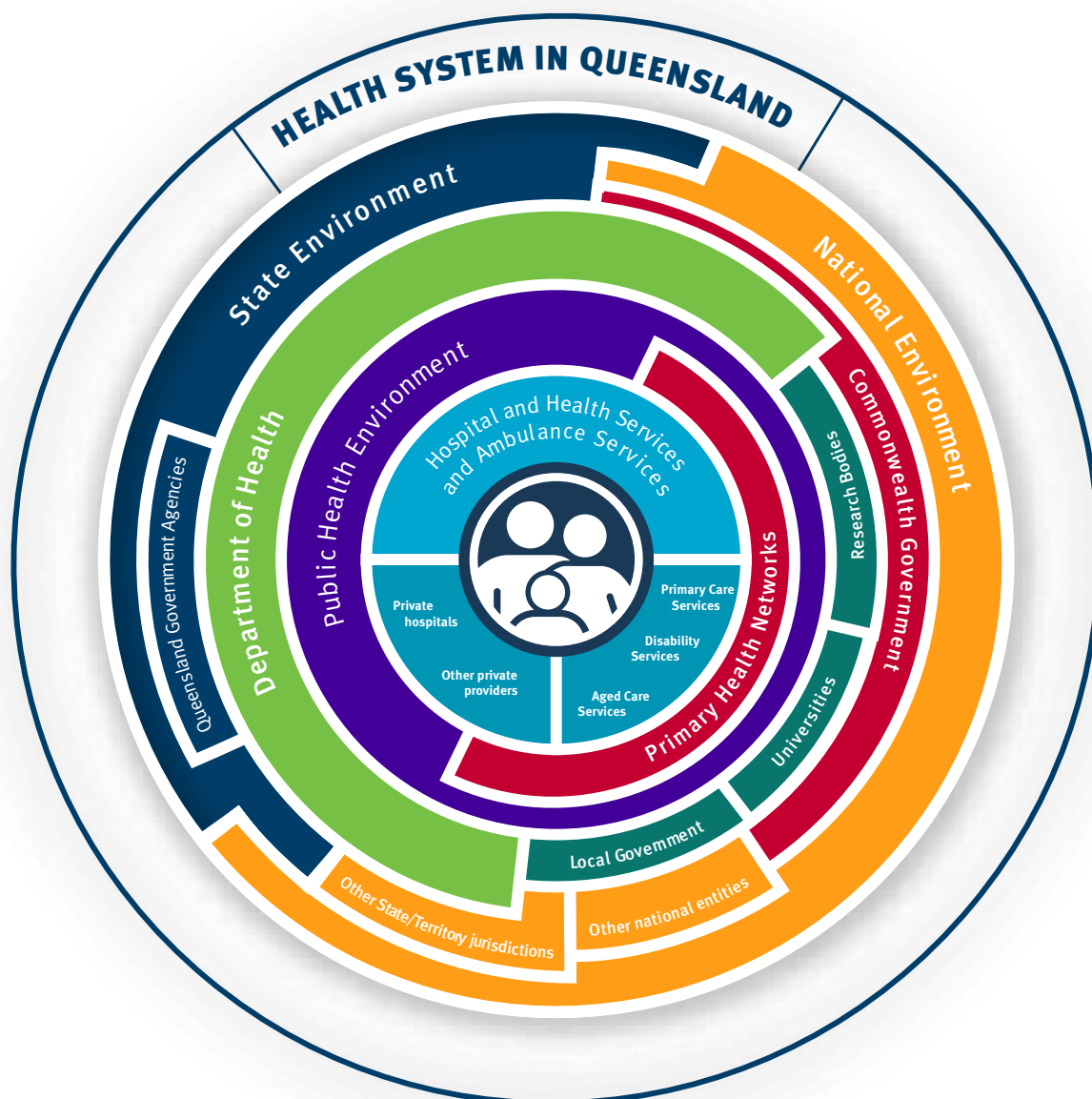


Diagram 2: The Queensland health system¹

Collaboration and transdisciplinary networks in action

Brisbane Diamantina Health Partners (BDHP)³

is an academic health science centre working to deliver quality healthcare. BDHP's aim is to build on Queensland's strong position as a global leader in biomedical research and deliver better outcomes to patients in nine clinical research areas where community needs and demonstrated existing capability intersect.

It is an alliance of four Hospital and Health Services (Metro North, Metro South, Children's Health Queensland, Mater Misericordiae Ltd), four academic and research partners (The University of Queensland, Queensland University of Technology, the Translational Research Institute and the QIMR Berghofer Medical Research Institute), Brisbane South Primary Health Network and Queensland Health. In addition, the Southern Queensland Centre of Excellence in Aboriginal and Torres Strait Islander Primary Health Care and CSIRO Australian e-Health Research Centre are collaborators.



brisbane diamantina health partners

Innovative healthcare through partnerships



³ www.brisbanediamantina.com/about-us/

The **Tropical Australian Academic Health Centre (TAAHC)**

has a unique focus on tropical health, Aboriginal and Torres Strait Islander health and the provision of services in regional, rural and remote settings, so important for northern Australia and our regional tropical neighbours. TAAHC's partners are five Hospital and Health Services

(Cairns and Hinterland, Mackay, North West, Torres and Cape, Townsville), James Cook University, the Australian Institute of Tropical Health and Medicine and the Northern Queensland Primary Health Network⁴.



The **Queensland Alliance for Environmental Health Science⁵ (QAEHS)**

is a new University of Queensland research centre, jointly funded by Queensland Health. The Alliance is committed to establishing and maintaining multidisciplinary research expertise across a range of environmental health sciences.

These include environmental aspects of toxicology, human health epidemiology, microbiology, health risk assessment, health risk communication, identification and analysis of emerging environmental health risks, and state-of-the art monitoring and analysis. QAEHS will work with Queensland Health in developing its research.



⁴ www.aithm.jcu.edu.au/nq-health-services-and-jcu-sign-landmark-collaboration-agreement-to-establish-the-tropical-australian-academic-health-centre/

⁵ <https://qaehs.centre.uq.edu.au/>



3

PREVENT DISEASE AND CREATE THE HEALTHCARE OF THE FUTURE

Health services and interventions built on new knowledge, technologies and processes offering more effective disease prevention, early intervention and personalised healthcare.

To continue improving the health outcomes of Queenslanders we must find new ways to prevent disease in the first instance and, when this is not possible, deliver more effective diagnosis, treatment and care.

Innovation triggered by technology is poised to change the healthcare ecosystem. Queensland Health's *Digital Health Strategic Vision for Queensland 2026*⁶ outlines how healthcare can be advanced through digital disruption, enabling predictive health delivery where demand is needed most.

Queensland has made an impressive start in hospital digitisation and the increasing use of telemedicine has meant more effective healthcare in regional Queensland. There may also be opportunities to utilise the roll-out of the national My Health Record for quality research in the future.

Enormous amounts of data are collected by hospitals, primary care providers, researchers, health insurers and government. By integrating and analysing this data, researchers, technologists and innovators can help predict epidemics, cure disease, improve quality of life and avoid preventable deaths. Big data can also identify waste in the healthcare system, thereby reducing costs across the board.

For example, Queensland Health in its annual performance reporting on Closing the gap is using data to help focus efforts in areas that will have the greatest impact on improving the health of Aboriginal and Torres Strait Islander people living in Queensland.

As well as working with patient and healthcare system data, biomedical researchers are generating vast quantities of data in their own right. The 'omics' revolution

is underway. Genomics, proteomics, transcriptomics, metabolomics and computational biology promise to advance significantly our understanding of disease.

Genomics will contribute to a new era of personalised medicine where prevention, diagnosis and treatment are precisely tailored to our individual DNA profile. There is real opportunity for Queensland, which has strong expertise and infrastructure in this field. The Queensland Government has invested in the Queensland Genomics Health Alliance to ensure that the state is at the forefront of this technological advance.

Biobanks—collections of tissue samples or other biological materials—are a key enabler of many medical research fields, including genomics. Queensland hosts a number of high-quality and research valuable biobanks that would benefit from having standardised consent, storage, funding and data collection and access arrangements.

Research in interdisciplinary fields such as biofabrication, bionics and robotics are demonstrating that they will be in the mix of innovative delivery mechanisms for future healthcare systems.

Health services and systems research is opening up as a major field of endeavour, looking at how future health programs and policies should be organised, financed, and delivered in ways that maximise population health impact, cost-effectiveness, and health equality.

This is especially important when it comes to improving the coordination of care for people with chronic conditions, closing the gap in health outcomes for Queensland's Aboriginal and Torres Strait Islander population and meeting the needs of rural and remote communities.

⁶ www.health.qld.gov.au/__data/assets/pdf_file/0016/645010/digital-health-strat-vision.pdf



Actions

- support the Queensland Genomics Health Alliance and other national initiatives to pioneer the introduction of genomics into healthcare
- use the Integrated Care Innovation Fund to trial and implement innovative models of coordinated care
- support and align with the Digital Health Strategic Vision for Queensland 2026 and Queensland eHealth Investment Strategy
- develop a governance framework for Queensland biobanks that supports better access for researchers.

Welcome to personalised medicine

Genomics promises a new era of personalised medicine with healthcare tailored to our individual DNA profile. The integration of genomics into everyday healthcare has the capacity to transform the delivery of health services globally with faster diagnosis, new treatments, and more cost-effective service delivery.

The Queensland Government has invested \$25 million in the Queensland Genomics Health Alliance over five years (2016–2020), to pioneer the translation and integration of genomics into everyday healthcare in Queensland.

In April 2017, nine projects received \$4.8 million in funding under the first round of this initiative. Five of the projects are focussed on building the infrastructure needed to integrate clinical genomics into our healthcare system.

Four projects are clinical demonstration projects, which will help to build the evidence base for clinical genomics



in the fields of melanoma, infectious diseases, maturity onset diabetes of the young and lung cancer.

There are expected to be two further funding rounds under this initiative.

Improving the diagnosis and treatment of lung cancer

The Lung Cancer research project will pilot the use, and assess the impact, of genomic testing in lung cancer treatment in Queensland and compare it to current diagnosis.

The research will be carried out by a team of researchers and clinicians from across Queensland, including the Townsville Cancer Centre, Princess Alexandra Hospital, Queensland University of Technology, The University of Queensland and James Cook University.

The project team will work with lung cancer patients across Queensland, including a specific focus on Aboriginal and Torres Strait Islander patients from metropolitan, regional and remote communities. The



approaches used in the Lung Cancer project could be applied across other cancer types in the future to provide faster diagnosis and more targeted treatments.



4 TRANSLATE RESEARCH INTO BETTER HEALTH OUTCOMES

Health and research system connections, processes and funding optimised to ensure new discoveries are translated and applied to deliver improved health outcomes.

Queensland has invested heavily over the past two decades in building its life sciences research sector. The world class expertise of Queensland based researchers in health and biomedicine is recognised through an outstanding academic publication record.

However, knowledge creation is just the first step. To improve the health of Queenslanders, it must be practically developed and applied in the health system. As the biggest provider of frontline healthcare in the state, Queensland Health has both a significant responsibility and unique position to facilitate the efficient and safe translation of research evidence into public health and clinical practice.

Encouraging strong engagement between Hospital and Health Service clinicians, researchers and industry, as early and as often as possible in the research life cycle and its development pipeline, is critical to ensure successful translation. Primary health networks and Aboriginal and Torres Strait Islander community controlled health organisations also have an important role to play in collaborative research and its translation into better health outcomes.

The co-location of state-of-the-art hospitals, research institutes, universities, and industry drives translation through collaboration, knowledge exchange and the sharing of infrastructure. Queensland's Translational Research Institute is one such iconic infrastructure investment, while Q-Pharm, based within the QIMR Berghofer Medical Research Institute in the Royal Brisbane and Women's Hospital precinct, specialises in the conduct of early phase clinical trials.

Clinical trials to prove the benefits of new drugs and devices, models of care and other innovative clinical practices are an important part of translating research. A vibrant clinical trial culture also gives Queenslanders the opportunity to access the latest treatment options.

Ensuring Queensland is an attractive location for carrying out clinical trials is therefore a key priority. Queensland Health provides funding support for Cancer Clinical Trial Coordinators via the Queensland Cancer Council to improve the uptake of clinical trials and offer new treatments to our patients.

Streaming and optimising processes to support clinical trials is also critical. Queensland has already been pioneering with the establishment of a National Mutual Acceptance of ethics reviews scheme across several States and Territories, reducing ethics approval times for trial sponsors.

More generally, there must be a greater emphasis on health services and system research needed to facilitate the uptake of new evidence and innovations into the healthcare setting, speedily, safely and, critically, at large scale. This will involve combining discoveries from the more traditional biomedical and clinical research disciplines with economics, behavioural and implementation science, and keeping a keen focus on evaluating their impact on health outcomes.



Actions

- Prioritise clinical and health system research that readily translates into improvements in clinical practice and better patient outcomes
- Explore initiatives to specifically address translation of research evidence into practice at scale
- create a Queensland Health research forum—to share ideas across the health system, tackle challenges and shape our future programs
- Improve the coordination, streamlining and access to clinical trials and explore the implementation of new work models such as tele-trials
- Queensland researchers to leverage the full range of Australian Government and International programs funding for translation and clinical trials, for example the Medical Research Futures Fund and the Biomedical Translation Fund.

Translation Success: Better Diagnosis of Chest Pain

Each year an estimated 500,000 patients present to hospital emergency departments (ED) in Australia with possible cardiac chest pain but fewer than one in five patients are ultimately diagnosed with an acute coronary syndrome (heart attack). ED clinicians need to quickly and accurately identify these patients.

With support from the Emergency Medicine Foundation (EMF), which is part funded by Queensland Health, Professors Louise Cullen and Will Parsonage undertook research into methods to safely improve the efficiency of assessment of emergency patients with chest pain.

Within four years of publishing their early research, an extensive pilot study at Nambour Hospital was undertaken before rolling out the novel protocol in 19 hospitals statewide, with the support and funding from Queensland Health. The rollout has led to cost savings which can be reinvested in other health services.

Professor Cullen said translating the research into clinical practice was only possible thanks to the enthusiasm and support of Queensland Health and Emergency, Cardiology and Internal Medicine Department staff in the 19 participating hospitals statewide.

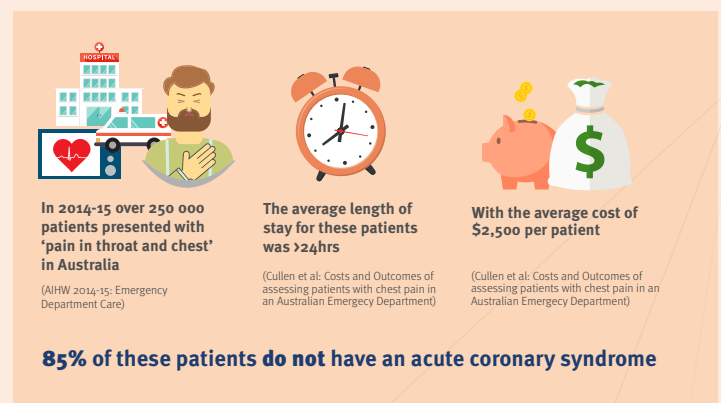
“With the support of Queensland Health’s Clinical Excellence Division we, as clinician-researchers, have been able to take ideas to improve patient care, perform high-quality clinical studies and implement widespread change to the care of emergency patients with chest pain,” Professor Cullen said.

“While a key focus was to safely improve patient care, large benefits for participating health services have also been realised.”



“This has reduced the demands on our emergency and inpatient services, while getting patients home sooner, reassured that they have not had a heart attack.”

Stage II of their research may realise even greater returns on the investment into research and translation, with the Clinical Excellence Division supporting the piloting and rollout of a further improved protocol. This will enable the safe, accelerated assessment of up to 70 per cent of all emergency patients with suspected heart attacks.





5

TAKE OUR RESEARCH AND HEALTH SERVICES EXPERTISE TO THE WORLD

Queensland's health and medical research, innovation and service expertise are actively converted into economic growth and jobs.

Queenslanders enjoy good health by global standards and our health system ranks among the best in the world. As a part of the health ecosystem in Queensland we have world class clinical leaders, trainers, health administrators, hospital designers, service planners, researchers and infrastructure.

Our universities are ranked world standard and well above in medical and health sciences and are collaborating internationally.

While the primary objective of Queensland's health sector is to provide the best possible healthcare for Queenslanders, there is an opportunity for us to capitalise on our strengths and to look for commercial opportunities.

There is strong market demand, particularly in our neighbouring countries, for training, health management systems, facility design and new models of care – for example in aged care and maternity services.

Commercialisation of research activity, where appropriate, is an important step in delivering benefits to the community, and has the potential to create economic benefits including high-value jobs.

Queensland Health is already a major investor and customer of science, research and technology. It can integrate this investment more tightly with the formation of a competitive Queensland health industry, while maintaining a cost effective and highly efficient health system, centred on patient care.

The \$420 million Advance Queensland⁷ initiative is working to set the scene for a future Queensland —its programs are designed to spur innovation-led economic growth by translating great ideas into commercial success. Advance Queensland has made strategic investments with international organisations to boost Queensland's access to global expertise and funding, for example, with the Queensland Emory Drug Discovery Initiative. Similarly, Commonwealth programs under the NHMRC Development Grants, Biomedical Translation Fund and MTP connect⁸ are also supporting commercialisation.

The Queensland Trade and Investment Strategy 2017–2022⁹ highlights the opportunity to grow the biomedical and life sciences industry in Queensland. As a part of Advance Queensland, the Queensland Biomedical 10-Year Roadmap and Action plan¹⁰ brings a focus to this emerging priority sector with global growth potential for diversifying and growing the state's economy and providing new jobs for the future.

Queensland Health has a strong role to play in linking our health sector with the international community creating new export and investment opportunities. For example, Queensland has a well established clinical trials network, both within Queensland Health and the commercial sector.

To explore opportunities, a new Queensland health export and investment strategic action plan is under development. Its development will be guided by an advisory council with representation from across the health sector and in collaboration with other government departments.

⁷ <http://advance.qld.gov.au/>

⁸ www.mtpconnect.org.au/

⁹ www.tiq.qld.gov.au/files/trade-investment-strategy-tiq-pdf/

¹⁰ www.statedevelopment.qld.gov.au/resources/paper/biomedical-life-sciences-discussion-paper.pdf



Actions

- establish a time-limited health export and investment advisory council
- develop a health industry export and investment strategic action plan
- explore opportunities for increasing clinical trials
- actively contribute to Queensland Government initiatives and programs relating to health and biomedical commercialisation
- increase awareness about identifying and protecting research with commercial potential.

Gardasil® – A Queensland developed preventative health vaccine and commercial success

Cancer of the cervix is a serious disease and the second biggest killer of women around the world. The Human Papilloma Virus (HPV) is known to cause over 70 per cent of cervical cancers and 90 per cent of genital warts worldwide.

Based on the research of Professor Ian Frazer and the late Professor Jian Zhou at The University of Queensland (UQ) a HPV vaccination was developed, which works by introducing virus-like particles into the body that activate the body's immune response and protects against future infection from the real HPV virus.

The UQ technology was partnered through its research commercialisation arm UniQuest. Subsequently, Merck & Co., one of the largest pharmaceutical companies in the world, conducted the long and large human clinical trials needed to prove the safety and efficiency of the discovery and pave the way for its market approval.

The Federal Drug Administration in the United States approved the resulting vaccination product Gardasil® in 2006 and it was launched onto the global market.

Gardasil®, has led to a 90 percent decrease in the prevalence of HPV. After ten years of sales, Gardasil® continues to dominate the global HPV vaccine market, reaping sales greater than US \$1 billion per year. Gardasil® is now available in 130 countries and more than 187 million doses have been distributed around the world.



Thanks to the efforts of Professor Frazer and the late Professor Zhou, and with support from the Gates Foundation and the World Health Organisation, the vaccine has been made available to developing countries at a low cost, with UniQuest waiving its right to royalty payments from sales in developing countries¹¹.

¹¹ Adapted from 'A Global Solution to Reducing Cervical Cancer', UniQuest Commercialisation Stories.
<https://uniquest.com.au/filething/get/8631/Gardasil%20Commercialisation%20Story.pdf>

Next steps

This Strategy will help guide Queensland Health's research investment decisions and supporting actions over the next decade toward achieving our vision of "Healthier Queenslanders through research-informed healthcare".

Fully realising this vision, and its five underpinning objectives, will require the involvement and collaboration of the full Queensland health and medical research community, including our Hospital and Health Services, universities, research institutes, industry partners, health consumers and others.

As the next step, the Department of Health will lead an implementation planning process for the strategy. An advisory committee comprising representatives of relevant partners will be established to help guide this process and provide input to assist the Department.

The Department of Health welcomes comment on the strategy. These can be made to the Health Innovation, Investment and Research Office by email HIIRO@health.qld.gov.au

We look forward to hearing your ideas and working together to further build Queensland's health and medical research capacity and ensure its discoveries lead to healthier Queenslanders.



