



**Health**  
Northern Sydney  
Local Health District



# NSLHD

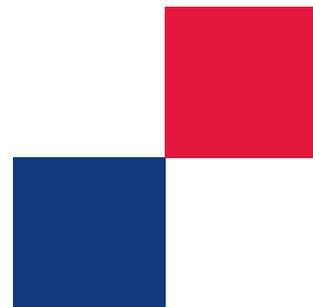
## ST LEONARDS HEALTH CAMPUS HEALTH, RESEARCH AND EDUCATION PRECINCT PLAN

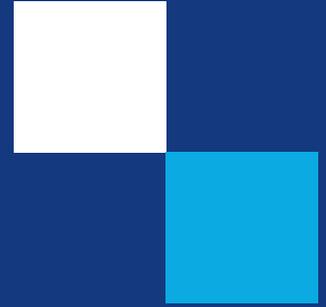
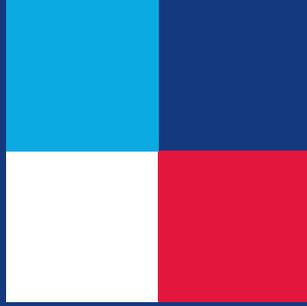
SEPTEMBER 2022



## ACKNOWLEDGEMENT OF COUNTRY

Northern Sydney Local Health District (NSLHD) acknowledges the Traditional Custodians of the lands on which our health services have been built, the Gai-mariagal, Guringai and Dharug peoples, and we honour and pay our respects to their ancestors. We acknowledge and pay our respects to all Aboriginal and Torres Strait Islander peoples and to Elders past, present and emerging. We acknowledge past, current and future Aboriginal and Torres Strait Islander peoples are the continuing custodians of this country upon which we live, work and meet and that it is from their blood, courage, pride and dignity that we are able to continue to live, work and meet on this ancient and sacred country.





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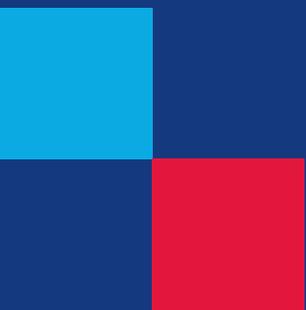
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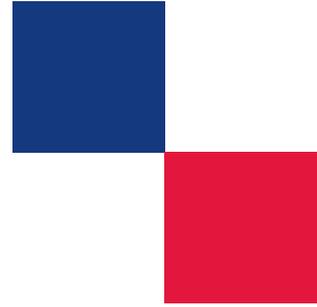
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# FOREWORD



Royal North Shore Hospital has been a central feature of St Leonards and northern Sydney since the start of the 20th century. As the community has grown and healthcare knowledge and services have developed, the campus has evolved from being a cottage hospital in 1903 to the principal tertiary referral hospital we know today.

In tandem with the hospital's development, the surrounding precinct has developed to encompass a wide range of healthcare facilities including community health, mental health drug and alcohol, North Shore Private Hospital, the Kolling Institute and the University of Sydney Northern Clinical School. The precinct is adjacent to TAFE NSW and the NSW Ministry of Health and affiliated entities that have relocated onto the precinct.

The *St Leonards Health Campus – Health, Education and Research Precinct Plan* (the Precinct Plan) outlines our vision to further develop public and private health services as well as education and research sectors into an integrated and innovative precinct. This will ensure we can harness the breadth of healthcare, knowledge and skills on our doorstep, to provide an exciting environment for future investment, employment and innovation.

In formulating this Precinct Plan, we consulted widely with a range of stakeholders, including our health staff, community members, precinct partners and the NSW Ministry of Health. In line with a set of guiding principles, we identified a number of clinical opportunities that draw on our expertise, capabilities and local facilities to foster the development of a world-class health, education and research precinct.

This Precinct Plan showcases some of the exciting future opportunities that we believe will benefit our staff, community and patients, as well as helping meet the evolving healthcare and infrastructure needs of NSW and Australia.

Outlining this vision for the precinct is the first step towards achieving an ambitious and forward-looking plan that we believe can be realised with sustained commitment, strong advocacy and ongoing community and staff engagement.

**Deb Willcox**  
Chief Executive  
Northern Sydney Local Health District

**Trevor Danos AM**  
Chair  
Northern Sydney Local Health District Board



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# EXECUTIVE SUMMARY

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Designing future-focused infrastructure to meet the growing and evolving healthcare needs of the community is a NSW Health Priority, as outlined in the *NSW State Health Plan - Towards 2021*. To facilitate this, the Precinct Plan foreshadows the establishment of healthcare precincts for the state's major health campuses. This document describes such a Precinct Plan for the St Leonards health campus.

The benefits of a vibrant and innovative precinct will flow not only to Royal North Shore Hospital (RNSH) as the principal health service within the precinct, but across all the Northern Sydney Local Health District (NSLHD) health services, and more broadly across the state's economic sectors.

RNSH is part of a mosaic of the health and social care landscape across North Sydney that encompasses primary care, private healthcare, aged care, non-government organisations and local, state and federal governments alongside the population and public health, health promotion, acute, sub-acute, mental health and primary and community health services provided by NSLHD.

From a research and education perspective, NSLHD has strong collaborations with tertiary education and research institutions including the Kolling Institute and the University of Sydney, University Technology Sydney (UTS) and Macquarie University - all of which have a presence on the precinct.

NSLHD consulted extensively with a wide range of internal and external stakeholders to identify opportunities for the precinct. Stakeholders came from a range of disciplines including medical, nursing and midwifery, allied health, operations and research. We identified a number of opportunities as either clinical opportunities or strategic enablers in this first phase of developing an active, innovative health ecosystem.

The Precinct Plan is about re-envisioning:

- how we will develop our precinct to best drive clinical, educational and research collaboration, innovation and impact for the benefit of NSLHD and more broadly, across the state and nationally;
- how judicious engagement with industry will facilitate both improved health service delivery and economic enhancement, and
- how we can optimise involvement of the community across the precinct and the outreach of services into the community.

The precinct enhancements were assessed against a set of principles, ensuring that the Precinct Plan:

- builds on the clinical and research strengths on the precinct, and more broadly across NSLHD
- builds upon the skills and passions of precinct personnel
- builds on initiatives already in hand
- reflects the characteristics of the catchment population
- engages with the community
- enhances job creation/ industry partner attraction
- strengthens relationships between precinct partners
- enhances the brand of RNSH locally, nationally and internationally
- complements other local health district precinct plans.

In line with these principles, a number of precinct enhancements and enablers were identified that build on our existing expertise, partnerships and research capabilities to help develop a world-class health, education and research precinct.

An overarching theme of enabling and promoting functional wellbeing was identified to guide the Precinct Plan.

We also recognise that engagement with community is a fundamental component of the precinct. The benefits of developing RNSH as a health, education and research precinct will extend to the entire precinct community including staff, patients, students, researchers and visitors.

This Precinct Plan, coupled with a renewed NSLHD Strategic Plan and Clinical Services Plan, will inform the planning for future infrastructure needs for the precinct.

# THE PRECINCT

## Our Staff

NSLHD has over 11,000 staff with more than half working at RNSH. The hospital has a workforce with a huge diversity of expertise, and this Precinct Plan aims to build upon the many skills and passions of our staff. The Precinct Plan was developed following discussions with many clinical and non-clinical personnel, and our staff are enthusiastic about creating a vibrant precinct for healthcare, education and research. We will continue to engage staff in the future development of the Precinct Plan, which will see benefits not only for RNSH, but for staff across all NSLHD health services. We believe the opportunities outlined in the Precinct Plan will help us continue to attract and retain a high-quality workforce including researchers, clinicians and other healthcare professionals from across Australia and the world.

## The Ambition

The Precinct Plan is about defining our strengths, building relationships, and leveraging value from partnerships that are critical to our future. It defines our points of differentiation from other health services, both across NSW and throughout Australia. The Precinct Plan describes our aspirations to help guide investment from government, private sector and philanthropic partners.

Our staff, community, neighbours and partners are critical to the precinct planning success.

By virtue of our location, clinical specialties, research capacity and community characteristics, we are well placed to maximise and leverage a range of partners to enhance the delivery of clinical services; foster greater high-impact research and the development of new technologies; and further improve the integration of our health services with research and teaching facilities.

The ecosystem for the Precinct Plan includes a number of important entities located within or adjacent to the precinct. In addition to RNSH, these include:

- NSLHD-wide or District wide health services
- North Shore Private Hospital
- NSW Ministry of Health
- Kolling Institute
- University of Sydney Northern Clinical School
- Northern Sydney Primary Health Network
- TAFE NSW

One of the unique features of the precinct is the close proximity to a range of health, diagnostic, medical device, pharmaceutical, private hospital and health data analytic companies. The Precinct Plan will leverage this expertise/capacity to the mutual benefit of both the relevant companies and health companies in the vicinity of the precinct.

Our vision is to develop the precinct into a vibrant, innovative ecosystem of healthcare, education and research.



## The NSLHD Ecosystem

Private Hospitals (x41) & Day Procedure Centres (x20) including:	•
- Macquarie University Hospital	•
- Mater Sydney Hospital	•
- North Shore Private Hospital	•
- Sydney Adventist Hospital	•
Northern Beaches Hospital	••
(public-private partnership)	
Private Medical Specialists	•••

Sydney North Health Network	•••
General Practice (280+ practices, 3000+ GP)	••
Private Allied Health	••
Home & residential aged care (8942 places)	••
Non-Government Organisations (20 agreements with NSLHD)	•••
NSW and Federal Human Service Agencies including:	•
- Australian Department of Health	•
- NSW Family & Community Services	•
- National Disability Insurance Agency	•



Public Hospitals & Facilities	
Mental Health and Drug and Alcohol	••
Primary and Community Health	••
Hornsby Hospital	•
Mona Vale Hospital	•
Manly Hospital	•
Royal North Shore Hospital	•
Ryde Hospital	•
Northern Beaches Hospital	••
(public-private partnership)	
Macquarie Hospital	•

Affiliated Health Organisations	
Royal Rehab	••
Greenwich Hospital	••
Neringah Hospital	••

NSW Health	
Pillars: CEC, ACI, BHI, HETI	•
Cancer Institute NSW	•
HealthShare NSW	•
Ambulance Services NSW	•
NSW Health Pathology	•

Northern Sydney Academic Health Sciences Centre	••
Kolling Institute	••
NHMRC Sydney Health Partners	••
University of Sydney	•
Macquarie University	•
University of Technology Sydney	•

NEIGHBOURING LHDs	
Central Coast, Sydney, Western Sydney, South Eastern Sydney	•
Sydney Children's Hospital Network	•
Justice Health & Forensic Mental Health Network	•

# PRECINCT ENHANCEMENTS

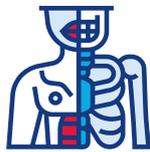
A number of potential opportunities were identified and a selection of the more developed opportunities are showcased below. Six opportunities relate to clinical enhancements supported by seven strategic enablers, which also enhance future clinical services across the district.



## Clinical Opportunities

1

National Reference Centre for Musculoskeletal Services



2

Nuclear medicine collaboration between RNSH/ ANSTO/University of Sydney



3

Multimodality imaging for cardiovascular treatment



4

Functional Wellbeing Centre



5

Multidisciplinary Neurovascular Service



6

Centre to Improve Persistent Pain Outcomes



## Strategic Enablers

2

Enhanced Academic Presence



3

Magnet® Hospital Recognition



4

Establishment of Early-Stage Clinical Trials Capacity



5

Genomics Enhancement



6

A Health Analytics and Innovation Hub



7

Optimal Precinct Design



1

National Centre for Human Factors





All of the potential opportunities have merit and contribute to the precinct ecosystem. They will remain under consideration, together with any opportunities that have not yet been identified, during the next phase of the Precinct Plan development.

In many of these opportunities a number of potential partners across industry and government have been identified.

Clinicians, researchers and academics located on the precinct already have numerous national and international relationships and/or collaborations. As the elements of the Precinct Plan evolve, it will be important to assess where more formal relationships with national and/or global hospitals and health services, industries and research centres may deliver real value and provide an advantage to the precinct. Such partnerships may be opportunity specific, or may be more broadly across health services.

The identification of these opportunities for the precinct is only the first phase of developing an active and innovative health ecosystem. Each of these opportunities, while endorsed in principle, will require further detailed consultations, development of subsequent prospectuses, business cases and approval from the NSLHD Board and NSW Ministry of Health, and identification of partners and funding sources. The potential interdependencies between the various opportunities should also be fully explored in the development of the business cases.

It is important to note there are some clinical services that are not specifically identified in this Precinct Plan which are equally important and are high performing. Future requirements for all clinical services, both within RNSH and across NSLHD, will be addressed in the updated *NSLHD Clinical Services Plan 2022 to 2026*.

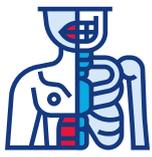
All of the potential opportunities have merit and contribute to the precinct ecosystem. They will remain under consideration, together with any opportunities that have not yet been identified, during the next phase of the Precinct Plan development.





# Clinical Opportunities

This section describes a number of clinical opportunities arising from broad consultation across medical, nursing and midwifery, allied health, and research. These proposed enhancements build upon our clinical and research strengths and draw upon our expertise, capabilities and partners to drive the development of a world-class health, education and research precinct.



## CLINICAL OPPORTUNITY 1: NATIONAL REFERENCE CENTRE FOR MUSCULOSKELETAL SERVICES

Harnessing our expertise in musculoskeletal medicine

A world-class centre bringing together clinical services, education and collaborative translational research to leverage cutting-edge innovation in musculoskeletal medicine.

### The Initiative

To establish a national reference centre for musculoskeletal services on the precinct, that leverages our strong history and foundation in musculoskeletal research and clinical services and elevates it further.

This opportunity aligns with the successful University of Sydney bid for NSLHD to be part of the flagship for research in musculoskeletal health, as well as with the designation of functional wellbeing as a focus for the educational campus.

### The Background

The precinct has a long history of clinical and research excellence, innovation and collaboration in musculoskeletal services.

RNSH is the only hospital in NSW where a major trauma centre is co-located with a specialist severe burns unit, a state-wide spinal cord injury service and high-end trauma reconstructive and injury services, which has led to the development of substantial expertise across medical, nursing and allied health. It is the only hospital in NSW to provide microsurgical hand

reconstruction associated with complex multi-trauma. It also hosts the first and longest continually running professorial chairs for rheumatology and orthopaedics with their associated research laboratories, and is the lead national site for the Australian Arthritis and Autoimmune Biobank Collaborative (A3BC).

The precinct continues to be at the forefront of innovation through exemplar research, clinical advancements and policy developments.

The precinct also has a long history of collaboration in high quality research and education including:

- A strong relationship with the University of Sydney and collaboration through the Kolling Institute and John Walsh Centre for Rehabilitation Research, which already undertake musculoskeletal and injury research and commercialisation activities
- A unique combination of rheumatology and orthopaedics research facilities with basic science facilities, animal model development and busy clinical services with co-located patient-based clinical data and biospecimens, through the Institute of Bone and Joint Research within the Kolling Institute
- Proven academic record in musculoskeletal research with global thought leaders and professional chairs
- Strong relationship with the Sydney North Health Network.



### Benefits to the Precinct

It is envisaged the national reference centre for musculoskeletal services will offer:

- Co-located and collaborative care, delivering world-class musculoskeletal clinical services and community-led functional health and wellbeing models of care that include rehabilitation and preventive care
- The next frontier of education, attracting and retaining the best expertise while providing the public with opportunities to learn about musculoskeletal health and the effects of trauma
- Collaboration in translational research with the world's leading centre of interdisciplinary musculoskeletal research, education and translation across four cutting-edge themes and discovery, clinical trial and cohort, digital health, prevention and lifestyle
- Innovation and collaboration will bring unique organisations with deep expertise into a hub that promotes the use of cutting-edge ideas and technologies into research, education and clinical services.

The co-location of research, education and clinical services from community to acute care in one place is a core component of the Centre, and will offer the following benefits:

- A unique, internationally recognised centre that delivers the best patient outcomes from health promotion, prevention and treatment

- Attracts researchers, clinicians and industry from around the world
- Supports fast translation of research to clinical practice through dedicated research resources including infrastructure and people and an innovative support model.

Another key element is leveraging cutting-edge innovations such as:

- The use of sensors, guides and robots in surgery and education
- Utilising data and linking with the Virtual Hospital and potential Clinical Analytics Hub to be on the forefront of using artificial intelligence (AI) and big data.

### Potential Partners

It is envisaged the centre's critical foundation partners will include:

- RNSH
- University of Sydney
- Kolling Institute.

Leveraging our relationship and geographical proximity to the NSW Ministry of Health and pillars, such as the Agency for Clinical Innovation, Clinical Excellence Commission and eHealth, will also be critical to the precinct.

A focus on consumer and community organisations, including consumer advocacy organisations and community groups is a core element of the initiative as is the potential relationship with industry partners.



## CLINICAL OPPORTUNITY 2: NUCLEAR MEDICINE COLLABORATION BETWEEN RNSH/ANSTO/UNIVERSITY OF SYDNEY

Translating nuclear medicine developments into real-world practice

Partnership with ANSTO and other key organisations to enhance rapid deployment of new developments in nuclear medicine into clinical care.

### The Initiative

Bringing together the RNSH Department of Nuclear Medicine and the Australian Nuclear Science and Technology Organisation (ANSTO) and other partners to develop a stronger research translational pipeline and enhance rapid deployment of new nuclear medicine approaches in clinical care.

### The Background

The last decade has seen a large increase in the number of new treatments based on targeting molecular pathways in chronic conditions such as cancer, infection, musculoskeletal degeneration and cardiovascular disease. Many of these approaches have subsequently been modified and enhanced by the addition of radionuclides which can deliver lethal doses of radiation with precision guidance to their molecular targets – known as theranostics.

ANSTO is Australia's premier nuclear technology organisation and a significant part of its mandate is to support research, development and clinical translation of nuclear techniques in medicine and health. The RNSH Department of Nuclear Medicine is internationally recognised for its strong

multidisciplinary clinical research agenda in the areas of nuclear medicine diagnostics, radionuclide therapy (RNT), capacity building, clinical trials, teaching and training in functional medical imaging. Other key drivers for the initiative include:

- RNSH was recently selected as the site for the National Collaborative Research Infrastructure Strategy (NCRIS) funded National Imaging Facility Total-Body PET-CT scanner – a \$15m five-year collaborative project
- ANSTO has outstanding research capabilities for new radiopharmaceutical development, particularly in the area of labelling with radioactive metallic isotopes
- RNSH Department of Nuclear Medicine is strong in clinical translation and physics but has fewer resources in radiochemistry and lacks an ability to develop de novo radiopharmaceuticals.

The RNSH Department of Nuclear Medicine and ANSTO have been developing stronger links in a number of areas over the past few years and a strengthened research translational pipeline bringing the two groups together will benefit both organisations.

### Benefits to the Precinct

Some of the potential activities for a closer working collaboration between ANSTO, RNSH/NSLHD, Cancer Institute NSW and the University of Sydney (and potentially GenesisCare) include:

- Clinical trials of pre-existing ANSTO radiopharmaceutical assets utilising RNSH's large clinical cohort
- Re-engineering previous therapies that used older, less effective radioisotopes with newer more potent ones
- Exploring the novel use of positron-emitting radioisotopes for radionuclide therapy
- Investigation of the potential for the using SPECT imaging agents for radionuclide therapy treatment planning
- Testing the potential role of fractionation in radionuclide therapy treatment regimes
- Testing the potential of combination multi-modality chemo/biological/ immunotherapy with molecular radionuclide therapy.

### Potential Partners

The North Shore Health Hub adjacent to RNSH will include ambulatory and day procedure services. GenesisCare Oncology will provide radiation therapy, medical oncology and theranostic treatments using radionuclide therapy on the site. GenesisCare is a potential partner, at a time when they are exploring a deeper, broad relationship with the University of Sydney as their primary academic partner for areas such as technology development, clinical trials, education and training.





## CLINICAL OPPORTUNITY 3: MULTIMODALITY IMAGING FOR CARDIOVASCULAR TREATMENT

Using integrated multimodality imaging to reduce the burden of cardiovascular disease

Developing a global hub of expertise to accelerate the integration of multimodality imaging for cardiovascular disease into clinical practice.

### The Initiative

To leverage current capabilities to accelerate the use of integrated multimodality imaging for precision medicine in cardiovascular disease in Australia and worldwide. The development of a global industry hub for state-of-the-art imaging technology will accelerate its use in clinical practice and help reduce the significant burden of cardiovascular disease.

### The Background

Cardiovascular disease is responsible for the second largest burden of disease in Australia, accounting for 14 per cent of disease as well as being the second most expensive disease group, costing more than \$10 billion per year and nine per cent of all health expenditure in Australia.

There has been a substantial increase in the use of advanced multimodality imaging to manage heart disease in the last decade, driven by rapid advances in ultrasound (echocardiography), CT coronary angiography, cardiac MRI, cardiac nuclear medicine imaging (SPECT, PET), and invasive angiography with intravascular imaging.

Only with correct diagnosis using integrated imaging can we do the following:

- Improve our understanding of disease mechanisms
- Determine the correct treatment
- Risk stratify and determine prognosis
- Establish and follow the effects of treatment.

We have an opportunity to leverage our already impressive capabilities to become a world-leading centre in this area. The team members collectively have an outstanding national and international track record, as well as breadth of competence, so are uniquely and excellently positioned to deliver on this vision.

NSLHD is already pioneering the integration of multimodality cardiovascular imaging into clinical practice.

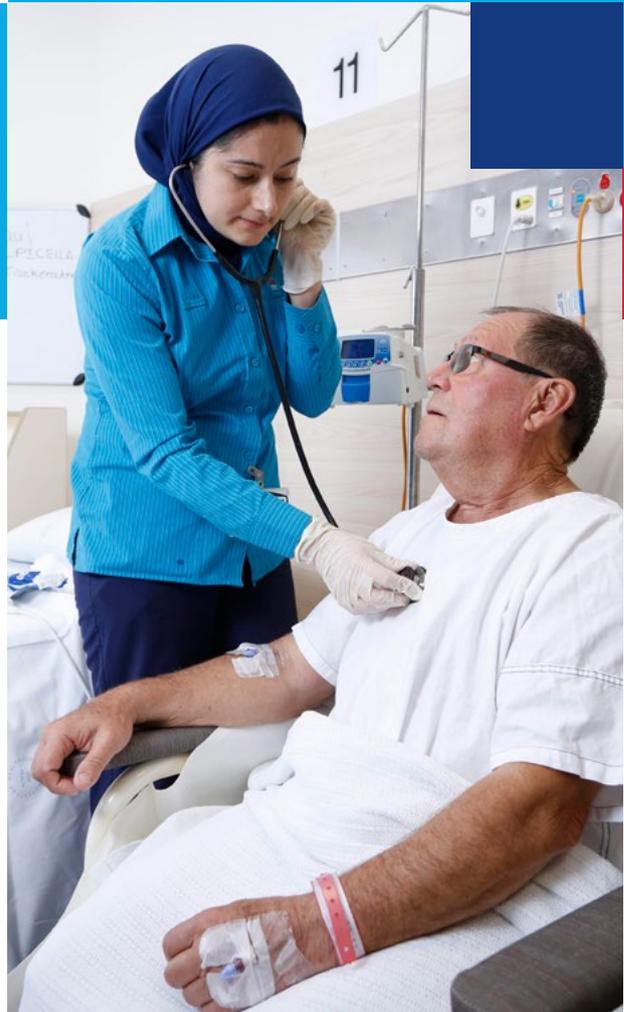
The team has developed numerous longstanding international collaborations with leading institutions (UK, USA, Sweden, Singapore, Canada, New Zealand) with academic, health and industry partners. They are renowned for innovative discoveries, invention and implementation of new tools, and application of advanced imaging to enhance the power of clinical trials with global impact.

This initiative will see strategic investment across the whole pipeline of imaging research, spanning from biomedical engineering and imaging physics to big data, precision medicine, clinical trials, and implementation and policy. It will build a thriving ecosystem for education, research and world's best clinical care.

### Benefits to the Precinct

The Precinct Plan provides an opportunity to further develop cardiovascular medicine and treatment. The benefits include:

- Improved patient diagnosis and management will see integrated application of state-of-the-art multimodality imaging to improve patient diagnosis and precision management, while minimising radiation and need for interventional procedures
- Education will see opportunities for medical and allied health students, junior staff, and research students to learn the theory, as well as how to use emerging imaging tools to improve patient diagnosis, management, outcome and experience
- Coordinated research platform: for discovery and innovation in cardiovascular disease imaging, with concentration of excellence of imaging scientists, engineers, data experts, bioinformaticians, along with clinical trialists, health economists and policy experts
- Enhanced University of Sydney presence on the precinct building on our existing programs, with particular focus on increased research and educational opportunities with allied health groups, radiography and nursing
- Enhancing the RNSH brand as leading innovators, inventing and applying state-of-the-art imaging technology to enhance patient outcomes and hospital experience



- Enhanced community and consumer engagement will see patient-focused research programs to help build broad strategies for imaging solutions to health problems and regular community education programs around heart health with schools, councils and sporting clubs.

### Potential Partners

This proposal would see the growth of a global industry hub, with development of an established platform of international academic and industry partnerships, including financial investment, in-kind support, mentorship programs, and creation of jobs.

It will also involve partnering with the Agency for Clinical Innovation to integrate new clinical models of care that use state-of-the-art imaging, enhancing NSW Health strategic initiatives.



## CLINICAL OPPORTUNITY 4: FUNCTIONAL WELLBEING CENTRE

Shifting the focus from surviving to thriving

Supporting a wide range of clinical specialties in incorporating evidence-based complementary therapies to improve patients' quality of life.

### The Initiative

To create a NSLHD/University of Sydney Functional Wellbeing Centre incorporating evidence-based complementary therapies such as exercise, nutrition, psychological support and mindfulness training, and providing patients with tools to improve their quality of life. The Centre will sit alongside conventional medicine – not in place of it – acting as a bridge between the outstanding medical outcomes for which NSLHD is known and survivorship care following active treatment.

### The Background

It is important to align the Precinct Plan with the University of Sydney designation of their northern campus as one focused on functional wellbeing. This opportunity has been jointly developed and sponsored by NSLHD and the University of Sydney.

Functional wellbeing programs, also referred to as integrative medicine, are becoming a more established adjunct to clinical treatment.



This is, in part, a response to increasing survivorship and in response to the patient voicing that surviving does not always equate to thriving. Functional wellbeing is what the patient hopes or aims to achieve in response to their clinical condition, and it represents a move from population-based to individualised, patient-centred treatments.

Informed discussion and decisions about treatment from the moment of diagnosis need to be augmented by the wider patient and carer community experience – not just among clinicians in multidisciplinary teams – but between patient, carers and clinicians. The experience of all patients is integral to the treatment of patients now and in the future, providing a feedback and feed forward element.



## THE EXPERIENCE OF ALL PATIENTS IS INTEGRAL TO THE TREATMENT OF PATIENTS NOW AND IN THE FUTURE

### Benefits to the Precinct

A NSLHD/University of Sydney Functional Wellbeing Centre will have the potential to support the scope of RNSH clinical specialties including cancer, burns, spinal, renal, mental health and musculoskeletal care. The Centre will incorporate evidence-based complementary therapies, supporting the patient to live while clinicians work to ensure the patient survives.

- It will provide a non-judgemental and informed space where patients can discuss alternative therapies and obtain information from reliable sources. Clinicians, in turn, will be aware of those alternatives and can discuss potential interactions with the patient's treatment
- Functional wellbeing medicine is increasingly incorporating artificial intelligence (AI) and machine learning in combination with biomedical research and wearable Apps, further driving change and individualisation of treatment and monitoring
- The Centre will deliver a holistic care experience for the patient and their families and carer(s) so treatment is adapted to meet individual needs and quality of life
- The result is a patient who remains as functional and independent as possible throughout and beyond treatment - shifting the focus from surviving to thriving.
- Education and research will be a key feature of the Centre.

### Potential Staff and Partners

This proposal will be jointly developed and sponsored by NSLHD and the University of Sydney.

The Centre will incorporate a range of staff from clinicians to allied health disciplines, pharmacists and Smart App technologists to support patients on their journey.

It also presents significant opportunities for translational research, for example the use of targeted nutrition and supplements.





## CLINICAL OPPORTUNITY 5: MULTIDISCIPLINARY NEUROVASCULAR SERVICE

Leading developments in neurology, neurosurgery and neuroradiology

Building on our existing high-level research and services to become a world leader in the field of neurology, neurosurgery, and interventional and diagnostic neuroradiology.

### The Initiative

To build on current capabilities to become a world-leading multidisciplinary neurovascular services, covering the fields of neurology, neurosurgery and interventional and diagnostic neuroradiology.

### The Background

NSLHD has always had a strong focus and expertise in neurovascular disease, including:

- The RNSH interventional neuroradiology (INR) service was among the first of its kind in Australia and for a long time, it was the statewide referral centre for neuro-interventional neurosurgical procedures, leading the way in novel treatments for stroke
- The RNSH Neurosurgical Department remains a tertiary referral centre with a very strong neurovascular focus and close links to Macquarie University

- The RNSH Neurology Department was one of the first to develop a stroke unit and treat stroke patients with a multidisciplinary approach. It remains one of the busiest neurological stroke service in NSW
- The NeuroCritical intensive care unit is the only one of its kind in NSW, catering for patients with critical neurological and neurosurgical disorders in close collaboration with the neurosurgical and neurological department.

The INR service together with diagnostic radiology, emergency medicine, neurology and intensive care have driven scientific developments that have changed treatment standards for ischaemic stroke and provided hope for patients with large vessel stroke. The neurovascular service is one of the largest and most active services in NSW and links into services at Macquarie University and the University of Sydney.

The breadth of expertise in different sub-specialities of neurovascular disease, the scientific focus and research development makes multidisciplinary neurovascular service a very strong candidate for the precinct.



### Benefits to the Precinct

The Precinct Plan provides an opportunity to further develop our neurology services and expand and foster new research opportunities for training and long-career development. Benefits include:

- Interventional neuro-oncology is one of the most exciting areas for further development. Technological advancements for treatment of ischaemic stroke and lesions of the cerebral vasculature hold promise for improving locoregional therapy for brain and head and neck tumours, managing tumour-related morbidity, and providing the foundation for personalised precision cancer care
- There is an opportunity to pioneer advances in robotic interventional neuroradiology in NSLHD, in collaboration with academic partners in its precinct. This could enable the roll out of new technologies across rural and remote Australia, so highly complex and specialist services like interventional radiology are accessible to rural and remote patients
- It will provide an Australia-wide teaching hub for the adoption of new INR technologies with live streaming interfaces

- The NSLHD Neuroscience Network has been very successful in researching and implementing new developments that have changed the way we treat stroke patients today. The district is at the forefront of cutting-edge research. One example is a trial underway using a new, highly effective intra-arterial thrombolytic therapy for targeting clots which are too distal to reach with mechanical embolectomy devices
- There is potential to train the specialists of the future remotely and help adopt new technology across NSW and Australia, with tele-proctoring.

### Potential Reach

The stroke and neuroscience network is multidisciplinary and collaborates with multiple academic institutions in NSLHD. We have a proven track record of delivering high level research which had a direct impact on how we treat our patients today. There is an opportunity to work with academic partners to become a leader in the field of neurology, neurosurgery and interventional and diagnostic neuroradiology. Together with academic partners, we can develop the technology that could provide complex care to remote patients and provide hope to patients with rare cancers.



## CLINICAL OPPORTUNITY 6: CENTRE TO IMPROVE PERSISTENT PAIN OUTCOMES

Enhancing the wellbeing of Australians living with chronic pain

Advancing multidisciplinary pain management, research, education and policy to reduce the high burden of distress and disability caused by chronic pain.

### The Initiative

A new State-wide Centre to Improve Persistent Pain Outcomes (SCIPIO) to provide a national focal point for the development and delivery of advances in multidisciplinary pain management, research, education and policy.

### The Background

Chronic pain affects 20 per cent of the NSW population and one-third of people aged over 65, so is particularly prevalent in the community residing within NSLHD. The distress and disability caused by chronic pain has a major negative impact on people's functional wellbeing. It also costs the state approximately \$25 billion per year in direct medical costs and lost productivity. People with chronic pain are twice as likely to be admitted to hospital and have many other poor health outcomes: they frequently have mental health comorbidities and substance abuse issues, including abuse and misuse of opioids and other prescription medications.

While many medical specialities address pain as a symptom of disease in one organ system, for example, musculoskeletal health, the Pain Management Research Institute (PMRI), which is based at RNSH and the Northern Clinical School, addresses both the sensory and the

emotional experience of chronic pain, and focuses on a biopsychosocial approach to assessment and treatment.

Since the 1990s, PMRI has been a leader in pain management research, education and advocacy. It has worked closely with industry partners in both the public and private sector.

PMRI's researchers are recognised as national leaders in the field and play key roles in the Kolling Institute priority research areas. PMRI is revolutionising the management of injured workers across the country, through system and case management changes adopted by many industries.

While PMRI is already a showpiece of the district, there is an opportunity to better coordinate its diverse activities and convert them into advances in policy and practice.

A new entity, tentatively called the State-wide Centre to Improve Persistent Pain Outcomes (SCIPIO), could achieve this aim. The new Centre will leverage PMRI's existing expertise and its partnerships to take what it has been developed in pain management, research, education and policy over the past two decades and use it to develop, promulgate and implement new guidelines, standards and policy.

While the Centre can be commissioned immediately, as it does not require the construction of a new building or the acquisition of expensive equipment or technology, should a Functional Wellbeing Centre be built on the precinct (Opportunity 4), the clinical services provided by the PMRI would benefit from co-location with other services in the new facility.

### Benefits to the Precinct

The activities that would be undertaken by SCIPIO include:

- Develop and evaluate improved ways of enhancing functional wellbeing in people living with chronic pain, while simultaneously educating and training healthcare providers in state-of-the-art methods of chronic pain management
- In collaboration with the Australian Health Services Research Institute at the University of Wollongong, map current service delivery and the collection of pain outcomes data in NSW, so methods like machine learning can be used to analyse the data to identify the best practices in current chronic pain management and make personalised pain management a reality
- Promote a network of health services research activities for chronic pain in NSW, to evaluate issues affecting implementation of best practice approaches across primary and specialist care settings, including data linkage to document outcomes
- Maintain and extend the reach of our current national pain education and training program in chronic pain beyond the end of the current grant
- Advocate for patients with chronic pain and their families and enhance our active participation in the Agency for Clinical Innovation pain management network and the peak national advocacy body, Painaustralia



- Promote the implementation, and research into implementation, of early targeted biopsychosocial interventions for recently injured people presenting at hospital emergency departments and primary care settings and identified as being at risk of developing chronic, disabling pain
- Focus on the expanding role of information technology in healthcare, accelerated by the COVID-19 pandemic.

### Potential Partners

The PMRI has developed extensive partnerships within and across the precinct including the Kolling Institute, NSLHD Clinical Networks, HammondCare, Macquarie Park and Frenchs Forest Precincts, and leveraging existing linkages with expertise in implementation science including through the Menzies Centre for Health Policy at the University of Sydney.

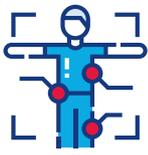
By building on our existing relationships within the NSLHD, the Agency for Clinical Innovation, and universities including the University of Sydney, Macquarie University, the University of Technology Sydney, the University of NSW, and Wollongong University, we believe SCIPIO can make a major contribution to enhancing the wellbeing of Australians living with chronic pain not only within NSLHD, but across all of NSW, the rest of Australia, as well as internationally.





## Strategic Enablers

This section describes a number of enablers which are important prerequisites to designing an active and innovative precinct ecosystem. These enablers are not only important pillars to support the opportunities described in the previous section, but will enhance the breadth of all future clinical services across NSLHD.



## STRATEGIC ENABLER 1: NATIONAL CENTRE FOR HUMAN FACTORS

Enhancing safety and quality of patient outcomes by embedding human factors concepts throughout the health service

### The Initiative

A focus on human performance within systems, known as human factors, is a rapidly emerging discipline in both healthcare and other sectors of society.

The integration of human factor considerations into our system of care further enhances the safety and quality of patient outcomes. As described by the Clinical Excellence Commission:



Human factors is an evidence-based scientific discipline that applies what is known about human capabilities and limitations to the design of systems, processes and environments to maximise human potential in the environment and reduces the likelihood of harm.

There is an opportunity for NSLHD, the Clinical Excellence Commission and the University of Sydney to create a National Centre for Human Factors on the precinct to:

- Design technologies and health systems that support human performance
- Embed human factors principles into safety and quality education and non-technical skills training
- Provide remote/face-to-face learning, professional leadership programs with clinicians/executive/boards on embedding human factors in every day clinical practice
- Provide a resource to support and promote research into human factors and patient safety.

Domains influencing human factors include:

- **Environmental:** Focused on user-centred design
- **Physical:** Focused on the anatomical, anthropometric, physiological and biomechanical characteristics of people and how these affect interactions between humans and other elements of the work system
- **Cognitive:** Focused on mental processes like perceptions, memory and reasoning and how these affect interactions between humans and other elements of the work system
- **Organisational:** Focused on sociotechnical systems, including organisational structures, policies and processes.

### Benefits to the Precinct

Immediate benefits would include the Centre utilising RNSH as a test site for optimising application of human factor knowledge through a partnership with the Clinical Excellence Commission.

While the role of the Centre would primarily be to embed human factor concepts throughout NSW Health, it is proposed to evolve a national and international brief.

The Centre will benefit all clinical disciplines – allied health, nursing, midwifery, and medicine.

The proposal includes expanding, innovating and housing the Sydney Clinical Skills and SIM Centre within the National Centre, which will enhance user experience and increase commercial return.



**HUMAN FACTORS, IS  
A RAPIDLY EMERGING  
DISCIPLINE IN BOTH  
HEALTHCARE AND OTHER  
SECTORS OF SOCIETY**





## STRATEGIC ENABLER 2: ENHANCED ACADEMIC PRESENCE

Developing a dynamic, visible academic presence to further promote multidisciplinary learning and interactions on the precinct

### The Initiative

The Precinct Plan offers an opportunity to develop an enhanced academic presence on the precinct.

NSLHD currently has student placement agreements with 25 providers across a range of disciplines. The principal tertiary institutions include the University of Sydney, University of Technology Sydney, Macquarie University, Australian Catholic University, Western Sydney University and Australian College of Nursing. All of these are important relationships NSLHD is keen to sustain and grow.

The Northern Clinical School of the University of Sydney supports Doctor of Medicine students as well as practitioners completing postgraduate training. The school also assists in the training of nurses and allied health practitioners in both hospital and community settings. More than 100 past graduate students enrolled in the Northern Clinical School are involved in a broad spectrum of research ranging from basic laboratory research to clinical and epidemiological projects across the precinct.

There is a strong nursing and midwifery student presence on the precinct, predominantly through University of Technology Sydney, Australian Catholic University and University of Sydney.

There is uniform consensus among contributors to this Precinct Plan that developing the precinct aspirations of an active innovation ecosystem will require a more dynamic and visible academic presence. A fundamental principle of this enhanced academic presence is that it is designed to promote multidisciplinary learnings and interactions – critical components of health care of the future.

### Benefits to the Precinct

This enhanced academic presence would:

- Improve student wellbeing and learning experience
- Help attract clinicians back to the precinct after graduation
- Facilitate integrated education and training between doctors, nurses, midwives and allied health.





### Factors for Consideration

A number of areas have been identified for development across all disciplines, including:

**Future learning environment:** Specifically designed teaching areas including small group tutorial rooms, a small amphitheatre and a number of specially designed interactive education rooms would elevate the student experience and encourage inclusion of a broader range of teaching styles.

**Sydney Clinical Skills and Simulation Centre (SCSSC):** The Simulation Centre comprises an operating theatre, laboratory with two resuscitation bays, two seminar rooms and a range of high and low-fidelity simulators, advanced anaesthetic simulators and part task trainers. The Clinical Skills Centre is the procedural teaching facility for Northern Clinical School. A new, sophisticated and contemporary SCSSC is proposed and would offer students access to a world-class learning facility, by enabling fully-immersive simulated clinical scenarios. The Centre could be expanded to include a simulation ward and 3D digital dissection tables that would enhance interprofessional teaching and specialty placement teaching. Enhancing the current SCSSC facilities would work to successfully develop and maintain high-quality simulation training programs for students and health professionals.

**The student experience:** In addition to improved academic experience, it is important to provide appropriate common room facilities for students to maximise the experience of their placements and embed a desire to continue to work and study at the precinct in the future. These facilities could include:

- A place to study and obtain support from teaching/medical staff
- A place to gather and collaborate
- A place to interface with other students – including other health disciplines.

A number of innovative suggestions were made to enhance innovative educational experience on the precinct. One involved the development of an integrative midwifery/medicine undergraduate course to promote joint learnings and multidisciplinary care during undergraduate years. Others involved initiatives in allied health, dentistry and pharmacy. All these propositions should continue to be explored.



## STRATEGIC ENABLER 3: MAGNET® HOSPITAL RECOGNITION

### Exemplar Nursing and Midwifery Services

NSLHD has recognised leaders in nursing and midwifery care in NSW. We consistently showcase our skills, knowledge and ability with international, national and state awards for innovative leadership, clinical innovation and research that generates publications and grants, profiling our significance in nursing and midwifery professions. This culture successfully aligns our nursing and midwifery strategic goals to improve patient outcomes across NSLHD. In all of our nursing and midwifery services we present the patient's voice and their compelling view of our safety culture across NSLHD.

Our principal tertiary referral facility, RNSH, is cutting edge, delivering specialist nursing and midwifery care in the areas of surgery, medicine, women's and children's health and critical care services including: emergency department, state-wide trauma centre, operating theatres, ICU, general, neurology/neuroscience and cardiology. This is in addition to being a state-wide referral centre for severe burns, neonatal intensive care, interventional neuroradiology and acute spinal cord injuries.

The nursing and midwifery care provided at RNSH promotes teamwork, shared leadership, innovation and excellence at all levels. With a strong and capable workforce of over 2000 nurses and midwives, RNSH is positioned to take the next step towards recognition of their exceptional nursing and midwifery services through the pursuit of Magnet® status, enabling NSLHD and RNSH to highlight the strength, innovation, leadership and persistence in seeking to provide the best care to our community.

The Magnet® Recognition Program has accredited only 400 hospitals internationally who are seen as leaders in the delivery of exemplar nursing and midwifery care. The Program benefits the whole of an organisation. To nurses and midwives, Magnet® recognition means education and development through every career stage, which leads to greater autonomy at the bedside. To patients, it means the very best care, delivered by nurses who are supported to be the very best that they can be.

NSLHD and RNSH are committed to ensuring a sustained culture of excellence. Although the process of attaining Magnet® designation is thorough and lengthy, demanding widespread participation within the organisation, we see ourselves as ready to commence this work to ensure we are internationally recognised as delivering clinically excellent care, delivered by nurses who are supported to be the very best that they can be.



**THE VERY BEST CARE,  
DELIVERED BY NURSES WHO ARE  
SUPPORTED TO BE THE VERY  
BEST THAT THEY CAN BE**



## STRATEGIC ENABLER 4: ESTABLISHMENT OF EARLY-STAGE CLINICAL TRIALS CAPACITY

Consolidating trial units to develop a world-class clinical trials facility that will attract and retain the best clinicians, researchers and partners

### The Initiative

NSLHD has an extraordinary opportunity to develop a world-class Clinical Trials Centre which will establish its reputation as a national leader in advancing patient outcomes through translational research.

NSLHD boasts world-leading clinician researchers who are backed by teams of research scientists turning concept into research breakthrough and translation, from the laboratory and data repositories to patient care settings. An important step in realising these advances is clinical trials.

NSLHD already has several clinical trial units operating independently. By consolidating these and further developing infrastructure and support services in the formation of a Clinical Trials Centre, NSLHD can build a world-class facility, attracting and retaining the best clinicians, researchers, and partners. This Clinical Trials Centre will provide opportunities for all departments, such as creating synergies and capacity for partnering with a range of relevant stakeholders, including pharmaceutical and industry partners within and across the district.

### Factors for Consideration

The clinical trials reference group is already undertaking the groundwork required to harmonise trials across NSLHD. This was an important initiative identified in the *NSLHD Research Strategy 2019-2024* and in particular given the inclusion of clinical trials in National Safety and Quality Health Service Standards from 2022.

The Kolling Institute is a critical partner in the success of a Clinical Trials Centre as it is:

- The joint-venture's home of academic excellence
- The bridge to translational outcomes
- A major pillar of the Kolling Institute's Research Strategy.

Many of our leading clinicians and opinion leaders have their scientific research base within the Kolling Institute. Other important expert partners, include North Shore Private Hospital, Radiology, Macquarie Imaging, NSW Pathology, allied health, and Sydney Health Partners.

To facilitate a consolidated and expanded Clinical Trials Centre on the precinct, specific infrastructure needs will be assessed and identified to ensure appropriate facilities are available.

### Benefits to the Precinct

The success of a clinical trial is largely dependent on successful patient recruitment. The Clinical Trials Centre will provide the necessary resources such as infrastructure and support personnel for clinician/investigator-initiated trials, with many subsidised or funded through external grants such as National Health and Medical Research Council, industry or internationally-funded awards.

The Clinical Trials Centre will attract and retain world-class clinicians, researchers and partners, and will provide a sustainable funding model through contract research in drug and medical device related industry sponsored trials.

It will attract profitable industry partnerships through patient access, high-quality facilities, and content expertise.

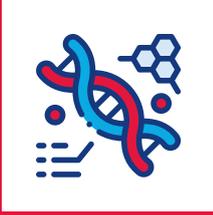
A feature of clinical trials is the positive benefits to patients through:

- Access to cutting-edge therapies
- Close monitoring of conditions
- Further expert advice and support
- An active role in their own healthcare decisions.

This Clinical Trials Centre will provide patients with an opportunity to engage in co-design and to benefit from participation in clinical trials.

Through the development of a high-quality Clinical Trials Centre, NSLHD would be addressing all six priority areas of the *NSLHD Research Strategy 2019-2024*. Through building the infrastructure we would enhance partnerships in clinical trials, which would grow our research and further engage the community. This will lead to career development opportunities for clinical trials nurses, coordinators and other relevant staff, while having real-world impact of research on patient care and community health.





## STRATEGIC ENABLER 5: GENOMICS ENHANCEMENT

Expanding NSLHD's genomic capability to harness developments in tailoring screening tests, genomic therapies, interventions and disease management

### The Initiative

There is an opportunity to expand NSLHD's genomic capability over the coming decade to include oncology, haematology, maternal-fetal medicine, endocrinology, rheumatology, gastroenterology and pharmacogenomics.

Healthcare is set to be delivered at an increasingly individualised level that is underpinned by a deep understanding of a person's own genetic sequence over the next two decades. NSLHD, which currently hosts the state-wide genomics groups, has the opportunity to establish itself as an exemplar by tailoring screening tests, therapies, interventions and management within the population it serves, in a way most appropriate to the individuals within that population. This is the ideal population to introduce this model of healthcare based on the genome for the following reasons:

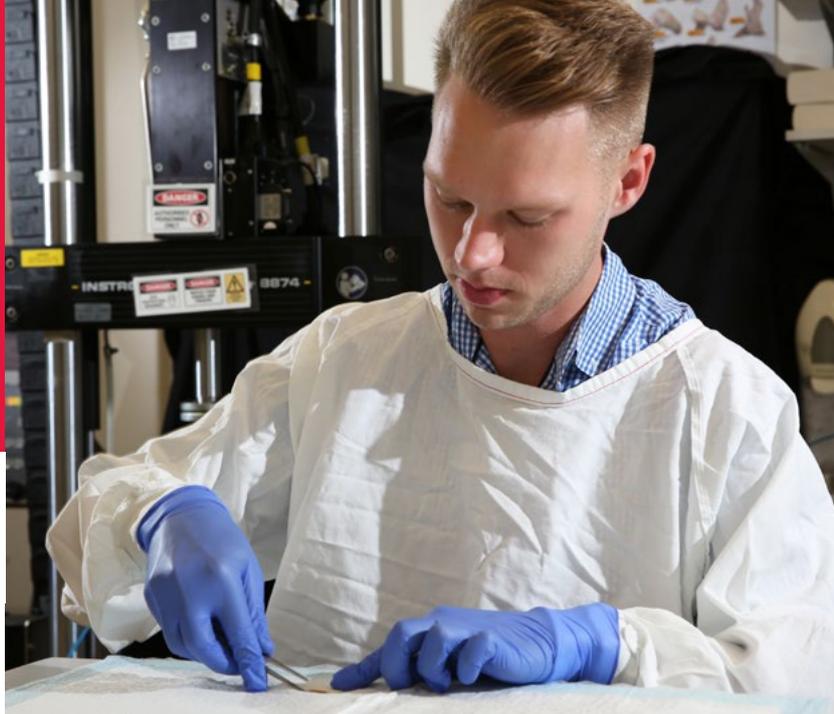
- Population with an elderly demographic
- High uptake of new technologies including non-invasive prenatal testing
- High rates of malignancy and other chronic disease commensurate with its aging population
- Well established interdisciplinary care teams.

### Factors for Consideration

Our vision will be achieved through molecular testing of cancers to match international best practice. Within oncology, this requires the capability to test tumour samples for selected mutations and chromosomal translocations for which treatments are already available. This testing needs to be performed on the precinct to allow full integration into clinical care.

In the near future, this will also require the ability to test blood samples for circulating tumour DNA. As cancers driven by targetable mutations move from becoming incurable to becoming a chronic manageable disease, the emphasis will shift from tumour testing, to blood tests (circulating DNA) so that repeated/serial determination of circulating DNA will become a key part of follow up for the detection of early recurrence and acquired drug resistance that will determine changes in therapy.

All of the above capabilities could be integrated with those of Sydney Health Partners and our partner universities. These will continue to provide many opportunities for PhD students and developmental research. It would not duplicate the prokaryotic gene sequencing facility at Westmead Hospital but integrate with it.

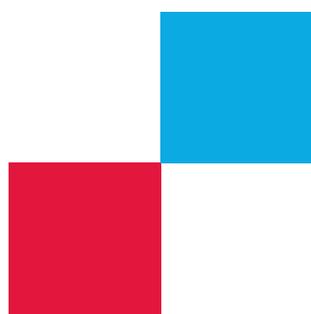


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Cell-based regeneration therapy is also an area where capability will need to be available within NSLHD within the next decade.

### Benefits to the Precinct and Health System

- **Maternal-fetal medicine:** Developing capability to undertake prenatal genetic testing and diagnosis and to examine fetal DNA through maternal circulation. Much of this work is done now in Victoria and as demand grows, it will also need to be available through NSW. This relatively non-invasive form of genetic testing will become an important adjunct to assisted reproductive technology
- **Endocrinology, rheumatology and gastroenterology:** Specific needs somewhat similar to those in oncology and haematology. This will include the ability to detect certain disease predisposing markers, or genetic markers, which indicate the suitability or otherwise of particular forms of treatment
- **Pharmacogenomics:** Drug metabolising enzymes and pathways, and polymorphisms within these, may well determine specific treatments suitable for individuals as part of a more personalised approach to their medical care so developing skills in this area will be critical.





## STRATEGIC ENABLER 6: A HEALTH ANALYTICS AND INNOVATION HUB

Leading the way in using informatics and data analytics to transform healthcare provision, safety and quality

### The Initiative

The partners in the precinct have a unique opportunity to harness data analytics to close the gap between knowledge and practice and bring research, administration and digital technologies closer to clinical care.

The recent COVID-19 pandemic has demonstrated the demand for digital technologies and analytics capabilities, which are essential to transform the patient experience and support clinicians. The pandemic also demonstrated how quickly the health system can evolve when different groups share their expertise and resources to reach a shared goal.

Recognising the existing co-location of NSLHD, the NSW Ministry of Health and pillar agencies, clinicians and researchers, there is an opportunity for the precinct to become the exemplar of how informatics and analytics transforms healthcare provision, safety and quality.

### Factors for Consideration

Successful examples of local or state-wide implementation are usually at high cost, have long development times and are limited in their scalability. Several challenges and potential solutions are describe below:

- There is disconnect between design of solutions and the information users on the clinical and operational frontline. This could be solved by strong clinician engagement and rapid iterative design and testing close to the clinical and operational front-line

- Technical infrastructure limitations and challenges in access to data. This could be solved by enabling the system to access eMR content structured into usable data. This requires high-powered computing infrastructure and sophisticated analytical tools to mine and structure the notes, diagnostics and other data in eMR
- Gaps in analytical skills and capacity. This could be solved by creating a critical mass of analytics expertise to develop tools and solutions for scaling out, and provide support and capability development to the analysts in the wider system.

### Benefits to the Precinct and Health System

The precinct will lead the way in demonstrating how informatics and analytics transforms healthcare provision, safety and quality. This will extend from a deeper understanding of the quality of care that is provided, to how care is accessed and managed as well as enabling clinical trials recruitment and research.

Enhanced analytics support has potential benefits for many different parts of the health system. The types of options range from very specific, to very general; and the choice of where to focus will consider funding, other initiatives, existing work across NSW, and local priorities and expertise. The broad options include the following:

- Focus on a specific analytics method or discipline, such as artificial intelligence (AI)
- Focus on a specific clinical specialty such as aged care or centre of excellence such as musculoskeletal



- Focus on a specific strategic or operational initiative
- Building capability and capacity to develop analytical solutions to meet the information needs of the operational and clinical frontline
- Creating an environment and capacity to develop state-wide tools using local data, clinicians and clinical operating environments.

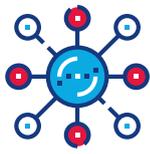
Several different, but overlapping, focus areas are proposed as follows:

- Become a centre of excellence for complex and big data analytics
- Create a learning system for continuous improvement of clinical care
- Create value and operational efficiency
- Foster innovative and digital solutions
- Speed up the process of undertaking research and impacting practice.

The precinct can achieve the aspirational vision of the NSW Health analytics framework through recruitment and maintenance of highly skilled analytics teams, agreed ethics and governance procedures and processes between organisations and alignment between local and state health and academic priorities and work cultures.

Data analytics tools have the potential to transform healthcare in many different ways including:

- Routine visits will be replaced by regularly monitoring one's health status, using analytics to synthesise and prioritise the information fed back from devices and patients
- The inpatient setting will be improved by more sophisticated quality metrics drawn from an ecosystem of interconnected digital health tools
- The care patients receive may be decided in consultation with decision support software that is informed not only by expert judgements, but also by algorithms that draw on information from patients around the world, some of whom will differ from the typical patient
- Support may be customised for an individual's personal genetic information, and doctors and nurses will be skilled interpreters of advanced ways to diagnose, track and treat illnesses
- In a number of different ways, policy makers are likely to have new tools that provide valuable insights into complicated health, treatment, and spending trends.



## STRATEGIC ENABLER 7: OPTIMAL PRECINCT DESIGN

Partnering with consumers and staff to design a healthy precinct for the future



### The Initiative

A new precinct design project will involve partnering with consumers and using co-design principles to identify particular issues for patients, carers, staff and visitors. This project will inform future planning and help establish a vision for the precinct that champions healthy placemaking and its central role in fostering healthy people and a healthy planet.

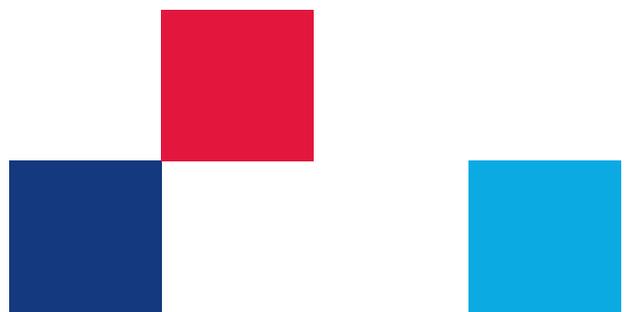
Precinct design is an important enabler to developing a healthy environment for patients, carers, visitors, staff and the broader community surrounding RNSH.

### Factors for Consideration

A precinct exemplifying best-practice design includes safe, inviting and well-designed spaces that cater for all users, including children, the elderly, people with disabilities and Indigenous Australians. Such design also affords opportunities for health-promoting behaviours, including recreation, active travel, social interaction and connecting with nature. These behaviours benefit both human and planetary health – and showcase how contemporary health precincts such as RNSH are evolving to promote a broader community of health and wellness.

Improving precinct design is therefore critical to reinforce RNSH's world-leading approach to person-centred care, its ongoing stewardship of the environment, its commitment to creating a healthy workforce and its recognition of the important connection between people and place. This includes raising awareness of the precinct's rich social and cultural history, and the role RNSH has served in the community for over a century.

In advance of identifying future infrastructure needs, this project will involve partnering with consumers and using co-design principles to ensure optimal design for the future.





### Benefits to the Precinct

In particular, such a project would focus on the following:

- **Quality public spaces:** creating a network of high-quality public spaces, including spaces for socialising, private reflection, active and passive recreation, connecting with nature and showcasing social and cultural heritage. Existing, underutilised spaces such as the Kolling building forecourt and the previous main hospital vacant building lot, provide the opportunity to meet user needs and establish an interconnected network of spaces across the precinct.
- **Access:** The creation of a welcoming environment to facilitate access for all, including those with mobility or sensory impairments. This is underpinned by a safe and walkable precinct with excellent pedestrian connectivity throughout the site, and to major destinations such as St Leonards train station and bus stops. Access could be centred around a network of green paths – a green grid – taking into account the precincts’ topography and key landmarks.
- **Wayfinding:** Establishing a clear hierarchy of streets and walkways, reinforced by consistent signage, paving and lighting. New technologies could be employed to improve user access and experience, particularly for the many people whose first language is not English.
- **Patients and carers:** Meeting the unique needs of patients, especially long-stay patients who are from outside the northern Sydney area. This could include spaces where these patients and/or their carers can escape routine and have greater privacy.
- **Staff:** Ensuing the precinct design instils a sense of ownership and pride among staff, through both the quality of the public realm and spaces that meet staff needs. This has the potential to create a more engaged workforce and reinforce a positive workplace culture.
- **Expanding/enabling alternatives to attendance:** projects to investigate alternative options to attending the hospital, including use of telehealth, outreach services, patient education videos, GP support, alternative transport options.

The Precinct Plan provides a unique opportunity to consider spatial development through a health lens and from a community perspective. Simple yet effective changes to the physical environment, in terms of quality open spaces, good access and wayfinding, will help create a vibrant precinct ecosystem that enhances user experience and has the potential to improve both population and planetary health.

# PHILANTHROPY AND PARTNERSHIPS



The NORTH Foundation is the philanthropic and fundraising partner of NSLHD supporting RNSH, Hornsby Ku-ring-gai Hospital, Ryde Hospital, Mona Vale Hospital and the Kolling Institute. NSLHD and the NORTH Foundation have a shared objective of building the Foundation to deliver strategic and effective fundraising for the purpose of furthering wellbeing. The NORTH Foundation is recognised as a major contributor to medical research and a community health system in which people enjoy improved health throughout their whole lives. The aim of the Foundation is to be a charity of choice for those seeking to improve community wellbeing, innovative health research and the delivery of exceptional patient care.

To support the precinct, the focus of the NORTH Foundation will be on identifying strategies to grow structured giving, as distinct from mass-market and other forms of giving such as direct donations or crowd-funding. Structured giving involves using a vehicle designed to enable giving, such as private or public ancillary funds, sub-funds and giving circles, testamentary or other legacy trusts. Structured giving can also occur without using a dedicated vehicle, through corporate cash donations, or larger scale and planned contributions from individuals and families. Growing structured giving helps support and reinforce other pro-social giving behaviours, such as mass market giving, impact investing, volunteering and other initiatives that benefit the precinct and the community.

To take advantage of the rapid growth of socially-conscious investing in NSW, the NORTH Foundation will also be looking to launch an impact investment fund to secure millions of dollars in multi-year commitments directly aimed at supporting the Precinct Plan and aligning impact and financial goals while also securing new philanthropic partnerships.



# NEXT STEPS

Meeting the vision of the Precinct Plan will require formal assessment of the proposed Clinical Opportunities and Strategic Enablers, and importantly, engagement with our community as well as government, philanthropic and industry partners.

The development of the Precinct Plan has been led by the NSLHD precinct planning group (PPG) and the NSLHD precinct reference group (PRG) under the governance of the NSLHD Chief Executive and NSLHD Board. This next phase will continue to be overseen by the PRG with representatives from the NSLHD Clinical Networks, the RNSH Executive, and key partners including:

- NSW Ministry of Health
- Office for Health and Medical Research
- North Shore Private Hospital
- University of Sydney
- Sydney North Primary Health Network

The PRG will be responsible for driving the Precinct Plan as the peak governance body overseeing implementation.

The advancement of the RNSH campus into a vibrant and innovative precinct that will drive the best clinical, educational and research collaboration will require the sharing of knowledge, identification of risks and potential opportunities, and close collaboration with all our partners.



**A VIBRANT AND  
INNOVATIVE  
PRECINCT THAT  
WILL DRIVE THE  
BEST CLINICAL,  
EDUCATIONAL  
AND RESEARCH  
COLLABORATION**

# ACKNOWLEDGEMENTS

We would like to thank all of those who provided their enthusiasm, time, vision and expertise to the development of this Precinct Plan.

Thank you also to the patients, staff and students who allowed us to use your words and images.

Thank you to our partners and consumers, whose ongoing contribution and participation in the precinct is invaluable in creating an innovative Health, Education and Research Precinct in St Leonards.







**Health**  
Northern Sydney  
Local Health District