The Strategic Intent Paper is based upon wide consultation, workshops and interviews with over 150 people conducted by REN over a period of 18 months.
## OUR TERMINOLOGY

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinicians</td>
<td>Clinicians refer to all healthcare providers who deal directly with patients and the community, including those within medicine, allied health, nursing and midwifery, population health, and integrated and community care, are referred to as clinicians.</td>
</tr>
<tr>
<td>Trainees + graduates</td>
<td>Trainees and graduates refer to all persons undertaking education and training and graduate programs across the broad spectrum of health care, including within medicine, allied health, nursing and midwifery, population health, and integrated and community care.</td>
</tr>
<tr>
<td>Campus partnerships</td>
<td>Campus partnerships refer to those transacted with health services and academic institutions co-located with Western Sydney Local Health District (WSLHD) campuses or within the precinct (SCHN, WIMR, CMRI).</td>
</tr>
<tr>
<td>External partnerships</td>
<td>External partnerships refer to those relationships with organisations or institutions outside of WSLHD (e.g. Universities, primary care, not-for profit organisations, industry, local government, Westmead Research Hub, Sydney Health Partners, etc.).</td>
</tr>
</tbody>
</table>

Associate Professor Saurabh Kumar is aiming to radically transform the diagnosis of conditions, for the benefit of patients and the health system.
OUR RESEARCH AND EDUCATION CONTEXT

Western Sydney Local Health District has unique community and disease profiles which provide a tremendous opportunity to use research and education to best meet the health and wellbeing needs of our community.

By 2021, Western Sydney Local Health District (WSLHD) will be the state’s most populous Local Health District (LHD), covering four Local Government Areas. WSLHD has the highest urban population of Aboriginal people in NSW.

Over 40 percent of residents were born overseas. The LHD is expected to respond to the rapid growth in its population, which is projected to reach 1.5M people by 2036.

An overview of Western Sydney’s diverse profile is presented in Figure 1. In addition, the mixture of wealth and socioeconomic disadvantage creates a diverse range of complex health needs within the LHD.

Residents of WSLHD have higher-than-average hospitalisation rates for heart disease, diabetes, falls (over 65), asthma, chronic obstructive pulmonary disease, influenza and pneumonia.

Research and education are critical to ensuring the workforce can adapt to this growing and evolving demand for health services.

Given that healthcare is built on the scientific understanding of health and illness, with care needs continuously changing, ongoing research and education are foundational for institutions and professions providing quality care and services to patients.

Figure 1: Western Sydney community profile

**Our priority**

Western Sydney Local Health District is a diverse community with a complex range of health needs, but we have prioritised some key groups due to their significant health needs.

**Priority people**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children up to 4 years old in WSLHD</td>
<td>68,980</td>
</tr>
<tr>
<td>Young people 15 to 24 years old in WSLHD</td>
<td>120,080</td>
</tr>
<tr>
<td>Australians aged over 16 will experience mental ill health each year</td>
<td>123,500</td>
</tr>
<tr>
<td>People aged 70+ in WSLHD</td>
<td>68,210</td>
</tr>
<tr>
<td>People in WSLHD Identify as an Aboriginal person</td>
<td>13,390</td>
</tr>
<tr>
<td>Speak a language other than English at home in WSLHD</td>
<td>50.3%</td>
</tr>
<tr>
<td>Of Australians have two or more chronic conditions</td>
<td>25%</td>
</tr>
</tbody>
</table>
WSLHD has a substantial and growing research and education capability.

We are entering a new phase with new buildings and strengthened relationships with three university medical schools. Investment and infrastructure in research and education already supports many world-leading researchers and teachers.

The national and state governments strongly support us in meeting the health needs of Western Sydney. This creates an exciting opportunity to develop innovative translational educational and research programs to achieve better clinical and patient care outcomes for our community.

We have a growing research and education footprint to support innovation, translation and commercialisation as seen in Figure 2.

Figure 2: Our (LHD) research and education footprint 2019

Supporting over 2,000 active research projects

13,000 WSLHD STAFF

680 INTEGRATED CARE STAFF

1,000+ RESEARCH ACTIVE STAFF

5,000+ NURSING, MIDWIFERY, ALLIED HEALTH, MEDICAL AND DENTAL STUDENTS EACH YEAR

1800+ HOURS OF REPRESENTATION

900+ DOCTORS IN TRAINING

90+ ACTIVE CONSUMER REPRESENTATIVES

1.45M+ hours OF EDUCATION AND TRAINING FOR 2018/19

10,000 STAFF TRAINED THROUGH SIMULATION ACROSS WSLHD

$50m REVENUE FOR RESEARCH ($11m IN COMPETITIVE GRANTS)

8,000+ OCCASIONS OF FORMAL MEDICAL EDUCATION

20% INCREASE IN RESEARCH REVENUE OVER 4 YEARS
Clinical research funds in WSLHD are growing by five per cent each year. This research has depended on the initiative and drive of inquisitive clinicians and clinical units. Relatively little has been commissioned to meet LHD needs or driven to align with Westmead Precinct and broader LHD strategy. There has been only limited translational research (moving evidence into practice) across the LHD (see Figure 3).

A WSLHD Research and Education Strategy will enhance our capacity to meet current and future health requirements of people living in Western Sydney and beyond. This would be apparent through improved quality and safety of care, better health outcomes, and optimal use of healthcare resources.

Figure 3: Growth in external research funds in WSLHD

*Note ‘Research’ refers to the funding provided from charities, institutes, not-for-profit organisations and small grant awarding bodies

**Financial Year
The LHD’s Research and Education Network (REN) is a unique facility in Australia providing an efficient function to organise key services to sustain and grow research, education, innovation and commercialisation within the LHD. It serves as a leader, facilitator, advocate and broker.

With new initiatives in education, research, innovation and commercialisation, REN will need to modify and grow in ways that provide leadership and support to the LHD and local population. In an ever-changing health and economic landscape, the LHD Board and Executive will need to prioritise the top areas of focus and manage REN accordingly.

Established ten years ago when the Millennium Research Institute achieved independence to promote basic research, REN has nurtured, governed, enhanced and fostered innovation in clinical research and education. Its 30 staff provide support across the four district hospitals at Westmead, Auburn, Blacktown and Mount Druitt. It supports the Research Development (RDC) and Professional Education (PEC) Committees of the Board. REN has contributed to, and help drive, our current research and education footprint (see Figure 2). REN provides District and Precinct support across medicine, nursing and midwifery, allied health, oral health, population health, integrated/community care and mental health. REN reports to the Executive Director of Medical Services.

REN supports research and education for staff to establish their projects and programs, negotiates space and facilities for education and research. It helps navigate required administration processes and establish and support the growth of research and teaching through effective IT, human resources and financial management. In the future, REN should strive to drive research and education leadership across the District and within the newly formed Precincts.

Formalities of research governance and ethical approval of proposed research, and professional education quality assurance are functions supported by REN that are critical to the reputation of the District for correct management of research and education. REN has strengthened and streamlined these processes, often in line with the Office of Health and Medical Research in NSW Health. It is now well positioned, by its skill and reputation to contribute to new initiatives.

REN has an academic faculty of conjoint appointments with Western Sydney University and the University of Sydney. The skills of these appointees in the fields of Clinical Education, Preventive Practice, Allied Health, Pharmacy, Nursing Research and Infection Prevention will serve us well in our future development. Already they are making it easier for academic institutions to participate in, and contribute to, both research and education within the LHD.

Figure 4 provides an overview of REN’s services and functions, including an assessment of the current maturity of each.

Stories of REN’s work across WSLHD can be viewed at https://thepulse.org.au/category/research
OUR PROPOSED STRATEGIC INTENT

This strategic intent paper describes opportunities to align our research and education agenda to achieve the WSLHD strategic priorities, the Westmead Precinct vision and achieve research benefits.

Research and education are necessary, though not sufficient, to improve clinical care, grow clinician calibre, and recruit (by our reputation) top-tier clinicians. Studies on quality of care have repeatedly shown that clinical service occurs best in an environment where research is occurring and where clinicians have a questioning approach to their practice. This approach is especially powerful when paired with a strong commitment to continuing quality of education. These realities are understood by many patients. A recent British study demonstrated that commercially-sponsored research evaluation of new drugs and devices can save organisational costs.

There is further benefit for WSLHD’s Research and Education to be realised.

Achievement of the benefits described above necessitates that investment decisions about our research align to a greater extent with the goals of the LHD and the new Precinct. In relation to education, we have recently witnessed through accreditation assessment, examples of suboptimal professional practice that call for a new approach to professional education quality assurance processes across the LHD.

REN has engaged with over 100 researchers, educators, clinical staff and consumers with a major interest in research and education. They have included clinicians, educators and clinicians with interests in prevention and wellness, and patient care in the primary through to quaternary care setting.
It is our premise that WSLHD research and education priorities should align strongly with the WSLHD’s Better West strategic priorities for 2017-2021.

WSLHD MISSION

Western Sydney Local Health District (WSLHD) will provide modern cutting edge healthcare. We will work in partnership with our community so it can be as healthy as possible.

PROPOSED WSLHD RESEARCH AND EDUCATION VISION

Excellent research and education to enable modern cutting-edge healthcare and healthy communities.
Seven goals are presented for consideration and possible endorsement by the WSLHD Executive and Board members. Next, to establish the WSLHD research and education strategy, the proposed 26 strategic initiatives that follow from those goals should be tested across a broad range of clinicians, researchers, educators and consumers. A priority order of strategic initiatives should be determined based on relative importance, impact and resources available for implementation.
1.1 Establish a succession of exceptional clinicians who use research and education to deliver quality clinical outcomes

1.2 Professionalise research, education and commercialisation through formal incentives to promote, recognise and invest in our people

1.3 Establish a working environment to enable all staff to teach and/or participate in research

1.4 Develop nationally and internationally competitive clinical units into research and education Centres of Excellence
2 QUALITY THROUGH TEAMS

Further develop and embed high performing multi-disciplinary teams into district clinical structure

2.1 Further develop world-leading multi-disciplinary/inter-professional research, education and commercialisation at Blacktown/Mount Druitt Hospital

2.2 Build outstanding research capability in Integrated Care and Population Health

2.3 Design and introduce shared professional development programs for clinicians and managers (with support from the People and Culture team)

2.4 Further embed research and education into the LHD clinical structures
3

MAKE RESEARCH AND EDUCATION EASY

3.1 Formalise a Research and Education Advisory Group to support the Chief Executive and LHD Executive in strategic and operational decision-making

3.2 Embed REN as a stream that leads and oversees the delivery of quality research and education across WSLHD

3.3 Establish research infrastructure to support coordination of clinical trials, translate research into practice and explore new funding sources

3.4 Invest in research about education to ensure that education practices are, wherever possible, evidence-based and prove both learning and patient care

3.5 Leverage technology to deliver high quality education and facilitate day-to-day working

Strengthening research and education enablers and infrastructure within WSLHD
Effectively translating evidence-based research into care outcomes

4 FROM EVIDENCE TO CARE

4.1 Establish formal mechanisms to optimise translation of research findings into practice to ensure quality care options are scaled quickly

4.2 Provide education, and support for cultural change, to enable adoption and scaling of new clinical practices

4.3 Explore, test and, if appropriate, implement new and emerging technologies and innovations and move to commercialisation

4.4 Use research evidence and clinical education to support disinvestment from lower value care
Leveraging clinical analytics and data to drive research and decisions

5.1 Strengthen the use of information and data to set the LHDs research agenda
5.2 Create an education stream to support the data literacy and analytics capabilities of WSLHD staff
5.3 Establish mechanisms to share innovative digital health research and education projects across the LHD
Enhancing high quality governance and assurance to ensure accountability and effectiveness

6

DOING IT RIGHT

6.1 Realign our governance structure to support the integration of education and research with clinical care
6.2 Create and implement a Research Governance and Quality Assurance Framework for the LHD
6.3 Implement the LHD Education Quality Framework
Facilitating, expanding and deepening our strategic research and education partnerships

7 PARTNERING FOR CAPACITY AND BETTER OUTCOMES

7.1 Coordinate strategic relationships with our campus and external partners through REN to leverage complementary capabilities of partners and develop new opportunities

7.2 Increase external partnerships to further involve industry and take advantage of commercialisation opportunities

7.3 Strengthen partnerships with consumers, the community, and advocacy groups to improve the relevance and effectiveness of research and education through co-production and social innovation
Aligned to the above strategic initiatives, Figure 5 below provides an overview of the proposed research and education governance arrangements.
NEXT STEPS

The implementation of this strategic intent paper will be led by REN as the face of research and education across WSLHD. We suggest that there be three categories for investment and development of research and education for endorsement by the Board:

1. Supporting research in new topics that have great potential e.g. Cell and Gene Therapy.

2. Supporting and strengthening already strong areas of research and education expertise and activity e.g. Infectious Diseases and Immunity, Cancer, Cardiovascular, Hepatology, Renal and Transplantation Medicine, Population Health and Preventive Practice, and investment in an evidence-based and world-class education infrastructure. Establishment of a top-rank Clinical Trials Facility under the auspices of REN will play a role in the future economic development of the Greater Parramatta and Olympic Peninsula by developing research capacity and commercialisation, fitting neatly into this investment category.

3. Investing in risky, potentially high-yield but unproven areas e.g. IT and data science. All research is risky and much ‘fails’ but is nevertheless a step in scientific progress and may be worth the investment in the long term.

Determining a priority order for research and education development will always be challenging because of the diversity of possibilities, both new and old. There is an unfortunate potential to stifle innovation in novel and emerging areas by simply continuing to invest safely in established activities. Therefore, judicious assessment of proposals for support as to whether they fit one or more of the three priority categories makes sense. We are proposing that a small panel assist the Chief Executive in making investment decisions in research and education.

In 2020, we propose that there be a review of research and education governance and infrastructure. This would seek to ensure closer alignment of education and research to the clinical organisational structure of the LHD:

- REN will continue to lead the WSLHD Research and Education agenda across the Precinct and be a key player in the establishment of the LHD’s innovation strategy including the Innovation Centre.
- REN will also lead the growth in education quality, faculty development and technology-enhanced learning.

We will also develop an implementation plan for this strategic intent, including a specific focus on developing research and education in Blacktown Hospital.
We will attract and develop high performing clinicians and other exceptional Sydney LHD:
• to support them to grow and adapt as contemporary healthcare evolves
• to equip them to provide innovative and adaptive healthcare to our community
• to help them harness new health technologies and research
• to be world leaders in biomedical, clinical and translational research.

1.1 Establish a succession of exceptional clinicians who use research and education to deliver quality clinical outcomes

We will establish clearer professional development pathways for clinicians to engage in research and education from early in their career as trainees or graduate students. This could include:
• embedding availability for teaching and research within the professional career trajectory pathway or job planning system
• designating time within new and existing appointments for education opportunities
• funding research opportunities for junior staff to gain early exposure
• embedding research and education into staff performance development and review process
• introducing innovative conjoint appointments within emerging focus areas (e.g. clinical analytics, mental health, population health and integrated/community care).
• establishing and implementing a career pathway for educators to support their career development and trajectory.

1.2 Professionalise research, education and commercialisation through formal incentives to promote, recognise and invest in our people

We will formalise incentives to recognise and reward well-established researchers and high-quality educators and promote their work. This could be through awarding outstanding contributions, introducing events to celebrate successes, or investing time (and/or resources) to increase access to development or research opportunities. We will ensure our initiatives align with the new People and Culture Strategy.

We will explore the opportunity to establish competitive fellowship positions preferentially awarded to early and mid-career clinicians to enable them to undertake research, innovation or education part-time, while continuing their clinical activity.

1.3 Establish a working environment to enable all staff to teach and/or participate in research

We will establish requirements to ensure all staff participate in research and education across the disciplines, and across the geography of WSLHD. For example, the contracts of Department Heads could include accountability for the growth of research and education and oblige all clinicians to be engaged in research and education. Where such requirements exist (e.g. in nursing and midwifery), we will ensure there are mechanisms in place to reinforce that all clinicians engage in research and education.

1.4 Develop nationally and internationally competitive clinical units into research and education Centres of Excellence

We will create and support local research and education Centres of Excellence to enable clinical units to undertake world-leading biomedical, clinical and translational research and teaching. Wherever there are signs of creativity, energy and ideas in education and research, especially when these have been recognised by external funding agencies and others, we will offer our support. The Centres of Excellence should be endorsed by the Research and Education Advisory Group (see Strategic Initiative 3.1) and be supported by their Clinical Academic Lead (see Strategic Initiative 6.1).
<table>
<thead>
<tr>
<th>STRATEGIC OUTCOME</th>
<th>SUCCESS MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Exceptional clinicians and clinical teams attracting high performing people to come and work at WSLHD</td>
<td>• Increased ratio of high potential applicants to posts available</td>
</tr>
<tr>
<td>• WSLHD becomes an employer of choice, with trainees choosing to come to WSLHD, and benchmarking more positively against to other LHDs</td>
<td>• Increased number of senior clinical staff completing professional development</td>
</tr>
<tr>
<td>• Research and education are embedded into the culture of WSLHD, becoming an expectation of clinicians and staff</td>
<td>• Increased in patient satisfaction</td>
</tr>
<tr>
<td>• Clinicians have more time dedicated to research, education and training programs</td>
<td>• Increased student/trainee satisfaction</td>
</tr>
<tr>
<td>• Well established WSLHD education programs to support health professional specialisation and expertise.</td>
<td>• Increased quality and number of applications for training (or equivalent) positions</td>
</tr>
<tr>
<td>• Well-established research and education Centres of Excellence that are nationally and internationally competitive, within the areas agreed by the Research and Education Advisory Group.</td>
<td>• Increase success in attracting external research grants (measured by revenue)</td>
</tr>
<tr>
<td></td>
<td>• Increase number of research projects</td>
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<tr>
<td></td>
<td>• Reduced number of complaints and adverse events</td>
</tr>
<tr>
<td></td>
<td>• Increased academic appointments</td>
</tr>
<tr>
<td></td>
<td>• Increased in scores from the PMES (People Matter Employee Survey) and the National Trainee Survey</td>
</tr>
<tr>
<td></td>
<td>• Increased educator workforce capability.</td>
</tr>
</tbody>
</table>
We will become a premier destination for the best practitioners because of its established high performing multi-disciplinary teams and district clinical teams.

Recent infrastructural investments within WSLHD will play a crucial role in supporting the educational experience of learners and enabling research. The Innovation Centre, Living Lab, the Westmead Precinct, the new Blacktown/Mount Druitt campus and novel learning spaces within LHD and university facilities, including those at Auburn, increased opportunity for multidisciplinary expertise to educate and work on real-life research problems in new ways.

2.1 Further develop world-leading multi-disciplinary/inter-professional research, education and commercialisation at Blacktown/Mount Druitt Hospital

The Blacktown/Mount Druitt Hospital (BMDH) provides distinctive opportunities to foster closer professional collaborations.

We will broaden research and education at BMDH, by establishing a multi-disciplinary/inter-professional training team, with greater focus on nursing and allied health and designed in partnership with local communities.

2.2 Build outstanding research capability in Integrated Care and Population Health

To increase our efforts in prevention, screening and management of long-term conditions, we will work across the whole health system and beyond to all levels and sectors of government and NGOs. To build capability in integrated care and population health to address key Western Sydney population challenges such as obesity, Indigenous health, health literacy, diabetes, infectious diseases, complex and chronic care and mental health.

Initiatives for consideration include:

- introducing an integrated Population Health Hub to complement the ‘living lab’ concept and explore population-level interventions
- strengthening the LHD-PHN collaboration in long-term management of conditions through research and education (such as creation of a Centre of Excellence in Integrated Care Research)
- broadening research and education opportunities in prevention, population health, integrated and community care and community services
- strengthening the integration of preventative care and clinical care to ensure better patient outcomes and healthier communities.

2.3 Design and introduce shared professional development programs for clinicians and managers (with support from the People and Culture team)

We will introduce development programs to cross-skill clinicians and managers to enable greater collaboration and translation of skills.

These include:

- opportunities for non-clinical staff to shadow clinicians in order to better understand the clinical environment.
- shared divisional leadership between clinicians and general manager.
- offering wider development workplace opportunities for learners, beyond their basic curricular.

2.4 Further embed research and education into the LHD clinical structures

We will introduce and embed research and education into the LHD clinical structures (in development) that are strongly linked to the REN. We will establish academic units that include the Clinical Academic Leads (see Strategic Initiative 6.1 for more detail). These units would be embedded into the LHD clinical structure to better align research and innovation. We will also consider further investment in Academic Heads, i.e. Department Heads with academic qualifications.

The academic units and Centres of Excellence will utilise REN enablers and be held accountable by the Advisory Group, Board Committees and WSLHD Board.
<table>
<thead>
<tr>
<th>STRATEGIC OUTCOME</th>
<th>SUCCESS MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• BMDH becomes a ‘magnet’ for exceptional people, with increasing growth in</td>
<td>• Increased student/trainee satisfaction</td>
</tr>
<tr>
<td>research and reduced turnover of staff</td>
<td>• Increased staff/clinician satisfaction (particularly teamwork and collaboration type measures)</td>
</tr>
<tr>
<td>• WSLHD becomes the employer of choice, with trainees, nursing, midwifery and</td>
<td>• Increased in scores from the PMES (People Matter Employee Survey)</td>
</tr>
<tr>
<td>allied health graduates choosing to come to WSLHD, and benchmarking more</td>
<td>• Increased multidisciplinary research projects</td>
</tr>
<tr>
<td>positively against other LHDs</td>
<td>• Increased research projects in priority areas</td>
</tr>
<tr>
<td>• A wide range of partners are mobilised to improve care in the western Sydney</td>
<td>• Increased WSLHD partner satisfaction</td>
</tr>
<tr>
<td>region</td>
<td>• Increased joint professional development opportunities (management and clinical).</td>
</tr>
<tr>
<td>• Research and education are embedded as core components of the LHD clinical</td>
<td></td>
</tr>
<tr>
<td>structure</td>
<td></td>
</tr>
<tr>
<td>• Multidisciplinary research and education teams are cross-skilled in research</td>
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<tr>
<td>and education.</td>
<td></td>
</tr>
<tr>
<td>• Alignment is embedded as a principle in the development of research, education</td>
<td></td>
</tr>
<tr>
<td>and clinical care.</td>
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</tr>
</tbody>
</table>
We will better leverage our existing infrastructure to translate research outcomes into practice. REN will facilitate and lead professional education and clinical research across the District and Precinct to ensure that priorities are aligned with the broader WSLHD strategy and workforce development.

3.1 Formalise a Research and Education Advisory Group to support the Chief Executive and LHD Executive in strategic and operational decision-making

We will formalise a Research and Education Advisory Group to advise on priorities and future investments in WSLHD’s research and education (including future academic and conjoint appointments), influence Westmead Precinct priorities, and support decision making with emergent issues and opportunities according to agreed principles. These principles include being locally relevant, facilitating multi and interdisciplinary collaboration, building on WSLHD strengths and building stronger internal and external partnerships. Members will be drawn from the LHD clinical structures and be conduits for the development and implementation of education, research and its translation into different models of care.

3.2 Embed REN as a stream that leads and oversees the delivery of quality research and education across WSLHD

REN provides a range of services and functions to the LHD that will need to be established or strengthened (see Figure 4).

REN will realign its current structure to drive and support the achievement of the research and education strategy and oversee the delivery of quality research and education. REN will also oversee the alignment of site-specific or discipline-specific research or education strategies.

3.3 Establish research infrastructure to support coordination of clinical trials, translate research into practice and explore new funding sources

We will invest in research enablers to accelerate and widen the impact of research outcomes on quality and safety of patient care. Such enablers include:

- Establishing a small clinical trial support unit through REN, with a dedicated pool of clinical trial coordination support across the Departments and good quality monitors (similar model to The George Institute Training). This would enable research clinicians to better focus on clinical research.

- Exploring opportunities for more strategic investment of the clinical trials levy to support academic foundations through drawing in new methodologies and technologies in clinical research (similar model to the Children’s Hospital).

- Exploring new funding sources for research and education activities beyond the current grants, partnerships and Government funds, considering the potential opportunities for developing relationships with philanthropic funders, trusts or industry partners.

- Consider exploring new funding streams and engaging private sector partners through the commercialisation of high quality LHD research to support financial sustainability.

3.4 Invest in research about education to ensure that education practices are evidence-based and improve both learning and patient care

We will invest in an educational research program to improve educational outcomes and enhance patient care. WSLHD has an opportunity to apply education research and upskill educators to the evolving curriculum to offer more innovative educational experiences for students and trainees. This complements Strategic Initiative 1.1, whereby education has a more established and recognised as a career pathway and trajectory.

3.5 Leverage technology to deliver high quality education and facilitate day-to-day working

We will, in conjunction with our academic partners, leverage the enthusiasm and skill of younger generations to design opportunities for learners to understand and apply the wealth of relevant technology and data to their practice. For example, use technology for better rostering, rapid access to up-to-date information, online coursework better aligned to daily clinical exposure and use of simulation.

In partnership with eHealth and HETI, we will explore opportunities to deliver education and share information differently through adaptive education. For example, eLearning capabilities could be used to deliver education to clinicians and trainees/students in real
time and information on education could be shared through Twitter. We will invest in our knowledge management systems and portals to enhance access to, and storage of, education, research and clinical data. We will ensure that researchers and educators have the hardware infrastructure and software to support knowledge and information sharing. We will look to exploring opportunities for a centralised system of data storage and access.

**STRATEGIC OUTCOME**

- Systems and processes supported by REN remove barriers to excellent research and education
- Clinical trials are better supported by the central administrative support function, with clinicians spending more time on research
- Academic and conjoint appointments are agreed through the Research and Education Advisory Group
- Transparent prioritisation of research focus areas
- Strong academic foundations embedded and socialised in the clinical environment
- Education is delivered in the time, place and mode that learners most engage with it.

**SUCCESS MEASURES**

- Increased research grants awarded to WSLHD
- Implementation of education research programme and research projects
- Fewer fractional and temporary positions attached to research and education projects
- Increased staff awareness and satisfaction with REN, and REN systems and processes
- Increased education research
- Satisfactory annual assessment of competency of trainees
- Credentialing of research units and researchers.
Effectively translating evidence-based research into care outcomes

**4.1 Establish formal mechanisms to optimise translation of research findings into practice to ensure quality care options are scaled quickly**

We will improve our translation of research and education by strengthening the LHD’s processes, governance and systems to better enable the translation of successful research findings into routine clinical practice quickly and at scale.

We will scope and redesign our system to ensure that we respond effectively to successful innovations to adopt, sustain and embed the new practices and approaches to improve patient outcomes. This could include exploring opportunities to commercialise research findings. REN’s role in research governance and oversight of the WSLHD’s research and education partnerships provides great opportunity to support and guide changes.

**4.2 Provide education, and support for cultural change, to enable adoption and scaling of new clinical practices**

We will establish initiatives to educate clinicians and staff on the value of translation and the systemic changes that need to be planned, managed and considered before clinical changes are able to be adopted and scaled.

We will work with the Redesign team to establish a range of education, activities and support to effect changes in clinician behaviour.

**4.3 Explore, test and, if appropriate, implement new and emerging technologies and innovations and move to commercialisation**

We will support and encourage testing and implementation of new and emerging technologies and innovation. These could include; gene technology, biobanking, CarT cells, artificial intelligence, and big data/machine learning. Where new and emerging technologies and innovations are successful, we will explore opportunities to commercialise the innovations.

**4.4 Use research evidence and clinical education to support disinvestment from lower value care**

We will better leverage the evidence-based research and clinical education available across the LHD and Precincts to make informed decisions on the investment into patient care, and in divesting from lower value care. This would better enable WSLHD to reinvest resources and effort into clinical research or higher value care.
**STRATEGIC OUTCOME**

- Greater integration and collaboration between clinical programs, biomedical research and translation research
- WSLHD become leading in translational research
- WSLHD is an early adopter and tester of emerging technologies.
- WSLHD disinvests from lower value care.

**SUCCESS MEASURES**

- Increased number of research findings adopted into clinical practice.
We will create an environment where clinical analytics, emerging technology, data, innovation and artificial intelligence become embedded into research, education and clinical care.

Most of our research and decisions will be driven by clinical analytics, evidence and data. According to the Better West Strategic Priorities: 2017-2021, “fit-for-purpose health service delivery depends on access to high quality information. Information management and digital technologies will transform the way we work, where and how we provide services, how patients interact with us and how we integrate clinical care with research and education.” As such, it is essential that we leverage our clinical analytics capabilities and rich quality data to drive our research focus and decisions.

5.1 Strengthen the use of information and data to set the LHDs research agenda

We will better leverage the rich information and data we have available across the LHD (in EMR and EMM) to inform decisions and prioritise the LHDs research and education focus areas. This would reduce waste in variation, creating greater efficiencies and delivering better clinical care outcomes.

5.2 Create an education stream to support the data literacy and analytics capabilities of WSLHD staff

We will invest in educational activities that enhance our staff and clinician capabilities to better leverage data literacy and analytics for decision making. Once established, this should be embedded into the professional development learning pathway (see Strategic Initiative 1.1).

We will also explore the opportunity to expand our clinical analytics and data literacy programs to ensure that all staff and clinicians are comfortable in data collection, analysis and reporting.

5.3 Establish mechanisms to share innovative digital health research and education projects across the LHD

We will establish new processes to share innovative digital health research and education projects, particularly examples including:

- Virtual Reality Augmented Training
- Code Black: Violence de-escalation training
- Advanced Life Support, using avatars in a game-like environment allows all team roles to be represented (Airway, Drugs, Scribe, Defib, Compressions) for rehearsing the management of a cardiac arrest event
- Proactive sepsis detection pilot program
- Pressure injury Internet of Things (IoT) project.

As in Strategic Initiative 3.5, we will invest in our knowledge management systems and infrastructure to facilitate sharing of digital health research and education projects.
**STRATEGIC OUTCOME**

- Research and education decisions are largely driven by evidence and data.
- A district notable for its achievements in innovation and collaboration in digital health research and education.
- Digital health research and education projects are shared to encourage further collaboration and improved patient care opportunities.

**SUCCESS MEASURES**

- Increased staff data literacy and analytics capabilities to make informed decisions.
Enhancing high quality governance and assurance to ensure accountability and effectiveness

Integrated research education & clinical care

6

6.1 Realign our governance structure to support the integration of education and research with clinical care

We will realign our governance structure for research and education to support LHD clinical structures through the establishment of a Clinical Academic Lead, responsible for all education and research in their clinical area across the LHD. These Clinical Academic Leads would be represented on the LHD Advisory Group (see Strategic Initiative 3.1) to advise the Executive on matters relating to research and education, including resource allocation and the prioritisation of activities.

6.2 Create and implement a Research Governance and Quality Assurance Framework for the LHD

We will develop an overarching framework for research governance and quality assurance to monitor and report on clinical research, monitor risks associated with clinical research and establish clearer performance measures for the Research Development Committee.

6.3 Implement the LHD Education Quality Framework

We will implement the Education Quality Framework to ensure core components of education are routinely monitored and reported including assessment of the learning environment, education governance and support to learners and educators.

We are working to create a system whereby the quality of education is continually assessed, measured and improved. We will use a concerted and systematic approach to triangulating trainee and student feedback, patient outcomes and a range of proxy measures aligned to quality and safety to assure curriculum requirements are appropriately met to ensure accreditations are maintained.
**STRATEGIC OUTCOME**

- Transparent and improving quality indicators for research and education
- High quality education processes in place
- Education infrastructure provides governance and quality assurance, enabling information to contribute to other clinical governance data
- Continual improvement and provision of education programs, with accreditations maintained
- Education programs are evidence-based, to promote quality and safety to the people in our care.

**SUCCESS MEASURES**

- Accreditation of research governance through the Australian Council on Healthcare Standards
- Implementation of Quality Framework for education and research
- Satisfaction with research governance across WSLHD
- Increased quality of education (e.g. through the number of accreditations maintained).
Facilitating, expanding and deepening our strategic research and education partnerships

We will expand and strengthen our strategic relationships with our partners (industry, universities, communities, consumers and advocacy groups) to enhance delivery and translation of high-quality research and education, with centralised coordination within REN.

7.1 Coordinate strategic relationships with our campus and external partners through REN to leverage complementary capabilities of partners and develop new opportunities

We will strengthen our strategic relationships with our campus and external partners by formalising the strategic partnership function within REN and managing this function through the existing REN structure. This would involve:

- liaising with research funding bodies and educational authorities on behalf of WSLHD’s research and education
- more strategic approaches to increase collaboration with our existing external WSLHD partners, and internally across the WSLHD
- providing a coordinated and strategic approach to leveraging complementary capabilities of partners and align new opportunities that achieve our LHD strategic priorities, while reducing the duplication of effort.

WSLHD currently has several well-established partnerships, including:

- Sydney Health Partners
- Medical Research Future Fund
- NSW Health Translational Research Grants Scheme
- Sydney Partnership for Health, Education, Research and Enterprise (SPHERE)
- Westmead Institute for Medical Research
- Children’s Medical Research Institute
- University of Sydney
- Western Sydney University
- University of Notre Dame
- Westmead Research and Education Hubs
- WentWest Primary Health Network
- Westmead Health and Education Precinct
- NSW Ministry for Health and Pillars.

7.2 Increase external partnerships to further involve industry and take advantage of commercialisation opportunities

We will introduce initiatives to strengthen and broaden WSLHD’s brand and reputation to further involve industry, increase commercialisation opportunities and leverage their diverse range of expertise. For example, collaboration with the Greater Western Sydney business and commercial groups could provide benefit to the Western Sydney population.

Some initiatives to consider include:

- Working with the Professional Education Committee, facilitate productive cooperation with educational partners and stakeholders, including NSW Health, Commonwealth Department of Health, universities and professional colleges, to determine the profile of educational activities in the LHD.

7.3 Strengthen partnerships with consumers, the community, and advocacy groups to improve the relevance and effectiveness of research and education through co-production and social innovation

We will grow our partnerships with consumers, communities and advocacy groups to facilitate increased participation in clinical trials, improved education delivery and better targeted local research. We will promote and encourage health literacy.

We will engage with important local patient, consumer and community groups including the Local Aboriginal Land Councils, migrant and refugee groups and disease specific and demographic specific advocacy groups.
We will work in close partnership with the local community in education and research design as we further develop this research and education strategy.

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<thead>
<tr>
<th>STRATEGIC OUTCOME</th>
<th>SUCCESS MEASURES</th>
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<tbody>
<tr>
<td>• A district notable for its achievements in innovation and formation of innovative partnerships including with the private sector</td>
<td>• Increased number of external research and innovation partnerships</td>
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<tr>
<td>• Establish more links with university partners to support training</td>
<td>• Increased investments by external education partnerships</td>
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<td>• District-wide faculty of conjoint appointments to support education research, data analytics, research translation, healthcare economics, workforce redesign and artificial intelligence in health</td>
<td>• Increased numbers and citations of research papers from WSLHD</td>
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<tr>
<td>• Increase external funding for research and education in WSLHD</td>
<td>• Increased collaborative externally funded projects.</td>
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<td>• Increase employment and investment in local Western Sydney business through research and education partnerships</td>
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<td>• Consumer groups are more involved in research planning</td>
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<tr>
<td>• New strategic partnerships with organisations and key industry groups.</td>
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