



Health
Pathology

Research Strategy

NSW Health Pathology
Towards 2025

www.pathology.health.nsw.gov.au

for all of
us

Taking on challenges together, delivering value that matters – for all of **us**

This document outlines NSW Health Pathology's plan for delivering evidence-based value. It highlights a commitment to:

- building an organisation that supports aspiring and ambitious researchers and intrapreneurs who lead with the RITE values (Respect, Integrity, Teamwork and Excellence), and
- partnering with our customers and communities to ensure our health and justice system delivers the outcomes that matter to them.

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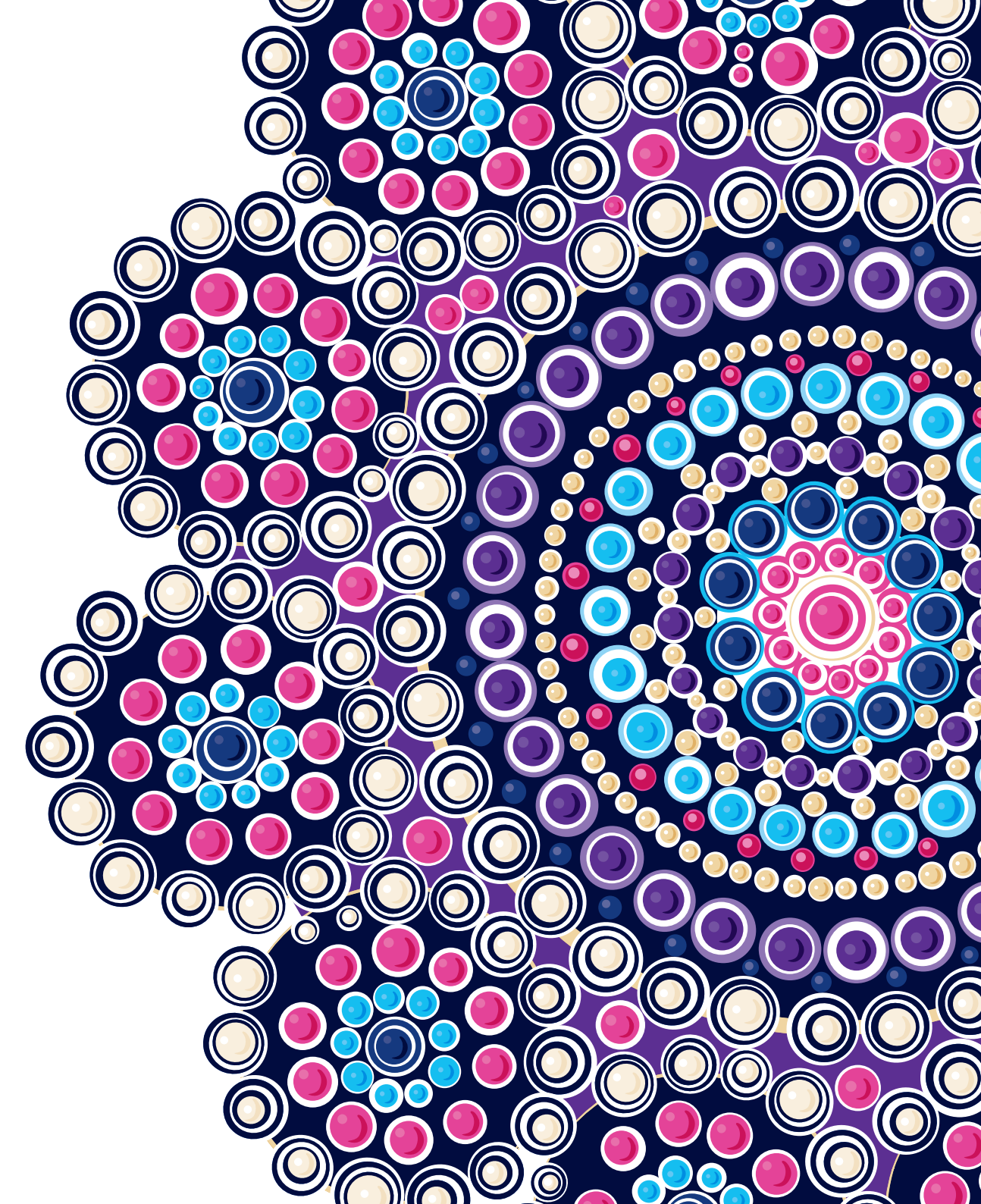
We acknowledge Australia's first innovators

Aboriginal and Torres Strait Islander Peoples are the first innovators of this land of sovereign nations and territories we now call Australia. Aboriginal and Torres Strait Islander Peoples have been innovating for more than 50,000 years.

We also acknowledge the harm that has come with research and innovation efforts that have further marginalised Aboriginal and Torres Strait Islander Peoples. We recognise the need for innovation and research efforts to be dignified, equity-centred, culturally appropriate and conducted in a culturally safe environment, with better outcomes for Aboriginal and Torres Strait Islander communities as a core outcome.

NSWHP recognises the right of Aboriginal and Torres Strait Islander Peoples to be engaged in any processes, projects and activities that may impact on them. We also acknowledge that Aboriginal and Torres Strait Islander Peoples have the right to control and maintain their culture and heritage, and that means benefiting from research undertaken by, with and about them.

Read more about our commitment to reconciliation in our NSW Health Pathology Innovate Reconciliation Action Plan.





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01

Context

The depth and breadth of knowledge and expertise across NSW Health Pathology (NSWHP), our partners and our communities is extensive. Importantly, it's being applied daily by our clinicians, scientists, and support staff who are partnering in innovation and research to improve services and health and safety outcomes and experiences for our communities.

WHERE WE ARE HEADED - OUR STRATEGIC PRIORITIES*



THE WAY WE'LL GET THERE - OUR STATEWIDE AND LOCAL PLANS

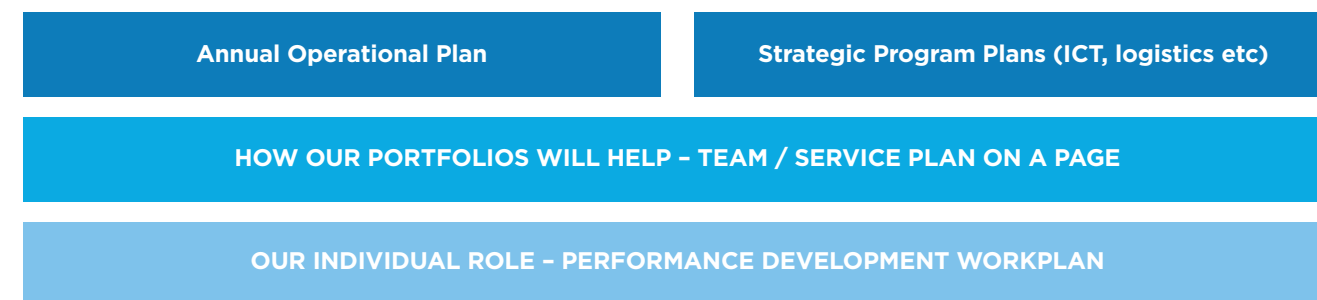


Figure 1. NSWHP's Strategic Plan Towards 2025

Research has a role to play across all priorities set in NSWHP's organisational Strategic Plan Toward 2025 (Figure 1). The Research Strategy is positioned around two key goals:

1. To be partners in translational research where discoveries move rapidly from lab to community;
2. To uncover answers that matter by pursuing innovation possibilities in all we do.

While research and innovation go together, there are a number of innovation approaches (such as service innovation, social innovation, business model innovation and systems innovation) that go beyond the strategies outlined in this document. These approaches are discussed further in NSWHP's 'Innovation by Design'.



Aspirations

NSWHP aims to create better health and justice systems by leading the way in training, education, research, service design and policy creation to meet the diverse, evolving needs of our communities.

We are committed to equipping emerging and current generations of public leaders and intrapreneurs with ways of dealing with contemporary challenges, designing and delivering services that create value for our communities.

In acknowledging the past practices that have impacted Aboriginal and Torres Strait Islander Peoples' social and emotional wellbeing, we have a commitment to support research initiatives that drive improvements for the health, safety and wellbeing of Aboriginal and Torres Strait Islander Peoples.

We aspire to establish the following future state (Figure 2) where:

- our culture encourages experimentation, and
- our workforce has the capability and capacity to drive research and innovation in partnership with communities.



OUR CULTURE

Cultivating and celebrating curiosity

Committing to a growth mindset

Growing psychologically safe teams, failing forward

Experimenting ethically

Embracing community-informed and community-led research and innovation



OUR CAPABILITY

Challenging the status quo

Accelerating and coaching researchers and innovators across our organisation

Co-designing, participatory design, speculative design and futures practices

Supporting the scale and spread of research and innovation

Monitoring, evaluation and learning



OUR COMMUNITY

Creating and strengthening partnerships with communities, caregivers, staff, institutions and our customers

Co-discovery, co-design and co-delivery of research and innovation

Fostering researchers and innovators throughout our system

Ensuring strong and active sponsorship of projects at all levels of our organisation



OUR CAPACITY

Building a depth of skill in innovation and research (small, specialised teams) as well as breadth of skill across our system

Offering time, space and physical environments to imagine, experiment and learn

Understanding what matters to communities and customers

Accelerating implementation of research and innovation

Figure 2. NSWHP's Future State

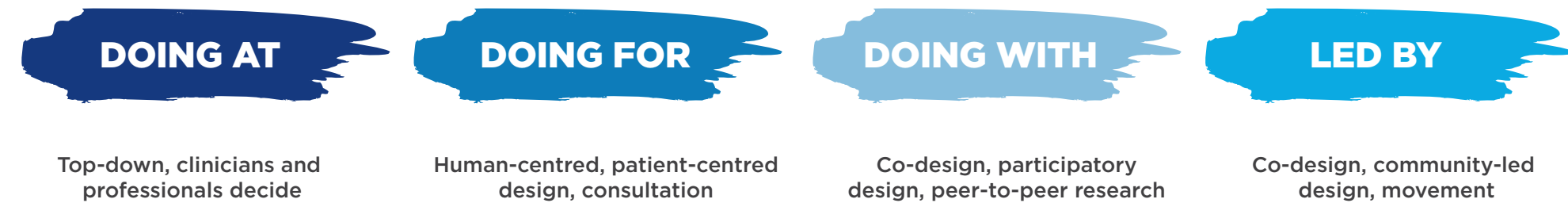


Figure 3. NSW Health Pathology’s Community Engagement Framework

Community participation and partnership

Across all research efforts, we aim to empower communities through selecting approaches that are more participative. Our focus aligns to national community and consumer engagement frameworks for health and medical research.

The levels of community participation are captured in NSWHP’s Community Engagement Framework (Figure 3). This framework is based on the International Association of Public Participation (IAP2) Public Participation Spectrum and builds on the commitments of NSW Health’s Elevating the Human Experience.

Aboriginal and Torres Strait Islander Peoples participation and partnership

Community development is based on the idea that local people already know what the issues and opportunities are and how to move forward. A community development approach means recognising the strengths, skills and knowledge of local people and working closely with communities to plan, design, deliver and evaluate research.

Ensuring a community development focus in engaging Aboriginal organisations and communities is essential.

Communication techniques

In Aboriginal communities’, word of mouth is very important and once an outsider is known as someone who has built trust and listens, communities are more likely to engage with us.

Aboriginal communities have constantly met barriers within mainstream systems and Aboriginal cultural priorities have been largely discounted, ignored and undermined. Some members of the Aboriginal

community may prefer visual or oral communication to understand what is being asked and provide their views. In some instances, it may be necessary to aid community members with completing forms, reading information and writing statements. It is important to approach this sensitively and not cause embarrassment or shame to the person by asking them if they can read or write.

Consultation and remuneration

All Aboriginal and Torres Strait Islander Peoples supporting research activities at NSWHP should be remunerated for their time in accordance with NHMRC’s Payment of participants in research, the NSW Health Aboriginal Cultural Activities Policy and the forthcoming NSW Health Reimbursement and Remuneration for Consumer Representatives. In addition to reimbursement for time and any out of pocket expenses incurred through participation, transport to and from a venue may need to be arranged, as well as respite and childcare.

03

Action

This Research Strategy uses a balanced scorecard (BSC) approach to planning, management and prioritisation of activities that aim to better support research across NSW Health Pathology.

The approach outlines key objectives, initiatives and sets activities under the domains of:

Customer and community – how our communities see us. Are we meeting or surpassing their expectations?

Learning and growth – how we will sustain our ability to change and improve?

Internal processes – what are the processes needed to enhance research and where must we excel?

Finance – how does research remain financially sustainable under increased change?

Our vision

To be partners in translational research, where discoveries move rapidly from the lab to the community.

To uncover answers that matter by pursuing innovation possibilities in all we do.

Our strategic objectives

Customer and community

- Bring New Ideas to Life (5.2): Through leading the translation of scientific and technological discoveries to deliver better outcomes for our communities
- Innovative People-Centred Care (1.3): Through leading the shift to preventive, whole-of-life, community-based care with widespread access to emerging diagnostics
- Connected Communities of Care (3.3): By bringing together partners in health and justice to redesign and drive new and better service models, outcomes and experiences for all our communities

Learning and growth

- Grow Research Opportunities (5.1): By defining and leading research priorities that target and align to state and national directions and pressures
- Celebrate Our Expertise (5.4): By recognising our staff as world-leading, renowned experts in technology-enabled science and clinical diagnostics

Internal processes

- Space to Innovate (5.3): Through creating dedicated spaces and programs to continually question, innovate and improve our services through experimentation and doing things differently
- Mature Governance Models (8.1): By continuing to improve transparency and accountability by maturing our clinical, corporate and research governance models

Finance

- Collective Stewardship (8.2)



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Our enablers (initiatives)

Underpinning the 8 strategic objectives to supporting research across NSWHP are 12 key enabling programs of work (initiatives).



Figure 4. Key initiatives to support research across NSWHP

04

Language

Research is the “creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies, inventions and understandings. This could include synthesis and analysis of previous research to the extent that it is new and creative.” (Australian Code for the Responsible Conduct of Research (2018))

Quality Improvement is the design, development, monitoring and evaluation of health care, safety and justice systems with the aim of improving its delivery and subsequent outcomes.

Quality improvement (QI) activities can include incident monitoring, root cause analysis, sentinel event monitoring, peer reviews, morbidity and mortality reviews and other forms of audits. (NSW Health GL2007_020)

Innovation is the “creation and implementation of new processes, products, services and methods of delivery which result in significant improvements in outcomes efficiency, effectiveness or quality” Mulgan & Albury (2003).

Innovation methods draw primarily from human-centred, service and strategic design as well as futures practices.

While not all innovation efforts will be successful, all of our efforts aim to provide valuable learning to inform future projects and initiatives. To learn and build from what doesn't work we adopt a failing forward mindset (Centre for Public Impact, 2020).

We commonly confuse innovation, quality improvement and research, yet they're not the same thing.

Innovation is about doing or creating something new in order to keep up with the changing world.

By contrast, **improvement** is about “looking at how something is done (the steps, roles and materials used) and making it more effective and efficient” (Henderson R. 2017).

Research on the other hand is the creation of new knowledge and understanding that underpins both innovation and quality improvement.

While improvement seeks to enhance existing processes, innovation questions whether the process should exist at all. Further, innovation identifies different ways of working to improve outcomes for communities, staff and customers.

Research can be innovative but to be classified as an innovation, the new knowledge, methods or inventions must be implemented in practice, leading to a new process, product or service that delivers value in the form of;

- Social value: makes positive gains for communities, including improvements in health and safety outcomes, equity or access
- Reputational value: strengthens our standing with our communities or peers
- Economic value: contributes to the sustainability of government systems
- Economic or commercial value: generates new revenue streams or efficiency savings to ensure sustainability and value for money.



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Translational Research Spectrum

Research and development can occur across a translational spectrum (Figure 6). Translational research involves multidirectional integration of basic research (**bench**), patient-orientated research (**bedside**) and population-based research (**practice**), and uses research methodologies to evaluate the feasibility, efficacy, replicability (adaptability), effectiveness and scalability of novel interventions (NSW Health’s **An Introduction to Translational Research**).

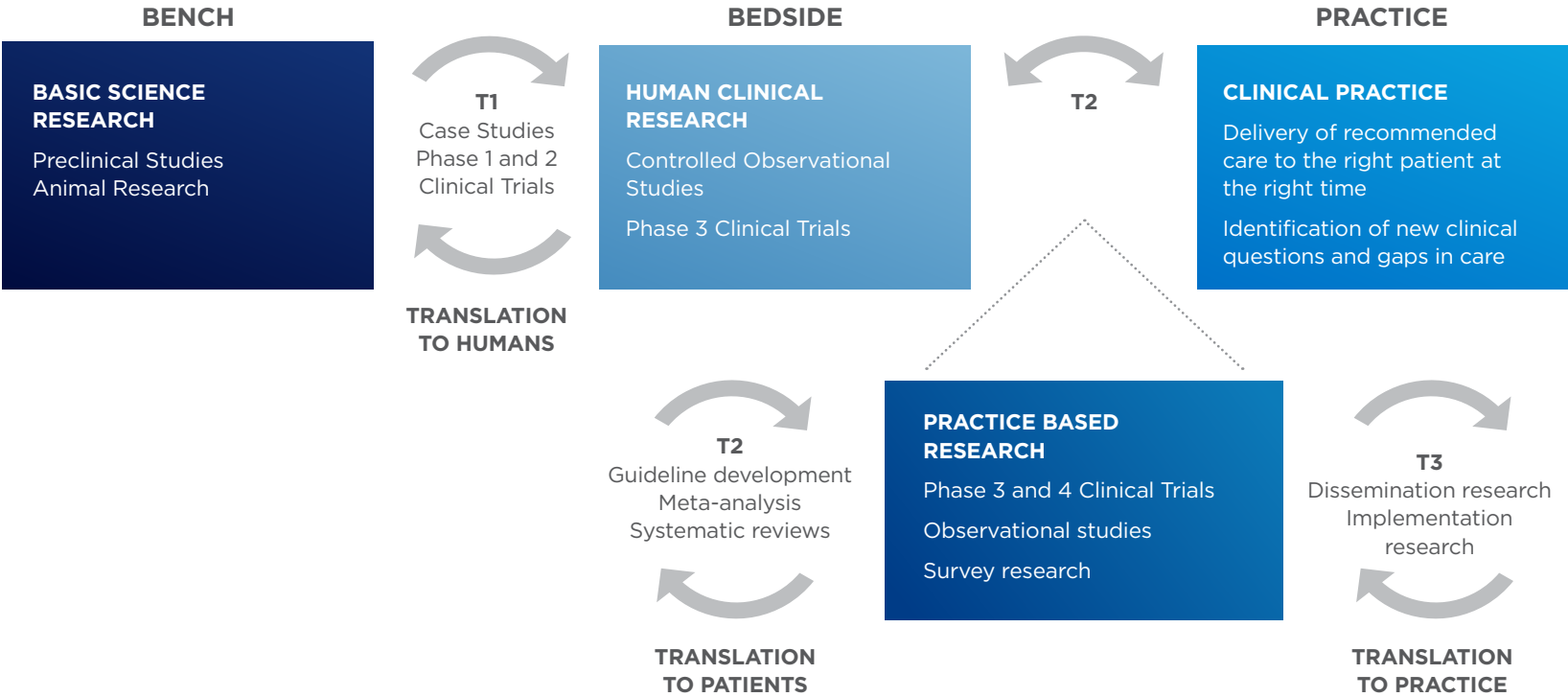


Figure 6. “Blue Highways” on the NIH Roadmap (Westfall JM, Mold J, Fagnan L. Practice-Based Research— “Blue Highways” on the NIH Roadmap. JAMA. 2007;297(4):403–406. doi:10.1001/jama.297.4.403)

01 Bench research

Work undertaken to acquire new knowledge that could prove relevant to an understanding of human biology or disease. Bench research may involve use of animals, cells or tissues and can include development of new interventions or diagnostic tests (i.e. analytical or clinical validation).

[T1] The outcomes from bench research may translate into human research. This is where new treatments, interventions or contexts are evaluated and adapted for clinical application.

02 Bedside research

Work involving living humans in carefully regulated settings. Bedside research usually involves clinical trials or observational studies.

[T2] The outcomes from bedside research may translate into new clinically proven knowledge about disease mechanisms or the application of new treatments or diagnostic techniques that are adopted in a routine clinical setting.

03 Practice research

Systematic work undertaken in a community (real-world) setting to improve clinical practice. Practice research involves dissemination, implementation and diffusion research for system-wide change (NSW Health and Medical Research Strategic Review 2012. NSW Ministry of Health).

[T3] The outcomes from practice research may translate into policy and best practice (recommended care to the right patient at the right time). It may also involve identification of new problems (gaps in care).



05

Focus

We must invest in research that matters to the health, safety and wellbeing of the people of NSW in relation to forensic, scientific and public pathology services.

Our research priorities, including focus areas and flagships, were co-developed with our researchers, leaders, customers and community.



Prioritisation: Core Principles

To ensure that all research activity is of the highest quality and is compliant with appropriate ethical, scientific, regulatory and professional standards, NSWHP assesses and prioritises all proposed activity of strategic focus against the following principles;



QUALITY

NSWHP is committed to ensuring that research supported by NSWHP is of the highest quality and that any human research meets relevant scholarly and scientific standards through encouraging peer review of research and publication of findings.



SAFE AND ETHICAL

NSWHP researchers take responsibility for ensuring the safety of all participants in their research. Acting in accordance with the National Statement on the Ethical Conduct of Human Research, participants will be valued and their rights respected. Their wellbeing is our primary responsibility.



DIGNITY AND PRIVACY

Researchers respect the unique knowledge, insight, experience and expertise of participants. Research involving NSWHP specimens or data must adhere to all legislations and policies relating to the use and disclosure of personal information.



RISK MANAGEMENT

Risks to participants, the research team, NSWHP and others involved in research must be identified, assessed and managed. The benefit of research must justify any risks of harm or discomfort to participants. Mechanisms are put in place to monitor and manage harm that occurs, protecting us all.

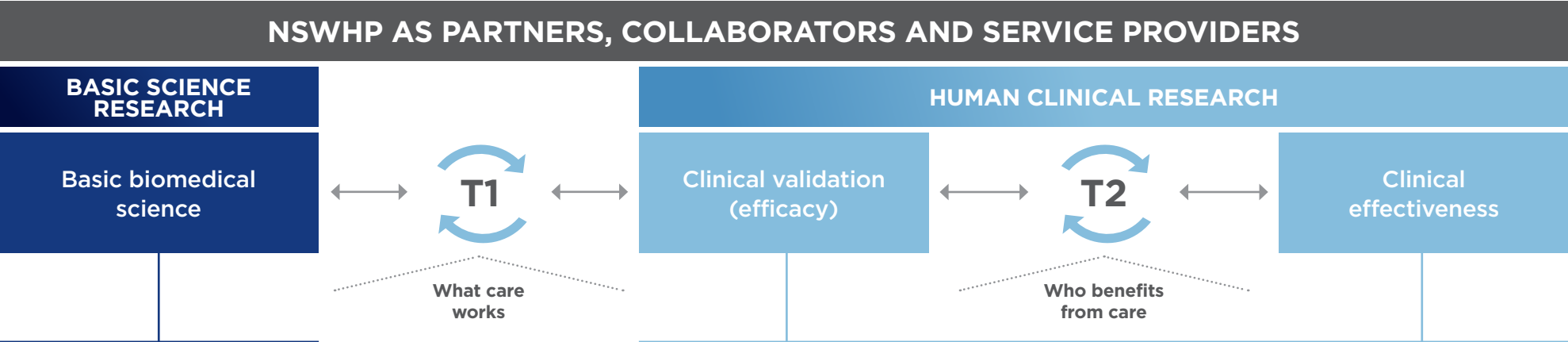


FINANCIAL MANAGEMENT

The receipt, investment and expenditure of funds used for research must comply with Accounts and audit determinations for Public Health Entities in NSW.

Figure 5. Excerpt from NSWHP's Research Governance Framework (NSWHP_CG_013)

Focus areas and flagships



OUR FOCUS AREA 1

1. Biomarker discovery

We acknowledge the significant contributions NSW Universities and Medical Research Institutes play in delivering advancements in basic science research.

We are committed to building strong partnerships that establish dedicated centres of excellence in **biomarker discovery**.

COLLABORATION AND SERVICES

We acknowledge the world leading clinical research, knowledge and expertise within NSW Local Health Districts. NSW public hospitals conduct and lead ground breaking research that needs to be supported and underpinned by an efficient, high quality pathology service.

We are committed to collaborating as investigators with our Local Health District, University and medical research colleagues on research projects to validate clinical efficacy.

Where we are not collaborating, we will support all research through the delivery of integrated research services:

- Statewide services for research
- NSW Health Statewide Biobank
- Data access



OUR FOCUS AREAS 2-6

2. Diagnostic tests (development and optimisation)

3. Technology evaluations (applications and replacement)

4. Innovative service models (quality improvement, surveillance and monitoring)

5. Evidence-based diagnostic pathways for decision making

6. Big data and data analytics (artificial intelligence and machine learning)

We acknowledge that as health service providers, our strengths lay in translating research outcomes into practice and through taking our learnings back to our Basic Science and Human Clinical Research partners.

We understand that to be leaders we must deliver value through shared investment in our areas of **strategic focus**.

FLAGSHIPS

Our flagship programs represent areas of strategic significance for NSW Health Pathology.

We commit ourselves to investing in opportunities and driving change together, with our communities across the following three programs:

- 1. Aboriginal and Torres Strait Islander health
- 2. Genomics
- 3. Point of Care

06

Indicators

What does research success look like?

INDICATORS

- More staff are publicly recognised as leaders in their fields and recipients of awards, grants and publications in health, justice and other government and industry programs.
- Increased involvement in dedicated centres for innovation and excellence in concert with LHDs, academy, industry and justice partners, that serve as effective hubs for collaborative research, education and simulation.
- Growth in the number of state-aligned and affiliated research priorities will increase and improve new practice changes and outcomes.

OUTPUTS

- NSWHP Research Strategy implemented by 2025
- NSWHP Research Governance Framework implemented by 2025
- 100% Turn-around time (TAT) <15 days for processing research projects through REGIS (Office Health and Medical Research target)
- Increase in research projects led by NSWHP people
- Increase in research projects of strategic focus including addressing Aboriginal and Torres Strait Islander health, safety and wellbeing
- Increase in research collaborations and publications in high impact, peer reviewed journals
- Reduced research complaints, misconduct investigations and reportable events



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07

Governance

The implementation of this Research Strategy requires leadership and contribution across all NSWHP portfolios.

Governance for this plan, and leadership for its implementation, lies with NSWHP's Board, who is ultimately responsible for ensuring processes and governance structures are set up to embody the principles of the Australian Code for the Responsible Conduct of Research (2018) including; honesty, rigour, transparency, fairness, respect, recognition, accountability and promotion.



Figure 7. NSWHP's governance structure for research

The Associate Director, Research has the responsibility to develop and support research across all of NSWHP. This position is responsible for ensuring both the Research Strategy as well as the Research Governance Framework are aligned with NSWHP's Strategic Plan – Towards 2025.

As outlined (Figure 7), Research Strategy and Operations report to NSWHP's Finance and Performance Board Sub-Committee via the Director of Clinical Operations. In order to achieve maximum results, implementation of the Research Strategy will be overseen by NSWHP's Research Advisory Committee (RAC), which has delegated responsibility for oversight and prioritisation of key initiatives.

Research Governance reports separately to NSWHP's Audit and Risk Management Committee via the Office of Chief Executive (OCE). Both Research Governance and Research Strategy report to the Board of Directors quarterly.

Contact us

We encourage you to contact us if you have questions about the Research Strategy:

Research support:

NSWPath-Research@health.nsw.gov.au

Research governance and ethics support:

NSWPath-RGO@health.nsw.gov.au

For further information visit

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