

**Submission
No 17**

**INQUIRY INTO CURRENT AND FUTURE PROVISION OF
HEALTH SERVICES IN THE SOUTH-WEST SYDNEY
GROWTH REGION**

Organisation: Western Sydney University

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WESTERN SYDNEY UNIVERSITY



Western Sydney University's submission to the Inquiry into the current and future provision of health services in the South-West Sydney Growth Region

Introduction

Western Sydney University (WSU) has a deep and impactful relationship across the South West Sydney Growth Region. This is primarily exercised through its Schools of Medicine, Nursing and Midwifery, Health Sciences and Psychology (including clinical psychology) and key research institutes (MARCS, NICM, THRI). Across these and other schools, WSU is educating the next generation of health practitioners, epidemiologists, health services researchers, and biomedical engineers and data scientists and addressing health challenges through research and innovation. The University's postgraduate offerings also support the needs to the community, including programs in Mental Health Nursing and Patient-Centred Diabetes Care and Education.

WSU works in partnership with other key institutions in the region, including the Local Health Districts, and has a very strong relationship with the South Western Sydney Local Health District (SWSLHD) exercised in both executive and operational domains. The key areas of overlap of interests have been in relation to:

- Health workforce planning and training;
- Improving healthcare outcomes through closer integration of academic research and clinical practice; and
- Building the capacity of the region, through the skills, knowledge job creation and investment in key infrastructure.

Western Sydney University has prepared a series of decadal strategies to promote discussion about community needs and highlight its current and future priorities. The University's health decadal plan, *Western Health* was launched in 2018 and outlines the need for:

- More medical training places for those likely to stay and practice medicine in the region;
- Increased numbers of nursing and midwifery students to allow and support population growth needs;
- Increased numbers of allied health and social workers able to support the health needs of the region, especially in the broader community; and
- Research infrastructure for Campbelltown hospital, Bankstown hospital, and in the Liverpool Innovation Precinct linked to the research teams at the Ingham Institute for Applied Medical Research (in partnership with SWSLHD).

The partnership between WSU and the SWSLHD has dramatically improved health care in South Western Sydney over the last decade and the future plan outlines our strong support for the investment that's been committed by the State Government and WSU in Campbelltown, Liverpool and Bankstown to support the growth region. A further decadal strategy, *Flight Path* was undertaken in 2019 outlining the University's strategy in relation to the Western Sydney Airport and its important links into two of the three 'Aerotropolis Edge cities' at Liverpool and Campbelltown.

The COVID-19 situation introduces very substantial challenges across South Western Sydney. The management and recovery phases of the pandemic will place extreme stress on the region. WSU and the SWSLHD remain committed and confident in their capacity to address these profound challenges, learn from them and continue to improve our partnership in service of the region's health and wellbeing.

TERMS OF REFERENCE

Western Sydney University responses

That Portfolio Committee No. 2 – Health inquire into and report into the current and future provision of health services in the South-West Sydney Growth Region, and in particular:

(a) an analysis of the planning systems and projections used by NSW Health in making provision for health services to meet the needs of population growth and new suburbs in the South-West Sydney Growth Region;

Projected workforce requirements have informed the Western Sydney University decadal health plan, *Western Health*, to train additional doctors, allied health workers, nurses and midwives, and psychologists. See: https://www.westernsydney.edu.au/data/assets/pdf_file/0006/1466682/VICE3148_Universitys_Decadal_Strategy_for_Health_v05_web3.pdf.

In undertaking its own planning, the University has drawn on several sources, including those of NSW Health. Across Western Sydney the following projections for workforce needs have been estimated to service the population growth from 1.9 million to 3 million:

	2018	2039
Medical Students	678	1,400
Nursing and Midwifery Students	4,677	9,400
Psychology and Allied Health students	6,573	13,200

The current WSU student presence by site in the South West Growth Region are:

- Bankstown: 564
- Liverpool: 1,170

- Campbelltown 1,049
- Camden: 278.

Further to undergraduate workforce training, the University is supporting evidence-in-practice through medical and health research capacity at Campbelltown, Liverpool and Bankstown, as well as through our connections in Parramatta, Westmead and Nepean. It is anticipated that the opportunity to quadruple WSU’s PhD student pipeline will feature in the economic growth of South Western Sydney.

WSU’s NICM Health Research Institute is working with South Western Sydney clinicians to further develop relevant clinical trials infrastructure. Furthermore, researchers across Schools and Institutes are engaged in undertaking clinical trials with across community and health/hospital partners.

(b) an analysis of capital and health services expenditure in the South-West Sydney Growth Region in comparison to population growth since 2011;

The University has sought to partner with SWSLHD in order to ‘boost’ the value of the NSW Government’s capital and health services expenditure across South-West Sydney, and specifically at Liverpool and Campbelltown.

WSU has contributed significantly to Campbelltown site via the Macarthur clinical School (\$12.5 million) opened in 2017, and has raised \$50 million – alongside partners UNSW, the Ingham Institute and the SWSLHD – for the proposed Macarthur Medical Research Centre.

WSU has invested in the Ingham Institute of Applied Medical Research at Liverpool and, with the co-investment of UNSW, attracted the \$56 million necessary to build phase one of the Ingham Institute (opened in 2011).

Capital expenditure, scale and policy alignments by WSU Campus in the South Western Sydney Growth Area:

Liverpool CBD Campus

Background

The University’s first Liverpool City Campus, the Ngara Ngura Building, commenced operations in 2018.

Scale

Ten storeys, 8,750sqm.

Composition

Almost 2,500 students, comprising 1,700 students of social work, anthropology, criminology and policing; and 750 nursing students. With close to 250 staff.

Investment level

\$120 million

Economic benefit

The campus is already generating more traffic and boosting business revenue in the local region. According to analysis by Deloitte Access Economics commissioned by WSU, the

University's presence in the CBDs of Liverpool and Bankstown is expected to provide upwards of \$90 million per annum in economic uplift.

SWSLHD integration

Approximately 750 nursing students have access to state-of-the-art new teaching laboratories, making it one of the most technologically-immersed nurse training facilities in the country and fitting for Australia's highest ranked Nursing school. Delivered in partnership with the South Western Sydney Local Health District and the Ingham Institute, partners within the Liverpool Innovation Precinct, these teaching labs provide the advanced infrastructure necessary to foster the growth of Western Sydney's leading health and education precinct.

Liverpool CBD Stage 2

Background

The University is seeking to progress a 'Stage 2' presence in Liverpool, adjacent to the hospital. NSW Health Infrastructure (HI) have committed \$740 million for the redevelopment of the Liverpool Innovation Precinct. This has created an opportunity for a health-focussed education and research hub to be developed within the Precinct, leveraging State Government's investment. Western Sydney University, South Western Sydney Local Health District (SWSLHD) and HI are leading investigations as to how to realise this hub, including partners Ingham Institute and other higher education providers (UNSW Sydney and the University of Tasmania).

Scale

Preliminary concept design – 22 storeys, 35,000sqm.

Composition

Up to 3000 additional students and health researchers within Liverpool CBD.

Investment level

Currently budgeted at a capital spend of almost \$330 million.

Partners

NSW Health Infrastructure, SWSLHD, Ingham Institute, UNSW Sydney and University of Tasmania.

SWSLHD integration

Connected to Liverpool Hospital, realisation of Liverpool Innovation Precinct masterplan The proposed new build provides an opportunity for education and research partners to collaborate and, attract talent, research and industry by establishing a building which provides economy of scale, connectivity and integration with the new Integrated Services Building through shared education, collaboration and socialisation spaces. By recognising this opportunity, the IIAMR, WSU and the SWSLHD have expressed a willingness to participate in the development of the ERH as a comprehensive integrated facility that fosters collaboration and translation in research and education. The ERH will facilitate connection between the partners including LHAP staff, local industry and the wider

community, giving it a secure foundation on which to build an integrated facility that is recognised both nationally and internationally.

Macarthur Medical Research Centre

Background

Western Sydney University, with its consortium partners including the South Western Sydney Local Health District (SWSLHD), NSW Government, UNSW Sydney and the Ingham Institute for Applied Medical Research, will bring together leading minds to embed research in the heart of the Macarthur Region through the construction of the Macarthur Medical Research Centre.

Scale

2-3 storeys, approximately 5000sqm.

Composition

Up to 150 researchers, contributing to more than 2000 knowledge workers in the Campbelltown Health and Education Precinct.

Investment level

Over \$50 million.

Partners

SWSLHD, Ingham, UNSW Sydney, Tharawal Aboriginal Corporation, South Western Sydney Primary Health Network and Diabetes Australia.

SWSLHD integration

South western Sydney is thriving with major hospital upgrades underway and plans for a new airport and train network, educational institutions, business and residential developments across our region. All of this brings opportunity, and I am excited about our collaboration with Western Sydney University and research partners as we transform Campbelltown Hospital into an international research precinct.

The new Macarthur Medical Research Centre will build upon our strengths in health and medical research, with optimal linkages between health, education and research.

Due for completion in 2022, the NSW Government investment of \$632 million for the new state-of-the-art tertiary hospital at Campbelltown, will see the integration of a range of adult and children's clinical services. The new hospital will also provide first-rate training grounds for our next generation of researchers and access to modern facilities and ground-breaking technology to care for more complex health conditions.

Research at the Campbelltown Health Precinct will focus on preventative health in the community consistent with the health needs of the local residents, with research themes including diabetes, mental health and paediatrics.

Bankstown City Campus

Background

The Bankstown City Campus project aims to increase the University's presence within the Bankstown CBD through a new vertical campus that will help transform the city centre, enhance the University's reputation, and provide for future University growth.

Scale

The area comprises a site of approximately 3,700m² between the Bankstown Library and the Canterbury Bankstown Council. The site is expected to support a 5-star Greenstar 19 storeys building development of around 28,000m² Gross Floor Area with basement car-parking and facilities.

Composition

Up to 12,000 students and 400 staff.

Investment level

\$250 million.

Economic benefit

The campus is already generating more traffic and boosting business revenue in the local region. According to analysis by Deloitte Access Economics commissioned by WSU, the University's presence in the CBDs of Liverpool and Bankstown is expected to provide upwards of \$90 million per annum in economic uplift.

Partners

Local communities, industry and business are set to benefit from the agreement, which will see the two universities' business incubator programs co-locate at the Western Sydney University's planned Bankstown CBD campus – helping unlock the potential for large scale start-up activity in the region and enhance its Industry 4.0 collaboration and digital transformation. This includes UTS occupying 700sqm.

(c) the need for and feasibility of a future hospital located in the South-West Sydney Growth Region to service the growing population as part of the Aerotropolis land use plan;

(d) an investigation into the availability and shortfall of mental, community and allied health services in the South-West Sydney Growth Region;

The University through its partnerships with the South Western Sydney Local Health District (SWSLHD) and the Macarthur Primary Health Network (PHN) has invested substantially in academic growth in the region.

Of particular note with regard to the new clinical services plan at Campbelltown the following demonstrate the strength of the partnership between the University and the district.

Mental Health: The academic unit at Campbelltown in Mental health (Professor Phillipa Hay, Senior Lecturer and team) have a prodigious, relevant research output which has informed substantial clinical translated outcomes in anorexia nervosa and other eating disorders.

Community Services:

- 1) General practice: professorial unit (endowed chair), clinical trial capacity in community medicine, clinical trials advancing clinical knowledge for the treatment of Aboriginal and Torres Strait Islander children with specific health conditions in urban areas;
- 2) Diabetes Care: professorial unit, additional senior clinical staff, multi-professional staff;
- 3) Aboriginal health;
- 4) Translational Research and Social Innovation (TReSI) Group (Director, Professor Lynn Kemp) and various TeEACH programs that grow regional early child development capacity and integrated service provisions, focusing on the voices of children and families as key stakeholders in health services;
- 5) MECOSH (a TeEACH program) that fosters maternal and infant health and wellbeing;
- 6) Allied Health: Podiatry Chair and research groups; Memory Clinic.

(e) a comparison of the per capita operational expenditure allocated for the health services and hospitals between the South-West Sydney Growth Region and other local health districts across metropolitan Sydney since 2011;

The University does not have any comments in regard to this criteria.

(f) a comparison of the staffing allocations at health services and hospitals between the South-West Sydney Growth Region and other local health districts across metropolitan Sydney since 2011;

A substantial aspect of WSU's contribution to South Western Sydney, has been its co-founding of senior positions to support academic medicine, nursing, midwifery and allied health (including Clinical Psychology). The current academic units co-founded between the LHD and the WSU include:

Medicine

- Diabetes
- Medicine
- Surgery
- Obstetrics and Gynaecology
- Paediatrics
- Mental Health.

The attraction of medical graduates to the region has been very positive, with up to 70 per cent of medical graduates undertaking the early years of their postgraduate work in Western Sydney including Liverpool, Bankstown and Campbelltown Hospitals.

Nursing and Midwifery

The Centre for Applied Nursing Research (CANR) – a partnership between WSU and SWSLHD – has been particularly successful across South Western Sydney in linking nurse academics with clinicians conducts translational research in areas including:

- Patient Safety and Quality
- Chronic and Complex Care

- Multicultural Health and Health Literacy
- Nursing Education and Workforce.

The Translational Research and Social Innovation group located at the Ingham Institute and situated with the WSU School of Nursing and Midwifery undertakes research on understanding the processes for community-based delivery to whole populations at scale. Currently TReSI's work is focused on early childhood services and developing research methods and frameworks for translational research.

Programs include:

- Sustained nurse home visiting for culturally and linguistically diverse families with limited English language proficiency;
- Maternal Early Childhood Sustained Home-visiting (MESCH) Program.

The Centre for Oral Health Outcomes and Research Translation (COHORT) a partnership between WSU and SWSLHD, focuses on interdisciplinary oral health and capacity building and training non-oral health professionals and undergraduate students in providing oral health education, screening and referrals to their patients.

MARCS Institute for Brain, Behaviour and Development

Joint position between MARCS Institute for Brain, Behaviour and Development and Liverpool Hospital: Biomedical Engineer in Residence: rapid translation of biomedical engineering and medtech solutions to clinical need; for example:

- Smart Glove: customised sensors to support training in robotic surgery (Liu);
- Wearables for rapid, accurate, non-invasive recording of heart volume and respiration in range of settings including cardiovascular, sleep disorders, foetal monitoring (Breen & Gargiulo).
- Assessment tools for speech perception and production designed and normed for Australian settings including culturally and linguistic diverse populations and involving SWSLHD Allied Health-Speech Pathology, TreSI and THARAWAL (Jones).
- Applying VR combined with cognitive-behaviour therapy to support cancer pain (Chuan & Bogdanovych).

Allied Health

- Podiatry
- Evidence-based integrative medicine services through NICM Health Research Institute's collaboration with Liverpool Hospital Cancer Wellness Centre.

Clinical Psychology

The plans for future clinical academic units are aligned to the

- 1) Clinical services plan for the new building at Campbelltown;
- 2) The growth plans at Liverpool (co-investment in cancer research and services);
- 3) The Bankstown Hospital: clinical dean and surgical academic support;
- 4) The Fairfield hospital, Obstetric academic contribution.

These units are decided by close consultation between the relevant School Dean from WSU and the clinical service planners of the SWSLHD, and its broader health service community.

These units provide data to improve clinical service provision locally, and to build a culture of excellence to attract talent to the region.

(g) an investigation into the health workforce planning needs of the South-West Sydney Growth Region to accommodate population growth to 2050;

The WSU decadal health plan, *Western Health*, has identified workforce needs as above and a desire to be the preferred institution of choice in the region to provide the necessary health workforce. See:

https://www.westernsydney.edu.au/data/assets/pdf_file/0006/1466682/VICE3148_University_Decadal_Strategy_for_Health_v05_web3.pdf

(h) a review of preventative health strategies and their effectiveness South-West Sydney Growth Region since 2011 and the required increase in funding to deal with childhood obesity;

WSU has contributed to the preventative strategies in the region via its paediatric training in Schools program, delivered to medical students as part of the paediatric curriculum. The School of Medicine also engages significant training in local general practices where the main focus of preventative health is taken at the clinical interface. Professor David Simmons (Medicine) has worked very closely with the Juvenile Diabetes Research Foundation (JDRF) to develop local strategies for Type I Diabetes affected children in the region.

There is a unique program in the South West growth region provided to WSU Medical Students learning about Medicine in the community where learning objectives are to identify early practice issues before tertiary care of high risk and vulnerable individuals is required.

TReSI: Maternal Early Childhood Sustained Home Visiting (MECSH). This program of work has a significant national and international footprint, not only because of the positive impacts the MECSH program is having in the lives of the vulnerable families who receive the program, but also because of the ways in which this program influences system change and integrated ways of working amongst health professionals.

(i) a comparison of clinical outcomes for patients in the South-West Sydney Growth Region compared to other local health districts across metropolitan Sydney since 2011, and;

Western Sydney University has a strong and enduring partnership with the health services of South Western Sydney, including across the undertaking of locally relevant research to improve patients outcomes. This was recently demonstrated at the Campbelltown Hospital Research Showcase, which shared research across clinical trials, health services research and service improvement in both hospital and primary health care settings. This event also highlighted the integration and benefits of student research.

Examples of academic contribution to improved outcomes in the region can be provided:

- Decrease in diabetes ketoacidosis (diabetic coma) rates related to case management and drug and alcohol awareness (Hennessy, Grunstein, and Ganda 2011);

- Decrease in the post-delivery seizure rate in women in Campbelltown (Thornton et al 2016; Hennessy);
- Decrease in AKI rate in maternity at Liverpool hospital Thornton et al 2016, Makris);
- Decrease in congenital cardiac anomaly risk in pre-existing diabetes at Campbelltown Hospital (Simmons)***paper in preparation;
- Decrease in neonatal intensive care unit admission for neonatal hypoglycemia in women with diabetes in pregnancy requiring elective section in late pregnancy (Simmons);
- Improvement in kidney function among people with diabetes attending the Wollondilly Diabetes Program community diabetes clinic (Simmons)***paper in preparation;
- Decrease in diabetes and diabetes complication risk among Samoans participating in a church-based program (Simmons);
- Increased uptake of hospital nurse diabetes education at Campbelltown Hospital (Simmons)***paper in preparation;
- Facilitated the introduction of a rapid ethics waiver process for quality projects (Simmons);
- Facilitated the introduction of OzDAFNE, a structured patient education and empowerment program for type 1 diabetes across SWSLHD (Simmons);
- Introduced a district-wide primary health care professional diabetes education program (Simmons);
- Provided access to new drug treatments for allergy in the Campbelltown region (Katelaris);
- Assessed chronic lung disease in the setting of heart attacks (Cochrane);
- Optimised care for local residents with anorexia nervosa including acute care pathways (Hay);
- Optimised care for children with congenital heart disease and expanded neo-natal diagnostic services (Whitehall);
- Optimised small volume highly complex abdominal surgical care (Merrett);
- Improved cancer care for colo-rectal surgery (Bokey);
- Access to new medicines in management of vascular dementia – Phase III study currently underway (Chang);
- Improved medicinal cannabis prescribing and research (Sinclair);
- Improved management of endometriosis (Armour, Abbott);
- Access to new drugs for prostate cancer Phase 1 clinical trials at Liverpool (De Souza);
- Improved instrument cleaning and reduced infection in hospitals (McCaffery, Gosbell);
- Enhanced pathology research, especially in the oncology domain (Lee);
- Development of a comprehensive early management Memory Clinic (Steiner).

(j) and other related matters;

WSU has significant academic health interests in other sectors of Western Sydney, notably Blacktown (medicine), Nepean (nursing and allied health), Mt Drutt (medicine), Westmead (nursing, midwifery medicine, integrative medicine) which are used to expand the option in

training for students, provide research and teacher training for local clinicians, and to provide research options to both. These local presences and experiences provide a benchmark for our activity in the South West Grow Region.