

Clinical Services Strategy

2017 — 2018

A Year in Review



ST VINCENT'S
HEALTH NETWORK
SYDNEY

Year in Review



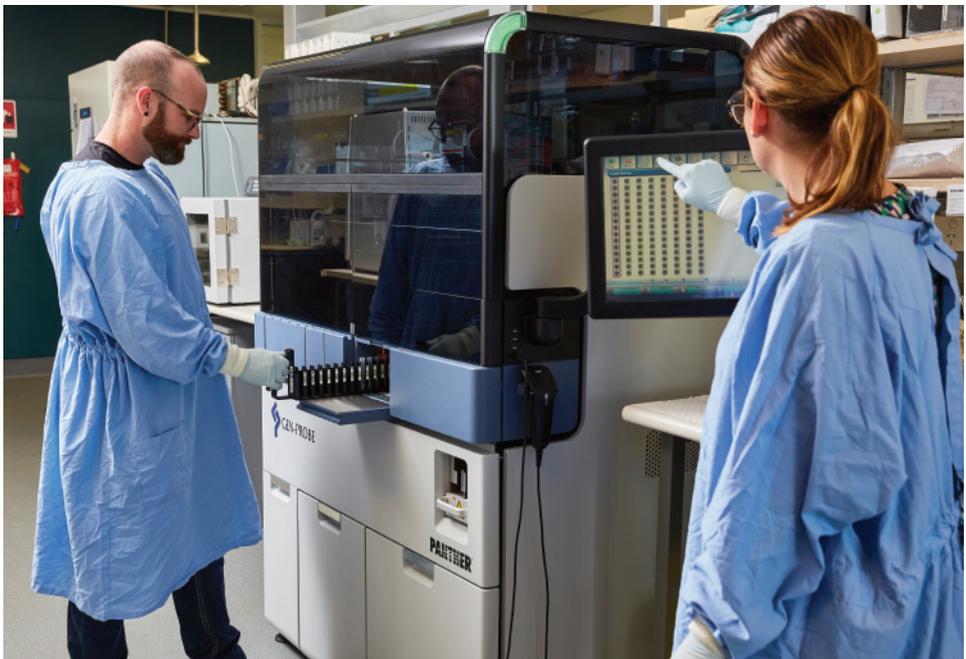
Foreword by A/Prof Anthony Schembri
Chief Executive Officer

In May 2017, the Hon. Brad Hazzard MP, Minister for Health and Minister for Medical Research, launched the St Vincent's Healthcare Integrated Campus Clinical Services Strategy. Throughout the year, we have been busy working with our partners to bring our Clinical Services Strategy to life. The Clinical Services Strategy focuses on six Strategic Commitments.

Be it the rapid growth in our precision healthcare endeavours such as theronostic treatment for prostate cancer, our growing inclusive health programs to better care for the vulnerable, or our new telehealth clinics that are improving health access for regional patients to innovative models of care

promoting better value care. The more we work to bring our Clinical Services Strategy to life, the better we are able to serve our growing communities – not only for the local residents of Eastern Sydney, but extending to our strategic health service partnerships in Murrumbidgee and beyond for our tertiary referral and state-wide services in areas such as heart/lung, bone marrow transplantation, prostate cancer and other cancers.

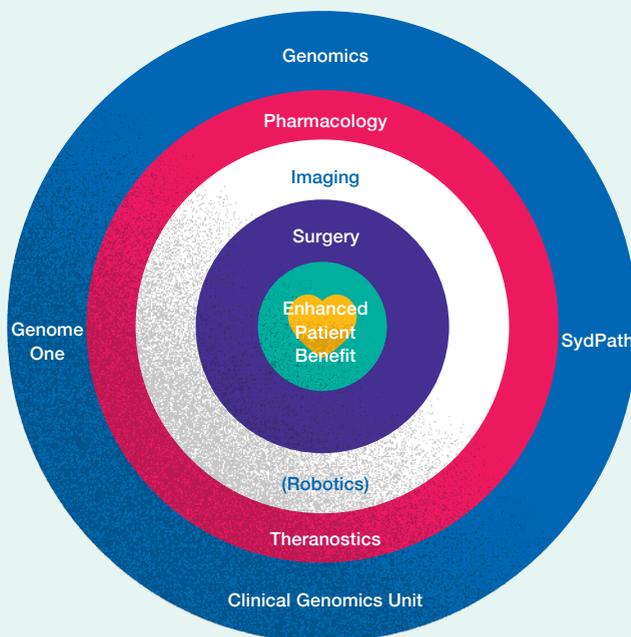
In the next twelve months, we will be working closely with our government, philanthropic and affiliated research and teaching partners to commence the detailed planning work for both the Cahill Cater and West St Clinical and Research Capital Developments, as well as priority works in intensive care and heart lung ambulatory services to ensure we have the right physical infrastructure to support this exciting strategy.



Precision Medicine

Strategic Commitment 1

St Vincent's Precision Healthcare



Over the past year, St Vincent's precision medicine capability has continued to grow through leading research and innovative clinical service models.

Australian Genomic Cancer Medicine Program

The Kinghorn Cancer Centre-based Genomic Cancer Medicine Program is set to expand nationally following receipt of the largest ever genomics grant in Australia. In July 2018, the Federal Government announced \$50 million in funds to expand the program nationally over the next five years. This funding will enable patients based in other states to access Garvan-led genomic cancer medicine clinical trials for early onset, advanced, rare or less common cancers.

Currently the Molecular Screening and Therapeutics (MoST) study conducted at the Kinghorn Cancer Centre conducts genome sequencing on patients to help discern the underlying cause of their cancer and guide treatment accordingly.

St Vincent's Clinical Genomics Unit

St Vincent's Hospital continues to offer general and subspecialty genomics consultations, testing and case management through its Clinical Genomics Unit (CGU). Established in 2016, and leveraging campus expertise in clinical genomics, the CGU provides ongoing multidisciplinary service to patients in the following specialties: cardiology, neurology, vascular medicine, endocrinology, immunology and rheumatology.

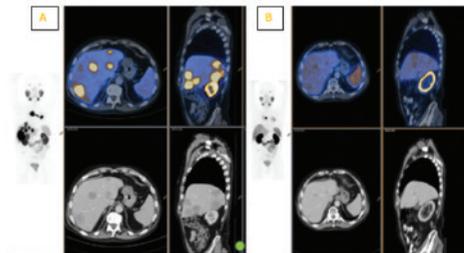
In 2018 the Unit has continued to expand its resources and capacity to provide additional services to patients in other specialty areas. This includes Mental Health and Addiction Medicine. One particularly innovative service that the Unit strives to provide is pharmacogenomics testing, to predict individual patients' response to a wide range of medications. The Unit will play an ongoing pivotal role in the applications of clinical genomics to inform precision healthcare at St Vincent's.

Strategic Commitment 1 Cont.

Department of Theranostics and Nuclear Medicine

The Department of Theranostics and Nuclear Medicine has been established within St Vincent's Public Hospital in response to technological and scientific innovations, placing it firmly in the realm of Precision Medicine.

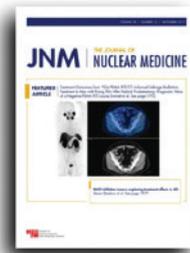
Thera/Nostics is a compound word of Therapy and Diagnostics and describes a key component of nuclear medicine, which is small peptides that have been developed to bind tightly to cell surface proteins that then get transported into the (cancer) cell. These peptides can be used for either diagnosis (PET) or therapy dependent on the type of radionuclide they get labeled to.



Above: A PSMA PET prior to LuPSMA therapy showing multiple metastases in liver and lymph nodes with a high PSA 350ng/mL. B. After 4 cycles LuPSMA therapy the liver metastases and almost all lymph nodes have entirely gone with PSA drop down to 1.5ng/mL.

By directly targeting the cancer cells with imaging, and then for therapy, theranostics embodies the philosophy of Precision Medicine. This will be supported by planning commenced to introduce Digital PET/CT technology at St Vincent's Hospital.

St Vincent's Department of Theranostics and Nuclear Medicine is currently undertaking a number of trials which deliver doses of targeted radiation to prostate cancer patients.



Left: Cover Image and Featured Article in Journal of Nuclear Medicine, December 2017: Treatment Outcomes from 68Ga-PSMA PET/CT-Informed Salvage Radiation Treatment in Men with Rising PSA After Radical Prostatectomy: Prognostic Value of a Negative PSMA PET. Louise Emmett et al.

In 2018, a \$3.75 million translational Program Grant was received from the Cancer Institute NSW to support the prostate cancer program. The grant, involving researchers from the Garvan Institute of Medical Research, the St Vincent's Theranostics Department and clinicians at the Kinghorn Cancer Centre will help support future and ongoing expertise in theranostics and precision medicine.

Neurology and Medical Imaging

Installation has commenced for an MRI guided ultrasound (MRgFUS) to improve diagnostic capability for neurological disorders and provide non-invasive therapy for certain disabling neurological tremors. MRgFUS is a technology platform allowing incision-less stereotactic brain intervention. Its primary application is for treatment of essential tremor and can replace standard care (deep brain stimulation surgery). The technology has advantages over DBS including: no skin incision, no craniotomy, no instruments passed into the brain (therefore much lower risk of complications including intracerebral haemorrhage or infection) and faster patient recovery time with shorter length of hospital stay. The procedure is also faster and less costly than DBS and does not require implanted prostheses with ongoing replacement costs.

New ambulatory models of integrated care

Strategic Commitment 2

In late 2017, St Vincent's submitted its plan for the Cahill Cater redevelopment project to the Ministry of Health. The project describes a strategy to respond to future demand, and embraces innovative care models, particularly in core services including Heart and Lung, Mental Health, and Drug and Alcohol.

Across its clinical portfolio, the Darlinghurst campus will also forge new services which embrace precision healthcare and genomics, virtual care and integrated ambulatory service models.

The Cahill Cater project will enable the introduction of new integrated models of

ambulatory care that will reduce inpatient treatment and increase treatment capacity. Importantly, it will house the new Heart Lung Vascular Institute as well as further expansion of the delivery of virtual care, providing patients in rural and regional locations greater access to leading health services.

The Cahill Cater project includes a dedicated Heart-Lung-Vascular Ambulatory Care Centre, and a Central Infusions and Medical Ambulatory Care Centre, and seeks to maximize opportunities stemming from the co-location of St Vincent's Private by creating a common zone of core clinical services. This will improve patient access to coordinated, specialist interdisciplinary teams – fully integrated with primary care with the central objective of treating the whole person.



Telehealth and Virtual Care

Strategic Commitment 3

Telehealth

St Vincent's is leading the way in providing digitally enabled, patient directed healthcare that allows patients to access services and information in a simple, effective and timely manner.

The cost to society of lost economic productivity due to ill health is substantial. We also know that the requirement to travel for appointments is inconvenient for patients and carers, further reducing economic productivity and leads to poorer access to care and worse outcomes. A core focus of the Cahill Cater redevelopment is the introduction of virtual care delivery, which will allow patients to receive treatment from any location that is convenient for them. Based on travel times alone, this will reduce productive hours lost to healthcare provision by 674,000, which equates to \$29.6 million over the 10-year period and \$9.8 million in travel associated costs.

Over the last year, St Vincent's has worked to provide an enhanced consumer telehealth experience, by improving the digital platform, creating a dedicated St Vincent's telehealth website, providing consumer resources, and enabling provider-to-provider virtual services.

Our telehealth and virtual care services provide patients a choice, when clinically appropriate, to be seen face-to-face or virtually. For rural and remote patients, this option assists to reduce the burden and cost of travelling to Darlinghurst, and improves care through better coordination across specialist and primary healthcare settings.

Telehealth and virtual care services can be clinical (i.e patient – provider consultations) or non-clinical (i.e education, meetings, MDT, mentoring, case conferences etc). Non-clinical telehealth service delivery is improving relationships between our specialists and primary healthcare providers, enabling primary healthcare providers to be educated on appropriate follow-up care, and increases the reach of our health care services.

The St Vincent's Darlinghurst Cancer Service has led the way in establishing patient to provider telehealth solutions, and has had a positive impact on our patients and their carers. Some recent feedback received from consumers includes:

- "Save travel time big time – we were going to drive for 4-5 hours for a single appointment"
- "We are really happy to have access to your telehealth service. Getting to appointments takes a lot out of my dad and also me" (carer)
- "It is very easy to use, great that I can have it on my phone too" (clinician)
- "Improved my relationships with the GP" (clinician)

St Vincent's has expanded its telehealth services to include the following services (active telehealth clinics):

- Head and Neck Clinic
- Diabetes and Endocrinology
- Neurology – Stroke Department
- IBAC Unit (Infectious Diseases)
- IBD Clinic
- Gastro Department
- Drug and Alcohol + Clinical Pharmacology & Toxicology
- Cancer Services – Clinical Trials
- Cancer Services
- Renal Ambulatory Care
- Psychogeriatric – Older peoples mental health
- Cancer Services – Lung Cancer Clinic
- Cancer Services – Medical Oncology
- Cancer Services – Haematology
- Pain Medicine Department
- SVHS Speech Pathology
- Heart & Lung Transplantation Clinic

Further, we have plans to introduce active telehealth clinics to the following departments / services:

- MND clinic – St Joseph’s Hospital
- Plastic Surgery Department
- Sacred Heart Palliative Care Department
- Rheumatology Department
- HITH
- Video conferencing at ED
- Day Procedure Centre
- Mental Health Service
- Speech Pathology – St Joseph’s Hospital
- Cancer Services – Radical Oncology
- Community Department
- Dermatology Department
- Geriatric Medicine Department
- Neurosurgery Department
- Orthopaedic Department
- Parkinson’s Disease Clinic
- Rehabilitation Services
- Social Work Department
- Upper Gastrointestinal and General Surgery Department
- Video conferencing at Anaesthetic Department



- Urology Department
- Vascular Surgery Department
- Wound Care
- Video conferencing at Medical Imaging
- Video conferencing at Nutrition-Dietetics
- Video conferencing at Occupational Therapy
- Video conferencing at Pharmacy
- Video conferencing at Physiotherapy Department
- Video conferencing at Psychology Department

Innovating to alleviate pain with VR – Samsung Partnership

Virtual Reality (VR) applications have been explored as ways to manage pain for children and adults. They have been used following trauma, for procedures and dressing changes, and for those living in persistent pain. The content is often guided imagery and is designed for the purpose of distraction, creating positive emotions associated with resilience and defocusing the patients’ mind from pain perceptions.

In collaboration with Samsung, St Vincent’s is undertaking a detailed randomised controlled study that would represent the first of its kind in Australia, and may lead to commercialisation opportunities and translatable use in the hospital population. The trial will utilise Samsung smartphones and virtual reality head-sets to explore their potential as a treatment method for acute pain, taking into account potential side effects, cost-efficiency, and the ability to reduce the risk of opioid dependency.

Heart Lung Vascular Centre of Excellence

Strategic Commitment 4

The St Vincent's Heart lung Vascular (HLV) Centre of Excellence (CoE) builds on the Campus' existing world leading specialties of Cardiology, Thoracic Medicine, Cardiothoracic Surgery, Vascular Medicine, Vascular Surgery and Heart and Lung Transplant services to treat and manage patients with highly complex and debilitating conditions, and drive innovation and translational research across the Campus.

Over the last year, St Vincent's has developed a Transformation Program and Roadmap which directs an ambitious program of work for Heart Lung Vascular services, identifying key priority initiatives to grow our referral networks, optimise our case mix and volume of services, expand our highly skilled workforce and continue to lead innovation.

St Vincent's has a long history of delivering the hallmarks of a Centre of Excellence, evidenced by unsurpassed patient outcomes, internationally recognised translational research and innovation and acclaimed training programs. The St Vincent's Darlinghurst Heart Lung Vascular Centre of Excellence will bring together the expertise of our Public, Private and Research

Divisions, and strengthen our commitment to Mission through the delivery of superior clinical and patient experience, as well as serving and advocating for the poor and vulnerable through enhancements to new and existing services and models of care.

Included in the Centre of Excellence Transformation Program are a number of projects already well underway. Stage 1 of the HLV CoE saw the consolidation of the public and private interventional cardiology services on the St Vincent's Campus under a single governance structure, which was completed in 2017. This consolidation has seen a strong improvement in efficiency of our services, and will be further enhanced by the Advanced Cardiac Imaging centre, due for completion in 2018.

The Advanced Cardiac Imaging Centre is a key component of the plan to maintain our world leading position in cardiovascular service provision, and provides for dedicated cardiac CT and MRI services. CT Coronary Angiography (CTCA) plays an integral role in the management of our patients. It is particularly critical in our chest pain evaluation pathway, allowing rapid 'rule out' of significant coronary artery disease and early discharge of our patients with low-intermediate risk chest pain presenting to the Emergency Department.

This use of CTCA prevents unnecessary admissions, freeing up precious bed days for our patients with significant cardiac problems and saving unnecessary and expensive investigations. Cardiac MRI is the 'gold standard' technique for diagnosing all types of abnormalities of the heart tissue. The variety of these disorders of heart tissue is immense, but common examples include acute inflammation, infection, fibrosis, cardiomyopathies, arrhythmogenic diseases, infiltrative diseases, tumours and congenital heart diseases.



Advocating and delivery of services to the poor and vulnerable

Strategic Commitment 5

St Vincent's has a long and proud history of advocating for and delivering services to the poor and vulnerable in the spirit of Mary Aikenhead and the Sisters of Charity.

In the latter half of 2018, St Vincent's has begun development of a comprehensive Mental Health Services Plan for the St Vincent's Integrated Healthcare Campus, grounded in the Darlinghurst Integrated Healthcare Campus Clinical Services Strategy. This Plan has seen the convergence of St Vincent's Darlinghurst Campus Partners to agree to a strong future vision for mental health services, by providing accessible, responsive and personalised services to meet the mental and physical health needs of our population when they or their loved one experience, or are at risk of experiencing a mental health problem.

This means that we will provide person-led services that meet the needs of our population, ensuring the coordination and integration with other health and care services and translate world-leading research into our clinical practice.

Some of the priorities discussed in the Plan include bringing together partners through shared investments to enhance service provision, coordinated education programs to provide for progression pathways for clinicians, facilitate better access to services, driving innovation through precision medicine, and enhancing the community services we provide.

Inclusive Health Program

It was the vision of our founder Mary Aikenhead to give to the poor for love, what the rich can buy for money. This commitment has continued in the enVision 2025 strategic plan of St Vincent's Health Australia and the St Vincent's Health Network Sydney Clinical Services Strategy.



The Board of St Vincent's Health Australia make resources available to spur service innovation, research and advocacy projects for vulnerable people, through the Inclusive Health Program. These very valuable resources allow St Vincent's staff to seek better ways to respond, particularly to the needs of people who are: Aboriginal and Torres Strait Islanders; in contact with the criminal justice system; experiencing homelessness, addiction or mental health problems. Some projects have also focused on the needs of people experiencing domestic and family violence and elder abuse, as well as refugees and asylum seekers.

To date, the Inclusive Health Innovation Fund has enabled significant projects to get started, such as: identifying and responding to people experiencing domestic violence in the emergency department; a lawyer has joined our team to respond to elder abuse; we are seeking to better understand the sources of alcohol related harm and the ways in which we are interacting with people soon after they leave prison, just to name a few.

St Vincent's has a very strong tradition of finding better ways of responding to the needs of vulnerable people. As an organisation we look forward to working with our community partners to develop even more integrated ways to support people who need our assistance.

Cost effective models of care

Strategic Commitment 6

Integration of the Cardiac Cath Labs

Ensuring the efficient delivery of best practice models of care across the Campus and appropriate clinical outcomes has been a strong commitment for St Vincent's, and throughout the past year, St Vincent's has seen the transition of separately managed cardiac cath labs, and the integration of the cath labs, managed by the public hospital.

The integration of the St Vincent's Public and Private Cardiac catheterisation Labs has enhanced our ability to provide cost effective and best practice care. Following a tender process, St Vincent's Public Hospital took over the management of services for both public and private hospitals.

Campus integration of the interventional cardiology services and model of care has benefited our patients, improved the quality and efficiency of the service, supported world class service delivery, positioned the Darlinghurst campus to meet forecast growth and reduced the risk of diminishing market share for both public and private organisations and will support our well established teaching, training and research activities.

Economic Impact of Integrated Ambulatory Models of Care in the Cahill Cater Redevelopment Project

The future of healthcare will be based largely on ambulatory and mobile clinical care delivery that is designed around the specific needs of individual patients. St Vincent's is therefore building an integrated ambulatory care centre (through the Cahill Cater project) that will offer personalised precision medicine, virtual and mobile healthcare with remote monitoring for rural patients and day procedure facilities.

Analysis by Deloitte shows that this new facility will drive more cost effective and safer models of clinical care that will save the state almost \$1billion over the thirty year life of the facility. If this integrated ambulatory care approach being developed by St Vincent's were applied across all of NSW, the savings to the health budget and improvements in economic productivity for the State would total tens of billions of dollars over a thirty year period.

Leading Better Value Care

St Vincent's Health Network has partnered with the NSW Ministry of Health and the NSW Agency for Clinical Improvement to implement the Leading Better Value Care (LBVC) strategy across the Network. LBVC aims to transform the health care system to ensure a positive impact on the health and experience of care of patients. The goal of LBVC is to focus on patients through adopting a patient experience and health outcomes approach, creating future system capacity through efficient and effective care and services. In 2017/18 SVHN has implemented the following LBVC initiatives:

- Renal Supportive Care – a program that is embedded in renal care and encompasses advance care planning and end-of-life care
- Osteoporosis Refracture Program – effective management for people with osteoporosis who have experienced a minimal trauma fracture



Above: Artist concept render of Cahill Cater

Deloitte's Estimated Statewide Benefits

\$382m

St Vincent's
Total Savings

\$3.8b

NSW Health
High Value Pathways

\$15b

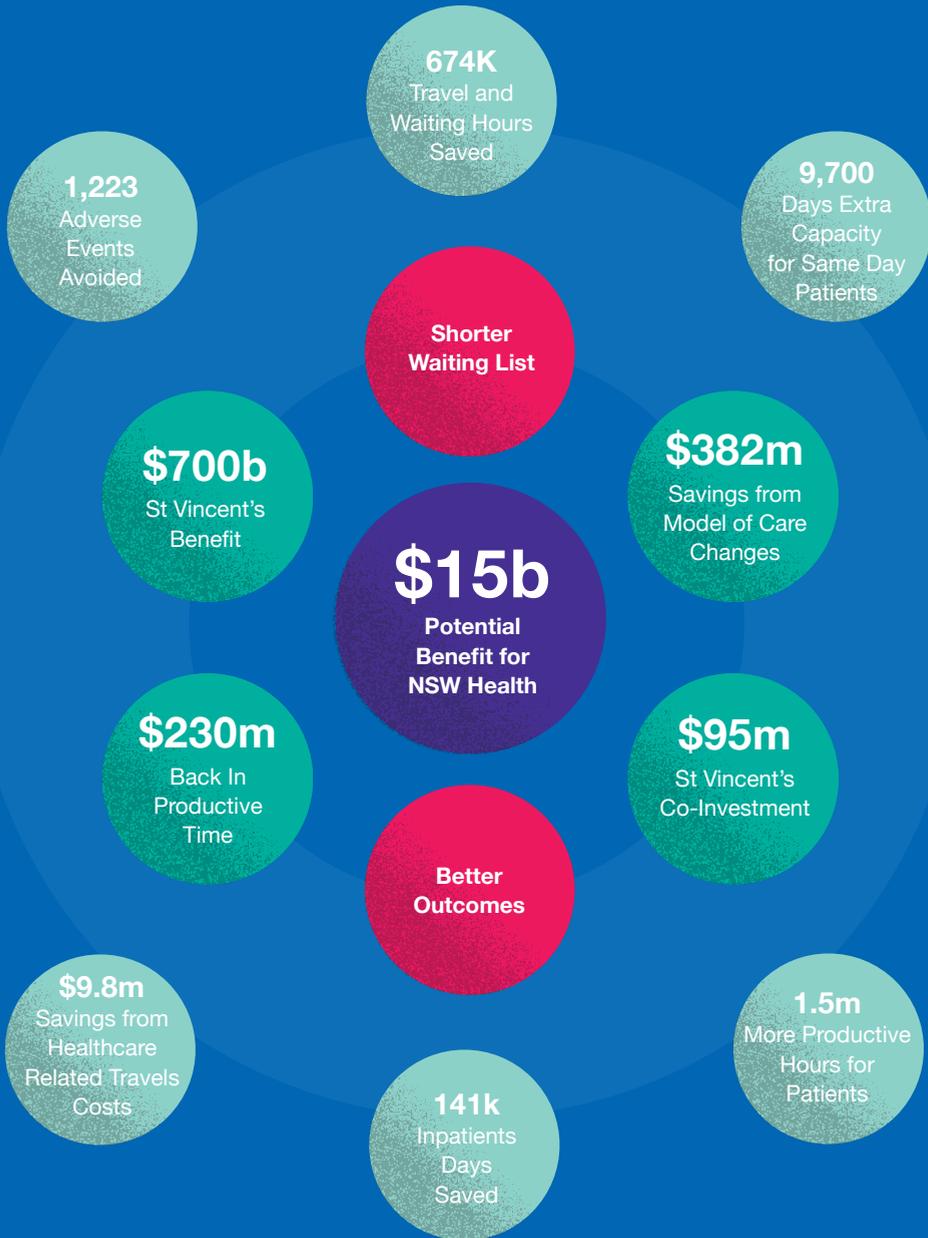
Potential Benefits
for NSW Health

Economic Impact of a New Model of Integrated Ambulatory Care at the Cahill Cater Redevelopment, April 2018, Deloitte.

- Osteoarthritis Chronic Care Program – implementation of a lifestyle program for patients with osteoarthritis
- High Risk Foot Service – specialised and coordinated multidisciplinary management of patients at high risk of foot complications and amputations associated with diabetes
- Chronic Obstructive Pulmonary Disease – improved management of people aged 40 years and older, admitted to hospital with a primary diagnosis of chronic obstructive pulmonary disease
- Cardiac Heart Failure – improved management of people aged 18 years and over admitted to hospital with a primary diagnosis of chronic heart failure
- Inpatient Diabetes – implement best practice strategies for in-hospital care of people with diabetes requiring insulin

- Falls in Hospital – a project to reduce the incidence and severity of falls for those in hospital aged 70 years

In the last quarter of the financial year, a number of the projects have trialled Patient-Reported Outcome Measures (PROMs). PROMs are questionnaires patients complete and that tell us how our health services and interventions have, over time, affected their quality of life, daily functioning, symptom severity, and other dimensions of health which only patients can know. PROMs fill an essential gap in our knowledge in whether healthcare interventions actually make a difference to people's lives. The ACI will provide further infrastructure and support to drive the PROMs strategy which will further enable us to drive quality improvement that brings patients' voices and outcomes to the forefront.



Deloitte's Estimated Statewide Benefits

Economic Impact of a New Model of Integrated Ambulatory Care at the Cahill Cater Redevelopment, April 2018, Deloitte.

Cost Effective Models of Care Cont.

The key sources of savings are:

- Lower cost ambulatory models of care rather than inpatient care
- Reductions in length of stay
- Reductions in adverse events for patients associated with inpatient stay
- Economic benefits stemming from the reduction in days off work enabled by virtual care appointments and remote monitoring
- Increased day case rather than overnight procedures
- Increased use of the MBS to fund services currently funded by the state budget.

Speech therapist led clinics

The Speech Therapy service in partnership with the Medical Imaging Department has established a new model of care involving Speech Pathologist led Video fluoroscopic Swallow Studies (VFSS). VFSS is a radiological procedure led by the speech pathologists to objectively evaluate the oropharyngeal swallow. This change has resulted in improved service for patients by reducing waiting times and reducing excess clinical time for the speech pathologist waiting for medical input into the study.



Integrated Ambulatory Care and Precision Outpatients Strategy

St Vincent's Health Network Sydney (SVHNS) provides outpatient services through 160 clinics across our seven clinical streams. The Clinical Services Strategy outlines a goal to reduce unnecessary use of hospital services and where possible provide care in an ambulatory setting.

The aim of this program of work is to:

- Develop the Integrated Ambulatory Care Plan
- Establish Precision Outpatients, a service improvement initiative adding value to patient and the hospital through sustainable, safe, efficient and cost effective specialist outpatient services.
- Drive efficiencies through improved models of care
- Improve the experience for patients, clinicians and staff working in outpatients

The Integrated Ambulatory Care & Precision Outpatients Implementation Strategy involves four enablers including:

- Strengthened Outpatient Governance and Performance Management
- Integrated Ambulatory Care Planning
- Precision Outpatients
- Alternate Models of Care

To date a Profitability Analysis of Outpatient Clinics has been completed and individual clinic data is being validated with clinicians. This project involved consultation with over 100 stakeholders.







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