THE NEW FRONTIER OF HEALTHCARE

Western Sydney Integrated Care Demonstrator 2014-2017
# CONTENTS

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>FOREWORD</td>
</tr>
<tr>
<td>06</td>
<td>EXECUTIVE SUMMARY</td>
</tr>
<tr>
<td>09</td>
<td>WESTERN SYDNEY</td>
</tr>
<tr>
<td>11</td>
<td>ABOUT WESTERN SYDNEY LOCAL HEALTH DISTRICT</td>
</tr>
<tr>
<td>11</td>
<td>ABOUT WESTERN SYDNEY PRIMARY HEALTH NETWORK</td>
</tr>
<tr>
<td>11</td>
<td>OUR COMMUNITY</td>
</tr>
<tr>
<td>12</td>
<td>BURDEN OF DISEASE</td>
</tr>
<tr>
<td>16</td>
<td>WESTERN SYDNEY INTEGRATED CARE PROGRAM</td>
</tr>
<tr>
<td>16</td>
<td>OVERVIEW</td>
</tr>
<tr>
<td>16</td>
<td>OBJECTIVES</td>
</tr>
<tr>
<td>16</td>
<td>TACTICS</td>
</tr>
<tr>
<td>16</td>
<td>MODEL OF CARE</td>
</tr>
<tr>
<td>16</td>
<td>PATIENT SELECTION, ENROLMENT AND RISK STRATIFICATION</td>
</tr>
<tr>
<td>16</td>
<td>INTEGRATED PRIMARY CARE MANAGEMENT</td>
</tr>
<tr>
<td>16</td>
<td>WSLHD CARE FACILITATORS</td>
</tr>
<tr>
<td>16</td>
<td>DYNAMIC SHARED CARE PLAN</td>
</tr>
<tr>
<td>16</td>
<td>SUPPORTING GPs</td>
</tr>
<tr>
<td>16</td>
<td>RAPID ACCESS AND STABILISATION SERVICES</td>
</tr>
<tr>
<td>16</td>
<td>SPECIALIST SERVICES</td>
</tr>
<tr>
<td>16</td>
<td>IT INTEGRATION</td>
</tr>
<tr>
<td>16</td>
<td>PATIENT REPORTED MEASURES</td>
</tr>
<tr>
<td>16</td>
<td>CONSOLIDATION OF SERVICES</td>
</tr>
<tr>
<td>16</td>
<td>JOINT GOVERNANCE</td>
</tr>
<tr>
<td>16</td>
<td>PATIENT AND CARER ENGAGEMENT</td>
</tr>
<tr>
<td>30</td>
<td>EVALUATION &amp; PERFORMANCE</td>
</tr>
<tr>
<td>30</td>
<td>BARRIERS</td>
</tr>
<tr>
<td>30</td>
<td>KEY ACHIEVEMENTS</td>
</tr>
<tr>
<td>30</td>
<td>RETURN ON INVESTMENT</td>
</tr>
<tr>
<td>36</td>
<td>PARTNERSHIPS – BETTER HEALTH TOGETHER</td>
</tr>
<tr>
<td>38</td>
<td>THE WAY FORWARD</td>
</tr>
<tr>
<td>38</td>
<td>RECOMMENDATIONS</td>
</tr>
<tr>
<td>38</td>
<td>KEY LEARNINGS</td>
</tr>
<tr>
<td>38</td>
<td>WSIICCP</td>
</tr>
<tr>
<td>42</td>
<td>APPENDICES</td>
</tr>
<tr>
<td>42</td>
<td>APPENDIX A: RETURN ON INVESTMENT ANALYSIS</td>
</tr>
<tr>
<td>42</td>
<td>APPENDIX B: RETURN ON INVESTMENT PATIENT ANALYSIS</td>
</tr>
<tr>
<td>42</td>
<td>APPENDIX C: EXAMPLE OF AN INTEGRATED CARE SERVICE</td>
</tr>
<tr>
<td>42</td>
<td>APPENDIX D: ABBREVIATIONS AND GLOSSARY</td>
</tr>
</tbody>
</table>
The Australian healthcare system is a bit like the 1964 EH Holden car. Both were created and performed well in another era. Nostalgia for the EH is understandable. But the design and engineering of motor cars has changed enormously over the past 50 years.

While Australian healthcare delivers good results by international standards, any sentimentality about the engineering of this system is misplaced.

Our healthcare system comprises Commonwealth and State government funding, multiple components of private industry participation and out-of-pocket payments by many in society.

There has been much debate over a long time about the desirability of engineering these elements differently. However for many reasons, this has led to few substantive changes.

Given the existing design of the Australian healthcare system, can we make it perform better? We can by doing five things:

1. Pay for health outcomes
2. Seriously fund population health priorities
3. Improve the health literacy of the consumer
4. Deliver care by integrated teams; and
5. Optimise the use of technology.

The Australian Government’s Productivity Commission’s recent agenda for Healthier Australians, August 2017, is welcome.

The integrated care pilot program in western Sydney is mostly a State-funded health service delivered by Western Sydney Local Health District and WentWest, the Western Sydney Primary Health Network.

The providers of the health service are the primary care sector and hospital clinicians.

The consumers are people who may or may not receive hospital care.

Much has been achieved and this good work will continue, but greater healthcare benefits for many more people could be achieved if the cost-benefit paradigm of healthcare is changed.

This requires a shift from paying fee-for-service or activity to paying for health outcomes and working with large consumer cohorts who share similar health risks or morbidity.
This also underpins the need to shift the funding debate from one of healthcare affordability to one of value for money.

The population of western Sydney is greater than half the jurisdictions of Australia and growing rapidly.

Broad-based population health issues such as diabetes and cardiovascular disease present extraordinary challenges of human misery and cost over the next 5 to 20 years.

The Western Sydney Integrated Care Program (WSICP) through its demonstrator has been *Laying the Foundations* (Midterm Report 2016)\(^1\) to improve the health of the local community.

This report shows how working together can lead to Better Health Together\(^2\) for our population.

It is timely to expand this work with a re-engineering of some of the key design elements of the healthcare system by Commonwealth and State governments agreeing to commission a group of healthcare providers and pay them for health outcomes in a designated group of patients over a sensible period of time in which to measure the cost-benefit result.

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Integrated care is the provision of seamless, effective and efficient care that responds to all of a person’s health needs across physical, mental and social health in partnership with the individual, their carers and family.

Delivering integrated care is one of three strategic directions in the NSW State Health Plan: Towards 2021.

The NSW Government has committed $180 million over six years to implement innovative, locally led models of integrated care across the State to transform the NSW Health system.

In 2013 western Sydney was selected by the NSW Ministry of Health for an integrated care demonstrator, the only metropolitan region in the State.

The Western Sydney Integrated Care Demonstrator 2014-2017 report details the mechanisms, challenges and outcomes of implementing integrated care over the past three years in one of the State’s most diverse economic, social and cultural demographics.

Leveraging a shared commitment to system reform, Western Sydney Local Health District (WSLHD) and Western Sydney Primary Health Network (WentWest) developed a joint proposal to strengthen and support the Patient-Centred Medical Home (PCMH) for the management of chronic conditions, building on previous integrated care approaches.

Forged by an evidence-based international model, the core of the program design is a shared responsibility to deliver the quadruple aim of: improving the health of patients; enhancing the patient experience; reducing healthcare costs; and better supporting health professionals.

Western Sydney encompasses some of the most socially disadvantaged areas in Australia and some of the sickest populations.

There are high rates of diabetes and respiratory illness and people are more likely to die from cardiovascular disease than other Australians.

The Western Sydney Integrated Care Program (WSICP) is developing and executing a comprehensive model of care for patients with one or more of four chronic conditions — congestive cardiac failure, coronary artery disease, chronic obstructive pulmonary disease and diabetes.

The 60 general practices totalling 208 GPs engaged in the program as at July 2017 identified better access to hospital specialist advice through telephone support, and improvements in clinical care as a result of practice-based education.

Over the same period 1510 patients were enrolled into the WSICP via their participating GP or hospital.

Patients have reported improved access to health services and greater knowledge and skill to better manage their illnesses.

Return on investment preliminary results show decreases in hospital admissions and emergency department (ED) attendances for the patient cohort realising better utilisation of resources for the management of patients in the program. Emergency department (ED) presentations have decreased by 32 per cent; unplanned hospitalisations 34 per cent.
percent; unplanned length of stay days 25 percent; potentially preventable hospitalisations 37 percent; hospitalisation cost (NWAU) 38 percent, ED cost (NWAU) 33 percent; and ambulance arrival by 23 percent.

Unplanned readmissions increased by 33 percent, however these were not related to the program.

Future projections and scaling up the WSICP to cover 10 percent of the population in western Sydney who have at least one of the selected chronic conditions demonstrate the program could reach an estimated 15,000 people over 2 years with a net cost benefit of $39 million, and over 8 years 60,000 residents and a net cost benefit of $157 million.\(^1\)

In October 2017, the Australian Government’s Productivity Commission released a report identifying key issues with the Australian healthcare system including a lack of integrated care, insufficient patient-centred care, the need to focus funding towards innovation or outcomes, a greater focus on quality of health and using information, data sharing and data linkage more effectively.

Operating under the banner of Better Health Together the WSICP has successfully commenced the journey of implementing integrated care for a targeted cohort of patients with chronic conditions.

This report demonstrates the value of integrated care for consumers, clinicians, and the NSW Health system through the positive impact on patients, carers, providers, and finite resources.

\(^1\) The Case for Scaling Up — Preliminary Analysis November 2017 by WSLHD Integrated & Community Health and PwC Australia
WESTERN SYDNEY HOSPITALS
1. Mount Druitt Hospital
2. Blacktown Hospital
3. Westmead Hospital
4. Cumberland Hospital
5. Auburn Hospital

WESTERN SYDNEY COMMUNITY HEALTH CENTRES
6. Mount Druitt Community Health Centre
7. Doonside Community Health Centre
8. Blacktown Community Health Centre
9. The Hills Community Health Centre
10. Parramatta Community Health Centre
11. Merrylands Community Health Centre
12. Auburn Community Health Centre

* Hatched area of Parramatta LGA is outside Western Sydney Local Health District
ABOUT WESTERN SYDNEY LOCAL HEALTH DISTRICT

Western Sydney Local Health District (WSLHD) is a leader in clinical, research and education providing a diverse range of public healthcare to more than 950,000 residents in Sydney’s west as well as services to those outside its catchment from specialty statewide centres of expertise.

It is responsible for delivering and managing $1.7 billion in public healthcare across more than 120 suburbs spanning 780 square kilometres in the Blacktown, The Hills Shire, Cumberland and Parramatta local government areas (LGAs).

One of 15 local health districts (LHDs) in the NSW Health system, WSLHD is one of the State’s fastest growing areas with more than 1.3 million residents estimated by 2031.

WSLHD employs more than 13,000 individuals (10,172 full time equivalents) across more than 70 sites.

Westmead, Auburn, Cumberland, Blacktown and Mount Druitt hospitals as well as comprehensive community and population-based services play a critical role in the provision of healthcare.

Key activity for the 2016-17 year included:
• 181,335 presentations to emergency departments
• 185,488 admissions to five hospitals; and
• 42,983 surgeries performed.

ABOUT WESTERN SYDNEY PRIMARY HEALTH NETWORK

Since 2002 WentWest has been part of the western Sydney community, delivering support and education to primary care and working with key partners such as WSLHD on shared priority areas to improve health outcomes for the region’s residents.

From July 1 2015, WentWest took on the role of Western Sydney Primary Health Network (WSPHN).

Primary health networks are a Federal Government health initiative, established with the key objectives of increasing the efficiency and effectiveness of health services for patients, particularly those at risk of poor health outcomes and improving coordination of care to ensure patients receive the right care, in the right place, at the right time.

In its role as the Western Sydney Primary Health Network, WentWest focusses on addressing national and regional health priorities in consultation and partnership with local GPs, WSLHD, allied health professionals, consumers and community bodies and the broader health sector.

WentWest has led initiatives to implement the principles of the Patient-Centred Medical Home, and was the first primary health network to adopt the Quadruple Aim Outcomes Framework.

LEFT: WSLHD, located in the geographical centre of Sydney, is responsible for delivering and managing public healthcare across more than 120 suburbs spanning 780 square kilometres in the Blacktown, The Hills Shire, Cumberland and Parramatta local government areas.
The population of Western Sydney is expected to increase from more than 946,000 to 1.2 million by 2026 and 1.3 million by 2031.

The WSLHD community comes from diverse economic, social, and cultural backgrounds providing a fertile environment to develop and implement innovative models of healthcare and new ways of doing business.

Western Sydney is characterised by wealth at one end of the spectrum and significant social disadvantage at the other bringing with it a range of complex health needs and social circumstances.

Almost half (46.8 per cent) of residents were born overseas.

Of these 60,000 arrived in western Sydney between 2006 and 2011.

A total of 50.3 per cent of people speak a language other than English at home with 71.1 per cent living in the Cumberland LGA.

People from culturally and linguistically diverse (CALD) backgrounds may have a higher risk of developing some chronic diseases such as diabetes.

Additional considerations with CALD people may include language barriers, problems with health literacy, absence of family support, financial stress, low social status and a sense of disempowerment.

Western Sydney is home to one of the largest urban Aboriginal and Torres Strait Islander populations with many living in socioeconomically disadvantaged areas.

The 2016 Census indicates about 13,400, or 1.5 per cent of the population self-identifies as being Aboriginal, with the majority (9500) living in the Blacktown LGA.

A 59 per cent increase in people aged 70 years or over and a 54 per cent increase in people aged 85 years and over is forecast from 2016-2026.

WSLHD residents experience greater socio-economic disadvantage compared to the general NSW population, except for those living in The Hills Shire LGA, with the 2016 Census indicating:

• 39 per cent of residents report a personal income of less than $500 per week; and
• 21 per cent of households report a family income of less than $1000 per week.

Unemployment is a social problem and is associated with poor physical and mental health outcomes.

The health effects are linked to psychological consequences, financial problems and reduced life opportunities, with outcomes worse in regions where unemployment is widespread.

In June 2016 the WSLHD catchment had an overall unemployment rate of 6.0 per cent. The NSW average was 5.4 per cent.

In June 2016 the following concession cards were held by residents:

• Health Care Card, 6.6 per cent
• Pensioner Concession Card, 17.8 per cent; and
• Commonwealth Seniors Health Card, 7.7 per cent.

OUR COMMUNITY
Three categories of chronic disease in western Sydney are costing more than $2.9 billion annually. It is estimated more than 189,200 people suffer diabetes, chronic obstructive pulmonary disease (COPD), and heart conditions averaging $2914 million annually in direct and indirect costs.

WSLHD has a 20 per cent higher incidence of diabetes and asthma than the NSW average, coupled with challenging demographics.

Australia’s leading causes of morbidity and mortality, the effects of obesity, diabetes and cardiovascular disease are particularly pronounced in Sydney’s west.

Western Sydney is a diabetes hotspot with an estimated quarter of the population likely to be affected by diabetes or pre-diabetes. A total of 50 per cent of the population is overweight and at risk of developing type 2 diabetes.

Hospitalisations in NSW are considerably higher for WSLHD residents for:

- Heart failure
- Diabetes
- Falls in the 65-plus year age group
- Asthma
- COPD
- Influenza; and
- Pneumonia.

The table (right) highlights the prevalence rates and estimated cost of three chronic conditions in western Sydney.

A significant driver of escalating healthcare activity and costs is due to chronic disease.

Hospital activity (separations) is growing at a faster rate in western Sydney than population growth with 3.3 per cent compound annual growth rate (CAGR) compared to 2.3 per cent CAGR between 2013 and 2016.

Of the 129,000 people in western Sydney with diabetes 25,800 (3 per cent) have high comorbidities and 103,200 (12 per cent) have low comorbidities.

In 2014, 9.4 per cent of the NSW population had diabetes or high blood glucose.

In western Sydney there is a prevalence rate of 15 per cent with diabetes with 35 per cent (301,000 people) at high risk with pre-diabetes.

Only 40 per cent of western Sydney patients with diabetes have a care plan or team care arrangement and 45 per cent of diabetes patients have a glycated haemoglobin level (HbA1c) greater than 7 per cent, indicating diabetes.

Coronary heart disease deaths in women are significantly above the NSW rate.

There is disparity across the LHD, particularly in the Blacktown LGA, which is significantly worse than the State for most indicators and conditions.

Deaths from COPD in Blacktown’s south west are 66 per cent higher than the Australian average.

The southern part of WSLHD has the highest obesity rates in the region with south-west Blacktown and Auburn having the worst with more than 20 per cent of the population being obese.
CASE STUDY
DECLAN

“I was referred to the integrated care program by my GP. I found it really beneficial and very helpful. It offered me a different level of care than just visiting the doctor. I was attending regular exercise classes and learnt a lot about correct breathing, which was really important for my emphysema. The nursing staff gave me a lot of advice about my condition, exercises to help me breathe and things to do to better manage. I wouldn’t have got that from just going to the doctor. It definitely made me feel like I was getting a lot more information and advice.”
Declan Hampsey, patient, 67, Lalor Park

ESTIMATED COST OF THREE CHRONIC CONDITIONS IN WESTERN SYDNEY

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<th>DIABETES</th>
<th>COPD</th>
<th>HEART DISEASE</th>
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<td>Best estimate prevalence in WSLHD</td>
<td>15.00%</td>
<td>2.00%</td>
<td>5.00%</td>
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<tr>
<td>Best estimate of number of people in western Sydney (WS) with condition</td>
<td>129,000</td>
<td>17,200</td>
<td>43,000</td>
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<td>Cost per person per annum – direct</td>
<td>$7311</td>
<td>$861</td>
<td>$9042</td>
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<tr>
<td>Cost per person per annum – indirect</td>
<td>$8813</td>
<td>$7993</td>
<td>$6821</td>
</tr>
<tr>
<td>Total cost per person per annum</td>
<td>$16,124</td>
<td>$8,853</td>
<td>$15,864</td>
</tr>
<tr>
<td>Best estimate of cost per annum for WS patients</td>
<td>$2080m</td>
<td>$152m</td>
<td>$682m</td>
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SOURCE: THE CASE FOR SCALING UP — PRELIMINARY ANALYSIS NOVEMBER 2017 BY WSLHD INTEGRATED & COMMUNITY HEALTH AND PwC AUSTRALIA
There is a threefold difference in diabetes prevalence between the communities of the Blacktown LGA and the affluent suburb of Mosman.

Eating nutritious food, undertaking physical activity, maintaining emotional wellbeing and avoiding smoking and excessive alcohol consumption are fundamental to good health and disease prevention.

There are significant health risks associated with not adopting these health behaviours, including the increased likelihood of developing risk factors such as high blood pressure, high cholesterol and obesity, and chronic illnesses such as heart disease, type 2 diabetes and some cancers.

In 2014, about half of WSLHD residents aged 16 years and older reported:
- Being either overweight or obese
- Getting adequate physical activity for good health; and
- Consuming the recommended amount of fruit.

And only 7.7 per cent of adults consumed the required daily amount of vegetables, while more than 20 per cent of WSLHD residents aged 16 years and older reported consuming alcohol at levels that pose a lifetime risk to health.

In parts of Blacktown adults on average consume fruit at a rate lower than the Australian average.

SOURCES:
WSLHD HEALTH SERVICES PLANNING AND DEVELOPMENT
WSLHD INTEGRATED & COMMUNITY HEALTH DATA
THE CASE FOR SCALING UP — PRELIMINARY ANALYSIS NOVEMBER 2017 BY WSLHD INTEGRATED & COMMUNITY HEALTH AND PwC AUSTRALIA

“IT IS VERY EXCITING TO BE PART OF A PROGRAM THAT BRIDGES THE GAPS FOR PEOPLE WITH CHRONIC CONDITIONS. I HAVE NURSED IN ACUTE CARE AND COMMUNITY HEALTH AND I COULD SEE THE GAPS — THE LACK OF COMMUNICATION BETWEEN THE TWO SECTORS. AS A CARE FACILITATOR I AM ABLE TO IDENTIFY THE BARRIERS TO ENSURE THE PATIENT IS GETTING THE RIGHT CARE AND I AM ABLE TO CONNECT THEM TO THE RIGHT PEOPLE TO ACCESS CARE SUCH AS AGENCIES LIKE CENTRELINK.”

WSLHD CARE FACILITATOR NATASHA MAUNSELL
James, a 29-year-old Aboriginal man, has DiGeorge syndrome, a chromosomal disorder, and suffers multiple comorbidities including poorly controlled diabetes, obesity and intellectual delays.

James’s total wellbeing and the needs of his carers are being addressed with great success through his care team made up of James, his GP, hospital specialist, care facilitator and the Greater Western Aboriginal Health Service (GWAHS).

Six months post enrolment into the Western Sydney Integrated Chronic Care Program, he has lost 16kg, his HbA1c and triglyceride levels have improved significantly, and he is more active and happier.

He was referred to the Rapid Access Stabilisation Service at Blacktown Hospital for a treatment plan and his GP ensured effective medication management including patient and family education such as healthy eating and other lifestyle behaviours.

He and his grandparents who care for him were linked to the GWAHS for domestic assistance, transport and carer support, and the National Disability Insurance Scheme. He is now participating in social activities and groups in his local community.

James’s WSLHD care facilitator Dinesh Subedi continues to monitor his progress and coordinate appropriate care and support for his physical, emotional and practical wellbeing.

“WE WOULD LIKE TO SEE JAMES IN BETTER HEALTH. WE WANT HIM TO BE MORE INDEPENDENT AND Socially ACTIVE. WE WANT HIM TO HAVE A GOOD WAY OF LIVING AS WE MIGHT NOT BE THERE TO SUPPORT HIM ALL THE TIME. WITH HIS INDEPENDENCE HE WILL BE ABLE TO LOOK AFTER HIS HEALTH BETTER. INTEGRATED CARE IS A VERY GOOD PROGRAM.”

JAMES’S CARERS, GRANDPARENTS OLIVE AND EDDIE SULLIVAN
OVERVIEW
The Western Sydney Integrated Care Program (WSICP) focusses on patients with congestive cardiac failure, coronary artery disease, COPD, and diabetes.
WSICP is a partnership between WSLHD and WSPHN (WentWest) in collaboration with patients and carers and clinicians. It provides seamless, efficient and effective care that responds to all of a person’s health needs across physical, mental and social health in collaboration with the individual, their carers and family.
The NSW Government has committed $180 million over six years to implement innovative, locally led models of integrated care across the State to transform the NSW Health system.
In 2013 western Sydney was one of three areas selected by the NSW Ministry of Health for an integrated care demonstrator and the only metropolitan site.
The Western Sydney Integrated Care Demonstrator (WSICD) commenced in late 2014, enrolling its first patients in 2015.
Redesigning health services to meet the needs of an ageing population with long term chronic conditions is crucial to the sustainability of health. Hospitals are not designed to manage and monitor populations.
The Western Sydney Integrated Care Program was designed to achieve the Institute for Healthcare Improvement’s (IHI) Triple Aim plus one, known as the Quadruple Aim:
1. Improve the health of patients
2. Enhance the patient experience
3. Reduce healthcare costs; and
4. Better support health providers.
Western Sydney clinicians have articulated a need for improved collaboration, accountability, prevention and patient-centred care that manages more patients in the community than in acute settings.
The WSICP sets out to improve healthcare management of patients with long-term chronic conditions by building and supporting capacity in primary care.
Coordinated interventions, clinical services and enablers implemented across primary care, community and hospital settings are based around the needs of the patients and carers to:
• Improve the patient’s experience of the healthcare system
• Improve health outcomes and quality of life (QOL) of the population
• Provide a less complex and more appropriate patient journey
• Reduce waiting times for patients as they navigate the system
• Reduce avoidable or unnecessary hospital admissions
• Reduce avoidable presentations to emergency departments (EDs)
• Reduce re-admission rates
• Reduce duplication of tests through better sharing of information
• Improve communication between GPs, community services and specialists; and
• Identify cost efficiencies and better use of health resources.

OBJECTIVES
For people with type 2 diabetes, COPD and congestive cardiac failure, the program aims to improve:
• The patient experience of care to achieve a positive response rate and better self-reported health
• The experience of care by carers and providers
• The general community’s health by increasing the number of people being checked and managed by local GPs for HbA1c, blood pressure and cholesterol and reducing smoking rates by 20-40 per cent; and
• Cost effectiveness by decreasing:
  • ED episodes by 20-30 per cent
  • Inpatient episodes by 10-15 per cent
  • Avoidable admissions by 10-15 per cent; and
  • Average length of stay by 20-40 per cent.

At the centre of the WSICP is the Patient-Centred Medical Home (PCMH). The virtual home is designed to support people with chronic and complex care needs.

The PCMH model emphasises a patient having an ongoing relationship with a GP who leads a multidisciplinary practice team; and primary care that is comprehensive, coordinated and accessible, with a focus on safety and quality.

The PCMH coordinates the care delivered by all members of a person’s care team which may include hospital inpatient care. It ensures each patient experiences integrated healthcare.
TACTICS

The overall strategies of the WSICP are to:

• Engage patients from the cohort into a PCMH and actively involve them in the management of their care
• Build capacity and expertise in primary care in the treatment of the specific chronic conditions
• Create care pathways and shared care plans between primary, community and hospital providers for continuity of care
• Utilise community-based care facilitators to assist in care planning, navigation, transitional care between services, and patient education and self-management
• Provide specialist Rapid Access and Stabilisation clinics to support specific needs of patients who have complex or deteriorating health conditions
• Educate and support systems including the GP Support Line, in-practice case conferencing and formal education seminars, to enhance the capacity of general practice and specialist teams
• Implement GP support payments
• Establish service level agreements with general practices, the primary health network (PHN) and specialist services
• Integrate chronic disease management programs between WSLHD and the WSPHN under the overall theme of Better Health Together
  www.betterhealthtogether.com.au
• And create a culture and services within hospital specialty units that work in close collaboration with general practice to improve the quality and experience of care for patients with chronic disease.

MODEL OF CARE

The WSICP has been collaboratively developed with patients and clinicians to provide new care pathways for improved patient-centred care. There is a strong focus on support and ongoing management in general practice and the community. The model incorporates:

• Patient selection, enrolment and stratification
• The PCMH with integrated primary care team-based management for enrolled patients
• Care facilitation by WSLHD registered nurses
• Dynamic shared care plans
• Targeted investment in primary care to support timely creation, maintenance and display of health summaries, care plans and clinical metrics
• Rapid access to specialist care
• Systems to build capacity so primary care health professionals can better manage patients with chronic disease
• IT integration between hospitals and primary care
• Amalgamation with the existing chronic disease management and some HealthOne services in western Sydney (commencing 2017)
• Joint governance between WSLHD and the WSPHN
**CASE STUDY**

**GAIL**

“I have been having treatment for diabetes for months, dealing with my head doctor, two nurses and a social worker. Often in the healthcare system, you feel like you have so many different people saying different things to you. Integrated care works because everyone is on the same page. All the health professionals talk to each other and they’re all working together to give you the best care possible. I feel like I’ve been getting quality care because everyone is across my case. I don’t have to keep explaining it to different people, everything is integrated. It’s given me confidence in the system and taken a lot of the fear away. You know everyone is working together. For a patient, that level and type of care is very comforting.”

Gail Smith, patient, 61, of Seven Hills

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**CASE STUDY**

**DR CON PALEOLOGOS**

“I have several patients who are part of the integrated care program. As a GP we look at the medical side of things. We prescribe the drugs and treat the condition. The integrated care facilitator looks at a patient’s health more globally. They determine what a patient really needs beyond just medical assistance. They investigate their social situation, their lifestyle and they can refer them to social workers, exercise programs and rehabilitation. It does make my job easier because you know you have someone there who is looking at the patient holistically.

The feedback from my patients has been really positive. They like having someone phoning them up and checking in on them. It’s giving them that next level of care. They’ve got another person looking after them.”

Dr Con Paleologos, GP, Alpha Medical Centre

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**ABOVE:** WSLHD care facilitator Heena Puri (left) with patient Gail Smith of Seven Hills

**ABOVE:** General practitioner Dr Con Paleologos from Alpha Medical Centre, Seven Hills
ENROLLED PATIENTS BY RISK SCORE

- **URGENT**: 0.4%
- **HIGH**: 9.0%
- **MEDIUM RISK**: 41.2%
- **LOW RISK**: 26.8%

SOURCE: CHOC AND LOCAL DATA PROVIDED BY DEPARTMENTS JUNE 2015 – JUNE 2017

WSICP MODEL OF CARE

- **HOSPITAL ADMISSION**
  - **HOSPITAL SPECIALIST TEAMS**
    - **RAPID ACCESS SPECIALIST SERVICE**
    - **STABILISATION CLINICS**
    - **PATIENT SUPPORT**
    - **BUILDING CAPACITY IN PRIMARY CARE**
  - **CARE FACILITATORS**
    - **CDMP**
    - **HEALTHONE**
    - **CLOSING THE GAP**
    - **COMMUNITY HEALTH**
  - **PRIMARY CARE**
    - **PATIENT-CENTRED MEDICAL HOME**
• Patient experience reporting
• Patient carer engagement; and
• Ongoing evaluation of program outcomes.

PATIENT SELECTION, ENROLMENT AND RISK STRATIFICATION

The WSICP has developed a model of care which can be expanded to other chronic diseases and health conditions. The current focus is on patients with one or more of four chronic conditions:

1. Congestive cardiac failure
2. Coronary artery disease
3. COPD; and
4. Type 2 diabetes.

Patients with one or more of these conditions are risk stratified and those at greater risk are included in the WSICP cohort.

Enrolment is via a comprehensive assessment conducted by a GP, hospital specialist or care facilitator.

Eligibility is determined on the presence of specific clinical conditions, having specified levels of health deterioration risk, and being assessed as benefiting from the program.

Suitable patients are offered enrolment and required to consent to participation in the program.

As at July 30 2017 there were:

• 1510 patients with chronic disease enrolled over two years (50 per cent of the target), of which 1428 (95 per cent) were enrolled via general practice
• 60 engaged general practices (45 per cent of the target); and
• 208 GPs.

Of the 1510 enrolled, 198 were discharged from the program due to reasons including withdrawing consent (27 per cent), not eligible (64 per cent), health deterioration (5 per cent), and deceased (15 per cent).

INTEGRATED PRIMARY CARE MANAGEMENT

General practices are equipped with tools and incentives to monitor and manage their WSICP enrolled patients. Key elements include:

• A shared care plan
• Clinical patient metrics via the LinkedEHR software tool
• Integrated care GP support phone line to contact relevant specialists or hospital services
• Integrated care specialist teams
• A chronic disease management nurse employed by WSPHN
• Integrated care facilitators employed by WSLHD; and
• GP support payments for achieving specific team care interventions in a timely manner.
WSLHD CARE FACILITATORS

For both patients and GPs, having a personal interaction with an identified care facilitator best integrates primary and hospital care, and engenders increased trust between providers in each area.

The most visible and novel element in the WSICP model is the care facilitator, who are registered nurses employed by WSLHD to work cooperatively with and in general practice.

Care facilitators are an essential central coordinating point and support liaison for patients in accessing fragmented services. They provide a level of care coordination to the enrolled patient.

They support GPs and assist clinicians to identify, enrol, manage and monitor patients using integrated care enablers such as HealthPathways and LinkedEHR.

Care facilitators provide patient assessment, care plan enhancement and supervision, monitoring of patient care including in hospital, self-care interventions and other advice, and care team coordination.

They have access to the dynamic shared care planning tool, LinkedEHR, and to the LHD hospital electronic health record, Cerner/CHOC.

The care facilitator’s specific knowledge of high-risk enrolled patients, and available health system resources build positive relationships and impact on the development, execution and maintenance of care plans for the enrolled patients.

They ensure patients have regular reviews based on preventative and continuing care needs including medication assessments, vaccinations, smoking cessation, annual spirometry and nutritional screening.

In conjunction with the patient’s GP and specialists, care facilitators provide referrals to health coaching, self-management strategies, community and other specialist services including occupational therapy, physiotherapy, dietetics, community exercise programs, and comprehensive pulmonary rehabilitation.

For patients and GPs, having personal interaction with an identified care facilitator best integrates primary and hospital care, and engenders increased trust between providers in each area.

DYNAMIC SHARED CARE PLAN

The WSICP model supports patient-centred care planning, coordination and electronic information sharing through a dynamic shared care plan (LinkedEHR) for all enrolled patients.

The plan is accessible to patients, their GP and GP practice team, care facilitator, hospital specialists and healthcare team, community health team, and private health providers.

Each patient’s dynamic shared care plan was created in LinkedEHR within one month of their enrolment, a first for the NSW integrated care program.
**GENERAL PRACTICE ACTIVITY**

<table>
<thead>
<tr>
<th>Description</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated care patients with care plan (LinkedEHR)</td>
<td>1272/99%</td>
</tr>
<tr>
<td>Care plan created within one month of enrolment</td>
<td>1221/97%</td>
</tr>
<tr>
<td>Clinical metrics recorded within 1 month of enrolment</td>
<td>1174/93%</td>
</tr>
</tbody>
</table>

**SOURCE:** LinkedEHR (WSPHN INFORMATION SYSTEM)

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**PARTICIPATING GENERAL PRACTICES**

<table>
<thead>
<tr>
<th>LGA</th>
<th>General Practices</th>
<th>GPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blacktown</td>
<td>35</td>
<td>129</td>
</tr>
<tr>
<td>Cumberland</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>The Hills Shire</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>Parramatta</td>
<td>15</td>
<td>55</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>62</strong></td>
<td><strong>217</strong></td>
</tr>
</tbody>
</table>

**SOURCE:** LinkedEHR AS AT JULY 2017
Rapid Access Clinic Wait Time

<table>
<thead>
<tr>
<th>JULY 2015 - JULY 2017</th>
<th>DIABETES</th>
<th>CARDIOLOGY</th>
<th>RESPIRATORY</th>
<th>(%) OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTENDANCES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seen within 5 days of referral</td>
<td>383</td>
<td>1970</td>
<td>160</td>
<td>2513 (85%)</td>
</tr>
<tr>
<td>Subtotal seen within 2 days of referral</td>
<td>307</td>
<td>843</td>
<td>146</td>
<td>1580 (54%)</td>
</tr>
<tr>
<td>Seen outside of 5-day referral target</td>
<td>22</td>
<td>369</td>
<td>54</td>
<td>445 (15%)</td>
</tr>
</tbody>
</table>

Source: iPM Report
SUPPORTING GPs
Targeted investment in primary care is designed to promote timely creation, maintenance and display of health summaries, care plans and clinical metrics.

GP support payments are unique in NSW and are made to enrolled general practices to aid the on-time development and maintenance of shared care plans (including health summaries) and clinical metrics of WSICP patients.

The small one-off general practice support payments were shown not to be a driver for participation in the WSICP.1

RAPID ACCESS AND STABILISATION SERVICES
Rapid Access and Stabilisation Services (RASS) are specialty services located at Westmead, Blacktown and Mount Druitt hospitals to reduce:
  - Waiting times for patients as they navigate the system
  - Unnecessary hospital admissions
  - Avoidable presentations to emergency departments
  - Readmission rates; and
  - Provide a less complex and more appropriate patient journey.

The services comprise teams for diabetes, COPD, congestive cardiac failure and ischaemic heart disease.

There were 15,085 occasions of service provided by the RASS clinicians from July 2015 to July 2017. A total of 3919 patients had a chronic disease (including 207 of the enrolled patients), with 54 per cent seen within two days of referral and 85 per cent seen within five days of referral.

People not seen within this target are delayed by access to transport, clinic schedules and availability of suitable dates and times.

SPECIALIST SERVICES
Integrated care specialist services are designed to support specific needs of patients who have complex or deteriorating health conditions by building the capacity of and supporting general practice.

They include the GP Support Line, the RASS and the immediate action plan feedback, the provision of in-practice case conferencing and patient review, and periodic education sessions for practice team members.

Integrated care specialist support services are provided for enrolled and non-enrolled patients and general practices.

Allowing non-enrolled patients and practices access exposes as many patients and practices as possible to the services extending the reach and increasing GP and patient enrolments to the WSICP.

From September 2015 to June 2017 there were 545 calls to the GP Support Line.

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Line for consultation and advice from the integrated care specialist teams. The teams also provided:

- 16 education sessions for more than 500 GPs and practice nurses; and
- 94 in-practice case conferences delivered to 44 practices.

**IT INTEGRATION**

Critical to the implementation and success of the WSICP is communication in real-time through innovative information technology integration between the hospital system and primary care.

Improved IT functionality within and between primary care (LinkedEHR) and hospital services (Cerner) is a key component.

Providing access to the shared care repository, LinkedEHR, across primary and acute care has produced a range of legal, privacy and procurement challenges.

Stringent security requirements and adherence to national and NSW Clinical Data Architecture Standards further added to the complexity.

WSLHD is one of the first LHDs to implement such a system in Australia.

LinkedEHR is a shared care planning tool uniquely placed to integrate functions across the system providing:

- A current health summary, care plan and clinical metrics in the electronic shared care plan
- A care facilitator’s dashboard for patient management
- Visibility to all clinical users in Cerner PowerChart
- An e-referral system to the RASS clinics
- My Health Record document downloads; and a component of the
- Navigation tool for HealthPathways.

While IT development has been iterative and slow, the need for improved IT capability for the WSICP has provided highly desired functions.

The opportunity to implement a fully functional shared care planning process is enormous. However the project has taken nearly three times longer than initially envisioned.

HealthPathways, an existing online decision support tool containing the integrated care protocols and referral pathways for GPs and primary healthcare providers has promoted, supported and enabled care integration.
<table>
<thead>
<tr>
<th>IT INNOVATION</th>
<th>FUNCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENROLLED PATIENT IDENTIFICATION</strong></td>
<td>Integrated care flag identifying eligibility and patient enrolment status in both Cerner and LinkedEHR</td>
</tr>
</tbody>
</table>
| **DEVELOPMENT OF LinkedEHR SHARED CARE PLANNING SOFTWARE FOR GENERAL PRACTICE** | • Creation of a care facilitator’s dashboard for monitoring patient status  
• Uploading of shared health summaries to LinkedEHR  
• Downloading of My Health Record Shared Health Summaries to LinkedEHR  
• Automatic updating and improved display of health summaries and clinical metrics in LinkedEHR  
• Embedding a risk stratification calculation  
• Easier creation of goals and activities in the shared care plan  
• Incorporating care facilitators into the shared care plan process  
• Context sensitive embedding of HealthPathways and GoShare into care plan creation and patient resource access  
• Improved reporting and data extraction capabilities |
| **CERNER IMPROVEMENT**                            | • PowerChart forms, action plans, reporting  
• Recording GP and practice names on patient files |
| **CHOC IMPROVEMENTS**                             | • Care facilitator dashboard  
• Care facilitator reporting  
• Patient enrolment and discharge status reporting |
| **REDCap**                                        | • NSW Health risk stratification tool CCoPS applied to the enrolled integrated care cohort  
• A report card for each patient’s assessment to assist in development of the shared care plan and to help determine the services offered to patients |
| **LINKAGES**                                      | • Visibility of LinkedEHR to all clinical users in Cerner PowerChart, utilising NSW eHealth’s HealtheNet  
• An eReferral system from LinkedEHR to the RASS clinics with an embedded GP notification system back to general practice systems  
• An action plan linkage from the RASS clinics to general practice systems |
| **BETTER HEALTH TOGETHER WEBSITE AND RESOURCES**  | • A website highlighting how health services in western Sydney are working together to provide better access to information and navigation points leading to health integration for people living with chronic conditions |
| **MY HEALTH RECORD INTEGRATION WITH CERNER AND LinkedEHR (INDEPENDENT OF WSICP)** | • Allows downloading of shared health summaries and other documents from My Health Record in both LinkedEHR and Cerner to better support integration of the patient’s care across providers  
• Uploading of shared health summaries from LinkedEHR to My Health Record remains under development as of the end of the WSICP Demonstrator 2014-2017 |
| **PATIENT SUPPORT**                               | • GoShare – patient experience based education materials delivered via text and email |
| **HEALTH PATHWAYS DEVELOPMENTS**                 | • Integrated care as a local HealthPathways navigation tool  
• Context specific linkages between LinkedEHR Shared Care Plan and HealthPathways pages |
PATIENT REPORTED MEASURES

Patient Reported Measures (PRMs) seek to support patients and clinicians, and add value to their interactions.

The program, managed by the Agency for Clinical Innovation (ACI), is divided into two sections, Patient Reported Outcome Measures (PROMs) and Patient Reported Experience Measures (PREMs).

PROMs are used to help assess and follow up a patient’s clinical progress while PREMs measure the patient’s experience of healthcare.

The development and implementation of PRMs was identified as a key enabler in integrated care to support consumers, clinicians, LHDs and the PHNs.

Enrolled WSICP general practices have been early adopters in testing the ACI PRM program.

A high level of patient satisfaction (about 90 per cent) has been reported by enrolled practices against non-enrolled practices (with 70 per cent happy).

CONSOLIDATION OF SERVICES

Community-based chronic disease management services and the WSICP have been amalgamated to:

• Better align with primary care for a patient-centred model by building on and retaining strengths within existing services
• Maximise capacity, scope and existing resources to meet the increasing demand for community-based chronic disease management services; and to
• Utilise learnings.

JOINT GOVERNANCE

Strong governance has been one of the key success factors for the WSICP, the hallmark of which is collaboration between executives and senior clinicians.

The WSICP’s shared governance structure between WSLHD and the WSPHN reports through the Western Sydney Integrated Chronic Care Program Executive Steering Committee and the Western Sydney Integrated Chronic Care Steering Committee.

WSICP’s shared governance is designed to ensure accountability, transparency, responsiveness, inclusiveness, empowerment, and broad-based participation to oversee service design, priority setting, funding and performance monitoring.

Key governance and leadership elements include:

• Western Sydney Partnership Advisory Council
• Western Sydney Integrated Chronic Care Program Executive Steering Committee
• Western Sydney Integrated Chronic Care Steering Committee
• Shared Program Management
• Director, managers, clinical lead and clinical advisors
• Monitoring committees:
  • Westmead Hospital
• Blacktown Hospital, GP leaders; and the
• WSPHN Clinical Council
• Service level agreements (SLAs) between WSPHN, GPs and GP practice teams
• SLAs between the WSLHD and hospital departments; and
• Evaluation and research committees.

WSLHD has developed strong alliances while working to address key health determinants including the NSW Department of Premier and Cabinet, Department of Family and Community Services, Juvenile Justice, NSW Department of Education, and the NSW Police Force as part of the services delivery reform with a strong focus on vulnerable families.

PATIENT AND CARER ENGAGEMENT

Collaborative partnerships with patients, key agencies and organisations provide for integrated and seamless pathways across the system.

The WSICP vision places the patient, carer and the community at the centre of all we do, with a commitment to improving health outcomes especially for vulnerable populations and where chronic and complex care, and social support is required.

WSLHD involves patients at all stages of the program to identify gaps, issues, and needs to ensure service delivery is effective, appropriate and efficient.

Patients and families are involved in decision making around their care and provide advice on service design and implementation.

Western Sydney Local Health District, the Sydney Children’s Hospitals Network and Western Sydney Primary Health Network have worked together to provide access to evidence based health and other resources for patients via www.healthywesternsydney.org.au

“MY FOCUS IS TO BE AN ADVOCATE FOR THE PATIENT AND CARER AND TO BE INVOLVED IN THE COORDINATION OF CARE TO PREVENT DETERIORATION OF THEIR CHRONIC HEALTH CONDITIONS AND IMPROVE THEIR QUALITY OF LIFE. WORKING WITH JAMES HAS BEEN VERY REWARDING. I WAS ABLE TO NAVIGATE THE HEALTHCARE SERVICES TO EMPOWER HIM AND HIS CARERS TO MAKE INFORMED DECISIONS FOR BETTER HEALTH OUTCOMES AND ONGOING SELF-MANAGEMENT.”

WSLHD CARE FACILITATOR DINESH SUBEDI
Performance of the WSICP is progressively being measured and analysed by internal and external agencies.

Evaluation of the WSICP is multipronged. The results and findings from each component are regularly monitored and collated.

Local analysis and performance is measured against aims and objectives, and key performance indicators agreed with the NSW Ministry of Health.

The WSICP evaluation assesses the impact on length of stay and presentation frequency, and monitors condition-specific clinical metrics through LinkedEHR.

Western Sydney University (WSU) researchers were commissioned to undertake qualitative evaluation, based on data from two interview rounds.

Conducted at 12 month intervals, they interviewed 125 patients and carers, healthcare providers and WSICP management.

By March 2017, patients reported improved access to health services, including RASS clinics.

Interviewees valued holistic, team-based care provided by clinics giving patients knowledge and skills to better manage their illnesses.

Shared patient care plans and specialist action plans improved communication and gave patients more confidence.

Relationships between GPs and hospital staff improved. GPs reported improved access to hospital specialist advice through telephone support, and improvements in clinical care as a result of practice-based education.

“IT’S ABOUT GIVING THE PATIENT TIME TO TALK THROUGH WHAT THEY NEED AND WHERE THEY ARE IN THEIR JOURNEY — SUPPORTING AND ENABLING THEM IN THEIR JOURNEY OF SELF-MANAGING THEIR CHRONIC DISEASE. NOTHING IS AS REWARDING AS BEING THERE FOR THE PATIENT, ASSISTING HIM OR HER TO NAVIGATE THROUGH OUR HEALTHCARE SYSTEM TO RECEIVE THE SERVICES THEY NEED WHETHER IT’S ALLIED HEALTH OR SPECIALIST SERVICES TO MANAGE THEIR CHRONIC DISEASE.”

WSLHD CARE FACILITATOR SIMON MBUGUA
Evaluation of the WSICP is multipronged with the patient at the centre of all analysis. The program’s constant comprehensive review methods are made up of several components.
Critical to the WSICP is the online care planning system LinkedEHR, designed to manage patients with a chronic disease and a team of health professionals involved in their care.

HealthPathways assisted with evidence-based care, although some GPs found the online platform challenging.

The Patient Hotline was promoted as an alternative to emergency department attendances and in some cases to RASS clinic presentations.

Care facilitators assisting patients to follow shared care plans were a vital link between hospitals and GPs following up patients in transition from hospital to home; and sharing information across sectors.

**BARRIERS**

Initially IT difficulties limited the use of shared records and the enrolment criteria was contentious. Many in need were excluded.

Lack of transport and hospital parking were issues, especially for the disabled.

Staff recruitment and retention was a challenge as WSICP was a pilot and considered a short-term trial.

**KEY ACHIEVEMENTS**

By July 2017 there were significant milestones including:

- 1510 patients with chronic disease enrolled over two years (50 per cent of the target), of which 1428 (95 per cent) were enrolled in general practice
- 15,085 occasions of service provided by RASS clinicians for 3919 patients with chronic disease (including 700 of the enrolled patients) with on-time consults
- 12 care facilitators employed by WSLHD and 2 chronic disease nurses engaged by WSPHN to work with patients and general practices to create shared care plans that communicate health priorities and actions to all team members and the patients
- 1281 (85 per cent) of the enrolled patients had a LinkedEHR record created of which 1272 (99 per cent) had a dynamic shared care plan
- Of 1257 with a dynamic shared care plan by July 2017, 1221 (97 per cent) had their care plan created within one month of enrolment and 1174 (93 per cent) had a set of specified clinical metrics including weight, BMI, blood pressure, lipids, kidney function (eGFR), and if relevant lung function (FEV1/FVC) and HbA1C uploaded within one month of enrolment; and
- Integrated care specialist teams responded to 545 calls to the GP Support Line.
"BEFORE THE INTEGRATED CARE PROGRAM MUM WAS CONSTANTLY GETTING ADMITTED INTO HOSPITAL. THEY WOULD TREAT OR FIX ONE ISSUE AND THEN SHE’D COME OUT OF HOSPITAL AND SHE HAD SOMETHING ELSE WRONG . . . . BUT OVER THE PAST SIX MONTHS I THINK SHE’S BEEN INTO HOSPITAL ONLY TWICE. HER BLOOD PRESSURE AND HER SUGAR ARE ON TRACK . . . . AND MUM’S ENTIRE MEDICAL HISTORY WAS LINKED WITH BOTH BLACKTOWN AND WESTMEAD THROUGH THE GP."

CARER


<table>
<thead>
<tr>
<th>FUTURE ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WSICP-OVERALL</strong></td>
</tr>
<tr>
<td>Number of people</td>
</tr>
<tr>
<td>Gross benefit</td>
</tr>
<tr>
<td>Cost</td>
</tr>
<tr>
<td>Net benefit</td>
</tr>
</tbody>
</table>

SOURCE: THE CASE FOR SCALING UP — PRELIMINARY ANALYSIS NOVEMBER 2017 BY WSLHD INTEGRATED & COMMUNITY HEALTH AND PwC AUSTRALIA
Clinical outcomes and quality of care evaluations indicate improved care. Shared care plans were developed for more than 85 per cent of the cohort and were valued by GPs and other members of the care team.

Ongoing local audits will help clinicians drive quality improvements for timeliness and quality.

RETURN ON INVESTMENT

Preliminary results on the return on investment (ROI) analysis show decreases in hospital admissions and ED attendances for program participants providing significant cost savings.

Better care navigation saw a drop in the utilisation of acute services due to the establishment of RASS clinics. A 33 per cent increase in unplanned readmissions was not related to the program.

For patients attending the WSICP RASS clinics the following preliminary indicators show $22.8m in NWAU equating to:

- 2857 less unplanned hospital admissions
- A reduction of 10,752 hospital bed days (LOS)
- A decrease of 1175 in preventable hospital admissions; and
- 3218 less ED presentations.

Data suggests people are being enrolled and referred to services earlier in their disease trajectory delaying use of acute care and emergency services.

Arrivals to hospital by ambulance were reduced by 1009, saving approximately $392,000 and creating extra capacity for other patients.

Work commenced in late 2017 to assist with costs and benefits of scaling up the WSICP program.

To cover 10 per cent of the population in western Sydney who have at least one of the selected chronic conditions would see approximately 15,000 people enrolled over 2 years.

The cost to run the program to cover 10 per cent of the population is estimated at $23 million per annum.

1 Appendix A: Return on Investment Analysis
2 Appendix B: Return on Investment Patient Analysis
There is a strong commitment in western Sydney to shared partnerships and driving innovation which addresses systemic gaps and strengthens the interface between healthcare services to promote health, wellbeing and resilience.

This has led to the establishment of integrated health in western Sydney with the patient and family at the centre, and working to improve the environment in health, the wellbeing of the population and ensuring social supports are coordinated and delivered.

HealthPathways, an existing online decision support tool containing the integrated care protocols and referral pathways for GPs and primary healthcare providers has promoted, supported and enabled care integration.

A focus on achieving optimal outcomes through an integrated regional approach has resulted in the broadening of partnerships though service delivery reform incorporating key human service and justice agencies including, but not limited to NSW Family and Community Services (FACS), NSW Department of Education, NSW Department of Premier and Cabinet, NSW Juvenile Justice, and the NSW Police Force.

Western Sydney Diabetes has led the way recognising that diabetes prevention and management needs a partnership model to drive a united effort. It is well advanced and has grown to an alliance of more than 95 partners.

The Western Sydney Integrated Health Partnership Framework has been developed in collaboration with more than 200 patients and partner organisations including NGOs, local councils, and government departments. Five collaborative priorities have been identified. They are:

- Child, youth and family health
- Chronic and complex conditions
- Mental health
- Aboriginal health; and
- Older person’s health.

Steering committees are in place to oversee outcomes in these areas. Each priority has sub-components including transitional care, advance care planning, palliative care, rehabilitation, and acute and post-acute care.

A collaborative partnership with consumers, key agencies and organisations provides for integrated and seamless pathways across the system.

At the centre of this alliance is a focus on the consumer and the community and a commitment to improve health outcomes especially for vulnerable populations.

The WSICP has forged partnerships with health and social policy agencies to change the way healthcare services are delivered to address the needs and wellbeing of the population with a focus on:

- Ensuring the community, family and individual are at the centre of all we do
• Understanding health risks and working together to prevent health problems
• Educating and empowering self-care
• Working in partnership with other groups and agencies that impact on the health and social wellbeing of our communities; and
• Recognising the importance of primary healthcare providers and hospitals working together to ensure services are tailored to meet the needs of local communities.

This has triggered the development of the two internet resources for consumers and care agencies:

- Better Health Together
  www.betterhealthtogether.com.au which details the WSICP for consumers and clinicians; and
- Healthy Western Sydney

“WE ARE CHANGING THE DIRECTION OF PEOPLE’S HEALTH. BEING FROM AN ACUTE CARE SETTING I HAVE ALWAYS BELIEVED A PATIENT’S JOURNEY TO BETTER HEALTH DOESN’T END WHEN THEY ARE DISCHARGED FROM HOSPITAL. IT CONTINUES IN THE HOME AND THE COMMUNITY. IN THE SHORT TIME I HAVE BEEN A PART OF INTEGRATED CARE, I HAVE SEEN PATIENTS THAT WOULD HAVE ORIGINALLY BEEN ADMITTED TO HOSPITAL HAD IT NOT BEEN FOR THE SUCCESS OF THE PROGRAM AND OUTPATIENT SERVICES. IT’S GREAT TO EMPOWER OUR PATIENTS TO BETTER HEALTH.”

WSLHD CARE FACILITATOR DANIEL GROSSER
THE WAY FORWARD

The challenge over the next few years is to sustain the work to date and further engage clinicians to embed change towards delivering integrated care.

The WSICP 2014-2017 has demonstrated:
- Success across all quadruple aims. Patients were better able to manage their health conditions, access hospital services and were highly satisfied with the WSICP
- Improved population health resulting from enhanced chronic disease management and a focus on preventive healthcare is the longer term outcome
- A reduction in healthcare costs due to improved access to multiple providers in one hospital visit, and decreases in ED attendance and admission rates
- Healthcare provider satisfaction with team work, education, and strengthening of cross-sectorial and interdisciplinary relationships
- It is possible to achieve better, more integrated healthcare for targeted patients when resources and management are committed
- Integrating care between hospital and community is complex. Established managerial systems in healthcare that are centralised and siloed operate against it. New models need to be advanced
- Developing integrated care systems takes at least three to four years
- Clinicians differ in how they value new ways of working and there is a wide variation in uptake of new programs and processes particularly in general practice; and
- Strong leadership and robust partnerships are critical to sustain momentum.

RECOMMENDATIONS

Reflecting on the findings, the following is proposed:

1. Integrated care should be seen as routine practice at all levels within the hospital and community through:
   - Policy and funding alignment
   - Promotion of the success of the current program; and
   - Improved provision of information about WSICP to internal and external stakeholders

2. Maintain the strong focus on patient and carer education and empowerment

3. Long-term commitment to continue and extend the WSICP through:
   - Ongoing WSICP staff appointments, especially care facilitator roles
   - Continuation of RASS clinics, and patient and GP support lines
   - Extension of integrated care to include those with comorbidities such as mental illness
   - Enrolment flexibility for those living in nearby areas who use WSLHD services and those in aged care facilities; and
   - Engagement of allied healthcare providers especially to assist with mental health problems.

1 Appendix C:
   - Traditional hospital-based diabetes care
   - Integrated care delivery for diabetes patients
4. Improve cross disciplinary collaboration including through multidisciplinary clinics
5. Continue outreach of hospital services into the community in collaboration with general practice
6. Continue healthcare provider education across all disciplines and in all sectors
7. Provide cross-sectorial shared patient records and more responsive IT systems to provide real-time access to shared information and alerts
8. Enhance parking and transport options to improve access to all hospital services
9. Continue to support primary health to deliver high quality care in the community and advocate for remuneration that rewards quality rather than throughput in general practice; and
10. Ensure evaluation continues to inform the development of integrated care in western Sydney.

KEY LEARNINGS
Care facilitators and the role of care coordination, navigation and health coaching are critical. These are the prime value-adds for GPs in managing care, identifying, linking patients to services and monitoring care.

For patients, care facilitators are an essential central coordinating point and support liaison for patients in a disarray of fragmented services.

For patients and GPs, having a personal interaction with a care facilitator best integrates primary and hospital care, and engenders increased trust between providers.

Greater investment in primary care is crucial to improve the management of long-term chronic conditions in the western Sydney community. This includes support, capacity building, IT, incentives and other changes to models of care.

The value-add for patients and carers is evidenced by qualitative reports and less time in hospital. The integrated care cohort had fewer ED presentations, hospitalisations and reduced LOS.

Leadership, commitment and strong partnerships between the local health district, the primary health network and clinicians are central to success.
As the Western Sydney Integrated Care Program continues it will retain the key components of the original model with an increased focus on building capacity in general practice, improving the quality of care planning and supporting the Patient-Centred Medical Home.

Practice and patient enrolment will continue, with all WSICP Demonstrator patients and practices invited to participate in the Western Sydney Integrated Chronic Care Program (WSICCP).

All patients will be risk stratified in accordance with NSW Health requirements and matched to defined integrated care interventions that will be planned through their general practice. Rapid Access and Stabilisation Services will continue.

WSICCP strategies include:

- Engaging the 22 general practices participating in the Health Care Homes pilot in western Sydney to participate in the WSICCP. Health Care Homes are virtual homes that use the PCMH model but have a separate funding system for bundled care payments
- Continuing to advocate and structure synergies between the WSICCP and the Commonwealth’s Health Care Homes trial
- Collaborating to implement the GoShare digital education platform and the extension to primary care of the peer-led Stanford Chronic Disease Self-Management Program
- Upgrading the preliminary ROI analysis methodology to better demonstrate outcomes for patients enrolled within primary care, and more specifically outcomes for patients enrolled in integrated care practices using a PCMH approach
- Scaling the integrated care model to involve more providers, patients, conditions and services by broadening the enrolment criteria and engaging more WSLHD service providers
- Further developing the clinician tool kit or model of care to be used with other areas in integrating care to allow greater sharing of the learnings; and
- Value adding for primary and secondary care.

Success will largely be determined by providing and demonstrating value for primary and secondary care clinicians, as well as for the health system.

A Health Information Unit in partnership with WSPHN is being established to provide support to clinicians and to demonstrate value to the system.

Information system enhancements at both primary and secondary care levels will improve sharing and integrating care.

Alternate funding models are required to encourage care facilitator involvement with primary care practices. Improved marketing of the integrated care model and philosophy will consolidate the WSICCP in the minds of patients and primary and secondary care providers.
APPENDICES

APPENDIX A
RETURN ON INVESTMENT ANALYSIS

The initial preliminary return on investment analysis assessed for each person in the WSICP, the admissions and ED measures attendances for the equal period of time before and after their program engagement. The engagement includes patients either enrolled in the WSICP, or who have attended the RASS, resulting in three sub-groups to analyse:

1. Enrolled not attending the RASS
2. Enrolled attending the RASS; and
3. Non-Enrolled attending the RASS.

ANALYTICAL PROCESS

SOURCE: INTEGRATED & COMMUNITY HEALTH DATA ANALYSIS
APPENDIX B

RETURN ON INVESTMENT PATIENT ANALYSIS

<table>
<thead>
<tr>
<th></th>
<th>WSLCP ENROLLED PATIENT</th>
<th>COMBINED</th>
<th>RASS PATIENTS</th>
</tr>
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<tbody>
<tr>
<td>PATIENTS ENROLLED</td>
<td>1372</td>
<td></td>
<td>5485</td>
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<tr>
<td>ALL PATIENTS</td>
<td>1165</td>
<td>207</td>
<td>5278</td>
</tr>
<tr>
<td>ENROLLED</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>MORE THAN 12 MONTHS</td>
<td>37% PATIENTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INCLUDED PATIENTS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADMISSIONS ED</td>
<td>326</td>
<td>141</td>
<td>4203</td>
</tr>
<tr>
<td>PRE</td>
<td>397</td>
<td>155</td>
<td>4531</td>
</tr>
<tr>
<td>POST</td>
<td></td>
<td></td>
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</tbody>
</table>

APPENDIX B
WESTERN SYDNEY INTEGRATED CARE DEMONSTRATOR 2014-2017 - APPENDICES
TRADITIONAL HOSPITAL-BASED DIABETES CARE

HOSPITAL

INPATIENT

ROUTINE DIABETES CLINIC

EMERGENCY DEPARTMENT

PRIMARY CARE

COMMUNITY

Inpatient Diabetes Management Services (IDMS)

Self Presentation

Discharge to GP

Routine Referral

Discharge to GP

Admission
**INTEGRATION OF CARE FOR INDIVIDUALS WITH DIABETES**

**COMMUNITY**
- Community Clinic
  - GPs
  - Endocrinologist
  - Diabetes Educator

**HOSPITAL**
- Inpatient Referral
  - Routine Diabetes Clinic
  - Rapid Access Services
  - Stabilisation Services
  - Endocrinologist
  - Diabetes Educator
  - Dietitian
  - Podiatrist
  - Psychologist

**EMERGENCY DEPARTMENT**
- Emergency Referral
  - Self Presentation

**INPATIENT**
- Inpatient Referral
  - Discharge to GP

**CARE FACILITATOR**
- GP and Practice Nurse
- Capacity Building

**PRACTICE NURSE**
- Diabetes Educator
- Other Specialist
- Psychologist

**ROUTE CONFERENCE**
- Endocrinologist
- Diabetes Educator

**CASE CONFERENCE**
- Endocrinologist
- Diabetes Educator

**PRIVATE ENDOCRINOLOGIST**
- Endocrinologist
- Diabetes Educator

**NEW SERVICES INTRODUCED**
- To foster integration and improve patient care

**APPENDICES**

---

- **Routine Diabetes Clinic**
- **Rapid Access Services**
- **Stabilisation Services**
- **Inpatient Referral**
- **Emergency Referral**
- **Inpatient Referral**
- **Discharge to GP**
- **GP and Practice Nurse**
- **Capacity Building**
- **Endocrinologist**
- **Diabetes Educator**
- **Dietitian**
- **Podiatrist**
- **Psychologist**

---

**INTEGRATION OF CARE FOR INDIVIDUALS WITH DIABETES**

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- Diabetes Educator

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  - Stabilisation Services
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  - Psychologist

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- **Diabetes Educator**
- **Dietitian**
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- **Psychologist**

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## APPENDIX D
### ABBREVIATIONS AND GLOSSARY

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACI</td>
<td>Agency for Clinical Innovation</td>
</tr>
<tr>
<td>CAGR</td>
<td>Compound Annual Growth Rate</td>
</tr>
<tr>
<td>CALD</td>
<td>Culturally and linguistically diverse</td>
</tr>
<tr>
<td>Care facilitator</td>
<td>Care facilitators are registered nurses who provide a level of care coordination to the enrolled patient cohort</td>
</tr>
<tr>
<td>CCoPS</td>
<td>Chronic condition of patient selection. A tool used for patient risk stratification</td>
</tr>
<tr>
<td>CDMP</td>
<td>Chronic Disease Management Program</td>
</tr>
<tr>
<td>Cerner</td>
<td>Cerner Corporation is a supplier of health information technology solutions, services, devices and hardware</td>
</tr>
<tr>
<td>CF</td>
<td>Care facilitator/s. Care facilitators are registered nurses who provide a level of care coordination to the enrolled patient cohort</td>
</tr>
<tr>
<td>CHOC</td>
<td>Community health and outpatient care electronic medical record</td>
</tr>
<tr>
<td>COPD</td>
<td>Chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>ED</td>
<td>Emergency Department</td>
</tr>
<tr>
<td>eGFR</td>
<td>Estimated glomerular filtration rate is a number based on a blood test for creatinine, a waste product in the blood. It tells how well the kidneys are working</td>
</tr>
<tr>
<td>FEV1</td>
<td>The maximum amount of air a person can forcefully exhale in one second, an important factor in measuring respiratory health</td>
</tr>
<tr>
<td>FVC</td>
<td>Forced vital capacity is the amount of air which can be forcibly exhaled from the lungs after taking the deepest breath possible. FVC is used to help determine both the presence and severity of lung diseases</td>
</tr>
<tr>
<td>GoShare</td>
<td>A web-app platform that allows health professionals to quickly and easily distribute digital health content to patients and carers</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>GPs</td>
<td>General practitioners</td>
</tr>
<tr>
<td>GWAHS</td>
<td>Greater Western Aboriginal Health Service</td>
</tr>
<tr>
<td>HbA1c</td>
<td>Glycated haemoglobin. By testing the level of glycated haemoglobin clinicians are able to get an overall picture of average blood sugar levels over a period of weeks/months. For people with diabetes the higher the HbA1c, the greater the risk of developing diabetes-related complications</td>
</tr>
<tr>
<td>Health Care Home</td>
<td>A virtual home. Currently a pilot project that uses the PCMH model (see page 48) but has a separate funding system for bundled care payments</td>
</tr>
<tr>
<td>HealthOne</td>
<td>HealthOne NSW is an integrated primary and community health initiative. It provides capital funding to bring together multidisciplinary teams of GPs and community health and other health professionals to improve the coordination of care for families with chronic diseases</td>
</tr>
<tr>
<td>HealthPathways</td>
<td>HealthPathways is an online health information portal for GPs to be used within patient consultations. It supports better linkages between GPs and specialist services</td>
</tr>
<tr>
<td>HIE</td>
<td>Health Information Exchange</td>
</tr>
<tr>
<td>IC</td>
<td>Integrated care</td>
</tr>
<tr>
<td>IHI</td>
<td>Institute for Healthcare Improvement</td>
</tr>
<tr>
<td>iPM</td>
<td>Software that provides a single patient index that has the ability to link patient activity across health service providers, and provide standardised data definitions and reference values and standardised activity reporting</td>
</tr>
<tr>
<td>IT</td>
<td>Information technology</td>
</tr>
<tr>
<td>LGA</td>
<td>Local government area</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LHD</td>
<td>Local health district</td>
</tr>
<tr>
<td>LinkedEHR</td>
<td>An online care planning system designed to manage patients with a chronic disease and a team of health professionals involved in their care</td>
</tr>
<tr>
<td>MoH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>NDIS</td>
<td>National Disability Insurance Scheme</td>
</tr>
<tr>
<td>NWAU</td>
<td>National Weighted Activity Unit is a measure of health service used in Activity Based Funding activity, against which the national efficient price (NEP) is paid. It provides a way of comparing and valuing each public hospital service, whether it be an admission, emergency department presentation or outpatient episode, weighted for clinical complexity. The most intensive and expensive activities are worth multiple NWAUs and the simplest and least expensive are worth fractions of NWAUs</td>
</tr>
<tr>
<td>PCMH</td>
<td>Patient-Centred Medical Home. A virtual home, the PCMH model emphasises a patient having an ongoing relationship with a GP who leads a multidisciplinary practice team; and primary care that is comprehensive, coordinated and accessible, with a focus on safety and quality</td>
</tr>
<tr>
<td>PHN</td>
<td>Primary health network</td>
</tr>
<tr>
<td>PRM</td>
<td>Patient Reported Measures capture outcomes that matter to patients</td>
</tr>
<tr>
<td>QOL</td>
<td>Quality of life</td>
</tr>
<tr>
<td>RASS</td>
<td>Rapid Access and Stabilisation Services provide rapid evaluation of an acute deterioration of a patient’s chronic condition with the aim to intervene early to prevent an admission or expedite admission to hospital if required</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>REDCap</td>
<td>Research Electronic Data Capture is a browser-based, metadata-driven electronic data capture software solution and workflow methodology for designing clinical and translational research databases</td>
</tr>
<tr>
<td>ROI</td>
<td>Return on investment</td>
</tr>
<tr>
<td>SLAs</td>
<td>Service level agreements</td>
</tr>
<tr>
<td>WentWest</td>
<td>Western Sydney Primary Health Network</td>
</tr>
<tr>
<td>WSICCP</td>
<td>Western Sydney Integrated Chronic Care Program</td>
</tr>
<tr>
<td>WSICD</td>
<td>Western Sydney Integrated Care Demonstrator 2014-2017</td>
</tr>
<tr>
<td>WSICP</td>
<td>Western Sydney Integrated Care Program 2014-2017</td>
</tr>
<tr>
<td>WSLHD</td>
<td>Western Sydney Local Health District</td>
</tr>
<tr>
<td>WSPHN</td>
<td>Western Sydney Primary Health Network (WentWest)</td>
</tr>
<tr>
<td>WSU</td>
<td>Western Sydney University</td>
</tr>
</tbody>
</table>