



Smarter Healthcare

We have an opportunity to transform Australia's healthcare systems to: optimise operational performance; deliver patient-centric care; and make better use of health information.

Why?

The rising cost of services, the growth of Australia's ageing and overweight populations, the shortage of clinical skills and the limited access to health information and treatments are pushing Australia's health system to the limit. This is not only putting individual Australians at risk, as a country, we need to reduce the incidence of illness, injury and chronic disease to boost our workforce productivity and participation.

- The number of people over 85 is forecast to quadruple to 1.6 million by 2047¹
- The average PBS costs for a person aged 65–74 are more than 20 times greater than for a 15–24 year old²
- The percentage of GDP spent on health is projected to double in a generation³
- 20-30% of treatment is not based on the latest research evidence⁴
- Poor diabetes management led to 200,000 preventable hospital admissions in 2004-05⁵
- The Victorian Auditor-General reported 135,000 Victorians may have experienced a potentially or actually harmful "clinical incident" in 2007⁶
- The Australian Health Workforce Institute claims: "nurses are an endangered species" ⁷

What?

A smarter healthcare system starts with better connections, better data, and faster and more detailed analysis. It means giving individuals the opportunity for greater ownership of their own health information. It means integrating our data and centering it on the patient, so each health professional has access to all relevant information and can make the right diagnosis and treatment decisions as quickly as possible. It also means moving away from paper records, to reduce medical errors and improve efficiencies. And it means applying advanced analytics to vast amounts of health data, to support improved population health outcomes.

With a smart healthcare system we can:

- Make better use of our limited health resources
- Empower patients to take greater responsibility for their health
- Ensure every Australian benefits from global health research

¹ Productivity Commission, Trends in Aged Care Services: Some Implications, September 2008

² Treasury, 2007

³ Treasury, Productivity Commission

⁴ Business Council of Australia

⁵ Australian Hospital Statistics, 2004-2005

⁶ Victorian Auditor-General, Access to Public Hospitals: Measuring Performance, April 2009

⁷ Kronos & AHWI Meta-Research Project Report, 2008

How?

Optimise operational performance...

by streamlining clinical processes and using technology to deliver both cost efficiencies and better clinical outcomes

Cumbersome work practices, archaic IT systems and limited connectivity are wasting hundreds of millions of dollars each year and putting lives at risk. As a matter of urgency, Australia needs to connect its primary health care providers, hospitals and patients and have digital records available wherever a patient presents.

At the same time, we need to improve operational excellence within individual institutions. For example, our nurses need computerised rostering to ensure they are allocated at the greatest point of need.

SMART IS Accessing an individual's full medical and family history with one view.

SMART IS Standardising clinical practices across the Australian health system by integrating information between healthcare institutions.

SMART IS Optimising processes using operational performance data and clinical and business results.

Providing instant access to health records

The Danish National e-Health portal is providing doctors with instant access to their patients' health history and records. The new system has cut administrative costs to just 1.3% of expense (compared to 31% in the U.S.), has the lowest medical error rate in the world and a 94% satisfaction rating from patients.

Saving IT capital and operating costs

The University of Pittsburgh Medical Center is using virtualisation to increase its processing capacity by 150%, while reducing its number of servers by 67% - saving USD\$30 million in capital and operating costs.

Accelerating month-end turnaround

Australia's largest private aged care provider, the Moran Health Care Group, shaved 15 days off its month-end turnaround of management reports by using business intelligence software in conjunction with its general ledger system.

Deliver patient-centric care...

By encouraging personal responsibility for healthier choices, while shifting our focus toward patient-centred activities

Our health systems should connect Australians to information, to experts and to each other – to help them to act proactively to support their own health and those they care for.

For example, smart health monitoring systems can give a busy mother daily electronic updates on the health status of an ageing parent who lives alone, is suffering from high blood pressure, and is on multiple medications.

Or, a traveling businessperson, who is diabetic, can have a real-time discussion about his blood sugar levels with his GP hundreds of miles away.

SMART IS Enabling individuals to access their medical records from anywhere in the world

SMART IS Giving people real-time line of sight and responses to individual health information

SMART IS Connecting communities with remote healthcare professionals

Providing remote diagnosis

Pakistan Telemedicine Project is using wireless broadband technology, videoconferencing and the internet to provide high quality medical services for patients in remote areas of Pakistan.

Improving chronic illness management

Denmark's Storstrøms Erhvervs Center has a predictive health monitoring system that uses advanced telemetry technology to monitor elderly patients and share data with healthcare providers in real time, increasing efficiency and success in chronic illness management.

Taking a different approach to healthcare

In the Medical Home model, primary care physicians act as "coaches," leading a team that manages a patient's wellness, preventive and chronic care needs. The doctor spends more time with each person, is available via e-mail and phone for consultation, offers expanded hours and coordinates care.

Make better use of health information...

With a focus on more personalised prevention, prediction, early detection and treatment

More complete health information will help us to better predict, prevent, detect and treat disease. At the micro level, this will mean using real-time and holistic data to speed insights and increase confidence that medical decisions will yield the best outcomes for an individual patient. At the macro level, we can analyse entire populations to gain deeper understanding into the nature and treatment of different diseases.

SMART IS Analysing, reporting and predicting the progression and impact of chronic diseases like diabetes, heart disease or stroke

SMART IS Analysing events generated in monitoring data to prevent a future acute episode

SMART IS Tracking and reporting infectious diseases to intervene early and keep people well

Mining clinical research data

Melbourne Health Bio21 is bringing together remote databases from multiple hospital sites into a single view, using this clinical research data to improve the treatment of diabetes, epilepsy and colon cancer.

Developing information-based medicine

A major pharmaceutical firm is establishing a national "bio-bank" to help accelerate understanding of the underlying mechanisms of disease, conduct more focused clinical trials and transform healthcare delivery.

Improving medical decision-making

A major hospital's neonatal intensive care unit (ICU) is collecting real-time data from premature babies and alerting doctors immediately when medically significant data changes occur. The sophisticated analytics are enabling doctors to make more timely interventions, reducing the time babies spend in the ICU.

When?

NOW! There's no better time to start building a smarter healthcare system – focused on providing excellent healthcare, by optimising operational performance, allowing collaboration between providers and individuals and using more complete information to predict, prevent and treat disease.

Let's work together to drive real progress in Australia.