

Background

Australia has one of the best health systems in the world based on the health outcomes of its citizens. However, maintaining or improving the health outcomes of Australians will require a fundamental change in the way healthcare is delivered.

The health system is straining to deal with increasing cost and demand pressures and a shortage of skilled healthcare workers. Given this reality, we need to move to a system where every interaction between consumers and care providers achieves maximum impact on health outcomes, and where scarce financial and human resources are deployed as effectively as possible.

A significant shift in the way information is collected, communicated and used across the health system is required. We have to move away from a reliance on tools such as pen, paper and human memory to an environment where consumers, care providers and healthcare managers can reliably and securely access and share health information in real time across geographic and health sector boundaries. The only way this can be achieved is through the implementation of world class E-Health capability.

In early 2008 Australian Health Ministers commissioned the development of a National E-Health Strategy to support health reform.

As part of this, a series of national consultations were conducted which included Commonwealth, State and Territory Governments, consumers, general practitioners, medical specialists, nursing and allied health, pathology, radiology and pharmacy sectors, health information specialists, health service managers, researchers and academics. An electronic submission process was also used to facilitate wider community input. The input of a diverse group of stakeholders has been critical to informing the strategy and its priorities for E-Health in Australia over the next decade.

The National E-Health Strategy was endorsed by Health Ministers in December 2008 as a guide to further development of E-Health in Australia.

The Strategy adopts a staged approach to developing E-Health capabilities to:

- build on what currently exists in the Australian E-Health landscape;
- manage the underlying variation in capacity across the health sector and States and Territories;
 and
- allow scope for change as lessons are learned and technology is developed further.

The National E-Health Strategy provides a vision, set of priorities and implementation roadmap aimed at delivering a safer, better connected and more sustainable healthcare system over the next decade.

National Vision for E-Health

"E-Health will enable a safer, higher quality, more equitable and sustainable health system for all Australians by transforming the way information is used to plan, manage and deliver healthcare services."

The vision can also be expressed in terms of what it might mean for care providers (i.e. the individuals and organisations that provide healthcare services) and healthcare managers (i.e. clinical managers, health service administrators, planners, researchers and policy makers).

Care Providers will make more informed decisions at the point of care as a result of better access to necessary consumer health information, more effective decision support tools and an improved evidence base for treatment decisions. They will deliver care more efficiently and be able to readily share information and coordinate care delivery with other providers.

Vision **Current State** Will have an integrated and complete view of consumer Work with incomplete and fragmented information when providing care to consumers health information at the point of care Spend time collecting consumer information Will be able to share information electronically in a timely and secure manner across different geographic and duplicating treatment activities locations and all parts of the health sector Manually coordinate care with other providers and exchange information in an inefficient, Will have access to data that allows them to more incomplete and ad hoc manner effectively monitor and evaluate service delivery outcomes Risk the occurrence of adverse events through incomplete information and a lack of access to Will be able to electronically order tests, prescribe decision support tools at the point of care medications and refer individuals to other providers Limited ability to interact with consumers Providers' care decisions will be supported by access to appropriate information sources and decision support remotely tools at the point of care Limited means to monitor effectiveness of Will be able to *electronically interact with consumers* service delivery outcomes regardless of where they are geographically located Will be able to *collaborate with other professionals* by more easily sharing expertise and evidence Will have easy access to clinical knowledge and evidence sources to assist with skill development

Healthcare Managers will have timely access to a more robust, comprehensive and accurate body of data for the purposes of effectively monitoring Australian health outcomes and responding to public health emergencies, prioritising investment decisions, undertaking targeted research programs, and driving policy directions.

Current State	Vision
Rely on incomplete, fragmented and untimely information to inform decision-making.	Will have access to timely and complete information about health system activities and outcomes
 Spend time trying to collect and manually integrate information from multiple data sources 	Will have a <i>reliable and comprehensive evidence base</i> to inform and monitor the impact of clinical, policy, investment and administrative decisions
Limited ability to share clinical and administrative management information across the health sector	 Will be able to better respond in the case of emergencies through real time monitoring of public health indicators
 Very difficult to meaningfully understand the national impact of strategic, operational or clinical treatment decisions 	 Will be able to rapidly assess the national impact of particular treatment regimes via access to nationally aggregated clinical datasets

Strategic Principles

There are several key principles that underpin and inform the National E-Health Strategy:

- National infrastructure Deliver core elements of enabling national E-Health infrastructure once, rather than duplicating development costs and effort and increasing the likelihood of rework;
- Stakeholder engagement Actively engage key healthcare stakeholders in the design and delivery of E-Health solutions;

- **Incremental approach** Build long term national E-Health capability in an incremental and pragmatic way, focusing initial investment in those areas that deliver the greatest benefits for consumers, care providers and healthcare managers:
- Recognising different starting points Provide active support for those with less developed E-Health capability, while not constraining the progress of others who are more advanced;
- Leverage More effectively build on and extend E-Health activity across the country;
- Balancing alignment and independence Drive alignment of national E-Health activities whilst not unnecessarily limiting the ability of healthcare participants and vendors to implement locally relevant solutions; and
- Relevant skills Ensure sufficient numbers of skilled practitioners are available to support delivery of the National E-Health Strategy.

Strategic Workstreams

In order to address these principles four major strategic workstreams of activity have been identified in the Strategy:

- **Foundations** the infrastructure, rules and protocols for sharing information in the system. This includes national health identification and authentication services, privacy management, standards, core computing infrastructure and broadband services;
- E-Health Solutions the specific computing solutions or tools that allow viewing, sharing and use of information in the system. These are based on the priority needs of consumers, care providers and healthcare managers. They include routine interactions (e.g. referrals, discharge, prescribing, diagnostics, care planning), electronic decision support and knowledge resources, new service delivery tools (e.g. chronic disease management support), and improved information sources (e.g. national databases and individual electronic health records);
- Change and Adoption the support required to encourage and enable participants in the healthcare system to adopt E-Health solutions. This includes building awareness and stakeholder engagement, providing incentives, developing workforce capability, and managing workplace change; and
- **Governance** the structures and processes in place to provide effective leadership, coordination and oversight of a national E-Health work program. The National E-Health Strategy recommends establishing a new E-Health governing board and national entity by leveraging the work of the existing National E-Health Transition Authority.

Challenges

The National E-Health Strategy identifies a number of challenges in further developing E-Health in Australia.

One of the key challenges to E-Health take-up is the current variation in the standard of computing infrastructure (i.e. computers, network connectivity and core patient, clinical and practice management systems) across many parts of the Australian health sector. Without sufficient and coordinated investment in health computing infrastructure, the ability of healthcare participants to adopt new systems or technologies is limited. In addition Australia is a relatively small market for IT vendors, which has impacted on the availability of world class health IT solutions that are functional, scalable, easy to use, and able to be seamlessly integrated with other systems.

Rapid advances in medical research and technology are also creating a significant knowledge management challenge for healthcare professionals who are trying to keep up to date with new developments and the best available clinical evidence. In addition, there is a relatively limited workforce within Australia with the required combination of health and IT skills to deliver a national E-Health work program. These challenges will need to be addressed through appropriate training and education programs.

The Strategy also acknowledges that there will need to be effective leadership, coordination and oversight of the range of activities that need to occur across all work streams to achieve desired national E-Health outcomes in Australia.

Ensuring that the health information collected is secure, protected and accurate and can be located, communicated and used effectively is another key challenge. The establishment of a robust national privacy and regulatory regime, which includes authorization for specific E-Health initiatives, is critical to ensuring appropriate safeguards and consent processes for access to and use of health information and participation within the E-Health environment.

Implementation Roadmap

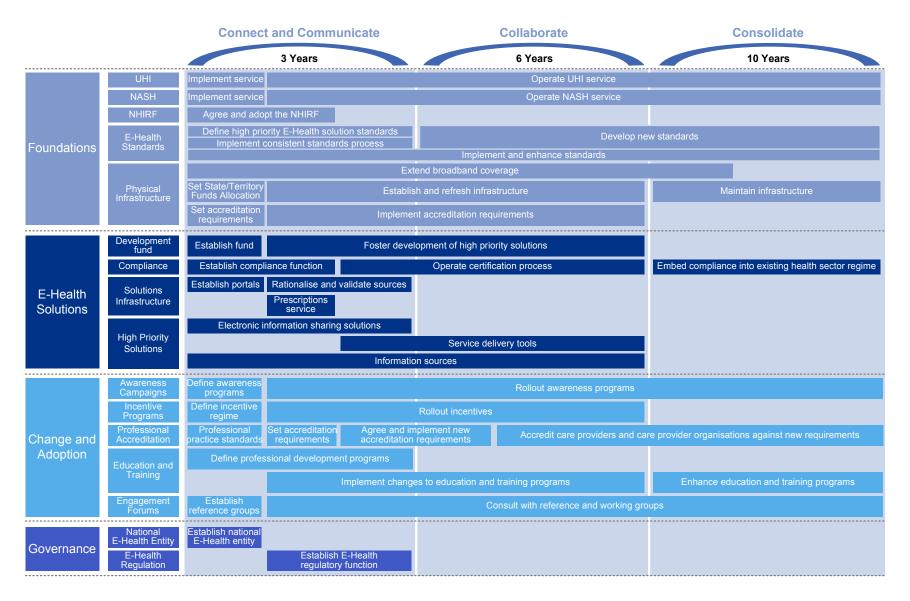
International experience consistently points to a journey of 10 years or more to deliver a National E-Health Strategy. However, breaking the journey down into 3, 6, and 10 year planning horizons keeps the work program focused by progressively delivering blocks of capability along the way.

These planning horizons are intended to reflect the primary focus in each progressive state of maturity in information sharing:

- Connect and communicate within the first 3 years, the focus is on establishing the foundations for E-Health and providing basic connections that allow information sharing to occur between care providers and across the health sector;
- Collaborate from 3-6 years, the focus shifts from basic communication to collaboration, joint care planning and multi-disciplinary care delivery through more extended information sharing; and
- Consolidate from 6-10 years, E-Health becomes part of business-as-usual for healthcare
 provision. In this stage there is a focus on maintaining and enhancing a sustainable health
 information sharing environment that supports ongoing innovation and the development of
 future models of care based on rich and extensive information sharing.

Figure 1 summarises the National E-Health Strategy work program over these 3, 6 and 10 year planning horizons.

Figure 1 - E-Health Implementation Roadmap



Implementation Targets

The National E-Health Strategy identifies indicative targets for the advancement of E-Health adoption over the next 10 years. In 10 years time, these targets would allow us to measure the success of the National E-Health Strategy from the perspective of care providers and healthcare managers as follows.

Care Providers

- The rollout of national identifiers is complete and they are being used for over 90% of interactions between consumers and care providers. Broadband connectivity is available to all Australian care providers.
- Over 95% of Australian care providers have appropriate levels of computing infrastructure in place to support the electronic exchange of health information. Maintenance of an acceptable baseline of physical computing infrastructure has been made a care provider accreditation requirement with criteria and accreditation processes in place.
- Professional responsibilities for electronically collecting and sharing health information have been fully adopted by care provider practices and organisations and have been embedded in professional accreditation requirements.
- Over 90% of care providers have adopted and are utilising standards compliant patient, clinical and practice management systems that support E-Health priority solutions such as the electronic transfer of prescriptions, test orders/results, referrals and event summaries.
- The National Clinician Portal is viewed as a world class source of comprehensive and up to date clinical treatment and evidence information.
- Care provider IT and health informatics education programs have been established and are producing a new breed of technology aware healthcare practitioners who understand the value and use of E-Health solutions. Specific qualifications are recognised for health informatics professionals.

Healthcare Managers

- Healthcare managers have access to high quality, comprehensive longitudinal and aggregated datasets for improved analysis, decision making and research.
- Healthcare managers utilise sophisticated data reporting and analysis tools which support the real time monitoring of Australian health system activities and outcomes.
- The vast majority of reporting data is collected through normal E-Health enabled care delivery processes and a significant consolidation and rationalisation of data collections has been completed.

Further information

The Commonwealth, State and Territory Governments are continuing to work together, in consultation with key stakeholders, to progress the national E-Health work program.

You may contact your local Health Department or check its website for further information about the National E-Health Strategy and opportunities to be involved in E-Health activities.

Further information about the National E-Health Transition Authority's work program can be found at: http://www.nehta.gov.au.