



Australia



Describe a successful or challenging e-health initiative your country has taken.

Eastern Goldfields Regional Reference Site (EGRRS)

One particular project that has been undertaken by the Australian Government Department of Health and Ageing is the Eastern Goldfields Regional Reference Site (EGRRS), which was established to measure the benefits to health care providers of having high-speed, continuous, high-quality broadband connectivity.

The project was able to demonstrate the value of a selection of key health services and applications that can be delivered by advanced broadband arrangements – an Internet Protocol (IP) Virtual Private Network (VPN). A VPN is a high-speed, always on, secure and high performance network service that is capable of transmitting large amounts of data and which provides secure connectivity for phone, data, and video applications.

The Reference Site covered the area serviced by the Eastern Goldfields Medical Division of General Practice (EGMDGP) and Goldfields South East Health Region in Western Australia (WA). This area includes the City of Kalgoorlie-Boulder and the surrounding region, from the inland town of Wiluna in the north, to the coastal town of Esperance in the south, covering 815,464 sq. kilometres (approximately 32.6 per cent of the land mass of Western Australia (WA)). The population covered by EGRRS is 59,208. The area covers typical rural and remote conditions in Australia, with the City of Kalgoorlie-Boulder mirroring metro-like conditions.

Core infrastructure for the project was deployed in February 2005, and the Reference Site went 'live' in March 2005. The EGRRS project was completed on 30 June 2006.

The VPN connected GP practices and homes, medical specialists, Kalgoorlie Regional Hospital, Esperance District Hospital, Aboriginal Community Controlled Health Services (ACCHS), the EGMDGP, the Rural Clinical School and local pharmacies and aged care facilities, and included secure gateway connections to the Royal Flying Doctor Service network, and private radiology and pathology providers.

The EGRRS project participants received the following services:

- ✦ *access to secure broadband connectivity to both their practice rooms/office (via direct cable connection or satellite technology, depending on location) and the private residences of clinicians*
- ✦ *provision of a secure email service including spam filtering*
- ✦ *secure internet access, including firewall, antivirus and filtering services*
- ✦ *secure data transfer*
- ✦ *remote access capability from sites within the VPN*
- ✦ *desktop videoconferencing capability*
- ✦ *Voice over Internet Protocol (VoIP) telephony*
- ✦ *the ability to use Medicare Online claiming*
- ✦ *the ability to receive electronic radiology and pathology reports.*

A panel of EGRRS network participants identified the following types of additional applications for use on the VPN that were accessed through a 'GoldHealth' portal:

- ✦ *electronic discharge summaries*
- ✦ *electronic reports from specialists*
- ✦ *online education applications and peer support*
- ✦ *online therapeutic guidelines, journals, resources and information services*

- ✦ *clinical applications (e.g. Teledermatology)*
- ✦ *small business tools that demonstrated the value of broadband.*

Wider e-health environment – National E-Health Transition Authority (NEHTA)

The development of e-health standards is being undertaken by the National E-Health Transition Authority (NEHTA). NEHTA is a not-for-profit company, limited by guarantee, which was established by the Australian, state and territory governments on 5 July 2005 to develop the critical standards, infrastructure, software and systems required to support the connectivity and interoperability of electronic health information systems across Australia.

NEHTA has a specific work programme, which has been agreed to and funded by all jurisdictions (Commonwealth, state and territory governments). The baseline activities funded in 2005-06 into 2007-08 include:

- ✦ *The development of clinical information*
- ✦ *Clinical terminologies*
- ✦ *Individual Healthcare Identifier (IHI)*
- ✦ *Healthcare Provider Identifier (HPI)*
- ✦ *Medical product directory*
- ✦ *Supply chain efficiency*
- ✦ *Interoperability framework; secure messaging*
- ✦ *User authentication*
- ✦ *E-health consent framework*
- ✦ *Electronic Health Record (EHR) specifications*
- ✦ *Standards implementation.*

The Council of Australian Governments (COAG) announced funding of \$130.2 million on 10 February 2006 for NEHTA to support accelerated work on priority e-health building blocks.

Jurisdictions have supported the introduction of standardised clinical terminologies, which provide the “language” for electronic information exchange in health. This allows healthcare providers to speak the same language when sharing patient information across the ether. This is where the SNOMED-CT (Systematized Nomenclature of Medicine – Clinical Terms) comes in. This internationally accepted standard is being adopted across the Australian health system under the guidance of NEHTA.

NEHTA is the Australian representative within the International Health Terminology Standards Development Organisation (IHTSDO), and will function as the Australian National Release Centre with responsibility for managing the flow of information between the IHTSDO and Australian users of SNOMED-CT. NEHTA has secured a national license for the use of SNOMED clinical terms, and access to the standard has been free for Australians since April 2007.

What were the financial challenges and costs associated with implementation of this programme?

EGRRS

The 2003-04 Federal Budget allocated \$9.2 million in funding to the ‘Access to Broadband Technology Initiative’ (which evolved into the Broadband for Health programme). A demonstration of the actual value gained by broadband connectivity was the key, agreed objective of this initiative. As such, a component of this funding allocation was used to implement the EGRRS project.

A total of \$4.76 million was expended to implement EGRRS. Primarily, the funding was used for VPN equipment purchasing and VPN management services. It also was used to upgrade participants’ existing hardware and software as required and for local project management and support services.

From 1 July 2006, EGRRS transitioned to the locally owned 'GoldHealth' private network with over 90 per cent of all original EGRRS participants (over 230 users) continuing with the network. The GoldHealth Network continues to be supported by the EGMDGP.

Wider e-health environment – NEHTA

Investment in the development of e-health standards is being shared by the Commonwealth, state and territory governments; a national approach was needed to develop the critical standards, infrastructure, software and systems required to support the connectivity and interoperability of electronic health information systems across Australia.

NEHTA is funded by jurisdictions according to the Australian Health Ministers Advisory Council (AHMAC) cost sharing formula, whereby the Commonwealth provides 50 per cent of funding and the states and territories combined provide 50 per cent. The Health Ministers agreed to provide NEHTA with \$18.2 million in base level funding for project activities from 2005-2008.

- ✦ The Commonwealth also funded NEHTA to undertake work on the Australian Catalogue of Medicines (ACOM) and the Shared Electronic Health Record (SEHR) initiatives.

On 10 February 2006, the Council of Australian Governments (COAG) agreed to provide NEHTA with an additional \$130.2 million over three years, commencing from 2006-07 to develop, implement and operate systems to manage:

- ✦ an Individual Healthcare Identifier (IHI) (\$45.1 million)
- ✦ a Healthcare Provider Identifier (HPI) (\$53.1 million)
- ✦ Clinical Terminologies (SNOMED-CT) (\$32.0 million).

What have been the main technological challenges to implementing e-health in your country?

Structural challenges

The nature of health service delivery in Australia presents slightly different challenges to other Commonwealth nations for managing investment in e-health implementation. Australia's health system is very diverse, and very structurally complex in comparison to many other Commonwealth countries. This diversity and complexity requires a greater level of cooperation and negotiation to progress the e-health agenda. Some examples of these differences are as follows.

- ✦ Australia has a strong federal system of government, with differing levels of responsibilities. The Australian Government has the primary role of developing broad national policies, regulation and funding while state and territory governments are primarily responsible for the delivery and management of public health services (including public hospitals) and for maintaining direct relationships with most health care providers, including regulation of health professionals and private hospitals.
- ✦ Funding for health services is predominantly the preserve of governments. National programmes such as the Medicare Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS) are funded by the Commonwealth Government. States and territories fund their public hospitals. There is also a proportion of total Australian health expenditure that is purely private expenditure and for private health insurance services not covered by government-funded services.
- ✦ Australia also has a strongly independent health workforce, with most general practitioners operating in the private sector on a fee-for-service basis. While government-run hospitals employ doctors on salary, doctors (as a rule) are not employed by governments. Australia's medical specialist workforce is also principally private operators. Likewise, there has been significant growth in the private hospital sector.
- ✦ Australia also faces geographic challenges. While most of the Australian population live in urban areas near Australia's coastline, there are great challenges in providing adequate levels of health services for Australians living in regional and remote Australia.

- ✦ *This geographical challenge is evidenced by the difficulties in provision of improved broadband infrastructure across the nation, ensuring that all Australians have fair and reasonable access to broadband and its benefits, particularly with regards to price and location barriers.*
- ✦ *The National Broadband Strategy (announced in 2004) provides a policy framework for broadband development in Australia agreed by all levels of government, which included the recently completed Broadband for Health programme. A major emphasis of these funding programmes is to provide access to affordable broadband services in regional Australia. Government services, the community and sectors such as education and health are also being targeted for broadband development.*
- ✦ *The strong support from general practices and community pharmacies in accessing the Broadband for Health initiative has seen a significant take-up of secure business-grade broadband services that will underpin the future exchange of health information.*

Technical challenges

To be able to have an effective e-health system providing key information at the point of care, the system needs to have a strong set of standards to promote the interoperability of health systems that will ensure that clinical records can be safely and securely exchanged between approved health professionals at different points within the continuum of care. The Australian Government and the governments of all states and territories have agreed that a collaborative national approach is essential to accelerate the e-health agenda to achieve desired health system reforms.

The partnership between the Australian Government and all jurisdictions in e-health represents significant strategic influence over future developments. This collaborative approach in Australia is often necessary due to the absence of market forces to generate viable sustainable markets, most notably in the health sector. As a consequence, governments in Australia often play a major role in developing markets and providing financial incentives.

The work being undertaken by NEHTA in e-health standards development, and NEHTA's lead role in developing and implementing the Unique Health Identifier (UHI) service, will underpin the development of e-health in Australia. It should also be noted that notwithstanding the work being undertaken by governments in supporting the development of e-health standards and key infrastructure, there will continue to be differing levels of technology take-up by health professionals.

- ✦ *General practice has been the success story in Australia for its embrace of information technology through accessing the Information Management Information Technology (IM/IT) incentive in the Practice Incentives Program.*

Have any ethical issues been raised during the design and implementation of e-health programmes?

Privacy

A robust consent framework is being designed to ensure that consumers participating in e-health initiatives are given a realistic expectation of potential uses and disclosures of their personal health information, and are assured that their privacy will be protected at all times.

People will be able to choose to participate in the Unique Health Identifier (UHI) service and use of individual identifiers will not be required to access health services.

The consensus reached by all Australian jurisdictions (Commonwealth, state and territory governments) is that a consistent health privacy regime will not provide sufficient certainty to enable e-health systems to operate, and that particular initiatives – including the UHI service – will require Commonwealth legislation to authorise their establishment.

Privacy considerations will be a key component of the National Health Information Regulatory Framework (NHIRF) being developed, and referred to more fully as part of Question 6.

Public / private ownership of services, systems etc.

Australia's health system has developed as a hybrid of public and private delivery of health services:

- ✦ Acute care hospitals are run by state governments, and are provided with supplementary Federal financial assistance through the Australian Health Care Agreements (ACHAs), where the Commonwealth provides approximately 50 per cent of the running costs
- ✦ The Commonwealth government provides assistance to the primary care sector through national programmes such as the Medicare Benefits Scheme (MBS), and the Pharmaceutical Benefits Scheme (PBS)
- ✦ There is a robust Australian private health sector. General practitioners are independent operators, as are Australia's medical specialist workforce. Australia's private hospital network operates alongside the public-run system
- ✦ There is support for private health insurance, with the Federal Government providing a rebate to promote use of private health services.

Secondary use of data

In principle, secondary use of health information (e.g. for research and population health purposes) will be permitted under tight controls. While the primary purpose for collecting health information electronically is for the healthcare treatment of the individual, secondary uses of e-health data may be permitted in accordance with agreed ethics and privacy safeguards.

- ✦ An example of a secondary use is population health research. The majority of such uses are expected to involve de-identified information.

The Department of Health and Ageing is working with all states and territories to develop a best practice protocol for the linkage and de-identification of data to ensure appropriate handling at all times.

Has the implementation of e-health programmes required any legal or regulatory changes?

ePrescribing

In order to remove Commonwealth legislative barriers to electronic prescribing and dispensing, the Department has amended the National Health (Pharmaceutical Benefits) Regulations. These amendments came into effect from 1 March 2007, and provide the legislative platform for the introduction of an alternative electronic prescribing and dispensing process that will be additional and separate to the existing paper-based prescribing and dispensing process.

States and territories are currently taking steps to remove any legislative barriers to electronic prescribing and dispensing in each jurisdiction.

In order to manage key stakeholder expectations, the Department is conducting consultations with key stakeholders including peak bodies covering doctors, pharmacists, health consumers and the software industry to provide information and an opportunity for input to national solutions development.

National Health Information Regulatory Framework

In July 2007, the Australian Health Ministers Conference (AHMC) agreed to develop a comprehensive regulatory framework designed to provide strong privacy protection for health information on a national basis. The key elements of the framework include:

- ✦ legal authority for the establishment and implementation of UHIs for individuals, healthcare providers and provider organisations, including to prohibit their use outside healthcare settings
- ✦ uniform national health privacy law based around the national health privacy principles in the draft national health privacy code
- ✦ national arrangements to undertake functions relevant to the operation of the regulatory framework.

It is expected that the legislation will be introduced for consideration by Parliament in late 2008 or early 2009.

What have been the outcomes of your e-health initiatives?

EGRRS

Some of the project's most notable achievements are that:

- ✦ *EGRRS demonstrated the value to health professionals of having access to high quality broadband connectivity through a private managed network*
- ✦ *EGRRS engaged a community of health professionals across the region to participate in the project resulting in an ongoing commitment to the health network*
- ✦ *The lessons learnt from EGRRS were used to inform policy development for the Managed Health Network Grants as part of the Broadband for Health Program*
- ✦ *EGRRS has resulted in increased communication and collaboration between health professionals that are connected to the network across the region*
- ✦ *EGRRS was recognised nationally as a project of significance and was the recipient of the 'Best Communications Solution – Regional' from the Australian Telecommunications User Group (ATUG) in March 2006*
- ✦ *the EGRRS project established the infrastructure and security that enables participation in e-health activities.*

Wider e-health environment – NEHTA

NEHTA has made good progress since its establishment delivering a number of key activities. These include:

- ✦ *publishing the standards for electronic hospital discharge summaries*
- ✦ *commencing work with Medicare Australia on the Unique Health Identifier (UHI) project*
- ✦ *publishing the standards for secure electronic health messaging and identification of medications.*

NEHTA is reporting to all jurisdictions on their progress against their agreed deliverables.