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2 July 2009

Alison Kelly
Secretary
Select Committee on the National Broadband Network
PO Box 6100
Parliament House
Canberra ACT 2600

Dear Ms Kelly,

NEHTA welcomes the opportunity to provide a submission to the National Broadband Network. Please find attached a summary of NEHTA's feedback on the most recent call for submissions.

If you have any further queries on the feedback provided, please feel free to contact me (02 9293 2000) or Peter Fleming, NEHTA CEO on the above number.

Yours Sincerely



David Gonski AC
Chair
National e-Health Transition Authority

Introduction:**Australia's commitment to e-health**

The implementation of world-class e-health capability requires a world-class telecommunications infrastructure.

Australia is committed to building a safer, more efficient health system for all communities in all States and Territories through the implementation of electronic health communications.

E-health, the combined use of electronic communication and technology in the health sector, is recognised as pivotal to the health reform agenda. Australian Health Ministers commissioned a National E-Health Strategy in 2008 that recognised "e-health should be viewed as both the essential infrastructure underpinning information exchange between all participants in the Australian healthcare system and as a key enabler and driver of improved health outcomes for all Australians."¹ At the same time the National Health and Hospitals Reform Commission recommended the introduction of electronic health records in its interim report.²

Electronic health communication moves the health sector from a reliance on 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.

While the first stages of e-health will be unique healthcare identification, clinical terminologies and authentication there will be gradual enablement of electronic discharge summaries and referrals, electronic prescription transfer and medications management. In the future, Individual Electronic Health Records will enable the electronic storage and retrieval of patient medical information and provide consumers with access to their own health information.

This contribution to the social capital of Australia will be measured in improved health outcomes as it will:

- Ensure the right consumer health information is electronically made available to the right place and time to enable informed care and treatment decisions;
- Provide consumers with electronic access to the information better needed to manage and control their personal health outcomes;
- Enable electronic access to appropriate health care services for consumers within remote, rural and disadvantaged communities; and
- Enable the Australian health sector to more effectively operate as an interconnected system overcoming the current fragmentation and duplication of service delivery.

The gradual implementation of e-health communications to provide the highest quality health service is intrinsically dependant on the progressive rollout of high speed broadband.

¹ National E-Health Strategy, National E-Health Information Principles Committee, September 2008.

² A Healthier Future for all Australians - Interim Report December 2008

Background:

The investment in e-health

Australia has made considerable investment in developing e-health capabilities. These include:

- *COAG's broad health reform agenda* to drive health reform, boost productivity, increase workforce participation and mobility and deliver better services to the community
- *COAG funding of the National E-Health Transition Authority (NEHTA)* to accelerate work on a national electronic health records system for Australia and the *National Health Call Centre Network (NHCCN)* including establishment of a national health information website³
- the *Regional Telecommunications Review*, which positions e-health as a fundamental enabler to ensure equitable access to health services for regional Australians and for the long term sustainability of its health workforce⁴

The National E-Health Transition Authority was tasked by the governments of Australia with building the foundations required to support the exchange of information through a safe and secure interoperable IT infrastructure.

There has been a phased approach to development and implementation of e-health systems which takes into account the varying levels of maturity of projects across Australia. This approach would suit any future phased rollout of national broadband services.

Current situation

Support for the national broadband network

NEHTA has to date built its short to mid-term e-health business case on proven safety, quality and efficiency outcomes enabled by *existing* telecommunications and infrastructure services.

Although initial e-health benefits are not dependant on the full rollout of the national broadband network, our foundation services have been designed to enable nationwide take up of collaboration opportunities including continuity of care (through discharge and referral), medications management, pathology orders and results. These collaboration opportunities are essential elements to health reform and would be enabled by the NBN.

The development of e-health foundation services including health identifiers and clinical terminology will be completed by June 2010. At a later date, consumers' important health information may be available through nationally standardised individual health electronic records (IEHRs). While NEHTA is not currently being funded to build IEHRs, their ultimate implementation also depends on the availability of the national broadband network.

NEHTA also supports the NBN view that satellite communications infrastructure may be required to economically provide access to broadband internet in rural and remote

³ Council of Australian Governments: Communiqué. February, 2006.

⁴ Attorney General's Department. Regional Telecommunications Independent Review Committee Report 2008: Framework for the future. Canberra: Commonwealth of Australia; 2008.

regions. The provision of quality health services to these areas is a key benefit of e-health. During the NEHTA consultation period on the Individual Electronic Health Record in 2008, there was consistent feedback from rural participants on the lack of telecommunications infrastructure in rural and remote regions. NEHTA strongly supports the view that in order to ensure equitable access to e-health services, IT infrastructure needs to be implemented into all locations where e-health is required.

Broadband and e-health technologies

While the current benefits of electronic information sharing and collaboration in the health sector are significant, NEHTA has been designing e-health foundations with future capabilities in mind.

Technology allows doctors to consult with patients remotely using a range of telemedicine environments. These include remote diagnostic services, such as simple pulse rate monitors, through to high end consultation environments such as those piloted by the CSIRO at the Royal Children's hospital in 2008 which require high definition video streaming integrated with other IT enabled diagnostic services and an IEHR. Other services being developed include a variety of in-home diagnostic devices⁵ that feed into central monitoring and intervention systems. Many of these technologies require enhanced telecommunication services which will be provided on the future NBN.

Online workflow-based diagnostic tools and remote diagnostic analysis services will become the normal way of improving access to diagnostics services. Radiology services, such as those in Bunbury in Western Australia, already use remote access and workflow systems to route diagnostic images to alternate locations (potentially international) for analysis.

In the future, diagnostic images and results will increase in resolution and be accompanied with associated data – such as that of an MRI scan. It is likely that 3D/4D/5D images that record multiple indicators will be stored and retrieved for regular diagnosis and review with patients. Today, the majority of these images are between 200 to 500 MB. When the element of time is added for comparative purposes, the health sector will begin to demand a wide range of extremely dense and rich data.

Conclusion

NEHTA's currently funded foundation services will provide the capability required for initial e-health collaboration using existing telecommunications services. But there will need to be *significant extensions to bandwidth* to provide this type of information in "real time" for collaborative management of a person's health care. Therefore the realisation of benefits from already substantial public and private sector investment in e-health is inherently linked to the rollout of high-speed broadband.

It should be noted that the people least able to gain access to specialist services because they live in remote and rural Australia will be the major beneficiaries of these types of services. Hence, the availability of high speed broadband services in these locations is also a way of improving the equitable access to health service provision.

To inform the NBN business case, the NBN may wish to extend the national e-health strategy to provide a detailed review and business case of e-health services that would be enabled by a national broadband network.

More than 82 per cent of Australians surveyed in 2008 said they would participate in a national electronic health record. In all states and territories, in all age groups, the

⁵ Home healthcare device interoperability standards are being developed by the international *Continua* standards organisation

community is ready to embrace the health information highway that will be accelerated by a national broadband network.