Position Paper

The rural and remote implications of a national e-health strategy

July 2009

This Paper represents the agreed views of the National Rural Health Alliance, but not necessarily the full or particular views of all of its Member Bodies.

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EXECUTIVE SUMMARY

E-health is a means of providing the right health information to the right person at the right place and time in a secure electronic form. The World Health Organisation defines 'e-health' as "the combined use of electronic communication and information technology in the health sector".

E-health is fundamental to the well-integrated, multidisciplinary, primary health care teams coordinated with other parts of the health system that the National Rural Health Alliance recommends for effective health care delivery in rural and remote Australia. Further, the Alliance has called for a more coordinated and structured approach to research, monitoring and reporting on health care delivery and health outcomes, to ensure that the most effective approaches for rural and remote Australia are identified and become a part of national health policy and program development. Such continuing improvements in the quality and safety of health care will rely in part on effective use of e-health.

The Alliance has an important role to play in ensuring that the benefits of e-health are realised in rural and remote Australia. These include online information for consumers about preventive health and support for self management of chronic conditions; electronic patient health records, so that patients from rural areas remain connected with their primary health care when they see a specialist or receive acute care; links to specialist advice to reduce the need (and cost) for patients to travel to a major city; professional development, peer support, and decision support tools that assist all health professionals in their work; and information systems to allow more standardised and more automated data collection and performance reporting.

Across Australia, a large and growing number of e-health projects are being developed in local regions, in primary and acute care settings and within the public and private sector. Many are delivering localised benefits such as radiology advice online, electronic discharge or medication information, outreach services for mental health consumers and patient information recall systems to support chronic disease self management.

Without coordination, there is the real risk of duplication of effort and expenditure that would create a wide range of e-health solutions that cannot be integrated or scaled across the health system. This approach will not achieve equity in health outcomes or drive effective health reforms for rural and remote Australians.

National E-health Strategy

Accordingly, the Alliance welcomes the endorsement of the National E-health Strategy by the Australian Health Ministers Conference (AHMC) in December 2008 as a guide to the further development of e-health in Australia. The overall vision for e-health described in the Strategy is that:

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 health care services.

In particular, the Alliance welcomes the stated objective that "e-health will enable electronic access to appropriate health care services for consumers within remote, rural and disadvantaged communities", along with the other stated objectives which are equally applicable in these communities.

Four major work streams and a ten year roadmap

The National E-health Strategy sets priorities under each of four major work streams, to be implemented concurrently in a coordinated way, according to a roadmap aimed at delivering a safer, better connected and more sustainable healthcare system over the next decade. The three, six and ten year planning horizons emphasise the need for planned and sustained input by the Alliance to ensure that rural and remote communities remain abreast of e-health implementation and associated improvements in health care over time.

The Alliance sees investment in e-health as integral to wider health care reforms. The Alliance will monitor the reports from the National Health and Hospitals Reform Commission, the Primary Health Care Strategy and the National Preventative Health Taskforce and the follow-up actions, including from the Council of Australian Governments and the Australian Health Ministers Council, to ensure that rural and remote communities share equitably in the benefits of e-health.

> The Alliance will call for preferential investment in e-heath capacity and implementation in rural and remote communities as part of addressing current inequities in health care and to ensure full participation in the e-health strategies that underpin health reforms.
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> Specific plans must be established to meet the electronic information and communication needs of all remote Australians so they too can benefit from e-health.

Planning for practical contributions by the Alliance

The four major work streams proposed in the National E-health Strategy provide a framework for the Alliance and its members to consider the practical contributions they will need to make in order to ensure that the adoption of e-health is useful and effective across rural and remote Australia.

Foundations work stream - establishing the computing infrastructure, consistent information standards, rules and protocols that provide the basic ability to share health information.

For the Alliance, one of the main barriers to improving health care in rural and remote communities is a lack of electronic connectivity between different parts of the health system and with support networks and health information available through the internet.

> The Alliance will advocate for timely implementation of the National Broadband Network with a focus on improving health care for all Australians, including additional strategies to provide equal broadband access for places with populations of less than 1,000.

A key issue for the Alliance is to ensure that nurses, paramedics and allied health professionals, dentists and medical specialists in private practice become a part of the National E-health Strategy, as well as general practices, pharmacies and hospitals. The Alliance also recognises the need for strategies to ensure that health consumers in rural and remote Australia have access to the computing infrastructure, technical support and knowledge that will provide them with the choice of obtaining online health information and support.

> The Alliance will research how well its networks are equipped to connect and communicate through e-health, as the basis for its advocacy for promoting opportunities and minimising gaps in health care delivery in rural and remote Australia.

E-health solutions work stream - investing in the computing solutions or tools that enable consumers, care providers and health care managers to share appropriate health information, with a focus on Individual Electronic Health Records (IEHRs).

Members of the Alliance are particularly concerned that many e-health pilot projects have been funded and then ceased over the years, without progressing what works or learning from what did not. They want to know about the e-health solutions already in use and to share the experiences in designing and implementing them, including the pitfalls and the benefits, to minimise duplication and maximise progress.

> The Alliance will share and promote information about e-health solutions that are working in rural and remote Australia, including strengths and weaknesses, and encourage its members to do the same through articles, newsletters, websites, continuing professional development, conference presentations and other means.
>
> The Alliance will advocate for its members to be represented in work to design e-health solutions that are relevant to their current practice, that will enable their participation in multidisciplinary health care teams, and will support the self management of chronic conditions and/or contribute to preventative health.

The Strategy proposes a set of *priority E-health solutions* to be progressed through *national alignment* of investment towards the goal of *individual electronic health records (IEHR)*. The proposed IEHR is a secure, private electronic record of an individual's key health history and care information.

Members of the Alliance want to see the scope of a shared electronic health record developed and expanded over time to accommodate the different uses and levels of access to health information required by consumers and the different members of their health care team. Privacy, confidentiality and medico-legal concerns need to be acknowledged and addressed. The Alliance wants an IEHR that integrates and summarises an individual's health information from a range of different health care providers, in a range of combinations and formats designed to assist various users, so that the people in rural and remote Australia have their health information where and when they need it.

The Alliance supports the establishment of a national compliance function to ensure that health information can be shared by consumers and their health care providers across geographical boundaries and state borders to support multidisciplinary team-based health care. Standards and protocols should build on the connectivity and information technology capacities currently available in rural and remote Australia and consider the costs and delays in upgrading to new specifications, to ensure timely implementation.

> The Alliance calls for early investment in the adoption of individual electronic health records so that people in rural and remote Australia have their health information where and when they need it.
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> To this end, it is critical for the people and health services in rural and remote Australia to build their e-health capacity using the technologies currently available, so they are well placed to participate in sharing of electronic health records as national standards and protocols are adopted and broadband connectivity and applications improve.

The simple and efficient exchange of the routine information that health professionals need in order to progress patient care in rural and remote communities should be a priority for developing e-health solutions.

The Alliance is concerned that a reliance on market driven development of e-health solutions will fail to support the more flexible models of care necessary in rural and remote Australia. The prices and choices available to them will be affected by higher costs in time, travel and technological support.

> The Alliance calls on governments to moderate pure market forces by augmenting the development and implementation of tailored e-health solutions that address current inequities in health services and outcomes for rural and remote Australia.

Change and adoption work stream - motivating consumers, health care providers and health care managers to use the e-health solutions.

The Strategy emphasises that coordinated awareness, training and education, and incentive and compliance programs, are needed for effective adoption of e-health solutions. It recommends that the work stream should focus on ensuring that consumers, care providers and health managers are aware of the solutions available or being developed, are educated in their use and encouraged to adopt them, while programs should be inclusive of software vendors. Further, the Strategy proposes that the adoption and change activities should be undertaken and managed at local and regional levels across the Australian health system.

Some cases of successful implementation of e-health solutions, developed to fill a genuine community need, in consultation and partnership with relevant communities, are well known among members of the Alliance and demonstrate the importance of this investment of time and resources.

> The Alliance will continue to call on entities involved with e-health to engage meaningfully with people in rural and remote areas, and to be aware of the need to help build the capacity of rural people and communities to adopt and make full use of e-health applications.

Further development of health funding arrangements and of e-health solutions that support electronic referrals and sharing of electronic health records among all members of the health care team will be particularly important for improving health care in rural and remote Australia. The adoption of electronic clinical records by the many salaried allied health professionals including remote area nurses who make up a significant part of the workforce in rural and remote Australia also needs to be considered.

> The Alliance will advocate for funding incentives and mechanisms that support the adoption of e-health as part of the shift to multidisciplinary team-based health care delivery in rural and remote Australia.

Some Alliance members are already involved in upskilling their networks to participate in e-health solutions. Other members remain concerned about the lack of face-to-face, hands on opportunities to build the confidence of health professionals and consumers in the use of new information management and technological solutions in rural and remote areas, and also about lack of support for installation and adoption of new technology.

> The Alliance will advocate for representation in the adoption and change activities for e-health at national, local and regional levels, in order to help ensure that appropriate rural and remote delivery is planned for and occurs.

Governance work stream - to provide appropriate coordination, visibility and oversight of the activities and outcomes of the national e-health work program.

The Alliance believes that a coherent national plan and framework for rural and remote health services is required as a matter of urgency. The Alliance is committed to working towards equal health for the people who live in rural and remote communities by 2020. This plan should draw on the demonstrated capacity of rural and remote Australia to develop innovative and effective e-health solutions that are underpinned by community ownership and resources that are focused on local needs.

> The Alliance recommends that governance accountability for the adoption of e-health in Australia should be a part of a coherent national plan for rural and remote health.

E-health outcomes

The Strategy outlines a list of e-health benefits for consumers, care providers and health care managers under the following headings:

- e-health will improve the quality and safety of the Australian health system;
- e-health will support a more accessible and equitable health system; and
- e-health will improve system efficiency.

In summary it asserts that the ultimate benefit achieved from implementation of a national e-health strategy will be a safer, better connected and more sustainable health system over the ten year implementation roadmap.

The Alliance wants to see the benefits of e-health flow in rural and remote communities, commencing within the three year planning horizon, **connect and communicate**, of the ten year implementation roadmap. For example, transfer of electronically generated, more legible prescriptions and more complete medication records should help to minimise medication errors and interactions.

Further benefits should flow as health professionals and consumers are better able to **collaborate** in multidisciplinary care, the six year horizon for the ten year roadmap; for example, consumers and their health care providers sharing joint care plans and key information from electronic health records across the multidisciplinary team. Continuous quality improvement systems for clinical care and for the health data collection and analysis required to support it must be a fundamental part of e-health adoption.

During the **consolidation** part of the ten year road map for e-health implementation, it should become possible for the vast majority of the data for monitoring health system performance to be collected through normal e-health enabled care.

The Alliance has a particular interest in ensuring that the health challenges and effectiveness of the models of care in rural and remote communities are visible and can be researched as e-health data is aggregated and health system performance monitoring improves.

> The Alliance and its members will seek to be involved in setting key targets and broad data requirements for quality improvements and for monitoring health system performance as an integral part of e-health solutions for rural and remote Australia.

Rural and remote communities are well placed and have a strong interest in leading the way to make e-health part of 'business as usual' for health care.

INTRODUCTION

E-health is a means of providing the right health information to the right person at the right place and time in a secure electronic form. The World Health Organisation defines 'e-health' as "the combined use of electronic communication and information technology in the health sector".

E-health is a key component of proposals for improving the quality and efficiency of health care in papers from the National Primary Health Care Strategy, the National Health and Hospitals Reform Commission and the Preventative Health Taskforce.

National Rural Health Alliance submissions to the reform proposals underline that e-health is fundamental to the well-integrated, multidisciplinary, primary health care teams coordinated with other parts of the health system it recommends for effective health care delivery in rural and remote Australia. Further, the Alliance has called for a more coordinated and structured approach to research, monitoring and reporting on health care delivery and health outcomes, to ensure that the most effective approaches for rural and remote Australia are identified and become a part of national health policy and program development. Such continuing improvements in the quality and safety of health care will rely in part on effective use of e-health.

As the peak non-government body concerned with rural and remote health issues in Australia, the National Rural Health Alliance (the Alliance) has an important role to play in ensuring that the benefits of e-health are realised in rural and remote Australia. It comprises 28 Member Bodies, each a national body in its own right, representing health professionals, service providers, consumers, educators and researchers. (A list of Alliance Members is at Attachment 1.)

In 2006, the Australian Journal of Rural Health (14:95-98) noted that rural areas stand to benefit most from e-health but have the poorest infrastructure, resources, capacity and capability for successful implementation and uptake of it.

Some of the benefits of e-health identified by the Alliance include online information for consumers about preventive health and support for self management of chronic conditions; electronic patient health records so that people from rural areas remain connected with their primary health care when they see a specialist or receive acute care; links to specialist advice to reduce the need, and cost, of patients travelling to a major city; professional development, peer support and decision support tools that assist all health professionals in their work, and information systems to allow more standardised and more automated data collection and performance reporting.

Across Australia, a large and growing number of e-health projects are being developed in local regions, in primary and acute care settings and within the public and private sector. Many are delivering localised benefits such as radiology advice online, electronic discharge or medication information, outreach services for mental health consumers and patient information recall systems to support chronic disease self management.

Without coordination, there is the real risk of duplication of effort and expenditure that would create a wide range of e-health solutions that cannot be integrated or scaled across the health system. This approach will not achieve equity in health outcomes or drive effective health reforms for rural and remote Australians.

THE NATIONAL E-HEALTH STRATEGY

Accordingly, the Alliance welcomes the endorsement of the National E-health Strategy by the Australian Health Ministers Conference (AHMC) in December 2008 as a guide to the further development of e-health in Australia.[1]

The overall vision for e-health described in the Strategy is that:

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 health care services.

The Alliance welcomes the stated objective under the vision for the National E-health Strategy that e-health will:

- enable electronic access to appropriate health care services for consumers within remote, rural and disadvantaged communities.

The other stated objectives are equally relevant to people living in rural and remote communities. These are that e-health will:

- Ensure the right consumer health information is electronically made available to the right person at the right place and time to enable informed care and treatment decisions.

- Enable the Australian health sector to more effectively operate as an interconnected system, overcoming the current fragmentation and duplication of service delivery.

- Provide consumers with electronic access to the information needed to better manage and control their personal health outcomes.

- Enable multi-disciplinary teams to electronically communicate and exchange information and provide better coordinated health care across the continuum of care.

- Provide consumers with confidence that their personal health information is managed in a secure, confidential and tightly controlled manner.

- Facilitate continuous improvements of the health system through more effective reporting and sharing of health outcome information.

- Improve the quality, safety and efficiency of clinical practices by giving care providers better access to consumer health information, clinical evidence and clinical decision support tools.

- Support more informed policy, investment and research decisions through access to timely, accurate and comprehensive reporting on Australian health system activities and outcomes.

The Strategy proposes to build on the existing collaboration of Commonwealth, State and Territory Governments through the National E-health Transition Authority (NEHTA)[2] and

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[1] Australian Health Ministers Conference, 2008. The National E-health Strategy Summary. http://www.health.gov.au/internet/main/publishing.nsf/Content/National+Ehealth+Strategy).

[2] NEHTA was established by the Australian Health Ministers Council in 2005 to develop the national standards, clinical terminologies and patient and provider identifiers necessary as e-health foundations. Boston Consulting Group. Report on the NEHTA Review. October 2007. http://www.nehta.gov.au/nehta-publications

provides recommendations for investment in four major work streams - discussed in more detail in the next section.

The Australian Health Ministers Conference noted that the Strategy 'provides sufficient flexibility for individual States and Territories, and the public and private health sectors, to determine how they go about e-health implementation within a common framework and set of priorities to maximise benefits and efficiencies'.

The Alliance sees investment in e-health as integral to wider health care reforms. The Council of Australian Governments has prioritised use of e-health tools to link providers and improve quality of care for the individual patient, as well as an individual electronic health record for all Australians in the National Healthcare Agreement.[3] The National Health and Hospitals Reform Commission (NHHRC) has recommended giving individuals control over their electronic health record, in conjunction with strong national leadership and genuine stakeholder engagement to accelerate electronic health records as a matter of urgency.[4] It has also proposed that funding mechanisms be developed for networks of primary health care services, expansion of multidisciplinary specialist outreach services, telehealth services and referral and advice networks for remote and rural practitioners that will bring the care to the person or the person to the care in remote and rural Australia, as well as flexible funding for health service delivery models that achieve the best outcomes for remote and small rural communities.[5]

The Alliance will monitor the reports from the National Health and Hospitals Reform Commission, the Primary Health Care Strategy and the National Preventative Health Taskforce and the follow-up actions, including from the Council of Australian Governments and the Australian Health Ministers Council, to ensure that rural and remote communities share equitably in the benefits of e-health.

> The Alliance will call for preferential investment in e-heath capacity and implementation in rural and remote communities as part of addressing current inequities in health care and to ensure full participation in the e-health strategies that underpin health reforms.
>
> Specific plans must be established to meet the electronic information and communication needs of all remote Australians so they too can benefit from e-health.

Four major work streams and a ten year road map

The National E-health Strategy sets priorities under each of **four major work streams**, to be implemented concurrently in a coordinated way, according to a roadmap aimed at delivering a safer, better connected and more sustainable healthcare system over the next decade.

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[3] Council of Australian Governments, Intergovernmental Agreement on Federal Financial Relations, Schedule F: A National Healthcare Agreement. January 2009.
http://www.coag.gov.au/intergov_agreements/federal_financial_relations/index.cfm
[4] National Health and Hospitals Reform Commission. Person-controlled electronic health records. Supplementary paper. 30 April 2009.
http://www.nhhrc.org.au/internet/nhhrc/publishing.nsf/Content/interim-report-december-2008
[5] National Health and Hospitals Reform Commission. A healthier future for all Australians. Interim report. December 2008. http://www.nhhrc.org.au/internet/nhhrc/publishing.nsf/Content/interim-report-december-2008

- **Foundations** – establishing the computing infrastructure, consistent information standards, rules and protocols that provide the basic ability to share health information.

- **E-health solutions** – investing in the computing solutions or tools that enable consumers, care providers and health care managers to share appropriate health information, with a focus on Individual Electronic Health Records (IEHRs).

- **Change and adoption** – motivating consumers, health care providers and health care managers to use the e-health solutions.

- **Governance** – to provide appropriate coordination, visibility and oversight of the activities and outcomes of the national e-health work program.

The ten year timeframe proposed in the National E-health Strategy is based on international experience. Three and six year horizons are identified to keep a focus on the journey to be taken through Australia's 3-4 year political cycles.

The **planning horizons for the implementation roadmap** are:

- **Connect and communicate (3 year horizon)** – in which the focus is on establishing the foundations for e-health and providing the basic connections that allow information sharing to occur between health care providers across the health sector.

- **Collaborate (6 year horizon)** – in which the focus shifts from basic communication to collaboration, joint care planning and multidisciplinary care delivery through more extended information sharing.

- **Consolidate (10 year horizon)** – in which e-health becomes part of 'business as usual' for health care 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.

At present, the focus of the implementation of the National E-health Strategy is still on connecting and communicating between health care providers.

PLANNING FOR PRACTICAL CONTRIBUTIONS BY THE ALLIANCE

The four major work streams proposed in the National E-health Strategy provide a framework for the Alliance to consider the practical contributions needed to ensure that the adoption of e-health is useful and effective across rural and remote Australia. The indicative timeframe and planning horizons in the Strategy emphasise the need for planned and sustained input by the Alliance to ensure that rural and remote communities remain abreast of e-health implementation and associated improvements in health care over time.

Foundations

The Foundations work stream under the National E-health Strategy focuses on establishing the computing infrastructure, consistent information standards, identifiers, rules and protocols and the legislation or regulation that provide the basic ability to share health information. This work is being nationally coordinated as it is more cost effective to do it once only, and it is important that health information can be shared and protected consistently anywhere in Australia. It includes the work of NEHTA to develop basic infrastructure such as national standards, terminologies and identifiers; the work of the

Australian Government Department of Broadband, Communications and the Digital Economy on the new National Broadband Network[6]; and the work of the Australian, State and Territory governments in relation to the recommendations in the Australian Law Reform Commission Privacy Report about health privacy protections.[7]

For the Alliance, one of the main barriers to improving health care in rural and remote communities is a lack of electronic connectivity between different parts of the health system and with support networks and health information available through the internet.

The Alliance has welcomed the announcement of the National Broadband Network, which will deliver high speed broadband to many parts of rural Australia. Additional strategies are still needed to ensure that small remote communities, which are often those most disadvantaged in terms of health care, are connected, for example through commercial level satellite at an appropriate community centre.

Further, given the time involved in developing the National Broadband Network, the foundations for the National E-health Strategy will continue to unfold in an environment where connectivity is limited for some health care providers and consumers in rural and remote communities.

> The Alliance will advocate for timely implementation of the National Broadband Network with a focus on improving health care for all Australians, including additional strategies to provide equal broadband access for places with populations of less than 1,000.

A key issue for the Alliance is to ensure that nurses, paramedics and allied health professionals, dentists and medical specialists in private practice are a part of the National E-health Strategy, as well as general practices, pharmacies and hospitals. Aged care facilities are starting to become involved with trialling electronic medication records that link to pharmacy and general practice. Emergency services including the Royal Flying Doctor Service and ambulance services are also important players in rural and remote health care, with an increasing role in the primary health care team. All the potential members of the health care team need to be involved in developing the foundations for connecting and communicating with each other and their patients through e-health.

The Alliance also recognises the need for strategies to ensure that health consumers in rural and remote Australia have access to the computing infrastructure, technical support and knowledge that will provide them with the choice of obtaining online health information and support. Programs that provide support for self management of chronic conditions (including mental health care), online health promotion, health literacy programs and so on, as well as internet links to support groups and services, must be available to rural and remote Australians too. The Australian Bureau of Statistics estimates that 67% of all Australian households had home internet access in 2007-08 with 52% (an estimated 4.3 million households) having broadband access.[8] Although households outside metropolitan areas were less likely to have internet access (61%) and broadband (43%), the potential for people in rural and remote communities to use the Internet for health is considerable.

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[6] Prime Minister of Australia. New National Broadband Network. Media release 7 April 2009. http://www.pm.gov.au/media/Release/2009/media_release_0903.cfm

[7] Australian Health Ministers' Conference Communiqué. 5 March 2009. http://www.ahmac.gov.au/cms_documents/AHMC%20Communique%20-%20Issued%205%20March%202009.doc

[8] Australian Bureau of Statistics. 8146.0 - Household use of information technology, Australia, 2007-08. Released 18 December 2008. http://www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyReleaseDate/ACC2D18CC958BC7BCA2568A9001393AE?OpenDocument

> The Alliance will research how well its networks are equipped to connect and communicate through e-health, as the basis for its advocacy for promoting opportunities and minimising gaps in health care delivery in rural and remote Australia.

E-health solutions

The focus of the National E-health Strategy is to harness and align the current wide ranging e-health activity towards a desired set of national outcomes in order to avoid costly duplication (reinventing the wheel) and enable more effective 'leveraging and scaling' of successful e-health solutions, and to improve the ability to exchange information across geographical and health sector boundaries.

Members of the Alliance share concerns about the duplication of energy and investment that is occurring in the development of a wide range of e-health solutions. Many of their members have been involved in designing and implementing local or regional e-health solutions to overcome specific problems in their practice or region, or to make it easier for them to collaborate or to obtain needed content or services. E-health solutions with which they or their colleagues have been involved (such as satellite participation in clinical seminars, or real time expert advice on radiology scans, or a patient recall system that flags upcoming health checks due when a patient presents at a remote clinic) are much more likely to be widely implemented than a commercial 'product' or solution that is built and marketed without a practical understanding of the needs of the users.

Alliance members are particularly concerned that many e-health pilot projects have been funded and then ceased over the years, without progressing what works or learning from what did not. They want to know about the e-health solutions already in use and to share the experiences in designing and implementing them, including the pitfalls and the benefits, to minimise duplication and maximise progress.

> The Alliance will share and promote information about e-health solutions that are working in rural and remote Australia, including strengths and weaknesses, and encourage its members to do the same through articles, newsletters, websites, continuing professional development, conference presentations and other means.
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> The Alliance will advocate for its members to be represented in work to design e-health solutions that are relevant to their current practice, that will enable their participation in multidisciplinary health care teams, and will support the self management of chronic conditions and/or contribute to preventative health.

The Strategy proposes a set of *priority E-health solutions* to be progressed through *national alignment* of investment towards the goal of *individual electronic health records (IEHR)*. The proposed IEHR is a secure, private electronic record of an individual's key health history and care information.

Members of the Alliance want to see the scope of a shared electronic health record developed and expanded over time to accommodate the different uses and levels of access to health information required by consumers and the different members of their health care team. Privacy, confidentiality and medico-legal concerns need to be acknowledged and addressed.

An initial focus should be on standardising key information (such as details to assist with emergency treatment, current medications and hospital discharge summaries) and ensuring that this key information can be integrated and shared. It would also be reasonable to standardise the information that health professionals already receive electronically in many cases, such as pathology results and diagnostic imaging. The simple and efficient

exchange of the routine information that health professionals need in order to progress patient care in rural and remote communities should be a priority for the development of standards, applications and protocols for exchange. For example, a rural general practitioner who has ordered radiology from the hospital should automatically receive the radiology results as well as the hospital discharge summary before the patient returns to them for treatment.

The Alliance wants an IEHR that integrates and summarises an individual's health information from a range of different health care providers in a range of combinations and formats designed to assist various users, so that the people in rural and remote Australia have their health information where and when they need it. For example, consumer formats available may include a record of monitoring results and health checks over time to assist them with self management; a key information sheet for travel or emergencies including allergies, current medications, immunisation record and contact details for family and health care providers, and so on. Different views of the summary would be available to improve care coordination between health care provider teams. The IEHR would also be used as a key information source for longitudinal and aggregated health information in conjunction with other health sector data sets to support more informed health care reporting and research, which places further requirements on standardised data collection.

The Alliance supports the establishment of a national compliance function to ensure that health information can be shared by consumers and their health care providers across geographical boundaries and state borders to support multidisciplinary team-based health care. Standards and protocols should build on the connectivity and information technology capacities currently available in rural and remote Australia and consider the costs and delays in upgrading to new specifications, to ensure timely implementation.

> The Alliance calls for early investment in the adoption of individual electronic health records so that people in rural and remote Australia have their health information where and when they need it.
>
> To this end, it is critical for the people and health services in rural and remote Australia to build their e-health capacity using the technologies currently available, so they are well placed to participate in sharing of electronic health records as national standards and protocols are adopted and broadband connectivity and applications improve.

The simple and efficient exchange of the routine information that health professionals need in order to progress patient care in rural and remote communities should be a priority for developing e-health solutions.

The Strategy advocates a market driven approach rather than centralised purchasing policies or central responsibility for the commissioning and directing of e-health solutions. It proposes to drive the development of high priority e-health solutions that can be integrated across Australia through tightly governed access to a national investment fund combined with the compliance testing and certification mentioned above.

The Alliance is concerned that a reliance on market driven development of e-health solutions will fail to support the more flexible models of care necessary in rural and remote Australia. Markets do not work – or perhaps barely exist – in rural and especially in more remote areas where there are small numbers of consumers and usually a very small number of suppliers, which leads to monopolies and monopsonies. Competition is the exception rather than the rule. Information about choices and options, or about the pitfalls and benefits of e-health solutions, is unlikely to be as freely or readily available in remote areas as in the major cities. Economies of size and scale are absent. The large distances

between the centres where market transactions occur and the rural people who want to take part in the transactions mean that the prices and choices available to them will be affected by higher costs in time, travel and technological support.

> The Alliance calls on governments to moderate pure market forces by augmenting the development and implementation of tailored e-health solutions that address current inequities in health services and outcomes for rural and remote Australia.

Change and adoption

The Strategy emphasises that coordinated awareness, training and education, and incentive and compliance programs, are needed for effective adoption of e-health solutions. It recommends that the work stream should focus on ensuring that consumers, care providers and health managers are aware of the solutions available or being developed, are educated in their use and encouraged to adopt them, while noting that the programs should also be inclusive of software vendors.

The Strategy proposes that the adoption and change activities should be undertaken and managed at local and regional levels across the Australian health system. This approach provides particular opportunities for rural and remote Australia, where strong community engagement can be achieved. However, effective community engagement in major projects for e-health adoption and implementation will rely on community consultations and capacity to deliver the coordinated awareness, training and education, and incentive and compliance programs at regional or community level as well as nationally.

Some cases of successful implementation of e-health solutions, developed to fill a genuine community need, in consultation and partnership with relevant communities, are well known among members of the Alliance and demonstrate the importance of this investment of time and resources. For example, eHealthNT provides shared electronic health records for people in remote communities across the Northern Territory, which means that their health needs, including ongoing medications and care, continue to be met as part of their highly mobile lifestyle and frequent travel to other communities. The rollout of the shared electronic health record builds on the Health*Connect*NT trial in 2002, a partnership between the major Aboriginal Medical Services in Katherine, the Katherine Hospital, Indigenous Elders and Communities, the Northern Territory Department of Health and Families and the Australian Government Department of Health and Ageing. It is recognised that the fundamental key to the success of the project is the effective working relationships among many individuals in remote communities. The hard working efforts of the implementation team were reciprocated by community members who worked tirelessly to ensure the implementation of the project, motivated by its potential for improved health outcomes for their communities. Further developments include extending the shared electronic health record to three urban general practices in Darwin in 2008-09 in conjunction with General Practice Network Northern Territory.[9]

> The Alliance will continue to call on entities involved with e-health to engage meaningfully with people in rural and remote areas, and to be aware of the need to help build the capacity of rural people and communities to adopt and make full use of e-health applications.

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[9] eHealthNT. Shared electronic health record timelines and achievements. Northern Territory Government. http://www.ehealthnt.nt.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/5/46.pdf&siteID=4&str_tit;e=Shared%20Electronic%20Health%20Record%20Timelines%20and%20Achievements.pdf

General practitioner uptake of information technology in Australia is a significant success story, as noted by the Royal Australian College of General Practitioners. In the mid 1990s, 15 per cent of general practitioners used computers for clinical purposes and this rose to 90 per cent by 2006. [10] The adoption of clinical software systems among general practitioners is widespread, supported through the profession and through considerable government investment including the Practice Incentives Program[11] and the Australian General Practice Network (AGPN). The Divisions Network continues to support e-health uptake in general practice through the Divisions Network eHealth Program, a network of e-health managers working at AGPN and the State Based Organisations.[12]

Electronic pharmacy dispensing systems and online claiming from the Pharmaceutical Benefits Scheme are widespread, with ongoing support through the Fourth Community Pharmacy Agreement for eligible community pharmacies to maintain or connect to business grade broadband internet connections, including additional recognition of the needs of rural pharmacies.[13] There is early rollout of links between general practitioners and pharmacists through electronic prescribing and dispensing.[14]

However, the experiences in sharing electronic clinical records among the other members of multidisciplinary care teams is generally limited to within hospitals and some general practices at present.

The use of electronic clinical record systems is spreading to medical specialists although main computer use among physicians in a 2007 survey included retrieving information from the internet and receiving results.[15] Those specialists using computers in private practice may not have the technical support available to general practitioners or to some of their hospital colleagues for adoption of e-health solutions. Dentists, dental and oral health therapists may use information technology in private practice and in public dental services, but are not linked electronically with other members of the primary health care team.

While over 85 per cent of nurses use a computer for some aspect of their work, with the figures rising to 93 per cent in remote/very remote areas, information technology is often used by more senior staff as a management tool and not seen as a tool for clinical care. Workload, number of computers and technical support are the principal barriers to use of computers. In the community health setting and also in remote areas, technical support and network issues were particularly important.[16]

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[10] Royal Australian College of General Practitioners. General Practice e-health. Thinking local, acting nationally to improve health care for all. 2008. http://www.racgp.org.au/policy/eHealth_Policy.pdf

[11] Australian Government Department of Health and Ageing. Practice Incentives Program. eHealth incentive Guidelines. March 2009. http://www.health.gov.au/internet/main/publishing.nsf/Content/C55286A97813B583CA25757F0017BB5E/$File/DOHA00501-eHealth-FINAL-web.pdf

[12] Australian General Practice Network. E-health and information management home. http://www.agpn.com.au/site/index.cfm?display=13307 viewed June 2009.

[13] Pharmacy Guild of Australia. Pharmacy Connectivity Incentive Scheme. http://www.guild.org.au/pci/ viewed June 2009.

[14] Medicare Australia. Electronic prescribing and dispensing. http://www.medicareaustralia.gov.au/provider/pbs/pharmacists/dispense.jsp viewed March 2009

[15] Royal Australasian College of Physicians. The computer will see you now. A study to determin access and use of computer and electronic applications. http://www.racp.edu.au/page/health-policy-and-advocacy/e-health viewed June 2009.

[16] Hegney D, Buikstra E, Eley R, Fallon T, Gilmore V, Soar J. Nurses and information technology. Final report. Australian Nursing Federation. http://www.anf.org.au/it_project/ viewed July 2009.

Allied health professional use of electronic clinical records is far from universal and as yet there are few pathways in place for them to participate in sharing information with other health professionals outside hospital-based teams. The Medicare and PBS funding structures generally do not provide incentives for them to do so. The extension of the Enhanced Primary Health Care items to include some dental services and a limited number of allied health consultations, primarily with physiotherapists and psychologists, starts to provide some reimbursement for multidisciplinary care.

Further development of health funding arrangements and of e-health solutions that support electronic referrals and sharing of electronic health records among all members of the health care team will be particularly important for improving health care in rural and remote Australia. The adoption of electronic clinical records by the many salaried allied health professionals, including remote area nurses, who make up a significant part of the workforce in rural and remote Australia, also needs to be considered.

> The Alliance will advocate for funding incentives and mechanisms that support the adoption of e-health as part of the shift to multidisciplinary team-based health care delivery in rural and remote Australia.

Given the strong role that e-health solutions will play in health care reform, it is important for the Alliance and its members to increase their profile and engagement in stakeholder consultations about implementation of e-health. The Alliance, with its broad representative base including organisations that represent health consumers, health care professionals, service providers, health educators, students and the Indigenous health sector, is in a unique position to collect and disseminate information about e-health and to identify key issues for health and wellbeing in rural and remote areas.

Some Alliance members are already involved in upskilling their networks to participate in e-health solutions. For example, the Australian College of Rural and Remote Medicine's medical education and online learning platform, RRMEO, combines online resources, education activities and discussion groups with telemedicine services.[17] However, other members remain concerned about the lack of face-to-face, hands on opportunities to build the confidence of health professionals and consumers in the use of new information management and technological solutions in rural and remote areas, and also about lack of support for installation and adoption of new technology. The expertise for providing this support may not be available locally but opportunities to leverage support for e-health adoption in association with broader technological development and installation of other national and business initiatives including the National Broadband Network must be pursued.

The Alliance will seek updating and representation where relevant on the 'Continuity of Care' work of NEHTA and other stakeholder groups such as the reference group for the implementation of the National Broadband Network in Tasmania. The Alliance will also work with its members to develop a panel of potential representatives for national stakeholder committees and consultations with expertise such as technical e-health knowledge, experience with change management and different funding models, adoption of new technologies in rural or remote communities, as well as time to contribute and work with the Secretariat to seek input from other members on emerging issues and challenges and provide updates on progress.

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[17] Australian College of Rural and Remote Medicine. RRMEO Online Education. http://www.acrrm.org.au/main.asp?NodeID=192 Viewed June 2009.

> The Alliance will advocate for representation in the adoption and change activities for e-health at national, local and regional levels, in order to help ensure that appropriate rural and remote delivery is planned for and occurs.

Governance

The Strategy recommends the following principles for governance:

- **Clarity of accountability** – ensure clear decision making accountability and provide all stakeholders with clarity regarding their roles and responsibilities.

- **Transparency** - provide widespread visibility of the progress of Australian e-health activities.

- **Appropriate stakeholder representation** – provide a forum for representation across all key stakeholder groups. Ensure broad ownership and a balanced approach to the delivery of e-health.

- **Sustainability** – implement a governance model that will not be unduly impacted by changes to the political or stakeholder environment.

- **Support for activity at multiple levels** – recognise that e-health governance will need to support initiatives that deliver e-health capability at differing levels of granularity.

- **Effective leadership and coordination** – recognise the range of activities that need to occur across all national e-health work streams.

- **Balance local innovation and national outcomes** – continue to support local innovation while ensuring that the development of e-health solutions locally supports national e-health outcomes.

It is unclear how the national governance arrangements for e-health will be finalised or within what timeframe. Without clear accountability for decision-making, execution and monitoring progress against agreed national targets, the ten year road map and three and six year milestones for staged implementation outlined above may slip away.

The Federal/State division of responsibilities and the funding and governance systems that work satisfactorily in the cities are sometimes not effective in the bush, particularly in small or remote communities. Further, it can be very frustrating for rural and remote communities to invest time and energy in e-health solutions that show potential, only to find that funding is not ongoing. Although not the view of all member bodies, the Alliance has proposed that one level of government should take overall responsibility for health through regional/district fundholders who would then be contracted to provide health services.

The Alliance believes that a coherent national plan and framework for rural and remote health services is required as a matter of urgency. This plan should define the principles for genuine community engagement at the regional level in the design, implementation and evaluation of regional and local health services, and include specific performance indicators and accountability for e-health adoption. It should draw on the demonstrated capacity or rural and remote Australia to develop innovative and effective e-health solutions that are underpinned by community ownership and resources that are focused on

local needs. The Alliance is committed to working towards equal health for the people who live in rural and remote communities by 2020.

> The Alliance recommends that governance accountability for the adoption of e-health in Australia should be a part of a coherent national plan for rural and remote health.

E-HEALTH OUTCOMES

The Strategy outlines a list of e-health benefits for consumers, care providers and health care managers under the following headings:

- e-health will improve the quality and safety of the Australian health system;

- e-health will support a more accessible and equitable health system; and

- e-health will improve system efficiency.

In summary it asserts that the ultimate benefit achieved from implementation of a national e-health strategy will be a safer, better connected and more sustainable health system over the ten year implementation roadmap.

Some of the benefits of e-health should start to flow in the three year planning horizon, **'connect and communicate'** of the ten year roadmap outlined on page 6. For example, consumers should become more empowered to participate in their own healthcare through the development of more reliable information and support sources such as the National Health Call Centre Network, *healthdirect*. [18,19] Transfer of electronically generated, more legible prescriptions and more complete medication records should help to minimise medication errors and interactions.

Further benefits should flow as health professionals and consumers are better able to **collaborate** for multidisciplinary care, the six year horizon of the roadmap, for example, by sharing joint care plans and key information from electronic health records. If data is to be shared to support improvements in health care delivery, e-health solutions must be designed to collect appropriate, good quality data and make it easy to enter it correctly in a consistent format. Automatic monitoring and integration must also be easy and appropriate, for example, for implementation of care plans for people with chronic conditions so that reminders are sent, results and health status are monitored and follow-up visits and review of the care plan are occurring. Continuous quality improvement systems for clinical care and for the health data collection and analysis required to support it must be a fundamental part of e-health adoption.

During the **consolidation** part of the road map for e-health implementation, it should become possible for the vast majority of the data for monitoring health system performance to be collected through normal e-health enabled care. The Australian Commission for Safety and Quality in Health Care, through its Information Strategy Work Plan and in conjunction with the Australian Institute for Health and Welfare on national safety and quality indicators, and with NEHTA on clinical quality registries and e-health,

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[18] Council of Australian Governments.' Meeting Communique 10 February 2006, See National Health Call Centre Network under 'Improving care and support in the community, including in rural and remote areas'. http://www.coag.gov.au/coag_meeting_outcomes/2006-02-10/index.cfm

[19] *healthdirect Australia* is a 24-hour telephone health advice line staffed by Registered Nurses to provide expert health advice. It is currently available to residents of the Australian Capital Territory, Northern Territory, New South Wales, South Australia and Western Australia. *healthdirect* will be made progressively available to residents of Tasmania. *healthdirect* is scheduled to be a fully national service by 2011. 1800 022 222.   http://www.healthdirect.org.au/ viewed June 2009

is already becoming involved in this area as part of Australian Health Ministers Council processes.[20]

The Alliance has a particular interest in ensuring that the health challenges and effectiveness of the models of care in rural and remote communities are visible and can be researched as e-health data is aggregated and health system performance monitoring improves.

The Alliance and its members will seek to be involved in setting key targets and broad data requirements for quality improvements and for monitoring health system performance as an integral part of e-health solutions for rural and remote Australia.

Rural and remote communities are well placed and have a strong interest in leading the way to make e-health part of 'business as usual' for health care.

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[20] Australian Commission on Safety and Quality in Healthcare. Information Strategy: Work Plan 2009-10. April 2009. http://www.health.gov.au/internet/safety/publishing.nsf/Content/PriorityProgram-08

Attachment 1: Member Bodies of the National Rural Health Alliance

ACHSE	Australian College of Health Service Executives (rural members)
ACRRM	Australian College of Rural and Remote Medicine
AGPN	Rural Sub-Committee of the Australian General Practice Network
AHHA	Australian Healthcare and Hospitals Association
AHPARR	Allied Health Professions Australia Rural and Remote
AIDA	Australian Indigenous Doctors' Association of Australia
ANF	Australian Nursing Federation (rural members)
APA (RMN)	Australian Physiotherapy Association Rural Members Network
APS	Australian Paediatric Society
ARHEN	Australian Rural Health Education Network
CAA (RRG)	Council of Ambulance Authorities - Rural and Remote Group
CRANA	Council of Remote Area Nurses of Australia
CRHF	Catholic Rural Hospitals Forum of Catholic Health of Australia
CWAA	Country Women's Association of Australia
FS	Frontier Services of the Uniting Church in Australia
HCRRA	Health Consumers of Rural and Remote Australia
ICPA	Isolated Children's Parents' Association
NACCHO	National Aboriginal Community Controlled Health Organisation
NRF of RACGP	National Rural Faculty, Royal Australian College of General Practitioners
NRHSN	National Rural Health Students' Network
RDAA	Rural Doctors' Association of Australia
RDN of the ADA	Rural Dentists' Network of the Australian Dental Association
RFDS	Australian Council of the Royal Flying Doctor Service of Australia
RHWA	Rural Health Workforce Australia
RIHG	Rural and Indigenous Health-interest Group of the Chiropractors' Association of Australia
RNMF of RCNA	Rural Nursing and Midwifery Faculty, Royal College of Nursing Australia
RPA	Rural Pharmacists Australia - Special Interest Group of the Pharmacy Guild of Australia, the Pharmaceutical Society of Australia and the Society of Hospital Pharmacists of Australia
SARRAH	Services for Australian Rural and Remote Allied Health