Presidents Welcome

After the successful first AGM in Perth in 2008 we are now working on several projects to promote telemedicine in Australasia.

We now have more than 50 members and 6 industry members. We are in the process of building a project database for Australasian telemedicine activities and a discussion board for our members to exchange ideas. I would like to request our members to contribute to the project database by sending one-page information about their projects. This kind of database will help members to learn from others’ experience about various telemedicine projects. It will also give the opportunity to collaborate with each other.

This is the first newsletter for 2009 and I would like to thank all contributors for providing valuable information about their projects for the newsletter. I would like to request the members to send any news, meetings information or projects related to telemedicine for publication in the ATHS newsletter. The newsletter will be published quarterly and the next one is scheduled for 15th July 2009.

Telemedicine at Telstra

Australia’s healthcare industry is being transformed at many levels through the adoption of state of the art communication technologies. The convergence of smaller, smarter hand held computing devices and other hardware is creating new opportunities and new ways of providing healthcare services across the nation.

At the same time, we face significant health challenges, especially in dealing with chronic disease. Financial pressures are strong, and costs are increasing. In addition, population ageing is reshaping our economy and if we are to provide affordable care, new technologies have a crucial role to play. Australia requires a greater capacity to focus on preventative care, access information irrespective of geography and deliver primary care to the patient outside the traditional clinical environment.

For healthcare providers, the use of new technologies to increase productivity is the key to seizing the opportunities and avoiding the pitfalls. This industry transformation is about a fundamental redesign of service delivery, shifting it away from the institution and bringing it closer to patients, wherever they happen to be, at home, in the workplace, in a rural or remote region, or in a suburban clinic. Healthcare is moving towards an emphasis on self management and community care, using technology to assist with monitoring and checking patients in a variety of settings.
Telstra is uniquely placed to help healthcare and medical services organisations address the challenges in the industry through a suite of technologies that are genuinely transformational such as:

- Digital Medical Imaging
  - Private Radiology Services, which is an initiative to enable a centralised hosted set of services for Private Radiology practices. Enabling service based offerings reducing the costly outlay of ICT infrastructure within a practice. Additionally, it allows radiology reporting to take place any time.
- Telstra’s Bedside Health Solution is a LCD touch-screen deployed at the patient’s hospital bed on a flexible arm. The unit has a secure broadband connection to the hospitals IT system and Telstra’s servers. The unit is for use by both hospital staff and patients for separate purposes. Staff can access electronic patient information from the bedside such as medication validation and diagnostic imagery.
- The Health Video Conferencing Solution assists hospitals and emergency services to assess critically ill patients presenting at remote and rural hospitals. It enables real-time assessment of trauma patients by critical care specialists located remotely offering expert advice.

Mobile Medical Cart is designed to assist hospitals and emergency services to treat critically ill patients in remote and rural areas by connecting live ‘real-time’ with trauma and critical care specialists located remotely to offer expert treatment advice.

Telstra continues to make significant investments in new networks and new IT systems, and is developing a new range of applications and services that will benefit all Australians. As Telstra transforms its networks and systems, the progressive healthcare providers and professionals that are first to adopt these capabilities are leading the transformation of Australia’s healthcare industry.

For more information please contact Bernadette Gibbons, Health Industry Executive.

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### Telepaediatrics in Queensland

The tyranny of distance presents significant challenges for the Australian health industry, and is often a central reason for inequity of access to specialist services in rural and regional communities.

For years, there has been much promise for the widespread use of telehealth to support patients – especially in rural and remote areas. Unfortunately, the adoption of telehealth in mainstream practice has been delayed due to a range of factors – including the lack of incentive to use telehealth instead of conventional methods (such as patient travel to the specialist).

This is a global issue – as many health organisations struggle to move beyond the initial networking and hardware requirements – and appreciate the importance of administrative and clinical systems which must be in place to support the use of information communication technology (ICT).\(^1\)

The potential for telehealth (especially in Australia) is great. In order to benefit the most from telehealth it is important to understand what the barriers are – and also support strategies which are scientifically proven to overcome these barriers. Telehealth services should be designed according to clinical needs and complement conventional outpatient services.

#### Telepaediatrics – combining research with service delivery

In November 2000, we commenced a trial to explore if we could provide regional clinicians with an incentive to choose telehealth instead of automatically transferring patients direct to a specialist.
The model was pioneered for telepaediatrics – and crafted by the COH in close collaboration with the Royal Children’s Hospital (RCH) in Brisbane.

The telepaediatric service is configured around a centralised referral centre based in Brisbane (at the RCH), and single point of contact for selected regional hospitals across Queensland. If a specialist consultation is required, the referring clinician calls a toll-free 1800 telephone number - which links them directly to a telepaediatric coordinator. Once a referral is made - a specialist response is guaranteed within hours subject to degree of urgency.

The telepaediatric service is a clinical support programme which directly benefits children, their families and the clinicians employed by the health service. Since the service began, over 7500 telehealth consultations have been conducted for thousands of families in Queensland – many of whom may have otherwise travelled hundreds or thousands of kilometres to Brisbane to see a paediatric specialist. Our work in telepaediatrics is gradually broadening to include routine outpatient services, home telehealth services, chronic disease screening, critical care telemedicine and customised email-based telehealth services.

In summary:

- The COH have delivered telepaediatric services to 92 sites throughout Queensland and Northern New South Wales (Fig 1).
- Telepaediatric clinics are now scheduled 12 months in advance for routine specialist outpatient appointments.
- About 17% of all paediatric burns OPD services are now conducted via videoconference. This represents a major shift in the way outpatient services are delivered for a group of patients where follow-up care may last for months or many years.
- Several formal economic evaluations have been published which demonstrate substantial savings for the health department due to reduced patient and staff travel.
- A study of family costs showed significant savings for families who are able to attend a specialist appointment in their regional hospital (via videoconference), compared to families who travelled to the RCH to see the specialist in person.
- Instead of relying on videoconference systems in lecture rooms or staff meeting rooms, we have developed mobile (wireless) systems which may be wheeled around and used in areas where clinical services are most likely to be needed – i.e. at the patient bedside or
throughout the immediate ward area (Figs 3a, 3b).9-10

Fig 3a: Telepaediatric robot - Eliza (based in Mt Isa)

Fig 3b: Specialist physiotherapy support via videoconference

The telepaediatric service developed by the COH has been extremely successful, demonstrating a unique method of coordinating telehealth services for children in Queensland. The study shows that by offering a centralised call centre (single point of contact) for clinicians in remote areas, telehealth consultations were a viable option.

The development and operation of the telepaediatric service in conjunction with academic research continues to have clear benefits - including the ability to accurately measure service performance and respond innovatively to changes in service requirements. The research environment is very receptive to ideas generated by clinicians in relation to novel methods to deliver clinical services at a distance. Formal trials are conducted to evaluate the feasibility, clinical benefits and cost-effectiveness of telehealth applications – and these are published for widespread benefit.

**About the Centre for Online Health**

The Centre for Online Health (COH) is an research department of the Faculty of Health Sciences at The University of Queensland. The overall goal of the COH is to research and develop new models of health care, with a view of obtaining quantitative evidence for their clinical and cost-effectiveness. The emphasis is on clinical work which delivers a useful and sustainable service to clinicians and patients.

**Website:** [www.uq.edu.au/coh](http://www.uq.edu.au/coh)

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**REFERENCES**


Dr Anthony Smith Senior Research Fellow and Deputy Director Centre for Online Health The University of Queensland

AHTS Committee Member (Queensland)

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**Coming Events**


6th Annual ICMCC Event Patient 2.0 Empowerment - EHR for Personalizing and Improving Care 1-3 June, 2009, University of Westminster, London, UK Visit [www.icmcc.org](http://www.icmcc.org) for more information.


For all events supported by the Australasian Telehealth Society visit the website [www.aths.org.au](http://www.aths.org.au) and click on ‘Events’.

Have an event that you would like advertised on the ATHS website or in the ATHS newsletter? Contact one of the Committee Members at [www.aths.org.au](http://www.aths.org.au)
CALL FOR ABSTRACTS

Contributions are invited from all areas of telemedicine, telehealth and e-health, including clinical, educational and administrative applications. Abstracts are due by Friday, 29 May 2009. Abstract guidelines and instructions on how to submit your abstract are available at the conference website.

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The Centre for e-Health is pleased to announce the 4th e-Health and Telemedicine (eHT) workshop

eHT09 is being held in Perth, Western Australia on the 3rd and 4th of December 2009. This year’s topics will include:

- Teleradiology;
- Chronic Disease;
- Health Call Centre Activities;
- Tele-Emergency/Ambulatory Care; and more

If you are interested in presenting your projects please submit your abstracts by the 30th of May 2009. Please contact Karen Monticelli for further information. karen@lei.org.au