Health Informatics trends and issues – Telehealth

Lewis N

Health agencies are moving towards more localised models for point-of-care delivery which allow individualised, patient-centric care and ease pressure on hospitals through promotion of community and home care. Healthcare systems were historically designed to manage acute illness in the hospital environment, "evidence from the US shows that the care of people with Chronic conditions consumes about 78% of all healthcare spending" (United Kingdom Department of Health) it is estimated that in Australia almost 75% of the health budget expenditure is on chronic disease. Chronic disease refers to those diseases that can only be controlled and not cured. Examples include diabetes, asthma, arthritis and heart failure.

As the percentage of the Australian population over the age of 65 years grows the cost of providing conventional healthcare, especially in a hospital setting, continues to increase.

With healthcare systems historically designed to deal with acute illness, the management of chronic disease needs to be improved through the introduction of new models of health care delivery. Telehealth offers significant and increasing opportunities to contribute to this paradigm shift.

Considerable interest in Telehealth is developing as the technology enabling this care rapidly evolves. Telehealth will assist with delivering a high standard of care that is more accessible to both urban and rural populations in Australia.

The International Organisation for Standardisation defines Telehealth as the "use of telecommunication techniques for the purpose of providing telemedicine, medical education, and health education over a distance" (ISO/TR 16056, 2004).

The World Health Organisation in 1997 defined Telehealth as "the delivery of healthcare services, where distance is a critical factor, by healthcare professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, and for the continuing education of healthcare providers as well as research and evaluation, all in the interests of advancing health of individuals and their communities" (Suleiman, 2001).

One method for providing accessible advice regarding management of acute and chronic conditions is through telephone triage. Registered Nurses assisted by algorithm-based decision support software provide telephone triage advice and information by phone. "Telephone triage can reduce unnecessary presentations to health services such as emergency departments and general practitioners by enabling patients to self-care more confidently" (Delichatsios et al. 1998).

Telephone triage is not new to nursing; nurses have historically delivered telephone advice to patients. However, this practice has recently become increasingly risk adverse due to concerns about its unstructured approach and the legal implications of poor documentation. As a consequence, the nursing profession is encouraging accountability by nurses for the advice they provide, and equipping them with the professional skills to manage patients safely and effectively through telephone consultations.

Nurses need to guide the "industry so it remains dedicated to patient care as it evolves with the emergence of new technologies" (Hellinghausen, 2000, p.1) Systems need to be in place to ensure the delivery of safe practice and quality of health care.

The more appropriate assessment and referral of patients can reduce the cost of healthcare delivery through better use of clinicians and allied health workers, and through the reduction of avoidable hospital utilisation. Savings arising from localised care and Telehealth have been identified in the medical literature as 60-70% of the cost of conventional approaches.

The potential for information technology in providing innovative methods for disease prevention, diagnosis, treatment and management is extensive.

An excellent example of a model of telephone triage delivering real health benefits is the GP Assist (Tasmania) model, operating throughout Tasmania since 2003.

GP Assist provides telephone triage and medical advice services to provide workforce support to approximately 89% of rural GPs throughout the entire state of Tasmania.

GP Assist is a state wide telephone triage and medical advice service, funded by the Commonwealth Government's Department of Health and Ageing and the Tasmanian State Department of Health and Human Services (DHHS). General Practitioners (GPs) have an obligation to provide care for their patients 24 hours a day 7 days a week. For rural GPs this often means being constantly on call – disrupting both family and professional life. This impact on lifestyle is increasingly a factor in discouraging GPs from working in rural communities. The GP Assist service is designed to assist the recruitment and retention of GPs in country areas and is free for them to use, as and when they wish.

All calls received by GP Assist are already seeking **after hours** General Practice attention – they are not simply attracted by public advertising. So before the GP Assist service existed, all these calls would have been answered by the on-call GP – an exhausting task for those doctors who have already been busy through the working day and week.

The GP Assist service operates from a purpose-built 7 seat call centre, staffed by specially-trained Registered Nurses using internationally-recognised decision-support software. The rationale for this development was to guarantee a professional first point of contact with the capacity to handle emergencies as well as general health enquiries and minor complaints according to evidence-based protocols. However, if the nurse determines that the patient needs to be seen by a doctor before the next working day the call is passed to a triage doctor who further assesses the problem. In the majority of cases the triage doctor can manage the patient without disturbing the local on-call GP; this might include authorising a prescription, arranging ancillary care or organising hospitalisation.

Advanced IM/IT systems have also been introduced to guard against system redundancy and to allow voice recording and full electronic documentation - all calls are reported to the patient's usual GP through the use of fax or secure electronic messaging. Technical developments now allow remote dispatch of calls, including the nurse's record, to the triage doctor's laptop (via a VPN and GPRS/ Next G) allowing the triage doctor to handle the call from any location whilst supplementing the clinical notes live on the server.

Whilst developing and implementing cutting-edge technology has proved to be a challenge, all the staff have adapted very quickly. The service now maintains a comprehensive database of participating GPs, which allows the nominated on-call GP to be identified and contacted immediately when necessary. An on-line database of additional healthcare resources, such as accessible pharmacies has also been established and GP Assist is working to establish a direct voice and software link with the Tasmanian Ambulance Service (TAS) so that high priority calls and data can be seamlessly transferred, whilst TAS can relay calls they believe would be better suited to a primary care response.

Since the introduction of GP Assist, fewer than 10% of calls require a local GP response, yet patients still have access to prompt and professional advice, and the best type of care for their needs is always arranged.
The results of GP Assist clearly demonstrate that when a call centre is fully-integrated into a wider system of clinical service delivery, it can provide enduring benefits to patients, providers and health services.

References:

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