

Implementing telehealth as core business in health services

The many benefits for the rural sector suggest it is time to integrate telehealth models into routine clinical practice

The uptake of telehealth in Australia has been increasing steadily, but continued uptake relies on clinical champions. Australian telehealth models cover a wide range of medical specialties and subspecialties.¹ However, most telehealth services in Australia are currently optional, which acts as a barrier to the growth and uptake of these models.

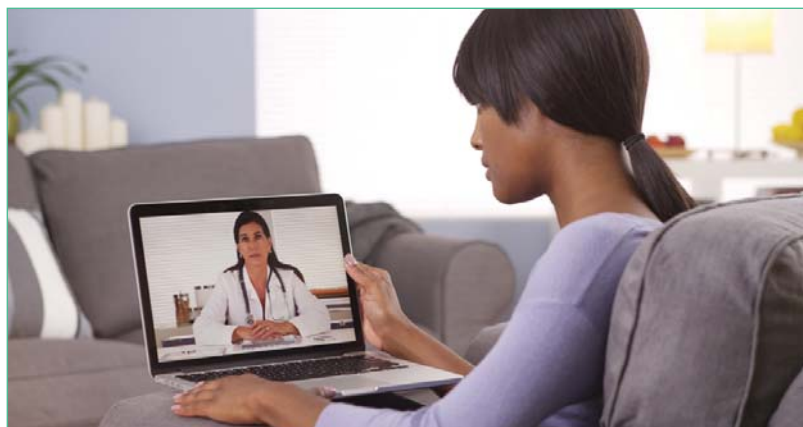
“there is sufficient evidence to support the role of telehealth in mainstream service delivery”

Many successful telehealth networks have been established by incorporating telehealth models of care as part of the core business of hospitals and health services, rather than as an academic activity or a pilot project. While some may argue the evidence base for telemedicine is “weak”,² we assert there is sufficient evidence for these models to be integrated into routine clinical practice.

Successful telehealth models

Telehealth models focus on a range of specialties and use telehealth for different purposes.¹ For example, a telehealth model in South Australia focuses on providing mental health services from tertiary hospitals in Adelaide to patients in country hospitals and health centres. The burns unit at the Princess Margaret Hospital in Western Australia uses videoconferencing and “store and forward” digital photography to provide an integrated multidisciplinary assessment and review service for rural and remote burns patients. The Centre for Online Health at the University of Queensland coordinates the telepaediatric service between Brisbane and rural and remote towns in Queensland, to provide paediatric subspecialty care closer to home for patients.¹ The Townsville Teleoncology Network in northern Queensland provides patients in rural and remote locations with access to medical and radiation oncologists, negating the need for long-distance travel.³

Established international telehealth models include the Veteran Affairs Telehealth Services (<http://www.telehealth.va.gov>) and the University of Kansas Center for Telemedicine and Telehealth (<http://www.kumc.edu/community-engagement/ku-center-for-telemedicine-and-telehealth.html>) in the United States,



and TEMPiS (<http://www.tempis.de>), Germany's telestroke network.⁴

Benefits of telehealth for the rural sector

Evaluation studies on the cost-effectiveness of telehealth models have produced varying results. A systematic review of the economic benefits of telehealth did not find evidence of net savings.⁵ This review included studies of rural centres at variable distances from the tertiary centres, a range of subspecialties and various study methods. However, in two Australian studies where telehealth negated the need for patients to travel long distances to access specialist care, there were cost savings to the health system.^{6,7} Therefore, pooling the results of studies from centres serving short travel distances may not show the true cost savings of telehealth models that are intended for improving specialist access for patients in rural and remote areas.

Patients welcome telehealth models mainly due to the convenience of receiving their care closer to home. Clinicians find these models are important for connecting with larger centres, professional development through case-based discussions, and the continuity of care they provide.⁸ Another benefit is that they enable clinicians to provide consultations to rural patients in a timely manner.³

Safety considerations

Just as face-to-face models of care have potential problems, telehealth models are not without risk. However, if appropriate risk mitigation strategies are in place, safety concerns will be minimal. For example, rates of complications of thrombolysis and post-stroke outcomes at remote sites in the TEMPiS network were similar to urban figures.⁴

Sabe Sabesan
BMBBS, FRACP

Jenny Kelly
BN, MPH, PhD

Townsville Hospital,
Townsville, QLD.

sabe_sabesan@health.qld.gov.au

doi: 10.5694/mja14.01021

Selection of patients suitable for telehealth requires sound clinical judgement. As such, these decisions may not be determined by protocols or guidelines alone.

Improvement in rural service capability

To provide care closer to home for patients, rural centres, as well as the regional or city hospital, need adequate resources to meet the requirements of the service capability frameworks set out by various jurisdictions and accreditation bodies. Current telehealth research tends to ignore or underestimate other benefits in terms of rural capacity building, support for the rural-based health professionals and the benefits to continuity of care for the patient. We believe that building capacity of the rural system is essential to close the gap in clinical and survival outcomes between rural and urban patients.⁹

Where clinicians are expected to employ telehealth models, health administrators and managers must ensure that the resources are adequate and the governance structures are in place to enable sustainable implementation and delivery. We assert there is sufficient evidence to support the role of telehealth in mainstream service delivery, and it is now time to implement these models as core business. Key performance indicators for managers and clinicians, keeping telehealth as a standing agenda item in management meetings, and attending to the resource requirements for implementation can be useful enablers to achieve this outcome.

Competing interests: No relevant disclosures.

Provenance: Not commissioned; externally peer reviewed. ■

References are available online at www.mja.com.au.

- 1 Gray LC, Smith AC, Armfield NR, et al. Telehealth assessment final report. Prepared for Department of Health and Ageing. Brisbane: UniQuest, 2011. [http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/6E3646F307A5E938CA257CD20004A3A8/\\$File/UniQuest%20Telehealth%20Assessment%20Report%20.pdf](http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/6E3646F307A5E938CA257CD20004A3A8/$File/UniQuest%20Telehealth%20Assessment%20Report%20.pdf) (accessed May 2014).
- 2 Armfield NR, Edirippulige SK, Bradford N, Smith AC. Telemedicine – is the cart being put before the horse? *Med J Aust* 2014; 200: 530-535.
- 3 Sabesan S, Roberts LJ, Aiken P, et al. Timely access to specialist medical oncology services closer to home for rural patients: experience from the Townsville Teleoncology Model. *Aust J Rural Health* 2014; 22: 156-159.
- 4 Audebert HJ, Schenkel J, Heuschmann PU, et al. Effects of the implementation of a telemedical stroke network: the Telemedic Pilot Project for Integrative Stroke Care (TEMPIS) in Bavaria, Germany. *Lancet Neurol* 2006; 5: 742-748.
- 5 Mistry H. Systematic review of studies of the cost-effectiveness of telemedicine and telecare. Changes in the economic evidence over twenty years. *J Telemed Telecare* 2012; 18: 1-6.
- 6 Smith AC, Scuffham P, Wootton R. The costs and potential savings of a novel telepaediatric service in Queensland. *BMC Health Serv Res* 2007; 7: 35.
- 7 Thaker DA, Monypenny R, Olver I, Sabesan S. Cost savings from a telemedicine model of care in northern Queensland, Australia. *Med J Aust* 2013; 199: 414-417.
- 8 Sabesan S. Medical models of teleoncology: current status and future directions. *Asia Pac J Clin Oncol* 2014; 10: 200-204.
- 9 Sabesan S, Allen DT, Caldwell P, et al; Royal Australasian College of Physicians Telehealth Working Group. Practical aspects of telehealth: establishing telehealth in an institution. *Intern Med J* 2014; 44: 202-205. ■