Summary of Major International Contributions to Telehealth Operational Standards and Practice Guidelines Related to Videoconferencing-based Consultations

1. Introduction

The scope of this Summary is to identify and provide a high level commentary on a range of public domain documents originating from sources outside Australia, which describe elements of operational procedures and clinical practice when delivering telehealth clinical services specifically based on use of videoconferencing for some type of synchronous consultation with a patient.

These documents are necessarily process oriented for utility, and therefore the scope does not include narrative documents providing unstructured advice such as website text or academic papers, nor aggregated documents such as frequently-asked-questions lists or conversational wiki/blog based documents.

The resulting documents presented here are essentially guidelines for clinical activities and choices that occur during video conferencing based telehealth episodes. They describe their purpose internally by a range of different terms: practice or best-practice guidelines, evidence-based guidelines, consensus guidelines, expert guidelines, operational guidelines. They may also be termed recommendations, procedures or standards: however they are seldom prescriptive or mandatory in nature and so the term guideline has been adopted here to avoid ambiguity with the definitive nature of technical standards used elsewhere.

2. Methods

The documents considered here were located by Google and Google Scholar web searches for { tele health / tele medicine / tele consultation / video consultation } + { guideline / practice / standard } as well as from references cited in related documents (such as those available on the MBSonline wesbite). A search of PubMed using Mesh terms {telemedicine} + { guideline } did not provide any additional material. A search for Systematic Reviews revealed a number dealing with telehealth and in particular with telepsychiatry, but were concerned with evidence for effectiveness of the approach rather than of any guidelines.

Filtering of the located documents was performed on the basis of significance of the documents in terms of the apparent breadth of their adoption, and influence of the producing organisation. The resulting set of documents covers guidelines in several different clinical speciality areas (e.g. psychiatry, medicine, primary care) and countries (e.g. USA, Canada, UK). For simplicity it has been organised here according to country.
This work has concentrated on contributions involving clinical video consultation (i.e. live synchronous interaction by at least one clinician and one patient): there are many others involving asynchronous transfer of captured video, image and data, radiology, telecare, telemetry, non-video teleconsultation (e.g. telephone). Some of these could provide relevant information (e.g. if a specialist wants to see images related to a patient’s complaint) but are beyond scope.

The work has also not considered educational resources related to delivery of telehealth services, as these would generally be based on expert determined curricula rather than consensus guidelines. An exception would be materials used for certification of clinicians to practice telehealth, which would necessarily follow a regulatory body of knowledge and practice, but none of these could be discovered that were available by public access.

It bears noting that the most consistently referenced work in this area is the seminal paper by M. Loane and P. Wootton, “A review of guidelines and standards for telemedicine”, Journal of Telemedicine and Telecare 2002:8(2)63-71, which although almost 10 years old continues to be strongly cited in recent work despite more recent development of many guidelines. This work distinguishes three categories of guidelines: clinical (for particular specialities), operational (for use of technologies) and technical (for general procedures in clinical services), and only one category of standards: telecommunications.

Another noteworthy more recent work is a systematic meta-review by A.G. Ekeland, A Bowes and S. Flottorp, “Effectiveness of telemedicine: a systematic review of reviews”, International Journal of Medical Informatics 2010:79(11)736-771. This lists numerous systematic reviews related to telehealth which constitutes a major survey of the literature evidence base as a whole.

3. USA

The American Telemedicine Association (ATA) has been developing telehealth guidelines since 1999. It has developed a “Policy and Guidance for Establishment of Telemedicine Standards” protocol to enable continuing development and review of such standards. It has also developed “ATA Core Standards for Telemedicine Operations” to provide advice on the three areas of administrative, clinical and technical aspects of remote provision of medical services, such as patient-provider interactions and electronic communications. http://www.americantelemed.org/i4a/pages/index.cfm?pageid=3311. Numerous ATA guidelines have been produced by dedicated speciality working groups, which include video consultation oriented services for:

- Evidence-Based Practice for Telemental Health,
- Practice Guidelines for Videoconferencing-Based Telemental Health,
- Expert Consensus Recommendations for Videoconferencing-based Telepresenting, Home Telehealth Clinical Guidelines,
• Blueprint for Telerehabilitation Guidelines.

Other clinically oriented bodies with an interest in telehealth have not generally provided separate guidelines publicly. The American Medical Association indicates that licencing for practice by telehealth in numerous states requires certification but no competency or practice requirements are stated. The American Medical Informatics Association refers to data and decision support standards activities in conjunction with telehealth. The American Health Informatics and Management Association offers content on practice guidelines and telemedicine within its Health Informatics and Information Management domain.

At government level, there is no coordinated approach to collect and disseminate telehealth guidelines. The Office for the Advancement of Telehealth http://www.hrsa.gov/ruralhealth/about/telehealth/ within the Department of Health and Human Services, Health Resources and Services Administration supports programs to provide advice and guidance, as well as telehealth services evaluation. It provides links to other organisations which offer guidelines (such as ATA). It's Agency for Health Care Research and Quality also hosts the National Guidelines Clearinghouse (in which no Telemedicine guidelines could be found) http://www.guideline.gov/index.aspx . The Food and Drug Administration, the main regulatory body for health technology, also has no explicit publications covering this area http://www.fda.gov/.

The National Library of Medicine http://www.nlm.nih.gov/ has previously supported the Telemedicine Information Exchange as a clearinghouse mechanism for telehealth documentation but this appears no longer to be operating. Two other major USA organisations which have pioneered use of telehealth are the Veterans Health Administration http://www.va.gov/health/default.asp and Telehealth and Technology Research Centre http://www.tatrc.org/, neither of which provides any public access guidelines.

Numerous state and regional telehealth networks have been established in the USA at scales varying from multi-state to locality or sector. The most active States include Alaska, Arizona, California, Colorado, Kansas, Missouri, New Mexico, Oklahoma. Some states offer advice on implementation of telehealth services, mainly from an administrative perspective. Many of these services rely on public money from State and Federal grants to sustain their activities, yet no publicly accessible guidelines for how they perform their services could be discovered in this survey.

4. Canada

Canada Health Infoway promotes and supports telehealth interests nationally and manages Canadian Health Informatics standards involvement https://www.infoway-inforoute.ca/lang-en. The Canadian Health Informatics professional body COACH has recently absorbed the Canadian Society of Telehealth, which formerly had stated an agenda to collect guidelines
COACH currently offers some best practice guidelines through the Canadian telehealth forum, to members only. The Canadian government sponsored national initiative for telehealth programme in 2003 set up a framework for guidelines in providing telehealth services across the categories of:

- Clinical Standards and Outcomes,
- Human Resources,
- Organisational Readiness,
- Organisational Leadership,
- Technology and Equipment.

It was intended that this project would lead to development of further telehealth guidelines that would be used by health professionals, by telehealth providers as benchmarks for standards of service and by accrediting agencies for accreditation criteria.

Recommendations were that organizations and jurisdictions might consider formal agreements to specify: (1) organizational interoperability; (2) technical interoperability; (3) personnel requirements; (4) quality and continuity-of-care responsibilities; (5) telehealth services; (6) remuneration; and (7) quality assurance processes. An additional recommendation was that flexible mechanisms were needed to ensure that accreditation criteria will be realistic and achievable in the context of rapid changes in technology, service integration and delivery, as well as in the context of operating telehealth services in remote or underserved areas.

Most Canadian work on guidelines has been undertaken at Provincial level and is mostly not accessible outside of those organisations. The Health Information Standards Committee for Alberta provided online guidelines entitled “Telehealth Videoconferencing” and “Telehealth Standards (Part C)”, but these were obsolete in May 2010 for unspecified reasons. Quebec provides detailed guidelines for Telepsychiatry and Telerehabilitation, while Nova Scotia provides an online list of “Telehealth Tips” as lightweight operational guidelines. Other provinces which operate extensive telehealth services are British Colombia, Manitoba, Saskatchewan.

5. Others

No European standards or guidelines for video consultation were revealed during the survey, although several European countries have active government supported telehealth programmes. In Scotland, indications were made in 2008 that the scottish centre for telehealth would collate and review guidelines and standards commencing in 2010 but there is no sign that this has happened yet.
In 2003 the Indian Department of Information Technology produced a report on "Recommended Guidelines & Standards for Practice of Telemedicine in India" with some guideline related information, but it is unclear if this was ever implemented.

The International Society for Telemedicine and eHealth is in the process of developing a “Best Practice” section on its website for disseminating contributed guidelines and other practice aids.

The International Medical Informatics Association has commissioned a special interest group in telehealth which will be conducting a worldwide search for best practice documents in due course.

6. Conclusion

This review sourced a total of 7 internationally publicly accessible guidelines for video consultation oriented clinical services, of which three cover telepsychiatry, and two cover telerehabilitation. It must be concluded that telepsychiatry offers the most mature area for sourcing of related guidelines, despite its clear differences from convention primary and specialist care consultations.

While a number of other guidelines were found in specialist areas (e.g. cardiology, dermatology, ophthalmology), these were not related to video consultation based practice, but to asynchronous store-forward telehealth activities. Usually these related to how the images or other data to be used in the telehealth activity should be captured for best outcomes.

The scarcity of such guidelines for areas other than telepsychiatry, indicates perhaps that the development of such guidelines has not been a fruitful area for study and regulation (including self-regulation) by health professional bodies or government agencies. In order to source more guidelines, it will be necessary to correspond directly with numerous health departments and agencies to discover whether guidelines exist, or to seek member level access of professional bodies which hold that information.

The ATA guidelines, being well established and constructed through a methodical development and approval process, stand out as the world best practice exemplars and it would be difficult to justify development of any competing guidelines in the same areas. Nevertheless, the absence of explicit primary-specialist interactions in these guidelines, and lack of any guidelines in specific scenarios such as indigenous health, midwifery and aged care, indicates that efforts might be beneficial within Australia to develop one or more of these, perhaps following the ATA guidelines development protocol.

A further development underway which could influence the guidelines space is the emergence of Technical Specification 13131 from the International Standards Organisation

Technical Committee on Health Informatics (TC 215). This document provides a list of different factors contributing to quality of service in delivery of telehealth services, spanning both operational and care aspects. While it does not categorise clinical aspects in a similar way, it may influence these by implication.