

National Initiative for Telehealth Guidelines

Environmental Scan of Organizational, Technology, Clinical and Human Resource Issues

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and Human Resource Issues

Section 1: Executive Summary

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1 Executive Summary

There is increasing interest in telehealth, defined as “the use of information and communications technology to deliver health and healthcare services and information over large and small distances” (Picot, 1997). This interest stems from the potential of telehealth to alleviate some of the health and health delivery problems associated with unequal access to health care services and providers. The clinical efficacy and cost-effectiveness of telehealth has been demonstrated for some but not all applications (e.g., Hersh et al., 2001; Roine et al., 2001; Whitten et al., 2002). It has been asserted that technological improvements are overcoming many current limitations (e.g., Bashshur, 1998) such that there are or soon will be no important clinical difference between face-to-face and telehealth consultations. Major barriers to widespread use of telehealth and/or the evolution of telehealth into the existing health care systems continue to be policy and regulatory barriers (e.g., Pong & Hogenbirk, 1999, 2000; US Department of Health and Human Services, 2001).

There is increasing interest among health care professional and administrators, health care institutions, organizations, businesses, government agencies and regulatory bodies to develop and adopt policies, procedures, guideline or standards for use within provinces, across Canada and internationally (e.g., CST Education Committee, 2003; Lacroix et al., 2002; Loane & Wootton, 2002; Nerlich et al., 2002). The telehealth community agrees that telehealth policy is in various stages of development across Canada. It has also been recognized that the development of a comprehensive pan-Canadian policy may be premature at this time. Instead, it has been suggested that some intermediate steps are needed, two of which are the development of telehealth standards by various health provider organizations and the maintenance of service standards and quality as a component of accreditation. Currently, various initiatives are looking at standards related to telehealth within their specific contexts. The National Initiative for Telehealth Guidelines (NIFTE) was founded to bring the stakeholders together to develop and reach consensus on a comprehensive framework of guidelines that can be utilized by the various organizations within the health community such as health provider organizations and the Canadian Council for Health Service Accreditation (CCHSA).

The primary project outcome is the development of a framework of guidelines that would be used across Canada by:

- Regulated health professionals in developing their specific standards;
- Telehealth provider organizations as benchmarks for service provision standards; and
- CCHSA, as well as other accrediting agencies, in developing accreditation standards.

Six key activities were undertaken to achieve the goals of the initiative. This report focuses on one activity – the Environmental Scan – that sought to identify telehealth-specific policies, procedures, guidelines or standards that were in current use or in development, and to identify gaps. The Environmental Scan was conducted by a research consortium involving four research teams, each one led by a Principal Investigator. The lead investigators and responsibilities of the four research teams were:

- Dr. Penny Jennett and the Health Telematics Unit (HTU), University of Calgary team – Organizational Context.
- Pam Brockway and the Alberta Research Council (ARC) team – Telehealth Technology and Equipment.
- Dr. John Finley and the Dalhousie University team – Clinical Standards and Outcomes.
- Dr. Raymond W. Pong and the Centre for Rural and Northern Health Research (CRaNHR), Laurentian University team – Human Resources.

A literature review, a stakeholder survey and key informant interviews were used to conduct the Environmental Scan with a focus on telehealth services in Canada.

Literature review

The purpose of the literature review was to examine the scope of information available as well as identify knowledge and knowledge gaps regarding telehealth-related organizational, technical, clinical and human resources issues. The literature search involved the development of keywords and search strategies, on-line searches of databases for potentially relevant publications, screening of abstracts to identify studies for further review, plus examination of the references sections of articles, reports and books to identify potentially useful studies.

Bibliographic databases were searched from 1990 to 2002 for relevant English-language publications focusing on Canada but including the USA, the UK, Australia and selected other countries. All four teams searched Medline/Pubmed. Other databases, searched by one or more teams, included CINAHL (Cumulative Index to Nursing and Allied Health Literature) Cochrane, Embase and Academic Search Premier. Databases were searched for the following keyword groups: (1) telehealth or telemedicine (or related keywords such as teletriage or telepsychiatry); (2) standard(s) or guideline(s) or policy/policies or procedure(s); (3) accreditation; and (4) keywords specific to (a) organizational, (b) technical, (c) clinical or (d) human resource issues. The keyword groups were used in combination to identify potentially relevant publications. The Telemedicine Information Exchange search engine, as well as World Wide Web search engines (Google, AltaVista Canada and Dogpile) were searched using similar keywords and strategies.

The literature search yielded up to 350 publications in each of four issue groups: organizational, technical, clinical and human resources. These publications were examined for relevance and 75-176 were abstracted by each team for use in the literature review.

Stakeholder Survey

The objective was to survey individuals listed in the Telehealth Stakeholders Database – a mailing list of individuals and organizations compiled and maintained by the NIFTE Secretariat – to determine the presence or absence of policies, procedures, guidelines or standards related to telehealth services. The survey was conducted by means of a five-part questionnaire (General, Organizational, Technical, Clinical and Human Resources) that was mailed to every individual listed in the Telehealth Stakeholder Database. Face and content validity were established by pilot testing the questionnaire with a sample of nine stakeholders, selected to be representative of the four content areas. Survey methodology and tools (cover letter and questionnaire), as well as the key informant interview methodology and questions (described below) were approved by the Research Ethics Boards of Dalhousie University, University of Calgary and Laurentian University and by internal review within the Alberta Research Council.

The 230 stakeholders were sent a package containing the questionnaire, a cover letter explaining the purpose of the project, a consent statement, and a postage-paid return envelope. An e-mail reminder was sent out two weeks after the initial mailing to those who had not yet responded. A second package, containing a reminder letter and the questionnaire, was sent two weeks after the email.

A total of 147 valid and complete questionnaires were received for an overall response rate of 64%. Respondents had the option of completing one or more sections. Sixty-four respondents had completed the demographics and general section only; 81 completed the demographics and general section along with the organizational leadership section; 78 along with the

technology and equipment section; 73 along with the clinical standards and outcomes section; and 76 along with the human resources section.

Descriptive statistics were calculated using SPSS (Statistical Program for the Social Sciences) Version 11.0. The respondents' open-ended survey responses were transcribed and content analyzed by each research team.

Survey respondents came from a number of professions, including clinicians, administrators, technicians and others. About one-third of the respondents were working for organizations with active telehealth programs, while the remaining respondents were typically affiliated with professional associations, regulatory colleges and government agencies.

Key informant Interviews

The objective here was to interview people with telehealth expertise or experience relevant to the four issues. We chose individuals who were directly involved in or very closely associated with the provision or receipt of telehealth services. We selected individuals on the basis of maximum variability so as to obtain information and viewpoint from different professions (e.g., clinical, administrative, technical), different organizations (e.g., differing number of employees, type of telehealth service, private/public ownership) and different geographic locations in Canada. Potential key informants were identified from the Telehealth Stakeholders Database and personal contacts. These potential interviewees were contacted by the NIFTE Secretariat regarding their willingness to participate. The research teams contacted only those individuals who agreed to be interviewed. Interview questions were jointly developed by the four research teams and were pilot-tested in October 2002. The interviews were conducted in October to December 2002. Each team conducted 11-13 interviews, which lasted 30-90 minutes.

Prior to the interview, each key informant was sent a package that contained a pre-interview questionnaire used to obtain some background information on the key informant. Each package also contained brief instructions, definition of common terms and a list of questions that formed the basis of the interview. Interviews were conducted over the telephone or in person. The interview was tape-recorded with the consent of the key informant and transcribed.

The interviewer asked each key informant some general questions about whether or not telehealth should be accredited and why (or why not), and which organizations should be involved and/or oversee the accreditation process. The next set of questions focussed on the team-specific component. The interview concluded by asking the key informant what he or she thought were the most important issues to be considered when establishing accreditation standards for telehealth. Transcripts of the tape-recorded interviews were content-analyzed in accordance with the broad categories or themes identified by each team. Interview quality was rated on a five-point scale (poor, fair, good, very good and excellent) by the interviewer.

Key informants also came from a number of professions, including clinicians, telehealth coordinators, technicians and administrators. Almost all of the key informants were working for, or working closely with organizations with active telehealth programs. Interviewers rated the quality of most sessions as good or better.

Summary of Main Findings

The next sections present salient results from the Environmental Scan for organizational, technical, clinical and human resources issues as they relate to telehealth. Results were

summarized to identify knowledge and knowledge gaps, current status, unresolved issues and future directions for the development of policies, procedures guidelines or standards for telehealth in Canada.

Organizational Issues

A common theme was the integration of telehealth services into existing organizational and administrative policies, standards, guidelines and procedures. Another major theme was the need for ongoing reviews and revisions. There are different levels of policies, guidelines and procedures for different types of telehealth programs: those related to the introduction of new applications and innovation; and those related to the diffusion or regular use of telehealth. Organizational issues focus on administrative policies, standards, guidelines and procedures, but include human and technical aspects.

Organizational Readiness

A recommendation was that organizations should plan for the implementation of telehealth services. Planning should occur at both the organizational and program levels. Planning for the potential impact of telehealth on the organizational processes and procedures is also required. Planning needs to take into account readiness issues related to: organizational structure, technical infrastructure, communication, change management, and human resources. It was also noted that health care system readiness was required relating to network infrastructure, funding, remuneration, as well as support for innovation and diffusion.

Accountability

Key informants felt that the majority of telehealth accountability issues are very similar to those for face-to-face services. Existing policy documents, guidelines and procedures manuals may only require modification. There is a need for organizations to develop a governance framework that focuses on telehealth roles and responsibilities. Two themes related to the governance structure of the organization were: (1) the position of telehealth within the organizational chart; and (2) the structures and processes to assist with accountability for telehealth.

Quality Assurance

Policies and procedures were needed to define key quality indicators for telehealth, develop an ongoing evaluation plan and to develop some sophistication in telehealth data collection. Five themes were identified: (1) human resources for evaluation, (2) data collection flexibility and sensitivity to innovation, (3) priority access in rural areas, (4) criteria for system utilization, and (5) the physical environment for telehealth. Standardized performance indicators are needed, related to system utilization, patient and provider satisfaction, and technical performance. Quality indicators need to be identified at both the program level and the organizational level.

Continuity

Administrative interoperability and development of an integrated telehealth delivery model were common themes. Administrative interoperability includes: telehealth scheduling procedures; access to information; provision of an integrated system of technologies; and the need for coordination of communication and linkages. An integrated telehealth delivery model would require that organizations look at how they deliver other services and telehealth services, and try, as much as possible, to integrate telehealth services into existing routines. The organization of outpatient services was proposed as a model for coordinating multiple telehealth services.

Implementing Telehealth

The Environmental Scan established that when implementing telehealth services it is important that organizations:

- Be aware that organizational readiness and its many components, including workplace readiness, is key to the successful implementation of telehealth services.
- Work with current policies, standards, procedures and guidelines, and adjust for any identified unique issues pertaining to telehealth.
- Consider the human, physical and environmental infrastructures required for telehealth.
- Recognize that different types of telehealth activities (R&D, pilot; implementation and diffusion) may require different policies, guidelines and procedures.
- Ensure that the business case specific to telehealth services is part of the overall business case of the organization, and fits within the strategic priorities of the organization.
- Recognize that the governance framework for telehealth must include upper level administrative support and be a live, dynamic part of the organization.
- Consider telehealth as an innovation and as a new alternative way of providing services. Therefore, organizations must move beyond “site specific” focus to “network” considerations.
- Endorse more frequent ongoing reviews, and appropriate action steps that respond to these reviews, as telehealth is an innovation with rapidly changing characteristics.
- Recognize that quality assurance, including safety, along with required processes and indicators, are important organizational elements.
- Integrate telehealth services with existing non-telehealth services. If there is more than one telehealth service being provided, macro-level organizational policies and guidelines are required.
- Be aware of provincial/territorial/national and international policy-related activities so that they can make ongoing changes as the field evolves.

These organizational issues require consideration when developing accreditation standards for telehealth services.

Technical Issues

There are numerous application-specific and non-specific standards and guidelines written for telehealth equipment, but teleradiology is the most advanced because of the published work on DICOM and standards and guidelines. Application-specific standards specifying security, diagnostic quality, safety, acceptability, interoperability, reliability and scalability requirements are needed for all telehealth applications. There is a lack of initiatives to establish the necessary application specific guidelines and a lack of clarity of who is responsible for setting technology standards and guidelines.

Treating telehealth services no differently than any other health service is a recurring theme throughout the key informant interviews. Standards and guidelines that exist for traditional care should be applied to telehealth where appropriate (e.g., quality assurance).

Technology and equipment issues recommended for inclusion in accreditation are: security, diagnostic quality, safety, acceptability, interoperability, scalability, reliability, maintenance and procurement practices. Appropriate training of key personnel is a human resource issue that

deserves mention here because of the implications for technical quality, reliability, acceptability and maintenance.

Procurement Practices

- Centralized RFP process based on user input could be developed.
- Checklist and weighting system is valuable to evaluate equipment during demonstration.

Security

- Telehealth systems should be behind locked doors and access by non-telehealth personnel should be limited.
- Peripherals and other movable equipment should be locked down.
- ISDN and IP system access requires user authentication.
- IP networks require a secure network behind a firewall with encryption.

Diagnostic Quality

- Application-specific diagnostic quality standards and guidelines are necessary.
- A coordinating body should be formed to facilitate development and implementation of guidelines and standards for diagnostic quality.

Reliability

- Logbooks should be kept to record technical and user problems and solutions.
- Check list is needed for post-installation testing of equipment and pre-session calibration.
- Reliability standards and guidelines need to be developed and used.
- Stable telecommunication networks need to be developed and utilized.

Acceptability

- User-friendly equipment should be purchased.
- Telehealth service should not take significantly more time than the traditional method.
- The quality of audio, video and data communications must be sufficiently high.
- On-going provider and client evaluation helps ensure acceptability.

Interoperability

- Standards for interoperability must be developed. Areas to consider include: (1) data exchange, (2) remote management, (3) audio quality, and (4) video streaming
- Standard development should be coordinated across Canada and involve vendors.
- Telehealth information exchange standards must be compatible with health information systems.
- Separate standards for the communication and clinical tools.
- An information repository on technical interoperability should be developed.

Scalability

- To facilitate scalability, the following standards are suggested for development: (1) file formats for store and forward, (2) number and type of inputs, (3) interfaces, (4) software and (5) multi-point bridging
- Pre-purchase planning and a refresh strategy are necessary.

Safety

- Equipment safety standards need to be developed and implemented.

- Medical Devices Branch needs to clarify the grey areas.
- C22, ICES 003 and Medical Devices policy needs to be complied with.
- Better awareness of safety standards is needed.

Maintenance

- Preventative maintenance is preferred.
- Equipment maintenance agreements are needed.
- Maintenance services should be available locally.
- Equipment needs an owner, someone who is accountable for it.

Current Standards and Guidelines

- Comprehensive application specific standards and guidelines are needed.
- Teleradiology guidelines and standard development could be used as a model

Clinical Issues

Telehealth systems are recognized as a means to improve access to and quality of health care services, particularly for the rural population. If there is to be more widespread application of telehealth technologies, a consensus on telehealth clinical guidelines need to be reached.

There is an urgent need for telehealth clinical standards and guidelines, but there is debate regarding how specific the guidelines must be to promote best practice and improve the consistency and efficiency of health care delivery in the telehealth setting.

At the very least, the need for general telehealth guidelines that address processes for assuring competencies in the delivery of telehealth clinical services is recognized. The general consensus is that the guidelines should be developed and implemented in a “systematic manner” with pan-Canadian coordination and local ownership.

Duty of Care

- Because duty of care is slightly altered due to the “nature” of the consultation (e.g., technology limitations, inability to view patient face-to-face etc.), it is questioned whether duty of care in the telehealth setting should be determined by the same general principles applied in the traditional provision of medical care.
- A “duty of care” is established in all telehealth encounters between the health care practitioner and the patient/client. Clear direction must be given to the patient/client at the telehealth encounter as to who has ongoing responsibility for ongoing health care. In most instances, this should be communicated to the patient/client at the conclusion of the telehealth encounter. Teleradiology services need not consider the issue of responsibility for ongoing health care.
- In the telehealth setting, the issues of responsibility and rights of the local provider, specialist and patients with regard to liability is an underdeveloped area, requiring further exploration (see also Crolla, 1998).
- Refer to a recently published Teleconsultation Practice Guideline (Nerlich et al., 2002) that addresses issues of responsibility and rights of the local provider, consultant and patients with regard to liability, licensure and patient privacy.

Communication with Patients/Clients

- Quality of communication in the telehealth setting is dependent on the comfort level of the telehealth practitioner with the technical environment, the general communication ability of the health care professional and the appropriateness of the clinical application to the telehealth setting.
- There is no consensus as to whether telehealth enhances or attenuates the therapeutic relationship or the traditional practice of medicine.
- Further research on the nature and content of the communication process is needed between telehealth practitioners and patients.

Standards/Quality of Clinical Care

- There is diversity of opinion regarding whether there is a need for telehealth-specific practice guidelines or if existing guidelines from the various professional licensing bodies and associations serve the purpose.
- There is consensus that general telehealth guidelines are needed to address operational protocols and procedures (e.g., process for informed consent, privacy and confidentiality, documentation, etc.).
- The “appropriate” standard of care delivered via telehealth should be equivalent to the standard expected in traditional provision of care. If equivalent standard of care cannot be met, the telehealth practitioner needs to consider what the alternatives are and decide if it is acceptable to proceed.

Clinical Outcomes

- Telehealth systems require assessment of relevant outcome data to promote and support the sustainability of telehealth programs.
- Telehealth networks need to have a systematic method of collecting, evaluating and reporting meaningful outcome data, which would include indicators of efficiency of service and clinical effectiveness.

Patient Confidentiality

- Maintenance of confidentiality in the telehealth setting poses more challenges than in the usual health care environment and challenges that may be different in nature.
- Develop telehealth-specific confidentiality guidelines that address appropriate technical and “site” operational measures including: site security; maintenance of store-and-forward records including photographs and videotapes; employee confidentiality agreements; establishment of security and ownership of patient/client record.
- Medical information can be electronically transported to other locations which may cause problems as different facilities may have different ways of ensuring the confidentiality of that information.

Informed Consent

- Opinions on whether formal consent is required in the telehealth setting are influenced by whether telehealth is viewed as a “tool” for the provision of care or is considered a “distinct method “ for the delivery of health care.
- Consent is considered “implicit” for general telehealth encounters and nursing telepractice, but should be based on informed choice, requiring full disclosure of information relevant to the telehealth encounter.
- Formal written consent should be obtained for specific circumstances in the telehealth setting, which would normally require consent in the traditional health care setting.

- The consent process, when required, should be integrated with existing consent procedures in order to simplify the process and avoid duplication or confusion.

Clinical services provided via telehealth must adhere to basic assurance of quality in accordance with each health discipline's clinical standards. Each telehealth specialty should examine how care delivered by telehealth impacts or changes its pattern of care delivery and if required, modify existing clinical practice guidelines in order to ensure best practice.

Finally, in order to increase acceptance and integration of telehealth into routine clinical care, telehealth should be integrated into the normal provision of health care services to enhance, not replace existing health care services and to improve access, appropriate use, and efficiency of health care services.

Human Resource Issues

A number of human resources (HR) issues revolve around the current lack of integration of telehealth into the health care delivery system. This lack of integration manifests itself in several ways and spans all areas covered in the Environmental Scan (organization, clinical, technical and human resources) and then some. This lack of integration also means that the full impact of telehealth on the health care system has yet to be felt. From an HR perspective, unresolved issues include roles and responsibilities, licensure, competency, qualifications, reimbursement/remuneration, inflexible funding, work arrangements, and so forth. It is important to note that the following recommendations are designed to support and bolster any initiative designed to address these issues at the local, regional, provincial/territorial or Canada-wide level.

Human Resource Plans

- Identify and update HR policies to accommodate telehealth concerns related to patient/client safety and competency of telehealth personnel.
- Integrate telehealth-specific policies into existing HR policies and only create new policies for telehealth when absolutely necessary.
- Consider a review/revision of telehealth HR policies every one to two years (needed because of the rapid pace of change in telecommunications technology).

Roles and Responsibilities

- To facilitate adoption of telehealth HR standards nationwide and to reduce duplication of effort, a pan-Canadian body could develop descriptions of telehealth duties that can be shared among organizations as a baseline description of telehealth-specific roles and responsibilities.
- A pan-Canadian approach may be needed to help resolve telehealth related scope-of-practice issues that arise among professions and jurisdictions.
- Individual organizations should develop position descriptions that clearly articulate the roles and responsibilities of personnel who are engaged in telehealth activities on a full-time or near full-time basis.
- Individual organizations should incorporate telehealth-specific components into formal job performance evaluations.

Licensure¹

- Patient/client safety and quality of service should be the guiding principles for any cross-jurisdictional licensure.
- A national body could explore the feasibility of a pan-Canadian mechanism or approach that was accepted and administered by the regulatory bodies in each jurisdiction.
- This mechanism or approach could be based on mutual recognition or special license.
- In the interim, individual jurisdictions in Canada could enter into bi-jurisdictional or multi-jurisdictional agreements to permit the provision and/or receipt of telehealth services.
- In the interim, patients/clients who do not reside in the professional's jurisdiction should be told how to lodge a complaint with the professional's regulatory body. Patients/clients should sign an informed consent/waiver that details the complaint process and other jurisdictional issues.² This was considered to be particularly important for international telehealth activities.

Competence and Qualifications

- The feasibility of a pan-Canadian set of qualifications and competencies specific to telehealth should be explored separately for each health care profession.
- One possible option is that these minimum qualifications/competencies could specify the licensure requirements that address clinical competency and requirements address telehealth competency.
 - Under this option, health care practitioners would already be licensed as part of normal requirements, but would require formal proof of their ability to use telehealth equipment to provide clinical care.
 - Technical staff would require formal education from colleges or universities as a basic requirement and would require formal proof of competency in specialized telehealth equipment.

Education, Orientation and Training

- A pan-Canadian initiative could list all elements of orientation and training and begin to standardize the more common and pertinent elements for adoption by provinces/territories.
- Regulatory bodies and professional associations could review and assist in the development of orientation and training programs specific to their professions who provide telehealth services.
- Training and job performance evaluation should be linked and feedback should be encouraged from personnel on telehealth training (e.g., comfort level and in the use of equipment).
- Consider the establishment of the position of a telehealth coordinator as a new health care occupation – a position that is defined by core competencies and skills.
- Consider developing in-house orientation and on-the-job training elements into “certificate”-level training opportunities that are standardized across Canada.
- Consider moving some orientation and training elements into the core curriculum of health care providers – elements such as increased exposure to computers, telecommunications technology, electronic health records and virtual patients.

¹ Independent practitioners and/or organizations that provide telehealth services are responsible for ensuring compliance with the pertinent laws and regulations in the appropriate jurisdictions.

² The consent form could contain other items such as those discussed in the section on clinical issues.

Reimbursement

- Unless health care practitioners (especially those on fee-for-service) are appropriately reimbursed for their telehealth work, telehealth is not going to be used widely (Pong & Hogenbirk, 2000).
- Encourage governments to resolve any outstanding reimbursement issues within their own jurisdictions and between/among jurisdictions.
- Where appropriate, encourage third-party payers, such as insurance companies, to reimburse for telehealth services.
- Encourage governments to establish long-term funding to telehealth personnel, particularly telehealth coordinators and clinical or technical staff who are engaged in telehealth activities on a full-time or near to full-time basis.
- Encourage telehealth organizations to create a telehealth pay schedule for salaried/waged personnel that reflects telehealth duties, roles and responsibilities, and whether these are in addition to existing duties, roles and responsibilities.
- Encourage telehealth organizations to link telehealth job performance reviews with salary/wage increases.

As an addendum to all of these HR recommendations, care should be taken to minimize the bureaucratic burden for health care professionals and technical staff, as well as for those who would develop/modify the policies or administer the licensure or certification processes. Whenever and wherever possible, existing policies and procedures should be used and only modified when necessary to accommodate telehealth-specific issues.

Implications

There is some diversity of opinion on whether telehealth should be accredited and, if so, how it should be accredited. For example, there was debate as to whether telehealth should be accredited as a stand-alone program or as one of several available service modalities for providing health care within a health care organization. Most of those in favour of accreditation recommended a flexible approach because of rapid changes in information and communication technologies. Many preferred that telehealth be accredited as a service modality as opposed to a separate program. Accrediting telehealth as a separate program was, however, advocated in those circumstances when the telehealth service was administered separately, or was sufficiently focused (e.g., a stand-alone teletriage service).

Those who argued against accrediting telehealth at this time thought that it was too early, that telehealth was not yet mature enough, were concerned that it could stifle innovative development of telehealth and introduce an unnecessary administrative burden, particularly for smaller organizations and/or rural/remote telehealth locations. This is especially important as one of the main *raison-d'être* of telehealth is its ability to bring much-needed health care services from major urban centres to small, more isolated communities and facilities. Thus it is important to ensure that disenfranchisement of small or rural-based telehealth operations is not an unintentional consequence of telehealth accreditation.³

³ The general advantages/disadvantages of accreditation or similar quality assessment programs are discussed by Shaw (2001) and Øvretveit & Gustafson (2003).

One finding, common to organization, clinical, technical and human resources, is the present-day lack of integration of telehealth into the health care delivery system. This lack of integration also means that the health care system has yet to be fully impacted by telehealth.

One frequently made suggestion noted by the four research teams was a preference for flexible policies that recognized program differences and were sensitive to innovation. The existence of differences among telehealth users/providers, including organizational readiness, available personnel, available equipment and geographic location (such as urban versus rural versus remote), necessitates a flexible and perhaps a hierarchical approach to accreditation.⁴ Another common recommendation was that existing policies, procedures, guidelines and standards should be revised to include and address telehealth concerns and that new policies, etc., should be created only when absolutely necessary. Frequent reviews and revisions of telehealth-specific or telehealth-related policies were advocated in the literature, by survey respondents and by key informants as described in most, if not all, of the team reports.

The progressive development of common policies, procedures, guidelines and standards for telehealth, and, for some experts, the subsequent development of the accreditation process was considered to be important for ensuring the safe and effective delivery of quality telehealth services among different organizations, including public- and private-sector organizations and, in particular, across jurisdictions. In the absence of a pan-Canadian policy, it has been recommended that individual organizations and jurisdictions should enter into formal agreements that would specify:

- (1) Organizational interoperability (e.g., a centralized booking and follow-up service);
- (2) Technical interoperability (e.g., a common data transfer protocol);
- (3) Personnel (availability, competence, licensure/certification requirements, roles and responsibilities at each site);
- (4) Patient safety, security, confidentiality and privacy, plus the details as to which organizations and personnel are responsible for continuity of care;
- (5) Telehealth services to be provided (clinical or other);
- (6) Remuneration and/or reimbursement⁵ for telehealth services among/between organizations and jurisdictions;
- (7) Quality assurance processes (performance indicators, evaluation frequency, feedback mechanisms).

It may be that these agreements may serve as a precursor to a pan-Canadian policy that will be predicated on the safe and effective provision of health care delivered by telehealth technology.

The accreditation processes will have to consider the implications of accrediting organizations, accrediting individuals (e.g., telehealth certification or licensure) or accrediting (certifying) equipment. Accrediting organizations may need to be done in the context of the entire telehealth network – it may not suffice to accredit separate organizations or locations without accrediting the entire network. Certifying or licensing individuals for telehealth duties/practice seems reasonable, but may pose difficulties in smaller organizations, particularly those in rural and remote regions. Personnel in rural/remote areas may be unable or unwilling to participate in certification programs, especially if telehealth activities are infrequent. In addition, rural/remote areas, which already have recruitment/retention difficulties, may shy away from telehealth if extensive certification is required. The simplest approach may be to certify

⁴ A hierarchical approach might set out criteria at different levels, based on size of the organization, geographic location and the extent of involvement in the telehealth service.

⁵ Remuneration and reimbursement are accreditation issues only insofar as they related to an organization's ability to attract and keep qualified personnel.

equipment and require that personnel receive training concomitant with their background and duties.

It is not clear that telehealth will require unique policies, procedures, guidelines or standards nor is it clear that telehealth will require a unique accreditation process. At the very least, telehealth may require specific mention/inclusion into existing policies and similar documents and perhaps recognition of a unique combination of policies, procedures, guidelines or standards. It is important to recognize that there are initiatives already underway that are designed to address these issues at various levels of organization (e.g., institutional, regional, provincial/territorial or Canada-wide). The ongoing success of these initiatives is both a challenge and an opportunity. One might also argue that it is a necessity considering the as yet unrealized potential of telehealth to affect the health care system and ultimately to have an effect on human health. Continued evaluation and research into telehealth is warranted, given the ongoing changes to health care funding and administration, the rapid changes in telecommunications technology and the evolving role of telehealth in the delivery of safe and effective health care.

Definitions

Accreditation: “A process that organizations use to evaluate their service and to better the quality of their services. Accreditation also provides recognition that an organization’s services are meeting national standards of quality.” (CCHSA, 2001)

Certification: A process by which an authoritative body gives recognition that an individual or a technology has met prescribed competencies or standards.

Framework: A skeleton structure for supporting or enclosing something, the arrangement of the basic or component parts of something (Funk and Wagnalls Standard College Dictionary).

Guideline: A statement of policy or procedures by which to determine a course of action, or give guidance for setting standards. (Adapted from Loane & Wootton, 2002).

Standards: A statement established by consensus or authority, that provides a benchmark for measuring quality and that is aimed at achieving optimal results.

NIFTE Framework of Guidelines: A structured set of statements designed to assist individuals and organizations in the development of telehealth policy and procedures, guidelines and/or standards.

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