

## Medical Informatics 2017 - WHY TELEHEALTH IS NOT ABOUT TECHNOLOGY?

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### Abstract

Most people's off-the-cuff associations with telehealth include technology terms like video, camera, remote communication, or maybe robots. But telehealth isn't about the technology. Telehealth is healthcare – delivering care at a distance. When organizations make telehealth about the technology, for instance by putting IT responsible of telehealth, this high potential solution for several of today's healthcare problems fails whenever. This presentation explores that telehealth really is about people (patients and providers), about processes, about health outcomes, and, yes, about the technology enabling the care at a distance. It'll include a summary of dozens of the foremost common telehealth applications, the various benefits of telehealth, and pragmatic guidance the way to design executive and operational support telehealth in order that telehealth are able to do its full potential.

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### **Information Technology**

It is widely held that information technologies will revolutionize patient care, medical research, medical education, and therefore the administration of health services. My medicine group, for instance, wouldn't function nearly also without the relatively simple technology of email. Statistics Canada reported in March 2001 that 53% of Canadians over 15 years aged (that is, 13 million) used the web over the past year. Commercialism aside, witness the recent explosive growth within the use of the web by many patients and physicians seeking information. the complete text of CMAJ, for

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instance, was first put online in July 1999, and last year the utilization of the location quite doubled, with users from round the world.1 Access to both good-quality and poor-quality information on the web has already affected the patient–physician relationship.

Risto Roine and colleagues systematically review research concerning telemedicine from 1966 to early 2000 and define telemedicine as “the use of data and technology to supply health care services to individuals who are a long way from the health care provider.” Their article analyzes many of the vast array of activities that happen under the telemedicine banner. this is often a well-done and timely analysis, because many Canadian hospitals and health care providers have invested or are currently poised to take a position heavily in computer-based information systems so as to enhance patient care both locally and at a distance. Roine and colleagues found the subsequent sorts of telemedicine to be valuable: “teleradiology, teleneurosurgery, telepsychiatry, transmission of echocardiographic images, and therefore the use of electronic referrals enabling email consultations and video conferencing between primary and secondary health care providers.” generally, cost savings weren't impressive. this is often not surprising, because such technology. specially to develop and support. However, the economic analyses that the authors reviewed did suggest that teleradiology, especially the transmission of CT images, might be cost saving. Physicians in both rural and concrete settings need this service for his or her patients.

The evaluation of the impact of telemedicine is difficult. Are the requirements of physicians and patients well met and is that the

technology up to the job? Researchers in telemedicine are constantly trying to gauge a moving target because technological advances may make routine today what didn't work well yesterday. However, such ongoing evaluations are imperative if we are to understand which technologies are worth investing in. We should always not be too discouraged by a number of the evaluation data presented within the article by Roine and colleagues but, rather, we should always learn from it to switch our efforts to satisfy real needs. Here, I review current trends.

### Internet resources for patients

Patients increasingly obtain health care information from the web. The standard and accuracy of this information and therefore the search engines want to access it need improvement.<sup>10</sup> Health organizations are recognizing the necessity to supply better up-to-date information;<sup>11</sup> many organizations publish listings of recommended sites ("sites about sites"). HealthWeb ([www.healthweb.org](http://www.healthweb.org)) is such a site maintained by several US health sciences libraries. Some internet site providers even personalize the knowledge for the patient and his or her condition or treatment and permit email access to an assigned health care provider for answers to questions. MediStudy ([www.medistudy.com](http://www.medistudy.com)) provides patients and physicians with information about Canadian clinical research trials.

### Technological advances

Laptops and handheld computers are increasingly powerful, portable and wireless, allowing consultant expertise to be brought on to the patient's bedside. The potential of networks and therefore the Internet to transfer large amounts of data reliably and securely is additionally ever-increasing, although the downloading of images, animated material and videos can still be frustratingly slow, even on "high-speed" connections. Soon we'll be ready to receive, by subscription, certain sorts of data, like X-ray film and real-time video, over the regular Internet at higher transfer rates.

The infrastructure of the web is additionally improving. A replacement generation of the web, supported fibreoptic cables, called CA\*NET3 in Canada and Internet2 within the US is partially in situ and promises extensive "broadband" capability, which can improve the standard and usefulness of video images on the Internet: many applications for medicine are being developed (<http://apps.internet2.edu/>). The delivery of much of telemedicine in both patient care and academic applications are going to be via this new Internet, taking advantage of the doubtless "unlimited" bandwidth for data transfer.

### Conclusion

We have moved well beyond the pioneering stages of telemedicine. Longer-term planning is required, and our health care budgets must incorporate telemedicine as a part of regular operating expenses. Physicians, other health care specialists and universities must lead the way. The time has come to recruit, very much like we do with researchers, for telemedicine expertise. Programs and centers of excellence associated with medical information technology and medical "e-Learning" should be fostered in Canada.

The article by Roine and colleagues<sup>2</sup> describes where we've been and can help determine where we'd best go. We must remember that the human element remains most vital which the technology is simply the tool. We'll succeed if we always start with the medical or educational need then determine if indeed technology might help best meet that require. It might be exciting to ascertain this same analysis administered during a decade from now.