

Viewpoint ■

A Manifesto on Telehealth and Telemedicine

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Abstract An evident contrast exists between the generally easy way medical doctors and administrators use the term “telemedicine” and the wide variety of significantly different technological methods and devices necessary for correctly performing specific tasks in the field. Many misunderstandings could be avoided by agreeing on the types of services that telemedicine can provide, names for those services, and descriptions of what is included in the services. This manifesto lists representative services, with a proposed name for and description of each.

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Serious misunderstandings are common in discussions of subjects associated with telehealth and telemedicine. Agreement on the terms and their meanings could help us avoid many of these misunderstandings.

As in other fields, when health care and medicine become truly vocational missions, health care professionals naturally want to offer their services to more patients, providing care over greater distances. When they do so, they provide “teleservices,” generally by use of information and communication technology (ICT) methods and devices.

Many examples of current teleservices in health care and medicine can be given. Some teleservices are of a “telespecialty” type, such as teleradiology, telecardiology, telepathology, telesurgery, and teleanatomy. Others are of a “telephase” type, such as teleprevention, telediagnosis, teletherapy, telecare, and telerehabilitation.

Although they may identify significant market segments, most of these terms are too general to convey clear messages about the architecture and minimal performance required of the ICT methods and devices

needed for implementation of the services. The terms should identify more specific teleservices, as follows:

- *Telereferral*—like the work of a radiologist who takes full responsibility for doing referrals from one site of a multi-site hospital
- *Teleconsulting*—like our conversations with a consultant colleague, to decrease our uncertainty, when we have sufficient knowledge to verify the received advice
- *Tele-illustration*—like the explanations a radiologist gives to a general practitioner who does not have sufficient knowledge to verify them in detail
- *Teleconsolation*—like the advice and reassurance given to grieving patients or family members, mainly through psychology-based approaches
- *Telemonitoring of patients*—like observation, from a nursing home, of a patient who is bedridden at home
- *Telemonitoring of procedures*—like outsourced drug warehouse management
- *Telecommanding*—transmission, to a distant location, of an order to do something
- *Telecontrolling*—the capability to change, from a distance, factors that are being telemonitored
- *Telebooking and telereservation*—the ability of a patient to book an appointment after finding out the waiting list status
- *Tele-administration*—like scheduling, budget control, and payroll administration

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- *Teleteaching*—Delivery of the illustrative part of a course
- *Telelearning*—Use of the illustrative part of a course by students
- *Tele-examination*—Management of course examinations, including their presentation, completion by students, and scoring

This list is not inclusive, and additional services may be added. For these services to be successful—that is,

for them to be used in normal, everyday practice—proper ICT methods and devices must be chosen and assembled according to a detailed analysis of the goals and the delivery modalities of each service. Such an analysis is the necessary foundation of any realistic project and any reasonable implementation. The analysis should be merged with detailed and extended knowledge of current ICT architectures, methods, and devices and should include evaluations of costs and benefits, cost effectiveness, and security and privacy issues.