Chapter 1
Policies on Telemedicine-Enhanced Hospital Services: Prioritization Criteria for the Interventions at Regional Level

Angelo Rossi Mori
Institute of Biomedical Technologies (CNR), Italy

Mariangela Contenti
Institute of Biomedical Technologies (CNR), Italy

Rita Verbicaro
Institute of Biomedical Technologies (CNR), Italy

ABSTRACT

Modern telemedicine offers to hospitals a whole range of opportunities to improve the appropriateness of their care provision, to offer new services to primary care and to contribute to patient engagement. In this chapter, the authors briefly discuss their approach to facilitate the collaborative production of region-wide telemedicine roadmaps involving the hospitals, explicitly based on national and regional healthcare strategic priorities. In addition, as an operational contribution to support their approach, they introduce a conceptual frame for evaluating and prioritizing multiple ICT-enhanced innovation interventions, within an all-inclusive plan. The proposed frame captures relevant evaluation criteria belonging to four broad categories: the systemic benefits related to the quality of care; direct economic factors; the cultural viability; and the technological feasibility. As an example, the authors simulate an application of our conceptual frame to the comparative assessment of three kinds of telemedicine-enhanced interventions: (i) to improve the care processes driven by the hospital, (ii) to support health professionals, and (iii) to promote citizen's engagement.

DOI: 10.4018/978-1-4666-2979-0.ch001

1 INTRODUCTION

The use of computer technology in medicine began with the rise of electronic digital computers in the early 1950s (Perednia et al., 1995). The story started with "Medical Informatics", or better "informatics applied to medicine" (Greenes et al., 1990). Then evolved into "Healthcare informatics" or "Healthcare information systems" to take into account the needs of the healthcare facilities and the changes in focus from few isolated applications to increasingly more complex integrated solutions (Siau, 2003).

Next came the time of "ICT for healthcare", where the "Communication" assumed an increasing role (Detmer, 2003).

Later the term "eHealth" was introduced, where the change of perspective was particularly significant: the main soul is now "health" (instead of "healthcare"), and ICT takes a secondary role, becoming the prefix "e-" only to remember that in the information society also health can no longer be the same (Oh et al., 2005; Pagliari et al., 2005). At this stage several national and regional authorities started to issue their eHealth roadmaps, working to develop the necessary infrastructures, such as secure networks, the electronic signature, the digital health card, as well as the longitudinal Electronic Health Record (EHR) for every citizen (eHealth Era, 2007).

The traditional distinction between *healthcare informatics* and *telemedicine* (and telehealth, telecare) was fading out, into a comprehensive sector about *the meaningful use of information and communication technologies to support the improvement of quality and effectiveness of the care systems* (Blumenthal, 2010).

Eventually in the Anglo-Saxon countries another term is taking over: e.g. "*Connecting for Health*" in England (Cross, 2006); "Health Connect" in Australia (DoHA, 2009) and for Kaiser Permanente (Raymond, 2005), a large American Health Maintenance Organization. The emphasis is no longer on technological solutions, but on health and connection (among people), with the patient at the center.

Indeed, even the European Commission has recently modified the name of its Directorate General on "Information Society and Media": as of 1st July 2012, the Digital Agenda of the EU is managed by the European Commission Directorate General for "Communications Networks, Content and Technology", shortly "DG Connect".

At the same time, countries and regions are increasingly looking for novel and more effective organization model for the health care delivery system, in order to address the burden of chronic diseases and to achieve sustainability and continuity of care (WHO, 2005). In the reorganization of the welfare system as a whole, eHealth and telemedicine applications represent an enabler for the flexible set up of "virtual healthcare facility", where autonomous but collaborative entities, among which the patient's home is included, can effectively interact to overcome the constraints of space and time (Camarinha-Matos, 2002).

In this perspective also the role of hospitals change, by providing specialized care services in collaboration with the community resources, through agreements on shared care processes (e.g. DoH, 2004) enhanced by a modern approach to telemedicine (Joint Commission, 2008). Actually modern telemedicine offers to hospitals a whole range of opportunities to improve the appropriateness of their care provision, to offer new services to primary care and to contribute to patient engagement.

Nevertheless, even if the fundamental components for the modernization of the healthcare enhanced by the technologies seem to be so close at hand, still an overall systemic vision is not yet set-up (European Commission, 2008; European Files, 2010).