Chapter 5
Can We Enable Digital Transition in Healthcare Delivery?
Insights From a Survey of Telemedicine Services in the Piedmont Region

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ABSTRACT

Implementing digital health transition is challenging. Whilst technology progresses rapidly, the appropriation of innovation in healthcare is slower and has to deal with the local context. This is the case with Piedmont, an Italian region where in the last decade a number of telemedicine projects have been launched. In order to assess their implementation a survey has been recently conducted by the regional Health Department. This work builds upon the results of this investigation. The conceptual approach underlying the survey is illustrated and the main findings of the investigation discussed. To examine the regional situation, a notion of telemedicine maturity model is used. By making it explicit the main dimensions entailed in developing an ehealth service, its application can facilitate the digital health transition in the region. A core argument is that to handle the complexity of ehealth projects a collaborative environment for exchanging health knowledge should be implemented.

INTRODUCTION

Telemedicine is the use of ICT to improve patient outcomes by increasing access to care and medical information. Many definitions of telemedicine have been given. They reflect the evolving links between advancements in technology and healthcare (Vesselkov, Hämmäinen, & Töyli, 2018) and the changing health needs and contexts of societies (WHO, 2010).

According to the World Health Organization, telemedicine is: "The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities" (WHO, 1998, p.1).

In Europe, the notion has gained popularity since 2008 when a communication by the European Commission urged Member States to: a. assess their needs and priorities in telemedicine; b. include these priorities in their national health strategies; and c. address issues such as accreditation, liability, reimbursement, privacy and data protection in order to enable a wider access to telemedicine services (European Commission, 2008; European Commission, 2018a; HISMSS Analytics, 2018)).

Telemedicine is part of ehealth, a field established in the Fifty Eight World Health Assembly (2005), which defined it as "the cost-effective and secure use of information and communications technologies in support of health and health-related fields, including health-care services, health surveillance, health literature, and health education, knowledge and research" (World Health Assembly, resolution WHA58.28, 2005, p. 109).

Viewing telemedicine in the ehealth wider perspective has motivated two reflections.

The first summons a higher-level view and highlights the importance of telemedicine, as an ehealth component, to support a public health system achieving the goal of universal coverage. The issue belongs to longstanding discussion on how to improve the efficiency and financial sustainability of healthcare systems, while enhancing their effectiveness and ability to meet social needs (Kutzin & Sparker, 2016). By improving health functions and strengthening control knobs, ehealth offers new potential for reforming how the health system actually operates.

This is a major concern of the European Commission (2014) who called for actions to focus on:

- Strengthening the effectiveness of health systems (through health systems performance assessment, integration of care and improvement of patient safety and quality of care);
- Increasing accessibility of healthcare (through transparent criteria for access to medical treatment; better planning of health workforce, cost-effective medicines, integrated models of care);
- Improving the resilience of health systems (through stable funding mechanisms, Health Technology Assessment, ehealth based information systems).

The second reflection is more focused and deals with how telemedicine projects can be developed in situated contexts and contribute to deliver healthcare more effectively. Here notions of socio-technical systems come to the fore.

A variety of aspects have been investigated such as: a. the multiple dimensions underlying these systems and how stakeholders' level of awareness would affect their possibilities to be engaged (Clegg et al., 2009); b. the role of discursive practices through which different ways of learning collectively contribute to the realization of telemedicine projects (Nicolini, 2011); c. the opportunity to adopt a de-

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