

Chapter 83

Leading the Technological Innovation in Healthcare Systems: The Telematic Medicine Approach

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ABSTRACT

The adoption of Telematics medicine or Telemedicine marks an important structural change in the mode in which deployment of medical care is being routinely provided. It is not a matter of using more or less developed technologies but mainly a deep change to the way in which countries and governments decide to provide and manage their national health care system. There is definitely a new paradigm taking place. Thus, the telemedicine approach implies deeply changing the way healthcare is provided. The authors are aware that this will take time, as does any cultural revolution, but for the time being, we need to start adapting our mentality and our networks to integrate and allow the two methods to cohabit together. Technology is one of the leading tools to allow this to happen, and it is necessary to understand what requirements are needed to get the maximum success. Years of experience have dictated the main rules and guidelines exploited in detail in this chapter.

INTRODUCTION

The telemedicine approach implies a much more modern and long range vision of health care, being prepared to take advantage of modern and cutting age technology solution, implement powerful tools and understand accordingly the enormous advantage that may derive in terms of resource optimization and services performance increase for social and healthcare assistance. With

no doubt it is a political decision when to face or not this new challenge, that in the long term can only provide to governments many economic advantages and patients a much better care service and quality of life. In the short term such decision requires a deep change to the existing healthcare organizations and adjustments to the new service provisioning models. One could compare it to a cultural revolution, a political or industrial epochal change but must keep in mind that historically any

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important transformation is caused by a critical combination of human and economic needs and indeed the world is slowly facing such change (Cleland, 2006; Gulla 2007). The background to all this picture is drawn by the aging statistics, the growing trend of lonely living people, the economic globalization scenarios, the need of more appropriate cost effective and ergonomic cares, which lead to an incredible increasing request of more and better distributed healthcare resources, consequently to higher cost requirements. In such constraining environment it is necessary to move towards new and better ways to deliver healthcare services and the only feasible and reliable tool today ready, worldwide tested and industrialized is the telematics medicine approach. Now we need to take a new more brave step forward for making all needed efforts to merge these solutions into the existing healthcare systems (COCIR, 2010) (see Figure 1).

THE TECHNOLOGY

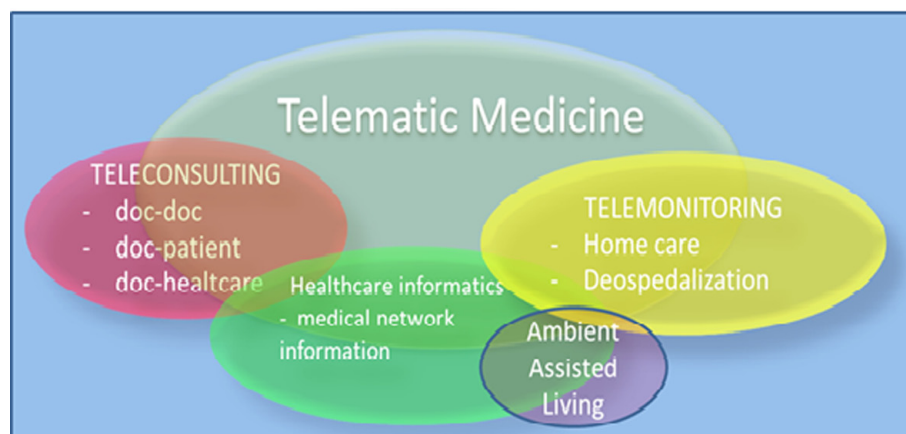
Telemedicine, recently included under a wider concept and named Telematics Medicine approach, technology speaking, has reached a very high maturity stage. Most of the critical items

have been removed, industry has invested heavily to improve and achieve cost-effective solutions. The market is offering tens of solutions addressing any disease management, relatively expensive, roughly simple and easy to use, covering most of daily needs and requirements for provisioning of efficient remote healthcare. Thanks to the technology progress, services such as telemonitoring and teleconsulting or Ambient Assisted Living models and any other medical information systems has now become a feasible and reliable tool. Ready to provide new efficient platforms, being offered by the industry as sustainable turnkey telemedicine solutions (Gulla, 2007, 2008, 2009).

Telematic Medicine Platform Model

A flexible telemedicine system is designed to provide efficient and low cost medical remote assistance, aiming to decrease the request for hospital recovery, allow patients and doctors to be connected when need raises or offer daily monitoring and patients healthcare information, simply using telematics means and networks. This in brief is the description of what a telemedicine system is required to do. The questions are “how is this performed? and “ Are there guidelines to follow?” The best way to try to give an answer is

Figure 1. Telematic medicine model: Merging telemedicine, e-health, teleconsulting, and AAL



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