Preface

INTRODUCTION

The real innovative cultural step for medicine is the overcoming of current generic conceptualization of the field (involving together medical, ICT technical, administrative, and legal problems) towards a new model of Telematic-Medicine and Surgery and a new health organization, Tele-Health. The provisioning of healthcare in homes, de-hospitalization, specialist medical care in remote areas, and so on, needs new rules and management models in addition to other technologies.

Furthermore, tele-health, as an organizational process, doesn’t lend itself to existing medical activities but it contributes to work share-out and collaboration within a hospital context and between hospitals and territories. Hospitals can extend into a patient’s house, and, conversely, then patient is made virtually present in hospitals. So represented, the relationship between professionals, patients, and information is transformed.

WHY THIS BOOK?

Many times we have asked ourselves about telemedicine and its applications. We are surrounded by models, proposals, projects, solutions that industries, research institutes, and governments have attempt to put in act, sometimes with very good results some others failing to meet the milestones and the gaols to put together a sustainable and replicable model. Our intention is to discuss about the positive results and experience in this field and draw simple and understandable guidelines that can support decision makers to identify the most suitable and implementable solutions in their local environment.

The method followed is simply to highlight some aspects we believe to be very important and to describe models of general understanding, showing concrete implementation examples supporting these choices. We will give an overview of the most developed and cutting edge technologies and how these can effect improvements in remote healthcare delivery systems, design delivery scenarios and feasible business models.

The book has been implemented thanks to the active and very appreciated cooperation with worldwide experts and researchers that have shown a great level of competence and experience. We will not take into considerations important and well know subjects such as:

- The ageing of the population, which leads to an aggravation of chronic conditions (>70% of healthcare costs),
- Patients information in monitoring their own health,
• Healthcare costs control,
• The lack of availability of qualified personnel and specialist in remote areas.

These topics are well developed and deeply exploited in many literature studies, but we focus on applicable solutions with the aim to draw a set of reference guidelines.

WHO DO WE ADDRESS?

The authors have worked in close cooperation to put together their knowledge, acquired in years of industry, research, and medical practise with the aim to send a message of feasible support to industries, governments and decision makers. Nevertheless these ideas and elaborations can be the basis for future studies aiming to improve even better solutions for the implementation of more suitable quality of life and health care models.

We address health care stakeholders willing to deploy or plan a territory healthcare service networks, or provisioning model, including all the players inside centralized structures and remote or dense populated areas, GPs, specialist, remote ambulatories or small hospitals.

We believe that the results of this work will be useful to service providers willing to pursue new business models provisioning healthcare, governmental bodies planning telematics medicine tools and to understand better the challenges the procedural and structure changes needed to design a telemedicine network.

AIM OF THE BOOK

The purpose of this book is to provide evidence of how researchers and practitioners understand the health market and to describe key points to health professionals (or health organizations) that should know when planning and implementing new tele-health services or improving existing telemedicine systems to provide value-added medical services. It will underline the methodologies needed to optimize resources and to manage telemedicine projects. Tele-health and its applications are considered as a “socio-technical” or “relational” system, one that doesn’t ponder devices, users, and usage context separately, but evaluates them in their mutual interaction. A brief survey about “technology-in-use”, a term that identifies technology and its potentiality when they are employed, modalities in which they are actually used on-the-field by users and their community in connection with other devices, techniques, and practices already in use. Studying tele-health as a technology-in-use (i.e. as a sociological problem) will make it possible to bring to light all the hidden work done by users to make the technology usable and reveal the work done by technology to incorporate user needs. Experiences and case studies reported using this approach—that technologies are not born usable and reliable but only become so with their users and their usage in real environments. The exploitation of telemedicine models is a challenging task which this book attempts to explore. In doing so, many models and country experiences have been collected in order to allow the readers to analyse the main features of the design and identify its own applicable model. It is not intended here to give a unique solution but guidelines, rules, and elements which should be addressed to cope with the lack of resources coordination to provide cost effective health management tools, meeting the expectation of an integrated efficient healthcare system available anywhere anytime.
Among all we aim to give better understanding to:

- The direct economic factors, as the suitability to attract resources to activate and maintain the programs, the economic benefits with respect to the investment, the timeliness of return, the impact on the efficiency of the care system;
- The systemic benefits about quality of care, as the citizens’ satisfaction, the ability to promote new organizational models, the contribution for a sustainable evolution of the health system, the impact on the jurisdiction as a whole;
- The technological feasibility, relying on the existence of previous success stories and know-how, the scalability and the critical mass of the program, the intrinsic modularity of the problems faced by the tele-health program, the issues of a possible co-existence of the paper flows with the electronic flows, the advantages from the availability of enabling infrastructures;
- The cultural feasibility, considering the predisposition of involving the users from a cultural and an organizational point of view, the degree of independence from incentives, regulations and agreements, the awareness of managers and professionals, the degree of support from public debate and from the consensus of public opinion.

The reader will have the opportunity to learn from the multiple experiences reported in the chapters:

- The models for telemedicine development in hospital services,
- The roles how to manage and harmonize telemedicine projects for hospital e-care,
- The benefits,
- Models and draw guidelines that may fit into each ones reality.

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