Chapter 16

Assessing E–Health in Africa:
Web 2.0 Applications

Alessia D'Andrea
IRPPS-CNR, Italy

Fernando Ferri
IRPPS-CNR, Italy

Patrizia Grifoni
IRPPS-CNR, Italy

EXECUTIVE SUMMARY

The aim of this chapter is to discuss the e-health readiness assessment in Africa by analysing the ICT usage and the different barriers for the implementation of e-health technologies. Moreover, the chapter analyses the e-health prospective by describing tree different e-health application areas: (1) electronic medical records, (2) telemedicine, and (3) e-commerce of health products.

INTRODUCTION

In Africa, healthcare services are primarily concentrated in urban areas while the greatest part of people resides in the rural areas, where health care services are often basic or inexistent. Consequently, a very high number of inhabitants of rural Africa does not have access to emergency health care services (Sanders & Chopra, 2006). Advances in Web 2.0 technologies are changing the way healthcare services are provided and the term "e-health" is broadly used to describe this evolution. There is

not a consensus on the definition e-Health concept. Eysenbach (2001) provides the following definition: "e-health is an emerging field in the intersection of medical informatics, public health and business, referring to health services and information delivered or enhanced through the Internet and related technologies." Marconi (2002) defines e-health as "the application of Internet and other related technologies in the healthcare industry to improve the access, efficiency, effectiveness, and quality of clinical and business processes utilized by healthcare organizations, practitioners, patients, and consumers in an effort to improve the health status of patients." A similar definition is given by Wyatt and Liu (2002) "e-health is the use of Internet technology by the public, health workers, and others to access health and lifestyle information, services and support; it encompasses telemedicine, telecare, etc." In Akeh et al. (2007), e-health is defined as "the ability to use Internet technology to provide health services and deliver care to individuals from geographically dispersed locations."

According to International Telecommunication Union (2008), the term e-health is extremely generic and can be referred to:

• Products, such as for example instruments for the monitoring blood pressure of patients in ambulatory;
• Systems such as for instance computer-assisted surgery systems, and services like: operating surgical and intensive care units, computer-assisted prescription services, contraindications and dosage levels and information services for patients and consumers.

Improving access to e-health services in developing countries and mainly in the African continent, has been receiving particular attention since the first World Telecommunication Development Conference (WTDC) in 1994. In 2005, the World Health Assembly recognized e-health as the way to achieve cost-effective and secure use of Web 2.0 technologies for health and urged its member states to consider drawing up long-term strategic plans for developing e-health services infrastructure. In 2008, the International Telecommunication Union (ITU) published a document (International Telecommunication Union, 2008) that represented guidelines for decision-makers in the health, telecommunications, and information technology sectors to develop e-health facilities and services in their countries. According to this document, e-health systems offer important benefits mainly in three different areas:

• **Productivity:** Cost reduction and avoidance, increased productivity, reduced duplication of tests/procedures and impacts on success of reform or change initiative.

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