

Chapter 13

Emerging ICT Challenges on Provision of Online HIV/AIDS Advisory Services

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ABSTRACT

In order to address the research challenges related to spreading, prevention, and treatment of HIV/AIDS it is necessary to look at it from different angles. Considering a single aspect on established initiatives, such as technological or political concerns that have been adopted in research, leaves a “none complete and integrated picture” on challenges related to the provision of services for combating HIV/AIDS. This chapter addresses this aspect by considering a multi-perspective approach and proposes a set of challenges for each perspective. It also considers the technological perspective of provision of HIV/AIDS advisory services and presents challenges towards designing the proposed system.

1. INTRODUCTION

The initiatives to combat the spread of HIV/AIDS across African society have been following different approaches ranging from workshops and seminars to posters across streets. The main challenge has been on the dissemination of relevant information related to HIV/AIDS to the appropriate in demand users. In response to this challenge,

for example in Tanzania, different methods and approaches (mostly face to face or physical contact) are now applied to support initiatives focused on providing knowledge related to the prevention and avoidance of the spread of HIV/AIDS in the society (Msanjila, 2011). However, the current advances in Information and Communication Technologies (ICT) have not been properly benefited in this area of activity and particularly in developing economy

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countries. Because of primitive methods for the provision of bundle of services in terms of packaged knowledge and information that have been used, young generations who are always faced with time scarcity, such as due to study pressure, are facing difficulty in getting or even missing the relevant information related to HIV/AIDS (Msanjila, 2011). It is a fact and considering the way it is practiced, in Tanzania for example, by joining universities, the students change their life style from being closely monitored by parents and secondary school regulations to fully free social life. Their desire to quickly learn ICT technologies for the purpose of making themselves up-to-date with time as well as matching the modern university life could be an advantage on the adoption of the proposed solution related to the provision of HIV/AIDS advisory services through online system (Msanjila, 2011).

It has been proved both in research and practice that Information and Communication Technologies (ICT) play an essential role in supporting daily life in today's digital society (Rabelo, et al., 2006). These technological solutions are used everywhere now and had been reported as playing an important role in the delivery of better and more efficient healthcare and health-supportive services. The efficiency indicators can include speed for the delivery of services, full availability of services, consumed resources, cost for the acquired services, etc. Thus, ICT solutions can enhance communication between several actors such as society, doctors, pharmacists, and hospitals towards achieving the intended effective provision and acquisition of better health services (Msanjila, 2011). Electronic health (eHealth) is one dimension for which ICT solutions have proved to effectively work. With this technology the medical professionals can access medical records more easily, get immediate access to test results from the laboratory, and deliver prescriptions directly to pharmacists. Thus patients can get services such as advices related to their health while at

home. Thus in same dimension, ICT solutions are also seen and becoming amenable solutions for enhancing the communication and advisory service provision in the society.

This chapter provides detailed challenges related to prevention of spreading HIV/AIDS as well as challenges related to treatment of AIDS. The presented challenges are classified into four perspective of social, economical, political and technological. The chapter then goes deep into the technological perspective of combating HIV/AIDS. Finally the chapter presents the requirement analysis and architectural design of the proposed system namely CIHAAS (Collaborative ICT enabled provision of HIV/AIDS Advisory Services) system.

1.1. History and Origins of HIV or AIDS

The origin of AIDS and HIV has puzzled scientists ever since the illness first came to light in the early 1980s. For almost thirty years, it has been the subject of fierce debate and the cause of countless arguments, with everything from a promiscuous flight attendant to a suspect vaccine programme being blamed. The true source of HIV/AIDS and where did it originate remain unanswered question.

The first recognized cases of AIDS occurred in the USA in the early 1980s (Avert, 2011). A number of gay men in United States suddenly began to develop rare opportunistic infections and cancers that seemed stubbornly resistant to any treatment (Avert, 2011). Until that time there was no an official name for this disease, but with time it quickly became obvious that all the men were suffering from a common set of symptoms or syndrome. The discovery of HIV, the Human Immunodeficiency Virus, was made soon after. At first, scientists were somehow resistant to acknowledge the connection, but there is now clear evidence to prove that HIV causes AIDS.

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