

## Chapter 13

# A Review into E-Health Services and Therapies: Potential for Virtual Therapeutic Communities – Supporting People with Severe Personality Disorder

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### ABSTRACT

*E-health has expanded hugely over the last fifteen years and continues to evolve, providing greater benefits for patients, health care professionals, and providers alike. The technologies that support these systems have become increasingly more sophisticated and have progressed significantly from standard databases, used for patient records, to highly advanced Virtual Reality (VR) systems for the treatment of complex mental health illnesses. The scope of this chapter is to initially explore e-health, particularly in relation to technologies supporting the treatment and management of wellbeing in mental health. It then provides a case study of how technology in e-health can lend itself to an application that could support and maintain the wellbeing of people with a severe mental illness. The case study uses Borderline Personality Disorder as an example, but could be applicable in many other areas, including depression, anxiety, addiction, and PTSD. This type of application demonstrates how e-health can empower the individuals using it but also potentially reduce the impact upon health care providers and services.*

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## INTRODUCTION

ICT systems have pervaded our lives over the last couple of decades and the health care system is no exception. A relatively new buzz word, E-health is essentially an umbrella term that directly correlates to health and computing. Eysenbach (2001) explains it in the following manner:

*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. In a broader sense, the term characterizes not only a technical development, but also a state-of-mind, a way of thinking, an attitude, and a commitment for networked, global thinking, to improve health care locally, regionally, and worldwide by using information and communication technology. (p. 20)*

The term arose in the late 1990s when other e-words, such as e-business and e-commerce etc. were also created for the purpose of portraying an increasing growth of the merging of computing into society. The convergence of health and technology has led to the development of systems and services, including: electronic health records; Health Information Systems; telemedicine; communicative wearable and portable systems, diagnostic ICT systems, well being management, and monitoring.

Health Information Systems have a huge impact upon patients, health care professionals and health providers. There is the potential for patients to be more empowered as they are provided with better quality information on their conditions. They are then able to take a more pro-active approach to taking responsibility for their own well being and management of their illnesses. Health care staff is able to communicate in a far superior way than previously, with the sharing and access of information, and advanced methods in monitoring patients.

Health care providers can run a more efficient and effective service by using technology to organize resources to facilitate greater productivity.

E-health also offers considerable benefits to rural areas, particularly in developed countries. For example, telemedicine can be used to increase the accessibility of healthcare facilities to rural areas. There are however examples in less developed countries too. The issue of reaching out to rural communities, with the aim to provide specialized health care, has in recent years seen the development of a telemedicine system in Sri Lanka. The system is known as *Vidusuwa* (Sudhagar *et al.*, 2009). A study was conducted as a case study for the implementation of e-clinics in Sri Lanka, and has since evolved into a new e-business model for enhanced healthcare delivery in the developing nations. This model provided an electronic platform through which specialized consultation could be facilitated and subsequent prognosis and treatment provided. This is also an e-Solution that makes appropriate use of Electronic Medical Records (EMR) and Telemedicine technologies which enables the patient to consult a Specialist through e-Consultation. The main benefit of this solution is then enabling specialized healthcare to rural areas. There are many more examples worldwide, indicating the importance of technology in the provision of a more effective and accessible health service.

## E-HEALTH TECHNOLOGIES AND THEIR IMPACT UPON WELLBEING

E-health lends itself well to a whole host of applications that support the wellbeing and management of mental illness, designed both from a patient and healthcare provider perspective. ICT based support is suggested as being an effective and economically viable intervention, particularly for anxiety and mood disorders (Newman *et al.*, 2011). The extent of support for people with psychiatric

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