An International Journal
JSCDSS
http://www.jscdss.com
Vol.1 No.1 December 2014: 17-23
Article history:
Accepted 19 November 2014
Published online 19 November 2014

Journal of Soft Computing and Decision Support Systems

Identification of Quality Parameters for an E-Health Platform in the Federal State of Thuringia in Germany

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Abstract

Many developed countries experience an acute shortage of medical specialists beyond urbanized areas. Specialists and services that are available are usually concentrated in cities apart from the growing number elderly people, who represent the main part of the population in rural areas. These people underlie a growing risk of dementia and live in marginalized isolation apart from specialist support. With the recent development in information and communication technologies, new options for telemedicine and for general knowledge sharing at a distance are becoming increasingly accessible to medical specialists as well as geographically and demographically disadvantaged populations. This paper provides a selected insight into the current state of the art of an E-Health based platform on federal state levels in order to assist medical doctors, nursing services or family members, to communicate with each other. We conclude that such an interconnected platform is highly suitable for the federal state Thuringia in Germany, which is bearing a positive influence on the future of regional health care.

Keywords: Dementia, Demographic changes, E-health, Regional healthcare, Technical process, Telemedicine platform, Thuringia

1. Introduction

The elaboration on a telemedicine platform on federal state level is an important part of actual research that helps in providing better healthcare within a regional context. As for the federal state of Thuringia, this development is in its initial project phase and consisting of several individual subprojects for the best-possible establishment of a generic and scalable telemedicine platform (Fincke et al., 2013). This platform shall support especially people underlying demographic changes, symptoms of social isolation and cerebral disorders including dementia in Thuringia (Eib et al., 2014). The urbanization has increased over last decades with the effects of widespread population related losses in rural areas (Gans and Schlömer, 2014). Areas like the Thuringian Forest, Thuringian Slate Mountains, as well as southern, eastern and northern parts of the state suffer economically from the effects of rural-urban migration with subsequent impacts caused due to this situation. This project targets on the improvement of quality of medication by surveying on the implementation of a telemedicine platform in Thuringia and identifying advantages and disadvantages of the usage of such a platform. This study also aims at proofing that telemedicine or E-health services provide more advantages in terms of technical processing as well as patient service. Results show convincing findings about the selection of healthcare provider organisations for regional hospitals in Thuringia. This project compares current technical processes in telemedicine.

2. Problem Background

Thuringia consists of an area enclosing 16172.50 km², being inhabited by approximately 2,000,000 people, living mostly in smaller cities. Around 24% of the population live in a cluster with more than 600 inhabitants per square kilometre, which represents 4% of the total area of Thuringia. This small number encloses the biggest towns of Thuringia, namely: Gotha, Erfurt, Weimar, Jena and Gera. However, the northern and south-eastern parts of the state are classified as rural areas due to a population density of less than 25 inhabitants per km².