

Chapter 63

A Multidisciplinary Remote Healthcare Delivery System to Increase Health Care Access, Pathology Screening, and Treatment in Developing Countries: The Case of Benin

Thierry Oscar Edoh

Technical University of Munich, Germany

Bernd Brügge

Technical University of Munich, Germany

Pravin Amrut Pawar

National Institute of Technology Goa, India

Gunnar Teege

Bundeswehr University Munich, Germany

ABSTRACT

In this paper, the authors describe a case study of the poor access to healthcare in developing world, case of Benin, a West African developing country. The authors identify problems and the existing obstacles for applying standard Telemedicine and eHealth solutions. The authors particularly describe an adapted multidisciplinary remote care delivery system approach for improving and increasing the use of existing health services as well as the access to healthcare by overcoming some cultural, social, financial, and at least linguistic barriers. The multidisciplinary remote care delivery system integrates traditional practitioners, because most people are more confident with the traditional medicine. The authors further present a practical test which has shown that their approach has the potential to improve the quality and effectiveness of health care in rural and other concerned regions and also increase the accessibility to health care system.

DOI: 10.4018/978-1-5225-6915-2.ch063

1. INTRODUCTION

1.1. Background

In the recent years, the burden of diseases is rapidly increasing in the developing countries. Most people living in these regions of the world are facing poor access to health care delivery. The care units in rural regions lack expert medical specialists or most health professionals working there are undertrained. Further, the existing medical infrastructures (facilities) are in a poor state. Care units are particularly scarce in rural areas and/or urban slums. Many urban areas also are facing those issues. Beyond the poor healthcare facilities and lack of care experts at certain care units, which are also underlying the poor access to healthcare, the socio-economic and cultural factors are decisive in how regularly a patient can visit a doctor (attend a health center in person). The few patients, who visit a healthcare facility, are often hospitalized instead of being ambulatory or remotely treated, because of their remote residence, and thus occupy unnecessarily hospital beds and cause unnecessary costs.

1.2. Objectives

The goals of this study are to investigate how ICT systems could help to improve the health care provision services, increase the use of offered health services, and increase as well as improve access to healthcare within the public health systems in African developing countries.

The existing healthcare systems are facing challenges such as improving the health care provision and increasing access to healthcare. Launching Telehealthcare into the public healthcare system could be a solution to meet the challenges (Edoh 2010). Expert medical specialists could remotely assist undertrained caregivers working in urban and/or rural health care centers in providing preventive, curative, promotional or rehabilitative health care. Therefore, this work aims to launch a multidisciplinary remote care delivery system into those public health systems in order to increase access to healthcare provision service in regions severely facing poor access to care provision.

1.3. Methods

In order to increase access to the healthcare in developing countries, it is required to investigate the main reasons why people do not have access to healthcare, and then provide solution approaches to tear the obstacles down. Therefore, the authors conducted quantitative and qualitative evaluation research to assess the state-of-the-art and also conducted survey with populations and health professionals as well as public health care bodies (authorities). The authors had particularly investigated and evaluated the impacts of the traditions, culture, and financial situations on the poor access to healthcare services, particularly on less use of offered health services, since it's reportedly indicated that „ (...) *Although in the meantime 83% of the population has access to the national health care delivery, only 36% of the population uses this.*” (Klein 2005). It is important for us to understand why only 36% of the population uses this possibility.

32 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:
www.igi-global.com/chapter/a-multidisciplinary-remote-healthcare-delivery-system-to-increase-health-care-access-pathology-screening-and-treatment-in-developing-countries/209186

Related Content

Fostering Ownership and Sustainability of School-Based Nutrition Education Intervention: Challenges and Lesson Learned Through PAR Study in Nepal

Yadu Ram Upreti, Krishna Prasad Duwadi, Devi Thapa Magar, Bikash Chandra Aryal, Bhimsen Devkota, Sheri Bastien and Birgitte Bjønness (2023). *Implementing Transformative Education With Participatory Action Research* (pp. 30-51).

www.irma-international.org/chapter/fostering-ownership-and-sustainability-of-school-based-nutrition-education-intervention/329910

Sufficiency Economy as an Alter-Globalist Concept for Modern Reforms: The Case of Thailand

Denis Ushakov and Pratheep Wajeetongratana (2018). *Economic Reforms for Global Competitiveness* (pp. 79-98).

www.irma-international.org/chapter/sufficiency-economy-as-an-alter-globalist-concept-for-modern-reforms/189599

Assessing Tax Policies for Urban Rehabilitation: The Role of Tax Incentives on Sustainability

André Carvalho, Ana Dinis and Liliana Pereira (2025). *Assessing Policy Landscapes in Taxation Dynamics* (pp. 33-70).

www.irma-international.org/chapter/assessing-tax-policies-for-urban-rehabilitation/360883

Driving Nurse-Led Research in the Acute Care Setting: A Recipe for Success

Todd Lane, Joubin Bavarian, Anne Aquila, Cheryl Green, Andy Quito, Kenneth Forte, Mary Christofferson and Lauren Thayer (2025). *Policies, Initiatives, and Innovations for Global Health* (pp. 119-138).

www.irma-international.org/chapter/driving-nurse-led-research-in-the-acute-care-setting/361923

Significance of Tax Reforms as a Solution of Economic Problems

Saurabh Chandra and Bhumika Muchan (2025). *Assessing Policy Landscapes in Taxation Dynamics* (pp. 273-302).

www.irma-international.org/chapter/significance-of-tax-reforms-as-a-solution-of-economic-problems/360890