

# Chapter 14

## Challenges Facing Healthcare Delivery Systems in Low-, Middle-, and High-Income Countries

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### **ABSTRACT**

*In the USA, there exist inequities in health delivery depending on whether you have healthcare insurance or not. People living in rural areas also are facing limited access to healthcare. The other high-income countries present, however, another picture. Healthcare insurance is mandatory and thus enables access to healthcare services. Nevertheless, these countries also face challenges such as the poor access to the healthcare services delivery in rural areas because of lack of general physicians. The cost burden is an important point that impacts the access to healthcare and care delivery to a certain group of individuals such as elderly people. The healthcare systems also are facing off-label-use challenges (see Chapter 5) that can also negatively impact the care delivery. In the low- and middle-income countries, the developing world, the poor access to healthcare services delivery is due to infrastructural, structural issues, and poor funding. Information exchanges and communication remain a challenge facing all public healthcare systems around the world, though at diverse level. This chapter aims at investigating the challenges facing the healthcare delivery systems around the world and proposing information and communication-technology-based solutions to tackle some challenges. The chapter further focuses on two case studies and generalizes the results and solution approaches to the other countries. For these purposes, the Republic of Benin, representing the developing world, and the Federal Republic of Germany, representing the developed world, are selected as study cases.*

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## INTRODUCTION

High-income countries own high organized and structured healthcare systems. Most of these countries use the health insurances to partially fund their healthcare systems. Though, there exist inequities in the healthcare delivery in the high-income countries, e.g. in the USA the access to adequate healthcare delivery depends on whether the individual has a health insurance or not. The rural regions have only a limited access to the healthcare (Brandeau, Sainfort, & Pierskalla, 2005)(Barkan, 2010). The western countries, except the USA, have national health insurance systems. The populations are mandatory insured and thus can easily access the healthcare delivery systems. Beyond this, the western public healthcare systems lack continuity and coordination of health care delivery, direct communication between the entities and doctors (A.C Greiner & Knebel, 2003). Although the challenges described in (A.C Greiner & Knebel, 2003) date back to 2003, the healthcare systems in the western countries are still facing these challenges [the result of the study we carried out in 2016/2017].

Despite, the joint funding systems of the governments and health insurances, the whole western public healthcare delivery system is facing challenges such as cost explosion, due essentially to the rapid aging of the western populations. The care delivery to elderly people is cost intensive since they are often affected by old related chronic disorders (Cognitive impairments). The medical treatment of disorders such as cognitive impairments, obesity, diabetes, heart diseases is cost intensive. A study in (Morgan et al., 2014) has shown the association between overweight (obesity) and the cost. An earlier study (Sturm, 2002) also demonstrated the correlation between the medical cost and the non-communicable diseases.

Beyond the financial challenges, the western countries public healthcare systems also face access to healthcare delivery like long waiting periods before visiting a doctor or long sitting in waiting room. For example, in Germany, most of the health insurances companies help their members to quickly get appointed by a medical doctor. The health insurance companies, therefore, provide their insured members with a portal for this purpose. An example of appointment portal can be seen here (<https://www.dak.de/dak/leistungen/arzttermine-online-1445166.html>). The appointment issues represent a big challenge facing the public healthcare systems in the western countries. In an earlier 2005, the study had found out that the waits time to see a doctor is high in Europe (50% in the UK, more than 70% in Germany). The amounts were similar for visiting a specialist. Today, 12 years later the situation is likely to be different. The population is growing, more migrants are entering these countries, and the elderly population is fast growing. It is then becoming very hard to quickly get an appointment for medical purpose, particularly, the waits for specialists is longer as earlier.

During the case study in Germany, we met old people who were refused by medical doctors because they do not have the necessary capacity to take care of the new patient. Old people are looking for medical doctor practice close to their residence place.

The case study in Germany reveals that the German rural regions are facing a severe medical workforce shortage. By 2020 about 50.000 general physicians (GP) would be retired. This fact will negatively impact the care delivery in the rural regions, then the young doctors do not like to practice in rural regions because of the low income and lack of carrier possibility. Unfortunately, most old people are living in rural areas, and thus facing poor access to the healthcare services. This situation is common to all western countries and is more severe in USA (A.C Greiner & Knebel, 2003).

In the developing countries, in the recent years, the burden of diseases is rapidly increasing. Most people living in developing countries are facing the poor access to healthcare services delivery. Unlike high-income countries, the poor access to care services is because of poor medical infrastructure. The

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