

Chapter XXXVI

Broadband for Health In Developing Countries

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ABSTRACT

This chapter highlights the major issues in the use of broadband technologies in health care in developing countries. The use of Internet technologies in the health sector has immense potential in developing countries, especially in the context of public health programs. Some of the main uses of information and communication technologies (ICT) in health include remote consultations and diagnosis, information dissemination and networking between health providers, user groups, and forums, Internet-based disease surveillance and identification of target groups for health interventions, facilitation of health research and support to health care delivery, and administration. The technology has immense potential, but is also constrained by lack of policy direction, problems with access to technology, and lack of suitable infrastructure in developing nations. However, given its crucial role in public health, comprehensive efforts are required from all concerned stakeholders if universal e-health is to become a reality.

INTRODUCTION

We live today in the age of information—the age of the global village when distance and physical barriers no longer pose hurdles to communication. The virtual world of the Internet has opened up avenues for unlimited information storage, transfer, and sharing, which is being utilized increasingly by each one of us to meet personal and professional needs. Information technology has also brought revolutionary changes in global trade, commerce, business, and professional service delivery. Increasing technological outreach and facilitation of information exchange has also laid bare before us the glaring disparity that exists in

the world today between nations in terms of economic and social development. Never before was the difference between the “developing” and the “developed” so visible. Grim pictures of poverty, famine, disease, and strife from all over the world reach our desktops in no time—and the truth is for us to see even as it unfolds. Globalization and a world culture seem but utopian ideals when we look at the deeply divided world—whether it is income, health, education, or infrastructure—the difference persists. Information and communication technologies (ICT) ranging from the humble radio to broadband Internet help bring clarity to the picture and are the most effective agents for reaching out and bridging the development divide.

Information technology is in fact now visibly impacting the nature of development programs across the world. One of the most fundamental benefits of technology such as the computers and Internet emerged in its ability to facilitate connectivity in remote and disparate regions, often impoverished and resource poor communities, where communication was a major hurdle to development efforts (Chandrasekhar & Ghosh, 2001). The achievements are indeed encouraging and ICT is beginning to emerge as an indispensable arm of global progress.

Within this broader perspective of global development and ICT's place in it, this chapter focuses on the health care sector in developing countries, more specifically public health programs and delivery of health care services to all. The chapter aims to highlight the various issues regarding the use of Internet, particularly broadband technologies in the public health sector, its potential, constraints, and possible future scenario in developing countries. The chapter is theoretical in nature, drawing upon current academic literature and news reports. Herein lies its limitation—lack of objective factual analysis to support the discussion. The suggested future course of direction in this context would be an objective analysis to validate the discussion presented here, possibly through a data-based intercountry comparison.

The chapter has been divided into six subsections including the introduction—the second section outlines the context of health and development in developing countries, the third section discusses the role of broadband in health care, the fourth section lists out the various avenues for the use of Internet in health care in developing countries, the fifth section is a discussion on the constraints to large-scale adoption of Internet technology in poorer nations, and the sixth is the concluding section with a discussion on the future scenario of Internet for health care in developing countries.

HEALTH IN DEVELOPMENT

Health is universally recognized as a primary social goal and a prerogative of the welfare state.

However, health remains a constantly neglected sector in developing nations where scarce resources compete with often more urgent alternate needs such as defense and industrialization. In the era of globalization, however, health is being viewed not as a compulsory social expenditure on part of welfare states but a constructive investment in human capital with implications on the future long-term economic productivity and health of nations (World Bank, 1993). In other words, it is no longer a purely consumption expenditure but a productive investment. Healthier populations are economically more productive, hence it makes economic sense to invest in health. This change in the global outlook on health has resulted in increased emphasis on health planning and expenditure on health programs by governments and aid agencies alike. WHO's call for "Health for All" (WHO, 1978) has been the driving slogan behind all global development initiatives in the health sector. Health encompasses not just "absence of illness" but a feeling of wellbeing in the broader sense, which is why WHO defines health as a state of "complete physical, mental, and social wellbeing." Health in the developmental context relates to basic human survival and the need for a physically healthy life for all, free from disease and infirmity.

The distance that developing nations need to cover in terms of health status can be gauged by some key figures. Life expectancy at birth is one of the most comprehensive indicators of health status of populations. According to UNDP (2006), high income nations have an average life expectancy of 79 years while low income nations have an average life expectancy of 59 years, which is a gap of 20 years. Under-five mortality statistics is a good indicator of child health and also points to the poor health status of children in low income countries—the under-five mortality rate for high income nations being just 7 per thousand while for low income countries it is as high as 120 per thousand. HIV prevalence is 1.8% in low income countries as compared to 0.4% in high income countries (UNDP, 2006). On the institutional side, public expenditures on health as a proportion of total GNP are much higher in countries with high human development, ranging between 6-9%, while

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