

# Chapter V

## Mobile Technology in a Developing Context: Impacts and Directions for Nursing

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### ABSTRACT

*This chapter presents the imperatives of mobile technologies in healthcare as these impact (or potentially) impact on development. It presents the contextual overview in development of the diffusion, penetration, and uptake of health-related mobile technologies. A consideration of the roles and responsibilities of the diaspora in the embracing of information and communication technologies is emphasized. The emphasis is on the impact of technologies, generally, and mobile technologies, specifically, in the global health context. The authors provide key exemplars of mobile technologies in development to increase understanding and demonstrate promising practices in this emergent field.*

## **CHAPTER OVERVIEW**

The goal of the chapter is to highlight the need for increased emphasis on nursing informatics as integral to quality of care and quality of work life in developing countries. The chapter will focus on the social and socio-technical considerations as these relate to the appropriation and utilization of information and communication technologies ICTs by nurses in select developing contexts. The topics will be framed within the relevant content on the current state in developing nations on technologies, generally, and mobile technologies (i.e., cellular phones, personal digital assistants), specifically. The issues, challenges, and opportunities related to technical capacities, human resources, and systemic limitations within the developing context will be presented. Further, the chapter will present critical issues on the social, cultural, and gender considerations as these pertain to nursing informatics in furthering the development agenda. Special attention will be given to the role of nursing informatics in achieving, monitoring, and evaluating the Millennium Goal agenda (World Health Organization [WHO], 2003). The chapter will include examples and promising practices of nursing informatics from developing countries' perspectives, including a case study of the "Linkage for Education and Research for Nurses (LeaRN): A Caribbean Exemplar". The final elements of the chapter will include a vision for future direction, research, and globalization of nursing informatics.

In accordance with the definition of the Nursing Informatics Special Interest Group:

*Nursing informatics is the integration of nursing, its information, and information management with information processing and communication technology, to support the health of people world wide. International Medical Informatics Association-Nursing Informatics<sup>2</sup> definition, adopted August 1998, Seoul, Korea*

This definition reminds us that there is an imperative for nurses to consider information and communication technologies (ICTs) and informatics as critical aspects of the global health care environment. Hence, this chapter is committed to a consideration of nursing informatics in an international context, generally, and a developing context, specifically. As health related ICTs and informatics are being increasingly integrated and supported in the Western world, there is an imperative to understand the implications and potentials within the developing context.

## **TECHNOLOGIES IN THE GLOBAL CONTEXT**

Technology is said to be at the heart of progress. It is important to understand the role which technologies play within development and within health care. However, this understanding is only possible, if we understand the role and function of technologies globally.

According to Alan Gelb, Chief Economist of the World Bank, technology is a critical determinant of sustainable growth and poverty reduction, as much of the socio-economic progress of recent years has been due to technology (World Bank, 2008). Despite this rapid technological progress in the developing context, there still remains a significant technology gap (a.k.a. digital divide). So where are the inequities? And what has contributed to perpetuation of these inequities?

### **Penetration of Technical Achievement Correlates with Income Level...to a Point**

In general, the level of technological achievement observed in a country is positively correlated with income levels (see Table 1). However, considerable variation is apparent within income groups, geography, and the nature of the technology. According to the World Bank (2008), "the

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