

# Chapter 9

## Strengthening Implementation of Guidelines at Primary Health Care

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### ABSTRACT

*Implementation of guidelines in the health system is a complex and considerable undertaking. After the health administration has developed guidelines, a dissemination strategy needs to be put in place. Dissemination involves distribution of printed guidelines booklets, training of health care providers, provision of the equipment needed for implementing the guidelines, improvements to facilities, and supervision and monitoring by managers. This chapter reports on the Basic Antenatal Care Information System (Bacis) study in South Africa which pertains to an e-health decision support systems that is intended as an aid for nurses and managers at primary health care. The Bacis program study is important because there are few published studies from developing countries on implementation of e-health decision support systems at primary health care and their effectiveness in improving care.*

### INTRODUCTION

In their classic reference, Field and Lohr (1990) define clinical practice guidelines as “...systematically developed statements to assist practitioners and consumers about appropriate health care actions for specific circumstances...” Clinical practice guidelines are meant to aid practitioners in delivering a high quality of care. In developing countries, primary health care is done by nurses and not doctors. This is due to the structure of the health system in developing countries, where doctors, being a scarce resource, are found higher up in the health system (Massyn, et al., 2004). However many cases presenting at primary health care in developing countries are often very challenging. Health administrators in developing countries now look to guidelines to assist these frontline care providers in carrying out their duties.

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Implementation of guidelines in the health system is a major undertaking, which takes place over a number of years (Grimshaw, Thomas, et al., 2004). The first phase is guideline development. In this phase the best available evidence is reviewed in order that the guidelines are supported by this evidence. An important constraint in guideline development in developing countries is that the guidelines recommendations must suit local conditions and must make use of available resources. This is a challenge because the health system of a developing country has a high burden of disease and little resources. Therefore guidelines recommendations must rely on cost effective health care interventions. After guideline development a dissemination plan must be devised. The dissemination plan involves distribution of the printed guideline booklets, training of nurses, provision of the equipment that is needed for guidelines implementation, alteration in clinic processes, and supervision and monitoring of the implementation.

Dissemination often runs into problems. Horner, Rautenbach et al (2014) in South Africa found that the implementation and dissemination of the national guidelines on maternity care ran into the following problems, among others:

- Firstly the training program on the guidelines was not carried out effectively. For example the health administration was using the train the trainer approach, whereby clinic representatives were trained on the guidelines. After their training, the clinic representatives were expected to train their colleagues when they returned to the clinics. However this was not happening. As a result not all nurses were trained on the guidelines.
- Secondly there were problems with availability of the printed guidelines booklets. Therefore nurses had no reference at hand, and relied on colleagues who had gone for training.
- Finally tools to support monitoring and evaluation of guideline implementation were inadequate. Therefore managers do not have detailed data to assist them in their planning.

In the light of these challenges in guidelines implementation and dissemination this chapter explores the role that can be played by e-health decision support systems to strengthen implementation of guidelines at primary health care. The focus of the chapter is the case study on the Basic Antenatal Care Information Systems (Bacis), which is a case study on an e-health decision support system which was developed and piloted in South Africa (Horner, et al., 2013).

## **RATIONALE FOR E-HEALTH DECISION SUPPORT SYSTEMS**

Computerised decision support systems were chosen in the Bacis program study because it has been shown by studies from developed countries that decision support systems can improve adherence of nurse and doctors with clinical practice guidelines (Grimshaw, et al., 2004; Balas, et al., 2000; Lobach & Hammond, 1997; Dowding, 2013; Zielstorff, 1998; Boxwala, et al., 2004). However developing and lower to middle income countries have only recently started using health information technology systems (Blaya, Hamish & Holt, 2010). For example South Africa has only recently developed an e-health strategy (Department of Health, 2012). Therefore the evidence base on implementation of e-health in developing countries is still accumulating.

Further the health system in South Africa is that of a developing country, with a high burden of disease and inadequate resources. Where information systems have been implemented in developing countries there are often challenges of data quality and lack of information management skills. This presents a

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