



Chapter 10

**The User Interface for a
Computerized Patient Record
System for Primary Health Care
in a Third World Environment**

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The manual paper-based system for keeping track of patient history was replaced with a computerized system in a Primary Health Care clinic in a traditionally Black urban area. Several factors influenced the design of the user-interface. Aspects such as screen layout, data fields to be captured, mouse dependency, computer literacy of the users and adapting the system to the normal daily routine of users were considered. The study showed that special attention should be devoted to the design of the user interface for systems used primarily by third world users who do not want the computer to interfere or hinder them in their daily jobs.

Quite a few studies on the impact of computerization of nursing practice have been done in the past. Amongst these Marasovic et al. (1997) stated that "a clinical information system (CIS) is a point-of-care, patient-focused computer system that replaces all or some of the paper medical records" (p. 91). Adderley et al. (1997) constitutes that "computerization has allowed more time for personalized patient care and patient/staff interaction" (p. 45). They also

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concluded that "it (computerization) has made information readily available for acquisition and analysis of data" (p. 45).

Given the unique circumstances of Primary Health Care (PHC) in the Republic of South Africa (RSA), however, the user interface for such a software system should be carefully designed. Special aspects that should be taken into account involves the level of computer literacy, cultural background and attitude towards computers of the potential users as well as the data set, the number of patients per nurse, et cetera.

The purpose of this article is, therefore, to highlight the lessons learnt with regard to the user interface when a study was done to determine the overall viability of computerizing a primary health care clinic in a third world environment.

METHODOLOGY

The study was done in a PHC clinic that is situated in the urban area of Mangaung, a third world residential area in the Free State province of the RSA. The clinic serves approximately 400 000 people from 12 squatter camps and 11 suburbs with permanent housing structures. The clinic is staffed by 18 people on a permanent basis of which 8 are professional nurses, 6 registered nurses and 4 administrative personnel.

Blignaut and McDonald (1997 (2)) showed that acquiring a ready-made product from a software vendor is not always feasible. After some discussion with the staff before this study commenced, it was evident that also in this case none of the currently available commercial systems could be used. Some of the reasons are listed below:

- The staff are totally computer-illiterate. It would not be feasible to train them to use a comprehensive system within a limited time.
- None of the commercial systems fulfill in their very specific needs. The professional nurses were quite adamant about not being limited by a system, especially one that did not closely resemble their current manual system.
- None of the commercial systems make provision for the specific distributed layout of the clinic chosen.
- It was important that the research be done with the minimum disturbance to the daily routine of the staff. Expecting them to adapt their routine to a given system would not be acceptable.
- In order to draw a comparison between the manual system and a computerized one, it is evident that the computerized system should, to a large extent, resemble the current manual system.

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