

## Chapter 24

# Nursing Information Systems: From Documentation as Evidence to Documentation as a Support to the Clinical Decision Making

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### ABSTRACT

*We have witnessed a change in the Health Information Systems (HIS) in what concerns structure, contents, and support for optimization of the resources, the best efficiency in cost control, and a better management of the quality of services rendered to the citizens. From the standpoint of reformulating the HIS, we can see an evolution in the production of information centered almost exclusively in the need of a documental proof on the care rendered by nurses to the citizens to produce information that can constitute a central resource for their clinical decision making. The authors describe the evolution of the Nursing Information Systems (NIS), reflect upon the impact of reformulation and implementation of the NIS in Portugal in the development of the nursing practice, and reflect upon the impact of the NIS reformulation in the quality of care as well as in education and training in the nursing area.*

### 1. INTRODUCTION

In the global world we live in nowadays, there is an increasing significance given to the production of information, as well as to its access in due time. Although it is not an exception in matters

of health decisions, either in the field of managed care or in research, in the last decades we have witnessed in Portugal, a considerable change in the Health Information Systems (HIS) in what concerns structure, contents and support aiming an optimization of the resources, the best efficiency in cost control and a better management of the quality of services rendered to the citizens.

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Thus, the persistent difficulties in the production and management of information in health have been propelling the political entities, investigators and health professionals to commit themselves to developing HIS in order to contribute to an improvement in the quality of care.

Traditionally, and over time, the activity related to documenting the process of nursing care has poorly motivated nurses, to whom the main focus of their professional activity is heading for human relationship, though there was a systematic conscience of the legal necessity of documenting the nursing care. Namely, from the standpoint of reformulating the Health Information Systems (HIS), we can see an evolution in the production of information centered almost exclusively in the need of a documental proof on the care rendered by the nurses to the citizens to produce information that can constitute a central resource for these professionals when making their clinical decision.

The evolutionary path of the nursing profession has been changing its professional activity from an initial and almost exclusively executive paradigm (technical) to a progressively more conceptual paradigm (according to this discipline theory). This has broadened the range of aspects to be documented. Therefore, the making of the clinical decision reflects a very important aspect of the HIS.

The first international discussions and researches on the application in healthcare of Information and Communication Technologies (ICT) are still relatively recent. The first references of this phenomena appeared during the 80s in the 20<sup>th</sup> century, in particular in the area of IS/ICT. Already then was there an attempt to clarify its contribution to the management of care and help in the process of making the clinical decision (Sousa, 2006).

In Portugal, and particularly in the nursing domain (profession and discipline of knowledge), we can see an important reformulation and implementation of Information Systems in the last decades. In 1995, Silva presents the first

Portuguese study on HIS whose results have been used in nursing clinical practice in several hospital internment units and, recently, in family health units. Some examples on the results of this labor are the development of the Project model to implement NIS (clinical module of hospital nursing) "Enfin – Nursing Information System" aiming its integration in the data base of the Hospital Information System (SONHO) – Differentiated Healthcare – developed by the Informatics and Finance Management Institute (IFMI) and also the project of NIS in the scope of community nursing assistance (Health Care)<sup>1</sup>.

The clinical module of nursing, a software named Support System to the Nursing Practice (SSNP), has been implemented along this decade in the diverse health institutions of the country constituting an enormous challenge and opportunity for the improvement of nursing care rendered to the citizens and, therefore, for the visibility of the profession.

Later, Sousa (2006) and still in the scope of the NIS/ICT, integrated in the path of the Nursing investigation, develops an explanatory module of information sharing in nursing amid healthcare contexts, namely in what concerns differentiated care and primary care.

Recently, Pereira (2009), also in the extent of the nursing study and in the context of the NIS, develops for Portugal a Module on Minimum Summary of Nursing Data (MSND) presenting a set of quality indicators on nurses' professional practice.

Within this process, there was always a concern so as not to center the nursing informatics in computer technologies but mainly in the specific nature of the nursing care as well as in how the available information of this clinical activity is acquired, treated and used.

From the foregoing and following these guidelines, in this work we aim to: 1) Describe the evolution of the NIS in the last decades; 2) Reflect upon the impact of reformulation and implementation of the NIS in Portugal in the development

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