

# Chapter 24

## Information System for Management of Organisation and Its Activity

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### ABSTRACT

*Health care organization management needs modeling techniques that allows to explain and manage it as the real world it self. This similarity between real world and model represents the key of success. A model characteristic represents the guide lines to manage it, and if this model is represented with a data model and an Information system it makes possible to be implemented in a computer based system. This chapter offers a hierarchical representation model and with different model views of the health care organizations, allowing being applied the business integration architecture, it is a way to transfer the organization approaches from the Industrial world to the Health Care world. To reach it is necessary to represent all the activities performed by a health care organization with the process map, linking the map with the structures of the organization that connects the different map points (resource-operation), developing the organization model. It is necessary that the decision making rules are implemented in the organization model to include in it the “intelligence”. The decision making rules to reach the organization rules are the Planning and Operation control system, and though it can be integrated the goals, activity and resources.*

### INTRODUCTION

The difficulty of implementing an integrated, global Information System –which is able to support the healthcare process-, lies in the different ways and forms in which the various healthcare agents

included in specific welfare levels (problems, episodes, medical diagnosis, etc.) provide medical assistance.

The way to deal with this problem requires the introduction of a health assistance model, focused on the first-care level, according to its inherent characteristics. That is the reason why processes which are developed at first-care level health

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structures (also identified as Health Centres or GP's), must be homogeneous and able to favour assistance planning.

To reach this objective is by applying re-engineering concepts to health processes, adapting them to the new needs and establishing a standard model for healthcare processes. Observance of the objectives and satisfactory information flow must be assured for the construction and operation of the Health Record- the first purpose and key instrument in the new information model.

This chapter discuss a hierarchical model for healthcare organisations. The model's different viewpoints allow the implementation of Business Integration Systems.

## **CURRENT TRENDS**

Nowadays health care is perturbed due to the agitated environment in which it finds itself. This disturbed atmosphere is produced not only by a series of exogenous factors such as technological changes, changes in the demand of services, and even political changes, but also by endogenous factors which are derived from paradigms in the management of health processes.

Nevertheless, when we consider the very reality of the health care system we find that its surroundings are disturbed by the clear, precise influence that the system has on them. One of the key factors in such a health care system is the I.T. System, at operational (management) and clinical (technical) level, to which this chapter will be devoted.

The current trend in the design of Health Information Systems (HIS) is towards inter-operability, which allows globalization: by improving accessibility and making the same health information available to all health operators, we achieve better performance of welfare workers, continuity of care and an enhancement in welfare quality. For all of this to be possible, updates and improvements of existent welfare information systems are needed, the targets being:

- Professionals making health-care decisions to have the best information available at their command.
- Managers to benefit from updated, accessible information for an effective, efficient decision-making.
- Planners to have enough information about health problems and needs to establish intervention strategies and programmes.
- Transmission of instructions and orders to co-ordinate actions taken.

This new trend is based on an understanding of health care as a whole. It **characterizes** a system whose main value is achieved by the **interdependence of its components** and the **order on which such interdependences underlie**.

This understanding of health leads to the conclusion that the patient's movement through the health system generates a great amount of information about his/her health care process. This information should be structured and systematized in such a manner that it can be accessed in a quick, easy way.

Health assistance is usually performed among different health care levels. To offer an efficient service, the creation of a flow or interchange of the required information is common amongst the different levels.

## **CLINICAL ORGANISATION**

Management of a Clinical Organisation requires modeling methods capable of explaining its functioning and its running in real life. This parallelism between model and reality is the key to success. Management possibilities of the model rely on its features. If this is represented by a data model of an information system, its automation is possible.

Business integration is a management strategy aiming to join action to objective, thus every action performed only occurs when responding to a previ-

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