

Chapter 9

Healthcare Professionals’ Decision Making in Emergency Units: An Operation Impact Analysis Considering Their Cognitive Heuristics

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ABSTRACT

Cognitive theories on decision making show that individuals often do not decide in a full and rational way; they instead use cognitive strategies that allow them to overcome the limitations imposed by their limited rationality and the difficulties derived from uncertainty. In this context, this chapter aims to analyze the impact on operations caused by decisions taken by healthcare professionals in an emergency department when influenced by heuristics. Therefore, a systematic review of the literature for extracting the heuristics of healthcare professionals and a non-systematic review for constructing the theoretical framework about operations management, health operations management, hospital organizations, and heuristics were performed. Thus, having also described the object of study, the analytical model could be built. Then, three approaches were proposed for the synthesis, and deployment proposals were exposed for each.

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INTRODUCTION

The operations management consists of planning, managing and controlling operational necessary activities to obtain products and services to the consumer market. This idea can be extended to health systems, transportation systems, municipal systems, all essential to the functioning of society (Spiegel, 2013). When applied to the health sector, the methods and approaches of operations management, originally developed in an industrial environment, have peculiar characteristics. By not following a commercial logic, there is a paradox between the level of service that must be offered and the costs associated with this offer, since it is conditioned to human needs (Osimo, 2012). For Hopp & Lovejoy (2013), there is an “operation science” in hospital management, just as there is a “medical science” that guides the patients treatment.

For instance, in emergency department (ED), the human resources has several agents involved in decision making, such as medical directors, trauma surgeons, residents, nurses, nursing technicians, pharmacists, secretaries / receptionists, assistants Social, on-call specialists, among others (Hopp & Lovejoy, 2013). Marewsky and Gigerenzer (2012) mention that doctor's decisions, for example, are made under uncertain conditions as without knowing precisely whether a diagnosis is correct or whether a treatment will actually cure a patient, and often under time constraints. Therefore, heuristics emerge as cognitive strategies that can provide good solutions to complex problems under time and cognitive ability constraints (Kattan, 2009) where decision making unconsciously use constraints to simplify the information as a “trigger” or “shortcut” to certain information that follows some pattern for the decision maker, thus exerting influence in the judgment of the information and in the decision making.

The perspective adopted in this chapter, when considering the human being as a key element in organizational decision making, is to investigate how decisions, when influenced by heuristics, can impact health operations. It is intended, therefore, to show impacts on the operations of the organization in light of the influence of heuristics in the decision-making of health professionals, thus taking into consideration the “person-dependent” model, a relevant characteristic in health organizations.

Regarding its nature, the research is applied, since it aims to generate knowledge to solve specific and practical problems. It addresses the problem in a qualitative way, because methods are used to discover the properties, phenomena, situations, people, meanings. A centrally exploratory methodology is adopted, which main objective is to make the problem explicit or to construct hypotheses, usually with a bibliographical survey, interviews with people with practical experience and case analysis. Respecting the technical procedures adopted, the survey of the elements that constitute the model are constructed based on a review of the literature. Regarding the analytical model, the health professionals' decisions will be taken throughout the patient care process and for each decision made, the following is analyzed: if the heuristic (h_n) influences the decision (d_n), which and how category (c_n) will be impacted and in what way. To do this, 10 decisions, 8 heuristics and 12 categories of operations are combined in order to allow for synthesis and unfolding resulting from the model.

BACKGROUND

The public health system is characterized in Brazil by the SUS (Unic Health System), which is based on the 1988 Constitution and the Organic Health Law (8,080 / 1990). According to article 197, *health*

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