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## SIMULATING HEALTHCARE QUALITY INNOVATION BASED ON A NOVEL MEDICAL TREATMENT FOR HEPATITIS-C IN EUROPE – A MICROSIMULATION MODEL

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Due to the far-reaching outcomes consequences of policy decisions in the healthcare sector, decision-support tools are gaining more and more importance. Thereby, different modeling approaches are getting a more and more important methodological approach, as they come with major benefits for the decision maker. However, the adequate use of methods is of great importance for adequate results and following decisions. In 2014, a novel medication for treating Hepatitis C virus infections caused severe difficulties for European decision makers in the public medical sector. Even though new drugs cure Hepatitis C in nearly all cases, related costs in the short run are extremely high. Thus, the estimation of overall costs for the national healthcare systems was of great importance for profound far-reaching decisions on policies regarding the medication and their reimbursement. As this budget estimation is extremely difficult due to the complexity of the virus spread and the existence of further discomforts that lead to additional costs, a new microsimulation model was developed that considers the problem from an individual's perspective and finally aggregates numbers on the macro level. While developing the model, general insights into the cost burden due to the new medication for the next three years were generated. Using our microsimulation model, decision makers are able to test for impact of one financial unit in several policies in order to maximize the overall benefit for the healthcare system. As initial results imply the need to change current reimbursement strategies in Europe, further research demand is discussed.

## MAPPING THE MEDICATION SYSTEM: FRAGILITIES AND RISK MANAGEMENT

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Safety systems that aim to prevent medication error are essential. The objective was to describe and map the medication system of a large hospital in Brasilia-DF Brazil, proposing risk management strategies for its main fragilities. This is a cross-sectional, exploratory and descriptive study. Data collection was performed with the support of two nurses trained by the researcher. Direct observations and semi-structured interviews were carried out among the professionals involved in the medication system, covering the following processes: prescription, dispensation, preparation and administration of medications. The data collection period was 15 days and occurred in May / June 2013. Eight nursing technicians participated in the study, who are responsible for the preparation and administration of the drugs in this study. This study was approved by the Ethics Committee of the Health Department of the Federal District. It was identified 34 activities, developed by different professionals, which shows its complexity and greater possibility of error. Fragilities such as disruptions, displacements, environmental problems, human resources, lack of patient identification, infrastructure, non-compliance with safety rules and protocols, technical failures during preparation and administration, and deficiencies in compliance with rules and protocols have been identified. It is concluded that the more computerized the process the less fragilities the same presents. In this sense, it is necessary to implement risk management strategies and the use of technologies for the detection and reduction of risks, in order to guarantee the quality of the processes executed.