


MEETING ABSTRACTS

Optimization of Patient Flow through EMT Facilities Applying Dynamic Behavioral Simulation Models

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Background/Introduction: The effectiveness of care provided by EMTs is directly linked to the ability to ensure a controlled, coordinated, and safe patient flow through the post, especially in case of MCIs or disease outbreak. Currently, there are neither frameworks nor tools to analyze such flow that is often visualized on paper using arrows or simply connected to the care pathway, thus missing the impact of people's interactions with the facility.

Objectives: This study aims at exploring the use of a behavioral-design-based approach in simulating patient flow through EMTs.¹

Method/Description: It provides a dynamic behavioral simulation model to assess the interactions between patients, staff members, and the related dynamic movements/interactions with the health care facility, each of them having specific features also in relation to the emergency condition faced.² Data used in this study consist of literature-based information concerning patient characteristics (eg, age), the variation of expected medical conditions and severity in relation to the time and typology of the emergency,³ layouts of existing facilities (eg, UKMed T1), and experimental activities (eg, exercise).

Results/Outcomes: The analysis of the results will allow to simulate different scenarios and improve the design of health care facilities layouts in order to prevent overcrowding situation,

avoid disease spreading, estimate the optimal number of staff for each task, and investigate interactions between patients and staff.

Conclusion: Optimizing patient flow encompasses quickly, efficiently, and effectively movement meeting the demand for care by moving patients through care pathways while improving coordination of care, patient safety, and health outcomes.



References (optional)

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Prehosp Disaster Med. 2022;37(Suppl. 2):s66.
doi:10.1017/S1049023X22001650