Primary management of clinical scenarios in the emergency department: the discrepancy between physicians’ theoretical approach and their everyday practice, and the possible influence of cognitive biases on this discrepancy

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Abstract

The process of clinical decision-making involved in Emergency Medicine relies, to a great extent, on intuition and heuristics, that make the process susceptible to the influence of cognitive biases, sometimes also referred to as ‘cognitive dispositions to respond’, or as ‘cognitive impairments’. The present study examines the possible existence of a discrepancy between clinical management of emergent scenarios ‘in-vivo’ – in the setting of the Emergency Department, and the theoretical approach to similar scenarios. In the light of the results, the study further discusses the possible influence of cognitive biases on physicians’ decision-making patterns.

In the first stage of the present study, we observed physicians in the Emergency Department managing clinical scenarios of patients with a chief complaint of either ‘chest pain’ or ‘dyspnea’. Following these observations, two questionnaires were administered to the same physicians to assess their theoretical approach to patient management in similar scenarios: a short questionnaire that included open-ended questions in which the physicians were asked to point out the first five actions they thought should be performed; a long questionnaire that
included a specific list of actions, from which the physicians were asked to prioritize the first ten actions they thought should be performed. A comparative analysis had been conducted to determine the ‘compatibility rate’ between the observed behavior and: (a) the data obtained through the questionnaires regarding the theoretical approach of the physicians; (b) the optimal algorithms for clinical management of ‘chest pain’ and ‘dyspnea’ that were formulated according to the medical literature.

The results of the present study demonstrate a discrepancy between the actual clinical management of emergent scenarios as performed in the Emergency Department and the theoretical approach to similar scenarios inferred from the answers to the questionnaires and described in the literature. The highest ‘compatibility rate’ was found in the comparison between the actual management to the literature – 68% and 75% for the first three and five actions, respectively. A lower ‘compatibility rate’ was found in the comparison to the short questionnaire – 56% and 65% for the first three and five actions, respectively. The lowest ‘compatibility rate’ was found in the comparison to the long questionnaire – 44% and 47% for the first three and five actions, respectively.

The ‘compatibility rate’ was also analyzed according to various characteristics, and a statistically significant discrepancy was established for certain categories. A significantly higher ‘compatibility rate’ was found for patients with a chief complaint of ‘chest pain’, as opposed to those with a chief complaint of ‘dyspnea’; patients who arrived with a companion, as opposed to patients arriving alone; patients with a more extroverted behavior as opposed to patients with a more introverted behavior.

When reviewing the results, several possible factors are discussed as contributing to the discrepancies between actual behavior and theoretically optimal management, such as factors related to the study methodologies, and factors related to work conditions in the Emergency Medicine Department. Additionally, several cognitive biases that might have implications for initial patient management, are discussed, and illustrated with concrete examples from the cases observed in the present study.
The importance of the study is in demonstrating the discrepancy described above, between physicians’ actual medical performances under emergency conditions, and the theoretically-preferred performance under similar conditions. Furthermore, the present study enhances awareness among physicians and medical staff to the issue of cognitive biases and their potential effect on clinical decision-making processes. Thus, this research serves as a 'pilot study' and should be followed by larger studies involving various research methods in order to further assess factors that influence clinical decision-making processes.
Bibliography