

The need for a patient focus in studies of the clinical decision-making process at an emergency ward

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1. Introduction

Diagnosing at an emergency ward often involves a complex decision-making process (DMP) for the attending medical staff. The complexity is due to several factors, including stress and time pressure as well as the fact that symptoms can vary greatly for the same diagnosis, both between patients and for the same patient regarded over time. The latter is especially true for patients seeking care for acute abdominal pain (AAP).

A considerable number of studies have been done on the clinical DMP, but most of this research has been performed in the laboratory as controlled experiments, or has had its focus on decision-making within one particular staff category. The authors argue that a shift of perspective is needed. Instead of putting physicians or other staff categories, or decision support systems (DSS), in the centre one should focus on the DMP itself, and hence on the patient. Following each patient all the way through the emergency ward system enables studying the interactions emerging between and within different categories of medical staff, and to pinpoint the roles of DSS, clinical routines and other parts of the DMP.

2. Methods

Beginning in 1997, patient data concerning patients seeking care for AAP at Mora Hospital, Sweden were collected [1]. The database has since been used as a basis for, amongst other things, developing a computerised decision support system (DSS) [2]. Such systems have been notoriously difficult to implement even if successful at the research stage. A study with the patient in focus as described above will commence shortly. Patients searching for AAP will be subjects to participatory observation and audio recording of their interactions with the staff. Starting with the research questions below, the use of a grounded theory approach will most likely generate further questions during the study.

3. Research questions

3.1 Major research questions

- How does the clinical DMP at a surgical emergency ward work?
- Which principal components does it contain, and how do they interact?

3.2 Subqueries

- What explicit conceptions about decision-making are held by the physicians included in the study and what decision-making methods do they actually use?
- What relations are there between the physician's reasoning and other parts of the clinical DMP?
- How does the triage system work and how does it interact with other parts of the clinical DMP?

4. Conclusion

Expected results from the planned study include a deeper understanding of, and better knowledge about, the decisions that a DSS is intended to support, which will in turn raise the probability of successful implementations of decision support systems. However, the main aim of the study is to draw a new kind of picture of the DMP – with the patient in focus.

References

[1] Laurell, H. (2006). Acute Abdominal Pain. Uppsala, Acta Universitatis Upsaliensis: 72.

[2] Bjornsdotter, M., Nalin, K. et al. (2010). Support Vector Machine Diagnosis of Acute Abdominal Pain. A. Fred, J. Filipe, and H. Gamboa (Eds.), 2010: BIOSTEC 2009, CCIS 52, p. 347-355.