Clinical Overview: A Framework for Analysis

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Abstract

In this presentation, we investigate concepts and theories for analysing how healthcare professionals achieve overview of patient cases. By 'overview' we mean the situation in which a healthcare professional with sufficient certainty and in concrete situations knows how to proceed based on available information upon a patient. Achieving overview is central for the efficient and safe use of healthcare IT systems, and for the realization of the potential improvements of healthcare that are behind investments in such systems. We focus on the theories of decision-making, sensemaking, narratives, ethnomethodology and distributed cognition. Whereas decision-making theory tend to be sequential and normative, we find the concept of 'functional deployment' in sensemaking theory, 'emplotment' in narrative theory, the focus on 'members' methods' in ethnomethodology and the inclusion of 'computational artifacts' in distributed cognition helpful.

Keywords: Medical Informatics, Electronic Health Records, Clinical overview, Decision Theory, Theoretical Framework

Introduction

Substantial resources are presently being invested in designing and implementing health information systems and electronic health records (EHR). These investments are made with expectations of higher quality of care. One precondition for such expectations to be fulfilled is that healthcare professionals can establish a quick and comprehensive overview of relevant patient information.

Methods

A literature search was conducted in PubMed, on Google scholar and in various journals on medical informatics.

Results

Our empirical material and the literature found converge in seeing 'overview' as more than a brief moment of 'eureka' in the mind of physicians. Instead we found that the concept is complex, process-related, context dependent, social and involves multiple actors and artifacts. Most of the time, the achievement of overview is endeavored to be able to make decisions about future actions (1-3). The challenge then is to find concepts that can provide a framework for the analysis of such processes.

We have chosen five theories to help conceptualise clinical overview. The five theories presented are decision-making, sensemaking, narratives, ethnomethodology and distributed cognition. While decision-making appears too narrow an approach for our analytic purposes, the four other approaches share the focus on interaction, process and interpretation. They can provide concepts through which to describe from 'the inside' what healthcare professionals do when they achieve overview. By 'the inside' we mean from an analytic stance within the actors' practice. In all four approaches detailed, empirical studies are the main methodological strategy (4-8).

Conclusion

A conceptualisation of clinical overview is necessary, to get a profound comprehension of clinical overview, hence to be able to conduct more accurate research and analysis in the area and to inform the design of healthcare IT systems and their use.

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