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An Ethnographic Focus for the Study of Information Needs in the Emergency Center of the Italian Hospital of Buenos Aires

Adriana Dawidowski[a], Analía Baum[a], Alejandro Mauro[a], María Schachner[a], Eduardo de los Rios[a], Daniel Luna[a]

[a] *Department of Medical Informatics, Hospital Italiano de Buenos Aires, Argentina*

Abstract

The development of informatics resources which meet the Information Needs (IN) of those who use them is an important challenge for the developers, and demands a profound knowledge of those needs. At the same time IN vary according to setting and the kind of work to be carried out. Classically, users' IN are clarified by asking the users direct questions but this type of evaluation brings with it an under-reporting of IN. The ethnographic investigation method allows an analysis of the IN of users in their workplace, and offers an understanding of those needs in the context in which they arise. Our purpose is to identify the IN of the physicians who work in the Emergency Center of a University Hospital, using the ethnographic method. The preliminary results of the investigation show that both the work dynamic of the Emergency Center and the context of emergency make it difficult to recognize physicians' IN , but following the methodology proposed by Diane Forsythe, we think it possible to achieve informatics developments which answer the real needs of the users.

Keywords:

information management, anthropology, cultural, needs assessment; emergency medical services

Introduction

In their daily practice, professionals systematically search for and use information of varying kinds. Clinical Decision Support Systems integrated with an electronic health record (EHR), have been proposed as one of the ways in which professionals can access the information they need in the different contexts of their professional life. However, it is difficult to develop systems which respond to the need for information in the process of decision making and in accordance with the requirements of their professional practice [1] To identify those requirements, common sense tells us that it should be sufficient to ask the users what they need, and in fact the majority of developments in information systems use this method [1-3]. However, the information that people give in response to direct questions leads to an under-registering of information needs [4]. Self-reporting tends to be incomplete and at times even incorrect [5].

The problematic of studying information needs (IN) is even more complex, in part because there is no explicit definition of the term "information needs" and a wide range of phenomena has been investigated under the rubric of Information Needs [6]. The majority of publications that we have found until now make reference to academic information [5].

Ethnography is a method of anthropological investigation which allows us to understand the context of the nature of knowledge; that is to say how it is personally experienced and used by each one of those who work in different cultural and organizational contexts [7]. Seen from this perspective the concept of IN is not restricted only to academic doubts, but rather to an absence of information that could interfere with the workflow. Studies based on ethnographic methods have revealed a greater diversity and quantity of information needs than those based solely on self-reporting [1, 8].

The Italian Hospital of Buenos Aires (HIBA) is a tertiary care, teaching and research hospital. Since 1998 a full-scale Health Information System has gradually been implemented. At this stage we are beginning the design of an electronic medical record for the Emergency Center (EC) and defining users' IN.

In the literature that we have found up until now, the information needs which are described are, in the majority of cases, related to the ambulatory area. We have found no literature making reference to what happens in the context of an EC. And no work of this nature has been carried out in Latin America.

The present study proposes to identify the Information Needs of doctors in the context of their daily work in the EC of the HIBA, using ethnographic methodology, decide which of these messages can be considered IN for the final users and to classify the IN according to the possibility of developing decision making support systems based on them.

The definition of the object of study

Forsythe propose to study "conscious expressions (verbal or non-verbal) of a desire for more information by one or more people and distinguish them from information deficits, which may or may not be conscious: only expressed

and therefore conscious information needs were recorded". In the Preliminary Results, we present the modifications that we propose in order to study the concept of IN.

Materials and methods

Qualitative investigation based on ethnographic methodology by means of participating observation. The observation and registration will be carried out by observers of different professional formations (doctors, nurses, sociologists) who will accompany the attending doctors in the EC, and will register the expressions of IN without prejudging the nature of or the occasion for the doubts. They will also register the context in which each IN is produced. This will allow these expressions to be validated by those who express the IN, whose observations and reflections will be incorporated in the register as part of the same process of analysis. Another investigator will provide an initial list of Possible Information Needs (PIN) for use in the joint discussions of the observers.

The PIN list will be discussed in focal groups with the interested parties and those responsible for the design of the EHR for the EC, to decide which of these possible needs are recognized by the doctors as true information needs and analyze which of these needs could be met by an informatics system. After this stage, we will have the views of the different parties involved on the role which the system should play, enriched by the contextual experience of practice in the EC.

Preliminary results

Following the definition proposed by Forsythe, IN is a wish or intention, which may or may not be made effective, in order to seek some type of datum. Methodologically this approach implies identifying questions and doubts, and interpreting them as IN. Therefore, any type of message that implies a desire for information is registered, independent of the nature of the information wanted, be it strictly clinical, academic, and administrative or of any other kind which may arise. Once the observer has identified and registered these expressions, he should interpret which of them could imply a potential search for information.

The EC presents characteristics different from those for which Forsythe's definition of IN proved both adequate and productive (morning rounds of residents who discussed a case with a hierarchical superior around the bed of a patient). The ambit of the EC is highly dynamic, and guided by the principle of economy of words and gestures. Accordingly, verbal interactions are few and brief and the observer must base his registers on gestures, proximity and space, all signs which, from a semiotic point of view, are little codified and whose meaning is indecipherable if they do not have a verbal anchorage which gives them meaning.

On the other hand, the professionals of the EC, unlike the residents who wait for the morning round to express their doubts, are little disposed to recognize that they have any significant doubts. We believe that the No-doubt condition would be, in our context, in some way related to the professional workplace of these doctors.

Both suppositions were corroborated by the preliminary observations which we carried out (n=20; words= 18.411; hours 11; persons observed=18; observers= 4), this led us to the conclusion that participant observation would allow us to identify, from verbal and gestural interactions, textual fragments which we could consider "Possible Information Needs". However, the ratification of these textual fragments as IN, given the complexity of those involved in the development and use of an information system for the EC, it should not be interpretative; for the answer – deciding whether an expression constitutes an IN or not – will depend on the perspective and the interests of the person faced with this question.

Methodologically, this implies the need for different view at the issue to decide which of these messages can be considered as IN, from the perspectives of the different people involved in the definition of what are and what are not IN. Finally, we propose that the PIN be validated by those parties involved in order to be considered true IN.

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Address for correspondence

Adriana Dawidowski, Qualitative Research Area
Hospital Italiano de Buenos Aires
e-mail: adriana.dawidowski@hospitalitaliano.org.ar