Assisting Collective Practices in a Healthcare Network

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# *CSCW 2013*,.

ACM XXX-X-XXXXX-XXX-X/XX/XX.

# Abstract

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In this paper we present an observation of a young healthcare network conducted during 2 years, and we show that the needs of their members focus on the possibility of discussing problematic cases and making collective decisions more quickly, rather than sharing data or to define emerging practices more strictly to make them auditable.

# Keywords

# Collective care, electronic patient file, healthcare network, CSCW

# Introduction

The increasing specialization of healthcare professionals has given rise to a growing need for cooperation between the various professionals dealing with the same patient [1]. In addition, co-morbidity is becoming more and more common, which means that patients often suffer from several different diseases at the same time. They therefore need to be cared for by several professionals, who must be careful to ensure that the prescriptions delivered are compatible. Various organizational responses in the field of healthcare have occurred in countries all over the world: these include the setting up of several Managed Clinical Networks in the UK and the creation of several healthcare networks in the United States of America, the main goals of which are to improve the quality, effectiveness, and efficiency of oncological practices so that patients can live better lives. Several healthcare networks have also been set up in Europe, which are dedicated to global (multi-disciplinary) patient coverage. We participated in one of these networks in France. It is named RPM and is devoted to patients with memory disorders such as Alzheimer’s disease. We were interested in defining the role a computer-based system could play to promote cooperation between the members of this healthcare network. Designing this kind of system requires taking all the constraints of the network into account and performing a fine-grained analysis of the collective practices taking place in the network.

We are now going to present the ethnographic study we have conducted, our main findings, and the role a computer-based system could play to assist collective practices among the various professionals of this network.

# Observation of the RPM healthcare network

The RPM network originated from some findings made by health professionals: first they complained about the very slow diagnosis of memory disorders. Since some forms of treatment can efficiently prevent the fast evolution of this condition if they are administrated early enough, professionals must be able to detect the first signs of the disease as quickly as possible. Secondly, many people are now required to care for patients with memory disorders in the later stages of the disease, who used to be entirely dependent on their families and their friends. Nowadays, paramedical and social workers are being brought in, but these professionals are used to working alone and are not accustomed to linking up with professionals from other fields. A group of neurologists and general practitioners therefore decided to set up the RPM healthcare network to reduce the time required to make a proper diagnosis and to form a team focusing on patients with memory disorders. They first drew up a standard protocol for diagnosing patients properly and quickly, and thought about ways of working together.

During two years, we attained all the face-to-face meetings. Ten meetings each lasting about one hour and a half were filmed and transcribed. In addition, transcriptions of ten meetings which took place during previous years before the RPM healthcare network was officially set up were incorporated into the corpus. During these two years, we observed various activities in which the members of the network were involved, and the following goals were defined: (1) coordination of the members in order to diagnose patients faster, (2) collective care of the patients being diagnosed, and (3) discussions about defining good practices and the content of training sessions, and adopting criteria for assessing the network.

One of our important findings was the importance of interactions which were not directly related to problem-solving (how to care for patients) in the life of the RPM network, since one third of the exchanges were dedicated to building or fostering social relations among professionals to define the network good practices. These interactions were not directly related to the “task”, but can we say that they constitute a loss of time? We can quote a small exchange here:

DrA (GP): “If we take time to make memory tests, we will not need the network anymore… Well, if we know how to use them, how to exploit them correctly and if we have time to spend to make them in the right way, we will directly go to level 2, which is…”

DrB(specialist): “Well, in fact, the network will permit, step by step to have more well-trained GP”

DrB (GP): “This is the aim…”

This supports the idea that even conversations which are not directly related to problem-solving play a relevant role in the life of the RPM; they should therefore not be neglected and must, on the contrary, be taken into account in designing a tool favoring cooperation within the network.

# The role of a system to favor collective practices

In this section, we discuss the factors possibly enhancing cooperation between professionals with different skills, which is one of the key principles underlying the RPM network.

We must first understand all the constraints that can prevent effective cooperation. The first problem focuses on the fact that professionals getting in touch have different professions (general practitioners, specialists, psychologists and neuropsychologists, speech therapists, social workers, nurses, etc.) and consequently adopt different points of view and use different languages. The second problem is due to the “solitary” working habits of these professionals. Furthermore, the fact of working in a network is a supplementary activity, what is also a major barrier to real cooperation because the professionals in question are already overloaded of work. The geographical dispersal of the professionals engaged in a network is another barrier to the implementation of synchronous collective situations. The members’ lack of availability adds to the latter problems. Lastly, real teamwork depends on all the actors being able to express themselves on an equal footing and all points of view being taken into account, which is not common practice in the field of healthcare, where respect for the hierarchy strongly determines people’s behaviour. Cooperation between members can be prevented by hierarchical barriers, which can be really strong in this field: some professionals, such as nurses, do not dare to contradict those who occupy a higher rank in the conventional hierarchy. The feeling of being overlooked is further reinforced when these people’s opinions are not taken into account.

It is in this particular context that the activities described above take place. To summarize, there are two successive phases during the care of each patient. The procedure used during the first phase, which corresponds to the diagnosis, has by now been closely defined and the actors in the network can quickly diagnose the condition of each patient. In the second phase, the collective care, there is no set procedure. The work of the participants consists here of exchanging information, discussing the problems involved, negotiating and to deciding together what global strategy should be applied to the patient and his or her family. For instance, a General Practitioner can report that one of his patients becomes dependent and financially abused by malicious sellers. The social worker will then explain that the patient is difficult to manage because of family and financial problems.

General practitioner, neurologist, psychologist and therapist will discuss the patient's treatment and wonder if it would be appropriate to change the views of the evolution of symptoms that the patient presents. Finally GP suggests putting the patient under supervision. The social worker suggests discussing this option with the patient. It will remain to decide who will be the guardian.

Since first stage involves applying a clearly defined procedure, we hypothesize that no computer-based system is required here. We could possibly set up a workflow system, but the professionals stated that they had no need for technical assistance of this kind for the moment; whereas the teamwork taking place during the second stage constitutes a real challenge in terms of assisting the collective activities, because the professionals have little time to devote to the network or to attend face-to-face meetings; as we explained above, the RPM network is composed of private health professionals, hospital workers and other actors in the medical and social fields. This is therefore a really multidisciplinary group, the members of which are volunteers, participating in the network on top of to their main occupational activities. Face-to-face meetings are for the moment the only way in which they can discuss their cases and theses meetings are quite rare. The lack of any formal coordination protocol at this stage makes a computer-based system all the more necessary. In addition to making a really collective approach to care possible, it could crystallize the network and give greater substance to the teamwork. It could be used by the professionals to organize the teamwork by focusing on each patient in turn, and could also be used to make collective decisions about the treatment when face-to-face meetings are not possible. The details of the cooperation cannot be defined solely as links between individual tasks, because “improvisation” plays a major role.

The team of professionals taking care of a patient (the pool) can be defined as a group having for its common purpose the coordinated care of the patient. To overcome the constraints mentioned above and to assist the work of the network, we propose to supply each of these pools with a common space in which they can collectively discuss the care of a patient, by presenting relevant documents, for instance, as well as discussing in private some aspects of the cases to be solved. A member of a network consisting of several pools will therefore have at his/her disposal as many spaces as pools. This tool would complete the use of a shared patient’s file. It would make it possible to solve problems collectively within a reasonable length of time by referring to the data shared in the file.

Besides the possibility of making the collective care of the patients more efficient, a system of this kind would contribute to reducing the present hierarchical barriers. In fact, several studies in the field of Computer-Mediated-Communications on the “equalization phenomenon” have shown that electronic media lessen hierarchical barriers [2]. For instance, Dubrovsky et al [3] compared face-to-face and electronically mediated discussions in groups where hierarchical barriers were liable to prevent some people from speaking during meetings. They found that in the groups using computer-mediated discussions, the domination exerted by the higher-ranking participants was less marked and the situation more equitable, and the arguments put forward by the lower-ranking participants were more frequently taken into account than in face-to-face situations.

In conclusion, the use of a system of this kind could help the members of the network to concretize their contribution to the network, or even to concretize the existence of the network. In fact, as Hinds et al have observed, “a dense network of social relationships can facilitate group identification and lead to more smooth coordination and collective action” [4]. This important part of the interactions we observed between the members of the RPM network relates to shared norms and mutual support and the feeling of social identity, which contribute to building social capital. Furthermore, this social capital can play a relevant role in the life of a community: it has been regarded as a “necessary ingredient” [5] or “the glue that brings and holds communities together” [6].

# Conclusion

We joined the RPM network as members of the IT commission for the purpose of defining a computer-based system to help the members achieve better global patients’ coverage. Healthcare can be assisted by cognitive tools (such as expert systems for diagnostic support, for instance), by information management systems (on-line libraries, Electronic Patient Records, etc.), and by fostering social ties between groups of professionals, professionals and patients, patients and social workers. After spending two years with the RPM network, we concluded the needs focused on the possibility of discussing problematic cases and making collective decisions more quickly rather than sharing data or to define emerging practices more strictly to make them auditable.

# Acknowledgements

This research was funded by Conseil Général de l’Aube (a regional grant) and the European Social Fund.

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