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Evaluation of the uses of medical records within a health assistance network.

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Description :

shared patient record, healthcare networks, log files, sociology of technology.

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This article proposes a method to evaluate the uses of medical records by healthcare professionals within a health assistance network. We have used a mixed methodology with two main axes: a qualitative sociological analysis, based on face-to-face interviews, and a statistical study of computer log files. 19 interviews of healthcare professionals and 16,417 logs files, concerning 111 doctors and 823 patients, over a period of 43 months have been analyzed. The main results are that there is a real use of Shared Patient Records, even if the intensity of use is very heterogeneous, with a small group deeply involved in use of the system. Moreover, the use of Shared Patient Records has increased steadily since the system was launched, both in the number of healthcare professionals consulting them and the number of patients treated. The sharing of data is motivated by a specific goal: to coordinate the care of addictive behaviors and the kind of data shared is determined by this goal. Not all information is shared, but only data that can help other professionals treat addicted patients.

Keywords: shared patient record, healthcare networks, log files, sociology of technology.

Introduction.

In France, the ordinances of 24th April 1996, also referred to as the *Ordonnances Juppé*, included the health service networks within the national healthcare system (*Sécurité Sociale*). The aim was to promote cooperation between players within the different healthcare systems and improve access to care for the populations concerned. The networks set up have remained experimental until now and need to evolve in order to achieve sustainable development. It is therefore useful to understand today the level of adoption by the players involved of the network and put forward indicators of usage that would justify the implementation and organization of new networks.

Information systems play a role in cooperation between health networks. Their development is a response to the need to communicate, coordinate treatments, share information in a secure manner and improve the quality of care. Recent laws, (French laws of 4th March 2002, and 13th August 2005 concerning Health Insurance) are examples of the appropriateness of an information system in dealing with the issue of coordinating care and formalize the obligation of setting up an information system to ensure the development of care within a network of healthcare systems.

Computerized information systems enable the transfer of medical records, even distance treatment of patients, and have developed significantly within formal healthcare networks organized around either a specific pathology, territory or a group of professionals. Organized networks have witnessed the recent emergence of quality processes within the medical field and medical information systems through the sharing of medical records between all the parties involved. Highlighting indicators that allow us to better understand the socio-technical workings of these networks could contribute to optimize them and reveal the conditions of adoption of a network by users. At the heart of the system, Shared Patient Records¹ are an important informational tool for ensuring the continuity of care. Will this new practice of sharing information lead to new roles for healthcare professionals? It is necessary to identify the possible modifications of interpersonal relationships and in particular the roles of the different professionals in the health and social sectors within this new system.

Until now, the evaluation of healthcare networks has been limited to a summary evaluation of the relevance of the network to care processes. This did not include an evaluation of the information system as a driving force behind

organizational changes, changes in professional practices, coordination and the treatment of patients. Yet, the 2002 law concerning financing of the national healthcare system has ensured the continued financing of healthcare networks within the framework of a national budget for the development of networks which includes a regional allotment. And, according to the French Court of Financial Auditors (in its report on the national healthcare system in 2003) no national standard of evaluation has been established, not even a software program to transfer information to the CNAMETS (national council made up of representatives of insured people, employers, private insurance companies and institutions whose role is steering, monitoring and assessing health insurance policy) or exchange information with other regions. This is why establishing indicators of usage based on the testimony of the professionals involved and data from computerized health service platforms would enable, in addition to simple performance issues, to gain a better understanding of the adoption of information systems by users within networks.

The objective of this article is to propose (and implement) an original evaluation method for the use of Shared Patient Records within a healthcare network, ADDICA (ADDictions, précarité, Champagne-Ardennes2). The originality of this method resides in the confrontation of observations concerning the frequency of use of records (recorded in computer logs) and the uses described by the players (interviews and comments about practices).

ADDICA was created in 1994 within the association GT-513. The clinical aspects of addiction imply cooperation and coordination between healthcare professionals and social services. After functioning for one year, sharing data by traditional means i.e. by telephone or paper files, it became necessary, for organizational purposes, to use a common IT tool. The project was launched in January 2001. After training to use this new collaborative tool, doctors were able to edit the first Shared Patient Records in 2002. The system selected was a platform developed by Uni-médecine. It consists in a set of applications and software accessible via the Internet. It enables healthcare and social service professionals to communicate and exchange information securely. The services offered are: access to shared medical records, tele-expertise and medical training.

After an initial 5-year experimental phase, the network is now entering the consolidation phase with the permanent development of three tools required for smooth and efficient collaborative work: regular pluri-professional training sessions, a professional coordination team and an IT system with Shared Patient Records accessible via a secure extranet.

Financed by a joint decision of the Union Régionale des Caisses d'Assurance Maladie (Regional Health Insurance) and the ARH (Regional Hospital Agency) within the framework of the DRDR (regional budget for the development of healthcare networks), the network must "undergo evaluation by an external body". The AUTOMATE research project (Analyse des Usages en Télésanté : Organisation d'un Réseau, Mesure de son Appropriation, Techniques d'Evaluation), sponsored by the Ministry of Research and New Technologies, took part in this external evaluation⁴ by proposing an analysis of the use of Shared Patient Records within this network.

In the first section we will present the methodology we propose to implement in order to evaluate use. This methodology includes a sociological analysis described in the second part and a statistical analysis the results of which will be presented in the third part. In a final section we will present the overall results.