MEDINFO 2007
HISA Ltd Australia
© 2007 The authors. All rights reserved.

The Rhône-Alpes Health Platform

Fadila Farsi, Hervé Spacagna

Réseau ONCORA (community cancer network), Lyon, France

Abstract

As a consequence of recently passed governmental policies, medical information systems must now comply to new standards aiming at improving communication between as yet very different platforms. On a large scale, differences between IS are observed within medical subspecialties as well as medical IS structures.

Taking into account all specific features of the health information systems in current use in Rhône-Alpes, we present here the way we achieve the Rhône-Alpes health platform currently in use by numerous physicians and caregivers and the choice we took to make the electronic patient record flexible and efficient.

This solution is based on a bottom up model to insure an evolvement of practitioners. The method we used to aim this goal was based on this bottom up model for each component of the project: analyzing the level of computerization, find a solution for every hospital, develop our own patient identification liking local patient numbering systems, no centralization of data but creating a link to these information stored in each hospital repository.

The platform is currently considered as the consolidated shared health record and has received approval from French supervision authorities. Eleven healthcare facilities and 15 community health networks are now connected, sharing more than 80 000 records with 1.2 million medical items indexed.

Keywords:

medical informatics, medical record linkage,
medical record systems, health networks

Introduction

Rhône-Alpes is the second largest administrative region in France. As large as Denmark in size and with 6 million inhabitants, Rhône-Alpes has 300 healthcare facilities, one regional comprehensive cancer center, three academic medical centers, more than 20 000 physicians and over ten thousand caregivers. The concept of a universal electronic patient record (DPPR) was initiated in 2000 by health professionals from the ONCORA community cancer network (ONCOlogy Rhône-Alpes). Cancer care implies indeed a multidisciplinary and multicenter organization.

Health networks currently represent the most friendly and innovative concept in terms of coordination of patient care between health practitioners. The concept of a health platform at the state level dates back more than ten years where many differences between IS were observed within medical subspecialties (e.g. cardiology, nephrology, emergency care, ambulatory medicine, etc.) as well as medical IS structures (e.g. departmental IS, distributed IS, etc.).

Methods: Reference knowledge and former experience

Several major issues are at stake: the type of Regional Health Record system depends on the level of computerization in the health sector, the suitability of existing information systems for elaborating the new regional system. To answer those questions, we used a bottom-up model allowing to involve key health actors in the implementation of the record. All ideas started from observations in the field by practitioners themselves. Involvement of end users was a key aspect of our project.

Oncora was originally confronted with the incredible heterogeneity of existing IS, the management and consultation of local patient records depended entirely on the type of institution. We decided to conduct a preliminary appraisal of the computerization level of hospitals and existing information systems. Our major goal was to identify organizational differences between facilities, which would help elaborate connections adapted to each type of structure. We built a scale of 6 different levels of computerization and asked the 300 facilities in Rhône-Alpes to position themselves on this scale. The span of the survey and proportion of responses (more than 86%) ensured the credibility of the results and their relevance for determining our current development strategy. Consequently, we decided to work on two different connections taking into account the specificity of each hospital.

We also draw inferences from a former experience of centralized specialized cancer record that was stopped a few years ago because it was found unsuitable for use in the healthcare environment. We decided to go the opposite way to avoid repeating the same problems. The regional IS described in this paper is a fully distributed, multi-disease model.

Results: Architecture of the Rhône-Alpes platform (SIS-RA)

The first part of the project consisted of making hospital document repositories connectable. Connection was achieved through connectors developed in partnership with software editors in each hospital (for 48% of them). For scattered members (52%) of the health community network, SIS-RA provided a communication tool that also ensured connections with the regional IS. Finally, all health facilities in Rhône-Alpes became able to share their data, whatever their computerization level.

An essential requirement for SIS-RA is patient identification, which allows to organize data. French law does not permit to use national patient identifiers, so every legacy IS has developed its own local patient numbering system. The challenge was to match all the local records available for a given patient.

Then the DPPR federates all regional health repositories and serves as a unique web-based portal to health information in Rhône-Alpes. The system handles the authentication of users, authorizations for record queries and displaying of structured or unstructured data. On each record query, the system generates a new query to the hospital repository known to store the information needed. In this decentralized system, hospitals are responsible for updating the information they produce. The DPPR is just a pointer system and authorization manager.

The Rhône-Alpes Health Information System (SIS-RA) was possible because Rhône-Alpes doctors have been involved in the project and have understood what benefit they would derive from it (patient medical information available in a very short time). The system is also exclusively based on medical documents, which facilitates its use by medical teams. The universal interface which is proposed allows very simple retrieval of medical information. At least, this project was possible because there has been a total consensus between the three university medical centers, Léon Bérard cancer center and the 53 hospitals from the ONCORA community network regarding the direction of the project.

Conclusion

The DPPR is currently considered as a consolidated shared health record and has received approval from French supervision authorities. Eleven healthcare facilities and 15 community health networks are now connected to SIS-RA, sharing more than 80 000 records with 1.2 million medical items indexed.

The third generation development plan for the organization of health foresees that, in 2010, all healthcare facilities of the region should be connected to the DPPR.

Many other French of foreign healthcare organizations are interested in the functionalities of the system, all the more so as many other projects should shortly be incorporated: development of information flows in emergency care, introduction of medical items by independent physicians.

Address for correspondence

Dr Fadila FARSI, Coordinator Doctor, Réseau ONCORA
M. Hervé SPACAGNA, Project Manager
GIP ONCORA
28, rue Laënnec, 69373 Lyon Cedex 08, France
e-mail: spacagna@lyon.fnclcc.Fr
Phone: +33 4 78 78 51 01
Fax: +33 4 78 78 26 90
Homepage:
http://www.sante-ra.fr
http://oncoranet.lyon.fnclcc.fr