Management and exploitation of health information and human resources in a national GP computer network

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Introduction

The objective of the "ICPC 2000" Project is to produce quality information from Primary Care services. This can be best achieved by ensuring that all the data held on every system is accurate and can be shared between systems. As stated and described in [1], in 1999, the health care reform was put into practice, this implying negotiations on many things and yet the relevant data is missing. In order to obtain data it is necessary that there be available all the results that ICPC Project will put into practice. The main results of the Project are: creating a first class dispensary-network to cover all the country; the introduction of the ICPC and ICD into Primary Care for data collection; training the doctors that will work in this network ; stimulation of GP research; to offer to policy makers valid and continuous data from Primary Care; development of dedicated software which is user-friendly for GP practice [2].

The distribution of the GPs cover 1% of the Romanian population which means 200 000 patients to which correspond 100 GPs. The software component of the project is the **MedINS** System. The interface is user-friendly and is based on the principles of client-centred interfaces [3], [4]. The System has two components: *the General Practitioner's consulting room component* - ensures the functions useful for the management of the information connected with the patient (general data, alarms, consultations, scheduling, tests, episodes, reports) and the *Server's component* - based on an ftp server under the Windows NT 4 operating system and an *Administrator Application*. The ftp Server allows one to up-date the basic information at the level of and to upload the periodic reports for the needs of the Project. The Administrator Application allows the transfer of the reports from the ftp directory to the report database.

Information management

The information flow at the dispensary level (MedINS) concerns: the management of the electronic patient records; the consultation using the SOAP philosophy (Subjective, Objective, Assessment, Procedures) and episodes for health care; the reports, including

the ones to be transmitted on Internet. The information flow for the 100 GPs network determines the implementation of the strategies of tracking the medical information through: establishing the requests of reporting at the level of the administrator of the project using the application AdmINS; processing of the report structure; automated reports generation; sending reports.

Human resources problem handling

In each step of the development of the Project we had to handle carefully the human resources. The team that worked in the Project development was balanced and the good results obtained confirm this assertion. The team involved in the Project contained: 2 physicians, 2 academics, 3 software engineers, 100 GPs. One of the important parts of the ICPC Project was the *training of the GPs*. There were programmed two modules for training. In the first the GPs learned to work in a 20 hours session with Windows, MedINS, MediNET and in the second they accomplished the new features to MedINS and MediNET.

Material problems solving

The Dutch Society of Family Medicine provided the equipment for the pharmacy network, the 100 computers. The cost of the training lectures was 700 USD and was sustained partially from the Project and partially from a grant from the Faculty of Automation and Computers, related to the acceleration of the social insertion of the GP.

Computers in GP practice

From the GPs involved in the Project 7% work frequently on a computer, 45% work occasionally, 38% worked previously with a computer and 10% did not work at all with a computer. Following a personal evaluation the levels of the computer knowledge of the GPs were: no knowledge: 10%; beginner: 62%; advanced: 28%. Interrogating the wish and disponibility of the GPs to use computers in their practice this had as result 100% approval. Also the necessity of a lecture of computer exploitation was considered with a 100% rate. The suggested number of hours for a computer course was between 10 to 30, excepting 3 persons that answered "any time, any where".

The major uses for the computers in the GPs practice were appreciated to be: for consultation registrations, for appointments, for guideline protocols, for research.

Conculsions

The management of information in the ICPC Project was very complex, concerning the human resources involved and also at the application level. The System is implemented.

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