Improving Cardiology Workflow in a Hospital Using a Mobile Software Solution

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Abstract. The paper presents a study and a software solution to support the cardiology department in a hospital. The result is quicker access to patient data and better management of the activities of the nurses. Alarms are sent on the spot and reaction is immediate, providing optimization of the process. The improvements in the activity of the cardiology department will raise the quality of the medical process with great benefits for the patient.

Keywords. e-Health, mobility, cardiology, standards, workflow

The purpose of the study is to present the cardiology department activity and to identify mobile solutions that will improve clinical workflow. The proposed solution is a support in the clinical activity of the doctors and nurses, raising the quality of the medical process with benefits for the patient, taking into account the important issue that the heart diseases are among the first causes of death. A mobile solution allows the cardiologist and nurse to have access to patient’s data in real time, and regardless of his/her location. The interoperability between the hospital departments is ensured based on HL 7 standards [1]. The presented work supports the activity in the cardiology department of a big hospital (1,400 beds) and it is based on the local archives and databases. The study took six months to observe the interaction between the cardiologist and nurse with the patients. The medical data of the patient can be accessed either on workstation, or on Tablet PCs/PDAs. At the moment the PDAs are used to access patient’s demographics, history, and medical data. Medical staff was trained to learn how to work with the mobile solution, and the conclusion was that they are inclined to use the mobile solution (resulted from qualitative observation, and a quantitative survey will follow). Similar studies have been developed [2], usually integrating IT solutions into the hospital workflow, and after that studying the results. The current approach starts from identifying the problems in the workflow of the medical staff activity, and based on these results a solution is suggested using a mobile software support. First benefits, obtained applying the mobile solution are: a better communication between the doctor and the nurses and quicker response of the nurse to emergency situations.


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