Automation world: covering the field of healthcare workflow optimization

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Abstract

The article examines the possibility of workflow automation in a medical institution by introducing a medical information system (MIS). It represents a computerized business process management (BPM) system, which provides automation and optimization of all the working processes of the medical institution [1].

Keywords: medical information system, decision making, EHR, BPM, EPMR

1 Introduction

The following important components can be distinguished in the hospital workflow: patient registration, issuance of ambulatory patient cards, registration of the patient's admission, appointment of treatments, and creation of medical reports. [2]

Furthermore, there is a need to create a database containing all information about patients and doctors and providing data access according to the access level.

Pursuant to the generally accepted data, the introduction of such system will help to increase the efficiency and accuracy in the formation of reports provided to health authorities, reduce unproductive working hours spent on work with documentation, improve the quality of medical care through information support for medical activities and, as a result, reduce the number of medical errors. [3]

2 Conclusions

According to the survey, most physicians are skeptical to the Electronic Health Record (EHR). This fact is caused by small computer literacy, lack of IT experience, uncertainty of time and costs. [4] However, despite the fact that it is hard for people to innovate, there is a tendency of a positive attitude towards IT in medicine.

The article gives examples and analysis of existing solutions on the market for BPM in medical facilities. This will help to form common characteristics and take into account all the shortcomings of MIS in order to meet the current public health needs.

References

[1] Dumas M 2013 *Fundamentals of business process management* (1st ed., pp. 297-310) Berlin: Springer
[2] Hameed S, Mustapha S, Mardhiyah A, Miho V 2008 Electronic medical record for effective patient monitoring database *International Conference On Computer And Communication Engineering*
[3] Marinos S, Nikolopoulos P, Pavlopoulos S 1999 A WEB-based patient record and appointment management system. Proceedings Of The First Joint BMES/EMBS Conference *IEEE Engineering In Medicine And Biology 21St Annual Conference And The 1999 Annual Fall Meeting Of The Biomedical Engineering Society (Cat. No.99CH37015)*
[4] Subrahmanian E 2009 Empirical studies of workflow automation in physician offices in the United State *IEEE International Conference On Automation Science And Engineering*