

Electronic Patient Information System Using PHP

Samir Maske, Dipika Shahare, Akash Nagalwade, Amol Doiphode, Ashish Vaishya, Prof. K. Malpe

Final Year student, Department of Computer Science And Engineering, GNIET, Nagpur, Maharashtra, India

“Professor, Department of Computer Science And Engineering, GNIET, Nagpur, Maharashtra, India

Abstract:- Recent research states that using new and emerging technologies in the areas of telecommunications are widely used in healthcare sector. The system Electronic Patient Record Management System (EPRMS) is a centralized database contains the in-patient record. It was implemented using PHP & MYSQL combination. The database record contains the patient personal info, department lies-in, physician, tours, treatment and lab results. Since the patient enters the hospital the workflow starts as the reception user creates new record by entering the personal info and sends the record to assigned department; at this stage the nurse starts update the record by entering the physician comments, required treatment, and sends lab test when it is required. The procedure continues as long as the patient still in the hospital. At last when the patient recovered or died the International Classification of Diseases (ICD) inserted to the record and out or died date.

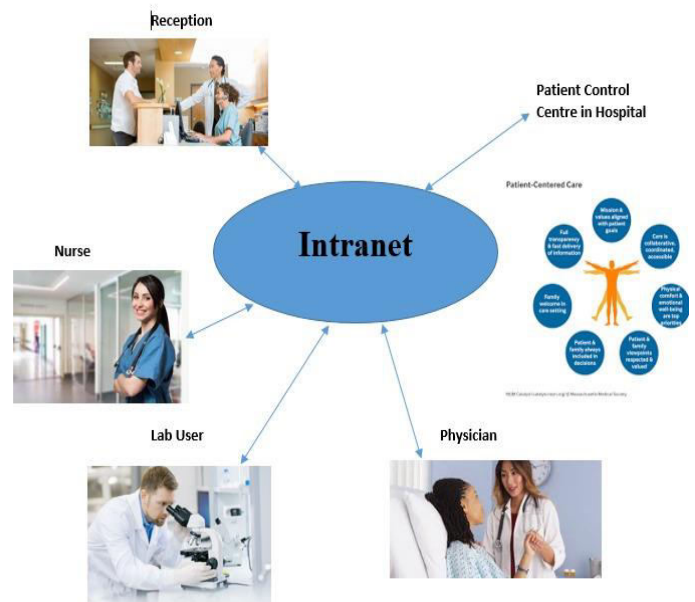
In addition there are many supported tables that can be updated manually through independent pages by IT administrator. These tables like Physician names, medicines, lab tests, users and ICDs. As the system consists of different users and different user permissions. Also there are advance search that can help to make statistical reports and researches for the physicians. The system is considered time and cost effective to healthcare.

Introduction:-

In the last decade the emerging technologies in Information and Communication technologies lead to very big advances in services for community, especially in healthcare sector. We have used this development and deploy it in Iraq, by creating an electronic medical database. Generally, there are three types of medical care services which are: in-patient (i.e. hospitals), out-patient (i.e. clinics) and emergency. For in-patient hospitals there are two different types: specialized hospitals (GIT Centers, Cardiac Centers, Cancer Centers, etc.), and general hospitals. However in Iraq, the first type is newly introduced, but the latter is already exist. As the

hospitals are considered essential in healthcare infrastructure, so we choose it to enhance the services in it. The implemented system

(EPRMS) is the first system in Iraq (in general hospitals) which is work as database and workflow. It is helpful for management, patient health, research, and archiving. In management, it could be used for hospital director to see the performance of the physician, or statistical reporting. Also the physician can have the patient history in details from his previous records with less time. The physician can make their researches by using the advance search. Archiving and securing electronic records considered more reliable and trusted than paper-based records.



Literature Review

1] Electronic health (e-health) is probably one of the most significant contributions of Information Communication

Technology (ICT) in present days silos healthcare. ICT efficiently bridges healthcare sector and technology for e-health implementation, which is a costly affair due to involvement of considerable amount of planning and investment. The present work focuses at the very initial level i.e. ICT and proposes an ICT-preparedness-framework for e-health implementation. The proposed ICT-preparedness framework is a conceptual one and is based on two different applications - A) connected graph-based approach to capture and in turn quantify some of the ICT constructs (Hardware, Connectivity, Software and Skills) and their respective indicators and B) a fuzzy set-based technique to assess the preparedness levels of these constructs. Finally the framework is discussed with an e-health scenario on Tele-cardiology.

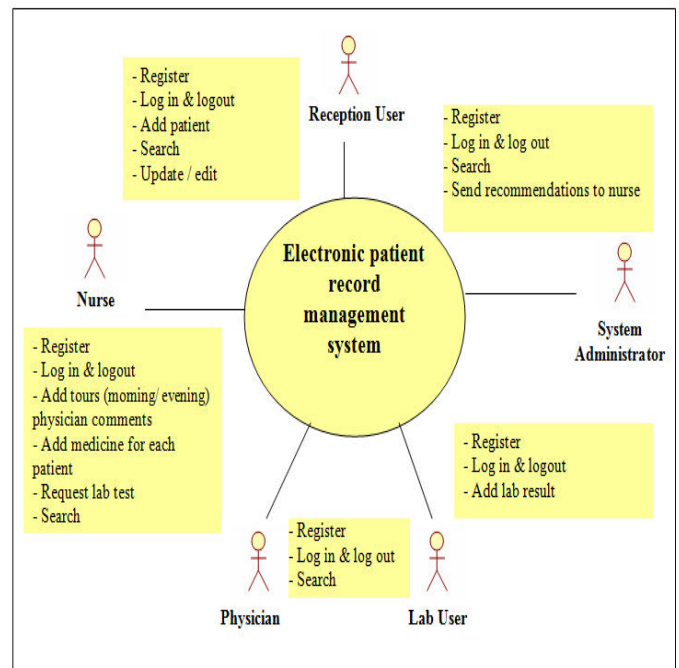
[2] The interaction style used in electronic patient record (EPR) systems and its usability can have a significant impact on the acceptance, efficiency and satisfaction of its users. In this paper, we describe a study of physician interaction with a text-based EPR system and a graphical-based EPR system. The usability attributes of learnability, efficiency and satisfaction are evaluated on typical tasks, such as viewing a patient's record, documenting and ordering. The results of the study revealed that a graphical-based interface can significantly reduce the time it takes physicians to complete typical tasks in comparison with a text-based interface. The results of the study also revealed that physicians can get more satisfaction from interacting with a graphical-based EPR system than with a text-based system.

[6] Although current research reports substantial benefits of the use of e-health systems and the barriers for their implementation, there are many inconsistencies between the results reported. Aiming to unify existing views and to identify the roots of such inconsistencies, this research used a socio-technical approach to collect data from two e-health projects. The results suggest that although there are some benefits and barriers that are consistent amongst those reported, new benefits and barriers were found. The qualitative approach to this study helped to identify possible ways to overcome these barriers and to propose alternative ways to justify the implementation of e-health systems.

CONCLUSION

This research has been presented the design and implementation of Electronic Patient Record Management System (EPRMS). Which is a centralized DB contains the in-patient record. The aim of this work was to provide reliable healthcare web-based system. It is enhance the provided services to patients by making their records available online and everywhere for physician to follow up the case easily with less effort, and their history would be available also. Hospital director and heads of departments can follow the physician work related to patients from diagnosis and follow up.

Securing and archiving the paper-based records is difficult and it can be stolen, burned or modified, so the need for such a system was very essential. Also it is considered time and cost effective to healthcare.



ACKNOWLEDGMENT

The motivating factor for this work was the inspiration given to us by our guide

PROF. K.Malpe. he has given many valuable suggestions and guided us by encouraging generous thoughts.

We are also grateful to HOD. K.Malpe **Computer Science And Engineering** for the encouragement given by her and her constant guidance. We also thank the entire Computer Science Department for their co-operation. Our sincere thanks are extended to the **PRINCIPAL SIR** for constantly encouraging and helping us during the completion of this project. Last but not the least, we take the opportunity to thank to all those who have inspired and help us in successful completion of the project.

REFERENCES

- [1] Chattopadhyay. S., Junhua Li1., etal(2008),"A Framework for Assessing ICT Preparedness for e-Health Implementations". Sydney, NSW 2052, Australia
- [2] Rodriguez, N. and Sands, D., etal., (2002),"A Study of Physicians Interaction with Text-Based and Graphical-Based Electronic Patient Record Systems". COMPUTER SOCIETY.
- [3] Satziger J W., Jackson R B., etal., 2007, Systems Analysis and Design in a changing world, (4th ed.). Thomson course technology.
<http://faculty.kutztown.edu/tan/csc354/Datafiles/A.pdf> On line document [Accessed 3 April. 2012]
- [5] Laplante, Phil (2009). Requirements Engineering for Software and Systems (1st ed.). Redmond, WA: CRC Press. ISBN 1-4200-6467-3.
<http://www.crcpress.com/product/isbn/9781420064674>.
- [6] Fitzgerald, G., Piris, L., etal., (2008), " Identification of Benefits and Barriers for the Adoption of E-Health Information Systems Using a Socio-Technical Approach". School of Information Systems Computing and Mathematics, Brunel University, UK
- [7] Jarke M., Lenzerini M., etal., (2003), "Fundamentals of Data Warehouses". Springer-Verlag.
- [8] Rosenberg D. and Stephens M., (2007), "Use Case Driven Object Modeling with UML: Theory and Practice", Apress.
- [9] On line document [Accessed 7 Jan. 2012]
<http://www.nlm.nih.gov/medlineplus/diabetescomplications.html>
- [10] USER ACCEPTANCE TESTING (UAT) PROCESS, Information and Technology Management Branch, (2008)
<http://www.bced.gov.bc.ca/imb/downloads/uat-test-process.pdf>
- [11] Valade J., (2004), "PHP & MySQL For Dummies", 2nd Edition, Wiley Publishing, Inc.
- [12] USER ACCEPTANCE TESTING (UAT) PROCESS, Information and Technology Management Branch, (2008)
<http://www.bced.gov.bc.ca/imb/downloads/uat-test-process.pdf>