Chapter 39
Ob/Gyn EMR Software:
A Solution for Obstetricians and Gynecologists

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ABSTRACT

In this chapter, the collection and the analysis for the development of an Ob/Gyn EMR software for small Obstetrics and Gynecology organizations is analyzed. The necessary gynecological information was gathered via research concerning the needs of the practice and was organized and categorized according to its importance to the clinicians. The user interface of the developed software provides access to obstetrics, gynecological, surgical, sterilization and PAP test data, along with video and image file storage capabilities. An integrated appointment scheduling module, as well as an expected labor day prediction module, are also part of the application. The developed software is self-contained so that it can be installed on the clinician's computer or accessed within the clinic.

INTRODUCTION

The increase in computer usage and the cooperation between Medicine and Informatics has a lead over the past 40 years to the development of important research and educational activity as well as high-quality infrastructure in the field of Biomedicine. Concentrating on Health Information Management (HIM) and Health Information Exchange (HIE) systems, Electronic Health Record (EHR) and Electronic Medical Record (EMR) software is being developed, in order to provide efficiency in Health Care and improve patient – doctor relationship. Various sizes of Health Care Organizations and unique needs of each Medical specialty have created the need for a wide range of software.

Information Technology has rapidly become over the past years one of the most important concepts in almost all daily activities and has expanded its influence over Health Care as well. Health Informatics combines Information Science, Computer Science and Health Care possibilities. A new level of cooperation and coordination is provided in managing and organizing data and Health Care services, for both research and knowledge application purposes. Health Informatics optimizes the acquisition, storage, retrieval and usage of information in Health and Biomedicine through the resources, devices and methods that Information and Computer Science can provide. Health Informatics tools are not limited to computers, but also include medical devices and information and communication systems, as well as clinical guidelines and clinical data management software. The cooperation of Health Informatics tools opens up new ways of practicing medicine and contributes highly to improving the quality of health care services.

The interdisciplinary nature of Health Informatics allows the simplification of every Health Care concerning activity. It is applied to various areas of Health Care including direct medical services for any specialty, pharmacy, public health analysis, therapy, and research. Efforts in improving Health Informatics systems have transformed Health Care by optimizing information and communication systems, enhancing provided services (in the level of analysis, therapy coordination methods, results evaluation techniques, etc.), improving patient care and clinician – patient relationship. This cooperation has been essential in developing and designing the necessary tools to implement health care with improved safety, efficiency, accuracy and making it more patient-centered.

Considering the continuously rising importance of Health Informatics and analyzing its benefits and applications in international Health Care systems we concentrate on designing an EMR Software that can be applied in Greek Obstetrics and Gynecology Health Organizations. Our software was designed by evaluating the usage and efficiency of similar software used in more highly advanced Health Care systems of other countries and adjusting the results of the analysis to the Greek Health Care system and the needs of the specialty in Greece. The analysis concentrated in the Health Informatics solutions mainly available in the US and the UK and the modern technologies used to implement Information Technology tools in Medicine. In addition, local factors such as specific methods of testing, therapy, and data management were taken into consideration and implemented in the software in order for it to better fit the exact needs of Obstetricians and Gynecologists.

BACKGROUND

Worldwide use of Information Technology in Health Care began in the early 1950's with the rapid increase of computers usage. In 1949 Gustav Wager established the first professional organization of informatics

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