

# **Computing for Human Services**

**Chief Editor**

**Shihab Ahmed Hameed**

*Electrical and Computer Engineering-IIUM University*

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## Chapter 22

### Electronic Patient Medical Record to Facilitate Patient Monitoring

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#### 22.1. Introduction

Nowadays, Internet plays a significant role in connecting all the participants in the health community. It is used to control remote medical equipments, communication between parties such as patients and doctors, search for needed information, transferring text, graphics, audio and video files as well as supporting collaboration in real-time [1]. In the web-based multimedia environment, the images for medical system can be categorized into different types: magnetic resonance (MR), computerized topography (CT), X-ray, (ECG) among others as well as medical information in forms of charts, graphs and others. These images could be loaded electronically with digital devices into the patient medical information. Thus, this would prevent the patient's medical images from damage or lost. Besides, it would be much comfortable for both patient and doctor, where, a patient may go for treatment in other medical center without carrying the medical report. The doctors could also view the patient health related images for further clarification without re-examining patient [2]. A mobile phone, PDA and other mobility devices can be used to link to the system. The wireless application protocol (WAP) is used to standardize the way mobility devices associated for Internet access, including e-mail and the World Wide Web [3]. Current demanding clinical care environment, doctors and nurses are pressured to do more with less time. Hospitals need a unique combination of integrated hardware and software products including patient monitoring, central and bedside workstations, telemetry and wireless monitoring, a cardiology management system, Web-enabled enterprise-wide networking and more [4].

#### 22.2. Existing Patient Monitoring Applications

There are a number of patient monitoring systems that exist in today's global market. The following are few of them: