

Leveraging Mobile Technology in Health Care Industry

It had been a long time since dissemination of power of computing has reached out for mobility, slowly but surely the mobile computing has evolved into a critical factor of futuristic computing. At the beginning many industries around the globe were integrating computer systems to support increase the productivity, yet the need of computing "on the go" was highly appreciated and as a result the Mobile Technologies gradually started to bloom, and currently almost every industry in the world has got some form of Mobile Technology in their repertoire.

While many industries trying to reach out for mobility, Health Care Industry was no exception. Often the bottom line being "Time can cost lives", around the world many Medical Institutions has adopted various mobile solutions to either support their daily tasks or to solve problems in their own environments.

And it has been proven that mobile systems coupled up with existing systems such as "Electronic Patient Records" and "Electronic Archives" can greatly improve the productivity of the health care workers.

The Problem

Many Medical Institutions today have been blessed by computerized environments to sustain their day-to-day tasks, though often being the case that, these systems may assist the said Medical Institution's administrative purposes it has many barriers when it comes to clinical care.

In many cases, the information has been computerized and these information can be accessed, and update via desktops that been placed in each ward thus the problem of getting information readily at the patient's bed side or at the point-of-care was not entertained. In a conventional paper-based scenario the clinician must take notes by hand which will later be entered into the system via a desktop by the administrative staff and this itself is a redundant task, not to forget that this could also be erroneous if the staff that enters these information could not decode the clinicians writings properly. And more often than not, there not many systems available in a ward to enter information that has been gathered by the staff, in peak hour's staff may have to wait or queue just to enter information into the main archive, this again resulting in wasting valuable time for non-core activities for staff and also system will may not be updated until everybody gets a chance to enter the records.

Solutions

The key word "Point-of-care", has to be addressed when designing a solution for these problem areas, A perfect example of a case study is George Eliot Hospital (GEH) in England.

The solutions that were deployed in order to counter that said problems were, 1st talking advantage of the wireless networks the hospital installed a 802.11b/g wireless network and also deployed accident and emergency-patient tracking dashboard, though this was previously available via desktops the Hospital upgraded the system and gave it more mobility by adding 20 Laptops and Tablet PCs, these machines were distributed among clinicians, ward mangers and administrative staff empowering them to access, update information "on-the-go".

In addition the hospital also included Microsoft Active Directory, Exchange Server and SharePoint Services, that resulted in 80% total site coverage. And all these were wrapped in a security model of WEP authentication and the data has been encrypted to ensure patient's records are kept private and confidential.

Results

- Faster decision making by Physicians due to readily availability of the information
- Saved time, as per the case of George Eliot Hospital the nurses saved an average of 10 minutes per shift where as ward staff saved an average of 20 minutes per shift when compared to the time it took them to do the same tasks.
- Improved patient care, the information about the patient was always available in the bed side and narrowed probability of having loss of important patient data provided less times that a patients had under go same tests again & again.

The case studies such as George Eliot Hospital proves that integration of Mobile Devices have paid off in saving valuable time, increased productivity, and flow of accurate and up to date information.