Mobile Computing and Social Networking’s Influence on the Medical Services
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This past few decades has seen a technological revolution in health care. Wireless connectivity, personal cellular devices, pervasive sensing technologies, social networks, and data analytics are finally developed enough to make the concept of wireless medicine a reality.

**Monitoring Patient Vital Signs via Mobile Computing Versus In-Patient Visits**
Vital signs are one of the most important components of patient care. Body temperature, heart rate, blood pressure, sugar levels and oxygen levels or respiratory rates can all be taken using mobile technology today. In the not so distant past the patient was required to travel to the doctor’s office or a hospital and have these physiological states tested. Typically, a nurses and clinicians would oversee and be responsible for the taking and recording of the vitals manually documenting them with a mobile computer or the results were written on paper and the clinician left the patients room to manually document into the electronic chart using computers. At times, this documentation happened hours later when time permitted. The vitals were hard to take in some cases and errors were not uncommon. These stats are a tool used to communicate patient deterioration to healthcare providers and sadly it also was not uncommon for clinical decisions regarding a patients care to be made using outdated vitals.
With today’s technology, patient care can be a lot more effective. The use of smart phones and broadband-enabled devises has allowed patients to do their own monitoring of vital signs and body functions and upload them to their medical provider’s clinical servers. They even have the ability to do videoconferencing via their phones for remote consultations with their doctors. Using technology to take advantage of remote monitoring systems is allowing patients to take a very active approach in prevention and care. But patients aren’t the only ones adapting to the new technologies available. Hospitals are also evolving as well. Today technology in a patient’s hospital room has various beside devices that (E.K.G. machines, ventilators, fetal heart monitors, oxygen sensors, blood pressure sensors, etc.) connects to the hospitals server that in turn records and transmits the data to a smart phone or tablet used by its staff to ensure the best care possible.

**Advantages and Disadvantages of Using Mobile Computing Technology to Monitor Patients**
The advantages of using mobile computing technology are growing as new apps are developed for use by both patients and medical service providers. The attitude of proactive healthcare emphasizing prevention, enhanced patient-doctor interactions, enhanced information exchange, getting healthcare to geographically remote patients, saving valuable time with diagnosis and treatment of illnesses and diseases, increasing accuracy of patient records and the freedom for patients who no longer have to be tied to smart rooms or cumbersome medical equipment are all advantages of this new technology. Thankfully, the medical community understands the need to accept and integrate new technologies into its practice to free up their personnel’s most valuable resource – time. The use of mobile technology allows doctors to assist patients with early symptoms before acute attacks occur. It enhances the patient-doctor interaction because doctors now have the ability to provide patients with information about their treatment and medication that is not normally provided in a normal in office consultation because of lack of time or the reserved attitude of the patient. There is also the added benefit in some cases because patients can save time and money by avoiding in office visits because they can consult with their medical care providers via the internet. Patients with non life threatening illness experience benefits because the new ways of health monitoring means they no longer have to deal with hospitalizations. They now have the benefit of having their monitoring done via a mobile system that can detect abnormalities and alert them and their doctors when urgent care is required.
Doctors are also seeing benefits because now have more time they can focus more on priority tasks. Essentially these new and emerging technologies are improving the quality of health care by making it more personalized, reducing medical errors and reducing costs.
However, there are also a few disadvantages to mobile computing technology as well. There is a learning curve for older generations who are not as tech savvy as the new generations. The chance of a system going off line could cause some major delays with regard to medications and loss of communication. And as always there is an opportunity for security issues. Patient data needs to be safe and secure and with data being considered a valuable commodity there is the looming potential threat of security breakdowns with respect to the transmission of personal medical information over wireless networks.

**Security Concerns Regarding Transmission Patient Data over Wireless Networks**
While there are huge benefits to using mobile technologies to make improvements to the medical field and profession, there are still some associated privacy and security issues that need to be analyzed to make these systems more secure and socially acceptable. The problems facing these advancements are access rights to data, how and when data is stored, security of data transfer, data analysis rights, and the governing policies. While there are currently regulations for medical data (HIPAA), these regulations must be reevaluated and adapted for the use of new technology in the medical industry. Large volumes of data from Smart phones, in-home sensors and medical records are being communicated electronically via the Internet and through wireless transmissions. This increases the danger of compromising the security and privacy of individuals. Paper based methods for recording and storing information was more cumbersome but a lot less likely to be accessed by anyone other than the medical professional or the patient. But once personal health information is introduced to the internet there is potential for exposure.
Data storage also has another set of security concerns. Once information is stored electronically it opens a door for hackers to access it as easily as those it is intended for. The same think can be said for data transmitted from mobile patient monitoring systems. Skimming and eavesdropping are a possibility when the data is transmitted via a wireless router or network. Data access, storage, and integrity are major challenges for this time of technology.
Electronic Recording Patient Systems process mass amounts of patient data. This data will be stored in databases in a common format. This data can then be shared and that will intern create an even larger source of human medical information that could be found useful by a lot of different markets. These markets employ tactics like data mining. This adds a whole new dimension to possible threat. Because of this regulations like HIPPS will have to evolve with the mobile technology.

**Social Networking for Group Support for Patients with Similar Medical Concerns**
Social networking brings together individuals who need to find support outside of their normal daily relationships to share experiences and advise with one another. The Mayo Clinic promotes the use of social networks and even assists in connecting people with similar medical issues by directing them to social networking groups. Twitter, YouTube, Facebook, MySpace and various other social networks are powerful platforms for those with relevant information that could be used between individuals to educate and comfort those who need them. This interaction allows participants to feel less lonely, isolated or judged. It gives them a sense of empowerment, improved coping skills, and a clearer understanding of what to expect from their situations. They are able to learn about new medical research and compare notes and resources about doctors and alternative forms of treatment. It can only benefit the user and assist them with their recovery and acceptance of their illnesses.
Thanks to mobile technology, health care does not just occur during the occasional visits to doctors' offices, clinics, or hospitals. It occurs daily in people's homes, cars, and workplaces. Included in the past now are the problems of diagnoses being written illegibly on paper, doctors not being able to easily access patient information, and limitations on time, space, and personnel for monitoring patients. While there are disadvantages with regard to security, access, and storage, the advantages take precedent and offer better patient knowledge, relationships with their medical providers and more importantly better care and longevity of life.

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