MMHA 6500

# Week 3 Assignment:

# Developing an Innovative IT Strategy–Data Driven Approaches to

# Challenges in the Health Care Continuum

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**Scenario**

*Telemedicine for Rural-Based Health Facility Canon hospital is a 189-bed hospital in rural Texas. The hospital is approximately 100 miles and 150 miles away from two major medical centers of excellence in Texas. As the CIO of Canon Hospital, you are aware that there are capabilities to do telemedicine programs with tertiary care centers. Two of the senior medical staff in the critical care and neurology departments at Canon Hospital have approached you to investigate telemedicine capabilities related to the management of ICU patients and the emergency management of patients presenting with stroke symptoms. These medical leaders would like to ideally preserve the appropriate services for ICU patients and rehabilitative services for stroke patients in the canon hospital community. They recognize that portions of these treatment plans must include certified critical care and stroke certified providers from a tertiary care center. They have ask you to examine both the business and technical aspects of establishing telemedicine programs with one or two of the tertiary care centers who have certified specialists in critical care and stroke certified physicians who can administer TPA and other urgent stroke treatments. Currently Canon hospital is transferring over half of the ICU patients and virtually all of the patients who are presenting with stroke symptoms to these to either of these tertiary centers. There is little to no follow up on those patients with regard to treatment plans or services. In many cases, patients and caregivers are relocated for step down and rehabilitative care to facilities outside of the Canon hospital area. This creates both high level of dissatisfaction for patients and families and revenue loss for canon hospital and its associated rehabilitation facilities.*

**Introduction**

Health and healthcare delivery in the countryside come with great challenges to both the patients and the healthcare facilities. Such unique challenges that are quite different from that of its urban counterparts are dynamics for disparities in both demographical and geographical points of view. Majority of telemedicine implementation in hospitals and health systems in rural areas are due to the needs of population and area constraints (Becker’s Health IT, 2012).

According to the Office of the National Coordinator for Health Information Technology, Telemedicine is the remote delivery of clinical health care services and information using telecommunications technology. Access to quality health among the rural populations is key to the large gap existing between rural and urban health care systems. Travel times, shortage of specialty physicians and smaller outdated hospitals have tested those living in the countryside. They have to deal with the issue of transportation to more developed health care facilities in urban areas to seek care from respected specialties and get quality health services from prestigious hospitals. These challenges can explain why the life expectancy of countryside dwellers fall short of their urban counterparts. Just by merely focusing on the period of transportation of the patient and how are they being transported may delay treatment, leaving their health in worse condition. The time taken to get to a quality health facility for rural populations can be critical in determining survival chances of the patient (Field, 1996).

**Problem Analysis**

For many centuries, rural health system had been facing and dealing with the same problem. And to see similar standards of care and health care management experienced and practiced at the countryside level, there is the undeniable need to incorporate technology as a link between the urban and rural health services. This concept is referred to as `Telemedicine’.

In the scenario, Cannon hospital is a rural-based health facility and is approximately 100 miles and 150 miles away from two major medical centers of excellence in Texas. With this situation, the hospital is transferring over half of the ICU patients and virtually all of the patients who are presenting with stroke symptoms to either of their tertiary care centers. Due to lack of appropriate and necessary options, a domino effect is very significant. The transfer of patients to other facility is causing a little to no follow-up on those patients with regards to the treatment plans thus creating high level of dissatisfaction for patients and their families. On a more serious note, the revenue loss for Canon Hospital may drag their decision on the implementation of Telemedicine due to its high cost.

A closer look at the telemedicine concept indicates huge impact and influence the system will have to the rural health care service delivery framework. The benefits of the new approach in medical treatment and administration override the aspect of access, but also takes over the health care system like a wave. However, the success level will definitely depend on the type of the adopted HIT solution to a particular rural setting.

**Scope of the HIT solution**

Health information technology provides the ultimate solution to the perennial issue of health care access and integration in both urban and rural areas. The scope of the HIT adopted should not be limited to any parameters within the health care charter, as the procedures and policies together with clinical priorities in HIT are put into consideration before embarking on a particular technological implementation process (Gupta & Denton, 2008).

Telemedicine represents the next frontier in medical care, and it is something that healthcare providers are getting pressured. Mainly because there are two types of patients, the older patients who are used to traditional face-to-face encounter and the next generation who are more interested in utilizing more digital health tools so they don’t have to come to the office. But how much pressure do they feel? According to Logicalis US, an international IT solutions and manages services provider, that depends on the generation of patient being served.

HIT solution should seek for improvement opportunities within the health care system which may include cost savings, quality, workflow and higher revenue. Therefore, telemedicine concept should incorporate all the derived aspects within the informatics formulated. The charter relied upon before implementing telemedicine should address the business, research, and the strategic aspects.

The American Recovery and Reinvestment Act provides funding to support a telemedicine infrastructure for rural areas, therefore, it would be prudent for the responsible management to have a full scope of what the health care system in the respectively rural areas would work best when implemented. Analysis on the demographics and geographical parameters.

**Stakeholders Analysis**

Stakeholder’s analysis in the rural health care system would be the limits in considerations before settling upon a certain HIT solution for the health care. A panel of stakeholders who represent individuals who are involved in health care services have to meet their perspectives on telehealth – individually and organizationally. They have to consider that telemedicine can further the healthcare outcome while controlling costs.

All issues at each department of the health care should be covered through the new communication technology employed. Telemedicine incorporation should be supplied by reputable communication technology providers to ensure efficiency and effectiveness prevail the several challenges encompassing the health care system. Considering the following may call for a support and approval on the implementation of telemedicine.

* Reimbursement
* Credentialing
* Broadband and Infrastructure
* Research

The business must be cost effective, plus having integration properties to all the health care functionalities. This type of communication should on board urban and well-equipped facilities together with rural and less professionally equipped facilities in a bid to see improvement relationships between different levels of health care (Torrance, et al., 1972).

**Risk analysis**

Although telemedicine is very much relevant and helpful to the current rural health care setting, there are categories of risk associated with the new approach.

* Privacy, security and patient confidentiality
* Credentialing
* Informed consent
* Maintaining continuity of care
* Ensuring reliability of the technology
* Choosing the appropriate clinical context
* Providing the oldest form of telemedicine – telephone device.

 Analyzing the risks which come along with telemedicine leaves some certain conditions as prevalent and intriguing to the implementation of the new technology-based system (Goldschmidt, 2005).

**References**

Anderson, G. F., Frowner, B. K., Johns, R. A., & Reinhardt, U. E. (2006). Health care spending and use of information technology in OECD countries. Health Affairs, 25(3), 819-831.

Field, M. J. (Ed.). (1996). *Telemedicine: A guide to assessing telecommunications for health care*. National Academies Press.

Goldschmidt, P. G. (2005). HIT and MIS: implications of health information technology and medical information systems. Communications of the ACM, 48(10), 68-74.

Gupta, D., & Denton, B. (2008). Appointment scheduling in health care: Challenges and opportunities. IIE transactions, 40(9), 800-819.

Torrance, G. W., Thomas, W. H., & Sackets, D. L. (1972). A utility maximization model for evaluation of health care programs. Health services research, 7(2), and 118.

Vaidya, A. (2013). 7 Telemedicine Risk Categories. Retrieved from [www.beckershospitalreview.com](http://www.beckershospitalreview.com)

Unknown (2012). Becker’s Health IT & CIO Report. Retrieved from [www.beckershospitalreview.com](http://www.beckershospitalreview.com)