* Write a four to five (4-5) page paper in which you:
  1. Identify and analyze what you believe to be the most significant new technology requirements for the health care industry. Indicate how providers should approach the implementation of this new technology requirement that you have identified. Provide support for the response.
  2. Analyze the basic technology underlying health care information systems. Argue that the need for technological innovation and / or modification is most pressing. Support the argument with examples.
  3. Recommend an innovation / modification, and explain how the recommendation could improve the overall level of health care in your own community. Include specific example(s) using local hospitals or other health care providers to support the response.
  4. Suggest a key action that senior health care leadership could take in the community in which you live to push the boundaries of information technology management. Next, speculate on the effect to the community as a result of the improvement to the health care technology.
  5. Use at least three (3) quality resources in this assignment. **Note:** Wikipedia and similar Websites do not qualify as quality resources.

Your assignment must follow these formatting requirements:

* 1. Be typed, double spaced, using Times New Roman font (size 12), with one-inch margins on all sides; citations and references must follow APA or school-specific format. Check with your professor for any additional instructions.
  2. Include a cover page containing the title of the assignment, the student’s name, the professor’s name, the course title, and the date. The cover page and the reference page are not included in the required assignment page length.

The specific course learning outcomes associated with this assignment are:

* 1. Demonstrate an understanding of the basic technology underlying health care information systems.
  2. Apply senior management’s role in information technology management.
  3. Use technology and information resources to research issues in health information systems.
  4. Write clearly and concisely about health information systems using proper writing mechanics.

Technology Assessment

Date

Technology Assessment

**Analyze the basic technology underlying health care information systems and determine the most pressing need for innovation.**

The most basic analysis of health care information systems is led by the importance of aligning Information Management/Information Technology (IM/IT) with organizational strategy. (Gland, 2008) Health care is considered an applied science, therefore, if it is to be effective; information must be recorded, records must be conserved, be organized and they must be retrievable in several different ways. To provide health care without the recording and analysis of the results is only of passing use and of no help to the next or future generations. To align IT/IM with organizational strategy is to determine the objectives of management and set the goals of the technology system to go in that direction.

In a health care organization, often the task of organizing the technology of the agency falls under the Chief Information Officer (CIO). This individual is tasked with developing a full understanding of “clinical information systems, regulatory and reporting requirements and the use of information in strategic planning and decision support. . .” (Gland, 2008, p. 28) The CIO must attend the meetings and have close relationships with the clinicians, the accountants, the staff and most importantly the Chief Executive Officer (CEO) of the health care organization. The CIO must understand the management of the organization as well or better than any employee because he is responsible for the design, implementation and sustainability of the IM/IT system. “Concepts and principles are accompanied by demands for more data on healthcare activities and for information systems to accumulate and process data.” According to Vikkelso, (2007) both clinicians and end users always want more and faster information. This is clearly the most pressing need of modern health care technology delivery systems.

The earliest systems could record, conserve, organize and retrieve information as pencil and paper file systems were used for hundreds of years. Today, with digital capture of information, increasing populations, longer lifetimes, and the advances made in medicine this information must be managed in a digital format. The CIO must hire others, whether it is outsourcing or local to follow his vision in directing an IM/IT system that will be cost efficient, functional and deliver the end result of easy use and accurate information. The CIO must be innovative, highly trained to understand the big picture in computing and skilled in sales of his new ideas to the organization.

The CIO must be able to explain the importance of the newest ways to provide the very best data for the future. The information must be programed to use an enterprise format to be presented by cloud digital architecture. Experienced analyst, Lutchen states, “They recognize that there is no greater impairment to innovation and success than falling behind in the IT curve.” (Journal of Health Care Compliance, 2005)

**Explain (with specific examples using local hospitals or other health care providers) how your recommended innovation will improve the overall level of health care in your own community.**

To deliver the demand for more information at higher speed the CIO must make a decision to use an enterprise format which would involve integrating all of the computing data in a group of servers which is able to analyze the information and deliver it in the whole or in the part, depending on how the user requests it. An enterprise system is capable of recording and sorting great amounts of information. It is able to catalogue it in a way that only gives the requested information to the user.

An example of how an enterprise system might work would be; if a patient is at his primary care doctor’s office, the doctor believes that the patient needs immediate care at the hospital, the doctor would be able to connect immediately with hospital intake and transmit the patient’s information. This would avoid lengthy registration and insurance gathering time at the hospital. The information is already on file at the doctor’s office. There is no reason for it to take two to three hours to re-gather the same information when time is critical. The sooner the patient is in and taken care of the soon he will be out of the hospital.

Enterprise architecture and use would also benefit the receiving hospitalists. The pharmaceuticals which the patient is taking, his medical, history and current symptoms would not have to be re-taken. They can be checked by what he has just provided his personal physician. Enterprise software always provides space for the receiving physician to input his own interpretation. All of the patient’s rights and information are there in a confidential way that he may choose for the new physician to see.

To be successful, the enterprise software must be supported by cloud computing hardware and software. This allows large amounts of information to be stored in complex servers which is able to segregate it by request. It means that the local physician’s information can be accessed at the hospital when it is approved. It also means that if the patient must have surgery and the surgeon finds something unexpected when he makes the incision, he is able to teleport the information to a specialist half way around the world for advice. With the experience and knowledge of an expert, the patient is able to have a higher chance of recovery at a faster speed.

The downfalls of enterprise and cloud computing is to convince the boards, accountants and others in power of the economy of enterprise software and cloud computing infrastructure. The programs and information gathering are the highest new expense, with the ongoing cost of paying for servers and transmission outside of the organization. The industry overall, will object to the privacy issues. Gara states, “ The Health Industry, for instance, is continuously looking at innovative ways to reduce healthcare costs and improve customer service but at the same time wants to exhibit compliance with the guidelines set by its administrative bodies, HIPAA and HITECH.” (Cloud Computing Journal (2011). The architects of the format are able to satisfy doubters as they explain that health care costs and solutions can be resolved and privacy issues held in compliance.

Another risk is the gathering of such large amounts of information in one space. The provider must take every precaution of cyber-attacks as well as local attacks which would delete information.

**Recommend actions that senior management could take in the community in which you live to push the boundaries of information technology management.**

Senior management must explain to the community that these processes have been in use for many years already. It just takes more money and understanding of technology to convert the thinking in the community to allow so much information to be stored digitally. Many people don’t want any information about them stored; however, when it comes to saving a relative’s life based on a few hours of speedier relief from an accident or chronic condition, they often change their mind.

In today’s economy, money is very important. To change the health care technology system to an enterprise system with cloud architecture would initially cost more, but as newer technology became more accessible by the rules of supply and demand, the price would go down. There is also no price that is too high to save a relative’s life and if community members could see that this is very likely, they would find a way to afford it.

**References**

Gara, M., Strukhoff, R., (2011) Cloud computing and health care: health care organizations in US are truly concerned about their existing healthcare infrastructure. Cloud

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Glandon, G., Smaltz, D., Slovensky, D., (2008) Austin and Boxerman’s Information Systems for healthcare management. (7th ed.) Health Administration Press. Chicago: IL

Lutchen, M., (2005) IT governance within a health care setting: reinventing the health care industry. Journal of Health Care Compliance. Aspen Publishing.

Vikkelso, S., (2007) In between curing and counting: performance effects of experiments with healthcare information. Blackwell Publishing Ltd., Malden: MA