Building health information technology workforce research paper

Health & Medicine, Healthcare

The importance of Health Information Technology (HIT) to the healthcare sector cannot be overemphasized. The availability of information as well as the ability to exchange this information is very crucial to the efficient delivery of care across all levels of the health care system. These levels involve different stakeholders that include the care team, patients, and health care organizations among others, which in totality comprise a political, economic system. The diagnosis and effective treatment of patients depend on the capacity of care providers, whether individual medical practitioners or large healthcare organizations to access three main types of medical related or clinical information. These are the patient’s records, the largely dynamic medical vs. evidence base and finally the provider orders that guide the patient care giving process. In addition to these there main types of information requirements, care providers also need information regarding patient’s values and preferences as well as crucial administrative information such as the availability and status of medical supporting resources.

The above facts just reveal how much health care information technology is relevant to the entire health care industry. In light of the rapidly advancing and dynamic world, this importance and relevance continues to grow. Technological advancement has played a huge role in elevating the requirement for information technology in the healthcare sector. This technology for instance has led to the discovery of better patient care systems, better diagnosis systems and better disease management systems. Consequently, the standards of healthcare across the entire globe have increased and for medical practitioners to be at par with the elevated

standards, they must utilize health care information technology. At the modern day and age, it is unimaginable to think how the health care sector would survive without health information technology (HIT).

The implication of the Health Care information technological is that it has led to massive improvement and efficiency of health care quality. Health information technology (HIT), provides a framework for health care system transformation that enables the coordination of care among providers, reduction of overall costs through efficient sharing of prior clinical information that is useful in the diagnosis as well as treatment decisions, facilitation of patient registries, quality medical reporting and the empowering of individuals to actively participate in their health and wellness.

In a nutshell, some the aspects emanating from health care information technology that lead to improvement and efficiency of health care quality are:

- Medical errors prevention
- Reduction in clinical care related costs
- Increased efficiencies in the health administrative sectors
- Decreased number of paperwork
- Increased access to improved and affordable health care

In terms of medical errors, health care information technology will play humongous role in the reduction of these. Although some errors in clinical care may emanate form care provider’s ignorance, many of the errors result from a lack of information. The frequency of medical errors in the healthcare fraternity has been on the increase in recent years. These errors have

resulted in enormous patients harm as well as costs. Consequently, the prevention of medical errors is a priority for all healthcare stakeholders across the globe. This is where Health Information Technology comes in. Health care systems that utilize information technology in their care provision present an opportunity for a reduction in medication errors. Such systems include digitized clinical order entries, computerized dispensing, electronic medication reconciliation, barcode medication amongst others. Such components form a key part of the strategy to reduce and eliminate medication errors and in light of this; there have been increased calls for the full integration into the health care provision process. The reduction of medication errors is of crucial importance because as statistics suggests, in the United States alone, about 1 million people are victims of medication errors annually. Out these, most of them are errors emanating from preventable events. In addition to the physical implications of medication errors such as patient health deterioration or even death, medication errors are accompanied by huge costs for the correction of these errors. Therefore, it is very crucial that health information technology in incorporated into the healthcare fraternity to reduce the occurrences of medication errors and consequently lead to an improved and more efficient health care.

Research findings show that the adoption of healthcare information technology, specifically electronic health records (EHR) can lead to the generation of billions of dollars through cost savings. At the same time, it can lead to improved healthcare quality as well as the reduction of medical inputs by facilitating shorter hospitals stays that have been prompted by care that is better coordinated, reduced nursing time that is spent on time

wasting administrative tasks, better and more efficient use of medications in healthcare institutions, improved drugs utilization, radiology and lab services in an outpatient setting. Healthcare organizations can save many labor hours through charting electronically as well as providing clinicians with immediate and smooth access to patient date.

Before the emergence of healthcare information technology, most of the medical records in health care institutions were kept in analogue files. This meant that the process of recording patient information involved physical notation on a piece of paper. These papers were then put in single patient files which were then stored in the health care institutions medical. The process of acquiring patient data requires that the clinician go to the store to retrieve the file and this was a tedious and time wasting process. In addition, files stored in such a setting were prone to destruction and loss. The adoption of health care information technology in form of electronic health records will help to eliminate this problem. An electronic health record is a record of a patient’s health information that includes medications, radiology reports immunizations, patient demographics, and lab data amongst others. Electronic health records are generated and also stored on an electronic platform and, therefore, allow the easy retrieval and exchange of information between health organization’s and institutions and even individual physicians. Data stored on an electronic platform is usually very safe and cannot easily be lost.

The other way through which health information technology leads to improved and more efficient health care is through increased access to improved and affordable health care. As shown earlier, the incorporation of

information technology in healthcare systems translates to reduced operation costs for these institutions. The reduction of operation costs directly translates to reduced patient costs. Cost efficiency in healthcare institution brought about by computerized systems means that the institutions can afford to reduce the costs of care that they charge to patients. The overall implication is that patient care becomes more affordable. In addition to making health care affordable, health information technology also increases the accessibility of health care to patients. For instance, patient in a far way place can visit any clinician in that location and easily access his or her health care records across the digital network in which they have been stored which can facilitate the efficient provision of care from that particular clinician.

In relation to the work force, this is one particularly one area that as a stumbling block in health care institution’s efforts to integrate health care technology into their system, As mentioned earlier, technology advancement has been taking place in an unprecedented rate. Although this advancement has opened previously unimaginable doors in terms of health care provision. The sad thing is that the rate of release into the field of trained personnel and relevant workforce from the medical training centers that can adequately utilize technology does not match the rate of technology advancement. In fact, the health care information technology sector has been plagued with massive shortages. This has led to a derailment in the process of actualizing health care information technology. The incorporation of healthcare information technology into the health systems is a very sensitive process that requires a skilled workforce and personnel.

Consequently, a shortage in the workforce leads to the mentioned derailment of healthcare information technology actualization, So, why is there a shortage of professionals in the Health Information Technology sector?

This shortage can be attributed to several factors. One of them is the lack of adequate training facilities. Health Information Technology is a relatively new concept and consequently, the institutions offering such programs are limited. In addition, the program is treated with a lot of apprehensiveness. Many medical schools, in fact, have tended to concentrate on simple and traditional theoretical medical concepts and have been reluctant to incorporate contemporary concepts such as health information technology curriculums. Consequently, when graduates form such programs are released into the real medical filed, they have no capability to use technology into their medical practice and this acts as an impediment to the global incorporation of health information systems into global health care.

The shortage of professionals in the healthcare information sector can also be partly blamed on the government. Health care is a matter of federal concern and one of the government’s primary responsibilities is to ensure that quality, and efficient care is availed to all citizens. As seen previously, one of the most effective ways of ensuring improved and more effective health care through health information technology. The government should be at the forefront of encouraging health institutions to incorporate this crucial vice into their systems. In addition, it should take the necessary steps to ensure that information technology is adequately integrated into the healthcare system. One of the best ways is to facilitate the training of

professionals. The government has been slow on this aspect and has not put in enough measures to oversee the training of information professionals who can augment the process of health information technology integration into the health systems.

In order to realize success full integration of health information technology into the health sector, the existing workforce must be reinforced. A workforce of professionals must be built. This can be achieved by opening up medical training institutions that combine the aspects of health and informatics and impart relevant skills to students. This requires the government to invest stupendously in the health care information technology information. The government should essentially work with health care institutions to establish training centers whereby students are taught how to integrate the concepts of health care and information technology. Sate medical schools should also be required to incorporate an aspect of health information technology into their curriculum so that not only will the students be equipped with medical theoretical concepts, but also are taught how to manipulate these concepts with the relevant information technology.

In addition to the existing professionals, the subsisting professional’s skills can also be upgraded to plug the gap in the market in future. Health care institutions should make it their duty to improve on the skills of their already existing professionals by providing occasional training sessions. As mentioned previously, information technology is very dynamic, and there is a need for people to be continuously updated. In light of this, the existing workforce should be informed and trained on new information technology concepts whenever they arise so that they adequately adapt and

incorporated them into their practice. Such measure will inadvertently help to reduce the gap that has been prevalent in the health care field.

Healthcare Information technology is a concept that is hugely applicable on a wider scale. The incorporation of health information technology into health system on an international wider scale will bring universal health information benefits. There will be facilitation of health information retrieval and exchange. The global standards of health care provision will be raised significantly and in essence, the world shall become healthier in general. The implementation of health information technology on a wider scale will in a general sense bring about health integrity across the global health sector. The role of health information technology to this regard will be that it will eliminate several health related hazards that range from the inaccurate provision of data on medications and drugs, inaccurate costs calculations and payments, insufficient and inaccurate patient health information amongst other aspects.

However, it is of extreme importance to note that benefits from health information technology on a wider scale will only be realized if there is an adequate and efficient workforce to oversee its implementation. The process of implementing health information technology cannot be left to unskilled professionals. It must be overseen and facilitated by individuals who have acquired the necessary training. Otherwise, it may lead to the misuse of information technology and failure to chive the goals for which it was set up to begin with. This once again augments the need for the relevant stakeholders to ensure that an efficient workforce is there. This area has significantly been ignored and in fact, the relative slow pace of health

information technology adoption into the health care sector has been particularly blamed on the costly nature of information technology tools. The fact that there is a shortage of professionals to oversee the implementation and integration of health information technology within the health sector has been overlooked even in research processes. This is clearly very dangerous and if there is, any hope for HIT to be fully implemented into the health sector such issues must be immediately addressed. If it is not addressed, the situation will remain the same whereby a shortage of health information technology professionals will be an ever-present dogma hindering the improvement of the health care sector in a general context. The experts also need to contribute their part, possibly by conducting more research that is designed to find an ever-lasting solution to the problem of inadequate professionals in the healthcare fraternity.

Most of the benefits emanating from the proper implementation and integration of health information technology into the health sector explored previously were in regards to individual care. However, the benefits that emanate from HIT are not confined to an individual level. There are a lot of associated public benefits. These benefits mainly regard public health. One of them is that heath information technology will facilitate early detection and diagnosis of infectious and chromic disease outbreaks and epidemics in the country as well as the entire globe. HIT provide a platform for the early detection of such diseases and consequently, measures can be taken to reduce the negative consequence and possibly avert public chaos. In addition to detection and diagnosis, Health Information Technology also leads to improved tracking of disease management, specifically chronic

diseases. In addition, health information technology ensures the delivery of value based health care, which emanates from comparison of public health information across geographical and social landscapes to come up with the most effect standard of public health care provision.

The road to successfully implementing health care information technology has been plagued with a variety of barriers. These barriers have impeded successful realization of improved and more efficient health care. The most pronounced barrier has been that of costs. The cost of buying the information technology tools as well as implementing them and integrating them with the existing health care systems is an expensive process even for well-endowed health care institutions. Another aspect of cost is that of training the workforce and professionals to oversee the implementation of health information technology. When health institutions evaluate all these cost, most of them are discouraged from even pursuing health information technology in the first place.

The issue of the inadequate professionals is one that has not received much attention, but is actually one of the primary barriers of the implementation of health information technology. Even if the cost barrier was eliminated and all the other aspects of HIT availed, an efficient workforce and a team of qualified professionals is required to oversee the implementation of this technology. Consequently, more efforts should be directed at ensuring the health sector has enough professionals who can oversee the smooth implementation of health information technology into systems and consequently lead to an improvement of general health care

The exploration of the above research problems reveals that there is still a

lot of things that need to be done before the country can realize a fully functioning health information technology. This is particularly in regards to an effective work force and related professionals. This, therefore, means that the process of building an effective health information technology workforce must commence now.

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