Good research paper on factors encouraging use of it in healthcare

Technology, Internet

Impact of Information Technology on Healthcare

Introduction

The field of healthcare has been undergoing evolution since its development where cultural practices were at the center of health service provision. In the 20th century, traditional approaches were replaced by evidence-based operations to improve the service outcomes. Due to improved health and awareness, populations have come to understand the importance of healthy living and they now demand quality services from health professionals. Currently information technology (IT) is gradually becoming the center of healthcare service provision. Most healthcare professionals are trying to embrace IT to improve service delivery and ensure the best patient outcomes.

Traditional approaches in the delivery of health services are slowly fading away for instance contact between the patient and doctor can be avoided at some instances. Modern communication tools are being used for follow up and educating patients while other systems are being used to maintain the safety of patient information and privacy. Through the internet and other IT mechanisms people have become more aware of their health status and their rights as patients hence demand accountability from health practitioners.

The field of healthcare is wide but needs to be addressed adequately since only healthy people engage in developing the country. Quality is one of the factors that that encourage health professionals to embrace IT. Without IT, quality of services cannot improve, and because diseases are changing their

nature then the nature of treatment and management need to be improved. Affordability is a major concern in the health sector; there has been an increase in costs for healthcare services and most systems are encouraging the insurance policy approach to solving this. Technology has significantly reduced the costs of health services for instance consultations could be done online while machines are being developed to perform procedures that could have needed several health professionals (Herrick, Devon, Linda & John, 170).

Efficiency is also a factor that has encouraged the development and utilization of IT. Most machines when properly used reduce inefficiencies that may come from the health practitioner hence reducing patient errors. When traditional approaches are used in the present world, most people may not believe that they will solve their health issues especially when they understand that there is an alternative for their treatment. Better outcomes for the patient can only be achieved by technological systems that avoid errors in screening and decision-making processes. Effectiveness and efficiency are important to health, and this can only be a success through IT.

Types of IT in Healthcare

In a healthcare setting, IT may be implemented in different sections including administrative, clinical or financial. Various technologies have been used and are continuing to be researched upon in order to improve the services of healthcare. Electronic Health Recording (EHR) systems are currently widely being advocated. They involve electronic storage of patient information encouraging its security. Bar coding is also used in healthcare

where products are scanned to observe their information. The health practitioners to obtain current screening and management recommendations use Clinical Decision Support System (CDSS).

The automated dispensing machines (ADMs) are always utilized in distributing doses of medication to the patient. Picture archiving and communications system helps in the integration of radiological in conjunction with diagnostic images from various hospital machines like X-ray and computed tomography scan. Radio frequency identification is a technology used in tracking patients within the hospital vicinity while computerized provider order entry (CPOE) is used in ordering for instance lab tests, transfers, discharges.

The greatest benefit of incorporating IT in healthcare operations is to improve the quality of life. These technologies help patients to recover quickly so that they can go on with their life activities. Other technologies may be for instance improved monitoring systems, scanning device, and other therapy machines. Development and incorporation of IT machines and telehealth has resulted in surgeries that are robotic where physicians must not be in the room for all procedures to be completed.

Application of IT in Healthcare

Technology has become part of human beings in the present world; it affects every aspect of our life for instance communication, infrastructure, business and the healthcare field. It is thus important to note that it will never be easy to run away from technology. In the healthcare sector IT has been applied in various sectors including gathering of data, management of illnesses,

communication, treatment and research. All these processes have an aim of improving the healthcare sector. IT increases the competitive advantage of a health institution in this present world making it more acceptable than those that still use traditional approaches.

The Internet as a Source of Health Information

The internet can be used for other various purposes other than as a health information resource. Apart from doctors and populations gaining awareness about various health matters, it can also be used for delivery of health services. Telemedicine is a concept gaining the attention of many health stakeholders. Due to patient empowerment, the pressure has mounted onto health professionals to acquire specialist knowledge and be updated on various health issues to avoid being challenged by their patients. Generally, the internet is a powerful tool with the ability to educate, encourage interaction, support professional training and encourage equity in healthcare.

Improved Treatment and Management of Diseases

Technology is the source of improved healthcare in all settings. It has ensured the production of new improved drugs, advanced healthcare machines and life-saving treatments that ensure recovery of the sick. Improved health practices and knowledge with the combination of technological systems has greatly improved the sector. Research has been encouraged in advancing all practices to bring less suffering to patients and improves recovery rates. It is important to acknowledge that without advancement in health IT treatment and management of most diseases that

are undergoing mutation will never be possible.

Various technologies have been developed to improve on the management and treatment various diseases. Some of them include sensors that capture important physiologic features, for instance, implantable glucose monitors and oximeters. There are various IT applications utilized in the management of chronic diseases, for instance, clinical decision support (CDS) which helps interpret patient information and patient-focused applications and portals like integrated voice response (IVR) systems. With advanced technology, patients will feel more secure since they increase positive outcomes for them.

Use of Social Media

The social media is being used as an advocacy and informative tool for health institutions and professionals. Information about different health situations can be found in social media, people advocate for patients rights and information about the developments in healthcare are spread through social media. Healthcare institutions utilize the social media to create a relationship with their clients and get feedback from them. Awareness interventions and outreach programs can be used through social media while consultations can also be made here (Naylor et al. 18).

Social media is particularly important in engaging the current generation that is technology savvy. This is important for this generation as they are always active on social media and most of the time they avoid health interventions set for them. The most common social media avenues for health professionals include online communities, here they can engage with

other experts, familiarize with developments in various health topics, and network. On the other hand populations may get educated, network, track their progress as patients and research from health social media sites.

Enhanced Care and Efficiency

The safety of patients has drastically improved when errors are being reduced through the introduction of reliable information systems. Health professionals have the opportunity to record patient's information electronically while they can also confirm to ensure right procedures and treatment. The screening section has improved in that diagnosis of diseases is quicker and dependable. In addition, health information systems have improved that all records are safe from any damage. With all the information, researchers will have an easier time developing the industry and the sector will wholly develop.

Accountability

Health information systems (HIS) have increased accountability rates in the health sector. Currently, it is easier to contact a health professional and book for an appointment. Health practitioners can also advance their knowledge through online studies. Most of the information they need is available on the internet such that they can easily make the right decisions. Telemedicine is a field that improves health status especially in the regions with fewer resources since it allows consultation with other advanced practitioners. HIT systems can be used to track a healthcare providers actions and the resulting outcomes of patients, and this can be used to measure accountability levels of a particular health practitioner. The same information

can also be used in establishing the quality and performance of those assisting healthcare professionals in a particular area. Awareness of patients that is improved by information technology has put health practitioners to pressure, as they must be accountable to those they serve. When health practitioners become accountable, then they instill discipline in the health sector and, as a result, patient outcomes improve.

Improved Research

Developed HIS has greatly improved health research through provision of machines that are efficient and effective. Data analysis has been improved, and presently experts can easily study health trends and predict coming health hazards accurately. This helps health practitioners adequately to plan for preventive interventions and ways of managing the situation. Research scientists are continuously researching to try and find out new procedures and technologies that will help diagnose, treat and manage illnesses. Through available information technology, research personnel can advance their studies and come up with new technologies.

Influences of IT on Healthcare Cost

IT has a great impact on healthcare costs in that it mostly reduces health costs. Most of the expenses in healthcare (over 30%) results in duplication of costs as well as clinical inefficiency. The internet can vitally reduce this expenditure through the online provision of some healthcare services like consultations. This type of system reduces doctor-patient contact as it encourages adequate data provision. Although the installation and implementation of some healthcare IT systems may be viewed as expensive,

most have long run advantages, for instance, some services will decline in costs. IT helps reduce duplication of patient records since most of them are electronic; this ensures efficiency and proper management of information (Naylor et al. 17).

The evolution in the information technology sector will lead to a point where testing services will be carried on within homes. Not so important hospital visits will be eliminated by 20% when IT communication structures are adequately utilized. Through efficiency, savings could be generated since available resources will be used efficiently and channeled to the neediest ones. Efficiency brought about by IT is essential in reducing wastage in healthcare practice.

Impact of IT on Quality

Accountability in the healthcare sector may be encouraged by IT for instance through the provision of the electronic payment system. Other structures may be put to boost the motivation of health personnel and ensure that services provided are to the required levels. New IT-sensitive equipment in the healthcare aim at increasing effectiveness while reducing obstruction in service provision, and this is a component of quality. There is an opportunity for healthcare professionals to shift focus from expert oriented decision-making to a system of internet-based one that is cheaper and instant (Naylor et al. 18).

Information available online offers professionals and health institutions an opportunity to learn from one another. Development in the IT sector will encourage improvement of quality of life in the process curbing future

expenditure on health. Patient safety can mainly be reducing healthcare errors, and IT including informatics, as well as artificial intelligence, can highly address this. Patient errors can be reduced by 80% through motivation of the staff and provision of essential resources that are required for smooth running of the institution (Naylor et al. 18). Generally, IT is involved in the provision of improved healthcare services to people.

Impact of IT on Access

Access to healthcare services can greatly be increased by IT components for instance telemedicine. Access to healthcare is a major concern within rural areas and through IT this problem can be addressed. Online consultation and monitoring facilities can be established in these places though awareness program is essential since most rural populations less utilize internet materials. Since the provision of services is through an online platform, most human errors will be eliminated. An instance of improved access is the electronic prescription pads for health practitioners that enable them obtain a patient's history for a particular disease and if any required drug is present in the pharmacy (Powell, John, Darvell &. Gray, 76).

The internet will ensure capacity in service provision since services will be readily available at any location a person is. Decision-making will be improved since patients will have the opportunity to decide on the direction to take with their health after being given all required information. Privacy is highly maintained through IT-based service provision as well as storage and access to healthcare data. With all the advancements in healthcare IT, there

is improved value for health through enabling the professionals deliver positive outcomes for all people.

Negative Impacts of IT on Healthcare

The greatest challenge in adopting IT in most health institutions includes lack of incentives. The beneficiaries of health information technology (HIT) are mostly the patients and health insurance agencies, these institutions will gain very little from installation of HIT while they are the ones who foot the bills for their installation. Most HIT systems reduce the revenue of health institutions hence they avoid investing in them for instance availing test results for diagnosis to internet sites will likely reduce the number of people visiting the institution for same services, something that they do not want. Added costs through investment in HIT while the returns are low result into reduced initiative in HIT installation (Herrick, Devon, Linda & John, 171). Even with the positive outcomes that they bring, HIT also has a negative impact to the healthcare sector. There are increased incidences of over-reliance on HIT, for instance, electronic medical records (EMR), and this could result into errors. When not properly utilized there could be inaccuracy in patient's data that could result into misinformation since service provision would rely on available data. The flow of information in other circumstances could reduce for instance collaborations between health professionals could be altered. System failures could be experienced resulting to not being able to access critical information and at times, there could be prescription errors.

Even though HIT systems improve on efficiency, there is no assured

performance on their functioning. The reliability of information could be at stake since the issue of corrupt systems is a challenge to solve. Data overload could be another negative impact of IT. Most health institutions still use non-electronic methods even when they have HIT since they view them as inefficient in conveying information. They view paper work as appropriate avenues for improved efficiency, awareness development and encourage organization according to self-understanding here (Naylor et al. 18).

There are security concerns over the security of HIT use within the health sector. Patient data storage is a very big challenge that needs a solution. Health Insurance Portability and Accountability Act (HIPAA) foe example discourages communication amongst health professionals and health plans. Provision of EMRs to some healthcare practitioners could be insecure as it may expose patient information to other people causing insecurity. Sharing of patient information could limit correction of any mistakes since tracking would be a challenge.

Conclusion

It is evident that Information Technology has had a great impact in the professionals within the healthcare sector. With a close look on these impacts, it is clear that the positive impacts outweigh the negative. Mainly affordability, access, safety, and quality, which are main factors to consider in health provision, can easily be achieved through proper installation and utilization of HIT systems. The government needs to improve on the incentive sector for health institutions to establish HIT systems as this is the main challenge they face. It is vital for all stakeholders to be included in the

implementation process of HIT for instance healthcare managers and consumers should be consulted on implementation procedures rather than leaving the matter to only the policy makers.

Works Cited

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