

DIGITAL SKILLS AND RESEARCH METHODS IN HEALTH AND SOCIAL CARE

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INTRODUCTION

The growth of technology has changed the way the healthcare service is viewed and delivered because healthcare management is seen as the intersection of information science, computer science, information technology and healthcare. The modern healthcare management deals with the resources, devices and methods required in optimizing the acquisition, storage, retrieval and use of information in health and biomedicine (Burney et al., 2010). This means that the development of information technology has been advantageous and beneficial to the healthcare service industry because it brought about improvement in the quality, safety and efficiency of the service being delivered to the patients.

This report would seek to address the use of contemporary technology in diagnostic, administrative and care support, use of technology during the Covid-19 and the benefits to the healthcare professionals in collaboration and data handling.

EVALUATION AND RELEVANCE

THE USE OF CONTEMPORARY TECHNOLOGY IN HEALTHCARE

Information technology has been advantageous to the healthcare service industry in running of effective diagnostics in order to ascertain the proper and right medical report of the patients, administrative duties of the institution that manage the resources available to the dispensation among the departments and provide efficient care support with updated and current tools for the patients. The ways in which information technology has improved diagnostics is the use of X-ray computed tomography, ultra-sonography, positron emission tomography (PET), Magnetic Resonance Imaging (MRI). According to (Prochazka & Daniel, 1997), there is continuous improvement in the imaging techniques used which has resulted in a better data acquisition especially the dynamic MRI which has enabled the field to replace most obsolete and mundane procedures. The importance of the innovative diagnostic is that it provides accurate information that is useful to guide treatment on the presence or absence of a disease or a condition and the likelihood with which a disease would respond to treatment or on the patient prognosis (Van-Beek et al., 2019).

THE USE OF TECHNOLOGY DURING COVID-19

The pandemic showed the importance of the information technology in the healthcare service industry due to the severity and mode of transmission that were unforeseen by the medical experts and this led to rapid changes in the practice. Technology was used for contract tracing, population surveillance, case identification and evaluation of interventions in order to study and contain the virus and mitigate the spread. The most effective way in which technology was used during the Covid-19 pandemic was in the control of the spread of misinformation that were prevalent in most social platforms and they stoke the tension by creating panic in the minds of the population. According to (Manjunath, 2020), tech giants such as Google, Facebook and YouTube were working tirelessly to guide people to the source of information that are verified by the WHO or local authorities and government in order to guide the spread of the information that could

cause an uproar or promotion of fake or unproven medication for the virus. Information technology made it possible for the professionals to maintain communication channels by providing services from a distance for example conferencing digitally, communicating, desktop sharing, utilizing digital information and exchanging virtual services (Vargo et al., 2020).

THE USE OF DIGITAL COMMUNICATION, COLLABORATION AND PARTICIPATION

Information technology has been beneficial especially in the communication, collaboration and participation aspect of its use in the healthcare service. Teams in the hospital are able to share details and information that are helpful to the health of the patients despite their different locations. Technology made the collaborative work of medical teams possible by the development of Groupware technology that is used to provide innovative resources and ways in which the teams could collaborate in the delivery of patient care at both the clinical and managerial levels (Househ, 20005). The technology refers to synchronous and asynchronous computer-based technologies that support the communication and collaboration between face-to-face team and teams that are dispersed through space and time. This means that technology has made it possible for professionals to continue providing services to the patients despite their geographical locations. Communication is essential to the practice of medicine and it is more effective when information technology developed faster means because information such as patient data were transferred in time and important details were not lost in transmission.

DIGITAL IDENTITY, WELL-BEING AND SAFETY

The advent of information technology has improved the service delivery of the healthcare industry through computerized data management system of patients and professional's information in the hospital. According to (Prochazka & Daniel, 1997), the increased use of digitized medical imaging in diagnosis and treatment has prompted the development of Clinical Information Systems (CIS) or Computer-Based Patient Records (CPR) that enables physicians, nurses, dietitians, social workers, physical therapists and others to share information about patients directly through the system. Patient digital identity enables the medical professionals to impart fast and effective healthcare services to patients and ensure sustainable development and it assists the providers to improve organization and sharing of medical records and reduction of medical fraud by protecting patient data (Marley, 2019).

Protecting patient data against cybercriminals is a major problem that the healthcare providers needs to contend with because the continuous application of the information technology in the healthcare service has made most of the data collected for patient use to be vulnerable to prying thieves. Installation of anti-malware and anti-virus systems are no longer enough but it is expected that robust encryption of patient's records is used by properly identifying and authenticating patients' identities through automated systems (Sullivan, 2011).

THE USE OF DIGITAL LITERACY FOR PROFESSIONAL CAREER DEVELOPMENT

Nowadays employers are seeking qualified and competent digital literates that would be able to proficiently use the equipment and tools available without much training and supervision. This was pointed out by (Vrana, 2016) in his report about digital literacy in which he implied that digital literacy is directly related to an individual's employability which is represented by the combination of factors and processes which enable people to get employed and stay in their jobs. Digital literacy which is the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers and it is also the ability of professionals to perform task effectively in a digital environment. Professionals who stay abreast with the modern and updated versions of information management and processing system would project themselves in an exceptional ground because they would continuously improve in the delivery of their professional services without incompetence. Professionals are expected to effectively

process and analyze information in order to be able to interpret messages differently and also recognize the use of media that influence their behaviors and ethical and legal issues.

THE RELEVANCE OF TECHNICAL PROFICIENCY FOR INFORMATION AND DATA HANDLING

Technical proficiency is essential to effectively protecting and handling of vital information and data of the patients in the hospital because healthcare professionals could better serve their patients by implementing the technical savvy that is necessary to the service. Technical proficiency is required because it would ensure that communication are effectively carried out without losing the essential details and messages are not misinterpreted or lost in transmission. Handling of the devices and equipment also requires the skills that would enable the professionals to be able to learn and operate them without much fuzz.

CONCLUSION

Digital skills are very important for the modern day workforce especially the healthcare service industry where most operations are computerized due to the advent of information technology. Patient diagnostics and treatments are made better using the developed information technology and these have brought better care into the healthcare service. Protecting patient data is also imperative in the healthcare because the use of information technology storage facilities such as cloud storage has left the data vulnerable to theft by hackers. Therefore, it is important that healthcare professionals are competent in both communication and data handling because it would be beneficial to their professional careers.

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