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A REPORT THE USE OF TECHNOLOGY, DIGITAL TOOLS AND TEHNIQUES TO IMPROVE EFFICIENCY IN HEALTHCARE

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INTRODUCTION

Digital skills are the abilities and technique to utilize digital devices, techniques and communication to operate information and data transformation. Digital techniques are used in different sectors and it has changed the aspect and scenario of healthcare in 21st century (Leon, 2020). Digital transformation is the process of adopting the updated technology to transform the operations of the business and in health care, it has changed the efficiency to deliver and produce medicines and supported the clinical team, research and development team, monitored the quality of care, measuring the disease and its spread, tracking of drugs and vaccines. In recent coronavirus has adversely affected the economy, working culture of all sectors but the digital platform has benefited the healthcare to optimize and research about the vaccine and provided safety measures (Konttila, 2019).

The report will determine the use of digital technology in the health care sector, use of contemporary technology, use of digital communication and collaboration in health care, use of digital literacy for professional career development and relevance of technical proficiency for information and data-handling.

CONTEMPORARY TECHNOLOGY IN HEALTH CARE

Digital tools and techniques have transformed and improved the treatment, equipment, machines and medicines of the healthcare sector. Due to technology various changes took place in the healthcare department like MRI scanners, X-Ray machines, CT scan, blood test, dialysis machines, all cancer treatment through different equipment like chemotherapy, SPECT/CT equipment in cardiology, EEG machines for measuring brain waves, motorized thrombectomy system that helps to analyse and treat the patients of blood clot etc. (Gopal, 2019). It has advanced the operational methods and working of the doctors and health care department. It has helped the doctors, nurses and other staff members in healthcare to assess the treatment, record data and information of patients, health and safety measures, improve sustainability in the hospitals, and improve the cleanliness in hospitals. The process and updated technology have helped the scientist to identify and analyse the patient history and medical treatment for the future (Walsh and Rumsfeld, 2017).

USE OF TECHNOLOGY DURING COVID-19

Rapid transformation in technology has triggered various departments and in Covid-19 numerous changes occurred in technical equipment in healthcare. The pandemic has affected all sectors but it boosted technological advancement and it transformed the perception of doctors, scientists and other healthcare personnel (Zeng, 2020). Like there were many inventions and innovations that took place and supported the operations of the healthcare department like Robotic technologies, Drones, UV-C disinfection and sanitisers, vital sign monitor, PPE kits, portable dialysis equipment, telemedicine and remote monitoring, ventilator, face mask, and COVID-19 POC diagnostic tools.

Robotics advancement: Robotic technologies were utilized to support the work operations of the doctors as people have to follow certain safety measures because the coronavirus is a communicable infection and disease. Robots were innovated and supplied to the healthcare departments and research and development team to communicate among the doctors, nurses and patients at a distance and they provided medical treatment and medicines to the patients (Vanani and Amirhosseini, 2021).

Drones: According to some reports in Canada Drones were designed to identify the symptoms and patients of Covid-19. It was used to detect whether the people are following the restrictions and social distancing rules imposed by the government or not (Agarwal, 2020).

PPE kits: The kits were designed to help the doctors to perform the medical treatment, surgeries, operations and other treatment of the diseases in the hospitals.

UV-C Disinfection and Sanitisation: Sanitisers were developed as a primary tool to prevent the spread of Covid-19 infection by the R&D department of healthcare and in a huge quantity it was used in hospitals for the safety of the doctors and patients etc. (Alloghani, 2018).

USE OF DIGITAL COMMUNICATION, COLLABORATION AND PARTICIPATION

Every sector was badly affected and faced failure due to pandemic but the technological advancement helped the healthcare industry to work efficiently and increased the sales, revenue and productivity as compared to the last many years (Walsh and Rumsfeld, 2017). Communication and collaboration is a very important aspect to resolve the conflict issues and other problems and through the digital platform, it has reduced the barriers of conflicts. The stability of the operations of the healthcare was not at all affected by the coronavirus, and with the help of digital innovations, different activities were performed. It helped the doctors and scientist of the healthcare department to be connected internationally to discuss the solutions to coronavirus infection across the world. Different tools, applications and software were used for the continuity of communication, collaboration and participation among the employees of the healthcare department like Microsoft team, Zoom application, Slack, social media platform, emails, video and audio conferences through mobile devices, Google suit, basecamp, Microsoft office 365 etc. These applications helped the employees to be connected and minimized the global distance. It helped them to perform their internal and external operations of the hospitals like treatment, vaccine development and other diagnoses (Haggerty, 2017).

DIGITAL IDENTITY, WELL-BEING AND SAFETY

Although digital technologies are important and helpful to maintain the collaboration and continuity of operations of the healthcare department but there some negative consequences too like everything has two faces one positive and another negative (Shankar, 2018). So, the healthcare department should also focus on the safety measures of the people with digital use and maintain the digital identity safe and secured. Digital identity is the data or information the individual possess on the digital platform to represent the identity of the person. IT can be secured through password, username, date of birth, online searching activity, medical history, criminal history, buying behaviour and social security number.

Thus the hospital department should also secure their employee's online data, computer system password, records of medical history on mobile devices, or computers. Cybercrime and data theft is already increasing in every sector thus to stop these activities in hospitals and medical centres the healthcare department should impose strict restrictions to use the data and technical advancement in security and safety should be followed. The data should be secured with a difficult password and there should be some restrictions to the people entering the hospitals and patients rooms for the safety and security of the doctors, nurses and patients in the healthcare department (McDougall, 2018).

DIGITAL LITERACY FOR CAREER DEVELOPMENT

Digital literacy is a process in which education is provided to the students through online mode for the career development aspect (Sicilia, 2018). During covid-19 there was a major recession in the education system but the technology advancement helped the educators and students to be connected and pursue their programs through online mode like Zoom application, Microsoft team, e-books, software designed by the educational organisations, e-library etc. It has helped the medical students also to learn the theoretical part through online classes and e-teaching mode. This digital platform enhanced the skills and knowledge of the students and even it supported the educators to develop their career. The digital model and medical concept interconnect on different bases like telemedicine, appointments of doctors suggestions from doctors and mobile applications practices to medical students to improve their ability and proficiency of working operations. Therefore the digital literacy is a tool to guide and balance the continuity of the communication to be updated with the information and health devices (Harding, 2017).

TECHNICAL PROFICIENCY FOR INFORMATION AND DATA HANDLING

Through digital technology the healthcare department has helped to maintain and record data of all diagnoses, infectious diseases their precautions and safety measure, research and development assessment, treatment criteria and most important it has provided superb equipment to check the efficiency of any disease (Harding, 2017). Data management skills are important to secure and handle the confidential information of the organization and therefore in the healthcare department, it is necessary to be proficient in technical skills. Various skills are the integrity of data, managing the accounts and files, database design and planning, navigation of database software. In the healthcare department professional are using the enterprise data warehouse EDW, to safe and secure the integrity of the data. It is a must for the healthcare department to select proficient professionals to handle the

data and information with technical skills. Technical proficiency is an ability, skill and knowledge to perform any task or operations through a programming language, mathematical task, designing programs, tools and equipment etc. and thus to for data handling and information healthcare department should focus on technology advancement (Gopal, 2019).

CONCLUSION

Thus, from the above report, it can be concluded that digital transformation in technology has improved the treatment, research and development analysis and entire work efficiency of the healthcare sector. This study has explained the uses of contemporary technology in healthcare, the use of technology during the pandemic, the use of digital communication, collaboration, and participation in terms of work culture. It has determined the aspect of digital techniques, identity and safety measures through updated technology, the use of digital literacy and transformation in professional career development, and relevance of technology in information and data handling for health care practitioners, and professionals. The report explained the scenario of digital literacy and its impact on the lifestyle, working culture, and professionals of the health care sector.

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