



DSR – HEALTH AND SOCIAL CARE

ASSIGNMENT 2

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RESEARCH

Research Skills in National Health Service (NHS)

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Introduction

The NHS (National Health Service) oversees England's public healthcare. NHS offers healthcare at all levels, from community up to hospital care. With the exception of dentistry, prescriptions and optometry, most NHS services are free of charge (Thorlby and Arora, 2020). There has been a growing concern of technology use in today's healthcare sector. This report aims to explore on technology application and its impacts in healthcare sector, specifically technology use in NHS. Secondary research will be used to acquire both qualitative and quantitative data for the report.

Necessity of Research to identify significant Aspects of the Technology's impact on the Healthcare Sector

According to Jonsson et al (2019), technology pervades every aspect of critical care. The bedside technology is essential for patient assessment and monitoring, as well as treatment delivery. It also facilitates access to critical information and can improve communication. Even though technology provides numerous advantages to patients and practitioners, it can also cause problems. A critical area of study is the human-machine liaison, or how patients and healthcare providers engage with health-care technology. Critical care relies heavily on technology. It enables health care professionals to conduct extraordinary, yet it is also an alluring as well as self-perpetuating power that those who employ it must carefully monitor (Jonsson et al, 2019). Therefore, for effective health care administration and running, it is necessary for research to be carried to identify the impacts that technology has on health care sector, alongside ways to curb the negative impacts for effective performance of the sector.

Topic selection for research

NHS has been selected as the focus for this study. Hodder (2020) states that the National Health Service is a complicated system that can be difficult to comprehend at times, particularly when determining who is liable for its various aspects. It is made up of many different organizations, each with its own set of roles, obligations, and areas of expertise. These organizations offer a wide range of services and assistance to patients and caregivers. The primary goal of the NHS is to ensure health care services are accessible to all people, poor or rich. Technology is critical to achieving this. As a result, it is an excellent subject for studying technological applications in the health care sector. The structure and operation of the NHS have changed in recent years. Individuals may not have noticed because it will not have impacted how the individuals gain access to their hospitals or local doctors. However, the changes have impacted who makes health-care decisions and who controls the budget for these services. Adjustments in who uses technology and how technology is used in the NHS are also a question of concern (Hodder, 2020).

This provides another reason to investigate technology in NHS in order to clearly define its roles and who is in charge of its applications today.

The Application of Modern Technology and its impact on the NHS NHS Traditional Technology

While the NHS enters its eighth decade, it is worthwhile to reflect on how the innovation spirit that resulted in the formation of a distinctive health service that is free to everyone at all delivery point is still existence and operating smoothly across the organization. The concept of employing an industrial sonar on pregnant women ought to have appeared absurd when Glasgow's Ian Donald initially proposed it briefly after the second world war. Moreover, he collaborated with a native electronics company to improve the instrument then eventually developed ultrasound technology in 1958, allowing pregnant women alongside their medical providers in the United Kingdom to enjoy realistic images of their babies in the womb. Ultrasound technology also is widely utilized in other medical fields for diagnostic purposes (Zaliunas et al, 2017).

Furthermore, a group coached by John Wallwork and Roy Calne in 1986 performed the very first effective lung, liver, and heart transplant in an arduous twelve-hour operation procedure at Cambridgeshire's Papworth Hospital. The operation is seen as laying the foundation culturally for growing recognition of organ donation as well as transplant technology from both healthcare professionals and the public at large, in addition to being a revolutionary medical accomplishment (Sellers et al, 2017).

Additionally, PROBOT, created in 1991 by a group in Imperial College, London, was the initial robot to effectively eliminate tissues from a patient within a healthcare setting, scaling back an augmented prostate gland underneath the supervision of a surgeon. Surgeons can now carry out complex, small amounts of processes with greater precision owing to robotic-assisted surgery (George, Brand and Marescaux, 2018).

NHS Modern Technology

Collins (2018) discovered that there are numerous innovators working in the NHS today, as demonstrated by the approximately two hundred innovation disclosures received by Health Enterprise East every year from NHS workforce. This aspect of growth has persisted throughout the NHS's history, resulting in thousands of lifesavings as well as life-changing technologies, some of which are still very much in widespread utilization today. Unfortunately, it is a widely recognized fact that National Health Service has been lagging in adopting new innovations.

Additionally, in the year 2000, the world's initial GT (Gene Therapy) children trials lacking an immune system were conducted. Great Ormond Street Hospital launched the world's initial trials for gene therapy for babies born with no operating immune systems, establishing on its continued research into paediatric treatments. By 2011, fourteen children with heretofore death forms of acute combined immunodeficiency had been cured with gene therapy (Ferrua and Aiuti, 2017).

On the other hand, in 2013, the world's initial bionic hand was created. An NHS worker in Scotland created the world's initial fully expressed prosthetic hand. The i-Limb, which allows war veterans, amputees and those birthed with limb deformities to move personal fingers as well as perform twenty distinct grips via muscle movement or smartphone app, has the possibility of changing the amputees' lives, war veterans, and the ones birthed with limb flaws (Young, 2022).

How Modern Technologies have Benefited NHS Employees and Patients

The NHS has recognized the necessity for digitization in order to provide modern services that are faster, secure, and more efficient. Their Long-Term Plan for Digitalisation expands the NHS's offering of digital health applications and services. Enabling individuals to look for information and assistance online lessens the requirement for unnecessary in-person care. It also means that the NHS is able to provide people with ongoing assistance in managing their needs for health and well-being (Gandrup et al, 2022). To render managing referrals simpler, the NHS recently launched an e-Referral Service, that has been incorporated into NHS application. According to research, whenever patients reserve their own consultations, the failed to attend rate drops by half, allowing patients to be treated more quickly while reducing the need for procedures to refer patients once more. The NHS is investing not only in app services, but also in IT system improvements as well as technological advancement. Alongside a variety of practical priorities guiding this digitalization, it is evident that this shift to technology is crucial for assisting the NHS (Lewis, 2019).

Furthermore, the NHS cannot function without its employees. A study by Robinson (2017) found out that the NHS is increasingly discovering that among their prime advantages is staff satisfaction via their mobile digital solution; MIA. Following the implementation of efficient technology by a foresighted Lead Midwife alongside her community group, their Bradford score enhanced by seventy four percent. The group did not only implement MIA Maternity, but also enhanced Wi-Fi accessibility within their hubs community plus initiated mobile workstations. However, by using a mobile solution such as the MIA, which can be used either online or offline to finish clinical notes, midwives save an average of five hours a week, and the duties they are having to cut back on, are the factors that making them frustrated at work. This is due to the fact that MIA synchronizes them in a transparent way, eliminating the need to return to foundation at the final moment of the day to re-enter paper notes in to Trust's EPR. It stems from the fact that files and valuable forms are no longer misplaced because they are digitized and available on a touchscreen tablet from wherever, thereby boosting team sharing of information. Meaning, that midwives can now arrive home on time during the completion of their shifts, whereas previously they had to compete for a limited number of workspaces at base to start typing their notes (Robinson, 2017).

The Danger of Modern Technologies

The issue concerning health data is that it often contains several of the highly private and important information about people. Unfortunately, this tends to make it one of the most lucrative for identity thieves as well as unscrupulous advertisers (Aceto, Persico and Pescapé, 2018). Healthcare data could be held hostage, utilized identity fraud, or even used to commit insurance fraud. Patients' private health information (PHI) can be stolen and sold for a high price by cybercriminals. In actuality, thieved medical records can fetch ten to twenty times the price of stolen numbers of credit card. While data is becoming more critical in the healthcare sector, it becomes more appealing to attackers. While the NHS continues to expand the uses of modern data gathering as well as analysis tools within the healthcare field, larger caution will be required. To protect itself plus its patients, the NHS requires collaboration with the technology sector (Abdelhamid, Gaia and Sanders, 2017).

Methodology

This report has employed secondary research method. Secondary research refers to a research technique that entails compiling existing information gathered from various sources. This encompasses both internal and external sources. Secondary research is available in a variety of formats, including published sets of data, reports, as well as survey results, and could also be obtained from internet sites, libraries, and exhibitions (Martins, da Cunha and Serra, 2018). The most significant benefit of secondary research is the fact that data is usually easy to obtain, especially when gathered from online materials. Secondary research sources that are more traditional, like the government archives or libraries, are also easily accessible. This helps in saving the researcher a significant amount of time as well as allows for the collection of a potentially larger dataset (Sherif, 2018). Furthermore, this research method is less expensive because there are no direct data gathering from a cohort, which is significant to most researchers. A significant advantage of using secondary research also is that it enables a researcher to spot knowledge gaps within a study area during an early phase of the study. For this report, the qualitative and quantitative data were obtained from the secondary sources' survey results. The survey's results obtained were from the questions which aligns with this study's purpose.

Conclusion and Recommendation

Technology pervades every aspect of critical care. Even though technology provides numerous advantages to patients and practitioners, it can also cause problems. The National Health Service is a complicated system that can be difficult to comprehend at times, particularly when determining who is liable for its various aspects. The primary goal of the NHS is to ensure health care services are accessible to all people, poor or rich. With NHS venturing into its eighth decade, it has evolved with time in reference to technology utilization. The NHS has recognized the necessity for digitization in order to provide modern services that are faster, secure, and more efficient. However, healthcare data could be held hostage, utilized identity fraud, or even used to commit insurance fraud. Therefore, it is recommended that, to protect itself plus its patients, the NHS needs to collaborate with the technology sector. This study has made use of secondary sources; books, articles and journals, obtained from the library and internet search engines such as Google Scholar. Through this study, research skills have been acquired.

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