



Cover page

THE IMPACT OF TECHNOLOGY AND COMMUNICATION SYSTEMS IN HOSPITALS

STEPHANIE NKOLI KENECHUKWU

Module code: BMSW4003

Module: Digital Skills and Research Method

Lecturer: Kushik

SECTION 1: Abstract

The increase of Information Technology also called IT in helping special assignments and services has made its proliferation important to gain knowledge to the factors that are needed to technology usage in the day-to-day basis of staff in the Health care Sector.

This secondary research is on the technology and communication systems that are used in Hospitals. It will be using past data from different sources.

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SECTION 2: Introduction

Technology, according to Andrew Hague (2008), is any software, feature, service, or application that has a computer component. This review covers all health care innovations in both the Wired and Wireless user interface. Business-to-market (B2B) and consumer-to-consumer (C2C) technologies are embedded in the consumer interface. B2B innovations do not communicate specifically with customers, such as IT infrastructures and specialized surgical instruments. Alasdair Liddell, Stephen Adshead and Ellen Burgess ((n.d.))

Telemedicine, AI-enabled medical devices, and blockchain electronic health records are just one example of the digital revolution in healthcare, how patients communicate with healthcare professionals, and how clinicians change patient data. There are consequences for treatment planning and health. Decided.

From Electronically recording your health report, Mobile Health, Telehealth, Smarter Partnerships, Self-service kiosks to Communicating wirelessly in surgical practices, technology has made people healthier and increased life expectancies in hospitals.

<https://www.tmcnet.com/topics/articles/2018/08/24/439267-top-5-technologies-being-used-hospitals-clinics-today.htm>

<https://healthinformatics.uic.edu/blog/5-ways-technology-is-improving-health/>

SECTION 3: Research Title

The use of technology in hospitals

SECTION 4: Rationale

The use of artificial intelligence and communication systems have increased in hospital settings over the years. Data collection methods will be implemented on several modules, including analysis of security methods, ethical methods and efficiencies of various technology and communication methods. The result of this study will show the positive aspects on how automatic technology and electronic communication improves hospital settings.

Data produced from this research will be used to show these positive aspects and provide insight into security and ethical issues. In addition it is hoped for this project will be the beginning of awareness of technology and communication systems in hospitals.

SECTION 5: Objectives

The aim of this research is to find the technology and communications systems that are used within hospital settings. There is also evidence that the use of telecommunications services, such as videoconferencing, online communication, is increasingly common in hospitals as it can be helpful in sharing skills. For example, it has been shown that the diagnostic accuracy of a general radiologist improves when the general radiologist can consult a specialist remotely through low-resolution video sharing of radiographic images. It is now widely accepted that with the right technologies, digitally transmitted images will be theoretically suitable for traditional imaging techniques.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1579411/>

Patients in the second sample were given access to medical specialists from other fields. Patients can either fly there or have a video consultation. Patients' preferences for traveling abroad have changed since choosing the video conferencing option. Initially, 20% wanted to travel for treatment, but after giving a tele-lecture, only 6% chose this option. Most of these results show that automated connectivity networks and technologies are beneficial. In fact, it is obvious that the use of such technology is advantageous only in specific situations.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1579411/>

SECTION 6: Methodology

The increase of technology and communication systems that are being used in hospitals is increasing, but what kind of artificial intelligences do hospitals use in their day-to-day basis. This research is written to also evaluate the impact of technology in hospital settings, using a quantitative data collection from other sources. As this academic research paper is conducted with secondary data the sources would be from websites, journals, government records etc.

SECTION 7: Literature review

According to Bettina B Bundschuh, Raphael W Majeed, Thomas Bürkle, Klaus Kuhn, Ulrich Sax, Christof Seggewies, Cornelia Vosseler & Rainer Röhrig (09. November 2011)

overall, the three aspects of 'suitability for use', 'self-description' and 'conformance to user standards', which were tested in this review for the various clinical programs, were highlighted: information as the basis for successful ergonomics of the applications. positive and significantly better than the benchmark results for SAP R / 3.

Users of clinical information and medical control systems agree that so many different modules are used, although users of pharmaceutical information systems do not agree. Experts from the GMDS "Clinical Information Systems" working group developed questions on functionality and interoperability to assess the effectiveness of clinical information systems, in addition to human-computer interaction. Staff rosters, clinical information systems, and medical monitoring systems received lower ratings.

Most diets have a wide range of values; The AIMS, the medical control structure and the clinical information system deserve special mention in this regard. Medical control systems, ERP systems, and clinical information systems all received lower marks. The survey was carried out by the "Clinical Information Systems" research group of the German Society for Medical Informatics, Biometry and Epidemiology (GMDS) and the Justus Liebig University in Giessen (Clinic for Medical Informatics in Anaesthesia and Intensive Care Medicine). (According to Bettina B Bundschuh, Raphael W Majeed, Thomas Bürkle, Klaus Kuhn, Ulrich Sax, Christof Seggewies, Cornelia Vosseler & Rainer Röhrig (09. November 2011))

In general, highly specialized information systems with limited and well-defined capabilities, such as AIMS, PDMS, pharmacy IS, LIS, and RIS / PACS, are probably higher than less customized clinical information systems. On the other hand, administrative information systems, clinical information systems and medical control systems received low ratings. Poor data availability or non-functional differences can explain the poor performance of HR registry systems in presenting all important details. The surprisingly poor results of medical control information systems can also be caused by more challenging users than in other fields. Consequently, they can be used as benchmarking data for user-oriented information engineering in hospital healthcare IT, which is essential for the advancement of hospital IT systems and, by extension, clinical practice. Utility has been evaluated in various ways, and the findings of effectiveness separated by software ergonomics and IT systems in this system are discussed. The findings reveal significant differences between different data structures, as well as wide standard deviations. (According to Bettina B Bundschuh, Raphael W Majeed, Thomas Bürkle, Klaus Kuhn, Ulrich Sax, Christof Seggewies, Cornelia Vosseler & Rainer Röhrig (09. November 2011))

Specialized information systems improve human-computer interaction, but general information systems that need to solve many tasks receive a low rating.

However, when compared to SAP R / 3, clinical information systems are better suited for activities and learning and can be compared at least according to consumer preference. As

a result, accessibility is one of the most important issues in enabling IT in health care, such as creating dialogue between people and information systems. The best specialized systems (AIMS, PDMS, RIS, LIS, and Pharmacy IS) produce results for standard specialized systems such as word processing software and database management systems. (According to Bettina B Bundschuh, Raphael W Majeed, Thomas Bürkle, Klaus Kuhn, Ulrich Sax, Christof Seggewies, Cornelia Vosseler & Rainer Röhrig (09. November 2011))

In particular, the broader prevalence of AIMS and clinical information systems can be attributed to significant material discrepancies between individual IT products and their application in clinics. Diagnosis of use based on hospital information system questionnaires, Hamburg KC, Vehse B, Bludau HB. This can be illustrated by the wide range of applications for the Clinical Information System, while PDMS and RIS are highly specialized systems with well-defined workflows. This document focuses on mission relevance, preparation efforts, and fulfilment of customer preferences, which are distinguished by the information system.

Often, it is surprising that information systems for healthcare management have surprisingly poor performance, which should be the subject of further research. These results show significant differences between different information systems. Almost all systems, especially RIS and Pharmacy Information Systems, deny the need to enter the same information in multiple locations. Due to the improved functioning of the medical information system, it is difficult to imagine daily work in a hospital without the help of IT. Analysed IT techniques may not eliminate the entry of useless data, but RIS and management information systems seem to solve this problem in the best possible way. Often, it is surprising that information systems for healthcare management have surprisingly poor performance, which should be the subject of further research. These results show significant differences between different information systems. (According to Bettina B Bundschuh, Raphael W Majeed, Thomas Bürkle, Klaus Kuhn, Ulrich Sax, Christof Seggewies, Cornelia Vosseler & Rainer Röhrig (09. November 2011)).

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The purpose of this study was to review the current state of use of clinical IT in Germany, in which users of IT devices in all systems had the opportunity to evaluate their use of the underlying IT system. (According to Bettina B Bundschuh, Raphael W Majeed, Thomas Bürkle, Klaus Kuhn, Ulrich Sax, Christof Seggewies, Cornelia Vosseler & Rainer Röhrig (09. November 2011)).

SECTION 8: Secondary Data Analysis

SECTION 9: Conclusion

Evidence shows that there is a great impact in hospitals because of the technology and communication system it has changed and saved the lives of patients and has made hospital staff workload easier and faster to finish with. According to data hospital settings always checked and made sure the technology and communication systems were in a reasonable price before purchasing the product. No one knows the future so this research can only predict that the popularity in technology and communication systems will increase.

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Module code: BMSW4003
Module: Digital Skills and Research Methods
Lecturer: Kushik
Student Name: Stephanie Nkoli Kenechukwu

<https://www.tmcnet.com/topics/articles/2018/08/24/439267-top-5-technologies-being-used-hospitals-clinics-today.htm>

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