

Certificate of Higher Education in Health and Social Care

Digital Skills and Research Methods

- LCHS4002 -

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Introduction



- This presentation seeks to explore the use of technology in the healthcare sector.
- It evaluates the use technology in the following areas:
 - Administrative, diagnostic, and care support.
 - During the Covid-19 pandemic.
 - Communication, participation, and collaboration.
 - Digital literacy for employees' well-being and career development.
- Moreover, it explores the relevance of technical proficiency in handling data.



Diagnostic technologies

- Diagnostic technologies are technologies used to diagnose a disease (Golinelli et al., 2020).
- Technology plays a crucial role in ensuring accurate diagnosis of patients.
- Technological tools used in this area include artificial intelligence, lab-on chip, stethoscopes, and electrocardiographs.
- Technologies such as imaging are used to diagnose diseases such as cancer, pneumonia, and ulcers.
- This ensures that human biases are removed from the diagnosis process.
- It also removes errors that could be done by physicians based in traditional methods (Golinelli et al., 2020).



electrocardiograph

Diagnostic technologies



- Grutters et al., (2019), argue that diagnostic technologies are cost-effective.
- They improve innovation.
- The use of technology in biomedical and molecular diagnosis has led to discovery of new diseases and new ways of treatment.
- They also improve clinical decision-making

Diagnostic technologies

- However, the use of medical diagnostic technologies has some set backs.
- Clinicians can make human errors, especially when they do not know how to use the technology.
- The initial cost is high (Pinsky & Hayden, 2019).
- Some technology companies can offer technological tools that are not accurate.



Care support Technology

- Technologies used in care support include EHRs, computerised disease registry, and computerised decision support technologies (Hashimkhojaeva & Sadikova, 2022).
- They ensure accuracy in primary and secondary care.
- They ensure safety of patients.
- They help in sharing information with patients and their families.
- Technological tools used for care support include biosensors, connected inhalers, artificial intelligence, and ECG monitors.



The Use of Technology during Covid-19 pandemic

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- Technology was used to determine social determinants of health.
- Data on the Covid-19 sought to determine social determinants of Covid-19 (Golinelli et al., 2020).
- This technology is being integrated in identifying social determinants of other diseases.
- Technology was also used in developing the Covid-19 vaccines.
- This could be an eye-opener for the development of vaccines for other diseases such as HIV.

The Use of Technology during Covid-19 pandemic



- The pandemic accelerated the use of technology in healthcare.
- Some technologies used during the Covid-19 pandemic include telehealth technologies and interactive personal health records.
- Telehealth technologies minimized the spread of the disease by allowing physicians to prescribe medication to patients at a distance (Hashimkhojaeva & Sadikova, 2022).
- Interactive personal health records ensured that patients enter records that were received by doctors.



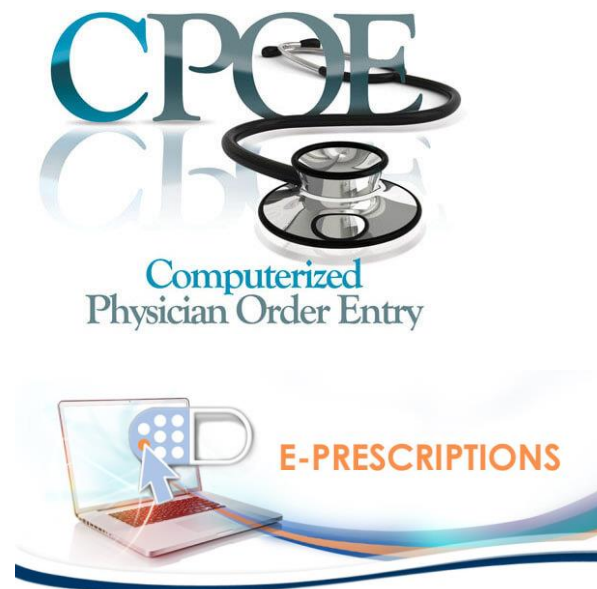
Administrative Technologies

- These are technologies used to manage operations in health and social facilities (Lee & Yoon, 2021).
- These technologies are crucial in ensuring a smooth workflow of care givers.
- For instance, HR officers in hospital manage the working hours for caregiver.
- This technologies ensure that medical information for patients are readily available.



Administrative Technology

- Technology ensures efficient administration of health facilities.
- The key technological tools used in healthcare administration include Electronic Health Records (EHR), telehealth technologies, interactive personal health records, computerised physician order entry (CPOE), and E-prescriptions (Hashimkhojaeva & Sadikova, 2022).
- EHR increase efficiencies in healthcare administration and reduce the cost of health.



Relevance of technical proficiency for data and information handling



- Technical proficiency for data and information handling is important.
- It helps in healthcare research.
- It also helps healthcare stakeholders to determine progress in solving a certain healthcare problem or disease (Dash et al., 2019).
- Proper data and information handling shortens the treatment time.



- Digital communication is used to enhance real-time communication among care givers.
- It improves quality of care by ensuring face to face communication.
- Technologies such as emails and CPOE ensure physicians can communicate with the care team easily.
- It helps to develop person-centred care approach.
- Limitations include misinterpretation of information, manipulation of identity, and breaching of personal data (Gross, 2020).



- Technology enhances collaboration and participation in provision of healthcare (Konttila et al., 2019).
- Collaborative care is enhanced as caregivers can communicate and process orders in a networked system.
- Moreover, physicians can collaborate using technologies such as telehealth technologies.
- Technology allows other people such as family members to participate in the provision of healthcare.

Digital literacy for employee well-being and their professional career development

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- Technology plays a crucial role in ensuring the well-being of healthcare workers.
- Employees use technology for their mental well-being.
- Technology is also used for employee training (Alzoubi, 2022).



Digital literacy for employee well-being and their professional career development

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- Technology is also used for self-improvement.
- E-learning technology is used by healthcare workers to further their education and acquire new knowledge.
- Healthcare employees also gain new skills using technological tools such as internet videos and reading over the internet.

Conclusion



- The use of technology ensure accurate diagnosis and efficiency in healthcare administration.
- As technology continue to be the key driver of change in healthcare, there is need to equip healthcare workers with proper IT skills.
- Job training should be done frequently in healthcare facilities.
- It is important for healthcare worker to develop technical proficiency for data and information handling.

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