

USE OF TECHNOLOGY TO IMPROVE DELIVERY AND QUALITY OF HEALTH CARE SERVICE IN MALAWI

KEY MESSAGES:

1. **New communication technologies represent a powerful tool for fostering discussion, learning, and collaboration among healthcare professionals, as well as between them and their patients.**
2. **Social media can be effectively used to improve healthcare delivery and organization.**
3. **Given the risks associated with the use of new communication technologies in the health-care sector, national guidelines and protocols need to be established.**

THE AFRICAN DIGITAL REVOLUTION

The last two decades have been characterised by a rapid spread of mobile technologies on the African continent. According to 2016 data from the International Telecommunication Union (ITU), the United Nations agency for Information and Communication technologies, about 80.8% of Africans owned a mobile phone. Africa remains the fastest growing mobile phone market in the world. The rapidly increasing access to mobile technologies, including mobile phones and social media, has been changing the dynamics of daily life, from how business is conducted to the delivery of healthcare and health information (Mourdoukoutas, 2017).

Access to information for many people, including in the rural African communities, is becoming more simplified, and in this context the nature and speed of engagement between individuals and the healthcare system is changing rapidly (Shekar & Otto, 2014). The use of technologies and social media platforms is increasingly becoming more relevant for the provision of health care and public health programs (Pimmer et al, 2018). In addition, it also benefits healthcare workers per se, such as making successful school-to-work transitions and stay connected with their peers after graduation (Pimmer et al, 2019, 2021).

THE CONTEXT IN SUB-SAHARAN AFRICA

The delivery of healthcare services in rural and marginalised areas in Sub-Saharan Africa (SSA) faces many challenges that dramatically reduce its efficiency and effectiveness (Shekar & Otto, 2014). Lack of access to up-to-date information, poor communication among health care workers, and professional isolation are often regarded as the main challenges undermining the ability of healthcare professionals to effectively deliver health services, particularly in rural and more remote areas (Shekar & Otto, 2014). The adoption and use of modern technology in the healthcare sector provides a pathway to address these challenges.

BENEFITS OF MOBILE TECHNOLOGY USE AMONG HEALTH CARE WORKERS

Use of mobile technology including social media has been suggested as a one possible pathway to train, support, and empower healthcare workers and to strengthen their professional networks in order to better address health-related sustainable development goals (SDG 3) (Pimmer et al, 2021, Shekar & Otto, 2014).

THE BENEFITS OF PROMOTING THE USE OF COMMUNICATION TECHNOLOGY AMONG HEALTH-CARE WORKERS ARE BROADER AND EXTEND TO THE CONSUMERS OF HEALTH-CARE (I.E., PATIENTS).

IMPROVEMENT IN HEALTH CARE DELIVERY AND ORGANIZATION

Evidence in SSA shows that healthcare professionals use social media for better coordination and organization within hospitals, which can in turn improve the quality of healthcare services patients receive (Pimmer et al, 2018, Pimmer 2019). More efficient use of medical instruments and equipment, better control of drug logistics and optimised shift arrangement result in improved patient experience (Pimmer, 2019). Social media can also be used for promoting health awareness (Ajuwon & Ajuwon, 2019) and healthcare delivery. For instance, reminder text messages sent to guardians about the completion of children immunizations have been effectively employed (Oladebo et al, 2021).

INCREASE IN HEALTHCARE WORKERS CONNECTEDNESS

Social media platforms can facilitate communication among healthcare workers and decrease feelings of professional isolation (Nyasulu & Chawinga, 2018; Pimmer et al., 2017). Furthermore, social media can also facilitate the exchange of professional information and experience among healthcare workers, which in turn results in knowledge improvement and better quality of care provided to patients (Pimmer et al., 2017; 2019).

IMPROVEMENT IN THE QUALITY OF HEALTHCARE TRAINING

Communication platforms such as Whatsapp can be effectively used between instructors and students (Ajuwon et al, 2018) and can facilitate the exchange of information and study materials among students (Pimmer et al., 2018; Pimmer, 2019).

Social media platforms enhance peer support, interpersonal learning environment and professional identity development, i.e., developing a sense of belonging to and identification with the healthcare community. This in turn translates into higher quality of healthcare services provided to patients (Pimmer et al., 2018; Pimmer, 2019).

CHALLENGES FOR ADOPTING MOBILE TECHNOLOGY IN THE HEALTHCARE SECTOR IN MALAWI

HEALTHCARE PROFESSIONALS FACE MULTIPLE CHALLENGES IN THE USE OF TECHNOLOGY FOR HEALTH IN MALAWI.

Some of the challenges faced by healthcare professionals include:

POOR INFRASTRUCTURE AND INTERNET COVERAGE:

The quality of the network infrastructure in Malawi is still low, limiting internet coverage in remote parts of the country (Pankomera & Greunen, 2018). For instance, access to internet services in 2019 was at 14.6 percent, with a large urban-rural disparity (40.7 percent of urban residents had access to internet services compared to 9.3 percent in rural areas) (NSO 2020). High Internet cost hinders a broader expansion of the use of social media by healthcare professionals (Pankomera & Greunen, 2018, Nyasulu & Chawinga, 2018, Pimmer et al, 2017).

UNRELIABLE POWER SUPPLY:

There is unreliable power supply in Malawi, especially in rural areas that are still not covered by the grid (Pankomera & Greunen, 2018). Where electricity is available, load shedding can make the supply of power unstable (Nyasulu & Chawinga, 2018). Unreliable access to power sources prevents healthcare professionals from reaping the benefits of social media because most of these benefits require immediate and synchronous interactions among users (Pimmer et al, 2017).

LIMITED TRAINING OF HEALTHCARE PROVIDERS IN THE USE OF NEW TECHNOLOGIES:

Lack of formal training in the professional use of new technology such as social media is in part due to the failure to include their use and best practices in healthcare training programs. As a result, a wider expansion of social media use among healthcare professionals is currently hampered (Pankomera & Greunen, 2018).

RISKS ASSOCIATED WITH THE USE OF SOCIAL MEDIA IN THE HEALTHCARE SECTOR

DESPITE THEIR BENEFITS FOR THE HEALTHCARE PROVIDERS AND PATIENTS, THE USE OF NEW TECHNOLOGY SUCH AS SOCIAL MEDIA IN THE HEALTHCARE SECTOR IS ASSOCIATED WITH RISKS THAT NEED TO BE ADDRESSED BY POLICY MAKERS.

Notwithstanding its large benefits, several risks are inherent to the use of social media in the healthcare sector.

BREACH OF PRIVACY AND CONFIDENTIALITY:

Privacy of patient information cannot be fully ensured in mobile and social media spaces (Pimmer, 2019). Even the use of privacy settings and encrypted messages in one-to-one conversations and closed groups cannot guarantee the confidentiality of the exchanged information because messages can still be forwarded to other users and cross-posted to other platforms (Pimmer, 2019).

DISTRACTION AND NEGLIGENCE:

Having easy access to a mobile phone and social media can result in distraction during work, which in turn can affect the attention paid and care provided to patients (Pimmer, 2019). Distraction can also reduce healthcare provider's productivity and increase the rate of errors in the healthcare procedures (Pimmer, 2019). Moreover, without appropriate infection control procedures such as regular hand washing with soap and water, the use of mobile devices by healthcare professionals in health care settings can be a source of bacterial contamination with serious health consequences for patients (Pimmer, 2019).

INADEQUATE BEHAVIOUR IN DIGITAL GROUPS:

Although many healthcare professionals use social media to promote their professional development, some engage in inadequate practices such as posting inappropriate content, and using disrespectful language (Pimmer, 2019). Such practices can give rise to irritation and frustration among group participants and considerably affect the effectiveness and the benefits for healthcare professionals that can be derived from social media (Pimmer, 2019).

EXPANDING THE USE OF NEW COMMUNICATION TECHNOLOGIES IN THE HEALTHCARE SECTOR CAN BE A POWERFUL TOOL FOR TRAINING OF PROVIDERS AND IMPROVEMENT OF HEALTHCARE DELIVERY AND ORGANIZATION.

POLICY RECOMMENDATIONS

1. The benefits and the risks of the use of new communication technologies in the healthcare sector should be included in the curricula for training of all categories of health workers including physicians, nurses, pharmacists and laboratory scientists.
2. Establish national guidelines and protocols to limit the risks associated with the professional use of new technologies in the healthcare sector, especially in regard to patient's privacy and confidentiality of information.
3. Given its potential for improving the experience of healthcare professionals as well as the patients, the healthcare system should promote the use of new communication technologies under clearly established guidelines and rules.
4. Health training institutions should utilize social media to enhance training and facilitate effective school-to-work transitions for their graduates.

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