



Chapter 1

The changing practice of health communication through digitalisation across sub-Saharan Africa

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Abstract

Access to the Internet has significantly altered the practice of healthcare communication. Through the Internet-enabled Fourth Industrial Revolution (4IR) digital technologies have seen the growth of media convergence for disseminating and accessing health communication. Digital communication technologies have also enabled the building of support communities online intending to destigmatise previously taboo health issues, and quick responses during pandemics such as the Coronavirus disease 2019 (COVID-19) pandemic. There has been a convergence of online communication of various health practices, from Western and traditional to alternative medicines. While the digitalisation of healthcare and health communication has increased access for ordinary, mostly young citizens, sub-Saharan Africa (SSA)'s Internet penetration rate is lower than the global average, with those most desperately in need of healthcare often excluded as a consequence of the digital divide (GSMA, 2023). This chapter highlights the many opportunities for digital health and communication. It uses a case study to demonstrate such opportunities and discusses the digital health and communication risks that arise from misinformation and infodemics.

Keywords: digital communication technologies; digital health; e-health; media convergence; Fourth Industrial Revolution (4IR)

Introduction

The Fourth Industrial Revolution (4IR) has given rise to a significant growth in digital communication technologies. These technologies have disrupted the communicative practices of many segments, including health communication, both at the interpersonal and mass levels of communication, and have given rise to digital health, also referred to as eHealth (Mawere & van Stam, 2020). Digital health, or eHealth, is defined as the interconnectedness of health systems and digital technologies, including information communication technologies and media, to aid in health management, communication, and promotion (Adeola & Evans, 2018; Fayoyin, 2016). Digital health has shifted the communicative balance of power from healthcare professionals, policymakers, and institutions as experts that could not be questioned by healthcare-seekers and the public to a more dialogic relationship. The health burden in Africa remains persistently high and needs innovative communication approaches to be applied to advance the continent's public health agenda (Fayoyin, 2016).

The use of digital technologies has brought positive physiological and psychological benefits to health communication practice. Social media communities' online interpersonal interactions can become an extension of offline personal networks (Soriano & Gutiérrez, 2015) and may also be easier to enter than in-person communities because they are more open (Matusitz, 2014). Digital health has also allowed for easier access to communication in more languages, although *linguae francae* are still primarily used (the challenges of this will be discussed). Engaging in online social media network communities can increase an individual's social capital and improve their psychological well-being (Malinen, 2015).

This chapter begins by providing background on how digital communication technologies have facilitated changes in health communication. This is followed by an outline of the health practice context in sub-Saharan Africa, highlighting the parallel health systems practised on the continent. The discussion goes on to highlight the influence of digital communication

technologies on health practices, how these technologies have been used to democratise access to health information, as well as the key benefits of digital health communication. The benefits, however, are not without their challenges in the digital context. The challenges addressed in the chapter include online risks of misinformation, personal information access, and reputational risk. The digital divide is a key challenge in increasing access and reach to all stakeholders in Africa, often resulting in the exclusion of the most vulnerable and desperate groups. The chapter highlights the case of mental health accessibility as a key example of the benefits and drawbacks of digital health communication practices. The chapter ends with a discussion on the convergence of various health practices, communication channels, and messages for diverse audiences across the African continent, and the critical role of health communication experts.

Literature review

Health information digitalisation

Knowledge asymmetry in health communication is becoming a matter of the past as information is democratised through digital communication technologies. The increased access is driven by the growth of Internet access globally, although in Africa low Internet penetration rates continue to persist when compared to the global averages (GSMA, 2023). The Internet penetration rate of 39.3% in Africa lags the global average by 24% (Statista, 2024). This persists despite the United Nations in 2011 declaring Internet access “a catalyst for the enjoyment of human rights” (Psaila, 2011). Multiple technological innovations, channels, and platforms have enabled health communication to grow in reach beyond immediate contexts, especially for healthcare practitioners. Digital communication technologies have been recognised as beneficial and are increasingly used in health communication by healthcare practitioners (Western and traditional) and public organisations alike.

The mobile phone’s ubiquity has been critical to driving Internet access on the African continent, particularly for a

continental population that has a reported median age of 19.7 years old (Worldometers, 2022) – the youngest average age globally (Lubinga & Sitto, 2021). However, according to GSMA reports, mobile penetration disparity – that is, population access, use, and network availability – in rural Africa is stark (Mawere & van Stam, 2020). One of the other challenges concerning digital communication and health involves literacy and technological skills for the African continent.

The opportunities for health communication practice have increased exponentially through the growth of digital communication technologies, from static websites to more engaging channels including social media, mobile applications, forums, instant messaging, and telehealth (Mbunge et al., 2022). Online communities and interpersonal communication technologies have enabled healthcare practitioners to become closer to their stakeholders, and for the stakeholders to be closer to one another. The traditional definition of a stakeholder, originally defined by Freeman (1984), as one that can affect an organisation's objectives has evolved to recognise the critical need for stakeholders as vital to the success and sustainability of an entity (Freeman et al., 2004). In a digital environment, stakeholders have become co-creators in the development of communication messages and content, including in health communication.

Health practice context in Africa

The practice of healthcare has multiple levels and layers, primarily driven by interpersonal interactions between healthcare-seekers and healthcare practitioners, as well as within the healthcare sector itself. The African continent has performed poorly in healthcare, with continental health indicators much lower in Africa than in other regions around the world (Adeola & Evans, 2018). The layered landscape of healthcare as well as the life and death implications of it make health communication a critical strategic area of practice, particularly in the digital age on a continent with the youngest average population. Technological advances in digital communication media and technology hold good promise in driving communication, which is central to

the successful delivery of public health on the African continent (Fayoyin, 2016). There is a positively correlated relationship between digital health communication technologies and health outcomes (Adeola & Evans, 2018). Healthcare, particularly on the African continent, is broadly divided into public and private healthcare, organised along the lines of economic affordability. Socio-economic inequalities influence the quality of healthcare that individual citizens receive as well as the health information that they can access. Digital technologies have reportedly been used successfully in numerous countries in southern and eastern Africa to improve disease surveillance in public health (Adeola & Evans, 2018).

Health communication can be broadly categorised into several contexts, including interpersonal and institutional communication, amongst others. At an interpersonal level, the communication is between healthcare-seekers and healthcare professionals in a personalised consultative setting. During these engagements, healthcare professionals often communicate the matter that healthcare-seekers are consulting about, and potentially use medical jargon to explain. There is often knowledge and information asymmetry in these interactions and a reliance on expertise during such communication. At an institutional level, governments and other health institutions, including non-governmental organisations, communicate issues of health at a societal level, primarily addressing public health communication. These include communication about diseases, epidemics, and policies in response to health matters. Institutional health communication takes place at a mass level, with limited opportunity for engagement with intended audiences.

Within health communication, consideration needs to be given to the diversity of health practices in Africa. The continent has multiple, parallel systems – Western, traditional, and alternative medical practice. The communication of these differs in the underlying assumptions, beliefs, and practices of each. Some of the most dominant health communication is Western-centred, and it vilifies traditional and alternative medicine at times.

Influence of digital communication technologies in SSA health communication

The growth of digital technologies for communication has altered health communication practices, and this trend will continue. Healthcare practitioners and institutions have traditionally controlled the communication about matters of health, including the messaging as well as channels of communication. However, 4IR communication technologies have fundamentally altered how communication takes place, particularly with the growth of computer-mediated communication and the exponential growth of social media. Digital health has multiple uses, including communication, awareness creation, screening, surveillance, monitoring, and compliance (Mbunge et al., 2022). The growth of the Internet has facilitated the explosive growth of digital technologies, enabling communication and interactions that are not time or geographically bound. Digital innovations such as “Kena Health”, a South African healthcare mobile app, allows healthcare-seekers to consult with a healthcare professional via text, voice, or video to seek medical interventions from anywhere in the country (Kena Health, 2022). Such phenomena have democratised knowledge and information, bringing about significant opportunities to reach previously unreachable individuals through various channels and platforms. The use of communications networks has however been slowing down in developing countries, coupled with stalling Internet rollout (Mawere & van Stam, 2020), thus limiting access to digital communication technologies on the African continent.

Communication technologies have become richer over time, reducing concerns about digital communication social cues. Hyperpersonal communication is a response to digital online communication, helping to develop online community engagement norms using a variety of tools to extend digital communication social cues (Sitto, 2019). Technologies such as video calls have become cheaper and more accessible, making it possible for healthcare professionals to consult remotely, participate in life-altering surgeries, and engage directly with healthcare-seekers without geographic boundaries being a concern. The benefits of digital health include improved

healthcare service access, especially for people living in hard-to-reach areas (Olu et al., 2019). Hyperpersonal computer-mediated communication technologies enable interpersonal online engagement and relationships that go beyond the closeness that is experienced in similar offline interactions (Walther, 2011). Digital communication technologies may be used as a more efficient and cost-effective means of providing healthcare by practitioners, remotely managing patients in the place of transporting healthcare specialists to rural and hard-to-reach areas (Adeola & Evans, 2018). Digital communication technologies have made communication and access to leading global health experts much easier, including the ability to observe and give social cues. Health communication has been enriched by digitalisation, especially where health communication experts have designed and produced quality health promotion messages accepted by digitally connected, informed, and mobilised communities (Olu et al., 2019).

Digital communication technologies include both online and offline contexts. The online technologies are powered by the Internet, which has become increasingly accessible. Through media convergence, digital online communication channels combine mass and interpersonal communication, disseminating messages to broad audiences, while also engaging users in interpersonal interactions (Kreps, 2017). The Internet penetration rates on the African continent, however, remain pervasively lower than global averages, mostly due to limited investment in the infrastructure required. Adeola and Evans (2018) found that in selected African countries such as Algeria, Morocco and Tunisia, there was a positive correlation between life expectancy, Internet usage, and mobile penetration – that is, higher Internet use in selected African countries. The mobile phone's ubiquity in Africa (labelled Africa's laptop), has been instrumental in increasing Internet access on the continent. While the mobile phone and Internet penetration in Africa is enough for scaling digital health and communication, it remains lower than the global average (Olu et al., 2019). In Africa's history, mobile phones have become the most common technological device over a short period, and continue growing in usage (Adeola & Evans, 2018). A good

example of the power of mobile health communication is the use of mobile phones, amongst other digital and traditional channels, through credible voices of community leaders and traditional healers in combatting the spread of Ebola in 2014 across West Africa (Lubinga & Sitto, 2021). Mobile phone access, however, remains skewed to younger, urban citizens, leaving out elderly and rural-based citizens, who make up the largest populations on the African continent. Mbunge et al. (2022) recommend the growing of rural area community networks to bridge the digital divide in developing countries. The digital divide refers to the gap between those people who have access to modern information and communication technologies, and those who do not have access or have restricted access (Van Dijk, 2017).

Internet access is organised along the socio-economic lines of affordability, considering that access is generally expensive. The constraints of mobile phone usage include prohibitive costs, limited access to handsets, restriction of content, unreliable network service, and limited tailored health information (Fayoyin, 2016), thus limiting the exclusive use of digital health communication practices. The price of connectivity plays a crucial role in the enablement of digital health communication and access on the African continent. As of 2012, the cost for one gigabyte (GB) of mobile data in Africa varies significantly across the continent, from as low as \$0.27 in Sudan up to \$50 in Equatorial Guinea (Statista, 2021). These mobile data costs are prohibitive when put in context: according to Andres Castaneda Aguilar et al. (2019), on average, approximately 85% of sub-Saharan Africans survive on \$5.50 per day.

Critical health messages using online digital technologies often fail to reach citizens who are not online, so word of mouth and re-sharing of critical health communication messages become crucial. This practice of passing down information means that critical health communication information may be lost, or distorted, adding to delays in individuals taking appropriate action. While Internet-driven technological developments and mobile infrastructure expansion have increased the deployment of social media devices for health communication and education across the globe, reach and media access asymmetry exist

societally in Africa (Fayoyin, 2016). In rural areas, mass media such as television, radio and newspaper remain the largest and most reliable sources of information, because of their exclusion online. Developing economies continue to struggle with increasing online digital access to citizens, especially because of the challenges experienced with delivering basic services that include communication about healthcare.

The digital divide on the continent perpetuates the public / private healthcare and access divide, with the more affluent being able to access online healthcare messages and communication more easily. Those excluded from online and digital health communication are often those in the most desperate need of the information, especially because of socio-economic challenges of affordability. The digital divide may thus be undermining health communication efforts aimed at informing, educating, and influencing behaviour amongst citizens.

The language used in health communication is another matter of strategic consideration, as the use of health jargon can result in misunderstanding and confusion with audiences. Health communication language continues to become more accessible, particularly through the growth of online communities for support and engagement to interpret the jargon. However, the linguistic challenge persists in Africa, where most digital and online channels cater mainly to *linguae franca*, excluding large segments of rural individuals who speak regional and local languages / dialects.

Digital health practices

Use of digital health communication for the democratisation of information

Health communication has historically been highly regulated, with global health issues shared through the World Health Organization (WHO) and respective member governments, who disseminated information to localised healthcare professional bodies. These bodies were the mediators of health messages and sanctioned all forms of communication about health matters

to the public and healthcare-seekers. Information was used primarily as a tool to control access to information. Digital and online communication technologies have permanently changed how and where communication takes place, even for health communication. Disintermediation has removed barriers between message originators and recipients, thereby democratising access to the means of communication, information, and knowledge. Health communication has also undergone significant changes through digitalisation, where healthcare professionals and healthcare-seekers are more directly engaged. Patients now interact with their doctors through instant messaging services, building a far more personalised relationship. Citizens can directly message or tag national health ministers, health institutions, and leaders concerning health communication and response to messages issued to them.

The COVID-19 pandemic context forced healthcare practitioners and institutions to rely more on digital technologies for the dissemination of critical health information and engagement. In South Africa, for example, the government and the healthcare system adopted multiple digital technologies as part of the strategic communication response and to provide services to healthcare-seekers during the COVID-19 pandemic (Mbunge et al., 2022). The technologies included mobile, telehealth, instant messaging through WhatsApp, chatbots, and robotics (Mbunge et al., 2022; Sitto et al., 2022). During the health crisis, governments increased their use of digital media to share information with citizens, although the challenge was the effectiveness of using these technologies (Sitto et al., 2022). According to Kreps (2017), digital and online health communication systems need to be easy to access and suitable to the users of those communication systems, which was not always the case for Africa's public health response to COVID-19. Disintermediation takes the power of control of information out of the hands of the limited few, namely healthcare professionals, organisations, and institutions, making it available to many ordinary individuals. Thus, health communication has become a contested sphere, especially in the digital space, where there are diverse beliefs, practices, and levels of access to healthcare services.

However, digital communication technologies such as social media have enabled individuals to develop and create communities of support for health-related matters, including chronic illnesses such as HIV/AIDS (human immunodeficiency virus / acquired immunodeficiency syndrome), diabetes, malaria, and others. Social media has been proven to have psychological benefits, particularly for those feeling isolated, for example through disease. Healthcare practitioners participate online and are part of online communities, lending expert voices to online conversations and guiding them. Traditional and alternative healthcare practitioners have also increased online participation. Previously, these health practices were shrouded in mystery; however, through digitalisation, they have become more accessible to individuals, who can access more information about them. Traditional and alternative healthcare practitioners have allowed for online consultations on matters previously available only during in-person consultations. Digital communication about traditional and alternative healthcare practices has grown and become normalised in online communication, helping healthcare practitioners to overcome stigma, reduce fear and demystify their practices.

Digital health communication is holistic in nature and includes physical, emotional, psychological, and spiritual health. Health communication has thus extended beyond the physiological elements to focus on an individual's overall state of wellness. The online convergence of Western, traditional, and alternative health has moved digital conversations to dialogues on the intersections between the practices and the sharing of information.

Digital health communication benefits

The interpersonal and public contexts of health communication are converging, with the rise of computer-mediated communication, digital technologies, and increased power being in the hands of individuals. The digital landscape builds Mecosystems that centre on the individual's health communication wants and requirements (Verwey & Muir, 2018). The individual in a digital and online communication context is

at the centre of all information and technologies, designed and tailored to individual tastes and preferences.

Social media has provided online spaces for individuals to build and participate in support communities for various health matters. These health issues may include communication of previously taboo issues such as HIV/AIDS through support groups. The power of social media is the ability for individuals to participate anonymously, yet reap the benefits of being part of an online community. Through these digital health social media communities, individuals can engage in self-disclosure, communicating their thoughts and emotions (Jiang & Hancock, 2013:557), all of which help to build online intimacy between health communication participants. This includes self-disclosure facilitated by access to leading healthcare experts on matters of personal and public health – for example, the COVID-19 pandemic, spiritual traditional health consultations, chronic illness matters, and health lifestyle metrics from wearable health devices.

Mobile phone applications for tracking health measures are useful applications for digital health communication. Increasingly, more healthcare professionals and seekers use digital communication channels to communicate critical health issues and gather relevant health data (Kreps, 2017). The use of advanced digital technologies for reaching remote areas with pharmaceutical interventions such as drone distribution of medication used in Rwanda (Shepherd, 2022) are some of the benefits of digital health on the continent where communities are remote from urban centres. For Africa to reap the benefits of digital health, approaches need to be coordinated and synchronised to ensure a quick, wide-scale rollout of the required technologies through establishing strong governance, regulatory mechanisms, policies, and strategic tools (Olu et al., 2019). One of the most critical benefits of digital health communication is the holistic approach to health that is Western, traditional, and alternative, all available to healthcare-seekers. It has helped demystify some practices, lowered the potential barriers to information access and potentially driven more disclosure of the engagement in parallel healthcare practices by healthcare-seekers.

Digital and online health communication practice risks

Along with the numerous benefits of digital health and communication there are some serious challenges, especially misinformation and personal security. The successful implementation of online and blended systems in the 4IR requires the appropriate skills to be able to work with the technology (Kayembe & Nel, 2019). Digital literacy is a challenge for digital health (Mawere & van Stam, 2020), especially in ensuring the comprehension and efficacy of health communication messages distributed through digital communication technologies. The reality is that the mobile phone may have grown, yet the majority are not smartphones, which allow for the development and use of mobile applications. Poor Internet and network connectivity can also cause delays in time-sensitive health communication (Mbunge et al., 2022).

Digital communication technologies have democratised the distribution and sharing of information. The Internet is widely used to seek health information; however, online health information sources are also considered sites of mass misinformation (Fayoyin, 2016). Misinformation is harmful, as it may involve the deliberate spreading of fake news and lead to infodemics (Tropina, 2023). According to de Rosa et al. (2021), an infodemic occurs when there is an information epidemic that mixes facts, rumours, as well as fake news in all communication domains. A large challenge concerning misinformation has involved the reputations of healthcare practitioners (e.g. Dr Wouter Basson also known as Dr Death), government officials, and institutions (Netcare hospital group and DR Basson), as took place in South Africa (Marbot, 2021), as well as discrediting official critical public healthcare information.

Misinformation about health communication and messaging can be harmful for recipients of digital health communication. The harmful practices include the promotion of fake healthcare practitioners (Pensulo, 2024), human trafficking recruitment for organ harvesting, as well as the distribution of incorrect or life-threatening medical advice. Young people, who make up a large majority of those connected online and through

social networks, are particularly vulnerable online. Digital online platforms such as social media can lure young people into consuming inappropriate content about health (Fayoyin, 2016; Busby, 2024).

Health information and communication are sensitive, requiring consideration, particularly of the protection of personal information, given the vulnerability of sensitive personal information online. One of the most critical hurdles to the successful implementation of digital health is that African governments lack the adequate legal framework and capacity required to address ethical issues of digital health data ownership and consent of use, as well as online security (Olu et al., 2019). Security and privacy issues are critical issues in digital health communication that can impede growth in the adoption and use of digital health tools and communication channels, fuelling a lack of trust in healthcare professionals and seekers in digital healthcare systems to keep data and personal information secure (Mbunge et al., 2022).

The evolution of digital health communication practices may perpetuate the exclusion of the most vulnerable in society due to the digital divide, thus influencing social behaviours and health outcomes due to information asymmetries. The African continent is made up of demographically diverse individuals who all have different levels of competence in their usage of the Internet. Rossouw et al. (2018) call this the technological generational divide. The digital health communication engagement of healthcare-seekers and professionals online is also prone to personal attacks and acts such as cyberbullying (online bullying), which can have damaging psychological consequences (Yosep, Hikmat & Mardhiyah, 2023).

Digital health initiatives and communication practices need to be context-specific and be results-driven (Olu et al., 2019). Communication technologies can increase the physical and psychological distance between communicators and audiences because of a lack of hard-to-detect non-verbal cues that may lead to stereotyping (Matusitz, 2014; McQuillen, 2003) and ultimately ineffective health messages. If digital health communication

practices fall short of benefiting the intended recipients, they potentially waste valuable yet scarce health communication resources in countries across the African continent.

Healthcare accessibility through digital communication media: The case of Mental health

Mental health attracts both public- and self-stigma, according to McLean Hospital (2024). The area of mental health and communication about it is largely taboo and hegemonic across Africa, at times referred to as a silent epidemic (Africa CDC, 2023; Amuyunzu-Nyamongo, 2013). There is little focus on mental health and even less on communication about mental health. A large proportion of African countries do not have dedicated mental health policies, as evidenced by the Africa CDC (Centres for Disease Control and Prevention) (2023) encouraging member states to invest in prioritising mental health. Mental health issues in Africa are often considered Western-induced. The traditional African medical approach to mental health is more holistic in treating the afflictions of an individual (Amuyunzu-Nyamongo, 2013). In traditional African settings, a single individual's mental challenges are attributable to the whole family, which may be considered cursed (Kpanake, 2018). Increasing health communication campaigns focused on the importance of mental health have raised awareness in African communities of such afflictions as medical issues (Africa CDC, 2023). For Africans living in a modern context with mental healthcare specialists, there is a range of available therapies that are becoming more mainstream and more easily accessible.

The approach to healthcare consultations, including mental health, remains focused on providing privacy and confidentiality for the patient, irrespective of whether the context is Western or traditional. The growth of digital communication technologies has further aided confidentiality because people do not have to consult in person; this also makes it more affordable, especially for rural-based individuals (Mindu et al., 2023). Hyperreal (also hyperpersonal) communication has become more desirable in some contexts than contact interpersonal interactions. In the last decade, remote mental healthcare consultations have become

more prevalent globally, with reliance on digital technologies for consultation that include video conferencing, telephone, and voice notes. Mental healthcare practitioners, particularly in a difficult African context where their patients do not always enjoy support for accessing such services, have been able to provide more privacy through computer-mediated consultations (Tshephe, 2023). One such service has been the growth of crisis hotlines in some countries such as Burundi (e.g., open counselling) and South Africa (SADAG, Childline, Akeso, Department of Social Development's substance abuse 24-hour helpline, etc.), which citizens may call anonymously to discuss their mental health challenges while enjoying privacy.

Hyperpersonal communication through various tools gets around the limited social cues available online to ensure better interpersonal communication. Such interactions are convenient as they allow individuals to access mental healthcare services and seek information without the prying eyes of their community or the possibility of facing stigmatisation for such consultations. Virtual communities have also come into existence to provide support for individuals seeking mental health information and interventions while avoiding being stigmatised in their communities. COVID-19 further perpetuated the stigma around mental health (Williams, 2020). The blended approach to mental health consultations had become normalised, especially in urban settings, even before the COVID-19 pandemic. With physical distancing an imperative at the height of the COVID-19 pandemic, and several African states having implemented lockdown strategies for their citizens, the limited access to mental healthcare was placed at even greater risk. The restricted movement forced healthcare practitioners, including those focused on mental health services, to pivot their methods of practice towards digitally supported methods to ensure that their patients were not left uncared for or vulnerable (Békés et al., 2021).

While digital technologies have improved access to mental health information and care, the African context remains one of unequal access not only to digital technologies but to limited resources. The digital divide, particularly in Africa, is perpetuated

by poverty and an inability to gain access owing to affordability, as well as a lack of digital technology skills to use communication technologies effectively. In the context of mental health, the largest barrier to health communication remains stigmatisation, followed closely by competition for limited healthcare resources due to the high prevalence of disease amongst populations. The competition for health resources results in a disproportionately low investment in mental healthcare and communication across the SSA region (Africa CDC, 2023). The case of mental health access, however, provides a good case for the use of digital technologies that can balance healthcare needs with maintaining societal positions outwardly. The focus thus needs to widen towards more vulnerable and disadvantaged communities, taking the lessons from existing digital solutions to mental healthcare access to develop converged communication strategies.

Discussion

The power of media convergence for digital health communication

The development of converged health communication strategies in Africa recognises and includes powerful mass media to develop successful and effective health communication practices within communities. Digital and social media technologies may be recognised for their vast potential benefits in health communication efforts; however, they should not be treated as a panacea for health communication practice (Fayoyin, 2016). Media convergence is the process where the same information becomes accessible through a variety of media types, content, and devices – e.g., radio, social media, newspapers, etc. Kreps (2017) argues that media convergence can improve health education, promotion, as well as behaviour change.

Harnessing the power of digital communication media and technologies to build collaborative and co-created health communication strategies will build relevance and drive message effectiveness across the continent. Digital communication technologies can assist health communication experts in

developing feedback loops through digital engagement that are almost immediate in response to health messages published and distributed to inform health communication practices. The reality, however, is that the majority of the African population resides in rural areas and thus only localisation aligned to rural realities (affordability, language, Internet access, traditional media access, etc.) can result in meaningful health communication interventions for sub-Saharan Africa (Mawere & van Stam, 2020). The digital communication levels of access and skills of diverse African audiences cannot be ignored, as they inform what digital health communication approaches are possible to undertake.

Digital health communication still requires the skills of health communication experts to understand the digital communication landscape, messaging requirements, intended audiences as well as their levels of media access to design successful communication. Digital communication media have enabled stakeholders to become co-creators and collaborators of online content (Sitto & Lubinga, 2021) and thus empowered, even in health communication messaging to initiate, engage, and curate such content. The convergence of information, technology, and connectivity to improve healthcare and health outcomes in countries with lower access levels can be tested through small pilot projects (Adeola & Evans, 2018). The value of co-creation and collaboration for effective converged health communication in the digital age should thus not be overlooked.

Conclusion

Digital communication technologies have disrupted health communication practices, as technologies have brought information closer to ordinary individuals. The parallel healthcare systems existent in SSA complicate the health communication landscape further, with the advent of digital health communication. Socio-economic inequalities continue to influence not only access to healthcare but also access to health communication interventions, especially on digital channels, widening the digital divide further, particularly for rural citizens. There have been numerous benefits gained through digital health communication, including increasing access, enabling

the development of online health support communities, and bridging the knowledge gap for rural communities. However, the risks of democratised digital health communication cannot be ignored as they have life-threatening consequences, including misinformation, distortion of health messages, and the promotion of fake healthcare practitioners, raising questions of digital safety, health data ownership, and digital health content trustworthiness. Numerous other risks beyond digital exclusion plague digital health communication, including affordability, language barriers, limited digital access, and potential access to sensitive personal health information. The benefits of digital health communication enable individuals to access sensitive information, such as in the case of mental health in SSA and demonstrate the importance of digital health integration for meaningful stakeholder engagement. Media convergence in health communication is imperative to ensure that information is disseminated in a manner that is contextually relevant, inclusive, and accessible for digital health communication to be effective. While digital health communication grows and technologies are increasingly integrated into health communication strategies, practitioners cannot rely exclusively on them to ensure message effectiveness to reach diverse audiences with key health information.

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