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Rumbidzai Chakanza and Sibongile Mpofu

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Digital technologies and public health communication in Zimbabwe: The case of Harare Health Services Department

Rumbidzai Chakanza

National University of Science and Technology

ruechakanza@gmail.com

Sibongile Mpofu

National University of Science and Technology

sibongile.mpofu@nust.ac.zw

Abstract

This paper analyses digital technologies used in public health communication to assess if they allow for stakeholder engagement. It also examines the challenges encountered by stakeholders in utilising digital technologies for public health communication. Using strategic communication and second-age media theories, the paper identifies communication technologies used by the Harare Health Services Department (HHS) for public health communication, and for what purposes. We further assess whether the communication technologies utilised by HHS for public health communication allow for stakeholder engagement and the challenges encountered. A qualitative case study methodology utilising in-depth interviews with personnel and key administrators from five health facilities under the HHS Department was employed. In addition, qualitative content analysis was conducted on the Department's Facebook and X pages. The findings reveal that the Harare Health Services Department is lagging in using digital technologies and only intermittently disseminating public health information during specific periods. Further, HHS has not fully embraced digital media use specifically social media for stakeholder engagement and targeted health messaging. Several challenges are identified such as failure to strategically implement and embrace digital technologies for communication; lack of training; resistance to change and accountability; lack of adequate and reliable resources; and a top-down management approach. The study concludes that digital technologies have the potential to enhance stakeholder engagement and improve public health services. However, there is a need for the integration of strategy in public health institutions' communication approach.

Keywords: *Digital communication technologies; digital technologies; public health; public health communication, social media; stakeholder engagement.*

Introduction

The use of digital communication tools within the field of healthcare is becoming an increasingly important aspect of clinicians' professional practice, improving the delivery of health services and communication between healthcare workers, as well as enhancing the decision-making process through the efficient flow of information (Rowe, 2008). Digital

communication technologies have the potential to transform the delivery of health services across the continent in ways that not only increase efficiency but also improve accountability (World Bank, 2004). Pervez et al. (2022), suggest that a two-way flow of communication assists policymakers to understand the greater problem facing society and provides them with a structure to change or fine-tune their policies and schemes. Further, Pervez et al. (2022) added that proper digital communication where feedback is instant and where all members of the society including policymakers are involved enables an easier execution of health schemes and policies. Public Health Ontario (2012) advocates for the use of digital communication platforms for health message dissemination, arguing that health communication is where good health promotion and good communication meet.

Zimbabwe, just like other countries, is confronted with numerous health challenges, notably from diseases such as HIV/AIDS, malaria, and tuberculosis, amongst others (WHO, 2020). Effective health communication therefore becomes vital for addressing these challenges. Research indicates that Zimbabweans actively pursue health information from diverse sources, including media outlets, healthcare providers and community leaders (Ndhlovu, 2018). However, language barriers significantly impede effective health communication, particularly in rural areas where indigenous languages predominate (Ndhlovu, 2018). In rural Zimbabwe, traditional communication channels such as face-to-face interactions and community gatherings remain efficacious, while in urban areas, there is growing reliance on modern communication channels like social media and SMS (Ndhlovu, 2018). Tracing the evolution of communication practices and their relevance to the public health sector, early communication theories described communication as a one-way process from sender to receiver (Hallahan et al., 2007). However, because public health communication programs rely heavily on formative research and two-way communication between sources and receivers to ensure that messages are accessed and understood and that communities are involved, dialogic forms of interaction are critical (Bernhardt, 2004).

However, most communication in healthcare is still one-way (Hynes, 2022). In Zimbabwe specifically, Mutizwa et al. (2021), in a study carried out during the COVID-19 period, found that Zimbabwe experiences a lack of basic digital communication technologies knowledge and skills and that some medical practitioners lack knowledge on how to access medical-related information on the internet, suitable digital health solutions and ICT infrastructure. Hynes (2022) further argues that communication must include ample opportunity for feedback to

counter one-way communication and adds that poorly designed digital messages may prevent two-way communication. On the other hand, well-designed messages may lead to a situation where health professionals rely too much on digital communication hence health professionals must still strive to improve their communication skills even if excellent digital communication is available (Hynes, 2022).

Our paper contributes to the above discourses by identifying the utilisation of digital communication technologies, and assessing whether these technologies utilised by the Harare Health Services Department allow stakeholders to engage with the HHS on matters of health. Further, we identify the challenges encountered by the Department in utilising ICTs for public health communication. Three research questions therefore guide this study:

RQ1: Which digital communication technologies are utilised for public health communication by HHS, and for what purposes?

RQ2: Do the digital communication technologies utilised by HHS for public health communication allow for stakeholder engagement?

RQ3: What are the challenges encountered by HHS in utilizing ICTs for public health communication?

Digital communication tools and stakeholder engagement

De Beer et al. (2012) note that stakeholder engagement is about organisations using leadership to build relationships with stakeholders and hence improve their overall performance, accountability and sustainability. In health care, technology-mediated communications have provided a private forum to discuss sensitive matters, connect with others who may have experienced similar health issues, network, and learn about new medical solutions, among others. These communications have also affected provider-patient relationships (Schiavo, 2007). Valos et al (2016) suggest that there is an inseparable relationship between customers, employees and the service, as the service outcome is co-produced on demand by the parties involved. Martin (2021) concurs arguing that regardless of the complexity, all public health issues have one thing in common – multiple stakeholders and communicating with them has become increasingly complex due to unprecedented political polarisation and the proliferation of news and other information from mainstream and social media. Martin (2021) added that public health practitioners must find ways to cut through the noise and effectively, and

persuasively communicate to stakeholders, no matter their political ideology. Therefore, uncertainty or absence of feedback, information, and proper explanation from the physician leads to dissatisfaction and higher anxiety levels in patients (Ha Longnecke and Anat, 2010).

Earlier, Schiavo (2007) suggested that many interactions are mediated by technology and take place using e-mail, voice mail, video conferencing, or other media channels. Schiavo (2007) further adds that this may shape the quality and implications of communication by depriving it of non-verbal expressions and other influences (for example, the potential impact of different venues—formal versus informal venues—on health care or business conversations) that are normally common in face-to-face encounters. Panos (2005) concurs adding that clarifying the distinct roles of different stakeholders is important in ensuring that their efforts are complementary. A wide range of stakeholders within key health institutions, and within society as a whole, in the developing world are potential beneficiaries of digital technologies (Panos 2005). For example, the use of the internet is argued to have influenced the coping skills of people living with HIV by promoting individual empowerment, increasing social support, and helping them help others (Reeves, 2000). This is also supported by other scholars such as Gatere and Ondongo (2019) who argue that despite efforts by the Kenyan government to curb the rate of new infections among married couples and people in long-term relationships, rates remained high. The research further reveals that effective communication practices later adopted by the Kenyan government including digital technologies, Kenya is now one of the leading countries in Africa in effective communication campaigns. For example, about 9 out of 10 people knowingly infected with HIV are receiving essential HIV-related care services and treatment for their infection (Gatere and Ondongo 2019).

Another key aspect of digital technology use for public health communication is the need for training. Training in communication methodology and message development may help healthcare providers sharpen their communication skills and address patients' questions and concerns more effectively (Schiavo, 2007). For example, Facebook allows for engagement which can bring both negative and positive sentiments as well as neutral ones. Checking for how the public feels by conducting social media monitoring and analysing the data helps to improve service and for organisations to know the impact of their health messaging. The goal is to know if targeted audiences are interacting well, being able to understand and also air their opinions. Similarly, doctors who allow patients to book appointments via health mobile applications have to check if patients are coming through after responding or booking to do

checkups and receive medication (Coombs & Holladay, 2015). Although the interactive potential and widening use of social media has resulted in talk about “joining the conversation”, and while social media has largely facilitated the ability of organisations and individuals to act as both senders and receivers, organisations do not have the resources and skills to cultivate and maintain relationships “for their own sake” (Coombs & Holladay, 2015: 692). This means that most organisations care to push the products and services they offer only and as long as the business is flourishing, they see no need to concentrate on hearing views from stakeholders.

Challenges in adopting digital communication tools in public health communication

Gains in digital technology infrastructure have not as yet benefitted the health sector in a systematic way (World Bank, 2004). Although there are many ongoing projects across Africa that attempt to improve the health sector through their use, most remain pilots, few are evaluated and even fewer are designed or assessed for scalability (eTransform Africa, 2012). Other scholars also argue that these tools can be challenging. There are several reasons why digital communication tools and health interventions do not succeed. WHO (2004: 2004-2007) identified several factors concerning national programmes which include: lack of proper needs assessment; lack of vision, strategy and national plans; lack of information and awareness about ICT applications; computer illiteracy; and insufficient resources. Other weaknesses, according to WHO (2004) are limited experience in medical informatics; weak information and telecommunications infrastructures; and absence of legislative, ethical and constitutional frameworks. Further, the complex communication in medical settings gives rise to serious barriers. For example, Schiavo (2007) argues that most of the problems emanate from a lack of understanding of the fundamental steps of a health communication plan and how to design communication interventions that fit an organisation’s, institution or nation’s mission, as well as the needs of its key constituencies and stakeholders. In other words, there is often a lack of clarity about what the plan should do for the organisation and its key audiences. Alfonso and de Valbuena Miguel (2006) argue that health practitioners are not fully embracing new media, are ill-equipped to do so and have a fear of the technology. Similarly, Badaracco (2007) posits that there is also a need to consider whether the target publics have access to new media technologies such as the internet which becomes an issue when communication strategies target publics without such access due to geographic or socio-economic factors.

A study by Wierncierz and Rottger (2018) revealed that digital media communication goals are formulated in the vaguest terms in most enterprises and that many developing countries lack the storage and communications infrastructure needed to organise and integrate the amount of information that is generated in a Big Data project. Not only do these countries lack these resources, but they don't have the computing capacity to analyse them (Latourette et al., 2011). This view is supported by Valos et al. (2016), who suggest that since the characteristics of social and digital media are quite different from traditional marketing communications channels, there is a need to modify existing IMC frameworks for effective integration of social media in organisations' IMC strategy.

However, the flipside of digital technologies is that such media platforms as WhatsApp, Facebook, Google, and Twitter fuel the spread of disinformation and misinformation, thus, raising the issues of reliability and validity of the information (Lindgren, 2017). For example, Benecke and De Young (2019) noted that vaccine misinformation and disinformation have contributed to increased vaccine hesitancy worldwide, resulting in measles outbreaks in the United States, Philippines, Ukraine, Venezuela, Brazil, Italy, France and Japan and a resurgence of other vaccine-preventable diseases. Similarly, Chen et al. (2014), suggest that digital inequalities may influence the extent of an individual's health information repertoire. For example, the COVID-19 pandemic was characterised by inconsistent, ambiguous, contradicting messages and the absence of clear, actionable, credible, and inclusive information from authorities that people trust, leaving space for other actors to fill the void irresponsibly (Montesi, 2021). The other challenge is that social media is used mainly by younger individuals, which may restrict the whole stakeholder participation (Kaplan and Haenlein, 2010).

Theoretical approach

The research study utilised the strategic communication theory framework (De Beer, 2014) and the second media age theory (Poster, 1995). In De Beer's (2014) theoretical framework for responsible strategic communication management, she suggests that communication management approaches, such as stakeholder relationship management, can assist an organisation in achieving its objectives - even to the point of becoming objectives in themselves. The major concepts of her framework are sustainability, governance, strategy, communication, stakeholder relationships and corporate reputation (De Beer et al., 2012). De

Beer et al., (2012) argue that the reflective communication strategist can make value-added contributions to an organization by conducting environmental scanning and obtaining information about the legitimate expectations of stakeholders and the publics/interest groups. Similarly, Steyn & De Beer, (2012) argue that the current demand that top management has of the communication function is providing communication intelligence to them and the board before top-level strategies are developed and then reporting in the integrated report on how stakeholder expectations have been addressed. Steyn and De Beer (2012) further suggest sustainability and governance as two new approaches to the strategic management of communication at the macro level in a triple context environment which ultimately results in the governing of stakeholder relationships. This means that an organisation will not succeed in sales or profitability alone. To remain relevant and grow in the business, strategies are needed that do not overlook the way the organisation is run. For example, establishing long-lasting relationships, operating ethically and offering effective and efficient solutions will enhance strong stakeholder engagement.

The advantages of this theory are that it allows for communication to take place at all levels before decisions are made and that helps in making well-informed decisions. The theory also is future-oriented and supports the objectives, goals and vision of an organisation by adopting strategic communication approaches that will help attain the vision. Strategic Communication Theory's limitation is that it is applicable in organisations that see the value of a communications specialist only. Some organisations see it as a waste of resources and unnecessary to invest in communications. This framework was utilised in this study to identify the technologies used for public health communication by the HHS department and to assess whether the department integrates strategy in its research, and implementation of digital communication technologies for public health communication. Lastly, the framework further enables an assessment of whether these platforms and their use allow for stakeholder engagement.

The Second Media Age theory by Poster (1995) highlights how interactive technology is transforming society and the constant usage of the internet. It examines the emergence of digital media and its impact on society, culture and communication (Poster, 1995). New forms of media demand exploration in their own right at the same time as the remediation of traditional media becomes open to investigation. According to Poster (1995), the Second Media Age theory keeps people all over the world connected and plugged into one another and allows them

to connect with the touch of a button. Mark Poster declared that a post-broadcast age would also mean the end of the traditional audience and the emergence of an audience for whom the personalisation of content, whether this be with interactive television or bookmarking, is directed. Similarly, Jenkins (2008) cited that people can engage and interact with the media as active audiences, customise it, and produce their content. Holmes (2012) argued that rather, attachment to media, both old and new, provides a constancy that individuals may find hard to attain in face-to-face relationships and other areas of everyday life. However, the criticism of this theory, just like other all digital communication tools, is the need for regulation, the need to curb the invasion of data privacy, and cyberbullying and protect the masses from misleading information.

The relevance of this theory in this study is that it highlights the importance of interactive media in today's communication landscape including health communication. The theory explains the benefits associated with digital media usage, and how its uses may at the same time, empower the public to in control of their content and messages. The value of interaction is prioritized to note the changes brought about by new media and in public health communication. The appropriation of this theory would enable the researchers to identify social, economic and other contextual factors that may impede the utilization of digital media platforms for health communication.

Methodology

The qualitative study utilised a descriptive case study methodology of the Harare Health Services Department. The choice of this design was vital for in-depth investigation or exploration of the complex issue or phenomena in context (Creswell and Creswell, 2018). Under the case study, five health facilities were purposively selected and these include: 2 Polyclinics - a Maternity unit, and a Primary Care clinic and Family Health Services); 1 Satellite clinic, 1 Infectious diseases hospital with dental clinic and 1 infectious diseases hospital with specialist service for sexually transmitted infections. This study's respondents were both males and females between the ages of 18-65 years who are health professionals working for HHS at head offices, hospitals and clinics. A total of 50 participants were drawn from the five health facilities. Purposive sampling was used for participants for interviews carried out through a qualitative questionnaire. The researcher selected individuals to participate based on a specific need or purpose i.e., based on the research objective, design, and target population; this is most commonly used for qualitative methods (Patton, 2002).

Criterion sampling was used to ensure that the right targeted participants were approached who were involved in the use of digital communication technologies.

In addition, five key informants, that is administrators within various departments from the facilities were selected for in-depth face-to-face interviews and these included the Head of Communications at the Harare Health Services Department (Rowan Martin Building). The other represented departments included Pharmacies, Dental, Viac and Opportunistic Infection, Laboratories, Environment and Health and Maternity. However, the researcher managed to interview 54 respondents as the other participants from managerial/administration positions could not respond. In total, 30 females and 24 males participated although the researcher wanted an equal representation for balanced gender equality. This was because females were more dominant in the facilities visited. The interviews were recorded for accuracy, with the permission of the HHS and later transcribed.

In-depth interviews are appropriate for qualitative research as they enable the researcher to control the line of questioning (Bogdan and Biklen, 1992), while a qualitative questionnaire with open-ended questions is also appropriate for qualitative study because it allows researchers to probe much deeper into a respondent's answers which enables them to gain valuable information about a subject that they might not otherwise pick up (Cleave, 2022). Further, to assess stakeholder engagement, qualitative content analysis was applied on HHS social media pages, namely the City of Harare Facebook page. As a resident of Harare, the researcher was part of the Facebook group, so it was easy to observe or follow the posts as they appeared on the timeline or by simply visiting the page to check for posts uploaded. Qualitative content analysis was used as a research tool to determine the presence of certain words, themes, or concepts within the text, in line with Palmquist's (2023) argument. The period of monitoring was from 1 February 2023 to 30 April 2023 (3 months). The researcher content-analysed all HHS health-related posts on the City of Harare Facebook page to check the number of likes, comments and engagement from stakeholders and to check whether HHS responds to messages. The researchers purposively selected a total of 14 posts, 8 on the Cholera outbreak campaign and 6 posts on health infrastructure development particularly on the construction of a maternity facility in Marlborough.

For analysis, the data collected was coded and categorised using inductive qualitative content analysis. The data gathered was arranged and summarised according to factors including awareness of digital communication tools, challenges in using the tools, recommendations etc.

The data was also analysed and interpreted following the research objectives and questions. Ethical standards were adhered to, that is ethics approvals were sought from the university, and the HHS department as well as consent from informants. The participants' confidentiality was guaranteed.

Findings

Due to the emphasis on confidentiality in the health sector, data was coded and hence no mention of the names of respondents in these findings. The five facilities which participated are coded using these codes; A1, B1, C1, D1, E1 and for respondents in each facility a number code is added to identify respondents. F1, F2, F3 and F4 represent Administrators.

Digital communication technologies used by health facilities

The findings revealed that digital communication technologies used by HHS are used in disseminating information and they include WhatsApp, SMS, Email, Zoom and Facebook. Zoom and Facebook are the least used, in as much as a platform like Facebook has the option for followers to comment or put their views. For the relatively few posts on Facebook, followers never got responses from HHS, thus there was no two-way communication. The administrators and heads of departments blamed the centralisation of information, which they said impeded the proper analysis of the posts by the public to the various entities. The FB pages are administered by the City of Health Corporate Communication department which has a mandate to cover all issues from different departments like water and sanitation, road and infrastructure development thus making it difficult for the HHS department to follow up on all posts made.

The findings further reveal that digital communication technologies are used to interact with stakeholders, make decisions from reports that come through, disseminate both private and public information to targeted audiences as well as communicate official news that is health-related information, to various stakeholders. Three-quarters of the administrators cited that they use digital communication tools to disseminate information and receive feedback like reports that they can use in decision-making and staying informed of what is happening in communities they serve (**F2, F3 and F4**). The administrators cited that the centralisation of information very often impedes their work as health entities.

“We have no control over what is posted on social media platforms because the pages are managed by City of Harare corporate

communications team. Normally when we have special news or announcements to share, we just notify them and they post on Facebook and X. What we have control over is the email, phone calls, text messages that we use to communicate with all stakeholders.” **F1**

HHS mainly uses WhatsApp groups and these were useful, especially at the onset of the COVID-19 pandemic. Two respondents said the department used to hold physical meetings with various groups and the WhatsApp platform helped them achieve their goals with cheaper instant communication. These WhatsApp groups are at provincial, district health team/ area health team, council and government level. The department also incorporates a multi-sectoral approach as many sectors work hand in hand with the health office.

“For example, reports can come through for sewage issues in areas like Budiro that quickly helps to act on taking the measures that will see the Budiro residents not being affected by diseases like cholera. HHS ensures that they liaise with players who have services that assist in making sure citizens’ livelihoods are well looked after. This means decisions are easily made when they have such information coming through from all sectors. Reports are sent and constant check-ups are made to see level of progress as they have teams designated to update with information. Pictures, videos, voice notes are all sent airing all concerns from residents, patients and health team.” **F1**

The Administrators also highlighted that the WhatsApp platform is used to communicate with employees on information like the need to have electricity tokens for power in their respective facilities, water challenges etc. They also communicate via phone calls for emergencies.

“WhatsApp helps us communicate well and plan accordingly. We receive messages that concern day to day running of the business and it has been so easy being kept informed on issues like the need for electricity tokens to be bought and any challenges concerning water availability for example.” **F3**

Findings from the qualitative questionnaires revealed that 28 out of 50 respondents did not have any idea of what digital communication technologies are, especially concerning stakeholder engagement. The administrators seemed to have an in-depth knowledge of what the term means like **respondents B1.3** and **C1.6** in particular the younger ones whilst the older were hesitant to participate upon hearing the ‘complicated’ term. Some viewed the term as referring to digital tools used to communicate with both internal and external stakeholders to allow for communication between various parties (**B1.3**), medium of communication (**E1.2**), use of IT tools to communicate with other stakeholders for example computers, internet, social media (**C1.6**, **E1.3**). For others, the responses were: no idea, am not the right person to ask (**A1.1**, **B1.1**).

With regards to tools that are utilized, Emails are used in their departments as they are highly efficient when communicating formally with corporations. Phone calls are used for instant communication with stakeholders and getting instant feedback. WhatsApp is the most efficient and it is highly efficient in the sense that, it saves the cost of trying to contact each individual to disseminate information. When it comes to bulk SMS, they are used as they are efficient in sending one-way messages to a wider audience but just to audiences in the list of data that can be accessed. For WhatsApp, groups are created on WhatsApp where each person is added to their group of specialities, like nurses, doctors, maternity staff, security and community mobilisers. It enhances the fast dissemination of information relevant to each department and people can easily send their feedback and contributions which can be tracked by all. If one misses the message when it was posted, he or she can view it later on and respond accordingly. Zoom is used for meetings and webinars occasionally with external stakeholders. When asked why they do not utilise other platforms like Facebook for communications, the majority of the respondents cited the nature of their work, in particular that health care requires a lot of privacy and confidentiality. One of the participants said:

“The nature of our job is strict on privacy and confidentiality. We cannot use Facebook and other tools because we feel they are not safe enough to value privacy and confidentiality.” **C1.10, A1.6, B1.4**

The nature of one's job determines the digital tools used for communication. Mostly those dealing with sending results and making appointments for patients communicate via calls, SMS and WhatsApp. Those dealing with payments, pharmaceuticals and medical supplies use emails, WhatsApp and phone calls. For messages on maternity services, they mostly use phone calls. Half of the elderly health personnel are comfortable with phone calls; this is because of a digital divide between the newer and older generations. Navigating through other tools seems to derail progress for them and resistance to change. The newer generation is more tech-savvy and any apps that have features to present pictures and videos are ideal for them.

We normally use WhatsApp as the most common tool internally and externally and Emails on rare occasions when communicating with stakeholders like the government, NGOs and suppliers (**D1.8, E1.9**).

We also use Zoom ever since the COVID-19 pandemic happened but mostly for meetings with external stakeholders for conferencing or workshops done virtually (**B1.1, A1.7**).

WhatsApp and phone calls are the tools we mainly used this is because hospital information should be private and confidential so we just communicate directly with the patient for example (A1.1).

Digital communication tools and stakeholder engagement

Stakeholder engagement means there has to be interactive communication between the sender and receiver of the message, whereby the receiver can then respond or give feedback. With regards to whether the use of digital tools enables stakeholder engagement, the respondents said the digital communication tools do allow and enhance stakeholder engagement through feedback which enabled the Department to act quickly on issues. One respondent said there is feedback that comes through as instant or delayed due to circumstances beyond the control or best known to stakeholders.

Yes, the tools we use allow for stakeholder engagement for instance, most corporates, government, NGOs communicate with us via email and we engage despite the fact that the response can be delayed due to reasons beyond our control (F3).

Other respondents felt that:

Patients are now just a phone call away and we can reach to them via SMS or WhatsApp as well. They do engage but we value confidentiality and privacy so it is not everyone who has the mandate to communicate with them (F4).

Yes there is stakeholder engagement unless it is in cases to do with some lab results, our systems allow for one-way communication by just sending results to patients' mobile phones (F2).

Internally we engage via phone calls and WhatsApp and emails depending with the department being communicated with. Two-way communication is enhanced and we find it very productive as we can reach out to each other within the blink of an eye, rather than having to walk to various offices and departments. It saves us on time and makes our work more efficient (F1).

The respondents further expressed concern over the use of Facebook and X for stakeholder engagement as these platforms have to be accessed through the City of Harare page which makes it difficult to track comments on various health-related posts. Respondent F1 added that accessing health-related matters on Facebook and X is time-consuming, and as such some matters and concerns may go unnoticed. Facebook in its nature allows for sentiments to be shared with people sending reviews.

Unfortunately, we have not been responding to stakeholder comments on Facebook. We do hope to do when we have our pages to start engaging with them successfully.” F1.

F1 further adds that there is a lack of communication strategies in place. On Facebook, the findings revealed that the 14 posts garnered a total of 188 comments, 43 of which were positive, 42 neutral and, 103 negative. Sentiments shared by followers show a lot of emotion loss of hope and lack of trust in not just the health services department, but in the services offered by the City of Harare as a whole. Most comments have nothing to do with health; it appears like citizens whose voices are not being heard. It ends up shunning all the positive work done by the HHS department. Furthermore, on each post, followers bring in issues that do not concern health posts with their frustration on parking rates, roads and water. Since the page is for all city issues followers end up commenting on any issue which does not concern the given post. Negativity related to health posts normally highlights how the HHS department has failed its citizens and waits for diseases like cholera to happen and then acts to ensure waste is managed well and measures put in place.

The cholera awareness campaign had very low engagement. For example, a post on the 28th of April 2023 for cholera solutions received 8 comments. 3 were negative comments and 5 were neutral comments. Most of the comments were in Shona language and when translated into English read:

So, you wait for cholera to happen first then you start taking measures to ferry waste from residential areas (A.M).

You wait for people to fall ill first then you remove waste after the damage has been done (L.P).

Another post on the 27th of April 2023 which read, “To: Dzivarasekwa Community. RE: Cholera Threat. Exercise extreme caution. Health professionals are on the ground taking water samples from boreholes and wells in the area so they can relocate the source of the outbreak....” The post had two comments, which were all negative at the same time, the comments gave feedback on areas HHS has to take note of. Such an informative and educating post received only two shares. Zimbabweans are known for how they quickly make posts viral on other issues like entertainment, accidents and skits, but when it comes to important issues, they are a bit hesitant. During the COVID-19 era, information would be shared within the blink of an eye, but no such has been happening with followers sharing such important information in times of crisis. One follower cited:

“It's your responsibility, the council. -you don't provide water to the residents, if you do, it will be very dirty that one cannot drink-since you cannot find a way to solve the water

shortage, you didn't make an effort to find a way around it. It's all on you city council, you're failing us.” S.S

The post that had the most engagement was a post on the 22nd of March 2023, about The Church of Christ which was working on turning their church into a Maternity facility. It received 291 likes, 56 comments and 3 shares. Some congratulated the mayor for the job well done and the Church and this post had better positive comments than others. The posts always have mixed sentiments with some being negative due to frustrations of other sectors managed by the City of Harare.

Have been following you Honorable Mayor, I checked Rufaro stadium and what I see there is progress, I remember you talking about Mbare poly clinic when toured it with city health department bosses, and you mentioned that cater house needed to be turned into maternity hospital, and today here you are with the Partners. You are just Level headed man **K.B.**

Overall, the 14 posts in three months were unconvincing that the HHS department embraced social media for communication. There is minimal dialogue and engagement by the department to audiences' comments. Communication is top-down and meant to disseminate information. There are no posts that can engage citizens to come forward with suggestions on how to strategically render services. Audiences need to feel belonging as a community and their concerns and engagement show a loss of hope and lack of trust in HHS's systems. Audience comments can break or make the reputation of the HHS department and the comments analysed in this study harm the reputation and image of the HHS department.

Challenges encountered by HHS in utilising digital communication technologies

All respondents spoke about network instability as one of the major challenges derailing progress in terms of using digital communication technologies. Emails and trying to download documents is compromised and end up missing important information or getting delayed information. The 4 respondents said that they use their data when the internet is down, to communicate. With tariffs being increased, it makes buying data become less priority to both admin and staff.

We use our own data and gadgets sometimes to communicate when we cannot access Wi-Fi in some departments as it is limited, network is also not reliable and it can forever to download documents **F1, F2, F3, F4.**

Network challenges hinder progress. Those in PR and Health Promotion are also faced with challenges of having to use own data and gadgets. Stakeholders in Budiriro for example are known to respond late due to known network problems **F1**.

Resource constraints disable strategic communications and cause misunderstandings and effective delivery of any plans are derailed. There is a failure to meet scheduled appointments. HHS has so many departments and fails to allow access to the internet to all the departments. Nowadays audiences have gone digital in urban cities and the majority have access to the internet. Buying newspapers is becoming outdated as people can just access information online. Maximising online interaction helps save time and gives convenience. There is hesitancy to participate online due to the toxicity of social media at times, whereby people can shame and tarnish the image of organisations and personalities. One respondent said: “I am quite skeptical that the hospital should post on Facebook because due to bitterness people have regarding service given generally in the whole economy, they could attack us and tarnish our image” **(F2)**.

Participants also revealed that there is a lack of social media strategy for communication by the HHS and that there is hesitancy to participate online due to the toxicity of social media at times blaming HHS for failing to deliver adequate health services. The HHS administration department has competitive individuals to use technology but is a bit hesitant to run its pages. Another challenge is with tools that allow two-way communication such as WhatsApp, stakeholders can just ignore messages and fail to respond yet there could be blue ticks indicating that the message has been read. This means there is a failure to acknowledge just receipt of the message which is vital for communication. One respondent cited that there is no instant feedback sometimes, stakeholders can just blue tick on WhatsApp and ignore or respond after days, which makes planning purposes difficult **(F2)**. Bulk SMSs are rarely read unless there is an SMS with personalised information for a client. Stakeholders are not able to respond to many bulk SMSs sent, so measuring the impact of awareness campaigns becomes difficult to monitor. Check-up appointments can be missed if patients fail to see messages on time.

In a nutshell, challenges being faced are mostly linked to unstable networks, accessibility of the internet and failure to embrace social media platforms such as Facebook, X and LinkedIn for interactivity to reduce negative perceptions audiences have of the department.

Discussion

From the findings above, what is drawn is that staff in the Harare Services Department is not given appropriate training on communication and using digital communication tools. The health personnel in the clinics work based on assumptions that they should just know how to utilise digital communication technologies. The only technology-related training the staff has received is on specific systems that are health-related like data management. Therefore, this study advances that training in strategic communication, message development, and stakeholder engagement may help healthcare providers sharpen their communication skills and address patients' questions and concerns more effectively, as argued by Schiavo (2007).

Further, the challenges revealed in this study concur with arguments by Steyn & De Beer (2011) that providing communication intelligence to top management and the board before top-level strategies are developed and then reporting in the integrated report on how stakeholder expectations have been addressed, can be considered as the current demand that top management needs. HHS is riding under the City Health Facebook and X pages where special health information announcements are posted. The pages are managed by corporate communications from the City of Harare offices. This has a derailing effect on progress as HHS cannot get constant and instant feedback from targeted audiences. The City of Harare posts issues targeting the entire city and include issues such as waste management, construction of roads, schools, transport, electricity and water. It therefore becomes difficult to navigate responses or engagement on the health posts due to this clutter. We therefore argue that such an approach for engaging residents using social media makes it difficult to analyse, monitor and evaluate communication activities and, therefore, impedes communication by the HHS. Targeting audiences and structuring the rightful messages is also difficult in such an approach to social media use.

What is further deciphered from the findings is that audiences have not been keen on sharing posts about HHS on social media to help with disseminating information faster. We argue that this is due to a lack of relationship the HHS has with its stakeholders, in particular on social media platforms specifically on this Harare City FB Page. While social media empowers marginalized groups such as women to raise their issues, as argued by Marcondes de Moraes et al. (2020), this opportunity is not fully utilised by the HHS Department to strengthen its relationships with stakeholders. According to Poster (1995), new media reaches out to everyone and gives connectivity to all, who are allowed the chance to connect. Therefore, the second media age theory breaks down the true meaning of the change in the digital world and

how it has impacted societies forever. With a self-managed website, data tracking can be made easier, seeing who visits the website, from which location and for what purposes. Similarly, HHS's clinics and hospitals have no stand-alone accounts to specifically engage audiences with targeted information and get them to learn more about the services offered.

Another critical aspect deciphered from the findings is that the viral nature of social media also instils skepticism and deters its use, especially for health-related matters. One Admin participant at a clinic noted that they once opened a Facebook page for their facility but never posted anything as they were skeptical about how public engagement would 'look like' as social media has become very toxic with a lot of negativity. Rather, health facilities are opting for websites which allow audiences to air views and help them improve services. Overall, this study reveals that the Harare Health Services Department is lagging in using digital technologies for communicating public health issues. This is because HHS has not fully embraced digital media use specifically social media for stakeholder engagement and targeted health messaging. This is in contrast to findings elsewhere where the use of social media, including other digital media has been found to assist HIV patients get support and networks with information on how to live with the disease as cited in the literature review. According to KAIS (2013), about 9 out of 10 people knowingly infected with HIV are receiving essential HIV-related care services and treatment for their infection.

Conclusion

The foregoing discussion has shown the importance of digital communication technologies for stakeholder engagement and public health communication, the uses of these technologies and the challenges encountered by selected health institutions in Zimbabwe. The main communication technologies utilised were found to be the WhatsApp platform and, to a lesser extent, Facebook and Email. However, even on social media platforms, there is minimal dialogic communication with stakeholders – rather the platforms are used largely for announcements. Amongst the challenges is the lack of autonomy by the Department to set up and manage its social media, lack of trained personnel to run digital communication, lack of resources and also skepticism of social media use for health-related purposes.

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