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The Future Is Participatory: *Collaborative Communication Design for Global Health Initiatives*

Myra Thiessen

Leah Heiss

Troy McGee

Gene Bawden

Abstract

The World Health Organization develops and delivers a range of technical documents outlining best practice procedures with the aim of improving global health outcomes and with emphasis on supporting low- and middle-income countries. However, these guidelines and other normative standard-setting products tend to have low uptake and implementation in the countries and communities they aim to reach due a range of system-level barriers and decision-making processes. These barriers are compounded by a disconnect between the individuals who are involved in the development of the guideline, typically experts from high-income countries, and those who are expected to implement them at the country level, typically in middle- and low-income countries. In order to address this problem, we employ the Digital Tactile Tools co-design method in an online workshop as a means to understand the lived experience of implementing guidelines in local country contexts. By drawing on participatory design, we speculate about how alternative approaches to generating and testing communication design processes at scale can be a viable and important means of developing more inclusive and responsive global health guidance. With this example, we hypothesize that communication futures that consider the wider context and the environmental factors impacting how information is used and understood will lead to more successful health initiatives.

Keywords

Tactile Tools

Co-design

Participatory Design

Communication Design

Global Health

Introduction

The World Health Organization (WHO) aims to improve global health outcomes, with a particular interest in supporting some of the most vulnerable communities in low- and middle-income countries (who.int). As part of this effort, the WHO develops and delivers a range of technical documents with recommendations and best practice statements, in the form of guidelines and other normative standard-setting products. However, uptake and implementation of this guidance within countries remains low (Saluja et al., 2022). Recent studies that investigated possible reasons for the low performance of global guidelines point to a range of system-level barriers and decision-making processes impacting their use (Saluja et al., 2022; Schünemann et al., 2022). Some of these barriers are very tangible—like access to reliable internet and power infrastructure, and those more related to capacity, such as insufficient funding and personnel (Saluja et al., 2022). Less tangible challenges, like those associated with poorly coordinated decision-making processes at the global and country levels, can also contribute (Schünemann et al., 2022).

Currently, guidelines used by global health initiatives tend to be disseminated as PDF documents that require downloading (who.int/publications/who-guidelines), which can be time-consuming and inconvenient for some country-level facilities that lack reliable access to the internet (WHO, 2022). Posting printed documents can also cause problems for remote locations or those with limited or infrequent postal service. In addition, even where postal services do exist, international shipping can be costly (WHO, 2022). Compounding this issue is the fact that, apart from the decision-making process for formulating the recommendations included in these PDF documents, there is not currently a standardized approach to the communication design of the final product. The WHO Department of Quality Assurance, Norms, and Standards commissioned a study in 2021 to examine what might be contributing to the limited adoption of WHO's guidelines in countries and found a distinct disconnect between the individuals who are involved in the development of the guidelines, such as technical experts in Guideline Development Groups who are typically from high-income countries, and those who will use guidelines, typically living and working in low- and middle-income countries (Saluja et al., 2022). This disconnect means that there is a high likelihood that communications around the guidance do not scale and may not be inclusive or a best fit for intended audiences. The result is limited usability and impact.

In this paper we present an alternative process to generating and testing communication design processes and artefacts for global health initiatives at scale and hypothesize that such approaches are necessary for future communication practices that aim to address these and other complex problems. Participatory design methodologies have shown that they can be a means to develop deep understandings about

a range of key social, environmental, and political factors, including the contexts and problems that design interventions aim to address. They are also robust enough to uncover and respond to the wants and needs of both the stakeholders and beneficiaries of a design system through processes that create opportunities for shared learning and agreeing on a vision for change (Robertson & Simonsen, 2012a, 2012b; Simonsen & Hertzum, 2012). Participatory methodologies are regularly used in the development and evaluation of systems and services (Light & Akama, 2014; Sanders & Stappers, 2012; Stickdorn et al., 2018) and to build on this, we argue that adopting an iterative participatory model to develop a communication design strategy and associated artefacts is essential to successfully addressing large-scale communication challenges. Achieving more successful health initiatives that are inclusive of diverse global audiences and that respond to individual contexts is more likely with the input of stakeholders and beneficiaries of the initiative.

Tradition Is Holding Us Back

Traditionally, communication design artefacts have been generated in response to a commercial need or commission, which has tended to overemphasize style and aesthetics (Frascara, 2022) and leaves little need or value for user engagement or research in the design process (Taffe, 2018). Despite many designers understanding the value of co-design and participant involvement in the design process (Taffe, 2017), communication design tradition has persisted. This is likely due to the fact that the practice of communication design largely remains—as it has for over a century—in the service of commissioning clients, not their audiences. Project pitches are frequently made to organizational management, and it is they who decide if the communication will resonate with end users (their customers), not the end users themselves. The designer will of course have had the end user firmly in mind when determining the communication outcome, but not engage them as a participating, co-designing partner. Instead, communication designers deploy a framework of predetermined "rules" that are learned and applied in order to aid public communication. These include such elements as appropriate column measures, type size and color, background color, and the visual hierarchy of page structures and their narrative flow. The elements of this framework comprise a visual communication practice determined to "organize everything in a unifying theory" (Wild, 2009).

This is a kind of practice that privileges "craft" and valorises material-rich practices (Tonkinwise, 2014). However, it is also within this practice that the communication designer is able to demonstrate their craft. As Lorraine Wild argues, "When craft is put into the framework of graphic design this might constitute what is meant by the 'designer's

voice'—that part of a design that is not industriously addressing the ulterior motives of a project, but instead follows the inner agenda of the designer's craft" (Wild, 2009). The personal crafting of visual elements within the predetermined parameters of pages, screens, or other media is how a communication designer demonstrates their excellence and, consequently, their value. It is what separates them from an "untrained" user of tools such as Canva, Figma, and other products readily available to a designing public. Rarely, however, is their nuanced crafting of content co-created with the final end user of the project, nor is there evidence of the critical creativity currently needed in the face of persistent complex and wicked problems (Tonkinwise, 2014).

One challenge is that communication design practice tends to follow the model that sets up the designer as a solo practitioner that, through their own creative genius, is able to determine how best to reach audiences (Cross, 2011). There is a worrying assumption in such a model that the designer will act ethically and "take care" of the reader by acting in their best interest. This power dynamic fostered by traditional linear communication models (Akama et al., 2014) is concerning, especially since such models suggest the designer is able to act responsibly, even with little knowledge of the intended audience. It is troubling to consider, especially when communication design is in service of communities who are marginalized or when the design problem is highly technical, as is often the case in global healthcare contexts (Groeneveld et al, 2018; Oswal, 2014; Paulovich, 2019)[1]. Of further concern is that this dynamic can place the communication designer at the head of a process that is virtually unknown to those "on the outside" and affords little chance to address unintended or unexpected consequences arising from the design. It is true that artefacts of great beauty are often produced, but a failure to observe what happens when those artifacts are put out in the world means that their overall value is rarely challenged (Cross, 2011). As the *Can Graphic Design Save Your Life?* Exhibition at the Wellcome Collection in London underscored, communication design practice has had a profound impact on how we experience health and care, but it is not always front of mind when we consider the success of public health initiatives (Ali, 2018).

When messages fail, outdated beliefs that drive some communication designers are made manifest by blaming the readers, rather than the designers willingly looking inward at their own ignorance of the contexts, environments, or the lived experience of the readers they aim to reach. These outdated beliefs also leave little room for the kind of critical

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1 The challenge of deploying both communication design and participatory design in these contexts is contentious and is discussed more deeply in Groeneveld et. al (2018), Oswal (2014), and Paulovich (2019).

reflection that is necessary to address complex communication challenges (Tonkinwise, 2014; Yee, et al., 2009) and places a lot of pressure on decisions made during the design process. It is a model that suggests the designer is the only one able to determine what is "right" and "good" for end users. This is an idea that is underscored by Suchman's (2002) critique of design professionals who portray the process as neutral and themselves as "un-locatable" professionals who "design from nowhere" (p. 95). At the global scale, the inability of traditional communication design approaches to respond and adapt is intensified when grand global challenges call for interdisciplinary collaboration and participation across countries and cultures.

In a recent paper, Frascara (2022) circled back to re-examine what the aim of communication design is and the processes it involves, which he first discussed in his seminal work, "Graphic Design: Fine Art or Social Science" (1988). Frascara (1988) challenged communication design practices that are too focused on beautiful artefacts and that tend to have little regard for whether or not the work achieved any positive social impact or change. In revisiting this argument, Frascara was disappointed with the fact that there has been little shift in communication design thinking and practice since he first critiqued it—and in fact, since the early 20th century. He stated, "Many of the problems in today's design practice come from a tendency to simplify [design] processes. This is possibly an attempt to make design practice more efficient in the mistaken belief that an experienced designer can address complex problems without research" (2022, p. 277). It may also be a result of communication designers feeling reluctant to relinquish control over the outcome (Taffe, 2017), which one might argue is a result of fragile egos that surface in master-apprentice style education models and where what is "good" design is determined behind closed doors and measured against some elusive criteria never made fully explicit (Thiessen & Kelly, 2019).

For Frascara, the involvement of stakeholders and beneficiaries is key to understanding the scope of the problem and what might be an appropriate intervention for the time and place. He is disappointed that communication design as a discipline has not progressed with the same understanding and suggests that overlooking the limits of one's own knowledge and expertise can be dangerous. It is crucially important to recognise one cannot be expert in all things and must be able to rely on and draw from other disciplinary or professional expertise (Frascara, 2022). In our view, this extends to the valuing of the lived experience of the people who will use and hopefully benefit from design interventions, which is an integral part of participatory methodologies (Sanders & Stappers, 2008).

There Is Value in Participation

While there is a historical influence of user-centered methods as a means to inform communication design practice and research (Forlizzi & Lebbon, 2002; Frascara, 1997; Schriver, 1997), instances of participatory methods that focus more on co-creation and designing with as opposed to for audiences remain limited. In rare cases where the integration of participatory methods guides communication design, practice outcomes have shown to be more inventive, inclusive, and appropriate for use. This can be observed in the community co-design practice undertaken by Monash University's XYX Lab[2], whose work aims to address the gender inequity that exists in urban spaces. This work is shedding light on power relations and gender-based civic safety at a societal level by "harnessing the lived experiences of diverse voices, and by extending the socio-cultural understanding of cities" (Kalms & Bawden, 2021; p. 103). Through their community co-design method, the XYX Lab stresses that all workshop participants are experts in their own lived experience and may join from a community position, such as law enforcement, policy-maker, or urban planner. They further reinforce that in the co-design process, all participants have equal status. It is this position that gives strength to the XYX Lab's approach, which has enabled them to raise awareness of the safety concerns experienced by women, girls, and gender diverse people in contemporary cities in a more meaningful and impactful way. Importantly, their process is "one that does not revere a single hero designer but empowers a community's voice in the defining of public spaces and infrastructure. Just as designers feel safe to collectively iterate, develop, confer upon, and dispute ideas through prototypes, we permit our collaborator communities the same freedom" (Kalms & Bawden, 2021; p. 111). This community co-design model offers a practical approach for dismantling power relations within communication design practice, along with those within societies. Even with these efforts, we worry that many practitioners may still be resistant to such democratic models to engage with them in a genuine way due to the embedded nature of the traditional thinking and approaches in communication design practice discussed above.

In an attempt to address this gap, Taffe (2018) presented two case studies that demonstrated the value of co-design methods for idea generation activities that result in improved communication design outcomes. The two case studies examined quite separate projects, where one aimed to improve the adoption and usage of sustainable cleaning products and practices in childcare centers. The second explored ways to increase the awareness and knowledge of asthma risk and management. Taffe found that although participants were reluctant to engage in typical design process-related activities, like critical discussion about outcomes or their peers' ideas, they did engage with and enjoy creative idea-generation

2 www.monash.edu/mada/research/labs/xyx.

generation activities. Participants in the asthma awareness case study seemed more comfortable sharing their ideas in small rather than large groups, and in this setting were more open about their concerns relating to the motivation of not-for-profits mandated to help asthma sufferers and raise awareness about the issue. The communication designers who participated in the project reflected on the success of the outcomes and stated "that without participating in the co-design workshops any designs produced, no matter how aesthetically and conceptually innovative, would have been irrelevant and not used by the end-users" (Taffe, 2018, p. 363).

A strength of participatory design methodologies is that they "democratize" the design process (Paulovich, 2019) and aim to break down power relations between stakeholders. In doing so, participatory design can make it more challenging for designers to take up roles that place them in a position to decide for audiences (Luck, 2018). Rather, participatory models invite people into the design process and consider audiences/stakeholders/readers/end users[3] to be experts in their own experiences and fields of knowledge. The contribution of end users as part of a co-creation process is essential to the generation of products, services, and systems that respond to the specific needs and concerns of the individuals who will use them (Drain et al, 2017; Hussain et al, 2012; Sanders & Stappers, 2008). Co-design methods are useful for communication designers to break down barriers that might exist between the designer and the end user (Taffe, 2017) and it is important to recognize that effort is needed to uncover what is at the heart of the communication problem—what Taffe (2017) referred to as "the real brief." The failure to define a problem well seems to be challenging for communication designers following traditional models. By drawing more intentionally on participatory methods, designers may be able to more successfully tackle complexity and create more meaningful social change (Haylock, 2020). This complexity includes learning how to meet end users where they are and to understand the contexts in which they will engage and are expected to use communication systems, especially environmental, social, and political factors that affect their capacity to respond. Further, Napier and Wada (2015) showed that participatory methods can be incorporated into communication design processes in professional practice by describing their involvement with the redevelopment of communication materials for a healthcare and emergency management messaging system. Napier and Wada (2015) engaged stakeholders in a process that aimed to uncover the barriers to the existing communication system and consider the opportunities of a more idealized scenario. These findings were used to

3 We recognize that many terms are used to describe the individuals who will use and hopefully benefit from design systems and artefacts. It is not within the scope of this paper to unpack these terms. For ease, we use the term "end user" due to its familiarity.

inform the redevelopment of the messaging system, which resulted in an outcome that was more responsive to the needs and desires of the individuals who use it, as measured by increased subscriptions to the service and overall user satisfaction.

Importantly, even with limited examples of communication design embedding participatory methods, it is plain to see how those methods add value across a range of design processes. This is particularly evident in the capacity of participatory co-design to help stakeholders, including end users and designers, understand the complexity of the issues they aim to address (Napier & Wada, 2015), improve the inventiveness and appropriateness of designed outcomes (Napier & Wada, 2015; Taffe, 2018), and mitigate power relations in exchanges with end users (Taffe, 2017) and in communities more broadly (Kalms & Bawden, 2021).

The Challenge of Scaling Health Initiatives

The WHO develops high-quality guidance informed by leading scientific evidence, aiming to improve health-related outcomes worldwide in the form of guidelines (who.int). These guidelines are one key way that the organization is able to disseminate their recommendations for clinical practice and public health policy. The organization is evidence-based (Sinclair et al., 2013) and trusted for its quality and rigor. Guidelines "outline recommendations for end-users regarding what can or should be done in specific situations to achieve the best health outcomes possible" (Saluja et al., 2022, p. 2). However, developing high quality products and services does not in itself guarantee support, uptake, and successful implementation (Saluja et al., 2022). Multilaterals like the WHO and their partners who support implementation in countries face a broad range of communication challenges due to the complex nature of the issues they aim to address, the range of systems and processes they aim to support, and the fact that global public health products must be scaled for diverse audiences. The concerns related to scaling global guidance are vast and entangled, and are much more involved than the translation of documents into local languages. As explained by Saluja et al. (2022), the uptake of these health-related recommendations may be deeply influenced by cultural norms and values related to particular issues and a country's political environment and level of support. Advocates for the uptake of WHO guidelines may face convoluted political barriers including the absence of necessary legislation and regulation to support implementation. Insufficient funding and limited personnel are also major barriers in most low- and middle-income countries. Access to required equipment and infrastructure like reliable internet and electricity may introduce further barriers. In some cases, a limited awareness of existing guidelines or of updates that contain more current advice has also been reported as a challenge for uptake (Saluja et al., 2022; WHO, 2022).

To improve the uptake of the advice outlined in guidelines used by global health initiatives, communication processes, practices, and resulting artefacts are likely to be more robust if they draw on the lived experience of the individuals who will use, implement, and advocate for these guiding documents. In an effort to address the barriers to uptake related to engagement with the content of WHO guidelines, we evaluated the process behind guideline document design. We engaged end users in an online workshop to understand the barriers to access and use of WHO guidelines. The evaluation focused on experience in low- and middle-income countries and was done in line with traditional communication design practices. We use this case study to explore the viability of participatory communication design practices for global health initiatives and suggest that approaches that consider the wider context and environmental factors in which information will be used and understood are likely to achieve more meaningful impact in local communities. This involves a deep understanding of the motivations, desires, and concerns of people and means meeting those people where they are (Sanders & Stappers, 2008). Our work is ongoing and we continue to iterate and evaluate our process, but here we aim to make a timely contribution to the limited discussion of participatory communication design identified by Taffe (2018) by offering a case study discussion of a workshop undertaken to improve uptake and implementation of the WHO guideline, *Fatal injury surveillance in mortuaries and hospitals: A manual for practitioners* (Bartolomeos et al., 2012). This account describes our collaboration with the WHO and shows the value of co-design methods for evaluating and improving the communication processes of global health initiatives on norms and standards implementation. This case study discusses practitioner-led design research (Grocott & Marshall, 2010) and is a reflection on practice. With this example we initiate a dialogue about how participatory communication design may be able to improve the usability and uptake of health guidance.

Co-designing for Global Health Workshop[4]

Drawing on participatory methods can introduce challenges for initiatives like this one since stakeholders, end users, and beneficiaries of WHO products may be located across the globe and may also be attempting to implement guidelines in remote country hospitals and clinics. To understand more about these challenges, we conducted an online co-design workshop that brought together 33 participants from eight countries (Australia, Denmark, India, Kenya, Lebanon, Switzerland, Thailand, and the United

4 We present a summarized version of the micro-workshop methods and findings here for purposes of discussion. A full account of the workshop findings can be found in *Improving the usability and impact of WHO guidelines: Report of a WHO workshop.* Geneva: World Health Organization; 2022. Licence: CC BY-NC-SA 3.0 IGO.

Republic of Tanzania) to understand more about their lived experiences, barriers, and motivations to engaging with WHO guidelines (WHO, 2022). In order to understand the challenges with guideline implementation we focused our discussion on a single WHO guideline: *Fatal injury surveillance in mortuaries and hospitals: A manual for practitioners* (Bartolomeos et al., 2012). Injury and violence are major contributors to untimely deaths around the world, and this guideline provides best practice advice for collecting data about the type, cause, and frequency of those injuries in countries as well as the circumstances under which the injury occurred. These data are necessary to better understand how prevention strategies may be implemented but many low- and middle-income countries lack a systematic procedure for their collection (Bartolomeos et al., 2012).

The workshop employed the Tactile Tools codesign method (Heiss et al., 2020; Heiss et al., 2022; Heiss & Kokshagina, 2021) and adapted it to an online delivery to enable a global audience to participate in the work and provide a better representation of end users overall. Participants included individuals from national ministries of health, healthcare workers, and WHO country office and headquarters staff. Including perspectives from such a diverse range of experiences, environments, and personal and political contexts provides insights that are more likely to speak to real and meaningful solutions to the barriers that are faced in countries and regional areas where guidelines are expected to be implemented.

The workshop ran for 90 minutes and was co-facilitated online from Australia and WHO Headquarters in Geneva, Switzerland using the video conferencing software Zoom® and the digital whiteboard tool Miro® (shown in Figure 2). Participants were organized into small working groups of approximately five people, with two facilitators, and groups were constructed so that they had a broad mix of expertise, roles, and locations in order to facilitate a robust, interdisciplinary discussion. The workshop consisted of four activities with discussion prompts designed around the experiences of four personas. These personas were co-created with members of the WHO team and with input from clinical and public health experts from across countries where the *Fatal injury surveillance in mortuaries and hospitals: A manual for practitioners* (Bartolomeos et al., 2012) guideline was being implemented and used. In an effort to develop more representative personas, we invited input from an international audience in advance of the workshops. For instance, the persona for Dr. Abasi was developed in collaboration with one of the United Republic of Tanzania's only forensic pathologists. Shown in Figure 1a and 1b, the personas included Dr. Helema, a National Programme Officer at the WHO Country Office in the United Republic of Tanzania; Dr. George, a lead program manager at the Ministry of Health and Social Welfare; Ms. Mary, a hospital statistics manager; and Dr. Abasi, a forensic pathologist in the United Republic of Tanzania responsible for a hospital mortuary department. The necessity of providing access to all

FIGURE 1a:

An overview of the co-created personas used in this workshop.

Meet
Dr Helema

Dr Helema is the National Programme Officer at the WHO Country Office in the United Republic of Tanzania. She is the main focal person for the mortality surveillance project.

Meet
Ms Mary

Ms Mary is a hospital statistics manager in the United Republic of Tanzania, responsible for overseeing day-to-day data collection within the hospital.

Meet
Dr George

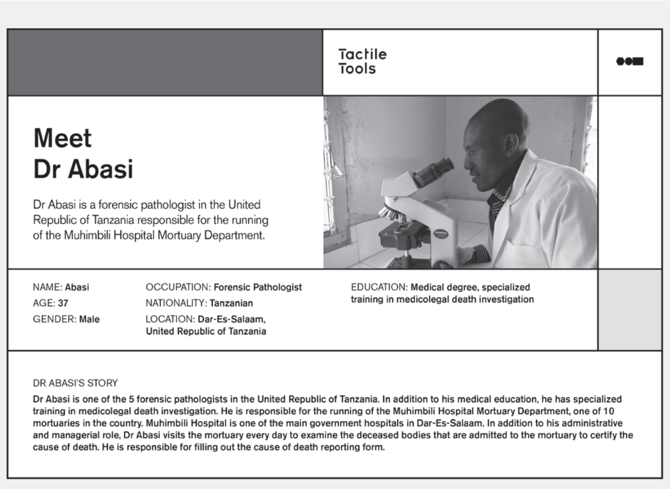
Dr George is the lead programme manager at the Ministry of Health and Social Welfare. He is responsible for implementing surveillance systems.

Meet
Dr Abasi

Dr Abasi is a forensic pathologist in the United Republic of Tanzania responsible for the running of the Muhimbili Hospital Mortuary Department.

FIGURE 1b:

An example of the complete persona, Dr. Abasi, as it was used in this workshop.



workshop participants, irrespective of their internet stability or familiarity with English, necessitated that the personas be written in a concise way, also enabling translation to the WHO's six official languages if required.

Each participant group worked with a different persona and considered what might motivate this person to take action to implement the WHO mortuary surveillance guideline, as well as identifying the barriers they may face when trying to implement the guidelines. Participants also explored how their assigned persona might react to and interact with a sample guideline chapter design developed to adhere to principles of design for reading and document design.

Prototype Chapter Design

As part of the workshop activities, we asked participants to evaluate a designed prototype chapter of the WHO guideline *Fatal injury surveillance in mortuaries and hospitals: A manual for practitioners* (Bartolomeos et al., 2012). Specifically, the designers worked with Chapter 2, shown in Figure 3, to provide an overview of a visual strategy that draws on principles of design for reading and document design. The prototype chapter was not based on user feedback, but on the acquired knowledge of the designers who have had significant experience in publication design. Theirs was a designers' response to the original document produced by the WHO. This redesign was not intended as the design—decreed correct solely by the knowledge and skills of the designers—but was generated as a design prototype to engage audience critique and feedback. As explained by Sosa and Grocott (2018),

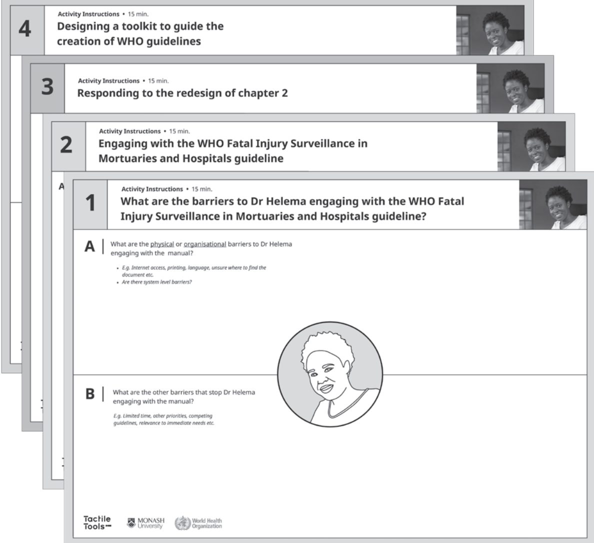
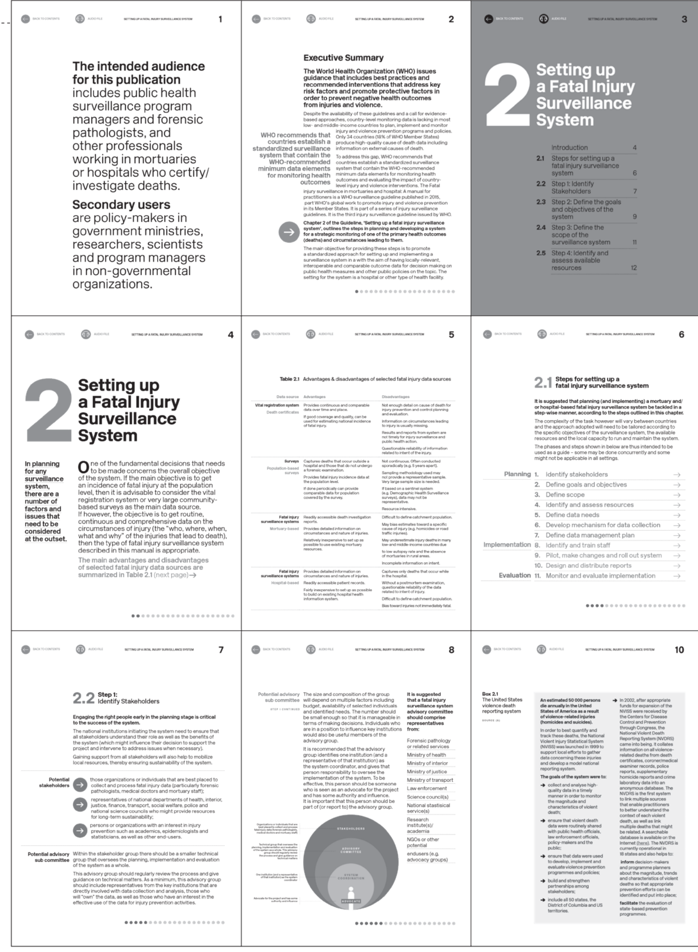


FIGURE 2:

Examples of the Digital Tactile Tools Miro® boards used to facilitate this workshop.

FIGURE 3:

Example pages from the prototype chapter design of the Fatal injury surveillance in mortuaries and hospitals: A manual for practitioners (Bartolomeos et al., 2012). The original guideline can be accessed at apps.who.int/iris/handle/10665/75351.



“simulations, facsimiles, models, props, and blueprints become the material and experiential way that designers tangibly explore not-yet-fixed ideas” (p. 82). The prototype chapter was indeed not fixed, but a model through which the co-design collaborators could see the visual impact of design interventions, changes, and reimagined layouts. By visually representing changes in the design through scale, hierarchy, and even color, the project’s co-design community could see the impact of change, providing them with the prompt to start the iterative, reimagining process themselves.

Participants were asked to respond to the chapter prototype design by considering how their persona might interact with and think about the visual features such as typographic structures and hierarchies, strategic use of color to visually cue content and create meaning, and highlighting content to draw attention to and instruct readers about

what information to attend to. This approach is more likely to support reading strategies such as skimming and scanning so that readers can better determine which sections of the guideline are relevant for them and to completing a task (Lonsdale, 2016; Schriver, 1997). We also utilized strategies such as grouping related content, creating a comfortable reading measure, using a comfortable type size and generous leading (Lonsdale, 2016), and choosing a typeface likely to support legibility and reading fluency due to its large x-height and clear neutral letterforms (Beier & Larson, 2010; Beier, 2012; Thiessen et al., 2020, 2022). After reviewing the chapter prototype design, workshop participants were asked to consider how their persona might respond to and think about the effectiveness of the revised layout and text structures (i.e., was the prototype chapter likely to be useful for their persona, and how might that persona engage with it?) Participants were also asked to consider whether there might be any further barriers to the access and accessibility of the prototype chapter in, for example, visual structure, navigation, and format.

Discussion and Reflection

While reporting of the full workshop outcomes is available in *Improving the usability and impact of WHO guidelines: Report of a WHO workshop* (WHO, 2022), the scope of this paper considers the value of our participatory approach as a means to inform future communication design practice and research and as way to address the problems that surround scaling communications for global health application. We also evaluate the value of the online engagement of stakeholders as a practical way to facilitate more inclusive participation and to benefit from a wider range of perspectives and lived experiences. Providing the means for such a diverse group of stakeholders to meet in one (virtual) place at the same time is invaluable in developing an understanding of how to create a more robust and inclusive communication system to reach more diverse audiences. Since engagement with documents of this kind is heavily influenced by an individual's motivation and as it is about access, ensuring that end users can easily understand and implement the content in guidelines is a crucial consideration.

Aligning with the observations reported by Saluja et al. (2022) in their scoping review of literature, the participants in our workshop discussed barriers to implementation such as difficulties in navigating political environments, insufficient funding, and unreliable electricity and internet infrastructures, as well as time-poor clinic and hospital staff. Further, participants who were involved in guideline development shared concerns about their limited understanding of the individuals who are expected to work with guidelines, including their motivations and the challenges that may affect their capacity to successfully implement recommendations. The environment offered by the co-design process provided an opportunity for

such discussion and realization about the need for guideline authors to develop a deep understanding of how and why a guideline might be needed and used in local contexts. It also highlighted the need to understand and develop empathy for end users and value their lived experience (Sanders & Stappers, 2008) including what motivates them, the contexts in which they work, and the environmental factors that may inhibit their success. In these cases, guideline developers may need to understand that their brief is not merely to translate the science, but to provide and support a roadmap toward implementing guideline advice amidst complex social and political barriers. This involves understanding that guidelines have more than one reader (e.g., statistician, forensic pathologist, and project managers) and that making documentation available in local languages does not mean that accessibility has been satisfactorily addressed. In this way, our co-design workshop helped uncover "the real brief" (Taffe, 2017) for WHO guideline developers and demonstrated the need for country-level consultation as an integral part of the development process.

In response to the prototype chapter, participants found the typographic structure and layout, the use of color and white space, usability, and readability all improved and provided support for easy navigation and reading actions, such as deep reading and search tasks. Although this prototype was not developed in consultation with end users and was instead developed to facilitate participant discussion, it has been shown to demonstrate the strength of design for reading and document design principles to improve user experience. Further, workshop participants were able to visualize how this prototype design might be read, which facilitated discussions about potential barriers to use, aligning with Kalms and Bawden's (2022) observations about their communal making process. In our experience, the workshop also acted as a means to incite critical discussion, which the examples discussed by Taffe shied away from (2018). For example, participants considered how the typographic structure and layout might support translation into multiple languages; whether visual explanations like illustrations, charts, and graphs can improve the comprehension of complex processes; and how added visual features and illustrative content might influence download speeds and printability. Moving forward, we are able to improve our approach by incorporating participant responses into our design and avoid the isolation of a more traditional communication design process. In this way, we move toward a communication strategy that is more likely to scale globally and be more inclusive, responsible, and appropriate for the people who will use it.

Significance

In this project, we utilized processes not common in the design and development of communication design artefacts and tested the methodology

and artefacts at scale within the context of an international co-design workshop. The impact of this is important for commu-nication design practices, but also for multilaterals like the WHO that want to improve their communication strategies and engagement with the lived experience of accessing and implementing their health advice. Pragmatically, this case study also demonstrates the value of design approaches to assist multilaterals to address complex problems that transcend communities and international borders. Our participatory practices demonstrate how design can be mobilized to unite both people across the globe and those who share the goal of improving public health initiatives and outcomes at the global level.

Finally, we show that a co-design approach is valuable for communication design outcomes. In this way, we contribute to a limited body of participatory communication design practice (Kalms & Bawden, 2021; Napier & Wada, 2015; Taffe, 2017; 2018) by demonstrating the value of this approach for global health initiatives. In addition, participatory approaches are more likely to address persistent problems within communication design practices that have perpetuated insular models and as a result are ill-suited to address the scale and complexity of global health challenges. In a participatory model, designers are facilitators who guide the design process but are beholden to the stakeholders involved in that process. Since this approach is deeply embedded in principles of participation, it is a means to directly address the problems with communication design tradition and outcomes that disregard the impact of the work and that do not have vision for positive social change (Frascara, 2022). It is a design process that forces the designer to relinquish control, which communication designers can be reluctant to do (Taffe, 2017).

Research Limitations and Opportunities for Future Co-design

We recognize that this paper provides only a single case study drawn from artefacts on the experience of the authors and international multilateral collaborators, which is situated within larger discourses that are concerned with how the process and outputs of design practice are disseminated and have impact in the world. Although the study is limited by the fact that it only examines one workshop, it is nonetheless able to show how outcomes can be directly informed by this kind of collaboration and highlights a future for the field that works to create more meaningful outcomes with, and not for, the communities it aims to serve. We recognize that global health initiatives face representation challenges due to the diversity of the communities and individuals involved. These are related not only to cultural and language differences, but also to the potential for substantial differences in location and access to infrastructures. We aim to address these concerns through our engagement of stakeholders and our partners at WHO in co-constructing personas, scenarios, and workshop activities, and recognize that ensuring

our end users are adequately represented remains a priority.

This pilot workshop was undertaken as an early piece of work in a series of larger and ongoing global co-design engagements. As such, with this project, we have sought to investigate the viability of our approach and will seek to validate the role of participatory methods in global design-for-health engagements in the future. As outlined by Stead et al. (2022), reflecting and reporting on early work of this kind is valuable within the context of the larger body of work as a means to discover what questions are most important and the methods we can draw on to address them. In sharing this account of our participatory practice, we aim to address the gap highlighted by Taffe (2018) on the lack of case studies that describe participatory communication design practice. Through both this workshop and ongoing engagements, we aim to illuminate the underexplored, yet important contribution that participatory communication design has to play in impacting how global health publications are disseminated and accessed.

Conclusion

With the scale of the health-related problems faced by global communities, a top-down approach to communication practices is no longer sufficient. Communication systems and assets developed using a participatory model are likely to be a more viable model for communication futures. With this case study we suggest that by drawing on participatory methods, communication design can step away from traditional models of practice that are exclusive and insular, and that venerate the "master" designer who is creating works of great beauty but arguably show no evidence of positive social impact or change (Cross, 2011; Frascara, 2022; Thiessen & Kelly, 2019). Beyond craft and tradition, we hypothesize that there is a future for communication design that is less concerned with artefacts and more with process; a kind of design that worries more about the journey afforded by design practice than the destination to material outcome. The relevance of this engagement will be in the contribution of professional design practice in multilateral settings and global public health initiatives and where collaborative design research must navigate political forces and complex relationships between people, organisations, and countries. Participatory models are not only more likely to improve communication outcomes for multilaterals like the WHO, but, we argue, they are also able to address the complexity of the communication problems that multilaterals face.

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