Digitalisation, Health, and Participation
A BRIEF ON GHANA

Country Context

Ghana is undergoing a rapid shift towards use of digital technologies for health and services, opening new opportunities and presenting critical new challenges for human rights that require urgent attention.

This brief introduces key facts on access, governance, and the impact of the digital shift in health on diverse young adults, drawing on participatory action research in Ghana.

Ghana's digital revolution has been driven by the widespread adoption of the Internet and social media platforms. Data Reportal's 2023 report placed Ghana's internet penetration at 68.3%. This growth, according to the report, was fueled by affordable smartphones, improved network infrastructure, and strategic government initiatives such as the *National Broadband Strategy* (NBS). Over 43 million cellular mobile connections were active in Ghana in early 2023, equivalent to 129.8% of the total population.[1] More than 19% of Ghana's population were social media users in January 2023[2], creating opportunities but also challenges for health information and misinformation. As in other countries, Ghana's health facilities embraced digital technologies during the Covid-19 pandemic.[3] This widespread shift led to the revision of Ghana's e-Health Strategy in 2023.[4]

This brief provides an analysis of the current context of digitalisation in Ghana and how it shapes access to health services and information, focusing on:

(i) Multiple digital divides

(ii) Findings from our previous participatory action research with young adults

(iii) Digital health governance

Based on this, we offer policy recommendations and share plans for future research.

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[1] Data Reportal (2023). *Digital data report: Ghana*, web page: https://datareportal.com/reports/digital-2023-ghana

[2] Ibid, Data Reportal (2023).

[3] Cory, N., & Stevens, P. (2020). Building a global framework for digital health services in the era of COVID-19. *Information Technology and Innovation Foundation*. https://itif.org/publications/2020/05/26/building- global-framework-digital-health-services-era-covid-19; Demuyakor, J. (2020). Ghana goes digital agenda: the impact of zipline drone technology on digital emergency health delivery in Ghana. *Shanlax International Journal of Arts, Science, and Humanities*, 8(1), 242-253. https://doi.org/10.34293/sijash.v8i1.3301.

[4] Ghana Health Service (GHS) (2010). Ghana eHealth Strategy. https://www.isfteh.org/files/media/ghana_national_ehealth_strategy.pdf.

Multiple digital divides

The trend towards digitalisation has created unequal access to technology and the Internet due to cost, cultural, geographic, gender and language factors, among others.

In Ghana, digital gender divides are particularly acute: in 2021, 4.9 million persons 15 years and older did not own a smart mobile phone, and over a million more females did not own a smartphone compared with males.[5] Cultural and language factors contribute to fewer women having access to technology, as does the fact that poverty disproportionately affects more women and girls than men.[6] Our previous study, discussed below, found that young women living with HIV described challenges in accessing healthcare when disclosing their status, and were less likely to be employed or financially secure.[7] This affects the uptake of specific mobile devices for women living with HIV.

According to a 2019 World Bank report, more than half of Ghana's population lacked the skills to use online health services.[8] The prevailing digital divides are further exacerbated by gaps in literacy, as the Ghana Statistical Service (GHS) has reported in its last census.[9] More recently, studies by the Global System for Mobile Association's (GSMA) assistive tech programme revealed a substantial mobile disability divide in Ghana across mobile products and services, including mobile ownership and mobile internet use.[10]

Londron reports that geographic barriers mean many rural communities are left behind.[11] Only 10% of individuals in the rural community own computers, compared to 24% in the urban areas. Gaps in both access and digital skills in rural communities makes it challenging to adopt and use digital health technologies or applications.

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[5] Ghana Statistical Service (GSS) (2021). *Thematic brief on digital exclusion in Ghana.* https://www.statsghana.gov.gh/gssmain/fileUpload/pressrelease/Thematic%20Brief%20on%20Digital%20Exclusion_260423a.pdf

[6] Pappoe, F. (2023). *Bridging the gender digital divide with focus on rural women and girls - reflections of a UN Women delegate.* Web page: https://thebftonhttps://savsign.org/she-helpline/line.com/2023/03/28/bridging-the-gender-digital-divide-with-focus-on-rural-women-and-girls-reflections-of-a-un-women-delegate/

[7] DHRPC (2022). *Digital health and human rights of young adults in Ghana, Kenya, and Vietnam: final project report.* Graduate Institute of International and Development Studies, Global Health Centre: Geneva. Available at: https://repository.graduateinstitute.ch/record/300591?_ga=2.99187678.1735834843.1682602161-345088509.1672743223

[8] Dzikunu R, (2021). *Digital health inequalities: 3 policy recommendations for Ghana.* Teamscope. https://www.teamscopeapp.com/blog/digital-health-inequalities-3-policy-recommendation zs-for-ghana

[9] GSS (2021) *Thematic brief on digital exclusion in Ghana.*

[10] Groupe Speciale Mobile Association (GSMA) (2022). *Closing the mobile disability gap in Ghana: insights and recommendations.* https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2022/04/Closing-the-mobile-disability-gap-in-Ghana.pdf

[11] Londron, P. (2021). *Digital inclusion: examining the Impacts of digital dealth technologies on Inequality. Addressing the specific needs of vulnerable groups in Ghana* (Doctoral dissertation, Vrije Universiteit Brussel).

Experiences of young adults: Findings from a participatory action research study

In 2021-22, the Digital Health and Rights Project Consortium (DHRPC) conducted participatory action research in Bangladesh, Colombia, Ghana, Kenya and Vietnam, with central roles for young researchers based in national Non-Governmental Organisations (NGOs) and universities in each country.

In addition to legal and literature reviews, the research team conducted 8 focus group discussions (FGDs) in Accra, Kumasi and Tamale) with a total of 56 young adults aged 18-30, including some living with HIV and some key populations. They also conducted individual interviews with 15 community and civil society leaders, government health officials, United Nations (UN) officials, and health outreach workers. The findings were analysed, shared and validated by study participants, who made inputs into a multi-country research publication.[12]

The Ghana study revealed both significant empowerment potential and risks in the digital transformation of health.[13] Young adults described increasing reliance on their mobile phones for access to health information, advice, and support. They emphasised reliance on web searches (Google), social media (Facebook, Twitter, YouTube, TikTok, Instagram), and social chat apps (WhatsApp) for health information and advice. A smaller number reported using mHealth apps, such as menstrual tracking apps, pregnancy apps, and apps for mental health. Specifically, several participants described using Ghana's "You Must Know" app, and Flo, a menstrual health app.

Young adults in Ghana shared significant benefits from online access, especially for women and key populations. They described finding "safe space" and "online family" through social chat and social media. Some also disclosed harms linked to seeking health information online, including cyberbullying, and fears of surveillance.[14] Young women who were required to share phones with others described online harassment, as well as surveillance by family members or partners that prevented access to health information. Female sex workers described lack of awareness of available health information online due to lack of digital skills or fluency in English. Some young people from sexual minorities described how online groups for HIV prevention work led them to face threats of infiltration by hostile individuals or groups and to physical violence.[15]

These disparities were reinforced by the intersectional nature of socio-structural factors, including gender, economic resources, language, education, sexual orientation, religious and cultural norms. As discussed below, efforts by way of policies, strategies and legal frameworks are developing to regulate digital spaces, however study participants described lack of information about or voice in shaping existing policy and legal frameworks.

(3)

> "I think [our chat group] has created a bond between the community. It's more or less like a family, because at least we can help someone, if that person is in need. If that person is maybe sick and needs some small help, maybe that person is in an abused case, we just come in. We help ourselves a lot too, with some funerals, some parties. But the great benefit that we are getting out of it is the education that we are giving out, and the services that they are also receiving."
>
> HIV peer outreach worker, Ghana

[12] Davis SLM, Pham T, Kpodo I, et al (2023). Digital health and human rights of young adults in Ghana, Kenya and Vietnam: a qualitative participatory action research study. BMJ Global Health;8:e011254. doi:10.1136/ bmjgh-2022-011254 ; Ibid, DHRPC (2022).

[13] DHRPC (2022). *Digital health and human rights of young adults in Ghana, Kenya, and Vietnam.*

[14] DDavis, Kpodo, Pham, et al., (2023), Digital health and human rights of young adults in Ghana, Kenya and Vietnam: A qualitative participatory action research study *BMJ Global Health.*

[15] DHRPC (2022). *Digital health and human rights of young adults in Ghana, Kenya, and Vietnam.*

Digital health governance in Ghana: An overview

The legal and policy framework of Ghana's digital health governance is fragmented. Health officials are making concerted efforts to address this.

A review of the law and policy environment in 2021 highlighted three specific policies and standards that guide the development of digital health in particular: (i) *ICT for Accelerated Development* (ICT4AD) (2003); (ii) *Health Sector's ICT Policy and Strategy* (2005); and (iii) *Ghana e-Health Strategy 2010*, all at that time in need of revisions.[16] Additionally, the *Electronic Transactions Act 2008 (Act 772); Electronic Communications Act 2008 (Act 775); Data Protection Act 2012 (Act 843); Payment Systems and Services Act 2019 (Act 987); National Communications Authority Act 2008 (Act 769); the National Information Technology Agency Act 2008 (Act 771); and the Cybersecurity Act 2020 (Act 1038)* are relevant for digital health governance, and indicative of its fragmented nature across diverse agencies in Ghana.[17]

Recently, the Ghana Health Service (GHS) launched a new *Policy and Strategy on Digital Health* (2023 - 2027)[18] to improve health delivery in the country. The policy aims to coordinate ICT solutions in the GHS for five years. It outlines strategies that aim to ensure integration and interoperability of digital platforms, with the main activities being to:

- Develop and operationalise interoperability frameworks, standards, and guidelines for digital health platforms; and

- Monitor interoperability, and ensure compliance with standards and guidelines.

The 2023 strategy further aims to enhance access to comprehensive and high-quality healthcare services by strengthening governance and accountability structures for digital health across various administrative levels to ensure client safety, data security, confidentiality, privacy and a competent health workforce proficient in digital technologies.

However, the strategy lacks a clear-cut plan to broaden access to remote consultations, diagnoses, and treatments through telecommunication technologies, particularly for women and under-served or key populations. Additionally, while the new strategy demonstrates an intent to promote equity and inclusion, specific details about how this would be realised is unclear. For instance, there is no mention of gender, disability, or vulnerable populations, and the digital divides they face. The broader legal environment also creates challenges, especially for key populations. A new bill approved by Parliament would criminalise online and offline activities that portray sexual and gender minorities in a positive way, creating heightened risks for HIV outreach activities online.[19] Website and ISP owners that host such content could face prison sentences if convicted. Additionally, civil society groups working with sexual minorities on HIV prevention and support have described harassment and online and offline violence on the basis of their identities.[20]

Nonetheless, the government, in collaboration with local and international partners, has undertaken initiatives aimed at addressing digital divides and improving access.

[16]   Ibid., DHRPC (2022).

[17] Addison Bright Sloane (2022). "An interview with Addison Bright Sloane discussing digital transformation in Ghana". *Lexology* (December 13). https://www.lexology.com/library/detail.aspx?g=900463a4-6b72-433d-8488-9e66ef4bac27.

[18] GHS (2023). *Policy and strategy on digital health*. https://ghs.gov.gh/wp-content/uploads/2023/04/POLICY%20&%20STRATEGY%202023-2027.pdf

[19] UNAIDS (2024). "UNAIDS Executive Director Winnie Byanyima responds to the passage of the Human Sexual Rights and Ghanaian Family Values Bill in Ghana's Parliament". Press statement (no date). Web page: https://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2024/february/20240228_ghana-law

[20] Freedom House (2023). Ghana: freedom on the Net. Web page: https://freedomhouse.org/country/ghana/freedom-net/2023.

UN Habitat and United Nations High Commissioner for Refugees (UNHCR), in collaboration with a local partner (IamtheCODE Foundation) launched the "Digital and Reproductive Health Learning for Girls and Boys in Informal Settlements" programme to improve digital and reproductive health education in selected slums and informal settlements.[21] United Nations Population Fund (UNFPA) has also launched "WAWABA SRH", a user-centered web-based sexual and reproductive health (SRH) platform in collaboration with the GHS that directs users to the nearest locations to access friendly SRH services.[22] In November 2023, the Ministry of Communications and Digitalisation launched the re/Start initiative at the Ghana-India Kofi Annan Centre of Excellence in ICT to train 10,000 young people and persons with disabilities (PWDs) in digital skills.[23] The government has also launched an ICT Capacity Building and Skills Development Programme to provide basic ICT training to civil and public servants and others in underserved communities using Community ICT Centres (CICs).[24] A Cyberlabs Programme aims to expand internet connectivity, services, and facilities to designated unserved and underserved communities.[25]

Civil society groups have also led the way with innovative interventions: Savana Signatures' SHE+ Helpline offers SRH counseling and education services in nine languages nationwide.[26]

The proliferation of the aforementioned interventions looks promising for the prospects of bridging Ghana's digital divide, but the extent to which marginalised communities benefit and participate in their design, implementation and assessment varies. The dominant role of social media, social chat and international health apps create challenges for domestic digital and data governance. For example, Flo, the above-mentioned menstrual health app, has been cited in the United States (US) for privacy and data protection breaches.[27]

In our current study, we aim to explore the reach and challenges of these initiatives for young adults, including those living with and affected by HIV in Ghana.

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[21] Abani, C. (2023). DigitALL: Innovation and technology for gender equality in Ghana- an Op-ed by Charles Abani, UN Resident Coordinator in Ghana. Web page: https://ghana.un.org/en/225010-digitall-innovation-and-technology-gender-equality-ghana-op-ed-charles-abani-un-resident

[22] Ibid, Abani (2023).

[23] Ministry of Communications and Digitalisation (MoCD) (2023). Govt launches 're/START' initiative to train 10,000 young people in emerging technology. Web page: https://moc.gov.gh/2023/11/21/govt-launches-re-start-initiative-to-train-10000-young-people-in-emerging-technology/

[24] Pappoe, P. (2023) Bridging the gender digital divide with focus on rural women and girls - reflections of a UN Women delegate.

[25] Ibid, Pappoe (2023).

[26] See Helpline advert by Savannah Signatures at: https://savsign.org/she-helpline/

[27] Privacy International (PI) (2020). We asked five menstruation apps for our data and here is what we found... Web page: https://privacyinternational.org/long-read/4316/we-asked-five-menstruation-apps-our-data-and-here-what-we-found

Further research: The Future of Human Rights in the Digital Age

In 2023-26, the Digital Health and Rights Project Consortium plans *The Future of Human Rights in the Digital Age* study, building on our previous research to incorporate community perspectives into global policies and practices.

Utilising a transnational participatory approach which centres early-career researchers and advocates at national institutions, the new study will focus on the role played by young adults and diverse grassroots communities in Colombia, Ghana, Kenya and Vietnam in shaping the future of human rights in these three areas:

(i) **Digital literacy and empowerment:** Exploring the kinds of digital literacy that young people and communities need, to participate in digital governance discussions.

(ii) **Political determinants of digital health:** Exploring experiences from the ground-up, with digital governance, laws and policies.

(iii) **Meaningful youth participation in digital governance:** Investigating the right to meaningful participation and the extent to which young adults and civil society can participate in promoting human rights in data and digital governance.

To foster a fairer digital future, and engage grassroots communities, the study adopts a pedagogical approach that translates voices from the side-lines into the mainstream by providing a platform that empowers young people to become both learners and researchers.[28] Consequently, the project has established a Community Advisory Team (CAT) in Ghana, with young adults from previous research, health advocates, and human rights advocates represented. The CAT advises on the research, leads national dissemination and advocacy plans, and participates in digital empowerment training. They also elect a representative to our global steering committee.

Recommendations

• Donors should focus on interventions that prioritise human rights education and digital literacy training for young adults and marginalised populations.

• The United Nations, regional bodies such as the African Union and other global health agencies should support the Ghanaian government to strengthen data protection regulation and implementation for marginalised populations.

• The government of Ghana should ensure that the processing and use of data by the private sector in the delivery of healthcare services and information, as well as in the management and provision of healthcare infrastructure, is effectively regulated and subject to robust accountability mechanisms.

• The government of Ghana should work with Civil Society Organisations (CSOs), youth associations and communities to enhance transparency and inclusive decision making. Specifically, government can work with the aforementioned stakeholders to assess varying levels of proficiency among young adults and marginalised populations with a view to providing digital empowerment trainings.

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28   DHRPC, Davis, S.L.M (2022). Towards digital justice: participatory action research in global digital health. *BMJ Global Health* 2022;7: e009351.

Conclusion

Ghana's digital health landscape is one of mixed prospects. Whereas the government has shown an intent to expand access to health care for all, specific policies and structural barriers (such as the digital divides) coincide to threaten the realisation of this agenda. While the new *Digital Health Policy and Strategy (2023)*[29] promises specific attention to principles of equity and diversity, its gender-blindness and lack of consideration of needs of marginalised populations may scupper any well-meaning intent. Key populations also face an increasingly risky environment for access to HIV services and information. These challenges, including socio-economic factors and infrastructure limitations, call for continued research and comprehensive advocacy to ensure digital inclusivity and equity for all. The current research aims to address these challenges from the ground-up by engaging specific stakeholders who influence and are influenced by these barriers.

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[29] GHS (2023). *Policy and strategy on digital health.*

About the Digital Health and Rights Project

The Digital Health and Rights Project (DHRP) consortium brings together international social scientists, human rights lawyers, health advocates, rights advocates, and networks of people living with HIV, to conduct research and advocate for rights-based digital governance in Colombia, Ghana, Kenya, Vietnam, and globally.

warwick.ac.uk/fac/cross_fac/cim/research/digital-health-rights/consortium/

NAP+ Ghana (Ghana Network of Persons Living with HIV/AIDS) is a national network and member of the Global Network for People Living with HIV (GNP+) and a consortium member of the DHRP, responsible for the implementation of the *Future of Human Rights in the Digital Age Study*.

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