Harnessing Technology to Prevent, Mitigate and Respond to Gender-Based Violence in Emergencies

Developments, Good Practices and Lessons Learned

Updated December 2021

GBV AoR HELPDESK

Gender Based Violence in Emergencies

Gender Based Violence AoR
Global Protection Cluster

Contents

Background

This paper is part of series of knowledge products produced by the Gender-Based Violence Area of Responsibility (GBV AoR) Helpdesk. The Helpdesk is a technical research, analysis, and advice service for humanitarian practitioners working on gender-based violence (GBV) prevention and response in emergencies at the global, regional and country level. GBV AoR Helpdesk services are provided by a roster of GBV in Emergencies (GBViE) experts, with oversight from Social Development Direct.

This paper focusses on the issue of technology in GBV prevention, mitigation and response in emergencies and aims to improve knowledge and understanding of good practices and lessons learned in harnessing technology to improve efforts to address GBV in humanitarian action. The paper was first published in 2019. The information and analysis were developed through review of recent literature and evidence on the use of technology-related innovations in GBV programming in humanitarian and non-humanitarian contexts, semi-structured interviews and correspondence with technology, GBViE and other specialists, and analysis of case studies collated based on a framework for enquiry. The paper was updated in December 2021 with a review of the latest literature and evidence to reflect recent developments in technology and GBV, including during the COVID-19 pandemic.

The paper synthesizes available evidence, learning and insights based on emerging examples, practices and challenges in using technology to address GBV in emergencies, to identify how technology is currently being integrated in programming to address GBV in emergencies. Lessons learned about challenges and safety-related risks are discussed, as are methodological and other considerations for scaling up use of technology to improve GBV prevention and response in emergency contexts. The paper concludes with some recommendations for the GBV community to support investment and efforts in adapting and trialling emerging technologies to address GBV moving forward.

Definitions

Artificial intelligence	There is no single, universal definition of "artificial intelligence" (AI). The term is used to refer to the theory and design of computer systems that can perform tasks requiring some degree of human "reasoning": perception, association, prediction, planning, motor control, as well as systems that can learn from applying algorithms to large amounts of data. "Artificial intelligence" is used as a blanket term that could refer to varying levels and kinds of big data and algorithmic innovations. It could include, for example, machine learning (ML), deep learning (DL) and neural networks (NNs).[1]
Audio computer-assisted self-interviewing (ACASI)	A self-administered questionnaire on a computer. The computer displays the text of each question and its answer alternatives while presenting a pre-recorded interviewer's voice, which reads these to the respondent, who listens privately through headphones. Respondents answer by touching the appropriate response option on the computer monitor.[2]
Big data	Describes large amounts of data. It does not refer to a specific amount of data, but rather describes a dataset that cannot be stored or processed using traditional database software.
Biometrics	Biometrics are biological or physiological characteristics which can be used for automatic registration. Those characteristics include fingerprints, facial structure, iris or retinal patterns, DNA, voice and signature.[3]
Blockchain	A blockchain is a digital record of transactions. Blockchain is a way to track ownership of assets without the need for a central authority. It is a decentralised public ledger that automatically tracks all transactions that take place across a digital peer-to-peer network. The platform provides a greater ability to monitor individual transactions among known or unknown parties.[4]
Chatbots	Computer programmes which simulate conversations often via popular instant messaging services.[5]
Crowdsourcing	Crowdsourcing refers to many people actively reporting on a situation around them, often using mobile phone technology and an open source software platform. Crowdsourcing can consist of information that people deliberately send to for example a devoted Short Message Service (SMS) line.[6]
Data privacy	Data privacy refers to a person's ability to know how their personal information will be collected, shared and used, and for them to exercise choice and control over its use.[7]

1 APC, 2021
2 https://www.popcouncil.org/research/audio-computer-assisted-self-interviewing-acasi
3 http://www.europarl.europa.eu/RegData/etudes/STUD/2019/634411/EPRS_STU(2019)634411_EN.pdf
4 Ibid
5 UNICEF East Asia & Pacific, 2020
6 http://www.europarl.europa.eu/RegData/etudes/STUD/2019/634411/EPRS_STU(2019)634411_EN.pdf
7 https://prd-girleffect-corp.s3.amazonaws.com/documents/Digital_Safeguarding_-_FINAL.pdf

Digital technology	Digital technologies are electronic tools, systems, devices and resources that generate, store or process data. Well known examples include social media, online games, multimedia and mobile phones.[8]
Digital identity	A digital identity is an online or networked identity adopted or claimed in cyberspace by an individual, organization or electronic device. These users may also project more than one digital identity through multiple communities. In terms of digital identity management, key areas of concern are security and privacy.[9]
Geospatial technology	Geospatial technology refers to equipment used to measure and analyse Earth's land and features. Systems such as Global Positioning System (GPS) and Geographical Information System (GIS) are used in geospatial work.[10]
Hotline	An established phone service that provides crisis support and information to anyone who calls. In many settings hotlines operate with toll-free numbers so that callers can avoid incurring fees. Some hotlines are open 24 hours. Hotlines variously address specific emergency issues, such as intimate partner violence, child safety, and suicidality.[11] 'Hotlines' are sometimes referred to as 'helplines' (see section on technology-assisted case management).
Information and communications technology (ICT)	A set of technological tools and resources used to communicate, create, disseminate, store, and manage information. These can include video, radio, television, Internet programmes, social media platforms, and mobile phones. Distinctions are emerging between "old" and "new" forms of media and technology—that is, between the use of television, radio, and other forms of traditional media that have been employed for decades and newer forms of media, including social media and the mobile phone.[12]
Interactive Voice Response (IVR)	A combination of pre-recorded messages with touch-tone technology that allows a direct participant response and collects meta data like the date, time, duration of calls and linguistic preferences.
Mobile money	The use of a mobile phone in order to transfer funds between banks or accounts, deposit or withdraw funds, or pay bills.[13]
Smart contracts	Programmes stored on a blockchain that run when certain conditions are met (e.g. issuing a fine, sending notifications to appropriate parties, etc.).

8 https://www.education.vic.gov.au/school/teachers/teachingresources/digital/Pages/teach.aspx
9 https://www.techopedia.com/definition/23915/digital-identity
10 https://4hlnet.extension.org/what-is-geospatial-technology/
11 GBV AoR Helpdesk, 2020a
12 https://www.ncbi.nlm.nih.gov/books/NBK200826/
13 https://www.worldremit.com/en/mobile-money

Introduction

In line with global developments, technology is playing a growing role in efforts to respond to humanitarian emergencies, transforming how humanitarian organisations deliver assistance and interact with the people they serve. From preparedness through crisis and ongoing response, humanitarian actors are exploring and adopting a variety of technologies to improve understanding of humanitarian needs, increase and measure the number of people reached, enhance the efficiency and effectiveness of humanitarian interventions, and facilitate greater accountability to affected populations and donors.[14] Examples include:

- the use of unmanned aerial vehicles and geospatial technology to detect and monitor humanitarian crises and population movements;
- mapping applications to enhance humanitarian needs assessment and coordination; biometrics and other digital identity tools to register affected people;
- and information and communication technologies (ICTs) to communicate, collect data and deliver services, with mobile money and blockchain replacing traditional forms of humanitarian assistance in some contexts.[15]

At the same time, more than ever, people impacted by crises have access to ICTs, transforming the interaction between those providing and those receiving humanitarian assistance and catalysing greater transparency and accountability of humanitarian agencies to affected populations.[16]

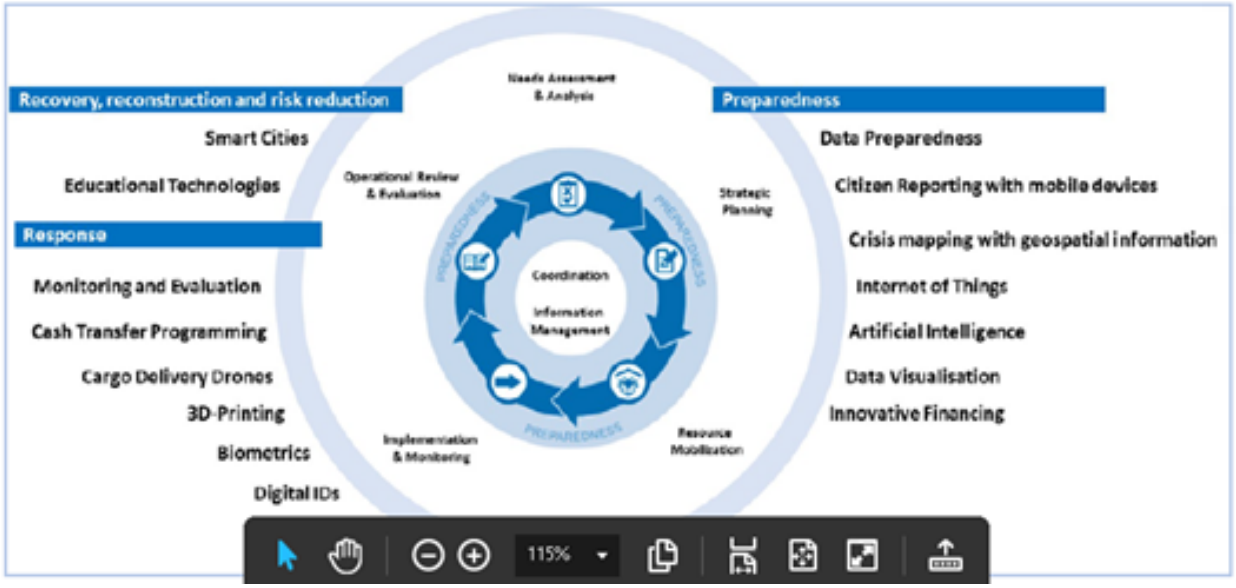

Figure 1: Examples of technology being adopted across the humanitarian response cycle[17]

14 Capgemini Consulting, 2019

15 For example, the mobile Vulnerability Analysis and Mapping (mVAM) project uses voice technology to periodically collect, analyse and map household food security information from the same cohort of respondents, enabling more effective and efficient data collection while reducing security risks for staff.

16 For example, IFRC and Haitian Red Cross have used mobile technology to disseminate information and gather feedback about its services to facilitate communities to have a voice in disaster response efforts. Similarly, Danish Refugee Council developed an SMS-based Feedback and Accountability System using Ushidi mapping capabilities to assess and respond to feedback from affected communities. For more information on these and other technology-related projects, see Obrecht et al, 2017.

17 Capgemini Consulting, 2019

Globally, technology is also being harnessed in efforts to address GBV. Around the world, different actors are using ICTs and other digital technologies to bolster GBV prevention, mitigation and response efforts. Governments and non-governmental actors are innovating with technology to strengthen GBV programming and systems, improve reach and access of GBV services, educate communities and empower women and girls through digital financial, health and education services.

Women's access to mobile phones and mobile Internet continues to increase across low- and middle-income countries: 83% of women now own a mobile phone in low-and middle-income countries, and 58% use mobile Internet,[18] enabling GBV survivors and other women and girls unprecedented access to digital tools and platforms where they can access and share information, and seek assistance and support from professionals and from peers. Women and girls at risk of GBV are using online and smartphone-based applications to feel safer in public and domestic spaces. And GBV and women's rights advocates and activists are using online tools to campaign, lobby and mobilise for gender equality and for action on GBV.

In the humanitarian space, the GBV community has long innovated with technology to address GBV. Notable examples include the application of cooking and energy technologies to reduce women and girls' exposure to GBV risks.[19] More recently, humanitarian and other actors – including the technology community and the private sector - are exploring ways to harness the transformative power of new technologies in GBV programming among populations impacted by conflict, disaster and displacement. New technologies are being applied to improve the collection, analysis and management of information about GBV and GBV services, as well as to enable agencies to better train and support staff and extend the reach of their services to GBV survivors.

Importantly, there is emerging evidence of the potential for new technologies to create greater accountability of services by giving women and girls an opportunity to voice their concerns, perspectives and needs related to services. Although not yet widely used in humanitarian contexts, biometrics and mobile phone payment systems may also be a method for supporting greater support to women and girl survivors and those at risk of GBV, by providing new opportunities for women to control resources that enhance their safety, protection and empowerment.[20]

Further lessons have been learned during the COVID-19 pandemic about the use of technology to prevent, mitigate and respond to GBV. Some actors have used existing technologies, whilst others have developed new ones. Mobile phones and mobile Internet have become more important than ever during the pandemic, making it even more imperative that women and girls have access to and know how to use mobile technology.[21]

Increased connectivity among populations affected by crises has the potential to enhance security, protection, health, livelihood, and self-reliance.[22] This includes programming for GBV prevention, mitigation and response. Nevertheless, there remain challenges, including a lack of an evidence base regarding the benefits, risks and impacts of new technologies in GBV programming in humanitarian contexts, or more generally in low- and middle-income countries. Further, technology is not gender neutral.[23] There is a serious risk that women and girls might not benefit from some of these technology advancements, despite their being disproportionately

18 GSMA, 2021
19 See Global Alliance for Clean Cookstoves, 2016 for examples of projects.
20 Crabtree and Geara, 2018
21 https://www.gsma.com/mobilefordevelopment/blog/why-covid-19-has-increased-the-urgency-to-reach-women-with-mobile-technology/
22 UNHCR, 2016
23 Gurumurthy, 2004; O'Donnell and Sweetman, 2018

impacted by crises and their heightened vulnerability to many forms of GBV during and following humanitarian emergencies.

In addition, there are significant barriers that hinder women and girls' awareness of, access to, and ability to use technology. These barriers can be compounded by other factors such as age, ethnicity, religion, social class and geographical location. Women are still 7% less likely than men to own a mobile phone and 15% less likely to own a smartphone.[24] There are still 234 million fewer women than men accessing mobile Internet.[25] Inattention to the fact that women are less likely to be able to access technologies has the potential to exacerbate women's vulnerability and marginalisation,[26] particularly as mobile phone access becomes an increasingly critical aspect of humanitarian service delivery. The technology revolution may therefore "carve stark inequalities in terms of who benefits and whose voice is heard."[27]

The purpose of this paper is to help build knowledge and understanding about how technology is currently being adapted and used in GBV programming in humanitarian settings and to identify emerging good practices, lessons and challenges in the uptake of technology in GBV prevention, mitigation and response. It also makes recommendations for the GBV community in harnessing technology to bolster efforts to prevent, mitigate and respond to GBV in humanitarian settings. Information is shared according to the following sections:

- **Part 1: Global Advances in Harnessing Technology to Help Prevent and Respond to GBV** covers different ways that technology is being used in GBV programming in humanitarian and development settings, and gives examples of technology being adapted to: strengthen GBV programming, systems and capacity; facilitate GBV survivor support; help mitigate GBV risks; and prevent GBV through education, campaigning and empowerment initiatives.
- **Part 2: Summary of Good Practices** overviews emerging good practices in using technology in GBV programming, including during the COVID-19 pandemic, which are drawn from literature, case studies and insights from those with experience and expertise in this area. Good practices are illustrated with lessons from relevant case studies.
- **Part 3: Lessons Learned and Key Challenges** draws on case studies, literature, and interviews with GBV and information specialists to identify lessons and challenges pertaining to the application of technology in humanitarian settings to women and girls' safety, protection and empowerment.
- **Part 4: Methodological and Other Considerations for Scaling Up Use of Technology to Improve GBV Prevention and Response in Humanitarian Action** highlights key considerations for scaling up the use of technology to improve GBV prevention, mitigation and response in humanitarian contexts.
- **Part 5: Conclusions** summarises the key issues and messages.
- **Part 6: Recommendations** makes some recommendations regarding the integration of technology in GBV programming for practitioners, agencies and GBV specialists and policy-makers.

24 Whilst this is down from 20% in 2019, this is largely driven by growth in smartphone ownership among women in India with relatively little progress in reducing the smart phone gender gap in regions outside South Asia. There are early signs in some countries that the COVID-19 pandemic may be disproportionately negatively impacting women's handset ownership. GSMA, 2021.

25 GSMA, 2021

26 For example, research among refugee populations has consistently found that connectivity is not evenly distributed to all refugees and that gender imbalance for mobile phone ownership can exacerbate situations for the most vulnerable refugees. See for example UNHCR, 2016 and GSMA, 2019.

27 O'Donnell and Sweetman, 2018

Part 1: Global Advances in Harnessing Technology to Help Prevent and Respond to GBV

Globally, new technologies are being harnessed in a variety of ways to bolster efforts to address GBV. From crowd-sourced mapping applications used to identify locations where GBV is occurring and catalyse action to address it, to wearable technology and smart-phone applications that seek to increase women and girls' individual safety, technology is an emerging and potentially powerful tool in GBV prevention, mitigation and response. While most technology-based innovations have to-date focussed on reducing GBV risks and responding to survivors to ensure they have access to assistance and care after experiencing GBV, there is evidence of the emerging use of technology to strengthen GBV prevention programming in humanitarian and development contexts. This section covers different ways that technology is being used in GBV programming in humanitarian and development settings, and gives examples of technology being adapted to: 1) strengthen GBV programming, systems and capacity; 2) facilitate GBV survivor support; 3) help mitigate GBV risks; and 4) prevent GBV through education, campaigning and empowerment initiatives.

Please note: the purpose of this section is simply to highlight how technology is being used in GBV programming. Information on issues such as safety concerns are addressed in subsequent sections on good practices, lessons and challenges, and methodological considerations for scaling up.

Harnessing technology to strengthen GBV programming, systems and capacity

GBV data collection and analysis

Mobile digital technologies – smart phones and computer tablets in particular – and new research software applications are being used to collect data for GBV assessments and for monitoring and evaluating GBV programmes in humanitarian settings. Digital research tools can enable faster and more cost-effective GBV data collection and analysis, improve data quality and data safety.[28] For example, in Somalia and South Sudan, Johns Hopkins University used computer tablets to administer a social norms survey among conflict-affected populations, enabling researchers to upload the survey response data to a secure server and delete it from the tablets daily, maximising data safety and protection.[29]

Digital research tools have the capacity to yield different data about GBV than traditional research methods - especially in contexts where there are low literacy levels - and to put women and girls' voices and perspective at the center of research and programming. As an example, in the

28 The Global Women's Institute, 2017
29 Glass et al, 2018

Democratic Republic of Congo and Ethiopia, the IRC/Columbia University ***COMPASS project*** used ***Audio-Computer Assisted Self-Interview (ACASI)*** software on computer tablets to collect information on GBV experiences of displaced adolescent girls.[30] ACASI is a data collection method in which participants listen to pre-recorded questions through headphones and respond by selecting their answers on a touch screen or keypad. The ACASI method was found to elicit more information about GBV perpetrated within the family and household from girls than that disclosed through face-to-face research methods, which focused on GBV in the wider community, indicating that the anonymity, privacy and confidentiality afforded by self-administered digital research methods enables participants to share sensitive information they might not otherwise disclose through traditional research methods.[31]

In another example, in Lebanon, researchers from Queen's University partnered with GBV service providers to trial the application of Cognitive Edge's ***SenseMaker***® software to GBV service monitoring and evaluation (M&E). *SenseMaker*® is a mixed qualitative and quantitative data collection tool that enables individuals to anonymously record and interpret their own stories about their experiences of accessing a GBV service using computer tablets (see the case study in Part 2 for more information on this initiative). Similar to the ACASI example, the anonymity and privacy afforded by the use of technology in this way elicited more revealing responses than traditional M&E data collection methods, better capturing women and girls' perspectives and needs, and therefore providing GBV programmes with an improved understanding of how their services are perceived and might be improved.[32]

GBV information and case management systems

The GBV sector turned to technology to respond to the need to systematise GBV information management a decade ago, rolling out the GBVIMS database to collect and store standardised GBV incident data.[33] Recent advances in software and mobile technology are currently being harnessed to further enhance GBVIMS capabilities and functionality. The new generation of the GBVIMS, the ***GBVIMS+/Primero***, an open-source software platform to safely collect, store, manage and share incident and case management data, has enhanced capabilities for both on- and offline GBV data collection. The software can be used on tablets, computers and mobile phones and accommodates different languages for client case management processes.

Humanitarian and development actors are trialling technology-based approaches to improving information management in relation to GBV reporting, referral and coordination systems in different countries, including those prone to disasters. Examples include:

- UNICEF and the GBV Area of Responsibility (AoR) have developed the ***eReferral Pathways app (eRPW)*** to enable remote updating of referral pathways and services and to make information more widely accessible on the services available. The app provides a platform to manage up-to-date information on available services for GBV survivors in real time; establish a vetting process to ensure accuracy and reliability of information on GBV services; and allow users to leave feedback and link with other similar digital solutions. The app accounts for low connectivity and low literacy settings with features

30 Falb et al, 2017
31 Stark et al, 2017
32 Bartels et al, 2018
33 The GBVIMS uses an excel-based database to support GBV actors to effectively and safely collect, store, analyse and share data reported by GBV survivors. For more information see: http://www.gbvims.com/

that allow it to be accessed off-line and give users the ability to download the GBV referral pathway as a PDF or Excel file and share it by email, SMS and WhatsApp.

- In Nepal, the national integrated GBV hotline and remote case management system (CMS) uses mobile phone and online technology to enable reporting, registration, referral and management of GBV cases.[34] The integrated system enables streamlined referral of survivors to services for shelter, healthcare, counselling, child support, and legal aid, and aims to eliminate the need for survivors to recount the incident and their circumstances to different service providers, reducing the risk of re-victimization and further trauma to the survivor.
- Similarly, the digital ***Afghanistan Electronic Case Management System (CMS)*** has been rolled out to support case management of GBV within the justice system. The CMS records information from civil and criminal cases, from the point of detection through investigation, trial and incarceration, with the objective of facilitating transparency, accountability and accessibility. The system records identity, date of the incident, location of the incident, case registration date and number, decision of the agency and the date the case is referred to the next authority.[35]

Workforce capacity development

Technology-enabled workforce capacity development modalities can significantly increase the reach, flexibility, accessibility and affordability of staff training, development and supervision. The GBV sector has leveraged e-learning and other web-based technologies to build workforce capacity for many years, and there are numerous examples of online platforms and web-based collaboration and learning tools that aim to build GBV practitioner knowledge, skills and competencies to improve the quality and reach of GBV programming and service delivery in humanitarian contexts. Examples include:

- UNFPA's online ***Managing Gender-Based Violence in Emergencies Course***[36] and ABAAD's ***Gender-Based Violence Case Management in Emergency Settings Online Learning Course***[37] are both examples of online training platforms targeting new or emerging GBV specialists and others who want to increase their knowledge around GBV prevention and response in emergencies.
- The ***GBV AoR Community of Practice*** is a structured virtual space that combines an electronic mailing list and a threaded Internet forum, with webinars and online mentoring to provide ongoing, field-centered, experiential learning for GBV practitioners, and to enable learners and experienced GBV specialists to discuss challenges and troubleshoot solutions to their work in the field.
- The ***GBV AoR Helpdesk*** is a remote technical support service which uses email and other telecommunications applications to support field based GBV practitioners.

GBV and other humanitarian actors are increasingly looking to rapidly advancing smartphone capabilities to facilitate real-time, field-based mobile staff training, guidance and supervision, even in low-connectivity settings. Examples includes:

34 https://nwc.gov.np/en/
35 UN Women, 2019
36 https://www.unfpa.org/publications/managing-gender-based-violence-programmes-emergencies
37 http://gbvcm-course.abaadmena.org

- The IRC's ***Remote Offered Skill Building application (ROSA)***[38] is a leading example. ROSA is an interactive smart-phone application and web-based portal that provides staff access to key GBV response-related knowledge and skills; enables self or supervisor-administered skills assessments; and hosts a community space for users to expand their learning through facilitated remote discussions.
- The GBV AoR and GBV Guidelines Implementation Support Team have developed a smartphone application called the ***GBV Pocket Guide***,[39] which provides step-by-step guidance and tools to build capacity of humanitarian practitioners across all sectors to support GBV survivors in contexts where there are no GBV services, referral pathways or focal points. It uses global standards on providing basic support and information to survivors of GBV without doing further harm.
- The Protection Cluster's ***Protection Mainstreaming Mobile Application (ProM)***[40] is a smart phone-based companion to the Global Protection Cluster Protection Mainstreaming training. ProM provides field-based guidance on key protection issues, including GBV risk mitigation in line with the ***IASC Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action***.[41] Podcasting is another smartphone-enabled technology being used to increase access to relevant information about GBV programming for humanitarian staff. The GBV IMS podcast series in one example, and includes episodes on using the GBVIMS, safe collection and use of GBV data and on case management.[42]

Harnessing technology within and for GBV service delivery

Around the world, advances in telecommunications and digital technology are empowering GBV survivors with unprecedented access to information, support and assistance, including in low-resource settings. GBV survivors who have access to the Internet can seek information about GBV, its consequences and their rights, and seek support from service providers and from peers. Survivors can increasingly use mobile phones to confidentially report GBV incidents, receive psychosocial support, and link with available services. Mobile phones and other technology have become even more critical to GBV service delivery during COVID-19.[43]

Technology-assisted case management

In humanitarian contexts, GBV case management is an essential and life-saving protection service, most often offered through static service delivery points such as women and girls' safe spaces (WGSS).[44] From the start of the COVID-19 pandemic, GBV response services were deprioritised as "non-essential" in many emergencies and forced to temporarily close.[45] Even if services were allowed to remain open, movement restrictions made it more difficult for women and girls to access usual entry points for case management.

38 https://gbvresponders.org/rosa-skill-building-application/
39 https://play.google.com/store/apps/details?id=com.gbvpocketguide
40 http://www.globalprotectioncluster.org/_assets/files/presentation-pm-app.pdf
41 https://gbvguidelines.org/en/
42 https://podcasts.apple.com/us/podcast/gbvims/id1121802132
43 Lannazzone et al, 2021
44 There are also some examples of remote service delivery prior to the pandemic. See IRC, 2018
45 Klugman, 2020

In response to this, many GBV service providers have been innovating with technology to deliver remote services to survivors, either in part or in full. In one example from the Arab States, a survey by UN Women found that 71% of women organisations, many of whom provide GBV services, switched to providing remote services during the pandemic.[46] These services include hotlines, remote case management, remote psychosocial support and remote legal support using phone, chat, SMS, or other modalities.

Hotlines have been around for some years and, even before the COVID-19 pandemic, were available in conflict-affected countries, such as Palestine, Afghanistan, Somalia,[47] and Rwanda.[48] Hotlines are an established phone service that provide crisis support and information to anyone who calls. In many settings hotlines operate with toll-free numbers so that callers can avoid incurring fees. Some hotlines are open 24 hours. Hotlines variously address specific emergency issues, such as intimate partner violence, child safety, and suicidality. Historically, hotlines have focused on providing emergency response to survivors in crisis.[49] Increasingly, however, they are being used by humanitarian agencies to deliver case management support where availability and access to GBV services is a challenge—in which case they are often referred to as 'helplines.' For example, in Myanmar, Burundi and Iraq, IRC piloted a helpline for GBV survivors using phone, chat and SMS options as a component of a remote and mobile GBV service delivery model.[50]

During the COVID-19 pandemic, many GBV service providers, including women-led organisations, established dedicated helplines for case management (particularly phone-based support, however chat, SMS and other technologies have been used)[51] or scaled up existing hotlines to meet an increase in emergency calls. Examples include:

- In Lebanon, ABAAD launched a national awareness campaign for its hotline using the hashtag #LockdownNotLockup, asking people to share their hotline number from their balconies to raise awareness for survivors in need.[52]
- In Yemen, working with local partners, the GBV sub-cluster and UNFPA adopted helplines and toll-free numbers as an alternative to in-person services at the start of the pandemic.

Shifting to remote services has necessitated adapting and developing new standard operating procedures (SOPs) and providing training to build caseworkers' skills to ensure safe and confidential case management that addresses the unique challenges of remote services. Examples of remote case management guidance and emerging good practice include:

- The GBV AoR Helpdesk produced ***COVID-19 Guidance on Remote GBV Services Focusing on Phone-based Case Management and Hotlines***.[53]
- In Lebanon, ABAAD experienced a rapid increase in demand for its services after the first lockdown in 2020. To ensure survivors could continue to access life saving support

46 UN Women ROAS, 2020
47 Hotline 5555, nicknamed Ceebla meaning 'no shame' in Somali, is managed by the Somali Women's Development Center.
48 This project is a partnership between Viamo and Legal Aid Forum Rwanda to provide legal information and advice via mobile to vulnerable populations. Content on legal rights and how to access legal services was developed and added to a toll-free mobile service in Rwanda. Callers can dial 845 and listen to free information on their legal rights and are also given the option to access a legal aid hotline for a personal consultation, staffed by call center operators from the Legal Aid Forum: https://viamo.io/newsletter-archives/accessing-justice-legal-aid-via-mobile/
49 Notably, There are some hotlines being established to provide support to survivors of online violence. For example, in Pakistan, the Digital Rights Foundation set up a *Cyber Harassment Helpline* to provide free, safe and confidential legal advice, digital security support, psychological counselling and a referral system to survivors of online violence and harassment.
50 International Rescue Committee, 2018
51 UN Women ROAS, publication forthcoming
52 UN, 2020
53 GBV AoR Helpdesk, 2020a

they adapted their case management support and started to provide it remotely.[54] To share its learning during the early stages of the pandemic, ABAAD partnered with UNICEF Lebanon on the ***Remote Gender-Based Violence Case Management during emergencies*** guide to help GBV service providers, caseworkers and supervisors adapt case management to remote modalities.[55]

- The GBV sub-cluster in Iraq developed technical guidance on remote GBV case management during the COVID-19 outbreak.[56]

Technology-assisted psychosocial support

In addition to hotline and helpline modalities for case management, there is also evidence of the emergence of technology-assisted approaches to mental health and psychosocial support (MHPSS) for populations in humanitarian settings. There are mobile tools for facilitating diagnosis and detection of mental health problems, and for providing online, SMS and telephone-based delivery of psychosocial support, including self-help programmes for individuals.

Examples of interventions targeting MHPSS for women and children in humanitarian contexts focus on management of depression, psychological stress and coping with adversity- all of which can be outcomes of GBV. For example, the ***WHO Self-Help Plus (SH+) programme***, a multi-media intervention package that aims to provide skills for managing psychological stress and coping with adversity, was piloted with South Sudanese women refugees. The programme is group-based and delivers a guided self-help multimedia course that can be implemented in areas with limited humanitarian access. SH+ uses pre-recorded audio to deliver an evidenced-based psychological intervention, instead of information being provided by a facilitator or therapist. The use of pre-recorded audio increases intervention fidelity and expands the reach of services in humanitarian settings.[57]

During the COVID-19 pandemic, and beyond the remote case management services described above, some GBV service providers adapted how they deliver psychosocial support to survivors, including transitioning to remote counselling on the phone and online. A recent evidence review found there is still limited evidence on best practice in this area, however practical guidance has been developed during the COVID-19 pandemic.[58] Examples include:

- UNFPA Country Offices and Regional Offices in Latin America and the Caribbean developed ***Guidelines for the provision of remote psychosocial support services for GBV survivors*** to provide practical support to organisations providing remote psychosocial support services for GBV survivors during COVID-19. This guidance can be adapted to different types of remote services, including psychological first-aid, psychosocial support, hotlines services and case management.[59]
- The ***IASC Guidance on Operational Considerations for Multisectoral Mental Health and Psychosocial Support Programmes during the COVID-19 Pandemic*** offers guidance on how to adapt psychological support services to the COVID-19 context, which can be used by GBV service providers.[60]

54 https://www.igwg.org/2020/12/a-conversation-with-gary-zeitounalian-abaad-resource-center-for-gender-equity/
55 https://www.abaadmena.org/documents/ebook.1624018123.pdf
56 https://reliefweb.int/sites/reliefweb.int/files/resources/gbv_case_management_guidance_during_covid_19_final-gbv_sc_iraq-_ver1.1.pdf
57 https://www.elrha.org/project-blog/building-capacity-research-piloting-self-help-plus-south-sudanese-refugees/
58 UN Women ROAS, 2021
59 UNFPA, no year
60 IASC, 2020

Technology-facilitated legal and justice support

Around the world, technology is being increasingly used in the criminal justice system, including through virtual court hearings, online protection orders, the provision of virtual legal support to survivors (e.g. via texts, videos and online chat), the adoption of national electronic judicial systems, and the use of artificial intelligence (AI), blockchain and smart contracts solutions.[61] Technology can help increase GBV survivors' access to justice through faster case processing, convenience and user-friendliness, reductions in travel time and costs, increased information sharing and coordination between agencies, and the potential for video-conferencing technology to be less traumatising for survivors.[62] However, remote legal solutions have ethical and safety risks which need careful attention before being adopted (see section on lessons learned and key challenges).[63]

During humanitarian crises and emergencies, GBV survivors face increased barriers in seeking protection and remedy for GBV through available legal and justice systems.[64] For example, during COVID-19 lockdowns court services closed or operated at reduced capacity, and even when they re-opened they faced a backlog of cases. Some organisations providing legal support to GBV survivors turned to technology (phone and video calls, email, text messages) to continue providing their services, including providing information on survivors' legal rights and court processes. Examples of guidance and emerging good practice include:

- Legal Action Worldwide and Norwegian Church Aid developed ***Guidelines for Providing Remote Legal Aid to GBV Survivors*** for legal aid practitioners to help them provide remote legal support to GBV survivors during the COVID-19 pandemic.[65]
- The Zimbabwe Women Lawyers Association adapted its services to provide GBV survivors with free legal advice online, via email and over the phone, following the suspension of in-person legal services.[66]
- In the West Bank and Gaza, the Palestinian Bar Association, legal aid providers and other partners launched an awareness-raising campaign to reach out to people in increased need of legal aid services during COVID-19. They used social media, radio and other media to provide updates on changes in services, including the availability of one-to-one consultation sessions through phone and online.[67]

Survivor-accessed smart-phone applications

Even before COVID-19, smart-phone applications were being developed to inform survivors about their rights and connect them with locally available support services, facilitate safety planning, and give direct access to trained professionals. Some apps include a safe virtual space for survivors to share their stories and access peer support. Examples of smartphone apps aimed at supporting GBV survivors include:

- The ***Nokaneng app*** in Lesotho which enables women to watch, read or listen to information about different forms of and consequences of GBV, services available in Lesotho and the laws that protect women and girls against violence. Users can also

61 OECD, 2019
62 Fraser, 2021
63 Ibid
64 GBV AoR Helpdesk, 2020b
65 Legal Action Worldwide and Norwegian Church Aid, 2020
66 Womankind Worldwide, 2020
67 UNODC, 2021

connect with professional counsellors for advice and use the virtual safe space to share their story and support other users.[68]

- The ***Toranj app*** in Iran, designed to connect survivors of intimate partner violence with the resources and support they need to be safe in crisis situations and in the longer term. Toranj connects users to a group of trusted contacts during emergencies, and users can choose from various pre-written text messages to ask their contacts to intervene, call the police, or take other steps to assist them. The app also offers social and legal tools for helping women protect themselves, including made-for-mobile educational resources, a legal support handbook, tools for self-assessing relationships, and a database of free counselling centers and pro-bono law firms.[69]
- The ***myPlan app***, a safety-decision and safety planning tool for IPV, originally developed and robustly evaluated in the US, has been adapted and tested in Kenya and is currently being adapted to other contexts. The app and website are designed to help survivors assess the risks they face, provide useful information and resources, and enable survivors to facilitate safety planning.[70]

Mobile health technologies

Mobile health technologies (mHealth) and telecommunication are rapidly being integrated into health care delivery in developing and low-resource settings, including humanitarian contexts.[71] While as yet there appears to be limited uptake of mHealth services for GBV survivors in humanitarian settings, there are examples of digital technologies being used to support health workers in the identification, documentation and management of GBV survivors, including in the context of collating and documenting medical evidence in cases of conflict-related sexual violence.

In DRC, Physicians for Human Rights has trialled ***MediCapt***,[72] a smartphone application for health care providers to use during a forensic examination to compile medical evidence, photograph survivors' injuries, and securely transmit the data to police, lawyers, and judges involved in prosecuting sexual violence crimes. The app converts a standardized medical intake form for forensic documentation of sexual violence and includes a secure mobile camera to facilitate forensic photography (see the case study in Part 2 for more information on this initiative).

In India, ***Mobilise!*** is a smartphone application to support government health workers in IPV screening and response. Mobilise! offers three mHealth products: mTrainer, mSoukhya, and mShakti. mTrainer is an interactive training to increase health care providers knowledge and skills to address IPV. mSoukhya provides health workers with standardized guidelines, protocols, and job aids, while mShakti provides education to women about IPV and available services.[73]

Harnessing technology for GBV risk mitigation

Technology for GBV risk mitigation in non-humanitarian settings

There are many examples of digital technologies being harnessed in initiatives seeking to reduce GBV risks and improve women and girls' safety. Mapping software and applications are being

68 https://genderlinks.org.za/casestudies/lesotho-new-app-to-prevent-gbv/
69 https://www.netfreedompioneers.org/toranj-mobile-application/
70 https://www.myplanapp.org/home
71 Perakslis, 2018
72 Naimer et al, 2019
73 https://www.prb.org/domestic-violence-india-mobile/

used in many countries to document, map and publicise GBV incidents and patterns. ***HarassMap*** is perhaps the best-known example. Originating in Egypt in 2010, *HarrassMap* uses an interactive online map, social media and mobile phones to map and publicise incidents of sexual harassment and mobilise community members to take action to address it locally and nationally.[74] Similar examples have evolved elsewhere, including *Safeciti* in India,[75] *Harasstracker* in Lebanon,[76] *Bijoya* in Bangladesh,[77] and Akshara's *HarassMap Mumbai* in India.[78] Plan International recently developed a similar platform targeting adolescent girls and young women's safety which has been piloted in Sydney, Delhi, Kampala, Lima and Madrid. Free to Be is a crowd-mapping tool for girls and young women to identify and share public spaces that make them feel uneasy, scared or happy and safe.[79]

There is a proliferation of smartphone applications that aim to improve individual women and girls' safety by providing information about GBV and enabling users to alert others and seek assistance when they feel unsafe or in imminent danger, for example, *Watch Over Me*,[80] *Circle of 6*,[81] and *SaftiPin*.[82] Launched in India in 2013, the *SafetiPin* app enables users to both view and conduct safety audits of the areas they are passing through, which are marked safe or unsafe on a visual map. Safety audits cover parameters such as lighting, visibility, security, transport, population density and gender diversity. When a user does a safety audit using the app, this information is immediately visible and made public for other *SafetiPin* users to see.

Wearable technologies, such as panic buttons and bracelets, have similarly been developed with the objective of enabling users to alert others when they are in unsafe situations. For example, *ROAR For Good's*[83] wearable devices function as a rape alarm linked to a mobile app, allowing the user to activate a loud alarm and flashing lights, and trigger an alert to authorities and chosen contacts. The *Safelet*,[84] which looks like a bracelet, is a similar example. No examples of wearable technology were identified in humanitarian settings. However, for displaced women and girls, even having a basic mobile phone can increase their sense of safety, as they can use it to call for help in an emergency. For some, simply having access to a torch on a mobile handset is enough to make them feel safer moving around a camp at night.[85]

Technology for GBV risk mitigation in humanitarian emergencies

Women and girls are at increased risk of many forms of GBV during emergencies – whether due to natural disasters, conflict or outbreaks of virus or disease – due to prevailing gender inequalities and harmful social norms that pre-exist and are exacerbated during the emergency. The COVID-19 pandemic and its associated movement restrictions further increased offline and online GBV risks for women and girls in humanitarian settings, and especially for those affected by additional and intersecting forms of discrimination due, for example, to disability, sexual orientation or gender identity, displacement, refugee or migrant status, poverty, HIV status and other factors.[86]

74 https://www.wikigender.org/wiki/harrassmap/
75 https://safecity.in/
76 http://harasstracker.org/
77 https://www.ushahidi.com/blog/2012/04/25/bijoya-crowdsourcing-a-harassmap-for-bangladesh
78 https://genderit.org/feminist-talk/crowdmapping-sexual-harassment-india
79 https://www.plan.org.au/freetobe
80 http://watchovermeapp.com/
81 https://www.circleof6app.com
82 Women and Health Alliance International, 2016
83 https://www.roarforgood.com/
84 https://safelet.com/
85 GSMA, 2019
86 UN, 2020; Lannazzone et al, 2021

Humanitarian agencies have been innovating with technology-based solutions to GBV-related risks in humanitarian settings for many years. Two examples are the use of cooking technologies that reduce women and girls' need to move in unsafe areas to collect fuel, and energy technologies such as solar lighting that make the physical environment and public facilities safer for women and girls to move around.[87] More recently, humanitarian actors have been assessing how mobile money and other assistance might be used to mitigate GBV risks, including those related to travelling long distances to collect payments. For example, in Jordan, Mercy Corps has been trialling a mobile wallet as a component of its cash programming to mitigate GBV risks for women[88] (see the case study in Part 2 for more information on this initiative).

There are also examples of digital mapping and mobile phone technology being used to reduce GBV risks in humanitarian and fragile settings. In Mexico, *Geochicas*, an international community of feminist cartographers, used *OpenStreetMap* software in the aftermath of earthquakes in 2017 and 2018 to map and share data on women's safety in informal shelters. They also created a database about women's safety issues and GBV reports to help improve safety measures and shelter provision for future disasters.[89] In Turkey, the Women and Health Alliance (WAHA) piloted a project to develop and test an SMS-based tool to disseminate information about GBV risks and available resources for adolescents.[90] The project found that using an SMS messaging tool to inform the community about GBV risks, as well as safe and danger zones, is feasible and that mobile phones are appropriate tools for disseminating essential information and reaching technologically literate populations.

Harnessing technology for GBV prevention

New technologies have tremendous potential for preventing GBV through enabling public and community education and mobilisation; providing a platform to lobby and advocate for legal changes and for policies that will end violence and promote equality;[91] and helping catalyse greater social and economic empowerment of women and girls.

Raising awareness, campaigning and educating

Women's rights organisations, activists, governments and others are using social media, such as Facebook and Twitter, and other online platforms to educate, spark debate, mobilise and campaign against GBV, with some initiatives, such as ***#MeToo*** and ***#NiUnaMenos***, catalysing viral conversations nationally, regionally and internationally. New technologies provide a way of reaching millions of people with new information, raising awareness and promoting dialogue and debate about GBV and the rights of women and girls.

For example, a number of initiatives have harnessed this potential to stimulate awareness and debate about early and forced marriage and women and girls' rights,[92] such as the UNICEF-supported multi-media campaign on ending child marriage in Bangladesh.[93] In Lebanon, as part of the 16 Days of Activism, activists launched an online campaign ***Undress 522 – A white dress does not cover the rape***, including a video which reached an estimated 20.8 million people online.[94]

87 Reed et al, 2018
88 Mercy Corps, 2018
89 https://wiki.openstreetmap.org/wiki/GeoChicas
90 https://www.elrha.org/project/mobile-tech-gbv-syrian-adolescent/
91 O'Donnell and Sweetman, 2018
92 Bell, 2014
93 https://www.unicef.org/bangladesh/en/national-multimedia-campaign-ending-child-marriage
94 http://arabadonline.com/details/advertising/abaad-s-undress522-the-campaign-that-won-big-on-all-fronts

cross Africa, young people are mobilising online and using social media to end FGM.[95] Whilst not yet widespread, there is evidence of the use of analysis of big data generated by social media to collect information to better understand and analyse attitudes towards GBV,[96] in order to design better communications strategies to prevent it.

There are also examples of organisations adapting their GBV prevention programmes to incorporate technology during the COVID-19 pandemic. For example, Trócaire Zimbabwe introduced a range of adaptations using technology to continue delivering their GBV programmes, based on *SASA! Faith* methodology, when in-person engagement was restricted. In particular, they used WhatsApp to hold *SASA! Faith* sessions, carried out community engagement via Twitter, Facebook and text messages, distributed short video dramas, held sessions on local radio stations, ran mobile awareness , set up tollfree phone lines offering referrals and counselling, and ran focused media campaigns.[97] Their learning has been documented in ***VAWG prevention in a time of COVID-19: a case study of Trócaire Zimbabwe's COVID-19 SASA! Faith programme adaptations***,[98] setting out the opportunities and challenges in delivering remote GBV prevention activities.

In humanitarian settings, older ICTs, such as radio and video, have long been used to build awareness about GBV and educate communities as part of GBV prevention. For example, in 2005 the American Refugee Committee and Communication for Change launched a community-based participatory video project to raise awareness of and help prevent GBV in conflict-affected communities.[99] Newer ICTs are now being similarly employed to engage communities in participatory development of content to spark dialogue and debate about GBV and challenge attitudes and social norms that underpin it.

In Ethiopia, a collaboration between researchers at Harvard T.H. Chan School of Public Health, Harvard Medical School, Addis Ababa University School of Public Health and Women and Health Alliance International Ethiopia with technical support from Fondation Hirondelle, is trialling a series of podcasts to prevent IPV among Somali refugees. The researchers are training men and women in refugee camps in digital storytelling and podcasting, who are then developing podcast content based on an existing validated community education curriculum and aimed at transforming gender norms and behaviours in their community[100] (see the case study in Part 2 for more information on this initiative).

Supporting women and girls' social and economic empowerment

In terms of women's economic and social empowerment, there is evidence of ICTs being used to provide women and girls with greater access to information, education, skills and services in remote regions and during humanitarian crises. ICTs have the potential to reach even the most marginalized women and girls with information about services - and in some instances, services themselves that would otherwise be unavailable. To address the digital exclusion of women and girls, including those in very rural areas, Innovative digital communications can include functionality that accounts for low literacy and low connectivity (internet and phone network access).

95 https://www.measureevaluation.org/resources/newsroom/news/can-analysis-of-tweets-inform-interventions-to-prevent-gender-based-violence.html
96 MEASURE Evaluation, 2018
97 Le Roux, 2021
98 Ibid
99 https://www.fmreview.org/sexualviolence/molony-konie-goodsmith

Examples includes:

- In Sierra Leone and DRC, Media Matters for Women is linking special radio broadcasting programmes with mobile phones to distribute critical news and information to rural women about their rights and available services to reduce their marginalisation and empower them.[101]
- In Lebanon and Iraq, the Women's Refugee Commission and UNICEF piloted ***virtual safe spaces (VSS)*** to better reach adolescent girls with sexual and reproductive health information and services.[102] UNICEF is now working to roll out a new version of the VSS platform in Ecuador and Iraq, for testing with users in January 2022, to facilitate access to information and services in a way that is safe, culturally appropriate, and accessible to adolescent girls and women, particularly those who experience high levels of marginalisation, including girls with disabilities and married girls. Technical features that are designed to improve the accessibility of the digital space include: the content is designed to be as light as possible and offered in a variety of modes; simple navigation; use of highly interactive content with limited text (e.g. videos, podcasts and quizzes); highly customizable content editor to localize for each context; and supports any language supported by UTF-8.[103]

In development contexts, ICTs have facilitated women's access to credit, markets, business information and networks, and provided income-earning opportunities - in some contexts directly improved women's economic well-being.[104] In displaced settings, cash assistance delivered to women using mobile money and blockchain is being tried in efforts to support women's financial inclusion and agency, by increasing their access to financial services and control over their assets. UN Women and WFP have recently partnered to leverage blockchain technology to assist Syrian refugee women to receive and transfer financial assets securely on a blockchain network (see the case study in Part 2 for more information on this initiative).[105]

100 Sharma et al, 2019
101 https://www.mediamattersforwomen.org/
102 Women's Refugee Commission, 2019; UNICEF, 2021
103 UNICEF, 2021
104 OECD, 2018
105 Thylin and Duarte, 2019

Part 2: Summary of Good Practices

There are currently no evidence-based best practices to guide the use of technology for GBV response, risk mitigation and prevention programming in humanitarian settings. While there are efforts to generate evidence, most interventions are still at feasibility or trial stages. There are, however, emerging good practices to support GBV actors and other stakeholders embarking on initiatives that involve the introduction of technology into GBV programming in humanitarian contexts. This section overviews emerging good practices, which are drawn from lessons and experiences and informed by practice literature as well as insights from those with relevant experience and expertise in this area.[106]

Prioritise and plan for safety

Ethical and safety considerations are paramount when introducing and using technology in GBV prevention, mitigation and response in humanitarian contexts. The potential harmful impacts of technology on women and girls, on wider communities impacted by humanitarian crises, and on humanitarian staff and agencies must be prioritised throughout assessment, design, implementation and monitoring phases.[107] Prioritising and planning for safety involves:

- Engaging with and learning from women and girls about GBV, safety problems they face and the ways in which technology may compromise their safety or expose them to GBV.
- Applying survivor-centered principles to all aspects of programming using technology, including for the ownership, storage, use and sharing of GBV-related data generated through technology-related tools.
- Assessing and addressing safety and security issues associated with women and girls and staff possessing and using ICT devices, for example, ensuring that having devices does not put women, girls and staff at risk of physical assault.
- Assessing and addressing safety, privacy and confidentiality issues related to data generated about and by women and girls in humanitarian settings, including GBV survivors. This requires having protocols in place to address issues of informed consent, safe data collection and storage, safe access to and use of data, and safe data disposal.
- Ensuring organisations have capacity to safely protect sensitive data about GBV.
- Being alert to safety concerns and risks associated with the use of technology throughout assessment, implementation and follow-up phases and monitoring for harmful unintended consequences over time.
- Ensuring content is reviewed and signed off by those with expert knowledge of GBV and safeguarding risks before the technology goes live. Partnering with local experts can help with this (see 'Understand and design for the context).[108]
- Managing women and girls' expectations from the start of their interaction with the technology, particularly in relation to chatbots aimed at supporting girls with information

106 The original review in 2019 adopted a mixed methodology, including semi-structured interviews and correspondence with technology, GBViE and other specialists. The update in 2021 only included a review of the latest literature and evidence on technology and GBV.
107 Crabtree and Geara, 2018
108 UNICEF East Asia & Pacific, 2020

on sexual and reproductive health, relationships, GBV, mental health and other sensitive topics. For example, make it clear as soon as possible that they are not talking to a human and give them an option to talk to a real person early on.[109]

Box 1 Case Study: Safety features built into Technology Enabled Girl Ambassador (TEGA) Girl Effect's ***Technology Enabled Girl Ambassadors (TEGA)***[110] is a digital research tool developed in Northern Nigeria to learn about issues facing marginalised girls. TEGA is a mobile phone-based peer-to-peer research application that enables adolescent girls to conduct research about issues relevant to their lives and communities. Young women are trained to use the app to collect interview data in the form of photos, video and audio files and upload this data to a central content hub. Key safety features built into TEGA include:[111]

- Using the Snapchat model of automatically erasing data once it has been sent;
- Using banking security methods to protect interviewees' identities
- Including an SMS panic button to allow a TEGA-trained interviewer to alert nearby community members if she feels endangered.

Understand and design for the context

Good practice in introducing technology into GBV programming involves designing approaches that are context-sensitive, based on existing infrastructure and systems, and address the circumstances, experiences, realities and needs of women and girls regarding their access and use of technology. Understanding and designing for the context involves:

- Adopting a participatory approach to assessment, analysis and intervention design to ensure that interventions using technology are based on the social, cultural and economic context. A participatory approach will also foster community buy-in and ownership of initiatives.
- Engaging local service providers and partners, such as women's organisations and those who have experience working directly with the women and girls the technology aims to support. This should be done from the outset to ensure that any technology introduced and content is appropriate, acceptable, safe and useable by women and girls and staff.
- Examining and assessing the gender, age and other dimensions of technology access and use in the context, such as ethnicity and disability.[112] This includes recognising that not everyone has access to technology and being careful not to further entrench gender and other inequalities by introducing services or interventions in a manner that further marginalises or disadvantages particular groups of women and girls.
- Develop an effective error handling process, for example when chatbots do no understand a user's message. If the bot does not understand something after several attempts it should provide a different error message that signposts users to human-managed services or alternative sources of support.[113]

109 UNICEF East Asia & Pacific, 2020
110 https://www.girleffect.org/what-we-do/mobile-platforms/tega/
111 Scanlon, 2016
112 Latonero et al, 2018
113 UNICEF East Asia & Pacific, 2020

Box 2 Case Study: Leveraging Blockchain Technology for Women and Girls[114]

Women's lack of access and control over resources, including money is both a risk factor for GBV, and a factor in structural gender inequality that is a driver of GBV. A major challenge facing women affected by crises is their financial exclusion, which renders them vulnerable to GBV risks. Many women struggle to access banking and other financial systems, which are necessary for them to receive, transfer and save financial assets.

One of the most common reasons for women's financial exclusion is that often they do not possess the necessary identity documentation to register for financial services. This problem is particularly acute in cases of displacement when women have often had to flee their homes and leave behind their belongings. If women cannot receive, transfer and save financial assets, then this has a significant and detrimental impact on their wellbeing, hindering their ability to engage in certain forms of activity, limiting their financial autonomy, and increasing the risk that they may engage in negative coping mechanisms which further increase their vulnerability to GBV. As more and more humanitarian actors move towards cash-based transfer interventions, there is a risk that women will not benefit equally when programmes do not address existing disadvantages for women in terms of their access to financial services.

In 2018, UN Women and the WFP partnered to leverage blockchain technology to assist Syrian refugee women in Za'atari and Azraq refugee camps in Jordan to receive and transfer financial assets. Previously, Syrian refugee women participating in UN Women's cash-for-work scheme would receive a monthly entitlement in the form of cash on a set date. Now, their money is stored securely on a blockchain network.

The blockchain network provides a record of the amount of money owed to the women refugees by UN Women. Whenever a refugee woman would like to make a cash withdrawal, she visits a WFP-contracted supermarket where her identity will be verified using an iris scanner. Once a withdrawal is made, the blockchain then records the amount of money UN Women owes the supermarket. This way, the formal banking system, from which many refugee women are excluded, is only used to settle UN Women's debts with supermarkets.

As part of this programme, UN Women is also seeking to enhance the financial and digital literacy of the women refugee beneficiaries by providing participants with training so they can view their account history online, and budget and track their expenses. A key learning from the project is that prior to introducing such initiatives, there is need to assess gendered access to smartphones, electricity and the Internet, as women tend to be disadvantaged in terms of access. One of the strengths of this intervention is the fact that it targets women and girls affected by crises with a solution that does not require the ownership of a smartphone, or access to electricity and the Internet. Women can access the funds by simply visiting a WFP-contracted supermarket.

Note: Initiatives such as these that involve stored client data must consider data privacy concerns, discussed in greater detail below under 'Lessons Learned and Key Challenges.'

114 Thylin and Duarte, 2019.

Adopt human and user-centered approaches to design

In addition to understanding and designing for the context as described above, it is important to adopt a human and user-centered approach to design. Designing for context typically examines broader contextual issues such as the cultural, social, political and economic context, while human-centered design is an approach to creating solutions for problems and opportunities through a focus on the specific needs, contexts, behaviours, and emotions of the people that the solutions will serve.[115] Adopting human-centered design and involving end-users, including women, girls and staff, improves the likelihood that any technology introduced is appropriate, acceptable and user-friendly for women and girls and staff who use it, and avoids the development of tools and content that do not address users' experiences, realities or needs. Human-centered design entails:

- Recognising that technology is an enabler for human activities, a tool that can enhance strategies to address GBV – it is not in and of itself an intervention or a solution.
- Involving end-users, including women, girls and staff, from the outset of identifying the problem, to co-designing the technology intervention in order to ensure it is tailored to user circumstances. For technologies that use AI, such as chatbots, a human-led approach is necessary to ensure AI systems are trained to recognize and interpret questions or comments. In training AI systems it is important that language is used carefully to avoid reinforcing gender stereotypes and harmful social norms.[116]
- Assessing digital and technological literacy, skills and confidence of both women and girls and programme staff and building in strategies to improve their digital and technological literacy, skills and confidence.[117]

Box 4 Case Study: Mitigating Protection Risks of Cash Assistance for Women Through Mobile Wallets

To mitigate some of the protection risks of cash distributions to female refugees, which include increased tension and conflict in both the household and the community, and placing women at risk of violence, exploitation and abuse, Mercy Corps Jordan piloted cash assistance to female Syrian refugees through mobile wallets[118] as an alternative to traditional cash distribution modalities. The aim of the pilot was to test and evaluate women's use of the new electronic cash modality. In partnership with Dinarak, a private company providing e-financial services, Mercy Corps developed a mobile wallet system, identified 50 Syrian female refugees with protection risks and trained them on the system, distributed them a one-time unconditional cash transfer through the electron wallets and conducted two rounds of post-distribution monitoring interviews (three days and two weeks after the distribution) to assess the impact of the mobile cash wallet distribution.

While feedback from beneficiaries and usage data indicates that mobile wallets may have successfully mitigated some protection risks and have the potential to provide the most vulnerable populations in Jordan with the opportunity to access

115 https://static1.squarespace.com/static/5715100cf8baf3c79d443859/t/57278d9a8a65e2945ad67678/1462209948161/MadPow_HCD_Overview.pdf
116 UNICEF East Asia & Pacific, 2020
117 Crabtree and Geara, 2018; GSMA, 2019
118 A mobile wallet is a virtual wallet that stores payment card information on a mobile device.

formalized financial tools, significant challenges were identified related to women's understanding and use of technology. Many beneficiaries did not fully understand the purpose of receiving cash via a mobile wallet and the mobile wallet's functionality. Mercy Corps Jordan has identified the need for co-design of future iterations of the mobile wallet with end-users at the earliest opportunity to ensure that users understand the purpose and benefits of the technology and that it meets as many of their needs as possible and is easy for them to use.

Use evidence-based approaches

Technology is a tool to improve or enable an intervention, not an intervention itself. Any intervention using technology must use evidence-based, good-practice approaches to GBV prevention, mitigation and response. Using evidence-based approaches involves:

- Adhering to existing principles, guidance and standards for GBV research and programming.
- Ensuring that interventions using technology are based on good practice in programme design, for example have a theory of change detailing outcomes and mechanisms for intended impacts.
- Ensuring that any content made available through ICTs to increase knowledge and skills and educate or transform beliefs and norms uses evidence-based curriculums and approaches.

Box 3 Case study: Using evidence-based approaches for podcasting to prevent IPV in Somali refugee contexts [119]

In Ethiopia, researchers at Harvard T.H. Chan School of Public Health, Harvard Medical School, Addis Ababa University School of Public Health and Women and Health Alliance International Ethiopia with technical support from Fondation Hirondelle, are collaborating to trial podcasts to prevent IPV among Somali refugees. The team has carefully used an evidence-based approach throughout the assessment, design and implementation phases, undertaking formative research to understand IPV and its drivers in the local context, and to understand the main channels of information sharing and communication in the Somali refugee setting where the approach is being trialled.

The team worked closely with the Somali refugee community to create a series of podcasts on IPV using an existing evidence-based curriculum, designed and tested in the Ethiopian context and adapted for use in the Somali refugee context. The approach has involved engaging men and women in the camps familiar with the curriculum, training them in digital storytelling and podcasting to creatively adapt the curriculum content to their context, culture and language. The podcasts will be first broadcast in safe spaces and carefully evaluated to generate evidence about their impact and to monitor for unintended consequences prior to being made more widely available for download and peer-to-peer sharing.

119 Sharma et al, 2019

Test and learn

Adapting, testing and learning about the feasibility, value-add, and usefulness of introducing new technologies in each context is important – just because an application or software works and is useful in one context, does not mean it is appropriate and should be used elsewhere. The needs and capacities of women, girls and staff will differ from context to context; infrastructure such as electricity and Internet speed can make technologies redundant in some settings; and content from one place may be irrelevant in another. Testing is, therefore, essential.[120] Testing and learning involves:

- Undertaking feasibility assessments, even if small-scale, and making sure to consider issues of sustainability.
- Allocating adequate time and resources to test and learn through pilots or trials.
- Being prepared for a technology-based intervention to fail or to not be considered feasible or appropriate.

Box 5 Case Study: Assessing feasibility of using SenseMaker to monitor and evaluate GBV services in Lebanon [121]

Monitoring and evaluation of GBV services in emergencies has in the past focussed on output data concerning numbers of women and girls accessing available services. Information on the quality of services and their short-, medium- and long-term impact on women and girls who use them is often lacking. There is an assumption that women and girls who access GBV services benefit from them, but there is little information and data that provides evidence of this.

In response to these issues, in 2017 Elrha and partners conducted a pilot study to evaluate the feasibility and added value of using ***SenseMaker*** as a monitoring and evaluation tool for GBV services. *SenseMaker* is a mixed quantitative and qualitative data collection tool, developed by Cognitive Edge, that empowers users to record and interpret their own experiences. *SenseMaker* can be downloaded as a software application on a smartphone or tablet or as an in-browser link. *SenseMaker* enables individuals to record their own story anonymously and then interpret their stories using a series of questions. The study had four aims:

1. Engage with GBV service providers to identify M&E gaps that *SenseMaker* could address;
2. Test the feasibility of different channels of *SenseMaker* data collection;
3. Develop and test a *SenseMaker* M&E survey for GBV services in Lebanon; and
4. Document and reflect on the process of integrating *SenseMaker* into an organisation's M&E process and whether *SenseMaker* could offer additional insights not provided through current M&E approaches.

120 Crabtree and Geara, 2018
121 Bartels et al, 2018

The feasibility study involved collaboration between ABAAD Resource Center for Gender Equality, IRC, UNFPA and Queen's University. Six GBV service providers across five sites in Lebanon invited women and girls to complete the survey. Over 10 weeks, 198 self-interpreted stories were collected. At the end of the trial a workshop was held with partners to discuss the study findings and the feasibility and added value of using *SenseMaker* as a monitoring and evaluation tool for GBV programmes.

The study found the use of *SenseMaker* to monitor and evaluate GBV services in emergencies is both feasible and can add value. It also generated important lessons to inform future implementation and scale-up. For example, some of the users misunderstood the questions due to both language and cultural barriers, others had limited literacy and technological skills, meaning surveys had to be administered by staff, which reduced the comfort and ability of these users to convey negative feedback. In turn, staff reportedly felt uneasy about how to collect and use *SenseMaker* data due to a lack of dedicated training. Costs associated with individual agencies purchasing the *SenseMaker* was found to be prohibitive to its use.

Monitor and evaluate

It is vitally important that innovations involving the use of technology to address GBV in humanitarian settings are carefully monitored and rigorously evaluated, firstly to assess their benefits, impacts and risks prior to being scaled up or introduced in other contexts, and secondly to contribute to the development of an evidence base about what works, where, why, how and for whom. It is also important that humanitarian actors are transparent about the success rates of their use of particular technologies and models to address GBV, so that the sector as a whole can learn and improve.[122] Evidence must be collected and shared on who is able to access specific digital solutions.

Box 6 Case Study: The MediCapt app and the impact of mobile collection of forensic evidence of sexual violence in Kenya and the Democratic Republic of Congo[123]

In the DRC and Kenya, most cases of GBV do not go to court and perpetrators are rarely held to account for their crimes. One of the reasons for this is a lack of evidence. Often, clinicians who examine survivors collect incomplete information that cannot be used as evidence to prosecute the cases. Furthermore, due to a lack of secure storage, most health and police facilities keep private medical files on desks or floors where they risk being damaged, lost or stolen. As a result, police often do not get the evidence they need from clinics to support investigations.

In 2011, Physicians for Human Rights (PHR) launched its Programme on Sexual Violence in Conflict Zones, an initiative to enhance collaboration between medical and legal

122 For example, recent research on artificial intelligence and machine learning in humanitarian settings has highlighted that few humanitarian actors/aid agencies are publishing success rates of models they are using to predict disasters, displacement and disease, resulting in the impact and effectiveness of these models and the use of AI/ML tools such as predictive analytics less clear. Spencer, 2021.

123 Naimer et al, 2019

professionals to help capture, preserve and transmit forensic evidence of acts of sexual violence, in order to increase the likelihood of successful investigations and prosecutions and improve access to justice for survivors. As part of the programme, PHR developed ***MediCapt***, a mobile phone application to help compile medical evidence, photograph survivors' injuries, and securely transmit the data to police, lawyers, and judges involved in prosecuting sexual violence crimes.

The app's data mapping feature can also help reveal patterns of prevalence of violence, including the widespread or systematic nature of offences critical to demonstrating crimes against humanity. The tool can accommodate the various languages and literacy levels of its users. In 2019, a team of researchers were awarded a Development Marketplace Award from the World Bank and the Sexual Violence Research Initiative to evaluate whether the use of the *MediCapt* application affects the ability of clinicians to collect, document, and preserve medical evidence of sexual violence during medical exams. The evaluation also aims to explore the role of *MediCapt* in facilitating a survivor-centered approach to forensic medical examination of sexual violence.

To conduct the study, researchers will compare the documentation of forensic medical evidence of sexual violence between control sites in both the DRC and Kenya, which will include hospitals that use paper forms and intervention sites using digitized forms via *MediCapt*. The choice of control sites will also allow for comparison between DRC, a country with no standardized national form for clinicians to use for forensic documentation of sexual violence, and Kenya, a slightly higher-income country with national medical and legal guidelines for addressing gender-based violence and a standardized documentation form for cases of sexual violence. Using a mixed method approach, the study will evaluate the following outcomes:

- The quality of evidence collected, defined as the completeness of the form.
- Access to the form.
- Preservation of the evidence collected.
- The ability of the clinician to conduct a survivor-centered evidence collection process, defined as time to complete the form.
- The hospital's ability to participate in national surveillance and health reporting, defined as the time to aggregate data.

Part 3: Lessons Learned and Key Challenges

While new technologies are increasingly being introduced into humanitarian contexts and have the potential to enhance GBV prevention, mitigation and response, there are some important lessons and challenges that need to be considered in order that technology benefits women and girls, maximises their safety and empowerment, and does not magnify the risks, vulnerabilities and disadvantages they face or expose them to harm. This section draws on case studies, literature, and interviews with GBV and information specialists to identify lessons and challenges pertaining to the application of technology in humanitarian settings to women and girls' safety, protection and empowerment.

Limited evidence on benefits, impacts, effectiveness and risks

Digital technologies have potential to provide populations in humanitarian settings with unprecedented access to information and services and to transform how humanitarian agencies operate. However, there is very limited evidence at this time on the actual impact and effectiveness of technology as a transformative tool for both people in need and those providing humanitarian relief.[124]

Although some literature argues that ICTs are transforming refugees' lives and can be leveraged to improve security, protection and access to information and services, there is a dearth of documented or rigorously evaluated evidence on the positive and negative impacts of new technologies on women and girls' safety, their GBV risks, and their economic and social empowerment.[125]

A recent landscape review of 17 studies on ICTs and GBV in low- and middle-income countries, carried out for HealthEnabled, concluded that evidence for ICT-facilitated GBV interventions is limited overall. The review did not find any evidence related to the implementation or long-term sustainability of ICT-based interventions.[126] Another recent review of evidence on the use of technology to facilitate GBV survivors' access to justice found that evidence is in its early stages and mainly comes from high-income countries with few documented examples in fragile and conflict affected settings and in the informal justice sector.[127] The COVID-19 pandemic has seen a surge in the use of technology, however the pace at which this has been done has resulted in limited evidence being documented.

As well as opportunities, technology can bring risks for women and girls, both for those who are accessing and using technology and those who are not, yet these are not well-understood. For example:

- Even though the use of technology in the delivery of cash has the potential to improve protection and empowerment outcomes for women, it is largely under-researched, and there remain concerns, such as whether the use of technology for payments may exclude specific groups of women and girls.[128]

124 Naslund et al, 2017; Latonero et al, 2018
125 Latonero et al, 2018; Fraser E, 2020
126 Mechael et al, 2021
127 Fraser, 2021
128 Crabtree and Geara, 2018

- Humanitarian agencies are using artificial intelligence and machine-learning technology to develop models to predict disasters, displacement and disease. And yet, very few are publishing the results. Not enough is known about what type of predictive analytics work – or indeed do not work- and whether they are addressing the right problem in the first place.[129]
- Some countries are starting to use AI for sentencing in GBV cases (e.g. in Malaysia) and to process backlogs in untested rape kits (e.g. in the U.S), however ethical and safety concerns have been raised about the in-built biases in AI tools and potential unintended negative consequences which could adversely affect some of the most marginalised women and girls.[130]
- The justice sector is beginning to experiment with digital legal assistants – for example in Uganda ***JusticeBot*** enables users to be connected with a legal expert ('Linda') through a chatbot on Facebook Messenger.[131] However, there is very little gender analysis of the impact of this technology on women and girls.

Generating better evidence will require a commitment by humanitarian agencies and other stakeholders, including donors and private sector actors, to undertake and disseminate robust evaluations of GBV interventions introducing technology. Even when technological innovations in humanitarian programming do not directly target GBV prevention and response, it is critical that evidence is generated about benefits and risks of such innovations, including unintended harms for women and girls' safety and empowerment. An evidence base will support the GBV community to develop and disseminate policies, guidance and tools to ensure the potential that technologies present may be realised whilst also safeguarding women and girl's safety and rights.

Data privacy and protection

As humanitarian and other actors collect more and different types of digital data about affected populations in humanitarian contexts, issues of data privacy and protection inevitably arise, as does the issue of the rights of people in humanitarian settings regarding the use of data generated by and about them.[132] The issue of digital data privacy is challenging the traditional concept of humanitarian protection, and researchers have noted that getting data privacy wrong in humanitarian contexts can have serious and even life-threatening consequences.[133]

Ethics, safety and security regarding GBV data in humanitarian contexts has long been prioritised by GBV researchers and practitioners, yet there continues to be challenges in ensuring data security, including appropriate and ethical sharing and use of GBV data.[134] The COVID-19 pandemic saw many GBV service providers shift in full or in part to remote service provision, with more information and guidance now available on how to safely and securely provide remote GBV services – including in relation to phone-based case management and hotlines where caseworker and survivor safety and privacy can be more challenging.[135] Much of this guidance can be adapted to other emergencies.

129 Spencer S W, 2021
130 Fraser, 2021
131 https://www.justicebot.org/
132 Maitland, 2019
133 Harvard Humanitarian Initiative, 2018
134 Behnam and Crabtree, 2019
135 GBV AoR Helpdesk, 2021; UN Women ROAS, publication forthcoming; Anani et al, 2021

Nevertheless, challenges are likely to be amplified by the collection of unprecedented amounts and types of sensitive digital data about women and girls' health, safety and well-being in humanitarian contexts. In the future, it will be critical for the GBV community to continue to prioritise and address ethical, safety and security dimensions of digital data privacy and protection regarding sensitive data generated about women and girls by both traditional and non-traditional actors within humanitarian response, such as private sector technology and mobile phone companies. It will also be important for organisations providing remote GBV services to ensure that staff know how to secure and protect survivor data and also minimise data privacy and protection risks in using remote services (see section above on GBV response).[136]

Gendered access, control and use of technology

Technology such as mobile phones and the Internet may be widespread in some humanitarian contexts, but as with other resources, access, control and use of technology is "affected by intersecting spectrums of exclusion including gender, ethnicity, age, social class, geography, and disability."[137] Research and programme experience across humanitarian settings consistently highlights how gender limits and shapes women and girls' access to, control over and use of technology.

Even in settings where women have parity with men in mobile phone ownership, gender inequalities exist based on access to smartphones, with men more likely to own a smartphone, while women are more likely to have a basic phone.[138] Particular groups of women and girls have even less access to technology. For example, in Lebanon, married adolescent girls reported more restrictions on their use of technology, with very few owning their own mobile phones, and many requiring permission from their husband to use his phone. In Iraq, internally displaced adolescent girls are less likely than Syrian refugee adolescent girls to have access to a mobile phone or the Internet.[139] Among refugee women in Uganda, refugee women with disabilities were less likely to own or to have recently used a mobile phone.[140]

Gender-related barriers to women and girls' access to and use of technology include costs associated with purchasing, maintaining and using devices such as mobile phones; attitudes and social norms that shape and limit women and girls' use of mobile phones and the Internet;[141] and the intersection of gender with other factors such as age, location, literacy, disability and employment.[142] Unless the gender gap in access and use of technology is addressed, women and girls in humanitarian contexts may be left behind in an increasingly digitised world, and structural inequalities may be reinforced rather than alleviated.[143]

Technology-facilitated GBV

While technology may be changing responses to GBV, it is also changing women and girls' experiences of violence.[144] Even before the COVID-19 pandemic, technology-facilitated[145] GBV was a

136 GBV AoR Helpdesk, 2021; UN Women ROAS, publication forthcoming
137 O'Donnell and Sweetman, 2018
138 Samual Hall, 2018
139 Women's Refugee Commission, 2019
140 GSMA, 2019
141 Crabtree and Geara, 2018
142 GSMA, 2021
143 Ibid
144 Hayes, 2014
145 In line with the learning series outlined in Box 7, this paper uses the broader term 'technology-facilitated violence' to be inclusive of all the ways that technology is used to perpetrate violence against women and girls, including those technologies that do not make use of the Internet (for example, mobile phones).

growing challenge globally, including in contexts impacted by conflict, disaster and other humanitarian emergencies.[146] As women's access to mobile phones and the Internet increases, so does their exposure to violence facilitated by these technologies.

Technology-facilitated GBV can be perpetrated by a wide range of people, both primary perpetrators and also secondary perpetrators when people download, forward and share harmful content. As with offline GBV, technology-facilitated GBV is often carried out by someone known to the survivor: abusive intimate partners use technology to track, monitor and control women and girls' mobility and communications. Women and girls who use technology to access information or support for GBV may face repercussions from perpetrators if discovered. Technology is also being used to intimidate, harass, stalk, blackmail, and threaten women online, including women's rights defenders and activists drawing attention to and mobilising against GBV.[147]

While having a mobile phone can make women feel safer, mobile phones also generate safety concerns, such as theft and harassment at point of sale or top up; IPV triggered by a spouse's suspicions of 'inappropriate' contact with other men through voice and SMS, such as unwanted calls or messages; and online harassment via social media.[148] Previous research carried out by the Association for Progressive Communications showed that perpetrators used a wide array of ICTs to harass and intimidate women, with mobile phones being the most commonly-used tool.[149] With more women using mobile phones than ever before the risk of being exposed to GBV increases.

The COVID-19 pandemic has exacerbated the problem of technology-facilitated GBV, as more people have come to rely on using technologies to connect, work and socialise. Women with access to technologies have increased their use of them for a wider range of purposes, further increasing their exposure to GBV risks. A recent study from the 51 most online-populated countries showed that nearly 40% of women surveyed had been harassed online. The vast majority (85%) had witnessed harassment or another form of online violence.[150]

A key finding from the GBV AoR Helpdesk's recent ***Learning Series on Technology-Facilitated Gender-Based Violence*** is that while there is very limited prevalence data from humanitarian contexts, it is very likely that technology-facilitated GBV is occurring at similar or higher rates to non-emergency settings, due to the increased vulnerabilities and risks facing women and girls created by conflict, disaster and displacement. Digital technologies are reported to be commonly used to perpetrate many forms of sexual violence, abuse and exploitation, intimate partner violence, harassment and trafficking of women and girls across humanitarian contexts.

To address this growing phenomenon it will be critical that humanitarian actors and other stakeholders engage with those who have expertise in this area and develop strategies for preventing technology-facilitated GBV, including strengthening the capacity of local women's organizations to respond to digital GBV and educating and supporting GBV survivors and other women and girls to understand GBV risks presented by technology.[151]

146 GBV AoR Helpdesk, 2021
147 Hinson et al, 2018; O'Donnell and Sweetman, 2018; https://www.ictworks.org/gender-violence-2-0-the-digital-safety-gap-for-women/#.XXHZfC4zbIW
148 Croxon and Wilson, 2018
149 APC, 2014
150 Georgiou, 2021
151 https://www.ictworks.org/gender-violence-2-0-the-digital-safety-gap-for-women/#.XXHZfC4zbIW

Box 7 Resource: GBV AoR Helpdesk Learning Series on Technology-Facilitated GBV[152]

In 2021, the GBV AoR Helpdesk published a learning series that looks specifically at the issue of technology-facilitated GBV as it affects women and girls in humanitarian settings. It focuses on the different forms of technology-facilitated GBV and includes suggested actions for GBV specialists as well as policy recommendations for humanitarian organisations, donors and technology companies. The learning series includes three briefs:

- **Learning Brief 1: Understanding Technology-Facilitated Gender-Based Violence**. The first learning brief provides a definition and overview of technology-facilitated GBV behaviors, looks at prevalence and how it is manifesting in emergencies, and impacts on women and girls. It also sets out priority actions for building knowledge and evidence about these forms of GBV in emergency contexts.
- **Learning Brief 2: Strategies and Actions for Preventing and Responding to Technology-Facilitated Gender-Based Violence**. This second learning brief overviews promising strategies currently being used in different parts of the world to prevent and respond to technology-facilitated GBV and highlights some key examples and resources. It also suggests five priority actions GBV practitioners and specialists can take to strengthen response, and five priority actions to enhance mitigation and prevention.
- **Learning Brief 3: Implications of Technology-Facilitated Gender-Based Violence and actions for humanitarian agencies, donors and online industries, which can be found**. The third learning brief looks at some of the wider implications of technology-facilitated GBV and offers recommendations for key stakeholders, including humanitarian agencies, donors and online industries, on priority actions to take to prevent and respond to technology-facilitated forms of GBV.

152 GBV AoR Helpdesk, 2021

Part 4: Key Considerations for Scaling Up Use of Technology to Improve GBV Prevention, Mitigation and Response in Humanitarian Action

This section highlights key considerations for scaling up the use of technology to improve GBV prevention, mitigation and response in humanitarian contexts.

Prioritising and safeguarding women and girls' safety and rights

While scaling up technological innovations in humanitarian response can offer new opportunities for humanitarian agencies, private sector actors, communities and individual women and girls, understanding and avoiding potential unintended negative consequences and unforeseen risks for women and girls must be a priority.[153] Safeguarding women and girls' rights to safety, privacy, security and empowerment is a paramount consideration for all actors. When embarking on technological innovation to strengthen GBV prevention, mitigation and response, GBV and other actors[154] must consider and ask questions on:

- Whether the potential benefits for women and girls from the initiative outweighs the potential risks.
- The possible unintended negative consequences and risks for women and girls, including the risk of increased exposure to GBV, and the differential impacts on marginalised and excluded females, including those with disability, married girls, and GBV survivors.
- Whether the technological intervention is being designed to meet a specific problem rather than a specific capability, and driven by those who understand the sector and are committed to prioritising and safeguarding women and girls' safety and rights.[155]
- Whether the introduction of technology may generate expectations or demand that cannot be met, and what happens when the project or services come to an end.
- Privacy rights of women and girls, and how data generated by and about women and girls will be used, stored and protected.
- How risks of technology facilitated GBV introduced through the intervention will be minimised and addressed.

Committing to and investing in women- and girl-centered design

As one of the few experts working at the intersection between GBV, technology and humanitarian crises points outs, design of technology solutions in humanitarian settings must not only be human-centered, but also be specifically women- and girl-centered and "follow principles that promote safety and respect and understand the systemic impact of patriarchal systems so as not to further obstruct women's engagement."[156] Putting women and girls at the center of design will

153 GSMA, 2019
154 Harvard Humanitarian Initiative, 2018
155 Spencer, 2021
156 Crabtree, 2020

build understanding of the different barriers that women and girls may face in terms of access and use of technology in each setting, including literacy, disability, discrimination, social and cultural influences, time, age, isolation and remoteness.[157]

Being women and girl-centered will require GBV and other actors seeking to use technology to reach out and listen to women and girls, including the those who are marginalised and harder to reach, in order to understand their concerns, safety risks and preferred technology modalities and platforms.[158]

Ensuring pre-requisites are in place

There are a number of pre-requisites that need to be put in place before GBV service providers in humanitarian settings establish or scale up remote services, including phone-based case management and hotlines. The first two are:[159]

- **Technology and network access:** considering issues in relation to infrastructure (e.g. whether there is electricity, phone network and Internet access, and how reliable and strong it is) and also who has access to technologies, where and why, and who does not.
- **Safety and privacy:** ensuring there is a separate facility or room where caseworkers can receive calls, whether in an existing GBV case management facility (e.g. a safe space) or another facility (e.g. a health facility). When staff are working from home there must be a private space where no one can listen in on the calls.

Other pre-requisites include ensuring referral pathways have been updated; the right technology platform has been selected; there are sufficient human and financial resources (see resourcing needs below); and there is sufficient organisational flexibility.[160]

As well as GBV response, preparedness is also vital in the use of technology in GBV prevention and mitigation, from design through to implementation, monitoring and evaluation.

Identifying and addressing resourcing needs

The design, introduction and evaluation of technology innovations to strengthen GBV prevention, mitigation and response in humanitarian contexts is resource intensive. Safe technologies that respect and protect human rights and are survivor-centered take time to conceptualize, develop and pilot.[161] Technological innovation requires considerable experimentation, adaptation and collaboration, all of which requires financial and human resources as well as adequate time. Appropriate resources are needed for assessing the feasibility of introducing technology into a specific context, and for testing and evaluating its benefits, impacts and risks. Resources are also required to purchase and maintain appropriate equipment, tools and infrastructure, build staff capacities, and put in place strategies for monitoring and mitigating risks and unintended negative consequences.

157 Raftree, 2018
158 Crabtree, 2020
159 GBV AoR Helpdesk, 2021
160 GBV AoR Helpdesk; UN Women ROAS, publication forthcoming
161 UN Women, 2019

Developing new capabilities and partnerships

Technological innovation within humanitarian response requires different ways of working, including with existing partners, and new skills and capabilities. Some humanitarian agencies are investing in building in-house capabilities to design, implement and manage technological innovation, while others are engaging in partnerships with new actors, such as technology developers, telecommunications firms, and multinational financing and credit companies. These new partners bring technology expertise, resources and design and innovation capabilities that GBV actors do not have. They also, however, bring different objectives, principles and ways of working that may not be in line with humanitarian and GBV programming objectives, principles and practices. They may have limited understanding of GBV, and of the gender-based power relationships and inequalities that both underpin GBV and frame the use and uptake of technology.[162]

While GBV actors should explore new partnerships to foster creative and new ways of working in humanitarian contexts, and to enhance their capabilities to innovate with technology to promote women and girls' safety and empowerment, they also need to be alert to the realities of engaging with non-traditional actors. Partnerships with non-traditional actors requires investment and time – sometime years- on the part of humanitarian agencies and must be carefully managed to ensure they operate within the ethical principles and values underpinning GBV prevention and response, such as survivor-centered principles and values of promoting women and girls rights and empowerment, and do not inadvertently exploit or cause harm to women and girls.

Ensuring shared principles and standards

To safely and effectively address the existing and emerging ethical, privacy and security concerns regarding digital data, and when scaling-up the use of technology in GBV prevention, mitigation and response, there is a need to articulate and operationalise a set of principles, with a process for monitoring their application, to guide and support innovation by GBV actors and by other sectors and stakeholders.[163] Of particular note, there are concerns about bias and discrimination in the use of AI, and yet there is currently no requirement for humanitarian actors to audit their AI systems and no systematic regulation of how humanitarian actors use AI.[164] Ensuring shared principles and standards will be important when it comes to scaling up AI in humanitarian contexts.

Across the use of all technology, a shared set of principles for GBV actors, donors, research institutions and private sector companies based on existing GBV standards, guidance and lessons on good practice in technology, innovation and design (see annex on Selected Resources for examples), will help to ensure that future investment, innovation and scale-up of technology within GBV programming and within other aspects of humanitarian action is informed not only by women- and girl-centered concepts and practice, but by the GBV survivors themselves.

162 Hayes, 2016
163 See Resources section at the end for operational principles developed by development, design, and technology experts.
164 Spencer, 2021; Fraser, 2021

Part 5: Conclusions

Digital technologies have proliferated over the past decade and are increasingly being adapted to humanitarian contexts to improve humanitarian information, assistance and services. Digital technologies also have great potential to improve accountability of humanitarian actors towards local populations by increasing transparency and providing affected populations, including women and girls, with opportunities to provide feedback on and input into humanitarian assistance and services. New technologies are also bringing new opportunities to strengthen GBV programming in humanitarian contexts, and there are a growing number of promising examples of technologies being trialled to enhance GBV prevention, mitigation and response in diverse contexts.

These new opportunities and applications also bring new challenges and amplify existing ones. These include concerns about the positive and negative impacts that technology may have on populations affected by humanitarian crises and the organisations serving them. Technology is not gender-neutral, and gender-based and other intersections of power and inequality are critical considerations if technology is to reach its full potential as a force for change.[165]

A key concern is that technology may inadvertently further entrench inequalities for women and girls, including for those who are most disadvantaged and marginalised. It will be important moving forward that technologies are introduced in ways "that maximise their potential to advance gender equality and the empowerment of women and girls in humanitarian settings, and minimise the risk of doing harm."[166]

As most technology innovations targeting GBV in humanitarian contexts are still at trial or pilot stages, it is not yet clear how and the extent to which technology will amplify efforts to address GBV. What is clear is that humanitarian actors seeking to introduce technology to address GBV must do so carefully and thoughtfully, drawing on emerging lessons and practices, and rigorously monitoring and evaluating interventions to help develop an evidence-base for good practice, and practices to avoid. It is also clear that GBV actors will need to engage in new partnerships with non-traditional actors to leverage the capabilities, resources and skills that these partners bring.

While there is as yet no evidence base to guide interventions, there are lessons and insights from pilot programmes and from GBV and other practitioners who have been at the forefront of innovation with technology in GBV programming. A key message from these experts is that technology is an enabler for human activities, a tool that can enhance strategies to address GBV – it is not in and of itself an intervention or a solution. When developing new technology solutions, first understand who or what the technology is trying to enable and what the needs and barriers are. Another key insight is that technology must build on and add value to existing and evidence-based approaches to addressing GBV. As humanitarian actors have turned to technology during the COVID-19 pandemic for GBV prevention, mitigation and response, further lessons and insights into the opportunities and risks are starting to emerge.

It is clear that technology will increasingly become part of the humanitarian landscape as the humanitarian community seeks solutions to emerging critical challenges presented by unprecedented numbers of protracted crises and associated human displacement, an increase in the

165 O'Donnell and Sweetman, 2018
166 Lafreniere et al, 2018

frequency and severity of climate-related disasters and associated resource-scarcity, and other emergencies. The GBV community will need to invest in adapting and trialling emerging technologies to address GBV, and at the same time seek to engage with and influence other sectors and actors at the field and global levels to ensure that new technologies they are introducing in humanitarian contexts benefit women and girls practically and strategically and do not inadvertently expose them to GBV or other harms.

Part 6: Recommendations

For practitioners, researchers and humanitarian agencies:

- **Learn about existing GBV-related technology initiatives** in the region, country and context, and seek information from users and implementers about lessons learned, benefits and challenges.
- **Learn about digital data safety, privacy and protection and put measures in place to address and monitor risks and ethical concerns** prior to introducing new technology. Ensure data safety and privacy and safety protocols address risks associated with data being hacked, shared or disseminated inappropriately.
- **Prioritise, assess and plan for safety** throughout, including making sure GBV survivors and women and girls are aware of and know how to respond to the potential for technology-facilitated GBV.
- **Conduct formative research involving women and girls**, including local women's services and organisations, as well as groups and individual women who may be doubly or triply marginalized, such as women and girls with disabilities to:
  - Assess the context specific GBV situation, including assessing power dynamics and issues facing women and girls,
  - Understand the circumstance, realities and needs of women and girls in terms of technology access, use, literacy and confidence.
- **Co-design technology interventions with women, girls and staff who will use it**. This will ensure user understanding, buy-in, relevance, appropriateness and usability of the technology.
- Ensure that programmes using technology are designed in line with **principles and good practice in GBV research and programming**.
- Ensure that programmes using technology are designed in line with **principles and good practices in technology innovation and design**.
- Ensure that programmes using technology **apply evidence-based approaches and methods**, for example, initiatives targeting community awareness-raising and education should use multi-pronged communication strategies and evidence-based curricula.
- Ensure that programmes using technology have conducted a context-specific **gender analysis of the risks and impact** on women and girls.
- **Invest in building local capacities, capabilities and systems** and foster local ownership of programmes and technology innovations. Wherever possible seek to reduce the gender divide in women and girls' technology literacy, skills and confidence, including for female staff.
- **Incorporate rigorous evaluations into the design of GBV interventions using technology**. Ensure the methodology can capture unintended consequences such as the risk that technology may introduce less opportunity for staff to engage directly with women and girls and thus identify those who might be experiencing GBV. Also, ensure the evaluation methodology is designed to support data collection via the chosen remote modality..

- **Make evaluation findings widely available** to contribute to the development of an evidence base on what works (and what does not), the risks and unintended consequences of interventions, and other factors relevant to scaling up technological innovations in humanitarian assistance.

For the GBV-specialist community and policymakers:

- **Monitor and share information about emerging approaches, evidence and lessons** learned regarding the impacts of interventions using technology on women and girls' safety and exposure to GBV in humanitarian contexts.
- **Monitor and seek opportunities to influence** how developments in technology in humanitarian action, such as the emerging of digitalised identities and digitalised service delivery, impact on the rights, safety and empowerment of women and girls.
- **Engage in global discussions on digital data privacy and protection in humanitarian contexts, and advocate across the humanitarian system** for the safety, security and rights of GBV survivors, and women and girls more broadly, to be addressed in guidance and standards regarding digital data. For example, make sure women and girls' safety and rights are considered in programme guidance and tools in settings where biometric identity systems are being rolled out.
- **Find opportunities to convene the GBV and technology communities, including private sector actors, to foster cross-pollination, dialogue and learning** and to identify shared principles and standards to guide the ethical and safe introduction and use of technology in GBV programming in humanitarian settings, including standards for data privacy and protection.

Selected Resources

Safety and privacy guidance and tools

Safety Planning for Technology: Displaced Women and Girls' Interactions with Information and Communication Technology in Lebanon and Harm Reduction Considerations for Humanitarian Settings (K. Crabtree and P. Geara 2018)
This article provides practical recommendations for service providers on how to safely introduce information and communications technology into programming for women and girls.

Girl Safeguarding Policy: Digital Privacy, Security, Safety Principles & Guidelines (Girl Effect 2016)
This guide is aimed at providing guidance on how to protect girls who are using digital tools. It is built on a set of principles that keep the girl and her privacy, security and safety at the center. It outlines how to approach digital initiatives and programmes involving girls and offers a framework to better protect girls' personal information and privacy and to ensure that the content generated does not put girls at risk. It lists the kinds of questions to ask partners, sponsors or vendors before engaging in partnership agreements, and helps when considering how to go about collecting, using, storing and disposing of data that is gathered as part of digital tools and platforms, as well as when conducting monitoring, evaluation, learning and research activities.

Digital Safeguarding Tips and Guidance (Girl Effect 2018)
This document offers digital safeguarding tips and guidance to Girl Effect staff and partners. It emerges from Girl Effect experiences designing and implementing mobile first platforms and builds on the Girl Effect digital privacy and security principles and guidelines (see above).

A Framework to Understand Women's Mobile-Related Safety Concerns in Low- and Middle-Income Countries (GSMA 2018)
This report explores women's mobile-related safety concerns, building on previous research by the GSMA and other organisations. It provides a framework to understand mobile-related safety concerns, an overview of initiatives (i.e. products, services, policies, or marketing or distribution approaches) that tackle this issue and actionable recommendations for stakeholders.

Research and assessment guidance and tools

Gender and Information Communication Technology Survey Toolkit (USAID 2017)
This Toolkit helps to fill the gap in available, standardized resources for obtaining an overall landscape assessment of gender and ICT for USAID programming. It provides USAID and implementing partners with practical, well-researched tools they can use to obtain data on women's access and usage of mobile phones and other connected devices. These data can be used to inform project design or create a baseline in order to understand the efficacy of an ICT intervention.

Using Social Media Data to Understand Changes in Gender Norms: Guidance (MEASURE Evaluation 2018)
This document provides guidance on collecting, analysing, and interpreting Twitter data on gender norms. It discusses when social media can be useful in monitoring, evaluation, and research; what data are available; and methodological challenges including generalization, biases, protecting individual privacy, and considering ethical implications.

Toolkit for Researching Women's Internet Access and Use (GSMA 2018)
This toolkit outlines both core and supplementary research topics to gain insights into women's Internet access and use and provides example questions for both qualitative and quantitative research. Building on existing indicators and initiatives, these questions are linked to the core list of indicators for ICT access and use produced by the Partnership on Measuring ICT for Development.

Monitoring and Evaluation in a Tech-Enabled World (ITAD 2014)
This paper highlights some of the ways that ICTs are helping overcome common M&E challenges, including "real-world" challenges and methodological and conceptual challenges. The paper also offers ideas on untested areas where ICTs could play a role in evaluation, and an in-depth discussion of some of the new challenges, problems and risks that arise when incorporating ICTs into the M&E process as a whole. Finally, it offers a checklist for thinking through the incorporation of ICTs into M&E.

Gender Evaluation Methodology for Internet and ICTs: A learning tool for change and empowerment (APC Women's Networking Support Programme, 2005)
Gender Evaluation Methodology (GEM) is a guide to integrating a gender analysis into evaluations of initiatives that use Information and Communication Technologies (ICTs) for social change. GEM provides a means for determining whether ICTs are really improving women's lives and gender relations as well as promoting positive change at the individual, institutional, community and broader social levels. The guide provides users with an overview of the evaluation process (including links to general evaluation resources) and outlines suggested strategies and methodologies for incorporating a gender analysis throughout the evaluation process. GEM does not contain step-by-step instructions to conducting evaluations.

Design guidance

Principles for Digital Development
A set of principles, guidance and tools to help practitioners succeed in applying digital technologies to development programmes.

Digital Services Toolkit (National Network to End Domestic Violence, 2021).
Guidance on choosing technology platforms and vendors, with best practice for reaching survivors using digital tools.

Programming guidance

COVID-19 guidance on remote GBV services focusing on phone-based case management and hotlines (GBV AoR Helpdesk, 2020). This resource presents options for adapting GBV case management to phone-based case management in the context of the COVID-19, and provides recommendations for scaling up hotlines as a strategy for meeting urgent support and referral needs of survivors and those at risk.

Best Practices Texting & Messaging with Survivors during COVID-19 (ABAAD, 2020)
This short note by the Lebanese organisation, Resource Center for Gender Equality (ABAAD), recommends best practices for CSOs using text messaging and other messaging platforms to communicate with survivors and women at risk of violence during the pandemic.

Guidelines for Mobile and Remote Gender-Based Violence (GBV) Service Delivery (IRC, 2018). This resource provides guidance on establishing GBV mobile and remote services, in order to provide case management, psychosocial support, and referrals to meet the immediate needs of GBV survivors. Such services should be established in settings where traditional services based in static centers with continuous access to trained caseworkers cannot be set up or consistently accessed due to the nature of displacement and/or ongoing insecurity that hinders both humanitarian access and the displaced population's movement.

Guidelines for the Provision of Remote Psychosocial Support Services for GBV Survivors (UNFPA Mexico, Venezuela and Colombia Offices; the Latin America and Caribbean Regional Office (LACRO); and the Caribbean Subregional Office (SROC), date unknown). This UNFPA guidance provides detailed, practical guidance for the provision of remote psychosocial support to adult survivors of GBV in the COVID-19 context. The guidelines can be adapted for different types of remote psychosocial support services, including psychological first aid, psychological support hotlines and case management.

Five Key Guidelines for Providing Remote Legal Aid to GBV Survivors (Legal Action Worldwide and Norwegian Church Aid, 2020). Guidelines for legal aid practitioners on supporting survivors remotely.

Cash & Voucher Assistance and Gender-Based Violence Compendium: Practical Guidance for Humanitarian Practitioners (CARE, 2019)
The purpose of this compendium is to assist humanitarian actors and crisis- and conflict-affected communities to integrate GBV risk mitigation into CVA interventions and integrate GBV prevention into multi-sector programming using CVA when appropriate. While not specifically focussed on mobile transfer modalities, it contains useful guidance to consider when using e-transfer.

Mobile Money-Enabled Cash Aid Delivery: Essential Considerations for Humanitarian Practitioners (GSMA, 2019)
This report offers guidance for humanitarian practitioners considering mobile money enabled CVA programmes. It provides a foundational understanding of the design of mobile money systems for CVA, the benefits they offer relative to other common CVA delivery mechanisms, and essential considerations for selecting mobile money as a CVA distribution method.

Integrating Information and Communication Technologies into Communication for Development Strategies to Support and Empower Marginalized Adolescent Girls (UNICEF, 2013). This paper highlights examples of existing C4D programming enhanced by the use of ICT tools and draws on the analysis of case-studies, risks and trends, to offer recommendations for policy and practice for ensuring marginalized adolescent girls are supported to access, own and use ICTs through strategic C4D processes at multiple levels.

Capacity-building tools

Digital Literacy: Empowering Women to Use the Mobile Internet (GSMA, 2015)
This report analyses the challenges women face when accessing mobile internet with low mobile literacy and digital skills, understand how women learn these skills, and identify the barriers women run up against in various learning channels. It makes recommendations for addressing women low digital literacy for relevant stakeholders.

Data Starter Kit for Humanitarian Field Staff (ELAN)
This Starter Kit provides concrete tips to help assess, plan and improve data management practices in e-transfer programmes. The seven Tip Sheets align with the project and data management lifecycles.

Association for Progressive Communications Feminist Tech Exchange project36 (FTX)
This is a training curriculum for trainers who work with women's rights and sexual rights activists to use the Internet safely, creatively and strategically. The training includes a module on online GBV, creating safe online spaces, mobile safety and risk assessment for organizations.

Further capacity-building tools can be found in the ***GBV AoR Helpdesk's Technology-Facilitated GBV Learning Brief 2***.

Organisations and websites

GSMA Connected Women Programme aims to reduce the gender gap in mobile internet and mobile money services in low- and middle-income countries and unlock commercial and socio-economic opportunities.

Technology Safety explores technology in the context of intimate partner violence, sexual assault, and violence against women and has a wide range of technology safety toolkits, including for safety considerations for survivors when choosing and using apps and for assessing for technology abuse and privacy concerns.

Take Back the Tech! is a global, collaborative campaign project that highlights the problem of tech-related violence against women, together with research and solutions from different parts of the world. The campaign offers safety roadmaps and information and provides an avenue for taking action. Take Back the Tech! leads several campaigns at various points in the year. During campaigns, Take Back the Tech! announces actions that combine creative and strategic use of ICT with the issue of VAW. Campaigners organise actions that respond to their local priorities, such as workshops on online safety, media monitoring on rape reporting, solidarity actions on the streets and in online spaces and discussions on women's right to privacy.

GenderIT.org is a project of the Women's Rights Programme of the Association for Progressive Communications and is a think tank of and for women's rights, sexuality, sexual rights and internet rights activists, academics, journalists and advocates. ***GenderIT.org*** carries articles, news, podcasts, videos, comics and blogs on internet policy and cultures from a feminist and intersectional perspective, privileging voices and expressions from Africa, Asia, Latin America, Arabic-speaking countries and Eastern Europe. GenderIT.org provides a space for reflection, influence and advocacy on internet policy in relation to the rights and demands of women, gender diverse people and issues related to sexuality.

Women'sNet is a South African network that works to promote gender equality in the country via the use of ICTs. Work includes capacity development with women's organisations through ICT training, and the Girls'Net project, which aims to encourage girls in the use of ICTs around issues that are important to them and to support their engagement in social activism

CHAYN is a global volunteer network addressing gender-based violence by creating intersectional survivor-led resources online. The website includes how-to guides that are crowdsourced in multiple languages, country-specific information, and (c) digital services which offers interactive support to women.

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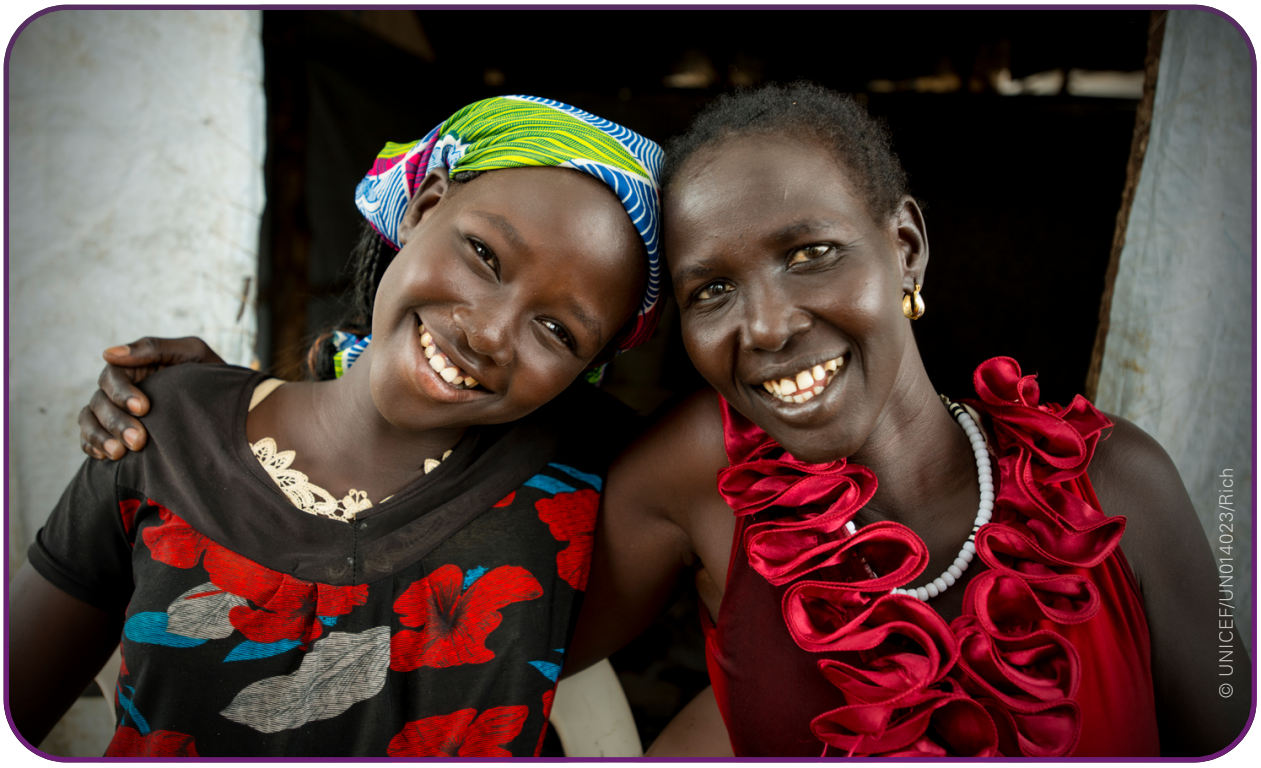

The GBV AoR Help Desk

The GBV AoR Helpdesk is a unique research and technical advice service which aims to inspire and support humanitarian actors to help prevent, mitigate and respond to violence against women and girls in emergencies. Managed by Social Development Direct, the GBV AoR Helpdesk is staffed by a global roster of senior Gender and GBV Experts who are on standby to help guide frontline humanitarian actors on GBV prevention, risk mitigation and response measures in line with international standards, guidelines and best practice. Views or opinions expressed in GBV AoR Helpdesk Products do not necessarily reflect those of all members of the GBV AoR, nor of all the experts of SDDirect's Helpdesk roster.

Gender Based Violence AoR
Global Protection Cluster

The GBV AoR Helpdesk

You can contact the GBV AoR Helpdesk by emailing us at:
enquiries@gbviehelpdesk.org.uk

The Helpdesk is available 09.00 to 17.30 GMT Monday to Friday.

Our services are free and confidential.