



Findings in Monitoring and Evaluations Practices During Humanitarian Emergencies

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Abbreviations

CAPI	Computer-Assisted Personal Interviewing
CATI	Computer-Assisted Telephone Interviewing
CAWI	Computer-Assisted Web Interviewing
GPS	Global Positioning System
HA	Humanitarian Assistance
IBTCI	International Business & Technical Consultants, Inc.
ICT	Information and Communications Technologies
INGO	International Nongovernmental Organizations
ISIS	Islamic State of Iraq and Syria
M&E	Monitoring and Evaluation
MDC	Mobile Data Collection
MIS	Management Information System
NFI	Non-food Items
NGO	Nongovernmental Organizations
PIMS	Personal Information Management System
QR Codes	Quick Response Codes
RTE	Real Time Evaluation
UN	United Nations
UNICEF	United Nations Children's Fund



Executive Summary

Conducting monitoring and evaluation (M&E) in complex humanitarian emergencies presents a difficult task for evaluators. This situational analysis presents M&E methodologies and tools that are currently being utilized in the field and those that are being newly introduced. Significant barriers to conducting M&E are posed by a lack of security and access as well as a lack of established M&E processes throughout programs' life cycles. This precipitates the need for remote monitoring practices and the leveraging of local staff or partners. As the humanitarian landscape changes, traditional M&E practices have evolved, incorporating technology and introducing remote monitoring techniques.

With the renewed interest of donor organizations, such as OFDA, in conducting external M&E for their humanitarian assistance (HA) programming, organizations such as International Business & Technical Consultants, Inc. (IBTCI) can leverage emerging technologies and methodologies to position themselves as leaders in the M&E community. Through the use of utilization focused methodologies, M&E can be incorporated from the inception of HA programming and be conducted more effectively. While conducting M&E is difficult in humanitarian crises, it is not impossible and should be included in the planning and implementation phases of all HA projects.

Introduction

The History of Monitoring & Evaluation in Humanitarian Assistance

Monitoring and evaluation, defined “as a systematic collection of data throughout a program’s life cycle to see the results of the program and how they were achieved,”¹ has historically been a challenge in humanitarian crises. From the beginning of HA during the first world wars to the many conflicts that pose challenges to the aid system today, humanitarian action in complex emergencies has consistently been characterized by its spontaneous nature. Since emergencies call for expedient actions, aid delivery frequently takes precedence over data collection and the standardization of practices.² In recent years, the rapid nature of HA has been coupled with an increasing number of natural disasters and armed conflicts, increasing the need for aid while diminishing the resources available to meet this need.³ Consequently, increased competitions in finding funding and resources to meet these needs often causes organizations to compromise the transparency of their work as public opinion of their operations may infringe upon their ability to secure funding. Historically, due to these challenges, M&E has been deprioritized, inhibiting program accountability and effectiveness. However, in recent years this is slowly changing as the international community seeks to learn from past mistakes and increase accountability for the aid that is gained through improved M&E practices.

Following the 1994 Rwandan genocide and the subsequent displacement of Rwandans in surrounding countries thereafter, the need for greater humanitarian accountability became a focal point for the international community.⁴ The surge of 500,000 - 800,000 refugees into eastern Zaire (present day Democratic Republic of the Congo) tested the capacity of humanitarian response.⁵ Reportedly, a majority of aid workers involved were not sufficiently trained nor experienced in hygiene or health practices and an estimated 50,000 refugees died in the first

month of the response. These proficiency shortcomings were later confirmed as the major causes of illness and death among the displaced population.⁶ In hindsight, the number of preventable deaths was astonishing, provoking a call for greater international accountability and response.

The dire situation during and after the genocide in Rwanda, highlighted the pitfalls of the humanitarian system and proved to be a catalyst for a rising consensus that M&E was necessary in HA. Informed by the *Humanitarian Charter* along with hundreds of best practices compiled by NGOs, the Sphere Standards were created to articulate a minimum standard of quality and accountability in humanitarian response.⁷ While over 200 government agencies and NGOs have pledged to follow the Sphere Standards, they have yet to be made obligatory.⁸ Despite this, they act as a basis for standardized toolkits and practices of those who have agreed to follow the principles. Performance, Transparency and Learning, the fifth core standard of the Sphere Project, encompasses “monitoring outcomes and adaption of program strategy in response.”⁹ Thus, Sphere encourages the transformation of HA towards a more evaluation-centered methodology.

Since the creation of the Sphere Standards, several other standards have been created that focus on humanitarian emergencies and are inclusive of M&E techniques. Ongoing assessments in emergency situations are difficult due to the many constraints that organizations and aid workers face in these fluid and dangerous environments. Nevertheless, with increased coordination efforts and innovative technology, conducting M&E in complex emergencies is not impossible. The HA field has been transformed by the successes and failures that have informed best practices and lessons learned. Without research and analysis this would not have been possible, thus making M&E a cornerstone for emergency preparedness.

Challenges

Conducting M&E activities in active complex emergencies presents a unique challenge for humanitarian aid providers. Lack of access and security leads international INGOs to engage local actors to deliver aid, making it much more difficult to conduct M&E on humanitarian projects. Additionally, organizations have a tendency to employ M&E after HA has been delivered for a considerable amount of time, which means baseline data is rarely established. With the late introduction of M&E practices into the field of HA, humanitarian organizations do not always view M&E as a necessity beyond pleasing their donors. These issues make it difficult to evaluate the impact of humanitarian aid in complex emergencies.

Humanitarian aid delivery and subsequent monitoring activities require access to the conflict zone. International law requires that governments facilitate humanitarian access for conflict or disaster affecting civilians in their nations.¹⁰ In certain cases, such as the Syrian conflict, governments will deny access to HA actors, creating difficulty for INGOs to operate or send third-party evaluators to conduct M&E on their projects.¹¹ Organizations must then create new M&E strategies to mitigate barriers and still gain access to their projects and beneficiaries.

Lack of security is another main concern facing organizations attempting to conduct M&E in conflict zones.¹² Traditionally, humanitarian actors and M&E experts rely on humanitarian corridors to access the locations where HA is being allocated. These humanitarian corridors are a means of access, agreed upon by all parties, which allows humanitarians to safely deliver



assistance to affected people.¹³ Even where corridors are established, security is not guaranteed. According to the Charity and Security Network, “attacks against humanitarian staff, aid buildings and supply routes are frequent amid the ongoing fighting, severely constraining humanitarian operations.”¹⁴ When a threat is posed to the security of the M&E staff, methods of remote M&E come into play.

Lack of good baseline data for performance indicators means that third party evaluators have a difficult time assessing the overall impact of HA programs. The nature of HA is such that rapid injections of aid are needed, prohibiting time for M&E practices to be built in from the onset. In emergency prone areas, implementation of M&E at the onset of a disaster is easier because organizations already have trusted local staff in place. In other areas this is much more difficult, especially where organizations have never had a presence before.¹⁵

Within the field of HA, M&E is generally seen only as a program component utilized to appease donors. This view of M&E diminishes the quality of M&E practices within organizations. Organizational priorities in HA are focused on quickly providing aid to those affected, which often fails to include a plan for tracking this aid. Organizations also have a difficult time explaining to local staff why conducting M&E is necessary when lives are already being risked for aid delivery.¹⁶ Only once a situation becomes more protracted are humanitarian organizations more likely to begin implementing monitoring procedures. Another lagging factor in M&E procedures is that many organizations fear that negative results from M&E will impact future funding.¹⁷ As M&E becomes more important in the humanitarian field, more organizations are developing their own M&E divisions; however, the practice of incorporating M&E as a key component of the aid delivery process is slow.¹⁸

Finally, issues between NGOs, governments, and the UN make coordination between entities difficult. Distrust between organizations and a lack of data transparency makes it difficult to gather data for analysis.¹⁹ This can lead to duplication of efforts and makes it difficult to ensure the accuracy of M&E results. Mitigating the issues discussed above can help improve the effectiveness of M&E programming.

Syrian Conflict Background

The Syria crisis began in March 2011, prompted by the wave of Arab unrest that began in Tunisia in December 2010. Nationwide protests against President Bashar al-Assad’s regime were countered with violent crackdowns by government forces. As opposition supporters began to take up arms, violence escalated between the Syrian government and opposition groups, ultimately leading the country into civil war. By March 2015, the UN’s estimated death toll reached 220,000 people.²⁰

Since the conflict began four years ago, it has grown to encompass more facets than the original battle between supporters of President Assad and his opposition. While sectarian and ethnic divisions have exacerbated the politics of the conflict, the rise of the Islamic State of Iraq and Syria (ISIS) has created additional obstacles to ending the crisis. Several areas of the country that have been liberated from government control have been captured by ISIS, further limiting civilians’ freedom, safety and access to aid.

Syria's perpetual state of conflict has caused one of the world's largest complex humanitarian emergencies. In almost four years of conflict, the UN estimates the number of Syrian refugees to be 3.9 million and the number of internally displaced people to be 7.6 million.²¹ A report published in March 2015 estimated that over four in every five Syrians lived in poverty in 2014, and according to the UN, approximately 12.2 million Syrians are in need of humanitarian assistance.^{22, 23} Such massive displacement has strained already limited resources, such as access to shelter, water, and livelihoods, and has the potential to destabilize the entire region.

Addressing the needs of displaced Syrians in the surrounding countries and providing assistance to the 12.2 million people within Syria has been at the forefront of HA agendas. However, despite the desperate need for HA, aid agencies have had limited access to Syria's suffering population. In an effort to address this, the United Nations Security Council approved Resolution 2139 (2014), which demanded that "all parties, in particular the Syrian authorities, promptly allow rapid, safe and unhindered humanitarian access for UN humanitarian agencies and their implementing partners, including across conflict lines and across borders."²⁴ When the demands of Resolution 2139 were not fulfilled, the UN Security Council approved Resolution 2165 (2014), giving UN humanitarian agencies and their implementing partners authorization to cross into Syria using four borders not controlled by the Syrian government "in order to ensure that humanitarian assistance, including medical and surgical supplies, reaches people in need throughout Syria through the most direct routes."²⁵ This resolution was renewed until January 10, 2016, by Resolution 2191 (2014).

Despite the UN Security Council Resolutions, HA for Syrian populations has not seen significant improvement and, according to a March 2015 report by Oxfam, the situation has worsened²⁶. Access remains a significant challenge to providing adequate HA within Syria, and the daily threat of violence has caused aid agencies to seek other means of supplying aid within the Syrian border. The solutions that we offer below have all been used by organizations or professionals we interviewed, either within Syria or other conflict zones.

Methodology

Our team of four consultants from George Washington University conducted a situational analysis of M&E in the field of HA. In order to serve IBTCI in their pursuit of future strategies for conducting M&E in humanitarian crises, we interviewed key actors and identified the pertinent literature within the field of HA. In doing so, we compiled an extensive analysis of tools and approaches that can inform methodologies for future projects.

The initial phase of our research involved extensive examination of existing M&E approaches and tools. This research resulted in a comprehensive literature review, enabling us to create a more targeted methodology. After mapping the actors and trends in HA, we were able to identify Syria as a country case study because the current crisis there exemplifies the challenges and general trends of M&E in crisis settings.

We expanded our research by conducting interviews with key stakeholders in HA, such as donors, INGOs, local implementing partners, academics, activists, journalists and private M&E consultants. Our initial key informant interviews allowed us to establish contact with other relevant actors, guiding us in our search for the most current information.



Our data collection methodology was largely qualitative. Using semi-structured interviewing techniques, we informed our analysis of best practices and tools by identifying common themes. Through coding our interviews by keywords and themes, we were able to establish commonalities. To ensure the most vital information would be released and to maintain good research practice, interviews were conducted under confidentiality. Consequently, no names or organizational titles of those interviewed will be released in this review. A total of twenty interviews were conducted.

M&E Approaches

Based on our research, our group was able to examine the range of M&E approaches that are currently being implemented in complex humanitarian emergencies. The extent, consistency, depth, and rigor of M&E practices varies across organizations, and even within different layers of organizations. The examples below examine the most common trends among organizations conducting M&E.

Remote Monitoring

When humanitarian organizations lack access due to a conflict situation, they often have to bureaucratize their M&E processes because staff are not present to physically see what is being done in the field.²⁷ One method of conducting remote M&E is to focus on tangible measurements: the material items and capital being distributed. Maintaining inventory, tracking equipment and supplies, gathering beneficiary data, and analyzing available records are widely used methods. For instance, organizations conduct financial M&E by collecting and analyzing receipts from their beneficiaries or local partners.²⁸ An organization may also compare the number of kilometers their ambulance drives per day and the number of gallons of fuel purchased. Several of these remote monitoring tools will be discussed in the next section.

Data Monitoring

Organizations' monitoring approaches vary depending on services, needs, and accessibility. Organizations providing healthcare support, for instance, rely on quantitative patient data in order to monitor how the aid is being used and who is benefiting from it.²⁹ A disadvantage of relying too heavily on this data is that it is often incomplete or not thorough enough to allow evaluators to draw reliable conclusions. Additionally, data can easily be altered, intentionally or un-intentionally, and as a result, other methods should accompany the simple data collection and analysis.

Currently, data is primarily obtained in writing and then entered into data management systems (like Excel, Access, DevInfo, etc.); however, it is increasingly being obtained electronically and automatically entered into databases.³⁰ This data is sent to a main field office, where M&E personnel, whose level of experience in M&E varies greatly, analyze the data. Data is used to: report activity from the field, up the management structure, and finally to headquarters; maintain organizational accountability and external accountability to donors and constituencies; and, as a

way to track progress, gain knowledge, and adjust approaches and assistance as necessary.³¹ Even when all the organizations we interviewed gather a significant amount of data, the standards for data collection vary across different actors. There is diversity in the methods and rigor of data collection, but as analyzing data with computers has become the norm, even those that still rely on paper and pencil are looking for ways to computerize their data gathering.³² A disadvantage of using these types of methods is that data are often incomplete or not thorough enough to allow evaluators to draw reliable conclusions.

Supply Tracking

Organizations providing food and non-food items (NFIs) use several different approaches to track supplies. Several techniques are used to make sure items are being accounted for and getting to their intended destinations. Keeping inventory of supplies is the most common practice. Other methods such as weighing and tracking shipments and monitoring the market for prices are used to obtain more reliable information. These methods, especially when combined with others, help organizations ensure the successful delivery of their supplies.

Tracking equipment utilizes the techniques discussed above, as well as more sophisticated tracking technologies, such as global positioning systems (GPSs), barcodes, video monitoring, and satellite imagery. However, working with local partners to monitor equipment locations, maintenance, and use is one of the least expensive and more commonly used means of monitoring equipment distributions.³³ Even when using the technologies mentioned above, triangulation with partners on the ground remains an integral component. GPS may be able to establish the location, and a barcode may confirm the existence of an item, but none of these can tell us whether or not the equipment is being used properly and if it is actually having a positive impact. The drawback of conducting M&E using only quantitative measures, is that assessing the actual impact of aid is often sacrificed.

Challenges of Quantitative Analysis

Triangulation is perhaps one of the words that is used the most by organizations trying to conduct M&E in complex emergencies. Certainly, conducting M&E using only quantitative methods may be less labor-intensive, but it does not provide a complete and accurate picture of a situation. In humanitarian crises, there is a tacit understanding between donors and implementing partners that partners may be unable to monitor and account for all aid given.³⁴ However, it is important to consider what an “acceptable” amount of losses is before donors begin thinking of withdrawing aid.³⁵ While many organizations believe they are delivering effective aid with their current M&E practices, other key stakeholders asserted that this was not the case.³⁶ Indeed, it is true that accountability and accuracy for M&E processes becomes difficult in high-stress HA emergencies where staff may not be fully trained or equipped to use M&E best-practices.³⁷ Despite the challenges organizations face, there is an effort to keep better track of resources, still, the degree of success in this endeavor varies across INGOs, and across operational layers within INGOs.



Human Capital

Human capital is indispensable for gathering qualitative data in M&E in HA. Developing consistent and reliable surveys, conducting interviews, gathering data through observation, and leading focus groups, among other methods, are key data gathering techniques that can only be properly done by trained professionals.³⁸ Surveys, one of the most widely used qualitative methods, are important for gathering information; however, they have to be carefully designed, not only to obtain reliable results, but also to ensure that they do not have unintended consequences³⁹. When conducting surveys, organizations strive to ensure they are culturally sensitive, which is particularly important during complex emergencies where people's lives could be endangered due to their interactions with international organizations.⁴⁰ Additionally, when participants are not able to answer questions directly, staff must come up with proxy indicators that will provide answers without directly addressing sensitive issues. In order to develop effective questions and proxy indicators, evaluators must be familiar with the context and be knowledgeable about different cognitive methods.⁴¹

Internal vs External Evaluations

In many ways M&E is more of an art than a science; there is not a specific formula that works in every response and creative approaches are constantly being utilized. Developing a comprehensive methodology is essential before deciding on a specific approach. From government officials to private consultants, most stakeholders agree on the importance of methods for conducting M&E. Evaluation is effective and relevant only as long as the methods that are used for data collection and analysis are appropriate for the situation.⁴² Some consulting firms and NGOs, for instance, have teams specifically dedicated to developing a methodology tailored to the nature and context of a specific crisis, since a standardized tool or approach will limit M&E's effectiveness.⁴³ In general, third-party evaluators are able to be more thorough in their methods, using tools such as piloting approaches, conducting cognitive testing for surveys, and using more sophisticated sample methods and analytical tools.

Based on our interviews, we saw that organizations conducting internal M&E tend to use less rigorous methods than private consulting companies. This can be attributed to several factors. First, many of those conducting their own evaluations have fewer resources (i.e. time and funds) and M&E often competes with project implementation and other day-to-day priorities. Second, because of lack of access and other hurdles, M&E has to be conducted on many different levels. As a result, information has to travel through several layers which leads to delays in obtaining information and reduced data quality.⁴⁴ These difficulties are particularly acute for many NGOs, which, unlike other expert consultants who prioritize M&E training, do not have enough on-boarding and continued training. Consequently, they are often unestablished on the ground, lacking capable local staff and long-term relationships; key instruments to leverage their capacity.⁴⁵

M&E Tools

A new trend in development assistance and M&E practices is the utilization of information and communications technologies (ICTs). ICTs consist of "hardware, software, networks, and media

for the collection, storage, processing, transmission, and presentation of information.”⁴⁶ In the past, more emphasis has been placed on “old ICTs” (newspapers, radio, telephone mainlines, television), but now new ICTs (internet use, mobile phones, personal computers) are increasingly being utilized by humanitarian actors. The explosive growth of mobile phones and other ICTs worldwide has changed how people access information, how they communicate with each other, and how they engage with services⁴⁷. With more than six billion people connected through mobile technology, this unprecedented level of connectivity has allowed development actors to access and communicate with a broader group of people⁴⁸.

Development agencies are increasingly utilizing new ICTs to communicate with beneficiaries, conduct surveys, collect data, and manage and analyze information. Mobile phones, smart phones and tablets allow organizations and beneficiaries to make voice calls, send text messages, download applications, access social media, take and share photos, record sound, and even track locations of people and objects with global positioning systems (GPS). These tools are unique in that they allow for the collection of real-time data as well as direct feedback from program participants, which can be uploaded to the internet and shared globally. Along with advances in mobile phone technology, an emergence of various mapping tools, platforms and software options offer greater opportunities to collect data and monitor and evaluate aid distribution. Several of these emerging technologies are discussed below. While ICT tools are not a panacea to M&E challenges, they can be used throughout M&E processes to overcome some of the limitations of conventional M&E methods.⁴⁹

Mobile Data Collection (MDC)

Advances in information technology allow for new means of conducting research and collecting data. As an alternative to administering paper surveys and recording information by hand, organizations have the opportunity to use mobile data collection (MDC) technologies. MDC is the utilization of existing hardware, such as cell phones, smartphones and tablets, in conjunction with various software programs in order to conduct surveys and gather data.⁵⁰ This method is also known as Computer Assisted Personal Interviewing (CAPI).

Benefits:⁵¹

- Improved data collection and analysis speed
- Increased savings (elimination of printing costs and data entry process)
- Increased data quality and accountability
- Enhanced performance of interviewers
- User friendly and accessible (e.g. easily downloading an application to your phone)

Limitations:⁵²

- Requires new capabilities; MDC is only as effective as the staff applying it
- Increased efficiency relies on Internet accessibility
- Limited only to quantitative surveys and data; pen-and-paper method is still more effective for qualitative research



By applying existing technologies to existing methods, MDC offers a more efficient means of conducting surveys and collecting data.⁵³ Surveys conducted with MDC tools can be edited and distributed automatically by use of the Internet, reducing the need to reprint different versions of surveys. Additionally, whereas pen-and-paper methods require time and manpower to manually enter data into a database for analysis, MDC tools can automatically upload collected data to a centralized database. Even when Internet connectivity is unavailable, data can be saved then uploaded once the Internet is accessible. Data is ready for analysis sooner and access is not only in real time but accessible by anyone with access to the database around the world. The faster turnaround time allows for better identification of potential problems as well as improved responsiveness to changes on the ground.⁵⁴

MDC tools can be used for single projects or for a larger programmatic shift in tools used for M&E. In either case, MDC tools must be integrated into survey design at the earliest possible stage.⁵⁵ For insecure areas, such as those experiencing complex emergencies, it is important to make sure that the MDC tools themselves do not endanger interviewers by selecting hardware appropriate for the local context. For example, researchers in Somalia have used tablets in northern parts of the country, yet they have chosen very basic and common Samsung devices in the less secure southern and central regions.⁵⁶ This consideration is particularly important for conducting M&E in HA, as evaluators and beneficiaries are increasingly at risk in these situations and should not be put at further risk due to M&E practices.

MDC Tools

[Askia](#) - Askia is a market research company which provides software where clients can design surveys, collect data, analyze the results and produce reports.⁵⁷ Features include a Microsoft Word plugin to convert existing surveys, customizable user controls, and hierarchical surveys.⁵⁸ Askia has also produced various solutions depending on the type of M&E taking place: Askivoice for CATI, Askiaweb for CAWI and Askiaface for CAPI and mobile. All these solutions are synthesized into the Platform One database, making tool management simple.⁵⁹

[Dooblo](#) - Dooblo is market research firm which provides the SurveyToGo application to conduct field research using tablets.⁶⁰ Surveys can be created with over fourteen different format types, in multiple languages, that can be accessed at any time by field staff.^{61,62} The application can be used offline and collect a wide variety of data including pictures and video.⁶³ Unique features of this application is the ability to include barcodes and QR codes in the surveys, and monitor field staff locations via GPS.^{64,65} The tracking component can be useful especially in conflict situations where there is a lack of security.

[Magpi](#) - This is a mobile data collection application which allows the use of mobile phones and tablets for data collection in the field. The easy to use application allows surveys to be digitized and sent to staff in the field via a mobile application downloaded to their cell phones or tablets and linked to a central database. Surveys can be created in the application's online dashboard and accessed anywhere by staff with the login credentials and a one-time cellular connection. There are various forms of questions that can be created in the surveys such as: text, numbers, and geolocation, and photos can also be uploaded. The database allows for immediate data analysis and creates charts and maps based on the data.⁶⁶ It is important to note that some of our

interviewees expressed skepticism about this platform due to security concerns, among other issues.⁶⁷

[Snap Surveys](#) Software - This software is a survey design program which allows organizations to create interactive mobile surveys that can be utilized on cell phones, tablets or desktops. Unique features include branding, a question library, and question routing.⁶⁸ Surveys can also be presented in paper forms and scanned into the software with accuracy.⁶⁹ Though it requires an external database, Snap Survey Software contains analysis tools and creates summary and questionnaire reports.⁷⁰ Snap Surveys also provides consultations services for the creation and administration of surveys, alleviating the burden on the implementing agency.⁷¹

[UPS Trackpads](#)⁷² - The Trackpad is a device, stemming from UPS technology, which has been used to register people in refugee camps in Haiti. The handheld scanner is capable of reading barcodes and capturing and sorting data via keypad inputs.⁷³ Handheld devices serve as a mobile two-way communications device between actors gathering data. Trackpads collect data with a uniform language that can be shared with all stakeholders. The Trackpads use GPS and satellite technology so when internet services are inaccessible, instant sharing of information still occurs. Additionally, they can be customized for each user so that they automatically receive only relevant information. Lastly, the Trackpads can also be used to register survivors, injured, and diseased persons, thus, making this information readily available to families and humanitarian personnel. The information captured in the Trackpads can be displayed on computers in order to understand and analyze the data more easily.⁷⁴

Management Information Systems (MISs)

When data is collected and sent straight to headquarters, or when the information remains local and is not analyzed, it is difficult for all stakeholders involved (field workers, beneficiaries, headquarters, donors, etc.) to fully understand ongoing activities and their results. To address this, management information systems (MISs) have been developed to collect and share information through centralized databases. These MISs may be utilized only within one organization or shared by a multitude of organizations. With these systems, organizations can gain a better understanding of what their own field offices' are doing, as well as improve information sharing with other organizations. Some organizations may utilize an open source system or build a system customized to their project, program or organizational needs.⁷⁵

Benefits:

- Provides a centralized database where local partners can upload data with set data parameters
- Enables data collection from multiple sources and devices (phones, paper, computers, etc.)
- Allows for the synthesis of data as well as access to other offices' or organizations' data for triangulation
- Addresses coordination challenges

Limitations:



- Few open-source solutions are aimed at development or M&E
- Open-source solutions are criticized for their functionality, usability, and security of information⁷⁶

MIS Tools:

[DevInfo](#) - DevInfo is a database system designed by UNICEF which many organizations use to collect and synthesize data. Originally designed as a way to monitor progress towards the Millennium Development Goals, it has evolved to encompass data from many organizations at the national and sub-national level.⁷⁷ The database software can be sourced off of the DevInfo website and allows organizations to use both standard and user-defined indicators. Users can choose to share their data, which then becomes searchable on the DevInfo website by keyword, topic and geographic area. Features of the database include data visualization tools: mapping, graphs, charts, etc.⁷⁸

[PIMS](#) – PIMS is a cloud-based platform which allows for mobile data entry and analysis. Through the use of a “GOAL ID” data can be collected multiple times over a period of years and the identifier can be used to analyze the change in beneficiaries. The system also allows for beneficiary ranking based on vulnerability and eligibility criteria enabling aid to be distributed based on need. Furthermore, it also provides commodities tracking through barcodes and beneficiary feedback.⁷⁹

Beneficiary Communication

In areas where there is high cell usage and coverage, capitalizing on that technology to monitor aid provision in hard to reach areas can be a simple way to gain beneficiary feedback. The use of calls or SMS messaging can be used to open two-way communication between beneficiaries and aid workers. Reminders for important events, such as workshops or meetings, can be sent out to program participants, while SMS and call centers provide methods for beneficiaries to give their input on projects being implemented.⁸⁰ Utilizing widespread cell phone coverage can facilitate M&E practices.

Benefits:

- Allows for beneficiary feedback
- Easy methods of communications
- Allows for mass contact all at once⁸¹

Limitations:

- Requires beneficiary literacy and a familiarity with technology
- Requires a large amount of infrastructure, including cell phone network⁸²
- Getting feedback not directly linked to the program
- Staff need to devise a plan for how to handle irrelevant feedback, such as protection issues⁸³

Organizations need to be cognizant of cultural issues surrounding soliciting feedback via SMS messages and call centers in the countries when they work.⁸⁴ All questions and surveys should be created in conjunction with local partners in order to ensure cultural relevance.

Beneficiary Communication Tools

[Call Centers](#) - Call centers can be set up to monitor beneficiary feedback for aid delivery. Beneficiaries are provided with a small card with a phone number on it which they can call to register their comments. This tactic was used in Somalia during the 2011 famine. Cards were distributed along with food aid and employees at a phone bank in Nairobi would register their comments. Implementation of this type of system can increase accountability with local partners conducting distributions in country.⁸⁵

[SMS “Call Centers”](#) - The Danish Refugee Council in partnership with UNICEF has created an SMS beneficiary feedback “call center”. The call center provides the full feedback loop between beneficiaries and the implementing partners.⁸⁶ Beneficiaries send SMS text messages which get converted to email, which in turn are directed to the correct partner for follow-up. Responses are sent back through the call center, converted to text and sent back to the beneficiary.⁸⁷

[Social media](#) - Social media is a valuable tool evaluators can use to understand the situation on the ground during a conflict.⁸⁸ Online communities such as Twitter, Facebook and YouTube can “be used to extract rapid, comprehensive intelligence about even the most violent conflicts”.⁸⁹ Since Twitter is an open form of social media it makes identifying continued needs much easier. Organizations do not need to have direct contact with their beneficiaries to gather feedback and this method can also be used to identify future beneficiaries.⁹⁰ Furthermore it can be used for focus group discussions or to track beneficiary feedback.⁹¹ Difficulties surrounding the collection of information from social media include the time taken to synthesize data and the potential for false information.⁹² Social media should be used in conjunction with other data gathering techniques.

[Text to Change](#) - Text to Change (TTC) is a program which utilizes cell phones to target beneficiaries in developing countries. TTC is used to collect data and disseminate information, through widespread surveys and education programs.^{93, 94} Surveys can be sent to mobile phones for beneficiaries who agree to participate with corresponding reward systems to enhance the number of respondents. A unique feature of this product is that it does not assume literacy on the part of the recipient, therefore, access to an Interactive Voice Response system is also provided to maximize the data collected.⁹⁵

[Trilogy Emergency Relief Application](#) - Trilogy Emergency Relief Application (TERA) is a network created by Trilogy International and the International Federation of the Red Cross and Red Crescent Society to communicate with those affected by disasters. TERA allows for needs monitoring of a targeted demographic.^{96, 97} Along with targeted information about services being provided in a disaster, beneficiaries can respond to text messages and key words will prompt automated responses.⁹⁸ This type of application can aid disaster responders in understanding the needs of the communities throughout the life of the disaster.



Crisis Mapping

Usually conducted to gather data during a humanitarian emergency, crisis mapping enables humanitarian actors to produce maps which are used to inform their responses.⁹⁹ Crisis maps are a relatively new phenomenon arising out of humanitarian emergencies such as post-election violence in Kenya and the 2010 earthquake in Haiti. The mapping process usually includes data collection through the various technological inputs discussed below, actual visualization of map, and analysis of the map.¹⁰⁰ As maps are generally done on the onset and first stages of humanitarian emergencies, they act as a real-time method of collecting information that assists in aid distribution and immediate evaluation, enabling aid agencies to make quick, evidence-based decisions.

Benefits:

- Ample amount of data and satellites
- Low cost and easily accessible
- Can meet immediate needs quickly
- Allows for transparency

- Leverages skilled volunteers from around the world
- Fast compilation of data¹⁰¹
- Draws on individuals previous knowledge of the area

Limitations¹⁰²

- Open access to information
- There can be too much data, limiting its accuracy
- Mostly used for monitoring, difficult to evaluate
- Verification of information is difficult
- Data needs to be cross-referenced to check for validity
- Security concerns for sensitive data¹⁰³
- Requires data synthesis from mapped data

Since the early initiation of crisis mapping, new technological advances have fostered quicker responses and increased accountability. As responders at all levels of the emergency can access data relatively freely, this decreases interdependency and enhances ownership. Due to the fact that big data is readily available to the public, external actors are more able to hold responders accountable, potentially incentivizing better evaluations.¹⁰⁴

Crisis Mapping Tools

[Crowdsourcing](#) - Crowdsourcing has become a new buzzword for those working in HA. Utilizing communication technology such as SMS and the internet, crowdsourcing can facilitate more accurate aid deliveries as it evaluates how needs are being met on the ground. Such technology professes to be more effective than traditional techniques as the resulting information

is more instantaneous and fluid.¹⁰⁵ In a humanitarian emergency, crowd sourcing can be used to report information deriving from citizens in crisis by utilizing communication technology. Thus, aid can be delivered to the community more quickly and the delivery of this aid can be assessed more rapidly by recipients of aid. This feedback from aid recipients builds local capacity by enabling citizens to have agency and also holds agencies accountable by allowing individuals to bear witness.

[Satellite Imagery](#) - Global monitoring satellites and personal global positioning systems (GPS) offer a diverse range of applications that are relatively inexpensive and easily accessible.¹⁰⁶ More recently, these technologies have been used for humanitarian purposes to remotely monitor land use in refugee camps and as a risk reduction strategy in the case of disaster management. In the case of the Indian Ocean Tsunami, mapping through satellite imagery was used to monitor aid distribution and evaluate need. Geographic Information Systems (GIS) can also be used to assess security, enhance telecommunications and monitor progress. While these technologies have largely been used for geographic purposes, there has been a recent movement of international organizations to use them as analytical tools in humanitarian responses.

[Ushahidi](#) – Ushahidi, meaning testimony in Swahili, is a website created to map reports of violence in the 2008 post-election fallout in Kenya. Subsequently, a company was formed, coming to represent the Ushahidi platform to make impact with ground-breaking technology. As humanitarian aid arrived in Haiti after the devastating 2010 earthquake, agencies were met with immense infrastructural and technological challenges that made rapid needs assessments nearly impossible. In a race against time, Ushahidi was able to launch its software customized to the specific context of the region.¹⁰⁷ Using a new code based on social media posts, the team was able to map out locations of prioritization. Desperate pleas for help were then advertised over radio stations throughout the country, saving countless lives in a short amount of time.

[Crisis NET](#) - Crisis Net, one of the Ushahidi initiatives, is using crowdsourcing to report aid abuses and general acts of violence in the Syrian conflict along with other disasters and conflicts. The data collected is informed by global participation on social media sites such as Facebook and Twitter and is later processed through a digital pipeline.¹⁰⁸ This pipeline includes translation software, translating all data into English, as well as language software, detecting common phrases, key terms and places. Using this software the technology processes data into contextual cues so as to map out information about incidents of violence. Not only does this technology assist in rapidly creating visualizations (geographical maps) of humanitarian needs, it also limits the demand for on the ground reporting. Thus, the implications of this might mean that traditional M&E methods that require personnel and involve huge security risks are not as necessary as they once were.

Re-thinking the Approaches

Throughout the development community, there is much criticism surrounding current M&E practices in HA. However, the changes that have taken place in the industry, including the innovative approaches and tools that the M&E departments and specialists are beginning to use and explore, indicate the move in a more positive direction. Below we will outline some important ways to strengthen M&E practices and suggest alternative ways of approaching the



issues that have prevented the humanitarian assistance community from developing successful and widely used M&E strategies.

Utilization Focused Evaluations

From our research, it was evident that the amount of resources needed to produce meaningful and methodologically sound M&E is extremely high, particularly, in humanitarian settings. Nonetheless, most of the humanitarian workers do appreciate the intrinsic value of M&E and try to do their best in gathering data remotely. However, M&E requirements remain largely donor driven, leading organizations to be more compliance-oriented than results-focused.¹⁰⁹ Even though M&E methods and standards have come a long-way since the 1970s, they complain that evaluation's findings are simply ignored persists among evaluators.¹¹⁰ With the rise of technology we have also seen the amount of information/data available for M&E increase exponentially, however information management over a complex global network is failing to keep up with new technological advances leaving much of the information available unused.¹¹¹ Given that M&E requirements continue to grow along with the amount of resources required for implementation, it is important to rethink the current methods of M&E in order to create valuable evaluations. In order to organizations to invest in M&E, evaluators need to think about what the ultimate purpose of the evaluation should be and focus on the intended use by intended users. As such, evaluators should facilitate the evaluation process and design so that it considers how people in real situations will apply the evaluation's findings¹¹². The utilization focused approach begins with the premise that evaluations should be ultimately judged by their utility, moving from the abstract audience to the actual primary users and their commitments to concrete and specific uses.¹¹³

Mainstreaming M&E - Due to the complex and unpredictable nature of emergencies, when a crisis starts the first priority is just to get aid in. Consequently, little priority is given to traditional donor requirements like M&E. as a government official put it "need for assistance trumps M&E requirements, it is all about getting assistance out there."¹¹⁴ It is not until the "emergency phase" has passed and HA programming turns into development programming that more of an emphasis is put on meeting donor requirements.¹¹⁵ This delayed focus on M&E makes an already complicated practice even more difficult. Many HA professionals we interviewed were in agreement that M&E needs to be mainstreamed and worked into the aid plan during the planning stage.

Leveraging local capacities - Issues with access and security in complex emergencies can lead to the need for international organizations to utilize local staff in order to conduct M&E. Leveraging local capacities can enable M&E practices to be conducted in areas where access is limited for international staff. Depending on access and security issues, organizations can choose between working through local partners (NGOs) or by employing local staff. Many organizations train local staff to conduct M&E, while also creating a local management structure, which enables evaluations to be conducted in a more rigorous manner¹¹⁶. Building local NGO capacity can strengthen the trust between organizations allowing implementing partners to have more autonomy in their M&E practices. Many organizations suggested building the capacity of either local NGOs or local staff before a disaster/conflict happens in order to avoid having to find local

actors once an emergency has occurred¹¹⁷. Pre-establishing trust and creating a connection with implementing partners will ensure that M&E results are accurate¹¹⁸.

External Evaluations- Most of the organizations we interviewed conducted their M&E “in-house,” however, some did mention piloting the use of third-party evaluators for their projects. Based on our research external evaluators tend to be more affective as there are not as many vested interests in swaying the results towards one direction. External evaluators and private consulting companies like IBTCI, tend to specifically practice M&E, making that their sole focus. Thus, they are often well versed in their methodology and might be more open to newer innovations in the field of M&E. Third-party evaluators then tend to be more rigorous with their methodology and data collection, more adaptable to diverse circumstances, and more likely to use cutting edge technologies and approaches. Lastly, internal evaluations might have fewer resources and go through many more avenues post data collection, detrimentally affecting results. For more transparent and legitimate results, it is imperative for INGOs to utilize third party evaluators.

Based on our research, these four lessons learned can be leveraged by organizations, such as IBTCI, to improve their M&E responses during humanitarian emergencies. In preparing their responses organizations can position themselves well in the M&E sector in order to provide a response which triangulates qualitative and quantitative data to suggest improvements to HA programming. This is particularly relevant given the current crisis in Syria and INGO’s response.

The Syrian crisis is quickly becoming one of the largest humanitarian crises of our time, with huge implications for the country and surrounding region. With the influx of refugees on the immediate borders of Syria and the hundreds of thousands that are fleeing to the European Union, there is a huge need for assistance from the international community. While it is imperative to increase aid flow to Syria and the surrounding countries in order to meet this need, M&E must also be implemented to ensure aid effectiveness. Due to the complexity, security concerns and fluidity of this conflict, it is difficult to provide services to those most in need. Efficient and contextually aware programs are the only way to tackle this ever changing environment, making consistent M&E the cornerstone of any effective intervention. With the groundbreaking technologies and innovative approaches formerly mentioned, it is not impossible to distribute aid and implement programs in a targeted, strategic way. Although there remain to be impasses in conducting M&E in these complex situations, it is certainly not impossible.



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