The Ethical Contours of Research in Crisis Settings: Five Practical Considerations for Academic Institutional Review Boards and Researchers

Kathryn Falb, ScD[1]*

Betsy Laird, MA[2]

Ruwan Ratnayake, MHS[2]

Katherine Rodrigues, MPA[2]

Jeannie Annan, PhD[2]

[1] International Rescue Committee, 1730 M Street NW, Suite 505, Washington DC 20036 USA, Kathryn.falb@rescue.org. *Corresponding Author

[2] International Rescue Committee, 122 E 42nd St, New York City, NY, 10168 USA, betsy.laird@rescue.org; katherine.rodrigues@rescue.org; ruwan.ratnayake@rescue.org; jeannie.annan@rescue.org

Abstract

Background: There are a growing number of research studies in the humanitarian field Thus, it is imperative that institutional review boards (IRBs) carefully consider the additional risks present in crisis settings to ensure that the highest ethical standards are upheld.

Main Text: The objective of this manuscript is to describe five ethical considerations that IRBs should deliberate that are specific to humanitarian contexts and provide recommendations to overcome associated challenges. These issues include: (1) staged reviews of protocols in acute emergencies; (2) flexible review of modification requests; (3) addressing violence and trauma experiences of participants; (4) the difficulty in attaining and documenting meaningful informed consent among populations dependent upon aid; and (5) reliance on constrained in-country IRBs.

Conclusion: Considering these five issues when reviewing protocols will yield more ethically sound research in humanitarian settings and hold researchers accountable to appropriate ethical standards.

Key Words

Ethics, conflict, humanitarian, research, war, natural disasters, violence

Introduction

Following the atrocities of medical experimentation throughout World War II and in the aftermath of the Tuskegee Syphilis Study, the twentieth century witnessed a new and vigorous commitment to the ethics of human subjects research. Guiding documents, such as the Helsinki Declaration, the Nuremberg Code, and the Belmont Report were crafted to set standards in research including informed consent, respect for persons, beneficence and justice (World Medical Association, 1964; The Nuremberg Code, 1947; United States, 1978). Decades later, the world is grappling with the highest number of displaced populations seen since World War II - when these ethical principles were initially articulated (Tappis et al., 2016). Moreover, health and social science research amongst these populations has continued to grow as governments and organizations shift towards evidence-based programming in humanitarian settings.

Particularly as the plight of crisis-affected populations continues to swell, ethical guidelines should better represent the specific issues inherent to research among populations grappling with armed conflict, natural disasters, or health emergencies such as the recent Ebola outbreak in West Africa. The challenges to the implementation of ethical principles are stark. First, ethical reviewers must ensure that the ethical approval process required for research studies does not delay program delivery, particularly in acute emergencies, and ensure that any changes to study protocols must be reviewed rapidly. Second, many people in humanitarian settings may have been exposed to direct violence or other traumas, requiring additional research safeguards to prevent unintentional harm that reviewers must be cognizant of. Third, humanitarian settings are often typified by political or ethnic tensions where it is conceivable that participation in research may increase risk to respondents from sharing sensitive information with researchers or simply being seen conversing with an international non-governmental organization (NGO) which may complicate informed consent. Further, in these settings, humanitarian organizations must also engage in the research and evaluations given logistical

and security concerns further complicating informed consent when populations may be dependent on aid from said organization. These issues deserve careful ethical review, and this is compounded by an additional challenge in that there may not be a fully-functional local IRB to provide a critical review informed by knowledge of the particular context.

Thus, the time is right for enhanced ethical considerations based on the experiences of humanitarian organizations undertaking research and working directly with crisis-affected populations. Alongside calls for more rigorous research to support evidence-based programming in recent years, humanitarian organizations have been conducting more research than ever before: the number of peer reviewed articles published by Médecins sans Frontières (MSF) over the past seven years has increased by a factor of ten and the International Rescue Committee (IRC) has conducted over 75 research studies over the past ten years, including nearly 40 impact evaluations across 28 crisis-affected countries (Ager et al., 2014; Ford et al., 2009). At the IRC, these studies are often designed and implemented in collaboration with external academic partners. Given the growing number of research studies in the humanitarian field, and the need to understand what works to best meet the needs of populations affected by conflict or natural disaster, it is imperative that academic IRBs review study protocols with consideration for the ethical issues faced by crisis-affected populations to ensure the highest ethics are upheld in these settings. When the IRC does not engage with academic partners, we submit study protocols to our own internal IRB, established in 2014.

Simultaneously, given the inherent challenges to conducting rigorous and ethical research in unstable environments, there has been a concerted effort to develop ethical research guidance including that commissioned by Enhanced Learning and Research for Humanitarian Assistance (ELHRA), MSF, and the World Health Organization (WHO) (Curry, Waldman, and Caplan, 2014; Sheather et al., 2016; World Health Organization, 2007). These guidelines are primarily tailored towards researchers and ethical review boards within

implementing organizations. Often, however, implementing organizations partner with academic institutions whose IRBs are not attuned to these contexts and guidance has thus far not been provided on how these institutions might address specific ethical issues in humanitarian settings. This frequently impacts the scope of their review and recommendations, resulting in studies where risk mitigation procedures are insufficient. In particular, experience has demonstrated over the past four years that ethical issues raised by the IRC's IRB may not be captured by academic institutions. Conversely, academic IRBs may note other concerns and may not be as flexible in their recommendations to ensure ethical, safe, and rigorous research as compared to IRC's IRB.

While there are numerous factors to take into account when reviewing study protocols, not least of which is determining whether the study question itself and related design are sufficient to improve the delivery of humanitarian aid in crisis settings, we have noted five key considerations for IRBs and investigators that may improve the overall ethical safeguarding and rigor of research in humanitarian settings throughout the ethical review process as well as within the implementation of research. Thus, based on the research experience of the IRC, the objective of this paper is to outline these five ethical considerations related to: (1) staged reviews of protocols in acute emergencies; (2) flexible review of modification requests; (3) addressing violence and trauma experiences of participants; (4) the difficulty in attaining and documenting meaningful informed consent among populations dependent upon aid; and (5) reliance on constrained in-country review boards. Deliberation of these issues and associated recommendations when reviewing protocols will yield more ethically sound research in humanitarian settings, and hold researchers accountable to appropriate ethical standards. Thus, the goal of this manuscript is to summarize the challenges related to each gap and to suggest recommendations for ways forward. Of note, we focus on non-medical / non-clinical research in these settings given different ethical implications of such research, and focus instead on

research from broader public health or other non-clinical related research using either experimental or other quasi-experimental and mixed methods designs (e.g., prevalence studies, qualitative investigations).

Main Text

Gap 1: Study protocol review for acute emergencies

According to the World Health Organization's (WHO) definition, an acute emergency is characterized by one or more of the following: "sudden, unplanned displacement"; "new or exacerbated and sustained episodes of armed conflict"; "sudden deterioration of nutritional status [that] is impending or has already occurred"; "natural or industrial (including nuclear) disaster"; or "the sudden breakdown of critical administrative and management functions resulting in large-scale disruption of public health" (World Health Organization, 2013). While it is imperative that during acute emergencies, programming to meet the population's survival and basic needs remain paramount, a growing number of research studies are being launched in the acute emergency period alongside programming (Acarturk et al., 2016; Arunatilake et al., 2005; Furst et al., 2009; Rassekh and Santosham, 2014). Such research can be appropriate in acute emergencies to ensure programs are effective, to evaluate delivery of services in a chaotic setting, or to describe the burden of a disease or condition. Critically, such studies must be pre-positioned for emergencies in order to not delay the delivery of potentially life-saving programming.

However, seeking IRB approval before the occurrence of an acute emergency implies that many study protocols may not be fully developed. Details such as language of survey administration, adaptation of tools to the context, or even the exact location may not be finalized. This lack of clarity make it difficult for IRBs to evaluate the study while it is being pre-

positioned for an acute emergency. On the other hand, waiting for these details to be finalized in the immediate aftermath of an acute emergency to launch a review process is not feasible as ethical review often takes months to complete. Given that persons caught in acute emergencies are even more vulnerable due to their lack of basic services and reliance on humanitarian organizations, there is no justification either, for launching these studies without ethical review. In specific instances, research conducted during an acute emergency may qualify for expedited review depending on the threshold for minimal risk, but the review itself may suffer from a lack of understanding of the rapidly changing context or the high level of vulnerability of subjects.

Therefore, we recommend that IRBs make provisions for a staged approach of review and approval to allow for ethical research to occur in acute emergencies in a timely, scientifically rigorous, and ethical manner. U.S. federal regulations governing human subjects research (45 CFR 46) do not prohibit the use of staged reviews and approvals, permitting the necessary criteria for IRB approval of research have been met. This recommendation is consistent with how IRC's internal IRB addresses research in acute settings. Similarly, MSF investigators also submit an initial generic protocol to its own review board before an emergency occurs. Details can then be quickly entered and the protocol re-submitted for expedited review following a crisis (once issues identified in the original submission have been addressed) (Schopper et al., 2009). In accordance with 45 CFR 46.110 and 21 CFR 56.110, IRBs may only use the expedited review procedure to review i) research involving no more than minimal risk[1] that falls into one of nine specified categories, or ii) minor changes to previously-approved research (i.e., those changes that do not increase risks to participants, such as changes to key research personnel, number of participants, catchment/recruitment areas, or changes in questionnaires so long as they do not fall outside the topics of inquiry originally planned or alter the risk level of the study).

[1] Minimal risk is defined as: the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

In this way, previously-approved protocols missing elements that do not affect risks to participants may be reviewed through an expedited process at the onset of an acute emergency. As such, we recommend that academic IRBs also allow this staged review where the ethical implications of the protocol are explored fully in the initial version submitted well before an emergency occurs. Then, once an emergency takes place, study details can be added to a previously-reviewed protocol shell. This ensures core considerations are addressed and there is ample time for critical review and reflection, while leaving room for researchers to highlight succinctly and clearly specific considerations that are paramount for a particular population and do not increase risk.

Case Study 1: The impact of cash transfers on women's risk of violence in an acute emergency

Currently, the use of cash transfer programming to meet basic needs of populations in humanitarian settings is growing exponentially (Pega et al., 2015). However, economic programming has been shown to have mixed effects on women's experiences of violence in the home since it can both raise the risk for intimate partner violence–as a backlash against a woman's financial empowerment—or can decrease risk as she gains decision-making power within the home (Vyas and Watts, 2008). Given the expanding use of cash transfers in emergencies, the IRC is launching a study to examine how cash transfers impact women's experience of violence in the home in an acute emergency in order to develop recommendations for how such cash transfers can be delivered that maximize the safety of women. A preliminary study protocol was submitted to the IRC IRB which included general information about the study including tools, informed consent documents, sample size, and study design options. However, since the study was prepared in advance of an acute emergency, additional details on the country and specific location, target population, exact cash transfer programming to be delivered, and other considerations were not yet available. Thus, the risks and mitigating actions could not be fully articulated. Therefore, a modification request will be submitted based on the originally submitted 'shell' protocol during an acute emergency so that review can occur in a timely manner and the study can roll out alongside emergency cash transfer programming.

This case study demonstrates how a staged approach to reviewing study protocols that will be implemented in acute emergency allows for rigorous ethical review while not delaying implementation of potentially life-saving humanitarian aid to populations. For instance, in the initial review of the 'shell' protocol, the IRB reviewers raised meaningful and nuanced questions regarding plans to assure privacy of interviews should physical structures be damaged or destroyed during an emergency, and how to rapidly recruit and train qualified data collectors.

Gap 2: Flexibility and rapid review of modification requests

Above and beyond acute emergency settings, other chronic humanitarian settings such as eastern Democratic Republic of Congo (DRC) or within Dadaab, Kenya area refugee camps which host the world's largest refugee population also require a more flexible and rapid approach to IRB review of modification requests. Humanitarian situations are dynamic and new problems may emerge in the course of a humanitarian operation where displacement is ongoing

and aid situations are unstable. For instance, study locations may have to change due to fluctuating security concerns and new risks may present themselves during data collection. For any research in humanitarian settings, having an IRB member who initially reviewed the protocol on call to quickly review and provide feedback on study design or questionnaire changes, as examples, may be a useful approach to encouraging dialogue and solving ethical issues in a timely manner. As is, the traditional alternative offered by academic IRBs is cautious but inefficient; researchers must submit a formal modification request which can take weeks to be granted and would result in the interruption of a study and possibly delay in program delivery in settings where time is of the essence. According to U.S. federal regulations (45 CFR 46.103), IRBs are mandated to establish procedures that i) facilitate prompt reporting of proposed changes to research activities, and ii) ensure such changes are not initiated without IRB review and approval except when necessary to eliminate apparent immediate hazards to subjects. As such, while the regulations do allow for quicker review timelines, we recognize that current regulations limit the extent to which an on-call IRB member can provide feedback outside of a formal expedited review of a modification request. However, it is permissible to advise on issues that could cause immediate hazards to subjects, ethical issues that do not fall within the purview of the IRB, and administrative changes that do not require IRB review, since these do not impact risk and are largely related to successful implementation. Further, if designated by the IRB Chair in advance, this on-call IRB member could technically also facilitate an expedited review of minor changes.

There is some precedence for U.S. academic institutions providing on-call ethics consultations. Indeed, a survey conducted in 2010 identified 33 academic institutions with established research ethics consultation services (McCormick et al., 2013). However, these bodies generally consist of ethicists who are not affiliated with the academic IRBs reviewing protocols. Instead, these services are aimed at complementing IRBs and other oversight bodies.

Yet IRB members who review a given protocol are arguably better positioned to advise on issues pertaining to that particular study, given their familiarity with the research (and regulations). Thus, we urge academic IRBs to consider setting up similar on-call processes that allow researchers operating in fluid humanitarian contexts to resolve ethical issues in a timely manner.

Gap 3: Addressing experiences of violence and trauma within the study population

In humanitarian settings, particularly in those affected by armed conflict, experiences of interpersonal violence and trauma are commonplace Academic IRBs must be aware of the heightened levels of violence and trauma within the study population, regardless of whether these constructs are directly part of the study. In some cases, research may focus on these issues as a direct construct of inquiry (Depoortere et al., 2004; Stark and Ager, 2011; Stark and Landis, 2016). Alternatively, narratives of violence and trauma may emerge organically in a wide range of qualitative work or as a result of household surveys that investigate other topics such as mental health, mortality, or nutrition assessments as part of wider humanitarian operations.

Therefore, violence research principles should be adhered to in all humanitarian research as such experiences may be more common and more likely to emerge in research, including recommendations such as establishing and providing information regarding local referral options for psychosocial support (World Health Organization, 2007; Child Protection Monitoring and Evaluation Reference Group, 2012). Particularly for studies that explicitly address experiences of gender-based violence or trauma, referral partners – which are often local actors such as midwives or women's community-based organizations – should be able to provide for at least basic care including treatment for injuries and psychosocial support. This may prove difficult in

settings where a humanitarian organization is providing, for example, health services but not psychosocial services. However, humanitarian actors should make appropriate linkages with services to close this loop. If no referral pathways can be established, either through local partners or by hiring a psychosocial health provider as part of the research study, this must be taken into account when examining the foreseeable risks and benefits to participants. Consistent with US federal regulations, IRBs should be particularly conscious of the unique issues that may result from conducting research with vulnerable populations, and should ensure additional safeguards are in place to protect the rights and welfare of these subjects (45 CFR 46.111(b)).

For studies investigating gender-based violence (GBV), in particular, the choice and training of data collectors is paramount. As part of developing a sound referral process, data collectors must also be appropriately trained on recognizing signs of distress and how to refer participants to further support. At minimum, enumerators should flag to data collection supervisors any concerns about participant distress. Supervisors, in turn, should have direct links to psychosocial support staff who can work collaboratively with participants to ensure their agency and make determinations about psychosocial support that are their best interests. In addition to these trainings, selecting gender-matched enumerators is a crucial aspect of conducting ethically sound research where experiences of violence may arise. Assessment of enumerator internal biases, such as gender-inequitable norms, may also be useful to ensure enumerators do not victim-blame participants who report violence. Attention to power dynamics is an additional factor to consider when selecting and training enumerators for research involving children (Berman et al., 2016). Particular attention to ethnic differences between data collectors and study participants or within data collection teams must also be considered, especially when examining risks of disclosing violence or trauma during a conflict that may have resulted in exacerbated ethnic tensions. Finally, enumerators themselves may have also experienced

trauma or violence experiences related to the emergency and are at risk of the research processes triggering detrimental outcomes. IRBs and researchers may consider how they address these concerns within their training and referral patterns (Sexual Violence Research Initiative, 2015).

Importantly, while narratives of violence and trauma may emerge directly or indirectly throughout a study, this should not prevent research from moving forward if appropriate risk mitigation measures are taken. While further information is needed on the experiences of participants in research itself in humanitarian settings, existing US-based research suggests that participant distress from trauma research is minor and that participants tend to perceive that the benefits of the research outweigh any distress experienced (Jaffe et al., 2015). In addition, it is imperative to understand the frequency, risks, and outcomes of experiencing violence as this information directly guides humanitarian programming models. Not capturing these data, particularly for GBV where women and girls' unique needs are often relegated as secondary concerns, risks de-prioritization of funding, program support, and political will for implementing appropriate violence prevention and response programming in an emergency (International Rescue Committee, 2015).

Case Study 3A: Handling traumatic experiences elicited during mortality research in crisis

Household surveys measuring mortality rates are commonly used to estimate the burden of a humanitarian emergency on a population, and for advocacy (Checchi and Roberts, 2008). As they are commonly carried out to support operations, they are not usually subject to formal IRB review. However, there is still the potential to elicit painful memories of those who have died due to injuries and the externalities of conflict. The IRC has followed standard ethical procedures for household mortality surveys in the Democratic Republic of Congo, Sierra Leone and South Sudan (Coghlan et al., 2006; Ratnayake et al., 2015; Ratnayake, unpublished). For example, participants were assured that interviews would be held in private where they could speak more freely about deaths, they could refuse to answer any questions that may be too painful, their responses would be kept confidential and their names would not be unnecessarily recorded to avoid identifying participants in reports. Researchers should consider whether asking if the cause of death was violent is absolutely necessary for the research objective, given the potential for putting respondents in a position where they may inadvertently identify perpetrators. Accordingly, when household surveys soliciting sensitive information are brought to IRBs, issues of interview privacy, assurance of confidentiality and ability to refuse questions and naming perpetrators should be queried.

Case Study 3B: Developing a high-risk protocol for a randomized controlled trial involving survivors of sexual violence

Along with academic partners at the Johns Hopkins Bloomberg School of Public Health, the IRC implemented a study examining the effectiveness of a cognitive processing therapy intervention for female survivors of sexual violence that exhibited heightened levels of depression, anxiety, or post-traumatic stress disorder (Bass et al., 2014). Careful consideration was given to the referral mechanisms and psychosocial support available to participants. High-risk protocols were developed specifically for potential female participants that reported suicidal ideation, which was an exclusionary criteria for the study. In the event a high-risk survivor was identified, additional trainings were conducted by the research team with case managers and psychosocial assistants on how to develop a plan of action with the survivor and contact IRC women's protection and empowerment program staff to ensure delivery of services. In this instance, additional protocols above and beyond standard violence guidelines were necessary to ensure the safety of potential participants. Engagement and partnership with IRC program staff and linkages to women's community-based organizations were critical to ensure that appropriate referrals and subsequent services were available to the woman.

Gap 4: Meaningful informed consent among crisis-affected populations

U.S. federal regulations (45 CFR 46.116) require that researchers only seek consent under conditions which allow the prospective subject the opportunity to fully consider their participation in the study. To do so, investigators must minimize the possibility of coercion or undue influence to the best of their abilities and ensure the consent information is presented in a way that is

understandable to the subject. In order to design appropriate conditions under which voluntary and autonomous consent can be obtained, investigators must consider and account for the particular challenges which may arise in a humanitarian settings. As we discuss in more detail below, common barriers to obtaining meaningful informed consent – such as low literacy levels, language barriers, and uneven power dynamics – may be heightened in crisis-affected contexts. Debates surrounding meaningful informed consent, including delivery at the appropriate literacy level and not administering overly complex consent documents, have been documented elsewhere (Ford et al., 2009; World Health Organization, 2007; Pandiya, 2010; Bhutta, 2004). Building on this work, we highlight some additional precautions researchers can take to obtain meaningful consent in humanitarian contexts where vulnerable populations often face higher risks of undue influence.

First, to facilitate an improved understanding of the research, potential risks, and participants' rights, a number of steps may be taken. As with any consenting process, subjects should be asked questions about the research and any difficult or technical vocabulary to check for comprehension (Isles, 2013). Subjects should be able to repeat the concept back in their own words to ensure full understanding. All information should be presented in a clear, non-threatening manner that encourages open dialogue between the investigator and subject. Researchers should solicit questions and comments from prospective participants and continually repeat key concepts throughout the consenting process, including the voluntary nature of the study and right to withdraw at any time without penalty. Subjects should be allowed sufficient time to take in the information presented, ask questions, consider their options, and make an informed decision about their participation. Given low literacy levels in many protracted crises, researchers may also consider providing supplemental pictures or images of research procedures, risks, or other components of the consent form to aid comprehension.

In refugee camp settings, where residents often have multiple national, cultural, religious and linguistic backgrounds, it is especially important for investigators to account for this variance by ensuring the consent process is contextually adapted for all participants and that appropriate translation services are available. Preliminary meetings with camp and/or community leaders can help investigators understand how best to adapt their consent process to limit outside influence and enable the subject to make an autonomous, voluntary decision. For instance, participants may feel more comfortable interacting with a local investigator or someone who shares their cultural background. However, especially in a refugee camp setting, employing data collectors from the local community can pose risks to confidentiality. As such, careful consideration should be taken with respect to who conducts the consenting process (Cooper & Turner, 2006), taking into account norms, such as pairing researchers and participants based on gender.

In addition to these concerns in humanitarian settings, strong consideration should be given to whether consent, or assent in the case of minors, is obtained verbally or documented in writing. Currently, federal U.S. regulations governing human subjects research (45 CFR 46) indicate that written consent is required unless specific criteria[2] have been met to allow for oral consent, which is reflected in the preference of academic IRBs. However, particularly in settings affected by armed conflict, participants may be at increased risk if their identities are uncovered via consent documents containing their signatures (Rodrigues, 2014). While all measures must be taken to ensure confidentiality of data, researchers and their documents may be detained or searched by authorities, which is outside of the research team's control. In addition, theft of data collection tools or documents may also occur despite best efforts (Falb et

[2] Specifically, per 45 CFR 46.117(c) an IRB may only waive the requirement for signed consent if it finds either: i) "that the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach in confidentiality", or ii) "that the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context".

al., 2017). Finally, literacy levels may be particularly low in areas of chronic conflict, thus making written consent inappropriate. It follows that verbal consent or other forms of documentation such as thumbprinting without names (Schopper et al., 2015; Tindana, Kass, and Akweongo, 2006) must be considered by IRBs, pending the criteria for waiving documentation of consent have been met.

In addition, humanitarian settings are inherently unstable which may directly or indirectly affect the risks associated with participation in a study, particularly as it relates to informed consent. For example, in the aftermath of contested or delayed elections, one's political affiliation and subsequent propensity for being targeted for violence can change quickly. Thus, while most longitudinal studies only require an initial informed consent, IRBs are urged to encourage ongoing informal verbal consents where participants are reminded of potential risks, benefits, and the voluntary nature of the study. As intended under U.S. federal regulations, the informed consent process is an ongoing exchange of information that can take on multiple forms, including individual check-ins, community meetings, Q&A sessions, or presentations. No matter the method, participants must have an outlet to express their questions and concerns, and to withdraw their consent should they choose to do so. Procedures should extend the consent process throughout the full period of participation in the research study. Per the U.S. Department of Health and Human Services' Office for Human Research Protection (OHRP, 2018), "ensuring adequate consent may require repeating or supplementing the initial consent procedure". While the regulations do not explicitly describe all circumstances in which repeating the informed consent process may be needed, they do require that potential participants be provided, when relevant, with a "statement that significant new findings developed during the course of the research which may relate to the subject's willingness to continue participation" (45 CFR 46.116(b)(5)). Thus, if the protocol design or risks have changed, or if a substantial period of time has elapsed since initial consent was obtained, it may be necessary to confirm

subjects' willingness to participate in the research (OHRP, 2018). As longitudinal impact evaluations grow in importance in the humanitarian field, so too should ongoing consenting processes, particularly since the risks of participation may vary over the course of the study in these settings.

Further, when humanitarian response organizations (and their partners) engage in research, subjects may view these researchers as analogous to humanitarian aid, and feel excessive pressure to participate in studies as a result.. While efforts are made to differentiate research teams that are external to the organization, in practice, the line between data collectors and humanitarian organizations can be blurred from the perspectives of beneficiaries. Careful attention must be given during the informed consent process that participation in research activities has no bearing on a person's eligibility to receive aid or other services from organizations. This is particularly critical in humanitarian contexts such as in refugee camps where the ability for a person to meet their basic needs can be entirely reliant upon support provided by a humanitarian organization. Data collectors must therefore present themselves as affiliated with the organization, but the research as having no impact on receipt of aid. Additionally, it is particularly important that participants know they can still receive psychosocial support services regardless of participation in a study even if a humanitarian organization is engaged with research. This is consistent with the previously outlined gap on ensuring referral systems are in place for the community.

Case Study 4: Grappling with informed consent considerations in eastern Democratic Republic of Congo

In late 2015, the IRC IRB approved the use of written consent for a mixed methods cluster randomized controlled trial in the Democratic Republic of Congo measuring the impact of an intervention aimed at preventing violence against women and girls. During baseline data collection, the IRB received a request to waive documentation of consent, in light of recent security incidents and growing tensions amid upcoming elections. For instance, one incident involved an IRC research vehicle being accidentally shot by a soldier responding to pillaging by an armed group in one of the study sites. Given the deteriorating security situation, the study team felt that community members and others might be suspicious of the research activities and demand to see written consent documents – which included participants' names. A breach of confidentiality would have posed significant additional risks, including stigmatization, reputational damage, and even security risks – given the sensitive nature of the study topic and participants' affiliation with an international non-governmental organization.

After reviewing the request, the IRC IRB determined the principal risk to research participants would have been the harm resulting from a breach of confidentiality, and that the only record linking the subject and the research would have been the consent document. As such, the IRB granted the waiver of documentation of consent, meaning researchers were approved to obtain oral consent from participants, without requiring the subjects' signature, mark, or fingerprint. The IRB required researchers to use an oral consent script to guide the informed consent process and these scripts included participants' unique identifiers, as opposed to their names. After reading the consent script, the data collector asked whether the subject agreed to participate and checked "yes" or "no" on the consent form. The interviewer then wrote and signed his/her own name, confirming consent had been sought. This script contained all necessary elements of informed consent and was reviewed and approved by the IRB. Subjects were also asked whether they wanted documentation linking them with the research.

In this case, it was determined that waiving the documentation of consent further safeguarded the rights and welfare of research participants.

Gap 5: Who is best-equipped to review the protocol in country?

As research in humanitarian settings has increased in recent years, the requirement of academic IRBs for a parallel review by national or local IRBs remains important (Ford et al., 2009; Schopper et al., 2015). Although not mandated by US federal regulations, wherever possible, national IRBs should review and approve proposed research, as they can generally speak more immediately to the ethical implications of the local humanitarian situation. However,

in-country review boards in states affected by humanitarian emergencies may face constraints themselves. Often, national IRBs may be restricted by the crisis and not fully functional or on schedule. As well, these IRBs may not be accustomed to addressing ethical issues amongst the refugee or displaced populations in their country. Protocols should address whether these national-level boards are most appropriate to review the research as well as relevant laws within a given country regarding research and ethical reviews. In some cases, refugee advisory boards, akin to local advisory groups, or local academics who work on the crisis may be more appropriate to offer a structured review of the protocols. They can speak to the unique needs of the population in addition to other national-level review processes. Alternatively, some countries may have ministries that specifically handle services for refugee populations directly. In this case, researchers should ensure their studies meet the requirements set forth by these government bodies in addition to other university or national ethical review board approvals, as appropriate. IRBs should query the appropriateness of existing ethical review bodies in a given context and request that investigators seek this in-country ethical approval. To this end, a starting point is to check whether the IRB under consideration is active and registered with the OHRP in their database (OHRP, 2016). OHRP also maintains a determination letters page, which can be searched for evidence of ethical violations committed by particular IRBs. In addition, speaking to local researchers or humanitarian response staff can shed light on the track record and reputation of in-country ethics committees. IRB managers and websites (if available) can also provide useful information for assessing the appropriateness of an in-country IRB. In making this determination, factors to consider include whether the IRB and its members have i) expertise navigating local regulations and policies; ii) a deep understanding of the norms and customs of your target population, as well as current events that may impact the research or risks to subjects; iii) demonstrated experience reviewing studies in similar topic areas and contexts with your target population; iv) sufficient staff and experience to manage numerous studies at any given time; v) regular full board meetings; and vi) a comprehensive review

process and guiding ethical standards. Some of this information may be obtained by requesting documentation and speaking with references (that is, other researchers who have used the in-country IRB).

Conclusion

Evidence-based programming is key to meeting the needs of populations affected by humanitarian emergencies. However, building the evidence base in these settings raises additional concerns. Humanitarian organizations constantly grapple with these ethical issues, yet academic IRBs may be less familiar with these challenges. Continued conversations between implementing partners and academic institutions are needed to ensure rigorous and ethically sound research in addition to ensuring that study questions have real world implications that sufficiently justify conducting research in humanitarian settings with highly vulnerable populations. The preceding five issues recommending staged review for research in acute emergencies, flexible and rapid reviews of modification requests, grappling with potential risks of research within populations affected by violence or trauma, promoting meaningful informed consent, and engagement with local boards who can speak to the needs of the population should serve as a launching point for these critical conversations between humanitarian practitioners, researchers, and IRBs.

Recommendations for Academic IRBs	Recommendations for Researchers
• Offer staged reviews of protocols, especially for studies in acute emergencies	• Develop study protocol shells that can be adapted as needed to different emergencies and more quickly submitted for ethical review
• Consider the use of a stand-by reviewer for flexible and rapid reviews of any modification requests	• Work closely with the teams on the ground to ensure adherence to study protocols and broader security risks, especially those that may influence the risk/benefit analysis or research
• Confirm referral procedures and processes for data collector recruitment and training take into account sensitivities around violence/trauma experiences of participants and staff	• Ensure proper referral procedures are established participants, ensure training of data collectors adheres to international guidance, and consider the potential violence/trauma experiences of data collectors themselves
• Document how researchers will address potential additional risks of participation in research within informed consent processes, recommend consent check-ins throughout the research study that includes any change of risk to participation, attend to the inherent tension between participation in research with an NGO and being reliant on aid	• Develop informed consent documents that address risks of participation throughout the study, including any changes that may arise in security situation, and ensure throughout the voluntary nature of participation with no negative impact on ability to receive aid
• Recommend or require submission to local review boards or community advisory groups that are knowledgeable of the population's needs	• Identify and work with local review boards or community advisory groups that are knowledgeable of the population's needs

List of Abbreviations

DRC: Democratic Republic of Congo

GBV: Gender-based violence

IRB: Internal / institutional review board

IRC: International Rescue Committee

MSF: Médecins sans Frontières

WHO: World Health Organization

Declarations

Ethics approval and consent to participate: N/A

Availability of data and material: N/A

Competing interests: The authors declare they have no competing interests.

Funding: N/A

Authors' contributions: KF, RR, KR, and BL led conceptualization of the article and drafting of the initial manuscript. JA provided technical support and contributed to subsequent drafts. All authors have reviewed and approved of the final manuscript.

References

Acarturk, C. et al., 2016. 'The Efficacy of Eye Movement Desensitization and Reprocessing for Post-Traumatic Stress Disorder and Depression among Syrian Refugees: Results of a randomized controlled trial.' *Psychological Medicine*, 46(12), pp.2583–2593. Available at: http://journals.cambridge.org/article_S0033291716001070 [Accessed August 25, 2016].

Ager, A. et al., 2014. 'Strengthening the Evidence Base for Health Programming in Humanitarian Crises.' *Science*, 345(6202), pp.1290–1292. Available at: http://science.sciencemag.org/content/345/6202/1290 [Accessed October 18, 2016].

Arunatilake, N. et al., 2005. 'Listening to Those Who Lost: Survey and Analysis of Rebuilding and Relocation of Tsunami affected Households in Sri Lanka.' Institute of Policy Studies. Available at: http://www.ips.lk/news/newsarchive/2005/11082005_tsunami/executive_summary.pdf [Accessed August 25, 2016].

Bass et al., 2014. 'Controlled Trial of Psychotherapy for Congolese Survivors of Sexual Violence.' *New England Journal of Medicine*, 370(26), pp.2547–2547.

Berman, G. et al., 2016. 'What We Know about Ethical Research Involving Children in Humanitarian Settings: An Overview of Principles, the Literature and Case Studies.' Available at: https://www.unicef-irc.org/publications/pdf/IWP_2016_18.pdf [Accessed October 18, 2016].

Bhutta, Z., 2004. Beyond Informed Consent

Checchi, F. & Roberts, L., 2008. 'Documenting Mortality in Crises: What Keeps Us from Doing Better?' *PLoS Medicine*, 5(7).

Child Protection Monitoring and Evaluation Reference Group, 2012. 'Ethical Principles, Dilemmas and Risks in Collecting Data on Violence against Children.' Available at: http://data.unicef.org/corecode/uploads/document6/uploaded_pdfs/corecode/EPDRCLitReview_193.pdf [Accessed August 26, 2016].

Coghlan, B. et al., 2006. 'Mortality in the Democratic Republic of Congo: a Nationwide Survey.' *The Lancet*, 367(9504), pp.44–51.

Cooper, J.A. & Turner, P., 2006. 'Improving Informed Consent' in *Institutional Review Board: Management and Function*, ed. Elizabeth A. Bankert and Robert J. Amdur (Sudbury: Jones and Bartlett Publishers), 241.

Curry, D.R., Waldman, R.J. and Caplan, A.L., 2014. An Ethical Framework for the Development and Review of Health Research Proposals involving Humanitarian Contexts. Available at: http://www.alnap.org/resource/10687.

Depoortere, E. et al., 2004. 'Violence and mortality in West Darfur, Sudan (2003–04): Epidemiological evidence from four surveys.' *The Lancet*, 364(9442), pp.1315–1320. Available at: http://linkinghub.elsevier.com/retrieve/pii/S0140673604171870 [Accessed August 25, 2016].

Falb, K. et al., 2017. 'Implementation of Audio-Computer Assisted Self-Interview (ACASI) among Adolescent Girls in Humanitarian Settings: Feasibility, acceptability, and Lessons Learned.' *Conflict and Health*, 10(1).

Ford, N. et al., 2009. 'Ethics of Conducting Research in Conflict settings.' *Conflict and Health*, 3(7).

Fürst, T. et al., 2009. 'Dynamics of Socioeconomic Risk Factors for Neglected Tropical Diseases and Malaria in an Armed Conflict.' *PLoS Neglected Tropical Diseases*, 3(9).

International Rescue Committee, 2015. 'Responding to Typhoon Haiyan: A study on Prevention and Mitigation of Violence against Women and Girls in the Response to Typhoon Haiyan.' Available at: https://www.whatworks.co.za/documents/publications/17-responding-to-typhoon-haiyan-women-and-girls-left-behind/file [Accessed August 26, 2016].

Isles, A.F., 2013. 'Understood Consent Versus Informed Consent: A New Paradigm for Obtaining Consent for Pediatric Research Studies.' *Frontiers in Pediatrics*, 38.

Jaffe, A.E. et al., 2015. 'Does it Hurt to Ask? A Meta-analysis of Participant Reactions to Trauma Research.' *Clinical Psychology Review*, 40, pp.40–56.

McCormick, J.B., et al., 2013. 'The Establishment of Research Ethics Consultation Services (RECS): An Emerging Research Resource.' Clinical ad Translation Science, 6(1), pp. 40-44.

Office for Human Research Protections. Database for Registered IORGs & IRBs, Approved FWAs, and Documents Received in the Last 60 Days. Available at: https://ohrp.cit.nih.gov/search/search.aspx?styp=bsc [Accessed October 3, 2016].

Office for Human Research Protections. Informed Consent FAQs. Available at: https://www.hhs.gov/ohrp/regulations-and-policy/guidance/faq/informed-consent/index.html [Accessed January 2, 2018].

Pandiya, A., 2010. 'Readability and Comprehensibility of Informed Consent Forms for Clinical Trials.' *Perspectives in Clinical Research*, 1(3), pp.98–100. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3146080/ [Accessed August 24, 2016].

Pega, F. et al., 2014. 'Unconditional Cash Transfers for Assistance in Humanitarian Disasters: Effect on use of Health Services and Health Outcomes in Low- and Middle-income Countries.' Cochrane Database of Systematic Reviews.

Polonsky, J.A. et al., 2013. 'High Levels of Mortality, Malnutrition, and Measles, among Recently-displaced Somali Refugees in Dagahaley Camp, Dadaab Refugee Camp Complex, Kenya, 2011.' *Conflict and Health*, 7(1).

Rassekh, B.M. & Santosham, M., 2014. 'Utilization of Formal Health Services for Children Aged 1–5 in Aceh after the 2004 Tsunami: Which Children Did Not Receive the Health Care They Needed? Implications for Other Natural Disaster Relief Efforts.' *Health Psychology and Behavioral Medicine*, 2(1), pp.111–131.

Ratnayake, R. et al., unpublished. 'Child Mortality in Unity State, South Sudan.'

Ratnayake, R. et al., 2015. *Ensuring access for the most remote communities: An evaluation of an integrated community case management program in Kono District, Sierra Leone.* [Chicago, IL]. American Public Health Association Annual Meeting.

Ratnayake, R. et al., 2016. 'Improving Ebola infection prevention and control in primary healthcare facilities in Sierra Leone: A Single-group Pretest Post-test, Mixed-methods Study.' *BMJ Global Health*, 1(4).

Rodrigues, C.D., 2014. 'Doing Research in Violent Settings: Ethical Considerations and Ethics Committees.' Social Science Research Council. Available at: http://webarchive.ssrc.org/working-papers/DSD_ResearchSecurity_05_Rodrigues.pdf. [Accessed August 24, 2016].

Sexual Violence Research Initiative, 2015. 'Guidelines for the Prevention and Management of Vicarious Trauma among Researchers of Sexual and Intimate Partner Violence.' Available at: http://www.svri.org/sites/default/files/attachments/2016-06-02/SVRIVTguidelines.pdf. [Accessed November 7, 2017]

Schopper, D. et al., 2009. 'Research Ethics Review in Humanitarian Contexts: The Experience of the Independent Ethics Review Board of Médecins Sans Frontières.' *PLoS Medicine*, 6(7).

Schopper, D. et al., 2015. 'Innovations in Research Ethics Governance in Humanitarian Settings.' *BMC Medical Ethics*, 16(1).

Sheather, J. et al., 2016. 'A Médecins Sans Frontières Ethics Framework for Humanitarian Innovation.' *PLOS Medicine*, 13(9).

Stark, L. & Ager, A., 2011. 'A Systematic Review of Prevalence Studies of Gender-Based Violence in Complex Emergencies.' *Trauma, Violence, & Abuse*, 12(3), pp.127–134.

Stark, L. & Landis, D., 2016. 'Violence against Children in Humanitarian Settings: A Literature Review of Population-based Approaches.' *Social Science & Medicine*, 152, pp.125–137.

Tappis, H. et al., 2016. 'Effectiveness of Interventions, Programs and Strategies for Gender-based Violence Prevention in Refugee Populations: An integrative review. *PLoS Currents.*

The Nuremberg Code,1947. 1996. *BMJ*, 313(7070), pp. 1448-1448. Available at: http://www.bmj.com/content/313/7070/1448.1 [Accessed August 24, 2016]

Tindana, P.O., Kass, N., and Akwengo, P., 2006. 'The Informed Consent Process in a Rural African Setting.' *IRB.* 28, pp. 1-6

United States, 1978. *The Belmont report: ethical principles and guidelines for the protection of human subjects of research*. [Bethesda, Md.], The Commission.

Vyas, S. & Watts, C., 2009. 'How does Economic Empowerment Affect Women's Risk of Intimate Partner Violence in Low and Middle Income Countries? A systematic review of published evidence.' *Journal of International Development*, 21(5), pp.577–602.

World Health Organization, 2007. 'Ethical and Safety Recommendations for Researching, Documenting and Monitoring Sexual Violence in Emergencies.' Available at: http://www.who.int/gender/documents/OMS_Ethics&Safety10Aug07.pdf [Accessed August 25, 2016].

World Health Organization, 2013. 'Vaccination in Acute Humanitarian Emergencies: A framework for decision making.' Available at: http://apps.who.int/iris/bitstream/10665/92462/1/WHO_IVB_13.07_eng.pdf [Accessed August 25, 2016].

World Medical Association, 1964. Declaration of Helsinki: Ethical principles for medical research involving human subjects. Available at: http://www.wma.net/en/30publications/10policies/b3/17c.pdf [Accessed August 25, 2016].