Guidance Note: Evidence Synthesis in the Humanitarian Evidence Programme

This Guidance Note discusses an approach to systematic evidence synthesis in the humanitarian field. Its recommendations apply to the evidence synthesis outputs commissioned by the Humanitarian Evidence Programme, a DFID-funded partnership between Oxfam GB and the Feinstein International Center at Tufts University (FIC). The Programme aims to synthesize research in the humanitarian sector and communicate the findings to policymakers, humanitarian practitioners, and researchers, with the ultimate goal of improving humanitarian policy and practice. This Programme has been funded by UK aid from the UK government; however the views expressed in this guidance note do not necessarily reflect the UK government’s official policies.

The Humanitarian Evidence Programme evidence syntheses will take the form of systematic reviews to synthesize evidence around what works and what does not work, as well as for whom and in which context. Reviews can also synthesize what we know and do not know around existing approaches, practices, and tools. Systematic reviewing is an “approach that consists of mapping out the available evidence, critically appraising the evidence and synthesizing the results.”¹ All of our evidence synthesis outputs strive to be transparent about which evidence they synthesize, clear about gaps and limits in the literature, and systematic in their mode of analysis of existing research. In this way, Humanitarian Evidence Programme reviews can identify gaps in existing research and knowledge, form conclusions with greater confidence than with individual studies, showcase disagreement and diversity among the literature, and highlight opportunities for further research.

Section I of this document discusses the utility and limitations of evidence synthesis in the humanitarian field. Section II outlines the process of conducting an evidence synthesis for the Humanitarian Evidence Programme, while Section III discusses the nature and types of evidence that these reviews may synthesize. Section IV delves deeper into certain stages of the review process, including defining the eligibility criteria, naming the search strings, and accounting for heterogeneity within the findings. Given that this document is not an exhaustive guide to evidence synthesis processes, reviewers are strongly encouraged to familiarise themselves with the growing literature around this topic. A suggested reading list can be found in the concluding Section V.²

¹ “Systematic Reviews,” Department for International Development, R4D, available at http://r4d.dfid.gov.uk/SystematicReviews.aspx (last accessed January 5, 2015). In this document, the term ‘reviewers’ refers to the individuals or teams carrying out the evidence synthesis in the form of a systematic review. In this way, it is distinguishable from ‘peer reviewers,’ who are the subject-matter and methodological experts whose assistance the programme team will solicit to quality-assure the review at different stages of the process. The ‘programme team’ refers to the Oxfam GB-FIC staff who will manage the commissioning and oversight of the review process.

² Acknowledgments: The authors would like to thank Dr. Mike Clarke and Claire Allen of Evidence Aid for their guidance and insight. The Evidence Aid training on systematic reviews in the humanitarian sector was particularly helpful in illuminating many of the questions discussed herein. The Humanitarian Evidence Programme Review Commissioning Panel provided feedback on earlier versions of this document. The authors
I. **Evidence Synthesis in the Humanitarian Sector: Opportunities and Challenges**

Evidence synthesis in the form of systematic reviews emerged as a tool for assessing and synthesizing evidence out of the medical sector (White and Haddington, 2012), but systematic reviews have increasingly been used in the social sciences, including in international development. A push for assessing the evidence base of interventions and programs in international development, and for aligning funding and programming accordingly in the sector, has led to a spike of recent reviews on international development topics. Although much can be learned from the international development field for reviews in humanitarian situations, important differences remain, particularly in terms of the types of data and evidence that are possible to collect, assess, and synthesize in these fields. Evidence syntheses for the humanitarian field thus often have to be adapted from medical standards.

The settings of data collection in the humanitarian sector – which often involve active armed conflict, natural disasters, or the immediate aftermath of conflict or disasters – render the collection of data difficult or impossible and limit the types of studies that can take place. When data collection is possible, the reliability, representativeness, and generalizability of the data may be limited by questions of access and numerous biases, including selection, recall, and reporting bias. Even in humanitarian settings that are not characterized by instability or insecurity, the types of studies – and therefore, the types of research methods that one can employ to generate and collect evidence – can be limited by the fragility of protracted crises, the sensitivity of the information in question, and issues related to identifying and accessing affected populations.

For these reasons, the challenges in conducting evidence syntheses in the humanitarian sector differ from those in the medical field, but share characteristics with the well-documented challenges in conducting systematic reviews and other types of evidence synthesis in the international development sector, as enumerated by Mallett et al (2012) and others. These challenges include the following:

a) Access to the databases and journals necessary to conduct a review may be difficult (particularly for non-academics or Southern-based researchers).

b) Defining key terms, including interventions and outcomes, may be more complex in ways that affect the scope of the question, the eligibility criteria and their interpretation, and the search strings.

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3 For examples of recent reviews on topics of interest to the humanitarian and international development sectors, see DFID’s R4D portal, which also contains links to reviews led by 3ie and AusAID. “Systematic Reviews,” Department for International Development, R4D, available at [http://r4d.dfid.gov.uk/SystematicReviews.aspx#aSystematicReviewTop](http://r4d.dfid.gov.uk/SystematicReviews.aspx#aSystematicReviewTop) (last accessed January 5, 2015).

are also grateful for the guidance of the Humanitarian Evidence Programme Advisory Board, and the many individuals who provided feedback on the design of the evidence synthesis process as key informants.
c) The vast ‘grey literature’ (e.g., programme documents, needs assessments, and internal reports) is difficult to search in a standardized, comprehensive way and may not be publically available.

d) There is subjectivity to interpreting inclusion and exclusion criteria for studies.

e) Data may be limited or of poor quality and methodologies are often not discussed explicitly, clearly, or at length in the various studies.

f) Sampling is often biased and comparison groups are weak or non-existent.

g) Meta-analysis is difficult, both because of the unavailability and the diversity of data (Mallett et al 2012, 448-449).

These limitations highlight that evidence synthesis may be challenging in the humanitarian field. There are, however, significant benefits to this rigorous, evidence-based approach to synthesis of research in the humanitarian sector. The evidence synthesis itself is valuable for policymakers and humanitarian practitioners who seek to understand ‘what works’ – and what does not work – as well as for whom and in which contexts. For example, past reviews have asked “what works to improve teacher attendance in developing countries?”\textsuperscript{4} or “what impact does the provision of separate toilets for girls at schools have on their primary and secondary school enrolment, attendance and completion?”\textsuperscript{5} Reviews can also synthesize what we know and do not know around existing approaches, interventions, and tools. Synthesis can result in conclusions beyond those of independent studies. Through statistical meta-analysis, there is increased statistical power to detect an effect, and greater thinking on heterogeneity, external validity, and publication bias. Likewise, qualitative synthesis can see patterns and themes that supersede the sum of individual studies. This analysis can help ensure that policymakers and practitioners invest in programs that work, shut down programs that cause harm, and do further research where there is not enough evidence.

Similarly, evidence syntheses can be useful for researchers by highlighting gaps in existing research and pointing to opportunities for future research. In that vein, by making a synthesis of existing evidence available, reviews can ensure research builds on existing efforts, particularly when reviews are disseminated in a way that focuses on promoting research uptake. Evidence synthesis outputs can also prompt future researchers to attempt to fill gaps where these reviews demonstrate that gaps exist. Furthermore, these reviews have the potential to broaden the thinking about how researchers collect data in the humanitarian field and may, therefore, inspire new thoughts about how to conduct research in order to generate better evidence in the future.


\textsuperscript{5} Birdthistle I, Dickson K, Freeman M, Javidi L (2011). What impact does the provision of separate toilets for girls at schools have on their primary and secondary school enrolment, attendance and completion?: A systematic review of the evidence. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.
As a result, the humanitarian sector can benefit from the type of rigorous, evidence-based analysis that these reviews inspire. At the same time, evidence synthesis as an approach will need to be customized in order to respond to the uniqueness, diversity, and limitations of data in this field. As Hagen-Zanker (2012) notes, a more flexible approach may be in order, whereby we “continue to comply with the core principles of [systematic review] methodology (rigour, transparency, replicability), while tailoring the protocol as and when required” in order to be applicable to the humanitarian field. Mallett et al (2012) echo, “we should be focusing on the utility that can be gained from a systematic review approach, rather than its rigid application” (453).

II. Review process in the Humanitarian Evidence Programme

This process applies to reviewers selected to carry out an evidence synthesis as part of the Humanitarian Evidence Programme. Note that a complete list of expectations and responsibilities can be found in the Call for Proposals and Terms of Reference, and the below should be read in conjunction with those documents. The steps below reflect the systematic review evidence synthesis process, and they may need to be modified or customized based on the extent of evidence available and the nature of the topic for review.

1. Researchers develop review protocol. The protocol further spells out the scope of the research question, names the search strings that will be used, elaborates on the inclusion and exclusion criteria for studies, discusses the types of meta-analyses that are applicable to the type of evidence the researchers will identify and synthesize, and specifies how the reviewers will account for heterogeneity in the results. During this step, researchers will typically disaggregate the research question along the ‘PICO’ parameters – therefore, along Population, Intervention/Approach, Comparator/Context, and Outcome. A more thorough discussion of the PICO approach and its applicability to evidence synthesis in the humanitarian field can be found in the next section.

2. Discussion of the protocol with the programme team. Throughout the process of protocol development, researchers will be in contact with the Humanitarian Evidence Programme team. If a refinement of the research question or adjustment of the scope is necessary, it will take place during this stage of the process.

3. Review of the protocol. To assure the quality of the protocol, and therefore of the review process, the programme team will provide feedback before the full process of the review commences. Researchers will be expected to incorporate feedback prior to continuing with the review.

4. Running the search terms. Reviewers will apply the search strings to the search strategy to identify a breadth of possible studies. These search strings will be recorded and later reported in the methodology section of the review.

5. Screening of abstracts and titles. Reviewers will apply their inclusion and exclusion criteria, expressly stated in the reviewed protocol, to screen the abstracts and titles for potentially relevant studies.
6. **Assessment of full-text studies.** Reviewers will screen potentially includable full-text documents to assess whether their methods, quality of evidence, interventions, and outcomes are relevant to the scope of the review.

7. **Evaluation of the risk of bias in included studies.** The reviewers will assess included studies for their risk of bias.

8. **Evidence synthesis.** The reviewers will synthesize the findings in eligible studies using relevant forms of synthesis, including narrative and/or statistical meta-analysis. At this stage, the review team will also account for heterogeneity within the findings, paying particular attention to the factors for disaggregation named in the protocol.

9. **Discussion of the review with the programme team.** Throughout the process, the programme team will be available to discuss the review, as well as provide feedback on a complete draft of it prior to sending it off to peer review.

10. **Peer review of full evidence synthesis.** Subject-matter experts and methodology specialists, whom the programme team will have identified in advance, will peer review the evidence synthesis.

11. **Revised review based on feedback.** Reviewers will incorporate the peer reviewers’ feedback to finalize the review.

12. **Submission to DFID.**

**III. Types of evidence for Humanitarian Evidence Programme reviews**

A recurrent question in evidence synthesis processes is which types of study designs should be eligible for inclusion. This, in turn, encompasses questions related both to study design and to mode of publication. While these determinations are ones for the reviewers to make, this section provides some guidelines on evidentiary standards that may be relevant to this decision-making process. Given the complexities of data collection, assessment and interpretation in the humanitarian sector outlined earlier, the types of evidence discussed here may depart from other evidence synthesis processes in order to ensure that the final reviews synthesize a range of data that can be useful to humanitarian practitioners and policymakers.

For example, a review for the Humanitarian Evidence Programme looking at evidence of effectiveness of an intervention may decide to include studies with comparison groups that control for potential confounders, such as randomized control trials (RCTs) as well as quasi-experimental study designs (QEDs). It may decide to look at process evaluations and qualitative research to understand findings. The review may also decide a corollary question through looking at qualitative research. For instance, the reviewers and the field may be interested in what individuals were spending their money on from a cash intervention in emergencies, and whether or not the intervention was effective. A wide variety of evidence, such as focus groups, surveys, and observation, may be reviewed in answering this question. Some study designs may be better-suited to a particular review question compared with others. Reviewers should justify which types of study designs they will include in their review. Reviewers may also choose to do a mixed-methods review, which would entail synthesizing quantitative results and qualitative findings separately and/or using the
qualitative data to contextualize the quantitative findings. These choices should be clearly stated and explained in the protocol.

In terms of locations for identifying potentially eligible evidence for inclusion in the reviews, reviewers should consult both databases of published journal articles and the ‘grey literature.’ There is a balance in the scope of search databases and search terms between specificity and sensitivity, between feasibility and rigor, which should be carefully considered. An illustrative list of grey literature sites and indices to consult when seeking to identify potential studies for inclusion can be found in the Annex. The review protocol should specify how the reviewers identified which websites to consult. A customization of the search strings to the type of literature (i.e. ‘grey’ versus journal databases) may be necessary, as discussed in the next section.

In addition to naming and justifying the eligible study designs and search locations, reviewers should also elaborate on their plans for quality assessing the identified studies and their findings. The programme team will provide the reviewers with additional guidance for assessing the quality of the evidence in the Programme’s systematic reviews. For further information, the EPPI-Centre’s work on qualitative research methods for systematic reviews and Cochrane Collaboration’s qualitative methods working group can provide helpful resources.

As this section has shown, the Humanitarian Evidence Programme seeks to adopt a broad approach to types of evidence that may be relevant to researchers, practitioners, and policymakers working in the humanitarian field. The nature of humanitarian work generally necessitates collecting data where a level of potential bias is recognized, while also acknowledging that there is knowledge in the field potentially conducive to synthesis. Too narrow a scope of evidence may limit the range and diversity of data that has academic value as well as relevance to decision-makers and practitioners. At the same time, too broad a scope may render comparison and synthesis difficult and draw conclusions based on highly biased and poorly executed research. The goal is, therefore, for the reviewers to identify the types of rigorous evidence that are relevant to the research question, process them using robust analytical methods, and arrive at an evidence synthesis that highlights what works, what does not work, and gaps in the knowledge.

IV. Factors for consideration in the protocol development stage of the review

During the protocol development stage, reviewers have the opportunity to make choices about the scope of the research question and types of evidence to be included in the review. This section discusses some factors to consider during this process, with the acknowledgment that no two reviews are alike and decisions depend on the nature of the review in question. Furthermore, the below guidance is not an exhaustive template or timeline of the review process nor does it substitute for the reviewers’ familiarization with evidence synthesis standards and methodologies; rather, it flags key points for decision-making about evidence synthesis efforts in the humanitarian sector, with the understanding
that other tasks are interspersed throughout the process. A timeline of review-related deliverables will be part of the reviewers’ Terms of Reference.

a. Formulating the review question

Each review question listed in the Call for Proposals is accompanied by a Briefing Paper that details the programme team’s interest in that topic of evidence synthesis and provides any additional guidance to the review team. Review protocols should state what reviewers identify to be the primary and secondary research questions, including a potentially more narrow primary research question. Some sample factors by which to narrow the review may include by population, context, intervention/approach, geographic area, outcomes, or years of study publication. A justification should accompany each of these choices in the review protocol. The PICO parameters – population, intervention, comparison/context, and outcome – may be useful in this process. The Humanitarian Evidence Programme encourages reviewers to interpret these parameters broadly, to the extent that they are useful: For example, there may be more than one population of interest; the ‘I’ in the acronym may refer to both a specific intervention and an issue more broadly; the ‘C’ may refer to context, not just comparators, and outcomes of interest may be numerous. The programme team welcomes alternative strategies for refining the scope of the research question and defining the relevant terms, provided that they are well-documented and suitable to the evidence synthesis in question.

Reviewers may want to do scoping work, including sample searches to better understand the topic and extent of the existing literature. The programme team will be available for conversations with the reviewers in order to ensure that the choices in the protocol reflect the original interest in the topic area and will render a review that is useful to humanitarian practitioners, policymakers, and researchers.

b. Setting the eligibility criteria

Reviewers should clarify whether their eligibility criteria are illustrative or exhaustive, as well as be explicit about any types of studies that are NOT within the scope of the review in question. Eligibility criteria should be as specific as possible in order to minimise interpretation errors among different reviewers. For example, if a review discusses interventions aimed at children, the criteria should specify the age threshold that corresponds to childhood in this particular context. This may, in turn, require consultations both with the programme team commissioning the review and with subject-matter experts who may shed light on possible interpretations of the terms in the research question.

In order to set the eligibility criteria, reviewers may need to focus on and disaggregate possible interventions and outcomes that relate to the review question. Specifically, they may need to consider how the various outcomes may be measured and what types of results these measurements may yield. For example, if a review is focused on interventions that improve nutritional status, the reviewers would have to name the indicators and outcomes related to nutritional status that would be relevant to the scope of the review.
Reviewers may again wish to consult with a subject-matter specialist during this step of the process in order to ensure that they are accounting for all relevant interventions and outcomes.

c. **Devising the search strings and conducting the search**

The search strings name the terms that the review team will enter in their specified databases and sites with the ultimate goal of identifying potential studies for inclusion in the review. It is strongly encouraged that reviewers consult with an information specialist or librarian during this step of the review process. In devising search strings, review teams should be conscious of alternate spellings, synonyms, and acronyms (e.g. ‘NGO’ versus ‘non-governmental organizations’ versus ‘non-governmental organisations,’ versus ‘nongovernmental organizations’). During the process of both identifying the search strings and setting the eligibility criteria, reviewers should be conscious of the fact that researchers may have used different names than the review commissioners or the reviewers themselves to describe the interventions and outcomes in which they are interested. This necessitates a broad and imaginative inquiry into the ways in which researchers may have described their own studies, named their interventions, outcomes, and results, titled their papers and presented their research. Simply put, the task is to ensure that the search strings are sensitive enough to find relevant research.

As stated earlier, the protocol should specify not only which terms are entered in the various databases and search engines, but also which websites, indices and databases are consulted to identify studies. An illustrative list of ‘grey literature’ sites to consult can be found in the Annex.

d. **Screening process for eligible studies**

Reviewers should explain their plan for screening for eligible abstracts and titles and then full-text studies and specify who will be performing the screening. This will likely involve applying the eligibility criteria to the abstracts and full-text studies. For reviewers working in teams, double-reading is encouraged, whereby members of the team separately assess all eligible studies or a portion of potentially eligible studies and make independent determinations on whether a study should be included on the review based on the eligibility criteria.

e. **Data extraction and recording information about each eligible study**

The review protocol should specify the type of information reviewers will record for each study they deem eligible for the review in order to ensure that information collection is as comprehensive and standardized as possible. Such information will likely include but not be limited to the publication date and date of the experiment of the study in question, the type of study design, the populations to which the study findings apply (disaggregated by age and sex, where possible), any settings/geographic locations to which the study results are limited, and the specific iteration of the research question. Reviewers should agree on the
complete list of factors to extract and record and their mode for recording this data prior to conducting the review in order to minimize error and variation.

f. Narrative synthesis and/or statistical meta-analysis

Reviewers will determine the types of evidence synthesis suitable to their review. Statistical meta-analysis is encouraged, where possible and applicable. However, a narrative synthesis of findings may be necessary or preferable with certain types of data, such as heterogeneous or qualitative data. Protocols should detail which types of meta-analysis will be employed and why those types of meta-analysis are well-suited to the type of evidence and data the review will synthesize. Reviewers may wish to engage a statistician in this step of the process.

In reviews that will entail statistical meta-analyses, review protocols should specify which statistical indicators reviewers will employ. These include, but are not limited to risk ratios, risk differences, odds ratios, and Numbers Needed to Treat (NNTs). Both in the protocol and in the review itself, reviewers should specify on which statistical analysis they are relying and why that type of analysis is most conducive to the research question.

g. Accounting for heterogeneity

The Briefing Paper accompanying the review question will provide an illustrative, though not exhaustive, list of the types of disaggregation of findings in which the review commissioning team is interested. While this type of disaggregation and accounting for heterogeneity will largely depend on the nature of the research question, reviewers will be expected to disaggregate findings based on sex and age whenever possible. Other types of heterogeneity in the data and effects of interventions may be due to geographic diversity or diversity in setting (i.e. urban versus rural), or intervention or population (i.e. migrants versus non-migrants; disaster-affected versus conflict-affected versus populations affected by neither conflict nor disaster) or data collection. The discussion of heterogeneity will be closely linked to a discussion of possible limitations in the existing evidence and its synthesis, the challenges to generalisability of the findings, and the existence of different types of bias. Reviewers should note what, if any, statistical tests they plan to do to measure heterogeneity.

Conclusion

The evidence synthesis approaches described in this Guidance Note present an opportunity to synthesize existing research in a humanitarian sector in a way that is honest about the possible biases and limitations, illustrative of opportunities for future research, and deliberate about the choices involved in any evidence synthesis effort. These evidence synthesis outputs can highlight existing knowledge about what works and does not work, in ways that have the potential to inform humanitarian policy and practice. This Guidance Note can serve as a starting point for bidders interested in carrying out a systematic review as part of the Humanitarian Evidence Programme. Additional information about the topics
of the reviews can be found in the Call for Proposals, as well as in the Briefing Papers accompanying each research question of interest.
V. **Resources for further research on evidence synthesis**

Reviewers are expected to familiarize themselves with the broad literature on systematic reviews and the growing literature on the use of systematic reviews in the international development and humanitarian spheres. A sample reading list can be found below.


Department for International Development (DFID), Research For Development (R4D), “Systematic Reviews.” [http://r4d.dfid.gov.uk/SystematicReviews.aspx](http://r4d.dfid.gov.uk/SystematicReviews.aspx)


Chapter 1 of: Gough, D., Oliver, S., Thomas, J. *Introduction to systematic reviews*. London: Sage, 2012. [http://www.uk.sagepub.com/books/Book234152#tabview=samples](http://www.uk.sagepub.com/books/Book234152#tabview=samples)


Annex: Suggested sites to consult as part of ‘grey literature’ searches

Note that the below is an illustrative list and that researchers will name the customized, exhaustive list of sites into which to enter the search terms in the customized protocols for each review. The following list does NOT include academic sites and databases or specific journals and their webpages.

- DFID R4D
- International Initiative for Impact Evaluation (3ie)
- Overseas Development Institute (ODI), including the Humanitarian Policy Group (HPG) and Humanitarian Practice Network (HPN)
- EPPI Centre
- Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP)
- Emergency Nutrition Network (Field Exchange)
- Evidence Aid
- Feinstein International Center, Tufts University
- Enhanced Learning and Research for Humanitarian Assistance
- International Association of Professionals in Humanitarian Assistance and Protection
- Humanitarian Accountability Partnership
- The Network on Humanitarian Assistance
- The World Bank
- Harvard Humanitarian Initiative
- Humanitarian Social Network
- Humanitarian Innovation Project
- United Nations (and related sub-websites)
- European Commission’s Humanitarian Aid and Civil Protection Department
- USAID Development Experience Clearinghouse (and related USAID sub-websites)
- ReliefWeb
- Oxfam Policy and Practice Websites
- OpenGrey
- UNHCR Policy Development and Evaluation Service
- Eldis