Objective To describe tools used for the assessment of maternal and child health issues in humanitarian emergency settings.

Methods We systematically searched MEDLINE, Web of Knowledge and POPLINE databases for studies published between January 2000 and June 2014. We also searched the websites of organizations active in humanitarian emergencies. We included studies reporting the development or use of data collection tools concerning the health of women and children in humanitarian emergencies. We used narrative synthesis to summarize the studies.

Findings We identified 100 studies: 80 reported on conflict situations and 20 followed natural disasters. Most studies (76/100) focused on the health status of the affected population while 24 focused on the availability and coverage of health services. Of 17 different data collection tools identified, 14 focused on sexual and reproductive health, nine concerned maternal, newborn and child health and four were used to collect information on sexual or gender-based violence. Sixty-nine studies were done for monitoring and evaluation purposes, 18 for advocacy, seven for operational research and six for needs assessment.

Conclusion Practical and effective means of data collection are needed to inform life-saving actions in humanitarian emergencies. There are a wide variety of tools available, not all of which have been used in the field. A simplified, standardized tool should be developed for assessment of health needs in the early stages of humanitarian emergencies. A cluster approach is recommended, in partnership with operational researchers and humanitarian agencies, coordinated by the World Health Organization.

Introduction

Humanitarian emergencies are natural disasters, man-made events or a combination of both that represent critical threats to the health, safety, security or wellbeing of a community.1 Humanitarian emergencies resulting from conflict, natural disasters, famine or communicable disease outbreaks have important health implications. Currently, there are approximately 39 million people displaced by conflict or violence.2 Every year, millions are displaced due to weather-related or geophysical disasters.3 Women and children are generally the worst affected – representing over three-quarters of the estimated 80 million people in need of humanitarian assistance in 2014.4,5 Moreover, many countries with high maternal, newborn and child mortality rates are affected by humanitarian emergencies.

Humanitarian emergencies are frequently characterized by the collapse of basic health services. For better decision-making, coordination and response in such emergencies, humanitarian actors need access to appropriate information.4,6,7 Studies have reported that during humanitarian emergencies, there can be either a shortage or, conversely, an overload of information. Both situations impair provision of effective humanitarian assistance.4

Sexual and reproductive health has historically been neglected in humanitarian emergency settings.1 Health services provided for women and children vary depending on location, climate, culture, existing infrastructure, population health and type of humanitarian crisis. The types of response also vary, with multiple governments and humanitarian agencies involved. Efficient, easy to use, comprehensive data collection tools are needed to aid situation analysis, decision-making and coordination of responses to humanitarian crises.10

We review tools for collection of data concerning the health of women and children in humanitarian emergencies. We identify which tools are available and where they have been used. For each study, we describe the setting and purpose of the study, the types of data collected and the tools used to collect the data.

Methods

Search strategy

We conducted a systematic review according to current guidelines.11 We searched MEDLINE, Web of Knowledge and POPLINE databases for studies in English published between 1 January 2000 and 30 June 2014. Searches incorporated medical subject heading terms, keywords and free text using the following search terms: “reproductive health”, “sexual”, “maternal”, “newborn”, “child/child health service*”, “pregnanc*”, “neonat*” under one search string and “disaster”, “sexual” , “maternal” , “newborn” , “child/child health service*” under another string. The Boolean operator “OR” was used for the terms under each search string and “AND” was used to combine the two strings. The detailed search strategy is available from the authors.

Through a snowballing process, we identified organizations known for their work in humanitarian emergencies and searched the websites of these organizations – including CARE International, the Centers for Disease Control and Prevention, Harvard Humanitarian Initiative, the Inter-Agency Standing Committee, the International Federation of Red Cross and Red Crescent Societies (IFRC), the Joint United Nations Programme on HIV/AIDS (human immunodeficiency virus/
acquired immunodeficiency syndrome), Knowledge for Health (K4Health), Médecins Sans Frontières (MSF), the Office of the United Nations High Commissioner for Refugees, Oxfam, the Reproductive Health Response in Crises Consortium, Save the Children, the United Nations Population Fund (UNFPA), the Women’s Refugee Commission, the World Health Organization (WHO) and World Vision. The snowballing process was carried out using the reference list of included studies and the organizations known for humanitarian emergencies. We also searched the references and authors of all included studies.

**Inclusion and exclusion criteria**

Studies were included if they reported the development or use of data collection tools concerning the health of women and children in a humanitarian emergency. We included studies, even when tools for data collection were not specified or the method was not described (Fig. 1).

Two authors independently searched databases and websites. The titles and abstracts of identified studies were screened and excluded if not meeting the inclusion criteria. Full texts of remaining studies were assessed for eligibility. When it was not clear if a study should be included or not, two reviewers discussed the study and if consensus was not reached, a third reviewer was consulted. The reviewers summarized information on tools used, type of data collected and the purpose of the study. Data were classified into four categories, based upon the continuum of care: (i) sexual and reproductive health including sexual/gender-based violence and family planning; (ii) maternal and neonatal health; (iii) infant and child health; and (iv) sexually transmitted infections, including HIV/AIDS.

Studies that met the inclusion criteria were summarized using textual narrative synthesis. First, we developed a commentary report on the type and characteristics of the included studies, context and findings using a standard matrix. The reviewers then looked for similarities and differences among studies to discuss and draw conclusion across the studies.

**Results**

We identified 2227 studies: 2109 publications from databases and 118 studies from websites. After removal of duplicates, the titles and abstract of 1593 studies were screened and of these, 225 studies were identified as eligible for full text review. Of these, 112 were not specific to humanitarian or emergency settings and 13 were not relevant (Fig. 1).

Of the 100 studies identified, 69 studies described the number of people affected. The population consisted of 677,568 individuals; 65,971 were identified as women and 57,427 children; 37,660 (57%) of children were younger than five years (Table 1, available at: http://www.who.int/bulletin/volumes/93/9-14-148429). Studies ranged in sample size from seven (in case studies of survivors of sexual violence) to 179,172 (in a rapid assessment of micronutrient deficiency following drought). Eighty studies reported on conflict situations, while 20 studies reported on situations following a natural disaster (tsunami, hurricane or drought). Nineteen studies reported on the timing of data collection: three studies collected data within one week, five within three months, and 11 studies collected data six months to one year after the onset of the humanitarian emergency.

Data were collected from refugee populations in the recovery phase. Our review did not identify any studies that collected data during the disaster preparedness phase, which is defined by UNFPA as, “the period preceding a humanitarian crisis – use of early warning signals to avert crises or prepare response”.

Seventy-six studies examined the health status of the population affected, while 24 examined the availability and coverage of health services, usually measured using the minimum initial service package. A variety of indicators were collected with some studies using specific toolkits for field settings (Table 2).

Data were collected for monitoring and evaluation purposes in 69 studies. In 18 studies, data were collected for the purpose of advocacy; seven studies were operational research and six studies described a needs assessment. No studies that we identified had the primary aim of collecting data to support a funding request.

**Data collection tools**

We identified a total of 17 different tools which were mainly structured questionnaires (Table 3). Among 100 included studies, 19 specified the use of any of the 17 identified tools. Eight studies used a rapid assessment field tool; seven used the assessment toolkit for conflict affected women and three used the emergency obstetric care assessment toolkit from the averting maternal disability and deaths programme.
Table 2. Data collection tools used and type of data collected for maternal and child health during humanitarian emergencies

| Category                                         | Type of data collected                                                                 | Tool application described in the literature                                                                 |
|--------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Sexual and reproductive health                   | SRH including MNCH, availability and accessibility of modern contraceptives, couple discussion on methods of choice, unplanned pregnancy, knowledge, attitude and practices of family planning, family of security. | CDC RH assessment toolkit for conflict-affected women, RHRC RH needs assessment field tools, MISP assessment. |
| Sexual and gender-based violence                 | Prevalence of child sexual abuse, risk factors of sexual and gender-based violence, patterns of sexual and gender-based violence, awareness among aid workers of sexual and gender-based violence, efficiency of response and coordination among agencies, availability and accessibility of services for sexual and gender-based violence victims, intimate partner violence and associated factors, physical consequences of sexual and gender-based violence (fistula and infections), mental consequences. | MISP assessment toolkit, AUDIT (The Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Care), Measuring Intimate Partner Violence Victimization and Perpetration: A Compendium of Assessment Tools (CDC, 2006). |
| Maternal and newborn health                      | Number of deliveries at health facilities, caesarean section rate, availability of blood transfusion, obstetric complications managed, manual vacuum aspiration procedures performed, maternal deaths. | Emergency obstetric and newborn care assessment toolkit from the Averting Maternal Death and Disability (AMDD) programme. |
| Newborn health                                   | Birth outcomes, birth defects.                                                         | No description of specific tools used.                                                                     |
| General maternal and newborn health              | Logistics and security issues, antenatal care, maternal height and weight, vitamin A during pregnancy, iron and folate supplementation, malaria during pregnancy, anaemia during pregnancy, human rights violations, barriers to receiving care. | RHRC RH needs assessment field tools, MISP assessment toolkit.                                           |
| Infant and child health                          | Weight, height and mid upper arm circumference (MUAC) of children, vaccination status of children, presence of oedema, haemoglobin levels, other infections (acute respiratory infections, diarrhoea), other nutritional and micronutrient deficiency, feeding practices (exclusive breastfeeding, complementary feeding), food assistance and food security. | No description of specific tools used.                                                                     |
| Nutrition                                        | Socioeconomic factors, demographic factors, diarrhoea and waterborne infections, acute respiratory infections and diseases of adenoids, visual disturbances, urinary problems, malaria treatment and use of insecticide-treated nets. | No description of specific tools used.                                                                     |
| Injuries                                         | Types of injuries, care seeking behaviour, intentional injuries including context, when and how it occurred, weapon used, relationship with perpetrator, injuries by landmines and unexploded ordinances (time, place and how it happened, type and site of injury), need for blood transfusion | No description of specific tools used.                                                                     |
| Miscellaneous                                    | Lead poisoning (blood-lead level, chelation therapy), medical health conditions, mental child health conditions, neurological disorders including epilepsy, infantile cerebral palsy. | No description of specific tools used.                                                                     |
| Sexually transmitted infections including human immunodeficiency virus infection (HIV) and acquired immunodeficiency syndrome (AIDS) | Availability and accessibility of HIV/AIDS management, knowledge and attitudes on HIV/AIDS, risk behaviour on HIV/AIDS, prevalence of sexually transmitted infections as consequence of sexual and gender based violence, availability of resource materials for sexually transmitted infections and HIV, prevalence of gonorrhoea and chlamydia. | MISP assessment toolkit. |

AIDS: acquired immunodeficiency syndrome; CDC RH: Centers for Disease Control and Prevention, Reproductive Health; HIV: human immunodeficiency virus; MISP: minimum initial service package; MNCH: maternal, newborn and child health; RH: reproductive health; RHRC: reproductive health response in conflict; SRH: sexual and reproductive health.
Table 3. Summary of data collection tools for maternal and child health in humanitarian emergencies, by year of publication

| Existing tools for data collection identified from the literature review | Type of data that can be collected | Suitable in acute phase of an emergency | Field application reported |
|---|---|---|---|
| Existing tools for data collection identified from the literature review | Sexual & reproductive health including gender-based violence | Maternal and newborn health | Infant and child health | Sexually transmitted infections |
| Twine (United Nations High Commissioner for Refugees, 2014) | Yes | Yes | Yes | Yes |
| Refugee health: an approach to emergency situations (Médecins Sans Frontières, 1997) | Yes | Yes | Yes | Yes |
| Refugee RH needs assessment field tools (Reproductive Health Response in Crises Consortium, 1997) | Yes | Yes | Yes | Yes |
| The alcohol use disorders identification test: guidelines for use in primary health care (Babor, 2001) | Yes | Yes | Yes | Yes |
| SGBV Tools for refugees, returnees and IDPs (United Nations High Commissioner for Refugees, 2003) | Yes | Yes | Yes | Yes |
| EmOC needs assessment tool (Women's Commission and Averting Maternal Death and Disability, 2005) | Yes | Yes | Yes | Yes |
| GBV prevention and response tool in emergencies (Inter-Agency Standing Committee, 2005) | Yes | Yes | Yes | Yes |
| Guidelines on public health promotion in emergencies (Oxfam, 2006) | Yes | Yes | Yes | Yes |
| Measuring intimate partner violence victimization and perpetration: a compendium of assessment tools (Centers for Disease Control and Prevention, 2006) | Yes | Yes | Yes | Yes |
| Adolescent SRH toolkit for humanitarian settings (United Nations Population Fund and Save the Children Fund, 2010) | Yes | Yes | Yes | Yes |
| GBV programme monitoring tool, (United Nations Population Fund, 2010) | Yes | Yes | Yes | Yes |
| Inter-agency field manual on RH in humanitarian settings (WHO Interagency Working Group on Reproductive Health in Crises, 2010) | Yes | Yes | Yes | Yes |
| MISP assessment toolkit (Interagency Working Group on Reproductive Health in Crises, 2010) | Yes | Yes | Yes | Yes |
| RH assessment toolkit for conflict-affected women, (Centers for Disease Control and Prevention, 2011) | Yes | Yes | Yes | Yes |
| Sphere handbook (The Sphere Project, 2011) | Yes | Yes | Yes | Yes |
| Guide to MNCH and nutrition in emergencies (World Vision, 2012) | Yes | Yes | Yes | Yes |
| GBV tools manual for assessment and program design, monitoring and evaluation in conflict-affected settings (Reproductive Health Response in Crises Consortium, 2003) | Yes | Yes | Yes | Yes |

EmOC: emergency obstetric care; GBV: gender-based violence; IDP: internally displaced persons; MISP: minimum initial service package; MNCH: maternal, newborn and child health; RH: reproductive health; RHRC: reproductive health response in crises consortium; SGBV: sexual and gender-based violence; SRH: sexual and reproductive health; WHO: World Health Organization.

* General toolkits that do not exclusively assess SRH or MNCH.
The approaches and methods for the collection of data during humanitarian emergencies are summarized in Table 4.

| Approach          | Methods                  | Data sources                                                                 |
|-------------------|--------------------------|------------------------------------------------------------------------------|
| Qualitative       | Key informant interviews | Key stakeholders (e.g., health service providers, policy- and decision-makers) |
| Mixed Method      | Focus group discussions  | Affected population                                                          |
|                   | Observational study      | Affected population and area                                                  |
|                   | Inventory or document review | Previous available data (e.g., surveys, health sector data, programme reports) |
| Quantitative      | Secondary data analysis  | Previous available data (e.g., surveys, health sector data, programme reports) |
|                   | Rapid counting           | Affected population                                                          |
|                   | Aerial surveillance      | Affected area                                                                |
|                   | Flow monitoring          | Affected population                                                          |
|                   | Enumeration or profiling | Affected population                                                          |

Of the 100 studies included in this review, only 19 described the data collection tools used and only six commented on their applicability in field settings. Authors may not be aware of the existence of a wide range of toolkits, or the importance of documenting their experiences.

To improve the response to humanitarian emergencies, target groups need to be identified and their specific needs understood. For sexual, reproductive, maternal, newborn and child health the underlying contexts which prevent or enable access to services also need to be considered. A central repository of data collected during a humanitarian emergency, where a core set of indicators is agreed on, would be useful. The repository would allow any user to submit or explore data to inform decision-making and enable comparisons between and across settings.

Only eight studies were conducted within the first six months of a humanitarian emergency. The majority of studies (69/100) and data collected were used to monitor and evaluate ongoing interventions. This may reflect the necessity of providing immediate life saving measures during the early stages of humanitarian emergencies. Rapid assessments are vital in the early stages of humanitarian emergencies. Information is required to highlight changing needs to inform appropriate provision of relief and urgent medical assistance. Most importantly, rapid assessment tools need to be simple to use.

It is encouraging to note that the tools developed so far seem to have used a cluster approach for data collection. Introduced in 2006 as part of the UN Humanitarian Response, a cluster is defined as:

> “a group of agencies that gather to work together towards common objectives within a particular set of emergency response”.

The approach aims to improve the effectiveness of humanitarian assistance by improving predictability and timeliness of a response process through a coordinated effort. The cluster approach can strengthen accountability among...
key actors and enhance the complementary nature of different organizations involved in providing humanitarian assistance. Although the health and nutrition clusters are critical for maternal, newborn and child health, the available tools consider other clusters as cross-cutting areas including protection, water and sanitation, camp coordination and management.132

Conclusion

There is a need to evaluate, standardize and harmonize existing data collection toolkits and to develop others that can be used in the response phase of humanitarian emergencies. Information is needed on the applicability of existing tools in relation to the types of populations and the emergency situations in which they are used. It would be useful to develop shortened versions of existing tools adapted specifically to use in the response phase, together with a more comprehensive version for the later phases of an emergency. Humanitarian assistance reports should include analyses of the lessons learnt when using data collection toolkits. This information can assist modification of existing tools and development of new tools. Whenever new toolkits are developed by interagency working groups, it is important to take the perspectives of field users into account. Wider dissemination of the availability of data collection toolkits among humanitarian workers can be achieved by educating staff at headquarters and country offices of humanitarian organizations, or by including the toolkits in disaster risk reduction training.

To plan and evaluate interventions and actions that will save lives in humanitarian emergencies, appropriate data are needed. To ensure that tools used to obtain such data are easy to use and comprehensive, it is essential that both individuals involved in field operations and in operations research continue to work together. New standardized tools should be developed and existing ones adapted based upon standards for data collection in emergencies with inputs from humanitarian agencies.133 This work could be coordinated by WHO.

Funding: This work was funded by the World Health Organization, reference number 200833146.

Competing interests: None declared.

مختصر

 أدوات جمع البيانات لصحة الأمومة والطفولة في الحالات الإنسانية الطارئة: مراجعة مهنية

الغرض وصف الأدوات المستخدمة في تقييم مشكلات صحة الأمومة والطفولة من إجماً في حالة الإنسانية الطارئة، وفقاً للدراسة المشتركة من الإعلان في موقع معطيات Popline Web of Knowledge، في الفترة من يناير/كانون الثامن 2000 وحتى يونيور/حزيران 2014، كما بحثنا أيضاً في المواقع الإلكترونية للمؤسسات الفاعلة في مجال الحالات الإنسانية الطارئة، وقد يتضمن دراسات توضح إعداد أدوات جمع البيانات أو استخدامها فيها يتعلق بصحة النساء والأطفال في الحالات الإنسانية الطارئة، وظلت أدوات الدراسة متاحة منذ 100 دراسة، وقدرنا 80 دراسة منها أوردت بيانات عن حالات الصحراء فيها تابعت 20 دراسة منها وقوع كوارث طبيعية. ركزت معظم الدراسات (76 من إجمالي 100) على حالة الصحة للسكان الناتجة من وقوع 24 دراسة على مدى توافر الخدمات الصحية و نطاق تغطيتها. ومن ضمن 17 أداة أوردت جمع البيانات المختلقة التي تم تحديدها.

الأسلاك الدقيقة

الطريق خلالها لاتباع سياسات عمل وطالعة جمع البيانات اللازمة التي تقوم على أساس تجارب العمل الإنتاجية في الحالات الإنسانية الطارئة، وتتولى مجموعة متخصصة وواسعة من الأدوات، والتي لم يتم استخدامهم جماعاً في الماضي. ينبغي إعادة أدوات مختلقة ومهذبة ل içmi مشكلات الصحة في الداخل الأول من الحالات الإنسانية الطارئة، يُوصى باتباع نهج تقاضي Cluster (الجوار مع الباحثين التنفيذيين) وكولات المساعدة الإنسانية، والتسنيد من جانب منظمة الصحة العالمية.

النتائج

نتيجة

نتائجنا هذه حاشية لاتباع سياسات عمل وطالعة جمع البيانات اللازمة التي تقوم على أساس تجارب العمل الإنتاجية في الحالات الإنسانية الطارئة، وتتولى مجموعة متخصصة وواسعة من الأدوات، والتي لم يتم استخدامهم جماعاً في الماضي. ينبغي إعادة أدوات مختلقة ومهذبة ل içmi مشكلات الصحة في الداخل الأول من الحالات الإنسانية الطارئة، يُوصى باتباع نهج تقاضي Cluster (الجوار مع الباحثين التنفيذيين) وكولات المساعدة الإنسانية، والتسنيد من جانب منظمة الصحة العالمية.

الاستنتاج

استنتاج

نصيحة

نتائجنا هذه حاشية لاتباع سياسات عمل وطالعة جمع البيانات اللازمة التي تقوم على أساس تجارب العمل الإنتاجية في الحالات الإنسانية الطارئة، وتتولى مجموعة متخصصة وواسعة من الأدوات، والتي لم يتم استخدامهم جماعاً في الماضي. ينبغي إعادة أدوات مختلقة ومهذبة ل içmi مشكلات الصحة في الداخل الأول من الحالات الإنسانية الطارئة، يُوصى باتباع نهج تقاضي Cluster (الجوار مع الباحثين التنفيذيين) وكولات المساعدة الإنسانية، والتسنيد من جانب منظمة الصحة العالمية.

الاستنتاج

استنتاج

نصيحة

نتائجنا هذه حاشية لاتباع سياسات عمل وطالعة جمع البيانات اللازمة التي تقوم على أساس تجارب العمل الإنتاجية في الحالات الإنسانية الطارئة، وتتولى مجموعة متخصصة وواسعة من الأدوات، والتي لم يتم استخدامهم جماعاً في الماضي. ينبغي إعادة أدوات مختلقة ومهذبة ل içmi مشكلات الصحة في الداخل الأول من الحالات الإنسانية الطارئة، يُوصى باتباع نهج تقاضي Cluster (الجوار مع الباحثين التنفيذيين) وكولات المساعدة الإنسانية، والتسنيد من جانب منظمة الصحة العالمية.

الاستنتاج

استنتاج

نصيحة

نتائجنا هذه حاشية لاتباع سياسات عمل وطالعة جمع البيانات اللازمة التي تقوم على أساس تجارب العمل الإنتاجية في الحالات الإنسانية الطارئة، وتتولى مجموعة متخصصة وواسعة من الأدوات، والتي لم يتم استخدامهم جماعاً في الماضي. ينبغي إعادة أدوات مختلقة ومهذبة ل içmi مشكلات الصحة في الداخل الأول من الحالات الإنسانية الطارئة، يُوصى باتباع نهج تقاضي Cluster (الجوار مع الباحثين التنفيذيين) وكولات المساعدة الإنسانية، والتسنيد من جانب منظمة الصحة العالمية.

الاستنتاج

استنتاج

نصيحة

نتائجنا هذه حاشية لاتباع سياسات عمل وطالعة جمع البيانات اللازمة التي تقوم على أساس تجارب العمل الإنتاجية في الحالات الإنسانية الطارئة، وتتولى مجموعة متخصصة وواسعة من الأدوات، والتي لم يتم استخدامهم جماعاً في الماضي. ينبغي إعادة أدوات مختلقة ومهذبة ل içmi مشكلات الصحة في الداخل الأول من الحالات الإنسانية الطارئة، يُوصى باتباع نهج تقاضي Cluster (الجوار مع الباحثين التنفيذيين) وكولات المساعدة الإنسانية، والتسنيد من جانب منظمة الصحة العالمية.

الاستنتاج

استنتاج

نصيحة

نتائجنا هذه حاشية لاتباع سياسات عمل وطالعة جمع البيانات اللازمة التي تقوم على أساس تجارب العمل الإنتاجية في الحالات الإنسانية الطارئة، وتتولى مجموعة متخصصة واس
Les outils de collecte de données sur la santé maternelle et infantile dans les situations d’urgence humanitaire: un examen systématique

Objectif Décrire les outils utilisés pour évaluer les problèmes en matière de santé maternelle et infantile dans les situations d'urgence humanitaire.

Méthodes Nous avons recherché de façon systématique, dans les bases de données Medline, Web of Knowledge et Popline, les études publiées entre janvier 2000 et juin 2014. Nous avons également fait des recherches sur les sites Internet d'organisations intervenant dans les situations d’urgence humanitaire. Nous avons inclus les études qui se rapportaient au développement ou à l’utilisation d’outils de collecte de données concernant la santé des femmes et des enfants dans des situations d'urgence humanitaire. Nous avons résumé ces études par une synthèse narrative.

Résultats Nous avons retenu 100 études; 80 portaient sur des situations de conflit et 20 faisaient suite à des catastrophes naturelles. La plupart de ces études (76/100) s'intéressaient à la situation sanitaire des populations affectées tandis que 24 d'entre elles s'intéressaient à la disponibilité de services de santé et à leur couverture. Sur 17 outils de collecte de données identifiés, 14 concernaient la santé sexuelle et génésique, neuf la santé de la mère, du nouveau-né et de l'enfant, et quatre servaient à recueillir des informations sur la violence sexuelle ou exercée à l'égard des femmes. Soixante-neuf études avaient été réalisées à des fins de suivi et d'évaluation, dix-huit de sensibilisation, sept pour la recherche opérationnelle et six pour évaluer les besoins.

Conclusion Des moyens pratiques et efficaces de collecte de données sont nécessaires pour orienter les actions permettant de préserver des vies humaines dans les situations d’urgence humanitaire. Il existe une grande variété d’outils disponibles, dont tous n'ont pas été employés sur le terrain. Il faudrait développer un outil simplifié et standardisé pour évaluer les problèmes sanitaires dès les premières phases des urgences humanitaires. Il est recommandé d’adopter une approche groupée, en partenariat avec les chercheurs opérationnels et les agences humanitaires, sous la coordination de l’Organisation mondiale de la Santé.

Instrumentos de recopilación de datos sobre la atención de salud materna e infantil en emergencias humanitarias: una revisión sistemática

Objetivo Describir las herramientas utilizadas para evaluar los problemas de salud materna e infantil en entornos de emergencias humanitarias.

Método Se realizaron búsquedas sistemáticas en las bases de datos de Medline, Web of Knowledge y Popline para encontrar estudios publicados entre enero de 2000 y junio de 2014. También se realizaron búsquedas en páginas web de organizaciones activas en emergencias humanitarias. Se incluyeron estudios que informaban sobre el desarrollo o el uso de herramientas de recopilación de datos relacionadas con la salud de las mujeres y los niños durante emergencias humanitarias. Se utilizó la síntesis narrativa para resumir los estudios.

Resultados Se identificaron 100 estudios; 80 informaban sobre situaciones de conflicto y 20 sobre desastres naturales. La mayoría de los
estudios (76/100) se centran en el estado de la salud de la población afectada, mientras que 24 lo hacían en la disponibilidad y cobertura de los servicios de salud. De las 17 herramientas de recopilación de datos diferentes identificadas, 14 se centran en la salud reproductiva y sexual, nueve tratan sobre salud maternal, neonatal e infantil y cuatro se utilizaban para recopilar información sobre violencia sexual o basada en el género. 69 estudios se habían realizado con fines de supervisión y evaluación, 18 para promoción, siete para investigaciones operacionales y seis para la evaluación de necesidades.

Conclusión Se necesitan medios prácticos y efectivos de recopilación de datos para informar de acciones para salvar vidas en emergencias humanitarias. Existe una amplia variedad de herramientas disponibles, y no todas se han utilizado en este campo. Se debería desarrollar una herramienta simplificada estándar para evaluar los problemas de salud en las primeras etapas de emergencias humanitarias. Se recomienda un enfoque por grupos en cooperación con investigadores operacionales y agenciashumanitarias, coordinados por la Organización Mundial de la Salud.
69. Mullany LC, Lee CI, Paw PW, Shwe Oo EK, Maung C, Kuiper H, et al. The MDM Project: delivering maternal health services among internally displaced populations. Sudan, Burma. Reprod Health Matters. 2006 May;16(31):44–56. doi: http://dx.doi.org/10.1016/S0968-8080(06)81341-X PMID: 16513606
70. Murray KO, Kilborn C, DesViges-Kendrick M, Koers E, Page V, Selwyn BJ, et al. Emerging disease syndromic surveillance for Hurricane Katrina evacuees seeking shelter in Houston's Astrodome and Reliant Park Complex. Public Health Rep. 2009 May-Jun;124(3):364–71. PMID: 19445411
71. Nichol ES, Talley LE, Bruniga N, McClellan AJ, Madura E, Chanda AB, et al. Suspected outbreak of riboflavin deficiency among populations reliant on food assistance: a case study of drought-stricken Karamoja, Uganda, 2009–2010. PLoS ONE. 2011;6(5):e19276. doi: http://dx.doi.org/10.1371/journal.pone.0019276 PMID: 21658790
72. Noes RS, Schnall AH, Wolkin AF, Podgornik MN, Wood AD, Spears J, et al. Disaster-related injuries and illnesses treated by American Red Cross disaster health services during Hurricanes Gustav and Ike. South Med J. 2011 Jan;104(1):102–8. doi: http://dx.doi.org/10.1097/SMJ.0b013e31819e7c1f PMID: 22363323
73. Nsoumi MJ, Taylor SN, Smith BS, Martin DH. Increases in gonorrhea among high school students following hurricane Katrina. Sex Transm Infect. 2009 Jun;85(3):194–6. doi: http://dx.doi.org/10.1136/sti.2008.031781 PMID: 19853385
74. Patel S, Schechter MT, Sewankambo NK, Atim S, Lakor S, Kiwanuka N, et al. War and HIV: sex and gender differences in risk behaviour among young men and women in post-conflict Gulu District, Northern Uganda. Glob Public Health. 2014;9(3):325–41. doi: http://dx.doi.org/10.1080/17441692.2014.887316 PMID: 24509099
75. Physicians for Human Rights, Harvard Humanitarian Initiative. Nowhere to turn: failure to protect, support and assure justice for Darfur women. Cambridge (MA): Physicians for Human Rights; 2009.
76. Ravindranath M, Venkaiak R, Koo MV, Arlapara N, Reddy CG, Rao KM, et al. Effect of drought on nutritional status of rural community in Karnataka. J Hum Ecol. 2005;18(3):245–52.
77. Emergency obstetric care: critical need among populations affected by conflict. New York: Reproductive Health Response in Conflict Consortium; 2004. Available from: http://reliefweb.int/sites/reliefweb.int/files/resources/BCGA/138057F8888C12356F00434314-RHRC_mar_2004.pdf [cited 2015 July 13].
78. Emergency obstetric care project impact report: reproductive health response in conflict context - April 2006. New York: Reproductive Health Response in Conflict Consortium; 2004.
79. Rodriguez SR, Tocci JS, Mallonee S, Smithlee L, Cathey T, Bradley K. Rapid assessment of maternal-child health in New York City and Madrid. J Urban Health. 2013 May-Jun;90(3):490–507. doi: http://dx.doi.org/10.1111/j.1460-2214.2010.01082.x PMID: 23516825
80. Salama P, Asessa F, Talley L, Spiegel P, van Der Veen A, Gotway CA. Malnutrition, measles, mortality, and the humanitarian response during a famine in Ethiopia. JAMA. 2001 Aug 1;286(5):563–71. doi: http://dx.doi.org/10.1001/jama.286.5.563 PMID: 11476658
81. Sawalha AF, Wright RO, Bellinger DC, Amarasiriwardean C, Abu-Taha AS, Talley L, et al. Development of a screening tool to identify female survivors of gender-trauma experience in a combat support hospital in eastern Afghanistan. Confl Health. 2013;7(1):13. doi: http://dx.doi.org/10.1371/journal.pone.0043144 PMID: 23758866
82. Sehgal K, Zwi AB, Belot S, Martins J, Martins N, Whealon A, et al. Conflict and development: challenges in responding to sexual and reproductive health needs in Timor-Leste. Reprod Health Matters. 2008 May;16(31):83–92. doi: http://dx.doi.org/10.1016/S0968-8080(08)31355-X PMID: 18513610
83. Shiner S, Sarmiento D, Blackmore C. Neonatal intensive care in a Karen refugee camp: a 4 year descriptive study. PLoS ONE. 2013;8(9):e72721. doi: http://dx.doi.org/10.1371/journal.pone.0072721 PMID: 23991145
84. Still in need: reproductive health care for Afghan refugees in Pakistan. New York: Women's Commission for Refugee Women and Children; 2010.
85. Talley LE, Boyd E. Challenges to the programmatic implementation of ready to use infant formula in the post-earthquake response, Haiti, 2010: a program review. PLoS ONE. 2015;10(3):e0123038. doi: http://dx.doi.org/10.1371/journal.pone.0123038 PMID: 25758886
86. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
87. Turner C, Carrara V, Aye Mya Thein N, Chit Mo Myo Win N, Turner P, Bancone G, et al. Neonatal intensive care in a Karen refugee camp: a 4 year descriptive study. PLoS ONE. 2013;8(9):e72721. doi: http://dx.doi.org/10.1371/journal.pone.0072721 PMID: 23991145
88. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
89. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
90. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
91. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
92. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
93. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
94. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
95. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
96. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
97. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
98. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
99. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
100. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
101. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
102. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
103. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
104. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
105. Tomczyk S, Goldberg H, Blanton C, Gabka R, Sayeede G, Warnah P, et al. Women's reproductive health in Liberia: the Loja County reproductive health survey. Atlanta: CDC; 2007.
| Author                        | Tools and methods                                                                 | Type of data collected by category                                                                 | Outcome (use of data collected)                                                                 | Setting (country – type of emergency if information available) | Populations included                                      | Publication type       |
|------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------|------------------------|
| Abdalla et al., 2008        | Cross-sectional survey; interviews and physical assessments                      | Maternal and neonatal health; Infant and child health                                              | Prevalence of malnutrition, cumulative incidence of diarrhoea and ARI and the feeding practices of mothers | Nepal – refugees from Bhutan                                     | 413 women of reproductive age and 497 children younger than five years | Not peer reviewed       |
| Abdeen et al., 2007          | Validated multistage clustered design using an interviewer-administered questionnaire and anthropometric measurements | Infant and child health Basic demography, feeding patterns, food availability, dietary intake and anthropometric measurements | Assessment of nutritional status of children aged 6 month to 5 years following food assistance | West Bank and Gaza strip – uprising                            | 3089 children younger than five years                        | Peer reviewed          |
| Abu Mourad et al., 2004      | Cross-sectional household survey                                                  | Infant and child health Data on socioeconomic, environmental health, hygiene, incidence of intestinal parasites and diarrhoea by age segregation | Causes of gastrointestinal illness in refugee camp                                              | West Bank and Gaza strip                                       | 1625 women of reproductive age                               | Peer reviewed          |
| Amowitz et al., 2002         | Cross-sectional randomized survey                                                 | SRH including GBV Physical and mental health perception, personal experiences on sexual assault and human rights abuse | Estimate of war and non-war sexual violence against Internally Displace Person and non-Internally Displaced women | Sierra Leone – IDP                                              | 991 women                                                    | Peer reviewed          |
| Annan et al., 2008           | Household surveys                                                                 | SRH including GBV Long-term effects of abduction, war violence, forced marriage and motherhood on young women and girls | Basis for advocacy to recognize the importance of the problem                                  | Uganda – protracted internal war                               | 619 young women and girls                                   | Not peer reviewed       |
| ARC International, 2003      | Baseline survey results compared with post-intervention survey                    | STI including HIV Knowledge, attitudes and behaviour regarding HIV/AIDS and other STIs before and after intervention | To formulate policy recommendations                                                              | Sierra Leone                                                   | 956 individuals                                              | Not peer reviewed       |
| Armony-Sivan et al., 2013    | Cross-sectional survey, interview-based study using regression analysis           | Maternal and neonatal health Maternal data on basic sociodemographics including ANC and PNC Maternal depression and anxiety | To examine the relationship between maternal stress in early pregnancy and cord-blood ferritin concentration | Southern Israel – post-emergency (after rocket attack during the military operation) | 140 pregnant women                                          | Peer reviewed          |
| Arques et al., 2013          | Cross-sectional, secondary data from a hospital                                   | Infant and child health Demographic, physical, microbiologic findings, treatment and outcomes of children | To analyse the results of clinical and microbiological characteristics of children treated in the hospital | Haiti – earthquake 2010                                      | 118 individuals, 53 children                                | Peer reviewed          |
| Author                  | Tools and methods                                                                 | Type of data collected by category                                                                 | Outcome (use of data collected)                                                                 | Setting (country – type of emergency if information available) | Populations included                                                                 | Publication type |
|------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------|
| Assefa et al., 2001    | Two-stage cluster household survey, standardized data collection tool              | Infant and child health, Weight for age data of children younger than five years, food coping mechanisms | Causes of crude and under 5 mortality rates and prevalence of malnutrition                      | Afghanistan – civil war and drought                             | 3165 individuals of which 41% (763) children younger than five years                | Peer reviewed   |
| Ayoya et al., 2013     | Daily data recording of attendees managed using standardized form                  | Maternal and neonatal health, Infant and child health, Feeding practices and anthropometric measurements | To evaluate methods and guidelines on implementation of baby tents to facilitate breast feeding following natural disasters | Haiti – earthquake                                              | 180 499 mother-infant pairs, 52 503 pregnant women                                  | Peer reviewed   |
| Baines, 2014           | Cross-sectional, qualitative data using FGD                                      | SRH including GBV, Perceptions of former commanders and wives on historical evolution of forced marriage | To highlight strategic use of sexual violence in political projects                             | Sudan – post-conflict                                           | 18 participants of which 15 are women                                              | Peer reviewed   |
| Balsara et al., 2010   | Interviewer-administered questionnaire, physical examination and lab tests        | SRH including GBV, Knowledge on RTIs and behavioural factors contributing to RTIs                 | Prevalence of RTI in Afghan refugee women                                                      | Pakistan – refugee camps                                        | 634 women of reproductive age                                                      | Peer reviewed   |
| Bartels et al., 2010   | Retrospective review of medical records using non-systematic convenience sample; semi-structured interviews with an open self-reporting interview | SRH including GBV, Physical and psychological consequences of sexual violence                     | To describe the demographics and define both physical and psychosocial consequences of sexual violence | Democratic Republic of the Congo – ongoing prolonged conflict | 1021 women of which 82.7% are women of reproductive age                              | Peer reviewed   |
| Bartels et al., 2013   | Retrospective analysis of secondary data                                          | SRH including GBV, Perpetrator profiles, attack characteristics including type and location of sexual violence | To describe the patterns of sexual violence described by the survived victims and analyze perpetrator profiles | Democratic Republic of the Congo – post conflict               | NA                                                                                 | Peer reviewed   |
| Bbaale, 2011           | Two-stage cluster using Uganda Demographic and Health Survey (2006)               | Infant and child health, Prevalence of diarrhoea and ARI                                         | Factors associated with occurrence of diarrhoea and incidence of ARI in children younger than five years | Uganda – IDP camps                                              | NA                                                                                 | Peer reviewed   |
| Bbaale & Guloba, 2011  | Two-stage cluster using Uganda Demographic and Health Survey (2006)               | Maternal and neonatal health, Infant and child health, Factors (maternal education, community infrastructure, occupation, location, wealth, religion and age) associated with utilization of professional childbirth care | To improve uptake of skilled care at birth                                                       | Uganda – IDP camps                                              | NA                                                                                 | Peer reviewed   |
| Beatty et al., 2001    | Interviews with IDP and health staff; no specific tool described                  | SRH including GBV, Maternal and neonatal health, STI including HIV, RH needs and services available | To assess the RH needs and RH services available                                               | Angola – IDP in civil war                                       | NA                                                                                 | Not peer reviewed|

(continues...)
| Author          | Tools and methods                                                                 | Type of data collected by category | Outcome (use of data collected)                                                                 | Setting (country – type of emergency if information available)                  | Populations included          | Publication type |
|-----------------|-----------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------|-----------------|
| Bilukha et al., 2007 | Victim data collection, demographics and standard international management system for mine action data collection form | Infant and child health           | Rates of injury from landmines in civilians                                                   | Chechnya, Russia – armed conflict                                                 | NA                            | Peer reviewed   |
| Bismwa et al., 2009  | Community based child nutritional monitoring, physical assessment                  | Infant and child health           | Assessment of effectiveness of monitoring the growth of preschool children from a cohort of endemic malnutrition | Democratic Republic of the Congo – armed conflict                               | 5479 children younger than five years | Peer reviewed   |
| Brown et al., 2010   | Population based study, laboratory tests and demographic data                       | Infant and child health           | Association between lead poisoning prevention activities and blood lead levels among children | Serbia – IDP camp                                                                  | 145 children                  | Peer reviewed   |
| Burns et al., 2012   | Clinical questionnaire based on the integrated management of childhood illness      | Infant and child health           | Development of a novel tool to control malaria in an emergency setting                         | Sierra Leone – refugee camp                                                      | 222 children aged 4–36 months | Peer reviewed   |
| Callands et al., 2013 | Secondary data analysis of DHS data                                                | SRH including GBV                 | To identify the relationship between STIs and negotiation for sexual safety with intimate partners among young women | Liberia – post-conflict                                                        | NA                            | Peer reviewed   |
| Casey et al., 2009   | Facility assessments, interviews, observation and clinical record review            | Maternal and neonatal health      | To determine availability, utilization and quality of emergency obstetric care and family planning services to avert death and disability | Democratic Republic of the Congo – conflict                                    | NA                            | Peer reviewed   |
| Casey et al., 2013   | Population based baseline and end-line surveys; CDC’s Reproductive health assessment toolkit for conflict | SRH including GBV                 | To evaluate the effectiveness of provision of long acting family planning methods both in mobile clinic and health centres | Northern Uganda                                                                    | 1778 women of reproductive age | Peer reviewed   |
| CDC, 2001          | Three-stage cluster sample design; interview and physical assessments               | Infant and child health           | Determination of causes of malnutrition (acute and chronic)                                    | Mongolia – severe winter weather                                                  | 937 children aged between 6–59 months | Not peer reviewed |
| D’Errico et al., 2013 | Semi-structured interviews from 16 locations from male and female respondents       | SRH including GBV, Maternal and neonatal health | Some understanding of social determinants of health                                            | Four eastern provinces of Democratic Republic of the Congo                          | 121 respondents               | Peer reviewed   |
| Author                  | Tools and methods                        | Type of data collected by category                          | Outcome (use of data collected)                                                                 | Setting (country – type of emergency if information available) | Populations included | Publication type |
|------------------------|------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|----------------------|------------------|
| Doocy et al., 2009     | Two-stage cluster design, survey         | Maternal and neonatal health; Infant and child health       | Information on pre- and post-tsunami household composition, including deaths and injuries   | Indonesia – tsunami                                           | NA                   | Peer reviewed    |
| Dossa et al., 2013     | Cross-sectional population-based study   | SRH including GBV, STI including HIV, Fistula, chronic pelvic pain, desire for sex and desire for children | To investigate the relationship between sexual violence and serious RTIs including fistula | Democratic Republic of the Congo – post-conflict               | 7935 individuals     | Peer reviewed    |
| Dua et al., 2013       | Retrospective analysis using data from military hospitals in Baghdad | Infant and child health Demographic and physiologic data on paediatric vascular injuries | To describe the experience of paediatric vascular injuries in a military combat support hospital | Iraq – post conflict                                          | 320 females          | Peer reviewed    |
| Edwards et al., 2013   | Cross-sectional analysis of hospitals admission databases | Infant and child health % of children required transfusion, location of injury, length of hospital stay and in-hospital mortality | To define the scope of combat and noncombat-related inpatient paediatric humanitarian care provided by the military of the USA | Afghanistan and Iraq – post-conflicts                         | NA                   | Peer reviewed    |
| Edhag et al., 2013     | Cross-sectional analysis using clinical data | Infant and child health Clinical history, sociodemographic characteristics, physical examination and laboratory tests of diarrhoea among children | To determine prevalence of rotavirus and adenovirus associated diarrhoea | Sudan – IDP                                                    | NA                   | Peer reviewed    |
| Falb et al., 2014      | Cross-sectional interview-based survey   | SRH including GBV, Maternal and neonatal health Frequencies of pregnancy complications, violence, conflict victimization | To guide maternal health programmatic efforts among refugee women | Border between Myanmar and Thailand – refugee camps             | 710 individuals (330 children younger than five years) | Peer reviewed    |
| Feseha et al., 2012    | Community-based cross-sectional study    | SRH including GBV, Maternal and neonatal health Physical violence for two timeframes: 12 months preceding interview; any time during the woman’s life since she started relationship with the current partner. Data from pregnant women also included | Prevalence of physical violence | Northern Ethiopia                                               | 1223 women of reproductive age                                  | Peer reviewed    |
| Ghazi et al., 2013     | Cross-sectional self-administered questionnaire | Infant and child health Anthropometric measurements and family social factors | Identified factors associated with child malnutrition | Iraq – conflict                                               | 220 children aged between 3–5 years                            | Peer reviewed    |

(continues . . )
| Author                | Tools and methods                                                                 | Type of data collected by category                                                                 | Outcome (use of data collected)                                                                 | Setting (country – type of emergency if information available) | Populations included | Publication type |
|-----------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------|------------------|
| Gitau et al., 2005    | Longitudinal cohort study, standardized questionnaire, physical examination and laboratory tests | Maternal and neonatal health, Infant and child health, Vitamin A during pregnancy, Vitamin E post-partum, maternal weight and haemoglobin; infant length and weight | Effects of drought on maternal and infant health                                                   | Zambia – drought and famine                                                                       | 429 women of reproductive age | Peer reviewed   |
| Gordon & Halileh, 2013 | Cross-sectional survey using WHO child growth standards                           | Infant and child health, Anthropometric measurements; birth weight; breastfeeding practice, family and household social factors | Identified factors associated with child stunting                                                  | West Bank and Gaza strip – conflict                                                               | 9051 children younger than five years | Peer reviewed   |
| Guenier et al., 2009  | Two stage cluster survey                                                          | Infant and child health, Anthropometric indices and measles vaccination history                  | Crude mortality rate, under-five mortality rate, prevalence of wasting and vaccination status among children aged between 6 months and 5 years | Eastern Chad – IDP                                                                                  | 80 300 individuals    | Peer reviewed   |
| Hapsari et al., 2009  | Community based surveys                                                           | SRH including GBV, Access to contraception, change in contraceptive methods before and after the earthquake, prevalence of unplanned pregnancy | To plan for effective family planning coverage                                                   | Indonesia – earthquake                                                                             | 450 women of reproductive age | Peer reviewed   |
| Helweg-Larsen et al., 2004 | Data collection from medical records using ICD-10 and International Classification of External Causes of Injuries | Infant and child health, Intent, mechanism, means, context and place of intentional injuries among children, relationship with perpetrator | To evaluate the combination of ICD-10 and International Classification of External Causes of Injuries, to test the feasibility of a systematic documentation of public health consequences of such conflicts | West Bank and Gaza strip – uprising                                                                 | NA                  | Peer reviewed   |
| Hossain et al., 2009  | Cross-sectional household survey using clusters; No information provided for tool | Infant and child health, Prevalence of acute malnutrition in children                            | To identify the relationship between food aid and nutritional status                              | Pakistan – earthquake                                                                               | 1114 children aged between 6 and 59 months | Peer reviewed   |
| Hudson et al., 2010   | Semi-structured questionnaire containing quantitative and open-ended questions    | SRH including GBV, Maternal and neonatal health, STI including HIV; Access to medical care, access to care during pregnancy and childbirth, access to food, water, and hygiene facilities, perception of personal safety | Needs assessment                                                                                 | Haiti – post earthquake with long-term political instability, IDP camp                             | 64 women of reproductive age   | Not peer reviewed |
| IRC et al., 2003      | Interview questionnaire                                                           | SRH including GBV, Demographic characteristics of women                                         | To estimate the prevalence of GBV in women and the consequences of such violence on mental, sexual and RH | Colombia – IDP from internal conflict                                                              | NA                  | Not peer reviewed |
| Author | Tools and methods | Type of data collected by category | Outcome (use of data collected) | Setting (country – type of emergency if information available) | Populations included | Publication type |
|--------|-------------------|-----------------------------------|--------------------------------|---------------------------------------------------------------|---------------------|-----------------|
| Jayatissa et al., 2006 | Cross-sectional, two-stage cluster, rapid assessment nutrition survey, interviewer administered questionnaire, anthropometrics, FGDs and KII | Maternal and neonatal health; Infant and child health Prevalence of acute and chronic malnutrition in children and under-nutrition among pregnant and lactating women | For policy recommendation regarding setting up of nutritional surveillance systems | Sri Lanka – 42 tsunami relief camps | 875 children younger than five years; 168 pregnant women, 97 lactating women | Peer reviewed |
| JSI Research & Training Institute, 2002 | Questions from reproductive health response in crises and refugee reproductive health needs assessment field tools used in group discussions | SRH including GBV; Maternal and neonatal health; STI including HIV Status and availability of services regarding safe motherhood, family planning, SGBV, adolescent sexual and reproductive health, STIs/HIV | To assess the RH needs and RH services | Democratic Republic of the Congo – IDP population in civil war | NA | Not peer reviewed |
| JSI Research & Training Institute, 2009 | Interviews and in-depth discussions with snowball sampling, no specific tools described | SRH including GBV; Maternal and neonatal health; STI including HIV Accessibility and availability of services regarding safe motherhood, family planning, SGBV, STIs/HIV | To identify gaps in the availability and accessibility of comprehensive RH services | Haiti – hurricanes | NA | Not peer reviewed |
| Krause et al., 2003 | Reproductive health response in crises Reproductive Health assessment toolkit | SRH including GBV; Maternal and neonatal health; STI including HIV MISP services availability (sexual and gender based violence, family planning, safe motherhood, STI/HIV) | Data used for formulating policy recommendations | Colombia | 363 individuals | Not peer reviewed |
| Khalidi et al., 2004 | Standardized questionnaire based on verbal autopsy formats; prospective monitoring of pregnant women and newborns from randomly selected clusters | Maternal and neonatal health Causes of neonatal and perinatal deaths, neonatal and perinatal mortality rates, including still births | To identify risk factors for perinatal deaths | West Bank and Gaza strip – uprising | 926 women of reproductive age | Peer reviewed |
| Kottegoda et al., 2008 | Interviews and structured questionnaire | SRH including GBV Knowledge, attitudes and practice of domestic violence recognition, management and prevention | Recommendations for the next steps of the project aimed at better understanding factors related to the severity of the domestic violence problem | Lebanon – refugee camps | 2018 individuals | Not peer reviewed |
| JSI Research & Training Institute, 2002 | Questions from reproductive health response in crises and refugee reproductive health needs assessment field tools used in group discussions | SRH including GBV; Maternal and neonatal health; STI including HIV Status and availability of services regarding safe motherhood, family planning, SGBV, adolescent sexual and reproductive health, STIs/HIV | To assess the RH needs and RH services | Democratic Republic of the Congo – IDP population in civil war | NA | Not peer reviewed |
| JSI Research & Training Institute, 2009 | Interviews and in-depth discussions with snowball sampling, no specific tools described | SRH including GBV; Maternal and neonatal health; STI including HIV Accessibility and availability of services regarding safe motherhood, family planning, SGBV, STIs/HIV | To identify gaps in the availability and accessibility of comprehensive RH services | Haiti – hurricanes | NA | Not peer reviewed |
| Krause et al., 2003 | Reproductive health response in crises Reproductive Health assessment toolkit | SRH including GBV; Maternal and neonatal health; STI including HIV MISP services availability (sexual and gender based violence, family planning, safe motherhood, STI/HIV) | Data used for formulating policy recommendations | Colombia | 363 individuals | Not peer reviewed |
| Author                        | Tools and methods                                                                 | Type of data collected by category                                                                 | Outcome (use of data collected)                                                                 | Setting (country – type of emergency if information available)                                                                 | Populations included                  | Publication type   |
|-------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------|
| Krause et al., 2011<sup>60</sup> | MISP assessment using reproductive health response in crises toolkit               | SRH including GBV; Maternal and neonatal health; STI including HIV                                  | Assessment on effectiveness of SRH service delivery                                               | Haiti – post-earthquake with long-term political instability                                                                      | Not peer reviewed                      |                   |
| Lederman et al., 2008<sup>61</sup> | Interview; material hardship scale                                                 | Maternal and neonatal health data on maternal medical, obstetrics; birth weight, heights; head circumference and gestational duration | Relationship of perceived air pollution and modelled air pollution to maternal characteristics and birth outcomes | USA – 400 different locations                                                                                                    | NA                                     | Peer reviewed      |
| Lee, 2008<sup>62</sup>          | KII with health care professionals from NGO and government facilities             | SRH including GBV; Maternal and neonatal health                                                  | To explore the availability of services provided in long-standing internal conflict               | Maguindanao, Philippines                                                                                                        | 8 individuals                         | Peer reviewed      |
| Longombe et al., 2008<sup>63</sup> | Review of hospital records of victims of sexual violence                           | SRH including GBV; including HIV; Prevalence of fistula, sexually transmitted diseases            | Basis for formulating policy recommendations to develop a coordinated efforts among key stakeholders | Democratic Republic of the Congo – armed conflict and post conflict                                                             | 7 survivors                           | Peer reviewed      |
| Mason et al., 2005<sup>64</sup>  | Child anthropometry and survey with two-stage cluster sampling                    | Maternal and neonatal health; Infant and child health                                            | Results of child malnutrition in six countries in southern Africa                                | Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe – severe drought                                                    | NA                                     | Peer reviewed      |
| Mateen et al., 2012<sup>65</sup> | Data collected from the United Nations refugee assistance information system, ICD-10 | Infant and child health Common neurological disorders                                          | Diagnosis of common neurological disorders in refugees (men and women)                             | Jordan – refugees from Iraq                                                                                                      | 31 476 individuals                    | Peer reviewed      |
| Mateen et al., 2012<sup>66</sup> | Data collected from the United Nations refugee assistance information system      | Maternal and neonatal health; Infant and child health                                          | Determining the range infections and burden of health services use among adults and children (0–17 years) | Jordan – refugees from Iraq                                                                                                      | 7642 individuals                     | Peer reviewed      |
| McGinn et al., 2001<sup>67</sup> | Interviews and self-administered questionnaires                                   | SRH including GBV; Acceptance of contraceptive methods by women; FP policies and management systems from organizations | Six specific recommendations were formulated                                                    | Pakistan – Afghan refugee camps                                                                                                 | NA                                     | Not peer reviewed  |

(continues...)
| Author                      | Tools and methods                                                                 | Type of data collected by category | Outcome (use of data collected)                                                                 | Setting (country – type of emergency if information available) | Populations included    | Publication type |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------|------------------------|-------------------|
| Minetti et al., 2009(68)    | Medecins Sans Frontieres programme monitoring data (medical records), physical examination | Infant and child health          | Evaluation of the change from National Center for Health Statistics to WHO 2006 growth standards children (6m-5y). Led to identification of a larger number of malnourished children at an earlier stage | Niger – severe malnutrition                                      | NA                     | Peer reviewed     |
| Mullany et al., 2008(69)    | Population-based; cluster-sample surveys, FGDs, pregnancy records                 | SRH including GBV, Maternal and neonatal health; Infant and child health | Monitoring and evaluation of MOM project in delivering maternal health services by qualitative and quantitative methods | Myanmar – IDP and conflict                                     | 59,042 individuals     | Peer reviewed     |
| Murray et al., 2009(70)     | Study specific rapid health assessment tool (included), interviews                | Infant and child health          | To identify potential disease outbreaks                                                   | USA – hurricane                                                  | 29,478 individuals     | Peer reviewed     |
| Nichols et al., 2013(71)    | Rapid assessment, mass screening, and convenience sample                           | Infant and child health          | To provide guidelines for monitoring micronutrient deficiency in adults and children receiving food assistance | Uganda – drought                                                 | 179,172 individuals    | Peer reviewed     |
| Noe et al., 2013(72)        | Retrospective aggregate of routine data collection, including the disaster health services aggregate morbidity report form | Maternal and neonatal health, Infant and child health | To identify health care delivery needs during a relief operation                           | USA – hurricane                                                  | 3863 individuals       | Peer reviewed     |
| Nsasu et al., 2013(73)      | Cross-sectional, survey                                                          | STI including HIV                | Prevalence of gonorrhoea and chlamydia before and after hurricane with the suggestion for STI screening immediately after natural disasters | USA – hurricane                                                  | 679 individuals         | Peer reviewed     |
| Patel et al., 2014(74)      | Cross-sectional demographic and behavioural survey                               | STI including HIV testing, sexual behaviour | Identified risk factors for HIV infection                                                 | Uganda – post-conflict transit camp                              | 384 adolescents         | Peer reviewed     |
| Physicians for Human Rights, 2009(75) | Quantitative and qualitative data from a non-probability sample, questionnaire, physical and psychological evaluation, interviews with stakeholders | SRH including GBV                | Provide insight into the experiences and suffering and provided a basis for recommendations | Border between Chad and Sudan – refugee camps                    | 88 women                | Not peer reviewed |
| Ravindranath et al., 2005(76) | Household survey using cluster sampling, anthropometry and physical examination | Infant and child health          | Assessment of nutritional status of community during drought and also evaluation of coping mechanisms by the intake of food and nutrient intakes | India – severe drought                                           | NA                     | Peer reviewed     |

(continues...)
| Author          | Tools and methods                                                                 | Type of data collected by category | Outcome (use of data collected)                                                                 | Setting (country – type of information available) | Populations included | Publication type |
|-----------------|------------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------|------------------|
| RHRC, 2004 AMDD | Facility assessment; AMDD tool                                                    | Maternal and neonatal health       | To establish and improve basic and comprehensive emergency obstetric care services             | Bosnia and Herzegovina, Kenya, Liberia, Pakistan, Sierra Leone, Sudan, Tanzania, Thailand and Uganda | NA                   | Not peer reviewed |
| RHRC, 2006 AMDD Program | Facility assessment; AMDD tool                                           | Maternal and neonatal health       | Monitoring and evaluation of basic emergency obstetric care at the health centre level and comprehensive emergency obstetric care at the hospital level was carried out to review emergency obstetric care delivery protocols | Bosnia and Herzegovina, Kenya, Liberia, Pakistan, Sierra Leone, Sudan, Tanzania, Thailand and Uganda | NA                   | Not peer reviewed |
| Rodriguez et al., 2006 | Survey using study specific questionnaire modelled after previous post-disaster surveys (EpiInfo3.2.2) | Maternal and neonatal health       | To determine medical and social needs to allocate resources                                    | USA – post-hurricane                              | 371 individuals       | Peer reviewed     |
| Saile et al., 2013 | Survey; structured interviews, standardized questionnaires, composite abuse scale, violence, war and abduction exposure scale, posttraumatic diagnostic scale, depression – Hopkins symptom checklist, alcohol use disorder identification test | Maternal and neonatal health       | Described partner abuse and predictor variables                                               | Uganda – post-conflict                             | 470 individuals       | Peer reviewed     |
| Salama et al., 2001 | Two-stage cluster survey, standardized questionnaire                             | Maternal and neonatal health       | To estimate major causes of deaths and prevalence of malnutrition among children and adults       | Ethiopia – famine                                   | 4032 individuals      | Peer reviewed     |
| Sawalha et al., 2013 | Cross-sectional survey; sociodemographic questionnaire, laboratory test          | Maternal and neonatal health       | Assessed blood lead levels                                                                     | West Bank and Gaza strip – refugee camp           | 178 children aged 6–8 years | Peer reviewed     |
| Sherrieb & Norris, 2012 | Review of birth outcomes pre- and post-event                                      | Maternal and neonatal health       | Impact of terrorist attacks on population health                                                 | USA – terrorist attack                             | NA                   | Peer reviewed     |

(continues...)
| Author                  | Tools and methods                                                                 | Type of data collected by category                                                                 | Outcome (use of data collected)                                                                 | Setting (country – type of emergency if information available)            | Populations included         | Publication type |
|------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------|-----------------|
| Spiegel et al., 2014   | Surveillance survey; descriptive data analysis, multivariable logistic regression | Maternal and neonatal health<br>Social history and behaviour, HIV knowledge and testing, refugee type and length, interaction between groups | Identified factors independently associated with multiple sexual partnerships                  | Botswana, Kenya, Mozambique, Nepal, Rwanda, South Sudan, Sudan, Tanzania, Uganda – refugees | 24,219 individuals     | Peer reviewed   |
| Sullivan et al., 2004  | Adapted reproductive health response in crises Reproductive health needs assessment field tools | Maternal and neonatal health<br>Data on catchment area, SRH service availability and coverage including staffing, equipment and supplies, client perception | To improve RH and building clinic capacity in monitoring and evaluation                         | Border between Myanmar and Thailand – illegal immigrant workers and IDPs | 462 women                        | Peer reviewed   |
| Talley & Boyd 2013     | Retrospective record review; standardized, study specific, data collection tool   | Maternal and neonatal health<br>Demographics, admission criteria, primary caretaker, infant feeding practices, anthropometrics | Evaluation of infant feeding programme                                                        | Haiti – earthquake                                                        | 493 infants                       | Peer reviewed   |
| Talley & Boyd 2013     | Analysis of birth records                                                         | Maternal and neonatal health<br>Birth weight, APGAR score, pre- and post-event                   | Effects of earthquake on birth outcomes                                                        | China – earthquake                                                        | 13,003 neonates                   | Peer reviewed   |
| Tappis H et al., 2012  | Secondary data analysis of UNHCR Twine database                                    | Infant and child health<br>Growth and nutrition data on the refugee camp population              | Effectiveness of the coverage of UNHCR supplementary and therapeutic feeding programmes for the malnourished children | Kenya and Tanzania – refugees                                           | 39,899 children younger than five years | Peer reviewed   |
| Teela et al., 2009     | FGDs and detailed case studies with maternal health workers; no specific tools described | 11=SRH including GBV,<br>2=Maternal and neonatal health<br>Characteristics of maternal health workers in conflict settings, their efforts on community mobilization, provision of emergency obstetric care and technical competence, security and logistical constraints, programme successes | To complement project quantitative information and provide contextual information of the community maternal health workers’ challenges in implementation | Eastern Myanmar – conflict                                                   | 41 health workers                       | Peer reviewed   |
| Tomczyk et al., 2007   | Population-based survey of a sample of 36 primary sampling units; CDC RH assessment toolkit | SRH including GBV, Maternal and neonatal health<br>STI including HIV<br>Social background, maternal health, contraception, violence, HIV/AIDS knowledge, attitudes, and risk behaviours | Policy recommendations regarding continuous funding when traditional humanitarian aid is limited or withdrawn | Liberia – post-protracted armed conflict and transitional years                   | 907 women of reproductive age | Not peer reviewed |
| Turner et al., 2013    | Informal staff interviews                                                          | Infant and child health<br>Admission diagnosis and characteristics, treatment provided           | Impact of introduction of special care baby unit on refugee population                         | Myanmar – refugees                                                       | 952 infants                       | Peer reviewed   |
| Author | Tools and methods | Type of data collected by category | Outcome (use of data collected) | Setting (country – type of emergency if information available) | Populations included | Publication type |
|--------|-------------------|-----------------------------------|---------------------------------|---------------------------------------------------------------|----------------------|-----------------|
| Turner et al., 2013 | Laboratory-enhanced, hospital-based surveillance; Patient interview, record review | Infant and child health Patient symptoms, nasopharyngeal aspirates, pyrexia, respiration rate | Characterization of the epidemiology of respiratory virus infections in refugees | Border between Myanmar and Thailand – refugees | 635 children younger than five years and 68 children older than 5 years | Peer reviewed |
| UNHCR et al., 2011 | Health facility assessment, IDIs, FGDs and household surveys; CDC RH assessment tool | SRH including GBV Knowledge, beliefs, perceptions and practices surrounding family planning | To improve programming and subsequently increase uptake of good quality family planning services | Kenya – refugees from Somalia | NA | Not peer reviewed |
| UNHCR et al., 2011 | Health facility assessment, IDIs, FGDs and household surveys; CDC RH assessment tool | SRH including GBV Knowledge, beliefs, perceptions and practices surrounding family planning | To improve programming and subsequently increase uptake of good quality family planning services | Jordan – refugees from Iraq | NA | Not peer reviewed |
| UNHCR et al., 2011 | Health facility assessment, IDIs, FGDs and household surveys; CDC RH assessment tool | SRH including GBV Knowledge, beliefs, perceptions and practices surrounding family planning, the state of service provision | To improve programming and subsequently increase uptake of good quality family planning services | Djibouti – refugees from Somalia | NA | Not peer reviewed |
| UNHCR et al., 2011 | Health facility assessment, in-depth interviews, focus group discussions and household survey; CDC RH assessment tool | SRH including GBV Knowledge, beliefs, perceptions and practices surrounding family planning, the state of service provision | To improve programming and subsequently increase uptake of good quality family planning services | Uganda – refugees from the Democratic Republic of Congo | NA | Not peer reviewed |
| UNHCR et al., 2011 | Health facility assessment, in-depth interviews, focus group discussions and household survey; CDC RH assessment tool | SRH including GBV Knowledge, beliefs, perceptions and practices surrounding family planning, the state of service provision | To improve programming and subsequently increase uptake of good quality family planning services | Malaysia – refugees from Myanmar | NA | Not peer reviewed |
| Usta et al., 2010 | The international child abuse screening tool (International Society for the Prevention of Child Abuse and Neglect (IPSCAN-2007) was translated from English into Arabic | SRH including GBV Child sexual abuse pre and post-conflict | The prevalence, risk factors and consequences of child sexual abuse in Lebanese children | Lebanon | 1028 children aged between 8–17 years | Peer reviewed |
| Wainstock et al., 2013 | Retrospective cohort study; Interviews | Maternal and neonatal health sociodemographics, smoking, perceived stress, clinical data from hospital records | Evaluation of the association between prenatal maternal stress and preterm birth and low-birth weight | Israel – conflict (rocket attacks) | 125 women | Peer reviewed |
### Author

| Author | Tools and methods | Type of data collected by category | Outcome (use of data collected) | Setting (country – type of emergency if information available) | Populations included | Publication type |
|--------|-------------------|-----------------------------------|--------------------------------|---------------------------------------------------------------|---------------------|-----------------|
| Ward, 2002<sup>100</sup> | Interviews with IDP and actors; no specific tools described | SRH including GBV; Overview of GBV findings globally | To inform of services available and programming gaps relating to gender based violence in conflict-affected populations | Border between Afghanistan and Pakistan, Azerbaijan, Bosnia and Herzegovina Democratic Republic of the Congo, border between Myanmar and Thailand, Rwanda, Sierra Leone, Timor Leste, – conflict affected populations | NA | Not peer reviewed |
| Wayte et al., 2008<sup>101</sup> | IDI, service statistics and document review; No specific tool described | SRH including GBV; Maternal and neonatal health; STI including HIV | Overview of GBV findings globally | Overview of GBV findings globally | Timor Leste | 35 individuals | Peer reviewed |
| Wilson et al., 2013<sup>102</sup> | Retrospective review of paediatric registry records | Infant and child health Demographics, mechanism of injury, clinical and laboratory data, diagnostic and surgical procedures, complications and outcomes | Review of paediatric trauma in a combat support hospital | Afghanistan – conflict | 41 children aged between 1–18 years | Peer reviewed |
| Wirtz et al., 2013<sup>103</sup> | IDIs, FGDs | SRH including GBV; Prevalence of GBV, physical and psychological consequences of GBV | To inform the development of a screening tool as a potential strategy for addressing GBV | Ethiopia – refugees from Somalia, post-conflict | 144 individuals | Peer reviewed |
| Women’s Commission, 2002<sup>104</sup> | Reproductive health needs assessment field tools | SRH including GBV; Maternal and neonatal health; STI including HIV Status and availability of services regarding safe motherhood, family planning, SGBV, adolescent SRH, STIs/HIV | To assess RH | Zambia – civil war refugees from Angola and Democratic Republic of Congo | NA | Not peer reviewed |
| Women’s Commission, 2003<sup>105</sup> | Based upon RHRC toolkit | SRH including GBV; Maternal and neonatal health; STI including HIV Family planning, SGBV, Adolescent SRH, safe motherhood, STI, HIV; Availability of instructional resource materials | Data for policy recommendations and to identify their problems in assessing the services | Pakistan – Refugees from Afghanistan | NA | Not peer reviewed |

(continues...)
| Author | Tools and methods | Type of data collected by category | Outcome (use of data collected) | Setting (country – type of emergency if information available) | Populations included | Publication type |
|--------|-------------------|----------------------------------|---------------------------------|-------------------------------------------------------------|---------------------|-----------------|
| Women's Commission, UNFPA, 2004<sup>10</sup> | Semi-structured interview, FGD, and health facility assessment; MISP assessment tool kit | SRH including GBV; Maternal and neonatal health; STI including HIV Status and availability of services under MISP; Coordination among RH service providers | To evaluate the implementation of the MISP and the use of RH kits | Chad – refugees from South Sudan | 108 individuals | Not peer reviewed |
| Women's Commission, 2005<sup>10</sup> | Cross sectional interviews and FGD, No specific tools described | SRH including GBV; Maternal and neonatal health; STI including HIV Status and availability of services under MISP; Coordination among RH service providers | To assess the implementation of MISP activities, and the agency staffs’ understanding of MISP | Indonesia – tsunami | 77 individuals | Not peer reviewed |
| Women's Commission, 2007<sup>10</sup> | Structured interviews, meetings with representatives of local and international NGOs, 10 focus groups with displaced persons; visits to local facilities | SRH including GBV; Maternal and neonatal health; STI including HIV Service availability and use in family planning, SGBV, safe motherhood, STIs and HIV/AIDS | Basis for formulating recommendations regarding: funding, coordination, staffing, training, RH equipment and supplies, safe motherhood, FM, STIs and GBV | Northern Uganda – protracted civil war | 140 females and youths | Not peer reviewed |
| Women's Commission, 2008<sup>10</sup> | Cross sectional interviews, FGD and observations: MISP | SRH including GBV; Maternal and neonatal health; STI including HIV Sexual violence, HIV, maternal and newborn morbidity and mortality | The purpose of the assessment was to examine the degree of implementation of the MISP for RH | Kenya | 139 individuals | Not peer reviewed |
| Women's Wellness Centre & RHRC, 2006<sup>10</sup> | Household survey of women of reproductive age | SRH including GBV; Estimates of sexual and physical violence prevalence | Data obtained used for formulating policy recommendations | Nine villages in Peja region, Serbia – conflict, displacement and post-conflict setting | 332 women of reproductive age | Not peer reviewed |

AMOD: Averting Maternal Death and Disability, ANC: Antenatal Care, ARI: Acute Respiratory Infection, BMI: Body Mass Index, CDC: Centers for Disease Control, FGD: Focus Group Discussions, FP: Family Planning, GBV: Gender Based Violence, HIV: Human Immunodeficiency Virus, ICD-10: International Classification of Diseases 10th edition, IDI: In-depth Interview, IDP: Internally Displace People, IPV: Intimate Partner Violence, KII: Key Informant Interviews, M&E: Monitoring and Evaluation, MISP: Minimum Initial Service Package, NA: not available, NGO: Nongovernmental organizations, PNC: Postnatal care, RH: Reproductive Health, RHRC: Reproductive Health Response in Crises Consortium, RTI: Reproductive Tract Infections, SGBV: Sexual and Gender Based Violence, SRH: Sexual and Reproductive Health, STI: Sexually Transmitted Infection, U5: Under five years of age.