

Conflict as a Social Determinant of
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Abbreviations SDOH- Social Determinants of Health; CDM- Conflict Determinant Model; SES- Socio-Economic Status; WHO- World Health Organization; M&E- Monitoring and Evaluation

Abstract

The limited number of tools and resources available to guide emergency response in conflict settings is particularly grim. In order to improve response in areas impacted by emergencies, responders need new frameworks to guide the inclusion of wider macro-level determinants such as conflict throughout the program cycle. The Conflict Determinant Model (CDM) provides a theoretical base for emergency responders, public health professionals, and social scientists to include the social determinants of health in their programming and for analysis of the impact of conflict on health status. By considering conflict as a macro-level determinant of health, responders and agencies can design high quality contextually relevant programming that identifies and responds to the wider social inequalities that create conflict. We propose five uses of the CDM: Health disparity analysis, community engagement, program design, impact measurement, and monitoring and evaluation tool development. When applied in the program cycle for emergency programs, CDM improves the understanding, application, and analysis of conflict as a determinant of health. CDM informs the evidence base needed for effective and efficient response in conflict settings.

Introduction

Health inequality exists in this world, across, within, and between every society and in every State. These inequalities manifest themselves in a number of ways, including but not limited to malnutrition levels, chronic diseases such as diabetes, access to fresh foods, rates of incarceration, and exposure to environmental hazards. There is an association between a lower Socio-Economic Status (SES) of a person, and worsening health outcomes and status [1]. This is the central tenet of the study of the Social Determinants of Health (SDOH). According to the World Health Organization (WHO), these health inequalities are “avoidable inequalities in health...” [2].

Conflict exacerbates existing health inequalities [3]. In 2014, the war in Syria was the single largest driver of displacement. In 2015, the United Nations High Commissioner for Refugees (UNHCR) projects more than 60 million people will be forcibly displaced [4]. With conflict causing widespread displacements and occurring frequently, there is an urgent need for an evidence-base for emergency response. A framework is needed that will guide analysis of health disparities in conflict contexts and be applied in key programmatic entry points.

A framework can guide much-needed new tools to measure the impact of conflict on health status [5]. As part of ongoing programming processes, micro-level, intermediary determinants that affect individual health status are often measured. However, these outcome measures are often driven by the conflict, a macro-level determinant in those affected areas. The proposed Conflict as a Determinant Model (CDM) responds to a health crisis caused by conflict. It guides the consideration and use of the wider macro-level determinant impact on health through the program cycle.

When applied CDM can aid in understanding other macro and micro level social determinants within any program and sector. CDM is best utilized in the following five processes in the program cycle: contextual analyses of health disparities and drivers of health status in the targeted program areas; use in community participatory processes to inform contextual understanding; use in the program design and planning processes, and in monitoring and evaluation tool development. Figure 1 shows the application of CDM and how each component builds within the program cycle. Through the application of CDM in central components of the program cycle, as depicted below, the quality and appropriateness of emergency response will improve in conflict settings.

Materials and Methods

A literature review was conducted to explore the impact of conflict on health disparities within (and between) countries and communities through the use of SDOH. Databases utilized included: DiscoverE, JSTOR, PubMed, Google Scholar, with specific inclusion of The Lancet and Conflict and Health journals due to known high profile research in conflict settings within these journals. Inclusion criteria consisted of journals, articles, and the grey literature utilizing in the title or text the key words: conflict, war, mortality, social determinants of health, determinants, and/

or displacement, Articles on the impact of conflict, mortality studies of major conflicts, best practices in emergency response in conflict settings, manuals and guides for emergency response with particular emphasis on health guides, and the SDOH in conflict contexts were additionally included.

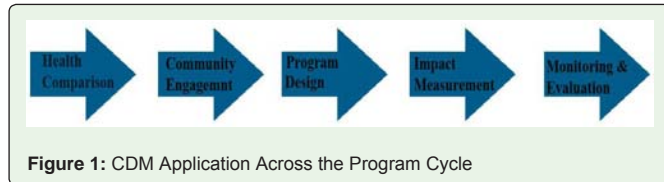


Figure 1: CDM Application Across the Program Cycle

Published literature on mortality and/or morbidity counts was included from the four highest profile protracted conflict emergencies. These protracted conflicts included Iraq, Afghanistan, Colombia, and Darfur. Due to the challenges of working in conflict contexts, there is a lack of evidence to support best practices in emergency response and particularly a lack of evidence on the application of social determinants in these settings. Only one article-written by the Eastern Mediterranean Regional Office (EMRO) of WHO-specifically addressed aspects of SDOH in conflict settings. No other articles or journals specifically addressed SDOH in emergency response or in conflict settings. This lack of evidence suggests the need for a theoretical framework to support the application of SDOH in conflict settings.

The social determinants of health are “the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics” [2]. The human rights paradigm also acknowledges these forces. The right to health- the highest attainable standard of physical and mental health-includes the underlying social determinants of health [6]. The theoretical foundation and application of CDM aids in understanding and applying these SDOH in areas of conflict.

Individual risk factors are typically the focus within epidemiology. Risk factors include individual causal relationships, such as those between smoking and lung cancer or of higher blood pressure and cardiovascular disease. When looking at diseases at the population level, it is important to understand the difference between biological markers, such as cholesterol levels, and behaviors, such as choosing to smoke [7]. Once this difference is ascertained, the social determinants or ‘causes of the causes’ can be unpacked. The CDM framework accounts for these individual risk factors and wider social settings that influence behavior, choice, and access to basic services. Such an analysis is in line with the population focus of public health.

Key documents identified during the literature review-including theoretical and epidemiological papers on the SDOH in traditional public health settings and the EMRO paper in conflict settings-informed the development of the Conflict as a Determinant Model. Through their influence, CDM provides a theoretical background to the application of SDOH in conflict settings while accounting for both individual risks and wider societal impacts on health status. CDM combines biological, behavioral, and structural determinants to inform health interventions and aid in improved health status. Importance is given not only to the immediate risks of disease, but also on the root causes of these risks and drivers for health inequality.

In the traditional application of SDOH, one of the main drivers of individual and community choice is SES. It effects the way in which one lives, in turn affecting individual and population health. The SES of countries and communities, as well as expenditures on the health sector by GDP, is an indicator used to explore health disparities. In the context of conflict and displacement, a focus on economic indicators does not capture the information needed to understand the root causes of health disparities. SES data are limited during the initial phase of a conflict when mortality is at its highest. This limitation highly influenced the development of the CDM framework. CDM moves away from economic indicators towards conflict related health indicators, described in more detail below.

Results

Available data from active conflict contexts are limited. Published data often become available many years after the conclusion of the emergency response. Where data do exist, there is an overemphasis on mortality counts to measure the impact of war [8,9]. In the conflict in Darfur, 300,000 deaths-above the baseline mortality rate in this region-are directly attributed to the conflict [10]. However, a focus on mortality tells us little about the health and well being of the Darfuri population affected by the conflict. Approximately, 80% of ‘excess deaths’ in Darfur were due to conditions of displacement that led to disease [10].

There is a gap between the individual health determinants and structural determinants. Individual health determinants, such as mortality, are measurable in conflict settings. The impact of structural determinants is difficult to measure. As a result, they are often only considered when they negatively impact programmatic operations. This gap limits approaches and the tools necessary for evidence-based interventions in emergency response. The three determinants of health WHO found in all conflict settings include the loss of human rights, breaches of medical neutrality, and the progression from individual “stress to distress to disease” due to recurring exposure to violence [5]. They are micro-level intermediary determinants that impact individual health status, but are created by the conflict, a macro-level determinant, in those affected areas. Macro-level determinants include conflict, poverty, economic crisis, and destabilization of cultural and societal systems. As these micro- and macro-level determinants are interconnected, a model is needed for application in various contexts and sectors. This model should aid in the inclusion of macro- and micro-level determinants in the program cycle, particularly in conflict contexts.

The SDOH are grounded in the idea that SES and other similar factors impact individual health typically through access to care, quality of housing, available spending on health care. When the main macro-level social determinant is altered to conflict, away from an SES focus, we can then utilize CDM to understand other determinants in those settings and how together they affect individual and community health. This knowledge may inform various aspects of program design. Figure 2 provides an example of CDM, adapted from Dahlgren and Whitehead’s SDOH. The CDM shifts the focus towards conflict-related determinants. Through concentric circles, CDM shows the relationship between these determinants, macro- and micro-level, resulting in community and individual health status [11].



Figure 2: Conflict as a Social Determinant of Health, adapted from Dahlgren and Whitehead (1992).

When CDM is applied at various points of the program cycle, the interrelationships of conflict and other intermediary determinants can be explored in situ. In Figure 2, conflict is the macro-level determinant that results in a displacement and economic instability. These determinants result in an increased disease burden in affected populations and this in turn affects community and individual health status. Displacement, economic instability, poverty, and disease burden are all very powerful intermediary determinants.

CDM can be useful in five key applications in an emergency health response. These include: health disparities analysis, examination of the drivers of health status of affected populations, community knowledge and engagement, to inform program design, and for tool development. These applications are common processes across all development, recovery, and emergency programming. Because of the urgent need for evidence-based approaches in emergency response, there is an emphasis on these contexts.

Discussion

The CDM expands upon the traditional approach of exploring health disparities through SES and economic indicators by supporting contextual analysis of the impact of conflict on health status. In this analysis, the application of CDM allows for a comparison of health status over time, between conflict and non-conflict areas within a country, as well as between countries for regional emergencies. Five specific applications within the program cycle contribute towards improved response in an emergency and conflict settings are shown in Table 1.

The first use of the CDM is for health comparison. Such comparison may be between conflict versus non-conflict settings,

Table 1: Five CDM Applications in Programs.

| Program Applications | Examples |
|--|--|
| Health Disparity Analysis | Comparison of health status in conflict vs conflict, conflict vs non-conflict, and regional (state vs state) settings |
| Community Engagement | Community members create a problem tree analysis and create a map to identify broken hand pumps. |
| Program Design | Program management uses CDM to inform their program design; developing a context based theory of change, conceptual framework, and log frame. |
| Impact Measurement | WHO uses CDM to identify key health metrics (direct and indirect) for use in trend analysis of the impact of conflict? |
| Monitoring and Evaluation Tool Development | Evaluation tool developed that accounts for the impact of conflict by using selected indicators at the program, community, population, and state levels. |

within a conflict-affected country, and between affected countries in the region. Using the CDM in this way provides a theoretical framework to guide real time data surveillance systems and establish trends over time for measuring the impact of conflict on health. Figure 3 shows the CDM application in health status compared across time.

This approach provides an evidence base from which to view the deterioration of health due to conflict. It would also provide an advocacy tool during an active conflict, which is a precarious time of implementation for most non-governmental organizations and civil society organizations.

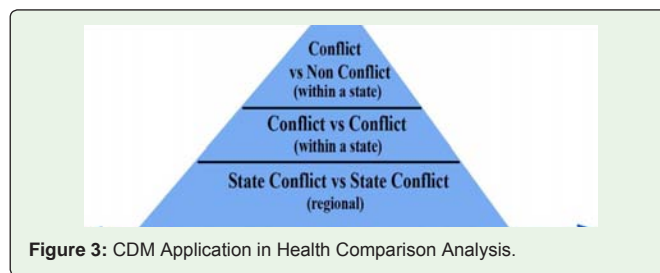


Figure 3: CDM Application in Health Comparison Analysis.

The second use of the CDM is for participatory approaches and community engagement. Often overlooked, participatory approaches are essential at the beginning of an emergency when responders are quickly adapting and transforming their programming in response. The necessary engagement of community knowledge in CDM provides an entry point for participatory approaches and encourages their use by emergency responders throughout the program cycle. Participatory approaches are a fundamental component of the realization of health as a human right [6]. As previously mentioned, the loss of human rights is considered one of the hallmark determinants in conflict settings [5]. It is critical in conflict settings, particularly in the initial phase of the emergency, to understand local interpretations of what and how their communities are changing. An effective application of CDM includes the use of participatory methods. These tools include problem tree analysis, community mapping of resources, community identification of dangerous land mine areas, community identification of response capacities through traditional resolution structures, and other participatory learning and action methods [12]. The theoretical foundation of the CDM framework creates the impetus to engage communities. This inherently builds resiliency into programming, even emergency programming.

CDM is a framework for application in program design of emergency response, its third suggested use. In the initial phase of the program cycle, agencies and organizations conduct context and problem analysis. Three basic outputs result as essential components of the program design. These include: an established theory of change, a conceptual framework, and a logic model. The theory of change is a theoretical and often organization specific plan of how to work towards a long-term goal. It is a basic blueprint for program implementation. The second is a conceptual framework. Informed by the theory of change, the conceptual framework provides an analysis of the general problem any program would seek to address and includes what social factors may cause the problem, hinder or help the response to it, and other contextual issues that may impact any program that responds to the problem. When the theory of change and conceptual framework combine, they result in the practical planning of a program design often referred to as a logic model or log frame. This is the detailed

and practical building block of any program, having considered the context of the problem and the organization relationship to it. CDM is a useful way for program managers, program development officers, and M&E officers to include the SDOH and local understanding of context in their response.

In addition to a health disparities analysis, providing an entry point for local knowledge, and the application to program design mentioned above, responders measure the impact of conflict through indices that are both direct and indirect in nature. Through the analysis of a conflict context using the CDM framework, it is possible to understand those drivers of health status that are direct measures (i.e. mortality) and indirect measures (morbidity indices that are contextually relevant). Direct measures are the most common during a conflict and in post-conflict impact analysis. These include mortality, access to care, medication access, and sanitation coverage. However, indirect measures are feasible and perhaps easier to measure before, during, and after a conflict. They can tell donors, ministries of health, responders, and politicians a great deal about a conflict, particularly in trend analysis over time. Indirect indicators include DALYS (Disability Adjusted Life Years), morbidity specifically emergency related infectious diseases such as cholera, Ebola, malaria, shigellosis, measles as well as a complementary child centered indicators [13].

Together, these direct and indirect measurements support an effective health response that accounts for conflict as a social determinant and moves towards the realization of health as a human right [14]. It is important to note children are, due to their size and weight as well as social vulnerability, affected first in an emergency. It is important to measure various aspects of child health, as the early deterioration of these indicators can potentially be the first signal of the impact of a conflict on affected populations.

The CDM, through the applications mentioned above, provides a framework from which to aid in the measurement of the impact of conflict on affected populations. From this perspective, CDM can also guide the adaptation of best practices of monitoring and evaluation (M&E) tools for specific use in conflict settings. This is one of the major gaps in evidence-based practice for emergency response. The systematic collection of data (i.e. monitoring) in areas of displacement, insecure program locations with migratory/mobile populations, and in IDP locations/settlements are challenging. The adaptation of programming necessary in conflict contexts, particularly in protracted contexts, also makes evaluations difficult. There is little evidence to guide best practices in evaluation methods in these contexts outside of process evaluations. CDM can guide the development of relevant M&E tools to use in these types of settings. Tools, in addition to typical program progress measurements, assist in creating quality impact evaluations that include conflict as a determinant. This is useful for not only programmatic staff and implementing organizations, but for donor funding programs in areas of conflict.

Conflict is the result of inequalities realized and justice unserved. Given that approximately 30% of the world's countries are affected by conflict and global displacement has hit an all-time high, there is an

urgent need for tools that aid in understanding the impact of conflict [4]. Shifting the social determinants of health theory towards the use of conflict as a determinant model, it is possible that responders to and researchers of complex humanitarian emergencies could push the envelope and use new perspectives for emergency response. Five areas of potential application of the CDM, proposed above, need piloting and the use of such frameworks further refined.

We invite public health professionals, emergency responders, and social scientists apply this model in conflict contexts such as in Sudan, South Sudan, Pakistan, Colombia, and Syria. It is important to consider the contextual application of theoretical frameworks such as CDM if improved response to public health crises in conflict settings remains a priority in humanitarian aid. In the context of conflict, CDM has the potential to change the way in which the development and aid sectors understand conflict, its impact, and how to approach the measurement of health disparities. With the increasing prevalence and protracted nature of war, increased sustainability, efficiency, and contextualization of emergency health response requires prioritization.

References

1. Marmot M and Wilkinson. *Social Determinants of Health*. 2nd edn. Oxford: Oxford University Press. 2005.
2. Marmot and Wilkinson. *Social Determinants of Health: The Solid Facts*. 2nd edn. World Health Organization. 2003.
3. Ranson K, Poletti T, Bornesmisza O, Sandorp E. *Promoting Health Equity in Conflict-Affected Fragile States*. 2007.
4. United Nations High Commissioner for Refugees (UNHCR). 2015.
5. World Health Organization (EMRO). *Conflict as a Social Determinant of Health*. 2007.
6. United Nations, COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS. Twenty-second session. 2000.
7. Townsend P, Davidson N, Whitehead M. *Inequalities in Health: the Black Report and the Health Divide*. New York: Penguin. 1992.
8. Roberts L, Lafta R, Garfield R, Khudhairi J, Burnham G. Mortality before and after the 2003 invasion of Iraq: cluster sample survey. *The Lancet*. 2004; 364: 1857-1864.
9. Burnham G, Lafta R, Doocy S, Roberts L. Mortality after the 2003 invasion of Iraq: a cross-sectional cluster sample survey. *Lancet*. 2006; 368: 1421-1428.
10. Degomme and Guha-Sapir D. Patterns of Mortality Rates in Darfur. *The Lancet*. 2010; 375: 294-300.
11. Dahlgreen G and Whitehead M. *Policies and strategies to promote equity in health*. Copenhagen: WHO Regional Office for Europe. 1992.
12. Kenton N. *Participatory Learning and Action 50: Critical Reflections, Future Direction*. 2004.
13. MA Connolly. *World Health Organization Communicable disease control in emergencies*. 2005.
14. United Nations, Committee on Economic, Social and Cultural Rights, sixty-second session, Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Paul Hunt Geneva. 2006.