Analysis

Leaving no one behind: lessons on rebuilding health systems in conflict- and crisis-affected states

Tim Martineau,1 Barbara McPake,2 Sally Theobald,1 Joanna Raven,1 Tim Ensom,3 Suzanne Fustukian,4 Freddie Ssengooba,5 Yotamu Chinwa,6 Sreytouch Vong,7 Haja Wurie,8 Nick Hooton,1 Sophie Witter4

ABSTRACT
Conflict and fragility are increasing in many areas of the world. This context has been referred to as the ‘new normal’ and affects a billion people. Fragile and conflict-affected states have the worst health indicators and the weakest health systems. This presents a major challenge to achieving universal health coverage. The evidence base for strengthening health systems in these contexts is weak and hampered by limited research capacity, challenges relating to insecurity and apparent low prioritisation of this area of research by funders. This article reports on findings from a multicountry consortium examining health systems rebuilding post conflict/crisis in Sierra Leone, Zimbabwe, northern Uganda and Cambodia. Across the ReBUILD consortium’s interdisciplinary research programme, three cross-cutting themes have emerged through our analytic process: communities, human resources for health and institutions. Understanding the impact of conflict/crisis on the intersecting inequalities faced by households and communities is essential for developing responsive health policies. Health workers demonstrate resilience in conflict/crisis, yet need to be supported post conflict/crisis with appropriate policies related to deployment and incentives that ensure a fair balance across sectors and geographical distribution. Postconflict/crisis contexts are characterised by an influx of multiple players and efforts to support coordination and build strong responsive national and local institutions are critical. The ReBUILD evidence base is starting to fill important knowledge gaps, but further research is needed to support policy makers and practitioners to develop sustainable health systems, without which disadvantaged communities in postconflict and postcrisis contexts will be left behind in efforts to promote universal health coverage.

INTRODUCTION
In 2014, there were 40 armed conflicts in 27 locations worldwide, the highest number of conflicts reported since 1999, and recent years have seen these trends intensify.1 Unpredictable instability has been described as the ‘new normal’,2 with a billion people living in fragile settings, and more people have been displaced (60 million) than at any time since World War II.2 Countries recovering from conflict are one category of those classed as ‘fragile’, where more than one-third of all maternal deaths and half of all child deaths occur.3 Writing in 2010, Kruk and colleagues4 indicate that while deaths due to conflict-related violence may have fallen in the past 30 years, the impact of ‘indirect’ mortality, such as that due to disruption of livelihoods or patterns of spread of disease and disruption of immunisation, has increased. Since 2012, violent deaths due to conflict in Africa are on the increase,5 while globally, escalating violence, including in the Middle East, Nigeria and Ukraine, has resulted in the highest annual death toll since the end of the Cold War6 in 1989. Any discussion of the Sustainable Development Goals, and specifically universal health coverage (UHC), cannot afford to ignore fragile and conflict-affected settings (FCAS), although sadly, from a health systems strengthening (HSS) perspective, these settings are woefully under-researched.

Key questions

What is already known about this topic?
► Conflict and fragile contexts are the ‘new normal’ and are critical to realising universal health coverage globally, yet the research evidence base is insufficient for effective policy making and practice in these contexts.

What are the new findings?
► Both communities and health workers, and the systems that support them, are variously debilitated by conflict; this should be the starting point in each context for policy development and systems strengthening to achieve universal health coverage.

Recommendations for policy
► Coordination of multiple actors, addressing power imbalances and capacity building for inclusive, sustainable and responsive nationally and locally owned institutions are essential to the delivery of equitable and effective health services.


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1Department of International Public Health, Liverpool School of Tropical Medicine, Liverpool, UK
2Nossal Institute for Global Health, University of Melbourne, Melbourne, Australia
3Nuffield Centre for International Health and Development, University of Leeds, Leeds, UK
4Institute for Global Health and Development, Queen Margaret University, Edinburgh, UK
5Department of Health Policy, Planning and Management at the School of Public Health, Makerere University, Kampala, Uganda
6Centre for International Health Policy, Biomedical Research and Training Institute, Harare, Zimbabwe
7Independent Consultant, Phnom Penh, Cambodia
8Department of Biochemistry, College of Medicine and Applied Health Sciences, University of Sierra Leone, Freetown, Sierra Leone

Correspondence to Tim Martineau; Tim.Martineau@lsthmd.ac.uk
Conflict affects the provision of healthcare by increasing needs due to violence and increased spread of infectious disease, and by reducing the opportunities to access healthcare due to the destruction of health infrastructure and the loss of health workers, and the effects of instability on people’s ability to reach health facilities.\(^1\)\(^-\)\(^6\) Significant deterioration in health governance at the national and district levels is frequently experienced.\(^4\)\(^5\) When health services urgently need to be restored at the end of conflict/crisis, international agencies step in. While essential services may be provided, this often leads to a more fragmented health system, with vertical programmes and unsustainable operational standards and facilities commonly put in place by external actors, in response to the limited institutional, technical and management capacity in postconflict countries.\(^7\)\(^8\) In many situations, humanitarian agencies have given limited support to building indigenous capacity during either the emergency or rehabilitation periods, thus increasing the risk of little being left behind when they exit.\(^9\)

Cometto \textit{et al.}\(^{10}\) suggest the transition to postconflict recovery ‘present[s] a window of opportunity for rapid reforms and the introduction of new ideas’ (p1). The theory of ‘path dependence’ proposes that decisions made at an earlier stage in the development of a country’s health system will have a significant influence on its future evolution,\(^10\)\(^-\)\(^12\) These ideas suggest that changes during the immediate postconflict period are critical not only for immediate outcomes but for longer-term trajectories of health system development. The research base to explore these impacts however is limited.\(^13\)

Existing literature is overwhelmingly based on small-scale studies by researchers from outside the study context and is disproportionately focused on the humanitarian response. Broader and longer term health systems research has lacked champions.\(^14\)

This may be due to various challenges, such as difficulties of operating in such settings including security issues with travel restrictions imposed by academic institutions\(^9\)\(^-\)\(^10\) and challenges in obtaining appropriate ethical review and permissions;\(^16\) lack of local research capacity; loss of data and records; and mistrust of outsiders carrying out research.\(^17\) This paper summarises key lessons from the ReBUILD consortium on rebuilding health systems after conflict or crisis.

**RESPONDING TO WEAKNESSES IN THE EVIDENCE BASE ON HEALTH SYSTEMS IN CONFLICT-AFFECTED AND CRISIS-AFFECTED STATES**

In response to such weaknesses in the evidence base, the multicountry ReBUILD consortium\(^*\) was established, with funding from the Department For International Development, UK. ReBUILD partners aim to jointly analyse health systems reconstruction post conflict and crisis in order to provide guidance for policy makers, donors and others working to strengthen health systems in countries currently emerging from conflict or crisis. The programme overcame some of the constraints that

\(^*\) See www.rebuildconsortium.com

have characterised the research field because it has had a stable, 6-year funding time frame, which allowed significant attention to HSS based on partnership and working closely with research teams based in the study settings, and has consequently been able to collect higher quality primary data than has typically been possible.

In contrast to the predominant focus on the immediate postconflict period, we have aimed to take a long lens on the pathways from conflict by working in two countries (Cambodia and Sierra Leone), which are more than a decade post conflict and in which the implications of interventions in the early postconflict period for longer term trajectories can be analysed. We have also worked in settings that provide a closer view of the immediate postconflict (Northern Uganda) and crisis-affected (Zimbabwe) contexts with a focus on factors constraining intervention and state building during those periods.

To assess postconflict/postcrisis health systems reconstruction, we have used multiple methods. We have also sought to foster a platform for further research on health systems in FCAS through funding additional affiliate research projects and playing a key role in the development and workings of the Health Systems Global Thematic Working Group on ‘Health Systems in Fragile and Conflict Affected contexts’.

Across the ReBUILD research programme, which examined both the impact of conflict/crisis — sometimes recurring — on the actual or potential users of health systems (demand) and the health systems themselves (supply), we focused on three key cross-cutting themes: human resources for health, communities and institutions. These are shown in figure 1 with some of the effects and responses.

The findings presented in the paper are derived from a selection of single and multicountry studies carried out by the ReBUILD consortium between 2012 and 2016. The study countries and projects, with works cited here, are summarised in table 1.

**COMMUNITIES**

Attempts to realise UHC urgently need to extend to FCAS; this means building the evidence base on the experiences of affected communities and their implications for responsive policy development. Given the particular impoverishing nature of crisis and conflict and the additional costs associated with system destruction, the impact on seeking healthcare is a key component to consider. For example, although a significant body of work addresses the impacts of different health financing policies for healthcare access, and to a lesser extent poverty and impoverishment, little of this is in FCAS and even less specifically examines the interaction between health systems, financing policies, poverty and conflict.\(^18\) We have developed the database through ‘life histories’ with affected communities and focused reanalysis of household survey data\(^19\) to identify the impact of relationships
between changes in health financing policies and household’s access to healthcare and health expenditures with attention to the role played by conflict/crisis and its aftermath in those patterns.

In many conflicts, men are significantly more likely to die as a result of violence than women, and conflict or crisis can create a ‘missing generation’. The nature and structure of households can therefore change post conflict, creating complex intersecting inequalities. In many cases vulnerabilities have their roots in, or have been exacerbated by, conflict and crisis. In respondents’ accounts, conflict may lead directly to changes in levels of poverty (eg, through loss of assets), poorer health (eg, related to conflict-related injuries and reduced access to healthcare), for financial reasons or disruption of family and social networks. Many older female and male respondents suffered from multiple chronic conditions that partly reflect their age but are also often traced to events in the conflict period; widows emerged as a particularly vulnerable group from our life histories in northern Uganda.20 These multiple conditions restrict people’s ability to work and require repeated healthcare use, both of which drive people into poverty and keep them there. Family and social networks are the major source of resilience — a fact that policy makers need to keep in mind — but for many people these networks have been depleted by the conflict, particularly through loss of male breadwinners and the younger generation.

Hence, health financing policies need to be matched to the particular needs of communities in conflict-affected or crisis-affected contexts. Policies that focus on reducing the costs of healthcare are well targeted to address key processes that drive and maintain poverty at the household level, and in some cases they succeed in mitigating problems.

![Figure 1](image-url)

Figure 1 Thematic areas of ReBUILD’s research on health systems in postconflict/postcrisis settings.

<table>
<thead>
<tr>
<th>Study/Country</th>
<th>Cambodia</th>
<th>Sierra Leone</th>
<th>Uganda</th>
<th>Zimbabwe</th>
<th>Other</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health financing</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>18–23 31</td>
</tr>
<tr>
<td>Health worker incentives/ remuneration/ deployment/ Ebola</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>23–37</td>
</tr>
<tr>
<td>Gender</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>20 33</td>
</tr>
<tr>
<td>Systems dynamics analysis</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>Northern Nigeria 37</td>
</tr>
</tbody>
</table>
Cambodia, for example, our long lens analysis shows that health equity funds and community-based health insurance are often helpful in addressing access issues. The impact is particularly pronounced among the poor, but also they achieve a general improvement impact on the health system, although the effects take time to build.21,22 The findings give clear insights into how they could have a greater impact, such as covering a wider range of access costs than just facility fees, and ensuring non-discriminatory care for users accessing healthcare as well as providing a basis for a more coordinated approach to universal coverage and other forms of social protection.25

HUMAN RESOURCES FOR HEALTH

Health worker attraction, distribution, retention and performance are arguably the most critical factors affecting the performance of a health system. In FCAS, where health systems and health worker livelihoods have been disrupted, the ability of the health system to respond appropriately to the needs of both health workers and communities they serve during conflict/crisis and in the process of rebuilding resilient health systems is particularly important. Two research themes in the human resources for health area were pursued in ReBUILD: the deployment systems to ensure equitable distribution of health workers — particularly to underserved areas — and incentive environments for health workers, and the resulting impact on attraction, retention and distribution in the context of a dynamic labour market. Both used a range of research methods combining quantitative and qualitative analyses.24 Additional projects on health worker remuneration25 and health worker experiences during the Ebola outbreak26 were supported in Sierra Leone, as well as two additional projects on gender and human resources for health through the RinGS consortium.†

Clearly emerging from all research approaches were the immense personal (echoing the community perspectives) and professional challenges faced by health workers during both conflict and crisis, and in many cases impressive resilience was demonstrated by these critical actors. Our findings highlight some of the immediate effects of conflict and crisis: staff were often specifically targeted during conflict,27 leaving areas lacking staff and staff traumatised; some staff carried out roles above their station; and human resources management and information systems collapsed. Some positive aspects can be built on — for example, staff developed coping strategies, both personal and community-based, which allowed them to survive. However, more needs to be done internationally to protect staff and nationally to draw up contingency plans for supporting staff and services in crisis-prone settings.28

In the countries where we investigated deployment (Northern Uganda and Zimbabwe), we found that no special changes were made to deployment-related policies during or following conflict and crisis.29,30 However, local managers interpreted the rules flexibly to fill vacant posts and to avoid staff resigning or absconding. Local managers had greater decision space for deployment during crises, for example, using secondment to staff rural areas, but would benefit from better human resource management skills. Flexibility in implementing deployment policies may contribute to increased retention in hard-to-reach areas. In postconflict settings, there is commonly a fragmentation of remuneration31 and incentive packages, linked in part to the multiple actors. Incentive policies tend to be piecemeal, poorly funded and implemented,32 with limited attention to gender33 and with poor feedback loops from staff to decision makers and funders. Postcrisis moments (eg, after the Ebola epidemic in Sierra Leone) can constitute important opportunities to learn from the past, capitalise on interest and innovate. Rural retention is clearly critical to realising UHC in FCAS settings.

Health labour markets are complex in all settings, but even more so in FCAS where communities and healthcare providers often had to fend for themselves without effective state regulation. Reforms to health worker incentive packages need to ensure a fair balance across sectors to avoid distorting the health labour markets and draining staff from hard-to-serve areas.34 Staff and managers can show remarkable resilience — surviving during dangerous conditions and keeping services functioning through local adaptations of deployment and other workforce policies. National and international support should focus on reinforcing and rewarding resilience, and providing decision space and flexibility for good staff to thrive and drive forward towards UHC in these contexts.25

INSTITUTIONS

A third key theme that cuts across the research portfolio was ‘institutions’, that is, the organisations, rules and relationships affecting the health system. The disruption caused by conflict or crisis experienced by communities and health workers is also mirrored in institutions. Key issues linked to institutions include the actors and networks involved in the postconflict context and the distribution of power, the policy response to the post-crisis situation, resource flows and their coordination, and building individual and institutional capacity for resilient and responsive health systems. Together, these different elements reflect the capacity for governance in the different settings studied.

Both disruption and opportunities emerge from the influx of external actors and aid. At one point during the conflict in northern Uganda, for example, there were over 300 health-related organisations. In such contexts, policies and services can be uncoordinated. New networks and relationships are established between these diverse actors, often with different priorities and approaches to rebuilding health systems post conflict, increasing the potential for fragmentation in the system. Power relations are inevitably affected particularly between those

† See http://resyst.lshtm.ac.uk/rings

with resources and the recipients at national and subnational levels. Research in Sierra Leone illustrated how the power dynamics between the district health management teams and donor-funded non-governmental organisations in the postconflict period reduced the level of control of local managers.23 Similarly, economic crisis in Zimbabwe has led to more fragmentation and external dependence: short-term crisis responses assist in shorting up services but also add to complexity of governance.35

The imbalance of power and the focus of important actors on short-term objectives may lead to policies not being sufficiently responsive to longer term needs to achieve UHC. For example, our analysis of gender in postconflict health systems reconstruction in northern Uganda showed limited support to survivors of gender-based violence (with male survivors particularly neglected), and much more attention paid to the hardware of health infrastructure (eg, building clinics) over the ‘software’ of health approaches, including strategies to ensure vulnerable groups can access care.36 Windows of opportunity to provide responsive policies may take time to appear, as demonstrated by the 8-year gap after the end of conflict before introducing the Free Health Care Initiative in Sierra Leone.37

The development of sustainable and resilient health systems requires predictable sources of funding and the development of individual and institutional capacity. Using social network analysis to understand resource flows, our research in northern Uganda showed how the predicted loss of up to 16 funding organisations in the network within a 2-year period could have a major negative impact on funding and potentially cripple the performance of the health system. However, in spite of this disruption, health systems can demonstrate, at both individual and institutional levels, remarkable resilience and ability to adapt to changing conditions. For example, many health workers continued working during the conflict in northern Uganda:27; local managers did their best to support health workers in northern Uganda and Zimbabwe:26 30; and committed staff in northern Nigeria (in a ReBUILD affiliate’s project) strengthened quality of care.27 It is important, therefore, to ensure that where individual or institutional capacity exists, external actors avoid undermining it inadvertently.

**CONCLUSION**

The ReBUILD consortium members have learnt useful lessons about carrying out research in these contexts. Robust data sets rarely exist in these disrupted contexts, so innovative methods such as life histories become even more important for providing the historical lens post conflict or crisis.20 Nevertheless, researchers must be sensitive to ensure an ethical balance between theoretical historical knowledge that will benefit other countries emerging from conflict or crisis and knowledge that benefits policy makers in the study countries through the development of practical recommendations. In contexts at high risk of recurring crisis, researchers should be agile and able to respond to changing research agenda, as ReBUILD did with the outbreak of Ebola in Sierra Leone.26 Research capacity tends to be less well developed in disrupted settings. ReBUILD had foreseen this need and planned for collaborative and capacity building relationships with key southern institutions. This will enable more southern institutions to take a lead on future research in this area.

To date the ReBUILD research portfolio has focused on observational and retrospective empirical research to develop the much-needed evidence base. However, lessons from ReBUILD research must be adapted to other specific fragile and postconflict contexts. While more observational research is still needed, the groundwork laid also allows for a move towards implementation research to better understand the practicalities of strengthening health systems and their implications at multiple levels and for different actors, and ultimately for ensuring UHC so that no one is left behind. One priority area for implementation research is on how best to support close to community providers, who play a key role in FCAS and are the first port of call for health seeking for impoverished and often traumatised communities. Other priority areas include developing mechanisms to identify and support vulnerable households emerging from conflict, learning from financing schemes to build a platform for universal coverage, strengthening district-level institutions and local governance capacity to coordinate and reinforce ownership, and strengthening sustainable national institutional capacity to lead on implementation research.

The development of responsive health systems in FCAS requires policy making that takes into account the debilitating effects of conflict and crisis that affect communities, health workers and institutions. By using both a long and a short lens, ReBUILD has made an important contribution to building the evidence base to inform responsive policy and practice in these contexts and developing an agenda for future research.

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REFERENCES


