

Case Study Series on Malaria in Conflicts and Emergencies



Complex emergencies—encompassing both natural and man-made disasters, including violent conflict—are increasing in number and intensity due to rapid population growth, high population mobility, erratic weather due to climate change, and numerous sociopolitical factors. Emergency events can have a tremendous impact on population health, leading to increased rates of morbidity and mortality from a range of infectious and noncommunicable diseases and disrupting the delivery of normal health services. Progress toward malaria eradication will rely, in part, on national malaria programs and other stakeholders in the malaria community recognizing the threats posed by complex emergencies and being prepared to implement strategies that alleviate their impact.

The Malaria Elimination Initiative conducted a series of short case studies investigating malaria control and elimination efforts in conflict and emergency settings. The goal of the case studies was to identify challenges and lessons learned to inform future strategies as malaria programs and stakeholders drive progress toward national, regional, and global

elimination and eradication goals. Malaria activities were examined in the context of diverse emergency settings: violent conflict, focusing on Afghanistan; natural disasters, focusing on the 2010 earthquake in Haiti; and other health emergencies, focusing on the 2014-15 Ebola outbreak in Sierra Leone.

Common themes emerged across the case studies despite the diversity of settings, the nature of the complex emergencies faced, and malaria program structures and phases (Figure 1).

Biggest Challenges

Afghanistan, Haiti, and Sierra Leone all have low-income economies and a history of political instability. While external funding is necessary to support health system operations under these circumstances, a consequence is that over reliance on external assistance limits government ownership over program performance and decision-making. This has implications for the sustainability of infrastructure and capacity improvements implemented during and after the

Figure 1. Summary of case study challenges and lessons learned

Case study location	Elimination goal/program phase	Type of complex emergency	Biggest challenges	Primary lessons learned
Afghanistan	Phased elimination by 2030	Violent conflict	<ul style="list-style-type: none"> Government access is restricted Ongoing violence reduces health capacity Heavy reliance on external donors 	<ul style="list-style-type: none"> Flexibility and adaptation to changing circumstances Community engagement and building trust Communication/collaboration across all stakeholders
Haiti	Zero transmission by 2020, sustained through 2022	Natural disaster (earthquake)	<ul style="list-style-type: none"> Chronic health system weaknesses Underuse/lack of trust in health system Heavy reliance on external donors 	<ul style="list-style-type: none"> Maintain vision, commitment to elimination Rebuilding can present opportunities Community engagement and building trust
Sierra Leone	Control	Health emergency (Ebola outbreak)	<ul style="list-style-type: none"> Chronic health system weaknesses Fear, lack of trust in health system Heavy reliance on external donors 	<ul style="list-style-type: none"> Community engagement and building trust Communication/collaboration across all stakeholders MDA can be effective in emergency settings

countries' respective emergencies, and impedes the flexibility of malaria programs to adapt their strategies.

The access issues identified by the three countries have different causes but similar effects. In Afghanistan, geopolitical circumstances dictate access, whether a result of sporadic violence that disrupts delivery of health services or because territory is under the control of anti-government groups. In Haiti and Sierra Leone, there is significant lack of trust in government-run health operations among the respective populations, and people are much more likely to attend private clinics or faith-based healers that do not coordinate with the public health system. All three countries also have physical access challenges, in that remote and rural populations live a considerable distance from the nearest health facility. Regardless of cause, lack of access means that vulnerable populations do not receive prompt diagnosis or treatment for malaria and cases are not reported into the surveillance system, undermining the malaria programs' abilities to manage and target cases with appropriate interventions.

Haiti and Sierra Leone have weak health systems that are chronically underfunded and understaffed. The earthquake and the Ebola outbreak put a spotlight on these systemic problems, particularly since both emergencies had direct and devastating effects on health infrastructure and healthcare workers. Health system weaknesses invariably affect the quality of malaria program operations, even with the support of external funders and partners, and they underscore the issues of sustainability and government ownership. Afghanistan's health system is still nascent and operating relatively effectively in much of the country, but in areas that are inaccessible to the government, the systemic problems and their negative impact on malaria program operations are similar to those in Haiti and Sierra Leone.

Primary Lessons Learned

All three countries recognized that community engagement is a top priority during complex emergencies and for improving routine malaria program operations. Establishing trust in communities through education, outreach, and local service delivery were identified as solutions to the access issues and some of the health system weaknesses previously described. In Haiti and Sierra Leone, providing consistent access to quality care using trained community health workers may help alleviate the long-term problem of distrust in the public health system. In Afghanistan, where tribal loyalties are strong and there is a general suspicion of outsiders even in areas where the government can operate safely, recruiting health workers from local communities to provide education and implement malaria interventions improves trust and acceptance.

Another common lesson was the importance of establishing partnerships and strong communication across all stakeholders. In Afghanistan, this partner network was key to filling gaps where the national government could not operate, and played a key role in facilitating communication and engagement with communities impacted by episodes of violent conflict. In Sierra Leone, collaboration proved essential for controlling Ebola, particularly as different external organizations took responsibility for various aspects of the outbreak response and the need to instill trust and provide clear and consistent messaging to the public grew. In Haiti, it was the lack of coordination across the many NGOs operating in health service delivery and earthquake response that illustrated the importance of establishing collaborative relationships with clear mandates and effective lines of communication prior to emergency events.

A significant lesson derived from Haiti but applicable to all malaria-endemic countries is that longer-term focus on malaria programmatic goals should be maintained, even if immediate operations are disrupted by an acute emergency. Achieving elimination and maintaining POR requires unwavering commitment and continued investment of human and financial resources to manage importation and conduct real-time surveillance. Complex emergencies may cause setbacks and timelines may have to be adjusted, but recovery periods can present new opportunities for partnerships and funding and can facilitate rapid progress toward malaria elimination and eradication goals.

The full case study series report is available at shrinkingthemalariamap.org.

The **Malaria Elimination Initiative (MEI)** at the University of California, San Francisco (UCSF) Global Health Group believes a malaria-free world is possible within a generation. As a forward-thinking partner to malaria-eliminating countries and regions, the MEI generates actionable evidence through operational research, shares new tools and approaches to help countries eliminate malaria more efficiently and effectively, documents and disseminates elimination best practices, assesses the costs and benefits of elimination, fosters regional initiatives for malaria elimination, and strengthens political and financial commitment to shrink the malaria map. With support from the MEI's highly skilled team, countries around the world are actively working to eliminate malaria.

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