The Long Road to Recovery

Ethnic and Community-Based Health Organizations Leading the Way to Better Health in Eastern Burma

A Report by the Health Information System Working Group

February 2015

TABLE OF CONTENTS

PURPOSE OF CURRENT REPORT

The organizations included in this report represent a group of ethnic and community-based health organizations providing primary health care services to rural and underserved communities in eastern Burma. These organizations have formed a collaborative network working to establish health workforce strategies, develop training curricula, identify service needs and gaps, design and implement projects and programs and conduct health surveys such as this one.

Starting in 2004, the Health Information System Working Group (HISWG) began conducting broad, population-based, retrospective mortality and morbidity surveys of internally displaced persons (IDP) and remote communities in eastern Burma. These surveys not only covered basic health indicators and population-level data of remote and IDP communities served by the ethnic health organizations, but also assessed morbidity, mortality and priority health conditions faced by these communities. The surveys also assessed local populations' experiences with human rights violations and their impacts on health. The surveys were unique in that they captured essential health information on displaced populations in the ethnic states that was not available from government service providers or other health organizations. The results of these surveys were released in a 2006 report titled, Chronic Emergency: Health and Human Rights in Eastern Burma, and a 2010 report titled, Diagnosis Critical: Health and Human Rights in Eastern Burma.

This report presents the results of the latest population-based survey of remote and IDP communities in eastern Burma (five states and regions, including accessible areas of Bago, Karen, Karenni, Tanintharyi, and Mon) conducted by the HISWG in 2013. (Data for Shan State is included in appendix 9.2) The primary objective of the study was to estimate morbidity and mortality in each of the service areas of the five ethnic and community-based organizations that deliver health services to IDPs and other remote populations in eastern Burma. Additional outcomes of interest included demographics, migration, mortality, self-reported health status, reproductive health, child health, water and sanitation, food access and nutrition, malaria, human rights violations and access to health services.

IMPLEMENTING ORGANIZATIONS

The members of the Health Information System Working Group (HISWG) helped to design, plan, and implement this survey. The members of the HISWG are: Back Pack Health Worker Team (BPHWT), Burma Medical Association (BMA), Karen Department of Health and Welfare (KDHW), Karenni Mobile Health Committee (KnMHC), Mae Tao Clinic (MTC), Mon National Health Committee (MNHC), and Shan State Development Foundation (SSDF).

ACKNOWLEDGEMENT

The development of this report has only been possible through the intensive efforts of many individuals and organizations. We would like to take this opportunity to thank the members of the Health Information System Working Group (HISWG) for their continuous commitment to ensuring the smooth implementation of this large scale survey and the effective communication of data to inform the issues discussed in this report. The participatory process fostered by the HISWG allowed for greater stakeholder input and ownership of the survey and resulting report. Additionally, many colleagues, friends, and individuals provided extensive comments and input to the analysis and drafting of the report. Special mention should also be given to the organizations that have supported this survey. The International Rescue Committee (IRC) and Burma Relief Centre (BRC) provided financial support to the project, and the latter also provided extensive input regarding the development of this report. Community Partners International provided technical support including helping to design the survey, providing training on data collection and analysis throughout the project, assisting with data analysis and helping to write this report.

We would also like to thank our partners at the University of California, Los Angeles and Harvard University who worked extensively in collaboration with Community Partners International on the design of the survey and the analysis of the data. Their peer reviewed publication which is based on data collected as part of this survey and is referenced throughout this report is pending.[1]

Last but not least, this report would not have been possible without the dedication and risk taken by surveyors who travelled throughout the region to collect data and the community members who were willing to share their personal stories with us.

1. Parmar, P., et al., Health and human rights in eastern Myanmar after the political transition: A population-based assessment using multistaged household cluster sampling. BMC International Health and Human Rights, 2014. Publication pending.

FOREWORD BY DR. CYNTHIA MAUNG

As we begin a new year in 2015, we find ourselves reflecting on the changes that have taken place in Burma over the course of the last five years and on the challenges that still remain, particularly with regard to improving essential health care for the people of eastern Burma.

There is no doubt that there have been positive changes since the last population-based survey undertaken by the Health Information System Working Group in 2008. Ceasefire agreements with non-state ethnic actors have resulted in a reduction in human rights violations, a decrease in the number of displaced people, and increased freedom of movement for many people in eastern Burma. Further, these ceasefire agreements have meant that it is now possible to deliver health services to many areas that were previously inaccessible due to the ongoing conflict.

Over the last two years, ethnic and community-based organizations working in eastern Burma have begun to have preliminary discussions with Ministry of Health officials. While it is still early and these discussions have yet to bear real fruit, we view future opportunities for coordination and cooperation as critical to improving health for the people of eastern Burma who have been disenfranchised as a result of decades of conflict and militarization.

While the temporary ceasefire agreements are reason to be hopeful, if you talk to people living in eastern Burma, you will find that many are cautious when it comes to expressing optimism about the future. Since 2011, there has been continual conflict and an escalation of serious human rights abuses in Kachin and Shan State, and as recently as October 2014 there was conflict in Karen State. The need to secure control over the abundant natural resources in the ethnic areas is the main source of the conflicts as well as the increase in incidents of land confiscation. Massive displacement continues as a result.

Burma's military continues to have significant powers under the constitution and has a mandatory 25 percent control of parliament. Earlier this year, President U Thein Sein said that the military should continue to play a key role in politics even as the country embraces reforms.

In the absence of constitutional reform, civil society and community-based organizations, including the ones represented in this report, are not in a position of equal partnership with the government. There is a lack of true representation at the local level and we do not yet have the powerful voice we need to effectively advocate for the rights of the people we serve. In order to build a solid foundation for a strong democracy, people must have the opportunity to be active participants in the political process at both national and local levels so that they are empowered to make a difference in their communities.

Further, the Burmese army has not withdrawn troops from ceasefire areas. In some contested ethnic territories, they have gone a step further, fortifying existing camps or even building new ones. This has led to continued clashes and fuelled insecurity among local populations. The construction and fortification of army bases has caused villagers to feel that their personal security is threatened, and to doubt that the

ceasefire is sustainable. Lack of protection and security continue to be key issues for people living in eastern Burma. Moreover, decades of conflict have diminished the rule of law; people have limited access to justice systems to address grievances and to defend their rights. These are significant issues that must be addressed in order for the reforms in Burma to be sustainable and to foster true reconciliation. Human rights groups and civil society organizations must play a key role in continuing to monitor human rights violations, put pressure on those responsible, and to advocate for strengthening the rule of law.

Over the last few years, Burma has seen a significant influx of humanitarian aid and international investment. There is no doubt that these investments can have a positive impact on the country, but there is also the very real risk that foreign aid and investment may result in further disenfranchising groups that are already marginalized. Many people have been forced to relocate or had their land confiscated to make way for development projects. Development projects run the risk of negatively impacting health and the environment. Similarly, while humanitarian aid can be an important tool to help populations in need, it can also have negative consequences if it is implemented in a way that is not sensitive to the needs of the people it is designed to help. All development must be held to high standards of accountability and transparency with close consultation with the communities affected by planned aid and investments.

And as you will see in this report, the people of eastern Burma continue to face critical health challenges. Preventable diseases such as malaria, acute respiratory infections, and diarrhea continue to be the top three causes of death among surveyed areas and mortality rates among infants and children under 5 remain high. However, there are some positive developments as well. Maternal malnutrition has decreased since 2008, a pattern of positive breastfeeding practices has emerged, and 63.6% of respondents reported using a bed net as a preventative measure against malaria.

We have a long way to go in creating a sustainable peace in Burma and we sincerely hope that some of the positive changes that have occurred can be built upon. We are dedicated to continuing to work to respond to the health challenges facing eastern Burma, but an increase in resources and support is desperately needed in order to scale-up health services to needed levels. We must capitalize on the existing infrastructure built by ethnic and community-based health organizations to continue to provide comprehensive primary health care to communities in need. So in addition to providing insight into the current health situation in eastern Burma, this report is also a call to action—to other community-based organizations, neighboring countries, INGOs, foreign governments, and the international community—to help us to address the chronic health crisis in eastern Burma and to prioritize support for populations that remain largely outside the scope of government health services.

The current situation is complex. It is a fragile time for Burma and it is imperative that we take the right steps in order to maintain the trust of the people and to give them reason to truly have hope for the future. The ethnic and community-based health organizations represented in this report are committed to facing all of the challenges that the future holds in order to create sustainable, quality health care systems that can help people to live long and healthy lives. We are dedicated to ensuring that the people of Burma are empowered to advocate for their own civil rights and to have equitable access to basic services such as health care and education.

In conclusion, I would like to take this opportunity to thank all of our supporters. Without you, our work would not be possible.

Dr. Cynthia Maung
Director
Mae Tao Clinic

1. EXECUTIVE SUMMARY

This report summarizes the results of a large-scale, population-based health survey, which covered 64 townships, 6,620 households, and a target population of 456,786 people. The survey was jointly conducted by members of the Health Information System Working Group (HISWG).

The survey results demonstrate that remote and conflict-affected regions of eastern Burma continue to face critical health challenges. Some health outcomes in the region have improved, though it is clear that significant challenges remain. Mortality rates among infants and children under 5 in eastern Burma are far higher than Burma's official figures for the country as a whole and more closely resemble other areas where complex humanitarian disasters have unfolded, such as Somalia. The three main causes of death across all age groups are attributable to largely preventable diseases such as diarrhea, malaria, and acute respiratory infections. Ethnic and community-based health service providers are responding strategically to health needs at the community level, but increases in support are needed in order to expand their reach and to address the chronic health crisis in the region.

After holding elections in 2010, Burma transitioned to a nominally civilian parliamentary government in March 2011. Since then, Burma has seen a dramatic increase in business investment and humanitarian aid. Additionally, temporary ceasefire agreements with a number of ethnic armed organizations have led to a significant decrease in fighting and increased freedom of movement in many ethnic areas. Yet for most of Burma's rural communities, particularly ethnic communities living in eastern Burma, daily realities with regard to health remain unchanged. Although the Burmese military continues to be implicated in human rights violations such as forced labor and confiscation of food, the number of reported human rights abuses has decreased in the last five years, with 10.7% of households reporting any kind of human rights violation, compared to 30.6% in 2008. Although promising, optimism must be tempered with the reality that, with 3.5% of respondents experiencing forced labor in the twelve months prior to the survey, and nearly 8% experiencing destruction or seizure of food, livestock, or crops, impunity for human rights abuses by uniformed personnel remains unacceptably common. As has been found in previous studies in eastern Burma, household exposure to one or more human rights violations was associated with malnutrition in children, demonstrating the negative impact that human rights violations can have on health outcomes.

During the decades of active conflict in the ethnic states, many ethnic groups established their own community-based primary health care service provision structures. Their service delivery models include a comprehensive 'package' of medical services comprising treatment of common diseases, war casualty management, reproductive and child health services, community health education, and water and sanitation programs. Services are provided through a mix of mobile medical teams and stationary clinics. The health workers have been trained to implement programs in remote areas under difficult conditions. These ethnic and community based health organizations are also working to standardize health data through joint data collection methods and health information management systems.

Key among the primary health care programs offered by ethnic and community-based health organizations are reproductive, maternal, and child health services. Among women surveyed, 73% of women delivered their last child with the participation of a trained traditional birth attendant (TTBA). In recent years, ethnic health organizations have increased the training offered to the existing network of TBAs by developing a six-week training curriculum, teaching TBAs to recognize the five key obstetric danger signs and symptoms and to provide essential antenatal care during pregnancy.

Capitalizing on the existing network of TBAs has been important, and has led to an increase in coverage of basic maternal health interventions and access to more specialized obstetric care. About 60% of women surveyed reported attending at least one antenatal care visit, though only 16.4% of women reported attending four antenatal care visits throughout the course of their pregnancy as recommended by the World Health Organization. Further, a pattern of positive breastfeeding practices has emerged as 79% of women reported that they began breastfeeding their babies within one hour of giving birth and 92% of women reported that they breastfed their infants for at least six months. In total, 11.3% of women of reproductive age were determined to be moderately/severely malnourished. This is an improvement compared to 2008, when 16.7% of women of reproductive age were found to be moderately/severely malnourished. Despite these positive trends, rates of malnutrition in children remain high. In 2013, 16.8% of children under 5 were determined to be suffering from acute malnutrition which falls within the "critical" range of Global Acute Malnutrition as defined by the World Health Organization.

Malaria was the primary reported cause of death across all age groups (17.7%) and the second main cause of death among children under 5 (14.8%). In terms of malaria prevention, 63.6% of survey respondents reported using bed nets. However, more support for the strengthening of malaria control programs is required, particularly due to the emergence of Artemisinin-resistant malaria spreading within and beyond Burma.

For the vast majority of people in eastern Burma, official Burmese government health facilities remain unavailable or inaccessible and primary health care services provided by long-standing, community-based health organizations continue to be the main source of health care for many people in eastern Burma. These unique health organizations have made great advances in responding to local health needs in conflict-affected areas and are working together to improve the quality, scope, and accessibility of health services in their communities. Their combined programs cover a target population of almost 500,000 people. Existing systems include a health workforce of over 2,650 health assistants, medics, community health workers, maternal and child health workers, trained village health workers, and trained traditional birth attendants. Survey results demonstrate the relevance of these systems, with 70% of respondents reporting that they accessed ethnic-led health services while only 8% of respondents reporting that they accessed government health services within the last 12 months. Ethnic and community-based health facilities were perceived to be more accessible than government health facilities. Further, improvements in several key health indicators highlight the impact these health organizations have had on their communities.

It is crucial to formally recognize and increase international support, especially during this critical transition period, for the existing ethnic and community-based health organizations that have a unique ability to identify, understand, and fulfill the needs of vulnerable communities who have been marginalized for decades. Solely supporting government health services runs the risk that these communities may be neglected, limiting durable improvements in public health. It also risks heightening mistrust among ethnic communities and jeopardizing prospects for an enduring peace in Burma. Further, moving towards the decentralization of health systems in Burma is an important step for giving communities more control over local health priorities and interventions. The strengthening of local governance structures and the empowering of local communities are fundamental to the country's successful political transition. Increased decision-making and power sharing at the local level are essential for successfully improving access to quality health services for the most vulnerable and neglected communities in Burma.

Recognizing and capitalizing on the strengths of ethnic and community–based health organizations can help ensure that populations facing poor health indicators such as high infant and child mortality rates can access needed health care in their communities and ultimately improve health for all people in eastern Burma.

2. CONTEXT

2.1 POLITICAL BACKGROUND

Burma is one of the most ethnically diverse countries in the world. There are more than one hundred ethnic groups, many with their own languages or dialects.[2] In eastern Burma, major ethnic groups include the Shan, Karen, Mon, and Karenni. Eastern Burma has also seen some of the longest civil wars in modern history as ethnic groups have fought for autonomy within the framework of a federal union, with some conflicts dating from the time of independence from the British in 1948. In 1962, these calls for autonomy prompted General Ne Win to launch a coup d'état, which ushered in almost fifty years of military rule. The military's counter-insurgency campaigns against many of the ethnic armed groups in eastern Burma resulted in forced relocation and destruction of villages in contested zones coupled with widespread human rights abuses (including forced labor, arbitrary taxation, and confiscation of food and property). According to The Border Consortium (TBC), an estimated 3,700 villages have been destroyed, relocated, or abandoned since 1996, and at the end of 2012 there were at least 400,000 internally displaced persons in rural areas of eastern Burma.[3]

While the 2008 Constitution created regional and state assemblies, they have little real power; health budgets are managed centrally, and chief ministers are appointed by and answerable to the president. The government health sector in Burma remains highly centralized and major policy decisions continue to be made in Naypyidaw.

Elected in 2010, the Thein Sein administration has undertaken various reforms, including launching peace talks with a number of ethnic armed groups. To date, 14 out of 16 main armed groups have signed temporary ceasefire agreements with the government, including the following armed groups operating in eastern Burma: the Karen National Union, the Democratic Karen Benevolent Army, the Restoration Council of Shan State/Shan State Army, the Karenni National Progressive Party, the New Mon State Party, the All Burma Students Democratic Front, and the KNU/KNLA Peace Council.[4,5] These ceasefires have resulted in a reduction of human rights abuses and have afforded many people in eastern Burma increased freedom of movement. According to a 2013 survey conducted by the Karen Human Rights Group (KHRG), the ability to travel more freely was the most frequently reported change to villagers' lives and livelihoods.[6]

However, fighting continues to occur between the Burmese military and ethnic armed groups in some areas, highlighting the tenuous nature of the temporary ceasefire agreements. Further, despite the ceasefire agreements, the Burmese military has not withdrawn troops from many ceasefire areas. In some contested ethnic territories, the Burmese military has gone a step further, fortifying existing camps or even building new ones. This has led to continued clashes and fuelled insecurity among local populations. According to KHRG, the construction or fortification of army bases as well as increases in military rations and transportation, have caused villagers to feel that their personal security is threatened, and to doubt

2. Minority Rights International, World Directory of Minorities and Indigenous Peoples: Myanmar/Burma Overview. 2009.
3. The Border Consortium, Changing Realities, Poverty and Displacement in South East Burma/Myanmar. 31 October 2012.
4. Burma News International, Deciphering Myanmar's Peace Process. January 2013. http://www.burmalibrary.org/docs14/Deciphering-Myanmar-Peace-Process-ocr-tu-red.pdf (Accessed 30 June 2014).
5. AFP, Clashes, mistrust overshadow Myanmar peace process, May 6, 2014.
6. Karen Human Rights Group, Truce or Transition? Trends in human rights abuse and local response in Southeast Burma since the 2012 Ceasefire. May 2014.

that the ceasefire is sustainable.[7] The Burmese military has also been continuing to conduct military offensives in Kachin and northern Shan States, where over 120,000 civilians have been displaced in the last three years and over 200 villages destroyed.[8] The ongoing offensives by the Burmese military in northern Burma as well as the failure to withdraw troops from ceasefire areas has led to skepticism among many ethnic people regarding the Burmese government's sincerity in tackling the long-held ethnic grievances and working towards a sustainable peace.

The latest round of talks between the Union Peacemaking Working Committee (UPWC) and the Nationwide Ceasefire Coordination Team (NCCT), which is negotiating on behalf of 16 ethnic armed organizations, was held at the end of September 2014. The talks were aimed at finalizing a nationwide ceasefire agreement.[9] While progress was made at talks held in August, the most recent round of negotiations stalled with both sides failing to reach agreement. Continued fighting between the Burmese army and ethnic armed groups in Shan and Kachin States is further reducing trust in the peace process and hopes that a nationwide ceasefire agreement will succeed.

Burma experts agree that developing a functioning rule of law system able to protect human rights is essential if the current democratic reforms are to be sustained and the peace process is to succeed. The strong national consensus in favor of rule of law – from the government to the opposition to civil society actors – has placed a spotlight on urgent questions of how to re-build Myanmar's crippled legal system and how to effectively support the public's increasingly vocal and democracy-driven demands for justice and rights.[10] An article published in the Democratic Voice of Burma earlier this year quoted a senior member of Burma's judiciary: "Everybody talks about the rule of law but they don't talk about how to support the judicial system to provide the rule of law". The article goes on to note that in order to fight corruption and foster good governance, Burma needs judges and lawyers who are able to operate independently and impartially to provide proper jurisprudence and, importantly, change the public's poor perception of the system.[11]

A woman displaced following fighting in Kachin State

Military and civilian rule of law must focus on protecting people's rights including working toward international human rights standards, addressing issues that may affect people's access to justice, and creating transparent and independent legal institutions. These are just a few examples of the essential steps that are needed to build confidence in the reform process and to foster true reconciliation.

7. Karen Human Rights Group, Truce or Transition? Trends in human rights abuse and local response in Southeast Burma since the 2012 Ceasefire. May 2014.
8. Weng, Lawi. 200 Kachin Civilians Flee Fighting Near Hpakant. The Irrawaddy. 13 August 2014.
9. Myanmar Times, Military Issues Hold Back Progress on Peace Deal. 29 September 2014.
10. The Oak Foundation, Supporting the Rule of Law in Myanmar: A Strategy for Funding Legal Change. 2013.
11. Zafari, Sam. Making Rule of Law a Reality in Myanmar. DVB. 18 February 2014.

2.2 HEALTH IN BURMA

While recent political reforms in Burma show promise for the country's future, Burma's long-neglected and highly centralized healthcare system faces a number of challenges before it can deliver effective and affordable care to the people of Burma. The government increased spending on health care in 2013 to 3.9% of the country's total budget, up from 1.9% in 2012.[12] While the increase is promising, according to the World Bank, when compared to other countries, Burma ranks among the lowest in terms of total money allocated to health care.[13]

According to a 2012 study conducted by the Lancet, Burma has some of the worst health indicators in the world. Life expectancy is 56 years, 40% of all Burmese children under the age of 5 are moderately stunted, and Burma has more than 50% of all malaria-related deaths in Southeast Asia.[14]

Although the majority of Burma's population lives in rural areas, most health services continue to be concentrated in larger towns and cities. According to a 2012 report published by the Myanmar Ministry of Health, although 70% of the population lives in rural areas, rural health centers have only increased from 1,337 to 1,565 since 1988.[15] According to an assessment conducted by UNICEF in 2012, many of these centers lack basic supplies, medication, and equipment.[16] According to the Ministry of Health's Health Workforce Strategic Plan, rural communities also tend to be understaffed as government health personnel are often unwilling to work in remote areas with limited infrastructure.[17]

Where government services are available, patients must pay out-of-pocket for almost all government health services including medication, medical supplies, and diagnostic tests. Patients must also cover the costs of food and cleaning, and are often asked to make "donations" to the staff, even at public hospitals, which has also eroded trust in the government health system. However, in 2013, public hospitals began providing some free medications to patients who cannot afford to pay. Regardless, out-of-pocket medical expenses remain high and given that 72% of the average Burmese household expenditures goes towards food alone, a figure that is even higher for some ethnic states, government health services remain unaffordable for many people in eastern Burma.[18]

Over the last several decades, a number of ethnic and community-based health organizations have developed health structures and systems in rural areas of the ethnic states where government health services are unavailable. However, the government does not officially recognize these health service organizations and many of them are unregistered. In addition to limiting opportunities for official collaboration with registered organizations and public health professionals in Burma, the lack of registration also

A Backpack Health Worker crosses a river to reach a remote community

12. Ipsos Business Consulting, Healthcare in Myanmar. November 2013.
13. World Bank, Health Expenditure, Total (Percent of GDP). 2012.
14. Burma: Health and Transition, The Lancet. 23 June 2012; 379 (9834). 2013.
15. Myanmar Ministry of Health, Health in Myanmar. 2012.
16. UNICEF, Situation Analysis of Children in Myanmar. July 2012.
17. Myanmar Ministry of Health, Health Workforce Strategic Plan 2012-2017.
18. U Myint, Myanmar: Pattern of household consumption, expenditure. National Workshop on Reforms for Economic Development of Myanmar, Myanmar International Convention Center (MICC), Naypyidaw, 19-21 August. 2011.

restricts funding opportunities for many ethnic and community-based health organizations.

In July 2014, the Burmese Parliament passed the Association Registration Law which allows for voluntary registration of domestic and international associations and contains no criminal sanctions or significant restrictions. However, Burma Partnership notes that the legislation includes some clauses which are ambiguous including a reference to organizations which threaten national security as being subject to charges under existing law.[19] The difficulties in interpreting what the legislation might mean for ethnic and community-based health organizations operating in eastern Burma highlight the ongoing challenges these organizations face as they attempt to gain official status while maintaining the freedom to operate without fear of reprisal. Regardless, many consider the new legislation an improvement on the previous law which banned any civil society organization from registering unless it maintained close ties to the government. The previous law also carried prison sentences of up to three years for those who were members of an unregistered NGO.[20]

3. ETHNIC AND COMMUNITY-BASED HEALTH SYSTEMS IN EASTERN BURMA

Ethnic and community-based health services are designed to be able to respond quickly and appropriately to local health priorities and needs through a large network of clinics, mobile health workers, village health volunteers and trained community-based birth attendants. While there are seven ethnic and community-based health organizations that are members of the Health Information System Working Group (HISWG), survey data for the following five organizations' service areas are represented in this report:[21]

- **Burma Medical Association**—the Burma Medical Association (BMA) was founded in 1991 by a group of health professionals from Burma. BMA is an independent non-profit organization made up of doctors, nurses, and other health professionals. For the past 22 years, BMA has been the leading body for health policy development and capacity building related to the provision of quality health care services in ethnic areas of Burma.

- **Back Pack Health Worker Team**—the Back Pack Health Worker Team (BPHWT) was established in 1998 by Karenni, Mon and Karen health workers to provide health care to internally displaced persons living along the eastern border of Burma who were affected by decades of civil war. BPHWT aims to improve health for displaced people through the delivery of primary healthcare services and public health promotion. They provide basic medical care, community health education and disease prevention, maternal and child healthcare, and water and sanitation programs.

- **Karen Department of Health and Welfare**—the Karen Department of Health and Welfare (KDHW) was established to provide primary health care to all people living in Karen state. From 1991 to 1997, the KDHW administered hospitals and clinics in all seven districts of Karen state, but the State Peace and Development Council (SPDC) offensive of 1997 decimated most of their health care infrastructure. In response, KDHW organized the first mobile health clinic in 1998.

19. Burma Partnership and the Assistance Association for Political Prisoners, A Briefing Paper on the Shrinking Space for Civil Society in Burma/Myanmar. 1 October 2014.
20. The Irrawaddy. Union Parliament Passed NGO Law. 1 July 2014.
21. The Shan State Development Foundation (SSDF) provides health care in internally displaced person (IDP) camps along the Thai-Burma border. The surveyed areas include IDP camps with a relatively small population of displaced people living in four camps along the Thai-Burma border. These camps are in relatively close proximity to health services in Thailand. Due to these characteristics, this population is significantly different from the other areas surveyed inside eastern Burma and do not represent populations in Shan State as a whole. As a result, data for the communities are not included in the main body of the report. Instead, data for the Shan State Development Foundation can be found in appendix 9.2.

Together with the Committee for Internally Displaced Karen People (CIDKP) and the Back Pack Health Worker Team (BPHWT), KDHW established additional mobile health clinics each subsequent year and is now returning to fixed clinic structures.

- **Karenni Mobile Health Committee**—the Karenni Mobile Health Committee (KnMHC) is the Burma-based wing of the Karenni National Progressive Party's Karenni Health Department (KnHD). KnMHC delivers health services via 20 mobile teams in Karenni State. Health programs include curative and preventive health services, reproductive and child health, environmental health, health training, and health information programs.

- **Mon National Health Committee**—the Mon National Health Committee (MNHC) is a non-profit health organization founded in 1992 that serves communities along the Thai-Burma border, deeper inside of Mon state and some areas of Karen State and Tenassarim Division. MNHC is the main provider of primary health care to internally displaced persons (IDPs) living along the Thai-Burma border in Mon State and also operates an additional 33 clinics deeper inside Mon State. Annually, MNHC provides health care to approximately 20,000 patients, with a target population of over 60,000 IDPs.

Other members of the Health Information System Working Group (HISWG) are the Shan State Development Foundation and the Mae Tao Clinic:

- **Shan State Development Foundation**—the Shan State Development Foundation serves the Shan refugees along the Thai–Shan border and internally displaced Shan villagers inside Shan State. It was founded in 2012 by uniting the Shan Health Committee (founded in 1997), the Shan Education Committee (founded in 2008) and Shan Relief and Development Committee (founded in 1999) under a broader vision.

A health worker administers a vaccination

SSDF is committed to creating opportunities for disadvantaged people in Shan State, to be able to fulfil their basic needs and improve their livelihoods. SSDF provides emergency relief assistance, health treatment, education, and community development programs. (Survey data for the Shan State Development Foundation can be found in appendix 9.2)

- **Mae Tao Clinic**—the Mae Tao Clinic (MTC) is a community-based organization operating along the Thai-Burma border. It was formed in February 1989 to provide primary health care for the displaced Burmese community who were affected by civil war and the desperate socio-economic situation in Burma. Initially, it was established to provide basic health services, but now it has expanded into being a comprehensive health service provider and training facility. MTC also responds to a variety of community needs including education, women's empowerment, and child protection.

3.1 GOVERNANCE AND LEADERSHIP

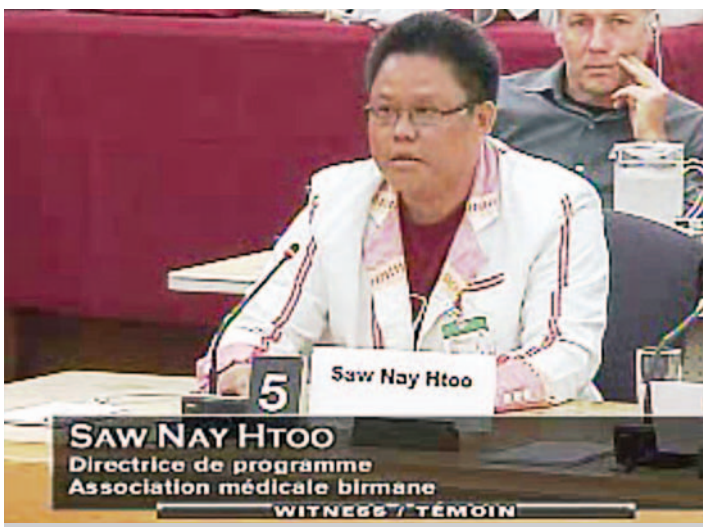
Dr. Cynthia speaking at the Senate Committee of Foreign Affairs and International Trade (Canada), 2014

Ethnic and community-based health organizations are rooted in local communities; the majority of ethnic health workers live and work in their home villages. Further, these organizations' governance structures are guided by leadership committees whose members are elected, a practice which promotes local participation and accountability. Various ethnic and community health service providers, including participants in this survey, collaborate closely with one another and regularly work across ethnic lines to design and implement context-specific health programs.

In May 2012, ethnic and community-based health organizations working in eastern Burma formed the Health Convergence Core Group (HCCG). Its membership in 2014 includes Chin, Karen, Karenni, Mon and Shan ethnic health organizations, as well as community-based health organizations such as the Back Pack Health Worker Team (BPHWT), Mae Tao Clinic (MTC), the National Health and Education Committee (NHEC), and the Burma Medical Association (BMA). The purpose of the HCCG is to explore policy options for achieving the convergence of ethnic, community-based, state, and government health systems through political dialogue.

The members of the HCCG have developed a model summarizing how convergence of health systems should align with the steps of the peace process, with coordination and collaboration between ethnic and government health systems. See appendix 9.3.

In March 2014, the members of the HCCG developed a policy paper on issues relevant to the potential decentralization of health systems in Burma and are continuing to explore options for what federalism would mean for health care in the ethnic states.[22]



Saw Nay Htoo speaking at the Senate Committee of Foreign Affairs and International Trade (Canada), 2014

Since its formation, the members of the HCCG have met with the Ministry of Health and hosted seminars attended by the Karen State Health Department, the Myanmar Medical Association, the Myanmar Health Assistant Association, the National League for Democracy's Health Network, and various INGOs. These meetings and seminars have offered important opportunities for ethnic and government health officials to explore options for collaboration, information sharing, and technical exchange. The members of the HCCG see convergence efforts as crucial to expanding access to health services for the most vulnerable communities in the country.

22. HCCG, 2014: A Federal, Devolved Health System for Burma/Myanmar: A Policy Paper (draft). Health Convergence Core Group (HCCG).

Although these efforts by the HCCG to engage with the government are a landmark beginning, notions of equitable and sustainable convergence between ethnic and government health systems are still premature. This is especially true when considering the fact that ethnic and community health organizations follow a decentralized health systems model, with local communities deciding on their health priorities and interventions. This stands in contrast to government health systems which remain highly centralized, as the majority of policy decisions continue to be made in Naypyidaw, there are limited roles for state and district-level health officials, and there is as yet no formal recognition of ethnic and community health systems. The future of convergence efforts is still uncertain.

Members of the HCCG at the 5th Strategic Planning Meeting, August 2014

The Impact of Aid

"In some conflict-affected areas, confidence in the peace process is being actively undermined by what is perceived as the conflict-insensitive expansion of government service delivery, as well as internationally implemented projects. At the same time, [ethnic health] services face severe funding cuts as donor priorities shift."—Asia Foundation[23]

Burma's recent political changes have resulted in a flood of international assistance from governments interested in showing support for the country's reforms, particularly from the United Kingdom, European Union, Japan, and the World Bank. A significant amount of development aid is being channeled to the Burmese government or other officially sanctioned organizations, with limited investments in local organizations and capacity. Aid has also flooded into international NGOs, some of whom may create parallel health services and structures to those services currently being provided by ethnic and community based health organizations.

2014 witnessed the start of a new round of health care interventions to be managed by large international organizations, some with specific funding mechanisms to support the work of ethnic and community-based health organizations. The majority of these new projects are financed by large, multi-donor funds. The increased attention to the health care needs of remote ethnic areas is positive, and any direct support for existing ethnic and community-based health organizations shows promise for a more holistic approach to health service delivery in eastern Burma. As international aid floods into Burma, ethnic and community-based health organizations continue to seek partnerships with donors that will directly support existing ethnic health service providers in their comprehensive approach that places emphasis on primary health care and health systems strengthening at the local level including preventative and curative care, education, infrastructure development, and community involvement and participation.

23. Joliffe, Kim. Ethnic conflict and social services in Myanmar's contested regions. Asia Foundation. June 2014.

3.2 HEALTH SERVICE DELIVERY

Ethnic and community-based health organizations are the main source of health-related services for hundreds of thousands of people living in remote ethnic communities in eastern Burma, including many internally displaced persons (IDPs). In some of the more stable areas of eastern Burma, ethnic health service providers have established fixed clinics, with one clinic for each village tract (comprising a population of 2,000-5,000).[24] In more isolated and conflict-affected areas, health care services are provided by mobile teams of health workers. Teams are assigned village clusters based on geographic proximity to ensure maximum accessibility and effectiveness. In this 'backpack' or 'mobile' model, medics are based in their home village, and provide outreach medical services to nearby communities. They also respond to referrals from a network of trained village health workers and volunteers, as well as trained, locally-based birth attendants.

In addition to providing basic preventive and curative services for the most common communicable diseases (particularly diarrhea, malaria, and respiratory infections), ethnic and community-based health organizations also provide basic reproductive health care (working in conjunction with trained traditional birth attendants), child health services, health education campaigns, control of disease outbreaks, relief during acute emergencies (such as storms and flooding), and water and sanitation projects.

Those facilities located near the border with Thailand are also able to provide referrals for patients in need of secondary and tertiary level care, with initial referrals made across the border to the Mae Tao Clinic in Mae Sot, Thailand. The Mae Tao Clinic (MTC) is a comprehensive health service provider and training facility, established to promote and contribute to accessible quality health care among displaced Burmese and ethnic people along the Thai-Burma border.

Health workers carry gravity flow water system supplies in Karen State

The clinic is located in Mae Sot, Thailand and for patients requiring more specialized care, the Mae Tao Clinic is able to refer patients directly into the Thai public hospital system through long-standing, close collaborations with local Thai health authorities and hospitals. Referrals are also made to clinics managed by the Shoklo Malaria Research Unit (SMRU) on the Thai side of the Thai-Burma border. SMRU clinics are equipped to treat patients in need of more complex care including emergency obstetric cases and severe malaria cases. Referrals to the Burmese health system are theoretically possible, although more rarely made due to concerns about the quality of care and the costs associated with travel and obtaining care, which as noted earlier can be prohibitive for the majority of rural patients.[25]

24. A village tract is the basic administrative unit which is made up of one or more villages depending upon the size of population in each village. There are typically around 10 villages in a village tract.
25. Myawaddy Hospital, a Burmese government hospital on the Burmese border, refers patients to the Mae Tao Clinic.

3.3 HEALTH WORKFORCE

Ethnic and community-based health systems have evolved to encompass a large and diverse workforce, with health workers who are capable of performing a variety of roles. Over half of the workforce is comprised of village health workers, reflecting the core function of this system, which is to expand access to basic primary health care services. Health workers are trained in basic health services including delivering babies, administering first aid, immunizing children, monitoring and treating infectious disease, and providing community health education.

Due to the unique conflict setting, ethnic and community-based health service providers use a 'task shifting' approach to respond more effectively to the specific conditions and needs on the ground. Task shifting refers to a process of delegation whereby tasks are moved, where appropriate, to less specialized health workers when traditionally trained medical doctors, nurses, and other licensed personnel are not available. For ethnic and community based health organizations, task-shifting has involved the rational redistribution of tasks amongst an active network of medics, community health workers, village health workers, and trained traditional birth attendants. This is managed collaboratively between the Karen Department of Health and Welfare, Burma Medical Association and the Back Pack Health Worker Team in the respective townships and villages where they work.[26] Task-shifting among the ethnic and community-based health organizations of eastern Burma has also included the targeted identification and training of community-based traditional birth attendants, who are the first point of contact for many pregnant women and women of reproductive age in need of reproductive health and family planning services. By reorganizing the workforce in this way, task shifting allows ethnic and community-based health organizations to make more efficient use of the human resources currently available.

Lab worker examining blood sample for malaria

26. Low, S., Kyaw T. Tun, et al. Human resources for health (HRH): Task shifting to promote basic health service delivery among internally displaced in ethnic health program service areas in eastern Burma/Myanmar.Global Health Action. 2014, 7: 24937.

Over the years that ethnic and community-based health organizations have been providing primary health care services to communities in eastern Burma, they have worked together to develop their own training curricula and standardized medical treatment protocols such as the Burmese Border Guidelines[27] which provides basic guidelines for the diagnosis and treatment of conditions common on the Thai-Burma border. The majority of health workers employed by ethnic and community-based health organizations attend initial training and periodic professional development seminars, with further clinical supervision undertaken at the Mae Tao Clinic or other ethnic health department clinics. The development and review of all training materials is done with collaboration from local Burmese, Thai, and international partners. Training programs have also evolved to respond better to emerging local and international priorities. For example, medics working in conflict-affected areas and areas with landmines receive more intensive training in trauma management. Further, the majority of health workers periodically receive refresher trainings to upgrade their skills and ensure they are informed of new international guidelines.

Community health worker training in Karen State, 2014

Central to the ability of ethnic and community-based health organizations to work effectively in the ethnic states is the issue of health worker recognition and accreditation. The fact that the majority of ethnic health workers are not accredited means that they can face arrest at any time for providing vital services to communities that have no other source of health care. In a recent report for the Asia Foundation, Kim Joliffe notes that staff of ethnic and community-based health organizations continue to face threats in some areas through surveillance, harassment, and demands for bribes. Prior to the ceasefire agreements, many ethnic health workers operated under severe security conditions. The Back Pack Health Worker Team reported that between 1998 and 2010, nine medics and one traditional birth attendant were killed by gunfire or landmines in the course of their work. Ethnic health workers have also faced specific threats of arrest as they are viewed as "illicit" health professionals by the Burmese government.

Health workers graduation ceremony, 2014

As recently as November 2011, two Backpack medics were arrested while attending to a patient in northern Karen State and were only released following the signing of the ceasefire agreement. Accreditation is seen as an important step in ensuring that staff are no longer at risk of arrest and are recognized as equals to Ministry of Health healthcare workers. Accreditation for health workers should follow formal recognition of existing ethnic health structures as a whole. Addressing issues of recognition and accreditation is also seen as an early step towards possible 'convergence' and achievement of a joint approach toward healthcare in the ethnic states.[28]

27. Burmese Border Guidelines. 2007.
28. Joliffe, Kim. Ethnic conflict and social services in Myanmar's contested regions. Asia Foundation. June 2014.

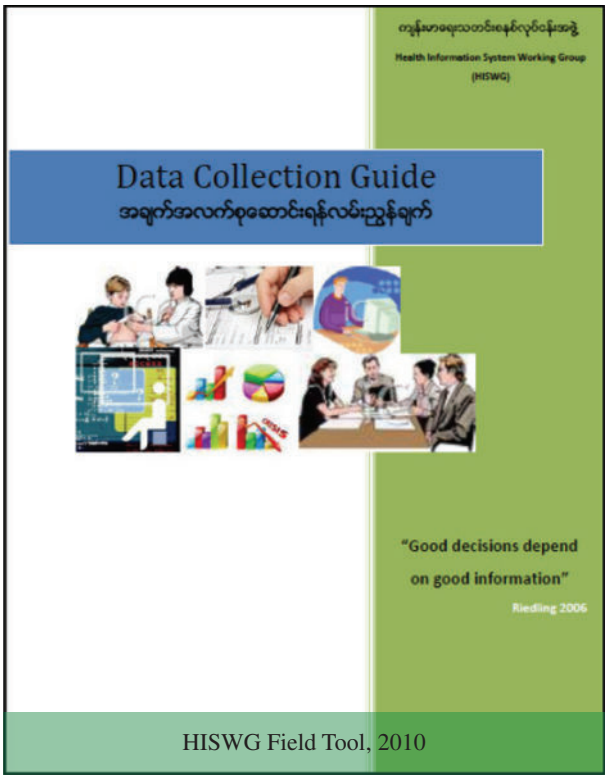
Table 1: Health Workforce among the five organizations represented in this report

Type	Numbers in Eastern Burma	Numbers per 1,000 Population
Medic	461	1.01
Maternal and Child Health Worker/ Reproductive Health Worker	134	0.29
Community Health Worker	372	0.81
Trained Traditional Birth Attendant	980	2.14
Village Health Worker/ Village Health Volunteer	648	1.41
Lab Technician	55	0.12
Total	**2,650**	**5.8**

3.4 HEALTH INFORMATION SYSTEMS

Government health information systems are inadequate in Burma and are characterized by a lack of quality data that is timely, complete, and relevant. Disease control programs are limited by reporting delays and weaknesses in disease surveillance[29] and official national statistics fail to capture important variations in health status across geographic regions and sub-populations. As a result, they are likely to underestimate health risks in conflict-affected border regions where state-sponsored data collection and health system responses have been constrained for decades.[30]

The inadequacy of government health information systems and the lack of reliable health data in the ethnic states have led ethnic health organizations to establish their own data collection mechanisms and health information systems under the umbrella of the Health Information System Working Group (HISWG) in 2002.[31] The HISWG receives ongoing technical support from international partners (including Community Partners International, Johns Hopkins University Bloomberg School of Public Health, and the David Geffen School of Medicine, University of California, Los Angeles). The goal of the HISWG is to ensure quality, timely, and standardized data collection as well as a standardized approach to the compilation and analysis of health data. Their

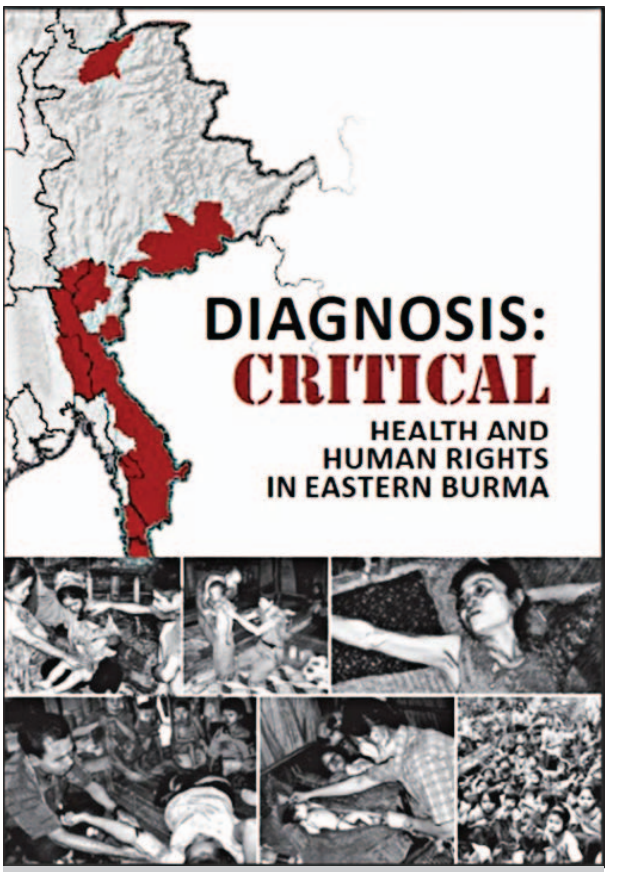


HISWG Field Tool, 2010

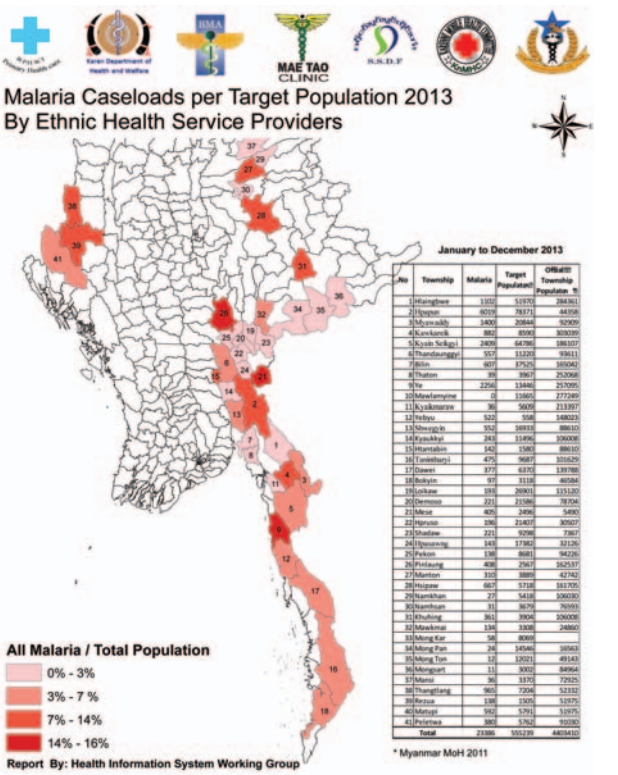
29. Yu Min Saw, Khine Lae Win, et al. Taking stock of Myanmar's progress toward the health-related Millennium Development Goals: current roadblocks, paths ahead. International Journal for Equity in Health. 2013, 12:78.
30. Parmar, P., et al., Health and human rights in eastern Myanmar prior to political transition: A population-based assessment using multistaged household cluster sampling. BMC International Health and Human Rights, 2014, 14:15.
31. For HISWG member organizations, see page 1, Implementing Organizations.

activities include compiling and analyzing data collected from each of their member organizations, creating standardized indicators and data collection forms, generating data collection guidance and data sharing policies, conducting trainings, and developing reports.

Since 2002, the HISWG has conducted surveys covering issues such as water, sanitation, morbidity, mortality, and nutritional status. Starting in 2004, the HISWG began conducting broader, population-based, retrospective mortality and morbidity surveys of IDP communities in eastern Burma. These surveys not only covered basic health indicators and population-level data of remote and IDP communities served by the ethnic health organizations, but also assessed morbidity, mortality, and priority health conditions faced by these communities. The surveys also assessed local populations' experiences with human rights violations and their impacts on health. The surveys were unique in that they captured essential health information on displaced populations in the ethnic states that was not available from government service providers or other health organizations. The results of these surveys were released in a 2006 report titled: "Chronic Emergency: Health and Human Rights in Eastern Burma", and a 2010 report titled: "Diagnosis Critical: Health and Human Rights in Eastern Burma". The 2008 survey data is also represented in a peer-reviewed publication in the journal BMC International Health and Human Rights titled: "Health and Human Rights in Eastern Myanmar Prior to Political Transition: A Population-Based Assessment Using Multistaged Household Cluster Sampling".



Previous HISWG report, 2010



HISWG routine monitoring of common diseases

4. METHODOLOGY

This report presents the results of the latest population-based survey of remote and IDP communities in eastern Burma, conducted by the HISWG in 2013. A steering committee, comprised of ethnic and community-based health organizations and international partners was formed to provide coordination and oversight. The HISWG administered the survey and provided support for the project, with ongoing technical support from member health organization representatives and international collaborating partners, including Community Partners International (CPI), Burma Relief Centre (BRC), Johns Hopkins Bloomberg School of Public Health, Harvard University, and the University of California, Los Angeles.

4.1 SAMPLING

From July to September 2013, 80 surveyors conducted retrospective household surveys in five states and regions, including accessible areas of Bago, Karen, Karenni, Tanintharyi, Mon, Kachin, Palaung and Shan. The primary objective of the study was to estimate morbidity and mortality in each of the service areas of the five ethnic and community-based organizations that deliver health services to internally displaced persons (IDPs) and other remote populations in eastern Burma. Additional outcomes of interest included demographics, migration, mortality, self-reported health status, reproductive health, child health, water and sanitation, food access and nutrition, malaria, human rights violations, and access to health services.

Surveys were conducted using two-stage cluster sampling and data were collected from a total of 6,620 households. The sampling frame of 456,786 people (87,841 households) was constructed using village-level population lists provided by ethnic and community-based health organizations that had been updated within the past year. Geographic boundaries were drawn based on service (or catchment) areas for each health organization. The stratified, two-stage household sampling protocol was designed to facilitate estimation of under five mortality rates in each service area (stratum). In the first stage, clusters were selected using population proportional to size (PPS); in the second stage, proximity sampling was used to select 30 households for each cluster. A household was defined as a group of people who live under the same roof for two or more months and share meals.

Surveyors examine a map of the planned survey area

4.2 INSTRUMENT DESIGN AND HEALTH OUTCOMES MEASUREMENT

The survey instrument was originally written in English, translated into Burmese, Mon, and Sgaw Karen, and then each of these languages was back-translated into English. The survey asked respondents to enumerate the age, sex, and in/out-migration of all household members and give the age and perceived cause of death of all who had died in the household in the past year with the exception of miscarriages, abortions, and stillbirths. Acute malnutrition was assessed by measuring mid-upper arm circumference (MUAC) of women of reproductive age (15-49 years) and children 6-59 months of age. All members of the first, 15th, and 30th household were tested with Paracheck ® (Orchid Biomedical Systems: Goa, India) rapid diagnostic test for infection with P. falciparum malaria. In clusters with less than 30 households, another household was chosen at random to replace the 30th household. Approximately two-thirds of those approached for testing agreed to do so. The most common reasons for declining testing include safety concerns, the lack of symptoms attributable to malaria, and the close proximity to a clinic, where testing and treatment services were already offered.

Interviewers requested that the head of household (male or female) respond to the first 78 survey questions; if the head of household was unavailable, respondents were selected in the following descending order of priority: a woman of reproductive age with the youngest child under five in the household; women of reproductive age currently pregnant; and oldest woman of reproductive age. In order to increase the number and fidelity of information collected about pregnancy history, interviewers asked an additional 19 reproductive health questions of all women of reproductive age in the household who either had a child under five or were pregnant at the time of the survey.

4.3 SURVEYOR TRAINING AND ETHICAL APPROVAL

A total of 80 surveyors participated in a two-week training conducted in the local language in one of three locations. The training covered sampling, interviewing techniques, informed consent protocols, use of global positioning system (GPS) units, handling adverse events, mid-upper arm circumference (MUAC) measurement, and rapid diagnostic testing for Plasmodium falciparum (P. falciparum) malaria. Instruction was complemented with mock interviews and observed field piloting of the survey tool.

A verbal informed consent process was undertaken with each household. When cases of malaria or malnutrition were uncovered, or when respondents expressed distress resulting from questions asked, surveyors referred affected individuals to community leaders and local clinics to seek necessary care. The Institutional Review Boards at Partners HealthCare and the University of California, Los Angeles provided ethical review and approved the study protocol.

4.4 DATA COLLECTION, COMPILATION AND ANALYSIS

Data was double entered independently in Epi Data 3.1 in the months of September and October 2013. It was then checked for accuracy and consistency, with the process completed in December. Reported data is based on a joint analysis conducted by Community Partners International and teams at Harvard University and the University of California, Los Angeles. In addition to this report, data from the survey will also be published in a pending peer reviewed publication.[32]

Crude mortality was calculated using a ratio of deaths to mid-year population; under 5 mortality rates (U5MR) and infant mortality rates (IMR) were calculated as a ratio of deaths per one thousand live births using standard approaches. Morbidity outcomes were analyzed with prevalence calculations. For counts of deaths within households, rate ratios were estimated using Poisson regression with an offset for the number of household members at-risk for outcome events within relevant age groups.

Mid-upper arm circumference (MUAC) data for children ages 6 to 59 months were analyzed using two complementary approaches. First, commonly used MUAC cutoffs were used to categorize children with severe (<11.5 cm), moderate (11.5 to <12.5 cm), and mild (12.5 to <13.5 cm) acute malnutrition. Second, in order to facilitate comparisons with previous surveys in eastern Burma, we used World Health Organization Child Growth Standards to calculate MUAC scores. Children with MUAC measurements less than 11.5 cm were considered malnourished. For women of reproductive age, MUAC less than 22.5 cm was considered malnourished.

All analysis was conducted using post-stratification weights, which is equal to the inverse sampling probability of being in a selected household using R for data analysis.

4.5 LIMITATIONS

As the survey employed a retrospective design, all questions asked of respondents were subject to potential recall bias, particularly for mortality outcomes. Recall periods for most questions were for the past 12 months, with the following exceptions: diarrhea and ORS usage in children under 5 (2 weeks), vitamin A and de-worming for children under 5 (6 months), reproductive health histories (last pregnancy within the last two years), landmine injuries (12 months and 15 years), and clean drinking water and mosquito net usage (24 hours). Because mortality cases and causes of death were reported by surviving household members without verbal autopsy or physician-classified cause of death, there is a possibility of misclassification of causes of death. Surveys were administered during the rainy season; thus, care is warranted in attempts to extrapolate epidemiologic data for diseases that have seasonal variations (such as malaria and diarrhea) when compared with data on such diseases in other areas, collected in other seasons. For analysis, most statistics were pooled across areas in which the survey took place. This may obscure more regional variations which likely exist, given the widely variable levels of health service availability and heterogeneous political realities faced by different IDP communities.

Although mobile teams of participating organizations regularly deliver services in highly insecure areas, it was not possible to collect and return data from several particularly dangerous areas. It is possible that the health and human rights situation in these areas is worse than in those for which data was available. However, given the lack of data from these areas, is not possible to draw definitive conclusions about the differences between survey areas.

32. Parmar, P., et al., Health and human rights in eastern Myanmar after the political transition: A population-based assessment using multistaged household cluster sampling. BMC International Health and Human Rights, 2014. Publication pending.

5. SURVEY AREAS

Out of 225 clusters planned (6,750 households), security concerns led to the replacement of 10 clusters, and prevented surveys from being conducted in 6 clusters. The final sample analyzed included 219 clusters (29 clusters had fewer than 30 households in the village), with 30,323 people enumerated in 6,620 households. The overall response rate was 91.5%.

Some village tracts and townships covered by the survey overlap with areas administered by the Burmese government, as reported by Myanmar Information Management Unit (MIMU). This is a result of political ambiguity with regard to the administration of some areas in eastern Burma that remains to be addressed. However, generally, there is no overlap of government and ethnic health services in these areas, though some collaboration occurs between health providers to address local health needs.

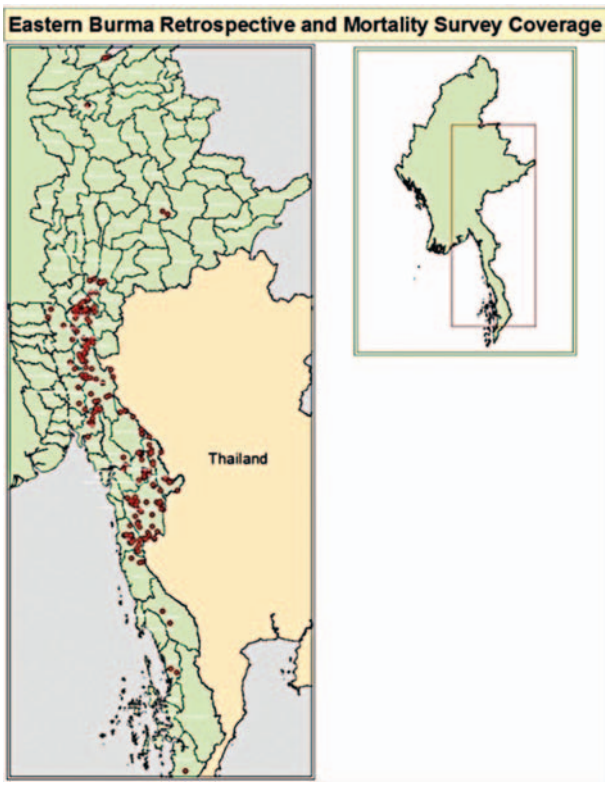


Table 2: Surveys Returned

Target population	**456,786**
Number of clusters sampled	225
Number of clusters reached	219
Total households sampled	6,750
Total households reached	6,220
Total consenting households	6,178
Total population in consenting households	30,323
Overall response rate	91.5%

6. SURVEY FINDINGS AND DISCUSSION

6.1 DEMOGRAPHICS

KEY INDICATORS

- Eastern Burma's demographics are characterized by high birth rates and high death rates.
- 40% of community members in eastern Burma are 14 years old or younger
- A majority of those surveyed identified themselves as ethnically Karen (67%)

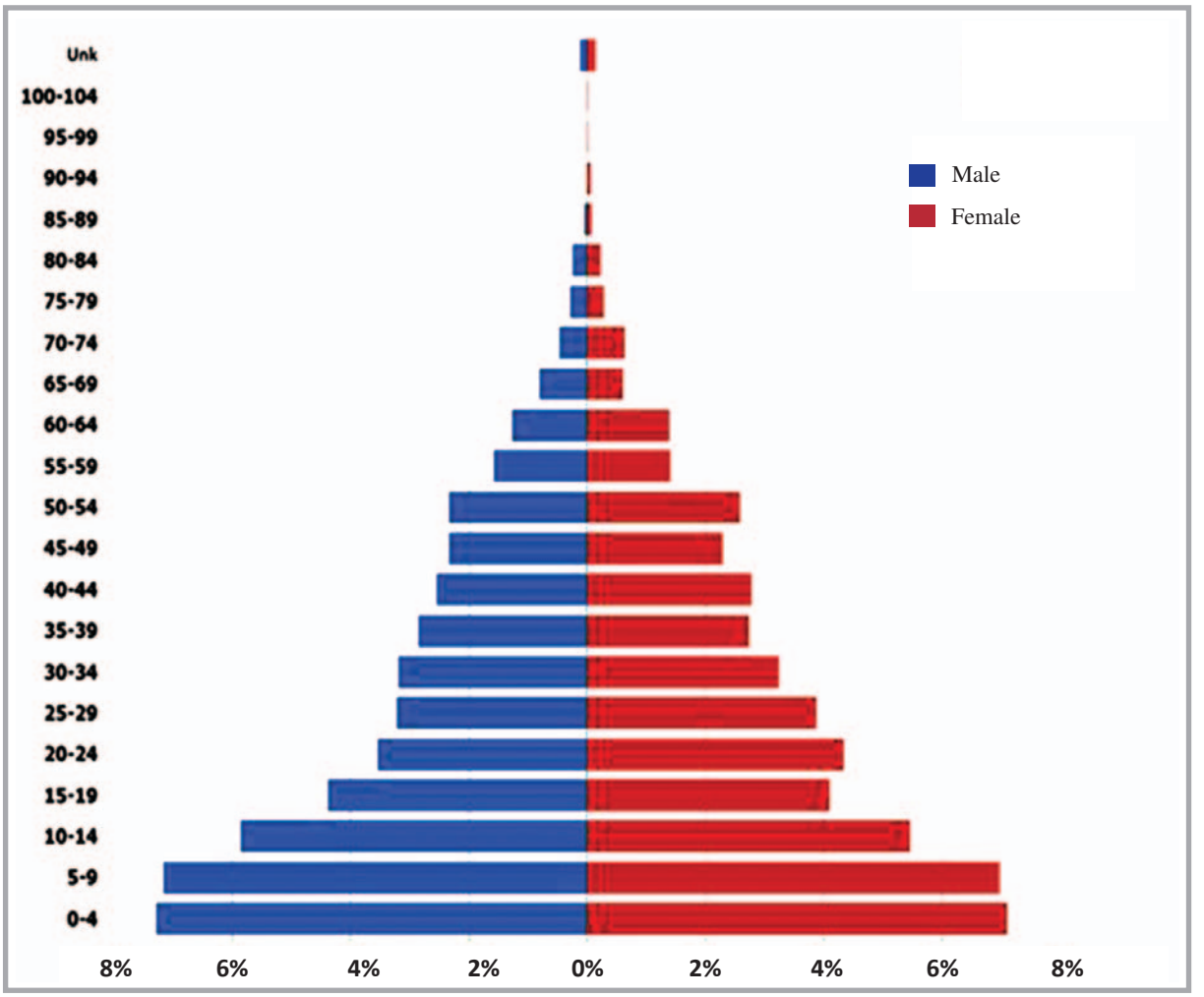
Table 3: Population Demographics (all household members)

Characteristic (N = 30,323)	Proportion
Male	49.7%
Female	50.3%
Mean household size	4.9%
Under 5 years	14.6%
Under 15 years	40.2%
65 and older	3.6%
Language	
Pwo Karen	15.1%
Sgaw Karen	60.2%
Burmese	41.4%
Shan	5.4%
Karenni	7.7%
Mon	10.4%
Other	8.8%
Ethnicity	
Karen	66.9%
Karenni	10.5%
Shan	3.4%
Mon	10.6%
Burmese	0.8%
Other	7.5%
Religious affiliation	
Christian	35%
Buddhist	58.5%
Muslim	0.1%
Animist	5.7%
None	<0.1%

Roughly 15% of the sampled population were under 5 years of age. Mean household size was 4.9 persons. A majority of those sampled identify as ethnically Karen and speak Sgaw Karen, though a substantial proportion also speak Burmese.

The demographic characteristics of the surveyed population are represented by the population pyramid below. A population pyramid consists of two bar graphs placed back-to back. Males are plotted on the left, and females are on the right. The pyramid for eastern Burma is triangular, with a broad base that quickly narrows indicating that there is a high birth rate, a high death rate—particularly of children, and a short life expectancy. This distribution is commonly seen in less developed countries and in settings where access to basic health care, particularly reproductive health services, preventive health care, and sanitation, is limited or unavailable. The gender divide overall is almost equal between males and females, with a slight female predominance.

Figure 1: Population Pyramid for Eastern Burma (2013)



6.2 MORTALITY

KEY INDICATORS

- Diarrhea, acute respiratory infections and malaria are the main reported causes of death for children under 5, resulting in 42.2% of deaths
- Infant and child mortality remain high
- Over one-third of deaths among children under 5 occurred within the first 28 days of life

Table 4: Comparison of Key Mortality Statistics

	Thailand (2012)	Burma (2012)	Eastern Burma (2013)	Somalia (2012)	MDG 2015 Target for Burma[33]
Crude Mortality Rate (CMR) per 1,000 population	7.6	8.5	9.2	12.5	-
Infant Mortality Rate (IMR) per 1,000 live births	11	41	94.2	91	28.3
Under 5 Mortality Rate (U5MR) per 1,000 live births	13	52	141.9	147	38.5

Figures for Burma, Thailand, and Somalia: UNICEF, Country Statistics[34, 35]

The crude mortality rate is the number of deaths per 1,000 people. The infant mortality rate (IMR) is the number of deaths in children less than one year of age, per 1,000 live births. The under-5 mortality rate (U5MR, also called child mortality rate) is the number of infants and children who die by the age of five, also per 1,000 live births per year. IMR and U5MR, in particular, are sensitive indicators of the performance of the health system of a country or region. The vast majority of these deaths occur as a result of preventable conditions, including malnutrition, infections, and complications during pregnancy or delivery, and can often be addressed with inexpensive interventions.[36]

The key mortality indicators for children show that mortality rates remain high in eastern Burma. These indicators highlight the critical health crisis that continues in eastern Burma despite the recent political reforms and influx of aid. Further, crude, infant, and under 5 mortality rates are higher than the corresponding national averages for Burma, which already ranks among the worst in Southeast Asia, and are far higher than neighboring Thailand. Infant and under 5 mortality rates in eastern Burma bear closer resemblance to other settings in which longstanding complex humanitarian disasters have unfolded, such as Somalia.

In the twelve months prior to the survey, three preventable diseases were the cause of 42.2% of deaths in children under age five including diarrhea (15.6%), malaria (14.8%), and acute respiratory infections (11.8%).[37] These three diseases were also the leading cause of death across all age groups, accounting for nearly half of all deaths.[38] These three diseases were also the three main causes of death in 2008.[39] The percentage of neonatal deaths also remains high. In 2013, over one-third (36.5%) of deaths among children under 5 occurred within the first 28 days of life. Neonatal deaths were the fourth major cause of death among children under 5 and across all age groups.[40] Among infants that died in 2013 before reaching their first birthday, over half (57%) were neonatal deaths.

33. United Nations Country Team in Myanmar, Thematic Analysis 2011: Achieving the Millennium Development Goals in Myanmar. 2011.
34. UNICEF, Myanmar Statistics. 2013.
35. United Nations Country Team in Myanmar, Thematic Analysis 2011: Achieving the Millennium Development Goals in Myanmar. 2011.
36. UNICEF, The Big Picture. 2014.
37. Total number of deaths among children under 5 = 94
38. Total number of deaths across all age groups = 250
39. Health Information System Working Group, Diagnosis Critical: Health and Human Rights in Eastern Burma, 2010.
40. Neonatal deaths accounted for 15.6% of deaths across all age groups in 2013.

6.3 MATERNAL AND CHILD HEALTH

KEY INDICATORS

- 73% of women reported that a Traditional Birth Attendant helped to deliver their last child
- 60.4% of women received at least one antenatal care visit
- 16.4% of women received four or more antenatal care visits as recommended by the World Health Organization
- 92% of women breastfed their infants for six months or more

Maternal health is another key indicator of health system performance. Services such as timely access to appropriate antenatal and postnatal care, attendance of a skilled health professional during delivery, and access to family planning services are considered essential. Ethnic and community-based health organizations have maternal and child health programs supported by skilled staff. These staff undergo extensive training and provide pre- and post-natal care, safe delivery services, and family planning services including education and contraception. Selected 2013 maternal and child health outcomes highlight key successes in areas like breastfeeding practices and demonstrate the relevance of existing health programs that promote and support maternal and child health. However, other indicators such as the unmet need for contraception and low rates of antenatal care visits demonstrate the continued need to strengthen and expand maternal and child health programs.

6.3.1 SKILLED BIRTH ATTENDANTS

Having a skilled birth attendant present during delivery is a key intervention to help avert maternal death and to protect the health of the child, particularly due to the need for the timely delivery of care when emergency obstetric or neonatal conditions occur. According to the United Nations Population Fund, up to 15% of all births are complicated by a potentially fatal condition.[41]

Over two-thirds (73%) of the women interviewed indicated that a traditional birth attendant (TBA) had supported the delivery of their last child (within the last two years). The shortage of health professionals and health facilities necessitates that TBAs take on work typically performed in other regions and countries by those with higher qualifications (see above, section 3.4. Health workforce, in particular 'task shifting').

Table 5: Presence of Skilled Birth Attendant

Delivery attendants (multiple responses allowed)	
Traditional birth attendant	73%
Ethnic health worker	11.4%
Other*	14.4%
Doctor/Nurse	5.2%
Health Assistant/Midwife/Auxiliary midwife**	5.4%

* Family, community, friends, self

** A health assistant, midwife, or auxiliary midwife could be working for either an ethnic/community-based health organization or the government, while doctors and nurses are exclusively employed by the government.

MCH worker examining a pregnant woman

41. United Nations Population Fund, Skilled Attendance at Birth. (Accessed 20 June 2014).

Trained Traditional Birth Attendants: Providing Access to Safer Delivery in Remote Settings

In eastern Burma, ethnic women of reproductive age and pregnant women have historically relied on traditional birth attendants (TBAs), many of whom had limited training, as the main providers of reproductive, maternal, and child health care. (In many remote areas, there is a general lack of access to secondary or tertiary health professionals, a phenomenon which has been compounded by conflict and militarization, related displacement, as well as restrictions on movement). Ethnic and community-based health organizations have responded to the need by tapping into the network of existing TBAs and helping them to develop the knowledge, skills, and infrastructure needed to build a foundation of solid practice for ensuring the safe delivery of babies and promotion of maternal health.

Prior to 2011, the majority of TBAs received one week of training followed by a three-day refresher training every six months. Ethnic and community-based health organizations have since developed a six-week curriculum, which includes detecting five danger signs and symptoms during pregnancy, safe delivery practices, and providing ante- and postnatal care. Target populations trust and regularly access these TBAs, who are trained in accordance with international standards and can provide effective, timely advice and assistance to women. In eastern Burma, capitalizing on the existing network of TBAs has been important, and has led to an increase in coverage of basic maternal health interventions and access to more specialized obstetric care.

6.3.2 ANTENATAL CARE

Antenatal and postnatal care visits with trained healthcare providers are considered an essential component of reproductive health care. These visits can help prevent, detect, and treat conditions that pose a potential risk to the life of a pregnant woman and her baby. The World Health Organization recommends at least four antenatal visits for procedures such as blood pressure screening, vaccination with tetanus toxoid, screening and treatment of infections, and tests for anemia.[42] Among survey respondents, over half of women whose last pregnancy was within the past two years received at least one antenatal care visit. However, only 16.4% of women had four or more antenatal care visits, meeting the World Health Organization recommended standard. Among respondents who received antenatal care services, over 80% obtained these services from an ethnic health worker or a trained traditional birth attendant.

In eastern Burma, both iron supplementation and presumptive de-worming treatment, recommended in all hookworm prevalent areas, can be life-saving

Table 6: Antenatal Caregivers

(Multiple responses allowed)	
Ethnic Health Worker	36.4%
Traditional Birth Attendant	50.7%
Health Assistant/Midwife/Auxiliary Midwife*	12.5%
Doctor/Nurse*	10.2%
Other	7.4%

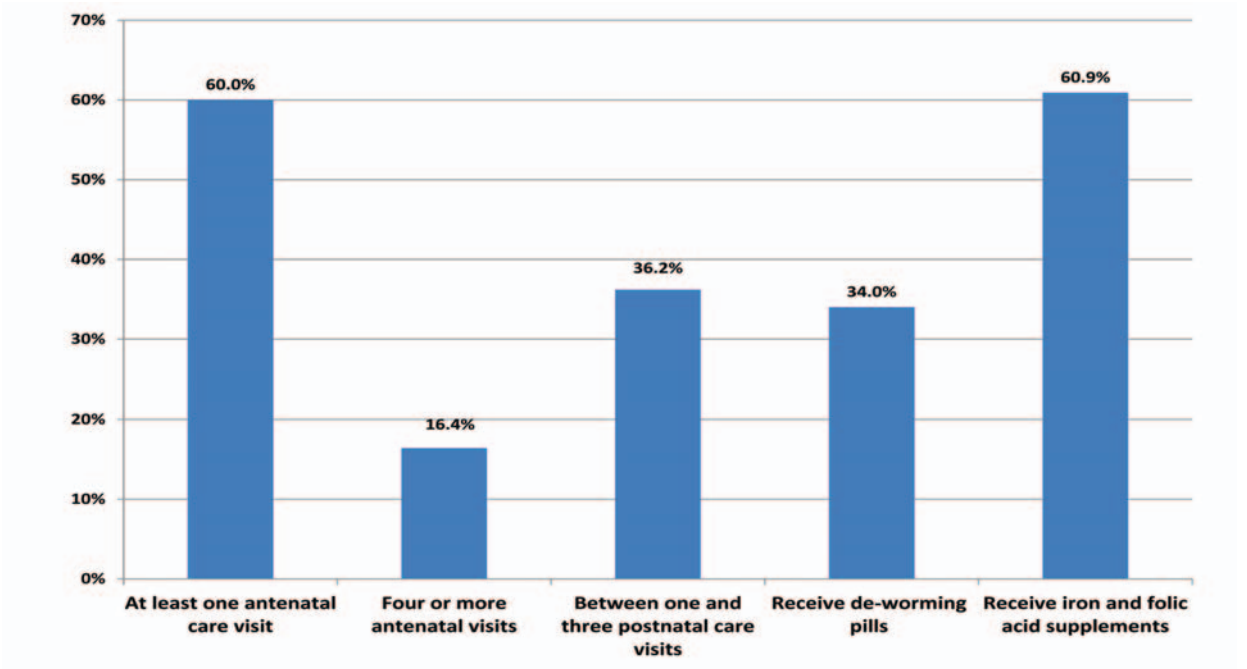
* A health assistant, midwife, or auxiliary midwife could be working for either an ethnic/community-based health organization or the government, while doctors and nurses are exclusively employed by the government.

42. World Health Organization, Global Health Observatory: Antenatal Care, 2014.

Senior Maternal and Child Health worker is examining a pregnant woman in Karen State

in pregnancy. These treatments reduce the risk of maternal anemia and its complications for both the mother and her baby. Just over one third of the women surveyed received some form of de-worming treatment and 60.9% of women received iron and folic acid supplementation.

Figure 2: Antenatal Care



A health worker discusses family planning options with a mother of four

6.3.3 FAMILY PLANNING AND CONTRACEPTIVE USE

Family planning is essential to empower people to control their own fertility and to determine the number of children they desire as well as the spacing of their births. It is considered essential to help reduce maternal mortality as well as improving the health of both mothers and babies.[43] Readily available and accessible family planning services including counseling, referral, and choice of family planning methods can also reduce the occurrence of unsafe abortions.

Among survey respondents, 26.7% of women who are not pregnant and do not desire any more children are using a modern form of contraception. However, the unmet need for contraception (the proportion of women who are fecund, sexually active, and do not desire any children but are not using any contraception) remains high.[44] In total, the survey found that 54.1% of women had an unmet need for contraception. Of the women surveyed who use modern methods of contraception, the vast majority used depot medroxyprogesterone acetate (DMPA) injections, followed by oral contraceptive pills.

Table 7: Contraceptive Use Among all Women Using Contraception (n=1,180)

Injection of depot medroxyprogesterone acetate	65.8%
Oral pills	28.8%
Sterilization	4.3%
Intrauterine Device (IUD)	1%
Male condom	1.2%
Other*	2%

* Norplant, female condom, calendar/ withdrawal/abstinence, traditional medicine

43. The report does not present findings on Maternal Mortality Ratio (MMR).
44. Unmet need--Women not doing anything to prevent a pregnancy among women who are not currently pregnant and not planning for more children (excluded are women who indicated they have "no need" for contraception, e.g. widowed/divorced women).

6.3.4 MATERNAL NUTRITION

Severe malnutrition in pregnant women can be assessed using mid-upper arm circumference (MUAC) as this measurement does not change significantly during the course of a pregnancy. A low MUAC in pregnant women has been associated with poor birth outcomes, including intrauterine growth retardation and low birth weight infants.[45]

Among survey respondents, 11.3% of women of reproductive age were moderately/severely malnourished, as defined by a MUAC score less than or equal to 22.5 cm.[46] This is an improvement compared to 2008 outcomes when 16.7% of women were considered moderately/severely malnourished.

Table 8: Maternal Malnutrition among Women of Reproductive Age

	2008	2013
Moderate/Severely Malnourished	16.7%	11.3%
Normal	83.3%	88.7%

* Moderate/severely malnourished: MUAC <= 22.5
* Normal: MUAC >22.5

45. Black, R. E., et al., Maternal and child undernutrition: global and regional exposures and health consequences. The Lancet. 19 January 2008, 371 (9608): 243-260.
46. USAID, Use of cutoffs for mid-upper arm circumference (MUAC) as an indicator or predictor of nutritional and health-related outcomes in adolescents and adults: A systematic review. November 2013. (Accessed 30 June 2014).
47. Center for Research on the Epidemiology of Disasters, Global Acute Malnutrition Rates. 2009.
48. World Health Organization, The Management of Nutrition in Major Emergencies. 2000.
49. Parmar, P., et al., Health and human rights in eastern Myanmar after the political transition: A population-based assessment using multistaged household cluster sampling. BMC International Health and Human Rights, 2014. Publication pending.

6.3.5 CHILD NUTRITION

KEY INDICATORS

- 16.8% of children between the ages of six months and five years have moderate or severe malnutrition using MUAC-for-age z-scores
- 19.1% of children under 5 had diarrhea in the preceding two weeks
- Less than half (39.1%) of children with diarrhea received oral rehydration salts (ORS)
- In total, 37.5% of children under 5 received Vitamin A supplements and 50.1% received de-worming medicine

The severity of a humanitarian crisis can be assessed via the nutritional status of the population, using an indicator such as the Global Acute Malnutrition (GAM) rate,[47] and is based on the total of moderate acute and severe acute malnutrition among children under 5 in a population. According to the World Health Organization, GAM values above 10% are considered "serious" while values over 15% are considered "critical" and should prompt initiation of supplementary feeding and therapeutic programs.[48] Using a MUAC-for-age approach as suggested by the World Health Organization, the present estimate of GAM among children under 5 is 16.8%.[49] These findings strongly suggest that malnutrition remains a serious problem in the survey area. Improved access to basic interventions addressing malnutrition should be considered a priority for these communities.

Global Acute Malnutrition

>5% = Acceptable
5% to 9% = Poor
10% to 14% = Serious
>15% = Critical

The levels of malnutrition identified in the survey appear to more closely resemble those of Rohingya

living in IDP camps in Rakhine state, where GAM was found to be 14.4%.[50] However, alternative methods to assess acute malnutrition in populations are not equivalent, and direct comparisons should be made with caution.[51,52] The Karen Department of Health and Welfare has piloted a successful population-based program to screen and provide therapeutic and supplemental food for acutely malnourished children in eastern Burma,[53] but a substantial increase in resources is needed in order to scale-up programs to prevent, identify, and treat hunger throughout the region.

The World Health Organization recommends periodic de-worming of all school age children living in endemic areas, along with proper hygiene and sanitation practices to address soil-transmitted helminth infections, which can result in impaired nutritional status.[54] Helminth infections are transmitted by eggs present in human faeces, which contaminate the soil in areas where sanitation is poor.

In addition, Vitamin A deficiency is a problem in more than half of all countries. It can cause night blindness and increase the risk of disease and death from severe infections. Supplementation in all children aged 6-59 months is recommended by the World Health Organization as a cost-effective intervention to reduce childhood morbidity and mortality, particularly from infectious diseases such as measles and diarrhea.[55,56] Among surveyed children between 1 and 5 years of age, 50.1% received de-worming treatment. Among children between the ages of 6 months and 5 years, 37.5% received vitamin A supplementation in the six months prior to the survey.

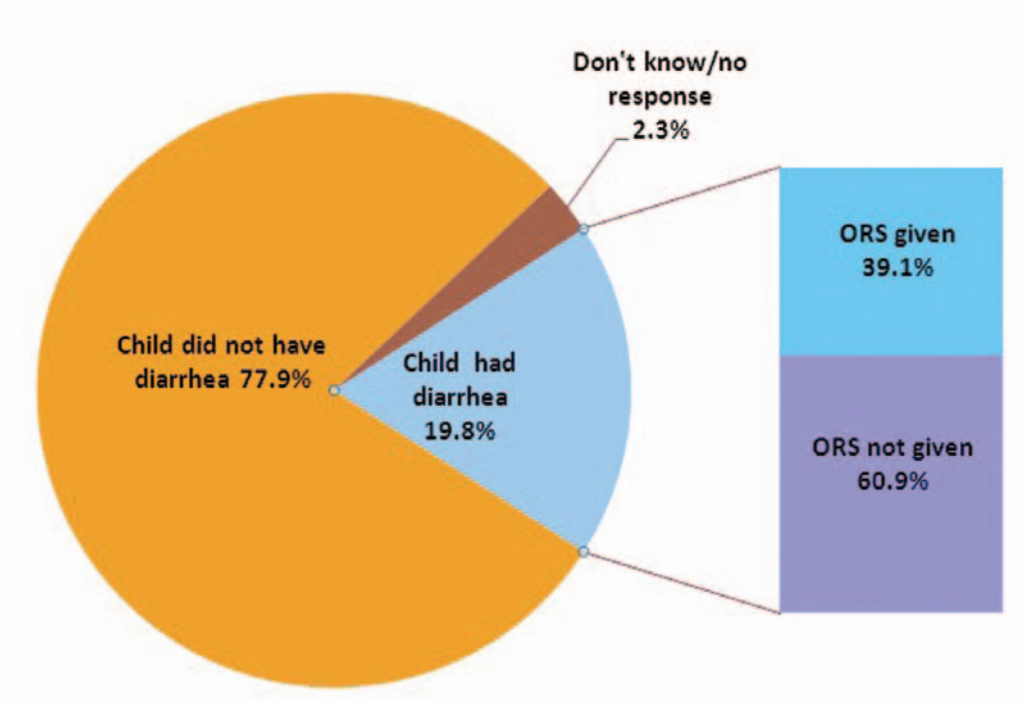
6.3.6 CHILDHOOD DIARRHEA

Diarrheal disease is the second leading cause of death in children globally,[57] and the number one identified cause of death among children in this survey. Caused by many different etiologic agents, diarrheal disease is both preventable with proper sanitation and hygiene, and treatable with proper interventions. One key intervention in children with diarrhea is the use of oral rehydration salts (ORS). ORS is a mixture of clean water, salt, and sugar, which is inexpensive and can help replace the fluids and electrolytes lost in the stool. ORS can be life-saving, particularly for children.[58] Among children surveyed, 19.8% of children under five had diarrhea in the preceding two weeks. Fewer than half of these children (39.1%) received ORS.

Health worker providing school heath promotion

50. United Nations. Situation of Human Rights in Myanmar: Note by the Secretary-General. 2 September 2013.
51. UNICEF. The Harmonised Training Package (HTP): Resource Material for Training on Nutrition in Emergencies, Version 2. 2013.
52. Young, H. and S. Jaspars, The Meaning and Measurement of Acute Malnutrition in Emergencies: A Primer for Decision-Makers. 2006, Humanitarian Practice Network: London. p. 1-56.
53. Scharschmidt, B. C., et al., Childhood malnutrition program: A community-based approach to address acute under-5 malnutrition among internally-displaced children in active conflict areas of Karen State, Eastern Burma (Conference Poster), in Unite for Sight Global Health Conference. 2010: New Haven, CT.
54. World Health Organization, Helminth Control in School-Age Children: A Guide for Managers of Control Programmes: Second edition. 2011.
55. Aamer Imdad et al., Vitamin A supplementation for preventing morbidity and mortality in children from 6 months to 5 years of age. Cochrane Database of Systemic Reviews in Numbers. 8 December 2010. (8).
56. World Health Organization, Vitamin A Supplementation for Infants and Children 6-59 Months of Age. 2011.
57. World Health Organization, Diarrhoeal Disease Fact sheet N°330. April 2013. 58. World Health Organization, The Treatment of Diarrhea: A Manual for Physicians and Other Senior Health Workers. 2005.
58. World Health Organization, The Treatment of Diarrhea: A Manual for Physicians and Other Senior Health Workers. 2005. (Accessed 5 June 2014).

Figure 3: Prevalence of Diarrhea in past 2 Weeks (n=4,059)



The number of children with diarrhea has increased since 2008 (10.7%). However, the high percentage of children with diarrhea may be partly due to flooding that occurred during the time the survey was being implemented. Flooding can disrupt clean drinking water supplies and sanitation systems, resulting in the rapid spread of diseases like diarrhea.

6.3.7 BREASTFEEDING PRACTICES

Breastfeeding is essential to improving the nutritional status of infants and young children, fostering physical growth and reducing susceptibility to many childhood illnesses. It can also have long-term positive impacts on the health of the child. For these reasons, the World Health Organization recommends exclusive breastfeeding for all infants for the first six months of life, followed by two years of breastfeeding combined with safe complementary feeding.[59,60]

In IDP communities surveyed, 79% women began breastfeeding their babies within one hour of giving birth. 92% of women who had given birth within the preceding two years had breastfed their infants for at least six months. Among these women, 36.4% reported feeding their children with something other than breast milk within the first six months of life. Another 59.2% reported breastfeeding exclusively for six months – more than the national figure of 23.6% of women who did so.[61]

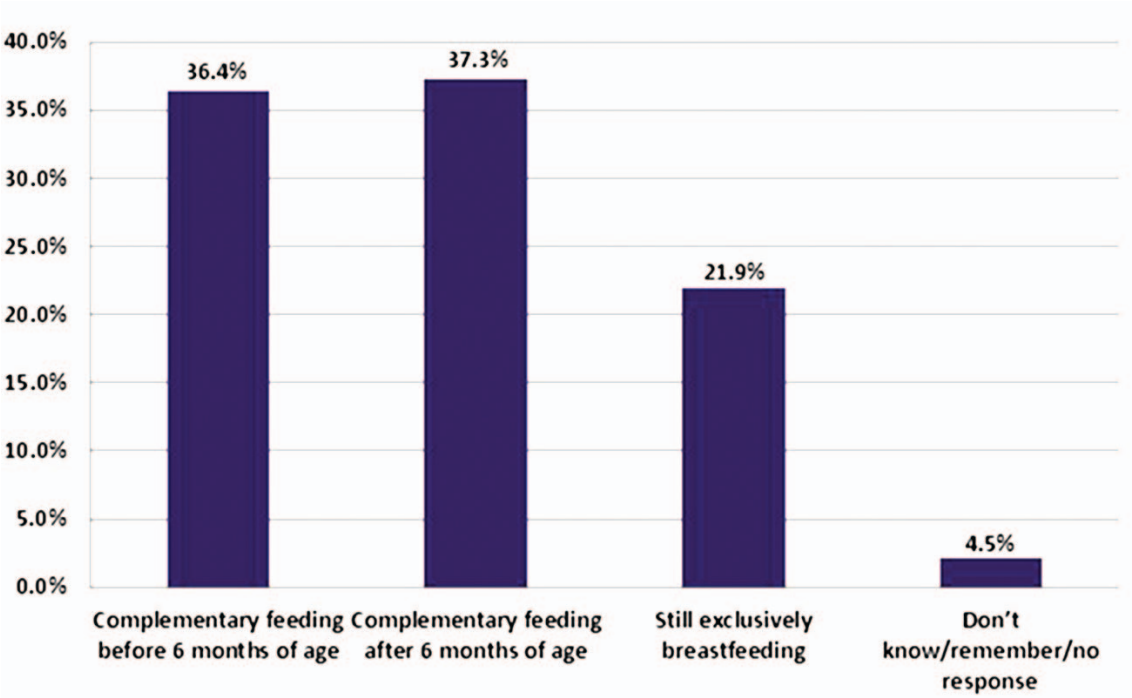
Improving Acute Malnutrition

Eastern Burma is characterized by high rates of malnutrition among women of reproductive age and children under 5. Despite these negative indicators, a pattern of positive nutrition practices is emerging among ethnic communities. This includes 79% of women initiating breastfeeding early; 92% breastfeeding for six months or more; and 59.2% initiating complementary feeding only after their children reached six months of age.

A key part of ethnic and community-based health service providers' maternal and child health programs is the promotion of positive breastfeeding practices. The data demonstrate the positive impact of these important health education campaigns which are typically carried out by community health care workers and traditional birth attendants. Additionally, de-worming medicine and Vitamin A are also promoted and administered as part of ethnic health providers' school health campaigns.

59. World Health Organization, Global Strategy for Infant and Young Child Feeding. 2003.
60. World Health Organization, The Optimal Duration of Exclusive Breastfeeding Report of an Expert Consultation, Geneva Switzerland 28-30 March 2001.
61. United Nations Children's Fund, Myanmar Statistics. 2013.

Figure 4: Breastfeeding Practices (n=785)



6.4 MALARIA

KEY INDICATORS

- Malaria was the leading reported cause of death across all age groups, causing 17.7% of all deaths
- In children under 5, malaria was the second leading cause of death (14.8%)
- 63.6% of households reported sleeping under a bed net
- 40% of people with a fever sought testing for malaria
- 82.6% of respondents who tested positive for P. falciparum malaria reported receiving treatment

The emergence of Artemisinin resistance in strains of P. falciparum malaria has made the successful control and eventual elimination of malaria in eastern Burma one of the highest priorities in global health[62] In remote rural villages, fake antimalarial drugs and poor access to government and INGO malaria control services has historically led to high levels of transmission[63,64] and created conditions conducive to the spread of resistance. Ethnic and community-based health organizations have scaled up programs to diagnose, treat, prevent and ultimately, eliminate malaria transmission. Findings from the present survey show a decline in morbidity and mortality due to P. falciparum malaria in areas served by ethnic and community-based organizations. However, additional resources are required to fill persistent gaps in timely access to care.

62. IRIN Asia, Curbing Myanmar's spread of drug-resistant malaria. March 28 2014.
63. Richards, A. K., et al. Prevalence of Plasmodium Falciparum in active conflict areas of eastern Burma: A summary of cross-sectional data. Conflict and Health 1: 9 2007.
64. Richards, A. K., et al., Cross-border malaria control for internally displaced persons: Observational results from a pilot programme in eastern Burma/Myanmar. Tropical Medicine & International Health: TM & IH. 2009

6.4.1 MALARIA PREVALENCE

Three households from each cluster (10% of the sample) were randomly selected for all household members to undergo testing for Plasmodium falciparum (P. falciparum) infection using Paracheck® (Orchid Biomedical Systems: Goa, India), an HRP-II antigen-based rapid diagnostic test (RDT). Among 2,269 participants who agreed to be tested, 2.3% tested positive for P. falciparum malaria. This is consistent with a decrease in prevalence since 2008 when 7.3% of survey respondents tested positive using the same RDT.[65]

Table 9: Malaria Prevalence Rate

Malaria Prevalence Rate 2013	
Overall	2.3%
Male	2.4%
Female	2.0%
Under 5	2.1%
Women of Reproductive Age (Overall)	2.0%
Pregnant Women	2.3%

6.4.2 MALARIA: CAUSE-SPECIFIC MORTALITY

Malaria remains one of the leading causes of death from preventable diseases.[66] Malaria accounted for 17.7% of deaths across all age groups and was the second leading cause of death among children under 5.

Table 10: Malaria Deaths 2013

Malaria Death Rate 2013	
Deaths Among Children Under 5	14.8%
Deaths Across All Age Groups	17.7%

65. Note the 2008 survey tested only the heads of households (95% of heads of households were women of reproductive age). As indicated in Table 9, malaria prevalence among women of reproductive age in 2013 (2.5%) was similar to prevalence in the overall population (2.4%).
66. Health Information System Working Group, Diagnosis Critical: Health and Human Rights in Eastern Burma, 2010. (Accessed 30 June 2014).

6.4.3 MALARIA HEALTH SEEKING BEHAVIOR

Ethnic and community-based health organizations regularly conduct health education activities about malaria and people are encouraged to seek timely testing and treatment when they have a fever. However, access to timely diagnosis and treatment requires that sufficient supplies be available throughout the year and this in turn requires a level of funding that to date has been insufficient to support the scale-up of malaria control interventions needed to reach the entire target population of the survey area. Inadequate resources contribute to the relatively low rate of testing. Among survey respondents who indicated that someone in the household had a fever in the past 12 months, only 39.8% were tested for malaria. However, adherence to treatment among household members who tested positive for malaria was quite high: 82.6% reportedly received treatment from a health worker, village health worker, or medic and 93.7% reported completing a full course of treatment. Although treatment guidelines do not require direct observation of adherence to treatment, directly observed therapy (DOT) reduces the risk for resistance by ensuring blood levels of medications are adequate to clear the infection. Nearly half (44%) of those households with someone who received treatment had a health worker come at least once to ensure the person took the medication at the right time.

Table 11: Malaria Health Seeking Behavior

Malaria Health Seeking Behavior	
Percent tested among households reporting someone with a fever	39.8%
Percent receiving treatment among those that tested positive	82.6%
Percent that completed treatment	93.7%
Percent who received at least one visit from a health worker to ensure medication was taken at the right time	44%

6.4.4 MALARIA PREVENTION

The cornerstone of malaria prevention has traditionally been insecticide treated mosquito nets (ITNs). In addition to personal protection provided to individuals, ITNs provide an additional community-wide protective effect when utilization is high.[67] This community effect is similar to the concept of "herd immunity" in the setting of vaccination campaigns that suppress transmission and protect even unvaccinated individuals when vaccination coverage is high. In total, 63.6% of respondents in the present survey reported sleeping under a bed net the previous night and this is within the range of 60% to 70% utilization required to achieve protective community-level effects from ITNs.

A health care worker administers a rapid diagnostic test (RDT) for malaria

Burma is one of four countries in Southeast Asia facing an emerging wave of drug-resistant malaria. The international community is gravely concerned that Burma will become the gateway for the spread of drug-resistant malaria to Bangladesh, India, and Africa, resulting in a global health catastrophe. In order to eliminate the threat of resistance and avert this potential malaria disaster, it is likely necessary to completely eliminate malaria in areas such as eastern Burma where Artemisinin resistance has been documented.[68] Ethnic and community-based health organizations are preparing to participate in a groundbreaking project sponsored by the Global Fund and the Gates Foundation to begin the process of malaria elimination in eastern Burma.[69]

67. World Health Organization, Insecticide-Treated Mosquito Nets: A WHO Position Statement. http://www.who.int/malaria/publications/atoz/itnspospaperfinal.pdfv (Accessed 6 October2014).
68. Maude, R. J., et al. The last man standing is the most resistant: Eliminating Artemisinin-resistant malaria in Cambodia." Malaria Journal 8: 31, 2009.
69. The Guardian, New wave of drug-resistant malaria threatens millions, June 5 2014.

6.5 ACCESS TO HEALTH CARE

KEY INDICATORS

- 70% of community members accessed ethnic and community-based health workers when they were sick
- When seeking care, 75% of people walked to the nearest health facility, taking on average 85 minutes to reach a clinic
- Ethnic and community-based health services are, on average, located closer to survey respondents' communities than government health services

The 2013 survey also included questions about accessibility to and availability of health services for target communities (see appendix 9.4 for survey questions). Respondents were asked if they sought care when they or a member of their household were sick in the preceding year. Respondents were also asked about the source of those services. Over 60% of respondents reported that they sought care, with the vast majority seeking care from sources outside the government health sector. Of those that did seek care, 70% received care from ethnic and community-based health service providers—either clinics (18.2%) or village health workers/medics (51.6%). Nearly 15% sought treatment from local drugstores or pharmacies. Only 8.3% of respondents presented for care at government health facilities.

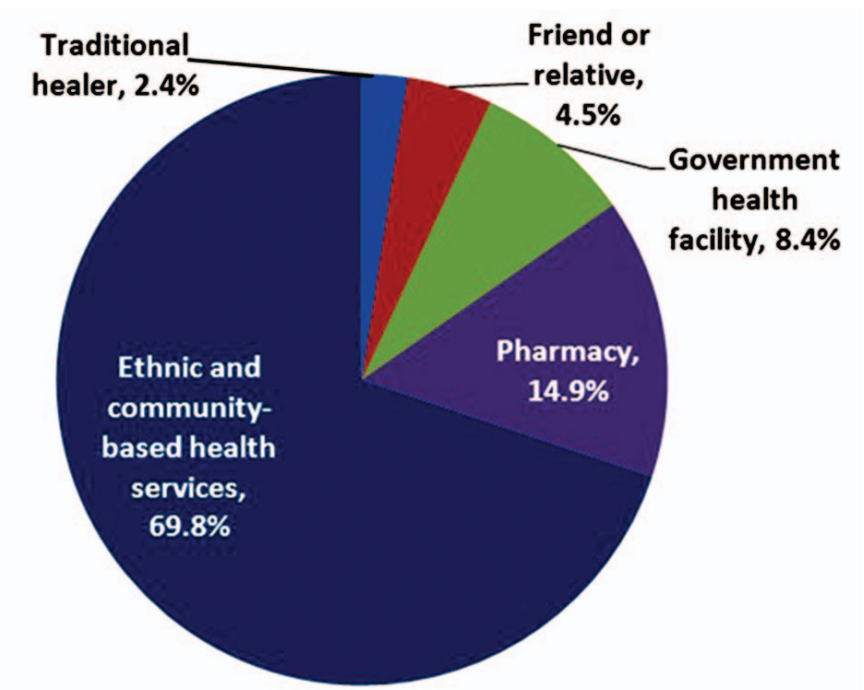
Although the survey took place largely in remote conflict zones administered by ethnic and community-based organizations, some areas included in the survey were under mixed ethnic and government administration. Some respondents therefore had the option to visit government facilities located in

Health workers transporting a patient to the nearest clinic

relative proximity, though the majority would have had to travel long distances to reach government hospitals. However, it is important to note that proximity to health services is not the only factor influencing decisions about where to seek health services. Issues of language, trust, culture, safety, and perceptions of discrimination may all also influence decisions about where to seek health care.

For the 37% of respondents who did not seek care for illness in the preceding year, the most common reasons were that they or a household member "did not feel very sick", (43.7%) the "hospital/clinic is too far", (30%) or "treatment was too expensive" (14.8%). Some also said that there was "no health worker nearby" (10.8%).

Figure 5: First Source of Health Care in the past 12 Months

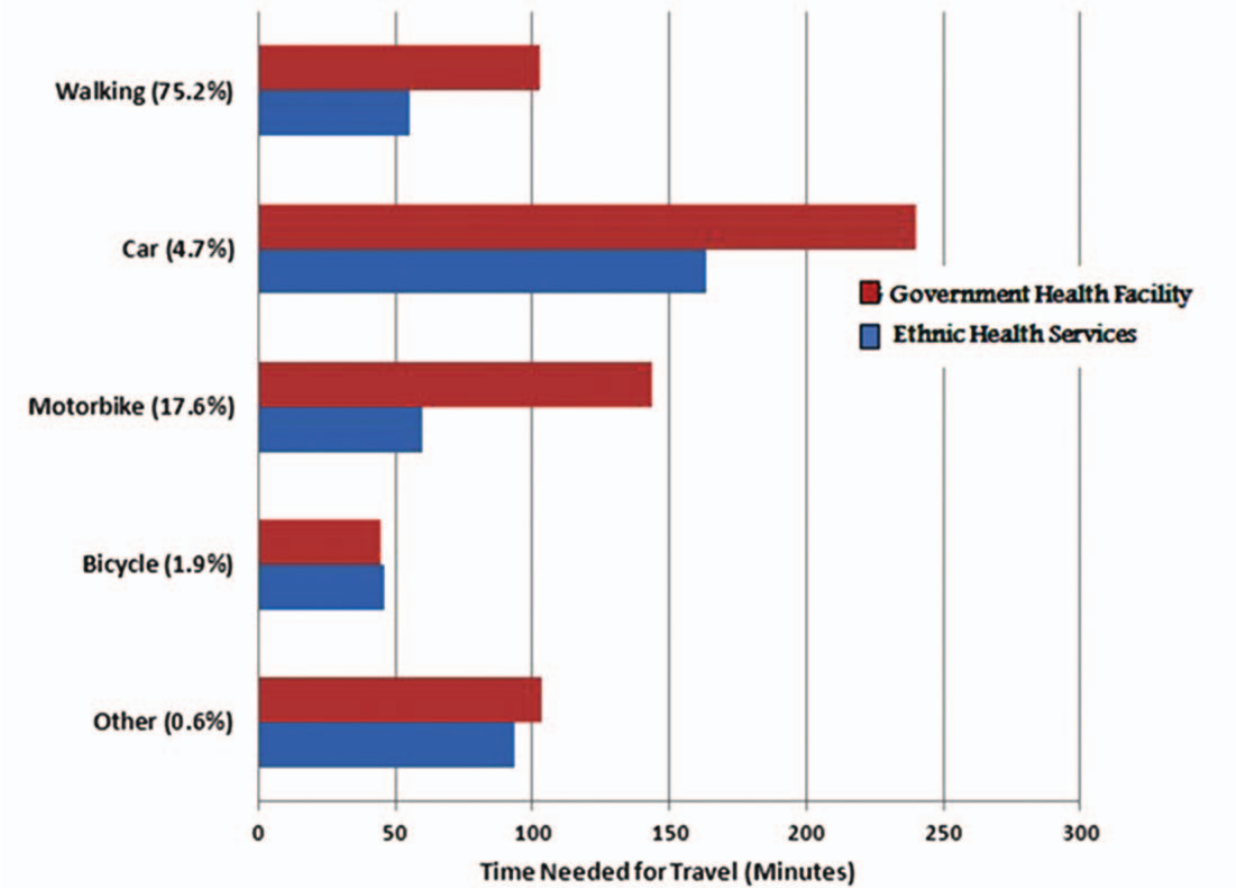


6.5.1 PROXIMITY TO HEALTHCARE FACILITIES

For those who did seek care for an illness, 75% traveled on foot to access health services. For the vast majority who traveled either on foot or by motorbike to reach health services, the average travel time was about one and a half hours. The average travel time to reach ethnic and community-based health services, either a clinic or health worker such as a village health worker or medic, was shorter than the travel time needed to reach official government health services.

A health worker asking a patient's case story

Figure 6: Accessibility of Health Services by Transport Mode and Travel Time



6.5.2 HEALTH ACCESS AND BIRTH REGISTRATION

In addition to physical proximity to healthcare facilities, several indicators highlight the vulnerable position of the majority of households and suggest that many communities remain outside the reach of government services. First, as mentioned previously, this survey found limited access to government health services, highlighted by the low proportion of respondents who accessed government health services.

Another marker of the marginalized status of sampled households is the low rate of official birth registration. In contrast to the officially reported rate of birth registration in Burma (72%)[70] only 7.9% of children surveyed have an official government birth record. Unless and until the remainder is registered, up to 92% of children are de facto stateless persons. Statelessness results in decreased access to education, health care, and voting rights.[71] Ethnic health organizations, including the Back Pack Health Worker Team and the Karen Department of Health and Welfare issue their own birth certificates which is an invaluable service to the communities that they serve. According to this survey, approximately one third (32.3%) of children have a birth record from an ethnic or community-based health organization. If formally recognized by the government of Myanmar, these birth records would allow children to have the benefits of an official birth record until a durable solution to unregistered births is identified.[72]

A health worker taking a footprint for birth registration

Table 12: Children with Access to Official Birth Records

Access to Official Birth Records Under Age 5	
No birth record	53.6%
Ethnic birth record	32.3%
Government birth record	7.9%
Other country's birth record	1.7%

70. UNICEF, State of the World's Children. 2013.
71. UNHCR, Problems Faced by Stateless People. April 2014.
72. Parmar, P., et al., Health and human rights in eastern Myanmar after the political transition: A population-based assessment using multistaged household cluster sampling. BMC International Health and Human Rights, 2014. Publication pending.

6.6 HUMAN RIGHTS VIOLATIONS

KEY INDICATORS

- 10.7% of households reported experiencing at least one human rights violation
- 7.7% reported destruction or seizure of food, livestock, or crops
- 3.5% of community member were forced to provide labor

As in the 2008 surveys of conflict-affected communities in eastern Burma, in addition to collecting basic information regarding demographics and health, respondents were also asked to answer questions about their experiences with select human rights violations in the year preceding the survey. Several of these human rights indicators have been demonstrated in the past to be linked to poor health outcomes, particularly forced labor, forced displacement, and seizure/destruction of food supplies.[73] In 2013, respondents were again asked about their exposure to human rights abuses. Consistent with other published reports, and compared to previous population-based surveys in 2004 and 2008, conflict-related human rights violations have decreased in eastern Burma.

Approximately one in nine households (10.7%) experienced at least one human rights violation in the past year [Table 13]. This represents a decrease from the 2008 survey when 30.6% of household reported at least one or more human right violations. The most common human rights violations reported were destruction and seizure of food, livestock, or crops (7.7%) and forced labor (3.5%).

Consistent with these findings, the most recent 2014 report from the Karen Human Rights Group corroborates the decrease in human rights violations, noting that there have been no large-scale, coordinated military attacks targeting civilian settlements since the 2012 ceasefire. The report also notes an overall decrease in forced labor (though some battalions continue to demand forced labor on a regular basis). Further, many villagers described an increased sense of freedom to report cases of land confiscation to local authorities in the ceasefire period. However, the report also notes that civilians accused of supporting ethnic armed groups continue to be arbitrarily arrested, detained, abused, tortured, and targeted in isolated attacks by the Burmese military. Further, the construction or fortification of army bases has caused many villagers to feel that their personal security is threatened and to doubt the sustainability of ceasefire agreements.[75]

Table 13: Prevalence of Human Rights Violations

Violation	Percentage	Number of individuals reporting the violation
Forced labor	3.5%	246
Destruction or seizure of food, livestock, or crops	7.7%	443
Confiscation of land	0.8%	81
Physical injuries (gunshot wounds, landmine injuries, beatings, stabbings)	0.2%	7
Detained or tied up	<0.1%	2
Landmine injury in last 12 months[74]	<0.1%	5
Any human rights violation	10.7%	677

Weighted prevalence estimates and their standard errors (and confidence intervals) account for the complex survey design.

73. Health Information System Working Group, Diagnosis Critical: Health and Human Rights in Eastern Burma, 2010.
74. The percentage of households reporting a member who suffered a landmine injury in the past 15 years was 5.3% (271 individuals).
75. Karen Human Rights Group, Truce or Transition? Trends in human rights abuse and local response in Southeast Burma since the 2012 Ceasefire. May 2014.

Karen villagers evacuating their homes to escape fighting in their area

While only 0.8% of respondents reported confiscation of land, the Karen Human Rights Group reports that they anticipate the problem will increase in coming years. Data gathered by KHRG between January 2011 and November 2012 found reports of land confiscation across seven geographic research areas in eastern Burma. KHRG collected reports on thousands of acres of land confiscated for natural resource extraction and agricultural, industrial, and development projects. In some cases, these projects resulted in forced displacement and were implemented without consulting, compensating, or notifying communities affected by the projects. Land was confiscated by various civil and military state authorities, foreign and domestic companies, and armed ethnic groups. According to KHRG, the issue of land rights in Burma is governed by a patchwork of overlapping, and sometimes contradictory laws.

Land laws passed by the Burmese government in 2012 provided some clarity in the law relating to individual land and property rights, while still giving the government substantial authority to expropriate land. In the context of the confusing legal framework, individuals and communities face uncertainty when it comes to claiming and protecting their land.[76]

Physicians for Human Rights in their recent report 'A Foreseeable Disaster in Burma: Forced Displacement in the Thilawa Special Economic Zone[77] stated that: "The displacement process in Thilawa violated residents' human rights, negatively affected their ability to provide for themselves, and resulted in deteriorating food security and limited ability to access health care".

6.6.1 HEALTH AND HUMAN RIGHTS

Associations between health outcomes and human rights violations were also assessed as part of the survey. As has been found in previous studies in eastern Burma,[78,79] household exposure to one or more human rights violations was associated with malnutrition in children. The fact that moderate and severe malnutrition was documented in 6.8% of children living in households that did not experience a human rights violation in the previous year suggests that the severe (or critical) malnutrition threshold of 10% is attributable to the exceptional rate of malnutrition among the households that were exposed to human rights violations. Household exposure to human rights violations was also associated with self-reported fair or poor health status among respondents.

Woman being treated tells her story about her family's forced displacement

76. Karen Human Rights Group, Truce or Transition? Trends in human rights abuse and local response in Southeast Burma since the 2012 Ceasefire. May 2014.
77. Physicians for Human Rights 'A Foreseeable Disaster in Burma: Forced Displacement in the Thilawa Special Economic Zone' November 2014
78 Parmar, P., et al., Health and Human Rights in Eastern Myanmar prior to political transition: A Population-Based Assessment Using Multistaged Household Cluster Sampling. BMC International Health and Human Rights. 5 May 2014.14:15.
79. Mullany, L.C., et al., Population-based survey methods to quntify associations between human rights violations and health outcomes among internally displaced persons in eastern Burma. Journal of Epidemiology and Community Health. October 2007. 61(10): 908 -914.

7. CONCLUSIONS

Temporary ceasefire agreements have resulted in a reduction of human rights abuses from previous years and have afforded many people in eastern Burma increased freedom of movement. Although the number of reported human rights violations has decreased since the last survey was conducted in 2008, a truly successful democratic transition requires a policy of zero tolerance and a mechanism of accountability for perpetrators.

Ethnic and community-based health organizations have made major advances in the provision of comprehensive primary health care services in conflict-affected areas. However due to causes beyond their control including ongoing conflict, displacement, human rights abuses and lack of infrastructures, their remote regions continue to face critical health challenges. The risk of disease and death in eastern Burma remains substantially higher than in the country as a whole. Malaria, diarrhea, and acute respiratory infections remain the three leading causes of death among all age groups. Similarly, while rates of maternal malnutrition have decreased since 2008, infant and under 5 mortality rates remain high. Dramatic increases in support are necessary to address the chronic health crisis. The persistently elevated risk of child malnutrition and death continues to provide a forceful moral imperative to prioritize support for populations that have been marginalized as a result of decades of conflict.

Ethnic and community-based health organizations continue to be the main source of health services for the majority of people in eastern Burma. It is crucial at this stage to increase international support for these organizations which provide health services to an estimated 500,000 people. A broader approach to assessing and strengthening health systems in Burma must capitalize on the strengths of these unique ethnic and community-based health organizations. It is essential to recognize that these organizations are best placed to identify, understand and respond quickly to the needs of vulnerable communities and to protect the health and human rights of people who are marginalized.

While increases in humanitarian aid present promise for the country's future, solely supporting government health services runs the risk that ethnic communities may be neglected, limiting durable improvements in public health. In addition to improving health outcomes, recognition of and direct support for existing ethnic and community-based health organizations can also foster the building of a participatory, inclusive public health system, increasing trust within and between communities, and advancing the prospects of a long-awaited, genuine peace. Importantly, capitalizing on the strengths of existing ethnic and community-based health organizations can help ensure that populations facing poor health indicators such as high infant and child mortality rates can access needed health care in their communities and ultimately improve health for all.

For ethnic and community-based health organizations working in eastern Burma, supporting monitoring and evaluation efforts will be essential as national statistics fail to capture important health data and underestimate health risks in conflict-affected zones. Strengthening existing monitoring and evaluation systems and continuing to implement more frequent population-based, retrospective mortality and morbidity surveys such as this one, will help to capture essential health information on displaced populations in the ethnic states that is not available from any other source. Such efforts can contribute to a better understanding of the health crisis and help to inform evidence-based, cost-effective programming in the years to come.

Ethnic and community-based health organizations are not only complementary to government health services, they are essential components of the larger health system in Burma. Understanding the interdependency of these systems is essential to guiding wise investments and decision-making for better health outcomes in eastern Burma. Further, the decentralization of health systems in Burma can ensure that communities have more control over local health priorities and interventions. Decision-making and power sharing at the local level are essential for successfully improving access to quality health services for the most vulnerable and neglected communities in Burma.

8. RECOMMENDATIONS

To Burma's Government:

1. End attacks and human rights abuses in ethnic areas
2. Prioritize political dialogue in the peace process
3. Formally recognize ethnic-led health structures and systems
4. Enforce a temporary moratorium on large-scale development projects in ethnic areas until a full peace agreement can be reached, democratic rights guaranteed, and a decentralized federal union achieved

To Burma's Neighboring Countries:

5. Call on the Burmese Government to formally recognize ethnic-led health structures and systems
6. Encourage regional and international support for ethnic and community-based health organizations in Burma
7. Continue to pursue increased cooperation between public health ministries and existing ethnic and community-based health organizations in order to coordinate primary health care provision to vulnerable populations

To the United Nations, Association of South East Asian Nations & the International Community including those providing Aid to Burma:

8. Continue to pressure the Burmese Government to end attacks in ethnic areas
9. Pressure the Burmese Government to put an end to human rights abuses such as land confiscation, forced labor and forced displacement which have a negative impact on health in eastern Burma. International aid programs should include transparent efforts to address these human rights issues with the Burmese government
10. Continue to pressure the Burmese Government to prioritize political dialogue in the peace process
11. Ensure sustainable peace and reconciliation, and address the health crisis in eastern Burma, by:
    - calling on the Burmese Government to formally recognize existing ethnic-led health structures and systems
    - providing support to ethnic and community-based health organizations to manage and implement their own primary health care programs
    - providing support to ethnic and community-based health organizations to collect, analyze, and report on vital health information concerning neglected populations in eastern Burma

To the International Community providing Direct Foreign Investment in Burma:

12. Support a temporary moratorium on large scale development projects in ethnic areas until a full peace agreement can be reached, democratic rights guaranteed and a decentralized federal union achieved

9. APPENDICES

9.1 ACRONYMS

BMA	Burma Medical Association
BPHWT	Back Pack Health Worker Team
HCCG	Health Convergence Core Group
HISWG	Health Information System Working Group
IDP	Internally Displaced Person
INGO	International Non-Governmental Organization
IMR	Infant Mortality Rate (child deaths under 1 year per 1,000 live births)
KDHW	Karen Department of Health and Welfare
KnMHC	Karenni Mobile Health Committee
MTC	Mae Tao Clinic
MNHC	Mon National Health Committee
SSDF	Shan State Development Foundation
TBA	Traditional Birth Attendant
TTBA	Trained Traditional Birth Attendant
U5MR	Under 5 Mortality Rate (death per 1,000 live births)
VHV	Village Health Volunteer
VHW	Village Health Worker

9.2 DATA FOR SHAN STATE DEVELOPMENT FOUNDATION

9.2.1 BACKGROUND

The Shan State Development Foundation (SSDF) provides health care to IDP camps along the Thai-Burma border. The context in which the persons within these camps live is notably different from the context of the people living in communities served by other organizations. The camps have a smaller population size and are contained within a more focused geographical area compared to the areas served by other organizations. The camps are also located very close to the Thai-Burma border, which allows for better access to Thai health facilities. Due to the significantly different settings between the IDP camps served by SSDF and the village settings of the other organizations represented in this report, the SSDF data are being presented separately in this appendix.

9.2.2 METHODOLOGY

From June to August 2013, surveyors conducted retrospective household surveys in four Internally Displaced Persons (IDP) camps (Kong Mung Moung, Loi Lum, Loi Sam Sip and Loi Tai Leng) and 11 sections/areas within those camps. The target population in these camps was 2,979 people. Surveys were conducted using two-stage cluster sampling. The sampling frame was constructed using camp-level population lists provided by the health organizations that had been updated within the past year. The sampling protocol was designed to facilitate estimation of under-five mortality rates in the SSDF IDP camp service area. In the first stage, clusters were selected using population proportional to size (PPS); in the second stage, proximity sampling was used to select 30 households for each cluster. A household was defined as a group of people who live under the same roof for two or more months and share meals.

Data collection was conducted between the months of June to August 2013. The SSDF program area did not have to have any cluster replacements reported and only one cluster was determined to be a village with less than 30 households. Data was collected from a total of 2,462 people living in 588 households.

9.2.3 DEMOGRAPHICS

The average household size in the SSDF IDP camps is 4.2 persons; there are a slightly higher percentage of males than females in the IDP camps. Nearly one-in-three people in the camps are under 15 years of age.

Table 1: Population Demographics (all household members)

Population Characteristic (N=2,457)	
Household size	
Mean household size	4.2
Gender Percent	
Male	52
Female	48
Age group	
<5 years old (%)	6
<15 years old (%)	30
>65 years old (%)	1

Nearly all participants who responded identify as ethnically Shan, with a small number identifying as Karen or Karenni. In total, 95% speak Shan, although a small proportion also speak Burmese (Table 2). Nearly three out of five people have no formal education and just over 25% have completed less than 10th standard level of education.

Table 2: Household Demographics

Household Characteristic (N=588)	
Language	
Burmese	5%
Shan	95%
Ethnicity	
Shan	98%
Other* (Karen, Karenni)	2%
Education	
None	59%
1 to 5 standard	17%
6 to 10 standard	10%
Above 10 standard	0%
Other education (short course or monastery)	13%

9.2.4 MATERNAL AND CHILD HEALTH

The crude birth rate within the SSDF program area is 3.9 per 1,000 population. The total fertility rate is 13.1 per 1,000 women of reproductive age. The average age of first pregnancy is about 21 years of age, with women in the surveyed area having an average of 2.2 pregnancies in their lifetime.

Among women who have had a pregnancy within the past 2 years (N=46), 96% had at least 1 antenatal visit during that pregnancy, and 85% of the women had 4 or more antenatal visits. Among women who received at least one antenatal visit, 91% reported receiving that care from an ethnic health worker/medic and the remaining 9% received their care from a doctor/nurse or health assistant/midwife or AMW (7% and 2% respectively). In total, 68% of women who had a pregnancy in the past 2 years received deworming pills and 100% reported receiving iron and/or folic acid at least once during their pregnancy.

In total, 87% of women who had a live birth in the past 2 years (N=39) indicated their baby was delivered by an ethnic health worker or medic, 8% indicated that delivery was provided by a doctor or nurse, 3% were attended by a TBA, and another 3% of deliveries were attended by a health assistant, midwife, or Auxiliary Midwife. In total, 85% of women who had a live birth in the past 2 years (N=39) received at least one postnatal visit within one and a-half months after delivery.

All women who have had a live delivery in the past 2 years (N=39) have breastfed for at least 6 months, and the majority, 90% exclusively breastfed for at least 6 months.

In total, 31% of women of reproductive age said they planned to have more children while over half (57 percent, n=85) reported they did not plan to have any more children. Among women who did not plan to have any more children, 89% reported using some form of contraception. Among women using some form of contraception, two-thirds reported using depot medroxyprogesterone acetate (DMPA), nearly one-third reported using oral contraceptive pills, and 1% reported having undergone sterilization. Nearly one-quarter also reported using male condoms in combination with either oral pills or DMPA.

In total, 5% of children under 5 years of age (7 out of 152 children), were reported to have had a case of diarrhea in the past 2 weeks. Of these 7 children, one had received ORS. Nearly 32% of children under 5 (48 of 152) in the SSDF program area had received Vitamin A pills and 15% (23 of 152) had received deworming pills within the past 6 months.

Nearly three-quarters of children under the age of 5 have ethnic birth documents while approximately 13% of children had no birth documents or registration.

In total, 84% of women of reproductive age agreed to have their mid-upper arm circumference (MUAC) measured to assess their nutritional status. 77% of children under 5 also had a MUAC measurement as part of their survey data collection.

The level of malnutrition in the IDP camps is low among women of reproductive age; just 3% of women had moderate or severe malnutrition. Among children aged 6 months to 5 years of age, 13% (15 out of 116) had moderate malnutrition, and no children were found to have severe malnutrition.

9.2.5 MALARIA

Three households (approximately 10% of the sample) from each cluster were randomly selected for all household members to undergo testing for Plasmodium falciparum (Pf) infection using Paracheck rapid diagnostic tests (RDT). Over 90% of expected household members in the SSDF service area agreed to be tested. There were no positive RDT tests among the 228 people tested in the SSDF program area.

A large percentage (78%) of households own at least 1 bed net (insecticide treated net or long-lasting insecticide treated net). Bed net use is high among household members in the SSDF area. Nearly 70% of all household members slept under an insecticide treated net the night before the interview. In total, 83% of all children under the age of 5, 71% of women of reproductive age, and over 75% of pregnant women slept under an insecticide treated bed net the night prior to the interview.

Three quarters of the households reported that someone in their household had a fever in the past 12 months. Among those households in which someone reportedly had a fever (N=441), 41% (N=179) indicated that the person was tested for malaria. Of those that were tested, about 8% tested positive for malaria (N=14) and 9 of the 14 households reported that the person received treatment for malaria by a medic, VHW or health worker.

9.2.6 ACCESS TO HEALTH CARE

Survey results show that people in the SSDF program area have relatively good access to health care including health workers, medicines, and supplies. Nearly 80% of respondents who sought care in the past 12 months, accessed care from an ethnic clinic, with an additional 20% utilizing a VHW or Medic for their care, while less than 1% (n=3) accessed government health care services. Among those respondents who accessed care at an ethnic clinic (n=322), all respondents (100%) reported that health workers and medicines and medical supplies were available at those clinics where they sought care.

However, nearly one-third of respondents did not seek care when they last felt sick in the past 12 months (n=179), with the main reasons being that they were too far away from health services or that they could not leave their work (17% and 16% respectively). Nearly 60% of those who did not seek care did not provide a reason for why they did not seek care.

On average, those who sought health care were able to get to the health services within 20 to 25 minutes, traveling by foot or motorcycle. The major modes of transport were either by motorbike or walking (68% and 29% percent respectively) with it taking on average, 22 minutes to reach the nearest health facility or health worker by any mode of transport. The major mode of transport to Thai government health services are motorbike or car.

9.2.7 HUMAN RIGHTS VIOLATIONS

There were no reported human rights violations in the SSDF program area. This is most likely due to the fact that the IDP camp settings are in a more protected environment than the other survey areas.

9.3 PRIMARY HEALTH CARE CONVERGENCE MODEL

Health Convergence Core Group (HCCG)
Primary Health Care Convergence Model (Burma/Myanmar) – Draft
October 2014
ကျန်းမာရေးပေါင်းစည်းမှု အမာခံအင်အားစု (အိတ်ချ်စီစီဂျီ)
ပဏာမကျန်းမာရေးပေါင်းစည်းခြင်းပုံစံ (မြန်မာနိုင်ငံ) - မူကြမ်း
အောက်တိုဘာ ၂၀၁၄

9.4 SURVEY QUESTIONNAIRE

Cluster ID: ___ ___
HH ID: ___ ___

Eastern Burma Health and Human Rights Survey (2013)

Survey ID: ☐☐☐☐ Date: ☐☐ (D D) ☐☐ (M M) 1 3 (Y Y)

Cluster ID: ☐☐☐ HH ID: ☐☐

If this is different than the village assigned, please write the original village name below and explain why you are at this village:

_____
_____
_____

Introduction

Hello. I am a young colleague who has been asked to assist BMA/ BPHWT/ KDHW/ KnMHC/ MNHC/ SHC. We are doing a study about the health and human rights situation of your community. We are collecting this information from you and other people from the community so that we can learn about your health access, beliefs, practice and human rights status in your community. We believe that this information will help us understand health situation in your community and enable to better address your community priorities.

Procedures

You and your household were selected for inclusion into this study through a random procedure, and because you are within the eligible age range. If you agree to participate in this study, we will ask you about how you stay healthy, how you seek health care, health priorities and human rights situation in your community. We will measure mid-upper arm circumference (MUAC) of all females aged 15-49 years and all children aged under 5 years from your household. **[FOR HOUSEHOLD NUMBER – 1, 15 and 30: WE WILL TEST ALL HOUSEHOLD MEMBERS FOR MALARIA BY RAPID TEST].** Asking these questions will take 45 to 60 minutes.

Benefits and risks

There is no risk to your health from participating in this survey. Some of the questions in the survey ask about your health and your family. If any questions are upsetting or difficult for you to answer, we can skip those questions. You may choose to refuse any question in this survey. Also, you may stop the interview at any time. You will not receive any specific incentive, such as money, food, or health care for you or your family, for participating in this survey. By participating in this survey, we believe that you and your community may benefit in the long-term, as the information will help us to address health priorities in your community.

Questions and Concerns

I will attempt to answer any questions you may have concerning this survey. If you don't understand the questions, please ask me to explain more. If you have further questions including about what this information will be used for you may contact any clinic belonging to Burma Medical Association, Back Pack Health Worker Team, Karen Department of Health and Welfare, Karenni Mobile Health Committee, Mon National Health Committee, or Shan Health Committee. If you do not know the location of the closest clinic to your village, you can ask me, or your village leader.

Confidentiality

Your identity will remain confidential and the answers will be kept private. When we combine and analyze this information together, it will not be possible for anyone to link the answers to you.

Voluntary Participation

Refusing questions or declining to participate will not limit your ability to access any of the health or other services provided in your community. You have the right to withdraw from this survey at any time, and there will be no effect on you or your family.

Are you willing to be in this study? ☐
0 = No (Refused - DO NOT CONTINUE INTERVIEW, skipping HH)
1 = Yes (CONTINUE INTERVIEW)
2 = Survey incompleted because the respondent was distressed
3 = Survey incompleted because the respondent refused to continue
7 = Not at home (attempted to contact 3 times, skipping HH)

Date: ☐☐ (D D) ☐☐ (M M) ☐☐ (Y Y)

Signature of Person Obtaining Consent: _____

Signed copies of this consent form must be retained on file by the surveyor.

Cluster ID: ___ ___
HH ID: ___ ___

Section - 1: Household Member List

List the age and sex of all people living in your household. (When I say "HOUSEHOLD" in this survey, I mean everyone who lives in your house, share meals, and sleeps under the same roof. This includes everyone who has lived in your household for at least two months. EXCEPTION OF INFANTS LESS THAN 2 MONTHS, THEY SHOULD ALSO BE INCLUDED IN THIS TABLE) Don't forget to list yourself, children and infants.

					Ask questions for children under 5 only							*In-Migration Table*			
1.A: Age (by YEARS and MONTHS) **IF A CHILD IS UNDER 1 MONTH OLD, CODE "00".** 666 = Don't know 888 = Refused	1.B: Sex 0 = Male 1 = Female 6 = Don't know 7 = N/A	1.C: Is this woman currently pregnant? 0 = No 1 = Yes 6 = Don't know 7 = N/A	1.D: How is this person related to you? 00 = Self 01 = Parent 02 = Husband/ Wife 03 = Child 04 = Uncle/ Aunt 05 = Brother/ Sister 06 = Nephew/ Niece 07 = Friend 08 = Cousin 09 = Other relative 66 = Don't know	1.E: Did this person sleep under an ITN or Bednet last night? 0 = No 1 = Yes 6 = Don't know	1.F: Has this child had Diarrhea in the last 2 weeks? ***If this person hasn't had Diarrhea, skip to Q 1.J.*** 0 = No 1 = Yes 6 = Don't know	1.G: Has this child had ORS in the last 2 weeks? 0 = No 1 = Yes 6 = Don't know	1.H: Did this child take a Vitamin A Pill (like this) in the past 6 months? 0 = No 1 = Yes 6 = Don't know	1.I: Did this child under 5 take a de-worming pill in the last 6 months? 0 = No 1 = Yes 6 = Don't know	1.J: Does this child under 5 have a birth record or certificate? 0 = No 1 = Yes, ethnic birth record 2 = Yes, government birth record 3 = Other country birth record 6 = Don't know	1.K: For children under 5 years and females aged 15-49, record a MUAC. 00.7 = Not at home 77.7 = N/A 88.8 = Refused	1.L: RDT Result (Test all available HHs members who agree to be tested, including children) 0 = Negative 1 = Positive 2 = Inconclusive after 2nd attempt 007 = Not at home 7 = N/A	1.M: Has this person live here for more than 2 MONTHS but less then 12 MONTHS? 0 = No 1 = Yes 6 = Don't know 8 = Refused (If the answer is 0 = No, skip to 2.A.)	1.N: Where did they move from? 0 = Inside your state 1 = Outside your state, but inside Burma 2 = Thailand 3 = Malaysia 4 = Other (Please record specific place for each person) 6 = Don't know 7 = N/A	1.O: What is the MAIN reason he/she moved back? (Record one response from choices) 01 = Work 02 = Education 03 = Family 04 = Marriage 05 = Insecurity 06 = Improved security 07 = Land confiscated 08 = No reason 09 = Other 66 = Don't know 77 = N/A 88 = Refused
No. Years Months	8 = Refused	8 = Refused	88 = Refused	8 = Refused	8 = Refused	8 = Refused	8 = Refused		8 = Refused	8 = Refused		8 = Refused		8 = Refused	Code Other
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

Section 2: - Out Migration Table

Now I would like to ask you some questions about members of this household who have lived here less than 12 MONTHS AGO but have since moved away. IF THERE IS NO PERSON MIGRATE OUT OF THIS HOUSEHOLD IN THE PAST 12 MONTH, GO TO NEXT SECTION.

No.	2.A: Age (by YEARS and MONTHS) IF A CHILD IS UNDER 1 MONTH OLD, CODE "00". 666 = Don't know 888 = Refused		2.B: Sex 0 = Male 1 = Female 6 = Don't know 8 = Refused	2.C: How is this person related to you? 00 = Self 01 = Parent 02 = Husband/ Wife 03 = Child 04 = Uncle/ Aunt 05 = Brother/ Sister 06 = Nephew/ Niece 07 = Friend 08 = Cousin 09 = Other relative 66 = Don't know 88 = Refused	2.D: When did this person leave this household? 1 = 1 to 3 months 2 = 4 to 6 months 3 = 7 to 9 months 4 = 10 to 12 months 5 = over 12 months 6 = Don't know 8 = Refused	2.E: Where did they move to? 0 = Inside your state 1 = Outside your state, but inside Burma 2 = Thailand 3 = Malaysia 4 = Other (Please record specific place for each person)	2F. What is the MAIN reason he/she moved away? 01 = Work 02 = Education 03 = Family 04 = Marriage 05 = Insecurity 06 = Improved security 07 = Land confiscated 08 = No reason 09 = Other 66 = Don't know 88 = Refused	
	Years	Months					Code	Other
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Cluster ID: ___ ___
HH ID: ___ ___

Section 3 - Death Table

For each person in this household who died, please tell me the age, sex and cause of death. Please include very little babies that cried or showed signs of life but later died or are still born. IF THERE IS NO PERSON DIED IN THIS HOUSEHOLD, GO TO NEXT SECTION.

No.	3A. Age For both YEARS and MONTHS IF A CHILD UNDER 1 MONTH OLD DIED, CODE "00". 666 = Don't know 888 = Refused					3B. Sex 0 = Male 1 = Female 6 = Don't know 8 = Refused	3C. How is this person related to you? 00 = Self 01 = Parent 02 = Husband/ Wife 03 = Child 04 = Uncle/ Aunt 05 = Brother/ Sister 06 = Nephew/ Niece 07 = Friend 08 = Cousin 09 = Other relative 66 = Don't know 88 = Refused	3.D: When did this person died? 1 = 1 year or less ago 2 = 1 - 3 years ago 3 = 4 - 5 years ago 4 = More than 5 years ago 6 = Don't know 8 = Refused	3D. Cause of Death *(List only one. If the answer is 08 = Other, write down specific cause in the beside column, otherwise skip it.)*			3E. Cause of Death Code Choices
	Year			Month					Code		Other	
1												01 = Diarrhea 02 = Malaria 03 = ARI 04 = Landmine 05 = Gunshot 06 = Pregnancy - Related Maternal Death (Women dies < 42 days after pregnancy, Abortion and Miscarriage) 07 = Neonatal Death (Newborn dies < 28 days old.) 08 = Other 66 = Don't know 88 = Refused
2												
3												
4												
5												
6												
7												
8												
9												
10												

Section 4. Background information

No.	Question	Coding	Reponse	Skip patterns
1	What is the highest standard of education you have completed?	0 = None 1 = 1 to 5 standard 2 = 6 to 10 standard 3 = Above 10 standard 4 = Other education (Short course/ Monastery) 6 = Don't know 8 = Refused	☐	
2	What languages do you speak well? ***(record up to 2 responses)***	01=Pwo Karen 07=English 02=Sgaw Karen 08=Other(_____) 03=Burmese 66=Don't Know 04=Shan 77=N/A 05=Karenni 88=Refused 06=Mon	☐☐ ☐☐	
3	What religion are you?	0=None 5=Other (_____) 1=Christian 6=Don't Know 2=Buddhist 8=Refused 3=Islam 4=Animist	☐	
4	What is your ethnicity?	0=None 5=Burmese 1=Karen 6=Don't Know 2=Karenni 7=Other (_____) 3=Shan 8=Refused 4=Mon	☐	
5	What describes your marital status?	0 = Single 1 = Currently married 2 = Widow/widower 3 = Separated or divorced 8 = Refused	☐	
6	What is your occupation?	00 = None 01 = Farmer/ Peasant 02 = Factory worker 03 = Private business 04 = Seller 05 = Daily worker 06 = Other (_____) 66 = Don't know 88 = Refused	☐☐	
Section 5. General Health and Wellness				
7	How would you describe your physical health during the PAST 12 MONTHS?	1 = Good Health 2 = Fair Health 3 = Poor Health 6 = Don't know 8 = Refused	☐	
8	Over the PAST 2 weeks, how often have you felt little interest or pleasure in doing things?	0 = None of the time 3 = Almost all the time 1 = A little of the time 6 = Don't know 2 = Most of the time 8 = Refused	☐	
9	Over the PAST 2 weeks, how often have you felt down, depressed, or hopeless?	0 = None of the time 3 = Almost all the time 1 = A little of the time 6 = Don't know 2 = Most of the time 8 = Refused	☐	

Section 6. Healthcare access & health practices

No.	Question	Coding	Response	Skip patterns
10	When you or anyone in this household are sick, did you or that person seek care IN THE PAST 12 MONTHS?	0 = No 1 = Yes 6 = Don't know 8 = Refused	☐	*If 0 skip to Q17*
11	Has anyone in your household been treated by any of the following providers in the PAST 12 MONTHS? (READ EACH CHOICE OUT LOUD)		**0 = No; 1 = Yes; 6 = DK; 7 = NA; 8 = Refused**	
	a. Medical doctor/ Nurse		0 1 6 7 8	
	b. HA/ MW/ AMW		0 1 6 7 8	
	c. Medic/ Ethnic health worker		0 1 6 7 8	
	d. Tradition birth attendant		0 1 6 7 8	
	e. Traditional healer		0 1 6 7 8	
	f. Drug store/ pharmacy		0 1 6 7 8	
	g. Other _____		0 1 6 7 8	
12	The last time you were sick, who was the FIRST person you sought treatment from?	0 = Doctor/Nurse/ MW (at government hospital or clinic) 1 = Ethnic clinic 2 = VHW/ Medic 3 = Traditional healer 4 = Friend/relative/family member 5 = Drug store or pharmacy 6 = Don't know 7 = N/A 8 = Refused	☐	*If 2 to 8, skip to Q15*
13	If you first seek care at a health care facility, are health workers available there?	0 = Never 6 = Don't know 1 = Sometimes 7 = N/A 2 = Always 8 = Refused	☐	
14	Are medicines and medical supplies available at this health facility or with this health worker?	0 = Never 6 = Don't know 1 = Sometimes 7 = N/A 2 = Always 8 = Refused	☐	
15	If you go to get treatment at the facility or with this health worker, how do you travel there?	0 = Walking 4 = Other (_____) 1 = Bicycle 6 = Don't know 2 = Motorbike 7 = N/A 3 = Car 8 = Refused	☐	
16	How long does it take for you to reach there?	00-48 = Number of hours OR 66 = Don't know-----> 00-59 = Number of minutes OR 66 = Don't know 77 = N/A -----> 88 = Refused	☐☐ ☐☐	
17	If you didn't seek care, what was the reason? ***CHOOSE ALL THAT APPLY*** ***(Prompt: Is there anything else?)*** ***DO NOT READ RESPONSES OUT LOUD. CIRCLE YES FOR RESPONSES MENTIONED AND MARKED. CIRCLE NO FOR RESPONSES NOT MENTIONED OR MARKED.***	**0 = No, 1 = Yes, 6 = Don't know, 8 = Refused**		
		☐ Did not feel very sick	0 1 6 8	
		☐ Could not leave work	0 1 6 8	
		☐ Could not leave children	0 1 6 8	
		☐ Treatment too expensive	0 1 6 8	
		☐ Clinic/hospital too far away	0 1 6 8	
		☐ No health worker nearby	0 1 6 8	
		☐ Too sick to go clinic	0 1 6 8	
		☐ Due to insecurity/ safety concern	0 1 6 8	
		☐ Other (_____)	0 1 6 8	

18	Have you or anyone in your household been denied health care because of your religion or ethnicity in the PAST 12 MONTHS?	0 = No 1 = Yes 6 = Don't know 7 = N/A 8 = Refused	☐	
19	Has anyone in your household been verbally mistreated or insulted by a health worker in the PAST 12 MONTHS?	0 = No 1 = Yes 6 = Don't know 7 = N/A 8 = Refused	☐	

Section 7: Diarrhea, Water & Sanitation

No.	Question	Coding	Response	Skip patterns
20	When do you wash your hands? CHOOSE ALL THAT APPLY *(Prompt: Is there anything else?)* *DO NOT READ RESPONSES OUT LOUD. CIRCLE 1 FOR RESPONSES MENTIONED AND MARKED. CIRCLE 0 FOR RESPONSES NOT MENTIONED OR MARKED.*	**0 = No, 1 = Yes, 6 = Don't know, 8 = Refused**		
		☐ I do not wash my hands	0 1 6 8	
		☐ After using the toilet	0 1 6 8	
		☐ Before preparing food	0 1 6 8	
		☐ Before eating	0 1 6 8	
		☐ After helping a child go to the toilet / changing a diaper	0 1 6 8	
21	Does your household have it's own latrine?	0 = No 1 = Yes 2 = Yes, we share with other households. 6 = Don't know 8 = Refused	☐	*If 0, skip to Q25*
22	Show me your own latrine. ***CIRCLE YES AND MARKED THAT YOU SEE THE LATRINE MATCHED WITH THE CHOICE, CHOOSE ALL THAT YOU SEEN. IF NOT CIRCLE NO.***	**0 = No, 1 = Yes, 6 = Don't know, 7 = N/A, 8 = Refused**		
		☐ Has a roof	0 1 6 7 8	
		☐ Has walls	0 1 6 7 8	
		☐ Has a door	0 1 6 7 8	
		☐ Has a plastic bowl	0 1 6 7 8	
		☐ Has a ceremic bowl	0 1 6 7 8	
		☐ Has an air flow pipe	0 1 6 7 8	
		☐ Has a deep hole	0 1 6 7 8	
		☐ It is dirty / Has a bad smell	0 1 6 7 8	
		☐ It doesn't have enough water	0 1 6 7 8	
		☐ Other (_____)	0 1 6 7 8	
23	Do you use the latrine that you have? ***(Read out responses)***	0 = Never 1 = Sometimes 2 = Always 6 = Don't know 7 = N/A 8 = Refused	☐	*If 1 or 2, skip to Q25*
24	Why don't you use the latrine that you have? ***CHOOSE ALL THAT APPLY*** ***DO NOT READ RESPONSES OUT LOUD. CIRCLE YES FOR RESPONSES MENTIONED AND MARKED. CIRCLE NO FOR RESPONSES NOT MENTIONED OR MARKED.***	**0 = No, 1 = Yes, 6 = Don't know, 7 = N/A, 8 = Refused**		
		☐ Dirty	0 1 6 7 8	
		☐ Smells bad	0 1 6 7 8	
		☐ Not my custom	0 1 6 7 8	
		☐ Too far	0 1 6 7 8	
		☐ Erodes the earth	0 1 6 7 8	
		☐ Water source unaccessible or too far	0 1 6 7 8	
		☐ Other (_____)	0 1 6 7 8	

25	Where do your household normally get water for drinking? ***CHOOSE ALL THAT APPLY*** ***DO NOT READ RESPONSES OUT LOUD.*** ***CIRCLE YES FOR RESPONSES MENTIONED AND MARKED. CIRCLE NO FOR RESPONSES NOT MENTIONED OR MARKED.***	**0 = No, 1 = Yes, 6 = Don't know, 8 = Refused**		
		☐ Pipe (plastic, bamboo, or metal)	0 1 6 8	
		☐ Pump	0 1 6 8	
		☐ Gravity flow	0 1 6 8	
		☐ River or stream	0 1 6 8	
		☐ Pond or lake	0 1 6 8	
		☐ Spring	0 1 6 8	
		☐ Open well	0 1 6 8	
		☐ Closed well	0 1 6 8	
		☐ Rain water (basin, pot, bamboo)	0 1 6 8	
		☐ Other (_____)	0 1 6 8	
26	In the last 24 hours, did anyone in your household drink water that was not boiled or filtered?	0 = No 1 = Yes 6 = Don't know 8 = Refused	☐	

Section 8: Food Security

For each of the following questions, consider what has happened in the past 30 days. Please answer whether this happened never, rarely (once or twice), sometimes (3-10 times), or often (more than 10 times) in the past 30 days.

27	Did you worry that your household would not have enough rice?	0 = Never 1 = Rarely (once or twice) 2 = Sometimes (3 - 10 times) 3 = All the time 6 = Don't know 8 = Refused	☐	
28	Were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?	0 = Never 1 = Rarely (once or twice) 2 = Sometimes (3 - 10 times) 3 = All the time 6 = Don't know 8 = Refused	☐	
29	Did you or any household member eat just a few kinds of food day after day due to a lack of resources?	0 = Never 1 = Rarely (once or twice) 2 = Sometimes (3 - 10 times) 3 = All the time 6 = Don't know 8 = Refused	☐	

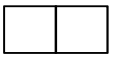
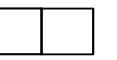
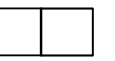
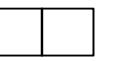
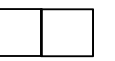
Section 9: Malaria

No.	Question	Coding	Response	Skip patterns
30	How many bednets do you have in your household? *ASK RESPONDENT TO SHOW YOU THE NETS AND ONLY COUNT THOSE THAT ARE OBSERVED TO BE FUNCTIONAL AND NOT DAMAGED.*	**00 - 10 (Record as integer)** 30.A: RESPONSE -	☐☐	
		30.B: OBSERVATION - 66 = Don't know 88 = Refused	☐☐	
31	How many bednets did you treat with KO Tab?	**00 - 10 (Record as integer)** 31: RESPONSE - 66 = Don't know 88 = Refused	☐☐	***IF YOUR RESPONSE IS 0 - GO TO 33.***

32	When is the last time your bednets treated with KO Tab? ***(Prompt to categorize)***	0 = Never 1 = Less than 6 months ago 2 = 6 months to 1 year ago 3 = More than 1 year ago 6 = Don't know 7 = N/A 8 = Refused	☐	
33	How many LLITNS do you have in your household? *ASK RESPONDENT TO SHOW YOU THE NETS AND ONLY COUNT THOSE THAT ARE OBSERVED TO BE FUNCTIONAL AND NOT DAMAGED.*	**00 - 10 (Record as integer)** 33.A: RESPONSE -	☐☐	
		33.B: OBSERVATION - 66 = Don't know 88 = Refused	☐☐	***IF YOUR RESPONSE IS 0 - GO TO 35.***
34	When did your household get this (the most recent) LLITNs ? ***(Prompt to categorize)***	1 = Less than 1 year ago 2 = 1 to 2 years ago 3 = More than 2 years ago 6 = Don't know 7 = N/A 8 = Refused	☐	
35	IN THE PAST 12 MONTHS, please think about all the people in this household who had fever. For the person who most recently had fever, was s/he tested for malaria?	0 = No 1 = Yes 2 = Nobody had fever 6 = Don't know 8 = Refused	☐	***If 0 or 2, skip to Q39***
36	Did the person get treated for malaria by a health worker or medic or VHW?	0 = No 1 = Yes 2 = The result was malaria negative 6 = Don't know 7 = N/A 8 = Refused	☐	***If 0 and 2, skip to Q39***
37	When this person took the malaria medicine, did a health worker come to the house at least once to ensure that this person took all of the medicine at the right time?	0 = No 1 = Yes 2 = Was not given pills for treatment 6 = Don't know 7 = N/A 8 = Refused	☐	***If 2, skip to Q39***
38	If a health worker did not visit your house, did this person finish all malaria pills themselves?	0 = No 1 = Yes 6 = Don't know 7 = N/A 8 = Refused	☐	

Section 10: Human Rights

No.	Question	Coding	Response	Skip patterns
39	How many people from your household were forced to work against their will by soldiers or authorities in the past 12 MONTHS, including those people who have died? This includes forced landmine sweeping, portering, carrying arms, building roads, being camp servants, forced recruitment and include if people had to pay fee to not do forced work.	Record as integer 00 = None 66=Don't Know 88=Refused	☐☐	*If 00, skip to 41.*
40	For each person who was forced to work against their will, please write the total number of days in the past year he/she was forced to work. ***(# Days/ 666 = Don't know/ 777 = N/A/ 888 = Refused)***	Person #1 Person #2 Person #3 Person #4 Person #5	☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐ ☐☐☐	
41	Is there any of the following projects happening in your village: ***CHOOSE ALL THAT APPLY*** ***READ RESPONSES OUT LOUD. CIRCLE YES FOR RESPONSES MENTIONED AND MARKED. CIRCLE NO FOR RESPONSES NOT MENTIONED OR MARKED.***	**0 = No, 1 = Yes, 6 = Don't know, 8 = Refused** ☐ Dam ☐ Mining ☐ Road/Bridge/Highway ☐ Timber ☐ Pipeline ☐ Other -_____	 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8	
42	In the PAST 12 MONTHS until now, have soldiers, authorities or private businesses demanded any of the following things from you: ***CHOOSE ALL THAT APPLY*** ***READ RESPONSES OUT LOUD. CIRCLE YES FOR RESPONSES MENTIONED AND MARKED. CIRCLE NO FOR RESPONSES NOT MENTIONED OR MARKED.***	**0 = No, 1 = Yes, 6 = Don't know, 8 = Refused** ☐ Rice ☐ Food ☐ Land ☐ Livestock ☐ Foodstock ☐ Money ☐ Other -_____	 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8	
43	In the PAST 12 MONTHS until now, have soldiers, authorities or private businesses destroyed, killed or taken any of the following things from you: ***CHOOSE ALL THAT APPLY*** ***READ RESPONSES OUT LOUD. CIRCLE YES FOR RESPONSES MENTIONED AND MARKED. CIRCLE NO FOR RESPONSES NOT MENTIONED OR MARKED.***	**0 = No, 1 = Yes, 6 = Don't know, 8 = Refused** ☐ Rice ☐ Food ☐ Land ☐ Livestock ☐ Foodstock ☐ Money ☐ Other -_____	 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8	*If their land was not confiscated, skip to Q.44.*
	43.A: How many acres of your lands have been confiscated by soldiers, authorities or private businesses?	Record as integer 666=Don't Know 777 = N/A 888=Refused	☐☐☐	
44	In the PAST 12 MONTHS until now, did you give any of the following things to soldiers, authorities or private businesses because of fear or to prevent soldier violence: ***CHOOSE ALL THAT APPLY*** ***READ RESPONSES OUT LOUD. CIRCLE YES FOR RESPONSES MENTIONED AND MARKED. CIRCLE NO FOR RESPONSES NOT MENTIONED OR MARKED.***	**0 = No, 1 = Yes, 6 = Don't know, 8 = Refused** ☐ Rice ☐ Food ☐ Land ☐ Livestock ☐ Foodstock ☐ Money ☐ Other -_____	 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8 0 1 6 8	

45	In the PAST 12 MONTHS until now, how many people in your household were shot at by a soldier or authorities, including those people who have died?	Record as integer 00 = None 66 = Don't Know 88 = Refused		
46	In the PAST 12 MONTHS until now, how many people in your household were stabbed by a soldier or authorities, including those people who have died?	Record as integer 00 = None 66 = Don't Know 88 = Refused		
47	In the PAST 12 MONTHS until now, how many people in your household were beaten by a soldier or authorities, including those people who have died?	Record as integer 00 = None 66 = Don't Know 88 = Refused		
48	In the PAST 12 MONTHS until now, how many people in your household were detained/ tied up by a soldier or authorities, including those people who have died?	Record as integer 00 = None 66 = Don't Know 88 = Refused		
49	Among all people who have lived in your household in the PAST 12 MONTHS, how many have experienced a landmine/UXO injury? Please also include those who have died.	Record as integer 00 = None 66 = Don't Know 88 = Refused		
50	Now we would like for you to think about the PAST 15 YEARS. Among all people who have lived in your household in the PAST 15 YEARS, how many have experienced a landmine/UXO injury? Please also include those who have died.	Record as integer 00 = None 66 = Don't Know 88 = Refused		

Surveyor: "Thank you for taking the time to participate in this survey. We appreciate your help in assessing this community health services and needs. Now, if there are women between age 15 - 49 who is either currently pregnant or has at least 1 child under age 5, we would like to interview all of them. Is that fine?"

PLEASE VERIFY # OF WOMEN TO BE INTERVIEWED FOR PART 2 WITH WHAT WAS INCLUDED IN THE HOUSEHOLD TABLE.

THIS PART OF THE QUESTIONNAIRE IS ONLY FOR ALL WOMEN AGE BETWEEN 15 TO 49 WHO IS EITHER CURRENTLY PREGNANT OR HAS AT LEAST 1 CHILD UNDER AGE 5 LIVING IN THE SAME HOUSEHOLD. IF THERE IS NO WOMEN WITHIN THE CRITERIA, THEN THIS PART OF SURVEY IS NOT NEEDED. PLEASE READ THE SAME CONSENT AS YOU HAVE READ FOR THE HEAD OF HOUSEHOLD BEFORE YOU START THIS PART OF INTERVIEW.

Survey ID: ☐☐☐☐ Woman ID: ☐ Date: ☐☐ ☐☐ ☐☐ (D D M M Y Y)

Are you willing to be in this study? ☐

0 = No (Refused - DO NOT CONTINUE INTERVIEW, skipping HH)
1 = Yes (CONTINUE INTERVIEW)
2 = Survey incompleted because the respondent was distressed
3 = Survey incompleted because the respondent refused to continue
2 - Head of household does not consent to the women being part of the survey
7 = Not at home (attempted to contact 3 times, skipping HH)

Signature of Person Obtaining Consent: _____

Section A: Pregnancy History

No.	Question	Coding	Response	Skip patterns
1	How many times have you been pregnant? INCLUDE CURRENT PREGNANCY AND ALL PREVIOUS PREGNANCIES, INCLUDING ABORTIONS/MISCARRIAGES.	00-15 = Record as integer 66=Don't know 88=Refused	☐☐	
	1a. How many times have you been pregnant in the past two years? INCLUDE CURRENT PREGNANCY AND ALL PREVIOUS PREGNANCIES IN THE LAST 2 YEARS, INCLUDING ABORTIONS/MISCARRIAGES.	0-5 = Record as integer 6=Don't know 8=Refused	☐	
2	How many times have you had therapeutic/ spontaneous abortions?	0 = Never 1-5 = Record as integer 6=Don't know 8=Refused	☐	
3	How old were you during your first pregnancy?	10 - 49 = Age in Years 66 = Don't know 88 = Refused	☐☐	
4	If you are currently pregnant, how many months has it been?	0 = Not currently pregnant 1 = less than 3 months 2 = 3 to 6 months 3 = Above 6 months 6 = Don't know 8 = Refused	☐	
5	How many months and years ago was the end of your last pregnancy? ***(If current pregnancy is first pregnancy, write "00" for months, and "00" for years.)*** ***INCLUDING ABORTIONS/MISCARRIAGES.***	00-Currently first pregnancy 01-20 Years Record integer ----->	☐☐	
		00-11 Months Record integer 66=Don't know -----> 88=Refused	☐☐	

Section B: ANC (During Last or Current Pregnancy)

For the following questions I am going to ask you about ANC visits, by this I mean a visit by a trained traditional birth attendant, health worker or medic in your village, ethnic clinic and nurse or doctor at a hospital.

No.	Question	Coding	Response	Skip patterns
6	How many antenatal care visits did you have during your last/current pregnancy?	0 = Never 4 = Four 1 = One 5 = More than 4 times 2 = Two 6 =Don't know 3 = Three 8=Refused	☐	*If 0 = No skip to Q.8.*
7	Who provided antenatal care to you during your last/current pregnancy? ***CHOOSE ALL THAT APPLY***	**0 = No, 1 = Yes, 6 = Don't know, 8 = Refused**		
		☐ Doctor/Nurse	0 1 6 8	
		☐ HA/ MW/ AMW	0 1 6 8	
		☐ Ethnic health worker/ medic	0 1 6 8	
		☐ Traditional Birth Attendant	0 1 6 8	
		☐ Other (_____)	0 1 6 8	
8	How many days did you take daily energy pills during your last/current pregnancy? ***(ESTIMATE NUMBER OF DAYS)***	0 = Never 1 = Less than a month 2 = 1 to 2 months 3 = 2 to 3 months 4 = More than 3 months 6 = Don't know 8 = Refused	☐	
9	How many times did you receive deworming pills during your last/current pregnancy?	0-5 = Record times as integer 6 = Don't know 8 = Refused	☐	

Section C: Delivery and PNC (Last Pregnancy)

No.	Question	Coding	Response	Skip patterns
10	Describe the result of your last pregnancy.	0 = Currently pregnant 1 = Miscarriage/Abortion 2 = Still Birth 3 = Live birth (died) 4 = Live birth (still alive) 6 = Don't know 8 = Refused	☐	*If 0 or 1, go to Q.16.*
11	Who delivered your last baby? ***CHOOSE ALL THE APPLY*** ***(Probe to make sure respondent is not calling MHW/HW a doctor)***	**0 = No, 1 = Yes, 6 = Don't know, 7 = N/A, 8 = Refused**		
		☐ Doctor/Nurse	0 1 6 7	
		☐ HA/ MW/ AMW	0 1 6 7	
		☐ Ethnic health worker/ medic	0 1 6 7	
		☐ Traditional Birth Attendant	0 1 6 7	
		☐ Other (_____)	0 1 6 7	
12	When did you begin breastfeeding your last baby after delivery?	0 = Did not breastfeed 1 = Less than 1 hour 2 = 1 to 6 hours 3 = Within 7 to 24 hours 4 = 1 day to 3 days 5 = After 3 days 6 = Don't know 7 = N/A 8 = Refused	☐	*If 0 go to Q15*

9.5 WEBSITE LINKS FOR REFERENCES

2. Minority Rights International, World Directory of Minorities and Indigenous Peoples: Myanmar/ Burma Overview. 2009. http://www.minorityrights.org/4477/myanmarburma/myanmarburma-overview.html, (Accessed 31 August 2014).
3. The Border Consortium, Changing Realities, Poverty and Displacement in South East Burma/ Myanmar. 31 October 2012. http://reliefweb.int/report/myanmar/changing-realities-poverty-and-displacement-south-east-burmamyanmar, (Accessed 20th June 2014).
4. Burma News International, Deciphering Myanmar's Peace Process. January 2013. http://www.burmalibrary.org/docs14/Deciphering-Myanmar-Peace-Process-ocr-tu-red.pdf (Accessed 30 June 2014).
5. AFP, Clashes, mistrust overshadow Myanmar peace process, May 6, 2014. http://reliefweb.int/report/myanmar/clashes-mistrust-overshadow-myanmar-peace-process. (Accessed 8 September 2014).
6. Karen Human Rights Group, Truce or Transition? Trends in human rights abuse and local response in Southeast Burma since the 2012 Ceasefire. May 2014. http://www.khrg.org/sites/default/files/khrg_-_truce_or_transition_-_english.pdf (Accessed 10 September 2014).
7. Karen Human Rights Group, Truce or Transition? Trends in human rights abuse and local response in Southeast Burma since the 2012 Ceasefire. May 2014. http://www.khrg.org/sites/default/files/khrg_-_truce_or_transition_-_english.pdf (Accessed 10 September 2014).
8. Weng, Lawi. 200 Kachin Civilians Flee Fighting Near Hpakant. The Irrawaddy. 13 Aug 2014. http://www.irrawaddy.org/burma/200-kachin-civilians-flee-fighting-near-hpakant.html (Accessed 10 October 2014).
9. Myanmar Times, Military Issues Hold Back Progress on Peace Deal. 29 September 2014. http://www.mmtimes.com/index.php/national-news/11805-military-issues-hold-back-progress-on-ceasefire-deal.html (Accessed 22 October 2014).
10. The Oak Foundation, Supporting the Rule of Law in Myanmar: A Strategy for Funding Legal Change. 2010. http://www.oakfnd.org/sites/default/files/Supporting%20Rule%20of%20Law%20in%20Myanmar_%20A%20Strategy%20for%20Funding%20Legal%20Change.pdf (Accessed 10 October 2014).
11. Zafari, Sam. Making Rule of Law a Reality in Myanmar. DVB. 18 February 2014. https://www.dvb.no/analysis/making-rule-of-law-a-reality-in-myanmar-burma/37387 (Accessed 10 October 2014).
12. Ipsos Business Consulting, Healthcare in Myanmar. November 2013. http://www.ipsosconsulting.com/pdf/Research-Note-Healthcare-in-Myanmar.pdf. (Accessed 5 September 2014).
13. World Bank, Health Expenditure, Total (Percent of GDP). 2012. http://data.worldbank.org/indicator/SH.XPD.TOTL.ZS?order=wbapi_data_value_2012+wbapi_data_value+wbapi_data_value-last&sort=asc (Accessed 5 October 2014).
15. Myanmar Ministry of Health, Health in Myanmar. 2012. http://www.searo.who.int/myanmar/documents/healthinmyanmar2012/en/. (Accessed 4 September 2014)
16. UNICEF, Situation Analysis of Children in Myanmar. July 2012. http://www.unicef.org/eapro/Myanmar_Situation_Analysis.pdf (Accessed 10 October 2014).
17. Myanmar Ministry of Health, Health Workforce Strategic Plan 2012-2017. http://www.nationalplanningcycles.org/sites/default/files/country_docs/Myanmar/health_workforce_strategic_plan_2012-2017.pdf (Accessed September 2014).

18. U Myint, Myanmar: Pattern of household consumption, expenditure. National Workshop on Reforms for Economic Development of Myanmar, Myanmar International Convention Center (MICC), Naypyidaw, 19-21 August, 2011. http://www.burmalibrary.org/docs12/NWR2011-08-Pattern_of_Household_consumption_expenditure-Myint%28en%29.pdf (Accessed June 2014).
19. Burma Partnership and the Assistance Association for Political Prisoners, A Briefing Paper on the Shrinking Space for Civil Society in Burma/ Myanmar. 1 October 2014. http://www.burmapartnership.org/wp-content/uploads/2014/10/BP-AAPP-UNGA-A-Briefing-Paper-on-the-Shrinking-Space-for-Civil-Society-in-Burma-Myanmar.pdf (Accessed 22 October 2014).
20. The Irrawaddy. Union Parliament Passed NGO Law. 1 July 2014. http://www.irrawaddy.org/burma/union-parliament-passed-ngo-law.html (Accessed 22 October 2014).
23. Joliffe, Kim. Ethnic conflict and social services in Myanmar's contested regions. Asia Foundation. June 2014. http://asiafoundation.org/resources/pdfs/MMEthnicConflictandSocialServices.pdf (Accessed 30 July 2014).
25. Myawaddy Hospital, a central government hospital on the Burmese border, refers patients to the Mae Tao clinic. See http://maetaoclinic.org/wp-content/uploads/2012/05/Briefing-Regarding-Myanmar-Peace-Team%E2%80%99s-Meetings-with-Mae-Tao-Clinic-Team.docx
26. Low, S., Kyaw T. Tun, et al. Human resources for health (HRH): Task shifting to promote basic health service delivery among internally displaced in ethnic health program service areas in eastern Burma/Myanmar.Global Health Action. 2014, 7: 24937. http://www.globalhealthaction.net/index.php/gha/article/view/24937
27. Burmese Border Guidelines. 2007. http://maetaoclinic.org/publications/burma-border-guidelines/ (Accessed 30 June 2014).
28. Joliffe, Kim. Ethnic conflict and social services in Myanmar's contested regions. Asia Foundation. June 2014. http://asiafoundation.org/resources/pdfs/MMEthnicConflictandSocialServices.pdf
33. United Nations Country Team in Myanmar, Thematic Analysis 2011: Achieving the Millennium Development Goals in Myanmar. 2011. http://planipolis.iiep.unesco.org/upload/Myanmar/Myanmar_MDG_2011.pdf (Accessed 10 June 2014).
34. UNICEF, Myanmar Statistics. 2013. http://www.unicef.org/infobycountry/myanmar_statistics.html. (Accessed 23 June 2014).
35. United Nations Country Team in Myanmar, Thematic Analysis 2011: Achieving the Millennium Development Goals in Myanmar. 2011. http://planipolis.iiep.unesco.org/upload/Myanmar/Myanmar_MDG_2011.pdf (Accessed 30 June 2014).
36. UNICEF, The Big Picture. 2014. http://www.unicef.org/health/index_bigpicture.html. (Accessed 23 June 2014).
39. Health Information System Working Group, Diagnosis Critical: Health and Human Rights in Eastern Burma, 2010. http://www.backpackteam.org/wp-content/uploads/reports/Diagnosis%20critical%20-%20Eng%20website%20version.pdf (Accessed 30 June 2014).
41. United Nations Population Fund, Skilled Attendance at Birth. http://www.unfpa.org/public/mothers/pid/4383. (Accessed 30 June 2014).
42. World Health Organization, Global Health Observatory: Antenatal Care, 2014. http://www.who.int/gho/maternal_health/reproductive_health/antenatal_care_text/en/. (Accessed 5 September 2014).
46. USAID, Use of cutoffs for mid-upper arm circumference (MUAC) as an indicator or predictor of nutritional and health-related outcomes in adolescents and adults: A systematic Review. November 2013. http://www.fantaproject.org/sites/default/files/resources/MUAC%20Systematic%20Review%20_Nov%2019.pdf (Accessed 30 June 2014).

47. Center for Research on the Epidemiology of Disasters, Global Acute Malnutrition Rates. 2009. http://www.cedat.be/glossary (Accessed 30 June 2014).
48. World Health Organization, The Management of Nutrition in Major Emergencies. 2000. http://www.who.int/nutrition/publications/emergencies/9241545208/en/. (Accessed 30 June 2014).
50. United Nations. Situation of Human Rights in Myanmar: Note by the Secretary-General. 2 September 2013. http://www.ohchr.org/Documents/Countries/MM/A-68-397_en.pdf (Accessed 4 April 2014).
54. World Health Organization, Helminth Control in School-Age Children: A Guide for Managers of Control Programmes: Second edition. 2011. http://whqlibdoc.who.int/publications/2011/9789241548267_eng.pdf (Accessed 30 June 2014).
56. World Health Organization, Vitamin A Supplementation for Infants and Children 6-59 Months of Age. 2011. http://www.who.int/nutrition/publications/micronutrients/guidelines/vas_6to59_months/en/ (Accessed 5 June 2014).
57. World Health Organization, Diarrhoeal Disease Fact sheet N°330. April 2013. http://www.who.int/mediacentre/factsheets/fs330/en/ (Accessed 5 June 2014).
58. World Health Organization, The Treatment of Diarrhea: A Manual for Physicians and Other Senior Health Workers. 2005. http://whqlibdoc.who.int/publications/2005/9241593180.pdf (Accessed 5 June 2014).
59. World Health Organization, Global Strategy for Infant and Young Child Feeding. 2003, http://www.who.int/nutrition/publications/gs_infant_feeding_text_eng.pdf (Accessed 10 June 2014).
60. World Health Organization, The Optimal Duration of Exclusive Breastfeeding Report of an Expert Consultation, Geneva Switzerland 28-30 March 2001. http://www.who.int/nutrition/publications/optimal_duration_of_exc_bfeeding_report_eng.pdf (Accessed 10 June 2014).
61. United Nations Children's Fund, Myanmar Statistics. 2013. http://www.unicef.org/infobycountry/myanmar_statistics.html (Accessed 10 June 2014).
62. IRIN Asia, Curbing Myanmar's spread of drug-resistant malaria. March 28 2014. http://www.irinnews.org/report/99852/curbing-myanmar-s-spread-of-drug-resistant-malaria (Accessed 30 June 2014).
66. Health Information System Working Group, Diagnosis Critical: Health and Human Rights in Eastern Burma, 2010. http://www.backpackteam.org/wp-content/uploads/reports/Diagnosis%20critical%20-%20Eng%20website%20version.pdf (Accessed 30 June 2014).
67. World Health Organization, Insecticide-Treated Mosquito Nets: A WHO Position Statement. http://www.who.int/malaria/publications/atoz/itnspospaperfinal.pdf (Accessed 6 October 2014).
69. The Guardian, New wave of drug-resistant malaria threatens millions, June 5 2014. http://www.theguardian.com/society/2014/jun/05/new-wave-drug-resistant-malaria-burma (Accessed 5 September 2014).
70. UNICEF, State of the World's Children. 2013. http://www.unicef.org/sowc2013/files/SWCR2013_ENG_Lo_res_24_Apr_2013.pdf (Accessed 10 September 2014).
71. UNHCR, Problems Faced by Stateless People. April 2014. http://www.unhcr.org/pages/49c3646c161.html (Accessed 6 October 2014).
73. Health Information System Working Group, Diagnosis Critical: Health and Human Rights in Eastern Burma, 2010. http://www.backpackteam.org/wp-content/uploads/reports/Diagnosis%20critical%20-%20Eng%20website%20version.pdf (Accessed 30 June 2014).
75. Karen Human Rights Group, Truce or Transition? Trends in human rights abuse and local response in Southeast Burma since the 2012 Ceasefire. May 2014. http://www.khrg.org/sites/default/files/khrg_-_truce_or_transition_-_english.pdf (Accessed 10 September 2014).

76. Karen Human Rights Group, Truce or Transition? Trends in human rights abuse and local response in Southeast Burma since the 2012 Ceasefire. May 2014. http://www.khrg.org/sites/default/files/khrg_-_truce_or_transition_-_english.pdf (Accessed 10 September 2014).

77. Physicians for Human Rights 'A Foreseeable Disaster in Burma: Forced Displacement in the Thilawa Special Economic Zone' November 2014 http://physiciansforhumanrights.org/library/reports/a-foreseeable-disaster-in-burma.html (accessed 21 January 2015)


S.S.D.F
Shan State Development Foundation


Kawthoolei Department of
Health and Welfare


Mon National Health Committee


KAREN MOBILE HEALTH COMMITTEE
KnMHC


BMA


B.P.H.W.T
Primary Health Care


MAE TAO
CLINIC

The Long Road to Recovery

www.hiswg.org