Newly emerged resistance healthcare systems in Northwest Myanmar's Sagaing Region post-military coup: qualitative insights from anti-junta healthcare workers and community members

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A thesis

submitted in partial fulfillment of the

requirements for the degree of

Master of Public Health

University of Washington

2024

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Program authorized to offer degree:

School of Public Health - Health Systems and Population Health

University of Washington

Abstract

Newly emerged resistance healthcare systems in Northwest Myanmar's Sagaing Region post-military coup: qualitative insights from anti-junta healthcare workers and community members

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Health Systems and Population Health

Objectives: To provide insights into the experiences and perspectives of the anti-junta healthcare providers and community members regarding the prevailing health problems in conflict settings of Sagaing Region, how the anti-junta healthcare providers have established alternative systems of care in the region, and challenges the providers and community members are encountering in healthcare provision and access.

Design: Qualitative study using online semi-structured, in-depth interviews.

Setting: Sagaing Region, Myanmar, mainly covering conflict-affected rural areas.

Participants: Total 26 healthcare workers providing, managing, or supporting healthcare services and six community members potentially receiving these services (23 men and nine women) from rural and urban areas of Sagaing Region, Myanmar.

Results: Prevailing health issues included conflict-related injuries, infectious diseases, chronic non-communicable diseases, and mental health concerns. In resistance force-controlled rural areas, government rural health centers have stopped functioning, and anti-junta healthcare workers have established new healthcare systems to fill the healthcare gaps. Significant health challenges encompassed travel restrictions and shortages of healthcare workers, essential commodities, and funding. Restricted communication, attacks on healthcare, and safety concerns have further compounded the crisis. Moreover, the politicization of healthcare and interference by the junta have hindered efforts to address these challenges effectively.

Conclusions: The post-coup conflict has severely devastated Sagaing Region's healthcare system and health status, disproportionately affecting rural areas, demanding immediate action. Failure to address these issues promptly could worsen the region's health outcomes and deepen the humanitarian crisis. Addressing healthcare in the region should prioritize effective interventions to stop the junta's attacks on healthcare and civilians and innovative ways to support new local healthcare initiatives technically, financially, and logistically.

ACKNOWLEDGMENT

I would like to extend my deepest gratitude to my mentors and thesis supervisory committee, Dr. Amy Hagopian and Dr. James Pfeiffer, for their unwavering support not only during my thesis but also throughout my entire MPH journey. Special thanks to my research team member, Dr. Tayzar Tun, for his invaluable contributions to this study. I am also grateful to Dr. Andrew, the Sagaing Region State Health Administration Team, Dr. Zarni Aung, and the Chindwin Medical and Humanitarian Network for their administrative support, coordination, facilitation, and assistance in participant recruitment, data collection, and interpretation.

I extend my appreciation to the healthcare workers and community members for their participation in this study and for their help in referring further participants. My heartfelt thanks go to Sister Win Win Khaing, Kaung Mon Winn, Htain Lin Aung, Ye Htet Naing, Hein Htet Ko, and seven other colleagues (whose names are kept anonymous for security reasons) for their diverse contributions to this study. I am also thankful to Dr. Linda Ko for her HSERV 517 course and to Emily Bernet from the Department of Health Systems and Population Health for their valuable advice during the initiation of this study.

I acknowledge the Fulbright Foreign Scholarship Program for supporting me throughout my MPH program, including this study, and the USABCI Myanmar Scholarship Fund for their partial funding of this research. Finally, I extend my deepest gratitude to the healthcare workers and their teams who continue to provide essential healthcare services to the people in the conflict areas of Myanmar despite facing life-threatening challenges.

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List of abbreviations

CBHO	Community-based health organization
CDM	Civil Disobedience Movement
CMHN	Chindwin Medical and Humanitarian Network
COVID-19	Coronavirus Disease 2019
EHO	Ethnic Health Organization
ERO	Ethnic Revolutionary Organization
GP	General practitioner
HIV	Human Immunodeficiency Virus
NGO	Non-government organization
NUG	National Unity Government Myanmar
NUG-MOH	Ministry of Health of the National Unity Government Myanmar
PDF	People's Defense Force
SHAT	State Health Administration Team
TB	Tuberculosis

INTRODUCTION

Myanmar had more than seven decades of persistent military governance and prolonged armed conflicts between Myanmar (Burmese) Military and ethnic revolutionary organizations (EROs) (previously called ethnic armed organizations). [1] Despite the country's transition towards democratic governance in 2011, it encountered a significant setback following a third military coup on February 1, 2021, amidst the COVID-19 pandemic. People nationwide peacefully protested against the coup, compelling the junta to relinquish control and restore power to the democratically elected representatives. These protest activities included the Civil Disobedience Movement (CDM), a campaign in which pro-democratic civilian government employees, including healthcare workers, resisted working for the junta's regime, and people avoided any acts of support for the regime. [2,3] However, the junta criminalized all opponents and aggressively suppressed their activities through arbitrary arrest, unlawful detentions, torture, extrajudicial killings, and the imposition of martial law. The crackdown transformed peaceful protests into armed opposition nationwide, together with the emergence of anti-junta militias arising from civilians, called People's Defense Forces (PDFs). [4] Former legislators and pro-democratic activists formed a resistance government called the National Unity Government (NUG). NUG allied with EROs, brought many PDF units under their wings, and gained substantial influence. All these situations quickly escalated into a nationwide full-blown civil war involving PDFs and EROs opposing the junta and its allies. [5]

The coup and the subsequent civil war have led to extensive deterioration across various sectors. To control territory and consolidate power, the junta raided villages, indiscriminately attacking civilians, torturing people, raping women, and systematically burning the villages. In addition to

ground assaults, the junta increasingly used airstrikes and bombed civilian villages, massively killing hundreds, including refugees and children, and destroying houses, hospitals, schools, churches, and monasteries. [6–8] To date, the junta has arrested more than 26,500 civilians and killed more than 4,880. [9] More than 2.8 million people have been displaced internally, including 2.5 million displaced after February 2021. [10] Moreover, the junta employs the so-called "four-cuts" strategy as a collective punishment to its opponents by cutting off whole areas from food, funding, information, and recruits. The junta has blocked local and international humanitarian aid to the conflict areas; imposed restrictions on travel and transportation by placing military checkpoints strictly screening the people's identities and limiting the amount and types of product transportation; and restricted media and information flow, including mobile phone and internet shutdowns and censorship, thereby limiting access to independent news and communication platforms. [11] The crisis has also led to the cessation of international aid and financial resources, suspension of agricultural and economic activities, and hikes in market prices, dragging half the country's population into poverty. Moreover, people have also suffered from disruptions in electricity supply, access to education, and primary healthcare services. [12]

Specifically, the crisis has profoundly affected the country's healthcare system, which has already been weakened by the COVID-19 pandemic, resulting in significant disruptions and challenges. The health sector was the first to participate in the CDM and contributed to many CDM staff nationwide, significantly reducing the regime's health workforce. For example, approximately 60,000 doctors joined CDM at its peak, and 45,000 remained until November 2022. However, the junta dismissed, criminalized, and arrested the CDM healthcare workers who provided healthcare outside the government health facilities, forcing many to flee to remote

places to ensure their safety. [13] However, these healthcare workers have initiated alternative systems of care in the local communities where they had relocated, sometimes in collaboration with the existing ethnic health organizations (EHOs) and the Ministry of Health of the NUG (NUG-MOH). [14] However, the junta made many targeted attacks on healthcare workers and facilities nationwide. [15] Until February 2024, the junta has launched 1,127 attacks on healthcare, and it has arrested, imprisoned, tortured, and killed 897 healthcare workers. In 49 incidents, the junta has dropped explosive weapons, destroying hospitals, clinics, rural health centers, and pharmacies, and killing or injuring healthcare workers, patients, and refugees. In its controlled territories, the junta placed military camps in the health facility compounds while resistance forces dropped drone-delivered explosive weapons on 25 health facilities occupied by the junta military. [16,17] Moreover, the junta's 'four cuts' did not spare medicines and other health supplies, and it destroyed, stolen, or hijacked health transportation, preventing the reach of medical supplies to the people in need. [18,19]

These challenges have exacerbated existing healthcare disparities and compromised the quality and accessibility of essential healthcare services. [12] The disruptions have been most prominent for preventive health programs, including vaccination campaigns and disease surveillance efforts, further increasing health risks within the population. The third wave of the COVID-19 pandemic, June-August 2021 (after the coup), suffered the highest case fatality rate (15% compared to 2.2% in the first and second waves). [20] In addition to conflict-related injuries, both previously controlled infectious and chronic diseases are now trending up again. [21] Increased stress and anxiety have also emerged as a nationwide critical concern and heightened after the junta's February 2024 conscription order, although mental health services are limited. [22] With the

rising war intensity, multisectoral deterioration, and lack of humanitarian support, the country's collective health status is at risk.

Sagaing, in Northwestern Myanmar, suffers from the most severe clashes in the ongoing conflict, with resulting health system damage. However, anti-junta healthcare providers are establishing alternative systems of care to fill the gaps created by the coup and subsequent conflicts despite challenges. However, the present healthcare situation and the innovative efforts of the anti-junta healthcare providers in Sagaing Region have not been studied. This study aims to provide insights into the experiences and perspectives of the anti-junta healthcare providers and community members regarding the prevailing health problems in conflict settings of Sagaing Region, how the anti-junta healthcare providers have established alternative systems of care in the region, and the challenges that the providers and community members are encountering in providing and accessing healthcare. The findings of this study will inform various local and international stakeholders and policymakers in developing better health and humanitarian support strategies for Sagaing Region and other conflict-affected areas of Myanmar.

The *"government"* hospitals, health centers, or services in the context of this paper mean those that used to be provided by the public or government sector before the coup, although the junta now controls these facilities; it does not mean calling the junta as government, which people of Myanmar do not agree. When I described healthcare related to the National Unity Government, I have made it self-explanatory.

METHODS

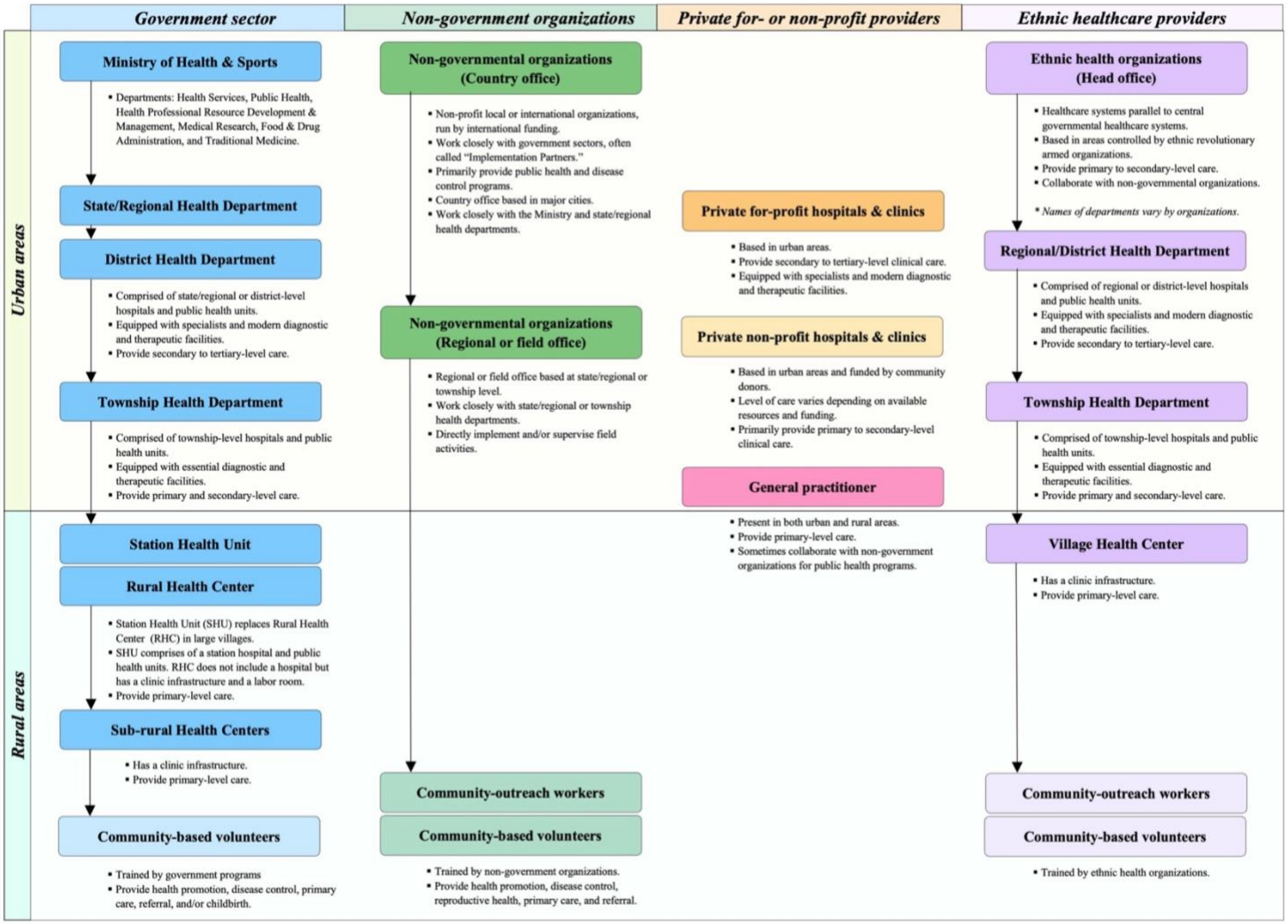
I employed qualitative, semi-structured, in-depth interviews with anti-junta healthcare workers and community members in Sagaing Region.

Study setting

Sagaing Region exists in northwest Myanmar and borders India. It is the second largest among the 14 states and regions, with a population of 5.3 million (~ 10% of the country's population) and 83% living in rural areas. [23] It has nine districts and a self-administrative zone (an ethnic administrative division with its own governing body independent of the central government) divided into 37 townships. Before the coup, the administration was under the hierarchical control of the central government except in the Naga Self-administrative Zone. Sagaing Region was stable and had no armed conflicts. The economy mainly depends on agriculture, primarily rice, with some gold mines in the northern part. Transportation methods are road, river, air, and rail (in order), depending on the part of the region. Sagaing Region can be arbitrarily divided into three parts: "Upper Sagaing" in the north, and "Eastbank of Chindwin River" and "Westbank of Chindwin River" in the south. They differ in sociodemography, economy, transportation methods, healthcare coverage, and disease epidemiology. [24]

Before the coup, the primary healthcare provider in Sagaing Region was the government healthcare system, like other central parts of Myanmar. Under the central Ministry of Health, Sagaing Region had Regional, District, and Township Health Departments in urban areas and Station Health Units, Rural Health Centers, and Sub-Rural Health Centers in rural areas, in order of administrative hierarchy (**Figure 1**).

Figure 1. Health systems in Myanmar before the 2021 military coup



The authors created this diagram based on the information adapted from the Myanmar National Health Plan 2017 – 2021, [25] using Microsoft PowerPoint.

The departments in urban areas have a hospital providing clinical care and a public health department providing public health services. In rural areas, Rural Health Centers manage multiple Sub-Rural Health Centers to provide public health and primary care services (no inpatient care is provided). In some large villages, a Station Health Unit replaces a Rural Health Center and provides clinical care at the Station Hospital. Non-government organizations (NGOs), which means internationally funded local or foreign non-governmental organizations that operate independently or in collaboration with the government public health units and are usually referred to as "implementation partners," provide public health services with occasional clinical services in urban and rural areas. For-profit private hospitals, for-profit specialist clinics, and charity clinics provide primary- to secondary-level clinical services in urban areas. Private general practitioner clinics (GPs) run by doctors, nurses, health assistants, midwives, or other professional healthcare workers provide primary-level clinical services in urban and rural areas. Community-based social organizations facilitate healthcare by providing financial and other support to the patients. [25] However, ethnic health organizations are parallel health systems under EROs, but not present in Sagaing Region.

Sagaing Region became one of the regions with the most severe conflicts, with more than 1.2 million internally displaced populations, comprising 40% of the nationwide total. [26] The main resistance actors in Sagaing are the NUG and PDFs, who oppose the junta and its allies, including the Shanni and Pyusawhti groups. PDFs in the context of this paper cover all PDF militias in the region, sometimes locally referred to as "Local Defense Forces" or "LDF," affiliated or unaffiliated with the NUG. Shanni Nationalities Army (SNA) is a junta-allied ERO in northern Sagaing. Pyusawhti militias are pro-junta villagers operating most actively in the

Central Dry Zone Theater of Myanmar, including Sagaing Region. While the territory control of the junta and resistance forces is volatile, and the widely circulated maps display the control mostly by townships and are flawed, [27] roughly in Sagaing Region, the junta still controls most urban areas, resistance forces control some rural areas, and some are contested. [28] More than a third (951 of 2,600) of armed clashes between the junta and PDF units were in Sagaing Region by April of 2024, involving 91 of 282 (33%) of PDF units nationwide, and resulted in 6,090 fatalities, including 1,083 civilian deaths. [29] The region has suffered the most from indiscriminate air strikes by the junta. [30–32] The conflict has disproportionately affected the rural population, causing them more significant hardships. Routine government health services in urban areas have significantly declined, and those in rural areas have apparently stopped functioning. Anti-junta actors are establishing alternative healthcare systems to provide essential services amidst the crisis in Sagaing. The NUG-MOH has deployed a State Health Administration Team (SHAT) in Sagaing Region to coordinate affiliated healthcare providers and services in the region. [18]

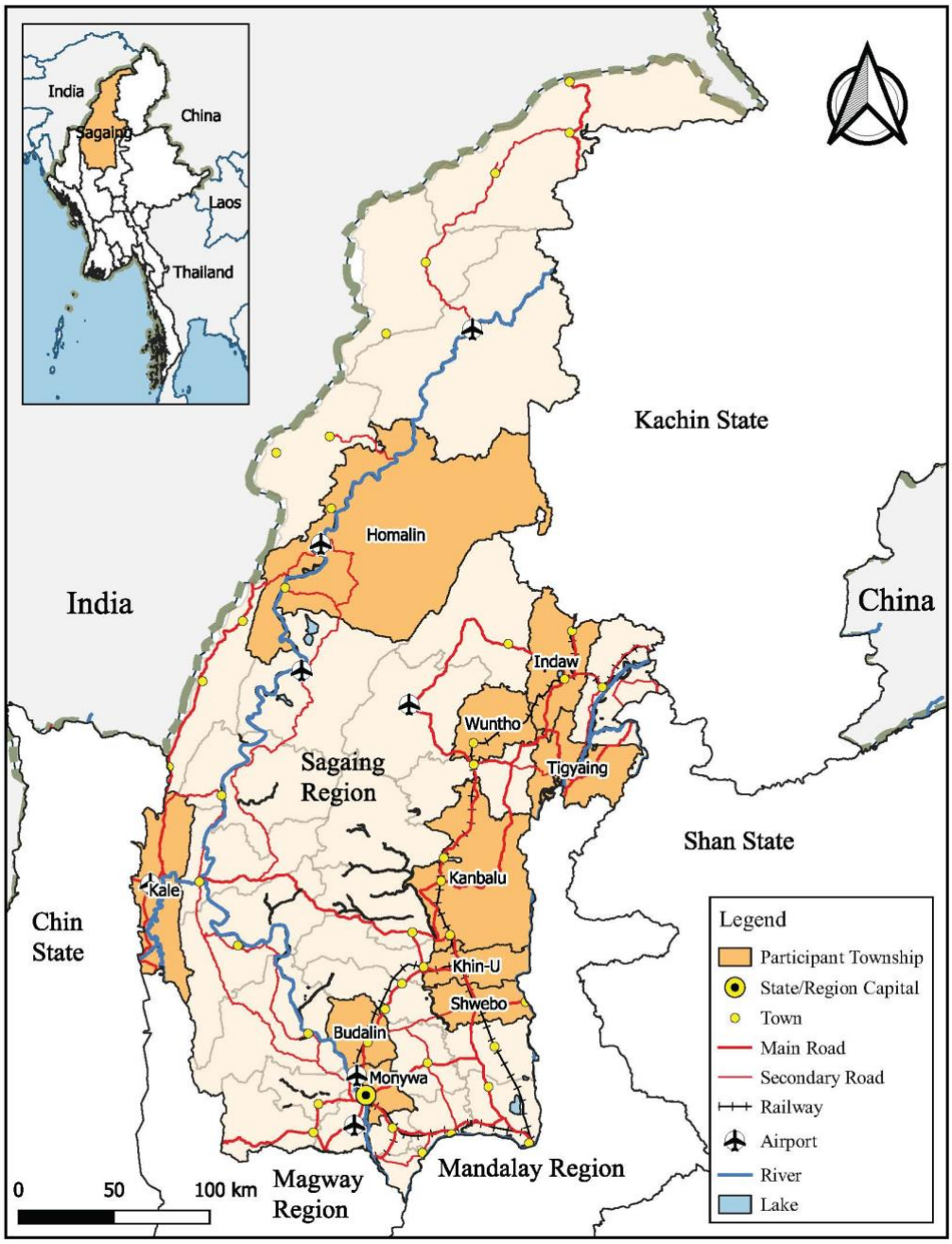
Study population and sampling

The study population encompasses anti-junta healthcare workers in Sagaing Region, Myanmar, defined as individuals providing, managing, or supporting healthcare services in the region and opposing the junta (they may not be actively engaged in resistance activities) and community members in the region potentially receiving these services. The sampling frame covered various healthcare workers, such as doctors, nurses, health assistants, lady health visitors, midwives, public health supervisors, and community health volunteers, working at multiple levels of operation such as first-hand service provision, management, leadership, policymaking, administration, and support of various organizations including newly emerged local healthcare

teams, community-based health organizations (CBHOs), NUG-MOH and Sagaing SHAT, NGOs, private health facilities, and GPs, and community members of various backgrounds such as chronic patients, pregnant mothers, and community leaders, from both rural and urban areas of the region. I considered all eligible and consenting participants aged 18 years and older for recruitment. I planned to recruit 20-25 participants, with 4-5 participants each from first-hand providers, managers, support persons, leaders or policymakers, and community members.

I recruited the participants by snowball sampling through their trusted networks as it was the only way to ensure their participation because of the politically sensitive nature of the study and the security concerns of the participants. The sample included 26 healthcare workers and six community members (totaling 32) of various backgrounds; 26 participants were from 10 townships across the region, while six healthcare workers represented many townships or the whole region. The Research Coordinator, appointed with the help of the Sagaing SHAT, recruited 13 healthcare workers and four community members. I recruited the rest through his professional network. Invitees from rural Westbank of Chindwin River denied participation for unstable internet access, armed conflicts, and safety concerns; some administrative officials for security concerns; and some healthcare workers and community members for busy schedules, safety concerns, unstable internet access, and inability to travel to an internet access point. Two management-level participants accepted the invitation, but I lost contact later. The locations and characteristics of participants are portrayed in **Figure 2** and **Table 1**.

Figure 2. Townships from which participants were recruited



Six participants represented or accounted for multiple townships or the whole region; I did not present their representation in this figure. The research team created this figure using QGIS software version 3.34 [33] and the resources from the Myanmar Information Management Unit website. [34]

Table 1. Characteristics of study participants

No	Participant	Description	Type of participant						Gender	Township[†]	Locality
			PR	MR	SR	LR	PO	CM			
1	PR01	Doctor of a local healthcare team	*	*					Male	B	Rural
2	PR02	Nurse of a healthcare team	*					*	Female	A	Rural
3	PR03	Health Assistant of a local healthcare team	*	*					Female	A	Rural
4	PR04	Health Assistant of a local healthcare team	*	*					Male	J	Rural
5	PR05	Public Health Supervisor of a local healthcare team	*						Female	I	Rural
6	PR06	Nurse-aid in a local healthcare team	*						Female	B	Rural
7	PR07	Doctor running a GP clinic	*						Male	E	Urban
8	PR08	Doctor running a GP clinic	*						Female	A	Mixed
9	PR09	Doctor of a private hospital	*						Male	D	Urban
10	PR10	Specialist doctor of a private hospital	*						Male	D	Urban
11	MR11	Manager-level staff of a CBHO		*	*				Male	General	General
12	MR12	Manager-level staff of an NGO		*					Male	General	General
13	MR13	Manager-level staff of an NGO	*	*					Male	G	Mixed
14	MR14	Manager of a private hospital		*					Male	D	Urban
15	MR15	Sister (nurse) running a local healthcare team	*	*	*	*			Female	I	Rural
16	SR16	Supporting team staff of a CBHO		*	*				Male	General	General
17	SR17	Doctor of a supporting network of the region			*				Male	General	General
18	SR18	Member of Public Administration Body			*			*	Male	A	Rural
19	SR19	Community-based health volunteer			*			*	Female	C	Rural
20	LR20	Specialist doctor leading a local healthcare team	*	*	*	*			Male	B	Rural
21	LR21	Doctor leading a local healthcare team	*	*	*	*			Male	A	Rural
22	LR22	Sister (nurse) leading a local healthcare team	*	*	*	*			Female	H	Rural
23	LR23	Specialist doctor leading a local healthcare team	*	*	*	*			Male	C	Rural
24	LR24	Program manager-level staff of a CBHO		*	*	*			Male	General	General
25	LR25	Member of People's Security Force			*	*			Male	A	Rural
26	PO26	Member of State Health Administration Team				*	*		Male	General	General

27	CR27	Community leader	*	*	Male	B	Rural
28	CR28	Community member with diabetes		*	Male	B	Rural
29	CR29	School teacher with pregnancy		*	Female	B	Rural
30	CR30	Housewife of a husband with TB		*	Male	C	Rural
31	CR31	School teacher family with elderly and a child		*	Male	D	Urban
32	CR32	Doctor representing his family in rural Sagaing		*	Male	F	Rural

Acronyms: PR = First-hand health service provision, MR = Healthcare management, SR = Technical, financial, administrative, or general support, LP = Leadership, PO = Policymaking, CM = Community member, CBHO = Community-based health organization, NGO = Non-government organization, GP = General practitioner.

† I used pseudonyms of the townships to secure the participants' identification.

Data collection

I limited the number of people involved in the research process to protect participant identities in a setting where military power enforces limits on freedom of expression. I, who lives in Seattle, Washington State, USA, interviewed all consenting study participants through an online platform of their choice: Zoom, Signal, or Telegram, using a laptop computer. Although 25 participants were physically present in Sagaing Region, four were in other parts of Myanmar, and three were outside of Myanmar at the time of the interview, although they all are working for Sagaing Region remotely. No note-taker was present at the interview. I ensured that the interviewer and participant were in a private setting where conversations could not be overheard. Participants with limited technology literacy were assisted by a trusted facilitator while maintaining interview privacy. Recognizing physical, mental, and emotional trauma that the participants might have gone through in the conflict settings, the interviews followed a trauma-informed approach. [35] All interviews were audio-only, and live video was turned off on both sides. I obtained the participants' informed consent for participation and audio-record of the interview before the interviews. To ensure the participants' safety, I avoided written documentation of the participants' consent, including their names and personal information. However, I audio-recorded the participants, saying, 'I voluntarily consented to participation and audio-record' at the start of the interview.

The interviews followed the semi-structured interview topic guides, informed by the World Health Organization (WHO) Health Systems Framework. [36] The questions covered general information about the participants and their locality, prevailing health problems, available healthcare providers and services in the areas, challenges in healthcare provision and access, and

suggestions for improvements (**Appendix 1**). I pilot-tested the topic guides with two healthcare workers and made necessary improvements. Moreover, former interview sessions informed the later ones to modify the flow, contents, and wording of interviews. All interviews were conducted in Burmese to avoid translation requirements, excluding non-Burmese-speaking individuals. I conducted 32 interviews with 32 participants between 11 November 2023 and 8 February 2024, including an interview unexpectedly joined by two eligible participants and a participant interviewed in two divided sessions because of scheduling conflicts. The interview durations ranged from 25 minutes to three hours, with an average duration of 1.5 hours, which included interruptions imposed by faulty internet. Although data saturation was not the determining factor to stop data collection, all completed interviews provided a saturated dataset, particularly for the Southern Sagaing Region. I, TT, and two other transcribers (kept anonymous for safety), Burmese-speaking medical doctors experienced in public health, transcribed the interview audio records verbatim in Burmese. I offered 13 participants to review the transcripts for content accuracy, adequate de-identification, and sensitive information they wished to remove from the analysis. Only two accepted the offer and reviewed and revised the transcripts. I could not offer the remaining 19 participants for the review because of logistical constraints in the conflict settings.

Analysis

I analyzed verbatim transcripts in the original language (Burmese). My thematic analysis used a deductive, followed by an inductive, approach, guided by the steps outlined by Miles, Huberman, and Saldaña. [37] To ensure the reliability and quality of the analysis, I and TT independently coded the data. Discrepancies were resolved weekly through discussion and consensus. First, we

developed a preliminary coding frame based on the research questions, theoretical constructs of the WHO Health Systems Framework, [36] interview questions, and our preformed knowledge about the health systems and ongoing conflicts in Myanmar and Sagaing Region (the deductive component of the analysis). We used the preliminary coding frame as a flexible roadmap and general guidance of the coding process. We updated it throughout the analysis based on the observed data, incorporating emerging themes (the inductive component of the analysis). The analysis process included carefully reading and re-reading the transcripts to gain familiarity with the data and a deep understanding of the participants' experiences and perspectives, assigning data segments in the transcripts to existing or new codes, and summarizing them into meaningful constructs, categories, and themes. We used NVivo 14 to assist in the process. I presented the synthesized preliminary findings to eight accessible study participants to validate whether our interpretations and conclusions were meaningful and reasonable in the context of the Sagaing Region. [38] Additional information on methods is provided in **Appendix 2**. This report followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) (**Appendix 3**). [39]

Ethics approval

The study protocol was approved by the Ethical Review Committee of the Ministry of Health, National Unity Government, the Republic of the Union of Myanmar (Approval Number: Ethics/NUG-MOH/2023/06, Date: October 28, 2023), and University of Washington Human Subjects Division (IRB ID: STUDY00018133, Date: June 7, 2023). All methods and procedures were performed according to the relevant guidelines and regulations set by those institutions. See **Appendix 2** for detailed information on ethical considerations.

RESULTS

I found that the turmoil in Sagaing Region, post-coup, has sparked many health crises, exacerbating existing issues and giving rise to new challenges. The healthcare landscapes have changed in urban and rural areas, particularly with the rise of new anti-junta healthcare providers in resistance-controlled rural areas. Challenges in healthcare provision and access stemmed from safety concerns, travel restrictions, and resource limitations.

Emergence of new health problems and exacerbation of existing ones in the region

Key health concerns in the region included conflict-related injuries and mental health problems as new problems and infectious and chronic diseases as exacerbated existing problems.

Conflict-related injuries

Despite the lack of armed conflicts pre-coup, conflict-related injuries have swiftly emerged and escalated as a primary concern in the region, particularly afflicting rural areas where battles between the junta and resistance forces were frequent. These injuries ranged from gunshot wounds to blast injuries from explosives and landmines, often resulting in deaths. They mainly presented as emergencies, requiring immediate surgical interventions and extensive rehabilitation. While predominantly affecting armed personnel, civilians endured collateral damage, especially landmine incidents during farming or traveling. Additionally, non-intentional injuries, such as road accidents, were exacerbated by population movement amidst hostilities.

> *"The village was attacked* (by the junta military). *Soon, the injured patients came to us. The junta didn't spare the civilians, who had just fled away. […] A*

(resistance force) *soldier brought a child in his arms, drenched in blood. We were very close to the village under attack, so we moved to the north. We brought the child with us. The kid died on the way from a chest injury."* (LR22)

"They are farmers, so they were usually hit (by landmines) *when they went to their farms, moved their cattle, or traveled from one village to another. […] As far as I remember, there have been 20 to 30 such accidents."* (CR27)

Mental health concerns

Additionally, prolonged conflict, economic hardship, chronic stress, and loss of safety, property, and loved ones boosted mental health challenges, including anxiety, depression, and post-traumatic stress disorder. Increased occurrence of interpersonal conflicts, domestic violence, and suicides was also noted. Coupled with social isolation caused by restricted travel and lack of entertainment opportunities, some resorted to heavy drinking and smoking.

"Regarding mental health, first, we became isolated (in the resistance areas). *We can't travel freely. Moving from one township to another is not easy. Next, the economy has declined. So, people have lost their patience and are mentally traumatized. […] Domestic violence has become common."* (LR23)

Infectious diseases

Furthermore, previously controlled infectious diseases were now trending up again. Notably, tuberculosis (TB) and HIV cases have surged, exacerbated by deteriorating disease surveillance

and control efforts and limited healthcare access. While COVID-19-related lung damage, poverty, malnutrition, uncontrolled diabetes, and overcrowding in displaced populations were fueling TB transmission, HIV prevention interventions such as condom distribution and needle replacement for injection drug users were interrupted. Treatment interruptions could foster TB and HIV drug resistance while its detection and control efforts were unavailable. Although the region was previously malaria-non-endemic, malaria cases have risen because of population displacement, while access to diagnostic tools, antimalarials, and insecticide-treated nets was limited. Moreover, regionwide disruptions in the Expanded Program of Immunization (EPI) have led to increased spotting of measles, mumps, diphtheria, pertussis, and childhood TB. Additionally, widespread transmission of other infections, such as seasonal flu, acute respiratory infection, and conjunctivitis, added to the burden.

> *"Prevalence of HIV and TB are very high. For a developing country, it was also high before. But now it is higher."* (SR16)

> *"What we still can't do is disease prevention. It's been almost three years since the Universal Child Immunization* (a former name of EPI) *has completely stopped. I am worried about potential outbreaks of vaccine-preventable diseases in under-five-year-old children. But we still can't do anything about it."* (LR20)

Chronic diseases

Moreover, chronic non-communicable diseases, particularly hypertension and diabetes, were widespread and poorly managed because of disruptions in government-provided free services and limited access to medications.

> *"Non-communicable diseases are abundant. […] They have underlying comorbid diseases, like diabetes, kidney diseases, and heart diseases. Some got exacerbated while running away from the battles and died."* (PR08)

Problems stemming from limited healthcare access

Limited access to proper healthcare in conflict settings exacerbated issues of self-medication and unqualified healthcare providers. Consequently, misuse of medicines such as analgesics, steroids, and antibiotics has increased, raising concerns about drug side effects and antibiotic resistance. In addition, travel restrictions created significant challenges for health emergencies such as acute appendicitis, snakebites, and childbirth, especially during curfew hours. Moreover, poor health literacy complicated the above health issues, significantly hindering disease prevention behaviors, medication adherence, and access to care.

> *"In this area, there are unlicensed healthcare providers. Because of the healthcare needs in the area and because there are no other healthcare providers, people use them. There are more unlicensed providers than before. Rural people have travel restrictions and receive treatment from these providers."* (PR08)

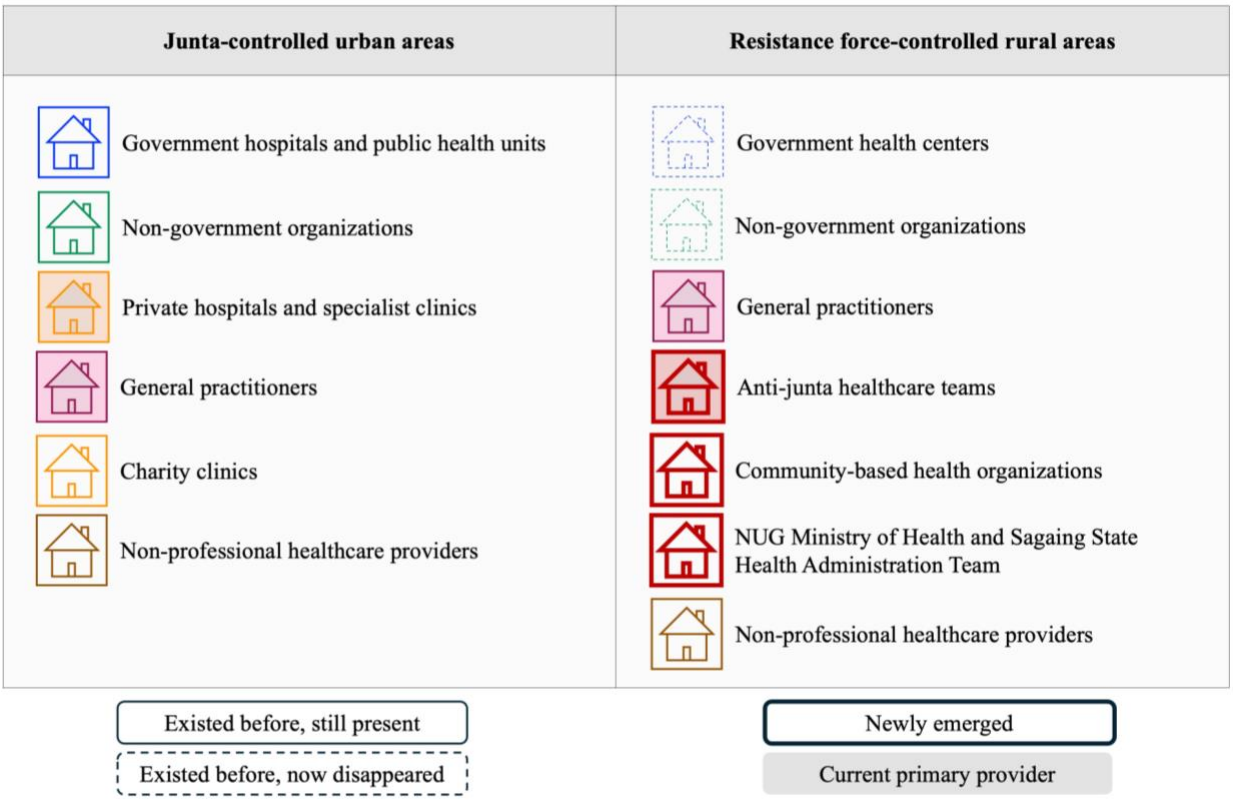
> *"There was a childbirth that occurred while we were running away from the battle. {Laughter} […] We, at times, stopped on the way as her blood was dripping down. She gave birth to the baby at the third stop. {Laughter} […] We brought her in a bullock cart. Where the bullock cart couldn't go, we used a motorcycle. Streams were on the way, and we all had to walk to cross them. We moved past the farms, the pigeon pea farms, with the guns shooting in the background. {Laughter} At first, she couldn't walk because of the labor pain, and she was also so scared. We had to push the motorcycle where we couldn't ride it."* (PR02)

Newly emerged resistance healthcare systems in the region

Post-military coup healthcare landscapes in the region and healthcare gaps in rural areas

The healthcare landscapes in the region have significantly changed since the coup, with the availability and functionality of providers and services determined by whether the junta or resistance forces are ruling the area. This study identified four distinct healthcare landscapes in the region: junta-controlled urban areas and resistance force-controlled rural areas of the Southern Sagaing Region, the SNA-controlled Northern Sagaing Region, and the Naga Self-administration Zone. In areas not entirely controlled by the junta or resistance forces, healthcare providers and services varied. **Figure 3** displays the first two which this study explored deeply.

Figure 3. Two healthcare landscapes of Sagaing Region after the 2021 military coup



Government health facilities, which were primary healthcare providers before the coup and are now taken over by the regime, could function only in urban areas. Most healthcare staff in rural Sagaing Region, like other government staff nationwide, participated in CDM and stopped working under the regime's control. Consequently, almost all government healthcare centers in rural areas, including station health units, rural health centers, and sub-rural health centers, stopped functioning, together with the stoppage of vital healthcare programs provided through these faculties, such as weekly antenatal and elderly clinics, EPI, TB care, and seasonal vector-borne disease control. Likewise, NGO-provided services have survived only in urban areas; rural services were now depleted because the junta prevented their activities in resistance areas, and people lost trust in NGOs controlled by the junta. Even in urban areas, the capacity of

government-provided healthcare has significantly diminished in both clinical and public health services. Consequently, for-profit private hospitals, private GPs, and NGOs have become the primary sources of healthcare in urban areas. The created healthcare gaps in rural areas were later filled by the newly emerged resistance healthcare systems, which will be expanded in later sections. Private GPs also played a key role in rural areas; however, their capacities differed from those of urban GPs. Moreover, non-professional healthcare providers existed as a first point of seeking help for some communities in both urban and rural areas.

> *"Currently, two parallel health systems are running. In urban areas such as big towns like Monywa, Shwebo, Kale, Khin-U, and Taze, the health systems under the junta are still running. But the regime's health systems can run only in towns; they cannot reach, say, beyond a mile from the town outskirts. Beyond that, their systems have completely stopped functioning. They cannot run healthcare in the villages. That's one system. Then, as the regime's health system cannot cover the rural areas, healthcare gaps appeared for the rural people. Then, a parallel health system appeared for the rural population."* (MR11)

Findings on the changed healthcare dynamics in the junta-controlled urban areas and the Northern Sagaing Region are provided in **Appendix 4.**

Emergence of new healthcare systems in rural areas

Although CDM healthcare workers in rural areas stopped working at their former workstations, some stayed in or around their workstation villages. On the other hand, some CDM staff from

other urban or rural health centers fled to rural areas (some villages are their hometowns) because of the junta's intensive crackdown and arrest of CDM staff. Necessitated by healthcare gaps created by the stoppage of rural health centers, the most severe post-coup COVID-19 third wave, and the rise of armed conflicts, the CDM staff started providing healthcare to the local communities wherever they stayed or relocated. Although most began as individual providers, some later teamed up with other healthcare workers in the locality to meet the increasing demand when the armed conflict became widespread. They provided essential healthcare at makeshift mobile clinics in communal places such as monasteries. Later, when the resistance forces gained better control of some rural territories, these teams settled in such areas and finally evolved into various forms of proper healthcare providers.

> *"I am a CDM health worker. I participated in CDM form [Township X] since the coup. I participated in protests. As I led the protests of CDM staff and the junta later searched and arrested protest leaders, I moved to rural areas. There, I provided healthcare to the people. […] We couldn't do much at first, but we gradually upgraded. […] Now, I am running a hospital."* (LR21)

> *"After the conflicts started, I didn't want to serve* (the regime) *and returned to my native village. […] I started outpatient care. Then, I found difficulties for patients requiring hospitalization and started thinking of a place to treat such patients. To fulfill the need, I reached out to my junior colleagues, 'Sayamas'* (possibly referring to nurses or midwives), *and former staff from the station hospital of this*

> *area, and gradually built up a hospital setting. We did that because the situation required us."* (LR23)

These teams can be in the form of hospitals with both outpatient and inpatient facilities, settled or mobile clinics with primarily outpatient facilities, or networks of healthcare workers scattered in villages. Some teams even had operating theaters built from locally available materials, often with community support. Some mobile teams lacked permanent infrastructure. Some hospital-based teams were comparable with a before-coup station hospital, and some network-based teams were comparable with a before-coup system of rural and sub-rural health centers. The number of hospital-based teams has recently increased. Professional CDM staff, such as doctors, nurses, and basic public health staff, led the teams. Sometimes, the teams included a specialist doctor such as a surgeon, orthopedist, obstetrician-gynecologist, or pediatrician, although they cared for all patients. Additionally, the teams included CDM medical and nursing students (who left their universities under the regime), non-former-government-staff health professionals from within or outside the areas, and trained health volunteers. Trained health volunteers comprised most of the workforce and were vital to the teams. Their services usually covered multiple surrounding villages, adapting to the local geography and junta military bases in the area. Neighboring teams collaborated closely, forming networks to share expertise and resources. Specialist doctors frequently visited neighboring teams to offer specialized care. Typically, the local teams charged patients for medications to sustain their funding; however, there were no additional fees. Some did not charge anything; however, they asked for voluntary donations. However, all teams treated poor patients, healthcare workers, PDFs, and their families for free. Inpatient teams often provided free meals for patients and their attendants, who typically assisted

in the kitchen. Local communities, eager for improved access to healthcare in remote areas, warmly embraced the emerging healthcare teams.

> *"Most team members are healthcare workers physically present in the areas. They are from various backgrounds. Some are natives of the area, worked in the area, and participated in CDM in the area. […] Some are not from Sagaing Region but participated in CDM from other places, like Mandalay or Rakhine Regions. […] Some are specialist doctors who participated in CDM from their respective departments. […] Some are not CDM staff but just doctors* (outside government service). *But when they learned the healthcare needs and difficulties, they teamed up with their friends and came here."* (MR11)

> *"As more CDM staff didn't come to join us, also with the decision of the district office, we trained the health volunteers. From [Date] to [Date], we provided 45-day training and trained the first batch, Batch 1, of 14 volunteers. Then, we deployed them in upper and lower parts across [Township X].*" (PR05)

> *"To say frankly, as we* (the local healthcare teams) *can do medical touring and open clinics wherever we can, people are {silence} pleased.* (We could see it in) *the people's looks and smiles. How should I describe it? In every village we went to, people said thanks, a lot of thanks, to all these healthcare workers because we came there for healthcare at such a time. I have heard and seen this myself."* (LR25)

In addition to the new healthcare teams, new community-based health organizations (CBHOs) have arisen in Sagaing Region, where Chindwin Medical and Humanitarian Network (CMHN) was the most prominent in the region. CMHN started as a self-help network of CDM staff in the region and evolved into a formal organization providing health and humanitarian services. When NUG MOH deployed SHAT in Sagaing Region, it collaborated with CMHN to organize, coordinate, and support the new local healthcare teams. They facilitated public health programs, sought funding from local and international donors, assisted commodity procurement, and provided administrative, technical, and financial assistance to the local teams. Sagaing SHAT formed Township or District Health Committees in 27 out of 37 townships, and many of them were reportedly functioning. The new local healthcare teams accepted the leadership of NUG-MOH, Sagaing SHAT, and CMHN; however, some study participants viewed the relationship more as a partnership rather than a strict chain of command. NUG has also designated certain bases for treating injured PDF members, which some participants called *"the MOD Hospital"* (NUG's Ministry of Defense Hospital).

> *"CMHN is an organization that emerged out of the local needs. The NGOs, which ran on the ground before, have left Sagaing Region* (rural areas). *They might not have left it on paper. But their effectiveness on the ground has significantly decreased. So, we decided to fill their gap and take responsibility. The situation also required us to take responsibility. […] We figured out how to implement healthcare in collaboration with the affiliated healthcare providers on the ground, what they needed, and how we could help them."* (MR11)

> *"The hospital in the township west to us* (the MOD Hospital) *can do much. It has a surgeon. It is superior to our hospital. We may call it the regional-level hospital of CMHN. […] On the other hand, they must serve more military patients* (of PDFs)*."* (LR23)

Additionally, NUG's non-health sectors, namely the Public Administration Body (PAB) and the People Security Force (PSF), and self-help groups in the community, played significant roles in the new resistance health systems. They provided vital administrative and security backing for healthcare, assisted fundraising, and facilitated commodity procurement and transportation. They provided financial assistance and arranged transportation for poor patients. Additionally, NUG's Ministry of Humanitarian Affairs and Disaster Management offered financial aid to poor patients.

> *"When the healthcare board* (of the village) *told us they were medical touring and needed security backup, we arranged it. We also helped them carry their bags of medicines and equipment to whichever village they went to. We placed guards for their security when they arrived at the village. Although we are supposed just to provide security to healthcare, we think we also have our social duty. We always think their duty is also ours, and we helped them with their healthcare activities within our capacity."* (LR25)

Health services by the new providers

The newly emerged local healthcare teams in rural areas offered comprehensive outpatient services, including antenatal care and chronic disease management. Patients needing inpatient care were admitted if the team had inpatient facilities, observed temporarily at outpatient centers or other designated places, or referred to other networked teams or urban providers. They provided first aid and primary care for injuries, including damage control surgeries and amputations. Definitive surgery for severe cases depended on available expertise or referrals. PDF members could also go to *the MOD Hospital* if accessible. Surgical treatments ranged from emergencies like appendicitis to elective procedures like hernia repair. They handled childbirth, including Cesarean sections and other perinatal care. Surgical procedures mostly used local or spinal anesthesia; resources of general anesthesia were limited. Only basic disease investigation services were available locally. Despite occasional complications, outcomes were generally good. Most operated around the clock; some had restricted hours due to security concerns. Many also conducted mobile clinics for displaced populations in other villages.

> *"We open our OPD* (outpatient clinic) *27/7. We also accept inpatients. As inpatients, we have labor cases, Cesarean section cases, snakebites, asthma, ARI* (acute respiratory tract infection)*, and other general cases. We also treat injured* (PDF) *soldiers. We can give emergency lifesaving treatment, including up to amputation. We admit wound cases and blast injuries here. But we cannot do laparotomy."* (LR21)

> *"Arms and legs are injured, so the orthopedist leads the surgeries. For abdominal injuries, I led the surgeries. I am an OG* (obstetrician-gynecologist), *but I try my best for abdominal surgeries. We have battle injuries. As an OG, we have labor cases. We also treat metabolic diseases and geriatric diseases, like diabetic foot. We also admit ARI and GE* (gastroenteritis). *Strangely, there was an 8-year-old boy and another 8-year-old girl, both coming with appendicitis […]. We performed laparotomy."* (LR20)

Despite the availability of clinical care, the public health efforts of the new teams remained limited. With assistance from CMHN and NUG-MOH, many teams have restarted TB control programs; however, limited diagnostic facilities and anti-TB medication availability hampered care, particularly for MDR-TB. Participants reported more than three episodes of childhood immunizations in some selected villages, co-funded by the community and the local healthcare teams or funded as pilot projects by CMHN and NUG-MOH; however, sustainability was uncertain due to limited funding or vaccine. Additionally, some teams have organized regular antenatal and elderly clinics, seasonal dengue control activities, and school health services in local makeshift schools, focusing on malnutrition screening, providing supplements, and health education.

> *"We provide health education, AN* (antenatal) *care, and occasionally, body weight monitoring of children. We specifically provide elderly care because NCD* (non-communicable diseases) *like diabetes and hypertension are common among*

> *people. We provide these services when we go on field visits. If there are donors, we also give immunization* (to the children)*."* (PR03)

For locally unavailable secondary and tertiary care, including invasive investigations and imaging, some TB and HIV care, and childhood immunization, the local teams referred patients to urban providers, which could be private facilities, NGOs, government hospitals, or public health units.

> *"But what is still difficult for them* (new local healthcare teams) *is specialty care, which is not always fixed at their facility. They can provide primary care, but the tertiary care they need is still rare."* (SR17)

> *"For other things* (locally unavailable services)*, we still must refer patients to hospitals and clinics in town until now. If the patients need blood tests or other laboratory investigations, we tell them to go to town and have the blood tests, sputum tests, etc."* (MR11)

Additional rural healthcare providers affiliated with or independent of the new resistance healthcare systems

Although some CDM healthcare workers in the villages joined the new local healthcare teams as core members, some practiced healthcare individually as GPs. Some GPs were affiliated with the new teams; however, some operated independently. Like in urban areas, GPs, if available, were the first point of seeking care for rural people. However, rural GPs were run mainly by basic

health staff such as midwives; doctor-provided GPs were rare in rural areas. In addition to GPs, despite the disappearance of overt NGO activities, some NGO-trained community-based volunteers continue delivering their services in their villages or displaced locations with the remote support of the organizations. Furthermore, non-professional healthcare providers, self-medication practices, and informal pharmacy prescriptions are more prevalent in rural than urban areas.

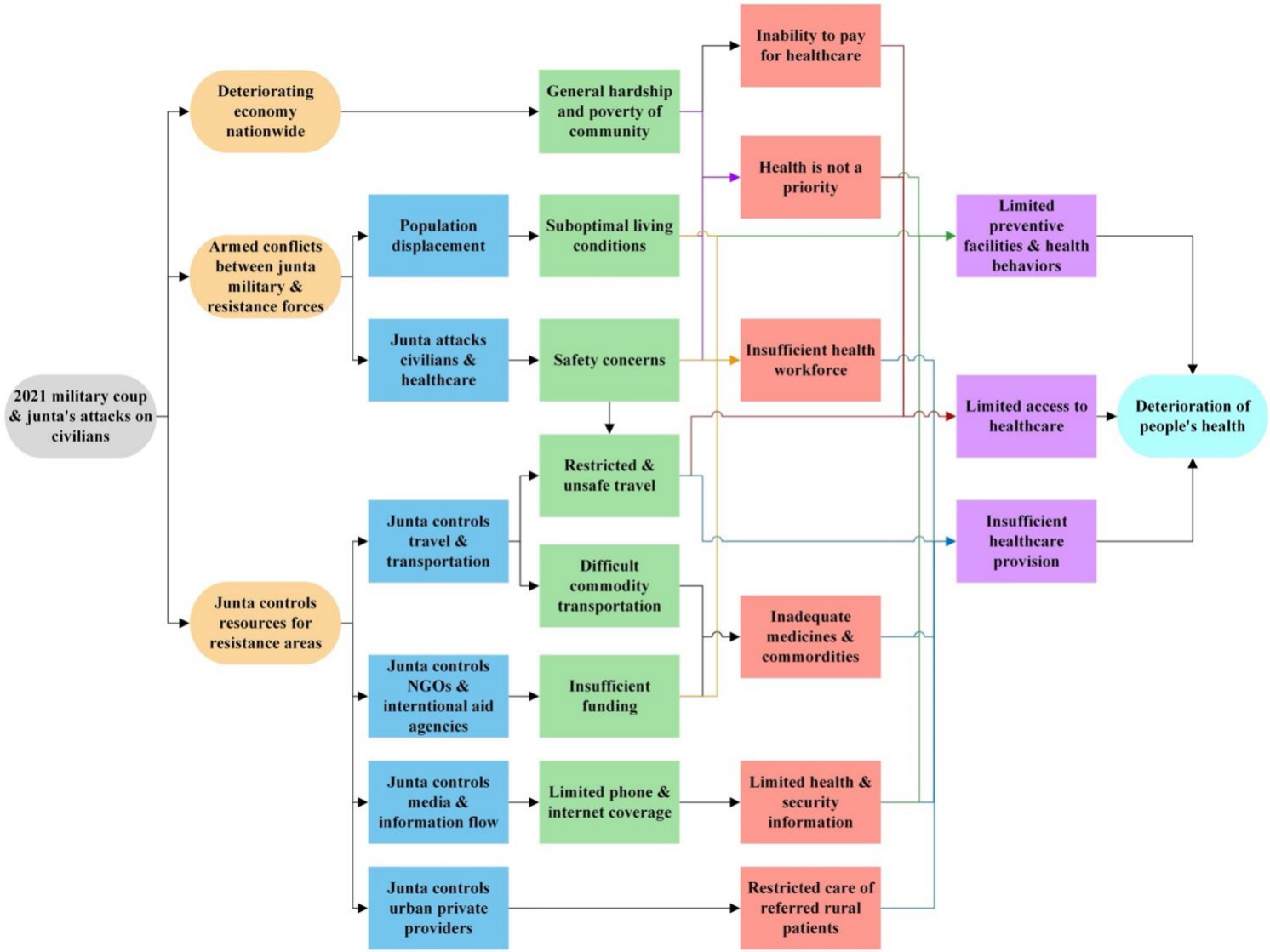
> *"I am not working with an organization or group but providing healthcare on my own. I have connections with one or two of my friends* (providing healthcare), *asking help from each other."* (PR08)

> *"So,* (clinic-based) *GPs later moved to towns. But another kind of GP who tours the villages has appeared. However, the providers are diverse. They can be doctors, but they are few. They can be HA* (Health Assistants), *midwives, and nurses. They can also be unlicensed providers. They* (GPs) *are getting more roles* (in the villages)*."* (MR11)

Challenges in healthcare provision and access in the resistance areas

The most striking challenges encountered by the anti-junta healthcare providers and community members in healthcare provision and access included active warfare, attacks on healthcare, safety concerns, travel restrictions, insufficient health workforce, medicines, commodities, and funding, and limited infrastructure and utilities (**Figure 4**).

Figure 4. Challenges in healthcare provision and access in resistance areas of Sagaing Region



Territory dynamics, attacks on healthcare, and safety concerns

While territorial control determined healthcare provision and both the regime and resistance healthcare providers have established services in their controlled territories, territorial control remained volatile. There were frequent battles between the junta and resistance forces to control territories, and territorial shifts were common. This instability forced healthcare workers and patients to flee during junta offensives. Many instances of the junta's targeted attacks on healthcare were also noted. Particularly, junta airstrikes left the communities and resistance healthcare systems vulnerable. During active warfare, healthcare services ceased entirely. Despite evacuation plans by local healthcare teams, infrastructures were often looted or destroyed by junta troops.

> *"The main problems are* (the junta military's) *offensives. We* (the healthcare base) *need to move from place to place now and then. No sooner we are about to get settled here than we have to move there because of the offensives; they destroy everything we leave behind. So, we are always needy and struggling with what we have. We are always in trouble."* (SR18)

> *"I am not worried about terrestrial attacks but afraid of airstrikes. If they come in the air, we must go into the shelter and not come out."* (PR06)

Restricted and unsafe travel

Travel-related challenges were the most significant in healthcare access and delivery for the people in rural resistance areas. Although primary care was usually available locally from the

new local healthcare teams in the areas, safety concerns prevented people from traveling when referred to other rural teams or to towns for locally unavailable services. In addition to the curfew-related limitations, impeding health emergencies at night, junta-manned checkpoints scattered along roads, particularly near towns, posed additional challenges around the clock. These checkpoints demanded identity cards and travel permits, penalizing those without proper travel documentation and arbitrarily arresting individuals, especially those from villages associated with resistance forces, often extorting money for release. PDF members, resistance healthcare team members, and their families found it nearly impossible to pass these barriers. Consequently, such people totally avoided traveling to towns. If necessary, patients traveled to distant rural resistance healthcare teams with better facilities, avoiding junta military bases and checkpoints and sometimes enduring multi-day journeys. In unavoidable town visits, patients preferred private hospitals, while accessing government hospitals often involved selecting facilities from townships other than their own or providing false addresses. Active battles and the risk of landmine accidents further complicated rural travel. These challenges also affected healthcare provider mobility, especially during mobile clinic tours. The presence of junta military bases limited collaboration between local healthcare teams. NGO staff in urban areas similarly faced travel limitations, hindering their ability to reach rural areas for service provision or volunteer supervision.

> *"To go to the nearest hospital, people cannot leave their houses after 6 pm because of the martial law. There is no excuse (by the junta) for health situations. […] There are junta's military checkpoints on the way for the patients* (coming to

town for healthcare). *[…] They check the ID cards. For no reason, they punish people by frog jumping or other nonsense methods."* (PR08)

"I am worried that I need to go to town (for an ultrasonogram of my pregnancy). *[…] Recently, about 10-15 days ago, three ladies from [Village X] went to town for eye care. The* (junta's) *checkpoint soldiers checked their ID cards and learned they were from [Village X], which is known for PDFs. Then, they arrested these three ladies. They haven't released them yet. […] Even if they could, they would never release them easily. They would ask for money, like 5,000,000 or 3,000,000 MMK* (~ 400 or ~ 850 USD, 1 USD = 3500 MMK), *for the release. […] The women couldn't even reach the clinics for their eyes. They didn't do anything* (any resistance activities), but it happened just because their village is known for PDF.*"* (CR29)

"They can't go to [Town A] because there is a military base on the way. So, it is extra work to avoid it and delays everything." (SR18)

"We (NGO staff), *before we go out of town, need to inform and get approval from the regime's* (administration) *departments on which villages we are going to, which medicines we will give the local people, and when we are going. They even require us to report any deviations from the original plan to them. We can only go with their approval letter, which is checked at the town exit checkpoint."* (MR12)

Insufficient health workforce

Healthcare workforce shortages were a pervasive issue across all sectors in Sagaing Region, including the new resistance healthcare systems. Despite the large number of CDM healthcare workers, only a small fraction of them, a speculated 10%, transitioned to the new local healthcare teams, with many opting for independent GP practices or career changes. Some CDM staff provided healthcare in the resistance areas as GPs; however, they needed to operate discreetly to avoid junta scrutiny.

> *"However, not all these workforces* (CDM-affiliated healthcare workers) *are going into the resistance health workforces. Some workforces are not used by any sectors, and their percentage is high. As they participated in CDM, they are no longer in the regime's workforce. However, only a few of them joined the resistance healthcare teams. In 100 CDM doctors, only a small percentage of them are fully engaged in that* (resistance) *health sector."* (SR17)

The new local healthcare teams faced challenges beyond personnel shortages. Healthcare workers were often required to operate beyond their expertise, leading to situations such as an obstetrician-gynecologist treating intestinal obstruction from TB, a pediatrician managing complex adult lupus, and a team of nurses conducting surgery for a perforated abdominal injury. Skill imbalances within teams were prevalent, such as teams having mostly clinical or mostly public health staff, a scarcity of doctors, and a lack of anesthesiologists. Moreover, increasing demand has overburdened the understaffed teams. To cope, teams resorted to training volunteers in first aid, nursing, and other skills. Most trainees were local or displaced youths with at least a

Grade 8 education, but included university students and graduates. CMHN and NUG-MOH provided refresher training for professional healthcare workers, such as snakebite management. Healthcare workers have established online resource-sharing and consultation platforms, such as Emergency Care Group. Some study participants suggested the NUG-MOH should strategically deploy healthcare workers, while some local teams discussed their own strategic deployment. However, safety concerns were an obstacle to attracting more CDM staff to join the local teams in conflict zones. Moreover, healthcare workers in the rural teams were not paid, except for a monthly incentive of 30,000 to 70,000 Myanmar Kyats (~ 9 – 20 USD, 1 USD = ~3,500 MMK) supported by CMHN and NUG-MOH, which were sometimes interrupted.

> *"A limitation in surgery is that we don't have a real anesthesiologist. […] I anesthetized the patients. No anesthesiologists, no physicians, or no pediatricians, and I'm now the jack of all trades. I had been a [Position Level] obstetrician-gynecologist for ten years, caring only for obstetrics and gynecology cases for ten years, not being in touch with other specialty patients for ten years."* (LR20)

> *"We have some medical students* (who participated in CDM and left their universities). *We are continuing their training. […] We also have health volunteers. We have* (also) *given them M&E* (monitoring and evaluation) *and finance training. We have given birth to new workforces. We also provided medic training* (to the volunteers) *in some townships."* (LR24)

> *"It is very difficult to find a doctor to come and provide care in these places voluntarily. Because nobody can guarantee their safety and security in these parts. Next, we still have challenges supporting them* (with salary, etc.). *So, only people* (healthcare workers) *who can sacrifice themselves and leave everything behind can come and remain in such places."* (SR17)

Insufficient commodities for the prevention, diagnosis, and treatment of diseases

The scarcity of diagnostic, treatment, and preventive facilities posed significant challenges for the new local healthcare teams. Only basic lab tests, such as blood grouping and rapid diagnostic tests, were available locally, and only a few teams possessed additional equipment, such as C-arm X-ray machines, ultrasonograms, and electrocardiograms. For more advanced investigations, patients were referred, or samples were sent to urban labs, causing delays. Otherwise, diagnoses were made clinically, sometimes leading to inaccurate treatments. The situation was more challenging for patients who required regular investigations and treatment adjustments. A participant described a case of an RDT-diagnosed HIV-positive PDF member who was unable to go to town for confirmatory tests for safety reasons. Another participant mentioned resorting to expired diagnostic kits.

> *"We don't have lab technicians. We operate many surgeries, so blood transfusion is essential. So, for blood transfusion, we have set up facilities for blood grouping and infection screening of blood donors, such as BCR* (Hepatitis B, Hepatitis C, Retrovirus) *test kits. That's all. We don't even have facilities to measure hemoglobin levels. If we seriously need to know these for some cases, for*

example, for those we need to know serum electrolyte levels for a viper bite patient, we send the blood samples to the nearest town (where the lab services are available). *We call the labs for the results."* (LR20)

"A soldier required his leg amputated, got infection screening before the operation, and was found to be retrovirus-positive (HIV-positive). *As he is a PDF member, we cannot refer him anywhere* (for safety reasons). *He couldn't even get an HIV confirmation test; he tested positive by the test kit* (rapid-diagnostic test kit). *Receiving ART is out of option; we can only sit back and wait."* (LR24)

Participants highlighted the scarcity of essential medicines like anti-TB and anti-retroviral drugs, primaquine for malaria eradication, and medications for hypertension and diabetes. The growing patient load exacerbated these shortages. One participant illustrated the challenge of insufficient anti-snake venom when multiple snakebite cases coincided. Quality concerns were also raised after purchasing ineffective anti-snake venoms from available sources. Additionally, interruptions in the supply of preventive materials like condoms and mosquito nets are also prevalent.

"To transport the anti-TB medicines takes 2-3 months. We need to be very patient. The patients also need to wait with their disease conditions. The anti-TBs we have are fixed-dose combination pills, and when we calculate the required doses, the pills are not fit for some patients. […] Still, that's for regular TB patients. If the TB patients have special conditions like liver problems, then we

don't have any (uncombined) *individual-molecule pills. And we don't have any medicines for childhood TB regime. For childhood TB, we must refer them to the big towns, like district or regional levels. But not every child can go."* (LR24)

"We reserve anti-snake venom for three or four patients. But what if three or four patients come on the same day? There was a day when two snakebite patients came first—it was still fine, and we gave them the anti-snake venom; we had two sets left, although it was insecure with just two sets. That evening, we got one more snakebite case. So, the rest was not adequate anymore (if more cases would come). *We need more anti-snake venom. Even if we order more anti-snake venom, they take time to reach us."* (PR06)

Participants attributed inadequate commodities to the junta's control over medicine and supply distribution in conflict areas. Junta's regulations restricted transportation, often intercepted at the junta checkpoints, forcing local healthcare teams to find clandestine procurement and delivery routes. Additionally, some essential medicines became scarce and costly in markets, with prices soaring up to 3 times pre-coup levels, also exacerbated by increased transportation expenses. The junta's Ministry of Health controlled TB, HIV, and malaria medications, limiting the distribution of these supplies to the resistance areas. While cross-border transportation via India seems to solve the commodity shortages, logistical challenges and India's border policy hinder feasibility, compounded by mountainous terrain and unclear territorial governance by the junta or resistance forces.

> *"We are getting short of medicines and medical supplies. If we ordered them from Yangon or Mandalay* (the biggest cities of Myanmar)*, there could be transportation blockages because of the weather, rain, or active battles on the way. Sometimes, the junta's checkpoints also loot the supplies. Next, medicines and supplies have become expensive. Some supplies are not available in the market and can be very difficult to get."* (PR10)

> *"The junta has blocked the Monywa-Mandalay Road. They* (the junta's police or soldiers) *check* (the trucks and cars) *at every gate* (checkpoints)*, and if they find medicines, they take them over. In such a situation where the junta intentionally restricts everything, things are more difficult for us."* (MR11)

Inadequate funding

Participants unanimously cited inadequate funding as a pressing issue for the new local healthcare teams. Typically, funding relied on local donations from community members, national donor networks, and support from Myanmar diasporas abroad. However, some expressed concerns that these sources were exhausted. While some teams received partial funding from patient contributions, many preferred not to charge patients if adequately funded. CMHN and NUG-MOH have received some funds from international donors, yet these funds fell short of meeting rural areas' escalating healthcare needs. Additionally, the junta restricted aid flow into conflict zones, normally sourced from international donors and UN agencies flown through health and humanitarian service NGOs. Some participants complained that the junta had

seized all incoming international aid, depriving needy communities of assistance. Moreover, the junta's grip on the banking system hindered financial transactions for the local healthcare teams.

> *"In my opinion, the main funding sources for now are donations. The donations can come from within or outside of the country. Foreign donations can come from two sources, Myanmar diasporas living abroad and humanitarian aid organizations."* (SR17)

> *"I sometimes wonder why UN organizations do not recognize people in these areas as human beings. Are we nationless people? Why can't we get the things that other people are readily getting? Why don't they want to support these people? Is it because they couldn't find any way to support us? Why don't they use alternative channels? I have many thoughts. As I regained communication access* (internet) only recently, *my views may be wrong. Maybe I didn't know widely whom they were connecting and supporting. But in my township, people are not receiving anything from any UNICEF or any NGOs. Nobody is supporting anti-snake venom. We need to buy and gather them ourselves. We are using stocks from NUG-MOH and CMHN and those we can buy from the common drugstores. We are having issues with important problems such as snakebite, immunization, TB, and HIV. Nobody and no organization are taking responsibility to support these in my township as far as I know."* (LR23)

> *"Organizations like the World Health Organization and neighboring countries like ASEAN countries, China, and India, in this situation, should support local*

> *CBOs and CSOs. Even if they have difficulties directly working with NUG, they should engage with the CBOs, CSOs, and other organizations providing* support (to the local communities). *This is global and humanitarian ethics, so they should follow it."* (PO26)

Limited infrastructure and utilities

With travel restrictions in place, access to telecommunications, particularly mobile and internet connectivity, has become essential in Sagaing Region. However, the junta has shut down both services, particularly in rural areas. It severely hampered communication for healthcare access, patient referrals, and safety; coordination among healthcare providers; and data recording and reporting. A participant noted that their services went unnoticed by CNHM and NUG-MOH and that they did not receive support until they regained internet access. This lack of connectivity has effectively eliminated telehealth options in rural areas. In rural areas lacking mobile coverage, handheld radio transceivers have become the primary mode of communication. While a few places had satellite internet, its coverage remained limited, requiring shared access at common locations.

> *"The most difficult part is communication. [..] For example, when the junta's military plans an offensive in an area, they reduce the mobile phone frequencies, so the mobile phone signal is lost in the area. In such times, we don't have any ways of communication."* (MR11)

> *"Lack of internet access is a big problem for healthcare. We sometimes need to learn something we don't know* (about patient management), *so lack of internet access affects this. We didn't have any internet access in 2022. We get it back in 2023. But we need to find ways to get electricity* (to use the internet), *so internet access is also interrupted."* (PR01)

Although a few rural areas still have electricity, many reported losing it post-coup, disrupting essential healthcare services such as surgeries and newborn phototherapy. Teams have resorted to solar grids and generators despite the high cost of gasoline. While clean water access was not universally cited as problematic, many rural teams faced challenges, with some resorting to piping water from remote sources. However, one team reported reliance on river water for all purposes, underscoring water quality concerns.

> *"In the same year of the coup* (2021), *they shut down electricity in our area. I think we were the first to lose electricity. Water access is also difficult for us. Difficulty with electricity. Difficulty with water. The coup occurred in February. We lost electricity in November or December. We have totally lost it. We have also lost phone and internet access since then."* (PR03)

> *"We need electricity for phototherapy of newborn babies, nebulizer machines, and oxygen machines for emergencies. We can use batteries and inverters for these. But we cannot always use the generators because of the gasoline costs."* (PR01)

Limitations to health information

Participants also pointed out that proper health information systems need to develop with the new resistance healthcare systems in rural areas. CMHN and NUG-MOH have started initiatives to rebuild the systems, including all affiliated local healthcare providers. However, limited facilities, competing priorities, restricted phone and internet access, limited capacities with health information management, and population displacement were hindering their efforts. The local teams on the ground recorded health information using paper documents; however, the types and systems of recorded information varied among the teams. Moreover, they sometimes must travel to places with internet access to send the aggregate data to CMHN or NUG-MOH. Some participants pointed out that the need for proper health information systems could limit the availability of funding and donor reporting.

> *"In Sagaing Region, the data system has fragmented after the coup. […] Now, we are reconstructing the system. We are recording the cases and reporting the data. […] Before now, there was a time when we couldn't care about reports at all. Now, we have monthly data, and we can now do some monitoring and evaluation."* (MR11)

> *"People from some places might say no to asking for data now that people are struggling for survival."* (LR24)

"For example, the internet in [Township X] has been cut out since a year ago. So, if the officer himself is not motivated enough to report, we cannot do anything." (MR11)

"It is very difficult to send the report on time because of limited internet access. Earlier, we didn't have internet access, and we climbed up the trees where we could use the mobile phone signal and send short text messages of total patient numbers in the given format. It is getting better now. Although we still don't have internet access in our place, we can go to the roads where we can use the internet and send the reports dutifully." (LR22)

DISCUSSION

Principal findings

This study interviewed anti-junta healthcare providers and community members to examine their experiences and perspectives regarding the prevalent health issues within the conflict-affected settings of Sagaing Region. It sought to understand how these providers have pioneered alternative care systems in the region and the obstacles the providers and community members face in delivering and accessing healthcare. The findings revealed a sharp decline in overall health conditions, including the emergence of conflict-related injuries and mental health issues, along with disrupted prevention and control interventions for both communicable and non-communicable diseases. While private hospitals, GPs, junta-run government health facilities, and NGOs served urban areas, rural areas depended on newly emerged local healthcare teams, CBHOs, NUG-MOH, and GPs, facing significant difficulties in accessing secondary and tertiary

care alongside disruptions in public health interventions. Insufficient healthcare workforce, commodities, funding, and health information further hindered healthcare delivery in rural areas, compounded by restrictions on travel and telecommunication, attacks on healthcare, and safety concerns. Rural populations bore a disproportionate burden of the turmoil, underscoring the urgent need for concerted efforts to ensure equitable access to healthcare in the region.

Health crisis in the region

Like other armed conflict settings worldwide, [40–43] healthcare provision and health status in Sagaing Region have significantly deteriorated since the coup, resulting in worse health outcomes. Conflict-related injuries are now prevalent in once-peaceful regions, and diseases such as TB and HIV have resurfaced. Malaria became prevalent in the previously non-endemic region, with many cases going undiagnosed or untreated due to limited resources and restricted access. Despite sporadic occurrences of vaccine-preventable childhood diseases, the EPI fails to reach the children. Shortages of drugs and medical supplies for chronic conditions like hypertension and diabetes result in uncontrolled diseases and complications. As communities focus on survival during hardships, healthcare becomes a secondary concern, risking worsening health outcomes. These issues are not unique to Sagaing Region but are mirrored nationwide. [12,21,44–46] Failure to take timely actions can exacerbate the situation, undermining previous achievements and hindering national and broader regional disease elimination and sustainable development goals.

Altered landscapes of healthcare and the prominent role of new resistance healthcare systems

With the lack of people's trust in government-provided healthcare that has fallen into the regime, healthcare utilization has dramatically shifted to private providers in urban areas. At the same time, the newly emerged anti-junta healthcare systems have become the only available major providers for the conflict-affected rural populations, who cannot reach urban providers because of travel restrictions. This systematic shift in healthcare delivery was also observed in other areas controlled by revolutionary forces nationwide, with the emergence of new healthcare providers in conflict zones, [14,47–49] the establishment of new CBHOs, [50] and the development of new or the strengthening of existing EHOs, [51] which collaborate. The local communities have greatly embraced these new providers, who have effectively bridged the service gap in conflict settings. Moreover, nationwide stakeholders have also acknowledged the emergence of decentralized healthcare services alongside the intensification of the political movement. Despite numerous challenges and resource limitations, this approach seems beneficial for conflict-affected populations.

Territorial offensives and politicization of healthcare by the junta

Most healthcare challenges in the region stem from territorial conflicts between the junta and resistance forces, posing safety risks for healthcare workers and patients, compounded by the junta's control over transportation, communication, and resources. While both the junta and newly established local healthcare teams have attempted to develop healthcare systems in their controlled areas, the instability of control status often leads to frequent displacement of both people and healthcare facilities. Moreover, the junta's targeted attacks on healthcare .

Furthermore, in areas not fully controlled by any faction, healthcare availability is unpredictable and further complicated by trust issues.

The junta's aggressive tactics to control territory have severely undermined healthcare delivery. It has monopolized crucial resources, restricted travel and transportation, confiscated medical supplies, attacked healthcare providers, imposed regulations hindering treatment in private and public healthcare facilities, and mandated registration of NGOs, limiting their activities and financial support. This has resulted in international aid agencies struggling to support local healthcare actors in non-junta-controlled areas while the junta seizes incoming international support meant for healthcare, worsening the healthcare crisis.

Shortage of health workforce

While many civil service healthcare staff participated in CDM in Sagaing Region and nationwide, many CDM staff were not engaged with any parties (regime or resistance) due to safety concerns. Not only has the junta criminalized the CDM staff, but the resistance factions also penalized those non-CDM staff or CDM staff returning to their former positions. [52–54] Despite discretely practicing healthcare at home or private facilities, fear of arrest looms over CDM staff. My CDM staff colleagues also reported discrimination and oppression of CDM staff at some private facilities where they were working. Joining new local healthcare teams in resistance areas may seem appealing; however, safety concerns, financial insecurity, and diminished living standards prevent them from joining the teams. Ensuring the safety of healthcare workers at least could incentivize them to join local teams. While local healthcare teams have expanded their workforce by training and integrating volunteers, inadequate training

and a lack of accreditation can lead to unauthorized healthcare provision and compounding existing issues.

Fragmented health information

Although most participants did not present it as a priority problem, they proved that the health information system in the region has broken down, especially in the rural areas. Health information recording and reporting are happening in the areas; however, they are not well-organized or not a priority. The lack of proper health information systems, an essential component monitoring and driving all other health system components, [55] will hinder the revitalizing and strengthening of health systems in the region. Moreover, the lack of health information would limit the suitability of health programs and funding availability.

Addressing healthcare challenges in resistance areas of Sagaing Region: Gaps and recommendations

To address the urgent healthcare challenges in resistance areas of Sagaing Region, I pinpoint critical gaps and propose targeted solutions for improvement.

(1) Most importantly, the safety of healthcare workers, facilities, and supplies is critical for an effective and efficient healthcare provision in the region. Timely actions by international stakeholders such as the UN Security Council to stop the junta's attacks on healthcare and civilians are paramount. Moreover, designating healthcare areas and implementing protective regulations in these areas could be a temporary solution. Healthcare provisions by impartial local

or international agencies, such as NGOs or UN agencies unaffiliated with any factions, can also work for areas uncontrolled by the junta or resistance forces.

(2) Rural communities lack comprehensive secondary and tertiary care that provides investigation-based diagnosis and monitored accurate treatment by a multidisciplinary team. In addition, the need for advanced care increases with intensified conflicts, and going to town is impossible for some rural populations. Before travel restrictions are lifted, upgrading the new rural healthcare teams into proper, at least secondary, care facilities by supporting them with resources and skilled personnel offers a pragmatic solution.

(3) Organized public health programs covering vital areas like TB, HIV, malaria, chronic diseases, antenatal care, and childhood vaccination require reinstatement in rural settings to prevent disease resurgence and the emergence of drug resistance. NGOs and international donors finding innovative ways to collaborate with local healthcare teams trusted by the local community and providing them with technical, financial, and logistic support can bolster the initiatives.

(4) The new local healthcare teams require more professional workforces to provide multidisciplinary care. Initiatives to enhance the safety of healthcare workers and livable salary support can attract skilled personnel to join them. Establishing accredited medical or nursing schools in the resistance areas is another sustainable solution for the health workforce shortage, which is already starting to happen in other resistance areas of the country. [18,56–60]

(5) The new local healthcare teams necessitate greater financial and commodity support to meet escalating healthcare demands amidst heightened conflicts. Direct engagement and support of international aid agencies and development organizations with the new local healthcare teams and CBHOs can circumvent the junta's restraints and ensure timely assistance.

(6) Well-organized integrated health information systems are required for the newly emerged healthcare systems. Sagaing SHAT and CMHN have started initiatives to revive and strengthen these systems. Supporting their efforts, coupled with measures to improve internet accessibility, is imperative for efficient health information system development in the region.

(7) The newly emerged healthcare systems in Sagaing Region require improved governance and strategic leadership. While Sagaing SHAT, MOH, and CMHN have assumed leadership roles and organized healthcare delivery, establishing a regionwide authoritative body and operational protocols, implementing systematic staff deployment policies, and fostering collaboration between relevant stakeholders are crucial steps toward enhancing healthcare governance and service quality.

Strengths and limitations

Strengths

This study represents a pioneering effort in examining the health and healthcare landscape of Sagaing Region, Myanmar, following the coup. By engaging healthcare providers and community members actively operating in the region, the study captures authentic, firsthand

insights into the region's challenges during the study period. These findings extend to other conflict-affected areas in Myanmar despite diverse conflict situations.

Limitations

Firstly, the study's scope was restricted to anti-junta healthcare providers and community members, omitting perspectives from those under junta control. Consequently, experiences and viewpoints from pro-junta counterparts may offer contrasting insights. Additionally, participants from areas experiencing severe armed conflicts or lacking stable internet access were not included due to logistical constraints, potentially underrepresenting the direst situations. Furthermore, specific politically sensitive findings were withheld from this paper to safeguard the safety of healthcare and community stakeholders. However, these insights were discretely shared with relevant parties for necessary actions.

CONCLUSION

The healthcare system in Sagaing Region, Myanmar, has been severely devasted by post-coup conflict situations, leading to significant challenges in healthcare provision and access. The emergence and worsening of various health issues, coupled with limited resources, have created a dire situation, disproportionately affecting the rural populations. Anti-junta healthcare workers and local communities have established alternative care systems to remedy the healthcare gaps in resistance areas. However, travel restrictions, shortages of healthcare workers, essential commodities, and funding, and limited infrastructure and communication impede their efforts. Moreover, the politicization of healthcare and interference by the junta have further hindered effective responses to these challenges. Urgent action is needed to address the healthcare crisis in

Sagaing Region. Failure to address these issues promptly could have devastating consequences for the region's health outcomes and exacerbate the humanitarian crisis. Addressing healthcare in the region should prioritize effective interventions to stop the junta's attacks on healthcare and civilians and find innovative ways to support the new local healthcare initiatives technically, financially, and logistically.

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APPENDICES

Appendix 1. Interview topic guides

Experiences and Perspectives of Healthcare Providers and Community Members in Conflict-affected Areas of Myanmar after 2021 Military Coup: A qualitative study

Interview Topic Guide for Healthcare Providers

Expected time of interview: 45 – 90 minutes

No	Questions
1.	Information about the study participant and local background
1.1.	In this study, I will ask you questions about the health services you are providing, the health services available in your area, challenges in healthcare provisions, and health service gaps. Regarding these questions, could you tell me a little bit about yourself which you think I need to know in the context of this study. (You don't need to tell me your name, or the names of other people, or the names of any city, town, village, department, organizations, and alike.) Regarding these questions, could you tell me a little bit about situations in the region/ place you are living in or working for which you think I need to know in the context of this study. (You don't need to tell me the names of the city, town, or village.)
2.	Priority health problems
2.1.	What are the primary health concerns of the people in the area you are working for? - Communicable diseases? - Non-communicable diseases? - Reproductive health problems? - Immunization? - Injuries? - Nutritional problems? - Personal cleanliness/WASH - Mental health problems? - COVID-19? - Others? What are the priority non-health concerns of the people in the area you are working for? Why do you think so?
2.2.	How do you think the ongoing conflicts are affecting the health and livelihoods of the people in the area? How did they change the health needs in the area?
2.3.	What do you think are the top 3 priority health needs/problems in the area? Why?

3.	Health services and healthcare providers
3.1.	Tell me about your current job/work/organization. (You don't need to say the names of any department, organization, city, town, village, etc.) - What kind of organization is it? (Government, Non-government, Philanthropic, etc.) - What are the health services of your organization/department/ group? How are you providing these services? (curative, preventive, etc.) - How long has it been functioning in this area? - What is the area coverage of your services? (You don't need to say the names of villages, townships, etc.)
3.2.	Are there any other people/groups/organizations/departments providing healthcare services in your area? - What kind of organization are they? (Government, Non-government, Philanthropic, etc.) - What are the health services provided by these organizations/departments/ groups? How are they providing these services? (curative, preventive, etc.) - How long have they been been functioning in this area? - What are the area coverages of these organizations? (You don't need to say the names of villages, townships, etc.)
4.	Challenges in healthcare provisions
4.1.	What are the challenges that your organization/department/group or other organizations/departments/groups encounter in healthcare provisions in this area? (You don't need to mention the names of departments, organizations, townships, villages, etc.) Health system domains of interest - Health service privisions (curative, preventive, etc.) - Health workforce - Medicines, commodities, drugs, vaccines, infrastructure, etc. - Health information management, recording, reporting - Health financing, expenditure, budgeting, enough funding - Governance, leadership, planning - Partnership, coordination, collaboration, communication Questions of interest for each domain - What are the challenges? Could you elaborate? - How do the ongoing conflicts affect the domain? (Skip this question if it is already covered.) - How does the COVID-19 pandemic affect the domain?

	- How are you overcoming these challenges? How can the situations be improved? - What kinds of support will be required? Where do you think you can get these supports? What would be the best ways to support them?
4.2.	How do you think of the quality and safety of the health services in the area? How can they be improved? What kinds of support will be required?
4.3.	What are the common personal challenges of healthcare providers in this area? - Physical and mental health? Social life? Family life? Education? Financial matters/ income? Sacrifice? Safety? Security? Life-threatening? How are the healthcare providers overcoming these challenges? What kind of supports are they needing?
4.4.	How do you think of the sustainability of the health services in this area? Why? How can it be improved?
5.	Service utilization by the community members and health outcomes
5.1.	How do you think the patients/community members responds to the availables services in the area? Why?
5.2.	Do the community members need to pay for the health services? Can they afford the payments? How are they solving the financial situations?
5.3.	What are challenges of the patients/ community members in accessing/ utilizing the available services? Could you elaborate on that? How can the situations be improved? - Transportation - Safety/ security concerns - Adhering to the treatment/instruction - Follow-up
5.4.	***(These questions are only for those working at leadership or policymaking positions.)*** What are your opinions on the **health outcomes**? - Improved health (level and equity) - Responsiveness - Social and financial risk protection - Improved efficiency How can they be improved?
6.	Service gaps
6.1.	What do you think are the service gaps in this area? (Heath services for the exising priority health problems that none of the existing healthcare providers are not adequetly addressing.) Elaborate.

	- What services have stopped or almost stopped functioning? (For example, Extended Programme of Immunization, COVID-19 vaccination, Antenatal care services, etc.) - Why do you think those services are not available? Why do you think these sevices are not accessible by the community members? - Can you rank them in order of their importance and urgency? (Could you pick 3 top priority service gaps?) - Who should provide those services? - What are the potential challenges? How should we/they overcome them?
6.2.	What kind of support do you/they need to fill these service gaps? - Materials? Financial? Administrative? Leadership? Policies? Political? - Who do you think can provide those supports? Individuals/ groups/ organizations/ departments/ facilities? Local/ national/ international?
6.3.	What do you think are the best ways/strategies the international and local stakeholders can support health and humanitarian services in conflict-affected areas like yours or Sagaing Region?
6.4.	***(These questions are only for those working at leadership or policymaking positions.)*** What do you think is the role/stance of different stakeholders in addressing these healthcare issues in the region? How do the situations affect the health problems and healthcare provisions in the region? How can these be improved? - Your organization/ department/ initiative in the region - Other organizations/ departments/ initiatives in the region - National Unity Government (NUG) - Military Regime (SAC) - International Actors (such as UN Agencies, ASEAN, other countries, etc.)
7.	Conclusion
7.1.	Could you also give a glimpse of the healthcare needs and health care provisions in Sagaing Region? - Could you also give a glimpse of the healthcare needs and health care provisions in other states and regions compared to Sagaing Region? (As far as you know)
	Closing
	That's all from me. If you have any remaining thoughts about what we discussed before, any comments, suggestions, or question, please, feel free to say. Thank you so much for your participation.

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၂၀၂၁ ခုနှစ် စစ်အာဏာသိမ်းမှုဖြစ်ပွားပြီးနောက် မြန်မာနိုင်ငံ၏ ပဋိပက္ခဖြစ်ပွားနေသော ဒေသများရှိ ကျန်းမာရေးစောင့်ရှောက်မှုပေးနေသူများနှင့် ပြည်သူများ၏ အတွေ့အကြုံနှင့် အတွေးအမြင်များကို လေ့လာသော သုတေသန

ကျန်းမာရေးဝန်းထမ်းများအတွက် အင်တာဗျူး မေးခွန်းများ

ခန့်မှန်း ကြာမြင့်ချိန် - ၄၅ - ၉၀ မိနစ်

စဉ်	**မေးခွန်းများ**
၁.	ဖြေဆိုသူနှင့် ဒေသဆိုင်ရာ အချက်အလက်များ
၁.၁.	ဤသုတေသနအတွက် သင့်ကို သင်လုပ်လုပ်ဆောင်ပေးနေသော ကျန်းမာရေးလုပ်ငန်းများ၊ သင့်ဒေသအတွင်းရှိ ကျန်းမာရေးစောင့်ရှောက်မှု လုပ်ငန်းများ၊ ကျန်းမာရေးလုပ်ငန်းများနှင့်ပတ်သက်သော အခက်အခဲများ၊ ကျန်းမာရေးစောင့်ရှောက်မှုလိုအပ်ချက်များနှင့် ပတ်သက်၍ မေးခွန်းများ မေးမြန်းမည် ဖြစ်ပါသည်။ ထိုအကြောင်းအရာများနှင့်ပတ်သက်၍ - ကျွန်ုပ်သိသင့်သည်ဟု သင်ယူဆသော "သင့်အကြောင်း" အနည်းငယ် ပြောပြပေးစေလိုပါသည်။ (သင့်အမည်ကို ထုတ်ဖော်ပြောပြစရာမလိုပါ။ အခြားသူ၏ အမည်များ၊ မြို့ရွာ ဌာန အဖွဲ့အစည်းတို့၏ အမည်များကိုလည်း အမည်တပ်ပြောပြစရာမလိုပါ။) ထိုအကြောင်းအရာများနှင့်ပတ်သက်၍ - ကျွန်ုပ်သိသင့်သည်ဟု သင်ယူဆသော သင်နေထိုင်သော ဒေသ (သို့) သင်အကျိုးပြုနေသော ဒေသတွင်းရှိ အခြေအနေများအကြောင်း အနည်းငယ် ပြောပြပေးစေလိုပါသည်။ (သင်နေထိုင်ရာ မြို့ရွာ အမည်ကို ထုတ်ဖော်ပြောပြစရာမလိုပါ။)
၂.	ကျန်းမာရေးပြဿနာများ
၂.၁.	သင်အကျိုးပြုနေသော ဒေသတွင်းရှိ ပြည်သူများ၏ အရေးအကြီးဆုံး ကျန်းမာရေးလိုအပ်ချက်တွေက မည်သည့်အရာတွေလို့ ထင်ပါသလဲ။ ဘာကြောင့်ပါလဲ။ (priority health concerns) - ကူးစက်ရောဂါများ - မကူးစက်တတ်သော ရောဂါများ - မျိုးဆက်ပွားကျန်းမာရေး - ကာကွယ်ဆေးထိုးခြင်း - ထိခိုက်ဒဏ်ရာများ - အာဟာရချို့တဲ့မှု - တစ်ကိုယ်ရည်သန့်ရှင်းမှု - စိတ်ကျန်းမာရေးပြဿနာများ - ကိုဗစ်-၁၉ ကပ်ရောဂါ - အခြားပြဿနာများ။ သင်အကျိုးပြုနေသော ဒေသတွင်းရှိ ပြည်သူများ၏ အရေးအကြီးဆုံး (ကျန်းမာရေးမဟုတ်သော) အခြားလိုအပ်ချက်တွေက မည်သည့်အရာတွေလို့ ထင်ပါသလဲ။ ဘာကြောင့်ပါလဲ။ (priority non-health concerns)

၂.၂.	လက်ရှိဖြစ်ပွားနေသော ပဋိပက္ခများသည် ဒေသတွင်းရှိ ပြည်သူများ၏ ကျန်းမာရေးနှင့် လူနေမှုဘဝကို မည်သို့ အကျိုးသက် ရောက်စေခဲ့ပါသလဲ။ ကျန်းမာရေးပြဿနာများနှင့် ပတ်သက်၍ မည်သည့်အပြောင်းအလဲများ ဖြစ်စေခဲ့ပါသလဲ။
၂.၃.	ဒေသတွင်းရှိ ပြည်သူများ၏ ကျန်းမာရေးနှင့် ပတ်သက်ပြီး အရေးအကြီးဆုံး ပြဿနာ အခက်အခဲ (၃) ခုကို ရွေးထုတ်ပြပါဆိုလျှင် မည်သည့်ပြဿနာများကို သင်ရွေးချယ်ချင်ပါသလဲ။ အဘယ်ကြောင့်ပါလဲ။
၃.	ကျန်းမာရေးစောင့်ရှောက်မှုလုပ်ငန်းများနှင့် ကျန်းမာရေးစောင့်ရှောက်မှုပေးနေသူများ
၃.၁.	သင် လက်ရှိလုပ်ကိုင်နေသော လုပ်ငန်း/ဌာန/အဖွဲ့အစည်း အကြောင်း ပြောပြပါ။ (လုပ်ငန်း/ဌာန/အဖွဲ့အစည်း၏ အမည်နာမများ၊ မြို့ရွာတို့၏ အမည်နာမများကို ထုတ်ဖော်ပြောပြရန် မလိုပါ။) - မည်သည့်အဖွဲ့အစည်းမျိုး ဖြစ်ပါသလဲ။ (အစိုးရ၊ အစိုးရမဟုတ်သောအဖွဲ့အစည်း၊ ပုဂ္ဂလိက၊ ပရဟိတ စသည်) - သင့် လုပ်ငန်း/ဌာန/အဖွဲ့အစည်းက မည်သည့်ကျန်းမာရေးဝန်ဆောင်မှုလုပ်ငန်းများ ဆောင်ရွက်ပေးနေပါ သလဲ။ မည်သို့ဆောင်ရွက်ပေးနေပါသလဲ။ (ကုသရေး၊ ကာကွယ်ရေး၊ ကျန်းမာရေးအဆင့်မြှင့်တင်ရေး) - သင်တို့ ဤဒေသအတွင်း လုပ်ငန်းလုပ်ဆောင်နေသည်မှာ မည်မျှကြာပြီလဲ။ သင်တို့၏ဝန်ဆောင်မှုများသည် စစ်ကိုင်းတိုင်းအတွင်းမည်မျှလွှမ်းခြုံထားနိုင်ပါသလဲ။ (မြို့ ရွာ အမည်နာမများကို ပြောပြရန်မလိုပါ။)
၃.၂.	သင်အကျိုးပြုနေသော ဒေသအတွင်း သင်တို့အဖွဲ့အစည်းအပြင် ကျန်းမာရေးဝန်ဆောင်မှုပေးနေသော အခြားအဖွဲ့အစည်း/ အသင်းအဖွဲ့များ ရှိပါသလား။ - မည်သည့်အဖွဲ့အစည်းအမျိုးအစားများ ရှိပါသလဲ။ (အစိုးရ၊ အစိုးရမဟုတ်သောအဖွဲ့အစည်း၊ ပုဂ္ဂလိက၊ ပရဟိတ စသည်) (လုပ်ငန်း/ဌာန/အဖွဲ့အစည်း၏ အမည်နာမများ၊ မြို့ရွာတို့၏ အမည်နာမများကို ထုတ်ဖော်ပြောပြရန် မလိုပါ။) - ထိုလုပ်ငန်း/ဌာန/အဖွဲ့အစည်းက မည်သည့်ကျန်းမာရေးဝန်ဆောင်မှုလုပ်ငန်းများ ဆောင်ရွက်ပေးနေပါ သလဲ။ မည်သို့ဆောင်ရွက်ပေးနေပါသလဲ။ သင်သိသလောက်သာ ဖြေဆိုနိုင်ပါသည်။ - ထိုအဖွဲ့အစည်းများ လုပ်ငန်းလုပ်ဆောင်နေသည်မှာ မည်မျှကြာပြီလဲ။ - ထိုအဖွဲ့အစည်းများ စစ်ကိုင်းတိုင်းအတွင်းမည်မျှလွှမ်းခြုံထားနိုင်ပါသလဲ။ (မြို့ ရွာ အမည်နာမများကို ပြောပြရန်မလိုပါ။)
၄.	ကျန်းမာရေးစောင့်ရှောက်မှုဆိုင်ရာအခက်အခဲများ
၄.၁.	သင်အကျိုးပြုနေသော ဒေသအတွင်း သင့် လုပ်ငန်း/ဌာန/အဖွဲ့အစည်း (သို့မဟုတ်) အခြား လုပ်ငန်း/ဌာန/ အဖွဲ့အစည်းများအနေနှင့် ကျန်းမာရေးဝန်ဆောင်မှုပေးရာတွင်၊ ကျန်းမာရေးလုပ်ငန်းများ အကောင်းအထည်ဖော်ရာတွင် ကြုံတွေ့ရသော အခက်အခဲများကို ပြောပြပါ။ (လုပ်ငန်း/ဌာန/အဖွဲ့အစည်း၏ အမည်နာမများ၊ မြို့ရွာတို့၏ အမည်နာမများကို ထုတ်ဖော်ပြောပြရန် မလိုပါ။) မေးမြန်းသင့်သည့် ကျန်းမာရေးစောင့်ရှောက်မှုစနစ်ဆိုင်ရာ နယ်ပယ်များ

- ကျန်းမာရေးစောင့်ရှောက်မှုပေးခြင်း (ကုသရေးဆိုင်ရာ၊ ကာကွယ်ရေးဆိုင်ရာ၊ ကျန်းမာရေးအဆင့်မြှင့်တင်ရေးဆိုင်ရာ ဝန်ဆောင်မှုများ)
- ကျန်းမာရေးလုပ်သားအင်အား
- ဆေးဝါး၊ ဆေးပစ္စည်း၊ ကာကွယ်ဆေး၊ အဆောက်အဦ စသည်
- ကျန်းမာရေးသတင်းအချက်အလက် (ဆေးမှတ်တမ်းပြုစုခြင်း၊ လချုပ်စာရင်းပြုစုခြင်း၊ တင်ပြခြင်း)
- ကျန်းမာရေးအသုံးစရိတ် (ကျန်းမာရေးအသုံးစရိတ် လောက်ငှမှု)
- စီမံအုပ်ချုပ်မှု၊ ဦးဆောင်မှု၊ စီမံကိန်း
- ဆက်သွယ်ဆက်ဆံရေး၊ ညှိနှိုင်းဆောင်ရွက်မှု

နယ်ပယ်တစ်ခုစီအတွက် မေးမြန်းရမည့် မေးခွန်းများ

- မည်သည့်အခက်အခဲများ ကြုံတွေ့ရပါသလဲ။ ရှင်းပြစေလိုပါသည်။
- ဒေသတွင်းပဋိပက္ခများသည် ကျန်းမာရေးစောင့်ရှောက်မှုလုပ်ငန်းများအပေါ် မည်သို့အကျိုးသက်ရောက်မှု ရှိပါသလဲ။ (အထက်တွင် ဖြေဆိုခဲ့ပြီး ဖြစ်ပါက ဤမေးခွန်းကို ကျော်သွားပါ။)
- ကိုဗစ်-၁၉ ကပ်ရောဂါသည် ကျန်းမာရေးစောင့်ရှောက်မှုလုပ်ငန်းများအပေါ် မည်သို့အကျိုးသက်ရောက်မှု ရှိပါသလဲ။
- မည်သည့်နည်းလမ်းများနှင့် ဖြေရှင်းနေပါသလဲ။ ပိုမိုကောင်းမွန်အောင်မည်သို့ ဆောင်ရွက်သင့်သည်ဟု ယူဆပါသလဲ။
- မည်သည့်အထောက်အပံ့များ လိုအပ်မည် ထင်ပါသလဲ။ ထိုအထောက်အပံ့များကို မည်သည့်နေရာမှ ရရှိနိုင်မည် ထင်ပါသလဲ။ မည်သည်နည်းနှင့် အကောင်းဆုံးပံ့ပိုးနိုင်မည်ဟု သင်ထင်ပါလဲ။

၄.၂.	ဒေသတွင်းတွင် လက်ရှိ ရရှိနေသော ကျန်းမာရေးစောင့်ရှောက်မှုများ၏ အရည်အသွေး (quality) နှင့် ပတ်သက်၍ မည်သို့ ထင်မြင်ပါသလဲ။ အန္တရာယ်ကင်းမှု (safety) နှင့် ပတ်သက်၍ မည်သို့ ထင်မြင်ပါသလဲ။ ပိုမိုကောင်းမွန်အောင် မည်သို့ဆောင်ရွက်သင့်သည်ဟု ထင်ပါသလဲ။ မည်သည့် အထောက်အပံ့များ လိုအပ်မည်ဟု ထင်ပါသလဲ။
၄.၃.	ဒေသတွင်းရှိ ကျန်းမာရေးစောင့်ရှောက်မှုပေးနေသူများအနေနှင့် မည်သည့် ပုဂ္ဂလိကအခက်အခဲများ ကြုံတွေ့နေရပါသလဲ။ - ကိုယ်ကျန်းမာရေး၊ စိတ်ကျန်းမာရေး၊ လူမှုဘဝ၊ မိသားစုဘဝ၊ ပညာရေး၊ စီးပွားရေး၊ ဝင်ငွေ၊ အနစ်နာခံရမှု၊ လုံခြုံရေး၊ အပူအပင်ကင်းမှု၊ အသက်အန္တရာယ် - မည်သို့ ဖြေရှင်းနေပါသလဲ။ မည်သည့်အထောက်အပံ့များ လိုအပ်ပါသလဲ။
၄.၄.	ဒေသတွင်းကျန်းမာရေးဝန်ဆောင်မှုလုပ်ငန်းများ၏ ရေရှည်တည်တံ့ခိုင်မြဲမှု (sustainability) နှင့်ပတ်သက်၍ သင်မည်သို့ ထင်မြင်ယူဆပါသလဲ။ ပိုမိုတည်တံ့ခိုင်မြဲအောင် မည်သို့လုပ်ဆောင်နိုင်မည်ဟု ထင်ပါသလဲ။
၅.	ကျန်းမာရေးဝန်ဆောင်မှုလုပ်ငန်းများကို ပြည်သူလူထုက အသုံးချမှုအခြေအနေ၊ ကျန်းမာရေးရလဒ်များ
၅.၁.	ဒေသတွင်းတွင် လက်ရှိ ရရှိနေသော ကျန်းမာရေးဝန်ဆောင်မှုလုပ်ငန်းများကို ပြည်သူလူထုက မည်ကဲ့သို့ သဘောထားသည်ဟု သင်ထင်မြင်ပါသလဲ။ မည်သို့ တုန့်ပြန်ကြပါသလဲ။ အဘယ့်ကြောင့်ပါလဲ။

၅.၂. ကျန်းမာရေးစောင့်ရှောက်မှု လုပ်ငန်းများအတွက် ပြည်သူများက အခကြေးငွေ ပေးရပါလား။ အခကြေးငွေ ပေးရန် တတ်နိုင်ကြပါသလား။ မည်သို့ ဖြေရှင်းနေကြပါသလဲ။

၅.၂. ကျန်းမာရေးဝန်ဆောင်မှုများကို ပြည်သူလူထုက လက်လှမ်းမီရေး၊ အသုံးပြုနိုင်ရေးနှင့် ပတ်သက်၍ မည်သည့် အခက်အခဲများ ရှိနေသည်ဟု သင်ထင်ပါသလဲ။ ပိုမိုကောင်းမွန်အောင် မည်သို့လုပ်ဆောင်သင့် ပါသလဲ။

- လမ်းပန်းဆက်သွယ်ရေး
- လုံခြုံရေး
- ဆေးကုသမှုညွှန်ကြားချက်များကို လိုက်နာဆောင်ရွက်နိုင်ခြေ (treatment adherence)
- နောက်ထပ်ပြန်လာပြသနိုင်ခြေ (follow-up)

၅.၃. **(ကျန်းမာရေးစောင့်ရှောက်မှုလုပ်ငန်း ခေါင်းဆောင်မှုနှင့် မူဝါဒရေးရာ ဆောင်ရွက်နေသောသူများကိုသာ မေးရန်)**

ကျန်းမာရေးစောင့်ရှောက်မှုရလဒ်များ (health outcomes**)** နှင့်ပတ်သက်၍ လက်ရှိအခြေအနေ မည်သို့ရှိပါသနည်း။ လက်ရှိအခြေအနေတွင် အားသာချက် ဘာတွေရှိသလဲ။ အခက်အခဲ ဘာတွေရှိနေသလဲ။ ပိုမိုကောင်းမွန်အောင် မည်သို့လုပ်ဆောင်နိုင်မည် ထင်ပါသလဲ။

- ကျန်းမာရေးအခြေအနေတိုးတက်မှု (အဆင့်အတန်းနှင့် သာတူညီမျှရှိမှု) (Improved health – level & equity)
- အချိန်မီတုန့်ပြန်ဆောင်ရွက်နိုင်မှု (Responsiveness)
- လူမှုရေးနှင့် ငွေးရေးကြေးရေး အကာအကွယ်ပေးနိုင်မှု (Social and financial risk protection)
- သက်သက်သာသာနှင့် အကျိုးရှိထိရောက်မှု (Improved efficiency)

၆. ကျန်းမာရေးဝန်ဆောင်မှု လိုအပ်ချက်များ

၆.၁. ဤဒေသအတွင်းရှိ ကျန်းမာရေးဝန်ဆောင်မှုလိုအပ်ချက်တွေ (service gaps) က ဘာတွေလဲ။ (လက်ရှိအချိန်တွင် ကျန်းမာရေးပြဿနာအနေနှင့် ရှိနေပြီး ထိုကျန်းမာရေးပြဿနာအတွက် မည်သူ/ မည်သည့်အဖွဲ့အစည်းကမှ လုံလောက်စွာ ဖြေရှင်းမပေးနိုင်သေးသော ကျန်းမာရေးဝန်ဆောင်မှု/ စောင့်ရှောက်မှု။

- လုံးဝရပ်တန့်သွားသော (သို့) လုံးဝရပ်တန့်လုနီးပါးဖြစ်သွားသော ကျန်းမာရေးဝန်ဆောင်မှုလုပ်ငန်းတွေက ဘာတွေလဲ။ (တိုးချဲ့ကာကွယ်ဆေးထိုးနှုန်ခြင်း၊ ကိုဗစ်-၁၉ ကာကွယ်ဆေးထိုးခြင်း၊ ကိုယ်ဝန်ဆောင်စောင့်ရှောက်ရေး၊ စသည်)
- ထိုဝန်ဆောင်မှုများ မရှိနေရသည်မှာ ဘာကြောင့်ပါလဲ။ လက်လှမ်းမမီဖြစ်နေရသည်မှာ ဘာကြောင့်လဲ။
- ထိုလိုအပ်ချက်များကို အရေးကြီးမှု၊ အရေးပေါ်လိုအပ်မှု စသည်တို့အပေါ်အခြေခံ၍ စဉ်ကြည့်ပေးပါ။ (အရေးအကြီးဆုံး (၃) ခုကို ရွေးချယ်ပေးပါ။)
- ထိုဝန်ဆောင်မှုများကို မည်သူ (သို့) မည်သည့်အဖွဲ့အစည်းများက ပေးအပ်သင့်ပါသလဲ။ကြုံတွေ့ရနိုင်ခြေရှိသောအခက်အခဲတွေက ဘာတွေလဲ။ မည်သို့ ကျော်လွှားနိုင်မည်ဟု ထင်ပါသလဲ။

၆.၂. ထိုလိုအပ်ချက်များကို ဖြည့်ဆည်းရန် မည်သည့်အထောက်အပံ့များလိုအပ်မည်ဟု ထင်ပါသလဲ။

- ဆေးဝါးနှင့်ပစ္စည်းကိရိယာများ၊ ငွေကြေးအထောက်အပံ့၊ အုပ်ချုပ်ရေးနှင့် စီမံခန့်ခွဲမှု၊ ခေါင်းဆောင်မှု၊ မူဝါဒရေးရာ၊ နိုင်ငံရေးအခြေအနေ
- ထိုအထောက်အပံ့များကို မည်သူ(သို့)မည်သည့်အဖွဲ့အစည်းများက ထောက်ပံ့ပေးနိုင်သည်ဟု ထင်ပါသလဲ။ လူပုဂ္ဂိုလ်၊ အုပ်စု၊ အဖွဲ့အစည်း၊ ဌာန၊ ဆေးရုံဆေးခန်း၊စသည်။ ဒေသတွင်း၊ ပြည်တွင်း၊ နိုင်ငံ တကာ၊ စသည်။

၆.၃. စစ်ကိုင်းတိုင်းအတွင်း ပဋိပက္ခဖြစ်ပွားနေသည့် ဒေသများအတွက် ပြည်တွင်းနှင့် နိုင်ငံတကာအဖွဲ့အစည်းများ၊ stakeholders များအနေဖြင့် ကျန်းမာရေးနှင့် လူသားချင်းစာနာ ထောက်ထားမှုအကူအညီများ ပေးအပ်ရန် အကောင်းဆုံးနည်းဗျူဟာတွေက ဘာတွေဖြစ်မည်ဟု သင်ထင်ပါသလဲ။ ရှင်းပြပေးစေလိုပါသည်။

၆.၄. **(ကျန်းမာရေးစောင့်ရှောက်မှုလုပ်ငန်း ခေါင်းဆောင်မှုနှင့် မူဝါဒရေးရာ ဆောင်ရွက်နေသောသူများကိုသာ မေးရန်)**

စစ်ကိုင်းတိုင်းအတွင်းရှိ ကျန်းမာရေးပြဿနာများကို ကိုင်တွင်ဖြေရှင်းရာတွင် ဒေသတွင်းရှိ အဖွဲ့အစည်း/ ဌာန/ အစုအဖွဲ့ အသီးသီး၏ အခန်းကဏ္ဍ နှင့် သဘောထား/ ရပ်တည်ချက်က မည်သို့ ရှိမည်ဟု သင်ထင်ပါသနည်း။ ထိုအခြေအနေများသည် ဒေသတွင်းကျန်းမာရေးပြဿနာများ၊ ကျန်းမာရေးစောင့်ရှောက် မှုလုပ်ငန်းများအပေါ် မည်သို့အကျိုးသက်ရောက်စေပါသလဲ။ ပိုမိုကောင်းမွန်အောင်မည်သို့ ဆောင်ရွက်သင့် သည်ဟု သင်ထင်ပါသလဲ။

- သင့်အဖွဲ့အစည်း/ဌာန/လုပ်ငန်း
- အခြားအဖွဲ့အစည်း/ဌာန/လုပ်ငန်းများ
- အမျိုးသားညီညွတ်ရေးအစိုးရ
- အာဏာသိမ်းစစ်ကောင်စီ
- နိုင်ငံတကာအဖွဲ့အစည်းများ (UN Agencies, ASEAN, အခြားနိုင်ငံများ စသည်)

၇. ခြုံငုံသုံးသပ်ချက်

၇.၁. ခြုံငုံသုံးသပ်ကြည့်လျှင် စစ်ကိုင်းတိုင်းအတွင်းရှိ ကျန်းမာရေးလိုအပ်ချက်များ၊ ကျန်းမာရေးစောင့်ရှောက်မှု လုပ်ငန်းများ၏ အခြေအနေကို သင်မည်သို့ ဖော်ပြလိုပါသလဲ။

- အခြားတိုင်းနှင့်ပြည်နယ်များနှင့် နှိုင်းယှဉ်လျှင် စစ်ကိုင်းတိုင်းအတွင်းရှိ ကျန်းမာရေးလိုအပ်ချက်များ၊ ကျန်းမာရေး ဝန်ဆောင်မှုလုပ်ငန်းများ၏ အခြေအနေကို သင်မည်သို့ ထင်ပါလဲ။

နိဂုံး

ကျွန်ုပ်မေးမြန်းလိုသည့်အကြောင်းအရာများ ပြီးဆုံးပါပြီ။

ရှေ့တွင်မေးမြန်းဆွေးနွေးခဲ့သောအကြောင်းအရာများ အပြင် သင်ဆွေးနွေးပြောဆိုလိုသော အကြောင်းအရာများ ရှိပါက ပြောဆိုဆွေးနွေးနိုင်ပါသည်။ မှတ်ချက်၊ အကြံပြုချက်၊ မေးခွန်း စသည်။

ဤသုတေသနတွင် ပါဝင်မှုအတွက် ကျေးဇူးအထူးတင်ရှိပါသည်။

--- ပြီး ---

Experiences and Perspectives of Healthcare Providers and Community Members in Conflict-affected Areas of Myanmar after 2021 Military Coup: A qualitative study

Interview Topic Guide for Community Members

Expected time of interview: 45 – 90 minutes

No	Questions
1.	Information about the study participant and local background
1.1.	In this study, I will ask you questions about the health problems in your area and health services available in your area. Regarding these questions, could you tell me a little bit about yourself which you think I need to know in the context of this study. (You don't need to tell me your name, or the names of other people, or the names of any city, town, village, department, organizations, and alike.) Regarding these questions, could you tell me a little bit about situations in the region/ place you are living in which you think I need to know in the context of this study. (You don't need to tell me the names of the city, town, or village.)
2.	Health problems and healthcare services
2.1.	What do you think are the **priority health needs** of your family and other people in your area? Why? - Communicable diseases? Non-communicable diseases? Reproductive health problems? Immunization? Injuries? Mental health problems? Others? What do you think are the **priority non-health concerns** of your family and other people in your area? Why? - How are they related to the health concerns you discussed before? How do the conflicts affect your health and living situations? How are you coping the situations? What support do you need? Whom do you expect these supports should come from?
2.2.	What do you think are the top 3 priority health problems/concerns in your area? Why?
2.3.	What kinds of healthcare services are available in your area? Could you elaborate? - What kinds of organizations are providing these services? (You don't need to say the names of any department, organization, city, town, village, etc.) - How is their performance? What are their strengths? What are their weaknesses?
2.4.	Have you or your family ever used any of these services? What services did you used? Could you share you experience of using these services?

- Why did you use them? How did you access them? Are you regularly using these services?
- How were the services? How were the health outcomes? How about your next visits? Why?
- Are you satisfied with these services? Why?
- What challenges did you encountered in these times? How did you overcome them?

How about your friends, neighbors, or other people in your community? Have they ever used any of these services? Could you share their experience of using these services?

2.5. What are your challenges in accessing/ utilizing their services? What are the possible solutions?

- Availability? Are always they available?
- Transportation? Are the services close to your place? How do you go to the service points?
- Safety/ security concerns?
- Adhering to the treatment/instruction? How are you getting all your regular medications?
- Follow-up? Could you show up for all follow-up visits?
- Do you need to pay for the services? How much? Are they free of charge? Do you afford the price?

How do you think of the quality of the services?

What are your personal challenges in your daily life? (livelihood, security, education, etc.) How are these factors affecting your health/ healthcare service utilization? How are you solving the situations? How can it be improved?

3. Health service gaps

3.1. Do you think all required health services are available in your area? Why?

What do you think are the service gaps in this area—health services that are required but currently not available in your area? Elaborate.

- What are the services that have completely (almost completely) stopped functioning?
- Why do you think those services are not available? Or not accessible?
- Can you rank them in order of their importance and urgency? (Could you pick top 3 priority service gaps?)
- Who should provide those services? (People, groups, departments, clinics, organizations, etc. Local, national, international, etc.)
- From whom/where do you want to get these supports from? What are the best way you want to get these supports?

	- What are the potential challenges? How should we/they overcome them?
3.2.	Could you also give a glimpse of the healthcare needs and health care provisions in your area or Sagaing Region? - Could you also give a glimpse of the healthcare needs and health care provisions in other states and regions compared to your area or Sagaing Region? (As far as you know)
4.	General opinion on health security
4.1.	Overall, how would you describe the health security status of you and your family? How do you think it can be best improved in this conflict setting?
	Closing
	That's all from me. If you have any remaining thoughts about what we discussed before, any comments, suggestions, or question, please, feel free to say. Thank you so much for your participation.

--- END ---

၂၀၂၁ ခုနှစ် စစ်အာဏာသိမ်းမှုဖြစ်ပွားပြီးနောက် မြန်မာနိုင်ငံ၏ ပဋိပက္ခဖြစ်ပွားနေသော ဒေသများရှိ ကျန်းမာရေးစောင့်ရှောက်မှုပေးနေသူများနှင့် ပြည်သူများ၏ အတွေ့အကြုံနှင့် အတွေးအမြင်များကို လေ့လာသော သုတေသန

ဒေသတွင်းရှိ ပြည်သူများအတွက် အင်တာဗျူး မေးခွန်းများ

ခန့်မှန်း ကြာမြင့်ချိန် - ၄၅ - ၉၀ မိနစ်

စဉ်	**မေးခွန်းများ**
၁.	ဖြေဆိုသူနှင့် ဒေသဆိုင်ရာ အချက်အလက်များ
၁.၁.	ဤသုတေသနအတွက် သင့်ကို ဤဒေသအတွင်းရှိ ကျန်းမာရေးပြဿနာများ၊ ကျန်းမာရေးလုပ်ငန်းများနှင့် ပတ်သက်သော မေးခွန်းများ မေးမြန်းမည် ဖြစ်ပါသည်။ ထိုအကြောင်းအရာများနှင့်ပတ်သက်၍ - ကျွန်ုပ်သိသင့်သည်ဟု သင်ယူဆသော "သင့်အကြောင်း" "သင့်မိသာစုအကြောင်း" အနည်းငယ် ပြောပြပေးစေလိုပါသည်။ (သင့်အမည်ကို ထုတ်ဖော်ပြောပြစရာ မလိုပါ။ အခြားသူ၏ အမည်များ၊ မြို့ရွာ ဌာန အဖွဲ့အစည်းတို့၏ အမည်များကိုလည်း အမည်တပ် ပြောပြစရာ မလိုပါ။) ထိုအကြောင်းအရာများနှင့်ပတ်သက်၍ - ကျွန်ုပ်သိသင့်သည်ဟု သင်ယူဆသော သင်နေထိုင်သော ဒေသတွင်းရှိ အခြေအနေများအကြောင်း အနည်းငယ် ပြောပြပေးစေလိုပါသည်။ (သင်နေထိုင်ရာ မြို့ရွာ အမည်ကို ထုတ်ဖော်ပြောပြစရာမလိုပါ။)
၂.	ကျန်းမာရေးပြဿနာများနှင့် ကျန်းမာရေးဝန်ဆောင်မှုများ
၂.၁.	သင့်မိသားစု နှင့် ဒေသတွင်းရှိ အခြားပြည်သူများ၏ အရေးအကြီးဆုံး ကျန်းမာရေးလိုအပ်ချက်တွေက မည်သည့်အရာတွေလို့ ထင်ပါသလဲ။ ဘာကြောင့်ပါလဲ။ (priority health concerns) - ကူးစက်ရောဂါများ၊ မကူးစက်တတ်သော ရောဂါများ၊ မျိုးဆက်ပွားကျန်းမာရေး၊ ကာကွယ်ဆေးထိုးခြင်း၊ ထိခိုက်ဒဏ်ရာများ၊ စိတ်ကျန်းမာရေးပြဿနာများ၊ အခြားပြဿနာများ။ သင့်မိသားစု နှင့် ဒေသတွင်းရှိ အခြားပြည်သူများ၏ အရေးအကြီးဆုံး (ကျန်းမာရေးမဟုတ်သော) အခြားလိုအပ်ချက်တွေက မည်သည့်အရာတွေလို့ ထင်ပါသလဲ။ ဘာကြောင့်ပါလဲ။ (priority non-health concerns) လက်ရှိဖြစ်ပွားနေသော ပဋိပက္ခများသည် သင်တို့၏ ကျန်းမာရေးနှင့် လူနေမှုဘဝကို မည်သို့ အကျိုးသက်ရောက်စေခဲ့ပါသလဲ။ ဤအခြေအနေများကို သင်တို့မည်သို့ ဖြေရှင်းကျော်လွှားနေပါသလဲ။ ထိုသို့ကျော်လွှားရာတွင် မည်သည့် အထောက်အပံ့များ သင်တို့ လိုအပ်နေပါသလဲ။ ထိုအထောက်အပံ့များကို မည်သူတို့ထံမှ မည်သည်အဖွဲ့ အစည်းများထံမှ ရှိနိုင်သည်၊ ရရှိသင့်သည်ဟု သင်ထင်ပါသလဲ။
၂.၂.	ဒေသတွင်းရှိ ပြည်သူများ၏ ကျန်းမာရေးနှင့် ပတ်သက်ပြီး အရေးအကြီးဆုံး ပြဿနာ အခက်အခဲ (၃) ခုကို ရွေးထုတ်ပြပါဆိုလျှင် မည်သည့်ပြဿနာများကို သင်ရွေးချယ်ချင်ပါသလဲ။ အဘယ်ကြောင့်ပါလဲ။

၂.၃. သင်နေထိုင်ရာ ဒေသအတွင်းတွင် မည့်သည့်ကျန်းမာရေးဝန်ဆောင်မှုများ ရရှိနေပါသလဲ။ အသေးစိတ် ပြောပြပါ။

- မည်သည့်အဖွဲ့အစည်းအမျိုးအစားများက ပေးအပ်နေပါသလဲ။ (အစိုးရ၊ အစိုးရမဟုတ်သော အဖွဲ့အစည်း၊ ပုဂ္ဂလိက၊ ပရဟိတ စသည်) (လုပ်ငန်း/ဌာန/အဖွဲ့အစည်း၏ အမည်နာမများ၊ မြို့ရွာတို့၏ အမည်နာမများကို ထုတ်ဖော်ပြောပြရန် မလိုပါ။)

ထိုအဖွဲ့အစည်းများ၏ လုပ်ကိုင်ဆောင်ရွက်မှု အောင်မြင်မှု အခြေအနေကို သင်မည်သို့ ထင်မြင်ယူဆပါသလဲ။ ၎င်းတို့၏ အားသာချက်တွေက ဘာလဲ။ မည်သည့်အားနည်းချက်များ ရှိနေပါသလဲ။

၂.၄. သင် (သို့) သင့်မိသားစုသည် ထိုဝန်ဆောင်မှုလုပ်ငန်းများကို အသုံးပြုခဲ့ဖူးပါသလား။ မည်သည့်ဝန်ဆောင်မှုများ ကို အသုံးပြုခဲ့ပါသလဲ။ ထိုအသုံးပြုခဲ့စဉ်က အတွေ့အကြုံများကို ပြန်လည်ပြောပြပေးစေလိုပါသည်။

- မည်သည့်အတွက်ကြောင့် အသုံးပြုခဲ့ပါသလဲ။ မည်သို့သိရှိပြီး မည်သို့ သွားရောက် ရယူခဲ့ပါသလဲ။ ထိုဝန်ဆောင်မှုလုပ်ငန်းများကို သင်ပုံမှန်အသုံးပြုဖြစ်ပါသလား။
- ဝန်ဆောင်မှုနှင့် ပတ်သက်၍ အကောင်းအဆိုး သင်မည်သို့ ထင်မြင်ယူဆပါသလဲ။
- ကျန်းမာရေးအကျိုးရလဒ်များ မည်သို့ ရှိခဲ့ပါသလဲ။ နောက်ထပ်သွားရောက်ပြသဖြစ်သေးပါ သလား။ ဘာကြောင့်ပါလဲ။
- ထိုဝန်ဆောင်မှုများနှင့်ပတ်သက်၍ သင်စိတ်ကျေနပ်မှု ရှိခဲ့ပါသလား။ ဘာကြောင့်ပါလဲ။
- ထိုစဉ်က မည်သည့်အခက်အခဲများ ကြုံတွေ့ခဲ့ပါသလဲ။ သင်မည်သို့ကျော်လွှားခဲ့ပါသလဲ။

သင့် မိတ်ဆွေ၊ အိမ်နီးချင်း၊ အခြားပြည်သူများအနေနှင့်ရော ထိုဝန်ဆောင်မှုများ အသုံးပြုခဲ့သည်ဟု သင် မြင်မိ၊ ကြားမိ၊ သတိထားမိခဲ့ပါသလား။ ထိုသူတို့၏ အတွေ့အကြုံနှင့်ပတ်သက်၍ရော သင်ပြောပြနိုင်လျှင် ပြောပြပေးစေလိုပါသည်။

၂.၅. ခြုံငုံသုံးသပ်ကြည့်လျှင် ထိုဝန်ဆောင်မှုလုပ်ငန်းများကို ရယူရာတွင်၊ အသုံးပြုရာတွင် မည်သည့်အခက်အခဲ များ ရှိသည်ဟု သင်ထင်ပါသလဲ။ မည်သို့ ဖြေရှင်းသင့်သည်ဟု သင်ထင်ပါသလဲ။

- ရရှိနိုင်မှု၊ ထိုဝန်ဆောင်မှုများကို ထိုအဖွဲ့အစည်းများက အမြဲတမ်းပေးအပ်နေပါသလား။ (availability)
- လမ်းပန်းဆက်သွယ်ရေးနှင့် ပတ်သက်၍ အခက်အခဲ ရှိပါသလား။ ထိုဝန်ဆောင်မှုများသည် သင်တို့ နေထိုင်သည့်နေရာအနီးတွင် ရှိပါသလား။ ထိုနေရာများသို့ သင်တို့ မည်သို့ သွားရောက်ပါသလဲ။
- လုံခြုံရေးနှင့်ပတ်သက်၍ အခက်အခဲ စိုးရိမ်ပူပန်မှုများ ရှိပါသလား။
- ကုသမှုလမ်းညွှန်ချက်များကို လိုက်နာရန် အခက်အခဲ ရှိပါသလား။ ရေရှည်သောက်ရမည့် ဆေးဝါးများကို စဉ်ဆက်မပြတ်ရရှိနေပါသလား။
- နောက်တစ်ကြိမ်သွားပြရန်လိုအပ်သော ကျန်းမာရေးပြဿနာများအတွက်ရော ထပ်မံ (သို့) ပုံမှန်သွားပြဖြစ်ပါသလား။ အဘယ်ကြောင့်ပါလဲ။
- ထိုဝန်ဆောင်မှုလုပ်ငန်းများအတွက် အခကြေးငွေ ပေးရန်လိုအပ်ပါသလား။ အခမဲ့ ပေးပါသလား။ မည်မျှပေးရပါသလဲ။ ဆေးဖိုးဝါးခကို သင်တို့ တတ်နိုင်ပါသလား။

ဝန်ဆောင်မှုများ၏ အရည်အသွေးနှင့်ပတ်သက်၍ သင်မည်သို့ ထင်မြင်ယူဆပါသလဲ။

သင်တို့၏ နေ့စဉ်ပုဂ္ဂလိကအခက်အခဲတွေက ဘာတွေလဲ။ (စားဝတ်နေရေး၊ လုံခြုံရေး၊ ပညာရေး၊ စသည်။) ထိုအခက်အခဲများသည် သင်တို့ကျန်းမာရေး စောက်ရှောက်မှု/ရယူအသုံးပြုမှုအပေါ် မည်သို့ အကျိုးသက်ရောက်မှု ရှိပါသလဲ။ မည်သို့ ဖြေရှင်းနေပါသလ။ မည်သို့ ပိုမိုကောင်းမွန်အောင် ဆောင်ရွက်နိုင်ပါသလဲ။

၃. ကျန်းမာရေးဝန်ဆောင်မှု လိုအပ်ချက်များ

၃.၁. သင့်ဒေတွင် လိုအပ်နေသော ကျန်းမာရေးဝန်ဆောင်မှုများအားလုံး သင်ရရှိနေသည်ဟု သင်ထင်ပါသလား။ အဘယ်ကြောင့်ပါလဲ။

သင့်ဒေသအတွင်း ရရှိနေသင့်သော်လည်း မရရှိနေသည့် ကျန်းမာရေးဝန်ဆောင်မှုများ (တစ်နည်းအားဖြင့်) ကျန်းမာရေးစောင့်ရှောက်မှု လိုအပ်ချက်များ (service gaps) က ဘာတွေလဲ။ ရှင်းပြပေးစေလိုပါသည်။

- လုံးဝရပ်တန့်သွားသော (သို့) လုံးဝရပ်တန့်လုနီးပါးဖြစ်သွားသော ကျန်းမာရေးဝန်ဆောင်မှုလုပ်ငန်းတွေက ဘာတွေလဲ။ (တိုးချဲ့ကာကွယ်ဆေးထိုးနှံခြင်း၊ ကိုဗစ်-၁၉ ကာကွယ်ဆေးထိုးခြင်း၊ ကိုယ်ဝန်ဆောင်စောင့်ရှောက်ရေး၊ စသည်)
- ထိုဝန်ဆောင်မှုများ မရှိနေရသည်မှာ ဘာကြောင့်ပါလဲ။ လက်လှမ်းမမီဖြစ်နေရသည်မှာ ဘာကြောင့်လဲ။
- ထိုလိုအပ်ချက်များကို အရေးကြီးမှု၊ အရေးပေါ်လိုအပ်မှု စသည်တို့အပေါ်အခြေခံ၍ စဉ်ကြည့်ပေးပါ။ (အရေးအကြီးဆုံး (၃) ခုကို ရွေးကြည့်ပေးပါ။
- ထိုဝန်ဆောင်မှုများကို မည်သူ (သို့) မည်သည့်အဖွဲ့အစည်းများက ပေးအပ်သင့်ပါသလဲ။ လူပုဂ္ဂိုလ်၊ အုပ်စု၊ အဖွဲ့အစည်း၊ ဌာန၊ ဆေးရုံဆေးခန်း၊စသည်။ ဒေသတွင်း၊ ပြည်တွင်း၊ နိုင်ငံ တကာ၊ စသည်။
- ၎င်းတို့ကို သင်မည်သူတို့ထံမှ/ မည်သည့်အဖွဲ့အစည်း ဌာနများထံမှ သင်ရယူလို့ပါသလဲ။ ထိုဝန်ဆောင်မှုများကို သင်တို့ရယူလိုသည့် အကောင်းဆုံးပုံစံက မည်သို့ပါလဲ။ ကြုံတွေ့ရနိုင်ခြေရှိသောအခက်အခဲတွေက ဘာတွေလဲ။ မည်သို့ ကျော်လွှားနိုင်မည်ဟု ထင်ပါသလဲ။

၃.၂. သင့်ဒေသအတွင်းရှိ/ စစ်ကိုင်းတိုင်းအတွင်းရှိ ကျန်းမာရေးလိုအပ်ချက်များ၊ ကျန်းမာရေးဝန်ဆောင်မှုလုပ်ငန်းများ၏ အခြေအနေသည် မည်သို့ရှိသည်ဟု သင်ထင်ပါလဲ။

- အခြား ဒေသများ/ တိုင်းနှင့်ပြည်နယ်များနှင့် နှိုင်းယှဉ်လျှင် သင့်ဒေသ/စစ်ကိုင်းတိုင်းအတွင်းရှိ ကျန်းမာရေးလိုအပ်ချက်များ၊ ကျန်းမာရေး ဝန်ဆောင်မှုလုပ်ငန်းများ၏ အခြေအနေသည် မည်သို့ရှိသည်ဟု သင်ထင်ပါလဲ။ သင်မြင်မိကြားမိသမျှ ပြောပြနိုင်ပါသည်။

၄. ကျန်းမာမှုဘဝလုံခြုံစိတ်ချရမှုနှင့် ပတ်သက်သော ထင်မြင်ယူဆချက်

၄.၁. ခြုံငုံသုံးသပ်ကြည့်လျှင် လက်ရှိအခြေအနေ၌ သင်နှင့် သင့်မိသားစု၏ ကျန်းမာရေးနှင့်ပတ်သက်၍ မည်မျှ ပူပင်သောက ရောက်ရပါသလဲ၊ မည်သည့်အတိုင်းအတာအထိ ရတက်အေးအေး နေနိုင်ပါသလဲ။

လက်ရှိအခြေအနေတွင် ကျန်းမာရေးနှင့် ပတ်သက်၍ စိတ်အေးချမ်းသာနေနိုင်ရန် မည်သို့မည်ပုံ ဆောင်ရွက်သင့်သည်၊ မည်သည်အခြေအနေမျိုး ရှိသင့်သည်ဟု သင်ထင်ပါသလဲ။

နိဂုံး

ကျွန်ုပ်မေးမြန်းလိုသည့်အကြောင်းအရာများ ပြီးဆုံးပါပြီ။

ရှေ့တွင်မေးမြန်းဆွေးနွေးခဲ့သောအကြောင်းအရာများ အပြင် သင်ဆွေးနွေးပြောဆိုလိုသော အကြောင်းအရာများ ရှိပါက ပြောဆိုဆွေးနွေးနိုင်ပါသည်။ မှတ်ချက်၊ အကြံပြုချက်၊ မေးခွန်း စသည်။

ဤသုတေသနတွင် ပါဝင်မှုအတွက် ကျေးဇူးအထူးတင်ရှိပါသည်။

--- ပြီး ---

Appendix 2. Supplementary information on methods

Ethical considerations in conflict settings (extracted from original study proposal)

1. Risks and benefits

Risks: The data collection procedure does not involve any measurement, treatments, or other forms of intervention. Therefore, there will be no risks associated with these procedures. The interview procedure itself generally poses minimal risk the participants, however, the participants may experience some discomfort during the interview when discussing personal experiences related to delivering care in a conflict setting and addressing politically sensitive issues. **Most importantly**, participation in the study may pose **serious risks** for some participants, as their work is conducted outside the authority of the ruling regime. Given the politically sensitive nature of some information discussed in the interviews and the limited freedom of expression in the current country context, there is a possibility that exposing participant identities could result in **mild to severe negative consequences, including potential detainment by the military or imprisonment**.

To mitigate these risks, measures will be taken to ensure privacy and confidentiality. Both the interviewer and participant will arrange to be in a private location where conversations cannot be overheard. For participants with limited information-technology literacy, facilitators will be present to assist without compromising the privacy of the interview. Participants will always have the right to refuse answering personal or sensitive questions. The audio-recording of the interviews will only be conducted with the participants' consent. Live videowill be turned off on the participant's end. Only I, Dr. Kaung Myat Thu, will perform the interviews so that the number of people knowing the participants' informatin will be limited. The in-country facilitator will not inform me, the principal investigator and the only interviewer, of the idendity of the study participants. We will not take written documentation of informed consent of the study participants by name to protect them from potential harm. Personal identification information will not be stored or shared outside of the research team, including with the transcribers. All data-containing materials, such as audio records and transcripts, will be made non-identifiable. Reporting of findings, especially sensitive information, will take precautions to ensure the anonymity of data sources.

Moreover, the number of data transcriber will also be limited to two persons which include me (Dr. Kaung Myat Thu) and an additional transcriber who is yet to be recruited. In addition to all researchers listed in the protocol, the in-country facilitators (who will help the researchers recruit study participants and organize interviews), the additional data transcriber (who will help in transcription of the interviews), the second data coder (who will code the interview transcripts during data analysis and who is yet to be identified), and any other people who will facilitate any stage of the study and subject to participant and data confidentiality, although they will not identify themselves and will not be listed in the study protocol by names, will sign the data confidentiality agreement form. I, the principal investigator, will document and keep the signed forms confidentially. Only the listed researchers will have access to the signed documents and the designated institutional review board or ethical review committee can access them upon request in cases any ethical issues arise. I will continuously monitor all the aforementioned participant privacy, confidentiality and data security protocol continuously and will immediately take required actions accordingly such as investigating any suspected confidentiality breach immediately and immediately informing the study participant for their safety.

Benefits: Participation in the study will not make direct benefit to study participants and this will be made clear in the PICF. Participation, however, may provide some individuals with an opportunity to review and reflect on their experiences, which can have some therapeutic effects. The transportation cost of study participants, if there are any, will be reimbursed as considered appropriate by the principal investigator. Participants will be provided with MMK8,500 (~USD4.0) to compensate their cost for internet access for the online interview. The participants will be provided with MMK10,000 (~ USD4.8) (exchange rate: USD1 = MMK2,100) as an appreciation of their participation and compensation of their time spent for participation in this study. Apart from them, other forms of remuneration will not be provided to any participants in this study.

The study will indirectly benefit all people in the conflict-affected areas of Sagaing Region including the study participants by informing different local and international stakeholders with improved healthcare services and humanitarian and health support strategies for the region.

2. Informed consent

We will take verbal informed consent of the participants for participation and all procedures in the study, including audio-recording of the interview. As breach of participants' identities can pose minimal to serious harms to them in the current context of Myanmar, we will not take written documentation of consent as it will be the only document directly linking the participants and the research and a potential source of confidentiality breach. Moreover, it will also reduce the logistic burden on the participants and the research team in getting written documentation in the current context and reduce the digital footprints through emailing, messaging, etc. which can be another source of participants identity breach.

My colleagues (working in or for the conflict-affected areas in Sagaing Region), when they have identified an eligible participant through their personal or professional networks, will contact through the phone or an online platform (or in person), explained him/her about the study purpose, procedure, and risk and benefits as mentioned in the Participant Information and Consent Form (PICF) in Burmese language. I used the PICF template recommended by the NUG MOH ERC with a few modifications of Part II (which originally is designed for written consent). The informed consent taking will always be conducted in the local language of the prospective participant, with the help of a translator if necessary. Care will be taken to prepare culturally appropriate and comprehensible explanations about the study **with a particular emphasis on the participant's right to withdraw from participation at any time without a reason and without any consequences**. After explaining the information and adequately answering all their questions, my colleagues will ask the potential participants for his/her consent to participate in the study. If the person consents to participate in the study, he/she will verbally reply in person or on the phone or online call to the recruiting person stating that he/she consents to participate in the study. He/She will not sign any paper or digital document for participanting in the study. To document the informed taking process, the person conducted the procedure will sign the form, and the witness, if applied, will also sign the form. The signed forms that contain their identifying information will be securely kept by the in-country facilitators and will not be forwarded to me for confidentiality reasons. I or the ERC may request the in-country facilitators for these forms in cases any ethical issues arise. I, the interviewer, will confirm the informed consent before the start of the interview session. If confirmed, participant's verbal consent

saying, *"I voluntarily consent to participate in the study as a study participant. I voluntarily consent for audio recording of the interview session with me"* will be audio-recorded at the start of the interview.

3. Confidentiality

As discussed above, violation of participant confidentiality may bring risks to the study participants, therefore, confidentiality of participation and participant identities will be secured in this study in all possible ways as already discussed above. All interview sessions will be arranged and facilitated with optimal privacy. We will not store personal identification information of study participants and will not share it outside the research team. We will not keep written documentation of participation in the study. We will always make all data in this study non-identifiable. All data-containing materials and documents such as the audio-records and transcripts will be securely stored in password-protected computers and UW Google Drive cloud servers, and they will be accessible only to the research team members. We will also ensure that findings in any form of reports or publications will be non-identifiable for the source of information (study participants).

END

Data collection plan (November 20, 2023)

1. Purpose of Data Collection:

The purpose of data collection is to gather in-depth qualitative insights into the experiences and perspectives of healthcare providers and community members in conflict-affected areas of Sagaing Region, Myanmar, following the 2021 military coup. The data collected will help fulfill the research objectives by exploring health needs, available healthcare services, challenges, and service gaps in the region.

2. Data Collection Methods

2.1. In-depth Interviews

- Conduct qualitative semi-structured in-depth interviews with healthcare providers and community members.
- Use open-ended questions guided by research objectives. Semi-structured interview topic guides are attached.
- Interviews will be conducted remotely via secure online platforms (Zoom, Signal, Telegram, Viber, WhatsApp, Messenger, etc.).
- Audio record all interviews with participants' consent for accurate transcription and analysis.
- Ensure privacy during interviews to encourage open and honest responses.

3. Sampling Strategy:

3.1. Sampling Technique and Sampling Frame:

- Purposive sampling will be employed to select participants.
- Aims to collect rich accounts of diverse experiences and perspectives of various healthcare providers and community members across the region.
- Target a diverse group of healthcare providers (doctors, nurses, health assistants, community health workers, etc.) and community members (patients, community leaders, etc.).
- Target healthcare providers at different levels of operation (leadership, policymaking, regional/country director, mid-level manager, field-level implementers, volunteers, etc.) from different types of organizations (government departments, non-government organizations, community service organizations, private, freelance, etc.)
- Target community members with diverse health experiences

- Target as much of the different geographical areas (both urban and rural areas) of Sagaing Region as possible.
- Regarding the types of healthcare providers and community members-
    - Frist-hand health service providers can be doctors (general practitioners, medical officers, or specialists), nurses, midwifes, health assistants, public health supervisor I/II, community health workers, volunteers, community members trained for healthcare, quacks, etc. working individually or in group, working independently or for an organization, department, or facility (government health facility, private health facility, refugee camp, NGO clinic, mobile clinic, etc.)
    - Healthcare providers at a management position can be team leaders, project managers, supervisors, coordinators, etc. working for an organization, department, or facility (mobile clinic, hospital, refugee camp, etc.)
    - Healthcare providers at a leadership or policymaking position program managers, program directors, area managers, regional coordinators, country directors, etc. working for an NGO, government health department, community-based organization, refugee camp, etc.
    - People providing administrative, financial, or logistic support for the services can be people from funding or donor organizations, staff from admin-logistic units of an organization, clinic, or refugee camp, or village administrator, or head of community-based organization.
    - Community members receiving the services can be people suffering from chronic diseases such as diabetes and hypertension, pregnant women or mothers with young children, people requiring long-term medication such as TB patients and PLHIVs, families in refugee camps, and village leaders or other key informants from the community.

3.2. Sample Size:

- An initial sample of 22 participants will be recruited, ensuring a mix of healthcare providers and community members to capture varied perspectives.

- Initial tentative numbers of participants from different categories are shown in the following table. The numbers will be adjusted before starting recruitment after discussion with State Health Administrative Team Sagaing Region.
- [Discussed in 11/11/2023 (Seattle time) meeting and the team discussed expected difficulties in recruiting some participant categories (highlighted grey in the following table). It is not mandatory to get all these participant categories. The Research Coordinator and the Principal Investigator will try their best and document their actions and recruitment results.)
- Recruitment of additional participants will be considered depending on the richness of the data collected from the following participants.

Table 1. Initial targeted numbers of study participants in different categories

Type of participants	Number	Description of potential participants
First-hand health service providers (they may have field-level management duties)	7	- 1 Doctor (field-based) from public or non-for-profit setting - 1 Doctor (facility-based) from public or non-for-profit setting - 1 Doctor from private sector (e.g., GP, private hospital) - 1 Nurse - 1 Health Assistant/Midwife/Public Health Supervisor I/II - 1 Volunteer/Community Health Worker - 1 Non-medical person engaging in healthcare provisions
Healthcare providers at a high- or mid-level management position	4	- 1 from public sector (e.g., NUG) - 1 from local non-for-profit sector (e.g., local NGO, CSO, CBO) - 1 from international non-for-profit sector (e.g., INGO) - 1 from private sector (e.g., private hospital)
Healthcare providers and others at leadership or policymaking position	4	- 1 from public sector (e.g., NUG) - 1 from local non-for-profit sector (e.g., local NGO, CSO, CBO) - 1 from international non-for-profit sector (e.g., INGO) - 1 from non-health sector (e.g., Sagaing Regional Administration)
People providing administrative, financial, or logistic support for the services	3	- 1 Administrative/Logistics support stuff (from ?) - 1 community leader (e.g., township/district administrator) - 1 Person from a donor or funding organization
Community members receiving the services	4	- 1 Person chronic diseases or elderly person - 1 Mother with young children or pregnant woman (at least a woman) - 1 People requiring long-term medication (e.g., TB patients, PLHIVs) - 1 Village leader or key informant from a village
Total	**22**	

3.3. Participant Recruitment:

- Research Coordinator(s) and Principal Investigator will utilize personal and professional networks in Sagaing Region to identify eligible participants.

- Most of the study participants will be recruited through a Research Coordinators as much as possible rather than directly by the Principal Investigator so that the identities of study participants will be blinded to the Principal Investigator and research team.

3.3.1. Recruitment procedure by a Research Coordinator

- When the Research Coordinator identified a potential study participant, he/she will provide clear information about the study, invite them to participate in the study, and obtain **verbal informed consent** from each participant.
- When a participant provides a verbal consent, the Research Coordinator assigns a 3-digit code number to the consented participant. Then, let the participant know their code number (probably by providing a piece of paper or sending a text message with the assigned code number in it).
- The Research Coordinator writes ONLY the code number on the informed consent form.
- The study participant must NOT sign a consent form or any other document. The Research Coordinator must NOT write participant's name or any other identification information on the informed consent form.
- The Research Coordinator then ticks the two checkboxes indicating that the participant has consented for participation in the study and the audio-recording of the interview.
- Then, the Research Coordinator signs and dates the consent form in the designated space.
- Prescence of a witness of the informed consent process is optional but encouraged. If applicable, the Witness also signs and dates the consent form in the designated space.
- Then, the Research Coordinator will discuss and arrange interview schedule with the consented participant.
- The Research Coordinator will remind the consented participant that
    - the Principal Investigator (interviewer) will ascertain the informed consent before the start of the interview, and
    - the Principal Investigator (interviewer) will take a voice recording of the participant verbally consentng, *"I voluntarily consent to participate in the study as a study participant"* and "*I voluntarily consent for audio recording of the interview session with me"*.

- The Research Coordinator can complete the recruitment process in person or through any other communication channels. If it happens virtually, use of internet-based communication through mobile direct messaging applications which allow end-to-end encryption (such as Signal, Telegram, Viber, etc.) is encouraged. Either calling or messaging through these applications is acceptable. Use of calling or messaging through mobile phone numbers must be reserved only for those situations where use of mobile direct messaging applications is not possible. In these cases, strict precautions must be taken for the security and safety of the study participants. In cases of any doubt, do not use direct calling or messaging mobile numbers.
- The Research Coordinator MUST not tell any personal or identification information of the study participants to the Principal Investigator.
- If the Research Coordinator makes temporary notes containing any identification information of the study participants during the recruitment to facilitate the research process, he or she must completely destroy all these notes when the data collection process ends.
- The Research Coordinator must document the signed informed consent forms and securely store them for 5 years so they can be presented to the Ethical Review Committee in cases of any ethical issues. If the Research Coordinator reports to a supervisor, the forms must be submitted to the supervisor at the end of data collection process and the supervisor will securely keep them for the same purpose. Securely keeping scanned copies of the informed consent forms is acceptable.

3.3.2. Recruitment procedure by the Principal Investigator

- The Principal Investigator must follow the exact same procedure and precautions as described above for participant recruitment and informed consent taking.
- For those participants recruited by himself, the Principal Investigator must securely keep the signed consent forms for 5 years for the same purpose as described above.

4. Data Collection Procedure:

4.1. Pre-Interview Preparation:

- The Research Coordinator schedules interviews at mutually convenient times for the interviewer (the Principal Investigator) and the participants.

- The Research Coordinator and the Principal Investigator may collaborate through an interview planner probably using Google Sheet, an internet-based mobile direct messaging application of choice, or email to regularly share -
    - participant code number
    - brief description of participant category
    - date and time of interview (local time of participant and/or Seattle time)
    - communication channel of participant's choice (Principal Investigator has access to Zoom, Google Meet, Microsoft Team, Signal, Viber, Telegram, WhatsApp, Messenger, and Instagram. Other channels are also possible if it ensures security.)
    - contact information (number or ID) to communicate through the channel of choice.
- The Research Coordinator will inform the participants to expect the call from researcher at the appointed data and time and to find a quiet, safe, and secure place with privacy and confidentiality for the interview. In cases, where the participant cannot find an appropriate place or cannot access internet, the Research Coordinator can arrange an appropriate venue and an internet access for the interview. Cost for internet access and transportation to the interview venue (if applicable) will be compensated.
- The Research Coordinator will inform the participants of the drills in cases of connection break during the interview and expected danger to the participant during the interview (**See 4.2.1. and 4.2.2.**).
- The Research Coordinator will send a reminder (call or message) to the participant before the day of the interview.

4.2. Conducting Interviews:

- On the date and time of the interview, the Principal Investigator residing in Seattle, Washington State, USA will call the study participants through online platform of their choice for the interview.
- To restrict the number of interviewers regarding the potentially sensitive nature of the data, only the Principal Investigator must conduct all the interviews alone with the study participants individually. Notetakers must not be allowed in the interviews.
- Both the interviewer and participant will ensure they are in a private setting where conversations cannot be overheard. For participants with limited technology literacy, a

trusted facilitator will assist the participant for the setup of the call after which the facilitator will leave the room or place to where the interview cannot be overheard.

- All interviews must be audio only. Live video must be turned off on the study participant's side throughout the call. The principal investigator will not ask the name or other identity of the study participants. Background and contextual information disclosed to the Principal Investigator will be limited to what the participants share during the interview.
- Audio recording of the interview will be done using a voice recorder and a mobile phone after obtaining consent. No video recording will take place.
- Before the start of the interview, the Principal Investigator will ascertain the participant code number, the informed consent of the participant and answer any remining questions. The Principal Investigator will not re-run the overall informed consent taking procedure. At the beginning of the interview, he will voice-record the participant consenting that, *"I voluntarily consent to participate in the study as a study participant"* and "*I voluntarily consent for audio recording of the interview session with me"*.
- The Principal Investigator will follow the semi-structured interview topic guides allowing flexibility for participants to express their thoughts. Interviews will be conducted in the Burmese language with cultural sensitivity to facilitate communication.
- The duration of each interview session is expected to range from 45 to 90 minutes, depending on participant availability and interview type.

4.2.1. In cases of connection break during the interview

- In cases where the call was dropped for any reasons from any side, the Principal Investigator will try to reconnect the participant-
    - Immediately
    - After 5 minutes
    - After 15 minutes
    - After 30 minutes.
- If he cannot reconnect with participant within 30 minutes, he will stop calling and inform the Research Coordinator about what happened. The Research Coordinator will contact the participant later at the earliest time of convenience and arrange another interview session if the participant still consents.

4.2.2. In cases of expected danger to the participant during the interview

- In cases where the participant encounters, expected to encounter, or suspected of encountering any kind of risk or danger during the interview or while waiting for the interview, he or she MUST stop the interview and drop the connection to move to safety IMMEDIATELY. He or she can do it even without giving any notice to the interviewer.
- He or she may contact the Research Coordinator later when they are safe and the Research Coordinator can arrange another interview session if the participant still consents.

4.3. Post-Interview Procedures:

4.3.1. Principal Investigator

- Stop audio recording and check quality of the audio files.
- Save audio recordings securely in the University of Washington-based Google Drive folder, ensuring confidentiality and compliance with ethical guidelines.
- Later share the audio recording to data transcriber for verbatim transcription in the Burmese language.
- Inform the Research Coordinator about accomplishment of the interview session, or any interruption so that the Research Coordinator may attempt to arrange another interview session.

4.3.2. Research Coordinator

- Either the interview session is successful or encounters any interruption at any point during the process, the Research Coordinator will contact the participant for remunerations. The remunerations namely the participant incentive, internet access cost, and (if applicable) transportation cost should be sent to the participant within 2 weeks whenever possible, or at the earliest time of convenience, in the most convenient and safest method for the participant and the Research Coordinator.
- The Research Coordinator must document the payment process in the best possible convenient and auditable way. In cases of difficulties in documenting signatures or transaction records, a note of transaction with signature of the Research Coordinator and countersignature of his/her supervisor is acceptable. These documentations must not

necessarily be sent to the Principal Investigator but must be kept by the Research Coordinator (or his/her supervisor) so they can be presented in cases of any dispute.

- The Principal Investigator will advance a certain amount of money to the Research Coordinator before starting the recruitment, and he will keep documentation of this transaction.

5. Data Management and Security:

- Store audio recordings and transcriptions in password-protected electronic devices.
- Use secure cloud storage platforms with access limited to authorized research team members.
- Remove any identifiable information during transcription to maintain participant confidentiality.
- Ensure that all team members adhere to strict data security protocols.
- Delete all audio records from all storage locations once data analysis is completed.
- Strictly follow the data management and security measures per the study protocol.

5.1. Research Data Confidentiality Agreement

- All research team members, data transcriber, research coordinators, or anyone facilitating any components of the research process MUST sign the Research Data Confidentiality Agreement.
- Signed documents of facilitating persons countersigned by the Principal Investigator must be kept by the Principal Investigator. Signed documents of facilitating persons countersigned by the Research Coordinator must be kept by the Research Coordinator (or his/her supervisor).

6. Timeline for Data Collection:

Week	Date (Tentative)	Activity	Deliverable
1	11/11/23 -	Develop a participant recruitment plan including documentation and payment plans	1 & 2
2	18/11/23 -	Recruit participants, arrange interviews, interview participants, and send participant compensation (3 – 5 participants per week) Regular meeting of Principal Investigators and Research Coordinators	3
3	25/11/23 -		
4	02/12/23 -		
5	09/12/23 -		
6	16/12/23 -		
7	23/12/23 -		
8	30/12/23 -	Compile final report	4

- Timeline is only indicative. It is expected that the data collection process may complete earlier that that depending on the convenience of participant recruitment and execution of interviews.
- It is also possible that the timeline may change depending on the local situations in the region, and the Research Coordinator will regularly update their plan with the Principal Investigator. Principal Investigator will try his best to follow the local team's plan.

7. Cooperation and reporting:

- Research Coordinator and Principal Investigator will schedule a weekly meeting to discuss and plan weekly data collection activities.
- Research Coordinator and Principal Investigator will regularly report State Health Administration Team Sagaing Region for progress of the data collection activities.
- At the end of data collection process, the Research Coordinators will compile a brief report summarizing the recruitment process, the number of participants invited to the study and the number of participants who declined the invitation (including their participant category), challenges overcome, and lessons learned.
- The Principal Investigator will compile the brief reports documenting the data collection process so that the interpretation and reporting of the research findings can be rationalized.

END

Data processing and analysis plan (February 4, 2024)

Data processing and analysis team

I will lead the data processing, analysis, and reporting, including the overall management of the whole process. TT, THA, and HLA **(initials are intentionally used here)** will help me with the transcription of the interviews. TT will help me with the coding and interpretation, and THA will be the third person in any disagreement between TT and me. Amy Hagopian and James Pfeiffer, my thesis committee, will supervise me and provide overall guidance at all steps. TT, THA, and HLA are master's degree-holding public health professionals.

1. Raw data

I conducted interviews through the Zoom, Signal, or Telegram applications on my laptop computer (MacBook). I used my phone (iPhone) (I used the Voice Memos application) and a voice recorder (Aiworth) to record the interviews. The raw data for the analysis are the audio records of the interviews, each approximately one to three hours. There will be two copies of audio records for each interview, in .mp3 and .m4a formats, respectively. I have checked the quality of the audio files, which are all good.

The audio records will be supported by

- a spreadsheet listing the participants and their interviews
- interviewer notes, which I contemporaneously produced after the interviews, reflecting my experiences and perceptions during the interviews and
- information regarding participant recruitment and interview arrangement by KMT and the Research Coordinator.

2. Data processing

The interview audio records will be transcribed verbatim in the original language (Burmese). AI-assisted transcription (Google Cloud Speech-to-Text API) will assist human transcription to save time and energy. (The original plan was human transcription only. However, the team with a limited number of transcribers needed to find assistance to complete the transcription within the available time.)

I (KMT) will transcribe the audio records of the interviews using Google Cloud Speech-to-Text API (https://cloud.google.com/speech-to-text/), using the language code: my-MM, alternative language code: en-US, transcription model: Chirp, API version: v2, and region: us-central1. It will transcribe the uploaded audio files in Burmese (with occasional English words spoken by the interview and the interviewee) into written transcripts in Burmese (with occasional English words). I learned from my testing that the AI-generated Burmese transcript is not 100% accurate but only 50-60% accurate (my estimate) with transcription errors, spelling errors, unrecognition of some dual-language conversations, and missing large chunks of conversations. However, I will save the AI-generated transcript outputs in Microsoft Word documents.

THA, HLA, TT, and I (Burmese-speaking public health professionals living in the United States, Japan, and Myanmar) will transcribe the interviews using the AI-generated drafts. We will listen to the audio records word by word, curate the transcripts, correct the errors, fill in the missing conversations, note the participants' voice expressions and actions, note the interview process, and format the conversation as planned. Whenever THA, HLA, and TT finish a transcript, I will check the quality and accuracy of the transcript and ensure that the transcript is completely de-identified by replacing the names and other information of townships, cities, villages, hospitals, clinics, organizations, departments, etc. with appropriate non-identifying words or phrases so that anyone reading the transcript cannot identify the study participant and their affiliations. I will import the quality-checked de-identified interview transcripts into the NVivo software for analysis.

To meet the data confidentiality requirements of the Ethical Review Committee of the National Unity Government Ministry of Health, I limited the number of people with access to the raw and curated data to as few as possible. I have also reported the complete profile of all team members with access to the data to the Sagaing State Health Administration Team Leader. Moreover, everyone with access to the research data commits to strictly follow the Data Confidentiality Agreement signed at the time of recruitment. All audio records, interview notes, and transcripts are securely stored in a University of Washington-based Google Drive folder I (KMT) manage. Team members have limited access only to the designated subfolders on the Drive. THA, HLA, and TT can download the audio files onto their personal computers and work on the transcription

on their personal computers. However, after uploading the transcripts into the team's folder, they must completely delete all data-containing materials from their computers. All audio records will be deleted from all storage locations once data analysis is completed.

3. Data analysis methods and procedures

I will employ a thematic analysis using a deductive and inductive approach, following the steps outlined by Miles, Huberman, and Saldaña's approach. We will start with careful and immersive reading and re-reading of the transcripts to gain familiarity with the data and a deep understanding of the participants' experiences and perspectives. Then, two cycles of coding will follow. The first coding cycle will include assigning codes to selected data chunks or segments from the large body of data. We expect to apply descriptive, process, causation, and some evaluation coding based on our study objectives. In the second cycle of coding, pattern coding, we will summarize the coded data segments into meaning constructs, categories, and themes. We will present the findings mostly in narrative descriptions. We will also try to present some findings in matrices and networks.

We will do the analysis using verbatim transcripts in Burmese. We will use NVivo 14 to assist in the process. TT and I will primarily do the coding. THA will join the coding in cases of any unresolved disagreements in coding. AH and JP will continuously supervise the whole analysis process.

Preliminary coding frame

First, through a series of weekly meetings, TT and I have developed a preliminary coding frame with multiple levels in NVivo based on the research questions, theoretical constructs of the WHO Health System Framework, interview questions, and preformed knowledge of TT and me about the health system and ongoing armed conflicts in Myanmar and Sagaing Region (the deductive component of the analysis). In the coding frame, we included constructs, domains, and high-level codes addressing the research questions, such as healthcare needs, healthcare services, healthcare providers, challenges, health service gaps, and solutions used or suggested by the participants regarding different health system building blocks, outcomes, and attributes. Based on our knowledge, we also included some detailed-level codes, which we expected to find in the

data. Otherwise, we created a high-level code (category or domain) and left it open to create subcodes under it later. We also discussed the code definitions of all codes and coding mechanisms that we will apply.

First-cycle coding

To ensure the reliability and quality of the analysis, TT and I will independently code the data, and any discrepancies will be resolved through discussion and consensus. First, we will start coding three or five rich transcripts independently using the preliminary coding frame in NVivo. If there is a predefined code in the framework, we will code the relevant data segments under it. If there is no predefined code in the coding frame for an unexpected finding, we will create a new code, including its code definition (independently). We will modify the existing codes in the coding frame whenever required. Moreover, we will use the preliminary coding frame only as a flexible roadmap or general guidance of the coding process. While following the agreed coding mechanism, we will be very open to new and unexpected findings and creating new codes at any stage. The coding frame will also be flexible for big and small changes and modifications (the inductive component of the analysis).

We will follow these rules in the coding.

- We will code the data idea by idea (concept by concept), i.e., we may code more than one sentence of the data, or a whole paragraph, into a single code if they fit into the single code. We will NOT code line by line.
- We may code a data segment into multiple codes if it pertains to different ideas or concepts.
- We may include words spoken by the interviewer when coding the following participant's answer so that it is easier to understand the context of the data in the later steps of the analysis.

In the following week, when we finish coding the first three or five transcripts, TT and I will meet, merge the independently coded NVivo projects, and assess the agreement and disagreements in our coding. We will discuss and resolve the disagreements and ask THA's

opinion wherever required. We will also discuss the new codes we independently added to the coding frame and, if agreed, will modify the coding frame accordingly.

TT and I will independently code the next three or five transcripts using the modified transcripts the following week. Then, we will meet again at the end of the week to discuss and adjust the codes. We will repeat the same process until we finish coding all transcripts.

Second cycle coding

After all transcripts are coded, TT and I will discuss how to group the individual codes into meaningful categories and themes in relation to the research questions. After setting a common goal, we will independently do the pattern coding. We will systematically review the codes and sort them into potential themes. After that, we will discuss, get a consensus, and plan for interpretation and report writing.

Additional aspects of analysis

In the data collection, while sticking to the original research objectives and interview questions, I tried to incorporate new questions or topics into the later interviews based on the topics or themes discussed in the previous interviews. The purpose is mainly to explain, clarify, elaborate, or compare the new topics or situations introduced in the previous interviews. I also got a chance to attend Sagaing Health Assembly, where all healthcare providers in Sagaing Region (mainly those affiliated with Sagaing SHAT) attended to present challenges and gaps in healthcare provision and propose solutions to the SHAT. I also introduced new topics (that I learned from the assembly and that were not covered in my last interview questions) in the last three interviews.

In NVivo, we will code the data by the speakers (Case coding in NVivo) and classify their attributes such as gender, type of participant, and place of residence or health service. With these tags, we can perform subgroup or clustered analysis and compare the findings of different cases if required.

As a secondary outcome of the study, we will investigate the relationships between codes or themes identified from the interviews. Depending on the time available, as a third coding round, we will identify the data segments that describe any relationships between concepts presented by the participants and code them under relationship codes. (The relationship coding function is available in NVivo Windows but not the Mac version. Therefore, a regular code will be used as a relationship code). For example, causes of priority health needs in the region and causes and consequences of challenges in healthcare provisions in the regions.

Interpretation and reporting

Once TT and I have finished the pattern coding and discussed the themes with AH and JP, I will start drafting the result section of the report. Detailed analysis and interpretation of the themes, defining and refining the themes, and elaborating the findings under each theme will be made along with the writing. After completing each session, I will discuss it with TT, AH, and JP and make the necessary changes.

I will present the findings in narrative descriptions by section, answering research questions: Priority health needs, available healthcare providers and services, health service gaps, strengths and challenges in healthcare provisions, and recommendations for improved healthcare in the region. Each reported finding will include the identified themes, elaboration of the themes, and supporting evidence through illustrative interview quotes.

Additionally, I will present two matrices to illustrate the health service gaps and challenges in healthcare provisions. The first matrix will cross-tabulate the priority health problems, available health services for the problems, providers providing the services, and inadequate or missing services in addressing the problems. The purpose of the matrix is to highlight the health service gaps in the region. The second matrix will lay out the challenges in healthcare provision, current solutions by the providers, and recommendations for improvement. The matrix aims to highlight the region's local-initiated strategies for improved healthcare. An additional matrix will be the region's SWOT analysis of healthcare provision (depending on available time). In addition, I will present two (or more) network diagrams to demonstrate the factors influencing and resulting

from the health problems and strengths and/or challenges in the healthcare provision in the region.

4. Member checking

During interviews, I asked some (about one-third of the) study participants if they would like to review the written transcript so they could check the accuracy of contents, ensure the de-identification of their information is enough, and remove some information they wish not included in the analysis. Only two participants said yes. I did not ask the rest I needed to pay more attention to the internet connectivity and the ability to talk to the participants. Moreover, member checking of transcripts was also not part of my plan. It could be difficult to send the transcripts directly to most participants connected through the Research Coordinator, where data confidentiality can be an issue. However, I have asked and will ask some participants I can directly contact for member checking of their transcripts after we finish their transcripts.

More importantly, I will perform member checking of the synthesized findings with the study participants and some health stakeholders when I finish the data analysis and have the preliminary findings. The purpose is to validate if my study findings are meaningful in the context of the Sagaing Region and the perspectives of the health stakeholders in the region.

I will send my drafted preliminary findings to the study participants and ask for their feedback on

- whether my study findings resonate with the points they discussed in the interviews,
- whether my study findings are consistent with their understanding of the existing context of the Sagaing Region and the sampled townships,
- whether my interpretations and conclusion are reasonable,
- any information they want to add to my study findings and any additional steps I need to do, and
- any findings that they do not want me to report publicly for the sake of information confidentiality and any potential harm to the health services and healthcare workers in the region.

Distribution of the findings and receiving and discussing findings will happen individually or in groups depending on the possible arrangement plan from the participants and Sagaing Region SHAT. I also expect some participants, especially the community members, may have technical and logistic difficulties and miss the process.

Ethics Review Committee
Ministry of Health
National Unity Government
The Republic of Union of Myanmar

Participant Information and Consent Form

This informed consent is for the interview participants who are invited to participate in the research entitled *"Experiences and Perspectives of Healthcare Providers and Community Members in Conflict-affected Areas of Sagaing Region, Myanmar after 2021 Military Coup: A qualitative study"*.

Name of Principal Investigator:	Dr. Kaung Myat Thu
Name of Organization:	Candidate for Master of Public Health, University of Washington, Seattle, United States of America
Title of the Study:	Experiences and Perspectives of Healthcare Providers and Community Members in Conflict-affected Areas of Myanmar after 2021 Military Coup: A qualitative study

PART I: Information Sheet

Introduction

I am Kaung Myat Thu. I am a candidate for Master of Public Health at the University of Washington, Seattle, USA. I am doing research on *"Experiences and Perspectives of Healthcare Providers and Community Members in Conflict-affected Areas of Sagaing Region, Myanmar after 2021 Military Coup: A qualitative study"*. I am going to give you information, invite you to participate in this research and asked your permission to include in the study. There may be some words that you do not understand. If you do not understand any word, you can ask me or other research team members at any time.

Purpose

The purpose of the study is to investigate the experiences and perspectives of healthcare providers and community members regarding the health needs and service provisions in conflict affected areas of Sagaing Region where the government public healthcare services are not functioning. This study will provide insights into how the 2021 military coup and ongoing internal conflicts have affected the health needs and service provisions in the region from the perspectives of the healthcare providers and community members. Findings of this study will inform various local and international stakeholders and policymakers with the current healthcare needs in Sagaing Region and enable them to develop better health and humanitarian support strategies for the region and other conflict-affected areas of Myanmar.

Participant selection
You are invited to take part in this research since you are eligible to include in the study.

Voluntary Participation
Your participation in this research is entirely voluntary. It is your choice whether to participate or not. It will not affect any medical care and any services you are receiving even if you choose not to participate. You may change your mind later and stop participating even if you agreed earlier.

Procedures and Protocol
If you agree to participate in the study, we would like you to answer an interview through an online platform preferably Zoom, or Signal, Telegram, or any platform of your convenience. The interview questions will ask the general information of you, health needs in your area, health services you are providing/receiving, challenges you encounter in providing/receiving the services, and gaps in the services. All interviews will be conducted at a convenient and private room. If you consent, we will take an audio-record of the interview session. But we will not take any video record of the interview and you can also turn off your live video during the interview.

Duration
You need to take part in the study for one time and the interview will take about 45 – 90 minutes.

Risks and discomfort
The data collection (interview) procedure will pose only minimal risk to you. During the interviews, you may feel some discomfort discussing some personal experiences of delivering care in a conflict setting and related politically sensitive issues. The data collection procedure will not include any forms of measurement, treatments, or other forms of intervention, so no risk related to such treatment procedures. However, **participation in the study may pose minimal to serious risk for you**, as your work is conducted outside the authority of the ruling regime. Since some information discussed in the interview may be politically sensitive and freedom of expression is poor in the current context of the country, exposure of your identities may bring mild to serious negative consequences to you such as being detained by the military or sentenced to prison at worst.
To minimize these risks, the interview will be arranged to be in a private place where other people cannot overhear the conversations. Moreover, you may refuse to answer any question of the interview, without any consequences, if you feel the question(s) are personal or if talking about them makes you uncomfortable. You are also allowed to turn off your live video during the interview. You can also refuse the audio recording if are not comfortable, and we will only take written notes during the interview. Moreover, we will not take any signed written documentation of your consent for participation in the study. Moreover, we will not store any written record of your personal identification information. Reporting of study findings will also ensure that the

source person of information is non-identifiable. Moreover, we will ensure strict anonymity and confidentiality for all data containing materials in our study.

Benefits

Participation in the study will not make direct benefit to you. You will not receive any medicine, treatment, monetary support, or non-monetary supports by participating in the study. However, participation may provide you with an opportunity to review and reflect on your experiences, which can have some therapeutic effects.

Moreover, I believe the study can indirectly benefit all people in the conflict-affected areas of Sagaing Region including you by informing different local and international stakeholders with improved healthcare services and humanitarian and health support strategies for the region.

Incentives

You will receive MMK10,000 (~USD4.8) as an appreciation of your participation and compensation of their time spent for participation in this study. You will receive MMK8,500 (~USD4.0) to compensate your cost for the internet access for the online interview. If you needed to travel to participate in the study, an appropriate transportation cost will be reimbursed to you. Apart from them, other forms of remuneration will not be provided to you. We will send the remuneration money to you through an online banking transfer of your preference within a week after participation in the study.

Confidentiality

Anonymity and confidentiality of the information will be ensured and only researchers will have access to the information. We will not be sharing information about you to anyone outside of the research team. The information that we collect from this research project will be kept private. The audio records and interview transcripts will be securely stored in password protected cloud drives and computers. We will make sure that the audio records and transcripts do not contain any information of your identity. Any information about you will have a number on it instead of the name. Only the researchers will know what your number is, and we will lock that information up with a lock and key. It will not be shared with or given to anyone except the investigators. We will not include your name or identifiable information in reports. The audio records will be deleted at the end the study.

Sharing the Results

The knowledge that we get from this research will be published so that other interested people may learn from the research.

Who to Contact

If you have any questions, you can ask me or the research team members now or later. If you wish to ask questions, you may contact Dr. Kaung Myat Thu, 4225 11th Ave NE Apt 103, 98105, Seattle, WA, USA, Phone: +1(206) 660-8847 (mobile phone call, or through Viber, Signal, Telegram, or WhatsApp), +95 9 880 147 730, Email: kthu2@uw.edu).

This proposal has been reviewed and approved by the Ethics Review Committee, Ministry of Health, National Unity Government which is a committee whose task is to make sure that research participants are protected from harm. If you wish to find out more about the Committee, please contact the secretariat team of the committee (erc@moh.nugmyanmar.org).

PART II: Informed consent

By verbally consenting to participate in the study, I completely understand and agree the following statements:

I have been invited to participate in research entitled *"Experiences and Perspectives of Healthcare Providers and Community Members in Conflict-affected Areas of Sagaing Region, Myanmar after 2021 Military Coup: A qualitative study"*. I understand that I have to participate to answer the interview which will last about 45 – 90 minutes. I have been informed about the potential risks of participating in the research. I am aware that there may be no direct benefit for me personally and I will be paid 10,000 Kyats. I have been provided with the name and address of a researcher who can be easily contacted. I have read the forgoing information, or it has been read to me. I have had the opportunity to ask questions about it, and any questions that I have asked have been answered to my satisfaction. I understand that participation in this study is voluntary without being enforced by any person, and I have the right to withdraw from the study at any time without any consequences.

- ☐ I voluntarily consent to participate in the study as a study participant.
- ☐ I voluntarily consent for audio recording of the interview session with me.

Code number of study participant: ☐-☐-☐

Person who conducted the informed consent taking

Signature: _____
Name: _____
Designation: _____
_____

Witness (if applicable)

Signature: _____
Name: _____
Designation: _____
_____

လူပုဂ္ဂိုလ်များအပေါ် သုတေသနဆောင်ရွက်မှုဆိုင်ရာ ကျင့်ဝတ်ကော်မတီ
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ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်

သုတေသနလုပ်ငန်းတွင်ပါဝင်ဆောင်ရွက်ရန် သဘောတူညီချက်တောင်းခံခြင်း

ဤသဘောတူညီချက်ပုံစံသည် "၂၀၂၁ ခုနှစ် စစ်အာဏာသိမ်းမှုဖြစ်ပွားပြီးနောက် မြန်မာနိုင်ငံ စစ်ကိုင်းတိုင်းဒေသကြီး၏ ပဋိပက္ခဖြစ်ပွားနေသော ဒေသများရှိ ကျန်းမာရေးစောင့်ရှောက်မှုပေးနေသူများနှင့် ပြည်သူများ၏ အတွေ့အကြုံနှင့် အတွေးအမြင်များကို လေ့လာသော သုတေသန" တွင် ပါဝင်ရန် ဖိတ်ခေါ်ခြင်း ဖြစ်ပါသည်။

အဓိကသုတေသီအမည် - ဒေါက်တာကောင်းမြတ်သူ
အဖွဲ့အစည်းအမည် - ပြည်သူ့ကျန်းမာရေးမဟာဗျူဟာကြိုကျောင်းသား၊ ဝါရှင်တန်တက္ကသိုလ်၊ ဆီယာတယ် မြို့၊ အမေရိကန်ပြည်ထောင်စု
သုတေသနခေါင်းစဉ် - ၂၀၂၁ ခုနှစ် စစ်အာဏာသိမ်းမှုဖြစ်ပွားပြီးနောက် မြန်မာနိုင်ငံ စစ်ကိုင်းတိုင်းဒေသကြီး၏ ပဋိပက္ခဖြစ်ပွားနေသော ဒေသများရှိ ကျန်းမာရေးစောင့်ရှောက်မှုပေးနေသူများ နှင့် ပြည်သူများ၏ အတွေ့အကြုံနှင့် အတွေးအမြင်များကို လေ့လာသော သုတေသန

အပိုင်း(၁) သုတေသနအချက်အလက်များ

နှုတ်ခွန်းဆက်
ကျွန်တော်သည် အမေရိကန်ပြည်ထောင်စု၊ ဆီယာတယ်မြို့၊ ဝါရှင်တန်တက္ကသိုလ်တွင် ပြည်သူ့ကျန်းမာရေးမဟာဗျူဟာအတွက် ပညာသင်ယူနေသော ဘွဲ့ကြိုကျောင်းသား ဒေါက်တာကောင်းမြတ်သူ ဖြစ်ပါသည်။ ကျွန်တော်သည် "၂၀၂၁ ခုနှစ် စစ်အာဏာသိမ်းမှုဖြစ်ပွားပြီးနောက် မြန်မာနိုင်ငံ စစ်ကိုင်းတိုင်းဒေသကြီး၏ ပဋိပက္ခဖြစ်ပွားနေသော ဒေသများရှိ ကျန်းမာရေး စောင့်ရှောက်မှုပေးနေသူများနှင့် ပြည်သူများ၏ အတွေ့အကြုံနှင့် အတွေးအမြင်များကို လေ့လာသော သုတေသန" ကို လုပ်ဆောင်မည် ဖြစ်ပါသည်။ ဆောင်ရွက်မည့်သုတေသနအကြောင်းပြောပြ၍ သင့်ကို သုတေ သနတွင်ပါဝင်ရန် ဖိတ်ခေါ်အပ်ပါသည်။ နားမလည်သော စကားရပ်များ ရှိပါက ကျွန်ုပ် (သို့မဟုတ်) သုတေသန အဖွဲ့တွင် ပါဝင်သူတစ်ဦးဦးအား အချိန်မရွေး မေးမြန်းနိုင်ပါသည်။

သုတေသနလုပ်ငန်းရည်ရွယ်ချက်

ဤသုတေသနသည် ၂၀၂၁ ခုနှစ် စစ်အာဏာသိမ်းမှုဖြစ်ပွားပြီးနောက် မြန်မာနိုင်ငံ၊ စစ်ကိုင်းတိုင်း၏ ပဋိပက္ခ ဖြစ်ပွားနေသော၊ ယခင်ရရှိနေကျ အစိုးရကျန်းမာရေးဝန်ဆောင်မှုများ မရရှိနိုင်တော့သော ဒေသများရှိ ကျန်းမာရေးစောင့်ရှောက်မှုပေးနေသူများနှင့် ပြည်သူများ၏ ကျန်းမာရေးလိုအပ်ချက်များ၊ ကျန်းမာရေးစောင့်ရှောက်မှုလုပ်ငန်းများနှင့် ပတ်သက်သော အတွေ့အကြုံနှင့် အတွေးအမြင်များကို လေ့လာရန် ရည်ရွယ်ပါသည်။ ၂၀၂၁ ခုနှစ် စစ်အာဏာသိမ်းမှုနှင့် နောက်ဆက်တွဲ ပဋိပက္ခများသည် စစ်ကိုင်းတိုင်းအတွင်းရှိ ကျန်မာရေးလိုအပ်ချက်များ၊ ကျန်းမာရေးစောင့်ရှောက်မှုလုပ်ငန်းများအပေါ် မည်သို့ အကျိုးသက်ရောက်မှု ရှိစေခဲ့ကြောင်း ကျန်းမာရေးစောင့်ရှောက်မှုပေးနေသူများနှင့် ပြည်သူများ၏ ရှုထောင့်မှ လေ့လာသိရှိရမည်ဟု မျှော်လင့်ပါသည်။ စစ်ကိုင်းတိုင်းနှင့် ပဋိပက္ခဒဏ်ခံစားနေရသော အခြားဒေသများအတွက် ကျန်းမာရေးနှင့် အခြားလူသားချင်းစာနာထောက်မှုအကူအညီပေးနေသော ပြည်တွင်းပြည်ပ အဖွဲ့အစည်းများ ပုဂ္ဂိုလ်များကို လက်ရှိဖြစ်ပေါ်နေသော ကျန်းမာရေးလိုအပ်ချက်များနှင့် ပတ်သက်သော သုတေသနတွေ့ရှိချက်များမှတစ်ဆင့် အကူအညီပေးနိုင်ရန်၊ ထိုမှတစ်ဆင့် ထိုဒေသများအတွင်း ပိုမိုကောင်းမွန်သော ကျန်းမာရေးစောင့်ရှောက်မှုများ၊ လူသားချင်းစာနာထောက်ထားမှုအကူအညီများ ရရှိလာနိုင်ရန် မျှော်လင့်ပါသည်။

သုတေသနတွင် ပါဝင်မည့်သူများကို ရွေးချယ်ခြင်း

သင်သည် ယခု သုတေသနတွင်ပါဝင်ရန် အကြိုးဝင်သူတစ်ဦး ဖြစ်၍ ပါဝင်ရန် ဖိတ်ခေါ်ခြင်း ဖြစ်ပါသည်။

မိမိဆန္ဒအရ သုတေသနတွင်ပါဝင်ခြင်း

ဤသုတေသနတွင်ပါဝင်ခြင်းမှာ သင်၏လွတ်လပ်သော သဘောဆန္ဒအရသာ ဖြစ်ပါသည်။ ပါဝင်ခြင်းမရှိပါကလည်း သင်၏ကျန်းမာရေးစောင့်ရှောက်မှုကို မည်သို့မှ ထိခိုက်စေမည် မဟုတ်ပါ။ ဤသုတေသနလုပ်ငန်းတွင် ပထမပါဝင်ရန် သဘောတူခဲ့သော်လည်း အချိန်မရွေး အကြောင်းပြ ချက်မလိုဘဲ နုတ်ထွက်ခွင့် ရှိပါသည်။

သုတေသနလုပ်ငန်းလုပ်ဆောင်ချက်

သင်သဘောတူပါက သုတေသနတွင်ပါဝင်ရန် ဖိတ်ခေါ်ပါသည်။ ဤသုတေသနတွင် သင့်ကို အွန်လိုင်းမှတစ်ဆင့် တွေ့ဆုံမေးမြန်းခြင်း ပြုလုပ်မည်ဖြစ်ပါသည်။ Zoom, Signal, Telegram, Viber စသည့် သင့်အတွက်အဆင်ပြေသည့် အွန်လိုင်းအပလီကေးရှင်းတစ်ခုခုကို အသုံးပြုမည် ဖြစ်ပါသည်။ တွေ့ဆုံမေးမြန်းခြင်းတွင် သင့်အကြောင်း၊ သင်နေထိုင်ရာ (သို့) သင်ကျန်းမာရေးဝန်ဆောင်မှုပေးနေရာ ဒေသရှိ ကျန်းမာရေးလိုအပ်ချက်များ၊ သင်ပေးအပ်နေသော (သို့) သင်ရယူနေသော ကျန်းမာရေးစောင့်ရှောက်မှုလုပ်ငန်းများ၊ ထိုလုပ်ငန်းများအတွင်း သင်ကြုံတွေ့ရသော အခက်အခဲများ၊ ကျန်းမာရေးဝန်ဆောင်မှုလိုအပ်ချက်များ အကြောင်း မေးမြန်းသွားမည် ဖြစ်ပါသည်။ တွေ့ဆုံမေးမြန်းခြင်းကို သက်တောင့်သက်သာရှိပြီး သီးသန့်ဖြစ်သော အခန်းတွင် ပြုလုပ်ပါမည်။ သင်သဘောတူပါက တွေ့ဆုံမြေးမြန်းစဉ် ပြောဆိုသည်များကို အသံသွင်းမှတ်တမ်း ရယူထားမည် ဖြစ်ပါသည်။ သို့သော်

ဗွီဒီယိုမှတ်တမ်း ရယူထားမည် မဟုတ်ပါ။ သင်သက်သောင့်သက်သာမဖြစ်ပါက တွေ့ဆုံမေးမြန်းနေစဉ်အတွင်း သင့်ဗွီဒီယိုကို ပိတ်ထားနိုင်ပါသည်။

ကြာမြင့်ချိန်

ဤသုတေသနတွင် သင့်အနေဖြင့် တစ်ကြိမ်သာ ပါဝင်ပေးရမည်ဖြစ်ပြီး မိနစ် (၄၅ မှ ၉၀) ခန့် အချိန် ပေးရမည် ဖြစ်ပါသည်။

ထိခိုက်နစ်နာမှု ဖြစ်နိုင်ခြေ

တွေ့ဆုံမေးမြန်းခြင်းဖြစ်စဉ်သက်သက်သည် သင့်အတွက် ကြီးမားသော ထိခိုက်နစ်နာမှု ဖြစ်စေလိမ့်မည် မဟုတ်ပါ။ တွေ့ဆုံမေးမြန်းစဉ်အတွင်း မေးမြန်းသော ပဋိပက္ခအခြေအနေအတွင်း ကျန်းမာရေးဝန်ဆောင်းမှုပေးခဲ့သော သင့် အတွေ့အကြုံနှင့် ပတ်သက်သော၊ နိုင်ငံရေးနှင့်ပတ်သက်ဆက်နွယ်သော အချို့မေးခွန်းများသည် သင့်အတွက် စိတ်အနှောက်အယှက်အနည်းငယ်ဖြစ်နိုင်ပါသည်။ ဤသုတေသနတွင် သင့်ခန္ဓာကိုယ်၊ သင့်ကျန်းမာရေးနှင့် ပတ်သက်သော စစ်ဆေးတိုင်းတာခြင်းများ၊ ဆေးဝါးတိုက်ကျွေးခြင်း၊ ကုသခြင်းများ မပါဝင်သောကြောင့် ထိုလုပ်ငန်းဆောင်တာများနှင့်ပတ်သက်သော ဘေးထွက်ဆိုးကျိုးများ၊ ဘေးအန္တရာယ်များ ခံစားရနိုင်ခြေလည်း မရှိပါ။ သို့သော် သင်ကျန်းမာရေးစောင့်ရှောက်မှုပေးနေသော (သို့) ရယူနေသောနေရာသည် စစ်ကောင်စီထိန်းချုပ်နယ်မြေ၏ ပြင်ပတွင်လည်း ဖြစ်နေနိုင်ပါသည်။ တွေ့ဆုံဆွေးနွေးရာတွင် ဆွေးနွေးရသော အချို့အကြောင်းအရာများသည် နိုင်ငံရေးအရ စဉ်းစားချင့်ချိန်ပြောဆိုရသော ကိစ္စများလည်း ဖြစ်နေနိုင်ပါသည်။ သို့သော် လက်ရှိနိုင်ငံရေးအခြေအနေတွင် အာဏာသိမ်းစစ်ကောင်စီသည် လွတ်လပ်စွာပြောဆိုပိုင်ခွင့်ကို ဖိနှိပ်ထားဆဲ ဖြစ်ပါသည်။ ထို့ကြောင့် ဤသုတေနသတွင် ပါဝင်ခြင်း၊ အာဏာသိမ်းစစ်ကောင်စီ အလိုမကျသော အချို့ကိစ္စများကို ဆွေးနွေးခြင်း၊ ထိုသို့ပါဝင်ဆွေးနွေးခဲ့ကြောင်း စစ်ကောင်စီက ထုတ်ဖော်ထိသိရှိသွားခြင်းအားဖြင့် စစ်ကောင်စီ၏ ရန်ညှိုးထားခြင်း၊ ဖမ်းဆီးထောင်ချနိုင် သော ပုဒ်မအတတ်ခံရခြင်းများ ရှိနိုင်ပါသည်။

သို့သော် ကျွန်တော်တို့အနေဖြင့် သုတေသနတွင်ပါဝင်သော သူများထံ ထိုအန္တရာယ်များ မကျရောက်အောင် အတတ်နိုင်ဆုံး ကာကွယ်သွားမည် အောက်ပါအတိုင်း စီစဉ်ထားပါသည်။ တွေ့ဆုံမေးမြန်းခြင်းကို အခြားသူများ မသိနိုင်မကြားနိုင်သော နေရာများတွင် ဆောင်ရွက်နိုင်အောင် စီစဉ်ပေးမည် ဖြစ်ပါသည်။ တွေ့ဆုံမေးမြန်းစဉ်မှာလည်း မိမိမဖြေကြားလိုသော မေးခွန်းများ၊ ပုဂ္ဂိုလ်ရေးဆန်သည်ဟု သင်ထင်သောမေးခွန်းများကို မဖြေဘဲနေနိုင်ပါသည်။ သင်သက်သောင့်သက်သာမဖြစ်ပါက တွေ့ဆုံမေးမြန်းနေစဉ်အတွင်း သင့်ဗွီဒီယိုကို ပိတ်ထားနိုင်ပါသည်။ သင်ဗွီဒီယိုဖွင့်ထားပါကလည်း ဗွီဒီယိုမှတ်တမ်း ရယူမည်မဟုတ်ပါ။ အသံသွင်းမှတ်တမ်း မယူစေလိုပါကလည်း ငြင်းဆိုနိုင်ပါသည်။ ပြောဆိုဆွေးနွေးချက်များကို သုတေသီမှ လက်ရေးမှတ်တမ်းဖြင့်သာ မှတ်တမ်းရယူမည် ဖြစ်ပါသည်။ ထို့ပြင် သင် သုတေသနတွင် ပါဝင်ရန် ခွင့်ပြုချက်ပေးခဲ့ကြောင်း (နာမည်၊ လက်မှတ်၊ နေရပ်လိပ်စာ စသည် ပါဝင်သော) ခွင့်ပြုချက်မှတ်တမ်းကိုလည်း ဤသုတေသနတွင် မှတ်တမ်းရယူထားမည် မဟုတ်ပါ။ ထို့ပြင် သင့်နာမည်၊ နေရပ်လိပ်စာ စသည့် သင့်ကိုယ်ရေးအချက်အလက်များကိုလည်း ဤသုတေသနတွင် မှတ်တမ်းယူ

ထားမည် မဟုတ်ပါ။ သုတေသနတွေ့ရှိချက်များကို တင်ပြရာတွင်လည်း မည်သူမည်ဝါက ပြောဆိုဆွေးနွေးခဲ့ကြောင်း မသိရှိနိုင်အောင် တင်ပြမည် ဖြစ်ပါသည်။ သုတေသနတွင် မည်သူမည်ဝါများ ပါဝင်ခဲ့ကြောင်း မသိရှိစေရန်၊ ပါဝင်သူများ၏ ကိုယ်ရေး အချက်အလက်များ မပေါက်ကြားစေရန် သုတေသီများမှ အထူးဂရုစိုက်လုပ်ဆောင်သွားမည် ဖြစ်ပါသည်။

အကျိုးကျေးဇူး

ဤသုတေသနတွင်ပါဝင်ခြင်းဖြင့် သင့်အတွက် တိုက်ရိုက်အကျိုးကျေးဇူးမရှိနိုင်ပါ။ ဤသုတေသနတွင်ပါဝင်ခြင်းအားဖြင့် ဆေးဝါးကုသမှု၊ ငွေကြေးထောက်ပံ့မှု၊ ငွေကြေးမဟုတ်သော အခြားထောက်ပံ့မှု မည်သည့်အထောက်အပံ့မျိုးမှ ရရှိမည်မဟုတ်ပါ။ သို့သော် တွေ့ဆုံဆွေးနွေးခြင်းတွင် ပါဝင်ခြင်းအားဖြင့် မိမိ၏အတွေ့အကြုံ အတွေးအမြင်များကို ဖွင့်ဟဆေးနွေးပြောဆိုရခြင်းအားဖြင့် စိတ်ကျန်းမာရေးကောင်းကျိုးအချို့ ရရှိနိုင်ပါသည်။ ထို့ပြင် ဤသုတေသနတွင် သင် ပါဝင်ကူညီခြင်းအားဖြင့် စစ်ကိုင်းတိုင်းနှင့် ပဋိပက္ခဒဏ်ခံစားနေရသော အခြားဒေသများအတွက် ကျန်းမာရေးနှင့် အခြားလူသားခြင်းစာနာထောက်ထားမှုအကူအညီပေးရေးလုပ်ငန်းများ ပိုမိုကောင်းမွန်လာစေရန်အထောက်အကူပြုနိုင်မည် ဖြစ်ပါသည်။

ကျေးဇူးတုံ့ပြန်မှု

သင်၏ အချိန်ပေးဖြေကြားမှုကို ကျေးဇူးတုံ့ပြန်သောအားဖြင့် ငွေကျပ် (၁၀၀၀၀) ရရှိပါမည်။ အွန်လိုင်းမှတစ်ဆင့် တွေ့ဆုံဆွေးနွေးရသည် ဖြစ်သောကြောင့် အင်တာနက်အသုံးစရိတ်အဖြစ် ငွေကျပ် (၈၅၀၀) ကျပ် ရရှိပါမည်။ ဤသုတေသနတွင်ပါဝင်ရန် ခရီးသွားလာရခြင်း ရှိခဲ့ပါက သင့်တင့်သောခရီးစရိတ်ကျသင့်ငွေကို သုတေသနမှ ကျခံပေးမည် ဖြစ်ပါသည်။ ထိုငွေများကို သုတေသနတွင် ပါဝင်ပြီးနောက် ရက်သတ္တပတ်တစ်ပတ်အတွင် သင်အသုံးပြုသော အွန်လိုင်းဘဏ်စနစ်မှတစ်ဆင့် လွှဲအပ်ပေးမည် ဖြစ်ပါသည်။

(၁၁) လျှို့ဝှက်ထားရှိမှု

သုတေသနတွင် မည်သူမည်ဝါများ ပါဝင်ခဲ့ကြောင်း မသိရှိစေရန်၊ ပါဝင်သူများ၏ ကိုယ်ရေးအချက်အလက်များ မပေါက်ကြားစေရန် သုတေသီများမှ အထူးဂရုစိုက်လုပ်ဆောင်သွားမည် ဖြစ်ပါသည်။ သုတေသနတွင် မည်သူမည်ဝါများပါဝင်ခဲ့ကြောင်း သုတေသီများက အခြားမည်သူ့ ကိုမျှ အသိပေးပြောကြားသွားမည် မဟုတ်ပါ။ သင့်နာမည်နှင့် ကိုယ်ရေးအချက်အလက်များကိုလည်း မှတ်တမ်းယူသိမ်းဆည်းထားမည် မဟုတ်ပါ။ သင်နှင့် ဆိုင်သော အကြောင်းအရာများကိုလည်း သုတေသနအဖွဲ့ဝင်များမှလွဲ၍ အခြားသူများနှင့် ပြောဆိုခြင်းပြုမည် မဟုတ်ပါ။ တွေ့ဆုံဆွေးနွေးခဲ့သည် အသံမှတ်တမ်းများ၊ စာမူမှတ်တမ်းများကို အွန်လိုင်းမှတ်တမ်းသိုလှောင်ရုံ (online cloud drive) နှင့် ကွန်ပျူတာများတွင် လုံခြုံစွာသိမ်းဆည်းထားမည်ဖြစ်သည်။ ထိုမှတ်တမ်းများတွင်လည်း မည်သူမည်ဝါဟု အမှတ်သညာပြုနိုင်မည့် မည်သည့်ကိုယ်ရေးအချက်အလက်များကိုမှ မှတ်သားထားမည် မဟုတ်ပါ။ ထိုမှတ်တမ်းများကို ကိန်းဂဏန်းများအကွရာများအသုံးပြု၍သာ အမှတ်အသားပြုထားမည် ဖြစ်ပါ သည်။ ထို့ပြင်

ထိုမှတ်တမ်းများကို သုတေသနအဖွဲ့ဝင်များကသာ ရယူအသုံးပြုနိုင်မည် ဖြစ်ပါသည်။ သုတေသန တွေ့ရှိချက်များ တင်ပြရာတွင်လည်း သင်၏အမည်နှင့်သင့်ကိုယ်ရေးအချက်အလက်များပါဝင်မည် မဟုတ်ပါ။ သုတေသန ပြီးဆုံးသွားသည့်အခါ အသံမှတ်တမ်းများကို ဖျက်ဆီးပစ်မည် ဖြစ်ပါသည်။

အဖြေများကိုမျှဝေခြင်း

ဤသုတေသနမှရရှိသော အဖြေများကို အခြားစိတ်ဝင်စားသောသူများ လေ့လာနိုင်ရန်အတွက် သုတေသန စာတမ်း ထုတ်ဝေခြင်းကိုလည်း ပြုလုပ်ပါမည်။

ဆက်သွယ်ရန်

အကယ်၍ သင့်၌မေးစရာမေးခွန်းများရှိပါက အချိန်မရွေးမေးမြန်းနိုင်ပါသည်။ မေးစရာရှိလျှင်

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သို့ ဆက်သွယ်မေးမြန်း နိုင်ပါသည်။

ဤသုတေသနအဆိုပြုလွှာကို လူပုဂ္ဂိုလ်များအပေါ် သုတေသနဆောင်ရွက်မှုဆိုင်ရာ ကျင့်ဝတ်ကော်မတီ၊ ကျန်းမာရေးဝန်ကြီးဌာန၊ အမျိုးသားညီညွတ်ရေးအစိုးရ၏ အတည်ပြုချက်ရယူပြီး ဖြစ်ပါသည်။ သင့်အနေဖြင့် ဤကော်မတီအကြောင်းကို စုံစမ်းလိုပါက အတွင်းရေးမှူးအဖွဲ့ (erc@moh.nugmyanmar.org) သို့ ဆက်သွယ်မေးမြန်းနိုင်ပါသည်။

အပိုင်း(၂) သဘောတူညီချက်

ဤသုတေသနတွင် ပါဝင်ရန် နှုတ်အားဖြင့် ခွင့်ပြုချက် ပေးခြင်းအားဖြင့် သင်သည် အောက်ဖော်ပြပါ သဘောတူညီချက်များကို သိရှိနားလည်လက်ခံပြီး ခွင့်ပြုချက်ပေးခဲ့ခြင်းဖြစ်သည်ဟု ယူဆမည် ဖြစ်ပါသည်။

ကျွန်ုပ်သည် "၂၀၂၁ ခုနှစ် စစ်အာဏာသိမ်းမှုဖြစ်ပွားပြီးနောက် မြန်မာနိုင်ငံ စစ်ကိုင်းတိုင်းဒေသကြီး၏ ပဋိပက္ခဖြစ်ပွားနေသော ဒေသများရှိ ကျန်းမာရေးစောင့်ရှောက်မှုပေးနေသူများနှင့် ပြည်သူများ၏ အတွေ့အကြုံနှင့် အတွေးအမြင်များကို လေ့လာသော သုတေသန" တွင် ပါဝင်ရန် သုတေသနတွင်ပါဝင်ရန် ဖိတ်ခေါ်ခြင်းခံရပါသည်။ ဤသုတေသနတွင် ကျွန်ုပ် အနေဖြင့် တွေ့ဆုံမေးမြန်းခြင်းတွင် ပါဝင်ရမည်ဖြစ်ပြီး (၄၅ - ၉၀) မိနစ်ခန့် ကြာမည်ဖြစ်ကြောင်း သိရှိပါသည်။ သုတေသနတွင် ပါဝင်ခြင်းဖြင့် ကြုံတွေ့ရနိုင်သည့် ထိခိုက်နစ်နာမှုများ၊ ထိုထိခိုက်မှုများမှ ကာကွယ်ရန် သုတေသီများ၏ လုပ်ဆောင်ချက်များကိုလည်း သိရှိပြီး ဖြစ်ပါသည်။ သုတေသနတွင်ပါဝင်ခြင်းအားဖြင့် မည်သည့်တိုက်ရိုက်အကျိုးကျေးဇူးမှ မရှိနိုင်ကြောင်းကိုလည်း သိရှိနားလည်ပြီးဖြစ်ပါသည်။ သုတေသနတွင် အချိန်ပေးဖြေကြားပေးသည့် အတွက် ငွေကျပ် (၁၀၀၀၀) ရရှိမည်ဟု သိရပါသည်။ သုတေသနပြုလုပ်သူနှင့် ဆက်သွယ်ရန် ဖုန်းနံပါတ်၊ email များကိုလည်း သိရှိပြီး ဖြစ်ပါသည်။
ကျွန်ုပ်သည် ရှေ့မှ အချက်အလက်များကို ဖတ်ရှုပြီးဖြစ်သည် (သို့မဟုတ်) ကျွန်ုပ်အားဖတ်ပြပြီး ဖြစ်သည်။ ကျွန်ုပ်တွင်မေးခွန်းမေးပိုင်ခွင့်နှင့် ထိုမေးခွန်းများကို ကျွန်ုပ်ကျေနပ်သည်ထိ ဖြေကြားပြီးဖြစ်သည်။ ကျွန်ုပ်သည် သုတေသနတွင် ပါဝင်ရန်မှာ မည်သူတစ်ဦးတစ်ယောက်၏ အတင်းအကြပ်တိုက်တွန်းမှုကြောင့်မှမဟုတ်ဘဲ မိမိဆန္ဒအလျောက် ဆုံးဖြတ်ရန်သာဖြစ်ကြောင်း နားလည်သိရှိပြီး ဖြစ်ပါသည်။ ဤသုတေသနလုပ်ငန်းမှ အချိန်မရွေးနုတ်ထွက်ခွင့်ရှိပြီး၊ ယင်းသို့နုတ်ထွက်ခြင်းကြောင့် ကျွန်ုပ်၏ ကျန်းမာရေးစောင့်ရှောက်မှုကို ထိခိုက်ခြင်းမရှိကြောင်း နားလည်ပြီးဖြစ်သည်။

- ☐ ဤသုတေသနတွင် ပါဝင်ရန် မိမိဆန္ဒအလျောက် ခွင့်ပြုချက်ပေးပါသည်။
- ☐ ဤသုတေသတွင် တွေ့ဆုံဆွေးနွေးချက်များကို အသံသွင်းမှတ်တမ်းရယူရန် မိမိဆန္ဒအလျောက် ခွင့်ပြုချက် ပေးပါသည်။

သုတေသနတွင် ပါဝင်သူ၏ ကုတ်နံပါတ်: ☐-☐-☐

ခွင့်ပြုချက် တောင်းခံသူ

လက်မှတ်: _____

အမည်: _____

ရာထူး/ဌာန: _____

_____

သက်သေ (ရှိလျှင်)

လက်မှတ်: _____

အမည်: _____

ရာထူး/ဌာန: _____

_____

Certificate of Approval

Date: 21.10.2023

Study Title: “Experiences and Perspectives of Healthcare Providers and Community Members in Conflict-affected Areas of Sagaing Region, Myanmar after 2021 Military Coup : A qualitative study”

Study number: 2/2023

Principal Investigator: Dr. Kaung Myat Thu, Candidate, Master of Public Health (Health Services), Department of Health Systems and Population Health, School of Public Health, University of Washington, USA

Date of issue: 21 October 2023

Expires date: 20 April 2024

This certificate verifies that the study titled "Experiences and Perspectives of Healthcare Providers and Community Members in Conflict-affected Areas of Sagaing Region, Myanmar following the 2021 Military Coup: A Qualitative Study" has been granted permission to proceed within the specified period by the State Health Administration Team of the Sagaing Region, Ministry of Health of the National Unity Government.

Dr. Andrew Thu
Team Leader
State Health Administration Team
Sagaing Region
National Unity Government
The Republic of Union of Myanmar

DETERMINATION OF EXEMPT STATUS

June 7, 2023

Dear Kaung Myat Thu:

On 6/7/2023, the University of Washington Human Subjects Division (HSD) reviewed the following application:

Type of Review:	Initial Study
Title of Study:	Experiences and Perspectives of Healthcare Providers and Community Members in Conflict-affected Areas of Myanmar after the 2021 Military Coup: A qualitative study
Investigator:	Kaung Myat Thu
IRB ID:	STUDY00018133
Funding:	None Funding Title(s): Pass-through institution(s):

Exempt Status

HSD determined that your proposed activity is human subjects research that qualifies for exempt status (Category 2). This determination may or may not be based on the Limited IRB Review process.

- This determination is valid for the duration of your research.
- This means that your research is exempt from the federal human subjects regulations, including the requirement for IRB approval and continuing review.
- **Depending on the nature of your study, you may need to obtain other approvals or permissions to conduct your research. For example, you might need to apply for access to data or specimens (e.g., to obtain UW student data). Or, you might need to obtain permission from facilities managers to approach possible subjects or conduct research procedures in the facilities (e.g., Seattle School District; the Harborview Emergency Department).**
- HSD does not make determinations on behalf of other institutions. If other institutions are involved in the research, they may need to make their own determination or they may decide to be guided by our determination.

If you consider changes to the activities in the future and know that the changes will require HSD review (or you are not certain), you may request a review or new determination by submitting a Modification to this application. For information about what changes require a Modification, refer to the **GUIDANCE Exempt Research**.

HSD does not review or approve consent plans and consent materials for exempt research. Researchers are still responsible for providing subjects with information about the research prior to their agreement to participate. Refer to the **GUIDANCE Exempt Research** for details about what

information should be provided. You may wish to use the optional **TEMPLATE Consent Exempt Research** as a guide.

Thank you for your commitment to ethical and responsible research. We wish you great success!

Sincerely,

Lindsey Westlake
Senior Administrator
206-897-1748 | scaggl@uw.edu

The Republic of the Union of Myanmar

National Unity Government

Ministry of Health

Ethics Review Committee

https://moh.nugmyanmar.org/ethics-review-committee/

Email: erc@moh.nugmyanmar.org

ERC Number:	2023-05
Approval Number:	Ethics/NUG-MOH/2023/06
Date of approval:	28th October 2023 (valid up to 2 years)
Project Title:	"Experiences and Perspectives of Healthcare Providers and Community Members in Conflict-affected Areas of Sagaing Region, Myanmar after 2021 Military Coup: A Qualitative Study"
Principal Investigator:	Dr. Kaung Myat Thu Candidate, Master of Public Health (Health Services) (Social and Behavioral Sciences concentration), Department of Health Systems and Population Health, School of Public Health, University of Washington

Items accepted:

1. Full proposal protocol dated 24th October 2023
2. Informed consent for participants (English & Myanmar)
3. Study area: healthcare providers and community members in Sagaing Region, Myanmar

Ethics Review Committee, Ministry of Health approves to conduct the proposed research project as it is in full compliance with the Declaration of Helsinki, Council for International Organizations of Medical Sciences Guidelines and International Conference on Harmonization in Good Clinical Practice guidelines.

Dr Mon Mon
Nov 01, 2023

For Prof. Dr Khin Maung Lwin
Chairperson
Ethics Review Committee
Ministry of Health

Appendix 3. Consolidated Criteria for Reporting Qualitative Research Checklist

Topic	Item #	Guide questions/description	Reported on Page #
Domain 1: Research team and reflexivity			
Personal Characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	21 – 22
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	Appendix 5
Occupation	3	What was their occupation at the time of the study?	Appendix 5
Gender	4	Was the researcher male or female?	Appendix 5
Experience and training	5	What experience or training did the researcher have?	Appendix 5
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	17 Appendix 2
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	17 Appendix 2
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	17, 21 – 22 Appendix 2
Domain 2: study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	22 – 23
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	16 – 20 Appendix 2
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	16 – 17 Appendix 2
Sample size	12	How many participants were in the study?	16 – 20
Non-participation	13	How many people refused to participate or dropped out? Reasons?	17

Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	21 Appendix 2
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	21 Appendix 2
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	13 – 20
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	21 – 22 Appendix 1
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	22
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	21 – 22
Field notes	20	Were field notes made during and/or after the interview or focus group?	Appendix 2
Duration	21	What was the duration of the inter views or focus group?	22
Data saturation	22	Was data saturation discussed?	22
Transcripts returned	23	Were transcripts returned to participants for comment and/or correction?	23
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	22 – 23
Description of the coding tree	25	Did authors provide a description of the coding tree?	22 – 23 Appendix 2
Derivation of themes	26	Were themes identified in advance or derived from the data?	22 – 23 Appendix 2
Software	27	What software, if applicable, was used to manage the data?	23
Participant checking	28	Did participants provide feedback on the findings?	23
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	24 – 54
Data and findings consistent	30	Was there consistency between the data presented and the findings?	24 – 54

Clarity of major themes	31	Were major themes clearly presented in the findings?	24 – 54
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	24 – 54

Appendix 4. Supplementary findings

Healthcare in junta-controlled urban areas: a variety of services still available despite changes in capacity and utilization

In urban areas, government hospitals and public health units—collectively referred to by some participants as *"the Big Hospital"*—have resumed their clinical care and public health services, overseen by the junta regime. The hospitals provided up to secondary or tertiary-level clinical care, and the public health units provided public health programs, such as TB, HIV, and childhood immunization programs. For-profit private hospitals and specialist clinics offered primary and secondary-level clinical care comparable to government facilities, although tertiary-level services varied. Some private hospitals have expanded services since the coup in response to increased demand. However, they did not run public health programs. NGOs primarily provided public health services, such as TB, HIV, and reproductive health services, independently or in collaboration with government public health units or GPs. Urban GPs typically were qualified professionals, including doctors, nurses, health assistants, midwives, and traditional medical practitioners. Their services depended on their level of competency and available facilities at the clinics; however, they primarily provided primary-level care, with referrals to hospitals for inpatient care. In addition, some community-based charity organizations in urban areas opened clinics, offering free primary or secondary care. These organizations also supported poor patients financially or by providing transportation. Quacks and other unprofessional healthcare providers acted like GPs, although their treatment was apparently symptomatic. Similarly, local pharmacies (not run by professional pharmacists) or grocery stores sold mixes of medicines based on the people's presenting symptoms. Government hospitals,

private facilities, and for-profit private laboratories provided diagnostic services (laboratory investigations and imaging); however, the level of capacities varied.

> *"It* (the government hospital) *is running, but only minimally. I think they (the regime) reopened it recently and restarted it in August or September 2023. Before that, we couldn't go into the hospital despite its presence. They didn't provide any treatment, but the* (junta) *soldiers occupied the hospital."* (CR31)

> *"Before* (the coup), *it was so easy that people could pick up their TB medications from 'Sayamas'* (which means female professional staff, supposedly referring to Midwives and Public Health Supervisors II here) *at the sub-rural health center in their villages. Now the appointed 'Sayamas' are gone. Some have joined the CDM. Some* (non-CDM staff) *have run away. Everyone is gone. So, TB patients must pick up their medicines at the points of care under the junta's control, such as the Township TB Control Unit* (in town)*. If they don't want to go there, they must go to* (private) *hospitals and clinics in town affiliated with that TB control unit."* (SR17)

> *"As I said, the TB control unit also has no doctor. Even at the regional TB control unit, an available doctor_ For example, there should be a doctor for TB, a doctor for HIV, and a doctor for malaria, but now there is none in these positions. The situations are different. So, the actual points of care now are the* (private) *clinics in town. But the clinic hours are also limited. There are some specific hours that*

doctors are available, and patients can see the doctors. They also have their challenges with human resources." (SR17)

"Next is ART (Anti-retroviral medicines). *People even have to go to Monywa (the capital city of the* Sagaing Region) *to get their ART. Unlike before, ART is not easily available anymore and is not at the usual points of care. They are required to go to big cities, perhaps. So, the medical dispensing systems are no longer decentralized, but they have returned to the centralized system."* (SR17)

"Compared to before, we, the INGOs, have faced the issues of mandatory registration after the coup. So, we have completely fallen under the junta's control. If they say we can go, we go. If they say we can't go, we can't. We are in this position. So, the situation, the effectiveness, the effectiveness of our efforts has greatly declined." (MR11)

GPs were the first point of seeking help for minor ailments in the urban population, although some found non-professional providers as cheaper alternatives. For more advanced clinical care, they would go to private hospitals and specialist clinics; however, high medical costs existed as a barrier for poor patients. People did not want to use government hospitals because of the junta's management, dissatisfaction with service quality, and military presence inside or around the hospitals. Moreover, government hospitals required patients to cover medication and equipment costs, albeit still lower than private hospitals that added room and service charges. People preferred private facilities for their superior facilities and care. Some people used up their

savings or received financial assistance from charity organizations to use private facilities; otherwise, government hospitals were the only option for poor people. For public health services such as TB and HIV care, people could use government or NGO clinics. However, routine childhood immunization was available only at government centers. Patients needing advanced care, like head surgery, were referred to larger government or private hospitals in major cities.

> *"People don't go to the private hospitals first. Most people try to go to small clinics (GP clinics), opened probably at providers' houses. If they don't want to wait in the clinic queue, or if their situation is non-emergency or non-major, like they are just feeling very dizzy, they will call in the, ah, those providers* (unqualified health providers or quacks). *So, to sum up, I think people try to go to the private clinics, the small clinics, more."* (CR31)

> *"The hospital under the junta military runs only in urban areas, the township hospital. If possible, people do not go to that hospital. They mainly rely on the private sector. As far as I have heard* (from my friends), *even if people go to the junta's hospital, unlike before the coup when the hospital provided services with government funding, people now are required to pay for all the medications and equipment out-of-pocket. The costs may be lower than private hospitals, as no service fees* (are usually required). *But people must pay for the medications."* (PR10)

> *"It* (the government hospital) *was reopened, but the nurses serving there were bad at communication. Before the coup, we thought such behaviors were loathsome, but now the communication has become terrible. Those staff members are so young and look incompetent. […] But most people are very hesitant to go to the Big Hospital. They find money from any available sources to go to private hospitals."* (CR31)

Northern Sagaing: different healthcare landscapes with different health actors

In the northernmost Naga Self-administration Zone, healthcare is not directly controlled by the central government but has generally been weaker than the rest of the country since before the coup. A few study participants reported that healthcare in the Zone was apparently stable despite the coup and conflicts in other parts of the region. However, this study did not explore it deeply.

> *"When we say Sagaing Region, it is a bit diverse, so the scenarios can be different. In the Sagaing Region, most are resistance areas, so what we have discussed has greatly covered them. But when we say Naga* (self-administration zone), *our conversation could have hardly covered it. It now has no conflicts. If we compare the Naga Zone with the whole region, its health status is, ah, more accessible. Because all NGOs are settling and have piled up there as they can run their programs there. This may go into your study limitations. […] Before the coup, we may say its health status was 0 compared to other areas. Now, it has improved, but not much. Now it is only 0.1. But when the other areas which scored five before now have become minus, it has reached the top. If the logistics*

> *can reach there, they can freely run all programs. The junta also doesn't control it. It is a hard-to-reach area.* (But) *people from these areas may report increased healthcare access now. Their answers can be the opposite of other areas."* (SR17)

In other parts of Northern Sagaing, primarily under the Shanni Nationalities Army and junta alliance, healthcare dynamics differed from other areas. Urban areas mirrored the broader region, yet a junta-controlled military hospital emerged as an additional healthcare source in one township. Specialist doctors from this facility also served private hospitals in the township. In rural areas, most government health centers ceased operations stemming from CDM. However, NUG-affiliated healthcare providers or CBHOs could not establish services in these areas controlled by a junta's ally. Like before the coup, GPs, including those provided by CDM-affiliated and non-CDM-affiliated doctors and non-professional providers, were more prevalent than elsewhere. Despite challenges, some NGOs in northern Sagaing continued vital HIV, TB, and malaria care, alongside initiatives for harm reduction and methadone replacement for injection drug users.

> *"Yes, the situation* (in a northern Sagaing Township) *has changed. There were three station hospitals, and they all have stopped functioning. I don't know the exact number, but there are RHCs and sub-centers* (rural and sub-rural health centers) *under each hospital, and these are not functioning. They all functioned in 2020. […] So far, no one in [Township X] can access NUG-affiliated healthcare services. You should know that this area is greatly controlled by the junta military*

and Shanni Army (the junta's ally), *and it is like, ah, really like the real North Korea. Nobody can resist them. Their alliance has a synergistic effect, and they become powerful. That's the territorial situation you should know."* (MR13)

"If someone needs to be hospitalized_ If someone wants to see a specialist doctor before hospitalization, they have to see the military specialist doctors. If they need to be hospitalized or need surgery, that would exactly be at their military hospital. Let's say, in a case of endometriosis or an ovarian tumor, an obstetrician-gynecologist will do surgery, but it will be at their military hospital. For an orthopedic surgery or escharotomy—traumas are common—they all are done in their military hospital. All specialist doctors and surgeons are working at the hospitals (the military hospital and the for-profit private hospital). *The* (capacity of the government) *township hospital has decreased, although it did everything and surgeries free of charge. Now, for all cases requiring specialist doctors, it is all at the military hospital."* (MR13)

"As for the INGOs, there are not many. There are some working on malaria, drug users, TB, a little bit on COVID-19, and NCD." (MR13)

General hardship of the community

All participants noted widespread suffering among urban and rural residents of Sagaing Region following the coup. The deteriorating economy, coupled with conflict-induced displacement, has led to a multitude of hardships. Many have been uprooted from their livelihoods and forced to abandon farms and businesses. Particularly in rural areas, homes, and possessions have been lost

to the junta's burning of entire villages. Amidst these trials, health has taken a backseat to the more immediate concerns of safety and survival. Consequently, healthcare affordability, delayed treatment, and adherence to long-term care regimens have all suffered, contributing to overall poor health outcomes.

> *"Everything has changed a lot since the coup. People must pay out-of-pocket for healthcare. Inflation and high market prices are all visible changes. And people get into trouble more and more hardships."* (PR10)

> *"The most important thing is, the important problem for them is, not health, but security of their life and living. […] Their problem now is not health, not business, not social life, not education, but survival."* (MR13)

> *"What I am most worried about health is—it is best if nothing bad happens in this situation—something bad happens to our health. It is not easy to travel. It is not easy to get care. We don't have as much money as before. So, what I am worried about the most with health is getting a health problem."* (CR32)

Appendix 5. Researcher profile

Dr. Kaung Myat Thu MPH, MMedSc, MBBS

Contact

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Summary

- A dedicated public health researcher with a decade of experience in teaching and working across diverse settings, including non-governmental organizations, public hospitals, medical and community health universities, government public health departments, and research institutes.
- Expertise lies in community-centered public health research, project management, and training.
- Special interest areas are infectious diseases, non-communicable diseases, health behaviors, health communication, immigrant populations, and the social determinants of health.
- Seeking a full-time position to leverage the knowledge and skills to make meaningful impacts while continuing to grow in the areas of passion.

Education

Master of Public Health (Health Services) (Social and Behavioral Sciences concentration) (June 8, 2024)
University of Washington, Seattle, USA
Thesis: Experiences and perspectives of healthcare providers and community members in conflict-affected areas of Sagaing Region, Myanmar, after the 2021 military coup: a qualitative study

Master of Medical Science (Preventive and Tropical Medicine) (April 8, 2018)
University of Medicine, Mandalay, Myanmar
Thesis: Serum cholinesterase level and associated factors of organophosphate poisoning among exposed farm workers in selected townships of Mandalay Region, Myanmar
Completed with Distinctions in Biostatistics and Epidemiology

Bachelor of Medicine; Bachelor of Surgery (February 10, 2013)
University of Medicine, Mandalay, Myanmar
Completed with Distinctions in General Pathology, Microbiology, Pharmacology and Forensic Medicine

Skills

- Community-based quantitative, qualitative, and mixed methods research
- Public health practice especially in infectious diseases, reproductive health, and health systems strengthening
- Project management including monitoring, evaluation and funding management
- Teaching and training in academic and community settings, and curriculum development
- Excellent communication, organization, coordination, and reporting skills
- Software packages: Stata, R, NVivo, EpiData, REDCap, SPSS, Deedose, ATLAS.ti, Microsoft Office
- Language: Burmese (mother tongue), English

Professional Experiences

Practicum Student [March 2023 – May 2023]
Health Alliance International, University of Washington, Seattle, WA, USA

- Led designing, implementation, and reporting in the evaluation of the NGO Code of Conduct for Health Systems Strengthening
- Link to evaluation report on the Health Alliance International website: https://ngocodeofconduct.org/suggested-readings/evaluation-of-the-code-of-conduct/

Senior Researcher (Technical Specialist – Malaria) [January 2020 – July 2022]
Burnet Institute Myanmar, Yangon, Myanmar

- Led designing, implementing, evaluating, and reporting malaria implementation research projects.
- Built strategic relationships with policymakers, government health departments, non-government organizations, and communities.
- Provided technical assistance and training to partner organizations and community members.
- Coauthored in research publications.
- List of research projects contributed:

1. Optimizing reactive surveillance and response strategies to achieve malaria elimination across the Greater Mekong Subregion: A mixed-methods evaluation study (2021 – 2022)
2. A personal protection package for reducing malaria transmission in forest-going mobile and migrant populations in Myanmar, Laos PDR, and Cambodia: A stepped-wedge trial with nested mixed-methods study (2021 – 2022)
3. Abundance, composition, behavior, and transmission potential of Anopheles spp. mosquitoes in the forest and farm of Duc Co and Krong Pa districts, Gia Lai Province, Vietnam (2021 – 2022)
4. Optimal community-delivered malaria elimination model for the Greater Mekong Sub-region: Evaluation of the implementation effectiveness and cost-effectiveness of the Community-delivered Integrated Malaria Elimination model: Myanmar (2020 – 2021)
5. Assessing the effectiveness of the Malaria Case-Based Reporting application compared to the Paper-Based Reporting system for the reporting of malaria cases in Myanmar: a mixed methods evaluation study (2019 – 2020)

Health Systems Strengthening Officer [June 2019 – December 2019]
Community Partners International, Seconded to State Health Department, Kayin State, Myanmar

- Collaborated strategically with the State Health Department, non-government organizations, and tribal organizations.
- Managed ACCESS State Health Grant.
- Developed and implemented State Health Plan.
- Implemented health system strengthening activities through training and strategic partnership.

Assistant Lecturer [February 2018 – May 2019]
Department of Environmental Health Science, University of Community Health, Magway, Myanmar

- Instructed Environmental Health Science in undergraduate, graduate, and certificate programs.
- Supervised and mentored students in their research projects.

Demonstrator [February 2015 – February 2018]
Department of Preventive and Social Medicine, University of Medicine, Mandalay, Myanmar

- Instructed Preventive and Social Medicine to Year 4 MBBS students.
- Instructed and facilitated Community Medicine Program for resident doctors.

Assistant Surgeon (Medical Officer) [July 2014 – February 2015]
1000-bedded Hospital, Naypyidaw, Myanmar

- Provided medical care as a general medical doctor in Internal Medicine, Surgery, and Orthopedics Units.

Health Services Officer [March 2013 – October 2013]
Population Services International Myanmar, Lashio Project Office, Myanmar

- Implemented, monitored, and supervised general practitioner clinic-based and community volunteer-based reproductive health, TB, malaria, child health, sexually transmitted infections, and HIV programs.
- Provided technical and operational support for successful program implementation.

Volunteer works

Data analyst [September 2023 – October 2023]
Northwest Health Law Advocates, Seattle, WA, USA

- Analyzed and reported a statewide survey of Washington State hospitals' compliance with the Charity Care Law.

List of Publications

1. **Kaung Myat Thu**, Win Han Oo, et. al (2021). **Sustainability of a mobile phone application-based data reporting system in Myanmar's malaria elimination program: A qualitative study**. BMC Medical Informatics and Decision Making, 21(1), 285. https://doi.org/10.1186/s12911-021-01646-z (**Role: Shared first author**)
2. Win Han Oo, et. al (2023). **Performance and feasibility of reactive surveillance and response strategies for malaria elimination in Vietnam: A mixed-methods study**. Malaria Journal, 22(1), 229. https://doi.org/10.1186/s12936-023-04660-w **(Role: co-author**)
3. Van Dung, N., et. al (2023). **Anopheles diversity, biting behaviour and transmission potential in forest and farm environments of Gia Lai province, Vietnam**. Malaria Journal, 22(1), 204. https://doi.org/10.1186/s12936-023-04631-1 **(Role: co-author**)
4. Win Htike, et. al (2022). **Reducing malaria transmission in forest-going mobile and migrant populations in Lao PDR and Cambodia: Protocol for stepped-wedge cluster-randomised controlled trial**. BMC Infectious Diseases, 22(1), 747. https://doi.org/10.1186/s12879-022-07724-5 **(Role: co-author**)
5. May Chan Oo, et. al (2022). **Perspectives of health and community stakeholders on community-delivered models of malaria elimination in Lao People's Democratic Republic: A qualitative study**. PLOS ONE, 17(3), e0264399. https://doi.org/10.1371/journal.pone.0264399 **(Role: co-author**)
6. Win Han Oo, et. al (2021). **Evaluation of the effectiveness and cost-effectiveness of a Community-delivered Integrated Malaria Elimination (CIME) model in Myanmar: Protocol for an open stepped-wedge cluster-randomised controlled trial**. BMJ Open, 11(8), e050400. https://doi.org/10.1136/bmjopen-2021-050400 **(Role: co-author**)

7. Win Han Oo, et. al (2021). **A mobile phone application for malaria case-based reporting to advance malaria surveillance in Myanmar: A mixed methods evaluation**. Malaria Journal, 20(1), 167. https://doi.org/10.1186/s12936-021-03701-6 **(Role: co-author**)

8. **Kaung Myat Thu** & San Kyu Kyu Aye. (2018). **Serum Cholinesterase Level and Associated Factors of Organophosphate Poisoning among Exposed Farm Workers in Selected Townships of Mandalay Region**. UMM Research Journal, 1(2), 17–21. **(Role: First author**)

Works in progress

9. Kaung Myat Thu, et. al, 2024. **New alternative healthcare systems in Northwest Myanmar's Sagaing Region post-military coup: qualitative insights from anti-junta healthcare workers and community members.** (*To submit to*: The BMJ) **(Role: first author**)

10. Win Han Oo, et. al, 2024. **Evaluating malaria reactive surveillance and response strategies in northeast Cambodia: A mixed-method study.** (*Submitted to*: BMC Public Health) **(Role: co-author**)

11. Win Han Oo, et. al (2023). **The effectiveness and cost-effectiveness of an expanded role for community health workers on malaria testing rates in malaria elimination settings in Myanmar: an open stepped-wedge cluster-randomised controlled trial** (*Submitted to:* The Lancet Regional Health – Southeast Asia) **(Role: co-author**)

12. Win Han Oo, et. al (2023). **Implementation and performance of reactive surveillance and response strategies for malaria elimination: a systematic review and meta-analysis** (*Submitted to:* BMJ Global Health) **(Role: co-author**)

13. Win Htike, et. al (2023). **Comprehensive evaluation of malaria reactive surveillance and response strategies in Lao People's Democratic Republic: a mixed-methods study** (*Submitted to:* BMJ Open) **(Role: co-author**)

14. Nguyen Xuan Thang, Win Han Oo, et. al (2023). **Facilitators, barriers and acceptability to implementation of malaria reactive surveillance and response strategies in Vietnam: a mixed methods study** (*Submitted to:* BMJ Public Health) **(Role: co-author**)

Conference presentations

1. **Kaung Myat Thu**, Win Han Oo, et al.: **Sustainability of a mobile phone application-based data reporting system in Myanmar's malaria elimination program: a qualitative study.** In: *Malaria in Melbourne 2021: 28-29 October 2021*: Online; 2021. ***(Poster presentation)***

2. **Kaung Myat Thu**, San Kyu Kyu Aye: **Serum Cholinesterase Level and Associated Factors of Organophosphate Poisoning among Exposed Farm Workers in Selected Townships of Mandalay Region**. In: *University of Medicine, Mandalay Research Conference 2018: 3 to 4 May, 2018*: University of Medicine, Mandalay; 2018: UMMRC18-07. ***(Oral paper presentation)***

Awards and Honors

1. Awarded **USABCI-Myanmar Scholarship Fund** by the US-ASEAN Business Council Institute (USABCI) (2023 – 2024) (Amount: USD 5,000)

2. Awarded **Fulbright Foreign Student Scholarship** (2022 Cohort) for Master of Public Health program at the University of Washington (2022 – 2024) (Amount: USD 44,390)

3. Awarded **Full Tuition Waiver** by the University of Washington School of Public Health for Master of Public Health Program (2022 – 2024) (Amount: 76,604)
4. Awarded **Oral Paper Presentation Prize** on *"Serum Cholinesterase Level and Associated Factors of Organophosphate Poisoning among Exposed Farm Workers in Selected Townships of Mandalay Region"* at the University of Medicine, Mandalay Research Conference (3rd – 4th May 2018)
5. Awarded **External Research Grant** by Department of Medical Research, Ministry of Health and Sports, Myanmar for the master's degree project in 2017 (Amount MMK 1,000,000)
6. **Good-will Youth Ambassador** (Participating Youth of Myanmar Contingent) for the *45th Ship for Southeast Asian and Japanese Youth Program (SSEAYP 45) (2018)* (23rd October 2018 – 13th December 2018) (SSEAYP International and Japan Cabinet Office)
7. **Youth Ambassador** for the *Short-term Exchange Program for ASEAN High School Students (AFS Intercultural Program)* (7th – 27th December 2006) (AFS, Japan)
8. Passed matriculation examination with **Distinctions in all subjects** and ***ranked as the 8th of Myanmar*** (2006)