UNIVERSITÀ DI PARMA

UNIVERSITA' DEGLI STUDI DI PARMA

DOTTORATO DI RICERCA IN
" SCIENZE MEDICHE E CHIRURGICHE TRASLAZIONALI"

CICLO XXXV

PROVIDING PRIMARY HEALTH CARE IN CONFLICT-AFFECTED SETTINGS: THE MYANMAR CASE

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Anni Accademici 2019/2020 – 2021/2022

To Myint Oo,
Master and friend

and

To the Myanmar people,
May they find peace and freedom

Index

List of tables and figures p. 4
List of abbreviations p. 4
Abstract p. 5
BACKGROUND p. 6
Case study: Myanmar p. 7
    Premises p. 7
    Background p. 7
AIMS p. 8
METHODS p. 9
    Positionality p. 9
    Sampling p. 9
    Recruitment p. 9
    Data Collection p. 9
    Data Analysis p. 10
RESULTS p. 11
    How is PHC conceived by the interviewees? p. 12
    PHC situation before the coup p. 13
    PHC situation during the conflict p. 16
    Future prospective p. 21
DISCUSSION p. 23
    How is PHC conceived by the interviewees? p. 23
    PHC situation before the coup p. 23
    PHC situation during the conflict p. 25
    Future prospective p. 28
Limitations p. 29
CONCLUSIONS p. 30
ANNEXES p. 31
BIBLIOGRAPHY p. 34

List of tables and figures

Figure 1	p. 7
Table 1	p. 11
Table 2	p. 12

List of abbreviations

CBO	Community Based Organisation
CDM	Civil Disobedience Movement
EHO	Ethnic Health Organisation
GPs	General Practitioners
MoH	Ministry of Health
NUG	Myanmar National Unity Government
PHC	Primary Health Care
UHC	Universal Health Coverage
WHO	World Health Organization

Providing primary health care in conflict-affected settings: the Myanmar case

ABSTRACT

Health systems are among the earliest casualties of conflicts. In this context, primary health care plays a crucial role in ensuring continuity of care and acting as a buffer against failure of service delivery. Scientific literature is rich of studies that have analysed the situation of primary health care in wartime conditions from a general point of view, but only a few studies have focused on specific situations. In this study, we have examined the specific situation of Myanmar, shedding light on the provision of primary health care in Myanmar conflict-affected setting.

The study followed a qualitative research design. We conducted 21 semi-structured interviews to Myanmar healthcare providers and decision-makers. Data were analysed through thematic analysis.

Despite the numerous difficulties encountered related to the specific context's conditions, the interviews allowed to confirm what was evidenced by scientific literature and to highlight some peculiarities of the Myanmar case. Myanmar healthcare professionals, aligned in rejecting the coup, are building alternative routes to provide either online and/or frontline primary health care to the population in need. Further, the concentration of healthcare workers in liberated areas is such as to not only allowing primary health care to be provided, but even improved compared to the situation prior to the coup. Therein, PHC can be provided and structured to envisage an improvement in the organization of the primary health care system itself when a situation of peace is reached.

The study hence provides stakeholders with updated information on the Myanmar's primary health care situation and with practical indications for supporting primary health care delivery. These insights can also be useful for the reconstruction of the health system, as based on primary health care, after the conflict.

BACKGROUND

The Ottawa Charter identified peace as the "fundamental condition" for health (WHO, 1986). Researcher have argued that without peace, there can be no health (Levy, 2002). Conflicts and the absence of peace are intuitively closely associated with violent deaths (Allen, 2022). According to the World Bank, 2 billion people currently live in areas that are fragile or affected by conflict (World Bank, 2018). Conflicts lead to great harm long before and after physical violence, creating divisions that undermine political solidarity, governmental legitimacy, and authority (Allen, 2022; Levy, 2002). The impact of conflict on health is long lasting and intergenerational. The combined ramifications of prolonged conflict and poor public health are persistent. Even after conflict ends, it takes decades for the population to recover (WHO, 2018).

Conflicts are a global health challenge (Jubb, 2021): they entail violence, displacement, infrastructure damage and the disruption of health services. Conflicts thus present a serious challenge to universal healthcare, as the impacts are indiscriminate across health systems (Al Mandhari, 2022; Leaning, 2013; Garry, 2020). Health systems are often among the earliest casualties of conflicts. Indeed, conflicts adverse the ability of health systems to provide care and disrupt many essential elements including physical accessibility, health facility infrastructure, availability of a competent health workforce, availability of funding, and supply chain management (Chaudhury, 2020; WHO, 2018; Utzinger, 2007). This leads to further devastating effects, as nonviolent morbidity and mortality increase due to previously preventable or treatable conditions (Atallah, 2018). Direct health effects encompass morbidity and mortality that are usually trauma-related (Levy, 2016, Mateen, 2010). Indirect mortality effects, which generally refer to morbidity and mortality attributable to the conflict minus the direct impact and that are modulated by underlying population health and public health system resilience, are often under-recorded and underestimated as they are difficult to assess (Gordon, 2010; Thoms, 2007; Ugalde, 2000).

Conflicts severely affect those already more vulnerable: children, pregnant women, elderly people, and those living with specific long-term healthcare needs, such as non-communicable diseases, as they all require carefully planned and long-term care, which becomes increasingly hard to access in volatile and insecure environments (Allen, 2022; Jubb, 2021). Mental health care and services also face a major challenge in conflict-affected settings. According to WHO estimates, one in five people living in a conflict zone has a severe mental health condition and 80% of people with symptoms of mental illness do not receive appropriate care (Charlson, 2019).

In this context, primary health care (PHC) provides a pivotal foundation for health emergencies and risk management, and for strengthening community and country resilience. PHC, when solid and resilient, plays a crucial role during emergencies in ensuring continuity of care and acting as a buffer against failure of service delivery, particularly for vulnerable groups and hard to reach communities (Lamberti-Castronuovo, 2022; Ramadan, 2022; WHO, 2018). PHC can act as a bridge for peace in emergencies, conflicts, and post-conflict situations (Al Mandhari, 2022; Décobert, 2022; Khan, 2022; Tang, 2017). Peace is not just the absence of conflict. Rather, violence, political instability, and unrest all affect the physical and mental health of people and health workers, which are also often attacked – thus damaging healthy systems and negatively shaping larger determinants of health. Peace thus represents a necessary and pivotal determinant of health and well-being. It clearly follows that safeguarding health can also help end conflict and relieve tensions (Al Gathrif, 2022; Allen, 2022; Al Mandhari, 2022; Coninx, 2022; Décobert, 2022).

Furthermore, trusted PHC providers are well placed to understand the health needs of their local population and, with adequate planning and resources, find mechanisms to fulfil this essential role during conflicts, and in rebuilding health systems post-conflicts (Khan, 2022; Bou-Karroum, 2020; Martineau, 2017). Before, during, and after emergencies, PHC providers must design and implement context-specific interventions, also by engaging with local communities (D'Apice, 2022; Chaudury, 2020).

Scientific literature tends to analyse this topic from a general point of view (Ramadan, 2022; Chaudury, 2020; Atallah, 2018). However, it is rather interesting analysing this topic within the context of a specific country,

as this kind of study would consent to realistically individuate the actual problems and the actual needs as caused by that specific conflict. In this view, Myanmar represents an interesting case study.

CASE STUDY: MYANMAR

Premises

Myanmar gained independence from Britain in 1948. Even after independence, it has suffered decades of repressive military rule and poverty due to years of isolationist economic policies, and civil war with ethnic minority groups (International Crisis Group, 2020). The transfer to civilian leadership in 2011 spurred hopes of democratic reforms. However, on February 1, 2021, the Myanmar military junta overthrew the legitimately elected government and took control of Myanmar by force (Bowyer, 2021). All over the country, call for anti-coup resistance have quickly gone viral, people showing their rejection of the military coup and their adherence to democratic values (Soe, 2021). In response to the unlawful coup, democratic and ethnic forces, representing most of the Myanmar population, came together in an alliance that has led to the formation of the National Unity Government (NUG), offering a democratic alternative to the junta (D'Apice, 2021). What has ensued since is two years of military attacks on unarmed civilians, and a protracted fight between the military junta and democratic forces. The country is now divided in three main areas: military controlled areas, conflict areas and liberated/ethnic-controlled areas.

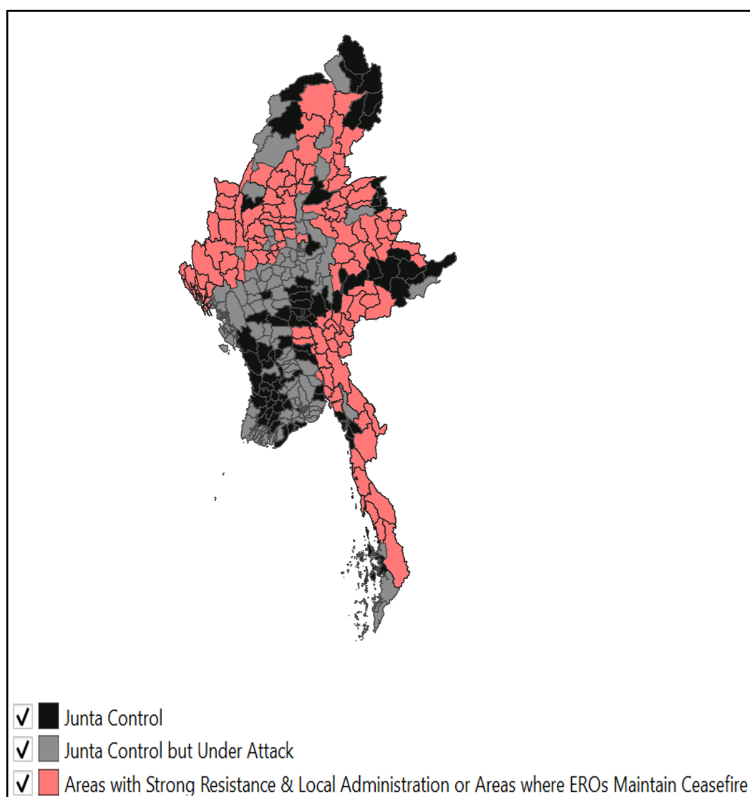

Figure 1 – Map on territory control as of September 2022. Credit MoH

Background

Myanmar health system has significantly improved under the ruling of the democratic government from 2015 to 2020, both in terms of addressing inequality of access and outcome, particularly by strengthening PHC, and in building up elements of a modern health education (Bowyer, 2021; Becker, 2018). Massive efforts ensured that the first wave of the COVID-19 pandemic did not cause all the harms predicted (Oo, 2020). Military rule over 50 years had failed to develop the health and education system in the country. The latest reversion to military rule, following the illegal coup of February 1, 2021, has caused the collapse of the country's health

system, posing an existential threat to health and human security for both Myanmar and its neighbours (Han, 2021; Soe, 2021).

Healthcare workers have led the resistance to the coup through a Civil Disobedience Movement (CDM) minimizing work in government hospitals and health clinics under military rule (Soe, 2021). The CDM has quickly spread throughout the country, resulting in closure of public hospitals as well as medical and nursing universities (Shepherd, 2021). CDM health workers are using private and charity clinics to provide PHC at reduced fees, collaborating with general practitioners (GPs), ensuring emergency services also through staffing ambulances and clinics in the streets (Soe, 2021).

Over the months, the military have been targeting health workers, arresting, and harassing them, whilst occupying public hospitals and vandalizing medical supplies and equipment (Darzi, 2021; Mahase, 2021; Sheperd, 2021). Direct essential health service provision and capacity-building of the public health sector are seriously impaired, hence resulting in limited availability of life-saving interventions and of PHC. This has led to an increase of preventable morbidities and mortalities. National reporting and surveillance systems are disrupted or non-functioning, thus limiting the health system capacity for early detection and prevention of communicable diseases. Access to several PHC services such to antenatal care, delivery care, postnatal care, family planning and child health care are severely impacted because of non-functionality of the public health sector. Immunization programs, particularly for children, are disrupted, resulting in higher dropout and higher risks for vaccine-preventable disease outbreaks (D'Apice (2), 2022; Bowyer, 2021; Han, 2021; WHO, 2021). We do not yet know how many people have lost their lives due to this vast failure of the health system.

The junta's human rights violations, coupled with financial strains, food insecurities and limited access to healthcare services, have led to widespread internal displacement and caused many to flee the country (Chen, 2023; Kobayashi, 2021). According to UN estimates, since the beginning of the coup, more than 1.1 million people have been internally displaced inside Myanmar and at least 72,000 have fled outside of Myanmar, where they join pre-existing refugee and migrant populations (OHCHR, 2023). After over two years under the military regime, people in Myanmar struggle to live amid economic and political turmoil. According to 2022 World Bank data, 40% of Myanmar's population lives below the poverty line, reversing years' worth of efforts in poverty reduction (World Bank, 2022).

In response to this crisis, the Ministry of Health (MoH) of the NUG, notwithstanding the military's repression, is delivering an interim health service strategy with selected partners, including CDM workers, community-based organisations (CBO) and ethnic health organizations (EHO), based on the principles of Universal Health Coverage (UHC) and Federal Democratic Principles. Within this strategy, PHC represents a key pillar and means for re-strengthening the health system, respond to the population' health needs, and act as a bridge for peace (D'Apice, 2021; NUG 4/2021; NUG 5/2021).

AIMS

The research aimed to analyse what happens to the provision of PHC in Myanmar conflict-affected setting. In particular, the research aimed to explore how the ongoing conflict has changed and is changing the provision of PHC in Myanmar from the perspectives of decision-makers and healthcare professionals. The research further aimed to investigate which are the actual PHC needs of the Myanmar population and to explore the experiences of PHC provision in Myanmar conflict-affected setting from the perspectives of decision-makers and healthcare professionals, and their expectations for the future of PHC in the country.

METHODS

The study followed a qualitative research design, whose suitability in medical and health research has been largely documented (Renjith, 2021; Hennessy, 2018; Cooper, 2014). Data were collected through semi-structured interviews and analysed through thematic analysis.
The project was conducted in accordance with Italian and Myanmar ethical standards. The research's protocol was shared with the Research Board (REB) of the University of Parma, that approved the study on 30th November 2022, and with the Ethics Review Committee (ERC) of the NUG MoH, that approved the study on 28th November 2022 (see the *Annexes* section of this paper).

Positionality

Positionality refers to the position a researcher has chosen to adopt within a given study (Savin-Baden, 2013). The research group positions itself in the vein of democratic support. For this reason, we have decided to interview only people who have not agreed to collaborate with the military regime.

Sampling

We followed a purposive sampling. Purposive sampling is a technique widely used in qualitative research and it involves identifying and selecting individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest (Creswell, 2017; Patton, 2002).
We foresaw maximum variation of the sampling to obtain variety of points of view on the phenomenon. These included healthcare professionals, health decision-makers, members of CBO and EHO, and other stakeholders directly involved in the provision of PHC in Myanmar conflict affected settings. To be included in the study, people needed to have direct experience of decision-making and/or provision of PHC in Myanmar conflict-affected setting, at least 5 years of professional experience therein prior to the conflict, and consent to participate in the study. We excluded people having less than 5 years of professional experience in decision-making and/or provision of PHC prior to the conflict and people not being directly involved in decision-making and/or provision of PHC in Myanmar conflict-affected setting.
The purposive sampling considered the concept of data saturation, which means we included new participants until data reached sufficient consistency to meet the research objectives. Saturation does not depend on the amount of data that has been collected and analysed but rather occurs when no significant new insights are emerging (Glaser, 1967). Totally, we conducted 21 interviews.

Recruitment

Recruitment followed convenience criteria, that is based on personal and professional relations of the research team with Myanmar relevant and informed people. We sent them the informative note and the consensus module by email or through the App Signal. We gave interviewees all necessary guarantees that their participation in the study would not have entailed any risk to their security nor visibility. Participation in the interviews was voluntary, and there was no form of compensation for the participants.
Further participants were recruited by using the first interviewees as gatekeepers. This means that the first participants already engaged in the research were asked for help to contact other participants, to whom they gave preliminary information about the study. Following their consent, the first participant gave the research team second participants' contacts. We are aware that gatekeeping by different groups can impact recruitment and restrict researchers' access to people who could potentially offer valuable insight on these experiences (Foley, 2015; Ewing, 2004). However, all efforts were made to access participants fitting the sampling criteria.

Data collection

It is important to point out that conducting the interviews, considering the conflict situation in which the interviewees find themselves and the consequent continuous and unforeseen changes, required great flexibility on the part of the research team.

Interviews were conducted by the first researcher (CD) and by a Myanmar language-native speaker[1] health professional collaborating with the research team. We conducted semi-structured interviews, that are commonly used in qualitative health services' research (DeJonckheere, 2019). Semi-structured interviews require using short interview guides, with opening, central and closing questions, typically no more than 10 questions in total, to help focus the data and expand on key components of the experience under study (Jamshed, 2014; Charmaz, 2006). Questions were open-ended, that is, not in any way prescriptive of what the answer might be. We decided to use simple language and a semi-structured and flexible approach, precisely because we interviewed both educated and low literate people.

Interviews topics, through open-ended questions related to the personal working experience of the interviewees, concerned a) what PHC is, b) PHC situation in Myanmar before the conflict, c) PHC situation in Myanmar during the conflict, d) expectations about the future of PHC in the country and personal prospective. Exemplificative questions are listed in the *Annexes* section of this paper.

We conducted the interviews between the 1st of December 2022 and the 28th of February 2023. Interviews were conducted online, through the Zoom platform or the Signal app, on a set date and time agreed with the interviewees. Some interviews were rescheduled several times, according to the needs of the interviewees.

Interviews were conducted in English language or in Myanmar language, depending on the interviewees' preferences. Most interviews were conducted in Myanmar language by our collaborator. Interviews were audio-recorded with the consent of the participants.

Duration of the interviews depended on the interviewees' willingness to answer and lasted from a minimum of 30 minutes to a maximum of one hour. The duration of the interviews also depended on the situation and context in which the interviewees found themselves. In fact, most of those interviewed were in conflict zones, often under bombardment and in danger, and with limited access to safe communications.

We compiled a table listing some personal information of the interviewees, including age, gender, profession before and during the conflict, and geographical area of work. Data were collected in respect of confidentiality and preserving the anonymity of the interviewees. Each participant was assigned a unique code, and only the research group could link the code to the identity of the participant. Following the data collection, personal data were deleted without the possibility of tracing back to the original data, and only the aggregated data were kept.

Data Analysis

We transcribed verbatim the audio-recorded interviews. Interviews conducted in Myanmar language were firstly transcribed verbatim in Myanmar language and then translated in English. For security reasons, we have decided not to attach the verbatim of the interviews.

Data were organized and processed using NVivo software and analysed through thematic analysis. Thematic analysis is a method for analysing qualitative data that entails searching across a data set to identify, analyse, and report repeated patterns. It is a method for describing data, but it also involves interpretation in the processes of selecting codes and constructing themes (Braun, 2021; Braun, 2013; Braun, 2006).

The textual data, produced from the transcription of the interviews, went through a process of coding the raw data until reaching the consistency of themes (Nowell, 2017). We first read and familiarized with the transcribed text, and we then generated codes for the latent and manifest content. Codes were combined to identify the main themes and sub-themes. The research team then commented on the list of identified themes to ensure internal consistency. We coded transcriptions after each interview on a line-by-line basis. We then descripted the main themes and wrote the results report.

[1] There are approximately a hundred language spoken in Myanmar. The Myanmar language, also known as Burmese, spoken by over two-third of the population, is the official language. Reference: Myanmar in Eberhard, David M.; Simons, Gary F.; Fennig, Charles D., eds. (2022). Ethnologue: Languages of the World (25th ed.). Dallas, Texas: SIL International

RESULTS

A total of 21 PHC professionals and decision-makers were interviewed, belonging to different professional roles and background. Those included physicians, family doctors, surgeons, community health workers, nurses, midwifes, public health professionals, NUG MoH representatives, representatives of CBO and EHO. Respondents were working in different areas of Myanmar, and especially from areas of high conflict, including Sagaing, Palaw, Kachin and Kayin regions, and from liberated areas. Some participants preferred not to disclose their geographical area of work for security reasons. In *Table 1*, we describe the main characteristics of the sample. Some information, including age and gender, is not reported for security reasons.

Table 1 - Participants' characteristics

Code assigned	Role before the coup	Role after the coup	Area
1	Physician	MoH Representative	Undisclosed
2	Physician	MoH Representative	Sagaing
3	Surgeon	MOH Representative	Undisclosed
4	Physician	CDM, frontline team	Palaw
5	MoH Representative	Health assistant	Karen
6	Physician	CDM, physician	Kachin
7	Community health worker	Community health worker	Kachin
8	Assistant surgeon	CDM, frontline team	Mandalay
9	Family doctor	Family doctor	Mandalay
10	Paediatrician	MoH Representative	Undisclosed
11	Medical doctor	Frontline doctor	Sagaing
12	Community health worker	Community health worker	Chin
13	Nurse	CDM, nurse	Shan
14	Public health official	Public health official	Sagaing
15	Health assistant	CDM, Ethnic organization	Kachin
16	Health project manager	Health project manager	Rakhine
17	Medical doctor	CDM, Frontline doctor	Sagaing
18	Midwife	Midwife, nurse	Karenni
19	Nurse	CDM, nurse	Shan
20	Public health official	Public health official	Sagaing
21	General practitioner	General practitioner	Yangon

From the in-depth reading of the interviews' transcripts and their thematic analysis, overarching themes, subthemes, and further subthemes were defined (a summary is provided in *Table 2*).
From the analysis of the interviews, it emerged that the Myanmar-speaking interviewer underextended questions involving personal examples. He explained that he did not elaborate on this aspect because he thought the interviewees would be afraid of disclosing personal information that could be used for their identification.

Table 2 - Summary of Overarching Themes, subthemes, and further subthemes	
1. How is PHC conceived by the interviewees?	1.1 PHC understood as first access and referral 1.2 Health domains encompassed by PHC in the understanding of the interviewees
2. PHC situation before the coup	2.1 Context 2.2 Criticality of the health system 2.2.1 Public-private health system 2.2.2 Out of pocket expenditures 2.2.3 Manpower and workload 2.3 Reluctance of the local population to turn to health facilities 2.3.1 Local culture and low health literacy 2.3.2 Distrust in institutions 2.4 Differences between urban and rural areas 2.4.1 Urban areas 2.4.2 Rural areas
3. PHC situation during the conflict	3.1 General deterioration of PHC 3.1.1 Logistic problems 3.1.2 Worsening health conditions 3.1.3 New critical issues: mental health and war wounds 3.2 Healthcare workers 3.3.1 Civil Disobedience Movement 3.3.2 Harassment and persecution of health workers 3.3 Providing PHC 3.3.1 Online 3.3.2 On-ground 3.4 Differences between areas 3.4.1 Military areas 3.4.2 Conflict areas 3.4.3 Liberated areas 3.5 Views on the NUG work with respect to the health situation
4. Future prospective	4.1 Future prospective of PHC 4.1.1 War 4.1.2 Peace 4.2 Personal future prospective 4.2.1 No more politics 4.2.2 A new role

The following section reports what emerged from the interviews as per *Table 2*. The excerpts from the interviews shown below can be traced back to the participants via the code number assigned to them (*Table 1*), which is reported in brackets at the end of each excerpt.

1. HOW IS PHC CONCEIVED BY THE INTERVIEWEES?

The first macro theme emerged from the interviews' analysis concerned respondents' understanding of PHC.

1.1 PHC understood as first access and referral

Most of the interviewees defined PHC as the first level of contact for the population with the healthcare system, bringing healthcare as close as possible to where people live and work. "*Primary health care is basic essential health services that reach out to people to care for them (15)*". "*PHC is first in hand service provision, yeah, first access point of service provision to the general community (16)*". According to the respondents, PHC is the first point of care, from which patients can be eventually referred to further health services. "*PHC is first access, before reaching to secondary or tertiary healthcare services. You know, GPs, family doctors and nurses give first PHC, then they can refer to secondary or tertiary care services if necessary (4)*".

1.2 Health domains encompassed by PHC in the understanding of the interviewees

According to the respondents, PHC encompass several health areas and services, including healthcare delivery, immunization, health prevention and promotion, and health education. "*PHC includes public health care, providing essential drugs, communicable diseases, non-communicable diseases, medical care, vaccination,*

reproductive health, mental and social health, and health education (7)". Following the interviewees, emergency care and services are also part of PHC: *"Now PHC also include emergency care and basic surgery care to answer to the people actual needs (2)"*.

2. PHC SITUATION BEFORE THE COUP

The second macro theme emerged from the analysis of the interviews concerned the PHC situation in Myanmar before the military coup.

2.1 Context

Following the interviewees, from 1962 until 2011, Myanmar has been ruled by a military junta, who failed to develop the health system by underinvesting in public health services and health education, and instead triggered poverty and inequalities. *"Health expenditure was too low. The military spent less than 3% of the country GDP on healthcare (21)"*. Myanmar transitioned to a semi-civilian government in March 2011. Although the democratic process has accelerated since then, many problems in the field of healthcare persisted. *"PHC in Myanmar was not good. Not good. According to the WHO and then also International Organization scoring System, PHC in Myanmar is almost, you know, among the last countries in the world…. Before 2016, the MoH spent for health only 1$ per person per year. With that expenditure, you can imagine we cannot have a good PHC. Definitely we cannot have. You know $1, you can only buy 5 paracetamols in one year. Of course, it is not enough (3)"*.

As emerged from the interviews, the Myanmar health system was highly centralized, with the MoH acting both as a governing agency and a healthcare provider. PHC delivery was also supported by CBO, EHO and international organizations. *"MoH was made of seven department. PHC was under the Department of Public Health. Each admin level had a health facility, with regional or state, district township, and sub-township or station hospitals. And also rural health centres in wards, or village tracts and sub-rural health centres in villages. Then there were UN and other international agencies supporting, as well as CBO and EHO (21)"*.

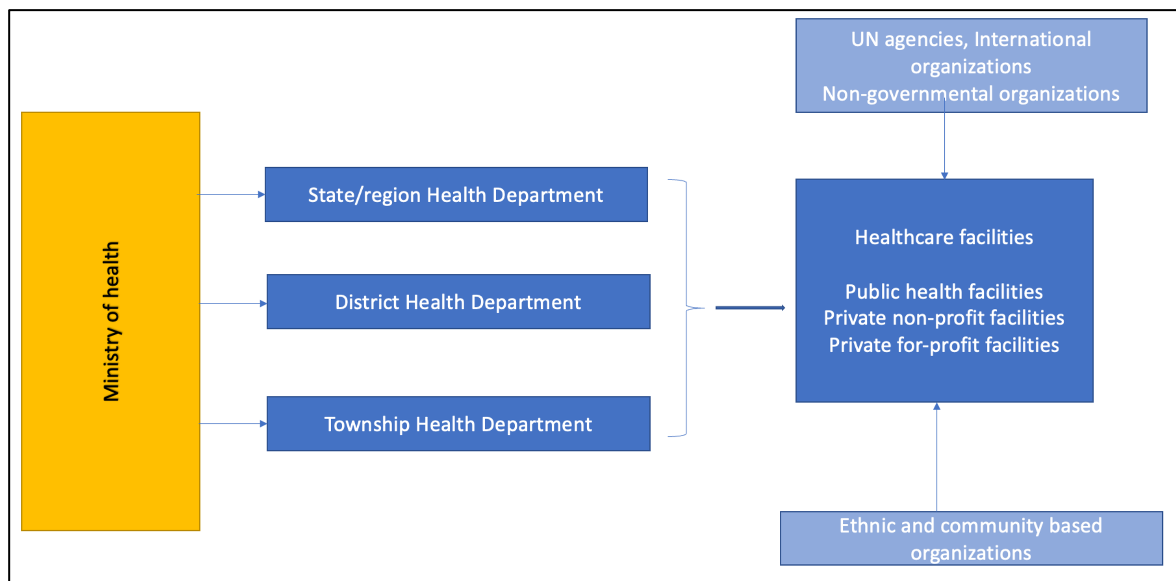

Figure 2 - Map of the Myanmar Health System, elaborated on the basis of the information retrieved from the interviews

Following the interviewees, the first democratically elected government took office in April 2016 and enacted a series of important healthcare reforms. Health indicators and outcomes have begun to improve since then as government spending on health increased. "*The democratic government was gradually trying to de-centralize the health system, but its efforts have been suddenly interrupted by the coup (2)"*. The democratic government aimed to reach UHC by strengthening PHC. *"So, as you know, the Myanmar universal healthcare coverage*

and ambition and vision was there and was on the agenda of the previous MoH. They started with development of the PHC minimum essential healthcare package services, defining minimum PHC services (5)".
Interviewees reported that, prior to the coup, Myanmar was facing a double burden of communicable and non-communicable diseases (NCD). *"For communicable diseases, the main causes of death and illnesses were TB, HIV-AIDS, and malaria. For NCD, we had mainly cardiovascular diseases, diabetes, cancer, respiratory issues. We also had poor maternal health, especially in rural areas. And many brain injuries, mainly caused by car accidents or work accidents (20)".*

2.2 Criticality of the health system

As it emerges from the interviews, despite the efforts and improvements on the part of the democratic government, many challenges and criticality remained. *"What I'm trying to convey is that the PHC service in Myanmar: number one, the coverage is very sporadic, and the quality of the service can be very different according to where you are. Thirdly, people were paying for all the routine services. And fourth, healthcare professionals are overwhelmed (1)". "So even before the coup, although the democratic government was paving the way to establish and to improve PHC, Burma was nowhere near in terms of universal health coverage for any kind of care (21)".*
Respondents underline that, despite the increase in availability of public healthcare facilities, public demand for equal access to such facilities was still not able to be fulfilled. While public health facilities remained underperforming, private PHC facilities, generally led by GPs, have become more favoured as they provided better services for their patients. "*Middle- or low-income people from urban areas they prefer to reach out to these private, specialists' clinics or GPs clinics as they can have easy access to the, you know, family doctors, specialist physicians, specialist surgeons and they don't need to wait at the public hospitals. That's why they prefer to go there, and they prefer the service from the private clinics and hospitals (16)"*. The use of private centres and clinics was made even more necessary in rural and remote areas by the scarcity of public health services.
Following the interviewees, Myanmar people generally used to pay out of pocket when medical attention was needed. *"As you know in Myanmar most of the healthcare services are out of pocket expenditure, probably around 85% according to WHO data (21)"*. Although there were some public healthcare services available through a cost-sharing system, families still needed to spend their own money, sometimes risking bankrupt, when one of their family members required medical attention and they wanted to get seen at a reasonable time. *"People risk bankrupt to pay their health bills. Others decide not to get treated for the same reason (13)"*. In the private sector, clients had to pay their healthcare expenses completely out of pocket.
As reported by all respondents, one of the most significative challenges of the health system in Myanmar was the lack of human resources. *"There was not enough manpower in hospitals and PHC clinics. Nurses were needed everywhere in the country. There were not enough doctors, nor health assistants, or community health workers. We lacked human resources (14)"*. Because of the scarcity of manpower, Myanmar health professionals had to cope with excessive workloads. *"The amount of work was overwhelming. We also didn't have enough time for each patient (17)"*. They were also not paid enough, their salaries being the lowest in southeast Asia, *"Our salaries are very low compared to other countries. Even in southeast Asia, I believe we have the lowest salaries for health professionals (13)". "We need to improve the manpower and to make the jobs more attractive and secure and better paid, that will help the recruitment. Providing job security will help maintain manpower (4)".*

2.3 Reluctance of the local population to turn to health facilities

According to the interviewees, among the Myanmar population there was a widespread feeling of reluctance to turn to hospitals and other primary health care facilities.
People, especially from rural areas, mainly turned to traditional healers and were often afraid of western medicine. "*Because they only have been treated by the traditional healers, or, you know, they have only traditional medicine. Because, you know, they trust traditional healers and fear other medicine (16)".*

People were also influenced by beliefs and practices rooted in their culture, which are sometimes harmful to health. *"When I was on a field trip to the middle region, there was poor water supply. Most villagers thought eating garlic and tomatoes caused skin infections. But the problem was the water supply not the food. Many of these misconceptions were present and there are still many lefts. Many villagers have wrong concepts (17)".*
As it emerges from the interviews, most people had limited health knowledge. For this reason, they often turned to hospitals only when symptoms were severe, and when it was often too late to treat them. *"There were a lot of misconceptions within the community. For example, a critically ill patient not reaching the hospital early enough because they were trying to cure the disease with traditional means. Most of them were afraid of western hospitals because they usually died when they reached to the hospitals. But the fact was that they should've come earlier. As soon as the person was ill (8)".*
Following the interviewees, a further reason why people preferred turning to traditional healers and private health facilities rather than public ones, lied in the prolonged period of military dictatorship to which they have been subjected. *"In my experience, even in the area where there are public health services, not many people are using them. I think it is because traditionally people do not find trust in the government system and do not expect that they will receive whatever they need. You know, after over 60 years of military rule, distrust is understandable (9)".*

2.4 Differences between urban and rural areas

According to the respondents, there were wide discrepancies between rural and urban populations and areas, and between central and peripheral states. *"You know, there were different services and different service user in the country. It mainly depended on the region. Like you know, urban or rural, central or peripheral. There were also a lot of big gaps between urban and rural population like types of services and user patterns (16)".*
Urban areas, which were mainly located in central states, were usually richer in health facilities, both public and private. These structures were also more easily accessible in terms of location and attracted more health personnel, highly specialized physicians, and surgeons.
In terms of users, people living in urban areas and central states had a higher level of health knowledge. Health literacy was usually associated with education and income level: *"Rich and medium-income, well-educated and more rounded people had good health literacy. But poor people, with low education had not much health knowledge (21)".*
Following the interviewees, richer people in urban areas referred to private, highly specialized health clinics and hospitals, or even practiced medical tourism. *"Medical tourism, you know, they go to other countries to receive healthcare because they don't trust our health system".* Middle-income and low-income people mainly referred to public facilities that were, as mentioned, underperforming and scant in resources.
Rural areas and peripheral states had few health facilities and limited health personnel and resources. This consequently led to higher morbidity and mortality, as people were not receiving sufficient PHC nor emergency care. *"In places like Karen, Karenni, Chin and Kachin – where there are remote areas – there were no GPs, no doctors or nurses and few health workers. People won't even get to see any medical professionals, probably for a month or more (3)".* Although the democratic government had started a process of renewal, conditions in rural areas were particularly dire for those already more vulnerable, such as chronic patients, the elders, pregnant women and their children: *"So in my experience between 2016 and 2021, I visited some of the really remote areas such as Chin and Mon and also the Irrawaddy Delta and in these places the most concerning thing and upsetting thing that I observed, was that the antenatal care package, that the pregnant woman receive in those areas and also the knowledge of the pregnant women and you know, health education for these pregnant women were not satisfactory at all. Women died because of lack of antenatal care or during birth (1)".*
According to the respondents, CBO and EHO also provided PHC in many rural areas without government facilities. However, these organizations often had limited capacity and were not equipped to deal with major health issues. In these areas, and especially in conflict-affected areas, UN agencies, international organizations and non-governmental organizations played an important, though insufficient, role. *"We did not have enough*

manpower, nor resources. We received support from UN agencies, or other NGOs, but that was never enough and only available in some villages. People in our area did not receive enough care (13)".

3. PHC SITUATION DURING THE CONFLICT

The third macro theme emerged from the interviews' analysis concerned the PHC situation during the conflict.

3.1 General deterioration of PHC

As discussed, the Myanmar health system was already challenged by common health problems faced by most developing countries. The situation was further aggravated by inter-ethnic clashes ongoing in several areas of Myanmar already before the military coup. According to the respondents, following the coup, the general health situation has severely worsened. Funds are limited: "*We have not enough money to support healthcare. During the coup, the most difficult thing in terms of healthcare is buying medicine, providing treatment and transporting thing. We need more money (5)"*.

Health services have declined, health needs are rising all over the country. *"The current health situation is far worse than before. Children are not allowed to be vaccinated, school health, nutrition, and immunization care is no longer available. Chronic patients are not receiving enough support. Emergency care is limited. It's been two years (11)". "Health situation is critical. The need for manpower increased. Health care can no longer be provided. There is a need for medicine and medical equipment. People need more health support (12)".*

Following the respondents, health conditions are negatively impacted by several logistic problems. International and domestic supply chains have been significantly affected by the military coup. Both land and air transportation are severely hampered and, in some instances, have come to a complete stand-still. Security threats to drivers, road closures, checkpoints, airport closures, reduction of relief flights, all contribute to substantial problems in the efficiency of Myanmar supply chains. Hence, availability of essential medicines, technical commodities and supplies for prophylaxis, diagnostics and treatment are severely impaired. *"In military controlled areas or in areas where the resistance is strong, the junta is seizing drugs and other health equipment as part of their divide and rule strategy. In conflict and liberated areas, it is also difficult to stock them (13)"*. The few available medicines and health care-related supplies are very expensive, with prices increased three to four times. Out-of-pocket healthcare are rising exponentially. *"People must seek help and pick up daily medications for example for diabetes, HIV, or hypertension in nearby towns. But if also nearby towns are out of medicine, people have to travel further distances, you know, only to pay even higher prices for their therapy (17)".* Additionally, due to lack of gasoline and more casualties, travelling to distant sites is not always possible, nor safe, further challenging appropriate referral. *"For this reasons people who can are moving to other countries for their health care. People who cannot travel simply disengage from their health care, sometimes with deadly consequences (18)".*

According to the respondents, the lack of medical instruments makes it difficult to do correct diagnoses and almost impossible to conduct some surgical operations. *"If the patient comes tired, there isn't any ECG machine to test the heart. If someone has a severe stomach-ache, we can't take an ultrasound because there is no ultrasound. There is no X-ray for injured patients. We have several gunshot patients, some injured in the arms, some in the legs, and some in the body or in the brain. If you want to take it out, you have to find the bullet hole and take it out. Without diagnostics, it can be dangerous if not deadly (12)".* Following the respondents, vaccines' supply and their cold chain is also very difficult. Therefore, immunization programs, particularly for children, are disrupted, likely resulting in higher dropout and higher risks for vaccine-preventable diseases outbreaks. *"Before the coup, people could be vaccinated and immunized. But now, we don't have enough vaccines. Cold chains are hard to maintain. We are mostly worried for children. It is almost 3 years that they don't receive vaccines. We are mostly worried for measles and diphtheria outbreaks, getting vaccines is the only effective way to prevent this (5)".*

According to the respondents, a further problem lies in the lack of reliable health data. National reporting systems are not functioning, rendering it difficult to capture reliable information on key health indicators.

Surveillance systems to monitor diseases of public health concern are disrupted, thus affecting capacity for early detection and prevention of outbreaks, and increasingly impairing tailored countermeasures. "*Collecting data and information is a challenge to know the exact ongoing situation… It is very difficult to have health data. Reporting of cases, births and deaths is unreliable (18)".*

Following the interviewees, direct essential PHC provision and health system capacity to answer to health needs are seriously impaired, hence resulting in limited availability of life-saving health interventions. Further, respondents underlined that, since it is not possible to early detect and prevent communicable diseases, preventable morbidities and mortalities are rising. As it emerges from the interviews, the impact is particularly severe for those already vulnerable, as pregnant women and their children. With minimal or no access to obstetric care, the number of women and children at risks of complications and or death in childbirth from preventable diseases has increased exponentially since the coup. Delays and fear of travelling to reach appropriate care services contributes to deaths. *"Pregnancies are not safe now. There is no early screening, nor antenatal care. Thousands of pregnant women are forced to give birth on the run, in the jungle, in abandoned villages and with little or no assistance. I lost many patients, both mothers and new-borns (18)".* Children are not receiving necessary post-natal care in their first 1,000 days of life. *"The first 1,000 days are critical for a new-born. We are losing many babies because we have nothing to help them. No ICU, no oxygen… (19)".* Health conditions are also particularly harsh for those living in conflict areas and for those displaced. *"They have no access to enough food, nor clean water or sanitation. Their hygienic conditions are terrible. They live in miserable conditions. You know this can lead to more diseases and epidemics (14)".*
Due to the collapse of the health system and the lack of available drugs, people with chronic illnesses and infectious diseases are experiencing a worrying worsening of their health conditions. There are widespread concerns also for the rise of communicable and non-communicable diseases going undetected because of limited prevention and screening. *"You can imagine people living in the jungle and on the run who are running for their lives. They have nowhere to think about their regular screenings that they should be doing, so that is, that is falling under the title of prevention. We cannot do anything about prevention aspect at all (1)".*
The interviewees are particularly concerned for the rise of HIV and TB cases, also because of increased sexual exploitation and abuses following the coup. *"Many women and adolescents have been abused and raped by the military after the coup. This has led to unwanted pregnancies, sexual infections, and a rise in HIV cases. There is a shortage of adequate ARV supply and TB drugs (13)".*
COVID-19 related activities on surveillance and contact tracing, laboratory testing, case management and vaccinations are currently disrupted. Thus, resurgence of COVID-19 cases is thus very likely, with effects also on neighbouring countries, which are destination of a significant number of Myanmar migrants.

Interviewees reported that the burden of mental health issues was already relatively high in pre COVID-19 times and then it severely worsened during the pandemic. Following the interviewees, the current crisis is severely affecting the mental health wellbeing of the Myanmar people. Loss of liberty, happiness and confidence in the future, as well as of properties or livelihoods, job insecurity, disruption of daily routines and sense of personal safety, are greatly increasing the risk of developing severe mental traumas, including depression or other anxiety disorders. *"All of us are basically screwed, you know.. everyone in this ..we are now nearly two years down the line… We are exhausted. The trauma is massive. We all are facing different kinds of stress and anxiety and challenges minute by minute, second by second, day by day, hours by hours. I cannot think how people are still standing strong to fight this, you know, unthinkably strong enemy, and yeah, doing what they are doing to resist (1)".* Mental health struggles are leading to higher alcohol consumption, drug abuse and self-harming behaviours, including suicides. "*We have more and more young people exposed to unthinkable pain and violence. Some of them cannot cope with the stress. We are trying to provide mental health support especially online, but it is not enough. There have been more suicides lately (7)".*

As the military are bombing villages and conflict is rising in many areas of the country, there is also a growing number of patients with gunshot wounds, bruises, and amputees due to shelling and bombing. "*We had to learn to treat gunshot through online trainings. We are doing amputations in the jungle (11)"*.

3.3 Healthcare workers

According to the interviewees, Myanmar health doctors have led the resistance through a Civil Disobedience Movement (CDM), minimizing work in government facilities under military control. Started by doctors in Mandalay the day after the coup, CDM became so strong that it nearly paralyzed the regime's ability to deliver public services. CDM spread throughout the health workforce, resulting in closure of public hospitals as well as medical and nursing universities. *"Almost everyone joined CDM. The health system took a fall. The Non-CDMs weren't capable to maintain the structure and the system. They were overwhelmed by the amount of workload they faced (2)"*. Clinical services have drastically diminished, leading to a health system suddenly in crisis. *"Deciding to join the CDM has been an ethical challenge. We know that our duty as doctors is to prioritize care for our patients, but how can we do so? How can we work under a military regime that is killing our people and stealing our freedom? (7)"*.

As will be seen in further depth in the following section, healthcare workers are using private and charity clinics to provide medical assistance at reduced fees and try to ensure continuity of PHC. When on ground assistance became impossible, they organized online medical support, in collaboration with the NUG and some CBO and EHO. *"In the first year, CDM actively provided treatment in areas where it was needed. We were able to work in groups. After April 2021, the number of arrests of staff increased, making it difficult to provide treatment on the ground. When the third wave of Covid came, CDM people began to provide health care and treatment through the telekyanmar plan online (9)"*.

Two years after the coup, though some healthcare professionals have returned to work out of financial necessity or fear of prosecution, many are standing firm in opposing the regime, despite the hardships they face. *"Despite all challenges, I think there are still over 45,000 workers still participating in the movement. From the very beginning, we didn't want to work under the military. We are not going back but our living conditions have become more and more difficult (4)"*.

Myanmar PHC professionals having refused to work in military controlled facilities are exposed to rising violence, risking their lives to provide healthcare to the population. *"Healthcare workers are on the run or hiding, they can't provide treatment openly, they live with a low profile. It is very hard for them, both physically and mentally. They are living in fear (15)"*. The military are reportedly occupying hospitals and other health facilities across Myanmar, attacking medical teams and rescuers, and vandalizing medical supplies, equipment, and vehicles. *"The main problem is security issues. The military are shelling and bombing us. We never know when the airstrikes are coming, we need to keep everything packed up and be ready to move. Providing healthcare has become a huge risk of life and death even for the healthcare provider. Every day we write our blood group, emergency contact number and name on our forearm: we never know if we will come back (8)"*.

According to the respondents, whilst some attacks are indiscriminate, others are a deliberate tactic designed to prevent healthcare workers from providing care. *"Healthcare workers are specifically targeted for the important role they play within their communities, the respect they get from their people, and how important they are for mitigating the violence, the conflict, the disintegration of society (18)"*.

Myanmar healthcare professionals and policymakers at all levels are being persecuted, harassed, intimated, arrested, forced to return to work, some have resigned, or gone into hiding or are *incommunicado*. Some have been tortured or even killed. *"Immediately after the coup I was in Yangon, providing healthcare to the people attending rallies in support of democracy. I was arrested and detained by the military. After I was released, I moved from one place to another. Some of my colleagues are still detained (6)"*. *"The military threatens family members of healthcare workers to scare them. They are also threatening villagers supporting healthcare workers. They say they will set fire to the villages if the locals keep helping or hiding the doctors or health staff (2)"*. Following the interviewees, because of the harsh repression perpetrated by the military an increasing

number of healthcare workers is suffering from mental health disorders. *"The mental burden faced by health professionals is massive. There will be long-term consequences. We will need to take care of this (14)"*.

3.4 Providing PHC

Respondents explained that Myanmar healthcare professionals refusing to work under the military organized an alternative healthcare system in collaboration with the NUG and/or with CBO and EHO. Depending on security issues and other contextual factors, they managed to organize a health network that could deliver PHC and emergency care online or on ground.

Following the respondents, healthcare professionals run, via telephone calls or internet calls, a telemedicine program to provide PHC, including mental health support, to the population in need. *"So, I have been working online at NUG MoH since April 2021, providing teleconsultation and healthcare. During the third wave of Covid, we were able to save people's lives by conducting telehealth plans and online consultations. Later, the public began to rely more on online consultations. It is easy to access because you only need a phone, and it is more affordable (10)"*. Patients requiring further specialistic assistance are referred to respective specialists for teleconsultation. Specialized doctors take care of the referred patients for further consultation via online platform unless physical examination or surgery is needed. If required, face-to-face consultation is organized with the necessary specialist in the nearest location. However, considering the ongoing conflict and military raids in many areas of the country, it is not always possible to safely organize face-to-face consultation or emergency referral. This can have negative - if not deadly - consequences for patients. *"Because most treatment and consultation are done online, we are not always able to fulfil the health needs of the patients. Let me explain this better. If I am on the ground, I can examine the patient, give him injections, intravenous therapies, drain wound or even perform minor surgical operations. But if I only speak to him online, I can only explain him, but I cannot treat him. For some patients, I can refer them to the nearest hospital… But for others, like the ones living in the jungle or in conflict areas, they cannot be referred, and they can maybe die of some treatable conditions (9)"*. Nevertheless, following the respondents, online healthcare consultations represent an important mean of providing PHC, especially in conflict and hard to reach areas, where on ground health services are hardly available. COVID-19's dedicated telegram channels were also launched to give medical guidance to the people during the third wave of the pandemic. *"When the third wave of COVID-19 came, CDM and other staff began to provide healthcare and treatment through some telegram channels. We gave them medical advice and prevention indications. Online consultations became more and more powerful (9)"*.

Through online platforms and social medias, healthcare professionals also run healthcare prevention activities and PHC trainings. *"We trained the people to achieve enough PHC health knowledge. We did many trainings of volunteers even to people who had not passed the high school examinations. We needed to as we need more health workforce. We have trained over hundreds of people to become PHC healthcare workers (14)"*.

According to the respondents, Myanmar healthcare professionals also organized on-ground healthcare teams and services to cope with the crisis and ensure PHC to the people. Their work is mainly coordinated by the NUG MoH. *"The democratic health workforce includes 308 specialist doctors, 456 general doctors, 574 nurses, 1554 PHC workers and 940 and 78% of them are members of the CDM. They are distributed among all Myanmar's states and divisions, based on the priority of needs and security concerns. Most are in areas of conflicts. They are coordinated by the NUG MoH, by state health focal and by township health focal (2)"*. From the interviews, it emerged that, at the time of writing, the democratic workforce controls 66 hospitals and 159 PHC clinics, and over 250 staffed mobile clinics. *"We supplemented the system with mobile clinics where the health service providers had to move from time to time depending on security and safety. Usually, the team includes doctors, nurses, sometimes there are medical students, and other volunteers who may or may not be health professionals, such as drivers, messengers, or community health workers (3)"*. Task forces were also organized for specific matters, such as COVID-19, while collaboration was strengthened with CBO

and EHO. Frontline healthcare providers were specifically trained. *"We trained up people from PDF and other armed groups to become medical soldiers. In my areas, I have trained two batches of medics. We should have at least one medic for every 10 soldiers, but in many areas, we only have one medic for over 30 soldiers (4)". "We organized emergencies war medical care trainings. These are trainings for on-ground professionals to teach them how to provide health services during war and conflicts, such as bombing, gunshot wounds, fracture, and eardrum problems due to the loud sounds. Not just medics, but also PHC workers and nurses (5)".* According to the respondents, some mobile clinic outreach services have been suspended in some areas of the country for security reasons. In these areas reinforcing recurrence to online health teleconsultation is even more important.

3.5 Differences between areas

Following the respondents, health needs and PHC's availability vary considerably between areas.

In military controlled areas, healthcare demand is higher than the supply, despite the efforts of CDM healthcare workers. *"CDM doctors are offering their trained health service in their private hospitals. That's why the military shut down the private hospitals. It shows that the military is trying to, you know, cut down all the health services in the country. Yeah, because of their political mind. They kill the people for power (21)".* Persecution, harassment, and arrest of healthcare staff on the part of the military are particularly frequent in military-controlled areas, where most CDM work. *"We are working in fear (1)".*

The military are seizing drugs and other medical equipment. Curfew orders, and later martial law orders were issued, thus posing extreme challenge for emergency referral services. The junta has even banned some private oxygen producers from selling it to civilians and humanitarian organizations. Many groups of volunteers all over the country have organized distribution of oxygen, food, medicine, and transport for the sick and dead. Families with ill members are asked to hang white and yellow flags from their windows to signal their need for food or medicine. This has made people more resistant to the junta and more determined to help each other outside the military. *"People don't trust the military. They prefer to suffer or die rather than being treated at military-controlled facilities (16)".*

In disputed areas, site of conflict, health professionals try to guarantee a minimum access to PHC through mobile clinics and frontline teams. *"They provide essential PHC and can perform some surgeries for battle wound problems. If not, they can contact the emergency team for consult and discussion (an online team available 24/7) or they may refer the patients to a bigger, better clinic (13)".* However, due to airstrikes and on-ground fighting, risks are massive. *"In conflict areas, people need to move fast, very fast. A war can break out anytime and they have to be ready for anything and everything (12)".*

Following the interviewees, internally displaced people and people living in conflict areas, are facing unbearable challenges and miserable living conditions. Lack of medicine, adequate food, and clean water as well as exposure to violence is leading to an increase in malnutrition, disease, disability, mental health crises and deaths. *"There is not enough healthcare in conflict areas. People are suffering. Their health needs are unmet despite our efforts We cannot deliver proper PHC (3)".* The situation is further challenged by military attacks. "*I was with my mobile unit. The military found us, tracked and followed and they started shooting. I got a bullet to my shoulder but managed to escape (5)".*

Respondents underlined that the situation is better in liberated areas now under the control of the NUG or of ethnic groups. *"The healthcare in ethnic and NUG controlled areas has improved a lot. There are more PHC health services and trainings (6)".* Indeed, in these areas, the NUG and other democratic forces managed to set up more PHC clinics and hospitals. A nursing university was also opened in Karenni. In border areas supply of drugs and medical equipment is easier, as they can restock them from border countries. However, the risk for airstrikes remains. *"We still have to fear for airstrikes, but it seems like we have a better, safer chance now. Healthcare can be given. Medicine needs can also be almost fulfilled. We are trying to get more staff to the areas (17)".* Immunization though remains a major concern for healthcare professionals.

According to the interviewees, the PHC situation in ethnic and liberated areas is now better than before the coup. This is mainly due to the higher concentration of healthcare professionals, who run from the cities under military control or from conflict areas and seek refuge in liberated ones. *"The situation is now better in ethnic areas than before. They have more facilities now, like PHC clinics and some hospitals. Especially there is more manpower now, both for PHC and for specialized surgery. For example, Khin Maung Lwin is there in Kachin now, and he is performing brain surgery. They never had brain surgery before in that area (3)".*

3.6 Views on the NUG work with respect to the health situation

Respondents explained that the NUG MoH is working on the ground and online with the goal of ensuring all the people of Myanmar have access to the PHC services they need during the period of ongoing conflict. To do this, the MoH is partnering with CBO and EHO, reaching a level of collaboration never previously achieved in Myanmar. However, the results are not yet as expected. *"We are not providing enough PHC and emergency care. We are not providing enough immunization. We are failing very, very miserable, but at end of the day, this is not our fault. We are doing all we can, risking our lives with unthinkable mental stress (1)".*

Security concerns, inaccessibility of some areas, communication breakdowns, scarce funds, difficulties in supplying drugs and medical equipment, are among the factors limiting the health capacity of the NUG and partners.

According to the interviewees, the MoH should do more to increase the number of available health staff and ensure them a decent salary. *"There is a huge need for human resources. We also need financial support to help these staff/volunteers to help them keep supporting their families. Because MoH isn't paying anything and we are surviving with donors and without saving any money for the future (19)".*

Some respondents also underlined the need for a stronger and more coordinated leadership, together with more effective communication. *"They have a lot of you know health task force or consortium coordination on the governing level. But there should be more on the ground. We need strong leadership on ground. Yes, they should improve collaboration and communication (16)".*

4. FUTURE PROSPECTIVE

The fourth theme emerged from the analysis of the interviews concerned healthcare professionals' expectations about the future of the country's PHC and their personal prospective.

4.1 Future prospective of PHC

According to the respondents, the future of Myanmar's PHC is closely linked to the political situation, and therefore whether the country will be at war or in peace. *"It is difficult to say. It depends very much on the political situation in Myanmar. The future of the country depends on whether there will be war or peace (6)". "After the revolution, if the people's government can plan and implement it, health care will improve and rehabilitation will be possible. If we can't win, there will be no future, no health. So, the revolution must be successful. I believe that it will be successful. Only when the revolution is successful, we will be able to provide proper PHC for the people (9)".*

Following the respondents, if the conflict does not end, the PHC situation, and that of the healthcare system in general, can only get worse, with negative repercussions also in the future. *"If the conflict does not end sometimes soon, the consequences on the health system and on the health needs of the population will be even more serious. The health consequences will be massive and intergenerational (10)".* Further, if the conflict continues, and vaccination cycles for children are not resumed, there will be an increase in infant mortality, and a serious risk of new epidemics. *"Children haven't been immunized for over 2 years. They are dying of preventable diseases. If this continues for another year or so, there will be a measle outbreak, diphtheria outbreak and polio outbreak in our country, which could easily spread to India, China, and Thailand and so on and so forth (11)".*

Peace would instead make it possible to rebuild the health system and strengthen PHC. "*For everything to come together, the essential ingredient is peace and stability in the country. So, the perspective is, if the country is in peace, health can be restored. We will need to work step by step to rebuild the system, as much has been destroyed (21)"*.

Interviewees support the NUG MoH plan to develop a federal health system, based on inclusion, decentralisation and tailored on local needs and contexts. This entails a strengthened collaboration with EHO. *"A co-created Federal Healthcare Plan will define the solutions to the current and future healthcare demands of the country and will form a crucial part of the essential reforms that are desperately needed in the country. To do this, we need to work with ethnic leaders and ethnic communities as well. We need to unite and work together (15)"*.

Peace would allow to resume the interrupted path towards UHC, starting right from PHC. *"The most important thing is rebuilding PHC. If we want to achieve universal health coverage, granting everyone access to PHC is the most important thing to do (12)"*. Respondents highlighted the need for the MoH to promote the role of PHC providers, as they are best placed to understand the health needs of their local population. *"We need to prioritize PHC workers. They really know the needs of the people, and the people trust them. So, they will be even more important to rebuild the system after the revolution wins (17)"*. In this sense, following the interviewees, health can act a bridge for peace, as it represents a neutral meeting point to bring conflicting parties to discuss mutually beneficial interventions. Therein, PHC workers are ideally placed because of their professional and ethical position within the community.

Respondents underlined that the MoH will also need to ameliorate the working and living conditions of the whole healthcare workforce, by increasing their salaries and by better distributing the workload. According to the interviewees, education will also play a major role in rebuilding the health system, both in terms of health professionals' education and people's education, with a focus on PHC prevention activities.

4.2 Personal future prospective

When it comes to personal future prospective, respondents can be divided in two main groups: those who do no longer want to be involved in politics and just want to carry out their profession, and those who want a new leading role in the reconstruction of the health system and of PHC.

Most of those interviewed stated that, once the conflict will end, they no longer want to be involved in politics. Almost all of them said they only want to carry out their professional role – as a doctor, nurse, health worker, GP, midwife, or policymaker. *"I just want to be a clinician in my town and that's it. I do not want to take part in these wars and battles anymore. No more doing actual politics. Just voting for the election and done (13)"*. *"I will continue my work and will help the public as much as possible. I do not want to be deeply connected to politics anymore. I just want a peaceful life with my patients after the revolution (14)"*.

The need not to be any longer involved in politics and the desire to live in safety with their families in their villages is particularly strong among CMD people, that had to move from place to place to escape military persecution. *"After the revolution, I would like to get away from being too involved in politics. For two years I had to run and hide. I am done with all those stressful conditions. I only want to live in my village and be a physician (6)"*.

Only few interviewees stated that they wish to continue being involved in politics and that they want a new professional role involved in the reconstruction of the PHC system. *"After the revolution is successful, we will have to do reconstruction work. There will be difficulties, because the army destroyed hospitals and clinics, and we have to rebuild them. MoH will do whatever is necessary and so do I. I will do my best wherever I am needed. I want to help rebuilding all (12)"*. *"I would like to be an admin or a teaching staff in the future, rebuilding the healthcare system. It is not impossible. But it will be a long way to proper efficient healthcare, and I want to help (19)"*.

DISCUSSION

The research aimed to analyse what happens to the provision of PHC in Myanmar conflict-affected setting, highlighting changes in the PHC provision from prior to the coup to the current situation and in the health needs of the Myanmar people.

As reported in the results, from the in-depth reading of the interviews' transcripts and their thematic analysis, overarching themes, subthemes, and further subthemes were defined (a summary is provided in *Table 2*). This section will comment on the results accordingly.

It is necessary to make some premises. First, this study was conducted under non-ordinary conditions, with Myanmar being ravaged by conflict, hit by a third wave of COVID-19, and confronted with a massive humanitarian crisis. The instability of the context and the consequent continuous and unforeseen changes required great flexibility on the part of the research team. Second, the cruel persecution of the healthcare professionals by the military made it extremely difficult to be able to conduct interviews. The very fact of having been able to interview people during a civil war, is the result of the experiences and relationships that the research group had already built in Myanmar in previous years. Without these robust relationships of collaboration and trust with PHC professionals and decision-makers, it would have not been possible to conduct any interviews. Thus, despite being a small number, the 21 interviews represent already a significant result.

1. HOW IS PHC CONCEIVED BY THE INTERVIEWEES?

In line with the Alma Ata Declaration on Primary Health Care (WHO, 1976) and with scientific literature (Ghebreyesus, (2) 2018; Ruano, 2015), for the respondents PHC represents the first level of contact for the population with the healthcare system and should hence be rooted in the communities.

Following the interviewees, PHC encompass several health areas and services: public health care, medical care including providing essential drugs, treatment and prevention of communicable diseases and non-communicable diseases, vaccination, maternal and children health, health promotion and education, and mental and social health. This is consistent with scientific literature, for which PHC should focus on the comprehensive and interrelated aspects of physical, mental, and social health and well-being, encompassing promotion, prevention, early intervention, treatment of acute conditions, vaccination, management of chronic diseases and health education (WHO, 2021; WHO, 2019; Starfield, 2005).

Following the interviewees, emergency care and services are also encompassed by PHC, hence underlining that PHC should match the actual needs of the Myanmar people. This is again in line with scientific literature, that clarifies that PHC should be contextualised to differing perspectives, health needs, and material and cultural settings of diverse groups in a given context (Ploeg, 2019; Abuzour, 2018; Evans, 2017; Øvretveit 2011; Gulliford, 2002).

2. PHC SITUATION BEFORE THE COUP

People living in countries with democratic institutions enjoy better health than those who are enduring under repressive regimes (Ruger, 2005; Franco 2004). A clear example of the negative effects on health by a repressive regime is provided by the case of Argentina. Indeed, a military dictatorship took power in 1976, leading to a sharp impoverishment of the health system: public facilities were transferred to the private sector, out of pocket expenditure rose exponentially, and morbidity and mortality increased throughout the country (Bermann, 1978; Escudero). Theoretically, democracy should improve population health (Bollyky, 2019; Ncayiyana, 2004). When enforced through regular, free, and fair elections, democracies have a greater

incentive than autocracies to provide health-promoting resources and services to a larger proportion of the population (Bollyky, 2019; Besley 2006; Ghobarah, 2004; Martyn, 2004).
Myanmar, having transitioned from a repressive regime to a democracy, represents a straightforward example. From 1962 until 2011, Myanmar has been ruled by a military junta, who failed to develop the country health system, with spending on health being among the lowest in the world (Brennan, 2020). As underlined by the respondents and confirmed by literature, decades of neglect, isolation and armed conflict have resulted in severe health outcomes, high mortality due to preventable illnesses, massive health needs and a tragic rate of individual out of pocket expenditure (Lwin, 2011). The public healthcare system was highly structured, following the state-district-township government hierarchy, with medical officers overseeing all health-related activities in designated areas (Risso-Gill, 2014). There was also an active network of community health workers, midwifes and health volunteers, working in collaboration with village tract health committees, providing some PHC services and running prevention activities (WHO, 2008). However, PHC services at the local level were dramatically under-resourced, and although some areas were supported by international organizations and non-governmental organizations, together with EHO and CBO, they lacked the resources to provide effective PHC (Low, 2014; Risso-Gill, 2014).
The first democratically elected government took office in 2016 and enacted a series of reforms to strengthen the health sector and reach UHC through PHC. Health indicators and outcomes have begun to improve since then as government spending on health increased together with PHC education and promotion activities (Gilder, 2019; Schucht, 2019). Myanmar had a window of opportunity to act and achieve significant progress in PHC (Risso-Gill, 2014). However, as emerged from the interviews, the Myanmar PHC system was still facing many challenges: differences between public and private healthcare system, elevated out of pocket expenditures, and shortages of manpower.
Indeed, notwithstanding the efforts of the democratic government to reinforce the public health system through PHC, health facilities remained overcrowded, not available in all areas of the country, and not able to provide timely care. Therefore, private healthcare facilities became more favoured among the people, especially among those who could afford them. This is line with tendencies in other low and middle-income countries, where privatization was widespread as an unplanned response to the failure of the health sector (Bennett, 1997). In many developing countries and especially in South-East Asia countries, the support of a market economy and increased demand for quality health care led to an overgrowth of the private sector, particularly for infectious and non-communicable diseases (Berendes, 2011; Saw, 2009). WHO conducted a series of operational studies in India, Nepal, Vietnam, Indonesia, and Myanmar that confirmed that the private sector was the dominant diagnostic resource even for poor patient (WHO, 2000).

As mentioned, despite the government increased budget to reinforce the public health system, out of pocket expenditure in Myanmar for PHC was one of the highest in the world, resulting in high levels of catastrophic health expenditure (Myint, 2019; Lwin, 2011). Of all Myanmar households that went to a health facility in 2015, over 28% took loans and over 12% sold their assets to cover health spending (Risso-Gill, 2014). Out of pocket expenditure impeded quality and equity of access to care. Although catastrophic health expenditures can occur in every country, scientific literature shows how they are mostly common in countries in transition and in low-income countries, hence affecting already vulnerable populations (Reid, 2022; Weinberger, 2021; Myint, 2019).

For what concerns health workforce, the interviewees underlined that one of the most significative challenges of the Myanmar PHC system was the shortage of manpower and the excessive workload placed on the few available. Again, this is a problem faced by most low and middle-income countries, that further impacts the ability of the PHC systems to cope with the population health needs (Astale, 2023; Makuku, 2022; Lehmann, 2008). Rural regions are most affected, not only because of the shortage of health professionals but also because of the difficulties in retaining them in these zones (Belaid, 2017; Budhathoki, 2017; Snow, 2011). This further exacerbates the health needs of rural population (Willcox, 2015; Shattuck, 2008).

The interviewees pointed out that low-income people, especially from rural areas, mainly turned to traditional healers and were often afraid of western medicine, hence referring to PHC facilities only when symptoms were severe, and when it was often too late to treat them. Following the respondents, the reason of this behaviour was mostly attributable to the limited health knowledge of those people. Low health literacy is a significant problem in many low and middle-income countries because of the low levels of general literacy and poorly resourced and functioning health systems (Meherali, 2020; Malik, 2017; Apolinario, 2014; Orach, 2009). Low health literacy is associated with inadequate knowledge about health and the health care system, poor access, and use of health services and increased hospitalisation. This leads to poor health outcomes and health inequalities (Meherali, 2020; Aboumatar, 2013; Al Sayah, 2013; Bostock, 2021).

Following the interviewees, a further reason why people preferred turning to traditional healers and private health facilities rather than public ones, lied in the distrusts in government's led institutions, which is a consequence of over 60 years of military dictatorship (Pedersen, 2012). Only a small number of studies have measured trust in health care settings to date (Ozawa, 2011; Bova, 2006; Hall, 2006; Moseley, 2006). More recent studies have begun to highlight the potential value of trust in understanding the performance of healthcare systems and institutions (Duckett, 2016; Rockers, 2012; Devadasan, 2009; Zhang, 2006). However, most of these studies have focused on trust in personal physicians or medical personnel, while relatively few studies have examined political, historical, and racial forms of healthcare-related distrust (Dean, 2021; Hermesh, 2020; Rockers, 2012; Armstrong, 2008).

For what concern health differences between areas, the interviewees reported that there were wide discrepancies between rural and urban populations and areas, and between central and peripheral states. This is confirmed also by scientific literature and official data. Residents of rural and peripheral states suffered from remoteness, civil conflicts, and low socioeconomic development. Due to that, there were wide geographic, ethnic, and socio-economic disparities (Tang, 2019; Zaw, 2015; Loyer, 2014). For example, the maternal mortality ratio (MMR) in Chin State was 357, compared to 213 in Yangon, and the under-5 mortality rate (U5MR) ranged from 108 in Magway Region to 48 in Mon State (Ministry of Health and Sports, Myanmar and ICF 2017). Children from poorer households were more than twice as likely to be undernourished than those from better-off households (Zaw, 2015). Scientific literature is rich of studies confirming that compared to urban residents, rural residents have poorer health outcomes because of lower access to healthcare facilities, lower availability of healthcare professionals, and lower health literacy (Bono, 2022; Singh 2017; Spasojevic, 2015). Studies confirm that this is a trend common to rural and remote areas both in high-income and in low and medium-income countries (Ranzani, 2022; Chen, 2019; Richman, 2019; Singh, 2014).

3. PHC SITUATION DURING THE CONFLICT

Conflicts are a global health challenge, as the impacts are indiscriminate across health systems (Al Mandhari, 2022; Garry, 2020; Leaning, 2013). Health systems - PHC services in particular - are among the earliest casualties of conflicts (Atallah, 2018). A straightforward case is that of Afghanistan, where decades of conflicts and political turmoil have contributed to the collapse of the country health system and of PHC delivery (Tao, 2023). A further case is that of Ukraine. Indeed, while progress was achieved before the conflict, the ongoing conflict represents a severe setback for the country's ambitions to implement health reforms and reach UHC through PHC, as the public health system is rapidly deteriorating (Skhodina, 2022). This is also the case of Myanmar.

Indeed, the military coup of February 1, 2021, has triggered the collapse of the Myanmar health system, posing a national threat to health and human security, and hindering PHC development (Bowyer, 2021; Soe, 2021). Myanmar healthcare professionals are facing numerous challenges to provide PHC in the country. First, they

are facing severe constraints related to logistic issues. Indeed, the conflict has damaged health and health-related infrastructure and has led to shortages in medicines, medical supplies, health personnel, and financial resources, increasing the burden on the already strained PHC system. Second, the armed conflict is making it more difficult for health workers to access populations in need and for these populations to access PHC services. This occurs due to increased insecurity, legal and administrative barriers, the militarization and politicization of healthcare, poor governance, displacement, and the exacerbation of existing vulnerabilities. There is also a lack of reliable health data, making it more difficult to capture information on key PHC indicators and affecting the capacity for early disease detection and prevention of outbreaks. These challenges are common to most conflict-affected countries (Atallah, 2018; Debarre, 2018). For example, in the Central African Republic, the conflict has disrupted the country's already weak logistic and transport capacity, making it exponentially more challenging to deliver medicine to rural areas (Ssonko, 2017). The same happened in the Tigray Region in Ethiopia (Paltiel, 2022). In Yemen, the conflict has crippled health, water, and sanitation facilities, creating the ideal conditions for diseases to spread. Yemen also suffered from serious electricity shortages, which meant that lab services could not continue and the cold chain for vaccines was unable to function (Van Esveld, 2017).

As witnessed by the interviewees, PHC needs are rising all over Myanmar. Direct essential PHC provision and health system capacity to answer to the health needs are seriously impaired, hence resulting in limited availability of life-saving health interventions. Scientific literature confirms that conflicts generally increase the health needs of the population and undermines the health system's ability to cope with both new and pre-existing PHC needs (Debarre, 2018). For example, as the military are bombing villages and conflict is rising in many areas of Myanmar, there is also a growing number of patients with gunshot wounds, bruises, and amputees who requires emergency surgical care which is lacking. This was also the case in Syria, where in 2016, around 25,000 people were injured each month because of the conflict (WHO, 2017).
Conflicts hamper the surveillance, prevention, and control of infectious disease outbreaks (Debarre, 2018). This is also the case of Myanmar. Indeed, following the respondents, people with chronic illnesses and infectious diseases are experiencing a worrying worsening of their health conditions. Literature confirms the widespread concerns also for the rise of communicable and non-communicable diseases going undetected because of limited PHC prevention and screening activities (Chen, 2023; Kyaw, 2023).

From the interviews, it emerges that the situation is particularly dire for those already vulnerable, as pregnant women and their children. Due to minimal or no access to pivotal PHC services such as antenatal, delivery, postnatal and child health, women and children morbidity and mortality has exponentially increased since the coup. Children are also negatively affected by the disruption and unavailability of vaccinations. These challenges are common to many conflict-affected countries (Bendavid, 2021). For example, in the Democratic Republic of the Congo (DRC), 473 of every 100,000 women who give birth died due to pregnancy-related complications. These deaths could be prevented through enhanced access and utilization of antenatal care services and skilled birth attendants. However, amid prolonged conflict, violence, and authoritarian governments, the Democratic Republic of the Congo has been classified as a fragile and conflict-affected situation and women are prone to face difficulties accessing maternal health services and experience higher rates of morbidity and mortality (Ziegler, 2020). A more recent case is that of Ukraine, where children are not receiving the timely and quality PHC they should access because of the conflict (Ahsan, 2022). A further example is that of Syria, where children are exposed to worrying risks for outbreaks because of worsening vaccination states as a result of decades of conflict (Elsafti, 2016).

Because of the conflict, Myanmar is also facing an exponential burden of mental health issues. Indeed, following the respondents, the current crisis is likely to dramatically impact the mental health of people, including those directly experiencing violence and those with pre-existing vulnerabilities. Mental health struggles are triggering drug abuses, higher alcohol consumption and self-harming behaviour among both PHC

workers and civilians. This worrying rate is also confirmed by a recent survey conducted by a mental health service provider in Myanmar working on prevention and healing through counselling (Artingstoll, 2023). All over the world, armed conflicts entail a wide series of compelling issues, including negative short- and long-term consequences on mental health, in addition to death, all which impact heavily on the lives of survivors (Carpiniello, 2023; Bogic, 2015; Martìnez, 2015; Levy, 2009). The interviewees are particularly concerned for the severe mental health consequences on pregnant women, children, and adolescents. Scientific literature is rich of studies confirming that pregnant women, children, and adolescents living in conflict zones are exposed to high levels of traumatic experiences, with detrimental consequences on their health and on their development (Bendavid, 2021; Moussa, 2015; Tol, 2013; Dimitry, 2012;). A recent study showed that children living in armed conflict areas of southern Thailand, although without any direct exposure to traumatic events, also suffered from mental health problems, including anxiety and depression (Jayuphan, 2020). The mental burden is also very high on pregnant mothers, as exposure to conflicts is associated with induced abortions because of high stress (Bendavid, 2021; Keasley, 2017; Tinglöf, 2015).

As it emerges from the interviews, Myanmar healthcare workers, in particular those part of the CDM movement, are facing unbearable challenges. Indeed, Myanmar healthcare professionals are being arrested, intimidated, prosecuted, and killed (Short, 2022; Bowyer, 2021; Tatum, 2021). Myanmar healthcare workers and health facilities are not just casualties of the conflict but, rather, are victims of military's deliberate attacks on them (People, 2022; Lwin, 2021). Data confirms this alarming situation. 889 incidents of violence or threat against healthcare were reported since the coup. These incidents had the following effects: 106 health facilities have been damaged, 86 health workers have been killed, 17 health workers have been kidnapped, 112 health workers have been injured (Insecurity Insight, 2023). Actual numbers are expected to be much higher, with Myanmar accounting for one of the most dangerous places in the world to be a health worker (People, 2022; Short, 2022). It is worth stressing the pivotal function of PHC workers in Myanmar both in their professional role of PHC giver and as leaders of the democratic opposition, by adhering also to the CDM. Despite attacks and persecutions, defections are kept to a minimum, and healthcare workers stand still against the military.
Deliberate attacks on healthcare workers and facilities as strategy of war are widespread and show no sign of relenting (Haar, 2021; Afzal, 2019; Debarre, 2018). The Syrian civil war is among the most striking examples (Ri, 2019), as combatants of both sides have been responsible for the bombing of hospitals, looting of ambulances, and executions of healthcare workers (Fouad, 2017; Sibbald, 2013). An analysis of attacks on healthcare facilities revealed a pattern of repeated targeting in opposition-controlled areas to restrict access to healthcare and engage in siege warfare (Harr, 2018; Elamein, 2017). A further example is that of Yemen, where healthcare workers have been deliberately attacked over the years of conflict (Elnakib, 2021). A more recent case is provided by Ukraine's ongoing conflict, where sources reported 86 attacks on healthcare workers, with 62 killed and 52 injured (Mahase, 2023).

Scientific literature shows how, during conflicts, the cumulative exposure to political violence, humiliation, and collective trauma can gradually destroy trust. Thus, building trust itself is an important pillar of PHC delivery (Atallah, 2018). Maintaining population trust in the capacity of PHC professionals to meet essential health needs is key to ensuring appropriate care-seeking behaviour, continuity of care and adherence to PHC advice. Indeed, PHC professionals can act as a buffer against failure of PHC service delivery, particularly for vulnerable groups and hard to reach communities (Bou-Karroum, 2020; WHO, 2018). For example, in Pakistan, PHC workers who continued working during and after the flood that devastated Sindh province in 2010 helped prevent outbreaks of infectious diseases such as diarrhea, while ensuring that vital PHC services such as child immunization continued uninterrupted (McBride, 2010). In Myanmar, healthcare professionals are working against the failure of the public health system, striving to provide people with access to decent PHC despite having limited resources. To do this, they are risking their lives and those of their families. For their strenuous efforts against all risks they face, the Myanmar people trust and support them.

Myanmar health workers are building alternative routes to provide PHC to the people. As discussed, Myanmar is currently divided in three main areas: military controlled areas, conflict areas and liberated/ethnic-controlled areas. Thus, depending on the context and on contextual factors of each area, such as health needs and security and accessibility of areas, Myanmar health workers are providing either online and/or frontline PHC.
As discussed, Myanmar health professionals are providing PHC through telemedicine and teleconsultations, building an online network of PHC workers and specialized doctors. Literature shows that providing digital care can help to bridge the gaps in conflict-affected areas (Asi, 2018). A recent scoping review underlined how technologies can contribute to enhancing quality, accessibility, and availability of PHC in fragile and conflict-affected states in the Middle East and North Africa (El-Jardali, 2023). On the frontline, Myanmar health professionals are providing PHC using different strategies ranging from community-level interventions, to fixed healthcare facilities – including private and charity clinics, and CBO and EHO facilities, to mobile clinics. The main objective of mobile clinics is to improve access to PHC in remote and conflict areas (Mortier, 2007; International Committee of the Red Cross, 2006) by providing a package of limited PHC services, with referral to nearby fixed structures for conditions not manageable under this package (McGowan, 2020). Community-level PHC interventions and fixed healthcare facilities are mostly used in liberated areas where, according to our respondents, the overall PHC situation is better than before the coup because of a higher concentration of health professionals escaping arrest from other areas of the country.
By providing online and frontline PHC, Myanmar health care professionals are showing how the PHC system must adapt to the new situation, building context-related answers to be able to meet people PHC needs. Scientific literature proves that the context and contextual factors are critical elements to successful PHC delivery and implementation of PHC interventions (D'Apice, 2022; Ploeg, 2019; Evans, 2017; Øvretveit, 2011). The Myanmar case shows that this is particularly true and urgent also in emergency situations, such as conflicts.

Myanmar healthcare professionals having refused to work in military's-controlled facilities are running PHC services under the coordination of the NUG MoH. The MoH strategy is based on the principle of UHC, whereby PHC represents a key pillar and means for re-strengthening the health system and respond to the population' health needs (D'Apice, 2021; NUG 4/2021; NUG 5/2021). This is in line with scientific evidence, that stress the role of PHC as a foundation for strengthening health system in low and middle-income countries and in countries ravaged by conflicts (Atallah, 2018; WHO, 2018; Bitton, 2017).
Literature shows that stakeholders' strengthened collaboration and multisectoral action are keys to addressing many pressing health challenges. Those challenges are likely to be more acute in low-income and middle-income countries where institutions are frequently weak, and fragmentation, even within the health sector, can undermine coordination (Bennett, 2018; Saif-Ur-Rahman, 2018). This is also the case of Myanmar where, despite the efforts of the NUG MoH to partnering with CBO and EHO to build a federal democratic health system, fragmentation remains (Biesty, 2021). Indeed, respondents underlined the need for a stronger and more coordinated leadership, together with more effective and timely communication between the MoH and stakeholders.

4. FUTURE PROSPECTIVE

Scientific literature shows that conflicts have substantial negative, long lasting and intergenerational impacts (Mahler, 2021; WHO, 2018; Devakumar, 2014). Sierra Leone represents a straightforward example. Indeed, the civil war that ravaged Sierra Leone from 1991 to 2002 destroyed the country's infrastructure including the health system. A decade later, the health system was still completely apart (Desai, 2010). Further, as the experience of Chile shows, the results of health management in periods of military dictatorship leave a mark that makes the reorganization of the health system difficult even in subsequent decades of democracy (Oliveira, 2020). Myanmar is itself an example. Indeed, from 1962 until 2011 the military junta that ruled Myanmar has

failed to develop the health system and instead triggered poverty and inequities (D'Apice (2), 2022). Notwithstanding the efforts of the civilian government in power from 2011, and of the democratic government in power from 2015 to before the coup, the reorganization of the health system and the strengthening of PHC were still severely undermined by the mark left by the military (Bowyer, 2021; Soe, 2021).

The future of Myanmar's PHC, and of the health system in general, is closely linked to the political situation, and therefore whether the country will be at war or in peace.
If the conflict does not end, the PHC situation, and that of the healthcare system in general, is likely to get worse, with negative long-lasting repercussions. In particular, because of lack of health and immunization' disruption, Myanmar risk vaccine preventable outbreaks and widespread epidemics (Lwin, 2022; Frontier, 2022). Scientific literature confirms this risk. For example, Yemen has been faced with the worst cholera epidemic of modern times, largely due to the longstanding civil war, which has severely damaged the already fragile PHC system (Ng, 2020).
Scientific literature proves that peace is the fundamental condition for health (Levi, 2022; WHO, 1986). Peace would thus make it possible to rebuild the Myanmar health system, resuming the path towards UHC through PHC. Researchers underline that, in emergencies, conflicts and post-conflict situations, health can act as a bridge for peace (Al Mandhari, 2022; Décobert, 2022; Ghebreyesus, 2022; Khan, 2022). The NUG MoH's efforts go in this direction, with their strategy focusing on strengthening PHC as means for re-building the health system and act as a bridge for peace (D'Apice, 2021; NUG 4/2021; NUG 5/2021).

As discussed, when it comes to personal future prospective, most respondents underlined that, once the conflict will end, they no longer want to be involved in politics but, rather, they only want to carry out their professional roles and live in safety with their families. I found this attitude of disengagement towards politics and of imagining a future different from the present interesting and peculiar. It suggests that it is difficult for the Myanmar healthcare workers and policymakers to connect with the present emotional experience. The burden triggered by their current role emerges from the fact that most respondents say they no longer want to do it. Indeed, as discussed, Myanmar healthcare professionals are facing an unbearable burden and risk their lives to provide PHC to the population in need. The risks for secondary trauma and compassion fatigue are high. Scientific literature is rich of cases of frontline providers' burnout (Wright, 2022; Billings, 2021; Deng, 2020). It is necessary for the NUG to cope with this risk.

Finally, it is worth underlying that, from the interviewees, it anyway emerges a sense of optimism for the future. In fact, the interviewees believe that in the event of peace, at the end of the conflict, the experience gained in this period, particularly in liberated areas, can give an important boost to the renewal and strengthening of PHC and starting from this to the improvement of the general Myanmar healthcare organization.

Limitations

Several limitations of the current study should be pointed out. First, we have decided to interview only people who have not agreed to collaborate with the military regime. This is a specific positionality choice of the research team, but it also represents a limit of the research, as research findings do not represent the whole of Myanmar health professionals and decision-makers. Recruitment of participants was by purposive sampling, whilst further participants were recruited by using the first interviewees as gatekeepers, which could bias participant selection. The generalizability of the results is also limited by the small number of interviews conducted. However, considering the ongoing conflict and the security concerns for health professionals, it is already a good result.
As already mentioned, the Myanmar-speaking interviewer underextended questions involving personal examples. He explained that he did not elaborate on this aspect because he thought the interviewees – being

already persecuted - would be afraid to disclose personal information. However, as discussed, the emotional experience of the interviewees came out anyway from their words.

CONCLUSIONS

The research shed lights on the provision of PHC in Myanmar conflict-affected setting. Several elements of the Myanmar case confirm what was evidenced by scientific literature (Chen, 2023; Ramadan, 2022; Chaudury, 2020; Atallah, 2018; Debarre, 2018). The conflict is limiting the ability of the country's health systems to provide PHC and is disrupting many essential elements including physical accessibility of PHC services, PHC facility infrastructure, availability of funding, and supply chain management. The ongoing conflict is increasing people's PHC needs, including mental health, and is undermining the health system's ability to cope with both new and pre-existing PHC needs, leading to higher morbidity and mortality.

However, the study also highlighted the peculiarities related to the specific situation of Myanmar. A first peculiarity is that most health professionals are aligned in rejecting the coup and have organized an alternative health system to meet the population's PHC needs. Depending on the context and on contextual factors of each area, such as health needs, security, and accessibility, they are hence providing either online and/or frontline PHC. A further peculiarity of the Myanmar's case is that in liberated areas PHC can not only be provided, but even improved compared to the situation prior to the coup. In fact, many health professionals are fleeing military-controlled and conflict-affected areas and flowing into liberated areas. Therein, PHC can be provided and structured to envisage an improvement in the organization of PHC itself when a situation of peace is reached.

This study provides stakeholders with updated information on the Myanmar's PHC situation and with practical indications for supporting PHC delivery to the population in need. International aid should be precisely addressed and organized by responding to the context' conditions. For example, drugs and medical equipment should be sent to liberated areas. From there, the NUG can dispatch them to conflict areas through its frontline teams and eventually to the people living in military controlled areas through secured channels. The NUG and international stakeholders should focus on reinforcing PHC as means of rebuilding the whole health system. To this aim, they should increase physical protection and mental support for PHC professionals to enable them working in safe and bearable conditions. Efforts should also be made to provide education and training both to healthcare students adhering to the CDM and to healthcare professionals working both online and frontline.

ANNEXES

Interview track - Exemplificative questions

Ice breaking questions

Is the purpose of the research clear? Would you like me to explain better the purpose of research and of the interviews?

Would you please like to introduce yourself?

Starting question

Could you please give me your definition and understanding of Primary Health Care?

Topic 1- experience before the conflict

Can you tell me which were the primary health care needs of the Myanmar people before the conflict, and how were they addressed?

What do you think? Can you give me an example that concerned you? What did you feel?

Topic 2 - experience now

Can you tell me which are the primary health care needs of the Myanmar people during the conflict, and how are they addressed?

What do you think? Can you give me an example that concerned you? What did you feel?

Topic 3 - expectations

Compared to the current situation, what do you think about the future of PHC in the country? Where do you think you have a role and where do you think you do not have?

Concluding question

Is there anything else you would like to add?

Approval by the Research Board (REB) of the University of Parma

OMISSIS

Punto 3. Richiesta parere 42-2022-N Clelia D'Apice

La Presidente informa che la Dott.ssa Clelia D'Apice, assegnista e dottoranda di Ricerca in Scienze Mediche e Chirurgiche Traslazionali - Dipartimento di Medicina e Chirurgia, ha presentato una richiesta di parere per una ricerca dal titolo "Providing primary health care in conflict-affected settings: the Myanmar case", di cui lei stessa ha istruito la pratica.
Si tratta di un progetto di ricerca finalizzato a indagare i bisogni di cure primarie della popolazione nel contesto conflittuale del Myanmar, e quanto siano cambiate le possibilità di fornire tali cure dall'inizio del conflitto. Si tratta di una ricerca qualitativa in cui si propongono interviste semi-strutturate a 40 stakeholders nel campo delle cure primarie, reclutati mediante contatti personali, da effettuarsi in presenza o in videoconferenza. Sono previsti adeguata informativa sul trattamento dei dati, e modulo per il consenso informato. Manca tuttavia nell'informativa sul trattamento dei dati un riferimento esplicito alla videoregistrazione dell'intervista. I dati personali non saranno conservati dopo la conclusione della ricerca.
Il progetto ha già ricevuto approvazione da parte dell'Ethic Review Committee (ERC) del Ministry of Health of the National Unity Government of Myanmar (ottobre 2022).

Il Progetto è conforme agli standard previsti dall'Università di Parma in merito al rispetto delle norme dell'etica della ricerca e delle buone pratiche scientifiche riguardanti progetti di ricerca non medica.
La Presidente chiede ai membri del Board se concordano con questa valutazione. La Dott.ssa Ilaria Comelli suggerisce di inserire nell'informativa sul trattamento dei dati il termine del trattamento stesso.
Non essendoci altri interventi la Presidente propone che in merito alla richiesta della Dott.ssa Clelia D'Apice il Board esprima parere favorevole, chiedendo tuttavia alla proponente di inserire nell'informativa sul trattamento dei dati esplicito riferimento alla videoregistrazione dell'intervista e il termine del trattamento stesso.

In questo senso, il Board, all'unanimità, esprime parere favorevole alla richiesta della Dott.ssa Clelia D'Apice.

OMISSIS

Non essendoci altri punti da discutere, la seduta è tolta alle ore 17.

Parma, 30.11.2022

Firmato digitalmente ai sensi del D.lgs 82/2005

La Presidente
(Prof.ssa Paola Corsano)

Il Segretario
(Dott. Alessandro Musetti)

2

Approval by the Ethics Review Committee (ERC) of the Ministry of Health of the Myanmar National Unity Government

Approval Letter

20 October 2022

OBJECT: Evaluation by the Ethic Review Committee (ERC) of the Ministry of Health of the National Unity Government of Myanmar of the research project "Providing primary health care in conflict-affected settings: the Myanmar case" submitted by Dr. Clelia D'Apice

Dear Dr. Clelia D'Apice,

The Ethic Review Committee (ERC) of the Ministry of Health of the National Unity Government of Myanmar took into consideration your request.

We have the pleasure to inform you that this Ethic Review Committee has evaluated that the research proposal "Providing primary health care in conflict-affected settings: the Myanmar case" ensures the safety and rights, including privacy, confidentiality and autonomy of the people participating in the research.

Therefore, this Ethic Review Committee approves the research project "Providing primary health care in conflict-affected settings: the Myanmar case" that you submitted.

Best regards,

The Ministry of Health and Education of the Myanmar National Unity Government
Professor Zaw Wai Soe

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