TIGRAY HEALTH BUREAU

TIGRAY HEALTH SECTOR

ANNUAL BULLETIN

2021

JANUARY 2022

FOREWORD

Tigray health sector has been on its accelerating growing trend in the last twenty-five years in different dimensions. Health facilities both in the public and private sector had been growing significantly. Health workforce to population ratio has been approaching towards the global standards. Different surveys on the field were showing encouraging as measured by key health and demographic indicators such as maternal and under five morality and life expectancy at birth. The health sector in Tigray before the war had achieved exemplary success, both by national and international standards, in attaining its core health indicators, in access and equity of health interventions to its seven million people.

The gains have been the result of concerted efforts of the community, the government, and non-governmental organizations, built over time. The national health policy of 1985 has been the result of field-tested proven interventions in Tigray since the seventeen years armed struggle against the Derg regime. The policy focuses on health promotion and disease prevention through community engagement. The very concept of health as an asset that must be produced at individual and household level has been proven right in Tigray through the Tigray's innovative flagship Health Extension Program. Evidences showed that lifesaving services such as immunization has been well established as a tradition in Tigray.

Unfortunately, the gains of last twenty-five years in the health sector has been faced with a near-total collapse just in fifteen months. Health sector in Tigray were tragically targeted and destroyed by the Ethiopian National Deference Forces and its allies from near and far. Health facilities were destroyed and burnt to ash, health workers were killed and displaced, ambulances and medical equipment were looted and vandalized with no mercy. As a result, almost all the health facilities in Tigray were either fully or partially dysfunctional, or inaccessible (Western zone and some areas bordering Eritrea). The situation has been worsened due to the de-facto blockade, especially since July 2021 that humanitarian operations faced serious challenges of medicine and medical equipment, fuel, and cash – which as against the United Nations' Universal Declarations and human right conventions.

Health Sector Annual Bulletin (2021) provides summarized overview about the situation of the health system in Tigray, impacts of the damage on key health and nutrition indicators, health responses to date, challenges, and recommendations for action. The bulletin provides facts and findings from different articles and assessments (mainly independent and humanitarian reports) about the damage to the health sector and expected to serve as a reference for response planning and furthers researches on related topics. Therefore, Tigray Health Bureau is calling for timely and meaningful support by all stakeholders so that the health system shall bounce back better.

Hagos Godefay Debeb (PhD)
Head, Tigray Health Bureau

ACRONYMS

ANC	Antenatal Care
CBHI:	Community Based Health Insurance
CHIS:	Community Health Information System
CSA:	Central Statics Agency
DHIS2:	District Health Information System, version 2
DM:	Diabetes Mellites
EDHS:	Ethiopia Demographic and Health Survey
ENDF:	Ethiopian National Defense Force
HC:	Health Center
HEP:	Health Extension Program
HIV/AIDS	Human -Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
Hosp.	Hospital
HP:	Health Post
HPN:	Hypertension
MHNT	Mobile Health and Nutrition Team
NCD	Non-Communicable Diseases
PLW	Pregnant and Lactating Women
PNC	Post-natal Care
RMNCH	Reproductive, Maternal, Newborn and Child health
SBA	Skilled Birth Attendance (Skilled Assisted Delivery)
SRH/FP	Sexual Reproductive Health/Family Planning
TB	Tuberculosis
THB:	Tigray Health Bureau
TSA:	Tigray Statics Agency
UN	United nations

CONTENTS

TIGRAY HEALTH BUREAU

JANUARY 2022
MEKELLE

I. BACKGROUND

Tigray, with a population of seven million (projection, CSA2007) is found at latitude 13.50 N and longitude 39.50 E, bordered by Eritrea in the north, by The Sudan in the west, and by Afar and Amhara regions of Ethiopia in the east and south respectively. Women of 15 - 49 years age group and under-five children comprise about 38% of the total population, which is around 2.6 Million (1).

The current ongoing war has led to the near-total collapse of Tigray's healthcare system, resulting in a humanitarian catastrophe of overwhelming proportions. Before the war began in November 2020, Tigray had a well-founded health care system, comprising 1,011 public health facilities (from a village health post to the specialized teaching hospitals), more than 25,000 health workforces ranging from health extension workers to specialist and sub-specialists. There were more than 310 ambulances and well-established referral system - primary health care (having 741 village health posts linked with 230 health centers and 24 primary hospitals) that feed to the secondary level health care with 14 general hospitals in the major towns and with the tertiary level care of two referral hospitals. The private health sector has been blooming, having more than 750 private health care facilities ranging from drug vendors and clinics to general and specialized hospitals.

The poor rural households started enjoying the protection from unnecessary financial shocks during sickness by introducing Community Base Health Insurance (CBHI) – reached about 60% by mid-2020. There was also digitalized District Health Information System (DHIS2), Community Health Information System (CHIS), and health research institute, and well-equipped regional laboratory.

"Tigray had one of the best health systems in Ethiopia, with health posts in villages, health centers and hospitals in towns, and a functioning referral system with ambulances transporting sick patients to hospital. Before the war, 94% of women in Tigray had access to antenatal care service, for example, but ***these services have collapsed****." MSF Report, March 15, 2021*

https://www.msf.org/health-facilities-targeted-tigray-region-ethiopia

Tigray had also been making steady progress in service utilization (annual service per capita), which went up from 0.56 in 2012 to 2.0 in 2019/2020. Several health indicators had shown significant progress in the last twenty-five years in line with international targets such us the millennium development goals. According to the Health and Demographic Survey (DHS) and Tigray Statistics Agency (TSA2020), antennal care service tripled from 36% to 94%; health facility delivery increased by 16-fold from 4.8% to 81%, and full immunization coverage more than doubled from 32.9% to 73%. In the same period (2,000 – 2,020 G.C), under-five mortality rates declined from 169 to 30 deaths per 1000 Live Births, and maternal mortality ratio from 871 to 186 deaths per 100,000 Live Births. Ethiopians in 2019/2020 could live 20 more years than they were in the 1990s - life expectancy at birth was higher by 40% to 66 from its lowest point below 47 years (2, 3).

These advances in the last 25 years were the result of decentralized health policy & leadership; concerted efforts of the government, health workforce, community, and non-governmental organizations. These gains had gone just in few months due to the massive destruction & looting during the 14 months war in Tigray. Therefore, this annual report summarizes the current situation of the health system and its deleterious impacts on the lives of millions of Tigrayans, especially children, and mothers. The document tries to present the critical gaps in health care system and invites for all stakeholders, especially the international community to respond immediately before it becomes too late to save lives.

II. SITUATION OVERVIEW

The Tigray war that began in the middle of crop harvesting season, November 2020, had thrown all types of gains in the last twenty-five years into a nightmare where no institution in Tigray was spared. The war resulted in the massive displacement of people from all directions towards urban centers such as Shire, Axum, Adwa, Adigrat, Abie Adi, Maychew and Mekelle and towards deep rural villages. More than 1.2 Million Tigrayans in Western Tigray have been forcibly evicted from their homes, currently in a destitute life as IDPs within Tigray, while over 70,000 fled to Sudan. As of December 2021, more than 5.2 million people, including 2.1 million IDPs faced with a dire need of humanitarian support (4).

In fact, the entire seven million Tigrayans are currently under a total communication blackout, life threatening air and drone strikes, and suffering from lack of basic life support amenities, such as food, shelter, water, medicines, cash, and fuel. More than 4.6 million of the population affected by the devastating war crisis are women of reproductive age group (1.6 M) and three million children under-15 years age.

Several independent reports, mainly from humanitarian organizations, indicated that health facilities were deliberately targeted and intentionally made dysfunctional – that includes bombing or shelling, and setting to fire (example: Sebeya Health Center (HC) in Eastern Zone; Bora HC in Southern Zone, and Semema Hospital, Edaga Arbi Hospital and Chila HC in central Zone); looting and vandalism of the entire health commodities from medicine and medical equipment to imaging machines and ambulances and systematic destruction to the water and electric systems of the health facilities.

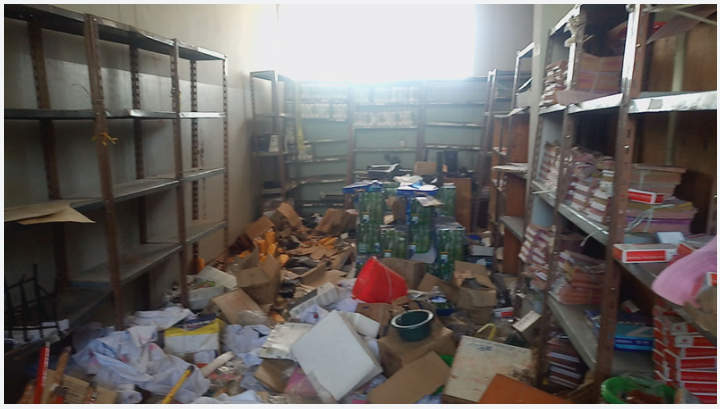
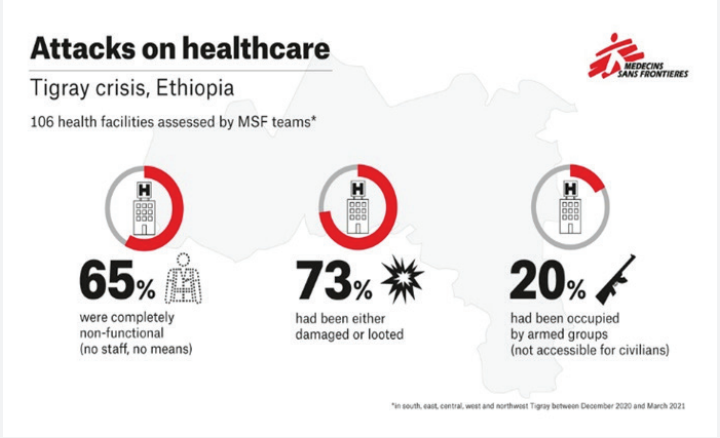


Fig. 1: Photos from Abie Adi General hospital, March 2021

Several health facilities served as military camps for the ENDF and its allies for several months, including Adi Aynom, Mugulat and Alasa health centers; Dr Tsegay (Fatsi) and Fresemaetat (Hawzen) primary hospitals; Adwa and Abie Adi general hospitals, which were not accessible for civilians.



An assessment conducted by Médecins Sans Frontiers/Doctors Without Borders (MSF) between Dec 2020 & March 2021 in Sothern Eastern, Central, Western and North-western Tigray revealed that "73% of the assessed 106 health facilities have been either damaged or looted, while 65% were completely non-functional *(no staff, no means) and 20% had been occupied by armed groups (not accessible for civilians)"* (5)

An investigation report published in November 2021 by the UN Human Rights and the government's Ethiopian Human Rights Commission, which covered the period of November 2020 through June 2021, found that only 40 of the 224 health centers [18 per cent] in Tigray were "functional". During this time, "the population did not have access to health care in most parts of Tigray." In this investigation into allegations of human rights violations during Ethiopia's war, *"health facilities have seen significant structural damage from shelling, looting of medicines and equipment, and an absence of medical personnel"* (6).

In July 2021, a more elaborative and comprehensive damage assessment was conducted by Mekelle University and Tigray Health Bureau in collaboration with all health partners. The assessment covered 880 facilities in Tigray (87% of the total 1,011), except those inaccessible areas (western zone and some weredas bordering Eritrea). The report revealed consistent results with the previous findings, that 695 (or 79%) of the 880 assessed health facilities have been damaged during the survey period (July 10 - 30, 2021). The damage has been across all levels of health care system, 82.4% of hospitals (28 of the assessed 34), 80.6% of health posts (514 of the assessed 638), and 73.6% of health centers (153 of the assessed 208), Fig. 2.

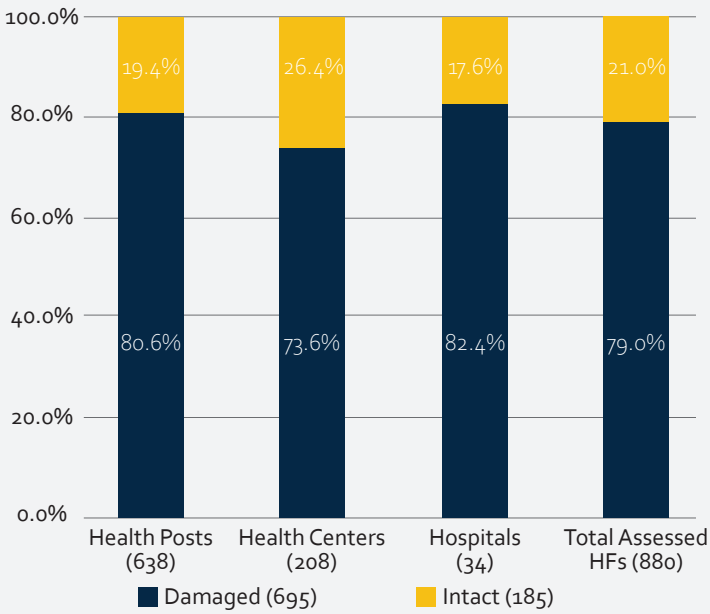


Fig. 2: Damage Status of Health Facilities in Tigray (%) among assessed 880 HFs (Source: Damage Assessment Report, Jan 2022)

The report also disclosed that the damage has been across all the zones during the eight months of war where Tigray was the battlefield for different waring forces including Eritrean, Somalia, Ethiopian and Amhara forces on one hand, and Tigray forces on the other hand. There was only slight differences among zones, where most of the health facilities were damaged and/or vandalized either fully or partially from Central (244, 86.8%), Eastern (131, 91.6%), North-west (132, 76.3%), and South-east zone (76, 80%). These damaged health facilities are characterized by physical destruction to the buildings including water, sanitation, and electric systems – in part or in full, and/or looting and vandalism of medicines, vaccines and medical equipment, furniture, or having inadequate health workforce. This means the health facility has been unable to provide basic health & nutrition services to the community at static level, except few outreaches or mobile clinics for emergency care (7).

Fig. 3: Photo from Bora Health Center, Southern Tigray, March 2021

Following the de-facto blockade since July 2021, the health facilities in Tigray that were working partially, including Ayder referral hospital – the only referral hospital providing high level care for seven million people, have been deteriorated into a near-total dysfunctionality. The major reasons were lack of basic drug supplies, medical equipment, and operational problems including fuel, oxygen supply and cash, which is against the UN charters and international human right conventions (8, 9).

More recent assessment report in Tigray (December 2021) using the WHO standardized global tool - Health Resources Availability Mapping System (HeRAMS) showed even more concerning results, especially on functionality and service availability of hospitals and health centers (10). **Fig. 4 (a)** and **(b)** shows the damage status of 251 assessed health facilities (hospitals & health centers only), where 62% of the buildings and 83% of the equipment were found to be fully or partially damaged.

Similarly, **Fig. 4(i)** below shows that almost all (243, or 97%) of the assessed 251 health facilities were either non-functioning or partially functioning during the survey time in December 2021. The HeRAMS tool captures the status of 10,921 service availability markers and more than 92% of these services were either NOT available or Partially Available, which is the worst situation by any standard, **Fig. 5**).

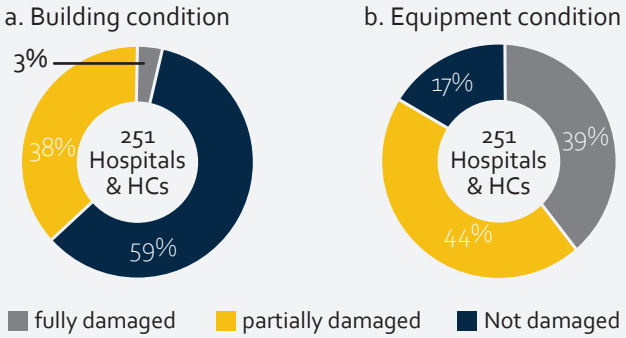


Fig. 4: Damage Status of Building (a) & Equipment (b) among Hospitals and Health centers in Tigray (N=251) [Source: HeRAMS, December 2021]

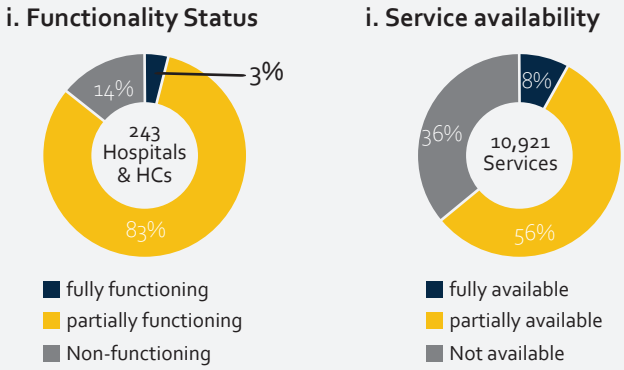


Fig. 5: Status of Functionality (i) and Service Availability (ii) among Hospitals and Health centers in Tigray [Source: HeRAMS, December 2021

The three reports from different assessment in time and scope - **"Attacks on Healthcare"** by MSF (March 2021), **"Damage Assessment"** by Tigray RHB & Mekelle University (July 2021), and **HeRAMS** by WHO (December 2021), spoke very similar language – health facilities in Tigray were severely damaged during the Tigray war, which is against the 1949 Geneva Conventions and the additional Protocols of 1977 that imposed obligations on the parties to both international and non-international armed conflicts, especially the immunity of the civilian population from attack and reprisals, and in particular the importance of the principle of distinction between civilians and combatants, and between civilian objects and military objectives; the duty to refrain from the use of weapons which are indiscriminate or which, by their nature, cause superfluous injury or unnecessary suffering; and the duty to permit impartial relief to be provided (8, 9).

Combination of these three surveys and other relevant facility assessments such as availability of essential health and nutrition services, and cold chain equipment inventory (July – September 2021) revealed that 779 (or 77%) of the total 1,011 health facilities in Tigray were "fully damaged." The damage encompasses all levels of health care system – 80% of the 40 hospitals, 74% of the 230 health centers and 78% of the 741 health posts. Only 10%, 17% and 12% of the hospitals, health centers and health posts respectively were partially functioning - providing very limited health services without adequate medicines, vaccines, medical equipment, and health workforce. Almost all the partially functioning health facilities were in the urban centers which are not accessible to the rural residents. On the other hand, 97 health facilities (4 Hospitals, 22 health centers and 71 health posts) were not assessed due to lack of access **(Table 1).** See the aggregate data collection tool (Annex-1).

Table 1: Damage Status Summary of ALL Health Facilities in Tigray, Jan 2022

Health Facilities (#)	Fully Damaged	Partially Damaged	Not Accessible
Hospitals (40)	32 (78%)	4 (12%)	4 (10%)
Health Centers (230)	169 (74%)	39 (17%)	22 (9%)
Health Posts (741)	578 (80%)	92 (10%)	71 (10%)
Total (1,011)	**779 (77%)**	**135 (13%)**	**97 (10%)**

Health workers are the core pillars of health care system as we talk about functionality of health facilities and availability of health services. During the fourteen months of Tigray war crisis, health workers have been living under a very stressful situation with no medicine at hand to give care for patients, yet with no salary, no means of transportation or without any incentives. Reports showed that about half of the health workforce in Tigray were either killed, injured, or displaced - as IDPs within Tigray and as refugees in Sudan. Two health workers in the town of Hawzen, for example, were shot inside their hospital after refusing to handover medical equipment and medicines to militants while the rest fled to other places (11). Similar death stories were reported from all corners of Tigray including at least 23 humanitarian aid workers also have been killed in the Tigray conflict. Among the 23 victims are three employees of Médecins Sans Frontières (MSF), who were killed in late June 2021, and 11 staff of the Relief Society of Tigray (REST), highlighting the difficult and dangerous working conditions for humanitarian workers (12).

III. HEALTH IMPACTS OF THE WAR CRISIS

With the deliberate destruction, looting and vandalization of various health facilities across Tigray, the health care system has collapsed. Gross impairment of essential health and nutrition service continue throughout the year in 2021 with increased severity since July 2021 as the result of the imposed de-facto blockade to Tigray. Consequently, most of the lifesaving medicines and medical equipment are totally absent, including oxygen for COVID-9 patients and dialysis services for renal cases at Ayder Referral hospital and almost in all health facilities in Tigray. Frequent power cuts, communication blackout, closure of banking system, fuel shortage, and air and drone strikes are contributing to the deteriorating situation of health care in Tigray.

The massive and systematic attack to the health facilities and health workers in Tigray resulted in a significant decline of health outcomes in 2021, as compared to the Pre-War level. Community based surveys such as DHS 2019 & TSA 2022 showed that 94% of pregnant mothers received at least one visit for antenatal care service, 81% of deliveries were assisted by trained health workers, and 73% of the mothers were getting postnasal service within 7 days after delivery. However, the corresponding Figures in 2021 were declined to 16%, 21% and 19% respectively. Acute malnutrition among PLW increased up to 78% in many of the woredas worst affected, IPC-5 or famine level **(Fig. 6).**

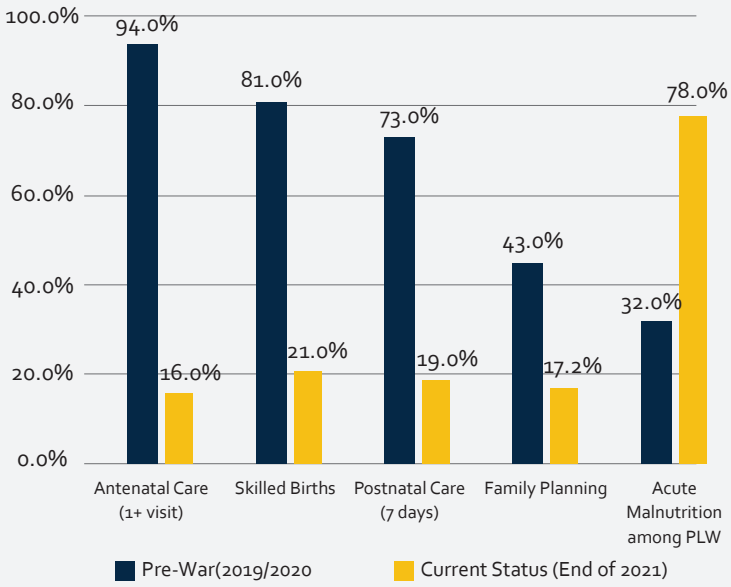


Fig. 6: Maternal Health & Nutrition indicators (%) in Tigray (2021).

Health service reports, mainly from Mobile Clinics and NGOs in 2021 showed that only 1 in 5 children in Tigray received the scheduled vaccines for children under 1-year old as compared to above 73% in 2019 and early 2020 (DHS2019, TSA2022). Acute malnutrition among under-5 children was raised by three-fold from its 9.6% rate to 29.1%, of which 7.1% were diagnosed with sever acute malnutrition (SAM), which is above the acceptable threshold **(Fig. 7).** It is obvious that starvation/malnutrition in Tigray will have long term impacts for the coming generations due to stunting, cognitive and productivity loses.

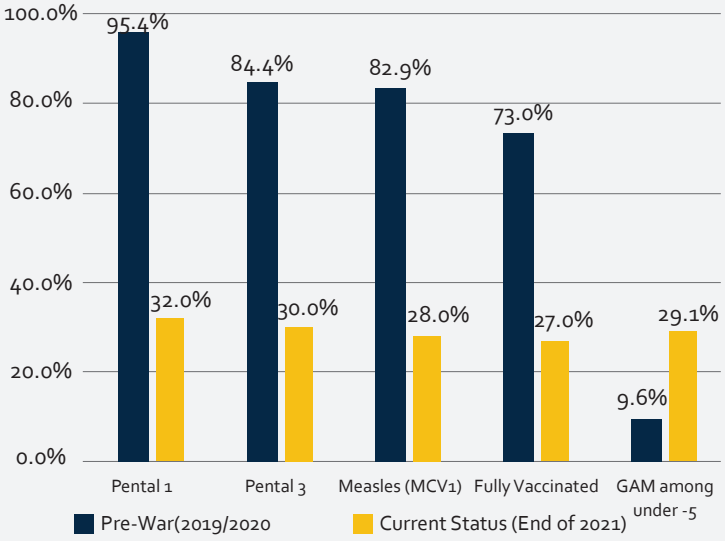


Fig. 7: Child Health and Nutrition: selected indicators in Tigray (2021).

Mobile Health and Nutrition (MHNT) teams where designed as last option at the time when all health system in Tigray faced with near-total collapse. However, these mobile clinics were limited to provide essential health and nutrition services in the accessible areas sand urban centers and to IDPs in the major towns. The reports from MHNT and few poorly functioning facilities in 2021 indicated that some of the health outcomes have been declined to the level they were 20 or 30 years ago. Thus, one can imagine that the health service outcomes could even be worst in the rural and inaccessible villages of Tigray.

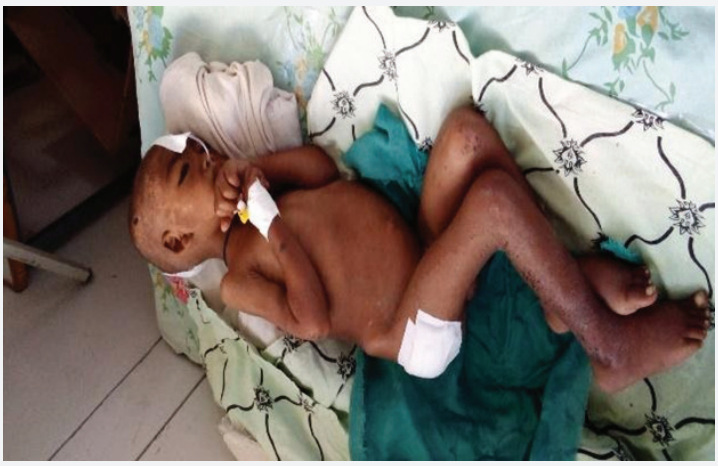


Fig. 8: Photo Credit: Ayder Referral Hospital (Ruth, 8 months old, Female, from Abie Adi (displaced from Humera.), admitted with Complicated SAM). She needed urgent dialysis, but NO hemodialysis, NO ringer lactate, NO 50% dextrose. Unfortunately, she died of sudden cardiac arrest.

Based on the available service reports, mainly mobile clinics and few health facilities in some towns, more than 1.6 Million mothers in Tigray have missed Basic Health Care such as Sexual & Reproductive Health and family Planning (SRH/FP), Antenatal care, skilled delivery and postnatal care. Similarly, around 900,000 under-5 children didn't get nutrition supplementation, deworming, or consultations for childhood illness, as well as vaccination against vaccine preventable diseases such as polio, tuberculosis, diarrhea, pneumonia, & measles (Fig. 9).

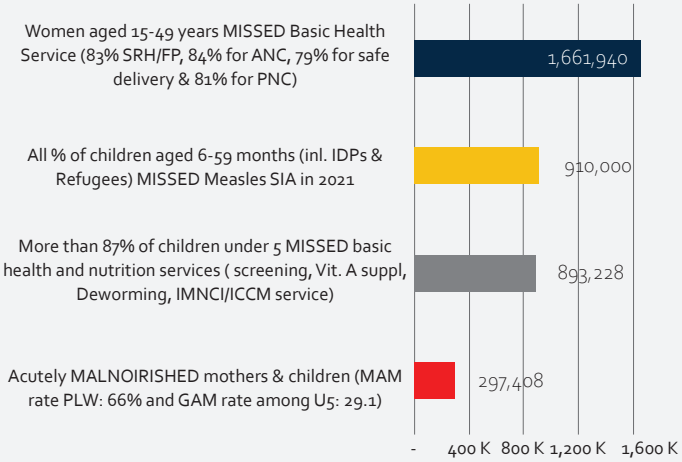


Fig. 9: Number of Children & Women who MISSED Essential Health & Nutrition Services in Tigray (2021)

Mothers and newborns in Tigray are facing the brunt of the horrible war crisis since November 2020. Obstetric care in the rural areas became inaccessible for mothers and neonates. Though under reporting is expected, a total of 276 deaths were recorded in 2021, that indicated 103% increase as compared to 136 deaths in the year before the war (Fig. 10).

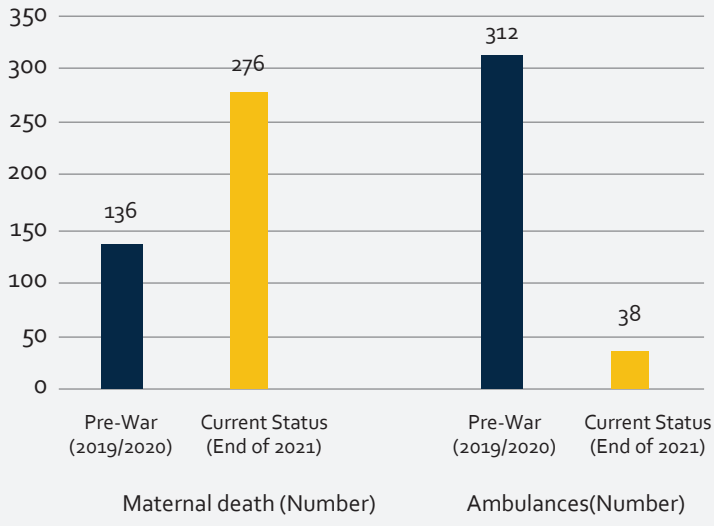


Fig. 10: Number of maternal deaths and Ambulances in Tigray, Pre-war (2019/2020 and in 2021)

According to the reports from Tigray Health Bureau and Ethiopian Red Cross Society (Mekelle), there were 312 Ambulances and around 65% of the deliveries were transported to and from health facilities with these ambulances prior to the current war.

However, only 38 ambulances have been saved in few urban centers while the rest were confiscated and taken by the waring forces. In January 2021, UNICEF reported that a fleet of 280 ambulances in Tigray was reduced to 30 — some were reportedly used by soldiers as transportation (11).

Fig. 11: Photo of Ambulances burned at Tergey Health center, central Tigray, Apr 2021

> *"A long Walk to Obstetric Tragedy"*
>
> *A story of TT (name abbreviated), by Doctors at Ayder Referral Hospital in Tigray (11).*
>
> *"TT is a 37 years old mother who is on her 2nd week postpartum after giving birth to a 3,500-gm baby with a decapitated head. Her labor pain started on Nov 12, 2021. After long labor, she walked 2 hours of journey from her village to Hawzen Primary Hospital (told that the baby was NOT alive). No service there, referred to Wukro General Hospital, where unable to do c/s, she was again referred to Ayder Referral Hospital, all the way of more than 120 Kms. On arrival, TT was exhausted and dehydrated. She also had bloody urine. The baby's cervical spine was completely detached from his head. Then she was resuscitated, antibiotics given, and the head was delivered! The mother is now on a morbid state for months with multiple complications."*
>
> *TT is among those mothers faced with long term disabilities but survived from this situation.*

A mortality survey collected representative data between July to October 2021 from 333 sub-districts (40% of the total villages) in all zones of Tigray, except from Western Tigray. Within these four months, 5,421 deaths (57% males) were recorded. Many of the deaths occurred at home (77%) and across all ages, though higher in the age group 15 years and above. The morality burden has been higher in Central, Eastern and North-west zones, which is in line with the extent of the damage to the health facilities in these zones, where more than 90 percent were fully damaged (12).

The major causes of death **(Fig. 12)** observed were infectious diseases (1,736 or 32%), Non-communicable diseases (1,489 or 27.5%), and Malnutrition (1,479 or 27.3%). Among infants, neonatal causes account for over 51% of all deaths, followed by malnutrition (29%) and infectious diseases (17%). This could be explained by the fact that nearly 80% of all the health facilities in Tigray have been fully damaged, no obstetric services due to lack of medicines, vaccines, medical equipment, and trained providers (12).

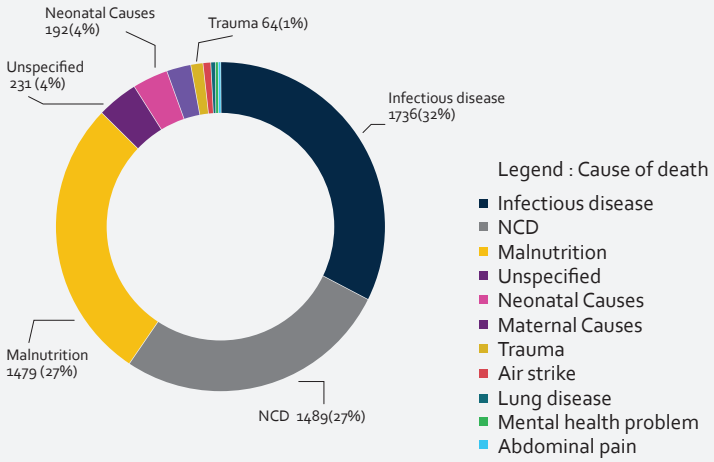


Fig. 12: Causes of deaths among the 5,421 deaths reported in Tigray (Source: Mortality survey, Jan 2021, Ethiopia Insight

When this mortality figure is annualized and projected for all the 813 Villages (Tabias), the total death in 2021 could be estimated at around 40,000 deaths. Essential health care services for Non-communicable Diseases (NCD) and Communicable diseases have been highly compromised during the war in Tigray. These include hypertension (HPN), diabetes Mellites (DM), Cancer, Renal and Cardiac failures, HIV/AIDS, Tuberculosis, and malaria. These are also compounded with the severity of starvation/malnutrition (29.1% among under-5 and up to 78% among Pregnant and Lactating Women (PLWs). This high level of acute malnutrition among mothers adds to the direct consequences of abortion, low birth weight, neonatal death and high proportion of children born with anomalies.

> ***"The most worrying is the lack of medication for vulnerable cases, such as diabetes, HIV or hypertension."***
>
> *International Committee of the Red Cross (13, 14).*

The situation of Communicable and Non-Communicable Diseases (NCDs): prior to the current war, there were 24,253 diabetic patients on regular treatment (6,626 for DM-I, and 17,627 for DM-II). Similarly, there were 29,271 hypertensive patients. However, there is no information about the status of these patients in the year 2021, except 1,598 deaths from diabetes and 2,385 deaths from hypertension, based on the few facility level reports in Mekelle and other urban centers.

"I know I am dying soon unless I get the dialysis. I feel like I am a dead body"

AG said (name abbreviated), a 43 years old patient with renal failure (both kidneys) from Enticho, Central Zone of Tigray. He has been getting regular dialysis at Ayder Refral Hospital in Mekelle for the last three years. AG has two children, 7 & 5 years, and worried for the fate of his life and the lives of his kids (11).

The story of AG is one among the 400 and more patients who were on regular dialysis at Ayder Referral hospital in Mekelle but stopped getting the service due to lack of necessary equipment. During the months between July to December 2021, there were 117 kidney failure related deaths recorded at Ayder Referral hospital, though the death figure could be under reported since many of the cases might have died at home due to lack of access to health facilities.

Prior to the war, there were 43,140 patients on Anti-retroviral Treatment in Tigray. In addition, there were also 2,363 pregnant mothers taking ARV prophylaxis, with 867 HIV exposed infants. In 2021, the follow-up to people living with HIV declined significantly, that showed 81% lost-to-follow [73 of the sampled 381], as per the preliminary report of damage Assessment conducted between July to September 2021. Similarly, there were 6,699 newly detected Tuberculosis (TB) cases (All forms) in 2020. However, there has been no service and no follow-up in 2021, hence 90% of the TB patients have been lost [105 of the 118 sampled]. The situation is more concerning when it comes to the dissemination of drug resistance bacteria due to interruption of anti-TB drug regimen (7).

COVID-19 pandemic: prior to the Tigray-war, there were 6,764 cases (7.7% of the 88,155 tests conducted). However, only 8,832 tests (10% of the pre-war) were conducted after the war, with increased positivity rate to 26% (2,306 cases). The death rate also showed four-folds increment, from 0.7% to 2.8% (47 death out of 6,764 cases in 2020 and 64 death out of 2,306 cases in 2021). However, the case and death figures in 2021 may not show the real situation of COVID-19 in the community due to lack of services to prevent the deadly pandemic in our era. Prior to the war, there were six rt-PCR testing sites, and six treatment centers equipped with 24 mechanical ventilators and other amenities - all of them were looted, vandalized, and destroyed during the war, including the well-established treatment center at HEWO hospital in Mekelle.

Despite the plan to vaccinate 1.63 million people who are at high risk including the IDPs, there was no vaccine, except the first dose of the first batch 119,000 doses of AstraZeneca (COVISHIELD), where 95% were administered in April-May 2021. This has been very clear indication of denial of life saving health services to the needy by the Federal Government of Ethiopia.

IV. HEALTH RESPONSE (2021)

"I think it will take many decades to repair the damage."
Dr. Hayelom Kebede, former acting executive director, Ayder Referral hospital

Starting January through June 2021, alternative health care approaches such as through mobile clinics have been provided under a very limited capacity. The intervention under UN agencies and few international NGOs tried to establish around 65 Mobile Health and Nutrition Teams (MHNT) in the accessible sites since the static health care service have been collapsed.

owever, lack of access within the region has been the main feature of the humanitarian response in Tigray. Active hostilities, denial of the existence humanitarian need or restriction of peoples' access to aid, restriction of movements, violence against humanitarian workers Threatening, killing), Bureaucratic administration implements were among the obstacles during the period from January to June 2021 (18). Since July 2021, blockade worsened where the entry of medicines, equipment and fuel were restricted from entering Tigray. With the course of banks, and shortage of cash, the MHNT platforms has been almost stopped by the end of December 2021.

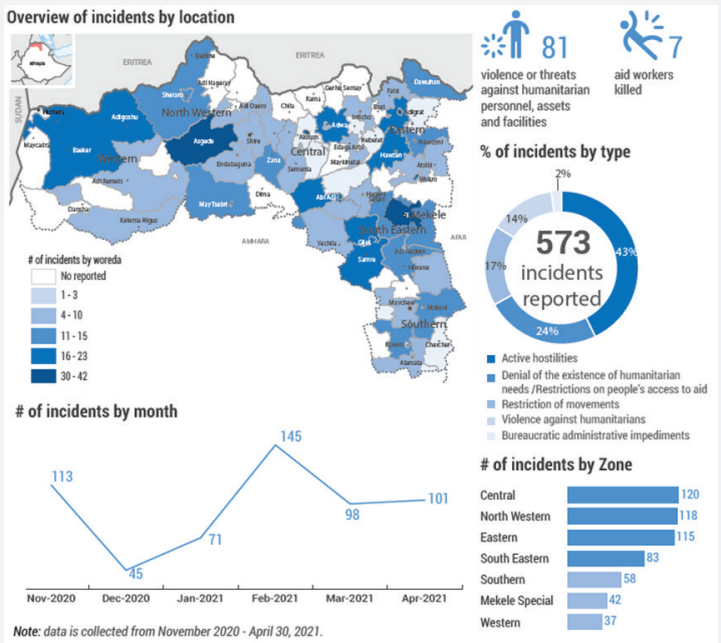


Fig. 13: UNOCHA - Tigray: Humanitarian Access Snapshot, as of April 2021

Important initiatives such as Find and Treat campaigns to avert the overwhelming starvation/malnutrition couldn't proceed as per the plan due to operational and supply impediments. In addition, the federal government suspended the work permit of humanitarian organization including MSF – Holland, and gave Persona-Non-Grata (PNG) to seven high ranking diplomats, including UNICEF Country Representative to Ethiopia and UNOCHA's coordinator for Tigray Humanitarian Crisis Response (13 - 15).

Other important health response programs such as COVAX and Oral Cholera vaccine (OCVs) have been started in April and June 2021 aimed at reaching 1.6 Million and 2 million targets respectively with two doses each. However, the program was interrupted due lack of additional doses of OCV and COVAX from after vaccinating 1.4 Million (only first dose) of OCV and around 99,000 doses of COVAX (first dose only).

Even though there has been encouraging readiness from international community to respond for the humanitarian catastrophe in Tigray, the operation challenges remained unsolved for more than a year now. and operational challenges. This has been a unique emergency where the federal government has failed to cooperate with humanitarian actors while people are dying of human-made starvation/malnutrition and lack of lifesaving medicines. Health workers in Tigray started using expired drugs to respond for the overwhelming needs and health problems such Permethrin for Scabies infestation including to the IDPs and Refugees after conducting pharmacological test for viability of its active ingredients by Mekelle University. Similarly, expired oncologic drugs have been given to patients as a temporary solution. The world in 21st century is witnessing such a tragic catastrophe which is totally human-made and essentially preventable through allowing unfettered access to food, medicines, and medical equipment – the very basic human rights principles.

Health Cluster Coordination and Partnership: There is very strong partnership forum in Tigray that has been functioning for the last ten years without interruption, under the motto of "We Plan Together, We Implement together! We Celebrate Together!" in line with global commitments and platforms such as "*The Paris Declaration on Aid Effectiveness and the Accra Agenda for Action" (16).*

The partnership platforms have been good opportunities activate the health cluster as per the WHO's practical guide for country-level implementation (17). Existing structures have been effectively adapted and to the humanitarian response such Reproductive, maternal, neonatal and child health (RMNCH TWG), Public Health Emergency Management (PHEM TWG), Risk Communication and Community Engagement (RCCE) taskforce, COVID-19 Taskforce and Pharmacy, Logistics, and supplies TWG. The health cluster has been actively engaged with the Inter-Cluster Coordinating Group (ICCG) and the Emergency Operating center (EOC). However, the health cluster needs additional efforts on higher level advocacy and inform the international community to create immediate access to medicines and medical equipment to save the lives of millions in Tigray who are in dire situation. International GOs having Office in Mekelle have been detached form their headquarters due to communication blackout and operational difficulties such as shortage of fuel and unable to access their cash at Bank to the extent that many of them couldn't pay salary to their employees.

V. FUNDING FOR TIGRAY HEALTH RESPONSE (2021)

According to the humanitarian situation report updates from UNOCHA in March 2021, the total budget requested for Tigray response was $1.3 Billion. The WHO's health cluster bulletin showed more than $48M has been requested for the period of July to December 2021 for health sector response (19, 20).

However, promised or even available funding has not been disbursed as per the plan due to the different operational obstacles. During the first half of the year (January – June 2021), the access within Tigray had been very limited only to few towns due to the active war. Since July 2021, there has been a total blockade that almost no medicine or medical equipment entered to Tigray.

The blockade has crippled the health response in Tigray, not only due to lack of medicines and medical equipment, but also due to lack of cash and fuel for humanitarian operations, to the level that some NGOs couldn't pay salary to their own staff. Some Emergency Projects are terminated due to donor conditionalities – that many of the projects failed to be implemented on time.

VI. CONTINUED CHALLENGES AND CONCERNS

Humanitarian response across most of Tigray remained consistently challenged in the year of 2021. The health cluster was not exceptional. In the first half of the year (January to June 2021), the main obstacles were related to access to most of the communities in rural areas. Health workers (both public and NGOs) had been continuously intimidated and denied access, vehicles and medicines confiscated including those working through mobile clinics. Frequent electric power cut-off and communication outage had been among the challenges.

Humanitarian operations and health workforce: Since May 2021, health care workers in Tigray didn't get their salary or any incentive to sustain their livelihood. This has been an added burden since they themselves were victims of the massive looting, displacement, and killings. In the second half of the year (July – December 2021), the health facilities working with limited capacity faced critical shortage of medicines and medical equipment that led them in to near-total collapses and stopping service to eth needy. There were futile efforts to give expired drugs such as anti-scabies and oncologic drugs, but this solution even has not been adequate.

Following the air and drone strikes since October 2021, partners reduced their footprints on the ground which additional impediments to the health response in Tigray. Hence, the health situation in Tigray continued to be deteriorated to the level of humanitarian catastrophe. Many of the humanitarian organizations had no strong connection to their headquarters, hence unable to operate with full capacity.

No medicine and medical equipment: there were limited medicines and medical supplies entering to Tigray between January and June 2021. However, since July 2021, there was no entry except very few nutrition supplies from UNICEF (air lifting), which is incomparable with the huge demand on the ground. Hence, medical stores and shelves have been emptied in the last six months almost in all health facilities, including at Ayder referral hospital, the only referral facility supporting hundreds of thousands of people in need of lifesaving medicines such as insulin, dialysis, anti-hypertension and anti-HIV drugs. Medical supplies such gloves and feeding tubes have been totally absent.

Operational constraints in Tigray: Cash and Fuel remained among the biggest hindrances to the humanitarian response. Despite the transfer of operational cash into Tigray, cash shortages persist. The limit of 2 million ETB per UNHAS flight is still technically in place, but in practice the limit is being imposed on a per week basis. This restriction will further reduce the amount of cash in Tigray and remains insufficient to meet the growing needs. Lack of fuel continues to hamper response as the reserve in Tigray run fast.

Communication blackout continues to limit response: No telecommunication and internet, and some imagining machines at Ayder Referral hospital and other health facilities are out of use because of lack of updated software (online).

Lack of Reliable Electric Power: The electric power has been repeatedly interrupted in 2021, hampering hospital operations and cold chains services. Tigray has been cut-off many times, twice due to the destruction of the Tekeze dam (Nov 2020 and Dec 221) and blockage of the power grid (Dec 2020, and June – July 2021).

Security and Safety concerns: Health workers have been targeted during the Tigray war crisis where thousands have been displaced and many killed including from Humanitarian Organizations. Air and drone strike continued taking the lives of civilians, including IDPs and Refugees, which is an additional burden on the collapsed health system in Tigray and creating fear among health workers and the community.

VII. WAY FORWARD

The health cluster calls up for unlimited access to health care, entry of lifesaving medicine, vaccines, and medical equipment into Tigray to save further loss of lives due to human-made humanitarian catastrophe. All stakeholders and humanitarian organizations need to harmonize their efforts for effective humanitarian response and towards political solutions through engagement and dialogues.

Therefore, some of the immediate actions for 2022 include:

1. Prepare working plan for 2022, with detail supplies and cash requirements, as a cluster.
2. Issue weekly advocacy and call for ACTION updates (unfettered access to medicine, vaccines, and medical equipment) substantiated with concrete evidences on the ground, including the horrible stories of people dying from lack of humanitarian support.
3. Ensure accountability – weekly and monthly updates on what is available (cash and supplies) and what is required immediately to save the lives of seven million Tigrayans.
4. Strengthen the cluster coordination at Tigray level, as well as at Zonal level through physical presence of international professionals on the ground. This applies to the Health Cluster (WHO), Nutrition & WASH Clusters (UNICEF) who are directly impacting the health outcomes
5. Join hands with other clusters and humanitarian actors to end the de-facto blockade, air and drone strikes, and solve some of the pressing challenges such as fuel, cash, and communication.

"This is an insult to our humanity to allow a situation like this to continue."

Dr. Michael Ryan,
executive director of the health emergencies program, WHO

VIII. REFERENCE:

1. CSA, Population and Housing Census report, 2007

2. CSA, 2019, Mini Demographic and Health Survey (DHS) in Ethiopia

3. Tigray Statistics Agency (TSA2020), Survey Report on Maternal and Child health Service in Tigray

4. ACAPS Northern Ethiopia crisis: Update on humanitarian needs, Thematic report, 13 December 2021

5. Health facilities targeted in Ethiopia's Tigray region, MSF, March 15, 2021
https://www.msf.org/health-facilities-targeted-tigray-region-ethiopia

6. Office of the United Nations High Commissioner for Human Rights (OHCRH)
https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=27756&LangID=E accessed 20 Jan 2022

7. Mekelle University and Tigray Health Bureau, War associated Damage to the Health System in Tigray, January 2022

8. Global Protection Cluster Working Group, Handbook for the Protection of Internally Displaced Persons, Geneva, December 2007.

9. Office of the United Nations High Commissioner for Human Rights and World Health Organization, "The Right to Health" Fact sheet No. 31. ISSN 1014-5567. Printed at United Nations, Geneva GE.08-41061–June 2008–13,600 *http://www.ohchr.org*

10. Health Resources Availability Mapping System (HeRAMS) Report for Tigray region, January 2022

11. Ayder Doctors and Health Professionals: "Hoping Against Hope!" January 4, 2022

12. Data shows siege and destruction of health system are causing preventable deaths in Tigray (Ethiopia insight, 26 January 2022)

13. Atlas of the Humanitarian Situation, December 2021.
https://www.researchgate.net/publication/349824181_Tigray_Atlas_of_the_humanitarian_situation

14. Tigray: The deliberate destruction of a health system. Sara Jervingsarajerving, Jan 2022

15. ICRC
https://www.devex.com/organizations/international-committee-of-the-red-cross-icrc-22799

16. WHO (2009): A practical guide for country-level implementation of the Health Cluster.

17. The Paris Declaration on Aid Effectiveness (2005)

18. UNOCHA - Tigray: Humanitarian Access Snapshot, as of April 2021

19. ETHIOPIA - TIGRAY REGION HUMANITARIAN UPDATE, Situation Report, updated: 22 Mar 2021

20. HEALTH CLUSTER BULLETIN, October 2021 Edition

21. FEWS NET, May 2021. Catastrophe (IPC Phase 5) outcomes likely among households in Tigray.
https://fews.net/east-africa/ethiopia/key-message-update/may-2021-0;

22. IPC, May 2021. Ethiopia: acute food insecurity situation May-June 2021 and projections for July-September 2021.
http://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1154897/?iso3=ETH; Reuters, 11 June 2021.

IX. ANNEX:

ANNEX-1: DATA COLLECTION TOOLS AND "DAMAGE DEFINED"

This annual situation report was compiled, mainly from the weekly and monthly updates of the health cluster in 2021. Published reports from different humanitarian organizations and UN agencies were also included. For the damage status of health facilities, the previous reports from international organizations were substantiated by the wealth of data collected during health facility assessment by the health cluster during July to September 2021, including Cold Chain Equipment Inventory (CCEI), functionality assessment, mortality survey and overall damage assessment (including Community based survey on Key Performance Indicators – KPI) conducted in July 2021 by Mekelle University in close collaboration with Tigray RHB and the health cluster, the final report is yet to be shared. The damage and functionally assessments used the standard checklists employed during humanitarian response and needs assessment per the SHPEHR indicators.

Based on the combined weighted score of the composite indicators (quantitative and qualitative data), the level of damage was categorized as "FULLY Damaged" when the health facility scored cumulative average below 50 percentiles against the minimum requirement to provide essential health and nutrition services per its standard. The health facility was categorized as "PARTIALLY Damaged" if it gets 50 to 75 percentile and "INTACT" when it scores more than 75 percentiles of the standard.

The key indicators are summarized below (taken from the detailed checklist):

Leadership and Governance:	Functionality of Governing Board, managing and executing overall health activities (Preparing current plan, meets regularly conducting overall inventory...Medication, equipment & Supplies, Human resources, etc. Community engagement, partnership, resource mobilization, etc.
Health Care Financing (HCF):	Mobilizing (collecting) internal resources, external resources, level of functionality and coverage of Community base Health Insurance (CBHI), Check if exemption service is as per the revised proclamation, Utilization of resources, internal control mechanism, etc.
Human resources:	Number and mix against the standard in all categories, technical and supportive staff per the level of the facility. Number of displaced, killed, injured, health workers in health facilities, health offices (wereda, region), etc.
Infrastructure and Basic Furniture	Availability of essential and vital medicines, Medical equipment, Management of Supplies, needs and gaps per the standard to the level of the health facility ***(Separate checklist with quantification by type)***
Health Service Delivery:	**Reproductive Health and Maternal, neonatal, Child and Adolescent Health (RMNCAH):** Family Planning, Abortion Service, Antenatal Care Service, PMTCT service, Delivery Service, Postnatal care service, IMNCI/ICCM service, Sexual and Reproductive Health Services, Maternal death, Neonatal Death, crude death - Community and facility
	Immunization Services: functional cold chain equipment, availability of vaccines, and related supplies, availability of static and outreach immunization services (uninterrupted)
	Nutrition Program: Nutrition Screening for children 6-59 Months, and Pregenital and Lactating Women (PLW), Growth Monitoring and Promotion, Vit-A supplementation and Deworming, Iron Supplementation, OTP service, Stabilization Service

	Communicable Disease Control: TB detection and treatment service, Malaria prevention and RX service, HIV counseling, testing and Rx service, ART service, etc.
	Non-Communicable Service: Clinical service for hypertensive patients, Asthmatic patients, DM patients, and other non-communicable diseases, Mental Health Service
	WASH: overall facility WASH, 24-hour service water supply service, Alternative water supply service, Water Rx chemicals, Functionality of water systems, latrines, sanitation systems and equipment, Incinerators, etc. Solid and Liquid waste disposal, Laundry, hand washing, incinerator, etc.
	Clinical consultation outpatient and inpatient, under-five and adolescents: Deferent services per the level of the health facility, including surgery and special care, OR services, Emergency Services,
	Sexual and Gender Based Violence and Metal health and Psychosocial Support: Identification and clinical service, psychosocial care, one stop center, etc. Trained provider, supplies, etc.
	Laboratory: Basic tests - Urine Test, Blood Film test, Stool Test, RBS, Hemoglobin Test, HIV testing
	COVID-19 Prevention activities: Alcohol/ Sanitizer/Triaging, Mask, Physical distance in place during service and RCCE
Health Information System and PHEM and M&E	Functionality of DHIS2, CBHIS, electronic medical records, etc. based on levels of care Register, availability of trained personnel and HIT.
	Public Health Emergency management (PHEM): Epidemic preparedness plan (cholera, malaria, seasonal diarrhea…), Collection of surveillance report, Report completeness and timeliness, Assessment of epidemic risk areas, Availability of drugs and other logistics for epidemic response (cholera, malaria, seasonal diarrhea…), Establish of RRT team, Anti-Rabis vaccine

ANNEX-2: PARTNERS OF THE HEALTH CLUSTER (FULL LIST & MAPPING AVAILABLE ON REQUEST)

There have been more than 50 health partners in Tigray, but many of them had been inactive due to operation and security challenges, especially since July 2021, due to shortage of fuel, cash and medicines and medical supplies.

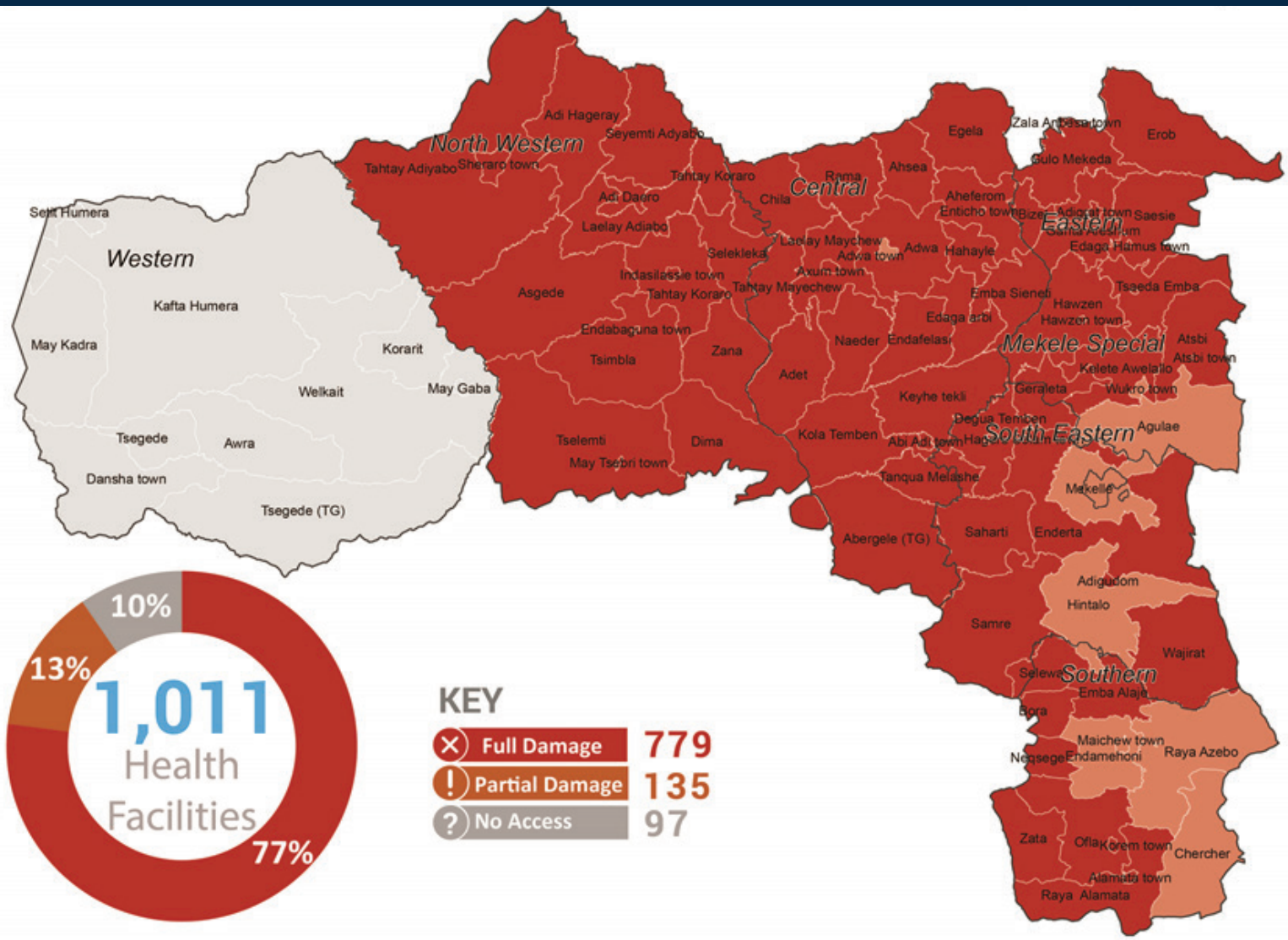
UN AGENCIES AND NGOS:

1. AAH: Action Against Hunger
2. ACSOT: Alliance of Civic Society Organizations in Tigray
3. ADCS: Adigrat Diocese Catholic Secretariat
4. ASDEPO:
5. CHAI: Clinton Health Access Initiative
6. CRS: Catholic Relief Services
7. CVT: Center for Victims of Torture
8. CWW: Concern Worldwide
9. Daughters of Charity
10. ERCS: Ethiopian Red Cross Society
11. FGAE: Family Guidance Association of Ethiopia
12. FHI360: Family Health International
13. GE: GOAL Ethiopia
14. Hamlin Fistula Centre
15. HI: Handicap International
16. HSFR/HFGP (HCF): Health care Financing
17. ICAP: International Center for AIDS Care and Treatment Programs
18. ICRC: International Committee of the Red Cross
19. I.H.S: Innovative Humanitarian Solutions
20. Imagine1day
21. IMC: International Medical Corps
22. IOM: International Organization for Migration
23. IRC: International Rescue Committee
24. Jhpiego
25. JSI/AIDSfree
26. Light for the World
27. MCMDO: Mothers and Children Multisectoral Development Organization
28. MFM: Mums for Mums
29. MSI: Marie Stopes International
30. MSF: Medecins Sans Frontieres (Holland, Spain, Belgium)
31. MTI: Medical Teams International
32. NRC: Norwegian Refugee Council
33. Operations Rescue
34. OSSHD: Organization for Social service Health and Development
35. PIE: Plan International Ethiopia
36. PSI-E: Population Service international Ethiopia
37. Project Hope
38. REST: Relief Society of Tigray
39. SCI: Save the Children International
40. SNV
41. SOS.
42. SP: Samaritan's Purse International Relief
43. TULANE
44. UNFPA: United Nations Population Fund
45. UNHCR: United Nations High Commissioner for refugees
46. UNICEF: United Nations Children's Fund
47. UNOCHA: United Nations Office of Coordination for Humanitarian Affairs
48. USAID – TPHC: Transform Primary Health Care
49. USAID/Eliminate TB
50. WFP: World Food Programme
51. WHO: World Health Organization
52. WVE: World Vision Ethiopia

GOVERNMENT BUREAU AND AGENCIES AND PROFESSIONAL ASSOCIATIONS:

53. EW/FSS: Early Warning & Food Security Sector
54. EPSA-Mekelle & Shire
55. EPS: Ethiopian Paediatrics Society
56. FMHACA
57. Health Insurance Agency (HIA)
58. Mekelle University
59. Midwifery Association
60. Nursing Associations
61. THRI: Tigray health research Institute
62. Tigray Inter-religious Forum
63. Tigray Medical Associations
64. Tigray War Veterans Association
65. THB: Tigray Health Bureau
66. TSA: Tigray Statistics Agency
67. TsegaTiena Private Health facilities Associations
68. TWB: Tigray Water Bureau
69. Other Associations: Suppliers, Women, Youth,
70. Other Government Bureaus (BOLSA, BOPF, etc.) and Agencies

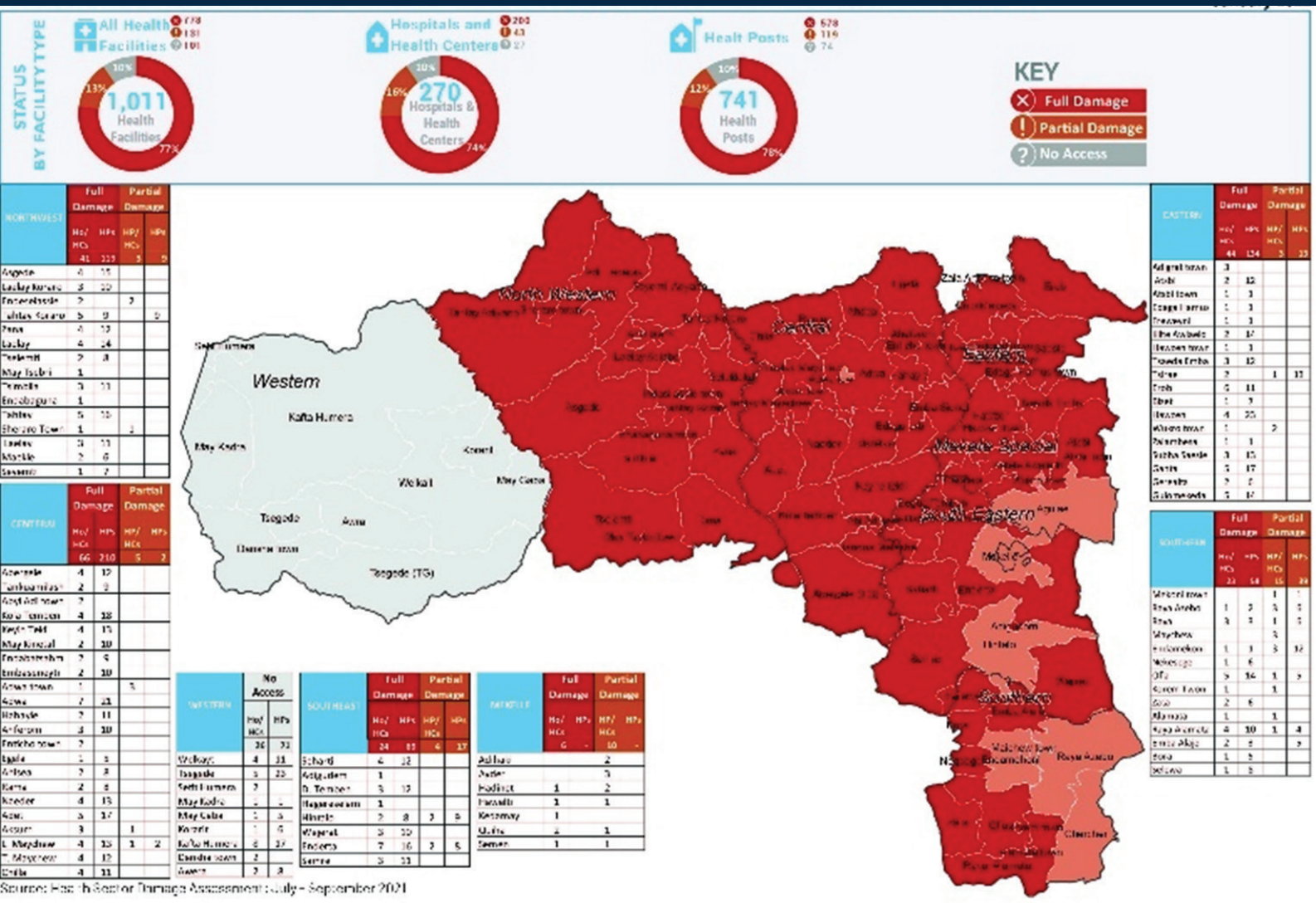
ANNEX-3: KEY DEMOGRAPHIC FIGURES



Source: Health Sector Damage Assessment Reports Conducted in 2021 (HeRAMS, Rapid Assessment, Inventories)

- *POPULATION: 7 MILLION (PROJECTION, CSA 2007); (FEMALES: 50.8%)*
- *WEREDAS/DISTRACTS: 93; TABIAS: 813*
- *PUBLIC HEALTH FACILITIES: 1,011 (40 HOSPITALS, 230 HCS, 741 HEALTH POSTS)*
- *WOMEN, REPRODUCTIVE AGE GROUP /15-49/ (23.4%): 1,638,000*
- *PREGNANT WOMEN (3.4%): 238,000*
- *UNDER 15 YEARS (43%): 3,010,000*
- *UNDER 5 (14.6%): 1,022,800*
- *SURVIVING INFANTS (2.91%): 203,700*
- *PEOPLE IN NEED OF URGENT HUMANITARIAN SUPPORT: 5.2*

ANNEX-4: DAMAGE STATUS OF HEALTH FACILITIES IN TIGRAY (2021)



Source: Health Sector Damage Assessment (July - September 2021

NB.
DETAIL INFORMATION IS READILY AVAILABLE ON REQUEST, INCLUDING PHOTOS AND VIDEOS

FOR MORE INFORMATION:

HAGOS GODEFAY (PHD)
HEAD, TIGRAY HEALTH BUREAU

JANUARY 2022