






Public Health Situation Analysis (PHSA)

Typologies of emergency	Main health threats	WHO grade	Security level (UNDSS)	INFORM risk (rank)
 Conflict  Food Security  Poor Nutrition  Displacement / influx of the refugees  Epidemics	Malnutrition and Child Health Risks Malaria Cholera & Acute Watery Diarrhea (AWD) Dengue Meningitis Measles Mental Health Disorders Yellow Fever Poliomyelitis (CVDPV2) Hepatitis E Tuberculosis	Grade 3	Central African Republic: 4 (Substantial) East Chad: 3 (Moderate) Ethiopia: 4 (Substantial) for Central, North West, South, South East and West South Sudan: 4 (Substantial) across all states	Central African Republic: 8.7/10 (Very High) in 2024 Global Risk Ranking: 1 of 191 countries East Chad: 7.8/10 (Very High) in 2024 Global Risk Ranking: 5 of 191 countries Ethiopia: 7.0/10 (Very High) in 2024 Global Risk Ranking: 12 of 191 countries South Sudan: 8.5/10 (Very High) in 2024 Global Risk Ranking: 2 of 191 countries

SUMMARY OF CRISIS AND KEY FINDINGS

The Public Health Situation Analysis (PHSA) on the impact of the Sudan crisis reveals a complex emergency across neighboring countries. The analysis identifies various types of emergencies, including conflict, food insecurity, displacement, and epidemics. Health threats in the region are categorized by risk levels:

- **Red Category:** Very high risk of malnutrition, cholera, measles, yellow fever, meningitis, dengue and malaria.
- **Orange Category:** High risk of mpox, poliomyelitis, mental health, hepatitis E, tuberculosis and HIV.
- **Yellow Category:** Moderate risk of COVID-19 and non-communicable diseases.
- **Green Category:** Low risk.

The conflict in Sudan, which began in April 2023 between the Sudan Armed Forces (SAF) and the Rapid Support Forces (RSF), has led to over 10.2 million people being displaced. Of these, 2.1 million have crossed into neighboring countries, and 7.9 million are internally displaced within Sudan. Chad and South Sudan have the highest numbers of displaced individuals related to the Sudan crisis. The total number of refugees and returnees from neighboring countries is over 1.5 million with significant movements to South Sudan, Chad, Ethiopia, and the Central African Republic. The humanitarian profile indicates that several countries have significant needs. For example:

- **Central African Republic:** 2.8 million people in need, with 2 million facing food insecurity.
- **Chad:** 6 million people in need, including 2.9 million who are severely food insecure.
- **Ethiopia:** 21.4 million people in need, including 15.8 million requiring food assistance.
- **South Sudan:** 9 million people in need, with 7.1 million projected to be highly food insecure.

The humanitarian health response aims to support host countries and requires \$1.4 billion in funding for 2024. Key focus areas include life-saving activities, resilience and capacity building, economic inclusion, and partnerships. However, challenges such as overstretched resources, security concerns, and logistical complications hinder aid delivery. The funding gap stands at 80.2%, highlighting a significant shortfall.

Historically, the region's health systems have struggled with various challenges. Currently, health infrastructure is overwhelmed, disease outbreaks are occurring, security issues are impeding access, and there are difficulties in surveillance data documentation.




Immediate needs and responses include:

- Urgent deployment of emergency medical teams
- Provision of health supplies for vaccine-preventable diseases
- Strengthening health surveillance systems
- Implementation of essential health packages
- Replenishment of emergency health kits
- Preparation for climatic conditions

In conclusion, the PHSA underscores the urgent need for a coordinated and comprehensive humanitarian response to address health risks and support affected populations in Sudan and neighboring countries.

HUMANITARIAN PROFILE

Humanitarian Situation in Central Africa, Chad, Ethiopia, and South Sudan

		
PEOPLE IN NEED (PiN) 2024	HEALTH NEEDS 2024	REFUGEES, ASYLUM SEEKERS, from Sudan
CAR: 2.8 million (including 71 176 under the Sudan RRP)	CAR: 1.9 million	CAR: 71 K
Chad: 6 million (including 1.4 million under the Sudan RRP)	Chad: 2.1 million	Chad: 1.4 M
Ethiopia: 21.4 million (including 225 000 under the Sudan RRP)	Ethiopia: 16.4 million	Ethiopia: 224 k
South Sudan: 9 million (including 537 000 under the Sudan RRP)	South Sudan: 6.3 million	South Sudan: 537 K

According to the 2024 Humanitarian Response Plan (HRP) by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), the **Central African Republic (CAR)** anticipates that 2.8 million people, constituting 46% of its population, will face extreme vulnerability this year, surpassing the capacity of humanitarian aid alone to meet their needs (OCHA, 2024). In 2023, seven out of ten Central Africans lived below the poverty line of \$2.15 per day, highlighting CAR's status among the world's poorest nations (OCHA, 2024). This situation not only exacerbates the impact of minor shocks on livelihoods but also heightens vulnerabilities among households with limited resilience.

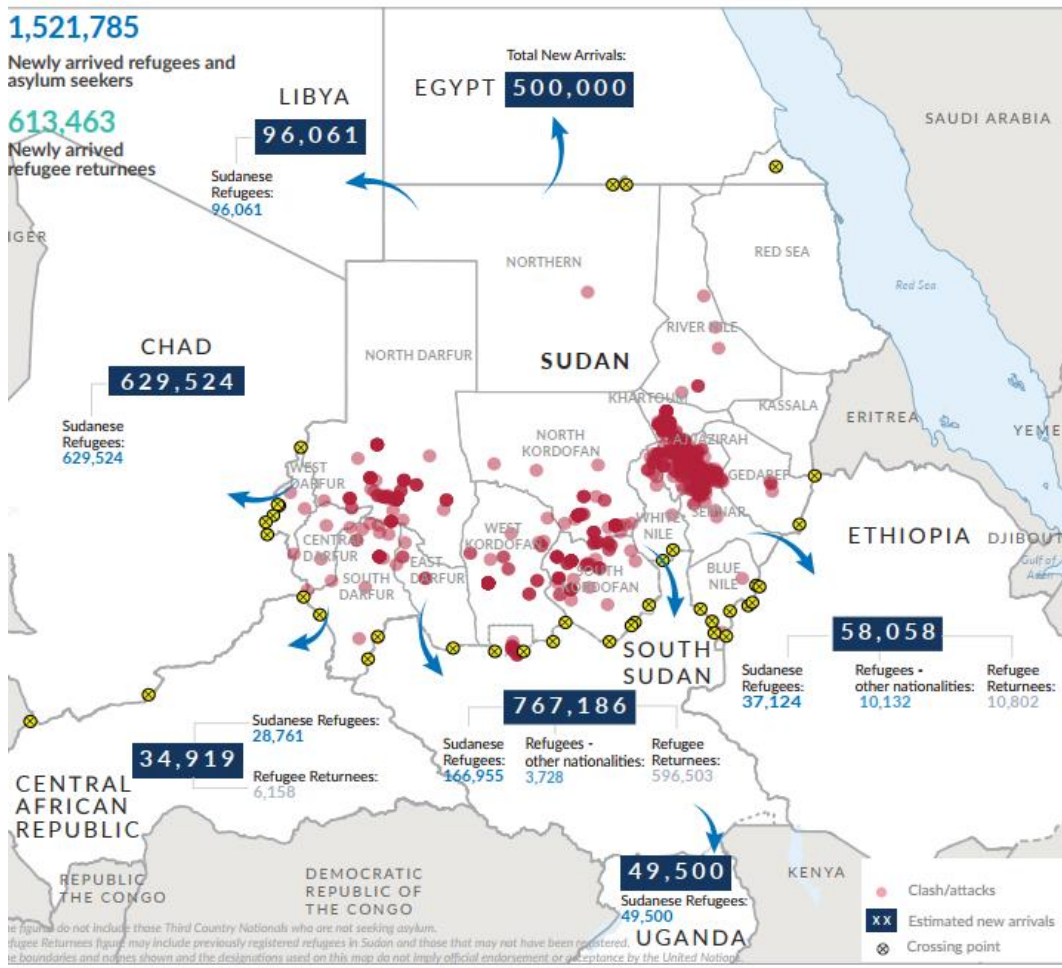
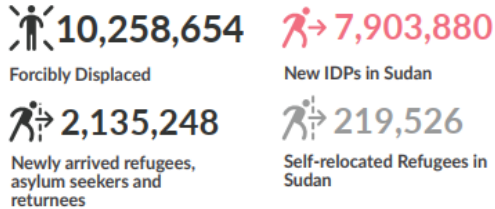
In 2024, the Humanitarian Response Plan in **Chad** targets 4.6 million out of a total of 6 million people in need. The continues to confront a prolonged and complex humanitarian crisis affecting over a third of its population, exacerbated by armed conflicts leading to widespread forced displacement, food insecurity, health crises, and climate-related challenges (OCHA, 2024). These challenges are compounded by socio-economic and political tensions in neighboring countries, severely impacting vulnerable populations. Despite recent marginal gains, Chad's low Human Development Index reflects underlying structural issues such as underdevelopment, climatic shocks, and economic instability.

In Ethiopia, 21.4 million people require humanitarian assistance, with efforts targeting 15.5 million individuals due to severe water shortages, dried pastures, and reduced harvests caused by an El Niño-driven drought (OCHA, 2024). A Flood Alert issued ahead of the March-May rainy season underscores the risk of displacement and severe impacts in vulnerable areas.

South Sudan, now in its twelfth year of independence, faces escalating humanitarian, economic, social, and political crises intensified by conflict and exacerbated by the Sudan crisis (OCHA, 2024). The influx of 658 021 refugees and returnees since April 2023, coupled with 5.8 million people facing crisis-level food insecurity, poses significant challenges. Projections indicate worsening conditions affecting 7.1 million people during the lean season from April to July 2024 due to the severe 2023-24 El Niño phenomenon, disrupting regional climate patterns, crop yields, and intensifying disease outbreaks. As of August 2024, reports have been received of flooding across eight states. Population

displacement to safer locations is happening daily, but locations that were previously safe are now also under threat. Forecasts are indicating that peak 2022 flood levels are likely to be reached soon in some areas, with locations such as Fangak, Unity, Upper Nile, Pibor, Northern el Bhar Gazar reporting that water levels in early August are already higher than those at the peak of flooding in September 2022, while water levels are still rising. The rainfall forecasts for this week predicts moderate rainfall (50-200mm) over most parts of South Sudan.

Refugee Situations in CAR, Chad, Ethiopia, and South Sudan



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Source: UNHCR, August 2024

The conflict that began on 15 April 2023 in Sudan continues unabated. The displacement crisis within Sudan and into neighboring countries has worsened, with Libya and Uganda now included in the Sudan Emergency Supplementary Appeal and the Sudan Regional Refugee Response Plan (UNHCR, 2024).

Since the conflict started over a year ago, over 10 million people have been forced to flee their homes, marking the largest humanitarian crisis in the region and one of the largest globally (UNHCR, 2024).

Within Sudan, 7.9 million people are internally displaced, adding to the existing 3 million who were displaced before the conflict began (UNHCR, 2024). Additionally, 2.1 million refugees and returnees have sought safety in neighboring countries such as the Central African Republic, Chad, Egypt, Ethiopia, Libya, South Sudan, and Uganda by the end of June 2024 (UNHCR, 2024).

Prior to the current conflict, Sudan already hosted over 4.8 million people in displacement (3.7 million IDPs mainly in Darfur, and over one million refugees, the second highest refugee population in Africa, mainly from South Sudan, Eritrea, Syria, and Ethiopia, as well as from the Central African Republic, Chad, and Yemen) (UNHCR, 2024). Children make up approximately 51% of the displaced population in Sudan, contributing to one of the world’s largest child displacement crises. These children face numerous protection risks throughout their displacement journey, including violations of their rights, restricted access to safety, separation from families, gender-based violence (especially sexual violence and child marriage), psychological distress, detention during immigration, trafficking, and limited access to child protection services both during their flight and afterward (UNICEF, 2024; UNHCR, 2024).

HEALTH STATUS AND THREATS

Health Needs in Sudan Crisis-Affected Countries

Country	People in Need of Health Services	Health Cluster Target
Central African Republic	1.9 million	768 000
Chad	2.1 million	1.2 million
Ethiopia	16.4 million	6.7 million
South Sudan	6.3 million	3.2 million

In Central African Republic, the number of people needing primary and secondary healthcare services has risen to 2.8 million, straining the healthcare system. Humanitarian shocks and disease outbreaks worsen healthcare needs for nearly half the population, exacerbating vulnerability amid socio-economic, security, and economic challenges from armed conflicts. International and local human resources are essential for effective service delivery. MSNA survey findings show 48% preference for direct service provision and 9% for cash transfers. Health cluster partners aim to enhance healthcare access in severity 3 and 4 zones across 65 of CAR’s 72 sub-prefectures in 2024. Epidemics include measles (15 districts), monkeypox (six), yellow fever (five), and rabies (eight) (OCHA, 2024).

Food Insecurity: Approximately 2 million people are facing high levels of acute food insecurity (IPC Phase 3 or above) between September 2023 and March 2024, which coincides with the harvest period. This includes approximately 378 000 people (6% of the population analyzed) in Emergency (IPC Phase 4) and nearly 2 million in Crisis (IPC Phase 3). The populations of the sub-prefecture of Birao (Vakaga prefecture where most Sudanese refugees are hosted in CAR) will be particularly affected and will be classified as Emergency (IPC Phase 4) (OCHA, 2024).

Displacement: 34 316 forcibly displaced people from Sudan have arrived in CAR since April 2023, of which 6158 are returnees (OCHA, 2024). A total of 14 858 Sudanese refugees have been biometrically registered and live in 13 localities, mostly in hard-to-reach locations outside Vakaga prefecture, of

which 11 243 Sudanese refugees are in Korsi (Vakaga prefecture). Additionally, 1449 Sudanese refugees were biometrically registered in the localities of Akroussoulback, Koundji, Zobossinda, and Ndele (Bamingui-Bangoran prefecture) (OCHA, 2024). Central African Republic has an estimated 521 857 internally displaced persons (IDPs), mainly in Ouham and Ombela M’Poko prefectures (OCHA, 2024).

In Chad, delivering quality healthcare remains challenging. Despite government efforts, inadequate healthcare personnel and infrastructure persist nationwide. Medical facilities lack essential equipment, medications, and supplies crucial for patient care. Geographic and financial constraints further impede healthcare access, increasing morbidity and mortality rates. Socio-economic factors, exacerbated by global and national economic crises and climate fluctuations, contribute to health challenges. In 2024, 2.1 million people will need healthcare due to humanitarian crises, with over a million (1 233 751) requiring acute humanitarian and healthcare assistance. Maternal mortality stands at 876 deaths per 100 000 live births, with low assisted childbirth rates (47.2%) and contraceptive prevalence (8.1%). Children face high mortality rates (122‰) from preventable diseases like measles, compounded by low vaccination coverage, malnutrition, malaria, acute respiratory infections (ARI), and diarrheal diseases. Rural populations, especially those affected by displacement, struggle to access healthcare, often traveling long distances on foot. Without intervention, sector-specific humanitarian needs are unlikely to improve in the next year due to recurring crises and structural issues (OCHA, 2024).

Food Insecurity: As of 1 January 2024, nearly 2.9 million people in Chad were severely food insecure (IPC Phase 3) (OCHA, 2024). Provinces hosting refugees from Sudan are projected to be in IPC Phase 3 Crisis from April to May 2024 due to the ongoing influx of Sudanese refugees, exacerbating the need for food assistance. Additionally, economic opportunities are scarce, and poor agricultural results during the 2023-2024 season have further worsened food security among host households, refugees, and returnees (OCHA, 2024).

Displacement: Chad currently hosts approximately one million refugees affected by the conflict in Sudan, primarily located in Ennedi Est, Wadi Fara, Ouaddai, and Sila provinces (OCHA, 2024). Since 2023, there have been 585 201 new arrivals, including 96 181 who crossed into Chad since January 2024. The majority of these new arrivals are women and children (88%), with 14% having specific needs (OCHA, 2024). In addition to Sudanese refugees, Chad accommodates about 200 000 refugees from other neighboring countries, 260 000 returnees, and 215 000 internally displaced persons (IDPs) (OCHA, 2024).

Vulnerable Groups: According to UNICEF, 86% of the refugees arriving from Sudan are women and children (UNICEF, 2024a), while the International Federation of Red Cross and Red Crescent Societies (IFRC) reports that 92% of the refugees are women and children (IFRC, 2024). Among the returnees, women alone constituted 58%, and people with specific needs accounted for 15% of the affected population (UNICEF, 2024b). UNICEF further reports that 93% of the returnees are women and children (UNICEF, 2024b).

Sudan Refugee Crisis: Chad has been facing significant challenges, exacerbated by the conflict in Sudan’s Darfur region since April 2023. The situation has had alarming impacts on provinces in eastern Chad. President Déby closed the border with Sudan in April 2023, the day the conflict broke out in Khartoum, although it remained open for refugees. Troops were deployed to the area, yet securing the 1400 km Chad-Sudan frontier remains a challenge. Eastern Chad is struggling to accommodate the new arrivals (OCHA, 2024).

Malnutrition: The number of admissions of children suffering from severe acute malnutrition (SAM) has been increasing over time. Ouaddaï province recorded 4237 new admissions of children with SAM,

surpassing the expected 2606 in June 2023 by more than 60%. Common complications reported with SAM include measles, malaria, and severe pneumonia. The Adré health district in Ouaddaï province is particularly affected, with 113% more new admissions than the expected annual target as of 30 June, 2023 (OCHA, 2024). According to the November 2022 nutrition SMART survey, the prevalence of global acute malnutrition exceeds 10% (WHO alert threshold) in Wadi Fira (17.7%), Ennedi Est (15.7%), Ouaddaï (12.1%), and Sila (11.1%) (WHO, 2022).

In Ethiopia, challenges in assessing healthcare include outdated data and limited infrastructure. High maternal and neonatal mortality rates, low life expectancy, and recurrent disease outbreaks highlight healthcare system stress. Access to healthcare is limited, particularly in rural areas, relying heavily on donor funding and Mobile Health and Nutrition Teams. Insecurity and floods disrupt healthcare services, affecting maternal care, immunizations, malaria prevention, and supply deliveries. Conflict and floods damage health facilities, with attacks hindering service delivery. These challenges persist amid a reliance on costly air transport for humanitarian responses, exacerbated by recent population movements (OCHA, 2024).

Food Insecurity: In 2024, 15.8 million people in Ethiopia are projected to face hunger and require food assistance. This includes over four million internally displaced persons and 7.2 million individuals experiencing high levels of acute food insecurity necessitating emergency assistance. Specifically, 3.5 million people in the Amhara region are in need of food assistance (OCHA, 2024).

Displacement: Since the onset of conflict in Sudan in April 2023, a total of 53 923 individuals in need of international protection have crossed into Ethiopia. Among them, 21 552 individuals entered through the Metema entry point in Amhara, 23 047 through the Kurmuk entry point in Benishangul Gumuz, and 700 at various entry points in Gambella (Pagak, Burbiey). Additionally, 8273 Ethiopian refugee returnees have also arrived (OCHA, 2024). As of December 2023, approximately 20 000 refugees were hosted in the Kumer settlement and transit center in Amhara's Metema area, with another 1770 in the "Awlala" site in Amhara. In the Benishangul-Gumuz region, close to 17 000 refugees were accommodated in the Kurmuk area near the Sudanese border. The government allocated additional land in Benishangul-Gumuz for the "URA settlement," capable of housing 34 000 individuals. As of March 2024, Ethiopia hosts a total of 1 059 232 refugees and asylum-seekers, solidifying its position as one of Africa's largest refugee-hosting nations (OCHA, 2024).

Floods: Ethiopia is among seven countries globally considered to be at the highest risk of severe humanitarian impacts caused or worsened by El Niño (OCHA, 2024). Heavy rains, flash floods, and river floods from October to December 2023 have resulted in a flood emergency affecting more than 56 woredas in five regions. This crisis has affected over 1 431 347 people, displaced more than 682 197 individuals, and tragically led to the deaths of 44 people, primarily in the Somali region (OCHA, 2024). These repeated shocks have severely depleted the coping capacities of households, diminishing their ability to respond to potential impacts of El Niño (OCHA, 2024). A Flood Alert issued by the Federal Government in January 2024 has called for preparedness and early response strategies ahead of the March-May rainy season, with projections indicating that over two million people could be affected, including one million people at risk of displacement (OCHA, 2024).

Vulnerable Groups: The 2024 Humanitarian Needs Overview (HNO) highlights that vulnerable groups such as women, children, youth, internally displaced persons (IDPs), refugees, older people, and persons with disabilities will be among the most severely impacted by these crises (OCHA, 2024). Other high-risk groups include individuals with chronic/mental illnesses, children-headed households, and survivors of gender-based violence (OCHA, 2024). Reliable and up-to-date data on persons with disabilities in Ethiopia is lacking, with the most recent available data from 2016 estimating 7.8 million persons with disabilities, constituting 9.3% of the total population (UNICEF, 2016).

Impact of Conflict in Sudan: Ethiopia is the third-largest refugee-hosting country in Africa, accommodating over 933 000 refugees and asylum seekers primarily from South Sudan, Somalia, and Eritrea (OCHA, 2024). Escalations in conflicts in Sudan have led to a significant influx of refugees, returnees, and third-country nationals into Ethiopia, primarily through the Metema border post in the Amhara region (OCHA, 2024). Since the onset of the crisis in neighboring Sudan in April, over 91,500 people have entered Ethiopia as of 14 November, 2023. Among them, Ethiopian returnees account for 43%, Sudanese nationals 39%, and third-country nationals 18% (OCHA, 2024).

South Sudan faces complex humanitarian challenges due to poor infrastructure, seasonal hazards, insecurity, and demographic constraints. Inadequate roads and aviation services hinder relief delivery, increasing costs and logistics challenges. Climate variability and violence disrupt supply routes and service provision, necessitating costly air transport for humanitarian responses. Returnees from Sudan add pressure to transport life-saving supplies, expected to continue in 2024 (OCHA, 2024).

Food Insecurity: Between April and July 2024, Ethiopia faces a severe food security crisis, with an estimated 7.1 million people (56% of the population) expected to experience high levels of food insecurity (IPC Phase 3 or above). Among them, 79 000 people are projected to be in IPC Phase 5 (Catastrophe), while approximately 2.3 million people are likely to be in Phase 4. The most affected populations reside in areas frequently impacted by climate-related shocks such as flooding and dry spells, compounded by economic crises including currency depreciation and high food prices, as well as conflict and insecurity linked to the Sudanese conflict spillover. These factors contribute to forced displacement, reduced agricultural production, and diminished humanitarian assistance (OCHA, 2024). High food insecurity, elevated prevalence of diseases, and poor hygiene, health, and environmental sanitation services are the main drivers of acute malnutrition in South Sudan, along with inadequate maternal and childcare.

Displacement: Since April 2023, a total of 658 021 individuals have arrived in Ethiopia from Sudan, including 518 348 refugee returnees (OCHA, 2024). They entered through various regions: 19 005 via Abyei Administrative Area, 38 301 via Northern Bahr al Ghazal, 8 165 via Unity, 562 525 via Upper Nile, and 11 147 via Western Bahr al Ghazal (OCHA, 2024).

Flooding: South Sudan is anticipating the worst flooding it has experienced in the last 60 years (OCHA, 2024). During June-September 2024, wetter-than-usual conditions are expected in the country's southern parts, with floods anticipated to affect more people. Additionally, according to the World Meteorological Organization (WMO), there is a 69% chance of a transition to La Niña by July-September and 85% by the end of the year (WMO, 2024).

Country ¹	Coverage	Phase 2	Phase 3	Phase 4	Phase 5	Phase 3+	Period from	Period to
Central African Republic	99%	2 350 523	1 996 258	520 668		2 516 926	April 2024	August 2024
Chad	91%	4 166 876	2 091 476	310 497		2 401 973	March 2024	May 2024
Ethiopia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
South Sudan	100%	3 501 000	4 684 000	2 336 000	79 000	7 099 000	April 2024	July 2024

DISEASE RISK ANALYSIS

Population Mortality:

MORTALITY INDICATORS	Central African Republic	Chad	Ethiopia	South Sudan
Life expectancy at birth (2019) ²	53.9	59.6	65	62.8
Death rate, crude, per 1000 people (2021) ³	11	13	7	11
Infant mortality rate (deaths < 1 year per 1000 births) (2021) xii	74	64	34	64
Child mortality rate (deaths < 5 years per 1000 births) (2021) ⁴	96.8	102.9	46.2	98.8

Central African Republic:

Maternal mortality in the Central African Republic remains alarmingly high, with 882 deaths per 100 000 live births, placing it among the highest in the world. The under-five child mortality rate is also severe, with 96.8 deaths per 1000 children (UNICEF, 2023). Additionally, the country has one of the highest fertility rates globally, with an average of six births per woman. The average life expectancy for both men and women is 53.9 years. The high maternal mortality rates also reflect this concerning situation, with an estimated 829 deaths per 100 000 live births. This places the CAR among the countries with the highest rates of maternal and child mortality in the world (WHO, 2023).

Chad:

In Chad, life expectancy at birth has increased to 59.6 years as of 2019, marking an improvement from 51.1 years in 2000. The country has a predominantly young population, with 65% of people under 25 years old and a median age of 16.8 years. The leading causes of death among females in 2019 were lower respiratory infections, neonatal conditions, diarrheal diseases, malaria, and maternal conditions. For males, the top causes included lower respiratory infections, neonatal conditions, diarrheal diseases, malaria, and road injuries (WHO, 2023).

Ethiopia:

Ethiopia has made significant strides in maternal and child health since 2000. Maternal mortality has decreased from 871 deaths per 100000 live births in 2000 to 401 deaths per 100000 live births in 2020. Child mortality has also seen substantial improvement, with deaths declining by two-thirds between 1990 and 2015. Life expectancy has risen to 63 years for males and 67 years for females as of 2015, up from just 49 years in 1990. Despite these gains, challenges remain in addressing stunting rates and neonatal mortality, which have shown limited improvement in recent years (WHO, 2023).

South Sudan:

South Sudan continues to face some of the world's most challenging health indicators. After years of conflict, the majority of the population lacks access to essential health services, safe water, and sanitation. Life expectancy at birth has improved to 62.8 years as of 2019, reflecting an increase from 54.1 years in 2000 (WHO, 2023).

Vaccine Coverage: Below are the latest vaccination coverage statistics for the region.

Country	DTP- 3rd dose (DTP3) (WUENIC, 2022) ⁵⁶	Drop out from DTP1 to DTP3 at national level (2021) ⁷	Measles-(1st dose) (WUENIC, 2022) ⁸	Pneumococcal conjugate vaccine, final dose (PCV3) (WUENIC, 2022) ⁹	Rotavirus (last dose (2022)) ¹⁰
Central African Republic	42%	22%	41%	40%	N/A
Chad	60% ¹¹	19%	56%	N/A	N/A
Ethiopia	65%	7%	56%	61%	91%
South Sudan	73%	4%	72%	N/A	N/A

DTP: Diphtheria-Tetanus-Pertussis

PCV: Pneumococcal Conjugate Vaccine

WUENIC: WHO/UNICEF Estimates of National Immunization Coverage

Central African Republic: Routine vaccination coverage is extremely low in the Vakaga health district, by the end of November 2023, Penta 3 immunization coverage was close to 57% (administrative data) (WHO, 2024). Reaching Every District (RED) strategy has not been effective in the district due to lack of means of transport, insufficient financial and human resources. To protect this highly mobile population from vaccine-preventable diseases and reduce the probability of outbreaks in the future, improvement of routine vaccination and implementation of catch-up strategies to reach the cohorts of under-immunized and zero-dose children would be necessary.

Chad: Chad's vaccination coverage rates are suboptimal, and there is a gap to meet the 90% target coverage rates for vaccination in children, reaching only 58% with the third dose of DTP-containing vaccine and 55% with the first dose of measles-containing vaccine in 2021 (WHO, 2022). While strengthening the routine immunization system to reach new cohorts sustainably, implementing appropriate catch-up vaccination strategies would be necessary to protect these cohorts of children from vaccine-preventable diseases and reduce the probability of outbreaks in the future.

Ethiopia: Despite significant strides in routine immunization (RI) programs in recent decades, Ethiopia continues to face challenges with a high number of zero-dose children, placing it among the top five countries globally (WHO, 2022). Only 44% of children aged 12-23 months have received all basic vaccinations (WHO, 2022). A study conducted in 2020 revealed that full vaccination coverage varied significantly between urban (60.9%) and rural areas (29.7%), with the highest coverage observed in Addis Ababa (81.6%) and the lowest in the Afar region (12.4%) (UNICEF, 2020). According to the 2024 Humanitarian Needs Overview (HNO), more than 50% of children diagnosed with measles had not received any vaccination, underscoring a critical gap in immunization coverage (UNICEF, 2024). A significant challenge is to increase the vaccination coverage rates and implement catch-up strategies to reach the large cohorts of under-immunized, nonimmunized, and zero-dose children (1.4 million and 1.2 million respectively in 2021) (WHO, 2022).

South Sudan: South Sudan hosts one of the largest cohorts of zero-dose children globally, numbering 72 096 in 2022 (WHO, 2022). The challenging context of the country, compounded by suboptimal immunization coverage, has contributed to outbreaks of diseases such as yellow fever, measles, and cases of vaccine-derived poliovirus (WHO, 2022). A significant challenge is to sustainably increase the vaccination coverage rates and implement catch-up strategies to reach the cohorts of under-immunised and zero-dose children.

HEALTH RISKS OVER COMING MONTH		
Public Health Risk	Level of risk***	Rationale
Malnutrition and Child Health Risks		Several countries in the region are experiencing severe health, climate, and security crises, leading to critical malnutrition risks. In Chad, 38% of children under 5 suffer from stunting, with 1.5 million people expected to be severely food insecure in 2023 without emergency aid. The refugee crisis has worsened severe acute malnutrition (SAM) among children, many of whom also face measles or injuries. South Sudan is in a Phase 5 (Catastrophe/Famine) situation according to the IPC Classification System. In Ethiopia, 4.9 million people need nutrition assistance, including 1 million children with SAM and 1.5 million with moderate acute malnutrition (MAM). Additionally, 2.4 million children under 5 and 1.3 million undernourished pregnant and lactating mothers require MAM treatment, while 942 000 children under 5 need SAM treatment. The Central African Republic also faces a critical nutrition situation, with many children suffering from acute malnutrition and severe food insecurity. According to the results of the analysis of the integrated framework for malnutrition (IPC) in 2023, 55 sub-prefectures (compared with 56 in 2022) are in a situation of stress or crisis (severities 3 and 4), covering 60.8% of the Central African population (3.7 million people). 1.2 million people, including 464 796 children aged 6-59 months and 224 178 pregnant and breastfeeding women are at risk of acute malnutrition, and require resilient or emergency response in areas affected by shocks. In addition, to seven sub-prefectures where the nutritional situation has deteriorated considerably in 2023 (from severity 3 to severity 4), the projected analysis forecasts a very marked deterioration in five other sub-prefectures (Birao, Ouada Djalé, Zangba, Ippy and Bakala) between March and August 2024. All these sub-prefectures are in the seven districts sheltering Sudanese refugees.
Cholera and Acute Watery Diarrhoea		Due to inadequate access to water and poor sanitation, the region is experiencing cholera outbreaks. In Chad, the cholera crisis is worsened by poor sanitation, limited access to clean water, and overcrowding in refugee camps. High levels of malnutrition, with 38% of children under 5 suffering from stunting, are compounded by a worsening refugee crisis that exacerbates severe acute malnutrition (SAM) among children, many of whom also face measles or injuries. In Ethiopia, cholera outbreaks are fueled by poor sanitation and unreliable water supplies, especially in refugee camps, along with shortages of medical supplies such as cholera kits and Oral Cholera Vaccine (OCV). South Sudan, classified as Phase 5 (Catastrophe/Famine) by the IPC Classification System, faces additional challenges with cholera worsening the crisis. In the Central African Republic, critical levels of acute malnutrition and severe food insecurity further complicate the cholera response, highlighting the urgent need for improved water access and sanitation.

Measles		The region is at a very high risk of measles outbreaks due to insufficient vaccination coverage and a high prevalence of malnutrition. Most countries of the region regularly experience large and disruptive measles outbreaks. The condition of overcrowding will increase the risk of transmission and severity of diseases.
Yellow Fever		Since the beginning of 2023, and as of 25 February 2024, a total of 13 countries in the WHO African Region have documented probable and confirmed cases of yellow fever (YF), including Central African Republic, Chad and South Sudan. Preliminary data for 2023 indicate a case fatality rate (CFR) of 11% ¹²
Meningitis		All four neighbouring countries to Sudan are part of the meningitis belt. An ongoing epidemic has been reported in Central African Republic. The very low vaccination coverage is reported.
Dengue		The global incidence of dengue has markedly increased over the past two decades, posing a substantial public health challenge. All the four countries are at high risk of Dengue. The movement of populations into areas with higher Dengue transmission and the disruption of the health system in the four countries, the environmental conditions are factors contributing to the worsening of the situation.
Malaria		Malaria remains a critical health challenge in these regions, with the disease environment being exacerbated by the displacement of populations into areas with poor living conditions and limited health infrastructure. The movement of populations into areas with higher malaria transmission and the disruption of malaria control activities like mosquito net distribution worsen the situation.
Mpox		Several factors heighten the risk of Mpox among Sudanese refugees in CAR, Chad, Ethiopia, and South Sudan. The Central African Republic is currently experiencing an Mpox outbreak, with 21 confirmed cases in 2024 across six of the 35 health districts. The ongoing conflict and instability in these regions severely restrict access to healthcare, including essential services for managing Mpox. Overcrowding in refugee camps, poor sanitation, and inadequate hygiene practices facilitate the spread of the virus. High levels of malnutrition further weaken immune systems, making refugees more susceptible to severe illness. Additionally, the frequent movement of refugees between camps and across borders can exacerbate the transmission of Mpox. Limited health education and awareness about Mpox also delay timely medical intervention, further increasing the risk and impact of outbreaks.
Poliomyelitis (cVDPV2)		cVDPV2 outbreaks are reported in all four neighboring countries to Sudan. The displacement of populations complicates efforts to maintain immunization coverage.
Mental Health		There is limited data on mental health across the surrounding countries of Sudan. The region has experienced record levels of forced displacement due to multiple crises with multiple factors, such as conflict, hunger and climate change. As a result, the mental health burden is likely to be high.

Hepatitis E		There are ongoing outbreaks of Hepatitis E in Chad, CAR and South Sudan ¹³ . Overcrowding and poor WASH conditions in refugees settings will exacerbate the transmission of Acute Viral Hepatitis and Hepatitis E in particular.
Tuberculosis and HIV		Tuberculosis (TB) remains a major public health issue among Sudanese refugees in Chad, the Central African Republic, Ethiopia, and South Sudan. The mortality rate for TB cases (excluding HIV) has risen from 23 to 25 per 100 000 population since 2015, exacerbated by poor living conditions, inadequate healthcare, and high rates of malnutrition among refugees.
COVID-19		Several factors heighten the risk of COVID-19 among Sudanese refugees. The ongoing conflict severely restricts access to healthcare, including essential services like oxygen therapy, increasing the likelihood of severe outcomes and higher mortality rates. Overcrowding in refugee camps facilitates rapid virus spread and makes social distancing difficult. Poor sanitation and hygiene further exacerbate the risk of transmission, while high levels of malnutrition weaken immune systems, making refugees more susceptible to severe illness. Additionally, limited health education and awareness delay medical intervention and contribute to higher transmission rates. Although conflict may not directly exacerbate COVID-19 transmission, these compounding factors create an environment where the disease has more severe consequences.
Non-communicable Diseases		In the African continent and particularly among Sudanese refugees in CAR, Chad, Ethiopia, and South Sudan, non-communicable diseases (NCDs) are projected to become the leading cause of death by 2030. This shift is driven by factors such as limited access to healthcare, high levels of malnutrition, poor living conditions, and inadequate management of chronic conditions. The refugee populations are at heightened risk due to the compounded effects of conflict, displacement, and overcrowding, which exacerbate the prevalence and impact of NCDs. Addressing these issues is critical to preventing a future health crisis where NCDs could overwhelm already fragile healthcare systems.
<p>Red: Very high risk. This could result in high excess mortality/morbidity levels in the upcoming month.</p> <p>Orange: High risk. This could result in considerable levels of excess mortality/morbidity in the upcoming month,</p> <p>Yellow: Moderate risk. Could make a minor contribution to excess mortality/morbidity in the upcoming month.</p> <p>Green: Low risk. It will probably not result in excess mortality/morbidity in the upcoming month.</p>		

OVERVIEW OF DISEASE RISKS

A SUMMARY OF THE MALNUTRITION RISKS IN EACH COUNTRY IS OUTLINED BELOW:

Integrated Food Security Phase Classification Security (IPC)

Central African Republic:

The latest IPC projection for April – August 2024 reveals a severe food insecurity crisis in the Central African Republic (CAR), affecting about 2.5 million people, representing 41% of the analyzed population classified in IPC Phase 3 or higher. This includes 508 000 individuals in IPC Phase 4 (Emergency) and 2 million in IPC Phase 3 (Crisis), necessitating urgent interventions to save lives, safeguard livelihoods, and address food deficits (IPC, 2024). The most affected prefectures such as Mbomou, Haut-Mbomou, Haute-Kotto, Mambéré-Kadéi, Nana-Mambéré, and Ouham-Pende have over 50% of their populations in IPC Phase 3 or above, with Kémo (48%), Ouaka (45%), Vakaga, and Lobaye (40%) also showing widespread vulnerability. Additionally, 11 sub-prefectures including Bambouti, Djéma, Obo (Haut-Mbomou), Ouadda, Yalinga (Haute-Kotto), Ouanga (Mbomou), Nana-Bakasa, Nana-Boguila (Ouham), Birao, and Ouada-Djallé (Vakaga) are in IPC Phase 4, indicating critical levels of food insecurity (IPC, 2024). Displaced populations affected by conflict and armed groups nationwide face compounded challenges, exacerbated by poor road infrastructure in landlocked areas that limit market access and hinder local agricultural sales. Urban and peri-urban households also confront obstacles due to constrained market access, low purchasing power, rising food prices, and diminishing livelihoods. Particularly in Vakaga, 40% of residents are in IPC Phase 3 or higher, necessitating urgent humanitarian assistance amidst complex challenges aggravated by displacement, conflict, and infrastructure limitations (IPC, 2024). The latest Acute Malnutrition analysis covering 69 sub-prefectures and Bangui estimates that approximately 177 000 children aged six to 59 months and over 162 000 pregnant and breastfeeding women will suffer from acute malnutrition between September 2023 and August 2024. Compared to the previous year, there is a 41% decrease in affected children and a 15% increase in affected women, with over 45 000 children under five expected to experience severe acute malnutrition, marking a 46% reduction from the previous year's projections (IPC, 2024).

Chad:

Food security in the eastern provinces of Chad, encompassing Ouaddaï, Sila, Wadi Fira, and Ennedi Est, is currently facing critical challenges exacerbated by the influx of Sudanese refugees and Chadian returnees. This influx has escalated the severity of food insecurity, resulting in Crisis (IPC Phase 3) outcomes in these regions. The impact on displaced populations is profound, straining local livelihoods and intensifying competition for scarce economic opportunities. The economic pressures stemming from this situation have significantly reduced incomes across the region, leaving many families unable to afford essential food items, which are predominantly sourced from local markets. In response to food deficits, the majority of Sudanese refugees heavily depend on food aid to meet their basic nutritional needs. Recent statistics from late June 2024 underscore the scale of the humanitarian challenge: the eastern provinces are currently home to more than 628 951 Sudanese refugees and close to 201 379 Chadian returnees. Ouaddaï Province alone hosts over 70% of the refugee population. Particularly vulnerable are the Assoungha, Ouaddaï, and Kimiti departments of Sila, where the concentration of refugees has escalated these areas to Crisis (IPC Phase 3). Looking ahead, the period between September 2024 and January 2025 holds some promise for improved food availability, coinciding with the harvest season. However, the enduring impact of the refugee influx will continue to strain local livelihoods and influence the prices of essential food commodities. This situation calls for sustained efforts to stabilize food access and support vulnerable populations through effective

humanitarian interventions. Addressing food insecurity in these provinces demands collaborative action from humanitarian agencies, governmental authorities, and international partners. This includes enhancing food aid distribution systems, promoting sustainable agricultural practices, and creating livelihood opportunities that can withstand economic shocks. By working together, we can mitigate the immediate challenges and build resilience among affected communities in Chad's eastern provinces (IPC, 2024).

Ethiopia:

Ethiopia is currently facing a severe food crisis exacerbated by conflict, drought, high living costs, and natural disasters, resulting in widespread acute food insecurity. The Humanitarian Response Plan (HRP) released in February 2024 underscores the gravity of the situation, projecting that approximately 13 million people will urgently need humanitarian food assistance from July to September 2024, including 4 million internally displaced persons (IDPs). Recent data from the Ethiopian Emergency Nutrition Coordination Unit (ENCUC) highlight concerning trends in malnutrition. As of March 2024, the prevalence of severely malnourished children with complications has risen to 10.3%, up from 9.4% the previous year. SMART surveys conducted in early 2024 by the nutrition cluster indicate Global Acute Malnutrition (GAM) rates surpassing the WHO emergency threshold (>15%) in critical zones: Amhara's Waghimra zone at 20%, Somali's Deghabur Agropastoral Livelihood (DAP) zone at 16.3%, Adadle woreda at 17.3%, and West Emi woreda at 13.2%. In Oromia's Chat, Vegetable, and Sorghum Livelihood zone, rates of 7.1% highlight ongoing challenges. The crisis affects approximately 13 million individuals nationwide, with IDPs making up a significant proportion. Regions most severely impacted include Somali (27%), Tigray (24%), Oromia (24%), and Amhara (9%). The 2024 Humanitarian Needs Overview (HNO) estimates that 4.9 million people urgently require nutrition assistance, including 1 million children suffering from severe acute malnutrition and 2.4 million children with moderate acute malnutrition. High rates of acute malnutrition persist among children under five years old, pregnant women, and breastfeeding mothers across various regions. Contributing factors include disease outbreaks, limited access to essential services, poor water quality, and inadequate sanitation facilities. Across the country, particularly in conflict-affected northern regions and drought-prone southern and southeastern pastoral areas, acute malnutrition levels remain alarmingly high and continue to escalate. According to the Famine Early Warning Systems Network (FEWS NET), reports indicate severe to extremely critical malnutrition outcomes, with Global Acute Malnutrition levels ranging from Serious (GAM MUAC 5-9.9% or GAM WHZ 10-14.9%) to Extremely Critical (GAM MUAC \geq 15% or GAM WHZ \geq 30%) (FEWS Net, 2024).

South Sudan:

Malnutrition remains alarmingly prevalent among children and women in South Sudan, as highlighted by the 2023 Food Security and Nutrition Monitoring System (FSNMS) and Standardized Monitoring and Assessment of Relief and Transitions (SMART) survey (FSNMS & SMART, 2023). The findings indicate that Global Acute Malnutrition (GAM) levels exceed the World Health Organization's emergency threshold of 15% in 46 out of the country's 79 counties, putting over 2.5 million individuals at risk of acute malnutrition in 2024. This crisis is exacerbated by multiple factors including widespread food insecurity, inadequate water and hygiene conditions, high child mortality rates, gender-based violence (GBV) concerns, and suboptimal child feeding and care practices. Particularly dire conditions are observed in 18 counties experiencing extreme deprivation, further aggravating the nutrition crisis. From July 2023 to June 2024, an estimated 1.7 million children aged 6 months to 5 years are expected to suffer from acute malnutrition, including 480 000 children with Severe Acute Malnutrition (SAM) and 1.2 million with Moderate Acute Malnutrition (MAM). Additionally, approximately 870 000 pregnant or breastfeeding women are anticipated to experience acute malnutrition during this period. The burden of acute malnutrition is disproportionately concentrated, with 72% of cases occurring in the states of Jonglei, Northern Bahr el Ghazal, Upper Nile, Unity, and Warrap. The severity of the

situation is reflected in the classification of counties under the Integrated Food Security Phase Classification Acute Malnutrition (IPC AMN) scale: 46 counties are classified as IPC AMN Phase 4 (Critical) between July and September 2023, with 15 counties in Phase 3 (Serious), 10 in Phase 2 (Alert), and 9 in Phase 1 (Acceptable). The acute malnutrition situation is expected to persist through the post-harvest period from October 2023 to March 2024, with further deterioration projected in 66 counties during the lean season from April to June 2024 (FSNMS & SMART, 2023).

COMMUNICABLE DISEASES

DIARRHEAL DISEASES (INCLUDING CHOLERA AND ACUTE WATERY DIARRHEA)

Central African Republic:

Since the beginning of 2023, the Central African Republic has not recorded any confirmed cases of cholera. Nonetheless, the country faces significant challenges in sanitation and water supply, which could potentially foster conditions conducive to a cholera outbreak. This risk is heightened by neighboring Cameroon and the Democratic Republic of Congo (DRC), both currently experiencing cholera epidemics, thereby increasing the likelihood of disease importation. In response to this threat, the Ministry of Public Health has established a technical committee to coordinate preparedness and response efforts. A contingency plan has been developed, and the Public Health Emergency Operations Center (COUSP) has been activated to ensure prompt and coordinated responses in the event of cholera cases being detected (WHO, 2023).

Chad:

In neighboring countries like Niger, Nigeria, and Cameroon, cholera is endemic and typically occurs during the rainy season. The Lake Chad region, spanning these three countries, has witnessed recurring epidemics since 1971. However, Chad itself has not reported any cholera cases in several years, with the most recent cases documented in Sudan in 2019 (WHO, 2024).

Ethiopia:

As of EPI week 11, the cumulative case load from 2022 to 2024 has reached 38 683 cases. There have been 329 outbreak episodes, resulting in a cumulative death toll of 528 (case fatality rate: 1.36%). During EPI week 11, there were 687 new cases and two deaths reported across 65 woredas affected by the outbreak. Specifically, 392 (57%) of the new cases were from Somali region, 203 (29.5%) from Oromia, and additional cases reported from Dire Dawa (57), Afar (26), Sidama (7), and CER (2) regions (WHO, 2024). The consumption of untreated water from rivers, streams, and lakes was linked to 75% of cholera cases. Efforts to control the outbreak have succeeded in 269 districts, though these areas remain at high risk due to their proximity to affected regions. Since December 2022, seven rounds of oral cholera vaccination campaigns (OCV) have been conducted, with the eighth campaign initiated in early March. A national eight-week "Stop Cholera Together" plan aims to contain the outbreak across affected regions (WHO, 2024). Currently, all doses of the oral cholera vaccine produced until mid-March have been allocated to affected countries, with increasing demand and global reserves depleted. Médecins Sans Frontières (MSF) has urgently highlighted the consequences of this vaccine shortage, urging manufacturers to ramp up production and support new manufacturers in expediting regulatory processes to save lives (MSF, 2024). Efforts are ongoing through the humanitarian-development nexus to advocate for essential long-term investments in water supply and sanitation systems. Inadequate WASH (Water, Sanitation, and Hygiene) facilities significantly contribute to cholera outbreaks due to poor access to safe drinking water, low latrine coverage, open defecation, and mosquito breeding sites (WHO, 2024). It is estimated that 60% to 80% of communicable diseases

stem from insufficient access to safe water and inadequate sanitation and hygiene services (WHO, 2024).

South Sudan:

South Sudan declared a cholera outbreak in Malakal County, Upper Nile State, in March 2023. Since then, a total of 1471 cholera cases and two deaths (CFR- 0.14%) have been reported. To combat the outbreak, 54,538 individuals out of the targeted 66 121 aged 1 year and above have received oral cholera vaccine (OCV) in the Protection of Civilians (POC) camp and Malakal town, achieving 82% coverage. South Sudan faces endemic cholera due to factors such as persistent flooding, conflict-driven displacement, limited access to health, water, and sanitation services, poor socioeconomic conditions, and acute food insecurity. The country has experienced eight cholera outbreaks since 2006 (Reference 106). In Week 20 (19 May 2024), five deaths were reported due to bloody diarrhea in Walgak, Akobo County (WHO, 2024). Additionally, Sudanese refugees in South Sudan are at heightened risk of cholera due to overcrowded living conditions, inadequate sanitation facilities, and limited access to clean water, exacerbating the potential for disease transmission among vulnerable populations (WHO,2024).

MEASLES

Country	% Measles-containing-vaccine first-dose (MCV1) (2022) ¹⁴
Central African Republic	88
Chad	65
Ethiopia	56
South Sudan	70

Central African Republic:

As of the end of epi-week 16, 2024, the Central African Republic (CAR) has reported 1453 suspected measles cases and three deaths (WHO, 2024). Despite a national Catch-up vaccination campaign conducted in December 2023, seven out of 35 health districts in CAR have experienced measles outbreaks since the beginning of 2024. Alarming, the measles epidemic curve indicates a persistent outbreak situation that originated in 2023 and has continued into 2024. The Am Dafock health area in the Vakaga district experienced a measles outbreak in June 2023.

Among Sudanese refugees in CAR, the risk of measles outbreaks is exacerbated by crowded living conditions and limited access to healthcare and vaccination services (UNHCR, 2024). These factors increase the vulnerability of refugees to infectious diseases like measles, highlighting the critical need for intensified vaccination efforts and improved healthcare infrastructure in refugee camps.

Chad:

Between 1 January and 11 February 2024, Chad has reported a concerning measles outbreak, with 771 suspected cases and 129 confirmed IgM-positive cases across 84 out of 158 districts, encompassing 53.2% of all districts (WHO, 2024). Tragically, one death has been recorded in the N'Djamena Centre health district within the N'Djamena province. Notably, 12 health districts have surpassed the epidemic threshold, none of which are located in provinces affected by ongoing humanitarian crises.

Specifically among Sudanese refugees in eastern Chad, the measles outbreak poses a significant threat. Refugees living in crowded camps with limited access to healthcare and vaccination services are particularly vulnerable to infectious diseases like measles (UNHCR, 2024). The influx of refugees

and the challenging living conditions exacerbate the risk of outbreaks, highlighting the urgent need for vaccination campaigns and improved health infrastructure in refugee settlements.

Ethiopia:

As of Epi week 11 of 2024, Ethiopia has reported 14 562 measles cases and 91 active outbreaks, resulting in 91 cumulative deaths (CFR: 0.68%) (Reference cxcv, cxcvi). These outbreaks have been widespread across regions including Amhara, Oromia, SWEPR, Sidama, Gambela, Harari, Somali, South Ethiopia, Central Ethiopia, and Benishangul Gumuz as of 25 February 2024. Measles remains endemic in Ethiopia, with cases reported annually, but the country has witnessed a troubling five-fold increase in cases from 2021 to 2022, attributed to factors such as low population immunity exacerbated by concurrent epidemics, conflicts, displacements, and humanitarian crises disrupting vaccination efforts. Vaccination coverage remains inadequate, especially among children under 5 years old who account for 53% of reported cases. Efforts to combat the outbreak include a significant vaccination campaign targeting 2.1 million children aged 6 months to 10 years between December 2023 and January 2024. Challenges persist in timely laboratory confirmation due to logistical issues in regional labs, contributing to delays in case management and highlighting the need for improved infrastructure and communication strategies to address vaccine hesitancy and healthcare-seeking behavior (WHO, 2024).

South Sudan:

Given the country's challenging context and suboptimal immunization coverage, measles outbreaks have been reported in South Sudan. As of July 2024, there are 3160 suspected cases of measles, with 310 samples collected. Among these, 173 cases have been laboratory-confirmed and 789 are Epi-linked. There have been 41 suspected measles-related deaths, resulting in a case fatality rate of 1.3%. In 2024, 21 counties reported confirmed and suspected measles outbreaks. However, in the past four weeks, no new or ongoing outbreaks have been reported, and no isolated cases have been submitted. A successful measles vaccination campaign was conducted in 15 counties, with 544 104 children (93% of the target population) vaccinated by July 2024. Additionally, ongoing vaccination at points of entry is targeting children under fifteen in eight counties across five states, with over 39 710 children vaccinated against measles and 36 344 receiving the polio vaccine.

YELLOW FEVER

Central African Republic:

In the Central African Republic (CAR), the yellow fever outbreak was officially declared on December 20, 2021. Since then, the country has reported a total of 28 confirmed cases of yellow fever: 9 cases in 2021, 14 cases in 2022, and 5 cases in 2023 (WHO, 2024). The affected districts include Mbaiki, Sangha-Mbéré, Berbérati, Bambari, and Bossembélé, each grappling with varying intensities of the epidemic (WHO, 2024). Responding swiftly to confirmed cases in Mbaiki, reactive vaccination campaigns have been promptly initiated (WHO, 2024). Presently, efforts are concentrated on preparing response strategies in Sangha-Mbéré, Berbérati, and Bambari to contain the disease's spread and safeguard vulnerable populations (WHO, 2024).

Chad:

According to the World Health Organization (WHO), the regional risk assessment for yellow fever is deemed high. Ongoing multi-country outbreaks and persistent virus circulation across West, Central, and East Africa have led to heightened levels of illness and death, with a continued threat of further escalation and dissemination. In Chad, yellow fever immunization coverage has been reported as

suboptimal, standing at 45%. Between 1 January 2021 and 26 August 2022, Chad documented a total of 24 confirmed cases of yellow fever (WHO, 2024).

Ethiopia:

Ethiopia, situated within the 'yellow fever belt' that spans 34 African countries along the Equator, is among the 440 million people at risk of yellow fever (WHO, 2024). The entire country faces potential exposure to the disease. Recent increases in disease outbreaks underscore the critical need for Ethiopia to integrate the yellow fever vaccine into its routine immunization program. This endorsement is crucial to mitigate the risks posed by ongoing outbreaks and to safeguard the health of the population (WHO, 2024).

South Sudan:

The yellow fever outbreak in South Sudan remains a significant threat to both the South Sudanese population and Sudanese refugees who have fled conflict in Sudan. Since its official declaration by health authorities on 6 January 2024, the outbreak has escalated, totaling 124 reported cases as of 19 May 2024. This figure comprises 121 suspected cases and three confirmed cases, with two new cases identified in Maridi. The outbreak has affected seven counties in Western Equatoria state, emphasizing the continuous public health risk in the region (WHO, 2024).

MENINGITIS

Central African Republic:

On 22 March 2024, health authorities declared a meningitis outbreak in the Batangafo-Kabo district following confirmation of the disease at the Institut Pasteur of Bangui. *Neisseria meningitidis* (Nm) serotype W135 was detected in three cerebrospinal fluid (CSF) samples out of 52 analyzed. The epidemic threshold was crossed in week 14, 2024 (ending 6 April). From week 7, when the first suspected case was reported, through week 16, 2024, a total of 64 suspected cases have been reported, including three confirmed cases and 10 deaths, resulting in a case fatality rate of 15.6%. The last patient was admitted to Kabo Hospital on 7 April 2024, marking 23 days without a new case as of 30 April 2024. Surveillance is being reinforced in other districts within the meningitis belt. In addition to this outbreak, there is an increased risk of meningitis among Sudanese refugees in the Central African Republic (CAR) due to the ongoing public health crisis. The movement of large refugee populations, combined with the existing meningitis outbreak, heightens the risk of transmission and necessitates enhanced monitoring and preventive measures to protect vulnerable refugee communities (WHO, 2024).

Chad:

Sudanese refugees in Chad are at significant risk of meningitis due to several factors associated with the region's epidemiological profile and existing conditions:

1. **Geographical Location:** Chad is situated within the African Meningitis Belt (AMB), a region known for frequent and severe meningitis outbreaks. This belt accounts for the majority of global meningitis cases, placing refugees in Chad at high risk.
2. **Recent Outbreaks:** Chad has experienced multiple meningitis outbreaks, with the most recent occurring in 2019 and several others between 1998 and 2011. The recurrence of these outbreaks, including those in refugee camps such as Bredjing and Treguine in 2005, underscores the persistent threat.

3. **Low Vaccination Coverage:** Regional vaccination coverage is very low, which exacerbates the risk of meningitis. The lack of widespread vaccination leaves both refugees and host communities vulnerable to the disease. This is particularly concerning as ongoing epidemics, such as the one in Niger reported as of July 30, 2023, illustrate the continuous risk within the AMB.
4. **Living Conditions in Refugee Camps:** Refugee camps often have overcrowded and unsanitary conditions that facilitate the spread of infectious diseases, including meningitis. Limited access to healthcare and preventive measures further increases the risk for refugee populations.
5. **Movement and Displacement:** The movement and displacement of Sudanese refugees from conflict zones to areas within the AMB can contribute to the spread of meningitis. The convergence of large populations in camps with insufficient health infrastructure heightens the risk of outbreaks.

Given these factors, Sudanese refugees in Chad are at a heightened risk of contracting meningitis, emphasizing the need for enhanced vaccination efforts, improved living conditions in camps, and strengthened health monitoring and response systems.

Ethiopia:

There is a strong link between drought and the incidence of meningitis, particularly in countries within the "Meningitis Belt," which includes much of the Horn of Africa. This region experiences high levels of both endemic and epidemic meningococcal meningitis, especially during the dry season. Increased dryness and dust in areas that have become more arid are significant risk factors. In Ethiopia, the most recent cases of meningitis were reported in 2022, affecting 11 out of 12 regions and surpassing the epidemic threshold. A major challenge remains the country's limited laboratory and technical capacity, which hampers accurate and timely reporting. During epidemiological week 7, a total of 196 suspected meningitis cases were reported, marking a 3% decrease compared to the previous week. Importantly, 59% of these suspected cases came from regions most severely affected by drought (WHO, 2023).

Sudanese refugees in this region are particularly at risk. As they settle in areas within the Meningitis Belt, often in overcrowded and unsanitary conditions, they become vulnerable to meningitis outbreaks. The prevalence of meningitis is exacerbated by the drought conditions that affect these regions, increasing dust and aridity and further heightening the risk of disease spread. Refugee camps, with their limited access to healthcare and preventive measures, are especially susceptible to such outbreaks. Ensuring effective vaccination, improving living conditions, and enhancing healthcare infrastructure are critical steps to mitigate the risk for these vulnerable populations.

South Sudan:

South Sudan is situated within the African Meningitis Belt, which stretches across twenty-five countries in sub-Saharan Africa, from Senegal in the west to Ethiopia in the east. This region is highly susceptible to meningitis epidemics, which have significantly impacted younger populations for over a century. South Sudan has experienced multiple meningococcal meningitis outbreaks, notably in 2006, 2007, 2009, 2013, and 2022. In 2022, Northern Bahr el Ghazel reported suspected meningitis cases across all five counties in the region. By July 2022, there were 328 reported cases and five deaths, with a case fatality rate (CFR) of 0.88%. As of 19 May 2024, three new cases have been reported from Aweil West, East, and South Counties. This brings the total number of recorded meningitis cases in South Sudan to 125, including 17 deaths, resulting in a case fatality rate of 13.6%. Among these cases, two individuals were aged 12 and 14 years, while the third suspected case was a 33-month-old infant from Aweil West. None of the Payams (subcounties) reported cases exceeding the outbreak threshold, which is defined as 10 cases per 100 000 in Payams with populations over 30 000, or five cases per

100 000, indicating a doubling of *Neisseria meningitidis* incidence over two to three consecutive weeks in areas with fewer than 30 000 residents. The number of counties reporting suspected meningitis cases remains at seven: Aweil Centre, Aweil East, Aweil North, Aweil South, Aweil West, Gogriyel West, and Twic (WHO, 2024).

The ongoing crisis in Sudan further compounds the risk of meningitis in South Sudan. The conflict and displacement resulting from the Sudanese crisis have led to increased population movements and overcrowding in refugee camps. These conditions exacerbate the spread of meningitis, as the disease thrives in crowded and unsanitary environments. Additionally, the disruption of healthcare services and inadequate vaccination coverage in these camps heighten the risk of outbreaks. The influx of refugees from Sudan, coupled with the existing health challenges in South Sudan, underscores the urgent need for enhanced surveillance, vaccination, and healthcare support to mitigate the risk of meningitis.

DENGUE

Central African Republic:

Dengue outbreaks and epidemics have been reported across all regions of Africa, with evidence suggesting that all four dengue virus serotypes are in circulation. The risk of dengue fever among Sudanese refugees in the Central African Republic (CAR) is escalating as these individuals flee the conflict in Sudan and arrive in CAR, where dengue outbreaks have been reported. The influx of refugees into densely populated, often poorly equipped camps creates ideal conditions for dengue transmission. Overcrowding, inadequate sanitation, and limited access to healthcare amplify the risk of dengue virus spread among these vulnerable populations. The combination of high temperatures and heavy rainfall in CAR facilitates the proliferation of mosquito breeding sites, further intensifying the risk of dengue fever.

Given that many refugees are settling in areas with limited health infrastructure, there is an urgent need for enhanced vector control measures, improved sanitation, and comprehensive health interventions. Strengthening surveillance and providing timely medical care are crucial to mitigating the risk of dengue and safeguarding both the refugee population and host communities.

Chad:

The recent dengue fever outbreak in Chad is the country's first. On 15 August 2023, the Ministry of Health officially declared the outbreak following confirmation from laboratory samples analyzed at the National Laboratory of Biosecurity and Outbreaks (LaBiEp) in N'Djamena. External quality control was conducted at a WHO Reference Regional Laboratory in Yaoundé (Centre Pasteur du Cameroun). Since July 2023, there has been a reported increase in patients with fever unresponsive to antimalarial treatments at two health centers in the Abéché Health District. From 3 to 27 August 2023, a total of 47 suspected cases were reported, including 26 confirmed cases and one death, across three provinces: Ouadai/Abeche (28 cases), Wadi Fira/Biltine (11 cases), and N'Djamena (8 cases). The majority of confirmed cases (73%) were in Ouaddaï/Abeche, followed by Wadi Fira/Biltine (15%) and N'Djamena (11.5%). The most affected age group is 25 to 34 years old, representing 30.7% of all cases, with a median age of 25 years (range: 12 to 70 years). The male-to-female ratio is 1:1. The outbreak's confirmation in the Abéché district, which houses many Sudanese refugees, is particularly concerning. Ouaddaï Province, the epicenter of the outbreak, is located in the eastern part of the country and borders Sudan. It is one of Chad's largest health provinces and has been significantly impacted by the Sudan crisis, accounting for 82.7% of all refugees arriving in Chad. Additionally, the district is facing multiple disease outbreaks, including malaria and measles, which could exacerbate the challenges in managing the dengue outbreak effectively (WHO, 2023).

Ethiopia:

As of EPI week 11, a cumulative total of 23 552 cases of dengue have been reported for the 2023/2024 period. There have been six reported outbreaks, with a total of 17 deaths. Nearly 98% of the cases and all deaths were concentrated in Dire Dawa (58.9% of cases) and Afar (38.3% of cases). The World Bank projects that rising temperatures and increased precipitation could enhance the transmissibility of malaria and dengue by 2050. Without significant health policy reforms, mortality and morbidity due to dengue could rise by up to 50%. However, if appropriate health sector reforms are implemented, the impact would be reduced, with mortality and morbidity increasing by only 14% by 2050 (WHO, 2024).

Risk to Sudanese Refugees in Ethiopia: The presence of dengue outbreaks in Ethiopia, combined with the influx of Sudanese refugees, heightens the risk of dengue transmission among these populations. The movement of large groups and the crowded conditions in refugee camps can facilitate the spread of the virus. Enhanced vector control measures, surveillance, and health interventions are essential to protect the refugee population and mitigate the risk of further dengue outbreaks.

South Sudan:

South Sudan has an age-adjusted death rate for dengue of 0.02 per 100 000 of the population, with the country ranked #76 globally (World Health Rankings). Dengue virus transmission and outbreaks are influenced by several factors, including climate change, global trade, international travel, unplanned urbanization, and high population density (WHO, 2023).

The ongoing refugee crisis in South Sudan further exacerbates the risk of dengue transmission. The influx of large numbers of refugees from Sudan into overcrowded camps and settlements can facilitate the spread of the dengue virus. Limited access to healthcare, poor sanitation, and inadequate vector control measures in these settings heighten the risk of dengue outbreaks. Enhanced surveillance, vector control, and health interventions are crucial to managing this risk and protecting both the refugee population and host communities.

MALARIA

Central Africa Republic:

Malaria remains a significant public health challenge in the Central African Republic (CAR), where it is endemic and experiences periodic epidemic peaks. According to the World Health Organization (WHO), the malaria incidence rate was estimated at 316.1 cases per 1000 inhabitants in 2020. Malaria is the leading cause of morbidity in the country. In 2021, there were approximately 1.8 million cases, with an incidence rate of 334.7 cases per 1000 and resulting in 5151 deaths. As of the latest data in 2023, CAR continues to struggle with high malaria rates, with an estimated 1.9 million cases reported, and the incidence rate showing minimal improvement. CAR's malaria incidence rate has remained relatively steady since 2015, and the country is currently off track to meet the targets set by the Global Technical Strategy for Malaria¹⁵. In 2021, the Central African Republic (CAR) accounted for 0.7% of global malaria cases and deaths, and 0.8% of all malaria-related deaths. Within Central Africa, CAR represented 3% of malaria cases that year. Between 2020 and 2021, the number of malaria cases remained stable at 335 per 1000 people at risk, while the death rate decreased slightly by 1.7%, from 0.96 to 0.94 per 1000 people at risk¹⁶.

Factors Exposing Sudanese Refugees to Malaria

- **Overcrowding in Refugee Camps:** The high population density in refugee camps increases the likelihood of malaria transmission. Overcrowded conditions can facilitate the spread of malaria

- parasites among refugees. **Inadequate Housing and Sanitation:** Many refugee camps lack proper housing and sanitation facilities, creating breeding grounds for malaria-carrying
- mosquitoes. Poorly constructed shelters and insufficient waste management contribute to the proliferation of mosquito breeding sites.
 - **Limited Access to Healthcare:** Refugees often have limited access to healthcare services, including malaria prevention and treatment. This can delay diagnosis and treatment, increasing the risk of severe malaria cases.
 - **Disruption of Health Services:** The influx of refugees can strain existing health services, which may already be under pressure. This can affect the timely distribution of mosquito nets, malaria medications, and other preventive measures.
 - **Climate and Environmental Conditions:** CAR's climate, characterized by high temperatures and seasonal rainfall, supports the breeding of Anopheles mosquitoes, the primary vectors of malaria. These environmental conditions exacerbate the risk of malaria transmission.

Given these factors, it is crucial to implement comprehensive malaria control measures for the refugee population. This includes increasing access to insecticide-treated nets, ensuring prompt diagnosis and treatment, and strengthening malaria prevention and control programs in refugee camps and surrounding areas.

Chad:

Malaria is endemic in Chad, with the entire population at risk. In 2022, there were 1.8 million confirmed cases and over 2500 inpatient deaths. Chad ranks 13th globally for malaria mortality, with nearly 60% of malaria deaths occurring in children under five years old. Heavy rains and river flooding during the peak season significantly contribute to elevated malaria rates, with a prevalence of 41% in the general population. The devastating floods of 2022, which affected 1.4 million people nationwide, led to over 1.2 million confirmed cases and 2692 deaths. This compares to 1 million confirmed cases and 1714 deaths in 2021. While Chad's malaria incidence rate has been relatively stable since 2015, the country is not on track to meet the targets set by the Global Technical Strategy for Malaria. In 2020, 95% of the 6 million people targeted were reached with mass drug administration (MDA) (WHO, 2023).

Ethiopia:

As of Epi week 11 of 2024, a total of 1 031 614 malaria cases have been reported in Ethiopia. Between 18 March and March 24, 2024, there were 81 080 new cases and nine deaths, reflecting a 3.6% increase from the previous week. During this period, approximately 75% of the malaria cases were concentrated in four regions: Oromia (33.7%), Amhara (19.8%), South West Ethiopia People's Region (13.1%), and South Ethiopia (8.9%). The number of malaria cases reported so far this year has already surpassed those reported during the same period in 2023. As of February 2024, the current malaria response faces several challenges, including inadequate bed net utilization, suboptimal vector control activities, and a lack of insecticide residual spraying at mosquito breeding grounds. Furthermore, limited partner involvement, poor data quality from affected areas, and weak community-level malaria prevention efforts are impeding a more effective response (WHO, 2024).

Historically, malaria-related mortality and morbidity had declined significantly prior to 2020. Between 2015 and 2019, malaria-related deaths decreased from 3.6 to 0.3 per 100 000 population at risk, and malaria case incidence fell from 5.2 million in 2015 to less than 1 million in 2019. However, in 2023, over 4.1 million malaria cases were reported, including 527 deaths. Between 1 and 28 January 2024, there were 328 881 new cases and 84 deaths. The majority of these new cases were reported from Oromia (35%), followed by Amhara (21%) and South West Ethiopia (12%) (WHO, 2024).

Malaria remains endemic in Ethiopia, with higher prevalence in areas below 2000 meters of altitude, which cover three-quarters of the country's landmass and house an estimated 52 million people. Changes in climate are likely to extend the transmission period of major vector-borne diseases and alter their geographic range. Currently, approximately 70% of the population lives in malaria-endemic regions, where periodic outbreaks contribute to up to 20% of deaths among children under five. Escalating temperatures create favorable conditions for disease-carrying vectors, increasing malaria transmission and heightening the vulnerability of affected communities (WHO, 2024).

Risk to Sudanese Refugees

The influx of Sudanese refugees into Ethiopia exacerbates the risk of malaria transmission. Refugee camps, often overcrowded and with limited sanitation facilities, provide ideal conditions for the spread of malaria. The addition of displaced populations into already vulnerable areas increases the strain on local health resources and complicates malaria control efforts. Refugees, many of whom have been exposed to unsanitary conditions and inadequate healthcare prior to their arrival, are particularly susceptible to malaria. Enhanced malaria prevention and control measures, including increased distribution of bed nets, improved vector control, and targeted health interventions, are critical to mitigating the risk of malaria among these refugee populations and protecting both the refugees and host communities from further outbreaks.

South Sudan:

The current health situation in South Sudan is dire, with malaria being the leading cause of death and illness, affecting nearly half of the population (World Health Organization, 2021). The country faces one of the highest malaria incidence rates in the region. The 2021 World Malaria Report estimates that approximately 8750 malaria cases are reported daily, and about 20 people die from malaria each day in South Sudan (WHO, 2021). Malaria transmission occurs year-round but peaks between July and November. *Plasmodium falciparum* is the predominant species, responsible for 93.1% of infections. It contributes to 66% of outpatient consultations, 50% of hospital admissions, and about 30% of malaria-related deaths (WHO, 2021).

Nutritional factors, such as inadequate caloric intake and deficiencies in vitamins and micronutrients, play a significant role in malaria-related morbidity and mortality (World Health Organization, 2021). The cycle of malnutrition is influenced by various factors, including birth weight, maternal nutrition, gestational age, the mother's age, feeding practices, recurrent illnesses, and poverty. Evidence indicates that malnutrition increases susceptibility to malaria and that undernutrition is a crucial risk factor for the progression to severe malaria, particularly in children (WHO, 2021).

MPOX

Central African Republic:

In 2024, the country has reported a total of 21 laboratory-confirmed cases of monkeypox. On 19 April 2024, the Bambari health district recorded a new case, increasing the number of districts experiencing outbreaks this year to six out of 35. On 27 July 2024, the Minister of Health declared the extension of the Monkey epidemic to two new districts, including one in the capital Bangui. Monkeypox (MPOX) remains endemic in the Central African Republic (CAR) with periodic outbreaks. Since 2018, annual outbreaks have been observed primarily in the southern part of the country, with a trend toward expansion into densely populated areas. In 2023, the number of cases decreased to 18 confirmed cases with no deaths, compared to 29 cases in 2021. Currently, six health districts are affected: Mbaïki, Bangassou, Alindao, Ouango-Gambo, Kémbé-Satéma, and Bamingui-Bangoran, with the primary outbreak centered in Mbaïki (WHO, 2024).

Sudanese refugees in Chad are at potential risk of monkeypox (MPX) due to the ongoing regional outbreaks and the movement of displaced populations. The proximity of outbreaks in neighboring countries, combined with the influx of refugees, could facilitate the spread of MPX among these populations. Monitoring and preventive measures are crucial to mitigate the risk of transmission among refugee communities.

Chad:

An epidemic of monkeypox was confirmed in the sub-prefecture of Ippy and officially declared by the Minister of Health on 17 March 2018. Since 2 October 2018, clusters of cases have been identified across three health districts: Mbaïki district, with nine cases including eight confirmed; Bangassou district, with five cases including three confirmed; and Bossembele district, with four cases including three confirmed. One death was reported in Bossembele. Previous clusters occurred in Bangassou (weeks 9-11, with nine cases including six confirmed), Bambari (weeks 13-16, with 15 cases including three confirmed), and Mbaïki (weeks 26-27, with five cases including two confirmed). A suspected case of monkeypox has been reported in the sub-prefecture of Ippy, and investigations are ongoing. From 2 March 2018 to 3 February 2019, a total of 34 cases were reported, with 25 confirmed and two deaths, resulting in a case fatality rate of 2.9% (WHO, 2019).

In Chad, there is a potential risk of monkeypox (MPX) transmission to Sudanese refugees, given the ongoing regional outbreaks and the movement of populations. The presence of these outbreaks in neighboring areas, combined with the displacement of people, could increase the risk of MPX spreading among refugee populations in Chad.

Ethiopia:

In light of the increasing cases of monkeypox (MPOX) reported in several African countries, including the DRC and neighboring regions, there is a notable risk for Sudanese refugees in Ethiopia. The recent surge in monkeypox cases in these countries, combined with the movement of large populations across borders, heightens the risk of MPOX transmission among refugee communities.

As a host country for many Sudanese refugees, Ethiopia may face an increased risk of MPOX introduction and spread due to the proximity of affected regions and the ongoing displacement crisis. It is crucial for public health authorities and humanitarian organizations to implement robust surveillance and preventive measures to protect refugee populations from potential outbreaks. Ensuring timely vaccination, monitoring for symptoms, and promoting hygiene practices are essential steps in mitigating the risk of MPOX among refugees.

South Sudan:

Considering the ongoing epidemic of monkeypox (MPOX) in the DRC and other African countries, Sudanese refugees in South Sudan are at increased risk of MPOX. The spread of the disease in neighboring regions, combined with the movement of displaced populations, heightens the potential for transmission among refugee communities. It is essential for public health authorities and humanitarian organizations in South Sudan to enhance surveillance and implement preventive measures to safeguard these vulnerable populations. The reported 17 suspected and 3 samples collected tested negative.

Poliomyelitis (cVDPV2)

Central African Republic:

A total of 14 cases of circulating vaccine-derived poliovirus type 2 (cVDPV2) have been reported in the country in 2023 (WHO, 2023). Additionally, six cases were reported in 2022 (WHO, 2023). Although no new cases were reported in 2021, four cases were reported in 2020, and 21 cases were reported in 2019 from several outbreaks (WHO, 2023). The number of confirmed cases for 2023 has been revised to 14 so far (WHO, 2023).

Chad:

One cVDPV2 case was reported this week, bringing the total number of cases for this year to 45 (WHO, 2024). This latest case, with an onset of paralysis on September 15, was reported from the Salamat region. In 2022, 44 cVDPV2 cases were reported (WHO, 2024). In 2020, 106 cVDPV2 cases were reported from three different outbreaks, and nine cases were reported in 2019 (WHO, 2024).

Ethiopia:

No cVDPV2 cases were reported this week (WHO, 2024). There were no cases of cVDPV2 reported in 2023, one case in 2022, 10 cases in 2021, 38 cases in 2020, and 13 cases in 2019, resulting in a cumulative total of 62 cases (WHO, 2024).

South Sudan:

According to the Global Polio Eradication Initiative (GPEI, 2024), two cVDPV2 cases were reported in Upper Nile. One case had an onset of paralysis in December, and the other in January, making it the first cVDPV2 case in the country for this year, bringing the total to three cases reported since last year (GPEI, 2024).

Risk to Sudanese Refugees

The ongoing outbreaks and the presence of cVDPV2 in neighboring countries pose a significant risk to Sudanese refugees. The movement of large populations due to the conflict in Sudan could facilitate the spread of the virus across borders. Enhanced surveillance, vaccination, and preventive measures are crucial to protect refugee populations and mitigate the risk of further outbreaks (WHO, 2024; GPEI, 2024).

Hepatitis E

Central African Republic:

In January 2024, both Chad and Sudan declared epidemics of hepatitis E. These countries, along with the northeastern Central African Republic (CAR), share borders and have experienced significant population migration due to ongoing conflicts between state and non-state groups. In April 2024, an increase in cases of jaundice and fever was noted in the Vakaga prefecture of northeastern CAR. Initially, health professionals attributed these symptoms to other prevalent diseases in the region. However, by June, the CAR Ministry of Health and Population officially declared a hepatitis E epidemic in Vakaga after laboratory tests confirmed 27 cases and three related deaths across four health areas: Am-Dafock, Birao, Sikikédé, and Zinzir. Since the beginning of 2024, the refugee population in Korsi Camp, located on the CAR-Sudan border, has nearly quadrupled. This surge has exacerbated the demand for food, water, shelter, and health services, which were already scarce. Hepatitis E infection is primarily driven by poor water quality, inadequate sanitation, and hygiene practices, as the virus spreads through contaminated drinking water. In response, the CAR Emergency Public Health Operations Center has convened meetings with Health Cluster partners active in the area. These

meetings aim to define the roles and contributions of each partner in addressing the epidemic and improving the overall response (WHO, 2024).

Chad:

On 5 March 2024, the World Health Organization (WHO) was alerted by the Chad International Health Regulation (IHR) national focal point (NFP) about an outbreak of hepatitis E in the eastern Ouaddai province of Chad. This region has been severely impacted by an influx of refugees and returnees fleeing the Sudan conflict since April 2023, with a significant portion being women and children. From January 2 to 28 April 2024, a total of 2092 suspected hepatitis E cases were reported in two health districts of Ouaddai province: Adré and Hadjer-Hadid. Among these cases, there have been seven deaths, resulting in a case fatality ratio (CFR) of 0.3%. Of the 2092 suspected cases, 103 (4.9%) were from the host community, while 1,989 (95%) were reported from seven refugee camps and transit sites. The use of rapid diagnostic tests (RDT) and polymerase chain reaction (PCR) confirmed the diagnosis in collected samples. The most affected age groups are 6-17 years (1113 cases) and 18-59 years (500 cases), representing 53.2% and 23.9% of the suspected cases, respectively. Additionally, 27 pregnant women (1.3%) have been reported among the suspected cases (WHO, 2024).

Sudanese refugees are particularly vulnerable to hepatitis E outbreaks due to the challenging conditions in refugee camps and transit sites. Limited access to safe drinking water and inadequate sanitation and hygiene facilities exacerbate the risk of hepatitis E virus transmission. Humanitarian settings, such as areas affected by conflict and displacement sites, are known to experience increased outbreaks of hepatitis E.

Ethiopia:

The risk of Hepatitis E among Sudanese refugees can be significant due to a variety of factors linked to their living conditions and access to healthcare:

1. **Poor Sanitation and Water Supply:** Hepatitis E is primarily transmitted through contaminated water and poor sanitation. Refugee camps or settlements often face challenges related to inadequate sanitation infrastructure, leading to an increased risk of waterborne diseases, including Hepatitis E. Refugees may have limited access to clean drinking water and proper sanitation facilities, heightening their vulnerability to outbreaks.
2. **Overcrowded Living Conditions:** High population density in refugee camps can exacerbate the spread of Hepatitis E. Overcrowded conditions can lead to rapid transmission of the virus, as individuals may come into contact with contaminated environments more frequently.
3. **Limited Healthcare Access:** Refugees frequently encounter barriers to accessing healthcare services, including testing and treatment for Hepatitis E. Limited healthcare infrastructure and resources in refugee settings can hinder the timely diagnosis and management of the disease.
4. **Disruptions in Health Services:** The healthcare systems in regions hosting refugees, such as South Sudan, may be overwhelmed or disrupted. This can result in inadequate screening and vaccination efforts against Hepatitis E, further increasing the risk of infection among refugees.
5. **Nutritional Deficiencies:** Malnutrition and poor living conditions can weaken immune systems, making refugees more susceptible to infections such as Hepatitis E. Additionally, limited access to a balanced diet can exacerbate the impact of the disease.
6. **Lack of Public Health Education:** Refugees may have limited knowledge about Hepatitis E prevention and hygiene practices. Without proper education and awareness, individuals are less likely to take preventive measures that could reduce their risk of infection.

In summary, Sudanese refugees are at increased risk of Hepatitis E due to factors such as poor sanitation, overcrowded living conditions, limited access to healthcare, and inadequate public health education. Addressing these risks requires targeted interventions, including improved sanitation,

better healthcare access, and comprehensive public health education to mitigate the spread of Hepatitis E among refugee populations.

South Sudan:

Hepatitis E in South Sudan is a growing concern due to its impact on public health, particularly in areas with limited access to clean water and sanitation. Hepatitis E, caused by the Hepatitis E virus (HEV), is often transmitted through contaminated water. In South Sudan, outbreaks have been reported, exacerbated by ongoing conflicts and displacement, which disrupt health services and infrastructure. Efforts to control the spread include improving water, sanitation, and hygiene (WASH) conditions and increasing public awareness. However, challenges persist due to the country's unstable conditions and limited resources. Since week 21 of 2024, the Abyei Administrative Area has reported cases of Hepatitis E among refugees. By the beginning of week 30, a total of 22 suspected cases had been reported, including four deaths, resulting in a case fatality rate (CFR) of 18.2%. Of the 22 suspected cases, three tested positive for Hepatitis E by PCR from the five samples sent to the National Public Health Laboratory in Juba¹⁷.

Tuberculosis (TB)

Central African Republic:

The Central African Republic (CAR) is one of the 30 most affected countries in the world by tuberculosis (TB) and ranks among the top 5 countries with an incidence rate exceeding 500 cases per 100 000 inhabitants. According to the World Health Organization (WHO) in 2022, the incidence rate for CAR is approximately 540 (ranging from 349 to 771), equating to nearly 29 000 new cases expected annually within the community. However, for several years, the National Tuberculosis Control Program (PNLT) has reported only about half of the actual cases, leaving many individuals with TB continuing to transmit the disease. In 2021, only 54% of the expected cases were reported, amounting to 15 784 out of the 29 000 anticipated cases. This low reporting rate is a major challenge for CAR, attributed to the limited decentralization of TB diagnostic and treatment centers (CDTs) and insufficient diagnostic tools, including a network of laboratories with operational issues. Additionally, community involvement remains limited. In response to this challenge, the WHO has provided CAR with 11 of the 38 operational GeneXpert machines across seven health regions. Furthermore, the country has benefited from WHO expertise in drafting a strategic plan for the new Global Fund submission for 2023-2025. To date, 16 out of 35 health districts have implemented micro-plans for tuberculosis control. A pilot project for sample transportation is underway in two out of 35 health districts. The National Tuberculosis Control Program has also received support from the French Red Cross, funded by the Global Fund, to continue advancing ongoing efforts (WHO, 2024).

Chad:

In neighboring Chad, the situation also presents significant concerns. In 2021, the incidence of tuberculosis was 140 cases per 100 000 people. The mortality rate for TB cases (excluding HIV) increased from 23 to 25 per 100 000 population between 2015 and 2021. In contrast, the TB mortality rate among HIV-positive individuals has decreased from 12 to 8 over the same period, with a reported 79% treatment success rate for HIV-positive TB cases. Additionally, the influx of Sudanese refugees into Chad and the CAR exacerbates the TB risk. Refugee populations often live in overcrowded and unsanitary conditions, which can facilitate the spread of TB. The stress on health services in these regions is further compounded by the growing refugee numbers, creating a higher risk environment for TB outbreaks. Addressing TB in these displaced populations is critical, as they are particularly vulnerable to the disease due to inadequate access to healthcare, poor living conditions, and limited resources for TB prevention and treatment (WHO, 2023).

Ethiopia:

Ethiopia is among the 30 high-burden countries for tuberculosis (TB) and TB/HIV globally. According to the WHO 2023 Global TB Report, Ethiopia has an estimated 156 000 TB cases (126 per 100 000 people) and 21 000 estimated TB deaths (17 per 1 million people). Additionally, there are approximately 2000 cases of drug-resistant TB, with a proportion of 1.1% among newly diagnosed TB cases and 12% among previously treated TB cases. In 2022, a total of 115 400 TB cases were notified, with children under 14 years of age accounting for 10% of these cases. Among HIV-positive TB patients, the coverage of antiretroviral therapy (ART) is 92%. The country has adopted and implemented the new WHO-recommended 6-month BPaL/M regimen for the treatment of drug-resistant TB, as well as TB preventive therapy using the 3HP regimen. Additionally, Ethiopia has introduced the use of urine LAM, Xpert Ultra, and stool tests for TB diagnosis. However, TB preventive treatment (PT) coverage among HIV-positive individuals and household contacts of bacteriologically confirmed TB cases is only 28%, and the case finding for drug-resistant TB is 34%. The current humanitarian crisis—including ongoing drought, internal conflicts in several regions, and population movements from Arab countries—is exacerbating TB transmission and reversing progress made in TB control. The number of TB notifications has increased from 135,888 in 2015 to 134 434 in 2023, according to the 2023 annual report from the National Tuberculosis Program (NTP) of Ethiopia. Between 2014 and 2017, a study identified a total of 1553 TB patients in Ethiopian refugee camps. The majority of these cases were from Gambella (55.2%), followed by Somali (24.6%), Tigray (6.6%), South West Ethiopia (5.1%), and Benishangul Gumuz (4.7%). Of the identified TB cases, 61% were bacteriologically confirmed, while the remaining cases were clinically diagnosed (WHO, 2023).

South Sudan:

In 2023, the estimated incidence of tuberculosis (TB) is 227 cases per 100 000 population. The rate of drug-resistant TB (DR-TB) is estimated at 4.7 cases per 100 000 population, totaling approximately 510 cases. This represents a significant 250% increase in DR-TB notifications compared to 2022. Similarly, TB treatment coverage has increased from 17 468 cases in 2022 to 19 659 cases in 2023, improving from 70% to 79% of the expected 25 000 cases. Additionally, 94% of all registered new and relapsed TB patients have been placed on antiretroviral therapy (ART) and screened for HIV, with 12% testing positive. In South Sudan, the prevalence of hepatitis B virus (HBV) infection among children under 5 years old is among the highest in Africa, estimated at 13%. This rate is significantly higher than the African average of 2.5% and the global elimination target of under 1%. These figures suggest an increase in infections transmitted from mother to child and during early infancy (WHO, 2024).

2020 data	Central African Republic	Chad	Ethiopia	South Sudan
HIV incidence per 1000 population	1.57	0.5	0.08	1.9
TB incidence per 100 000 population	540	140	126	227
TB treatment success rate (%) (2017 data)	82%	83%	87%	84%
% of pregnant women living with HIV with access to ARVs	51%	75%	55%	50%

HUMAN IMMUNODEFICIENCY VIRUS (HIV) / ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

Central African Republic:

The Central African Republic (CAR) has experienced a declining HIV prevalence, with rates falling from 3.8% in 2017 to 3.4% in 2022. The monitoring of the 95-95-95 programmatic targets in 2022 indicates that 88.4% of HIV-positive patients who are aware of their status have achieved ARV coverage and viral suppression rates of 88.4% [1][2]. These efforts have contributed to a positive trend in reducing mortality rates (WHO, 2023). However, the situation in Chad presents distinct challenges. As one of the most affected countries in Africa, with an HIV prevalence of 1.6%, Chad faces significant public health challenges, including higher prevalence rates in urban areas compared to rural areas.

Sudanese refugees in Chad are particularly vulnerable to HIV due to several factors:

1. **Disruption of Healthcare Access:** Refugees often face interruptions in their access to healthcare services, which can lead to inadequate HIV prevention, treatment, and care. This is compounded by limited resources and infrastructure in refugee camps and host communities.
2. **High-Risk Environments:** The challenging living conditions in refugee camps and informal settlements can exacerbate the risk of HIV transmission. Factors such as overcrowding, inadequate sanitation, and instability can contribute to higher exposure to high-risk behaviors and limited access to preventive measures.
3. **Lack of Health Education:** Refugees may have limited access to health education and information regarding HIV prevention and treatment. This lack of awareness can increase their vulnerability to the virus and hinder effective management of HIV.
4. **Socioeconomic Factors:** Economic hardship and displacement-related stress can contribute to risky behaviors, such as transactional sex or other forms of high-risk behavior, which increase the risk of HIV transmission among refugee populations.
5. **Integration Challenges:** The integration of refugees into local health systems may be uneven, with some areas experiencing challenges in providing comprehensive health services to both local populations and refugees. This can lead to gaps in HIV prevention and treatment coverage.

Overall, the compounded risks faced by Sudanese refugees in Chad highlight the need for targeted interventions to address their specific needs and reduce their exposure to HIV.

Chad:

Data on the number of people living with HIV and those on treatment who are virally suppressed is limited. In 2021, approximately 827 people were receiving antiretroviral treatment. Chad has been reported as one of the most affected countries in Africa by the AIDS epidemic, with an overall prevalence of 1.6% according to the DHS/MICS 2014-2015 survey. The prevalence among young women increases with age: 1.2% among those aged 15-19, 1.8% among those aged 18-19, and 2.4% among those aged 23-24. This is notably higher compared to boys, who have a prevalence rate of 0.7%. HIV prevalence is seven times higher in urban areas (4.3%) than in rural areas (0.4%). The role of mobile populations in the spread and control of HIV is increasingly being recognized. While migration does not automatically increase HIV vulnerability, and not all mobile populations are at higher risk due to their mobility, many individuals in these groups face unique sociocultural, economic, and environmental factors that increase their susceptibility to HIV. These factors include limited access to health services, lack of information, and environments that may foster high-risk behaviors (WHO, 2023)

In this context, Sudanese refugees are particularly vulnerable to HIV. They often face compounded risks due to their displacement. Refugees typically experience disruptions in their healthcare access, limited availability of HIV prevention and treatment services, and heightened exposure to high-risk situations. The instability and often harsh living conditions in refugee camps or informal settlements

can exacerbate these risks, as refugees may have limited access to health education, preventive measures, and essential healthcare services. These factors increase the likelihood of HIV transmission and complicate efforts to manage and treat the virus effectively among refugee populations.

Ethiopia:

In Ethiopia, the national HIV prevalence is 0.9%, but the epidemic varies significantly by sex, geographic location, and population group. Regional disparities are notable: the Gambella region has the highest prevalence at 4.8%, followed by Addis Ababa city at 3.4%. In the Tigray region, 3% of women and girls tested for HIV/AIDS are positive. Prior to the conflict in Tigray, approximately 46,000 clients were enrolled in Anti-Retroviral Therapy (ART). However, the ongoing conflict has severely disrupted healthcare services, resulting in depleted medication supplies and limited diagnostic testing. As a result, patients in the region are now at increased risk of opportunistic infections due to inadequate treatment and monitoring (WHO, 2024).

Given the context of HIV prevalence and healthcare disruptions in Ethiopia, Sudanese refugees in the country are particularly vulnerable to the following risks:

1. **Limited Access to Healthcare:** The general healthcare system in Ethiopia is already strained, especially in regions like Tigray where conflict has disrupted services. Sudanese refugees may face additional barriers to accessing healthcare due to legal, logistical, or financial constraints. This can hinder their ability to receive essential HIV testing, treatment, and care.
2. **High-Risk Areas:** Many Sudanese refugees are concentrated in regions with high HIV prevalence, such as Gambella and Addis Ababa. The elevated prevalence in these areas increases the likelihood of exposure to HIV among refugees. The lack of targeted prevention and treatment services for refugees exacerbates this risk.
3. **Impact of Conflict:** The ongoing conflict in Tigray has significantly impacted the availability of Anti-Retroviral Therapy (ART) and diagnostic testing. For Sudanese refugees who may already be living in precarious conditions, this situation compounds their vulnerability. Depleted medication supplies and limited testing services mean that refugees in the region are at increased risk of opportunistic infections and poor health outcomes.
4. **Inadequate Health Education:** Refugees often have limited access to health education and information about HIV prevention and treatment. This lack of awareness can lead to higher rates of HIV transmission and poorer health management among refugees. Efforts to improve health literacy are critical to mitigate these risks.
5. **Socioeconomic Stressors:** Refugees face significant socioeconomic challenges that can exacerbate health risks, including HIV. Economic instability, poor living conditions, and social marginalization can contribute to high-risk behaviors, further increasing their susceptibility to HIV [5].
6. **Integration Issues:** Integration into local health systems may be uneven, with refugees sometimes receiving less comprehensive care compared to local populations. This disparity can result in gaps in HIV prevention, treatment, and support services for refugees [6].

In summary, Sudanese refugees in Ethiopia are at heightened risk of HIV exposure and poor health outcomes due to a combination of factors including limited access to healthcare, high HIV prevalence in certain regions, and the impact of ongoing conflict. Addressing these challenges requires targeted interventions and enhanced support systems to ensure that refugees receive adequate HIV prevention, treatment, and care.

South Sudan:

The HIV prevalence in South Sudan has been gradually decreasing, with a current adult prevalence of 2.1% and an increased proportion of people living with HIV (PLHIV) receiving antiretroviral treatment

(ART) at 47% as of 2023 (WHO, 2023). Despite these positive trends, Sudanese refugees in South Sudan face particular challenges and risks that can impact their health outcomes:

1. **Limited Access to Healthcare Services:** Sudanese refugees often encounter barriers to accessing comprehensive healthcare services, including HIV treatment and prevention. In South Sudan, where healthcare infrastructure may be strained, refugees might experience difficulties in accessing ART and other essential health services. This can affect their ability to manage HIV effectively.
2. **Higher Vulnerability to New Infections:** The prevalence of HIV among refugees could be influenced by factors such as overcrowded living conditions in refugee camps, limited health education, and reduced access to preventive measures. These conditions increase the risk of new HIV infections among the refugee population.
3. **Impact of Health System Strain:** The improvement in ART coverage and prevention of mother-to-child transmission is a positive development; however, the healthcare system's capacity to meet the needs of both local populations and refugees may be limited. Refugees may face additional challenges in accessing these improved services.
4. **Increased Risk of Opportunistic Infections:** The overall healthcare system's focus on expanding ART coverage may not fully address the needs of refugees, who may be at higher risk of opportunistic infections due to inadequate treatment and monitoring.
5. **Challenges in Integration and Support:** Refugees may struggle with integration into local health services, leading to gaps in their HIV care. The provision of ART and other HIV-related services for refugees might not be as consistent or accessible as for the host population.

NON-COMMUNICABLE DISEASES (NCDs)

Noncommunicable diseases (NCDs) were responsible for 41 million deaths globally in 2016, comprising 71% of all deaths worldwide (WHO, 2018). In low- and middle-income countries, over 85% of these deaths occur prematurely between ages 30 and 70, reflecting a disproportionate burden compared to high-income countries (WHO, 2018). The World Health Organization (WHO) forecasts a 17% global increase in NCD-related deaths over the next decade, with the African Region projected to experience a 27% rise, resulting in an estimated 28 million additional deaths by 2030. This trajectory highlights the escalating impact of NCDs, which are anticipated to exceed deaths from communicable, maternal, perinatal, and nutritional diseases combined by 2030 (WHO, 2018).

In Chad, Central African Republic (CAR), Ethiopia, and South Sudan, NCDs contribute significantly to the overall disease burden. In Chad, for instance, the prevalence of NCDs is rising amid challenges in healthcare access and infrastructure (WHO, 2023). Similarly, CAR faces high rates of NCD-related mortality, exacerbated by limited healthcare resources and infrastructure damaged by conflict (WHO, 2023). In Ethiopia, despite improvements in healthcare access, NCDs continue to strain the healthcare system, affecting a large portion of the population (WHO, 2023). In South Sudan, recovering from decades of conflict, the burden of NCDs adds to existing health challenges and poses obstacles to achieving sustainable health outcomes (WHO, 2023). These countries also grapple with common risk factors for NCDs such as tobacco use, physical inactivity, harmful alcohol consumption, and unhealthy diets, exacerbated by social and economic determinants including poverty, urbanization, and limited access to education and healthcare (WHO, 2018; WHO, 2023).

Central African Republic:

Non-communicable diseases encompass cardiovascular diseases (chiefly hypertension), metabolic diseases such as diabetes, and cancers. According to the Ministry of Health (MOH) data, in 2017, 27.1% of the population had hypertension (HTN); 9.5% of Central Africans suffered from diabetes; 16% of the population was overweight, and 9.7% were obese (WHO, 2024).

Chad:

Chad faces a significant health challenge marked by both communicable and non-communicable diseases (NCDs), with NCDs alone contributing to 27% of deaths in 2019 (WHO, 2023). Despite some improvements in child survival rates between 2015 and 2021, Chad remains far from meeting the Sustainable Development Goal (SDG) targets for neonatal and under-five mortality rates. As of 2021, 82 755 individuals were receiving antiretroviral therapy for HIV, but Chad has achieved only one of the 95-95-95 goals aimed at improving HIV treatment and care (WHO, 2023). The country is endemic for four of the five neglected tropical diseases (NTDs) that can be controlled through mass drug administration (MDA), successfully reaching 95% of the targeted 6 million people in 2020 (WHO, 2023).

Furthermore, Chad grapples with high age-standardized mortality rates due to major NCDs such as cardiovascular disease, chronic respiratory disease, cancer, and diabetes, which were recorded at 698 per 100 000 in males and 584 per 100 000 in females in 2021 (WHO, 2023). Despite implementing initiatives including NCD policies, tobacco taxation, smoke-free laws, health warnings on tobacco products, bans on tobacco advertising, and alcohol taxation, progress in these areas has been limited (WHO, 2023).

Ethiopia:

Non-communicable diseases (NCDs) pose a significant health burden globally, exacerbated by limited access to essential medications for conditions like diabetes and arterial hypertension (World Health Organization, 2020). This lack of access contributes to the persistence of high NCD rates and premature deaths among affected populations. Additionally, food insecurity plays a pivotal role in exacerbating NCDs such as diabetes, cancer, and cardiovascular diseases due to its correlation with malnutrition and obesity (UNICEF, 2018). This is often driven by diets rich in empty calories and poor nutritional quality. In humanitarian settings, where food scarcity is prevalent, individuals may resort to prioritizing quantity over quality, opting for cheaper but less nutritious food options as a coping mechanism (Food and Agriculture Organization, 2019). The rise of NCDs worldwide has been linked to factors such as rapid urbanization without proper planning, the globalization of unhealthy lifestyles, and an aging population (World Health Organization, 2018). Addressing these complex issues requires comprehensive strategies that include improving access to affordable, nutritious food and essential medications, as well as promoting healthier lifestyles and urban planning practices. Such initiatives are crucial in mitigating the growing burden of NCDs and improving overall public health outcomes globally (WHO, 2024).

South Sudan:

Non-communicable diseases (NCDs) pose a growing challenge in South Sudan, with an age-standardized mortality rate for major NCDs including Cardiovascular Disease, Chronic Respiratory Disease, Cancer, and Diabetes reaching 531 per 100 000 in males and 443 per 100 000 in females in 2019, up from 513 and 433 respectively in 2015. While initial efforts have been made in NCD policy, planning, guidelines, and tobacco and alcohol control measures, progress remains limited in areas such as tobacco and alcohol advertising bans, trans fats and salt policies, marketing to children, and physical activity guidelines. NCDs accounted for 28% of deaths in 2019, reflecting a significant burden alongside communicable diseases. Additionally, South Sudan has achieved substantial coverage in treating neglected tropical diseases (NTDs) through mass drug administration, reaching 91% of targeted individuals in 2021 (WHO, 2022).

MENTAL HEALTH AND PSYCHOSOCIAL SUPPORT

The risk of mental health disorders among refugees in the Central African Republic (CAR), Chad, Ethiopia, and South Sudan is a significant concern due to the challenging conditions faced by these populations. Here's an overview of the mental health risks in these regions:

Common Risk Factors

Across these regions, several common risk factors contribute to mental health disorders among refugees:

- **Exposure to Violence and Trauma:** Many refugees have experienced or witnessed violence, abuse, and conflict, which can lead to post-traumatic stress disorder (PTSD) and other trauma-related disorders.
- **Displacement and Uncertainty:** The stress of displacement, loss of home, and uncertainty about the future can cause significant psychological distress.
- **Lack of Access to Mental Health Services:** Inadequate mental health infrastructure and services limit the ability of refugees to receive appropriate care and support.
- **Economic Hardship:** Poverty and economic instability further exacerbate mental health issues, creating additional stress and barriers to recovery.
- **Social Isolation and Stigma:** Refugees often face social isolation and stigma related to mental health, which can prevent them from seeking help.

Addressing these mental health risks requires a coordinated approach that includes improving access to mental health services, increasing community awareness, and providing adequate support for refugees in these regions.

Central African Republic:

The Central African Republic (CAR) has been grappling with a humanitarian crisis for over a decade due to persistent military and political conflicts. One consequence of these recurrent conflicts is the worsening of mental health disorders. A 2010 study by Vinck & Pham conducted across prefectures such as Lobaye, Ombella M'Poko, Ouham, Ouham Pende, and Bangui estimated a prevalence of 55.3% for symptoms of depression and 52.5% for symptoms of anxiety. The study highlighted a significant association between exposure to violence and these mental health disorders (Vinck & Pham, 2010). CAR's national mental health policy document reveals a rise in new cases of mental disorders admitted to the Bangui Psychiatric and Mental Health Service—the sole specialized treatment center—increasing from 416 cases in 1996 to 1812 cases in 2018. This steady rise in demand for mental health care contrasts sharply with the shortage of qualified personnel and the absence of decentralized structures for managing mental health cases. Following the armed conflict in Sudan, the mental health needs in CAR have become even more acute. Prolonged military and political conflicts have exacerbated existing mental health disorders among the population. The growing demand for mental health care is compounded by the shortage of qualified personnel and the lack of decentralized structures for managing mental health cases, posing significant challenges in addressing the mental health needs of the affected population.

In CAR, refugees and internally displaced persons (IDPs) face numerous stressors, including ongoing conflict, displacement, and extreme poverty. These conditions contribute to high levels of psychological distress, including anxiety, depression, and PTSD. The lack of adequate mental health services and support systems exacerbates these issues, leaving many individuals without access to necessary care.

Chad:

There is limited available data on mental health in Chad. As of 2020, WHO reported that most individuals pay entirely out of pocket for mental health services or psychotropic medications. Despite a population exceeding 17 million people, the country had only two psychiatrists, six mental health nurses, six psychologists, and nine social workers. There is a single psychiatric unit within a general hospital (WHO, 2020). However, due to the Sudan refugee crisis in eastern Chad, humanitarian organizations have established mobile health clinics to offer specialized consultations, including mental health support. Nevertheless, these services remain restricted and have reached only a small proportion of those requiring assistance (WHO, 2020).

Chad's refugee population, particularly those in camps near conflict zones, is at high risk for mental health disorders due to prolonged exposure to violence, displacement, and uncertain living conditions. The psychological impact of these stressors is compounded by limited mental health services and support infrastructure. Refugees often experience PTSD, depression, and anxiety, with many facing barriers to accessing mental health care.

Ethiopia:

Current data specifically detailing the mental health status of Sudanese refugees in Ethiopia are not readily available. However, given the crisis context, it is anticipated that the affected populations, including Sudanese refugees, may experience various forms of mental distress or psychological disorders. Refugees often encounter significant stressors such as displacement, loss of loved ones, exposure to violence, and uncertainty about the future, all of which can contribute to mental health challenges (UNHCR, 2023). The unique circumstances of refugee life, including limited access to healthcare and psychosocial support, further exacerbate their vulnerability to mental health disorders. Efforts by humanitarian agencies are crucial in providing necessary mental health services and support to mitigate these risks among Sudanese refugees in Ethiopia.

In Ethiopia, the refugee crisis is marked by the influx of displaced persons from neighboring countries, as well as internal conflicts. Refugees in Ethiopia often encounter severe stressors, including displacement, trauma, and the challenges of integrating into new environments. Mental health issues such as depression, anxiety, and PTSD are prevalent, and the mental health care system struggles to meet the demand. The situation is worsened by stigma and a lack of resources for mental health support.

South Sudan:

The World Health Organization (WHO) reports that conflict-affected populations experience a high prevalence of mental disorders, estimated at 22.1%, encompassing severe disorders like schizophrenia, bipolar disorder, severe depression, severe anxiety, and severe post-traumatic stress disorder (5.1%), as well as moderate forms such as depression, anxiety, and post-traumatic stress disorders (4.0%). Applying these figures to South Sudan, where 3.2 million people are affected by humanitarian emergencies, it is projected that approximately 291 200 individuals will require treatment for moderate to severe mental health conditions, including 163 000 for severe forms and 128 000 for moderate forms. Beyond mental health challenges, hypertension affects about 20.1% of adults, and diabetes affects 6.5% of the population. These non-communicable diseases (NCDs) are compounded during emergencies, increasing the incidence of complications like heart attacks and strokes. NCDs demand continuous care, ongoing treatment, and management of acute conditions, all critical aspects for emergency response. Effective integration of NCD programming is essential to mitigate their impact, ensuring coordinated care and addressing the broader healthcare needs of affected individuals, potentially including palliative care (WHO, 2024).

South Sudan faces an acute mental health crisis among its refugee population due to ongoing conflict, displacement, and widespread violence. The mental health impact of such prolonged adversity includes high rates of PTSD, depression, and anxiety. Refugees often experience compounded trauma from both pre-displacement and post-displacement experiences. The mental health care system in South Sudan is underdeveloped, with limited resources and trained professionals to address the needs of this vulnerable population.

DETERMINANTS OF HEALTH

VIOLENT EXTREMISM AND CONFLICT

WATER SANITATION AND HYGIENE (WASH)

	Central African Republic	Chad	Ethiopia	South Sudan
Population using basic drinking water services	36%	43%	50%	41%
Population using basic sanitation services	14%	20%	9%	16%
Population with basic hygiene facilities	12%	24%	19%	21%

Source: World Bank, 2022

PROTECTION AND GBV RISKS

1. Protection

According to UNHCR’s Regional Child Protection Brief on the Sudan Situation (June 2024), as of 15 June 2024, over 8.6 million persons were forcibly displaced, including 1.9 million who have fled to Chad, Central African Republic, Egypt, Ethiopia, South Sudan, and Uganda. Children constitute approximately 51 percent of the displaced population, making Sudan one of the world’s largest child displacement crises. Countries have screened and registered approximately 44 105 children at risk. Children face a wide range of protection risks at every stage of their displacement—before, during, and after fleeing. These risks include grave violations of children’s rights, restricted access to safety, separation from families, gender-based violence (particularly sexual violence and child marriage), psychosocial distress, immigration detention, trafficking, and limited access to child protection services along their journey to safety. Displaced parents, older siblings, and families also encounter numerous protection risks that adversely affect children’s well-being. These risks include lack of access to protection and basic services, abuse, harassment, and exploitation.

Central African Republic (CAR) has received and registered approximately 31 649 Sudanese refugees, the majority of whom are women and children. Refugees find themselves dispersed in highly insecure and remote areas. With the dry season looming, armed group activities and associated protection risks remain prevalent, and access to the new Sudanese refugee arrivals, especially in the South-East, remains a significant challenge for humanitarian actors (UNHCR, 2023).

In Chad, the number of new arrivals from Sudan has tripled since the beginning of the year due to increased ethnic conflicts, with children representing 54% of the total registered refugee population.

UNHCR, in collaboration with the Government of Chad, has identified over 10 479 children at risk, including 3154 unaccompanied and separated children. Although the government is currently relocating refugees from the borders to refugee sites, access to refugee camps and provision of child protection and other services remains a challenge (UNHCR, 2023).

In Ethiopia, the influx of Sudanese refugees has strained resources and capacities, particularly in the provision of child protection services. Many arriving children have experienced or witnessed violence, including assaults and attacks. The journey to border crossing points often leaves children unaccompanied, arriving in a frail and malnourished condition. Efforts are underway to address these challenges, but sustaining adequate support remains a critical concern amidst ongoing displacement crises (UNHCR, 2023).

In South Sudan, 56% of Sudanese refugees are under the age of 18. Many of them have witnessed or experienced violent events, including attacks and sexual assaults. Additionally, many children travel or arrive at border crossing points unaccompanied and too often arrive weak and malnourished (UNHCR, 2023).

2. Child Protection

Central African Republic:

Recruitment and use of children by armed forces and groups remain the most frequent violation of children's rights in CAR, accounting for 584 cases out of a total of 792 confirmed and documented serious violations in 2020. It is deeply concerning that thousands of children, already traumatized by conflict and violence, endure additional trauma by being forced to join and live among armed actors, engaging in combat and risking their own lives and those of others. These harrowing events leave lasting scars on the lives of children and families, constituting an unacceptable breach of their fundamental rights. According to UNICEF's report "Protecting Children in CAR," 1,280 children experienced one or more serious violations between 1 July 2019 and 30 June 2021, with girls accounting for over 40% of all victims. Recruitment and use of children were the primary offenses, affecting 845 boys and girls. Since 2014, UNICEF and its partners have facilitated the release of over 15 500 children – including 30% girls – from armed forces and groups (UNICEF, 2021).

Chad:

In Chad, 46% of newly arrived households lack proper documentation, including birth certificates (UNHCR, 2023). This absence of documentation poses significant risks, particularly for children, as it hampers their access to essential services such as education and healthcare. It also increases their vulnerability to various protection risks and potential statelessness (ICRC, 2023).

Ethiopia:

Ethiopia faces significant challenges related to gender-based violence (GBV), exacerbated by conflicts and drought crises. The country has one of the highest rates globally of female genital mutilation (FGM), with approximately 23.8 million women and girls affected (UNICEF, 2023). However, there is a positive shift in attitudes towards FGM within communities, with over 80% of girls and women opposing its continuation. Additionally, societal views are changing, with 78% of boys and men now willing to marry women who have not undergone FGM, marking a notable shift from a decade ago (UNFPA, 2023).

The crises in Ethiopia have also led to an increase in early and forced marriages, adolescent pregnancies, and violence against women and girls. Survivors of GBV often experience severe trauma, contributing to the breakdown of marriages, families, and communities (UN Women, 2023). These challenges highlight the urgent need for comprehensive support services and interventions to address GBV and promote gender equality.

South Sudan:

Child protection in South Sudan is in crisis, particularly affecting 2.5 million boys and girls due to prolonged conflict and recurring climate-related challenges (Save the Children, 2023). These adversities expose children to various forms of abuse, including recruitment into armed groups, displacement, separation from caregivers, and exploitation. Child neglect and sexual violence are among the most alarming concerns (UNICEF, 2023). Shockingly, it is estimated that half of young women in South Sudan are married before they turn 18 (UNFPA, 2023). Early marriage is often used as a harmful strategy by families and communities, especially for girls who are separated from their biological parents and live with host communities (UN Women, 2023).

Economic hardships have further exacerbated the situation, leading to a rise in child labor (ILO, 2023). As of July 2023, approximately 2.8 million school-aged children are out of school, with 46% of them engaged in child labor (UNESCO, 2023). These statistics underscore the urgent need for comprehensive child protection measures and interventions in South Sudan.

3. GENDER-BASED VIOLENCE (GBV)

Central African Republic:

During times of conflict, displacement, and resettlement, women and girls are particularly vulnerable to gender-based violence (GBV). In the Central African Republic (CAR), 59% of new arrivals are women and girls, with half of them under 18 years old (UNHCR, 2023). Reports indicate that instances of GBV affecting women and girls fleeing Sudan have been widespread, especially in regions like Darfur (UN Women, 2023). Upon reaching CAR, these individuals remain at risk of GBV, especially in situations where resources are scarce or they must travel long distances for essentials such as water and firewood.

Specifically, in the AM Dafock border area, ongoing protection monitoring activities by humanitarian partners highlight a precarious security situation. This poses significant risks, given that over 88% of arrivals consist of women and children, including unaccompanied minors and separated children (UNICEF, 2023). The combination of crisis conditions and inadequate protection and healthcare services across the country exposes women and girls to heightened risks of GBV, including sexual violence, exploitation, and early or forced marriages.

Chad:

In Chad, Sudanese refugee women and girls escaping conflict face alarming vulnerability to gender-based violence (GBV). This risk persists both during their displacement and upon their arrival in refugee settlements (UNHCR, 2024). The majority of new arrivals find themselves in precarious conditions at informal border sites, where they confront heightened GBV risks exacerbated by inadequate shelter, limited lighting, and scarce access to essential resources such as food and water (MSF, 2024). Despite efforts, 58% of newly arrived refugees still endure dire conditions at these spontaneous border sites, further exposing women and girls to increased risks of GBV.

Challenges persist due to the high logistics costs in Chad and insufficient funding, compounded by the rapid influx of refugees that hampers timely identification and construction of new refugee sites with necessary infrastructures, especially during the rainy season. The precarious nature of shelters and Water, Sanitation, and Hygiene (WASH) facilities, coupled with inadequate lighting, limited food access, and lack of livelihood opportunities, forces refugee women and girls to undertake long walks outside the sites, significantly multiplying their exposure to GBV and resorting to negative coping mechanisms.

From April to November 2023, reported incidents of GBV among refugees escalated six-fold, highlighting the pervasive and underreported nature of the issue. Many cases likely remain unreported due to barriers such as fear, stigma, and limited access to support services (IRC, 2024). Addressing these challenges requires bolstering security measures, improving service provision, and enhancing community support mechanisms to effectively safeguard vulnerable populations (ACF, 2024).

HEALTH SYSTEMS STATUS AND LOCAL HEALTH SYSTEM DISTRIBUTIONS

Indicator	Central African Republic	Chad	Ethiopia	South Sudan
Universal health coverage (UHC) service coverage index (SCI), 2021	32	29	35	34

Health Spending:

Indicator	Central African Republic	Chad	Ethiopia	South Sudan
Health Spending US\$ per capita (2021)	41.96	34.80	28.70	33.23
GDP US\$ per capita (2021)	427.1	716.8	1,027.6	1,071.8

Health workforce:

Indicator ¹⁸	Central African Republic	Chad	Ethiopia	South Sudan
Density of physicians (per 10 000 population) (2019)	0.7	0.6	1	0.4

SURVEILLANCE/EARLY WARNING, ALERT, AND RESPONSE CAPACITY:

Central African Republic:

The epidemiological surveillance system in the Central African Republic (CAR) is anchored in the Integrated Disease Surveillance and Response (IDSR) strategy, with the 3rd edition validated in October 2021, including event-based surveillance (WHO, 2021). In 2022, training on the IDSR Technical Guide's latest edition was conducted for central, regional, and district-level teams. Community-based surveillance (CBS) is integral, supported by national policies on community engagement. CAR's

surveillance system monitors 23 diseases and health events, detecting seven epidemics in 2023: COVID-19, measles, yellow fever, monkeypox, pertussis, circulating vaccine-derived poliovirus type 2 (cVDPV2), and canine rabies. Efforts to strengthen surveillance include ongoing digitalization, coordination with One Health sectors, and improving epidemic-prone disease indicators. Enhancing event-based and community-based surveillance across all levels, alongside bolstering human resources, are key priorities for effective implementation (WHO, 2021). In the Central African Republic (CAR), the implementation of the 3rd SIMR guide began in 2021, focusing on the Integrated Disease Surveillance and Response (SMIR) system. Weekly data collection is carried out by FOSA focal points at the district level, which is then compiled and shared simultaneously at regional surveillance focal points and at the Ministry of Health's surveillance directorate via DHIS2. Disease alerts identified through surveillance are investigated by district focal points, often with support from consultants affiliated with WHO, CDC, and the regional initiative REDISSE IV. Samples are prepared at the district level and subsequently sent to reference laboratories such as the National Laboratory and Institut Pasteur in Bangui, with assistance from WHO. Upon confirmation of cases, epidemic investigations and responses are managed by the Public Health Emergency Operations Centre (COUSP) through Rapid Response Teams (EIR) formed under the SURGE project. Partner organizations provide varying levels of support depending on their geographical presence. In internally displaced persons (IDP) and refugee sites, the early warning system (EWARS) is being established to enhance surveillance capabilities. Weekly data from these sites are integrated with those from the corresponding health area FOSA. Event-based surveillance (EBS) is currently in a pilot phase across two health regions (WHO, 2024).

Chad:

In 2021, Chad adopted the ISSR3 (Integrated Disease Surveillance and Response) technical guide, a system that engages all levels of the health system in surveillance activities aimed at detecting and responding to diseases. Supported by WHO, this surveillance initiative aims to reduce morbidity and mortality by facilitating feedback and information sharing through the IHR focal point. At the national level, the Ministry of Health established a surveillance directorate. At the regional level, each health delegation appointed a focal point known as the Head of the Epidemiological Surveillance Antenna (C.A.S.E), while at the district level, Area Heads of Responsibility (CZR) oversee surveillance activities. These CZRs collaborate closely with community relays to ensure effective implementation. Beyond WHO support, CDC-Africa provides ad hoc assistance for specific activities such as surveillance capacity building. Samples from suspected cases in regions are transported to N'Djamena with WHO's logistical support. Central laboratories include LABIEP, capable of confirming hemorrhagic fevers, and the National General Reference Hospital's bacteriological and virology units. Challenges include inadequate human resources, weak community-based surveillance, delayed result reporting, and insufficient funding for activities.

Ethiopia:

In Ethiopia, the implementation of the Integrated Disease Surveillance and Response System (IDSR) integrates local feedback mechanisms and global information sharing to enhance disease surveillance capabilities. Managed nationally by the Ethiopian Public Health Institute (EPHI) and the Federal Ministry of Health, the system extends to regional levels through Regional Health Bureaus and Public Health Institutes, and down to district levels involving Health Facilities and Surveillance Officers. International support from organizations like WHO, US-CDC, Resolve to Save Lives, IGAD, and Africa CDC bolsters Ethiopia's surveillance and early warning system. Efforts focus on improving data quality, event and community-based surveillance, laboratory capacity, system integration, and capacity building to enable informed decision-making and improve health outcomes (EPHI, 2024). Ethiopia's public health laboratory system operates across four levels—health centers, zonal/teaching hospitals,

regional reference laboratories, and the national reference laboratory—to ensure efficient sample management and timely results. During outbreak responses, laboratory teams collaborate with Rapid Response Teams (RRT) and Emergency Medical Teams (EMT) in sample collection, testing, and investigation. Suspected cases identified through surveillance are referred to appropriate levels of laboratories following national protocols, ensuring comprehensive diagnostic capabilities and effective response strategies (EPHI, 2024).

South Sudan:

Surveillance priorities in South Sudan have evolved significantly since the adoption of the Integrated Disease Surveillance and Response (IDSR) strategy in 2006, with systematic implementation beginning in 2009 to establish national surveillance structures aligned with this strategy (WHO, 2021). Key milestones include South Sudan becoming a WHO Member State in 2012 and committing to the International Health Regulations (IHR 2005) in 2013. The Ministry of Health adapted the third edition IDSR guidelines and training materials during a workshop facilitated by WHO in October 2019, which were subsequently adopted in November 2019 for dissemination and use across counties, health facilities, and communities. The national surveillance system aims to enhance South Sudan's capacity to detect, report, confirm, and respond effectively to priority diseases and events, in line with IHR (2005) and the IDSR strategy for the African region 2020-2030. The updated guidelines emphasize one-health surveillance for zoonotic diseases, eHealth utilization, cross-border surveillance strengthening, and surveillance in humanitarian contexts. Disease prioritization under the revised 2019 IDSR guidelines expanded from 26 to 59 diseases, conditions, and 19 events for indicator and event-based surveillance, with malaria topping the list due to its high morbidity impact (WHO, 2021).

HUMANITARIAN HEALTH RESPONSE

In 2024, nearly 300 million people worldwide require humanitarian assistance and protection due to conflicts, climate emergencies, and other factors. A significant portion of this, totaling 74.1 million people, is concentrated in East and Southern Africa. Sudan alone accounts for nearly 40% of this regional total. The humanitarian crisis in Sudan has intensified drastically, with needs skyrocketing from 15.8 million people in 2023 to an alarming 30 million in 2024, exacerbated by a surge in population displacement following the outbreak of conflict in August 2023 (OCHA, 2024).

The impact of the conflict beyond Sudan's borders, such as the disruption of existing trade and supply chains, inflation, and the growing cost of the humanitarian response, are creating increased hardship for vulnerable host communities, aggravating existing economic and food insecurity challenges (UNHCR, 2024a). This situation risks fueling tensions between refugees and host populations through disputes over scarce resources. Neighboring countries were already hosting a large number of refugees, migrants, and internally displaced populations before the crisis. The Central African Republic, Chad, Egypt, Ethiopia, and South Sudan together hosted at least 800 000 Sudanese refugees before 15 April 2023 (UNHCR, 2024b). The new refugee arrivals to Chad add to the more than 400,000 Sudanese refugees who have been living in protracted displacement in eastern Chad for some 20 years. Additionally, the Central African Republic, Chad, Ethiopia, and South Sudan also have internally displaced populations.

In South Sudan, an estimated 76% of the population were already in need of humanitarian assistance, in addition to more than 290 000 Sudanese who arrived before April 2023. In Ethiopia, more than 20 million people need humanitarian assistance, in addition to almost 50 000 Sudanese refugees who arrived before April 2023. Egypt has historically hosted many Sudanese and had the second-highest number of Sudanese refugee arrivals in 2023 (UNHCR, 2024c).

Most new arrivals continue to enter neighboring countries through remote border locations, where humanitarian partners strive to provide critical life-saving assistance and facilitate onward movement in extremely difficult conditions requiring extensive logistical arrangements (UNHCR, 2024a). People are assisted in moving onward to either camps - where there is no viable alternative - or settlements for refugees integrated in host communities, and to preferred destinations for returnees.

In 2023, humanitarian actors primarily focused on establishing systems and procedures for delivering assistance, including protection, health, water, sanitation, and hygiene (WASH), mitigating the manifestation of disease. New arrivals were often in an extremely vulnerable state, requiring higher levels of assistance, access to basic services, and protection interventions for individuals and groups at heightened risk. Food security remains a top priority, as well as shelter and housing needs.

Efforts need to be expanded to ensure that prevention mechanisms, mitigating the risk, and responding to gender-based violence (GBV) are established and expanded, with specialized services and referral mechanisms reinforced to respond to the needs of displaced women and girls who are most at risk of GBV and sexual exploitation and abuse (UNHCR, 2024c).

The conflict in Sudan has had a devastating impact on the national health system and has resulted in poor capacity to respond to the population's health needs, including refugees. This has been observed in deteriorating national health indicators and a reported spike in preventable deaths and mortalities among the Sudanese and refugee populations. Outbreaks such as measles, dengue, and a recent

cholera outbreak exceeding 5000 cases in November 2023 have affected the country, with implications for neighboring countries like Ethiopia and South Sudan (UNHCR, 2024a).

The nutrition situation of refugees in Sudan is expected to worsen with the introduction of a 50% food ration cut as of January 2024 due to funding shortfalls, which was already the case in South Sudan and Ethiopia in 2023 (UNHCR, 2024b). Refugees and returnees arriving from Sudan are increasingly likely to arrive in a poor nutritional state and continue to suffer from food insecurity in countries of asylum or return, leading to harmful coping strategies.

Ethiopia:

In Ethiopia, GBV continues to be a pressing issue exacerbated by conflict and environmental crises, such as droughts and floods (UNICEF, 2023). GBV takes various forms including violence, sexual assault, physical violence, abduction, rape, child marriage, and harmful traditional practices (UNFPA, 2023). Shockingly, between 40% and 50% of women in Tigray have experienced GBV, with approximately 10% subjected to sexual violence. Among these, more than 80% have been victims of rape, often gang-raped, resulting in severe physical and psychological trauma (UN Women, 2023).

The Amhara Region has recently witnessed a surge in GBV cases, primarily attributed to the ongoing conflict. Despite this increase, the region faces significant gaps in response capacity, with only ten one-stop centres and six safe houses available. This inadequacy is compounded by damaged health facilities and the migration of healthcare professionals due to safety concerns, which hampers survivors' access to essential services (UNDP, 2024).

South Sudan:

Conflict-related sexual violence against women and girls is pervasive and systematic across South Sudan. The ongoing conflicts, including in regions like Equatoria, have created highly insecure conditions for them (UN Women, 2023). According to a national prevalence study on violence conducted in 2022, 58% of women and girls in South Sudan have experienced at least one form of gender-based violence (GBV) in the past year (UNFPA, 2022).

Recent conditions in displacement and refugee camps have worsened, exacerbating these issues, especially since 2020 when aid resources became more strained (ICRC, 2023). FGM remains a concern, with reported prevalence among women aged 15–49 years at 1% in South Sudan (WHO, 2023).

The influx of Sudanese refugees fleeing conflict has heightened the risk of GBV in South Sudan. Women and girls among the refugees are particularly vulnerable, facing increased threats of sexual violence and exploitation in both transit and settlement areas (UNHCR, 2023). This situation underscores the urgent need for enhanced protection measures and support services to mitigate the impact of GBV on these vulnerable populations.

Strategic Priorities and Areas of Intervention

S/N	Strategic Priorities	Areas of Intervention
1.	Health Leadership and Coordination	<p>Strengthen Coordination mechanisms to guide the health Response.</p> <ul style="list-style-type: none"> - In-country coordination - Intra-regional coordination - Partner Coordination
2.	Access to quality essential health services and medicines for people in need	<ul style="list-style-type: none"> - Establish and support rapid response teams in targeted locations to conduct timely interventions. - Ensure quality and timely consultations, deliveries, vaccinations, vaccination campaigns, malnutrition treatment, and trauma treatment. - Strengthen IPC -WASH in health Facilities. - Strengthen targeted readiness preparations across borders. - Initiate cross-border surveillance. - Reinforce community-based surveillance in communities bordering Sudan. - Preposition of essential supplies within the health facilities bordering Sudan.
3.	Critical Health Workforce	<ul style="list-style-type: none"> - Health Cluster Coordinators - Data Managers - Epidemiologist - Public Health Officers - Medical officers - Nutritionist - Vaccinators - Mental Health officer- Psychiatrists - GBV officers
4.	Epidemic surveillance	<ul style="list-style-type: none"> - Strengthen Community-based surveillance. - Build capacity for detection and response. - Strengthen essential laboratory systems for rapid detection and response. - Strengthen Vaccination systems. - Strengthen Cross border surveillance
5.	Access to essential medicines and health supplies (Operational Support and Logistics)	<ul style="list-style-type: none"> - Preposition essential medicines in locations where displaced populations are located. - Support collaborating partners with essential medicines for response. - Provide structural support to establish nonfunctioning health facilities in key strategic locations. - Establish a whole route of health response to the moving populations. - Procure dispensary tents for establishing advanced medical posts in areas receiving displaced populations. - Set up essential medicines storage units to improve access.
6.	GBV	<ul style="list-style-type: none"> - Hire a national consultant for Gender-Based Violence in Emergencies (GBViE) to implement the WCO's GBViE Action Plan. - Strengthen WHO staff capacities on WHO's role in addressing GBV during emergencies. - Strengthen Health Cluster partners' capacity on WHO's response to GBV in health settings. - Enhance partners' and health workers' capacities to coordinate and provide quality Gender-Based Violence (GBV) services regionally. - Assess health facilities' ability to provide quality care to GBV survivors.

		<ul style="list-style-type: none"> - Procure and preposition supplies for clinical management of GBV survivors. - Build capacities in the detection and clinical management of rape survivors. - Conduct Training of Trainers sessions on Clinical Management of Rape and Intimate Partner Violence (IPV). - Train mobile clinics, WHO staff, and partners on CMR/IPV in the field. - Organize and conduct step-down training on CMR/IPV in priority health regions. - Develop and disseminate GBV prevention messages.
7.	Communication	<ul style="list-style-type: none"> - Real-time communication in the form of human-interest stories - Media outputs for the public and health stakeholders - Monitoring accountability on the responses to the affected community.
8	PRSEAH	<ul style="list-style-type: none"> - Mainstream PRSEAH across the operations - Identify a SEAH FP to coordinate PRSEAH activity in the field with WHO and - Collaborate with Inter-agency PSEAH networks on response plan including strengthening. - Establish and strengthen community-based complaint mechanisms, - Implement PRSEAH awareness sessions for all targeted communities and implementing partners. - Disseminate and communicate PRSEAH implementation to all stakeholders (radio, leaflets etc.)

Information Gaps / Recommended Information Sources		
	Gap	Recommended tools/guidance for primary data collection
Health status & threats for the affected population	Epidemics prone diseases	EWARS
	Recent and up-to-date nutrition data	Emergency Nutrition Assessment
	Data on NCDs and their risk factors	Community- and hospital-based studies (STEPS approach)
	Data on crisis attributable deaths and injuries, trauma (including violence against children and GBV) and mental distress	Review of humanitarian health actor's data GBV IMS Community surveys
Health Resources & Services Availability	Availability of health services and distribution and functionality of health care facilities	Health Resources and Services Availability Monitoring System (HeRAMS)
	Scarce or lack of data on attacks against health	Surveillance System for Attacks on Health Care (SSA)
Humanitarian Health System Performance	Lack of data on utilization of humanitarian health services, including mobile clinics	Health Cluster and partners
	Lack of data on quality of humanitarian health services	Health Cluster and partners
	Incomplete information on partner presence and activities	Health Cluster 3/4 W tool

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FOOTNOTES

- ¹ IPC (2024), Dashboard, available at: <https://www.ipcinfo.org/ipcinfo-website/ipc-dashboard/en/> [Accessed 29/04/24]
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