

Attacks on health system in South Sudan.

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Abstract

Complex emergencies have been defined as “relatively acute situations affecting large civilian populations, usually involving a combination of war or civil strife, food shortages and population displacement, resulting in significant excess mortality”

Armed conflict causes an enormous amount of death and disability worldwide. It destroys families, communities and cultures. It diverts scarce resources. It disrupts the societal infrastructure that supports health. It forces people to leave their homes and become internally displaced persons or refugees who have fled to other countries. It violates human rights. It promotes violence as a means to resolve conflicts and it degrades the environment. Armed conflict has an even more profound effect on low- and middle-income countries. Health professionals can play important roles in minimizing the adverse consequences of war and in preventing war itself provide evidence for conflict resolution efforts, we carried out retrospective documents and literature

Large-scale armed conflict in South Sudan has led to the displacement of about 4.5 million people and severely affected food security and livelihoods. So as to inform the ongoing humanitarian response and reviews from various sources to construct the direct and indirect effect of conflict and war on fragility of health system for the period 2014 and 2018.

While important factors such as climate abnormalities, limited farming technology and maternal, infant and young child feeding practices modulate its severity, armed conflict is generally understood to be a key underlying cause. Moreover, its effects on health are exacerbated by other factors brought about by war, including limited preventive and curative health services, poor water and sanitation, increased disease transmission due to displacement, and exposure to both physical and mental trauma.

This definition has limitations; the duration of the emergency, which may be decades, and the inclusion of food shortages as a prerequisite are especially problematic. We have redefined complex emergencies as situations in which mortality among the civilian population substantially increases above the population baseline, either as a result of the direct effects of war or indirectly through increased prevalence of malnutrition and/or transmission of communicable diseases, particularly if the latter result from deliberate political and military policies and strategies (national, subnational, or international). This definition does not include natural disasters, which are usually short term and necessitate a qualitatively different response, but may include situations in which war does not play a major part (famine where government policies contribute to food insecurity) or situations in which food insecurity is not prominent (war and civil strife in developed countries).

Key Words

Health, War, Conflict, Morbidity, displacement, Mortality and Migration

Introduction

The Republic of South Sudan became independent in July 2011 after decades of armed conflict. During the next two years, despite ongoing insecurity in different regions, the country developed its institutions and services. In December 2013, large-scale conflict resumed, initially between armed groups loyal to President Salva Kiir and his deputy, Riek Machar. A Compromise Peace Agreement signed in August 2015 temporarily led to shared government, but broke down in July 2016, with conflict gaining intensity and spreading geographically since then.

As of early 2018, the war involved about two dozen, mostly communally-based armed groups, and had caused the displacement of about 2 million people within South Sudan and a further 2.5 million as refugees to neighboring countries. The humanitarian response to this crisis is among the largest worldwide, targeting about 6 million people with a total funding requirement of 1.7 billion USD in 2018, 45% funded as of September 2018.

The world's youngest nation marked five years of vicious war in an ongoing conflict that is affecting millions of people, many of them children.

South Sudan is home to the largest refugee crisis in Africa and the third largest in the world, after Syria and Afghanistan, according to the Office of the United Nations High Commissioner for Refugees. Sixty-five percent of South Sudanese refugees are under the age of 18.

Not long after gaining independence and emerging from civil war, South Sudan slid back into conflict in December 2013 when President Salva Kiir sacked his then-deputy Riek Machar and accused him of plotting a coup. The personal rivalry sparked fighting between forces loyal to the president and rebels allied with Machar.

It also deepened a rift between two of South Sudan's largest ethnic groups Kiir's dominant Dinka and Machar's Nuer people.

The conflict in South Sudan has likely led to nearly 400,000 excess deaths in the country's population since it began in 2013, with around half of the lives lost estimated to be through violence.

Most of the death toll occurred in the northeast and southern regions of the country, and appeared to peak in 2016 and 2017. Those killed were mostly adult males but also included women and children. Unexpectedly, the share of infant mortality was low, and estimates of the under-five death rate were no higher during the war period than before it.

As of early 2018, the war had caused the displacement of about two million people within South Sudan and a further 2.5 million as refugees to neighboring countries. Although a Compromise Peace Agreement was signed in August 2015, temporarily leading to shared government, it broke down in July 2016, resulting in the conflict gaining intensity and spreading geographically.

The effect on war on health system whether through violence or indirectly through increased risk of disease and reduced access to healthcare, protracted armed conflicts lead to an increase in death rate. This information on 'excess' mortality can inform the ongoing humanitarian response, provide evidence for resource mobilization, and support conflict resolution."

They also captured data on various predictors of mortality including climate, armed conflict intensity, displacement, food security and livelihoods, humanitarian and public health service functionality and epidemic incidence

An estimated 1,177,600 deaths due to any cause occurred among people living within South Sudan during the period, while the team estimated 794,600 deaths would have occurred in the absence of the war, yielding an excess of 382,900. Nearly 190,000 people were estimated to have died of violent injuries

“It is clear that the war has severely affected the health of the South Sudanese population, and that the humanitarian response to the crisis has been insufficient. Inadequate resourcing and sub-optimal performance of humanitarian services

Methods and Material

Study Design

A mixed methods descriptive survey design was adopted for this task. It involved a combination of qualitative and quantitative data collection methods. The extraction of study information was done through in-depth document review of both primary and secondary from published, unpublished and observed information documented, recorded by various media and agencies.

Methodology

The people in need figure was calculated based on the number of all IDPs in PoC sites and informal settlements. While estimates for emergency health assistance were calculated on eight health indicator parameters namely: disease burden, disease outbreaks, immunizations, the IPC, health service functionality, active conflict, flood prone areas and cold chain capacity in all counties. These were weighted for severity and scored within a range of 1-5 with 5 depicting severe challenges along all health systems parameters.

The score a county is converted to a percentage which constitutes the people in need for the county. The 2019 HNO

county people in Needs calculations range from 9 per cent to 65 per cent of the population. Severe acute malnutrition with medical complications, status of WASH in health facilities and locations with major funding disruptions were also factored in to fine tune targets for focused intervention. The final cluster target is derived from 56 per cent of the total people in need.

As in previous years, the SMART surveys were not used to estimate the people in need figure for 2019 due to the limited number of surveys conducted at the peak lean season, timing of the FSNMS, poor population estimates at county level as well as the availability of robust program data that could provide a better estimate of people in need for the 2019. The cluster used programme monthly admission data and information to project the burden for 2019, considering the following factors: well established community-based management of acute

malnutrition programme currently covering 76 out of the 78 counties; monthly data collection at level with 98 per cent for both outpatient therapeutic programmes (OTP) and targeted supplementary feeding programmes (TSFP); and increase in OTP and TSFP coverage of nutrition sites by 20 per cent and 24 per cent respectively. This method is recommended by WHO (2014) when the above the above factors are met.

For estimation of 2019 people in SAM and MAM among under 5 and pregnant and lactating women, the January-August 2018 new admissions trends were used and the projected achievement for 2018 determined using previous trends on the remaining four months. The nutrition situation for 2018 was assumed to be relatively similar to the 2019 situation. The achievement for 2018, was therefore assumed to represent 80 per cent and 62 per cent of the SAM and MAM cases respectively. This was then back calculated to achieve the caseload for SAM and MAM. In terms of blanket supplementary feeding programmes for under 5 year old children and pregnant and lactating women, the people in need figure was estimated based on previous years coverage, in priority counties and the potential for raising funding for implementation of the response. In terms of severity of the nutrition situation, the cluster continued to rely on IPC analysis for acute malnutrition; and WHO nutrition situation classification based on global acute malnutrition levels from SMART surveys conducted in different partners of the country either as seasonal or ad hoc surveys.

The cluster collected data on IDP population and hotspots using OCHA, IPC and ACLED sources. The main indicators used to determine needs were: number of IDPs, percentage of host community members affected by displacement based on percentage of IDPs, and percentage of host community members affected by conflict based on data from ACLED. In the absence of assessment specific data, these indicators are considered to provide intermediate indicators on the main populations of concern, and include the needs from all sub clusters altogether.

The primary indicator for people in need is the number of IDPs. The total IDP population is considered to be in need of some form of protection. The cluster also recognized that protection needs increase for communities hosting IDPs. The percentage of IDPs has a greater impact on the host community than the absolute numbers of IDPs alone. The protection needs increase proportionately based on the number of IDPs vis a vis the total host community population. The cluster calculates the number of host community in need proportionately based on five classes of severity.

The cluster also considered populations in areas with incidents of conflict to be in need of protection. The cluster uses the dataset but removes incidents that have little to no impact on the protection environment from

the total number of incidents at the county level. As the number of incidents in a county indicates the severity of protection concerns, the cluster has adopted a system of five classes to determine severity. They were ranked and weighed as per the methodology of the Protection Cluster severity mapping to determine the severity of need.

The approach to the methodology to calculate people in need for WASH was a two-step process involving: the identified key WASH indicators, including a severity index for each indicator, and the available data sources; and the people in need figure, generated by multiplying the population ranking for each WASH indicator then averaging all indicator rankings for the county. The affected population covers each county of South Sudan, excluding the contested territory, Abyei. FSNMS is a county level-representative survey that employs two-stage cluster sampling, using a state-based sample size and cluster determination.

In Round 22, some counties were not or were only partially accessed. The WASH Cluster created seven indicators from the available datasets. Each indicator was weighted equally and was broken down into five levels of severity. The indicators were: IDPs, GAM rates, cholera hotspots, safe access to water, suitable defecation location, access to WASH NFIs and self-reported water borne diseases. An average was taken from the combined indicators for each county, to determine the people in need for geographic locations with the highest WASH needs applying a logic formula. The average indicator ranking defined the percentage of the population to be targeted by the cluster. Finally, in counties where the IDP population was higher than the weighted people in need, the IDP population size was considered as the people in need figure.

Scope of study

Protracted armed conflicts are characterized by increased population mortality, both directly (violence) and indirectly (increased risk of disease, reduced access to healthcare) attributable to the crisis. Information on this “excess” mortality can inform the ongoing humanitarian response, provide evidence for resource mobilization, and support conflict resolution.

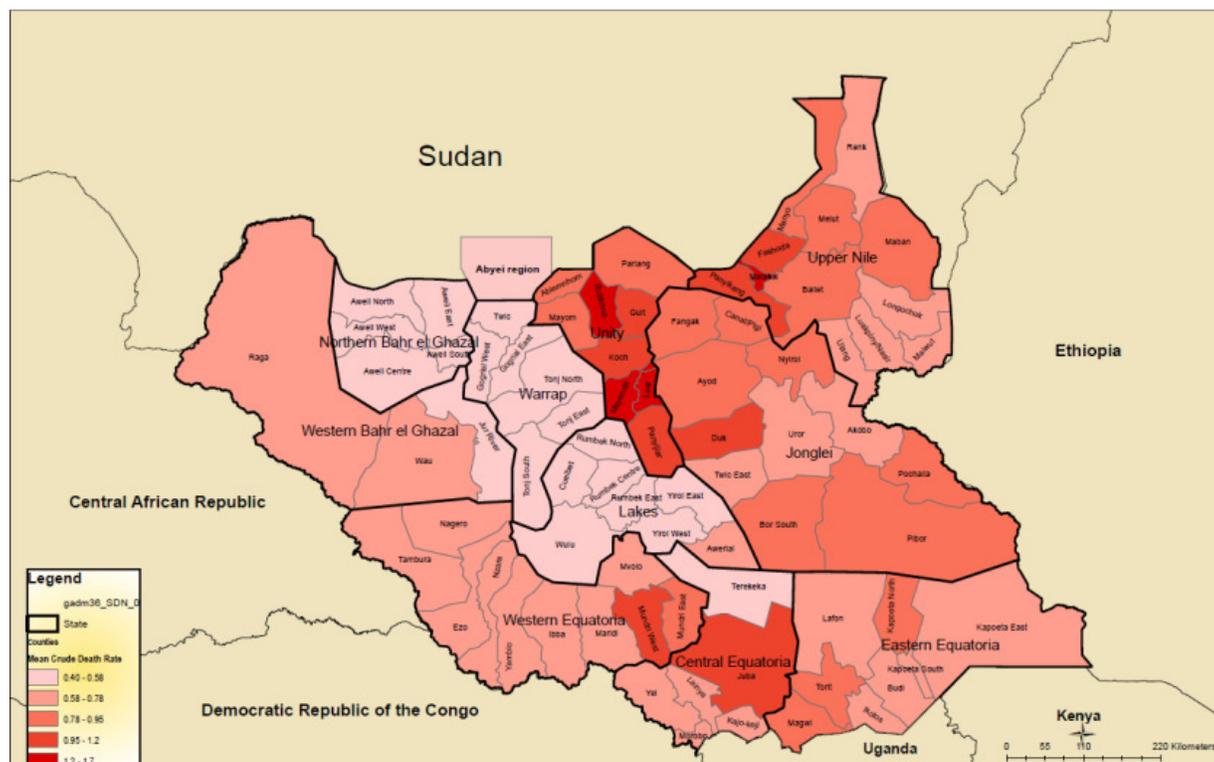
Inclusion and Exclusion

The study was limited to documented, recorded and observed information from published and unpublished sources both at primary and secondary level. The effect of the war and conflict focused on targeted organizational unit on health and its complimentary sub units e.g families, school and gender based violence, Nutrition, water health and sanitation.

The study excluded possible effect on other sphere of life's e.g communication, poverty, governance, environment, livelihood, food insecurity and humanitarian

Study Area

The study covered the entire country affected by war and conflict in South Sudan for the period of 2013 – 2018.



Study Population

The study target populations are people, process and system affected by war and conflict both individual, community structural and organizational which included schools and health facilities.

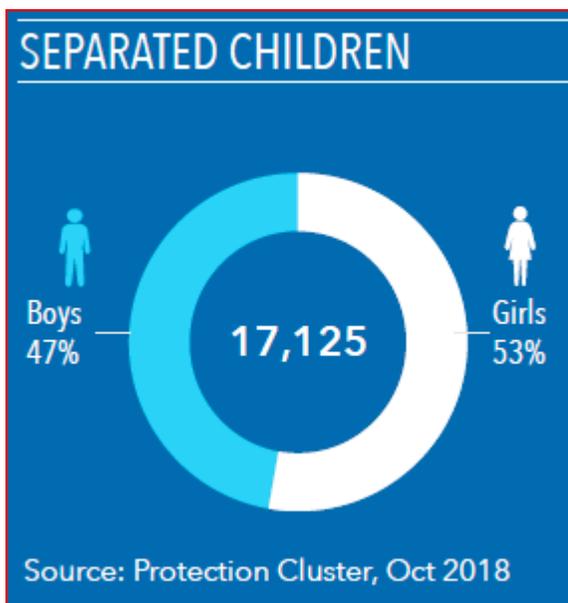
Ethical Consideration

All data collected for routine humanitarian response and health service provision purposes, and were either in the public domain or shared in fully anonymised format. Approval and authority to undertake the study was sought from Ethics Review Committee of the South Sudan Ministry of Health (Apr 2018).

Results

South Sudan is the world's youngest country that is still affected by war after gaining independence in 2011. The war has severely affected the country's socioeconomic development and has claimed over 2 million of lives since 1956. In South Sudan, it is estimated that about 75% of the population has no access to healthcare services, 63% of adult population is illiterate and over 50% of the population is living on less than US\$1 per day. Children from low socioeconomic households are at increased risk of premature death and disability due to low access to essential lifesaving interventions than those children with access to established public health interventions. On average, about 50% of under-five children in South Sudan have no access to evidence-based interventions, such as access to insecticide-treated mosquito nets (34%), improved sources of drinking water (69%), improved sanitation facilities (7%), rehydration treatment for diarrhoea (49%), antibiotic treatment for pneumonia (33%) and childhood immunizations (6%). Therefore, in South Sudan health inequities and inequitable condition of daily living can be explained by poor social policies, unfair economic arrangements and bad politics.

In 2018, the conflict continued to force people to remain on the move and undermine their access to assistance. Almost 4.2 million people have been displaced, often more than once, including nearly 2.2 million in neighbouring countries and nearly 2 million internally. The population inside the UNMISS Protection of Civilian (PoC) sites has stabilized at approximately 200,000 in the past three years, after a peak at 224,000 registered IDPs in 2016, to 190,000 in October 2018. Displacement is both a driver and result of vulnerability.

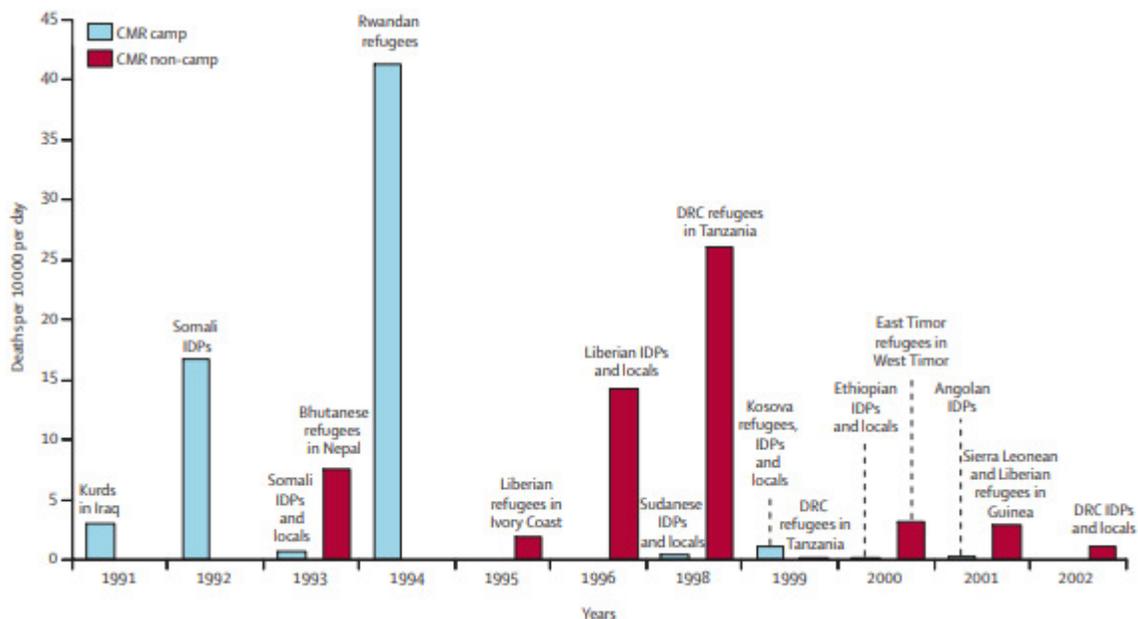


Past studies from the post conflict settings indicate that children are particularly vulnerable to the consequences of violence, poverty, being a child soldier, landmine injuries and mental health impairment, which might increase their risk of mortality.



Symbol of fragmented and perforated poster communicating health messages in South Sudan

Studies from postconflict settings, such as Mozambique and Ethiopia, have found children of urban migrants experience a higher rate of under-five mortality than urban non-migrant children during the period of civil war and conflict. This study reported similar findings with under-five children living in urban South Sudan having a higher odds of death compared with those living in the rural areas. This could be due to the in-migration of large numbers of socially and economically disadvantaged groups of South Sudanese returnees, and internally displaced people from North Sudan, after the end of the war for independence searching for work and better social services for their families in Juba. Under-five children born or growing up in such harsh conditions would be more likely to die than children who were better off in rural areas of South Sudan. The Government of South Sudan and non-governmental organization needs to improve and adequately resource services for vulnerable populations but especially in urban areas



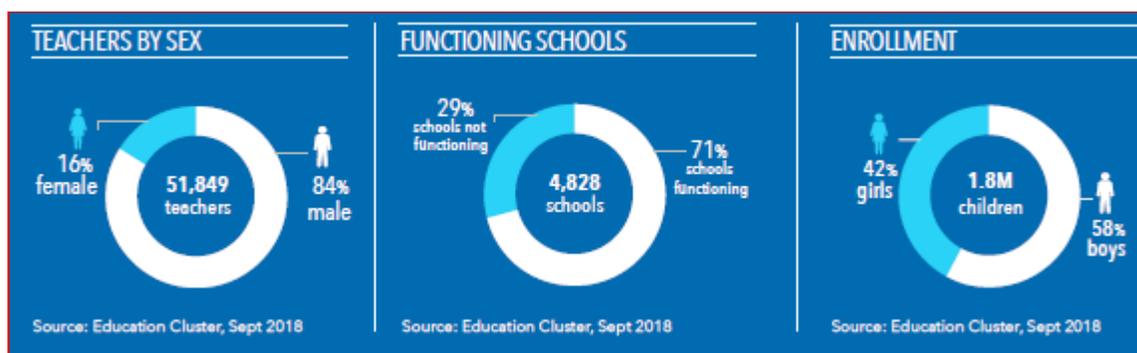
Education

Some 2,784,276 girls and boys between 3 and 18 years of age in conflict and crisis affected areas are estimated to not have access to pre-school, primary and secondary education in 2019. In addition, some 42,902 teaching personnel and members of school management committees are in need of humanitarian assistance. These people are crucial to deliver education services during emergencies. Some 81,456 refugee children in South Sudan do not have adequate access to education in 2019. The number of boys and girls in need represents an 11 per cent increase from 2018. Plausible reasons include the deterioration of systems and services whereby the resilience of households to cope with the economic downturn is seriously tested, and collapses, in the absence of support, especially in opposition-controlled areas. As portrayed by the adjacent severity map, needs are particularly dire in Central Equatoria, Lakes and Unity. Changes in education needs have been observed in Central Equatoria, Upper Nile and Western Bahr el Ghazal. This is because of a lack of teaching and learning supplies, inconsistencies in provision of teacher incentives, non-availability of school feeding programmes, poor infrastructure and insecurity in the region. Girls are more likely than boys to be excluded from education.

“The situation is difficult for women in this camp. Many children cannot go to school, so it affects them. There are no hospitals. There is not enough food.”

Displaced woman in South Sudan

A recent needs assessment found that on average, schools lost three to four weeks of education in the latest academic year, and over 50 per cent of the assessed schools reported that this interruption was due to insecurity.⁵⁸ Some 21 per cent of assessed schools were non-functional, with insecurity being the major cause of school closure. Of the assessed schools, 15 per cent reported having experienced an attack on the school, teachers or pupils, and theft or looting by armed forces and groups. Deterioration in food security was also reported as one of the main reasons for children dropping out of, or missing, school as families preferred to keep them at home to seek livelihoods. For those children that remained in school, the effects of chronic hunger affected their learning. The prolonged economic crisis has also affected teachers directly through delays in, or lack of, payment of incentives. As a result, teachers reported that they were demotivated and looking for other jobs to support their families. In the areas where education continued, the quality of teaching deteriorated due to missed opportunities to train teachers, and because incentive payments to teachers were delayed, or devalued due to currency fluctuations. A combination of all these factors has affected an already fragile education system.



Legacy of conflict, violence and abuse

Five years of the most recent conflict has forced nearly 4.2 million people to flee their homes in search of safety, nearly 2 million of them within and 2.2 million outside the country. While the intensity of conflict may have reduced recently, and clashes contained to certain regions, vulnerable people will continue to experience the impacts of the conflict through 2019. United Nations reports indicate that all parties to the conflict have repeatedly violated international humanitarian law and perpetrated serious human rights abuses, including gang rape, abductions, sexual slavery of women and girls, and recruitment of children, both girls and boys. People affected by the conflict, including the more than 300,000 refugees in South Sudan, repeatedly identify security among their primary needs.

Inadequate basic services

The conflict and associated economic decline have eroded the Government's ability to provide consistent basic services to its people. Currently, one primary health Centre serves an average of 50,000 people. Only 40 per cent of nutrition treatment centres have access to safe water, a gap that puts more vulnerable people, particularly women, boys and girls, at risk of malnutrition and disease. Only about one in five childbirths involves a skilled health care worker and the maternal mortality ratio is estimated at 789 per 100,000 live births. Every third school has been damaged, destroyed, occupied or closed since 2013, and more than 70 per cent of children who should be attending classes are not receiving an education



Destroyed livelihoods and eroded coping capacity

Years of conflict, displacement and underdevelopment have limited people's livelihood opportunities, marginalized women's formal employment opportunities, and weakened families' ability to cope with the protracted crisis and sudden shocks, like the death of a wage earner or loss of cattle. The livelihoods of 80 per cent of people are based on agricultural and pastoralist activities. Farmers, who are mostly women, and their families have been displaced from their fertile lands. Annual cereal production has reduced by 25 per cent from 2014 to 2017, leaving a nearly 500,000 metric tons deficit for 2018. Over 80 per cent of the population lives below the absolute poverty line and half the population will be severely food insecure between January and March 2019, similar to the same period in 2018. The number of people in IPC Phase 5 is expected to nearly double from the same period in 2018

Displacement and Migration

During the war and conflict in South Sudan populace were moved and displaced in various towns and states a total of 2 million were internally displaced while 2.2 million become refugees in neighboring countries of Kenya, Uganda, Sudan and Democratic Republic of Congo while 300,000 were refugees within South Sudan.

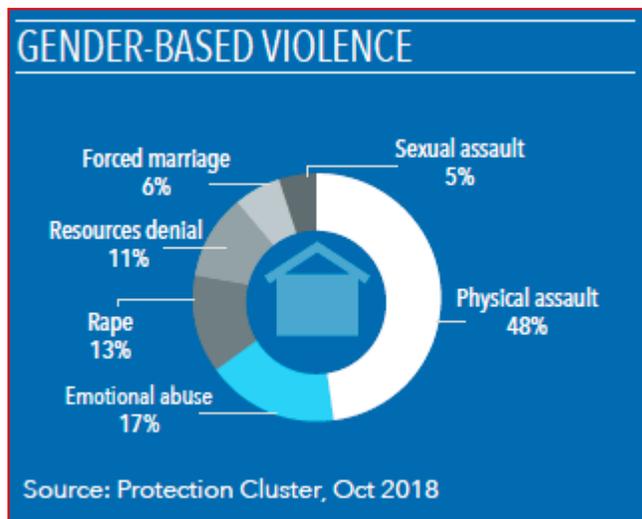
“The biggest problem and challenge we encounter daily is access. Insecurity and displacement have made it difficult for us to provide services.”

Faith based humanitarian organization staff

However, the cumulative effects of years of conflict, violence and destroyed livelihoods have left more than 7 million people or about two thirds of the population in dire need of some form of humanitarian assistance and protection in 2019 – the same proportion as in 2018. While the situation is no longer escalating at a rapid speed, the country remains in the grip of a serious humanitarian crisis

Limited access to assistance and protection

About 1.5 million people live in areas facing high levels of access constraints – places where armed hostilities, violence against aid workers and assets, and other access impediments render humanitarian activities severely restricted, or in some cases impossible. In 2018, violence against humanitarian personnel and assets consistently accounted for over half of all reported incidents. More than 500 aid workers were relocated due to insecurity, disrupting the provision of life-saving assistance and protection services to people in need for prolonged periods. Communities’ inability to access lifesaving support risks pushing women, men and children deeper into crisis. Many of the hardest to reach areas in Unity, Upper Nile and Western Bahr el Ghazal have alarming rates of food insecurity, malnutrition, and sexual and gender-based violence.



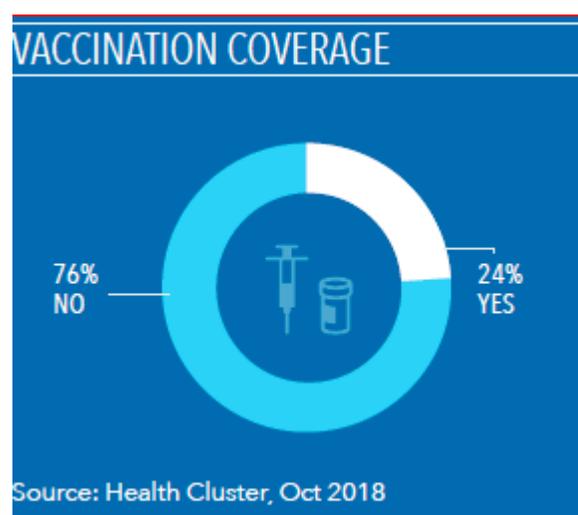
Shortage of food supplies – malnutrition and hunger

During protracted crisis of conflict and war in South Sudan clean water from a well can become contaminated with poor hygiene habits. The conflict compromised personal hygiene, food safety and water safety. The compromised health, hygiene and sanitation led to increased open defecation, increased waterborne and sanitation morbidities like diarrhoeas, dysentery, cholera, pneumonia and malaria. When conflict arises in any country or community women and children are mostly vulnerable. For the case of South Sudan in 2014 – 2018 women hygiene was compromised during puberty and menstrual. Other factor like shortage and congested social amenities for villagers increased risk and caseload of morbidities and mortalities. In South Sudan, exposure to indoor air pollution and use of unimproved source of drinking water were associated with increased risk of neonatal mortality.

Health

An estimated 4,472,000 South Sudanese women, men and children will not have access to sufficient healthcare services in 2019. Around 300,000 refugees face the same challenge. The prevailing health systems challenges are exacerbated by lack of access to potable water, infection prevention and control measures, healthcare waste management, extensive malnutrition and a threat of viral hemorrhagic disease, including Ebola. The number of people without access to healthcare represents a 7 per cent decrease from 2018. This is explained by preparedness considerations for overall increased disease burden including mortalities from severe acute malnutrition, 12 Ebola risk counties and additional IDP settlements in host communities. As portrayed by the adjacent severity map, Tambura, Yei, Nimule, Yambio, Lainya, Kajo-Keji, Morobo, Magwi and Juba are

among the locations of most concern for multiple disease burden, including high alert risks for Ebola. Ten counties are at risk of suffering a convergence of high Global Acute Malnutrition rates (>15 per cent), notable displacement, catastrophic food insecurity and disease. Displaced populations face the most complex challenges in accessing healthcare services. Children under 5 years are one of the most vulnerable to vaccine preventable diseases, owing to poor nutrition and low levels of immunity and immunization coverage. The coverage in 2017 and 2018 for all vaccine preventable diseases remained under 50 per cent, and as a consequence 42 per cent of children under 1 year are at risk of measles. Women of reproductive age face serious health risks and only about one in five childbirths involves a skilled health care worker. Survivors of gender-based violence lack access to adequate services. People with health issues like HIV/AIDS, tuberculosis, mental health, disabilities and non-communicable diseases are also largely being cut off from life-saving treatment.

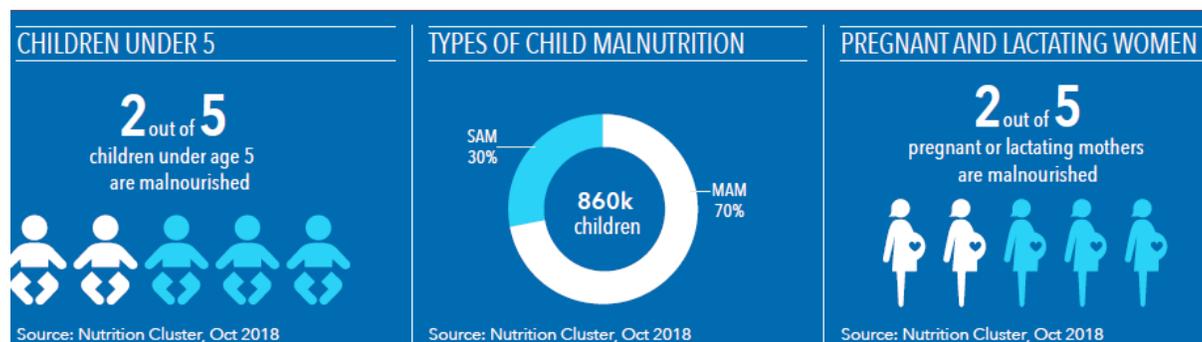


Drivers of need include displacement, malnutrition, high disease burden from vaccine preventable and communicable diseases and planning for the threat of Ebola. Seasonal outbreaks of communicable diseases including cholera and measles, with malaria continuing to be endemic, are posing a challenge to a health system which is already fragile. In 2018, some 500 attacks on healthcare services have been documented, including deaths of 115 healthcare workers, with extensive looting and damage of health infrastructure. Additionally, there are widespread shortages of essential medicines in health centres. Predictions from the IPC findings show that eight counties may go into catastrophic levels of food insecurity, which might contribute to, and be worsened by, disease. The high risk of Ebola in 12 counties demands stringent efforts to improve health security measures, failing which any spread of the disease could lead to an epidemic that affects areas across the country.

Nutrition

Some 860,169 children under the age of 5 years, nearly 596,944 pregnant and lactating mothers, and some 4,000 older people in Protection of Civilians (PoC) sites are estimated to be acutely malnourished. In addition, some 300,000 refugees will require nutrition assistance during the year. The number of people in need of emergency nutrition support decreased by 3 per cent from 2018. The overall situation of acute malnutrition slightly improved in 2018 with no county reporting extreme critical levels (Global Acute Malnutrition above 30 per cent) of acute malnutrition. As seen from the adjacent severity map, areas of most concern include Greater Bahr el Ghazal and Greater Upper Nile, which continue to have the highest burden of acute malnutrition for the fourth consecutive year. Emerging needs and vulnerability are also observed in Greater Equatorias, especially Eastern Equatoria, and in Lakes. In 2018, 64 per cent of SMART surveys reported critical levels of acute malnutrition compared with 85 per cent during the same period in 2017. The most recent IPC) for acute malnutrition also indicated a decrease in number of counties classified with critical nutrition situation from 43 in September 2017, to 31 during the same period in 2018. Still, 76 per cent of the 21 repeat SMART surveys conducted in the same period and locations in 2017 and 2018 depicted critical levels of acute malnutrition. The Food Security and Nutrition Monitoring System surveys also reported a concerning nutrition situation in most parts of the country. Children below the age of 5 years, pregnant and lactating women remain the most vulnerable to acute malnutrition due to their increased biological and physiological needs. Other vulnerable groups include the elderly and people living with HIV/AIDS and tuberculosis.

The level of acute malnutrition is attributed to severe food insecurity, poor access to health and nutrition services, high morbidity, extremely poor diets and poor sanitation



and hygiene.⁷⁰ In 2018, persistent conflict in Great Upper Nile, Western Bahr el Ghazal and parts of Greater Equatorias hampered the provision of nutrition services in some locations. This left 5.1 per cent of targeted

children in 2018, at national level, without access to nutrition support between January and June 2018, aggravating their needs. The risk of acute malnutrition increases among children in distressed conditions, such as those living in active conflict or access-restricted areas, and GBV related safety risks can have a significant impact on communities' ability to access life-saving nutrition services. Poor health coverage, sub-optimal childcare and feeding practices, and prevalence of disease outbreaks such as malaria and acute watery diarrhea also contribute to high nutrition needs. When assessed in mid-2018, only 40 per cent of nutrition treatment sites had access to safe water.

Protection

In 2019, about 5,725,000 million South Sudanese women, men and children face protection risks and violations due to widespread conflict both causing, and compounded, by multiple shocks and stresses. These shocks and stresses include food insecurity, destitution, disease, natural disaster and the absence of essential services. The civilian population continues to be subject to deliberate attacks, conflict-related sexual violence, abductions, forced recruitment including boys and girls, cruel and unusual treatment, destruction of housing and property, forced displacement and family separation. In addition, some 300,000 refugees will have protection needs in 2019.

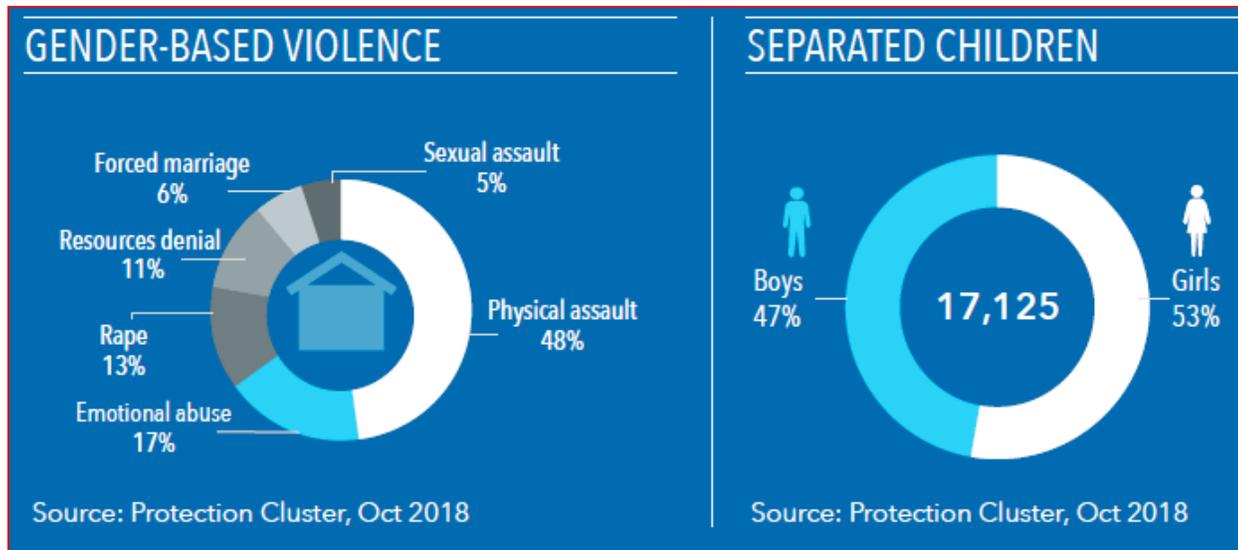
As portrayed in the adjacent severity map, the greatest areas of concern in 2019 are in Central and Southern Unity, Central and Eastern Jonglei, parts of Upper Nile, Western Bahr el Ghazal (particularly Wau county), and Yei. Most needs remain the same as in 2018 in terms of general protection, child protection, GBV, and mine action needs. The main difference from 2018 relates to the heightened needs for addressing housing, land and property issues and durable solutions, as well as preparedness and resilience capacity building. While people of all ages, genders and diversities face some protection risk, the most severely affected are persons with specific vulnerabilities or needs, including IDPs, people with disabilities, survivors of GBV, and women, elderly and children. The majority of IDPs, approximately 85 per cent of whom are women and children, are integrated with host communities, staying in informal settlements, or hiding in hard-to-reach areas across the country. They have fewer coping mechanisms to mitigate the multiple risks they face and to address their protection needs.

Gender-Based Violence

Violence, abuse and exploitation remain the greatest protection risks to women and girls, reflecting continued gender inequalities exacerbated by the prolonged crisis in South Sudan. Furthermore, widespread GBV constitutes a significant impediment to women's participation in recovery and development. In the first half of 2018, some 2,300 cases of GBV were reported, a 72 per cent increase in reporting of GBV compared to same period in 2017. During the same period, 97 per cent of reported cases in South Sudan affected women and girls, and 21 per cent of survivors were children, of which 79 per cent were adolescent girls, consistent with previous years. Physical violence, commonly by an intimate partner or someone known by the survivor, continues to be the most common form of GBV, accounting for 42 per cent of reported cases. Sexual violence constitutes 20 per cent of reported cases. GBV continues to be severely under-reported due to stigma, the survivors are often abandoned, with most receiving no legal assistance to help them seek justice, and with children born out of rape facing multiple protection risks. Despite preventive actions by humanitarian actors, all forms of GBV continue to be reported in and near Protection of Civilians (PoC) sites as young men and armed elements acting with impunity often prey on, sexually assault, and loot from women and girls who venture to fetch firewood, cultivate crops or access markets.

Child Protection

Approximately 61 per cent of the affected populations are children, of which 1.9 million boys and girls will face acute and severe protection risks in 2019. Boys and girls continue to be exposed to threats of recruitment, psycho-social distress, family separation, abuse, neglect, exploitation, and sexual and physical violence. Since 2013, over 100,000 children in South Sudan have been affected by 3,500 verified Monitoring and Reporting Mechanism incidents, of which killing and maiming accounted for 12 per cent; denial of humanitarian access 10 per cent; rape and other grave sexual violence accounted for 8 per cent; abduction 8 per cent; and attacks on schools and hospitals 7 per cent. Over 19,000 children are estimated to have been recruited to armed forces and armed groups; 955 children (691 boys and 264 girls) have been released so far in 2018. Since 2013, more than 1 million children have been affected by psycho-social distress, whereas 17,125 children, of which 9,076 girls and 8,049 boys, are still in need of family tracing and reunification.

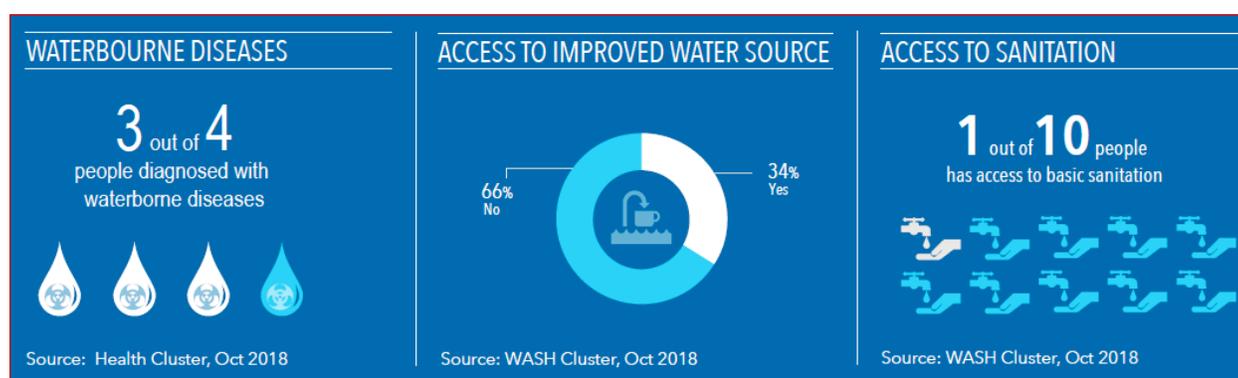


Water, Sanitation and Hygiene

An estimated 5,712,000 South Sudanese women, men and children will not have access to adequate water, sanitation and hygiene (WASH) in 2019. In addition, some 300,000 refugees lack sufficient WASH conditions. The number of people requiring emergency WASH services in 2019 increased by 7 per cent from the previous year, explained by the expansion of WASH data with a higher reliability and more detailed analysis. As the adjacent severity map shows, WASH needs are the highest in Canal, Fangak and Pibor in Jonglei, Awerial in Lakes, Panyijar in Unity, and Ikotos in Eastern Equatoria. While Awerial and Fangak remained two counties with the highest WASH needs, they represent a shift from last year that saw Fashoda of Upper Nile, Ayod of Jonglei, Rubkona of Unity and Juba of Central Equatoria. Women and girls face increased risk of harassment, assault and sexual violence when collecting water and using communal latrines, and access to menstrual hygiene products. Appropriate and dignified washing locations remains their key need. IDPs in Protection of Civilians (PoC) sites do not have sufficient hygiene and sanitation and are at risk of disease outbreaks in the congested conditions. WASH needs are also high among IDPs in non-camp settings and among their already stretched host communities.

Only 29 per cent of the population has access to a borehole, tap stand or water yard within a maximum 30-minute distance without facing protection concerns. The remaining two thirds of the population are required to take greater lengths to access water or are reliant on surface water or unprotected water sources. More than 90 per cent of the population practices open defecation, either because they do not have access to, or are not accustomed to using a basic sanitation facility. Only 13 per cent of the population has access to WASH non-

food items, such as jerry cans, soap and mosquito nets. Poor access to WASH services and goods combined with high levels of food insecurity has a detrimental impact on the health of the most vulnerable, as seen through the high prevalence of malnutrition and water-borne diseases. For example, 75 per cent of the population reported households with members that had been self-diagnosed with a water-borne illness in the previous two-week period. The conflict has continued to drive people's WASH needs, from blocking or destruction of WASH infrastructure to limiting WASH commodities in the market. Insecurity at times prevents humanitarian actors from accessing areas that have high WASH needs, while the presence of armed groups can deter civilians from accessing existing WASH infrastructure.



Conclusion

Even with the advent of the revitalized peace agreement in late 2018 and the promise of better times to come, the cumulative effects of the conflict have translated to sustained poverty and persistent humanitarian and protection needs for more than 7 million people in South Sudan. This is particularly the case in the Equatorias, Western Bahr el Ghazal, Jonglei, Upper Nile and Unity, where drivers and multipliers of crisis have remained present over time. These include insecurity and violence, local and inter communal conflicts, ongoing displacement, sparse basic services, disease, climate shocks, economic instability and insecure access to food and livelihoods. Yet, prospects for peace and development may improve and begin to generate some confidence for durable solutions, including returns, relocations or local integrations, although their scope, scale and flows remain difficult to project.

This study suggested that the condition and circumstances in which the child is born into, and lives with, play a role in under-five mortality, such as higher mortality among children born to teenage mothers. Integrating equitable healthcare service delivery as frontline service during crisis to all disadvantaged populations of children in both urban and rural areas is essential but remains a challenge.

The possible effect of conflict and war on health system will inevitably cause loss of lives, physical injuries, widespread mental distress, a worsening of existent malnutrition (particularly among children) and outbreaks of communicable diseases. Internally displaced and refugee populations are at particular risk. Common, preventable diseases such as diarrhoea, threaten life. Chronic illnesses that can normally be treated lead to severe suffering. The dangers of pregnancy and childbirth are amplified.

Similarity between the South Sudan, Somali and Iraq Conflict to health system it resulted to reduced people's personal security and restrict their access to food, medicines and medical supplies, clean water, sanitation, shelter and health services. People's coping capacities are already severely strained: many will find the privations of war overwhelming and need both economic and social support.

The pattern of conflict has an immediate impact on civilian suffering. If water supplies are damaged, sanitation impaired, shelter damaged, electricity cut, or health services impaired, mortality rates start to rise. If these risks are to be minimized, those involved in conflict must give priority to ensuring that civilians can access these basic needs. If access is impaired, it must be restored as rapidly as possible. Population movements and crowding in temporary shelters increase the risk of waterborne disease outbreaks such as cholera, typhoid and dysentery. In refugee and internally displaced persons' camps during (and after) previous wars in Iraq, diarrheal diseases accounted for between 25% and 40% of deaths in the acute phase of the emergency. 80% of these deaths occurred in children under two year of age.

In the longer term, disruption of surveillance for monitoring disease in the general population, breakdown of public health programmes, damage to health facilities and malfunction of water and sanitation systems will lead to increased levels of illness, further suffering and higher death rates. The incidence of acute lower respiratory infections, diarrhoea and vaccine-preventable infections will increase. There will be outbreaks of communicable diseases – including measles, meningococcal meningitis, pertussis and diphtheria. New disease patterns - including conditions that have previously been controlled.

Recommendation

In an event of protracted conflict and war in any country. Learning from the better humanitarian response strategies will require that frontline humanitarian, emergencies and development project and organization should address on:

Ensure adequate, safe drinking water and access to sanitation;

Provide medical supplies and treatment for people affected by trauma and other injuries;

Prevent outbreaks of communicable diseases such as cholera, typhoid or measles;

Making sure those adequate stocks of essential drugs, medicines and medical supplies for common conditions are in position;

Provide access to basic health care for persons with chronic conditions which need continuing treatment (e.g. renal dialysis and cancer care);

Attend special needs of vulnerable populations, including pregnant women, children, the elderly, and those who are chronically ill or disabled.

Internally displaced or refugee populations face additional risks to their security and health: they are more vulnerable to disease. Those involved in conflict, as well as organizations responsible for humanitarian assistance, need to liaise with local authorities to manage the additional risks faced by such populations.

A coordinated, flexible, rapid and effective response reflecting best health care practice, in line with the policies and strategies of the national government, and based on the most up-to-date information on population needs

Authors Contribution

Corresponding author devised the project, the main conceptual ideas and proof outline. 2nd author worked in depth documentation review and literature review. Author 3rd and 4th authors provide the face and blind review of the document including editing the manuscript in line with publisher guideline.

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106) 'Areas of focus' are more qualitative, based on both severity and access mapping, and other potential risks that merit a particular focus by the humanitarian community, for example on partner capacity and presence or on advocacy for access to enable more robust and consistent data collection and response.