THE MATERNAL & CHILD HEALTH STATUS OF INTERNALLY DISPLACED PERSONS IN DARFUR, SUDAN

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Primary Reader

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Secondary Reader
Abbreviations

AU  African Union
ARI  Acute Respiratory Infection
CMR  Crude Mortality Rate
EmOC  Emergency Obstetric Care
GAM  Global Acute Malnutrition
IAWG  Inter-Agency Working Group
ICPD  International Conference on Population and Development
IDP  Internally Displaced Person
JEM  Justice and Equality Movement
LBW  Low Birth Weight
MDG  Millennium Development Goal
MMR  Maternal Mortality Ratio
MSF  Medecins Sans Frontieres
NGO  Non-Governmental Organization
NNM  Neonatal Mortality
PNM  Perinatal Mortality
SAM  Severe Acute Malnutrition
SBA  Skilled Birth Attendant
SLA  Sudan Liberation Army
UN  United Nations
UNHCR  United Nations High Commission for Refugees
UNICEF  United Nations Children’s Fund
WHO  World Health Organization
WFP  World Food Program
Abstract

The purpose of this paper is to assess the state of maternal and child health of internally displaced persons (IDP) in Darfur, Sudan. It will examine the impact of conflict and its direct and indirect effects on maternal and child health outcomes. A review of the literature indicates that the levels of maternal mortality, neonatal mortality, under-5 mortality, and malnutrition resulting from conflict in Darfur are unacceptable by any public health standard. Humanitarian aid must be distributed far more effectively if rates of hunger and death are to be brought down to conventional levels. The international community must respond to the public health challenges of the IDP community and address the extent and severity of human rights violations in Darfur’s current complex emergency.
Introduction

The crisis in Darfur has been described as the worst humanitarian crisis in the world by the United Nations (UN), citing widespread human rights violations.\(^i\) The picture of civil war in the world today drastically differs from civil wars of the early twentieth century, with the major consequences of war being suffered by civilians, not by military personnel. At the beginning of the twentieth century, 90% of victims were soldiers.\(^ii\) Today, nearly 90% of armed conflict causalities are civilians.\(^ii\) This is the picture of the conflict in Darfur, Sudan and has significant implications for international public policy in complex emergencies.

The purpose of this paper is to assess the state of maternal and child health of internally displaced persons (IDP) in Darfur, Sudan. It will examine the impact of conflict in Darfur and its direct and indirect effects on maternal and child health outcomes. After seven years of ongoing conflict, IDPs in Darfur are not receiving critical public health interventions and are experiencing consistently elevated mortality rates. Women and children are disproportionately affected, with crude mortality rates (CMR) indicating elevated mortality. CMR is the mortality rate of all causes of death for a population during a specific time period. In a complex emergency, the emergency phase is defined by a CMR of one or more deaths per 10,000 persons per day. The CMR in Darfur IDP camps is six times the African average \([0.5]\) and three times the level \([0.1]\) indicating “elevated mortality.”\(^iii\)

In Darfur, internally displaced women do not have adequate access to reproductive health services and are experiencing elevated maternal mortality rates - 1,700 maternal deaths per 100,000 live births.\(^iv\) Children under the age of five are
suffering from avoidable infectious diseases in IDP camps (diarrhea, malnutrition, acute respiratory infections, malaria, and measles) and are dying at a CMR of more than 5 deaths per 10,000 per day. This is well above the mortality threshold for the emergency phase of a complex situation.

This paper will focus on the health needs of IDPs in Darfur, evaluating their unique circumstances. They are still within their nation’s borders placing them at increased risk of violence, conflict, and inadequate humanitarian assistance. The core purpose of this paper is to summarize the status of maternal and child health of the internally displaced and propose an agenda for action for the international community. In Sudan, those who make political decisions to continue or resolve conflict through peace agreements are often relatively immune to the impact of conflicts. The majority of war’s repercussions are experienced by its nation’s civilians, who do not have a voice in political decisions. It is, therefore, necessary for the international community to be advocates for the victims of Darfur.

**Crisis in Southern Sudan**

The crisis in Darfur has been the result of civil war, primarily between northern and southern Sudan, and has spanned several decades. Conflicts from 1955 through 1972 and from 1983 to present have left more than 1.5 million southern Sudanese dead. Today, the North-South civil war in Sudan is primarily occurring in the western region of Sudan, known as Darfur. The crisis erupted in southern Sudan in 2003 with the rise of two rebel opposition groups against Sudan’s central government – the Sudan Liberation Army (SLA) and the Justice and Equality Movement (JEM). Conflict escalated when rebel insurgent groups attacked government military personnel to protest the Sudanese
government’s failure to protect citizens in southern Sudan from attacks by nomadic groups. In response to the insurgency, the regime of Sudanese President Omar al-Bashir and its allied militia, the Janjaweed, initiated a genocide campaign against civilians of similar ethnic backgrounds as the rebels.\textsuperscript{viii}

Since 2003, the Sudanese government and Arab militias have led a war against local populations in Darfur. The Darfur conflict has been characterized by mass population displacement, widespread and systematic rape of women, severe violence, and disintegration of the region’s health system.\textsuperscript{vi} The 2006 peace agreement has been widely accepted as a failure. The British Broadcasting Company has reported, “Darfur now resembles Somalia – with warlords recruiting private militias to extort money, wield power and terrorize civilians.”\textsuperscript{ix} The Sudanese government continues to resist foreign involvement, refusing additional African Union (AU) or UN troops into the region, restricting humanitarian assistance to the Darfur region.

The crisis in Darfur has resulted in the displacement of more than 1.8 million people within the Darfur region (25% of the Darfur population).\textsuperscript{x} Since 2003, the UN estimates the death toll at approximately 300,000, yet a former UN undersecretary general stated the death toll to be no less than 400,000 persons.\textsuperscript{xi} Amongst all of this conflict, exists a humanitarian crisis in which women and children remain most vulnerable. The humanitarian aid community remains strained by continuing violence and conflict in south and western Darfur.
Who are Refugees?

According to the United States Committee for Refugees, there are currently 37 million refugees, asylum-seekers, and internally displaced persons throughout the world.\textsuperscript{xii} The 1951 United Nations Convention Relating to the Status of Refugees defines a ‘refugee’ as a person who,

\begin{quote}
“owes to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality, and is unable to or, owing to such fear, is unwilling to avail himself the protection of that country or return there because there is a fear or persecution…”\textsuperscript{xiii}
\end{quote}

The reasons for persecution must be because of one of the five grounds listed in Article 1A(2) of the Refugee Convention, being race, religion, nationality, membership of a particular social group, or political opinion.\textsuperscript{xiii} The distinction between refugees and IDPs is that refugees have left their home country and crossed international borders to seek refugee in a nation other their own. Refugees, unlike IDPs, are protected under international law. Once a refugee crosses an international border, they are under the protection of the United Nations High Commission for Refugees (UNHCR). The UN established the UNHCR agency with the mandate to protect refugees and coordinate international action to assist refugees worldwide. Designated refugee status, and the protection it affords, does not equally apply to internally displaced persons.

Who are Internally Displaced Persons?

Internally displaced persons are individuals who are seeking refugee from conflict within their own country. IDPs do not cross international borders and remain in the epicenter of the conflict. Currently, there are 26 million IDPs displaced by conflict in 52
countries worldwide. More than half of this population is fleeing conflict in three nations: Iraq, Colombia, and Sudan. Current estimates of the IDP population within Darfur range between 1.8 million to 2.4 million persons.

In contrast to refugees, IDPs in Darfur are not eligible for protection under international refugee law because they remain within their country and under the control of the Sudanese government. Under international law, the native country (i.e., Sudan) is responsible for the assistance and protection of its internally displaced population. Guiding Principles 28-30 outline the rights of IDPs to durable solutions, stating that it is the responsibility of national authorities to protect its citizens. The United Nations Guiding Principles on Internal Displacement states that IDPs have a “right to a durable solution.” However, the international community is not responsible for the protection of the internally displaced. Humanitarian assistance can be provided by stakeholders, such as the World Health Organization (WHO) or non-governmental organizations (NGO), to assist in the establishment of durable solutions for the internally displaced.

There is no international agency with a mandate to protect and assist the internally displaced. Although they are fleeing conflict, they are still within their nations’ borders and under their governments’ jurisdictions, which may be the origin of violence and conflict, such as in Darfur. For the displaced people inside Darfur, there is no international agency with the authority or responsibility to come into Sudan to protect and assist them. Without an agency with an international mandate for assistance and protection, IDPs are at risk of inadequate aid assistance and adverse health outcomes. IDPs are at greater risk of experiencing adverse health outcomes secondary to war and conflict. The lack of refugee status for IDP communities severely constricts the
response of international aid agencies, and majority IDP communities are at the mercy of their state government for humanitarian aid. This is of an increased concern in a humanitarian crisis where the in-country government is involved and/or the cause of the crisis itself, such as in Darfur, Sudan.

Lack of international protection for IDPs results in issues of accessibility and inequitable distribution of services and humanitarian aid, with refugees in stable camps more likely to have access to maternal and child health services than their IDP counterparts. UN agencies and NGOs are able to access refugee camps in neighboring Chad, supplying refugees with food, shelter, and medical care. Ongoing conflict and the legal status of IDPs prevent relief agencies from reaching the internally displaced within Darfur. As seen in Figure 1, as many as 2.4 million Darfuris have fled their homes and now reside in precarious IDP camps. Another 300,000 refugees have taken refuge in Chad.
Figure 1: Refugee and IDP Population Estimates, Darfur

It is important to note that three-quarters of all IDPs are women and children, with 20% being women of reproductive age. These statistics have serious implications for maternal and child health in humanitarian crisis – Darfur being no exception. As a result of all these factors, IDPs are not receiving the urgent humanitarian assistance they desperately need, resulting in consistently elevated mortality rates from disease-related deaths.

Mortality in Darfur

As outlined by the WHO, a complex emergency is a situation in which efforts to drastically restructure a state or social group lead to civil or international war, resulting in
the violent death of large civilian populations and in their displacement into camps with exposure to infectious disease, malnutrition, dehydration, and possible violence.\textsuperscript{xviii} The emergency phase of a complex emergency is defined as a Crude Mortality Rate (CMR) of one or more deaths per 10,000 persons per day,\textsuperscript{xix} with the majority of deaths being contributable to injury related to violence and infectious diseases, such as diarrheal infections, measles, malaria, and respiratory infections.\textsuperscript{xx, xxi} In the post-emergency phase of a typical complex emergency, the CMR begins to decline, primarily as a result of increased infrastructure and public health programs to decrease the incidence of infectious disease.\textsuperscript{xix}

In 2004, two research studies revealed that the combined CMR in Darfur is six times the African average [0.5] and three times the level [0.1] indicating “elevated mortality.”\textsuperscript{xiii} These surveys provide evidence that as of mid-2004, violence and disease in Darfur were generating approximately 15,000 deaths per month, or 500 deaths per day. A 2010 study by Degomme and Guha-Sapir investigated Sudanese conflict dynamics and its resulting effect on causes of mortality in Darfur. Their research revealed that displacement correlated with increased rates of deaths associated with diarrhea, but also with reduction in violent deaths.\textsuperscript{xxii} Although violence was the main cause of death during 2004, infectious diseases have been the leading cause of mortality since 2005, with displaced populations being the most susceptible.\textsuperscript{xxii} Any reduction in humanitarian assistance could lead to worsening mortality rates, as was the case between mid-2006 and mid-2007.

Mortality is one of the most appropriate dimension for assessing the violation of human rights in complex humanitarian emergencies. Mortality rates only capture one dimension of the human consequences of conflict, but are the most reliable measurements
of crisis and its impact on populations. To quantify mortality in Darfur, we will use CMR—deaths per 10,000 population per day—as an indicator of normal or excess mortality in the region. A CMR of 1.0 is identified as a formal threshold of elevated mortality by the United States Department of State. To evaluate the status of maternal and child health in Darfur, we will use and discuss the following indicators: maternal mortality, neonatal mortality, and under-five child mortality.

**Maternal Mortality**

Of the estimated 37 million displaced persons worldwide, approximately 20%, or 7 million, are women of reproductive age. Approximately 75% to 80% of all crisis-affected populations are women, children, and youth who are in need of maternal and child health services. Women fleeing violent conflict tend to be the most in-need for emergency reproductive health care, with increased numbers of rape victims, women with little to no access to obstetric services, and increased infections from sexually transmitted diseases. This urgent need for reproductive health care in refugee camps is more urgent as refugees are being displaced for prolonged periods of time. IDPs face additional barriers in accessing reproductive health due to a breakdown of pre-existing family support and their loss of income to pay for services.

The 10th revision of the “International Statistical Classification of Diseases and Related Health Problems” by the WHO defines a maternal death as “the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.” Although maternal
mortality is not a direct measure for human rights abuses, it is an important indicator of health inequalities between and within nations.\textsuperscript{1} There are significant health disparities in maternal health outcomes within Sudan. As of 2005, the maternal mortality ratio (MMR) (maternal deaths per 100,000 live births) in northern Sudan was 590 maternal deaths per 100,000 live births, in comparison to 1,700 maternal deaths per 100,000 live births in southern Sudan.\textsuperscript{xxv} Maternal mortality in southern Sudan has been exacerbated by ongoing violence, civil conflict, and population displacement. Currently, maternal mortality estimates for the three western states of Sudan do not exist, but are expected to exceed Southern Sudan’s rate of 1,700 maternal deaths, as these areas are the primary conflict regions.

The MMR of southern Sudan places the region in the top four most dangerous nations to give birth, preceded only by Sierra Leone (2,100), Afghanistan (1,800), and Niger (1,800).\textsuperscript{xii} Maternal mortality is unacceptably high in developing countries, and countries in conflict have the highest levels of maternal mortality in the world. Sierra Leone was a nation in conflict from 1991-2002, a time where women faced a 1:6 lifetime risk of dying from complications in pregnancy.\textsuperscript{xxvi} Women of Uganda and the Democratic Republic of Congo, both nations with ongoing conflict, have a lifetime risk of 1:13.\textsuperscript{xxvi}

A study by Haggaz et al. of the state of maternal health in Darfur revealed a maternal mortality ratio of 640/100,000 live births.\textsuperscript{xxvii} The most common cause of deaths were septicemia followed by pre-eclampsia/eclampsia, hemorrhage, malaria, and viral hepatitis [Figure 2]. Anemia, tetanus, heart disease, and ectopic pregnancy accounted for the other causes of death.

\textbf{Figure 2:} Causes of Maternal Mortality in Darfur, Sudan
It is important to note that this study was performed in a hospital-based facility, and does not adequately portray the causes of maternal deaths taking place outside hospital facilities. Data from 2006 shows that only 18% of births in Sudan were delivered at health facilities, showing that majority (76.5%) of births took place at home. Therefore, Figure 2 only depicts maternal causes of death in a hospital, and does not represent the larger proportion of women who have less access to higher-level obstetrical care. However, the data show that preventable causes are the leading causes of maternal death in this study.

All of these leading causes of maternal death in Darfur are preventable with basic medical care. The research of Haggaz et al. shows that even within the medical care of hospital facilities, women are dying of preventable causes, mainly sepsis, eclampsia, malaria and viral hepatitis. Pre- and post-delivery sepsis is treatable with the availability of antibiotics, and mostly preventable with the use of sterile birthing kits and access to quality care. Eclampsia, malaria, and viral hepatitis can be treated with early detection and treatment. Displaced women are at particular risk of increased rates of maternal
mortality, unmet need for family planning services, complications from unsafe abortion, gender-based violence, and contraction of sexually transmitted diseases, including HIV/AIDS. The ongoing conflict is preventing urgent medical care from reaching IDP women in Darfur.

Despite relief and development work by the UN and NGOs, substantial gaps remain in the maternal health of internally displaced Darfuri women. In the Millennium Development Goal (MDG) framework, two indicators are proposed for monitoring progress towards maternal health: (a) percentage of births attended by a skilled birth attendant [Figure 3], and (b) percentage of births delivered by Cesarean section [Figure 4]. The proportion of births attended by skilled health personnel is a key indicator (Indicator 5.2) in measuring progress in achieving MDG 5.A – reducing the maternal mortality rate by three-quarters by 2015.

Figure 3: Skilled Attendance at delivery, Darfur

Skilled attendance at all births is considered to be the single most critical intervention for ensuring safe motherhood, because it hastens the timely delivery of emergency obstetric and newborn care when life-threatening complications arise. A skilled birth attendant (SBA) is a health professional – such as a midwife, physician, or nurse – who has been educated and trained to proficiency in the skills to manage uncomplicated and complicated pregnancies, childbirth, and postpartum periods. At the national level, 50% of births in Sudan are attended by a SBA [Figure 3]. At the state level, health disparities are evident, with Darfur having one of the lowest coverage rates. The percentages of births attended by a SBA are suboptimal in South and West Darfur, with 30.6% and 31.6% births attended by a SBA respectively. Lack of skilled attendance at birth results in increased mortality from preventable causes as seen in Figure 2.

Figure 4 displays the percentage of births in Sudan delivered by Caesarean section. In 2006, the Sudanese national level of births delivered by C-section was 4.5%. As seen in Figure 4, all regions of Darfur had the lowest rates of C-sections: West Darfur 0.8%, North Darfur 1.5%, and South Darfur 1.9%.

Figure 4: Percentage of births delivered by C-Section (2006)
The data suggest unacceptably low rates of utilization and access to Emergency Obstetric Care (EmOC) facilities, resulting in barriers to access life-saving interventions, such as Caesarean sections. Access to EmOC facilities and skilled care during pregnancy, birth, and the postpartum period are necessary for improvements in neonatal and maternal health. Internally displaced Darfuri women are a particularly vulnerable population given the few resources for reproductive health services. The internally displaced population in Darfur has inadequate health systems and services, and remains dependent upon the precarious charity of the Sudanese government. Conflict threatens the stability of public health and is reversing progress that has been made in achieving the Millennium Development Goals.

In 2004, the Inter-Agency Working Group (IAWG) in *Reproductive Health in Refugee Situations* performed an evaluation of reproductive health services in crisis settings, and identified serious gaps in the provision and distribution of reproductive health services between refugee camps and IDP settlements. The IAWG report noted the majority of advancements in service coverage have been concentrated in stable refugee camps. As outlined in the Program of Action of the International Conference on Population and Development (ICPD), reproductive health services include: family planning counseling, education, information, and services; education and services for prenatal care; safe delivery and postnatal care; infant and women’s health care; prevention and appropriate treatment of infertility; abortion care; treatment of sexually transmitted infections and HIV/AIDS; and active discouragement of harmful, traditional practices.
The 1994 ICPD Program of Action specifically declared reproductive health as a human right, and included displaced populations in its affirmation of the link between human rights treaty provisions and reproductive rights. However, internally displaced women have little capacity to practice their rights to reproductive health. Conflict zones such as Darfur consist of poverty, interrupted access to healthcare resources, stress, and poor nutritional support. The combination of destroyed social networks and lack of healthcare infrastructure places displaced women and their newborns at an increased risk of dying in the perinatal period. If the right of health is to be obtained by internally displaced women, governments and humanitarian agencies must establish emergency obstetric services within reach of IDP camps and include transportation to clinic sites.

In developing nations, newborn and infant mortality rates mirror the maternal mortality rates, with the majority of infant deaths occurring in the same areas. Investing in maternal health has numerous implications not only for women, but for the health of their children as well. When their mothers die, the likelihood of infant survival is drastically reduced. Although the causes of maternal and infant mortality differ, the basic interventions for saving the lives of both mothers and newborns are the same. Providing basic support and skilled attendance at birth are the most effective ways to dramatically reduce the number of neonatal and maternal deaths throughout Sub-Saharan Africa.

**Neonatal Mortality in Darfur**

During times of conflict, increased rates of neonatal mortality and preterm deliveries occur due to destroyed health infrastructure, malnutrition, stress factors, and the breakdown of the healthcare system. Research has shown that neonatal mortality
typically increases by 13% during a typical five-year war. However, in Darfur, the “war effect” has been persistent with neonatal mortality rates remaining 11% above the baseline since 2003.\textsuperscript{vi}

Neonatal mortality (NNM) is defined as the number of live births who died within the first seven days after birth per 1,000 live births.\textsuperscript{iv} Perinatal mortality (PNM) is defined as the number of deaths of newborns born after or at 28 weeks of gestation until the end of the day seven per 1,000 total births.\textsuperscript{iv} Between 1985-1990, Sudan made substantial progress in perinatal health, with PNM rates reduced by almost one-third in a ten-year period.\textsuperscript{xxxvii}

\textbf{Figure 5}: Neonatal and Post-neonatal Mortality Rates in Sudan, 1975-2006
Despite this progress, data from the Sudan Household Health Survey (2006) revealed that both neonatal and perinatal mortality rates remained largely unchanged from 1975, with PNM sharply increasing after 1990 and neonatal mortality steadily increasing since the 1970s [Figure 5].

In 1983, the sharp increase in PNM directly correlates with the re-initiation of civil conflict within the country.

Low birth weight (LBW) is an important indicator of the state of obstetric care and the health status of a population. LBW is a major determinant of neonatal mortality and morbidity, being highly associated with increased risk of neonatal mortality. If LBW in neonates can be reduced by two-thirds by 2015, it would be an important contributor to MDG4 in reducing child mortality worldwide. Studies in Sudan have shown that the main risk factors of LBW neonates were lack of antenatal care and maternal anemia. Prior to the Darfur crisis, utilization and access to antenatal care services in South and West Darfur were comparable to Northern Darfur averages.
Prior to the conflict, 70.9% of women in Sudan received ANC services from skilled providers in 1990. In 2006, only 54.6% of women in West Darfur received at least one antenatal visit. The conflict in Darfur has severely reversed maternal health progress in Sudan. The majority of LBW neonates and maternal anemia cases could be prevented with increased access and utilization of ANC services. A study by Elhassan et al. in Sudan revealed that anemic women were nine times more likely to deliver LBW babies than non-anemic women. Additionally, anemia has been reported to be associated with fetal anemia and stillbirth in eastern Sudan.\(^{\text{xl}}\)

Of the four million neonatal deaths worldwide, 60% are preventable through known interventions. Availability of immediate newborn care would reduce NMR by 15%; routine postnatal care by 10%; extra care of low-birth weight infants by 10%; and management of infections by 15%. However, the women of Darfur do not have access to medical care nor to simple interventions known to curtail maternal and neonatal mortality. Lack of humanitarian aid, simple public health interventions, and medical care are driving forces behind the rising under-five child mortality rate in Darfur.

**Under-Five Mortality**

Prior to the crisis, levels of child mortality in Darfur were comparable or better than other states within Sudan. However, since the eruption of the crisis in 2003, under-five child mortality rates have increased dramatically, primarily due to the increase of undernutrition rates in this population. In refugee and IDP emergencies, the provision of food, shelter, sanitation, and access to clean water and primary health care are priority activities. These interventions are critical in combating major killers in IDP camps, particularly diarrhea, malnutrition, measles, acute respiratory infections, and malaria.
However, IDP camps in Darfur are not receiving these critical interventions, and children under the age of five are suffering avoidable illness and mortality rates above emergency markers.

An epidemiological study by Grandesso et al. performed assessments of mortality and nutritional status at three IDP camp sites in South Darfur: Kaas, Kalma, and Muhajiria. Surveys were performed between August and September 2004. Crude mortality rates at all three sites were considerable higher than the 1 per 10,000 population per day that is recognized internationally as defining an emergency situation and 4 to 6 times the expected rate in sub-Saharan Africa populations (CMR, 0.5). In both Kass and Kalma, the under five-year mortality rates exceeded the 2 per 10,000 per day used as the emergency benchmark [Table 1]. As seen in Table 1, survey reports by Medecins Sans Frontieres (MSF) and WHO report under-five CMR in IDP camps between 2.9 and 1.7 deaths per 10,000 per day.

**Table 1**: Crude Under-Five Mortality Rates, MSR & WHO Surveys 2004

<table>
<thead>
<tr>
<th>Location</th>
<th>Year</th>
<th>Survey of:</th>
<th>Crude Under-5 Mortality Rate (per 10,000 population per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kass</td>
<td>2004</td>
<td>Epicentre, MSF</td>
<td>5.9</td>
</tr>
<tr>
<td>Muhajiria</td>
<td>2004</td>
<td>Epicentre, MSF</td>
<td>2.9</td>
</tr>
<tr>
<td>Kalma</td>
<td>2004</td>
<td>WHO, Epiet</td>
<td>11.7</td>
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**Table 2**: Under-Five Mortality Rates (per 1,000 per year)

<table>
<thead>
<tr>
<th>Location</th>
<th>1999</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Darfur</td>
<td>101</td>
<td>91</td>
<td>55</td>
</tr>
<tr>
<td>South Darfur</td>
<td>96</td>
<td>215 (IDP Camps)</td>
<td>95 (IDP Camps)</td>
</tr>
<tr>
<td>West Darfur</td>
<td>104</td>
<td>113</td>
<td>33</td>
</tr>
</tbody>
</table>

In Kaas and Kalma, the majority of deaths were the result of medical causes (80% and 90% of deaths, respectively). Diarrheal diseases were responsible for 25% and 47% of all deaths in Kaas and Kalma, affecting mainly children under-five and the elderly. Additionally, the prevalence of acute malnutrition was extremely high in Kalma [Table 1], where 24% of children under-five years of age were affected, with more than 10% of cases being defined as “severe.” Malnutrition in Kalma was well above the “critical” threshold of 15%. Grandesso et al. reports that IDPs in Kalma have no access to cultivated land or to food other than that provided through international agencies’ food distribution, which is sporadic. Efforts by humanitarian and governmental agencies are urgently needed to prevent immeasurable losses of life in these regions.

**Figure 6**: Under-Five Mortality Rates (per 1,000 per year)

*Note: South Darfur (orange) represent IDP camps’ under-five mortality levels

In 2007, global malnutrition rates in Darfur rose above the emergency threshold at 16.1%.\textsuperscript{xliv} The Darfur Nutrition Surveys performed by UNICEF in 2006-2007 evaluated the nutritional status of children in six regions, two in North Darfur, three in South Darfur, and one in West Darfur [Figure 7].\textsuperscript{xliv} Global Acute Malnutrition (GAM) rates exceeded the emergency threshold of 15% in all six regions.\textsuperscript{xliv} Rates of Severe Acute Malnutrition (SAM) ranged from 1.4% to 2.8%. UNICEF reports that GAM rates are higher than those found in the same regions in 2006.\textsuperscript{xliv} This time period coincides with the reduction of half of the survival rations provided by the World Food Program (WFP).

Nearly two million people in Darfur are reliant on the food distributions by the WFP, which is their only resource to ensure their survival. A report by MSF indicated even higher levels – with the incidence of SAM at 3.6% in Taiba camp and overall malnutrition at 14% in March 2006.

**Figure 7**: SAM %, GAM % in Darfur IDP Camps, 2007

As previously mentioned, CMR is the mortality rate of all causes of death for a population during a specific time period. A crude mortality rate above one death per 10,000 persons per day is defined as a humanitarian emergency. The CMR for children under the age of five were above alert levels in two surveys (Otash Camp and Kass in South Darfur). The primary causes of death were diarrhea and acute respiratory infections (ARI). GAM rates for children age 6-29 and 30-59 months continues to be elevated, clearly demonstrating the need for concerted efforts to address sub-optimal infant and young child feeding practices.\textsuperscript{xlv}

Severe epidemics of diarrhea and malnutrition peaked with a prevalence rate of 15.8/10,000 per day in June, while the crude death rate dropped to almost the national average of 0.3/10,000 per day by the end of the year before once again reaching a high value (5.0/10,000 per day) in 2003.\textsuperscript{xlv} The peaks of under-five mortality and crude death rates are extraordinary high, in comparison to the crisis threshold of 2/10,000 per day.\textsuperscript{xlv} Additional surveys have reported high rates of acute malnutrition between 2001 and 2003, exceeding the already high national average of 16\% to 35\% in the regions of Jonglei and North Bahr Al Ghazal. Guha-Sapir et al. reports both under-five child mortality and wasting from malnutrition increased after 2004, when ethnic cleansing by the government began.\textsuperscript{xlv} In May 2004, IDP camps reported increasing high crude and under-five death rates in Al Guinaina and West Darfur with 5.6/10,000 per day and 7.5/10,000 per day, respectively – all well above the emergency threshold.\textsuperscript{xlv}

\textbf{Figure 8} shows the under-five death rate and prevalence of global acute malnutrition for the conflict-affected region in southern Sudan between the years of 2000–2004.\textsuperscript{xlv} It displays the correlation between acute malnutrition and under-five
mortality. In 2004, the IDP population in this area was experiencing a severe food shortage, due to the conflict and violence in the area.

**Figure 8:** Under-five Mortality Rate (2004) and Global Acute Malnutrition (2004) in Darfur

![Graph showing under-five mortality rate and global acute malnutrition in Darfur](image)


Worldwide, undernutrition is an underlying contributor in one-third of deaths among children less than five years of age.\(^1\) Available and curative interventions can avert more than two-thirds of child deaths.\(^{iii}\) A review of the literature indicates that the levels of maternal mortality, neonatal mortality, under-5 mortality, and malnutrition resulting from conflict in Darfur are unacceptable by any standard. Efficient, reliable, and adequate food rations and supplies are critical in saving the lives of IDP in conflict zones. The role of malnutrition in under-five mortality cannot be understated, which reemphasizes the important role of humanitarian aid in the health of IDP women and children. The international community must respond to the challenge of measuring and addressing the extent and severity of the human impact of complex emergencies on civilian populations.
**Humanitarian Aid**

Humanitarian aid has been used as a tool of war by violent fractions in times of crises in the Sudan. Humanitarian assistance is at risk of collapsing, primarily due to pressure and lack of compliance from the Sudanese government, as well as in part of the government’s militia allies. Aid has been used as a tool of war in Darfur in two ways: (1) the Sudanese government and Janjaweed have tightly controlled and restricted the access of humanitarian agencies to the IDP populations, and (2) IDP camps have become integrated into the conflict through manipulation of population movements.\(^{xlvi}\)

In September 2006, the United Nations stated that a collapse in aid would result in the deaths of 100,000 civilians every month.\(^{xlvii}\) Aid itself is insufficient and late, often due to warring parties who do not grant humanitarian access to the affected populations when they need it most.\(^{xlviii}\) The denial and limitation of humanitarian aid poses a severe threat to the health and well being of IDPs in southern Sudan. By January 2006, the UN had access to less than 40% of the population of West Darfur.\(^{xlix}\)
**Figure 9:** United Nations Humanitarian Access in Darfur, 2006-2007

The map to the left is the humanitarian access in March 2006. In comparison, the map of January 2007 (right) shows the decreasing access to displacement camps within Sudan borders. This has led to a severe crisis, placing humanitarian aid at the brink of collapse.

In November 2010, reports were released by UNICEF stating that the Sudanese government is increasingly hampering international efforts to address chronic levels of undernutrition in IDP camps. Aid workers within Darfur report that food shortages and malnutrition rates have increased since the government expelled non-governmental organizations in the area in early 2009.

Internal and external politics and the limited reactions of the international community can drastically alter the states of complex humanitarian and human rights crises. For example, in the Democratic Republic of the Congo, mortality rates have not

significantly improved from an average of 0.7 deaths per 10,000 population per day since 2002, with rates being 75% higher in conflict-prone regions of the Congo. War destroys health infrastructure, leaving communities at increased risk for infectious disease; depleting monetary resources for health systems; and uproots populations, which places them at increased risk for disease. Policies and international aid often fail to take a long-term perspective, addressing only short-term issues despite the fact that the majority of refugees and IDPs live in protracted situations.

International assistance typically invests in bringing healthcare providers to refugee camps and devastated areas; however, the level of absenteeism of physicians in areas difficult to access, such as IDP camps, is approximately 45% and physicians typically stay for only short periods. It is essential for international assistance agencies to reform their policies and action plans to properly address the health needs of IDPs, providing sustainable improvements in health. IDPs should receive the same attention from the international community as refugees in host nations. However, IDPs within Darfur are afflicted by higher rates of violence, maternal mortality, neonatal mortality, under-five mortality, and undernutrition. Internally displaced persons face increased incidences of infectious disease and mortality rates primarily because of their precarious location and lack of humanitarian aid.
Policy Recommendations

In order to provide sustainable maternal and child health services to IDPs, the following interventions must be implemented: international involvement in genocide conflicts, ongoing presence of UN Peacekeeping Forces, establishment of safe IDP camps within Darfur, and reliable procurement of humanitarian aid to IDP settlements. Figure 10 displays a conceptual framework outlining key strategies and their impact on establishing sustainable solutions to maternal and child health issues in Darfuri IDP areas.

The main barrier to improving Darfuri IDP health is that the United Nations’ Guiding Principles on Internal Displacement specifically states “the primary responsibility to provide durable solutions for IDPs and ensure their protection and assistance needs to be assumed by the national authorities.” Yet, how are internally displaced women and children to be protected by their government, which is the source of violence and conflict? The Sudanese government officials are actively deciding the fate of events in the conflict, yet are not the ones who suffer the consequences. At the same time, the United Nations expects the Sudanese government to ‘protect and assist’ its citizens.
**Figure 10:** Conceptual Framework - Sustainable Strategies for Maternal & Child Health Services in Darfur
The United Nations and all member-nations must safeguard and actively protect the human rights outlined in the Universal Declaration of Human Rights, particularly the human rights of individuals who are persecuted by their own national government. As outlined in the 2005 World Summit’s “Responsibility to Protect,” each state has the obligation to protect its population from serious harm resulting from internal war, insurgency, or state failure.¹ The outcome of the 2005 World Summit was the approval of the Protection of Civilians in Armed Conflict Act by the UN Security Council in 2006, which states an obligation of the international community to intervene when a state has failed, through lack of willingness or capacity, to protect its own people. However, there is a gross discrepancy between approval of the act and its implementation, as seen in the Darfur conflict.

The primary responsibility for providing durable solutions for Darfuri IDPs must be assumed by international humanitarian and development actors, without involvement from the Sudanese government. The international community must adopt an intervention policy in times of complex emergencies earlier in complex situations involving mass displacement, genocide, civil war, and human rights abuses. Collective international action is essential for ending the elevated maternal and child mortality and malnutrition rates in Darfur. There is an urgent need for the mainstreaming of maternal and child health services within humanitarian relief for IDPs. It is essential for all stakeholders to reaffirm their commitment to strengthening reproductive services and strengthening the policy and funding provisions in refugee and IDP situations. Efforts must focus on: human resources for health in complex emergencies, infectious disease, malnutrition,
basic and comprehensive emergency obstetric care, gender-based violence, and strengthened referral systems.

Under the United Nations’ ‘Guiding Principles on Internal Displacement,’ Khartoum, the Sudanese government, has the primary responsibility to protect its own citizens of Darfur, yet has failed to do so. It has been the primary player behind ethnic cleansing in Darfur, and has actively recruited and armed the Janjaweed militia. The government continues to purposefully neglect its responsibilities to the Darfur people, repeatedly violating the Darfur Peace Agreement of May 5, 2006 and ignoring requests from the UN Security Council to disarm the Janjaweed militia.\textsuperscript{lv} It is outside the mandate of UN Peacekeeping forces to become involved in political discussions.

Despite attempts by the UN to send peacekeeping troops to Darfur, the Sudanese government is actively refusing the presence of peacekeeping troops. An armed intervention by UN peacekeeping forces is not going to happen without verbal consent from the Sudanese government. Kofi Annan made this clear when he said, “the fact is, without consent of the Sudanese government, we are not going to be able to put in the troops. So what we need is to convince the Sudanese government to bend and change its attitude and allow us to go in.”\textsuperscript{lvii} If conflicts of civil war and genocide are to ever end, the United Nations and its member-states must intervene and show commitment to their written obligation to protect citizens when a state has failed to protect its own people.

In order to lower mortality rates in IDP camps, the creation of safe, guarded internally displaced camps within Darfuri borders is essential. If the internally displaced are unable to or refuse to relocate to a refugee camp, they need safe grounds to seek refuge in times of conflict. The location of camps is critical for lowering unnecessary
mortality rates: many camps are isolated, far from hospitals, and do not have access to clean water.vi Camps should be established with the knowledge that IDPs will most likely be displaced for many years to come. IDPs should be the primary actors in the process of finding the durable solution of their choice. IDPs should have access to humanitarian aid stakeholders, be involved in peacekeeping activities, and participate in the planning and management of durable solutions, so that recovery and development strategies address their rights and needs. The displaced community should be actively involved in the construction and decision-making process of public services. Research has shown that services are more effective when the community contributes to the cost and is involved in its implementation.

Internally displaced persons often face continuing problems post-conflict and require humanitarian support until they achieve a durable solution to their displacement. As stated earlier, the primary responsibility to provide durable solutions for Darfuri IDPs must be assumed by international humanitarian and development actors, without involvement from the Sudanese government. IDPs who have achieved a durable solution need to remain protected by international human rights and humanitarian law.

Conclusion

The development of complex emergency surveillance systems that can accurately depict the reality on the ground is essential. Sound epidemiological data can be used for local resource allocation by humanitarian actors and can assist donors in assessing impacts and evaluating trends.xlv Review of the literature indicates that the levels of maternal mortality, neonatal mortality, under-5 mortality, and malnutrition
resulting from conflict in Darfur are unacceptable by any standard.

Humanitarian aid must be distributed far more effectively if rates of hunger and death are to be brought down to acceptable levels. The international community must respond to the challenge of measuring the extent and severity of the human impact of complex emergencies on civilian populations. International collective action must occur if the pain and suffering of women and children in civil conflict is to ever end. Until the international community takes a stand, the Universal Declaration of Human Rights and the Responsibility to Act will remain an empty promise to the global community, and never realized.
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