

SPECIAL FOCUS: EFFORTS TO REDUCE CHILD MORTALITY THROUGH NUTRITION INTERVENTIONS IN SOMALIA

Overview

Urban assessment: In October 2009, FSNAU conducted the quarterly urban nutrition and food security assessment in the main regional towns throughout Somalia. Findings on the food security situation indicate that the urban households' access to food has begun to improve in most areas, with the exception of Central regions. Urban households in the south, the north and northwest are able to cover the cost of the Minimum Expenditure Basket (CMB); however, poor households are still reliant on remittances, cash gifts or loans to cover between 20-25% of this minimum expenditure basket. In central regions, in contrast, a deterioration was reported, mainly caused by increased prices of cereals, subsequent increased cost of the minimum expenditure basket and reduced social support in these regions. For more details, see the Food Security & Nutrition Brief, Oct '09 at <http://www.fsnau.org/fileadmin/uploads/1607.pdf>. A nutrition component assessing MUAC (mid upper arm circumference) and coping strategies also indicates sustained stress in poor households in the south, with many continuing to report distress coping strategies such as reducing meal frequency.

Treatment of Acute Malnutrition: The latest figures from centres treating severely and moderately acutely malnourished children in South and Central Somalia report a varied picture with many locations reportedly seeing increasing trends of admissions in recent months. This is of particular note in Central, Bakool and Shabelle regions, where INGO are reporting continuing high numbers of severely malnourished children. **This is of great concern in the current climate, where funding shortages could significantly decrease the access to life saving services such as food aid, selective feeding programs, child health days and protected water, for these children in the coming months.** Such interruptions in the delivery of these life saving interventions, therefore, is likely to increase the associated mortality of severe acute malnutrition. The situation will continue to be monitored and reported through the representative surveys and the selective feeding centre statistics.

Nutrition Assessment Schedule: The FSNAU, in collaboration with partners, is conducting 23 nutrition assessments from October – December 2009, to review the nutrition situation in the vulnerable population groups. Nineteen of these are targeting rural livelihoods; two are targeting IDPs while the other two are region based. Surveys have just concluded in the central regions (Hawd and Addun pastoral livelihood zones, Galgadud and Mudug regions), Hiran (pastoralists, agropastoralists and riverine livelihood zones), and Togdheer (pastoralists and agropastoralists). Findings from these and other scheduled surveys will be disseminated through the regular interagency coordination meetings, the bimonthly nutrition updates and the FSNAU website, <http://www.fsnau.org>.

Health Events in Somalia (Key highlights from the 7 – 13th WHO November bulletin)

- **Pandemic Influenza A (H1N1) 2009, has been confirmed in Somalia for the first time.** Two out of 10 samples tested positive for novel H1N1 (pandemic strain) on 3rd November 2009 in a KEMRI referral laboratory in Nairobi, Kenya.
- **Acute Watery Diarrhoea (AWD) Update:** There has been a

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47% increase in the number of AWD cases reported in Banadir Hospital during week 44 compared to week 43. 75 cases (95% in <5yrs) of AWD were reported with 1 death below 5 years. In week 44 in Lower Shabelle, 27 cases of AWD (48% in <5yrs) including 2 deaths <5yrs. 59% of AWD cases were from Merka. In the same week, 7 districts of Lower and Middle Juba reported a total of 147 AWD cases (84% in <5yrs) and no deaths, **almost double those reported in week 43.** Approximately 50% of the cases were reported from Hagar and Kismayo. Jilib and Jamame have remained inaccessible and thus are not reporting.

WHO and partners, including UNICEF and the WASH cluster, have initiated: increased chlorination of water sources in the locations of confirmed cholera and/or AWD; localized community/health staff trainings, active case finding and management, and repositioning of essential medicines and equipment in all affected regions. Close monitoring of the situation is on-going.

For details, see the October Somalia Health Cluster Bulletin and November 2009 WHO Health Events in Somalia Bulletin at www.emro.who.int/somalia/healthcluster

NUTRITION RESEARCH AT FSNAU

Metadata Analysis

Research and experience¹ has shown that six out of the eleven million annual child deaths at global level could be saved by fundamental, evidence-based, cost-effective measures such as improved family care and breastfeeding practices, micronutrient supplementation, immunization, improved access to basic health services and the use of insecticide-treated bed nets. The third Lancet series (Bhutta et al., 2008) highlights key messages that illustrate interventions for maternal and child under nutrition and survival that work.

In this *Special Focus* Nutrition Update, FSNAU analyses the significance and current practice of the recommended interventions which aim at reducing maternal and child under nutrition and mortality, as presented in the Lancet series², within the Somalia context. This analysis is based on anthropological, nutrition and mortality assessments data collected in the country from 2001 to current.



*A Healthy Mother and Child,
Juba region 2008*

Note: The analysis presented is a snapshot of an upcoming detailed technical report "Nutritional Trends in Somalia 2001-2008, A Meta-analysis Study", due December 2009

1 UNICEF <http://www.unicef.org/mdg/childmortality.html>

2 Lancet 2008;371:417-40 Published January 17, 2008, the third in a series of five papers about maternal and child under nutrition

INTERVENTIONS TO REDUCE CHILD UNDERNUTRITION AND MORTALITY - SOMALIA CONTEXT

According to the Lancet Series on Undernutrition¹, it is estimated that 11 million child deaths occur globally² every year. More than 70% of these deaths occur in developing countries and are attributed to six preventable causes: diarrhoea, malaria, neonatal infection, pneumonia, preterm delivery, or lack of oxygen at birth. Malnutrition and lack of safe water and sanitation contribute to half of all these children's deaths³. Of all the 53% of child deaths associated to malnutrition worldwide, 30% of the deaths are directly attributable to respiratory infections and 27% of the deaths are caused by diarrhoea (Figure 1)⁴. Therefore there is a global push to focus on effective programming to treat undernutrition.

Research and experience⁵ has shown that six out of the eleven million annual child deaths could be saved by fundamental, evidence-based, cost-effective measures such as improved family care and breastfeeding practices, micronutrient supplementation, immunization, improved access to basic health services and the use of insecticide-treated bed nets. The third Lancet series (Bhutta et al., 2008) highlights the following key messages that illustrate interventions for maternal and child undernutrition and survival that work:

1. Effective interventions are available to reduce stunting, micronutrient deficiencies and child deaths. If implemented at sufficient scale, they would reduce child deaths by about a quarter in the short term⁶.
2. Counselling on breastfeeding and fortification or supplementation with vitamin A and zinc has the greatest potential to reduce the burden of child morbidity and mortality.
3. Improvement of complementary feeding through nutrition counselling, food supplements, conditional cash transfers or a combination could substantially reduce stunting and related disease burden.
4. Interventions for maternal nutrition can improve outcomes for maternal health and births, but few have been assessed at sufficient scale.
5. Elimination of stunting will require long term investments to improve education, economic status and the empowerment of women.

Figure 2 illustrates the proportion to the reduction in child mortality each of the nine evidence based interventions linked to the above main messages contributes to.

The aim of this update is to explore the feasibility and current practice of some of these interventions which aim at reducing maternal and child undernutrition and mortality as presented in the Lancet series⁷, within the Somalia context based on meta analysis of nutrition and mortality assessments conducted in the country from 2001-2008 and existing practice.

MORBIDITY TRENDS IN SOMALIA

Child morbidity not only causes undernutrition but directly contributes to mortality. As mentioned earlier, about 70% of deaths of children under five years of age are due to five common preventable and treatable childhood disease - ARI, diarrhoea, measles, malaria and malnutrition or combinations of all.

Figure 1: Chart illustrating Major Causes of Under Five Mortality and Contribution of Malnutrition

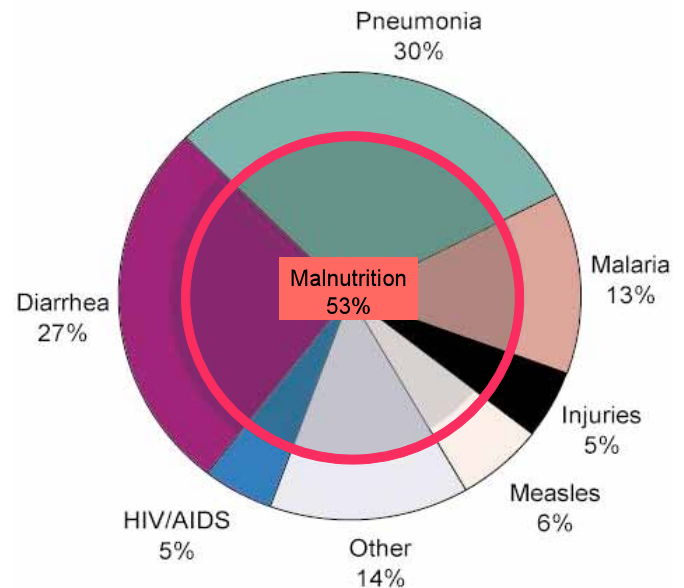
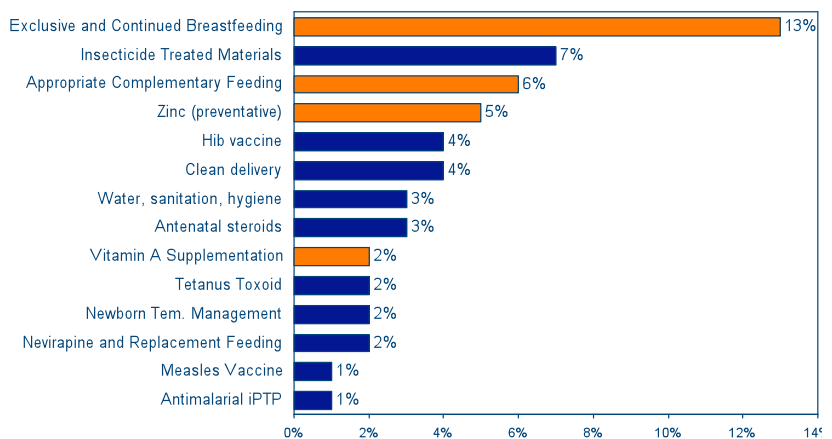


Figure 2. Source: Jones et al, Lancet 2003;362:65-71 (Child Survival Series)



1 Lancet Series; Maternal and Child Under nutrition – “What works? Interventions for maternal and child under nutrition and survival”, Jan 2008
 2 Approximately 29,000 children less than five years die per day, (translating to 21 children per minute)
 3 UNICEF <http://www.unicef.org/mdg/childmortality.html>
 4 UNICEF Millennium Goal No.4 Reduce Child Mortality- <http://www.unicef.org/mdg/childmortality.html>
 5 UNICEF <http://www.unicef.org/mdg/childmortality.html>
 6 Lancet Series; Maternal and Child Under nutrition – “What works? Interventions for maternal and child under nutrition and survival”
 7 Lancet 2008;371:417-40 Published January 17, 2008, the third in a series of five papers about maternal and child undernutrition

Given, in most cases, health workers are presented with children suffering from a combination of these illnesses, WHO and UNICEF (WHO, 1997)⁸ developed the Integrated Management of Childhood Illness (IMCI) strategy to reduce death, illness and disability, and to promote improved growth and development among children under five years of age. IMCI includes both preventive and curative elements that are implemented by families and communities as well as by health facilities. The strategy combines improved management of childhood illness with aspects of nutrition, immunization and other disease prevention and health promotion elements and recommends effective treatment of ARI, diarrhoea, measles, malaria and malnutrition by health workers at the local health facilities.

According to the World Health Statistics report (WHO, 2006), 225 children out of 1000 live births die in Somalia before the age of five years, mostly from pneumonia (24%), diarrhoea (19%), measles (7%) and malaria (5%); these findings are consistent with those from the data collected from FSNAU nutrition surveys during the period 2001-2008. According to the meta analysis report (FSNAU, 2009), Somalia bears a heavy burden of reported child illness with 44.8% of the 105,314 children assessed in the meta data reported having been ill in the preceding two weeks (one month for suspected measles) prior to the individual assessment. ARI (24.8%) is the most commonly reported form of illness among children under five years followed by diarrhoea (21.4%), fever (16.2%) and lastly suspected measles (5.1%) reported in the data base. The median national total prevalence of child illness reported is 44.9%. The median prevalence for reported ARI is 23.4% contributing to 36% of the total burden; while diarrhoea (21.0%) contributes to 33.0% of the total reported disease burden. Acute malnutrition showed significant associations with all illness and with individual common child illnesses. Children who were reportedly ill had 1.55 times greater risk of being acutely malnourished than those who were not (RR= 1.55; 95% CI: 1.50-1.60; $p < 0.0001$). Diarrhoea posed the highest risk (RR= 1.64; 95% CI: 1.58-1.70; $p < 0.0001$) of malnutrition in children reported ill.



Collecting drinking water, Central region 2009

Further to the high disease burden experienced in Somalia, access to health services remains dismally low. Analysis from FSNAU nutrition surveys indicates that access to public health services did not show any significant associations with acute malnutrition, with the exception of polio vaccination, indicating that access to these services are limited across the populations and affect the children evenly ($p > 0.05$) irrespective of their nutrition status⁹. The provision of adequate and accessible health services is a major challenge in Somalia due to the security and logistical challenges; health services are limited in number and capacity, and the population may also not be able to access them due to distance and/or security and economic constraints, consequently influencing the health seeking practices of the population.

Health Seeking Practices in Somalia

Findings from the national FSNAU Knowledge Attitude and Practice survey conducted in 2007 revealed that health seeking practices across all livelihood zones in all regions tend to follow a generalized pattern. When a mother notices that the child is ill, the first thing is to pray, after which, depending on nature and severity of illness, the next step can be at any of the following areas: traditional home health practice, traditional healer, buying medicine, getting the Sheikh to pray or seeking modern health care at a health facility. The general trend in health care taken by caregivers from all livelihoods is as shown in Figure 3.

This illustration confirms the reporting from health facilities that often children get to the health facility when the condition is quite severe: reportedly due to a lack of confidence in the health systems and lack of resources (financial and time) to make that journey. Table 1 illustrates the alternative traditional treatment approaches applied during an episode of illness.

Therefore the management of childhood illness in Somalia requires a full understanding and appreciation of the reasons behind the choices people are making on health care to ensure success. Efforts by agencies to sensitize communities on the benefits of certain health practices are needed at scale to reform current practices and reduce the burden of childhood morbidity in Somalia.

Figure 3. Child Caregiver Health Seeking Model

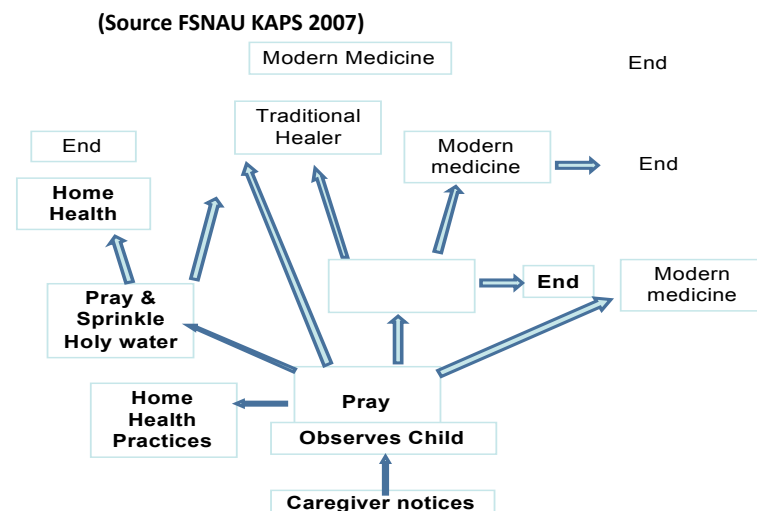


Table 1: Illnesses and Type of Treatment (Source FSNAU KAPS 2007)

Illness	Modern Treatment	Traditional Treatment
Diarrhoea (Normal)	ORS or Ringer's Lactate Health Facility / Prayer	Lemon Juice (no sugar as it aggravates diarrhoea) Herbal Treatment / Sour milk without fat,
Diarrhoea associated with teething	None exists	Removal of teeth (<i>Illigow</i>)
Cough	Buy cough syrup	Goat soup /Eggs /Traditional healer/Recite Koran/ Health facility
Dysentery	Ringer's Lactate	Sheep fat or soup.
Intestinal Parasites	De-worming medicine	<i>Hilidid</i> ; Sheep fat/oil/wool
Tonsillitis	Modern drugs	Cutting of uvula
Measles	Vaccination (Not popular)	Smear child with Blood or liver & cover child with goats skin to keep warm / Goat milk drink
Pneumonia	Antibiotics	Burning of points in the chest as first aid
Malaria	Modern Drugs	Camel milk as laxative to clean stomach Neem Herb; Daccar herb
Malnutrition	Modern drugs to treat illnesses	Give More food, burning of swollen sites (if kwashiorkor with oedema)
Fever	Buy Tablets at Health Facility	Fevers that are not understood are cured by traditional healers
Skin Infection	Buy Medicine / Pray	Read Koran/pray/ Buy Medicine

8 WHO (1997). Integrated management of Childhood illness. A WHO/UNICEF Initiative. *Bull WHO*, 75, (Suppl).

9 Malnutrition Trends (2001-2008) In Somalia- A meta analysis study report

Mortality Data

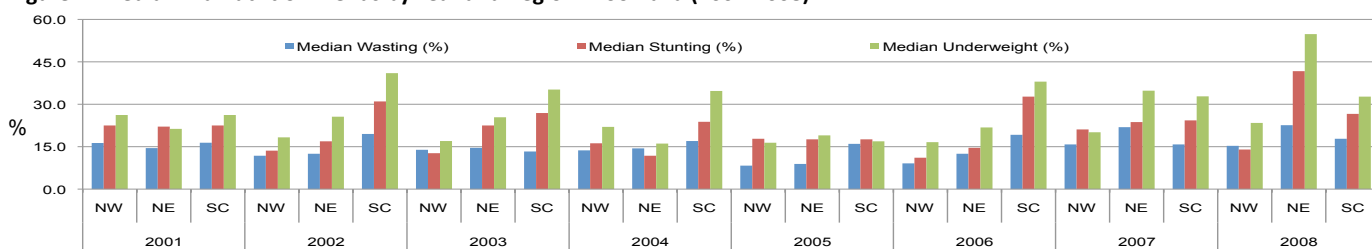
Based on the same meta analysis and the data collected from the emergency mortality assessments¹⁰ nested in the nutrition surveys, the median Under five Death Rate (U5DR) for the same period is estimated at **1.45 deaths/10,000/day** with the Crude Death Rate (CDR) estimated at **0.71 deaths/10,000/day**. Although these rates are below the respective alert levels of 2/10,000/day for U5DR and 1/10,000/day for CDR they are unacceptably high and well above the baseline for sub Saharan Africa referenced at 0.44 for CDR and 1.14 for UDR. This illustrates the devastating impact protracted conflict has on child mortality.

NUTRITION SITUATION IN SOMALIA

As highlighted in *Figure 1*, malnutrition directly causes more than half of all deaths among children from 2 days to five years of age¹¹. For one form of undernutrition, severe acute malnutrition, affected children have a 9 - fold greater risk of death than well nourished children, however more deaths occur among the moderately malnourished children who are many more in number (and twice at risk). Consequently, they are susceptible to disease and are not as prioritized for special nutritive or health care compared to their severely malnourished counterparts. In Somalia, since the collapse of the government in 1991, rates of both moderate and severe acute malnutrition rates remain at unacceptably high levels.

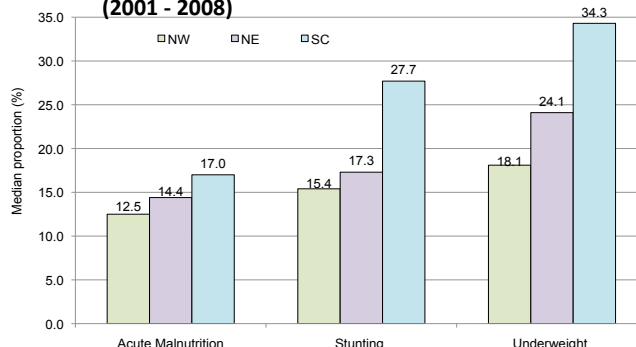
A meta analysis of 141 representative nutrition surveys conducted in Somalia for the period 2001-2008 indicates an appalling nutrition situation with consequently unacceptable under five mortality rates as mentioned earlier. The wasting and underweight rates have generally remained at **Critical** levels (WHO classification, 2000) with national median rates of **15.7%** and **31.7%** respectively; while stunting generally remained at **Alert** levels with a median rate of **23.2%** (*Figure 4*).

Figure 4: Median Malnutrition Trends by Year and Region in Somalia (2001-2008)



Analysis of the 21 assessments conducted in northwest region in 2001-2008 recorded median acute malnutrition, stunting and underweight rates of 12.5%, 15.4% and 18.1% respectively. In the northeast, the median rates of 14.4%, 17.3% and 24.1% for acute malnutrition, stunting and underweight respectively were recorded from 28 assessments reviewed (Fig. 5). The South Central region (SC) of Somalia recorded the highest median prevalence of different forms of malnutrition – acute malnutrition (17.0%), stunting (27.7%) and underweight (34.3%) from a total of 92 assessments conducted during the period of study (2001-2008).

Figure 5: Median Malnutrition Levels by Region in Somalia (2001 - 2008)

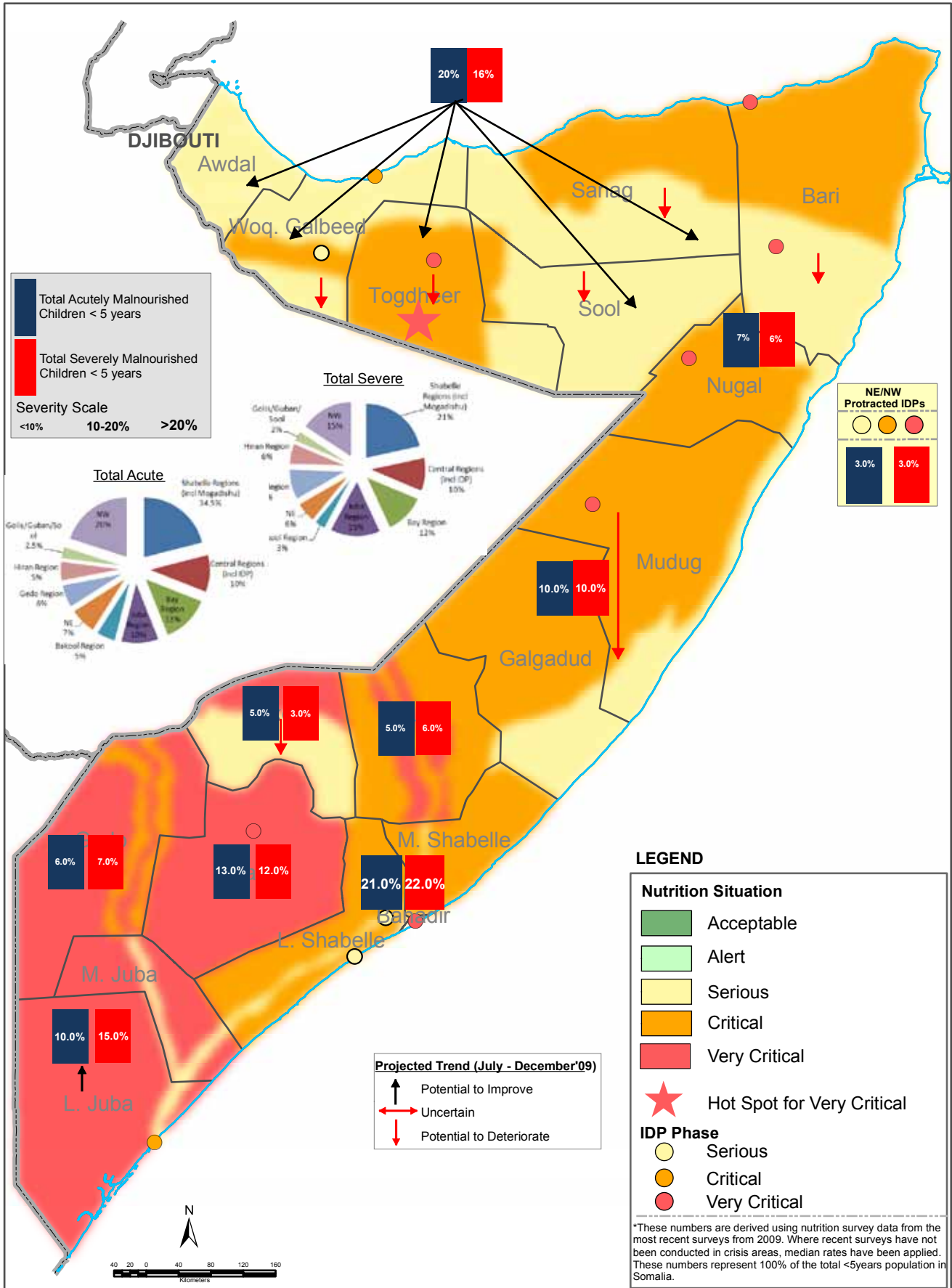


Regional variations are therefore evident for all the forms of malnutrition, with generally higher GAM rates observed in South Central than in the northeast region (p=0.021) and in northwest region (p<0.0001). Significantly higher stunting rates are also observed in SC than in the northeast and in northwest. Similarly, underweight rates were significantly lower in northwest compared to northeast and SC. The relatively poor nutrition situation in the SC, exhibiting median malnutrition rates above the emergency thresholds has been attributed to the complex socio-political and frequent conflicts, causing population displacements and loss of livelihoods. The northwest region on the other hand has experienced relative tranquility and has had lower rates of all types of malnutrition especially in the earlier years, until 2007 when *Critical* rates emerged from a series of rain failures in areas coupled with high food prices.

The Estimated Caseload of Acutely Malnourished Children map (Map 1) illustrates the current total caseload of acutely malnourished cases based on the most recent nutrition assessments in a given area, September 2009, and where recent survey data are not available extrapolations are made using median rates specific to the region as appropriate. This has meant that the current map developed by FSNAU has estimated the caseload of acutely malnourished children of 100% of the population from 6 months to 5 years in Somalia. Population figures from the UNDP 2005 settlement survey are used, as the standard reference for Somalia. The map, therefore, illustrates the distribution of the total estimated caseload of acutely malnourished children and the regional importance which relates to population density. To explain the *Gu '09* nutrition cycles estimated approximately 285,000 children 6-59months as acutely malnourished of which 70,000 are severely malnourished in the total population. The distributions of the 285,000 (100%) acutely malnourished children are illustrated in blue, and the distributions of the 70,000 (100%) severely acutely malnourished children are illustrated in red. For example 21% of the 285,000 acutely malnourished children, reside in the Shabelle regions, followed by 20% in the 5 northwestern regions. Neither of these areas report a **Very Critical** nutrition situation (>20% GAM) yet due to the population density, the absolute numbers of acutely malnourished children are very significant. For the severely malnourished children, the regions hosting the majority are again the Shabelles at 22%, followed by Juba regions at 15% and Bay regions at 12%. This, therefore, highlights that the focus should not just be on areas of **Critical** and **Very Critical** nutrition situation but also on the distribution of these cases. The indicators used are based on the WHO Growth Standards 2005, <-2 WHZ and/or oedema for GAM and <-3 and/or oedema for SAM.

¹⁰ Mortality assessed using 90- days recall using SMART methodology
¹¹ UNICEF <http://www.unicef.org/mdg/childmortality.html>

Map 1: Distribution of Estimated Caseloads (%) of Acutely Malnourished Children In Somalia By Region, July 2009



*These numbers are derived using nutrition survey data from the most recent surveys from 2009. Where recent surveys have not been conducted in crisis areas, median rates have been applied. These numbers represent 100% of the total <5years population in Somalia.

Management of Acute Malnutrition in Somalia

Community management of severe acute malnutrition with ready to use therapeutic foods has been shown to induce weight gain in emergency settings and has been recommended by WHO, UNICEF and WFP. Data from field programmes suggest that the management of severe malnutrition at home with appropriate therapeutic products and protocols can achieve high coverage and low case fatality. Observational studies have shown that the use of the prepared balanced foods such as spreads and ready to use supplementary foods is feasible in community settings. Children born with low birth weights, usually by undernourished women at pregnancy, are likely to be underweight. Similar interventions have the potential to be effective in the management of severe and moderate malnutrition in Somalia.

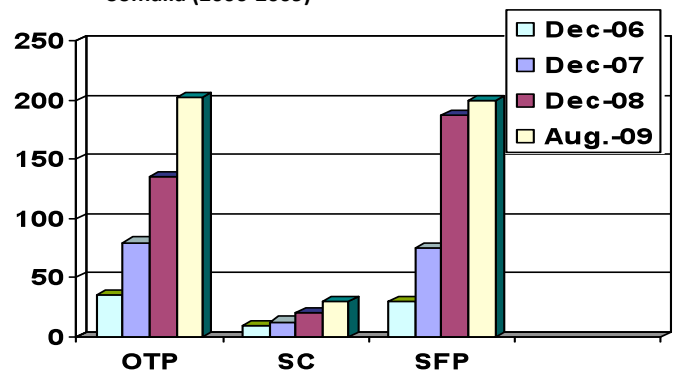
One of the major challenges to successful rehabilitation of acutely malnourished children in Somalia is the volatile security situation, which presents an unsuitable environment for humanitarian intervention operations, often leading to disruption of programmes. In South and Central Somalia, where 70% of all acutely malnourished children in Somalia¹² reside, the complex socio-political context frequently results in population displacements, and suspension of essential health, WASH (water and sanitation) and livelihoods interventions. With current median rates of 19% GAM and 4.5% SAM coupled with a severe drought in parts, high food prices and displacement due to insecurity, the ability of the humanitarian agencies to meet the great needs in South and Central Somalia is thus restricted.

Many agencies are compelled to suspend operations due to lack of access by senior staff, delays in supplies reaching and also due to direct threats to staff members in the locality. The impact of these suspensions are of great concern not just as they restrict life saving interventions to the most needy, but also reduce the confidence the community have in the interventions and therefore can lead to poor take up of similar services once resumed.

Despite all these challenges, however, the nutrition cluster members and other nutrition expert agencies in Somalia have significantly increased the availability of emergency nutrition services for the treatment of moderate and severe acute malnutrition. *Figure 6* illustrates the scale up of Out Patient Therapeutic Programmes (OTP), Stabilisation Centres (SC)/ Therapeutic Centres and Supplementary Feeding Centres (SFP), from December 2006 to current in Somalia.

Although there continue to be many constraints to ensure the continued delivery of services, cluster members are targeting 60% coverage of the caseload assuming a multiplier factor for incidence¹³. *Map 2* illustrates the location of these interventions.

Figure 6: Number of Centres for Targeted Feeding Programs in Somalia (2006-2009)



BREASTFEEDING PROMOTION IN SOMALIA

Breastfeeding, especially exclusive breastfeeding, has been clearly shown to reduce mortality and undernutrition (Abate et al., 2001)¹⁴ in infants and young children. Inappropriate feeding practices have also been shown to be a major cause of the onset of malnutrition in children. Evidence suggest that of the nine proven recommendations to reduce child mortality, exclusive breastfeeding at levels of 80% in the population, is the biggest single contributor of up to 13% (Jones et al., 2008)¹⁵. The Multiple Cluster Indicator Survey (MICS) conducted by UNICEF in Somalia in 2006 reports an unacceptably low national rate of 13% for exclusive breastfeeding. Therefore an understanding of the obstacles to exclusive breastfeeding in Somalia is key to inform an appropriate response strategy.

In the Lancet series, studies that assessed the effect of promotional strategies on exclusive breastfeeding rates for infants younger than 6 months and on continued breastfeeding up to 12 months of age, indicated that all forms of extra support increased the duration of 'any breastfeeding' including partial or exclusive; the relative risk (RR) for stopping any breastfeeding before 6 months was 0.91 (95% CI 0.86-0.96). All forms of extra support together affected the duration of exclusive breastfeeding more strongly than the likelihood of any single initiative (RR 0.81-, 0.74-0.89). Social and professional support together extended the duration of any breastfeeding (RR before 4-6 weeks 0.65, 0.51-0.82; before 2 months 0.74, 0.66-0.83). Studies also revealed that for individual and group counseling, the odds of exclusively breastfeeding were substantially increased in the neonatal period and at 6 months of age. Although the study did not reveal any effectiveness of additional strategies such as the baby friendly hospital initiative, community-based strategies for breastfeeding promotion should be integrated with such additional health-system support strategies.



A young mother feeding her baby

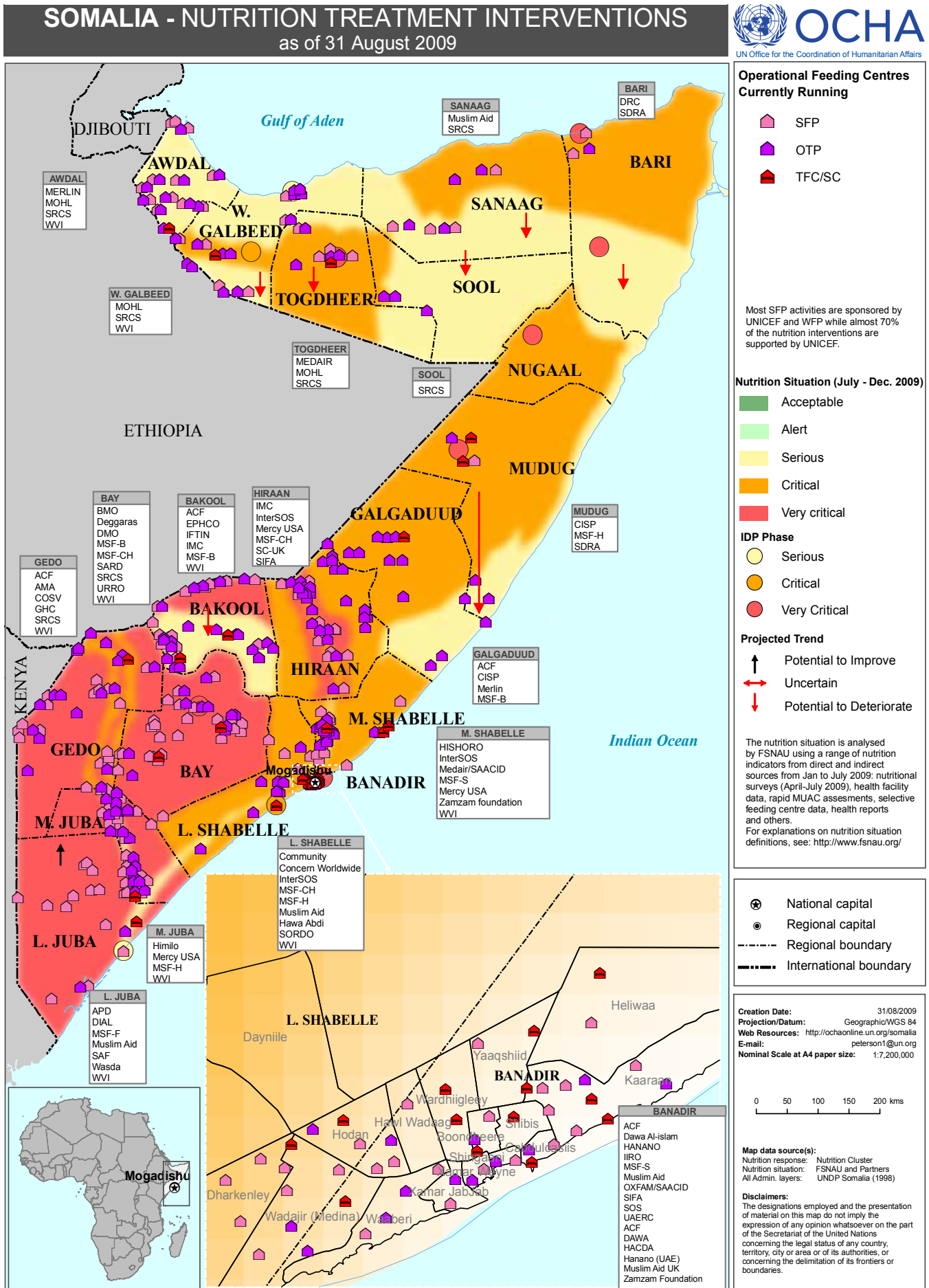
¹² FSNAU Distribution of Caseload Estimates, Gu 2009, Sept 11th 2009

¹³ Somalia Nutrition Cluster members have adapted a multiplier of 1.6 from prevalence to incidence based on existing references.

¹⁴ Abate G., Kogi-Makau., Muroki, N.M (2001). Hygiene and health-seeking behaviours of households as predictors of nutritional insecurity among preschool children in urban slums in Ethiopia - the case of Addis Ababa. *S A J Clin Nutr* 2001 May Vol 14 No 2 pp 56-61. Retrieved on July 16th 2009 from www.popline.org/docs/1707

¹⁵ Jones G, Stketee R, Black R, Bhutta Z, Morris S and the Bellagio Child Survival Study Group. How Many children Deaths, Available : <http://www.chnri.org/se-cured/uploads/publications/files/0078262001241875998-MADAGASCAR%20FINAL.pdf>

Map 2: Somalia - Nutrition Treatment Interventions by Nutrition Cluster Members



It is crucial to consider that one of the benefits that breastfeeding offers is increased immunity to disease and infection and given that the relationship between morbidity and malnutrition is synergistic, it would be prudent to continue to support and promote breastfeeding. The promotion of proper breastfeeding practices should also be combined with the promotion of appropriate child feeding and care practices and provision of access to health and sanitation facilities.

A Knowledge Attitude and Practices (KAP) study conducted by FSNAU in 2007 highlighted key issues relating to child care, feeding and health practices which play a significant role in the high rates of malnutrition. Delayed initiation of breastfeeding by up to 4 days, followed by the introduction of complementary foods at one month of age, early cessation of breastfeeding and use of unprotected water exposes the newborn to pathogens early in life, resulting in diseases that consequently results in malnutrition. The study found that knowledge, attitude and practices on breastfeeding are mainly controlled by culture through maternal grandmothers and other elderly women in the community, and are generally unsatisfactory. Most children are put on breast 2-3 days after delivery and the colostrums is not fed to children by majority of mothers as it is considered heavy, thick, course, dirty, toxic, and harmful to children's health. Breastfeeding is however acceptable to all mothers and their networks and almost all children breastfeed on demand.

Exclusive breastfeeding (EBF) although pecieved to exist, does not really exist in most parts of South Central Zone (SCZ) to any significant extent. To the majority of the caregivers and their social support network, EBF constitutes feeding children on breast milk and water with some sugar alone without any soft or solid foods. Breastfeeding continues alongside complementary foods because breast milk alone is believed to be inadequate for the child. However, on a more positive note, the agreed and acceptable total duration of breastfeeding is 24 months, which is based on the Koran verse 2:233 surah al-BAQARAH –T.J. Irving: *“Mothers should breastfeed their children two full years, provided they want to complete the nursing”*.

Lack of knowledge, inappropriate beliefs and very close birth spacing before the child reaches 2 years are the major obstacles to successful breastfeeding. Annual celebrations of World Breastfeeding Week have had some impact on change on belief and behaviours on breastfeeding in parts of urban livelihood zones where these celebrations have taken place.

In 2010, the nutrition cluster in Somalia aims to increase the focus on efforts to enhance exclusive breastfeeding through a variety of interventions targeted at the various groups. Below are examples of some of the methods used for the delivery of the *International Breastfeeding Week* messages in Somalia to date. They are available online at www.fsnau.org.



COMPLEMENTARY FEEDING IN SOMALIA

Appropriate complementary feeding has been shown to prevent up to 6% of child deaths (UNICEF, 2008)¹⁶. According to the Lancet series (Bhutta et al., 2008), a review on studies focused on complementary feeding strategies, concluded that appropriately designed interventions can have a positive effect on feeding practices. Nutritional education in food secure populations produced an increase in height for age Z score of 0.25 (95% CI 0.01-0.49), compared with a control group. Although these studies were in diverse populations, and with age-groups and follow up periods that varied, they showed that education strategies alone were of most benefit in populations that had sufficient means to procure appropriate food. In populations without these means, educational interventions were of benefit when combined with food supplements. Access to safe water used for preparing and serving the food for the child and for drinking as well as good sanitation and hygiene are important for appropriate complementary feeding and has been show to have an impact on reducing child mortality.

In Somalia, the national KAP study (FSNAU, 2007) revealed inappropriate practice of introduction of complementary foods at one month of age infrequent meals, and early cessation of breastfeeding. In addition, the widespread use of unprotected water exposes the newborn to pathogens early in life, resulting in morbidity, especially diarrhoea, that consequently results in malnutrition. Overall, the study found inappropriate or lack of knowledge on proper feeding practices in all livelihood zones.

16 UNICEF (2008). Infant and Young Child Feeding. Available: http://www.unicef.org/nutrition/index_breastfeeding.htm

Early introduction of complementary foods is common, where, from birth to 3 months, children are mainly fed on cow or goats, milk in addition to breastfeeding. Soft food in the form of potatoes and biscuits (in agro-pastoral, urban and riverine livelihood zones) or porridge (in all livelihood zones) are introduced to most children after the 3rd month of life. In households which have difficulties accessing milk, the milk is often replaced with tea or porridge after the third month. For all regions and livelihoods, however milk was found to be a fundamental constituent of complementary diets for young children and, of similar finding to the recent *Milk Matters*¹⁷ report, is known to be of great importance to healthy growth and development for young children. However, poor accessibility at the household level among agro-pastoralists, riverine and urban poor populations is a major challenge to offering it as part of desired complementary meals. Lack of variety in complementary diets was also noted. Most children in the riverine and agro-pastoral zones mainly feed on cereal-based, less nutritious diets with no fruits or vegetables (see photo). Meat consumption among children was reportedly minimal except for pastoralists' and urban children whose family diet frequently had some meat.



Young child being fed on a meal consisting of cereal by older sibling

There was no special dietary attention or snacks for children after 24 months of age. All children were reportedly expected to feed like adults during normal adult mealtimes. Most children also fed on tea before the main meal. This not only reduces the children's stomach capacity to eat more food, further, tea also interferes with absorption of iron from iron-rich foods, and will likely increase the already unacceptably high levels of anemia. However, it was encouraging to note that most caregivers practice responsive feeding to overcome refusals to feed.

Food prohibition for children was not commonly reported except for breast milk on its own, liver and kidney meat due to the belief that such practices may cause deafness (*Dhagoolenimo*) in children. During illness, efforts are made by caregivers to ensure that children get special diets for quick recovery, and foods which are believed to aggravate the illnesses, particularly protein foods, are often withheld. There were no reports of with-holding breastfeeding during illness. Certain foods are also used for non-dietary purposes in traditional treatment of childhood illnesses. For example, goats' milk and liver are traditionally used to treat measles. Goat milk is used to keep the oesophagus open, or for washing the child with measles, while liver or blood is smeared on the child's body during the infection.

VITAMIN A SUPPLEMENTATION IN SOMALIA

Vitamin A supplementation in children (and mothers) is a micronutrient intervention found to be effective in reducing child undernutrition and improving child survival in countries with high burden of malnutrition and child mortality (Bhutta et al., 2008)¹⁸. Vitamin A supplementation reduced childhood mortality in children aged 6-59 months, with a pooled estimate that showed a 24% reduction in the risk of all cause mortality (relative risk 0.76, 95% CI 0.69-0.84). Vitamin A supplementation did not affect morbidity from infectious diseases or anthropometric measures.

Three reported trials of vitamin A supplementation in the neonatal period in low-income countries showed a 20% reduction in mortality in babies younger than 6 months (relative risk 0.80, 95%CI 0.66-0.96). A pooled analysis of studies from South Asia indicated that neonatal vitamin A supplementation was associated with a 21% reduction in mortality in babies younger than 6 months.

A meta analysis of 116 surveys conducted in Somalia over 8 years (2001-2008) reported a median Vitamin A Supplementation status rate of 57.1% (mean 56.5% 95%CI: 52.8-60.2) within six months prior to being assessed. From the KAP survey conducted in 2007, although communities are aware that polio, measles, and tetanus are preventable diseases, they (mostly men) report certain obstacles to a full up take of vaccinations, including vitamin A, as follows:

- General belief that vaccines are not effective,
- Suspicion with too frequent polio vaccinations – possible link with family planning
- Lack of availability of immunization services in rural and remote areas
- Reluctance to have children immunized due to understanding that short term side effects of vaccines make children sick, e.g., fever, restlessness

Although it is clear from the results that a significant part of the community has a positive attitude towards immunization, nevertheless, many caregivers do not see their children through the complete immunization schedule. However recent enhanced outreach efforts through the Child Health Days managed by UNICEF and WHO have indicated a significantly better uptake of vaccination services. The approach of the Child Health Days (CHD)¹⁹ to access children across the country is ideal, as it has demonstrated success in improving the proportion of children immunized against measles and polio, and who have received vitamin A supplementation, de-worming and treatment of basic illnesses through outreach activities. The package includes: immunization against measles, whooping cough, tetanus, polio, vitamin A, nutritional screening, oral rehydration solution and water purification tablets for children and breastfeeding promotion and tetanus toxoid for women. This package to date has reached over 1 million children under 5 years and 800,000 women of child bearing age.

¹⁷ Milk Matters: The Role and Value of Milk in the Diets of Somali Pastoralist Children in Liben and Shinile, Ethiopia, October 2009

¹⁸ Bhutta, Z.A., Ahmed, T., Black, R.E. et al., (2008). What Works? Interventions for maternal and child undernutrition and survival. *Maternal and Child Undernutrition* 3. *Lancet Series*, 371: 417-440, February 2, 2008. From: www.thelancet.com

¹⁹ UNICEF & WHO outreach campaign conducted throughout Somalia

Assessments conducted by FSNAU in October 2008 and April 2009 in the northwest of Somaliland clearly validate the success of the CHDs conducted by UNICEF/WHO and MOHL. The proportion of children that were vaccinated against measles and polio and received vitamin A supplementation according to a nutrition survey conducted in the Awdal and Galbeed region in October 2008 was reportedly 43.0%, 70.1% and 46.9% respectively²⁰. A repeat survey in the same areas in June 2009, after the successful completion of the CHDs in the zone in April 2009, indicated that the proportion of children vaccinated against measles and polio and that had received vitamin A supplementation had significantly increased to 84.6%, 95.2% and 92.2% respectively²¹. Although no statistical association was derived, it would be important to note the acute malnutrition rates were lower with the increased vaccination and supplementation rates reported. Therefore, in line with the recommendations from the Lancet series on vaccination coverage, the sustained use of alternative approaches to reach as many eligible children as possible through Child Health Days to reduce the associated mortality is strongly recommended.



A child receives DPT vaccination Huddur March, 2008

²⁰ FSNAU Nutrition Update September- October 2008

²¹ FSNAU Nutrition Update June-July 2009

Children in Somalia start out life in a battle for survival. One in 7 dies before reaching his/her 5th birthday. However, ongoing efforts by partners in nutrition, health, WASH and livelihoods have shown that the delivery of services in one of the most dangerous countries in the world is possible and these children can be reached.

The prevention of further deterioration is also possible through alternative strategies such as expanded outreach services, and enhanced capacity of local partners on the ground.

However, in the current funding climate much of the successful work conducted to date could be at risk if these lifesaving interventions are not maintained and many more Somali children will die. All actors involved in the crisis in Somalia, therefore, must ensure the sustained provision of humanitarian assistance to all affected populations.



Other FSNAU Publications:

FSNAU Food Security and Nutrition Special Brief, October 2009

FSNAU/FEWSNET Market Data Update, November 2009

FSNAU/FEWSNET Climate Data Update, November 2009

FSNAU Technical Series Report Nutrition Situation, September 2009

FSNAU Technical Series Report, Post Gu '09 Analysis, September 2009

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