



SWAZILAND COMPREHENSIVE DROUGHT HEALTH AND NUTRITION ASSESSMENT REPORT

MARCH 2016



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ACRONYMS

AIDS	Acquired Immuno-deficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
CSO	Central Statistics Office
EAs	Enumeration Areas
ENA	Emergency Nutrition Assessment
EOC	Emergency Operations Centre
EPR	Emergency Preparedness and Response
FDG	Focus Group Discussions
FGD	Focus Group Discussions
GAM	Global Acute Malnutrition
H/A	Height-for-Age
HIV	Human Immuno-deficiency Virus
IMAM	Integrated Management of Acute Malnutrition
MAM	Moderate Acute Malnutrition
MDR-TB	Multi- Drug Resistant Tuberculosis
MICS	Multiple Indicator Cluster Survey
MUAC	Mid-Upper Arm Circumference
NDMA	National Disaster Management Agency
NERMAP	National Drought Emergency Mitigation and Adaptation Plan
NGO	Non-Governmental Organisation
NNC	National Nutrition Council
PNC	Post Natal Care
RHM	Rural Health Motivator
SAM	Severe Acute Malnutrition
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SNNC	Swaziland National Nutrition Council
TB	Tuberculosis
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
W/A	Weight-for-Age
W/H	Weight-for-Height
WASH	Water , Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organization

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EXECUTIVE SUMMARY

The Government of Swaziland declared a national drought disaster on 18th February 2016. The health and nutrition cluster under the Ministry of Health in collaboration with stakeholders such as the Swaziland National Nutrition Council (SNNC), the National Disaster Management Agency (NDMA), civil society and UN agencies (WHO, UNICEF , UNFPA and WFP) conducted a joint rapid health and nutrition assessment in March 2016. The purpose of the assessment was to assess the nutrition and health situations and the capacity of the health system to respond to nutrition and health emergencies. The joint assessment had three components: health facility assessment, community focus group discussions and nutrition rapid SMART survey.

The assessment used two main approaches namely, qualitative and quantitative. The qualitative approach used Focus Group Discussions (FDG) interviews. The quantitative approach used standard questionnaires through face to face interviews as well as anthropometric measurements. The assessment was carried out in the four regions of the country. A total of 40 clinics, all Public Health Centres and Hospitals were purposively covered. Nutrition rapid SMART was implemented in the Lowveld region. The data was captured using ENA for SMART, EPI INFO for data entry and tabulation were made using SPSS.

The anthropometry results revealed Global Acute Malnutrition of 3.1% and Severe Acute Malnutrition of 2.5%. All the severe cases were oedematous. The stunting prevalence of 21.1% and underweight 5.5% are classified as medium and low respectively. Screening data and nutrition program admission data also indicated an increase in acute malnutrition cases during the drought period compared to the period prior to the drought. A gradual increase in the overall monthly cases of anaemia diagnosed in the health facilities during the drought period was observed. It was also observed that more clients were admitted in the Food by Prescription Programme during the drought period than before. The drought related factors are likely to impact more on acute malnutrition in the coming months as food stocks run out (the October planting season was affected by drought and little or no harvest is expected in April).

The results highlighted an increase in the cases of acute watery diarrhoea among all age groups during the drought period, especially the driest months (October and November

2015). The number of malaria cases, especially local cases, reduced dramatically during the transmission drought season compared to the previous transmission season. There was also a drop in the number of skin conditions and Upper Respiratory Tract Infections reported in the assessed facilities during the drought compared to the same period the previous year. However the number of reported eye diseases increased. Other diseases of public health importance are HIV/AIDS and TB. It was revealed that ART and TB treatment defaulter rate is increasing.

There was a decrease in the number of people living with chronic diseases observed at the health facilities. However findings from the community based FGDs revealed that these diseases were a concern since a number of deaths due to these conditions were reported.

The results revealed a number of changes regarding maternal and new-born health, as well as sexual reproductive health in general is concerned. For instance, there is a marked decrease in the number of pregnant women attending antenatal care; the number of facility based deliveries; as well as post-natal care visits. Early infant diagnosis for HIV doubled during the drought period compared to the same period in the previous year. The communities reported an increase in gender based violence due to issues related to drought. An increase in teenage pregnancies was also reported, as young girls were engaging in sexual relationships with truck drivers and other older men. Immunization rates either remained the same or are increasing in some communities.

In addition to the above, the assessment revealed some gaps in the health system's ability to respond to drought emergencies in the areas of coordination, human resources, community engagement, WASH, and logistics and supplies.

The drought health and nutrition assessment was conducted in order to reveal the situation of the impact of drought on the nutrition and health status of communities in Swaziland. The findings revealed that there a deterioration in the nutrition and health status. It also revealed a number of gaps in the preparedness status of the health system. Therefore, the health and nutrition sectors need to strengthen response mechanisms to mitigate the effects of drought.

1. INTRODUCTION

Following the declaration of the emergency as a result of the drought on 18 of February 2016 the Government of Swaziland has made efforts to address the growing humanitarian needs. On the 16th of March, 2016, the Government held a donor conference to brief the donor community on the National Drought Emergency Mitigation and Adaptation Plan (NERMAP) 2016-2022 and the current situation of the drought in the country. The NERMAP 2016-2022 had estimated that from March 2016 a minimum of 300,000 people, (about one third of the population), will be in need of food assistance.

The Swaziland Comprehensive Health and Nutrition assessment took place from 16 to 22 March 2016. It was conducted at the request of the Health and Nutrition Cluster under the auspices of the National Disaster Management Agency (NDMA) under the Deputy Prime Minister's Office. The assessment was undertaken by a team composed of the Health and Nutrition Cluster including Ministry of Health EPR, Swaziland National Nutrition Council, Environmental Health, School Health, Health Promotion Unit, Sexual Reproductive Health Unit, Swaziland National AIDS Programme, Regional Health Management Teams, Health Management Information Systems, Monitoring and Evaluation Unit, Epidemiology Unit and UN Theme Group. A Nutrition Specialist from the UNICEF Regional Office and a Sexual Reproductive Health Specialist from UNFPA supported the team.

Drought is a period of abnormally dry weather. It is a deficiency of rainfall that causes water shortage over an extended area and period of time (months or years) compared with the multi-year average for the region. The Southern Africa region including the Kingdom of Swaziland is experiencing severe drought due to the ongoing El Niño, which started in 2014.

Droughts are the most destructive natural hazard. They cause more deaths, hunger, illness and displacement than floods, cyclones and earthquakes combined. The principal health effects include crisis levels of acute malnutrition, plus increases in morbidity linked with malnutrition. Another health effect is increased environmental risks such as decreased access to improved water sources and decreased standards of hygiene. Droughts pose multiple threats to lives and livelihoods, in addition to causing hunger and malnutrition. The effects of droughts persist long after rains have started again, with food still scarce and water resources depleted, soils eroded and socioeconomic problems exacerbated. Intermittent flash floods

during periods of prolonged drought may further exacerbate the negative impacts attributed to scarcity of food and water.

The Vulnerability Analysis for 2015/16 consumption year indicates that an estimated 50, 566 people require immediate food assistance while about 200, 897 people are estimated to be in need of interventions aimed at maintaining livelihood assets and strategies. This condition has resulted in numerous stress and concerns for the population for their livelihoods and welfare.

Therefore, it is under this background that the country undertook a comprehensive health and nutrition assessment. The main objective of the assessment was to assess impact of the drought on the health and nutrition status of the people, as well as the health system's preparedness to respond to any related emergencies.

2. PUBLIC HEALTH IMPACT OF DROUGHTS

The impacts of drought are usually indirect. Being a slow-onset, long duration, spatially diffuse emergency, rather than a sudden, high-impact event (such as a flash flood or earthquake), drought differs from other natural hazards and has many multiple 'downstream' effects. The effects of drought are critically dependent on context and underlying population vulnerability. Drought development and severity depend on the background level of water use (which might aggravate drought onset, duration and end) and infrastructure (which aims to mitigate the consequences of water deficit). The impact on health is particularly dependent on the socio-economic environment that can influence the resilience of the population. Poor health, poverty, and conflict are additional contributing factors to the impact of drought.

For Example: Severe drought conditions can negatively affect air quality. During drought, there is an increased risk for wild fires and dust storms. Particulate matter suspended in the air from these events can irritate the bronchial passages and lungs. This can make chronic respiratory illnesses worse and increase the risk for respiratory infections like bronchitis and pneumonia.

The following are the impacts of drought and coexisting factors on health:

- Nutrition-related effects: increased acute malnutrition, exacerbated chronic malnutrition, micronutrient deficiencies.
- Interaction of malnutrition with other diseases, with increased severity and complications of any disease, including chronic diseases, when overall malnutrition rates increase.
- Increased nutrition-related morbidity associated with pregnancy and new-borns, including low birth weight and anaemia in pregnancy.
- Environmental effects, particularly water scarcity linked with poor water, sanitation and hygiene conditions and leading to increased incidence of communicable diseases (waterborne disease, vector-borne disease, airborne and dust-related disease).
- Decreased and/or delayed access to health services due to reduced ability to pay following the loss of livelihoods.
- Mental health effects especially among malnourished children.
- Increased poverty and displacement.

2. PREPAREDNESS PLANNING & RESPONSE CAPACITY

A Multi-hazard Contingency Plan has been developed to cover the period of 2016/17. The plan was developed through a participatory and inclusive multi-stakeholder process involving stakeholders from Government, the United Nations and NGOs, and has been developed in line with the provisions of the National Disaster Management Act, 2006 and the National Disaster Risk management Policy, 2010. The plan is informed by vulnerability assessments, analysis of hazard and risk profile of the country.

The Multi-hazard Contingency Plan is based on hydro-meteorological hazards and includes only rural areas. Simulations of the National Contingency Plan started three years ago and are conducted on a yearly basis. However, they need to be reinforced in terms of quantity, scale and geographical coverage. Simulations take place at Tinkhundla level but the stakeholders involved are mostly those operating at national level. Regional and local level stakeholders are not involved. Simulations have never taken place in urban areas and systems in urban areas have never been tested. Health/EPR holds internal simulations/skills drills once a year.

2.1 Capacity of the Health Sector to respond to emergencies

The Ministry of Health has a well-developed emergency preparedness and response system (EPR) with a dedicated service responsible for providing leadership and coordination on health emergencies. The Ministry has a dedicated hot-line (977) for all health emergencies which operates 24 hours. This line also serves as the dedicated line for Immediate Disease Notification System which acts as the Early Warning System for the health sector. The sector has a dedicated response service throughout the country which also responds 24 hours. A public health emergency operations centre (EOC) exists as a central location for coordinating operational information and resources for strategic management of public health emergencies and events.

Linking with the National Disaster Management Agency (NDMA), the Health and Nutrition Sector is coordinated through the Health and Nutrition Cluster which acts as the ministerial or sector coordinator.

3. AIM AND OBJECTIVES

Aim

This assessment aims to support drought policy, planning and implementation of intervention strategies and adaptation measures by documenting the health nutrition situation and the health system preparedness to respond to the impacts of drought.

Objectives

- To assess the situation of nutrition and health related conditions due to the impacts of drought.
- To assess the capacity of the health system to respond to any health and nutrition related emergencies.

4. METHODOLOGY

4.1 Overview

This was a cross sectional survey using both quantitative and qualitative methodologies. The assessment was based on a review of health facility registers, interviews with health care providers, focus group discussions with community members as well as anthropometric measurement among children less than five years of age. Therefore, this means that the assessment collected both facility and community based data.

The health facility registers' review and interviews with healthcare providers were important sources of the data obtained to measure changes in the burden of malnutrition, communicable and non-communicable diseases, maternal and new-born health, trends in immunisation coverage as well as the preparedness status of the health system to respond to any health and nutrition emergencies. Indicator measurements were recorded for two points in time: before the drought (September 2014 – February 2015 and during the drought (September 2015 – February 2016). The register review and facility based provider interview form was designed for use in public and private facilities.

Two focus group discussions were conducted per region with women of child bearing age and other members of the community. The discussions focussed on trends in disease burden, mortality patterns, nutrition, gender based violence, and WASH, before and during the drought. This was necessary in order to give a broader view of the drought situation in the communities.

A rapid SMART survey was conducted. The Rapid SMART was implemented because of the limited time and it focused on a resident population with similar characteristics in the Lowveld areas that are affected by drought. The survey focused on estimating the prevalence of Global Acute Malnutrition in children aged 6-59 months, assessing the acute nutritional status of pregnant and lactating women, as well as estimating the morbidity rates two weeks prior to the survey.

4.2 Ethical Consideration

Consent was obtained prior to initiating the interviews from all health care providers and respondents for the FGDs as well as the participants of the rapid SMART. No individual identifiers (e.g., name, address) were collected, and no sensitive questions related to personal health status were asked. Findings from individual health facilities are not identified in the

report. Permission to undertake the survey was granted by the Scientific and Ethics Committee (SEC) in the Ministry of Health.

4.3 Selection of respondents and health facilities

Site selection for the assessment was mainly purposive. Health facilities were selected from all four regions of the country (Hhohho, Manzini, Lubombo and Shiselweni) Those selected included all the referral and regional hospitals, all Public Health Units, all health centres and randomly selected government and private clinics per region. A total of 62 health facilities were selected. The selection of sites was not random, and the information obtained was not intended to be representative of all facilities in the country.

The selection of the respondents for the FGDs was purposive targeting women of child bearing age in the communities that were information rich.

For the Rapid SMART a cluster sampling approach was applied given that there were several settlements dispersed in the Lowveld area that are affected by drought. In the first stage, a total of 25 clusters were randomly selected using probability proportional to size method. The Central Statistics Office (CSO) selected the 25 clusters from its sampling frame of enumeration areas (EAs) in the Lowveld areas. In the second stage, a total of 12 households were selected in each cluster using Systematic Random Sampling (SRS) method. A total of 12 households were chosen in each cluster because the proportion of under five children of 13.3% in Swaziland was below the 15% rule for deciding on the number of households in each cluster. Hence, the survey planned to include 300 households and a minimum of 200 children 6-59 months.

4.4 Data collection

The data collection instruments used in this assessment were developed with guidance from individuals with direct knowledge of the health care system in Swaziland, as well as from individuals with expertise in nutrition, health emergency preparedness and response. The data collection tools were developed in English. The paper based data collection process used 3 tools (see Appendix 1):

1. A data abstraction form for register review and provider interview at the health facilities.

2. A brief questionnaire for FGD (open-ended questions).
3. A rapid SMART data recording form.

4.5 Fieldwork training

A two-day training (on the 14th & 15th March 2016) for 48 individuals was held at the Manzini Regional Health Offices. Officers experienced in field studies from WHO, UNICEF and UNFPA as well as the MOH, provided logistical and administrative support for the training and field work. Participants were senior officers in the Ministry of Health. The training focused on familiarizing trainees with the data collection tools and their application. Each of the three instruments was reviewed in detail, and trainees were instructed on how to identify all possible sources of data at the pre-selected sites, anthropometry measurements, assessment of morbidity, household selection method (SRS), completing the questionnaire, general field procedures and survey logistics. Four participants with previous experience in data entry in Epi Info were trained on the specifics of data entry for this exercise. Copies of Epi Info 7 were downloaded onto their individual laptops.

A field test of the data collection instruments was conducted immediately after the training. Three health facilities, one regional hospital, one health centre and one clinic, agreed to serve as mock data collection sites. One FGD was conducted as a pilot. The information in the field test was then used to practice the data entry procedures. Based on experience gained from the field test, the data collection instructions were adjusted and further guidance was provided.

4.6 Field work

The trained participants were organized into six field teams. Each team comprised of four members, including a driver. There were 4 coordinators and national support officers. In their role as team leaders, the supervisors assisted with data abstraction and interviews, and were responsible for: communicating and coordinating with national supervisors and health officials at the assigned sites; ensuring adherence to the protocols for data collection and provider interviews; and regular review of data quality and form completion.

4.7 Analysis

The facility based tool data was captured into EPI Info and exported into Microsoft Excel 2010. SPSS was then used for analysis, with mainly frequency tables as outputs. The Rapid SMART data processing was done using the ENA for SMART software 2011 between the 4th Feb 2015 & July 2015. The qualitative data was transcribed verbatim and scripts were produced using microscope word. The data was analysed manually by grouping emerging themes.

5. RESULTS

5.1 General information

The assessment covered the four regions of the country focusing on health facilities at all levels and communities.

Table 1: The type and location of facilities that were assessed

	N (%)
Type of health facility	
Clinic	39 (64%)
Public Health Unit	8 (13%)
Health Centre	6 (10%)
Regional Hospital	5 (8%)
National Referral Hospital	3 (5%)
Region	
Hhohho	15 (25%)
Lubombo	14 (23%)
Manzini	18 (30%)
Shiselweni	14 (23%)

5.2 Nutritional situation

The nutritional situation in the country is shown below:

5.2.1 SMART findings

- Global Acute Malnutrition (GAM) was 3.1% (1.3%-7.2%) and Severe Acute Malnutrition (SAM) was 2.5% (0.9%-7.1%) based on Weight-for-Height and the presence of bilateral oedema.
- 9 cases of oedema were identified in Hhohho and Lubombo. These cases were from Mhlangatane and Mpolonjeni Tinkhundla. There were no cases of oedema in the other regions.
- Total stunting (chronic malnutrition) was 21.1% (16.8%-26.1%) and severe stunting was 4.4% (2.8-6.8%).
- Total underweight was 5.5% (3.4%-8.7%).
- Half (51.8%) of the children were reported to have been sick 2 weeks prior to the survey. Cough (58.4%) was the most common type of illness followed by fever, skin infections and diarrhoea.
- Almost three quarters (71.4%) of the caretakers first sought treatment for their sick children in health facilities.
- Among children aged 9-59 months, (81.3%) had received the measles vaccination verified by card and recall.

5.2.2 Children with SAM and MAM- trends

A total of 17 832 children were screened for SAM and MAM from September 2015 to February 2016 compared to 23 260 during the same period the previous year. About 359 (2%) of the 17 832 children had MAM and 249(1.4%) had SAM compared to 254 (1.1%) of the 23 260 children and 165(0.7%) respectively. The trends of SAM are shown in figure 1 below.

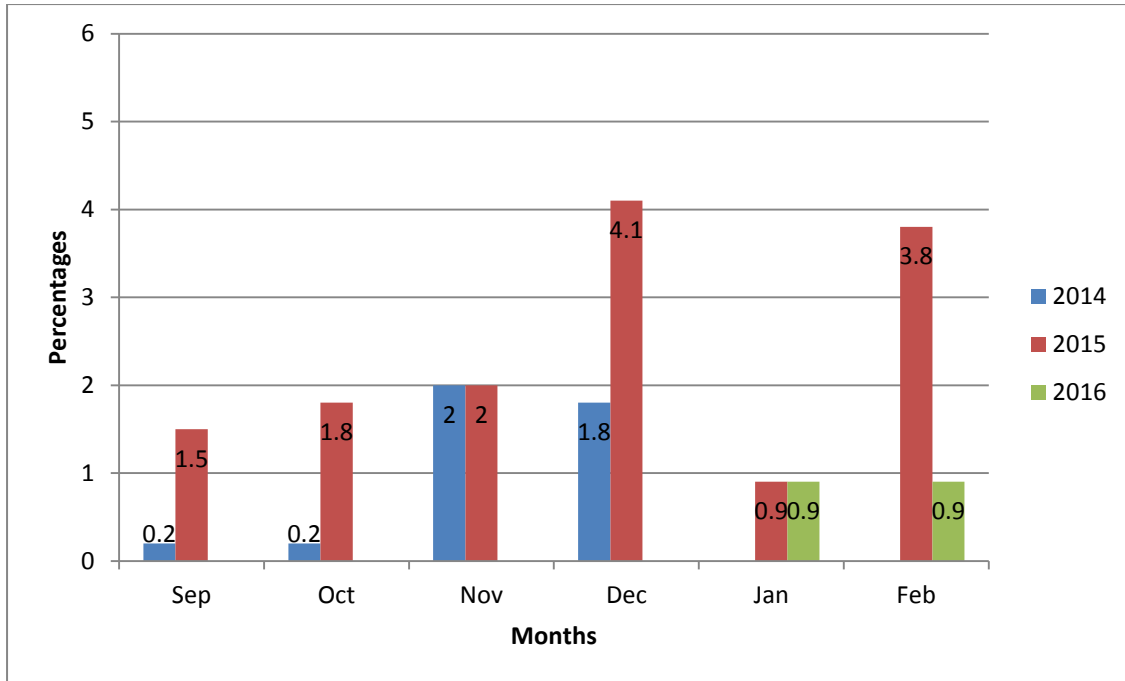


Figure 1: The trends of SAM before and during the drought.

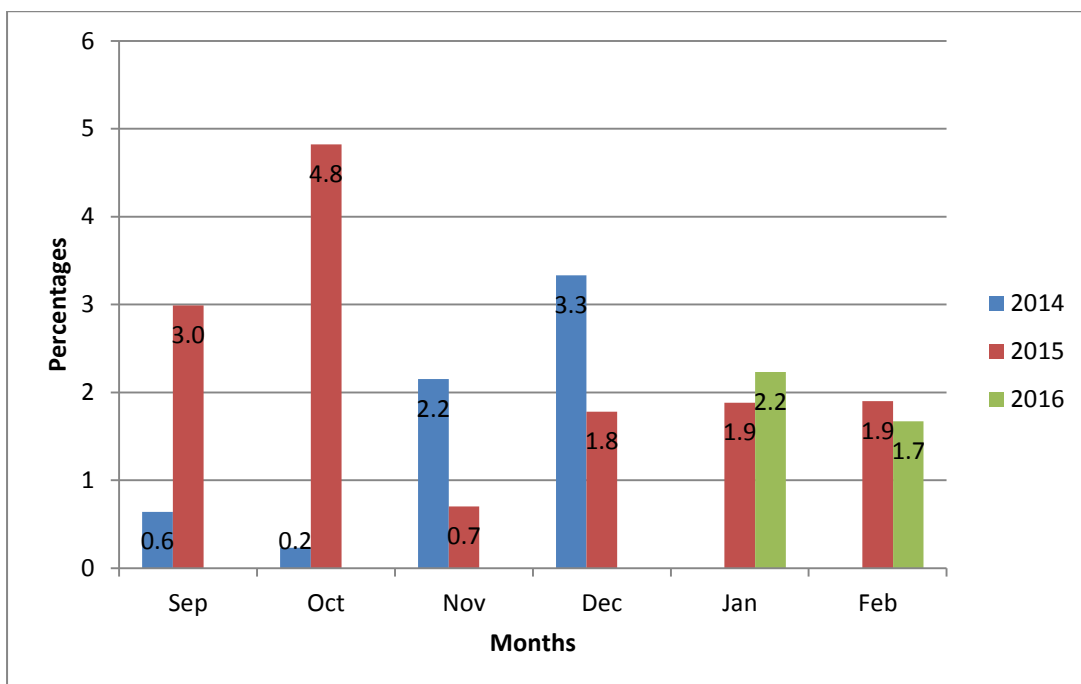


Figure 2: Trends for MAM admissions

The graph above shows that more children were admitted for MAM in September 2015 (3%) rising to 4.8% in October 2015. In 2014, a rise was seen in November and December.

5.2.3 GAM Rate/ Wasting

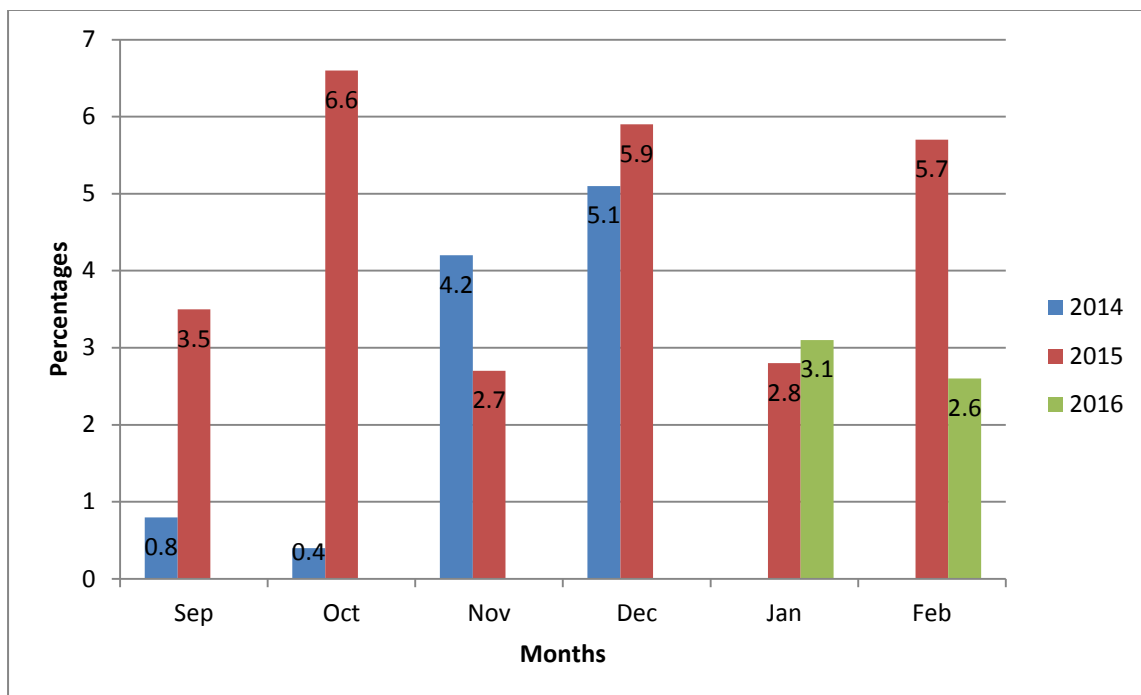


Figure 3: Trends in Global Acute Malnutrition

The Multiple Indicator Cluster Survey (MICS 5) indicates that GAM was at 2% while the Rapid SMART indicated the GAM was at 3.1%; and data from the facilities depicts that it was at 2.6%. The study findings show the gradual increase of malnutrition in this era of drought.

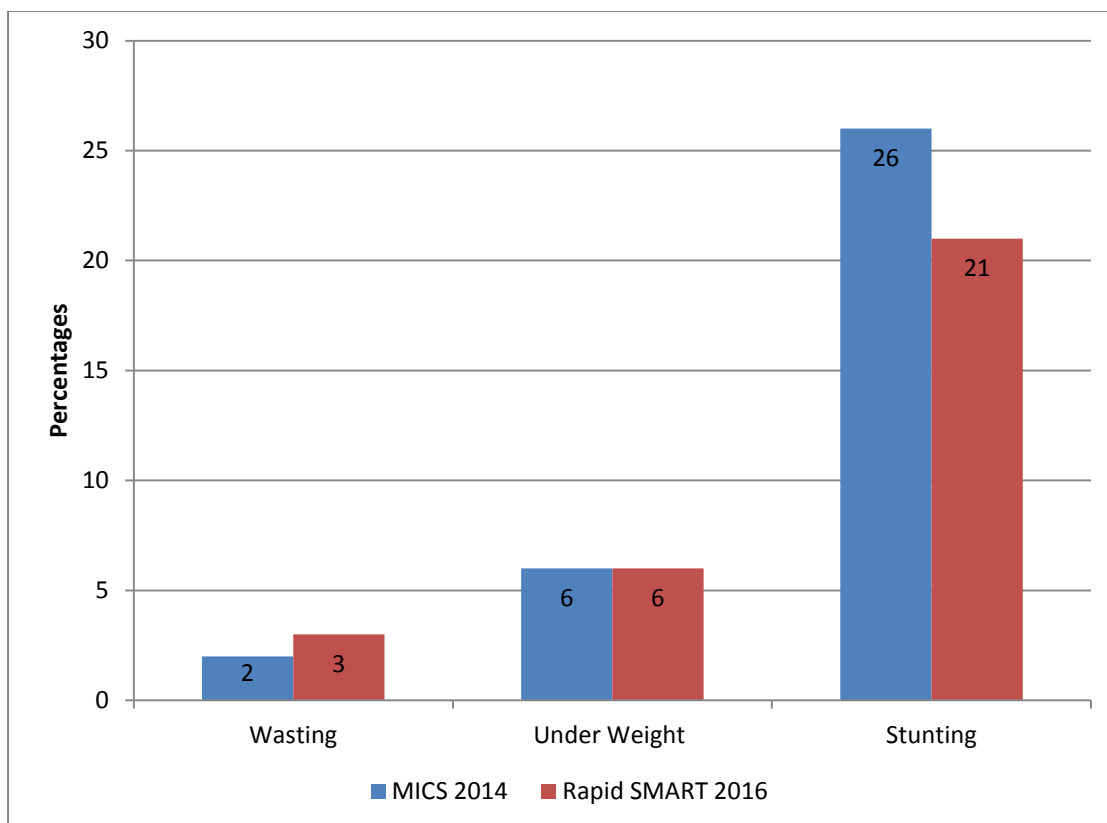


Figure 3: The comparison of Rapid SMART and MICS 2014 findings

5.2.4 Admission for Food by Prescription

The Food by prescription Programme covers individuals suffering from HIV infection who are on ART, those on TB treatment, pregnant women and lactating mothers, and those with malnutrition.

Table 2: Number of cases admitted for Food by Prescription under different programmes

Programme	Number of cases admitted for Food by Prescription													
	Sept		Oct		Nov		Dec		Jan		Feb		Total	
	2014	2015	2014	2015	2014	2015	2014	2015	2015	2016	2015	2016	2014/2015	2015/2016
TB	5	45	9	39	11	29	12	56	22	53	8	65	67	287
ART	1614	854	1618	831	1499	839	1569	866	1885	842	1075	912	9 260	5 144
ANC	67	40	25	41	42	19	30	29	38	53	2	119	204	301
PNC	25	17	25	17	43	24	24	15	40	61	0	76	157	210
MDR-TB	0	22	0	19	0	20	0	17	0	17	0	31	0	126
IMAM	0	4	0	3	0	0	0	2	0	7	0	16	0	32
TB/HIV	20	22	23	20	18	31	15	41	65	50	41	49	182	213

Table 2 shows an increase in the number of people admitted in the Food by Prescription Programme during the period September 2015 to February 2016. However the ART programme has seen a decrease in the number of admissions.

5.2.5 Anaemia

There is an overall increase in the cases of anaemia being diagnosed in the facilities during the drought period especially among females above five years of age as shown in figure 3. However, there are few case of anaemia diagnosed among children under five years of age.

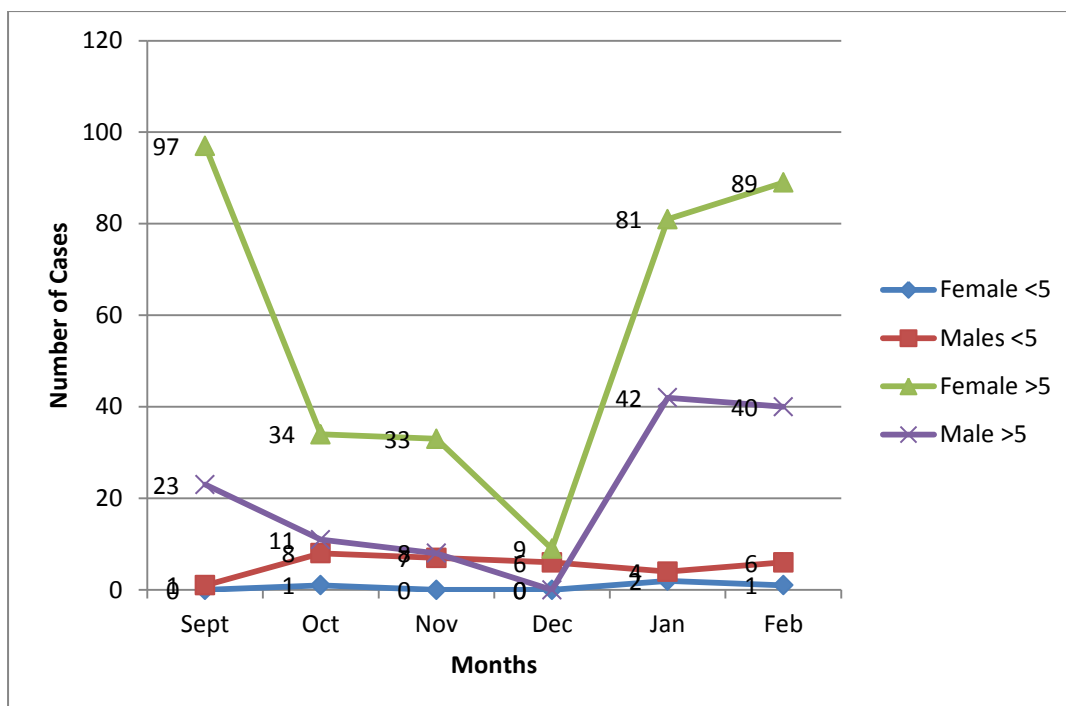


Figure 4: Trends of anaemia from September 2015 to February 2016

6.3 Health situation

6.3.1 Trends in communicable diseases

The following section outlines the trends in communicable diseases following the onset of the drought.

- There was an increase in the cases of acute watery diarrhoea in October and November 2015 compared to the same period in 2014. The number of cases then decreased in December 2015 to February 2016. This was observed in all age groups.
- There were 65 cases of malaria from September 2015 to February 2016 which shows a reduction of 36% from the 101 malaria cases seen during the September 2014 to February 2015 period.
- The country has not reported any cases of measles before and during the drought.
- There has been a decline by half, in the number of skin conditions reported in the assessed facilities, 13 501 cases in 2015 during the drought compared to 25 914 in

2014 which is before the drought. However skin conditions still remains a major cause of outpatient visits.

- Upper respiratory tract infections among people presenting at the facilities are also on the decline; 26 923 in 2015 compared to 29 084 in 2014.
- A total of 5368 eye disease cases were seen in the health facilities during the same period in 2014 before the drought in 2014. In 2015 during the drought 8078 were reported, which showed an increase of 50%.
- ART defaulting was also observed in facilities that were assessed. The number of defaulting increased by 12 percent from 2014 to 2015; the number of defaulters were in 890 in 2014 and 1000 in 2015. Though TB defaulters were low, the number of cases has increased by eight times compared to the 2014 cases; from 29 cases in 2014 to 251 in 2015 respectively.

6.3.2 Trends for non-communicable diseases

Hypertension is one of the conditions that was assessed in health facilities. There were 14,193 cases seen in 2014 whilst there were 5, 520 in 2015, which was a significant decline by almost 40 %. A similar trend is observed amongst clients with diabetes, where a total of 3152 cases were seen in 2014 and only 1,478 in 2015, showing a decline by 53 %. A decline in mental disorders was also observed; from 8,483 in 2014 to 3,780 in 2015.

6.3.3 Trends in maternal and neonatal health

A marked decrease of about 55 % was observed amongst pregnant women attending antenatal care in the facilities with 5,309 in 2014 to 2,354 in 2015. The results show a reduction in the number of deliveries taking place in health facilities and in 2014 there were 7,102 compared to 6,342 in 2015, over the same period. On the other hand, there is an increase in the number of babies who were delivered at home; in 2014 there were 750 which increased to 1235 in 2015 during the same period. There was also an observed decrease amongst women coming for post-natal care visits where there were 7,028 in 2014 compared to 6,550 in 2015. Deliveries at term, but with low birth weight, have increased from 216 in 2014 to 351 in 2015. Premature labour has increased by two and half times from 272 in 2014 to 947 in 2015. Early infant diagnosis has doubled from 2014 compared to 2015. Another

issue which came out from the qualitative analysis was that the respondents reported a marked increase in miscarriages among pregnant mothers, which they attribute to hunger.

6.3.4 Trends in immunization

The number of children that received measles immunization at nine months increased by 20 % during the period of September 2015 to February 2015 compared to the same period in the previous year. There is also an observed increase of DPT coverage by 21 % during the same period like that of measles. The third tetanus toxoid immunization of women increased by four times in 2015 compared to the same period in 2014.

Children are given Vitamin A as a supplement and during the assessment it was observed that this increased by 82 % in 2015 compared to the previous year 2014. Children are also dewormed in the country and given Albendazole; from the assessment it was observed that this increased by two and half times in 2015 compared to the 2014 of the same period.

6.4 Qualitative findings

There were focus group discussions conducted in all the regions of the country. The discussions focused on morbidity and mortality in the communities in relation to drought, health service provision, nutrition, water sanitation and hygiene, as well as gender based violence.

6.4.1 Morbidity

Before the drought the communities' burden of diseases was mainly due to diarrheal diseases, HIV/AIDS, TB, and upper respiratory tract infections. Children were mostly affected by skin diseases like scabies. Scabies and diarrhoea disease are observed more frequently now and this is attributed mainly to the unavailability of clean water. The communities perceive that drought is causing a lot of stress and diseases like Hypertension, Diabetes, and mental illness and that these are on the increase. Malnutrition is affecting all age groups due to problems associated with food shortages and other essential commodities for families. It was also reported that the chronically ill patients like those on ART, hypertensive medication and TB treatment are not adhering to their drugs since they do not have food to eat before they take their treatment.

6.4.2 Mortality

The communities are experiencing high numbers of deaths for all age groups particularly adults, and this is attributed to hypertension, diabetes, diarrhoea, and HIV related illnesses. However, other communities have seen an increase in neonatal deaths during the drought period which they said is due to poor attendance at antenatal clinics and lack of food. It has been discovered that people do not to adhere to their treatment when they do not have food to eat and subsequently die of treatable diseases.

6.4.3 Health services

The communities have access to health facilities where services are affordable. However, the respondents reported that there were shortages of medication and that health workers were unfriendly at times. They also reported very long queues resulting in long waiting times. For those who live far from health facilities, ambulance services are not available, hence, they consult Rural Health Motivators (RHMs) and after referral, they have to hire neighbours' vehicles at a cost. They reported that due to the drought, some facilities were experiencing serious water shortages and expectant mothers were asked to bring their own water, needed for service delivery. Condoms and family planning commodities are available but community members do not use them. Condoms available in public toilets are inaccessible due to inability to pay for toilet usage fees. It was also reported that in some communities there was poor health seeking behaviour, as most people use traditional medicine and do not bother visiting health facilities. There was also a lot of health education going on especially on HIV/AIDS and diabetes.

6.4.4 Nutrition

The communities are faced with severe food shortages. Dietary diversity is poor; the households not have a daily balanced meal day. Meal frequency in some households has been reduced to one meal per day. Infant feeding practices were also compromised with some claiming not to have enough breast-milk for their babies. The respondents also reported that some mothers were practicing mixed feeding.

6.4.5 Gender Based Violence

It was revealed that GBV does exist in families even though it is not discussed openly by communities. It comes in the form of physical, emotional, sexual and financial abuse.

Women reported that their husbands and partners no longer give them money to buy food and other commodities compared to the period prior to the drought. They accuse men of using the little money to buy food for their dogs and cats instead of sending children to hospital. The situation is such that there is no food in the family yet money is spent on alcohol, hence, an increase in alcohol abuse has been observed. It was also revealed is that sexual activity has lessened because women are no longer open to having sex yet men demand more sex without buying food for their families. Therefore, men then retaliate by physically assaulting the women, resulting in intimate partner violence.

6.4.6 Water, Sanitation and Hygiene

Water

The respondents reported that water was available but was dirty and unsafe. Some were experiencing water rationing and some had to buy water. Some were using community water sources and expected to pay E30 to E40 joining fees before being allowed to access the water. Some communities were sharing the water from unprotected sources with animals as some boreholes had dried up. As a result people have to travel long distances to collect water. Due to unavailability of water, backyard gardens were adversely affected. Some people were harvesting rain water and others collected water from temporal water ponds during rainy periods. Some communities were not sure about how to use Jik or Chlorine tablets to treat water before consumption.

Sanitation

Pit latrines are mostly used in rural and peri-urban areas and flush toilets mainly in towns. In some peri urban areas the respondents reported using buckets and plastics bags to dispose of their human waste including sanitary pads and nappies. Some dispose of the waste in nearby streams and rivers. In rural areas some families either do not have toilets or the toilets are not safe to use, hence, open urination and defaecation is practiced. Some health facilities are currently being supported by World Vision to construct toilets.

Hygiene

It was reported that sanitary pads were disposed of in toilets or in nearby open fields. As a result, the drought had resulted in compromised hygiene practices. At times women cannot afford sanitary pads; hence, they resort to using newspapers and pieces of cloth. This practice is mainly affecting adolescent girls. Some girls are even ashamed to go to school during the

menstruation period because of lack of menstrual protection. Some respondents mentioned that menstruation has become more painful than before, to the extent that they end up going to health facilities to ease the pains. People no longer wash their hands regularly. Some bath once a week or when they will undertake travel; laundry is only done when necessary. They are recycling water.

Table 3: Statements by the respondents on different thematic areas

<i>Thematic area</i>	<i>Statements</i>
<i>Morbidity</i>	<p><i>“We are now sharing water from the dams with the livestock. We eat meat from the dying livestock. People collapsing due to the heat wave. Skin conditions are also on the rise”</i></p> <p><i>“We have also seen a lot of teenagers falling pregnant; There are truck drivers in this area, so the teenagers indulge in sexual intercourse in exchange for money to buy food for their families, also exposed to STIs”.</i></p> <p><i>“We are experiencing problems with diarrhoea , vomiting and headaches especially amongst the under 5 year olds. This is caused by the shortage of water in the community, we drink unsafe water”.</i></p> <p><i>“We are also experiencing stress related illnesses due to the drought. People are hungry because there is no food for the young ones, this is very stressful. Strokes and diabetes are on the rise too. Snake bites are on the rise especially with adults”</i></p>
<i>Mortality</i>	<p><i>“A lot of people are dying now than before the beginning of the drought, more especially the adults, and children are dying too but at a minimal rate. In most cases they die because of hypertension, diarrhoea, and some are those who are on ART”.</i></p> <p><i>“They stop taking their medication because they say they can’t take them on an empty stomach. The deaths are sudden and occur in the communities”</i></p>
<i>Health services</i>	<p><i>“Our Health facility does not have water. Patients, especially those who come for delivery had to come with their own water to use because the health centre doesn’t have water”.</i></p> <p><i>“Now people do not have money to pay the community levy-E5 People are referred to health facilities by community health workers when they</i></p>

	<i>are very sick”</i>
Nutrition	<p><i>“The balanced diet meal is the thing of the past, in this situation there is nothing, I mean nothing at all”.</i></p> <p><i>“But now we eat only once a day or sometimes have almost nothing at all; we just drink water and sleep. Our children go to school on empty stomachs, and only depend on the school feeding scheme”.</i></p>
Gender based violence	<p><i>“We are stressed by the women who demand food from us every day yet we don’t have anything and don’t know where to get it from, so we feel like our status.....as Swazi men are being violated”.</i></p> <p><i>“Nowadays they quarrel a lot with her husband because he always demands sex, yet am hungry, I don’t have strength for sex.”</i></p> <p><i>“Mhh, my children, it is tough on that one, I have attempted suicide three times. I have my grand children , I am expected to feed them but I absolutely do not have anything to feed them .Their parents are busy imbibing alcohol, I feel abused, it’s just too much for me, they think less about me. The children do not understand this, the fact remains , they need to be fed”</i></p> <p><i>“Hey what they are saying its true people have more dogs than humans in the households and they are cared for more by the men who get troubled more for the welfare of the dogs than the children”.</i></p>
WASH	<p><i>“There is no water here, we cannot even grow vegetables. We get water from the streams which we share with the livestock. The water is unsafe since it is not treated. In actual fact, availability of water varies according to the locations”</i></p> <p><i>“Now we use 25L of water for 2 days. Only wash hands rarely”</i></p> <p><i>There is no water here, we cannot even grow vegetables. We get water from the streams which we share with the livestock”.</i></p> <p><i>“Some get water from the river and there are no purification methods</i></p>

	<p><i>used. We still believe that spring water is nice we purify the water using Jik where she pours 1 lid of Jik in a container filled with about 180 litres of water. She then keeps them over night until the smell of the Jik subsides then she can use them”</i></p> <p><i>“In some places around town the used sanitary pads are disposed indiscriminately. Sometimes people use buckets and plastic bags as toilets. Some of the rented residences have no toilets, so they use the plastic bags as toilets. In some areas children are left alone in the houses then given the plastic bags or buckets to use as toilets. Then they dispose the waste material in the same place where water is disposed”</i></p>
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6.5 Emergency health and nutrition preparedness status

The following section presents the findings from the assessment of the status of health systems emergency health and preparedness. It focuses on coordination, human resources, community engagement and social mobilisation, WASH, case management, surveillance and response, as well as logistics and supply chain management.

6.5.1 Coordination mechanism for response

From the 61 health facilities interviewed, only five (8.2%) knew about the existence of a functional Multi-sectoral Emergency Health and Nutrition coordination committee and out of the same number of health facilities only four (6.5%) knew about the existence of functional technical sub- committees of the Emergency Health and Nutrition with focal points and a clear mandate constituted. Health facilities that had reviewed updated their membership and were informed about their roles and responsibilities were only four (6.5%). Only three (4.9%) health facilities had existing Terms of References for the coordination committee and technical sub-committees, with established procedures for command and control coordination mechanisms and had developed plans of actions for coordination. From the four health facilities with Terms of References for the coordination committee, only one had minuted meetings and monitoring mechanisms of the coordination body. Seven (11.5%) health facilities had linkages and reporting mechanisms with other higher level coordination committees. Six (9.8%) health facilities had available relevant policies, strategies and capacities to guide disaster risk management.

6.5.2 Human resource for emergency response

Human resource is a key element for an emergency response, thus the assessment sought to establish whether health facilities were ready to respond. Only 11 (18%) health facilities had identified and trained teams at community level on emergency health and nutrition preparedness and response. A total of 18 (29.5%) facilities had human resource availability and capacity gap analysed and eight had filled the gaps.

6.5.3 Community engagement and social mobilization

Twenty-seven (44.3%) health facilities had established functional communication coordination mechanism for engaging with local community networks for social mobilization. Nine (14.8%) health facilities had conducted orientation of community leaders on Emergency Health Nutrition preparedness and response. Regarding community engagement, eight (13.1%) facilities had health and nutrition emergency preparedness and response activities as standing agenda in their regular community meetings, and 20 (32.8%) facilities had disseminated targeted messages for local and traditional leaders, churches, schools and other community stakeholders. Six (9.8%) facilities had established plans for reviewing, revising and monitoring impact of communication and social mobilization activities.

The communities were using different media as sources of information on drought in general and health and nutrition situation in particular. This is shown in table 4.

Table 4: Source of information as reported by the facilities

Source of information	Number of facilities N (%)
Mass media	23 (38%)
Social Networks	16 (26.2%)
Internet	10 (16.4%)
Interpersonal	37 (60.7%)

6.5.4 Water, Hygiene and Sanitation

A total of 43 (70.5%) health facilities had a consistent and sufficient supply of water and back-up system. A total of 48 (78.7%) had functional hand washing facilities. Fifty-three (86.9%) health facilities had water sources identified for human consumption and 28 (45.9%) had access to water trucking services.

Forty-nine (80.3%) facilities had ongoing general hygiene and sanitation promotion activities taking place at health clinic and community levels including schools. Health facilities in rural areas used pit latrines as the findings revealed 31(50.8%) health facilities had pit latrines and 52 (82.2%) had flushing toilets. A total of 48 (78.7%) had functional sanitary facility at all times. This means about one fifth of the facilities had non-functional sanitary facilities at some point. A total of 13 (21.3%) health facilities had dignity kits available. As far as waste management is concerned 53 (86.9%) health facilities had functional medical waste management system and 57(93.4%) general waste management system in place.

6.5.5 Case management

Thirty-three (54.1%) health facilities provided care to patients with uncomplicated severe acute malnutrition with identified capacity gaps. A total of 26 (42.6%) health facilities had daily SAM case identification, admission and linkage to care. A total of 36 (59.0%) had functional anthropometric measurement equipment. Protocols for the management of SAM cases were available in 26 (42.6%) health facilities.

Thirty (49.2%) health facilities had arrangements for managing moderately acute malnourished children, pregnant and lactating women, patients on ART and TB treatment. Food supplementation for people living with HIV, TB, pregnant and lactating mothers and OVCs was available in 14(23.0%) facilities. Only 38(62.8%) had functional Oral Rehydration Therapy (ORT) corners.

Existence of functional designated isolation area in case of admission of highly infectious patients was available in 15(24.6%) health facilities. Sixteen (26.6%) facilities had surge capacity in case of disease out breaks.

6.5.6 Epidemiological surveillance and response

Twenty-six (42.6%) facilities had functional weekly disease surveillance system five (8.2%) had functional weekly nutrition surveillance system in place. A total of 47(77.0%) facilities were using the Immediate Disease Notification System (977). Health facilities that practiced data analysis, interpretation and use were 42 (68.9%). A total of 45(73.8%) health facilities had established systems to identify unusual occurrence of diseases and 5 of these facilities experienced increased cases of scabies, acute watery diarrhoea at some point. A total of 23 (37.7%) facilities had functional feedback mechanism in place.

6.5.7 Logistic and supply management

Forty-two (68.9%) health facilities had additional supply requirements identified and 34(55.7%) had identified supply and logistics gaps. Thirty-three (54.1%) facilities had taken measures to fill the additional identified supply gaps. A total of 43(70.5%) facilities had functional mechanisms to regularly request and report medical supplies and 51(83.6%) had minimal stock level defined for commodities supply. Forty-nine (80.3%) facilities had supply chain management system in place.

6.5.8 Stocks availability

A checklist was used to assess the availability of tools and supplies in the facilities and table 5 shows the status.

Table 5: Current status of availability of tools and supplies in the assessed facilities

Category	Item	Number of facilities with tools/ supplies	Percentage
Tools	Severe Acute Malnutrition protocol guide	32	52%
	MUAC tape	55	90%
	Functioning weighing salter with basin/pants	47	77%
	Functioning electronic scale/adult	41	67%
	Length board	33	54%
	Weight /height reference	45	73%

Recording	Outpatient Therapeutic feeding Programme cards	14	23%
	F-75 reference card	9	14.8%
	F-100 reference card	8	13%
	Therapeutic Feeding Programme multi chart	18	29.5%
	Registration books	34	55.7%
	Monthly statistical reporting format	44	72%
	Referral form	52	85%
Therapeutic and supplementary feeds	Corn Soya Blend (CSB)	14	23%
	RUTF/plumpy nut	19	31%
	F-75	10	16%
	F-100	12	19.7%
	Resomal	0	0
	OXFAM kits	8	13%
Supplements	Vitamin A capsule	51	83.6%
	Ferrous sulphate tablets	55	90.2%
	Zinc	41	67%
	Folic acid tablet	58	95%
Antibiotics	Amoxicillin capsule	57	93%
	Amoxicillin syrup	54	88.5%
	Mebendazole/ Albendazole	59	96.7%
	Metronidazole)	55	90%
	Ciprofloxacin	55	90%
	Anti-malaria drugs	47	77%
	IPC	Hand sanitizers	23
	Jik and chlorine tablets	33	54%
	Jerry cans	26	42.6%
Reproductive health	Contraceptives	57	93%
	Condoms	45	73%
	Magnesium sulphate injection	16	26%

	Oxytocin injection	18	29.5%
Others	Linen back –up	29	47.5%
	Availability of food for care-takers in SC	1	1.6%

7. DISCUSSION

The assessment revealed the health and nutrition situation in the country during the drought. There were changes in the trends of nutritional status and distribution of diseases. The assessment also revealed the health system’s preparedness status to respond to any health and nutrition emergencies related to the drought. Therefore, focus of the discussion is on the nutritional status, the health status, the health system preparedness.

7.1 Nutrition status

The prevalence of wasting was 3.1% (95% CI: 1.3%-7.2%). 3.1% is within WHO 2000 threshold of 5% for acceptable nutrition severity situation. At the same time, pockets of malnutrition seem to exist within the Swaziland context. There are limited population level studies that have investigated and reported on oedema in Swaziland. Benyera & Hyera 2013, retrospective observational study at Mbabane government hospital recruited 179 severe acute malnutrition cases, of which 88 (31%) had bilateral oedema, thus pointing at occurrence of oedema in Swaziland.

The programme data results revealed that the cases of acute malnutrition had increased by about 1% during the drought period. The increase was noted for both MAM and SAM. The rate of underweight, however, remained the same before and during the drought. Studies done elsewhere reveal that increased rates of national acute malnutrition may not necessarily be due to lack of food, but can be exacerbated by both acute infections and chronic illness that lead to reduced food intake and increased needs. Surveillance for acute malnutrition is used in early warning systems.

Malnutrition is both caused and exacerbated by drought, especially if a population is dependent on locally-grown food that is in reduced supply during a drought. Therefore, if food is not distributed to make up for shortfalls in local production, the decreased availability of food is compounded by poor hygiene, lack of potable water and poor access to health services, all of which can contribute indirectly to malnutrition.

Acute malnutrition is the stereotypical presentation of decreased food security leading to mass hunger, starvation and famine. A decreased intake of calories and nutrients results in wasting, with loss of body fat, muscle bulk and body weight. The effect of a longer-term reduced intake of protein, fat, carbohydrates and micronutrients leaves young children stunted and compromises cognitive development.

In this assessment a gradual increase in the overall monthly number of cases of anaemia diagnosed in the health facilities during the drought period was observed. This was especially among females above five years of age. This picture projected a worsening situation as the drought progressed. Micronutrient deficiencies may be primary or secondary drought outcomes. Typical deficiencies in drought are iron, vitamin A and vitamin C. Subclinical deficit is more common than clinical deficit. People with both acute and chronic malnutrition are also likely to have one or more micronutrient deficiencies. These deficiencies are caused by poor intake of micronutrients, which is worsened during times of drought and by disease. Micronutrient deficiencies predispose to the same infectious diseases that cause them, as well as to acute respiratory infections.

It was also observed that more clients were admitted in the Food by Prescription Programme during the drought than before. This was particularly the case for those on TB medication, pregnant and lactating mothers as well as children under the IMAM programme. However, a decrease in the number of clients on ART admitted was noted. Food supplementation for these at risk population groups can help in improving the overall nutrition status of the communities.

7.2 Health status

7.2.1 Trends in communicable diseases

In drought situations measles, diarrhoeal diseases, acute lower respiratory infections and malaria are largely responsible for high morbidity and mortality in infants and children – particularly in combination with malnutrition (WHO 2012). High worm load is a further risk.

The results highlighted an increase in the cases of acute watery diarrhoea among all age groups during the drought especially the driest months, October and November 2015. Water reduces in both quantity and quality during drought, with people at times forced to drink unsafe water, and basic hygiene practices are compromised. In this case community members

were sharing water sources with both domestic and wild animals and hand washing and general personal hygiene practices had gone down. Outbreaks of infectious diseases associated with drinking from alternative water supplies can occur in any setting (Stanke, 2013). Contamination of open water sources increases as faecal pathogens become more concentrated, making it more likely that people will drink a minimum infective dose. Potential diseases then include diarrhoea, cholera, bacillary and amoebic dysentery, typhoid, hepatitis A and E, Cryptosporidium and giardiasis, leptospirosis, E Coli and poliomyelitis.

The number of malaria cases especially local cases reduced dramatically during the transmission season involving the drought, compared to the previous transmission season. Vector-borne diseases tend to decrease during drought but may increase again with the rains following drought. Although malaria transmission is likely to lessen during drought, there is a danger that mosquito densities can increase dramatically with the first rains after the drought.

It was noted that there was a drop in the number of skin conditions and Upper Respiratory Tract Infections reported in the assessed facilities during the drought as compared to the same period the previous year. However, the number of reported eye diseases increased. On the other hand, the communities reported increases in skin, URTI, eye diseases on top of other communicable diseases. Eye diseases include infection and allergies and any other eye conditions. This is expected in drought situations due to dust and compromised hygiene practices which might be attributed to shortage of water. This might mean that community members were not visiting the facilities for these diseases due to priority setting. They would anticipate the conditions to clear on their own. Poor hygiene is associated with increases in scabies, impetigo and conjunctivitis.

The other diseases of public health importance are HIV/AIDS and TB. It was revealed that ART and TB treatment defaulter rate was increasing. The main reasons cited were the lack of food and patients not willing to take their medication without eating. The other reasons might be lack of money to travel to health facilities for refills. This situation is worrisome as more people might die due to relapse; there might also be a promotion of drug resistant strains resulting in all the achievements gained in the fight against the two diseases being lost.

7.2.2 Trends in non-communicable diseases

There was a decrease in the number of people living with chronic diseases as observed at the health facilities. These included Hypertension, diabetes and mental disorders. However findings from the community based FGDs revealed that these diseases were a concern and a number of deaths due to these conditions were reported. Conditions associated with drought may negatively impact people who have certain chronic health conditions such as asthma, diabetes, hypertension and disabilities. Drought-related changes in air quality such as increased concentrations of air particulates can irritate the eyes, lungs, and respiratory systems of persons with chronic respiratory conditions. Malnutrition and micronutrient deficiencies combined with lack of psychosocial stimulation can have permanent negative effects on the cognitive, language and motor development of young children. Although there are limited studies available, this situation suggests an increase in stress and anxiety and possibly suicide. Community members reported having attempted suicide more than once due to stress associated with the drought. Further research is needed on the impacts of drought on mental illness, and in particular depression, anxiety and suicide.

7.2.3 Trends in maternal and child health

As far as maternal and new-born health, as well as sexual reproductive health in general is concerned, the results revealed a number of variations. A marked decrease in the number of pregnant women attending antenatal care, the number of facility based deliveries as well as post-natal care visits were observed. Early infant diagnosis for HIV doubled during the drought period compared to the same period the previous year. An increase in teenage pregnancies was also reported, as young girls were engaging in unprotected sexual relationships with truck drivers and other older men.

These variations in maternal health can be explained by the fact that due to distance from health facilities and lack of water, women were staying away from obstetrical care, antenatal and post-natal care, as well as institutional deliveries. In the absence of ambulance services, there was no money to hire neighbours' cars when labour began, therefore, the women decided to deliver at home and then take the new-born babies for check-ups. Reduced antenatal and delivery care contributed to some women not being enrolled for Prevention of Mother to Child Transmission of HIV, hence, having more babies exposed to HIV as seen with higher Early Infant Diagnosis. Deliveries at home are associated with complicated deliveries which might result in a rising number of infant and maternal morbidity and deaths.

7.2.4 Trends in immunization

The country has not reported any cases of measles before and during the drought. The proportion of children who received measles vaccination verified with a card and recall remains relatively the same as before the drought or even slightly higher. The number of children receiving vitamin A supplementation as well as Albendazole for deworming was on the increase. The Expanded programme on Immunization was engaging in outreach programmes as they implemented to Reach Every District (RED) strategy.

Immunization (against measles and other vaccine preventable diseases) through campaigns and accelerated routine immunisation during drought are encouraged. Where immunization rates are low, a concerted programme of accelerated routine immunization may be needed, combined with initial campaigns of measles and polio immunization. These campaigns should be accompanied by the distribution of vitamin A and deworming.

7.3 Access to health care services

Reduced ability to pay for health services and lower thresholds for catastrophic health expenditures can pose increased barriers for access to services. Droughts can severely reduce livelihoods and assets, in turn reducing access to services that have to be paid for as transport costs to health facilities or during referral become prohibitive. This is likely to have an impact on child and reproductive health and on chronic disease, leading to interruption in treatment and potential exacerbation of chronic communicable (e.g. HIV, tuberculosis) and noncommunicable diseases. Catastrophic health expenditures and lack of financial health protection may further increase poverty and undermine the restoration of livelihoods.

7.4 Emergency health and nutrition preparedness status

As health needs increase during droughts there may be implications for the capacity to treat patients. With increased needs for medical supplies and for more human resources for health who are adequately trained to address the medical aspects of acute malnutrition for instance, Health information systems that may not be adequate to detect increases in malnutrition, or potential increased risks of outbreaks are also needed. The potential effect of water scarcity on the water supply, sanitation and hygiene conditions in health facilities is also of concern. The assessment revealed some gaps in the health system's ability to respond to drought emergencies in the areas of coordination, human resources, community engagement, WASH, and logistics and supplies.

Generally coordination mechanisms for emergency health and nutrition response at all levels was weak. There were no functional coordination committees. Weak coordination hinders effective and prompt response to an emergency situation. Capacity at health facilities in terms of human resources was found to be inadequate as most of the staff was not trained on health and nutrition with regards to emergency and disaster risk management. Health workers were not adequately prepared or trained to address the health effects of drought and malnutrition.

Community engagement and social mobilisation for drought was inadequate. Though there were established functional communication coordination mechanism at all levels, they were not being utilised to orient of community leaders and general public on emergency health nutrition preparedness and response. Communities were not engaged. More health education was focusing on HIV and other chronic illnesses like diabetes. Information at health facilities was disseminated mainly through interpersonal interactions. Other sources of information were not being used. This may lead to distortion and misperceptions. Lack of access to the internet was also depriving the health providers of current information and updates.

Key behaviour change communication messaging is essential in all emergency interventions, be it in health facilities or in communities. The different sectors and actors should streamline the use of community workers ideally around a nationally or locally-agreed system, in order to ensure the effectiveness and sustainability of community mobilization and the promotion of key messages. Community committees (based on health and nutrition facilities and water supplies, or meeting in the community) should be empowered to set priorities and methodologies for communication. In addition to providing technical information, there should be discussions on the rights to food, land, water, sanitation, health and nutrition, with community participation in fulfilling needs. Clear communication on the availability of services is also needed, as is the accountability of health and nutrition partners to those accessing the services. Health programmes should target priority and marginalized groups. Communication should be effective and clear. Multiple media may be used, including local radio, posters, leafleting, and text messaging and social media.

Care for those with previously-diagnosed chronic diseases involves avoiding interruption of treatment regimes. However, increased consultation rates during a drought may expose a poorly identified pre-existing disease burden. This creates a dilemma, and normal diagnostic pathways should not be circumvented. This also highlights the need for clear chronic disease treatment protocols in all post disaster settings.

The surveillance system was weak. The health information systems were not adequate to detect increases in malnutrition, or potential increased risks of outbreaks. Health facilities were affected by water scarcity compromising sanitation and hygiene conditions in institutions. During the time of visits most health facilities (70.5%) had portable water and adequate sanitation. However, conversations with the health facility staff indicated that this was a temporal condition and was due to the rains which had just been received which had improved the availability of water. Most of the health facilities didn't have dignity packs and were not sure where to solicit them. All urban facilities were using flush toilets and had no back-up systems in case of water shortages. Reduced stream and river flows can increase the concentration of pollutants in water and cause stagnation. Having water available for cleaning, sanitation, and hygiene reduces or controls many diseases. Drought conditions create the need to conserve water, but these conservation efforts should not get in the way of proper sanitation and hygiene. Personal hygiene, cleaning, hand washing, and washing of fruits and vegetables can be done in a way that conserves water and also reduces health risks.

In terms of supplies and logistics, an increase in health needs has an impact on the case load of health facilities, which results in the need for more staff and medical supplies. Severe heat with droughts can affect the quality and shelf-life of medicines.

8. RECOMMENDATIONS AND CONCLUSION

8.1 Recommendations

1. There is need to strengthen all-hazards health emergency risk management including vulnerability and risk analysis and preparedness plans for the health and nutrition sector. Activation of preparedness plans and strengthen response coordination functions is also needed.
2. The surveillance systems, including for early detection of, and response to outbreak prone diseases is needed. This involves strengthening early warning and response systems (EWARN) for epidemic-prone diseases. Nutritional surveillance should be integrated within health facility-based disease surveillance.
3. Integration of nutrition programmes horizontally into health service delivery, including training of health workers and surge capacity for community and facility-based management of acute malnutrition is urgently required. Provision of refresher training of health workers in managing the health aspects of acute malnutrition as well

as putting in place nutritional feeding programmes for rehabilitation of children with moderate and severe acute malnutrition is essential. There is need for support of medical care of patients with acute malnutrition, including management of children affected by severe acute malnutrition with medical complications, including support to selected referral hospitals where stabilization centres are needed and to psychosocial stimulation programmes.

4. Provision of support for adequate breastfeeding and complementary feeding of young children in drought affected areas is also critical.
5. There is need to strengthen the prevention and control of communicable diseases, including early diagnosis and appropriate case management. Scaling up integrated management of childhood illness to increase access to basic care for early treatment of diarrhoea, acute respiratory infections and malaria, and mitigate childhood diseases as risk factors for malnutrition.
6. Continuity of care for those with noncommunicable chronic diseases is needed, including the establishment of mental health and psychosocial programmes.
7. Adequate coverage levels for measles and polio vaccination, including vitamin A and de-worming should be ensured through campaigns and/or strengthening of routine immunization programmes.
8. Investment in community preparedness and health promotion in order to increase community resilience is essential. There is need to intensify community engagement and social mobilisation based on risk analysis for health and nutrition interventions.
9. Support for procurement and supply chains of equipment, devices and medicines related to drought response is vital.
10. Ensuring adequate water, sanitation and hygiene conditions in all health facilities and drought affected communities is also essential.
11. There is a need to address nutritional needs and related increased health risks for pregnant and lactating women as an integrated part of antenatal care programmes as well as management of pregnancies and safe deliveries, including emergency obstetrics and newborn care, or EmONC.

12. It is also essential to intensify implementation of interventions addressing adolescent girls and menstrual protection as well as alternative coping mechanisms for those at risk of GBV during the drought emergency.

8.2 Conclusions

The drought health and nutrition assessment was conducted in order to reveal the situation of the impact of drought on the nutrition and health status of the communities in Swaziland. The findings revealed that there is deterioration in the health and nutrition status especially among under-five children, expecting and lactating mothers as well as those living with chronic illnesses like HIV and AIDS. Access to health care services has been compromised as priorities have shifted; people prefer to use the little resources available for the procurement of food than for accessing health services. This has resulted in a marked reduction in the number of those accessing sexual and reproductive health services whilst access to child welfare services are satisfactory. Due to scarcity of food, there is a reduction in the number of meals consumed per day and an increased in inappropriate infant and young child feeding practices.

The assessment also revealed a number of gaps in the preparedness status of the health and nutrition systems. The health and nutrition sector needs to strengthen the response mechanism to mitigate the effects of drought. The areas of focus are coordination, human resources, information systems, case management, logistic and supplies.

REFERENCE

Public health risk assessment and interventions. The Horn of Africa: Drought and famine crisis, July 2011

http://www.who.int/diseasecontrol_emergencies/publications/who_hse_gar_dce_2011_3.pdf

Government of Swaziland (2010): Multiple Indicator Cluster Survey (MICS), Mbabane, Swaziland

Sahel Food and Health Crisis: Emergency Health Strategy. World Health Organization. 2012.

Stanke C, Kerac M, Prudhomme C, Medlock J, Murray V. Health Effects of Drought: a Systematic Review of the Evidence. PLOS Currents Disasters. 2013 Jun 5. Edition 1.doi: 10.1371/currents.dis.7a2cee9e980f91ad7697b570bcc4b004.

Annexure A: Survey Tools



Health and Nutrition Preparedness Status Assessment

Objectives of the assessment

1. To assess the situation of nutritional and health related conditions due to the impacts of drought
2. To assess the capacity of the health system to respond to any health and nutrition related emergencies

1. General information

1.1 Health Facility

Name of facility	Type of facility
Inkhundla:	Region:
Ownership:	
Number of beds:	
Total Number of Staff	
Technical	Support:

1.2. Survey team

Name	Organization
1.	
2.	
3.	
4.	
5.	

1.3. Contact person at the Facility (Person in Charge and Respondent if different)

Name	Responsibility	Contact details
1		
2		

2. Background information

2.1. Population figures

SN	List	Number	Remark
1	Catchment area population		
2	Under 5 year child population		
3	5 to 14 years		
4	15 to 24 years		
5	25-49 years		
6	50 and Above years		
7	Pregnant women		
8	Lactating mothers		

2.2 Humanitarian Interventions

Current humanitarian intervention		
Organization	Main activity	Target
1		
2		
3		
4		
5		

3. Nutrition profile

3.1 Nutritional screening for 6-59 months children

3.1.1 .For the year 2014-2015

Month	Total number of children screened	Number Moderately Acute Malnourished (MAM) WHZ>-3<-2	Number Severe Acute Malnourished (SAM) WHZ<-3 & or Oedema	%MAM	%SAM
Sept 2014					
October					
Nov					
Dec					
Jan 2015					
Feb					

3.1.2 .For the year 2015-2016

Month	Total number of children screened	Number Moderately Acute Malnourished (MAM) WHZ>-3<-2	Number Severe Acute Malnourished (SAM) WHZ<-3 & or Oedema	%MAM	%SAM
Sept 2015					
October					
Nov					
Dec					
Jan 2016					
Feb					

3.2 Admissions for MAM and SAM

Month	MAM	SAM
Jan 2015		
Feb		
March		
April		
May		
June		
July		
August		
Sept		
October		

Nov		
Dec		
Jan 2016		
Feb		
March		

3.3 Food by Prescription - Admissions

3.3.1 .For the year 2014-2015

Month	TB	ART	ANC (1ST & 4th)	PNC	MDR TB	IMAM	TB/ART Co- infection
Sept 2014							
October							
Nov							
Dec							
Jan 2015							
Feb							

3.3.2 .For the year 2015-2016

Month	TB	ART	ANC (1 st & 4th)	PNC	MDR TB	IMAM	TB/ART Co- infection
Sept 2015							
October							
Nov							
Dec							
Jan 2016							
Feb							

3.4 Anemia

Month	Female <5	Males < 5	Female > 5	Males >5
Sept 2015				
October				
Nov				
Dec				
Jan 2016				
Feb				

4. Health Profile

4.1 Trends in communicable diseases

4.1.1 .For the year 2014-2015

Month	Acute watery Diarrhea < 5	Acute watery diarrhea >5	Malaria	Measles	Skin conditions	URTI	Eye diseases	ART - defaulters	TB defaulters
Sept 2014									
Oct									
Nov									
Dec									
Jan 2015									
Feb									

4.1.2 .For the year 2015-2016

Month	Acute watery Diarrhea < 5	Acute watery diarrhea >5	Malaria	Measles	Skin conditions	URTI	Eye diseases	ART Defaulters	TB defaulters
Sept 2015									
October									
Nov									
Dec									
Jan 2016									
Feb									

4.2 Trends for non-communicable diseases

4.2.1 .For the year 2014-2015

Month	Hypertension	Diabetes	Mental disorder
Sept 2014			
October			
Nov			
Dec			
Jan 2015			
Feb			

4.2.2 .For the year 2015-2016

Month	Hypertension	Diabetes	Mental disorder
Sept 2015			
Oct			
Nov			
Dec			
Jan 2016			
Feb			

4.3 Trends in Maternal and Neonatal Health

4.3.1 .For the year 2014-2015

Month	ANC	Deliveries	PNC	Low-birth weight	Premature deliveries	BBA	EID/DBS
Sept 2014							
October							
Nov							
Dec							
Jan 2015							
Feb							

4.3.2 .For the year 2015-2016

Month	ANC	Deliveries	PNC	Low-birth weight	Premature deliveries	BBA	EID/DBS
Sept 2015							
Octo							
Nov							
Dec							
Jan 2016							
Feb							

4.4 Trends in Immunization

4.4.1 .For the year 2014-2015

Month	Measles	DPT3	Vit A	Albendazole	TT3 for pregnant women
Sept 2014					
Oct					
Nov					
Dec					
Jan 2015					
Feb					

4.4.2 .For the year 2015-2016

Month	Measles	DPT3	Vit A	Albendazole	TT3 for pregnant women
Sept 2015					
October					
Nov					
Dec					
Jan 2016					
Feb					

4.5 Morbidity

4.5.1 What are the main health illnesses seen in the facility (list)		
1.	2.	3.
4.	5.	
4.5.2 Have there been any reports or rumours of any outbreaks or unusual increases in illness?		
<input type="checkbox"/> No <input type="checkbox"/> Yes (Specify)		
4.5.3 Have there been cases of gender based violence (GBV) compared to the previous year?		
<input type="checkbox"/> No <input type="checkbox"/> Yes (Specify)		
Sexual	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Domestic	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Intimate partner violence	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Physical	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Emotional	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4.5.4 Have there been reports of non-infectious agents (such as cold, heat, radiation, poisons or toxins)?		
<input type="checkbox"/> No <input type="checkbox"/> Yes (Specify)		

4.6 Mortality

4.6.1 Number of under-5 deaths in the last in the last month	
4.6.2 Number of deaths of people over-5 in the last seven days	
4.6.3 Was there a change in the mortality pattern since the beginning of the drought?	
<input type="checkbox"/> No <input type="checkbox"/> Yes (Specify)	

5. Emergency Health and Nutrition Preparedness Status Assessment

The purpose of the assessment is to check the functional ability of the various elements, either singularly or interactively as applicable, to respond to any health and nutrition related emergencies.

5.1	Component 1- Overall Coordination:			Comments
5.1.1	Existence of functional multi-sectoral Emergency Health and Nutrition Coordination Committee <ul style="list-style-type: none"> • National • Regional • Community If yes, name committee	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	
5.1.2	Existence of functional technical sub-committees of the Emergency Health and Nutrition with focal points and clear mandate constituted <ul style="list-style-type: none"> • National • Regional • Community 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	
5.1.3	Membership to the Emergency committees reviewed and updated, and every one informed of the roles and responsibility <ul style="list-style-type: none"> • National • Regional • Community 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	
5.1.4	Existence of clear TOR for the Emergency Health and Nutrition coordination committee and technical sub-committees <ul style="list-style-type: none"> • National • Regional • Community 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	
5.1.5	Established procedures for command & control, coordination mechanisms, clearance of key technical and information products <ul style="list-style-type: none"> • National • Regional • Community 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	
5.1.6	Developed plans of actions for the coordination committee <ul style="list-style-type: none"> • National • Regional • Community 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	
5.1.7	Minuted meetings and monitoring mechanisms of the coordination body at clinic level <ul style="list-style-type: none"> • Weekly • Monthly • Quarterly 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

	<ul style="list-style-type: none"> • Annually • Others 			
5.1.8	Linkages and reporting mechanisms with other higher level coordination committees	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
5.1.9	Availability of relevant policies, strategies and capacities to guide health sector interventions in disaster risk management	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

5.2	Component 2- Human resource for Emergency Response		
5.2.1	Identified and trained team at community level on emergency health and nutrition preparedness and response	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.2.2	Human resource availability and capacity gap analyzed	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.2.3	Human resource availability and capacity gap filled	<input type="checkbox"/> Yes	<input type="checkbox"/> No

5.3	Component 3- Communication and Social Mobilization – Public awareness and community engagement		
5.3.1	Established functional communication coordination mechanism at all levels and across levels	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.3.2	Established mechanisms for engaging with local community networks for social mobilization	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.3.3	Orientation made about Emergency Health Nutrition preparedness and response to community leaders in the community	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.3.4	Health and nutrition emergency preparedness and response activities as standing agenda of regular community meetings	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.3.5	Disseminated targeted messages for local and traditional leaders, churches, schools and other community stakeholders	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.3.6	Established plan for reviewing, revising and monitoring impact of communication and social mobilization activities <ul style="list-style-type: none"> • National • Regional • Community 	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.3.7	Source of information <ul style="list-style-type: none"> • Mass media • Social networks • Internet • Interpersonal • Other (specify) 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No

5.4	Component 4- WASH-Water, Hygiene and Sanitation		
5.4.1	Is there consistent and sufficient portable water at all levels?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.2	Are there any hand wash packages at facility level?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.3	Water sources identified for human consumption	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.4	Water trucking capacity / easy accessibility	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.5	Functional hand washing facilities at all points	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.6	Supply of water consistently available at all levels	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.7	Backup system in place	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.8	Water treatment chemical available or easily accessible	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.9	General hygiene and sanitation promotion activities at health clinic, community and at school	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.10	Type of sanitary facility available <ul style="list-style-type: none"> • Pit latrine • Flush 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No
5.4.11	Sanitary facility functional at all times	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.12	Availability of a dignity kit	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.4.13	Functional waste management system in place <ul style="list-style-type: none"> • Medical • General 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No

	Component 5- Case Management		
5.5	Out-patient therapeutic care (OTP)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.5.1	Clinic provides care to patients; <ul style="list-style-type: none"> • uncomplicated Sever Acute Malnutrition in Outpatient Therapeutic Programme • communicable diseases • non communicable diseases • maternal and new born care • others (specify) 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No
5.5.2	Assessed capacity and gap identified for management of: <ul style="list-style-type: none"> • Uncomplicated Sever Acute Malnutrition in Outpatient Therapeutic Programme • Communicable diseases 	<input type="checkbox"/> Yes	<input type="checkbox"/> No

	<ul style="list-style-type: none"> • Non communicable diseases • Maternal and new born care • Others 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No
5.5.3	Existence of functional designated isolation area	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.5.4	Surge capacity in case of disease out breaks (cholera, typhoid, measles, MUAC red (SAM), acute watery diarrhea, ARI and malaria)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.5.5	Daily SAM case identification and admission to Outpatient Therapeutic Programme in clinic (Linkages between screening , Outpatient Therapeutic Programme Therapeutic Supplementary Feeding)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.5.6	Clinic with functional anthropometric measurement equipment for Outpatient Therapeutic Programme(length board, scale, tape measure)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.5.7	Availability of protocols for the management of SAM cases	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Supplementary Feeding Program (SFP)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.5.8	Arrangements made with relevant sectors for managing moderately acutely malnourished children and Pregnant and lactating women, ART, TB	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.5.9	Food ration for people living with HIV, TB, pregnant and lactating mothers, OVCs	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.5.10	Linkages to Therapeutic Supplementary Feeding discharged from OTP and SC	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.5.11	Functional Oral Rehydration Therapy(ORT) corners	<input type="checkbox"/> Yes	<input type="checkbox"/> No

	Component 6 - Epidemiological Surveillance and Response		
5.6.1	Availability of functional for weekly disease surveillance system (PHEM) in place	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.6.2	Functional IDNS (977)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.6.3	Availability of functional weekly malnutrition surveillance system in place - recording, analysis and reporting of SAM and MAM cases from OTP, SC , SFP and other health facilities	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.6.4.	Health and health related clinic profile mapped	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.6.5.	Availability of weekly disease and malnutrition reporting formats (lay case definitions, PHEM reporting form)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.6.6.	Practice of data analysis, interpretation and use: <ul style="list-style-type: none"> • community 	<input type="checkbox"/> Yes	<input type="checkbox"/> No

	<ul style="list-style-type: none"> • facility • regional • national 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No
5.6.7.	Established system to identify unusual occurrence of diseases at the following: <ul style="list-style-type: none"> • community • facility • regional • national 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No
5.6.8	Outbreak (Scabies, Measles, Pertussis)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.6.9	Feedback mechanism functional	<input type="checkbox"/> Yes	<input type="checkbox"/> No

5.7	Component 7- Logistic and Supply Management		
5.7.2	Additional Supply requirement identified	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.7.3	Mapped available supply and logistics gap identified	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.7.4	Measures taken to fill the additional identified supply gaps	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.7.5	Are there functional Mechanisms to regularly request and report medical supplies	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.7.6	Minimal stock level defined for commodities supplied	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5.7.7	Supply chain management (requisition, transportation, storage, distribution, etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No	

6. Stock checklist

Material list	Availability		Stock out status(past 3 month)	Observation and comment (indicate month of stock)
	Yes	No		
Severe Acute Malnutrition protocol guide				
MUAC tape				
Functioning weighing salter with basin/pants				
Functioning electronic scale/adult				
Length board				
Weight /height reference				
Outpatient Therapeutic feeding				

Programme cards				
F-75 reference card				
F-100 reference card				
Corn Soya Blend (CSB)				
Therapeutic Feeding Programme multi chart				
Registration books				
IV fluids				
Monthly statistical reporting format				
Water tanks				
Referral form				
RTUF/plumpy nut				
F-75				
F-100				
Amoxicillin capsule				
Amoxicillin syrup				
Vitamin A capsule				
Zinc				
Ferrous sulphate tablets				
Magnesium sulphate injection				
Oxytocin injection				
Folic acid tablet				
Mebendazole/ Albendazole				
Metronidazole)				
Ciprofloxacin				
Anti-malaria drugs				

Resomal				
Hand sanitizers				
Jik and chlorine tablets				
ORS				
Contraceptives including condoms				
Jerry cans				
OXFAM kits				
Linen back –up				
Standard of treatments (Quality) <ul style="list-style-type: none"> • Rooms • Safety • Tents 				
Availability of food for care-takers in SC				

End of Questionnaire



Health and Nutrition Preparedness Status Assessment Focus Group Discussion Guide

Objectives of the assessment

1. To assess the situation of nutritional and health related conditions due to the impacts of drought
2. To assess the capacity of the health system to respond to any health and nutrition related emergencies

Procedures

- Target group: Women of reproductive age with young children
- Number of FGDs in affected region: at least 2 in each area (sub regions)
- Instructions: Refer to annex 1 at the end of this tool

Question	Probe
Morbidity	
1. Which are the most common diseases that affect the community now and before the drought?	<ul style="list-style-type: none"> • for under 5s, pregnant women, general public • Changes in disease patterns • Snake bites • Relationship to drought
Health services	
2. Tell us about access to health care in your area before the drought and now.	<ul style="list-style-type: none"> • Time, distance and cost, provider attitude and referral • Availability of condoms • Health seeking behaviour
Mortality	
3. Tell us about deaths reported in the community in the last 6 months.	<ul style="list-style-type: none"> • For under 5 children and adults. • Any increase in death, at home
Nutrition	
4. Tell us about the food situation in your area before and during the drought	<ul style="list-style-type: none"> • availability, access, balanced diet • frequency of meals for children under 5 and household • change in breastfeeding patterns • coping mechanisms • Supplementary feeding for special

	groups-HIV, TB, Pregnant women- food by prescription
Water, Sanitation and Hygiene	
5. Tell us about the following on your water now and before the drought.	<ul style="list-style-type: none"> • Source, distance , safety ,quantity, cost
6. Tell us about the following on your hygiene and sanitation now and before the drought	<ul style="list-style-type: none"> • Hygiene (washing hands, body and cloths) • Sanitation (Type) • What are the issues around menstrual protection/hygiene
Gender based Violence	
7. Tell us about the cases of Gender Based Violence (GBV) in the community now and before the drought.	<ul style="list-style-type: none"> • Types • Response
Conclusion	
8. What are your suggestions on how to improve the health, nutrition and water situation in your community?	<ul style="list-style-type: none"> • Any questions

ANTHROPOMETRIC & HEALTH QUESTIONNAIRE													
Date (D/M/Y): ____/____/____ Enumeration Area/Cluster No: Team No: Region: Tinkhundla: Chiefdom:													
1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	1.11	1.12	1.13	1.14
Child no.	HH ref. no.*	Sex m = Male f = Female	Age in months (use birth certificate immunization card first or recall eg local calendar of events)	Weight in Kg (ex 12.4)	Height in cm (ex 78.1)	Oedema n = No y = Yes	MUAC in cm (ex 11.3)	Illness in past 2 weeks? 0 = No 1 = Yes (If yes ask qs 1.10)	Type of illness 1 = Fever** 2 = Cough** 3 = Diarrhoea*** 4 = Skin Infections 5 = Eye infections 6 = Other (specify) Not applicable (NA)	Where did you first seek treatment for the child 1=health facility 2=traditional healer 3=spiritual 4=pharmacy 5=other specify 6=Nothing 7=Not applicable (NA)	Has child of age (9-59 months) received measles vaccination? 1= yes with card 2= yes recall 3=No 4=Don't know	If malnourished, is child enrolled in treatment programme? 0 = No 1 = yes, in TFP 2 = yes, in SFP 3 = Not applicable (NA)	Pregnant and Lactating women MUAC in cm (ex 28.1)
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													

Annexure 2: List of Sampled Clinics Names

Serial	Clinic Name	Enumeration Area	Region
1	Herefords	12,148	Hhohho
2	Mahwalala Clinic	11,484	Hhohho
3	SOS Community Clinic	11,471	Hhohho
4	Kumalandzela Nazarene	12,259	Hhohho
5	Motshane Clinic	11,103	Hhohho
6	Malandzela	12,219	Hhohho
7	Ntfonjeni Clinic	12,123	Hhohho
8	Sattelite Clinic	12,234	Hhohho
9	Ngowane	12,252	Hhohho
10	FLAS(Manzini and Mbabane)	22,454	Manzini
11	Mafutseni Nazarene	23,201	Manzini
12	Nokuthula	21,108	Manzini
13	Hillside	22,783	Manzini
14	Hospice at Home	22,308	Manzini
15	Kazondwako Clinic	21,210	Manzini
16	Sappi	21,502	Manzini
17	Sgombeni Clinic	22,126	Manzini
18	Lamvelase Health Centre	22,407	Manzini
19	Bulunga Clinic	22,223	Manzini
20	Philani	22,454	Manzini
21	High Care	22,503	Manzini
22	Sharma Family Centre	22,179	Manzini
23	Kwaluseni Campus	22,434	Manzini
24	Tfokotani CLinic	31,626	Shiselweni
25	Nkwene	32,218	Shiselweni
26	Mashobeni South Clinic	31,219	Shiselweni
27	Nhlangano SOS Clinic	31,404	Shiselweni
28	Silele	32,183	Shiselweni
29	BBRS Gama Surgery	31,404	Shiselweni
30	Jericho	32,138	Shiselweni
31	Lavumisa Clinic	33,402	Shiselweni
32	Gucuka Clinic	43,153	Lubombo
33	Vuvulane Clinic	43,529	Lubombo
34	Siteki Nazarene	44,407	Lubombo
35	Ikhwezi	43,331	Lubombo
36	Tsambokhulu	44,101	Lubombo
37	Manyeveni Clinic	43,550	Lubombo
38	New Thulwane	43,190	Lubombo
39	Lubuli	43,236	Lubombo
40	Gilgal	43,133	Lubombo

Annexure 3: Survey Teams

#	Name	Organization	Region
1.	Choice Ginindza	CSO/SVAC	National
2.	Masitsela Mhlanga	MOH	National
3.	Danisile Vilakati	SNNC	National
4.	Dr Kevin Makadzange	WHO	National
5.	Victor Mahlalela	NDMA	National
6.	Edward Kutondo	UNICEF	T/A
7.	Jonathan Ndzi	UNFPA	T/A
8.	Makhosini Mamba	UNICEF	Lubombo
9.	Margaret Thwala	UNFPA	Hhohho
10.	Nana Dlamini	WFP	Hhohho
11.	Tamary Silindza	UNFPA	Hhohho
12.	Dr Serge	MSF	Shiselweni
13.	Musa Dlamini	SNNC	Manzini
14.	Bonsile Mkhwanazi	Manzini Regional Health	Manzini
15.	Lizzy Dlamini	Lubombo Region	Manzini
16.	Vusie Lukhele	SNNC	Driver
17.	Muzi Dlamini	SINAN	Shiselweni
18.	Zandile Masangane	SHRU	Shiselweni
19.	Sicelo Dlamini	WFP	Shiselweni
20.	Sabelo Dlamini	WFP	Driver
21.	Sphindzile Maseko	SNNC	Lubombo
22.	Brian Cindzi	EPR	Lubombo/ Driver
23.	Thabsile Simelane	NCD	Lubombo
24.	Sniketiwe Zwane	SNNC	Hhohho
25.	Dudu Dube	Environmental Health	Hhohho
26.	Makhosini Mamba	UNICEF	Lubombo
27.	Mandla Thwala	Dental Unit	Driver
28.	Thandie Mndzebele	RHM	Hhohho (Supervisor)
29.	Vusi Lokotfwako	Epi	Hhohho
30.	Daniel Sithole	Environmental Health	Hhohho
31.	Mdududzi Lokotfwako	EPR	Hhohho (Supervisor)
32.	Bongani Dlamini	UNFPA	Shiselweni

33.	Promise Dlamini	SNAP	Hhohho
34.	Bongani Sigudla	Env.	Hhohho
35.	Nhlanhla Gwebu	SNAP	Driver
36.	Nokthula Mahlalela	VIP	Manzini (Supervisor)
37.	Thulile Dlamini	QA	Manzini
38.	Xolisiwe Dlamini	EPR	Manzini
39.	Nokthula Gamedze	EPR	Manzini
40.	Beryl Masuku	Hhohho Regional Health	Manzini
41.	Albert Thwala	Manzini Region	Manzini
42.	John Tsabedze	QA	Driver
43.	Obed Sukati	PHU	Driver
44.	Nhlanhla Nhlabatsi	Epidemiology Unit	Shiselweni (Supervisor)
45.	Sonnyboy Dlamini	Shiselweni Region	Shiselweni
46.	Lungile Mkhweli	Shiselweni Region	Shiselweni
47.	Zakhele Nkambule	Shiselweni Region	Shiselweni
48.	Calvin Dlamini	NPH	Shiselweni
49.	Velaphi Sgudla	RHM/Epi	Driver
50.	Dumsane Shabangu	EPR	Driver
51.	Phumzile Mabuza	SRH	Lubombo (Supervisor)
52.	Sibongile Simelane	Lubombo Region	Lubombo
53.	Bongani Simelane	Hlatikhulu	Lubombo
54.	Sabelo Masuku	Lubombo	Lubombo
55.	Voyivoyi Lukhele	HPU	Lubombo
56.	Nontokozo Simelane	Environmental Health	Lubombo
57.	Mbongiseni Xaba	School Health	Driver
58.	Skhumbuzo Dlamini	School Health	Driver
59.	Thami Dlamini	WHO	National
60.	Fortune Mhlanga	HMIS	National
61.	Nqaba Nhlebela	M \$ E	National
62.	Ncamsile Mmema	HMIS	National