

## **National Nutrition Surveillance Survey (NNSS) July 2008 report**

Malnutrition is serious public health concern in Zambia. It is estimated that 1.5 million children suffer from chronic malnutrition. The most recent data shows that among children less than five years of age, 47% are stunted, 28% are underweight and 5% are acutely malnourished. Additionally, Zambia has the highest malnutrition case fatality (40%) in the region. Micronutrient deficiencies are also prevalent, especially vitamin A and iron deficiency.

Therefore, NFNC and other stakeholders designed and piloted a scale-up National Nutritional Surveillance System (NNSS) in July 2008 in Eastern, Lusaka and Southern Province.

### **Introduction**

The pilot scaling-up of the National Nutrition Surveillance System in 2008 was implemented in three provinces, namely Eastern, Lusaka and Southern provinces, with a plan for a national scale up to all the remaining 6 provinces. The pilot scale-up took into account the experiences of the pilot result of the Lusaka province districts. The main purpose of the pilot scale up NNSS was to collect minimum amount of data that meet the surveillance objectives as well as considering both logistical and financial feasible and sustainable over time.

### **Methodology of the 2008 Scale-up NNSS**

This section describes the implementation process for the National Nutritional Surveillance System. It starts with highlighting the selection of the sample population, selection of clusters in this case health centers, selection of Neighbourhood Health Committees (NHCs)

catchment areas which are under the selected health centre and selection of households in the selected NHCs where the data was collected.

Based on the assumption that acute malnutrition (wasting) was the primary nutritional outcome of interest in the nutrition surveillance, a sample size of 760 children 6 to 59 months of age per province was calculated

## **FINDINGS**

### **Demographic Information**

Quarter (25.4 %) of the surveyed respondents were aged between 10-19 while (18.6%) were aged between 0-4 and the lowest was those aged above 70 years (1.4%). In addition, the respondent whose age was not stated was 1.8%.

### **Economic status of the Household heads**

Majority of the respondents were in an informal form of economic activity with Southern province recording the highest (88.2%) with Lusaka province recording the lowest (50.1%). Furthermore, Lusaka province had less than half (42.8%) of the respondents who are engaged in a formal form of economic activity with Southern province recording the lowest (7.1%).

## **WATER SANITATION AND HYGIENE**

Safe drinking water is critical in promoting good health and nutrition. It was therefore important to find out the usual sources of drinking water for the households in the study areas.

Eighty-four percent of households in Lusaka Province are accessing safe or clean water from mainly private taps, public taps, boreholes and protected wells. However, in Eastern and Southern provinces, only 61% and 53% of households respectively have access to safe drinking water.

The survey revealed that the proportion of households that treat drinking water was high in Lusaka Province with about 33 percent and lowest in Southern Province with only about 18 percent. Chlorine is the main method used in the treatment of drinking water in most of households in all the provinces. The result was highest in Eastern Province with 90% followed by Southern Province with 78% and Lusaka Province with 76%.

Most of households (57%) in Lusaka Province use pit latrines/traditional latrines. The proportion of pit latrine usage in Lusaka was higher compared to the other two provinces, Eastern (47%) and Southern (25%) provinces. The analysis of the survey results reveals that 70% of households in Southern Province and 48% of households in Eastern province have no sanitary facilities.

## **MATERNAL NUTRITION**

The mean age of women in the child bearing age per province, i.e. Eastern, Lusaka and Southern provinces. The survey result clearly indicates that the average age of women in the child bearing age for all the provinces is 28 years. In addition, the survey also revealed that the proportion of pregnant women who were given iron and folic acid was slightly higher in Eastern province with 60% followed by Lusaka province with 58% and Southern province recorded 49%.

The survey revealed that the proportion of pregnant women who reported having received **de-worming** tablets was similar across all the provinces surveyed with an average of 45%.

Mothers were asked about being given vitamin A capsule within eight week after delivery (postpartum vitamin A supplementation). The survey revealed that the higher postpartum vitamin A supplementation was reported in Lusaka Province with 72% followed by Eastern Province with 56%. Southern Province recorded the least with 48%.

## **Micronutrients**

Micronutrients are essential for the metabolic processes in the body and they play a major role in the numerous and health of an individual. The July 2008 survey collected various types of data that are used in assessing the micronutrients status of young children.

## **Salt in Household**

In all the provinces over 80% of the households visited had salt available in the household while an average of about 10% accounted for households with no salt. This implies that the difference was not significant among the three provinces.

## **Sugar in Household**

The government through Ministry of Health put up this measure as an intervention to curb the high prevalence of vitamin A deficiency. Households were asked at the time of the interview whether they had sugar. According to the table below shows that Lusaka Province had the highest proportion (65%) of households with sugar While Southern Province had the lowest proportion (26%).

## Child Nutrition

The 2008 July NNSS collected data on infant feeding for all children born in the one year preceding the survey about 59% of infants were put to the breast within one hour after delivery. This practice was reported to be higher in Southern province (68%), followed by Eastern province (50%). The survey noted that most (93%) of infants in Eastern Province were put on to the breast within the first day of birth.

The NNSS revealed that 89.6% of children 6 – 59 months old reported to have received vitamin A capsule and 73.8% of the children (12 – 59 months) received de-worming tablets within six months before the survey. De-worming coverage in Eastern, Southern and Lusaka province was 75.7%, 72.2% and 71.5% respective. The 2008 July NNSS showed that on average 86% of child received [measles vaccination](#).

## Childhood Illnesses

The July 2008 revealed that about 46% of children in Eastern, Lusaka and Southern provinces were reported to have been sick two weeks prior to the survey. Southern and Eastern provinces had 49.0% and 47.2% of children reported to be sick respectively, while Lusaka province reported 37.9%.

## WASTING

The survey reveals that Global Acute Malnutrition (<-2 SD) was 2.8% (0.6, 1.6 - 95% CI), while Severe Acute Malnutrition (<-3 SD) was 1.1% (2, 3.7 – 95% CI). These finding are on the lower side of the preliminary results of 2006 ZDHS. There were a higher proportion of older children (36 – 59 Months) who were wasted than the younger children (6 – 35 months). Eastern province recorded a higher proportion (3.7%) of children who were

wasted, while the lower proportion of wasted children was reported in Lusaka province (2.1%).

## **Underweight**

The NNSS survey found that moderate underweight (<-2 SD) among children was 16.5% (14.8, 18.3 – 95% CI) and severe underweight was 5.7% (4.6, 6.8 – 95% CI). These results are comparable to the preliminary findings of 2006 ZDHS. Children between the age of 36 – 59 months were relatively underweight than the younger ones. There were more underweight children in Southern province (44.2%), while Lusaka province (14.7%) had lowest proportion of underweight children.

## **Stunting**

The results of 2008 July NNSS revealed that 49% (46.6, 51.5 – 95% CI) of children were stunted (-2SD) and 23.1% (21.1, 25.2 – 95% CI) were severely stunted. The finding of 2008 July NNSS were similar to the preliminary finding of 2006 ZDHS. More than half of the children in the Eastern province (54.2%) and 44.2% in southern province were stunted.

## **Bilateral edema**

The nutrition surveillance results showed that 1.3% of children in the three provinces had bilateral edema. At provincial level, Southern, Lusaka and Eastern had 2.1%, 1.5% and 0.5% respectively.

## **Mid-Upper Arm Circumference**

Circumference of the left upper arm, measured at the mid-point between the tip of the shoulder and the tip of the elbow is called Mid-Upper Arm Circumference (MUAC). MUAC

has been known to be a good predictor of mortality in young children. The NNSS July 2008 collected information on MUAC for children. The findings of the 2008 July NNSS were that 0.6% of children in the three provinces had MUAC reading of less than 11 cm.

### **Household Dietary Diversity Score (HDDS)**

Household Dietary Diversity Score (HDDS) has been developed in light of the need to build consensus on household food access impact indicators. Household dietary diversity, *the number of different food groups consumed over a given reference period*, is an attractive proxy indicator for the following reasons; A more diversified diet is an important outcome in and of itself. It is documented that a more diversified diet is associated with a number of improved outcomes in areas such as birth weight, child anthropometric status, and improved hemoglobin concentrations.

The results of the 24 hour recall based household diet diversity revealed that the average HDD score for the three provinces was about 4 (3.8). This means that on average, there were 4 out of 13 food groups that were consumed in a day by households. At provincial level, Lusaka, Eastern and southern provinces reported a HDD score of 4.4, 3.8 and 3.1 respectively.

The common food groups that were reported to be consumed were Cereals and cereals products (98.9%), dark leafy vegetables (80.0%), Oil and fats (60.6%), sugary foods (48.8%), Legumes, nuts and oil seeds (40.7).

### **Crude and Child Mortality**

The table below shows that among the three provinces, Eastern province reported more deaths i.e. eleven people in the past six months followed by Lusaka province which reported 10 deaths. Southern province recorded the lowest of eight deaths in the past six months.

Lusaka province recorded the highest followed by Eastern province showing that in every 1000 three (3) people were expected to die in the past six months compared to Southern province where in a thousand only two (2) people were expected to have die in the past six months. Furthermore, in all the provinces, in 1000 people two people were expected to die. The child mortality rates in the three provinces that were included in the study showed that both Eastern and Southern provinces recording that in a thousand four (4) children i.e. children aged between less than five years were expected to die in the past six months compared to Lusaka which never recorded any in the past six months.

## **Recommendations**

- The NNSS programme has come timely and good but there is need to do a comprehensive review in its early stages to fine tune the objectives, methodology and indicators before scaling up to other provinces.
- All food and nutrition plans, guidelines, strategies and most importantly the Food & Nutrition Policy need to be operationalized and most importantly to increase coverage for these programmes in order to improve nutritional status of children, women and vulnerable households in the country.
- Develop and implement a comprehensive Diet Diversity Programme. Zambia and indeed the pilot province have a rich food diversity that can be taken advantage of. This should be holistic and should strengthen the role of nutrition in agriculture programming such research, food diversification, and determination of appropriate food basket for urban and rural settings.