transform nutrition
WEST AFRICA

TECHNICAL NOTE

ASSESSMENT OF NUTRITION DATA IN WEST AFRICA

JUNE 2019

Abbreviations

BMI	Body Mass Index
MDD-W	Minimum Dietary Diversity for Women
NCD	Non-Communicable Diseases
SD	Standard Deviation
U5	Children Under 5 years of age
WRA	Women of Reproductive Age

1. Summary

Transform Nutrition West Africa is a regional initiative to support effective policy and programmatic action on nutrition through evidence generation, synthesis and mobilization.

This technical note provides methodological detail on the nutrition data assessment conducted for a set of 17 key nutrition indicators in the West African region. It includes the stepwise approach to map primary data sources and secondary data platforms and assess primary data sources across four quality measures for the nutrition indicators. Results are presented in individual country data profiles and spreadsheet, and can be visualized through an interactive online tool.

2. Methodology

2.1. Indicator selection

A list of indicators of relevance for maternal, infant and young child nutrition (MIYCN) in the West African region was compiled. These selected indicators represent global nutrition targets (WHA targets[1] and WHO NCD targets[2]), regional nutrition challenges identified through the Transform Nutrition West Africa (TNWA) inception review, and address priority issues as identified by regional stakeholders at the TNWA regional stakeholder consultation. Seventeen indicators were included, as shown in **Table 1**.

2.2. Identification of nutrition data sources at country level

The following complementary searching approaches were used to identify nutrition data sources at country level: (1) targeted website search; (2) a Google search; and (3) consultation with content experts via email (**Table 2**). Primary data sources were defined as an original data source, i.e. data are collected firsthand for a specific research purpose or project; and secondary data platforms as platforms that use previously collected data by other people or organizations for their own purposes. Searches were completed in November 2018; any surveys released after this date are not reflected in this exercise. The resulting identified primary data sources were validated in December 2018 through: i) consultation with in-country experts on nutrition data and ii) cross-checking the primary sources referenced in retrieved data platforms (**Table 2**) that were not found in the initial searches.

Table 1 Key nutrition indicators

The indicators included in this assessment cover maternal, infant and young child nutrition (MIYCN) status, underlying behaviours that drive nutritional status, and diet-related non-communicable diseases (NCDs). Several of the indicators track countries' progress on global nutrition targets1,2. In addition, the selected indicators represent important regional nutrition challenges and priority issues.

		WHA target	Nutrition status	Drivers
Children	U5 stunting	■	■	
	U5 wasting	■	■	
	U5 overweight	■	■	
	Low birthweight	■		■
	Exclusive breastfeeding	■		■
	Early initiation of breastfeeding			■
	U5 anaemia		■	
	Minimum acceptable diet			■
	Minimum dietary diversity			■
Women of reproductive age	Anaemia	■	■	
	Wasting		■	
	Obesity		■	
	Minimum dietary diversity			■
Adult	Sodium intake			■
	Hypertension			
	Diabetes			
	Overweight and obesity		■	

1 Global Nutrition Monitoring Framework: operational guidance for tracking progress in meeting targets for 2025. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.

2 World Health Organization NCD monitoring framework

Table 2 Search approach

Search approach	Details
Primary data sources	
Targeted website search	Specific websites providing nutrition data on each of the indicators were searched to find relevant surveys for each West African country (e.g. http://ghdx.healthdata.org, http://microdata.worldbank.org, https://www.pma2020.org/pma2020-datasets-list)
Google search	We searched Google for the indicators linked to each country and outcome to identify any additional data sources. We searched these keywords in English for all countries and the French translation for francophone countries (Benin, Burkina Faso, Guinea, Ivory Coast, Mali, Mauritania, Niger, Senegal, Togo). [indicator]+[country]+ [data]
Consultation with content experts via email	We contacted content experts in nutrition data to identify data sources in the region (e.g. ARENA team, Countdown to 2030, DataDENT, national statistics office/bureau).
Secondary data platforms	
Targeted website search	We identified some platforms through the targeted website searches done for the Transform Nutrition West Africa inception report
Reference searching	Additional platforms were identified as the reference source for other platforms.
Consultation with content experts via email	We contacted content experts in nutrition data to identify platforms in the region (DataDENT, UNICEF, country teams).

We included primary data sources when: i) A survey was representative at national level; if no national survey was available for a given indicator, a sub-national survey was documented (e.g. STEPS survey); ii) The survey included at least one of the 17 selected nutrition indicators. Only the most recent available round of repeated surveys (e.g. Demographic and Health Survey) was listed. In addition, all types of secondary data aggregation platforms, such as score cards and data visualization tools, that report on at least one of the key indicators were included.

2.3. Country assessment of primary data sources

The study assessed national-level primary data sources identified for each of the selected indicators according to four measures: comparability/validity, timeliness, accessibility, and representativeness. A measurement matrix was developed and validated by DataDENT and UNICEF. For **Accessibility**, the study recorded the accessibility of primary data sources at national level. For each indicator and country, the study assessors noted at what level the results of the survey were available (report and/or dataset). For **Representativeness**, the level of disaggregation of each indicator for each of the West African countries was assessed (national and/or first level administrative divisions). For **Timeliness and frequency**, indicators were assessed for their timeliness and frequency. Timeliness was measured from the date of the most recent survey available and frequency by the recommended frequency for collecting the indicator. And finally, **Validity/ comparability** adherence to international set global measurement standards was documented.

Table 3 gives details on the standard definitions for each indicator with the reference source and the recommended frequency data collection for each indicator with the reference source. **Table 4** details the four-point rating scale for each of the four measurement dimensions.

Table 3 Quality measurement matrix

Indicators	Comparability/Validity		Timeliness	
	Standard measurement	Source	Recommended frequency	Source
U5 Stunting	Percentage of stunted (moderate and severe) children aged 0–59 months (moderate stunting = length/height-for-age between <-2 and >-3 v of the WHO Child Growth Standards median; severe stunting = height-for-age below -3 SD of the WHO Child Growth Standards median) x under-five population at the time of the survey	Indicator of the WHO Global nutrition monitoring framework	Every 3–5 years	Indicator of the WHO Global nutrition monitoring framework
U5 Wasting	Percentage of wasted (moderate and severe) children aged 0–59 months (moderate = weight for-height between <-2 and >-3 SD of the WHO Child Growth Standards median; severe = weight-for-height below -3 SD of the WHO Child Growth Standards median)	Indicator of the WHO Global nutrition monitoring framework	Every 3–5 years	Indicator of the WHO Global nutrition monitoring framework
U5 Overweight	Prevalence of weight-for-height in children aged 0–59 months defined as above +2 SD of the WHO Child Growth Standards median	Indicator of the WHO Global nutrition monitoring framework	Every 3–5 years	Indicator of the WHO Global nutrition monitoring framework
Low Birth Weight	The incidence of low birth weight in a population is defined as the percentage of live births under 2500 g out of the total number of live births during the same period. WHO defines low birth weight as less than 2500 g (5.5 lb)	Indicator of the WHO Global nutrition monitoring framework	Continuous (Annual surveys in the rating)	Indicator of the WHO Global nutrition monitoring framework
Exclusive Breastfeeding	Percentage of infants <6 months of age who are fed exclusively with breast milk	Indicator of the WHO Global nutrition monitoring framework	Every 3–5 years	Indicator of the WHO Global nutrition monitoring framework
U5 Anaemia	Children age 6-59 months classified as having anaemia if their Haemoglobin levels are below 11 g/dL, adjusted for altitude and smoking.	Indicator of WHO prevalence of anaemia in the world. Preventing and controlling iron deficiency anaemia through primary health care: a guide for health administrators and programme managers (1989)	Every 3–5 years	No source retrieved for the recommended frequency for this indicator. In the absence of guidance, we use the periodicity WRA Anaemia.
Minimum Acceptable Diet	Proportion of children 6–23 months of age who receive a minimum acceptable diet (apart from breast milk). Breastfed children 6–23 months of age who had at least the minimum dietary diversity and the minimum meal frequency (2 for 6-8 months and at least 3 for 9-23 months) during the previous day. Non-breastfed children 6–23 months of age who received at least 2 milk feedings and had at least the minimum dietary diversity not including milk feeds and the minimum meal frequency (solid or semi-solid food or milk feeds at least four times a day) during the previous day.	Indicator of UNICEF Indicators for assessing infant and young child feeding practices	Every 3–5 years	Indicator of UNICEF Indicators for assessing infant and young child feeding practices
Minimum Dietary Diversity	Proportion of children 6–23 months of age who receive foods from 5 or more food groups out of 8 groups: 1. Breast milk, 2. Grains, roots and tubers, 3. Legumes and nuts, 4. Dairy products, 5. Flesh foods, 6. Eggs, 7. Vitamin-A rich fruits and vegetables, 8. Other fruits and vegetables	Indicator of the WHO Global nutrition monitoring framework	Every 3–5 years	Indicator of the WHO Global nutrition monitoring framework
Early Initiation of Breastfeeding	Proportion of children born in the last 24 months who were put to the breast within one hour of birth.	Indicator of UNICEF Indicators for assessing infant and young child feeding practices	Every 3–5 years	No source retrieved for the recommended frequency for this indicator. In the absence of guidance, we use the periodicity of exclusive breastfeeding.

Indicators	Comparability/Validity		Timeliness	
	Standard measurement	Source	Recommended frequency	Source
Anaemia WRA	Percentage of women aged 15–49 years with a haemoglobin level less than 120 g/L for nonpregnant women and lactating women, and less than 110 g/L for pregnant women, adjusted for altitude and smoking.	Indicator of the WHO Global nutrition monitoring framework	Every 3–5 years	Indicator of the WHO Global nutrition monitoring framework
Minimum Dietary Diversity WRA	MDD-W is a dichotomous indicator of whether or not women 15–49 years of age have consumed at least five out of ten defined food groups the previous day or night. The ten food groups are: 1. Grains, white roots and tubers, and plantains, 2. Pulses (beans, peas and lentils), 3. Nuts and seeds, 4. Dairy, 5. Meat, poultry and fish, 6. Eggs, 7. Dark green leafy vegetables, 8. Other vitamin A-rich fruits and vegetables, 9. Other vegetables, 10. Other fruits.	Indicator of FAO Minimum Dietary Diversity for Women: A Guide to Measurement	Every 3–5 years	No source retrieved for the recommended frequency for this indicator. In the absence of guidance, we use the periodicity of children minimum dietary diversity
Wasting/Thinness WRA	Percentage of women aged 15–49 years with low BMI (<18.5 kg/m2). This excludes pregnant women.	Indicator of the WHO Global nutrition monitoring framework	Every 3–5 years	Indicator of the WHO Global nutrition monitoring framework
Overweight/Obesity WRA	Percentage of non-pregnant women (18+ years) who are overweight (defined as having a BMI ≥25 kg/m2) and obese (defined as having a BMI ≥30 kg/m2). BMI is calculated by dividing the subject's weight in kilograms by their own height in meters squared. Overweight is defined as having a BMI ≥25 kg/m2 and obesity is defined as having a BMI ≥30 kg/m2.	Indicator of the WHO Global nutrition monitoring framework	Every 3–5 years	Indicator of the WHO Global nutrition monitoring framework
Sodium Intake	Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years	Indicator of the WHO NCD monitoring framework	Every 2 years	Indicator of the WHO NCD monitoring framework
Hypertension	Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg) and mean systolic blood pressure	Indicator of the WHO NCD monitoring framework	Every 2 years	Indicator of the WHO NCD monitoring framework
Diabetes	Age-standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose)	Indicator of the WHO NCD monitoring framework	Every 2 years	Indicator of the WHO NCD monitoring framework
Overweight/Obesity	Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ≥ 25 kg/ m^2 for overweight and body mass index ≥ 30 kg/m^2 for obesity)	Indicator of the WHO NCD monitoring framework	Every 2 years	Indicator of the WHO NCD monitoring framework

Table 4 Assessment of primary data sources across four quality dimensions

Dimension	List of items	Rating	
V **Validity/Comparability**	Does the data source use the specified global measurement method for the indicator or can it be calculated from other indicators available in the dataset?	++	Uses the standard measure and specifies the method of measurement/calculation
		+	Uses the standard measure, but no information is given on the method of measurement/calculation
		-	Uses a different measure than the standard and the standard measure cannot be calculated from other indicators in the dataset
		?	The measure is not specified in any way
T **Timeliness**	Does the data collection respect the recommended frequency for the indicator?	++	Data collected according to the recommended frequency and last data collection within the recommended frequency window
		+	Data not collected according to the recommended frequency, but last data collection within the window
		-	Data not collected according to the recommended frequency and last data collection not in the window
		?	No information on the year of collection
A **Accessibility**	Are the results of the survey published?	++	Report and datasets publicly available
		+	Report publicly available and Datasets available after authorization
		-	Report publicly available but datasets not available
		?	No information on the survey retrieved
R **Representativeness**	Is the survey representative at national and first-level administrative divisions?	++	Representative at national and first-level administrative divisions
		+	Representative at national level but not at first-level administrative divisions
		-	Subnational survey
		?	Representative at national level but no information on representativeness at first-level administrative divisions

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