

10. Proportion of children 6-23 months of age who receive a Minimum Acceptable Diet (MAD)



VERSION	V3.0 – 2023.05
INDICATOR CODE	10
INDICATOR TYPE & AREA	<p>Type: Outcome corporate indicator (in Annex II of the CRF)</p> <p>Reported in ACR</p> <p>2. Nutrition</p>
INCLUDED IN CSP LOGFRAMES	Yes
APPLICABILITY	<p>Mandatory:</p> <p>Under the relevant outcomes under which stunting prevention programmes are being implemented</p>
TECHNICAL OWNER	Nutrition (NUT)
ACTIVITY TAGS	<p>*Prevention of Acute Malnutrition (PREV)</p> <p>*Prevention of Stunting (STUN)</p> <p>*Prevention of Micronutrient Deficiencies (PMD)</p> <p>This indicator can be tracked under Nutrition-Sensitive activities therefore the Nutrition Sensitive Marker should be selected.</p>
UNIT OF MEASUREMENT & ANALYSIS	Percentage of children aged 6 – 23 months
DEFINITION	<p>MAD is a composite indicator used for assessing Infant and Young Children Feeding (IYCF) among children 6 – 23 months.</p> <p>The Minimum Acceptable Diet is defined as:</p> <p>For breastfed children: receiving at least the minimum dietary diversity and minimum meal frequency for their age during the previous day;</p> <p>for non-breastfed children: receiving at least the minimum dietary diversity and minimum meal frequency for their age during the previous day, as well as at least two milk feeds.</p> <ol style="list-style-type: none"> 1. Minimum Diet Diversity 6-23 months (MDD) definition: Percentage of children 6–23 months of age who consumed foods and beverages from at least five out of eight defined food groups during the previous day. <p>Note: the method has been recently revised and refers to 5 out 8 (instead of 4 out of 7) to include breastmilk amongst the food groups.</p> <ol style="list-style-type: none"> 2. Minimum Meal Frequency 6-23 months (MMF) definition: Percentage of children 6–23 months of age who consumed solid, semi-solid or soft foods (but also including milk feeds for non-breastfed children) at least the minimum number of times during the previous day. 3. Minimum Milk Feeding Frequency for Non-Breastfed children 6-23 months (MMFF) definition: Percentage of non-breastfed children 6–23 months of age who consumed at least two milk feeds during the previous day.

2. NUTRITION

Breastfed children:



Non-Breastfed children:



RATIONALE

Children aged 6–23 months should be fed meals at an appropriate frequency and in a sufficient variety to ensure, respectively, that energy and nutrient needs are met. This indicator combines information on minimum dietary diversity and minimum meal frequency with the extra requirement that non-breastfed children should have received milk at least twice on the previous day.

MAD quantifies the likelihood of adequate macro and micronutrient intake among children of this age group; therefore, it is a complete indicator to measure infant and young children's diets.

DATA SOURCE

A survey conducted among the beneficiary population, such as Post Distribution Monitoring (PDM), is the most common. A representative sample size should be used appropriately.

It is highly recommended that MAD be included in any household assessment, such as Comprehensive Food Security and Vulnerability Assessment or any other population-based representative survey.

DATA COLLECTION TOOL

The electronic version of the questions for this indicator can be found in [Survey Designer](#) in the **Nutrition** Module **Minimum Acceptable Diet (MAD)** sub-module or by selecting the indicator **Proportion of Children 6-23 Months of Age Who Receive A Minimum Acceptable Diet (MAD)**.

SAMPLING REQUIREMENTS

A significant representative sample needs to be used if a survey needs to be conducted. The following guidance can be used on the components-specific for this indicator:

- **Population size** is the number of individuals (i.e., children 6-23 months) enrolled in the program at the time of the survey.
- **Expected prevalence of the indicator:** Use previous prevalence if available, and if unknown, 50% can be used.
- **Non-response:** 10%
- **Design effect:** if cluster sampling is done, the design effect needs to be considered. This can be based on previous results and/or set at 1,5 if no information is available. Take note of guidance on design effect for situations where the design effect needs to be increased or decreased due to homogeneity of the surveyed population.
- **Confidence interval** is highly recommended to be 95%

**INDICATOR
CALCULATION**

The MAD indicator is a “composite” of the three indicators: the Minimum Dietary Diversity, Minimum Meal Frequency and Minimum Meal Frequency for non-Breastfed Children.

The **Minimum Dietary Diversity (MDD)** indicator establishes the proportion of children who consumed at least five out of the standard food groups during the previous day.

$$\frac{\text{Children 6 – 23 months of age who consumed foods and beverages from at least five (5) out of eight (8) defined food groups during the previous day}}{\text{Total number of children 6 – 23 months of age}}$$

The eight food groups used for tabulation of this indicator are:

#	Food group
1	Breast milk;
2	Grains, roots, tubers and plantains;
3	Pulses (beans, peas, lentils), nuts and seeds;
4	Dairy products (milk, infant formula, yoghurt, cheese);
5	Flesh foods (meat, fish, poultry, organ meats);
6	Eggs;
7	Vitamin-A rich fruits and vegetables; and
8	Other fruits and vegetables.

NOTE: For WFP monitoring purposes, including ACR and APR, the IYCF indicator has been recently modified to include an additional question related to the consumption of [Specialized Nutritious Foods](#). **The SNF should be categorized as flesh food.**

Minimum Meal Frequency (MMF): The minimum number of times is defined as;

- Two feedings of solid, semi-solid or soft foods for breastfed infants aged 6–8 months;
- Three feedings of solid, semi-solid or soft foods for breastfed children aged 9–23 months; and
- Four feedings of solid, semi-solid or soft foods or milk feeds for non-breastfed children aged 6–23 months, whereby at least one of the four feeds must be a solid, semi-solid or soft feed.

$$\frac{\text{Breastfed children 6– 23 months of age who consumed solid, semi – solid or soft foods the minimum number of times or more during the previous day}}{\text{Children 6 – 23 months of age}}$$

or

$$\frac{\text{Non – breastfed children 6– 23 months of age who consumed at least four (4) solid, semi – solid or soft foods or milk feeds during the previous day with at least one of the four being a solid, semi – solid or soft food feed}}{\text{Children 6 – 23 months of age}}$$

Minimum milk feeding frequency (MMFF) is defined as the proportion of non-breastfed children who consumed at least two milk feeds during the previous day.

2. NUTRITION

$$\frac{\text{Non – breastfed children 6–23 months of age who consumed at least two (2) milk feeds during the previous day}}{\text{Non – breastfed children 6 – 23 months of age}}$$

Calculation of the Minimum Acceptable Diet (MAD) Indicator:

For breastfed infants, if MDD and MMF are both met, then MAD is achieved.

For non-breastfed infants, if MDD and MMF and MMFF are all met, then MAD is achieved.

This indicator is calculated in two steps.

- The first step is to calculate the three component parts and code each part “1” for “yes, achieved” and “2” for “no” for each individual IYC, for all three component parts.
- Once these three indicators have been calculated, then in the second step, MAD can be estimated as:

$$\frac{\text{Age in days} \geq 183 \text{ AND Age in days} < 730 \text{ AND MDD} = 1 \text{ AND MMF} = 1 \text{ AND (Q4} = 1 \text{ OR MMFF} = 1)}{\text{Age in days} \geq 183 \text{ AND Age in days, 730}} \times 100$$

The calculation of the MAD indicator can be completed electronically with statistical software or with an excel sheet.

- For assistance in calculating MAD in an excel sheet, see [here](#):

Scripts in [R, STATA and SPSS](#) and [sample data](#) are available on [github](#) for the survey version of this indicator.

DATA ENTRY IN COMET

Data is recorded in the Logframe

DISAGGREGATION FOR DATA ENTRY IN COMET (MANDATORY)

Mandatory disaggregation for data entry in COMET

Sex, target groups, modality, residence status and programme area

- It is mandatory to report Minimum Dietary Diversity (MDD); one of the indicators required to collect to calculate MAD.
- It is recommended to report: Minimum Meal Frequency (MMF) and Minimum Milk Feeding Frequency for Non-Breastfed children 6-23 months (MMFF)

Recommended disaggregation

- It is recommended to disaggregate the indicator by:
- Age category 6-11 Months, 12-17 Months, 18-23 Months
- Sex of child
- Beneficiary group (e.g., IDP, Refugee)
- Breast-fed and non-breastfed children

Optional: MAD is a summary indicator that can be disaggregated in many ways to provide essential information on feeding practices. The analysis needs are dependent upon the results of MAD and programme needs. For more information, please see [Indicators for assessing IYCF 2021](#)

FREQUENCY OF DATA COLLECTION/ DATA ENTRY IN COMET

Data must be collected at least once per year in the same season. Ensure that the baseline data was collected at the beginning of the programme. If the programme is required, data can be collected across each season. This ensures a fuller understanding of

seasonal patterns in diets and serves as an important baseline if repeat measurements occur in different seasons. Data entry in COMET should be annual.

BASELINE ESTABLISHMENT

It is recommended to conduct a baseline survey. A new intervention baseline should be established three months before or three months after starting the activity (see the guidance for [Minimum Monitoring Requirement](#)).

TARGET SETTING

Annual target:

The proportion of children 6-23 months who reached MAD has increased compared to the previous year's value. See comment end of CSP target. If uncertain; it is recommended to target an increase of 10%.

End of CSP target:

For nutrition-specific programming such as prevention of stunting, micronutrient, wasting and/or SBCC programming implemented more than six months, the target should be >70%. However, the target can be lower depending on the local context, and the baseline value.

For nutrition sensitive programming, the target at the end of the CSP is to increase the MAD value compared to the baseline. Only general guidance can be provided for setting targets for MAD in the context of nutrition sensitive programming, as it is not possible to recommend universal targets. The percentage of increase should thus be determined based on local context; baseline value; type of intervention implemented and its theory of change or impact pathway; scientific evidence on the impact of this type of intervention, if available; timeframe and season (especially relevant to MAD); ongoing interventions in the same area and/or events that may affect the desired outcome.

RESPONSIBLE FOR DATA COLLECTION

Typically, CO M&E Unit with technical support from Nutrition Unit

INDICATORS COLLECTED & ANALYSED AT THE SAME TIME

Individual-level indicators: 10. MAD, 11. MMD-W, 8. Adherence, 7. Coverage⁵

Household-level indicators: 1. FCS, 3. CSI (food), 4. CSI (Livelihood), Food Expenditure share

COMPLEMENTARY QUALITATIVE RESEARCH

Qualitative approaches, including FGDS, KIIs to complement quantitative data and establish reasons for performance should be used. Qualitative data can, in addition, inform required actions and recommendations for improvement.

DECISIONS DATA CAN INFORM

This information helps WFP target their interventions towards children those most at risk of malnutrition. MAD data allows WFP to identify regions or communities with a high prevalence of inadequate diets. This information helps WFP allocate resources and prioritize interventions in areas with the greatest need.

The indicator informs the design and implementation of nutritional interventions by highlighting specific gaps in dietary diversity and adequacy. WFP can develop targeted interventions, such as providing specialized nutritious foods or promoting behaviour change communication strategies, to address the specific nutritional gaps identified in the data.

INTERPRETATION

An increase in the percentage represents an improvement in diet quality. If there is no change, review context and programme appropriateness and delivery.

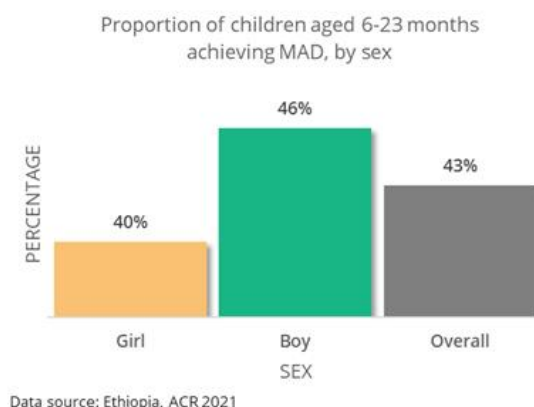
⁵ The ability to estimate coverage is dependent upon inclusion of both beneficiaries and non-beneficiaries.

2. NUTRITION

REPORTING EXAMPLE(S)

Survey results on Minimum Acceptable Diet (MAD) from Ethiopia in 2021 showed that the percentage of children (aged 6-23 months) who consumed a minimum acceptable diet during the previous day was 43 %, with 40 % and 46 % among girls and boys, respectively.

VISUALIZATION



LIMITATIONS

MAD should not be used to inform diet quality at the individual level (child). The correct use and interpretation of MAD are at the population level, i.e., for groups of children 6-23 months. Therefore, it should not be used for screening or targeting children.

FURTHER INFORMATION

[Nutrition Monitoring & Evaluation Guidelines 2022-2025 | WFPgo](#)

[WFP Guidance Minimum Acceptable Diet 2022](#)

Survey Designer:

- List-based questionnaire: [xlsform](#) / [enketo](#)
- Open recall questionnaire: [xlsform](#) / [enketo](#)

Indicator calculation (resources on github):

- [Scripts](#) in R, STATA and SPSS
- [Sample data](#)