Meeting the measurement needs of the changing face of children's diets around the world

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Conflict of Interest Disclosure

The authors have no conflict of interest to report in relation to this presentation.
IYCF Technical consultation in 2017 and 2018
- Re-evaluated the 2008 indicators
- Proposed additional breastfeeding and complementary feeding indicators

Following the consultations, 17 IYCF indicators recommended for inclusion in IYCF guide published in April 2021.
The guidance includes
- Indicator definitions
- Data collection methodology
- Standard recommended questionnaires
- Details on selecting and training interviewers
- Analytical codes
IYCF Guide update: Indicators retained with no change

- Children ever breastfed
- Early initiation of breastfeeding
- Exclusive breastfeeding under 6 months
- Bottle feeding
- Minimum milk feeding frequency for non-breastfed children
- Introduction to solid, semi-solid and soft foods
IYCF Guide update: Indicators deleted

- Predominant breastfeeding under 6 months – rarely used, not considered useful
- Age-appropriate breastfeeding – hard to interpret programmatically
- Duration of breastfeeding – hard to calculate and communicate
- Consumption of iron-rich or iron-fortified foods – difficult to operationalize in household surveys
IYCF Guide update: **Revised Indicators**

Continued breastfeeding - assessed among children 12-23 months of age

- With disaggregations for 12-15 months, 16-19 months, and 20-23 months

Replaces **two indicators** on 12-15 months and 20-23 months

- Large confidence intervals due to tight age range
IYCF Guide update: Revised Indicators

Minimum Dietary Diversity (MDD): Revised indicator definition includes breastmilk as the 8th food group.

Rationale for revision

• Previous definition of MDD “advantaged” non-breastfed infants by allowing breast milk substitutes, but not breast milk to count to receive a point

• Previous definition became more problematic in context of global use, i.e. if MDD becomes more commonly used in countries with high rates of use of breast milk substitutes

• Despite specific instruction against comparing breastfed and non-breastfed children in the previous guidance, experience showed that such comparisons were often made, which made assessment between breastfed and non-breastfed children unfair and inconsistent.
Previous definition required at least 4 out of 7 food groups

Revised definition requires at least 5 out of 8 food groups, including breastmilk.
### IYCF Guide update: Revised Indicators

#### Minimum Meal Frequency:

**Breastfed children**

<table>
<thead>
<tr>
<th>CURRENT INDICATOR</th>
<th>PREVIOUS INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-8 months ≥ 2/day</td>
<td>6-23 months ≥ 4/day</td>
</tr>
<tr>
<td>9-23 months ≥ 3/day</td>
<td>(unchanged)</td>
</tr>
</tbody>
</table>

**Non-breastfed children**

- Requires at least 1 out of 4 feeds to be solid, semi-solid, or soft feeds.

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**IYCF Guide update:** Revised Indicators

**Daily intake may result in any combination of the following:**

- All soft and semi-soft foods
- All breastmilk substitutes
- Solid/semi-solid/soft feeds
- Milk feeds
Changes in minimum dietary diversity and meal frequency have resulted in the revision of minimum acceptable diet.

<table>
<thead>
<tr>
<th>Minimum Diet Diversity</th>
<th>Minimum Meal Frequency</th>
<th>Milk feeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breastfed children</td>
<td>6-8 months ≥ 2/day</td>
<td></td>
</tr>
<tr>
<td>5/8 food groups</td>
<td>9-23 months ≥ 3/day</td>
<td></td>
</tr>
<tr>
<td>5+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-breastfed children</td>
<td>For all children, 6-23 months ≥ 4/day</td>
<td>at least 2 milk feeds</td>
</tr>
<tr>
<td>5/8 food groups</td>
<td>≥ 1/day</td>
<td></td>
</tr>
<tr>
<td>5+</td>
<td>≥ 3/day</td>
<td></td>
</tr>
</tbody>
</table>
IYCF Guide update: **New Indicators**

- **Exclusive breastfeeding in the first 2 days after birth** – Percentage of children born in last 2 years who were exclusively breastfed in the first 2 days following birth

**Rationale for the indicator:** Feeding newborns anything other than breastmilk has the potential to delay their first critical contact with their mother and can make it more difficult to establish breastfeeding over the long-term.
IYCF Guide update: New Indicators

- **Mixed breast-and non-breast milk feeding under 6 months** – Percentage of infants 0-5 months of age who are fed breastmilk and formula or animal milk during the previous day.

**Rationale for the indicator:** Non-human milk are likely to displace breastmilk and associated with increased risk of early cessation of breastfeeding, diarrhea, altered gut microflora.
IYCF Guide update: **New Indicators**

- **Egg and/or flesh food consumption** – Percentage of children 6-23 months of age who consumed egg and/or flesh foods during the previous day

**Rationale for the indicator:** Available evidence that infants and young children consuming egg and flesh food have higher intake of various nutrients important for optimal linear growth.
IYCF Guide update: New Indicators

3 new indicators proposed to capture unhealthy eating

- Sweet beverage consumption 6-23 months of age
- Unhealthy food consumption 6-23 months of age
- Zero vegetable or fruit consumption 6-23 months of age
• **Sweet beverage consumption**– Percentage of children 6-23 months of age who consumed a sweet beverage during the previous day.

**Sweet beverage includes**

- Commercially produced and packaged beverages as soda pop, sport drinks, chocolate and other flavored milks etc.
- 100% fruit juice as well as fruit flavored drinks
- Home-made drinks of any kind to which a sweetener was added
• **Unhealthy food consumption**— Percentage of children 6-23 months of age who consumed sentinel unhealthy foods during the previous day.

**Selected sentinel unhealthy foods includes**

- Candies, chocolate and other sugar confections, including those made with real fruit or vegetables like candied fruit or fruit roll-ups.
- Frozen treats like ice cream, gelato, sherbet, sorbet, popsicles or similar confections.
- Cakes, pastries, sweet biscuits and other baked confections
- Chips, crisps, cheese puffs, French fries, fried dough, instant noodles and similar items which contain mainly fat and carbohydrate.
• **Zero vegetable or fruit consumption**— Percentage of children 6-23 months of age who did not consume any vegetables or fruits during the previous day

**Rationale for the indicator:** Low fruit and vegetable intake in young children is linked to low intake later in life. While there is not a universal recommendation for the optimal number of servings of vegetables and fruits per day for 6-23 months old children, consumption of zero servings on the previous day represents an unhealthy practice.
### Data Collection Methodology: Household surveys

<table>
<thead>
<tr>
<th>Q#</th>
<th>Question</th>
<th>Response</th>
<th>Code</th>
<th>Skip</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Was [NAME] ever breastfed?</td>
<td>Yes</td>
<td>1</td>
<td>If “no”, END questions about retrospective feeding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>How long after birth was [NAME] first put to the breast?</td>
<td>Immediately</td>
<td>000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If immediately, circle “000”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>If less than one hour, record “00” hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>If less than 24 hours, record hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Otherwise, record days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>In the first two days after delivery, was [NAME] given anything other</td>
<td>Yes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>than breast milk to eat or drink – anything at all like water, infant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>formula, or [insert common drinks and foods, including ritual feeds,</td>
<td>No</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>that may be given to newborn infants?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Indicators as ever breastfed & early initiation of breastfeeding based on recall of practices immediately following child’s birth

Respondents are women of reproductive age with a birth in last 2 years

Questions asked about all live births in last 24 months, whether the infant is alive or dead at the time of interview
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Measurement methods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current breastfeeding practices</strong></td>
<td>Based on <strong>24-hour dietary recall</strong> <em>(day before the survey)</em></td>
</tr>
<tr>
<td></td>
<td>- List-based method recommended to record beverage intake</td>
</tr>
<tr>
<td></td>
<td>- Foods fed to child may be recorded using <strong>open-recall or list-based recall</strong></td>
</tr>
<tr>
<td><strong>Current complementary feeding practices</strong></td>
<td><em>The beverage and food lists must be adapted to represent the most commonly consumed items by infants and young children in a country</em></td>
</tr>
<tr>
<td><em>(Minimum dietary diversity, egg and/or flesh food consumption etc.)</em></td>
<td>Questions to mothers/caretakers about <strong>all living children 0-23months of age</strong> in a household</td>
</tr>
<tr>
<td>Q#</td>
<td>Question</td>
</tr>
<tr>
<td>----</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 7  | Now I would like to ask you about everything that [NAME] ate yesterday during the day or at night. I am interested in foods your child ate whether at home or somewhere else. Terminate if (he/she) eat anything at that time.  
   Think about when [NAME] woke up yesterday. Did (he/she) eat anything at that time?  
   If "yes" ask: Please tell me everything [NAME] ate at that time.  
   Probe: Anything else?  
   Record answers using the food groups below.  
   What did [NAME] do after that? Did he/she eat anything at that time?  
   Repeat this series of questions, recording in the food groups, until the respondent tells you that the child woke up this morning.  
   If a mixed dish is mentioned:  
   Probe: What were the main ingredients in [MIXED DISH]?
   Record answers in the correct food groups 7A–7R. |                                                                 |                  |     |    |    |

| 7A | Yogurt, other than yogurt drinks?                                                                                                                        |                  | 1   | 2  | 9  |
|    |                                                                                                                                                |                  |     |    |    |

7Anum  | If "yes": How many times did [NAME] eat yogurt?  
If "more than 7", record "7"  
If "number of times not known", record "9"                                                                                      |                  |     |    |    |

7B | Porridge, bread, rice, noodles, pasta or [insert other commonly consumed grains from table A6.2, including foods made from grains like rice dishes, noodle dishes, etc.].? |                  | 1   | 2  | 9  |