



# Strengthening the Nutrition Data Value Chain for Accountability and Action

## Progress, gaps and next steps

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continuous innovation across the value chain; and fostering a culture of data use and sharing.

- > Our hope is that the recommendations in this perspectives paper will motivate future financial and political commitments to invest in nutrition data value chain capacities and actions both before and at the 2020 Nutrition for Growth Summit.

### Key messages

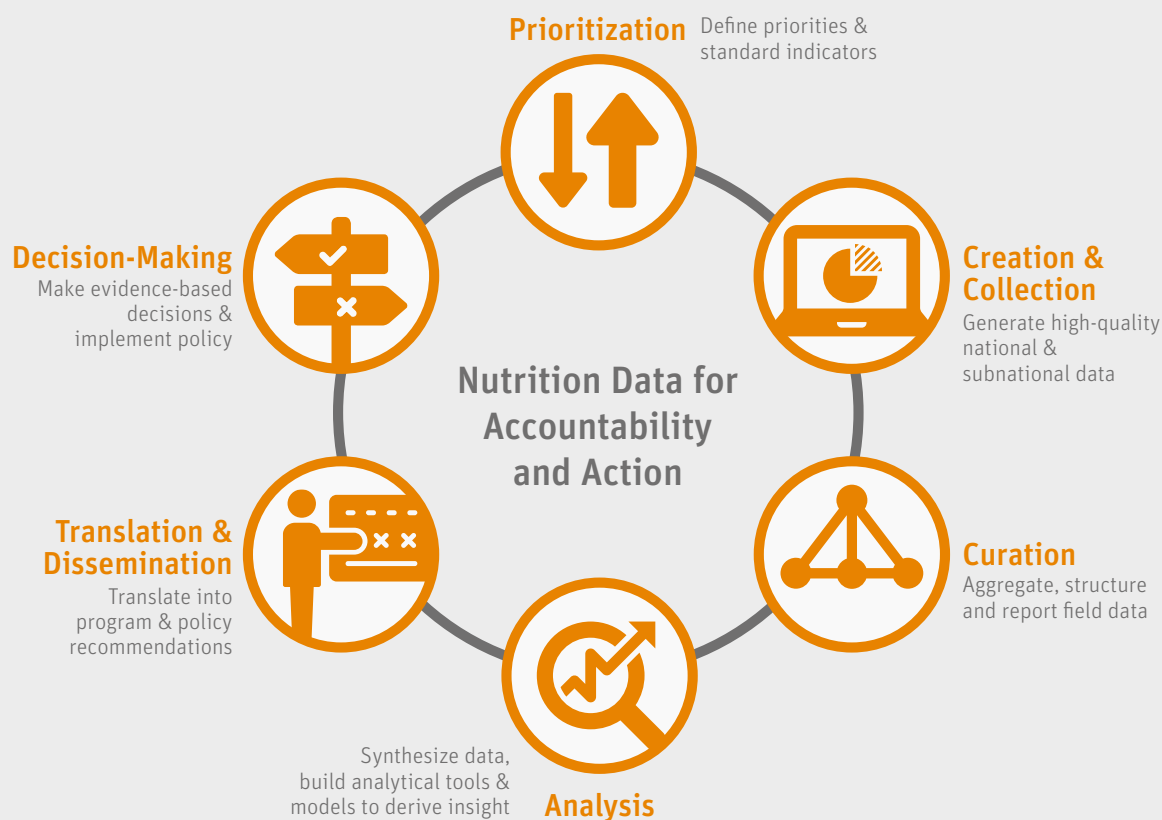
- > The nutrition data revolution is not only about improving the quality, availability and accessibility of data but also requires building capacity and transforming information into sound decisions.
- > This end-to-end systems approach is referred to as the Nutrition Data Value Chain because it considers data as a value-adding ingredient that not only serves to describe progress toward nutrition goals but is in fact essential to achieving them.
- > Advancing the nutrition data revolution agenda requires: in-country mechanisms for priority-setting and data coordination; operational guidance for strengthening nutrition data systems; capacity development at multiple levels; costed country data plans that are resourced and implemented; dissemination of knowledge and experience;

### Introduction

In 2014, the first Global Nutrition Report (GNR)<sup>1</sup> declared that nutrition needs a data revolution, and proposed four actions (**Box 1**). Five years later, we recognize that the revolution is not solely about data but also about building capacity and transforming information into sound decisions.

### BOX 1: Proposed actions to start a Nutrition Data Revolution

- 1) Identify data priorities and gaps through a consultative process in anticipation of the SDGs.
- 2) Invest in nutrition survey capacity so that consistent and reliable national data would be available every 3–4 years.
- 3) Ensure that high-income countries provide comparable data so that they can be included in progress tracking.

**FIGURE 1:** The Nutrition Data Value Chain

A global nutrition data ecosystem characterized by strong leadership, consensus on data priorities, and capacity to generate, analyze and use data, analytics, and evidence, is needed to tackle malnutrition in all its forms, and to monitor progress toward SDGs and other global nutrition goals

- 4) Invest in national and global, interoperable and accessible, nutrition databases to facilitate accountability.

Global Nutrition Report, 2014

“Data funding should help people transform data into information, information into knowledge and knowledge into action”

In this paper, we take stock of the progress mounting for the Nutrition Data Revolution, and suggest next steps and future investment opportunities to accelerate change. This work is framed in the context of SDG calls for ending all forms of malnutrition (SDG 2.2); leaving no one behind; and building country-data-related capacity (SDG 17). The ideas expand on a short paper we wrote in the 2017 GNR,<sup>2</sup> which introduced the Nutrition Data Value Chain. Country and global examples and suggested actions come from desk studies, SUN Movement Secretariat (SMS) consultations, personal experiences and common sense.

In 2020, the global community will gather in Japan for the second Nutrition for Growth Summit. Our hope is that our recommendations will motivate future financial and political commitments to invest in nutrition data value chain capacities and actions.

#### The Nutrition Data Value Chain approach

The 2016 State of Development Data Funding report<sup>3</sup> specified that data funding should help people transform data into information, information into knowledge and knowledge into action. This perspective inspired us to propose an end-to-end systems approach to the Nutrition Data Revolution (and its funding) by considering nutrition data from a value chain perspective.

Value chain concepts are increasingly used to describe how the agribusiness sector can contribute to improved nutritional outcomes.<sup>4</sup> Fortification provides a good example of this, whereby micronutrients are added during the milling of staple foods, increasing their nutritional value as they move through the supply chain.

In analogous fashion, the Nutrition Data Value Chain (**Figure 1**) considers data as a value-adding ingredient that not only serves to describe progress toward nutrition goals but is in fact essential to achieving them. The data value chain encompasses multiple links, ranging from prioritization of what to measure and how, through the collection, curation and analysis of this data, and its translation into information and evidence that is widely shared and informs decision-making. This paper describes the links in this chain, with country and global examples of progress and next steps.

## Unpacking the Nutrition Data Value Chain

### 1. Data prioritization

Defining priorities is the first step in the value chain and according to SUN Country Focal Points would require the leadership from coordinating bodies (**Box 2**). SDG 17 calls for immediate capacity-building support to increase the availability of high-quality,

#### BOX 2: Recommendations from SUN Country Focal Points

##### Data coordination

- > Identify a lead actor to coordinate the data and accountability work.
- > Engage nongovernment stakeholders including civil society organizations, academia, media, businesses and development partners.
- > Map all stakeholders to get a better idea as to who can help where with data and information.

##### Data prioritization

- > Include the World Health Assembly (WHA) Maternal, Infant and Young Child Nutrition (MIYCN) targets and the nutrition-relevant noncommunicable disease (NCD) targets in the planning stage.
- > Agree on one multisectoral monitoring and evaluation (M&E) framework that can be used by key stakeholders.

##### Data collection

- > Build capacity at frontline level.
- > Use automated systems to improve data quality.
- > Coordinate survey implementation.

##### Data access

- > Establish central data repositories that are, at a minimum, accessible to all key stakeholders.

##### Data use

- > Tailor data and information to specific and well-defined purposes.
- > Make data publicly accessible and usable.

SUN Consultations, 2016

timely and reliable data disaggregated by income, age, race, gender, ethnicity, migratory status, disability, geographic location and other characteristics to enable robust progress tracking by 2030. Disaggregated nutrition data are needed to: **1)** characterize nutritional status, dietary practices and deficiencies; **2)** identify root causes; **3)** design policies and interventions; and **4)** monitor implementation and outcome progress for accountability and to inform management decisions.

Unfortunately, there is no global guidance document specifying how frequently this disaggregated data should be collected, but common sense suggests that information for policy formation, intervention design and root cause analysis is needed less often than information for management decisions and accountability tracking, which should be accessible and used annually at a minimum.

## “SUN countries have called for clear guidance on nutrition data prioritization”

SUN countries have called for clear guidance on nutrition data prioritization that includes: **1)** a hierarchy of indicator categories; **2)** a dictionary of indicator definitions and operational advice; **3)** suggestions on appropriate data platforms for each category of information; **4)** recommendations on data collection frequency; and **5)** examples of how data should be reported. Tools for capacity strengthening in each of these areas are also needed.

### 2. Data collection

Once data needs are prioritized, information sources should be identified and an operational data plan for joining up available and new information should be developed and costed. A guiding principle is to avoid creating parallel data systems.

Population-based surveys, such as Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS), are the most common data sources for nutrition but are administered infrequently. Nigeria, Burkina Faso and several West and Central African countries collect nutrition data annually using the Standardized Monitoring and Assessment of Relief and Transitions (SMART) survey methodology.<sup>5</sup> Standardization of



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A healthcare worker explains the data of a children's growth chart at a local maternal and child community center where the health workers track interventions and the weight of each child under 3 years of age, in Sogobamba, within the Chinchao district of Huánuco, Peru, on 27 August 2017

indicators across data platforms is the subject of ongoing discussions led by WHO/UNICEF<sup>6</sup> and supported by the Data for Decisions to Expand Nutrition Transformation (DataDENT).<sup>7</sup>

Though national surveys are critically important, none provide the range of indicators needed and few have adequate sample sizes to enable the necessary disaggregation to address the inequity vision of SDGs, which calls for counting multiple subgroups. For example, data on the effective coverage of interventions<sup>8</sup> and financial expenditures are lacking. We recommend georeferencing survey data to enable modeling and mapping<sup>9</sup> that permits visualization of vulnerable populations, in line with the goal of leaving no one behind.

## “High-quality, timely data is essential for decision-making”

High-quality, timely data is essential for decision-making. Peru is an example of a country that reduced stunting by half in 10 years. This outcome was strongly enabled by regular surveys, robust monitoring and the use of timely data for results-based budgeting.<sup>10</sup>

UNICEF is currently documenting the range of nutrition indicators used in country health information systems and will be developing global operational guidance. Standardizing and automating this information should improve local decision-making with standardized methods and clearly defined denominators.

Innovations are needed in several areas to reduce the cost and complexity of nutrition data collection from all sources: administrative, survey and, where appropriate, crowdsourced. Recent innovation has focused on technology-enabled automated processes, including auto-calculated fields and logical validation rules within data collection forms and the use of mobile tech-

nology and open-source software such as RapidPro<sup>11</sup> to collect data in real time. Advances are needed across a range of issues from improved sampling methodologies to validated methods for assessing the coverage and quality of interventions, as well as easier and more accurate means for measuring food intake,<sup>12</sup> length and body composition<sup>13</sup> and micronutrient status.<sup>14</sup> Additionally, innovations are needed to strengthen methods used in nutrition early warning systems, particularly for areas that face repeated crises.<sup>15</sup>

### 3. Data curation

Nutrition data comes from various sectors that have limited ability to connect in a coordinated manner (also referred to as systems interoperability), making curation of joined-up analyses challenging. The Global Partnership for Sustainable Development Data,<sup>16</sup> Global Open Data for Agriculture and Nutrition (GODAN),<sup>17</sup> and the Health Data Collaborative<sup>18</sup> are examples of global initiatives that promote data interoperability and open access. The Ethiopian Public Health Institute is creating a National Data Management Center<sup>19</sup> that allows analysis across multiple datasets and includes a national data-sharing policy, with nutrition support from the National Information Platforms for Nutrition (NIPN) initiative.<sup>20</sup> Concepts of interoperability and open access have not fully permeated the nutrition data ecosystem and are areas for future attention.

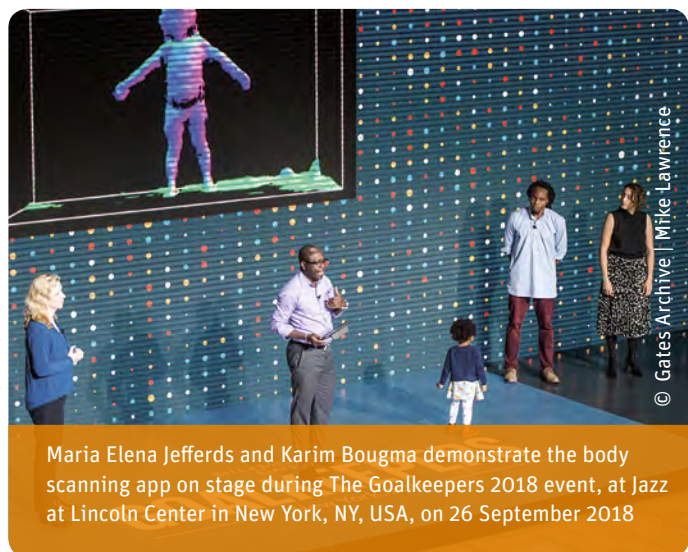
### 4. Data analysis

Strengthening analytic capacity was a priority expressed in many country discussions, particularly for the use of tools to derive



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Antonio Sousa Macaço, supervisor at the Demographic Surveillance System (DSS) program from the CISM (*Centro de Investigação em Saúde de Manhica*), uses a new electronic device to gather demographic information in Malavela village, Manhica, Mozambique, on 17 December 2011



Maria Elena Jefferds and Karim Bougma demonstrate the body scanning app on stage during The Goalkeepers 2018 event, at Jazz at Lincoln Center in New York, NY, USA, on 26 September 2018

insights and display information for decision-making. Initiatives such as Countdown to 2030<sup>21</sup> and Transform Nutrition West Africa<sup>22</sup> are supporting regional networks to build this capacity, using data from multiple sources. Today, nearly 70 countries use the open-source, web-based District Health Information Systems 2 (DHIS2) health management information system,<sup>23</sup> with features that enable rapid analysis, visualization and dashboard production. In addition, several nutrition modeling tools are available to analyze and synthesize data to aid program planning<sup>24</sup> and optimization,<sup>25,26</sup> impact forecasting,<sup>27</sup> visualization<sup>28</sup> and advocacy.<sup>29</sup> A Nutrition Modeling Consortium was recently constituted to facilitate dialogue among tool developers and to compare assumptions and improve tool interoperability and uptake.<sup>30</sup>

### 5. Data translation and dissemination for use in decision-making

Translating analysis into action is at the heart of the data value chain approach. All too often, information is not synthesized and packaged to facilitate this. At the global level, there is a need for continuous, inclusive and evidence-informed dialogue to advance the nutrition agenda forward. Several initiatives, including the GNR,<sup>31</sup> the Global Panel on Agriculture and Food Systems for Nutrition,<sup>32</sup> and various Lancet Nutrition Series<sup>33,34</sup> and Commissions,<sup>35,36</sup> have integrated evidence and data, and used these outputs for policy-oriented communication. There is an expanding number of nutrition reports and accountability tools in use today, with some conflicting messages.<sup>37</sup> However, as emphasized by all SUN Focal Points, improved management decisions and accountability require data to be accessible and usable at national and local levels.

### A call for immediate action

The transformations that are needed to achieve the SDGs require new ways of thinking. When it comes to data, the discussion

cannot solely be about aggregating information upward; it must be about fully exploiting information to make informed program and policy decisions that contribute to improvements in nutrition and other SDG outcomes. This will not be achieved without significant investments in data value chain capacities.

## “Translating analysis into action is at the heart of the data value chain approach”

Garnering commitment and resources for nutrition data requires that we have clear priorities, understand the data gaps and have identified the platforms and institutions that will provide and use the information. This requires leadership, coordinated efforts, costed data plans and financing. Some may argue that investing in data is resource-inefficient compared with delivering interventions and services. There are, however, examples of how nutrition data investments can pay for themselves through more efficient and effective programs. For example, an economic optimization study from Cameroon used national survey data to suggest policy changes in the national vitamin A program that could achieve the same effective coverage at 44 percent of the cost.<sup>38</sup>

Advancing the nutrition data revolution agenda requires: **1)** in-country mechanisms for priority-setting and data coordination; **2)** operational guidance for strengthening nutrition data systems; **3)** capacity development at multiple levels; **4)** costed country data plans that are resourced and implemented; **5)** dissemination of knowledge and experience; **6)** innovation across the value chain; and **7)** fostering a culture of data use and sharing.

Some of these actions are more straightforward than others, and all seven present unique challenges. However, without this investment, the SDG target of ending malnutrition in all its forms will be much harder to achieve.

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