

B R I E F

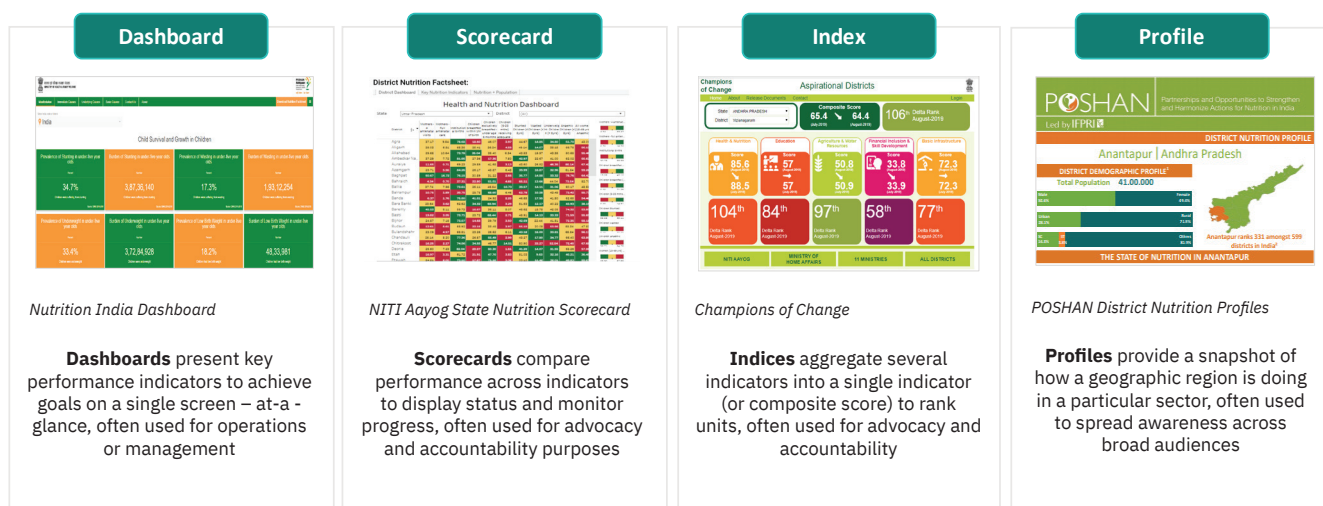
Purpose of Work

To better understand how data visualization tools (DVTs) for nutrition audiences in India support key stakeholder information needs, we conducted a landscaping of 10 publicly accessible DVTs that were produced or refreshed within the past 5 years. For each DVT, we reviewed: (1) goal and audience; (2) design features; (3) indicator domains and data sources; and (4) dissemination strategy and user support. Out of 10 DVTs, we conducted interviews with 7 DVT Producers¹ to understand their DVT’s theory of change, intended users, outputs, dissemination processes, user engagement strategies, and production/ maintenance.

Why visualize data?

- Data visualizations tools (DVTs) are defined as outputs that help people understand the significance of data by placing it in a visual context (e.g., bar graphs, maps, etc.).
- Data visualizations can be helpful because human brains more rapidly process visuals compared to text and data is often more persuasive in graphs or other visualized formats².

Figure 1: Different types of DVTs support different types of goals and decisions – DVTs rarely fall into just one of these types



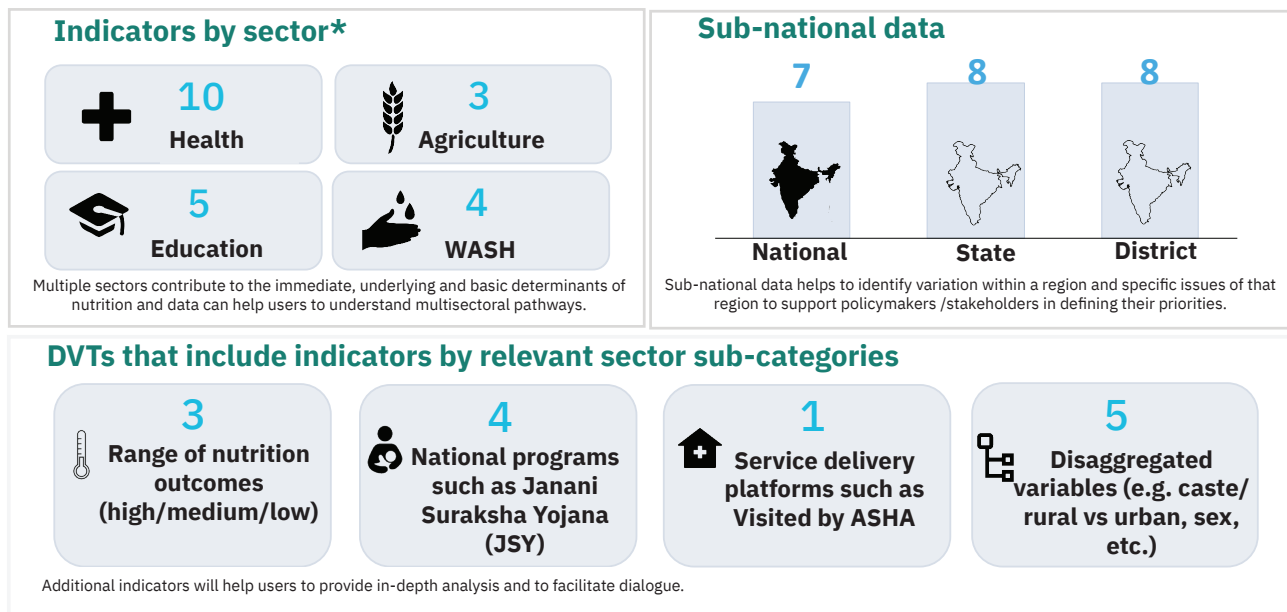
¹ DVT producers were responsible for conceptualizing, deciding DVT content, commissioning designers, and managing the DVT.
² Evergreen, Stephanie DH. Effective Data Visualization: The Right Chart for the Right Data. SAGE Publications, 2016.

Key Findings are based on desk review and DVT producer interviews.

Finding #1: There is a growing number of nutrition DVTs in India tailored to national policies that can facilitate in-country decision-making.

We found 10 publicly-available nutrition DVTs in India, 9 of which were launched in a 24-month timeframe. They are tailored to national policies and priorities by including the following types of information:

Figure 2: Ways in which Indian DVTs in nutrition are tailored to national policies and priorities



* Indicators by sector: During our review, we also found that DVTs have indicators related to health, agriculture, education and WASH sectors, along with nutrition relevant indicators.

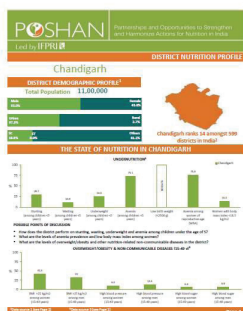
Finding #2: Most nutrition DVTs reviewed have a clear purpose and audience but few specified how their DVT will contribute to users taking action (e.g. a Theory of Change).

The majority of Indian DVTs are designed for 1) planning, implementation, and monitoring and 2) accountability. They target multiple audiences, most commonly government stakeholders. Most DVTs did not have a clear goal statement on their website. Findings from desk review and DVT Producers interview suggest that there was a lack of mention around:

- A set of explicit decisions and/or behavior in the target audience they are trying to influence
- A clear pathway of how making the data available in the DVT format leads to the desired change

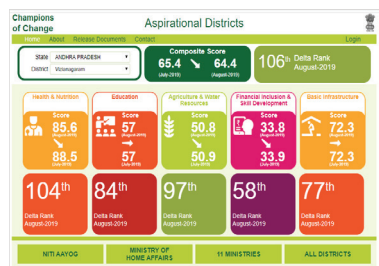
Positive examples of DVTs with specific aims and audience, which presents pathways to achieve goal are below.

The POSHAN District Nutrition Profiles (DNPs) target specific district-level stakeholders and are regularly used during decision-making meetings



- A focused theory of change with targeted set of decision makers at district level (District Panchayati Raj Officers, District Program Officers, Medical Officers, etc.)
- The goal of DNPs is to create awareness, facilitate evidence-based discussions, and mobilize action for nutrition at the district level.
- Actionable indicators includes coverage indicators, immediate and underlying determinants and impact indicators.
- Active engagement strategy: POSHAN team held regular trainings with district officials and nutrition stakeholders on DVT use in planning and decision making.

The Champions of Change Dashboard target district officials to monitor progress of critical indicators in Aspirational District Programme



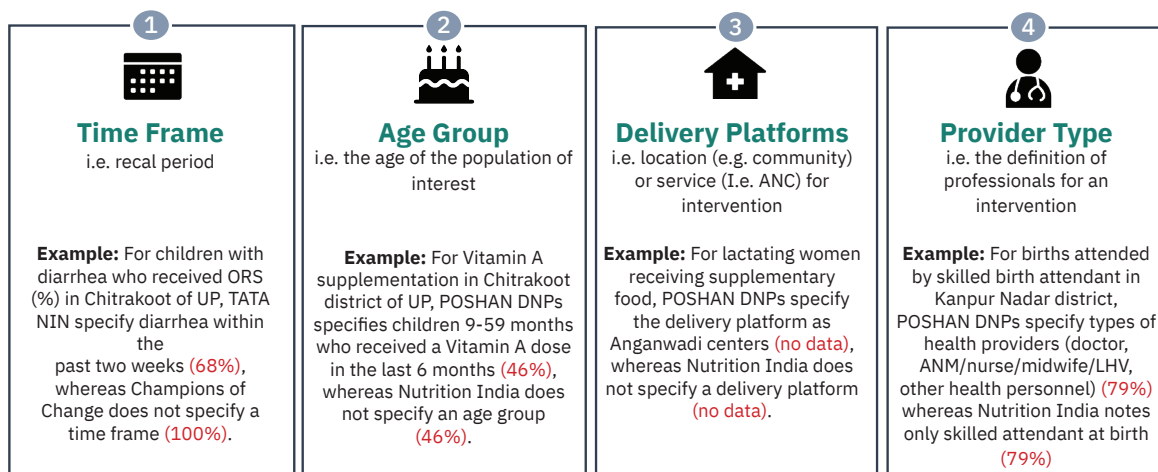
- Target audience are government stakeholders (national, state and district), researchers, and development partners.
- The goal is to track performance of 115 Aspirational Districts Programme* across 5 domains, health and nutrition being one.
- 13 actionable indicators and 31 data points includes input, coverage, and few impact indicators.
- Reference user guides are available that lists methodology and indicator selection criteria and data sources.
- Engagement strategy: NITI Aayog coordinates with state and district officials through WhatsApp groups and regular meetings are held to seek suggestions and dashboard is updated.

Finding #3: Information in DVTs may be difficult to interpret when they include **visualizations without adequate explanation** or use **different data sources and definitions for the same indicator** when compared to other DVTs.

- DVTs report on common indicators but use different data sources including population-based surveys (NFHS: National Family and Health Survey, CNNS: Comprehensive National Nutrition Survey, RSOC: Rapid Survey on Children, Census) and administrative data sources (HMIS: Health Management and Information System, ICDS: Integrated Child Development Services, ICAR: Indian Council of Agricultural Research, program activity data).
- These data sources vary in sample methodology (e.g. whether data was collected at household or facility level) and time and frequency of data collection, and therefore can yield different statistics.
- In some cases, the data source appeared to be the same as they quote the same estimate but the documentation of the indicator definition was incomplete, making it difficult to confirm.

The most common types of indicator definition differences fell into four categories:

Figure 3: Indicator definition differences of change definitions used in Indian DVTs may cause confusion







Finding #4: Most DVTs reviewed lack **input and intervention coverage indicators** on adolescence, lactation and newborn care

³ Menon, Purnima; Avula, Rasmi; Sarswat, Esha; Mani, Sneha; Jangid, Manita; Singh, Anamika; Kaur, Supreet; Dubey, Alok Kumar; Gupta, Shuchita; Nair, Divya; Agarwal, Pulkit; and Agrawal, Nitya. 2020. Tracking India's progress on addressing malnutrition: What will it take? POSHAN Policy Note 34. New Delhi, India: International Food Policy Research Institute (IFPRI). <https://doi.org/10.2499/p15738coll2.133750>

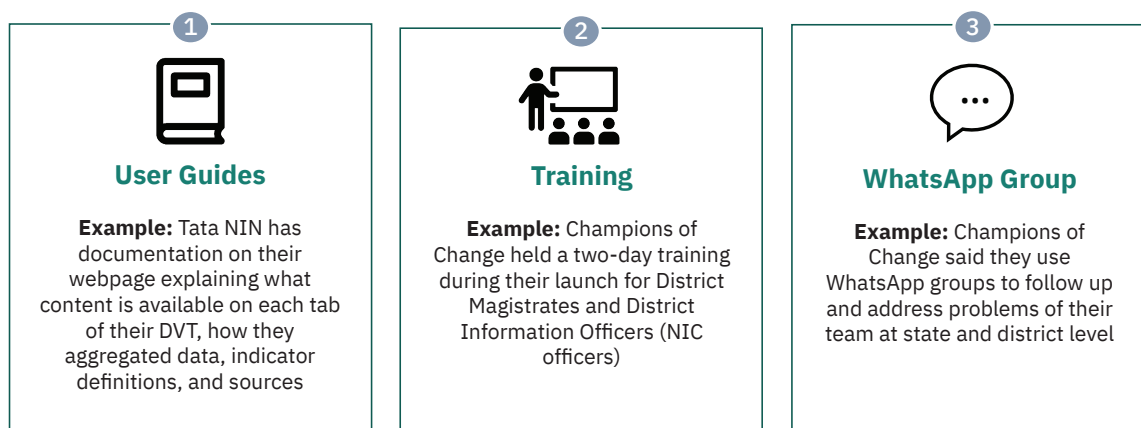
When compared to the India Nutrition Indicator Framework³ (2020) to identify what data is available for tracking the progress of POSHAN Abhiyaan⁴, input and intervention coverage indicators on adolescence, lactation and newborn care are missing in most DVTs. Many indicators from the India Nutrition Indicator Framework are not currently being tracked in any of the Indian DVTs we reviewed. This finding aims to only inform the type and extent of indicators across input, coverage, determinants and outcomes covered in DVTs. Many of these DVTs were produced before India Nutrition Indicator Framework was published and each DVT has their own theory of change.

Figure 4: Key observations after mapping DVT indicators

Domains	Findings	Indicator Examples
 Input indicators	<ul style="list-style-type: none"> 2 out of 10 DVTs have included a few input indicators 	<ul style="list-style-type: none"> Percentage of stocks available for IFA tablets- Red (Adult) (AMB Dashboard)
 Intervention Coverage	<ul style="list-style-type: none"> 9 out of 10 DVTs have at least one coverage indicator <ul style="list-style-type: none"> Only 1 DVT has coverage indicators in adolescence 3 DVTs include lactation coverage indicators, and 4 DVTs have newborn care coverage indicators 	<ul style="list-style-type: none"> Percentage of girls (6-12 class) provided 4 IFA tablets in schools (AMB Dashboard) Supplementary food during lactation (POSHAN DNPs) Children who received a health check-up after birth from a doctor /nurse/LHV/ANM/midwife/other health personnel within 2 days of birth (%) (Tata NIN)
 MIYCN	<ul style="list-style-type: none"> 6 out of 10 DVTs have any MIYCN behavior indicators 	<ul style="list-style-type: none"> Early initiation of breastfeeding (0-24 months) (Nutrition India)
 Underlying Determinants	<ul style="list-style-type: none"> 5 out of 10 DVTs have any underlying determinants indicators. 	<ul style="list-style-type: none"> Percentage of households with individual household latrines (Champions of Change)

Finding #5: Half of the DVTs reviewed provide user support, such as user guides, and/or trainings on nutrition data, interpretation and its use.

Figure 5: DVT producers provide support to users in three ways



Finding #6: Few DVTs deployed systems for soliciting user feedback in DVT development process.

DVT producers have not adequately engaged users before development to understand user needs and data literacy. Only 2 DVTs did some form of user research before developing their DVT, such as POSHAN DNPs. Many producers aimed to keep their DVTs “simple”, however few mentioned considering their audience’s data literacy in the design.

⁴ POSHAN (Prime Minister’s Overarching Scheme for Holistic Nutrition) Abhiyaan – India’s flagship programme to improve nutritional outcomes for children, pregnant women and lactating women was launched in March 2018.

Figure 6: Examples of user feedback form related to dashboard and program

TATA NIN Dashboard and Anemia Mukt Bharat Dashboard have a feedback form with questions on their portal. **POSHAN DNPs and Nutrition India Dashboard** have provided contact information for suggestions.

Tata NIN Dashboard Feedback Form

Feedback form asks for user contact details, feedback on dashboard (nature of query, specific request and other queries) to improve services

Anemia Mukt Bharat (AMB) Dashboard Feedback Form: Positive policy impact of DVT study in India

In response to this landscaping review, **AMB Dashboard** added a page for user feedback on dashboard and program. Monthly web analytics data on:

- Number of visitors/hits are collated
- Top Download/ viewed
- Users by country

Sources: <https://anemiamuktbharat.info/feedback>, <https://www.dashboard.nintata.res.in/#/contact>

Notes: There may be differences in terms of the approach, information collected, and usefulness of information gathered via active and passive feedback. Active = DVT seeking out feedback in person or over email vs passive = something that just sits on the DVT website for anyone who has thoughts.

Recommendations to DVT producers:

1. Build DVTs around a theory of change, including identifying (a) which decisions by which stakeholders they aim to support, and (b) what actions are needed to deliver change.
2. Collaborate with other Indian DVT producers to improve synergies across DVTs, in terms of goal, design and uniformity to indicator definitions.
3. Include additional input and coverage indicators that align with the DVT's theory of change
4. Continue to support users to better use and interpret the data from DVTs.
5. Further strengthen the design and use of the DVT, by conducting user research to understand data literacy and user needs.

More information on the study can be found on the DataDENT website [here](#).

Project Note

This analysis was led by International Food Policy Research Institute (IFPRI), along with Results for Development Institute (R4D) as part of the Data for Decisions to Expand Nutrition Transformation (DataDENT) initiative. DataDENT is a four-year initiative (2017-2021) that aims to transform the availability and use of nutrition data by addressing gaps in nutrition measurement and advocating for stronger nutrition data systems. DataDENT is funded by the Bill & Melinda Gates Foundation, and is implemented by three institutions: Institute for International Programs (IIP) at the Johns Hopkins Bloomberg School of Public Health, the International Food Policy Research Institute (IFPRI), and Results for Development (R4D).