



Data Visualization Tools (DVTs) for Nutrition in India: A Landscape Review

International Food Policy Research Institute (IFPRI)

Co-investigators: NITI Aayog and Results for Development (R4D)

Glossary of Acronyms

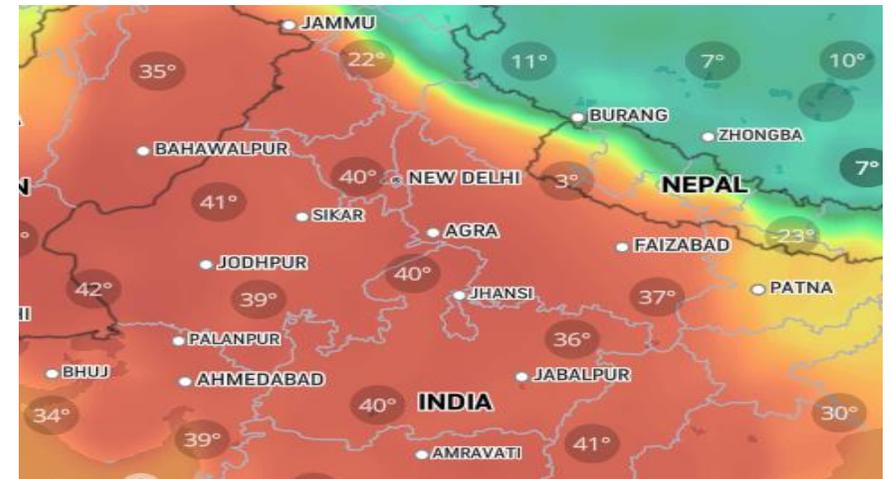
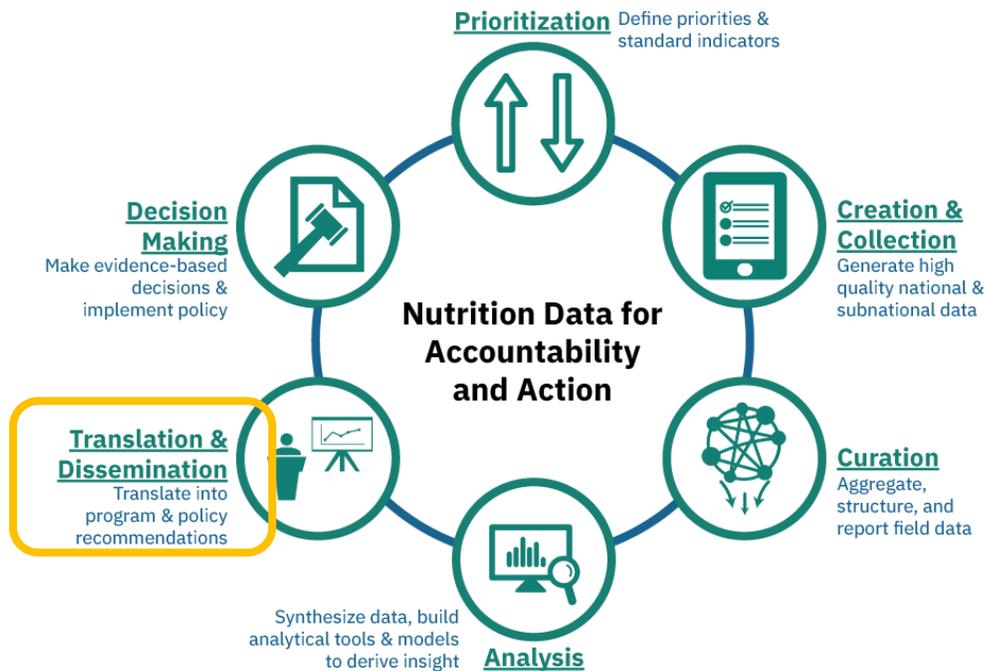
AHS	Annual Health Survey
AMB	Anemia Mukh Bharat
AMPR	Anganwadi Centre Monthly Progress Report
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
CAS	Common Application Software
CNNS	Comprehensive National Nutrition Survey
DLHS	District level Household Survey
DVT	Data Visualization Tools
HMIS	Health Management and Information System
ICDS	Integrated Child Development Services
ICAR	Indian Council of Agricultural Research
IFA	Iron Folic Acid
IFPRI	International Food Policy Research Institute
JSY	Janani Suraksha Yojana
LHV	Lady Health Visitor
MCP	Mother and Child Protection card
MIYCN	Maternal, Infant and Young Child Nutrition
MOHFW	Ministry of Health and Family Welfare
MPR	Monthly Progress Report
MWCD	Ministry of Women and Child Development
NACO	National AIDS Control Organization
NIN	National Institute of Nutrition
NFHS	National Family and Health Survey
NHM	National Health Mission
NSSO	National Sample Survey Office
ORS	Oral Rehydration Salts
POSHAN	Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India
RSOC	Rapid Survey on Children
SRS	Sample Registration System (Census of India)
VHSND	Village Health Sanitation and Nutrition Day

Overview and approach

What are Data Visualization Tools?

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.), making them useful in decision making, advocacy and communication.

DVTs are an integral part of the **Nutrition Data Value Chain**



Weather map, a common DVT example in everyday life curates the most important actionable indicators on temperature across regions and shows on a map with color coding.

Sources: Evergreen, Stephanie DH. *Effective Data Visualization: The Right Chart for the Right Data*. SAGE Publications, 2016.

<https://www.r4d.org/resources/a-landscaping-of-global-data-visualization-tools-for-nutrition/>

<https://www.accuweather.com/en/in/national/current-weather-maps>

Different types of DVTs support different types of goals and decisions

Dashboard



Nutrition India Dashboard

Dashboards present key performance indicators to achieve goals on a single screen – at-a-glance, often used for operations or management

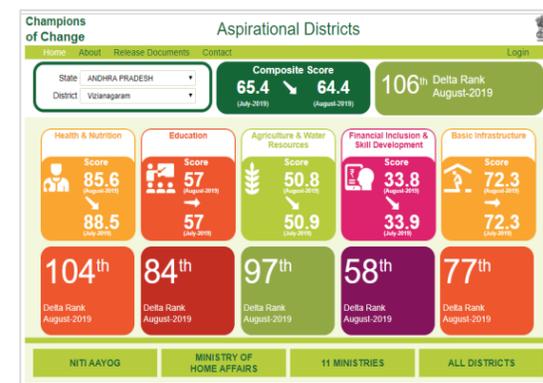
Scorecard



NITI Aayog State Nutrition Scorecard

Scorecards compare performance across indicators to display status and monitor progress, often used for advocacy and accountability purposes

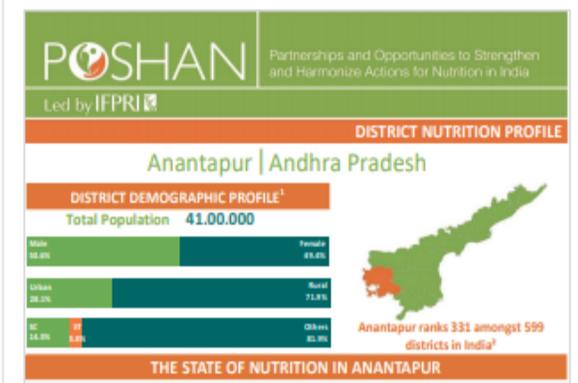
Index



Champions of Change

Indices aggregate several indicators into a single indicator (or composite score) to rank units, often used for advocacy and accountability

Profile



POSHAN District Nutrition Profiles

Profiles provide a snapshot of how a geographic region is doing in a particular sector, often used to spread awareness across broad audiences

DVTs rarely fall into just one of these types- they often mix goals and features across the different types

There has been an increase in the number of nutrition DVTs in India in recent years

Government and development partners are stepping up efforts to create a culture of accessible data for decision-making using DVTs. Two key government initiatives include:



Digital India is a flagship program that promotes governance through digital platforms, aiming to transform India into a digitally empowered society and knowledge economy.



The **Prime Minister's Overarching Scheme for Holistic Nutrition (POSHAN) Abhiyaan** is India's flagship programme to improve nutritional outcomes for children, pregnant women and lactating women. It was launched in March 2018 and is being implemented by the Ministry of Women and Child Development and Ministry of Health and Family Welfare.

How do DVTs contribute to the nutrition landscape in India?

Key research questions

- 1 What nutrition DVTs are available in India?
- 2 What is the ultimate goal of the DVT, and what is the producer's theory of change for how that goal will be achieved through their DVT?
- 3 How do nutrition stakeholders' access DVTs in India to meet their data needs?
- 4 What are the strengths and challenges of existing Indian DVTs?
- 5 What can be recommended to strengthen the design and use of nutrition DVTs in India?

In 2018-19, an [analysis of global Data Visualization Tools \(DVTs\)](#) was conducted by R4D as part of the **DataDENT** initiative. To complement the global DVT work, we studied India's case to examine how well DVTs respond to data needs and challenges among nutrition decision-makers in India.

We conducted a landscaping of nutrition DVTs in India using a 3-step methodology



I. Desk review

- 1 DVTs that include **nutrition** data or content were reviewed
- 2 We focused on **publicly accessible DVTs** that were produced or refreshed within the **past 5 years**.
- 3 We found 10 nutrition relevant DVTs through **internet searches** (Google), and **partner referrals**.



II. Producer interviews

- 4 **Producers*** were interviewed for **7 of the DVTs** regarding:
 - Their DVT's theory of change, intended users, outputs, dissemination processes, user engagement strategies, and production/ maintenance
 - Who uses their DVT, how people are using their DVT, and any feedback they have received from users



III. Online user surveys

- 5 **35 nutrition stakeholders** took part in online user survey:
 - To understand how users are exposed to DVTs, their nutrition data needs, preferences in visualization, and challenges faced in accessing and using data.

*Note: DVT producers were responsible for conceptualizing, deciding DVT content, commissioning designers, and overall management. Out of 10 DVTs included in our review, we could not interview DVT Producers of Jan Andolan Dashboard, Brookings Health Monitor and NITI Aayog State Nutrition Dashboard.

In specific, nutrition DVTs were reviewed against four parameters



Goal & Audience

Goals & Audience: DVTs goals grouped into two categories: (1) accountability; and (2) planning, implementation, and monitoring. Goals and audience were assessed based on description on their website and validated by producer interviews.



Domains & Indicators

Domains & Indicators: Indicators included in the DVTs were reviewed by domains (e.g., coverage, nutritional status) and mapped against the India Nutrition Indicator Framework.*



Design

Design: Design features such as “naming, faming, and acting” techniques (includes traffic lights, etc.), profiles, and interactive dashboards with bar graphs, maps, etc.



Data Sources

Data sources: Identified the specific data sources (administrative or population-based surveys) used by DVTs to populate data.

*Note: A list of interventions, determinants, and outcomes aligning with the POSHAN Abhiyaan framework was generated along with potential indicators, creating the India Nutrition Indicator Framework. This framework is developed jointly by IFPRI, NITI Aayog and IDinsight to highlight issues to improve data availability and data use in context of POSHAN Abhiyaan, India's National Nutrition Mission.

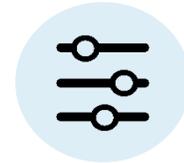
Summary: Key findings from the landscape review



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



Most 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).



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.



Most DVTs reviewed lack **input and intervention coverage indicators** on adolescence, lactation and newborn care.



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



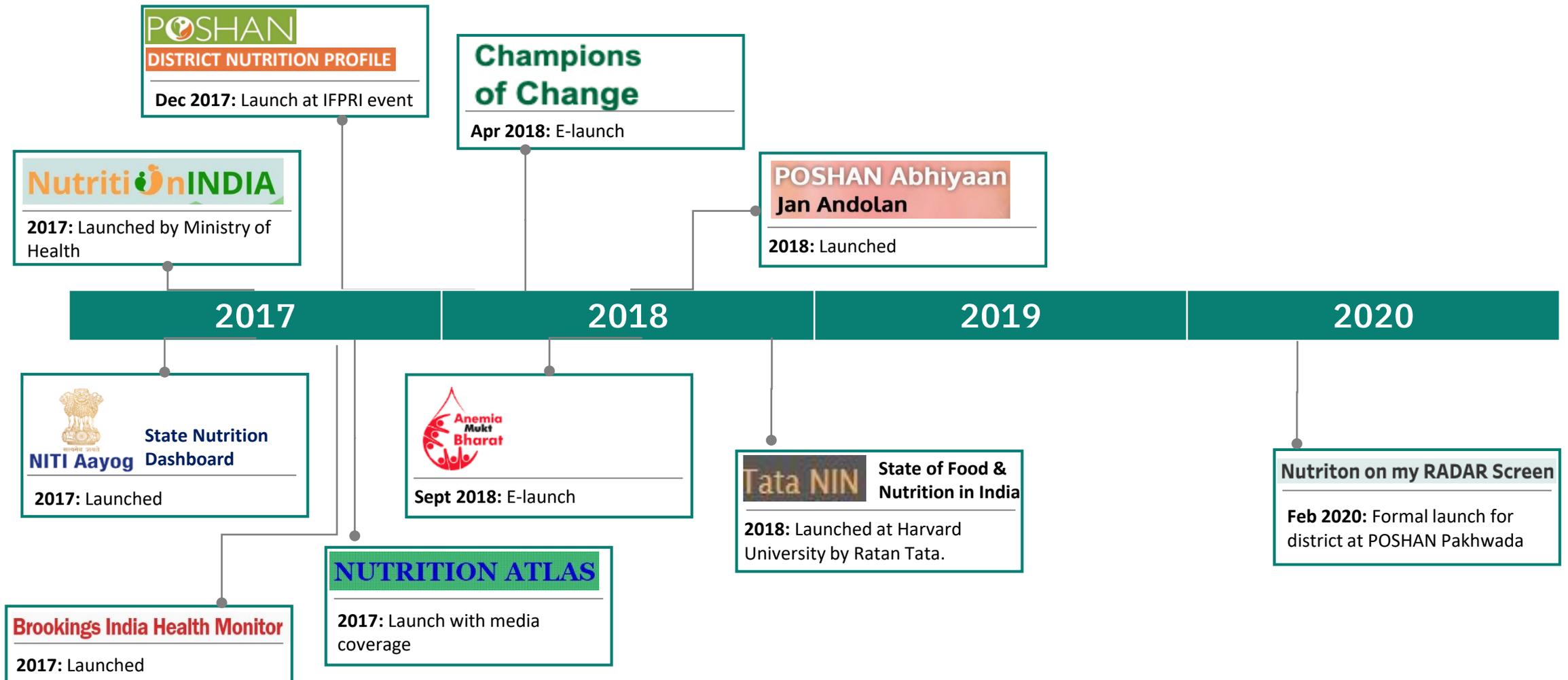
Few DVTs **deployed systems for soliciting user feedback** before or after DVT development.

Key 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



Note: We only reviewed DVTs that were produced or refreshed within the past 5 years.

Of the 10 DVTs, 5 were produced by the government, 3 used government-owned administrative data (in public domain)

Anemia Mukt Bharat

Produced by: MOHFW/UNICEF
Data source: Administrative (HMIS)

Champions of Change

Produced by: NITI Aayog
Data source: Administrative (HMIS, ICDS-AMPR and other departments)

Jan Andolan

Produced by: MWCD
Data source: Administrative (HMIS, ICDS-AMPR and other departments)

NITI State Nutrition

Produced by: NITI Aayog
Data source: Population-based survey (NFHS-4)

Nutrition India

Produced by: MOHFW/UNICEF
Data source: Population-based surveys (NFHS-4 & 3, CNNS 2017-18, and RSOC 2013-14)

... and 5 were produced by development partners, often using data from population-based surveys

Nutrition Atlas

Produced by: ICMR-NIN
Data source: Population based survey (NFHS-4, DLHS, AHS, SRS, NACO estimates)

POSHAN District Nutrition Profiles

Produced by: IFPRI
Data source: Population based survey (Census 2011, NFHS-4, NSSO)

Tata NIN

Produced by: NIN
Data source: Population based survey (NFHS-4, NSSO, and others)

Brookings India Health Monitor

Produced by: Brookings
Data source: Population based survey (NFHS-4)

Nutrition on my RADAR Screen

Produced by: IIT Bombay
Data source: Population based survey (NFHS-4)

Nutrition DVTs in India include different features to facilitate in-country decision-making

Indicators by sector*



10
Health



3
Agriculture



5
Education



4
WASH

Multiple sectors contribute to the immediate, underlying and basic determinants of nutrition and data can help users to understand multisectoral pathways.

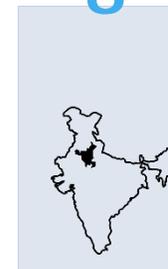
Sub-national data

7



National

8



State

8



District

Sub-national data helps to identify variation within a region and specific issues of that region to support policymakers /stakeholders in defining their priorities.

DVTs that include indicators by relevant sector sub-categories

3



Range of nutrition outcomes
(high/medium/low)

4



National programs
such as Janani
Suraksha Yojana
(JSY)

1



Service delivery
platforms such as,
visited by ASHA

5

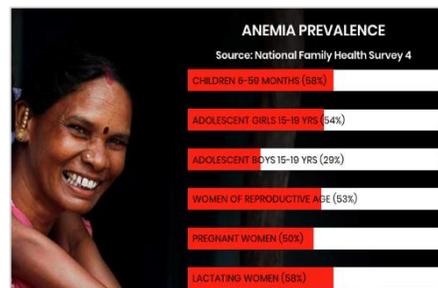


Disaggregated
variables (e.g. caste/
rural vs urban, sex,
etc.)

Additional indicators will help users to provide in-depth analysis and to facilitate dialogue.

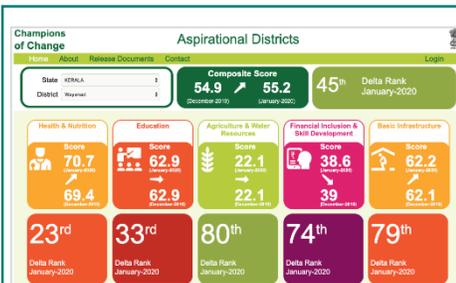
* **Indicators by sector:** During our review, we also found that DVTs have indicators related to health, agriculture, education and WASH sectors, along with nutrition relevant indicators.

Government-owned DVTs include sub-national data, indicators from multiple sectors, and often disaggregated variables



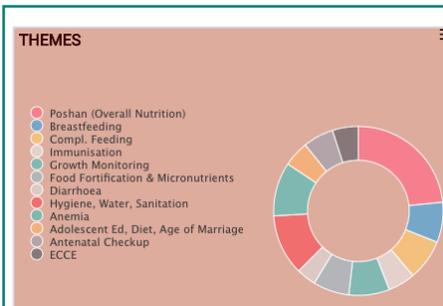
Anemia Mukt Bharat Dashboard

Indicators by sector: Health & nutrition
Sub-national data: 29 states, 6 union territories and 725 districts
Indicator sub-categories: Input indicators on IFA tablet; severity of indicators is shown in color-coded maps using data range (no data, 0-25, 25-50, 50-75 and 75-100).



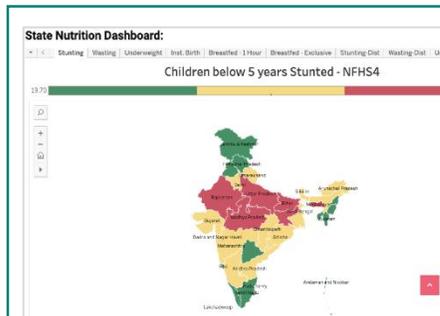
Champions of Change Dashboard, Index

Indicators by sector: Health & nutrition, education, agriculture, WASH
Sub-national data: 117 Aspirational districts
Indicator sub-categories: Institutional deliveries, and deliveries by Skilled Birth Attendant (SBA).



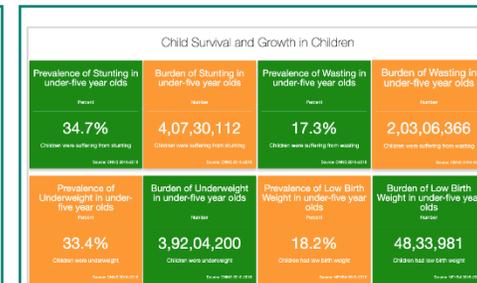
Jan Andolan Dashboard

Indicators by sector: Health & nutrition, education, WASH and others
Sub-national data: 29 states, 6 union territories
Indicator sub-categories: Data from 7 ministries at central level, and 14 departments at state, district, and block Levels provide data are updated in real-time basis.



NITI State Nutrition Dashboard

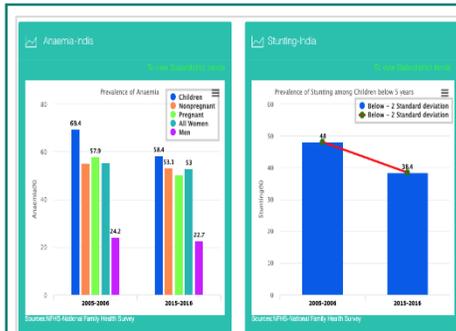
Indicators by sector: Health & nutrition
Sub-national data: 29 states, 6 union territories and 725 districts
Indicator sub-categories: Disaggregated variables (e.g. residence, total population); severity of nutrition outcomes (high and medium).



Nutrition India Dashboard, Profile

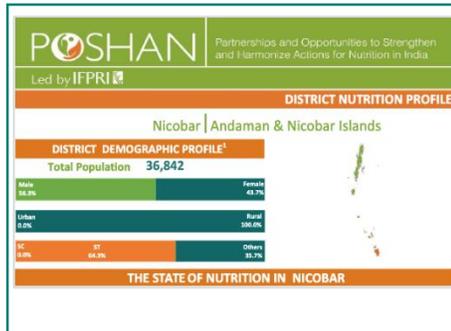
Indicators by sector: Health & nutrition, education, WASH
Sub-national data: 29 states, 6 union territories and 725 districts
Indicator sub-categories: Disaggregated variables (e.g. caste/ rural vs urban, sex, socio-economic status.); data on pregnant women visited by ANM/ASHA/AWW.

DVTs produced by development partners include sub-national data, indicators from multiple sectors, and national program data



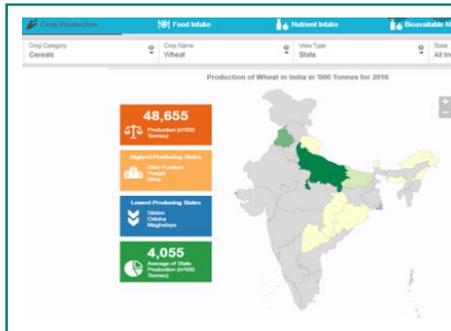
Nutrition Atlas Dashboard

Indicators by sector: Health & nutrition,
Sub-national data: 29 states, 6 union territories and 725 districts
Indicator sub-categories: Disaggregated variables (e.g. sex.); severity of nutrition outcomes (low, medium and high).



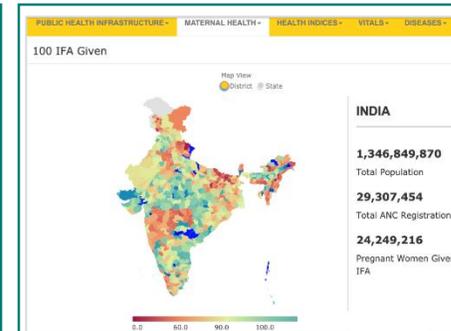
POSHAN District Nutrition Profiles Index, Dashboard

Indicators by sector: Health & nutrition, education, agriculture, WASH
Sub-national data: 640 districts
Indicator sub-categories: Disaggregated variables (e.g. caste/ rural vs urban, sex, etc.), JSY availed, visited by Primary Health Worker.



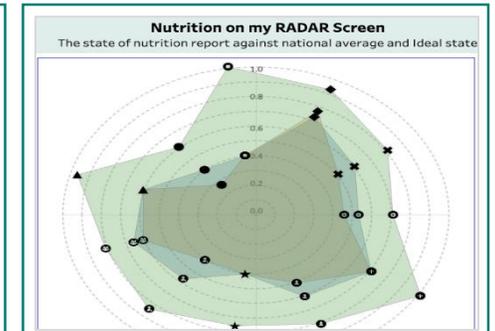
Tata NIN Dashboard

Indicators by sector: Health & nutrition, agriculture
Sub-national data: 36 states, 6 union territories and 638 districts
Indicator sub-categories: National average, high prevalence and low prevalence districts are presented for indicators; JSY availed.



Brookings India Health Monitor Dashboard

Indicators by sector: Health & nutrition
Sub-national data: 29 states, 6 union territories
Indicator sub-categories: Disaggregated variables; equity; JSY availed.



Nutrition on my RADAR Screen Dashboard

Indicators by sector: Health & nutrition, education
Sub-national data: 29 states, 6 union territories and 640 districts
Indicator sub-categories: 44 key indicators from NFHS-4 India & State factsheets; JSY availed.

Key finding #2



Most 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)

Most DVTs reviewed fall under two broad categories, a) planning, implementation, and monitoring, and b) accountability.

- **Planning, implementation and monitoring DVTs** aims to provide data to support a range of stakeholders in planning, implementation, and monitoring progress. These DVTs focus more on enabling environment, enacted legislation, and coverage indicators. For example, Anemia Mukh Bharat and Jan Andolan Dashboard.
- **Accountability DVTs** aims to hold governments or other stakeholders accountable for delivering on a specific commitment or achieving global targets/goals (e.g., WHA targets). These DVTs tend to focus more on outcome indicators, and use color-coding/rankings. For example, Champions of Change and NITI Aayog State Nutrition Dashboard
- Some DVTs fell under both categories, such as Nutrition India and POSHAN DNPs.

DVTs generally select indicators based on data availability and their goal. Reasons DVT producers select indicators were identified from interviews:

Monitor progress

“At output level, indicators were included to monitor the progress of the program.”

Generate comparisons

“We provided a comparative picture of district indicators against state figures.”

Align with the UNICEF framework

“Both nutrition-specific and nutrition-sensitive indicators were selected, primarily based on UNICEF Conceptual Framework.”

Highlight a problem/success

“The primary indicator was the risk of deficiency... In order to advise FSSAI, we wanted to inform the risk of deficiency...”

Support short-term results

“We decided to include the majority of input and output indicators... because there is more movement... whereas outcome indicators take a long time to change.”

Most DVTs target multiple audiences, most commonly government stakeholders

DVT	Target Audience						Target Audience Geography		
	Govt	Research-ers	Technical/ program	NGOs	Donors	General public	Sub-national	National	Un-specified
Anemia Mukd Bharat	✓		✓	✓			✓	✓	
Champions of Change	✓	✓		✓	✓		✓		
Tata NIN	✓	✓	✓		✓				✓
Nutrition India	✓		✓				✓	✓	
Nutrition Atlas	✓	✓				✓			✓
POSHAN DNPs	✓	✓	✓	✓			✓		
Nutrition on my RADAR Screen	✓						✓	✓	

Most DVT producers noted broad or multiple target audiences and were not clear about what specific actions they are trying to encourage among their users

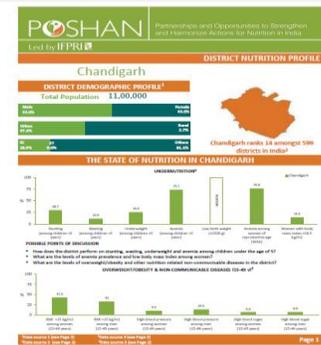
“Entire data is in the public domain, everyone could access and use.”

“[Our target audience includes] Policy makers, program implementors (program managers) at national, state and district levels”

Note: The findings in this slide are based on 7 DVT Producer interviews conducted out of 10 DVTs included in our desk review. The column on ‘Target Audience Geography’ highlights the level (sub-national, national or unspecified) at which a DVT producer specified their target audience.

POSHAN DNPs and the Champions of Change Dashboard have clear pathways to change with targeted audiences

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.

20

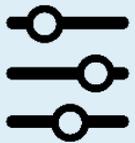
The Champions of Change Dashboard target district officials to monitor progress of critical indicators in Aspirational District Programme



- ***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.

*Note: Aspirational Districts Programme has identified 115 districts from 28 states, that are affected by poor socio-economic indicators. Improvement in these districts are aimed towards overall improvement in human development in India.

Key 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.

Multiple DVTs report on the same indicators but use different definitions and data sources

Indicators have different numerators and/or denominator definitions. 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 value for indicators.**

Example of differences in indicator definition and data source: Early initiation of breastfeeding in Araria District, Bihar

DVT	INDICATOR DEFINITION	DATA SOURCE	YEAR	POINT ESTIMATES
Champions of Change	Percentage of newborns breastfed within one hour of birth	HMIS, MoHFW Monthly	2018	97.91%
NITI State Nutrition Dashboard	Children breastfed within 1 hr at birth	NFHS4	2015	29.6%
Nutrition India	Early initiation of breastfeeding (0-24 months)	NFHS4	2015	29.7%
POSHAN	Number of children aged 0-3 years who were breastfed within 1 hour of birth	NFHS4	2015	29.6%
Tata NIN	Children under age 3 years breastfed within one hour of birth (%)	Not specified	Not specified	30%

In a few cases, confusion may rise when DVTs use incomplete definitions or change definitions

1



Time frame

I.e. recall period

Example: For children with diarrhea who received ORS (%) in Chitrakoot of UP, TATA NIN specify diarrhea within the past two weeks (68%), whereas Champions of Change does not specify a time frame (100%).

2



Age group

I.e. the age of the population of interest

Example: For Vitamin A supplementation in Chitrakoot district of UP, POSHAN DNPs specifies children 9-59 months who received a Vitamin A dose in the last 6 months (46%), whereas Nutrition India does not specify an age group (46%).

3



Delivery platforms

I.e. location (e.g. community) or service (I.e. ANC) for intervention

Example: For lactating women receiving supplementary food, POSHAN DNPs specify the delivery platform as Anganwadi centers (no data), whereas Nutrition India does not specify a delivery platform (no data).

4



Provider Type

I.e. the definition of professionals for an intervention

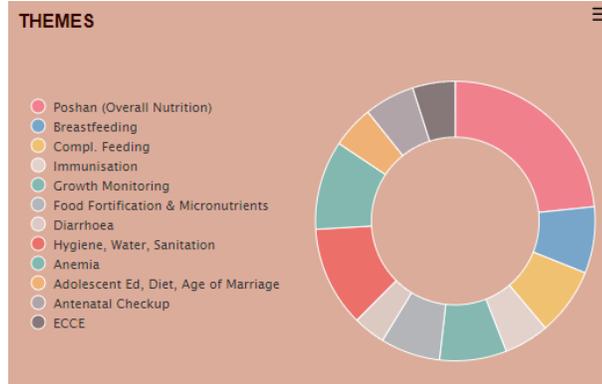
Example: For births attended by skilled birth attendant in Kanpur Nadar district, POSHAN DNPs specify types of health providers (doctor, ANM/nurse/midwife/LHV, other health personnel) (79%) whereas Nutrition India notes only skilled attendant at birth (79%)

Users may also be confused when visualizations lack information and values needed for interpretation



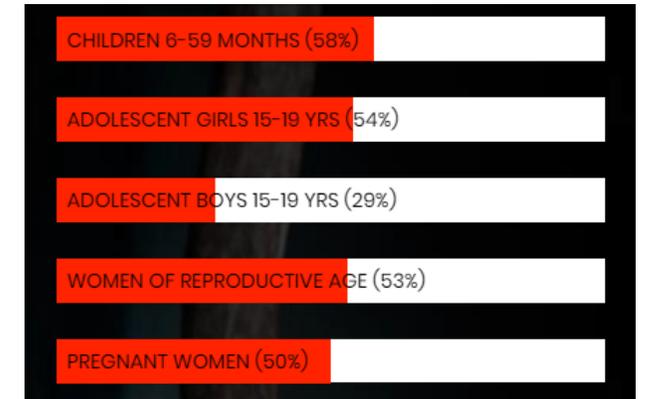
Complex diagrams

Nutrition on my RADAR Screen Dashboard used radar diagrams, believing them to be helpful for policy stakeholders because they consolidate data onto 1 page, show linkages/priorities/gaps, relative ranking, and are user-friendly. However there was no user research to confirm if they can be interpreted.



Graphs without labels

Jan Andolan Dashboard used donut graphs without clear labels, leaving the reader unsure of what data was being presented. As depicted above, it showed different government ministry labels, but did not have a graph title or indicators.



Point estimates without reference value*

Anemia Mukt Bharat Dashboard showed percentages for different indicators, without providing any information on whether the point estimates were good or bad, or a reference value for comparison.

*Note: A reference value provides the reader a point of reference whether the presented statistic is good or bad. For example, a reference value could be a national target, or international cut offs for mild, moderate, or severe anemia.

Key finding #4



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

When compared to the INIF, Input and intervention coverage indicators on adolescence, lactation and newborn care are missing in most DVTs, outcome indicators were common

= Number of indicators aligning with the India Nutrition Indicator Framework

 = No indicators in this domain

INDICATORS	CHAMPIONS OF CHANGE	ANEMIA MUKT BHARAT	JAN ANDOLAN	NITI STATE NUTRITION	NUTRITION ATLAS	NUTRITION INDIA	POSHAN DNP	TATA NIN	BROOKINGS INDIA HEALTH MONITOR	NUTRITION ON MY RADAR SCREEN
Intervention coverage	11	12	4	3		14	18	17	7	17
Adolescence		2								
Preconception						2	1	2		4
Pregnancy	4	3	1	1		4	5	5	3	4
Delivery and Postnatal care	2			1		2	3	3	3	3
Newborn care							1	2	1	1
Lactation		1				1	1			
Early childhood	5	3	2	1		5	7	5		5
Inputs		3	1							
Immediate determinants	3			3		8	5	5		4
Underlying determinants	2					6	5	5		2
Nutrition outcomes	4	3		5	8	7	9	9	4	5

Note: The table indicates availability of various types of indicators across DVTs against the India Nutrition Indicator Framework . Due to different theory of change of each DVT and India Nutrition Indicator Framework (2020) wasn't available when most DVTs were designed, this information aims to only inform the type and number of indicators available across domains.

To achieve nutrition outcomes, data on input and coverage interventions are important to monitor progress and improve performance

Domains	Findings	Indicator examples
 <p>Input indicators</p>	<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) (<i>AMB Dashboard</i>)
 <p>Intervention coverage</p>	<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 (<i>AMB Dashboard</i>) Supplementary food during lactation (<i>POSHAN DNPs</i>) Children who received a health check-up after birth from a doctor /nurse/LHV/ANM/midwife/other health personnel within 2 days of birth (%) (<i>Tata NIN</i>)
 <p>MIYCN</p>	<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) (<i>Nutrition India</i>)
 <p>Underlying determinants</p>	<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 (<i>Champions of Change</i>)

*Notes: **Input indicators** refer to the resources needed to support the implementation of an intervention or program, such as, financial and human resources, training, and infrastructure; **Coverage indicators** reflect the extent to which people in need actually receive important health and nutrition interventions; **MIYCN indicators** are immediate determinants, interventions in the first two years of life. **Underlying determinants** include interventions such as social safety nets, sanitation programs, women's empowerment and agriculture programs have the potential to improve nutrition. **Outcome indicators included** low birth weight, stunting, underweight, wasting, childhood overweight, and anemia among children, adolescents, and WRA, high blood pressure and high blood glucose among adults.

Key finding #5



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

DVT producers are currently providing support to users in three ways

Approximately half of DVTs provided some sort of support to users on nutrition data, interpretation and its use. The three main types of support to users included:

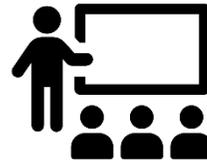
1



User Guides

Example: Tata NIN has documentation on their webpage explaining what content is available on each tab of their DVT, how they aggregated data, indicator definitions, and sources

2



Training

Example: Champions of Change held a two-day training during their launch for District Magistrates and District Information Officers (NIC officers)

3



WhatsApp Group

Example: Champions of Change said they use WhatsApp groups to follow up and address problems of their team at state and district level

Key finding #6



Few DVTs **deployed systems for soliciting user feedback** in DVT development process.

User input is lacking in the DVT development and update 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

Example: POSHAN DNPs did a pilot study with development partners (part of their target audience at the district level) to better understand their engagement with data and identified different mechanisms of data engagement depending on the context. Results of this pilot study informed DNP revisions, including translations into Hindi.

Many producers aimed to keep their DVTs “simple”*, however few mentioned considering their audience’s data literacy in the design

Example: “We wanted to keep our design simple and colorful easy for users from different backgrounds to interpret.”

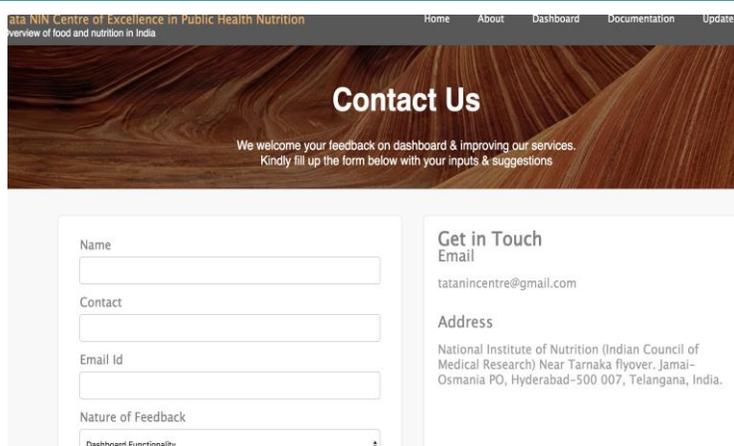
No DVT specified clear plans to update DVT website or visualization features based on user needs and feedback

*Note: DVT Producers did not describe/ define what they considered ‘simple’ and may have varied opinions on what’s considered simple

Examples of user feedback form related to dashboard and program

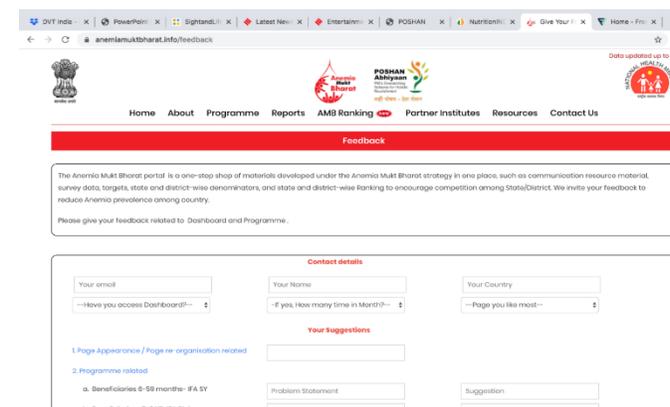
TATA NIN Dashboard and **Anemia Mukh Bharat Dashboard** have a feedback form with questions on their portal. **POSHAN DNPs** and **Nutrition India Dashboard** have provided contact information for suggestions.

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 Mukh 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://anemiamukhbarat.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.

How are users using nutrition DVTs in India: Early findings

We received 35 responses to our online survey from nutrition data users in India

Survey aimed to answer three questions

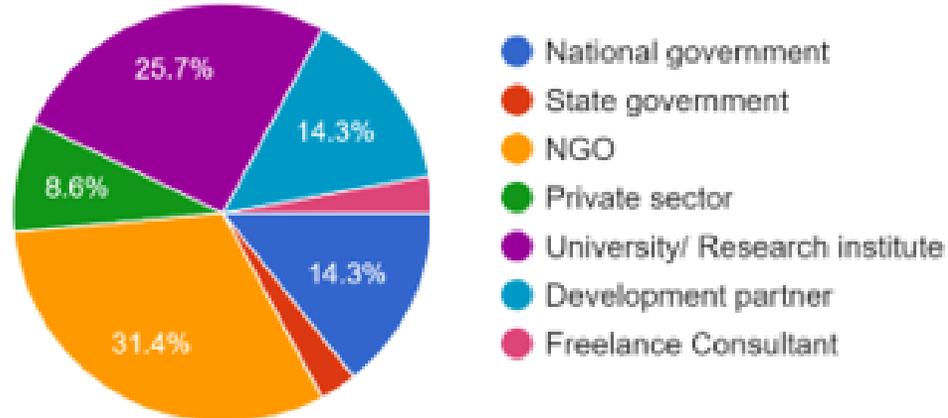
- What type of data and DVTs are the nutrition community using?
- What type of indicators users want to use, but are not accessible?
- What are challenges users face in accessing and using nutrition data?

About survey

- Created using Google Forms
- Disseminated through email to targeted nutrition stakeholders (development partners, govt. officials)
- Data collected: October - December 2019
- 35 responses received
- Allowed multiple responses to questions

User background

Who do you work for?



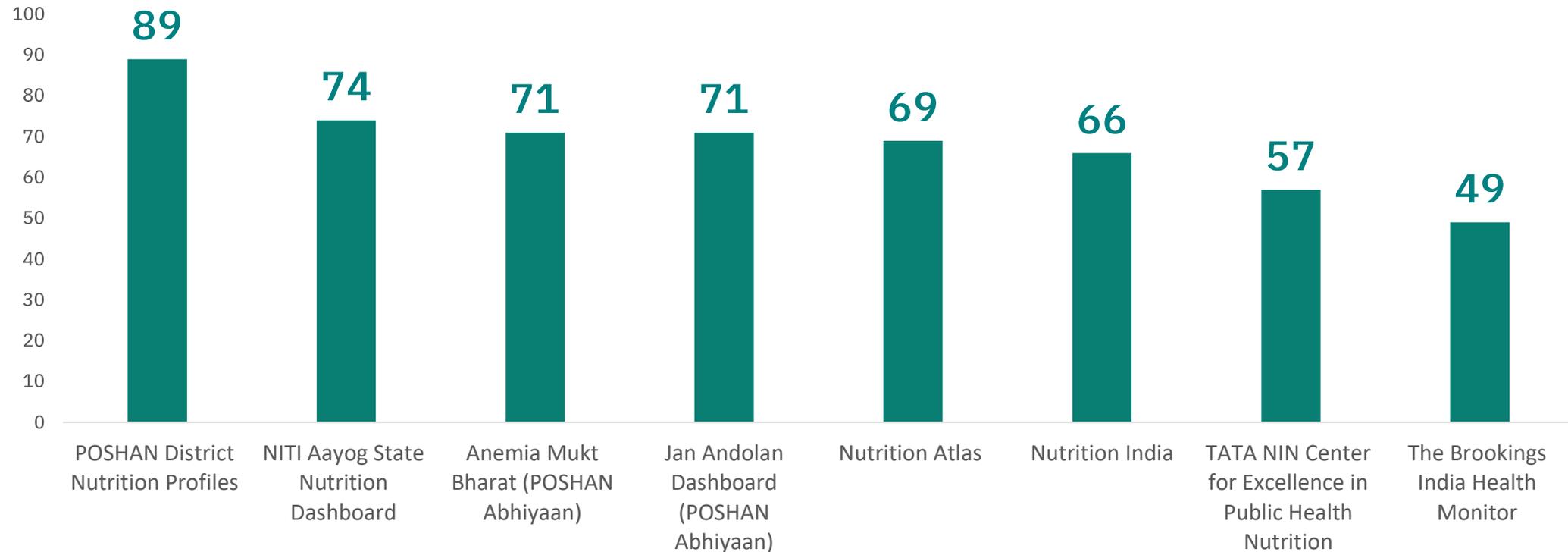
Geographic scope of work*



*Multiple responses were allowed

India nutrition DVTs accessed by respondents

% Respondents who accessed/used nutrition DVTs in last 12 months*
n=35

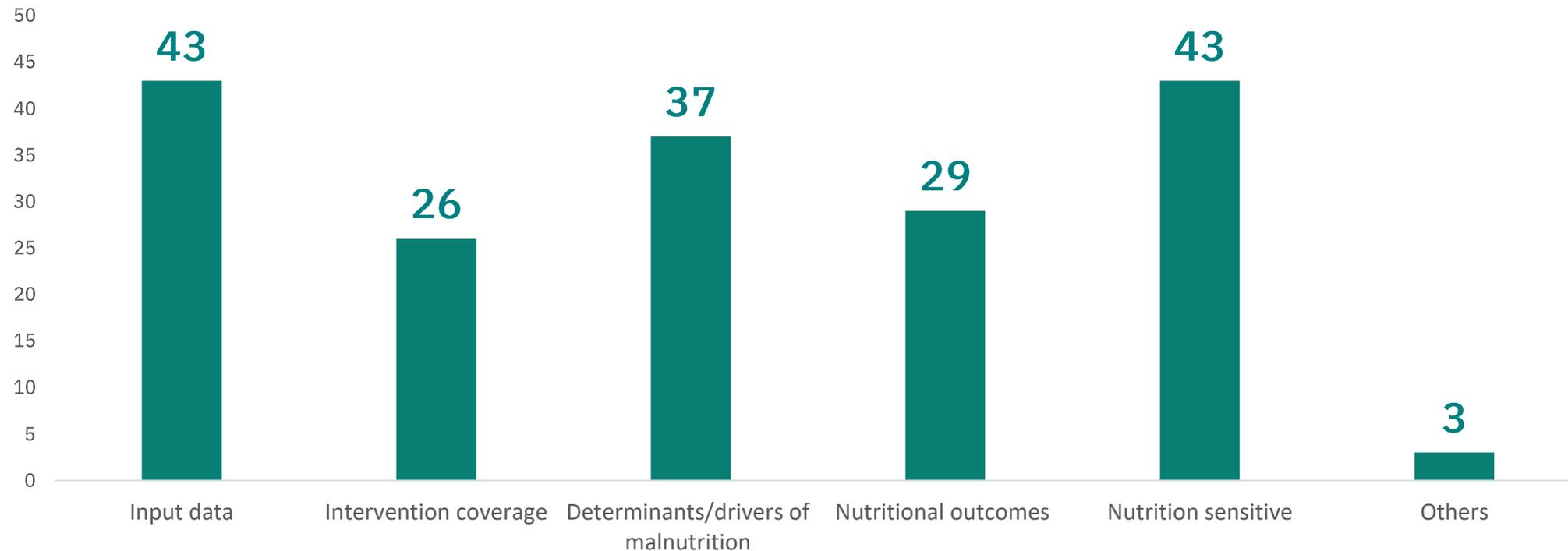


Most DVTs were used to access nutrition data for reference and tracking progress

*Multiple responses were allowed

Respondents use DVTs to access a wide range of nutrition data, yet critical gaps exist

% Respondents who were not able to access this data from DVTs *
n=35



Most users were unable to access data on – input, determinants of malnutrition and nutrition-sensitive in DVTs. These findings corroborate with desk review indicator mapping, where we found similar data availability challenges.

*Multiple responses were allowed

Most common challenges faced among respondents in using nutrition data online, not only in DVTs

- 1 Multiple data sources for some interventions, determinants and outcomes, makes user unsure which one to reference
- 2 Data quality cannot be trusted / is unreliable
- 3 Measurement and reporting issues in administrative data sources
- 4 Different analytic approaches at national/state/district level

Recommendations

Key Recommendations



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.



Collaborate with other Indian DVT producers to improve synergies across DVTs, in terms of goal, design and uniformity to indicator definitions.



Include additional **input and coverage indicators** that align with the DVT's theory of change.



Continue to support users to better use and interpret the data from DVTs.



Further strengthen the design and use of the DVT, by conducting **user research** to understand **data literacy** and **user needs**.