How to measure delivery effectiveness beyond coverage?

Andreas Hasman
On behalf of the UNICEF Delivery Effectiveness project team

8 July 2021
Project objectives

• **Identify** parameters and measures of delivery effectiveness

• **Evaluate** the effectiveness of country VAS programs

• **Explore** patterns in delivery effectiveness parameters across different strategies and contexts

• **Identify** tools for countries to assess multi-parameter effectiveness for program planning and delivery
Project timeline

- Identify parameters
- Review literature
- Consult stakeholders
- Interview key informants
- Identify measures
- Analyze VAS data
- Compare delivery strategies
# Identifying effectiveness parameters

**Primary Health Care Performance Initiative (PHCPI) conceptual framework**

<table>
<thead>
<tr>
<th>System</th>
<th>Inputs</th>
<th>Service Delivery</th>
<th>Outputs</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government &amp; Leadership</td>
<td>Drugs &amp; Supplies</td>
<td>Population Health Management</td>
<td>Effective Service Coverage</td>
<td>Health Status</td>
</tr>
<tr>
<td>Health Financing</td>
<td>Facility &amp; Infrastructure</td>
<td>Facility Organization &amp; Management</td>
<td></td>
<td>Responsiveness to People</td>
</tr>
<tr>
<td>Adjustment to Population Health Needs</td>
<td>Information Systems</td>
<td>Access</td>
<td></td>
<td>Equity</td>
</tr>
<tr>
<td>Workforce</td>
<td></td>
<td>Availability of Effective PHC Services</td>
<td></td>
<td>Efficiency</td>
</tr>
<tr>
<td>Funding</td>
<td></td>
<td>High Quality Primary Health Care</td>
<td></td>
<td>Resilience of Health Systems</td>
</tr>
</tbody>
</table>

- **Government & Leadership**
  - Primary health care policies
  - Quality management infrastructure
  - Social accountability

- **Health Financing**
  - Payment systems
  - Spending on primary health care
  - Financial coverage

- **Adjustment to Population Health Needs**
  - Surveillance
  - Priority setting
  - Innovation & learning

- **Drugs & Supplies**

- **Facility & Infrastructure**

- **Information Systems**

- **Workforce**

- **Funding**

- **Population Health Management**
  - Local priority setting
  - Community engagement
  - Proactive population outreach
  - Empowerment

- **Facility Organization & Management**
  - Facility management capability & leadership
  - Performance measurement & management
  - Information systems use
  - Team-based care

- **Access**
  - Financial
  - Geographic
  - Timeliness

- **Availability of Effective PHC Services**
  - Provider availability
  - Provider competence
  - Provider motivation
  - Patient-provider respect & trust
  - Safety

- **High Quality Primary Health Care**
  - First-contact accessibility
  - Continuity
  - Comprehensiveness
  - Person-centered
  - Coordination

- **Effective Service Coverage**
  - Health promotion
  - Disease prevention
  - RMNCH
  - Childhood illness
  - Infectious disease
  - NCDs & mental health
  - Palliative care
11 Survey parameters
Delivery effectiveness survey, 2021

Community awareness

Community acceptance
11 Survey parameters
Delivery effectiveness survey, 2021

- Community awareness
- Community acceptance
- Sustainability
11 Survey parameters
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- Availability
11 Survey parameters
Delivery effectiveness survey, 2021

System
- Government & Leadership
- Health Financing
- Adjustment to Population Health Needs
- Information Systems
- Workforce
- Funding

Inputs
- Drugs & Supplies
- Facility & Infrastructure

Service Delivery
- Population Health Management
- Facility Organization & Management
- Access
- Availability of Effective PHC Services

Outputs
- Effective Service Coverage
- High-Quality Primary Health Care

Outcomes
- Health Status
- Responsiveness to People
- Equity
- Efficiency
- Reliability of Health Systems
11 Survey parameters
Delivery effectiveness survey, 2021

- Community awareness
- Community acceptance
- Sustainability
- Access
- Availability
- Service quality
- Clinical outcomes
11 Survey parameters
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**System**
- Government & Leadership
- Health Financing
- Adjustment to Population Health Needs

**Inputs**
- Drugs & Supplies
- Facility & Infrastructure
- Information Systems

**Service Delivery**
- Population Health Management
- Facility Organization & Management
- Information systems use

**Outputs**
- Effective Service Coverage

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- Responsiveness
- Equity
- Efficiency
- Resilience
Effectiveness parameter definitions

**COMMUNITY AWARENESS**
- **IMPROVED UNDERSTANDING**
  - Community members know about the intervention, why it is being delivered and when service delivery is taking place.

**ACCESS**
- **FEWER BARRIERS TO SERVICES**
  - The program ensures access to services and interventions and minimizes physical, logistical, social, cultural and financial barriers.

**CLINICAL OUTCOMES**
- **HEALTHIER POPULATION**
  - The program achieves a reduction in mortality, morbidity and/or improving quality of life.

**EFFICIENCY**
- **BETTER REACH & UPTAKE**
  - The program maximizes the reach and uptake of services and interventions from available resources.

**COMMUNITY ACCEPTANCE**
- **INCREASED USE OF SERVICES**
  - Community members are willing to use interventions delivered through the program, ranging from active demand to active referral.

**AVAILABILITY**
- **TIMELY, CONTINUED SERVICES**
  - Sufficient, appropriate commodities and health workers are available in a timely manner.

**RESPONSIVENESS**
- **AGILE PROGRAMS**
  - The program is able to pivot to the changing circumstances and needs of the population.

**RESILIENCE**
- **STRONG PROGRAMS**
  - The program absorbs shocks and sudden disruptions, it continues or resumes core functions quickly.

**SUSTAINABILITY**
- **CONTINUED BENEFITS**
  - Supply of, or benefits from, the delivery program continue over time without interruption; program funding is from domestic (government) sources.

**SERVICE QUALITY**
- **IMPROVED CLINICAL OUTCOMES**
  - Services and interventions are provided safely, timely and in a way that is people-centered.

**EQUITY**
- **REDUCED HEALTH DISPARITIES**
  - Children who are affected with the intervention and services are not experiencing other deprivations.
70 respondents completed the vitamin A delivery effectiveness survey.
Respondents most frequently worked at the global or national level

70 respondents

Source: Vitamin A delivery effectiveness survey results, 2021
Respondents most frequently worked in immunization or nutrition
70 respondents | Nearly half of respondents (32) reported working in multiple focus areas

Immunization (n=33)
Nutrition (28)
Maternal & newborn health (19)
Malaria (15)
Polio (15)
HIV/AIDS & tuberculosis (11)
Neglected tropical diseases (9)
Sexual & reproductive health (9)
Other (17)

Source: Vitamin A delivery effectiveness survey results, 2021
At least three-quarters of respondents identified equity, service quality, access and sustainability as **important for decision-making** (n=70)

<table>
<thead>
<tr>
<th>Yes, important for decision-making</th>
<th>No, not important for decision-making</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>63</td>
</tr>
<tr>
<td>Service quality</td>
<td>59</td>
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<tr>
<td>Access</td>
<td>56</td>
</tr>
<tr>
<td>Sustainability</td>
<td>54</td>
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<td>Community acceptance</td>
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<tr>
<td>Availability</td>
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<tr>
<td>Community awareness</td>
<td>42</td>
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No, not important for decision-making  Yes, important for decision-making

<table>
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<tr>
<th>Category</th>
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Source: Vitamin A delivery effectiveness survey results, 2021
Equity, access and availability were most frequently ranked in the top half of parameters identified as **important for decision-making** (n=70)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>No, not important</th>
<th>Ranked as high priority</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>7</td>
<td>4</td>
<td>63</td>
</tr>
<tr>
<td>Service quality</td>
<td>11</td>
<td>2</td>
<td>59</td>
</tr>
<tr>
<td>Access</td>
<td>14</td>
<td>4</td>
<td>56</td>
</tr>
<tr>
<td>Sustainability</td>
<td>16</td>
<td>2</td>
<td>54</td>
</tr>
<tr>
<td>Community acceptance</td>
<td>19</td>
<td>1</td>
<td>51</td>
</tr>
<tr>
<td>Availability</td>
<td>24</td>
<td>3</td>
<td>46</td>
</tr>
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<td>2</td>
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<td>8</td>
<td>44</td>
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Source: Vitamin A delivery effectiveness survey results, 2021
5 parameters identified for inquiry

1. Equity
2. Sustainability
3. Access
4. Availability
5. Community acceptance
5 parameters identified for inquiry:

1. Equity
2. Sustainability
3. Access
4. Availability
5. Community acceptance
Example 1: Equity

OBJECTIVE

Identify inequality in vitamin A supplementation delivery programs
Are traditional measures of VAS coverage equity sufficient?
Potential problems with using existing measures of inequity

Multiple deprivations

Adverse health outcomes be risk exposures

Underlying distribution of deprivations
**VAS Deprivation Score**

Sum of the number of deprivations experienced by children 9–35 months old

1. No improved water source in household
2. Mother with no formal education
3. Household in poorest wealth quintile
4. Have not received DTP1
5. Have not received MCV1
Percentage of children that are zero-dose for VAS with 0–5 deprivations

Absolute difference in zero-dose VAS between groups (0–5 deprivations)

Relative difference in zero-dose VAS between groups (0–5 deprivations)

Distribution of deprivation scores among children
Percentage of children that are zero-dose for VAS with 0–5 deprivations

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Relative difference in zero-dose VAS between groups (0–5 deprivations)

Distribution of deprivation scores among children
<table>
<thead>
<tr>
<th>Equitable</th>
<th>Moderately equitable</th>
<th>Moderately inequitable</th>
<th>Inequitable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low absolute difference of zero-dose VAS for children with deprivation scores of 0 compared to 5</td>
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<tr>
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<tr>
<td>Underlying distribution has few children with deprivation scores &gt;3</td>
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Example 2: Sustainability

OBJECTIVE
Identify sustainability in vitamin A supplementation delivery programs
Vitamin A supplementation coverage, 2010–2018
Administrative semester VAS coverage data for 64 priority countries

**Sustained, high** admin VAS coverage data (n=15)

**Nearly sustained, high** admin VAS coverage data (n=3)

**Unsustained and/or low** admin VAS coverage data (n=32)

**Unsustained, low** admin VAS coverage data (n=13)

Source: Vitamin A delivery effectiveness survey results, 2021
Notes: TKM had no reported administrative data
Of the 15 countries with sustained coverage all nine years,

- 12 (80%) used a predominantly **non-routine** delivery strategy
- 3 (20%) used a **mixed** delivery strategy
- None used a predominantly **routine** delivery strategy
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Applied learning

• **Evaluate** national-level programs

• **Compare** programs across countries

• **Recommend** delivery strategies in specific contexts

• **Plan** national-level programs

  *challenge: dependence on population-based surveys; focus*