BEYOND COVERAGE
Measuring vitamin A supplementation programme effectiveness in
Mauritania and Sierra Leone

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Key Messages

The Beyond Coverage project worked with stakeholders in Mauritania and Sierra Leone to conduct a review of their vitamin A supplementation programmes’ effectiveness by looking beyond coverage towards additional effectiveness parameters. Findings from the review included the following:

- Locally available indicators were selected and discussed in a participatory and multi-programmatic strategic review process, which enabled country stakeholders to deliberate on aspects of programme effectiveness and reach a consensus on desired outcomes.

- The strategic review resulted in context-specific recommendations to enhance effectiveness in vitamin A supplementation programming.

- Further research is required to determine appropriate approaches to stakeholder engagement and methods for real-time consensus building and documentation.

Background

Preventive health technologies such as early detection and screening technologies, vaccines, and nutritional supplements have contributed significantly to extensive reductions in child mortality and increases in life expectancy in recent decades.

As the full potential of lifesaving preventive interventions becomes evident, the effectiveness of the systems by which these interventions are delivered is coming under increased scrutiny. Ineffectiveness in the delivery of highly efficacious lifesaving interventions is a wasted opportunity in the form of mortality and morbidity that could have been avoided.

But what does it mean that a public health programme is effective? Assessing programme delivery effectiveness and devising strategies to optimize performance are often challenging, for two reasons. First, preventive public health programmes may not use multiple data sources to assess effectiveness, instead relying mainly on single aggregated markers (such as programme coverage). The problem is that aggregated markers often do not give sufficiently detailed insights into the workings of delivery programmes to enable precise diagnosis and course correction. If delivery programmes rely mainly on coverage, for example, they will not have the actionable information needed.

The second reason assessing programme effectiveness can be challenging is that the value placed on programme outcomes by stakeholders is affected by social, political, economic, and environmental factors, and therefore depends on context. Moreover, at any time, different stakeholders may disagree

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* A frequent challenge is that scientifically rigorous data on multiple aspects of programme performance simply is not available in a timely manner. One solution is to instead use data from related programmes, proxy indicators, small sample size data sets, anecdotal information, and expert opinions to address gaps in our understanding of programme performance.

† For example, stakeholders may highly value access to services during an emergency, but when there is no emergency, equitable delivery – reaching the most vulnerable – may be a more important consideration.
on what constitutes an effective programme. Some may argue that a programme’s ability to withstand natural disasters makes it effective; others may find that an effective programme must be efficient (i.e., reach as many beneficiaries as possible for the available money). When trade-offs are made between different considerations (e.g., spare capacity for a prospective emergency response vs. efficiency when there is no emergency), there is potential for disagreement among stakeholders. In the absence of consensus on desired outcomes, conducting an actionable assessment of a programme’s effectiveness becomes difficult. It rarely happens that public health programmes seek to establish consensus among stakeholders as part of an assessment of programme effectiveness.

The Beyond Coverage project aims to address both of these challenges. Focusing on vitamin A supplementation (VAS) programmes in Mauritania and Sierra Leone, the project explores how stakeholders can assess effectiveness in the local context, drawing on locally available data and engaging in a deliberative and iterative process to generate actionable recommendations for programme delivery. Mauritania was selected because VAS is delivered through door-to-door campaigns there, whereas Sierra Leone recently shifted its strategy to routine delivery through the health system.

**Assessing Effectiveness in Vitamin A Supplementation**

Most programmes, including VAS, rely on coverage – the share of an eligible population reached – as the most important measure of effectiveness. Coverage summarizes and aggregates a wide range of a delivery system’s strengths and weaknesses into a single figure. Arguably, VAS programme stakeholders require additional information and data on specific programme functions to improve performance. Moreover, VAS programmes have traditionally not systematically engaged stakeholders in discussions about the programmes’ desired outcomes. A lack of consensus has arguably also been a barrier to comprehensive assessments of programme effectiveness in VAS.

This project explores processes by which country VAS programmes can use available data to assess effectiveness and devise strategies and actions to improve performance. Its starting point is the delivery effectiveness framework, which the United Nations Children’s Fund (UNICEF) developed in the initial phase of the project [1]. The delivery effectiveness framework breaks down the concepts of effectiveness into 11 discrete parameters (Annex 1).

![Figure 1: Conceptual framework to assess delivery effectiveness of health and nutrition interventions](image-url)
Research Question and Objectives

The following research question guided the project: How can country programme stakeholders systematically, inclusively, and transparently use readily available data and programme knowledge beyond coverage estimates to measure the effectiveness of VAS programmes for children aged 6-59 months? Specific objectives were to:

1. Develop and test approaches to strategically review the delivery effectiveness of VAS programmes using the delivery effectiveness framework in two case-study countries (Mauritania and Sierra Leone).
2. Explore generic definitions and indicators for effectiveness parameters‡ in the case-study countries.
3. Conduct desk reviews to map available data in the case-study countries.
4. Build consensus around the prioritization of effectiveness parameters and recommendations in country-specific workshops.
5. Collect and analyse lessons learned from the strategic review of VAS programme effectiveness in the case-study countries.

Methods

The multi-phased, iterative study design (Annex 2) facilitated a strategic review of VAS programmes’ effectiveness using a mixed-methods and participatory approach [2-4] in Mauritania and Sierra Leone.

Prior to the workshop, the country team (VAS programme and UNICEF Country Office) identified possible data sources for information on VAS programme effectiveness.§ In consultation with the project team at UNICEF HQ, indicators were derived from available data sources to match some of the 11 effectiveness parameters from the delivery effectiveness framework (Annex 3).

The participatory workshops brought together stakeholders from the VAS programme and similar programmes for deliberating, brainstorming, and consensus building. This type of workshop has previously been successfully conducted across multiple settings for both formative and summative purposes in health and nutrition research, involving a range of stakeholder types [5]. In Sierra Leone and Mauritania, workshop participants were purposefully selected based on current professional affiliations with nutrition and related programmes in the country. Individuals representing both government (e.g., Ministry of Health officials), non-government entities (e.g., nutrition technical specialists from non-government organizations), and immunization and neglected tropical disease programmes participated.

Mixed Methods

In pre-workshop data analysis, both primary and secondary data were collected and analysed. Secondary data analysis provided numerical effectiveness indicators across parameter types, drawing from both country-level reports and peer-reviewed literature. In the workshop, primary data were

‡ A delivery effectiveness parameter is an element of the public health service delivery system that is sufficient and necessary when identifying that system, and when evaluating its performance, status, and condition.
§ These data sources included recent population-based surveys, post-event coverage surveys, quality assurance assessments, and administrative data.
collected from stakeholders using written self-reporting,** small-group discussions, and consensus-building methods within a tested participatory workshop design [5]. The design aimed to draw on different data collection methods, participant types, and data sources for a comprehensive understanding of VAS programming [6].

**Participatory**

The study methods were purposefully designed to maximize participation, engagement, and buy-in of stakeholders. During the participatory workshop, small groups of stakeholders rotated among five ‘dialogue stations’ where effectiveness data were presented for discussion. A dialogue station is a small-group discussion of data related to two or three effectiveness parameters (Annex 4). The facilitated discussions afforded all participants equal opportunity to reflect and discuss key findings while also generating their own recommendations through the written self-report. A pile sorting method was also used, in which participants were asked to group effectiveness parameters according to importance and how much effort is required for the programme (degree of difficulty) to improve the parameter [7]. Statistical analysis†† of pile sort data was used to determine group consensus [8]. The pile sorting further helped ensure that all stakeholders, regardless of position or affiliation, could provide inputs that informed the final conclusions.

**Strengths and Limitations**

A main strength of the study was that country stakeholders (government and non-governmental) were in the lead and set agendas and direction. Although indicators for the parameters were initially selected by the project team, the country team (VAS programme and UNICEF Country Office) interpreted the data and their implications after agreeing on the suitability of the suggested indicator. During the workshop, country stakeholders were actively encouraged to offer different viewpoints on the parameters, indicators, and recommendations. The context specificity of findings is a strength that enabled the development of recommendations that are tailored responses to contextual challenges [9].

Study findings were limited by a lack of high-quality data for certain indicators (see Annex 3). This limitation was addressed by using metrics from other health programmes (typically where sound comparisons could be made) and all quantitative data were supplemented by expert opinion during deliberations. Another limitation was that community members were not represented in the workshops.

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**In ‘self-reporting’ participants reported their own professional perspectives individually in writing. Responses were subsequently used as data sources. Rather than extracting ‘top-down’ recommendations based on deliberations and other workshop outputs, participants were asked to report opportunities, barriers, and recommendations from their own professional perspectives. Self-reporting enabled a participatory and ‘bottom-up’ approach.**

**Anthropac software was used for the analysis of the pile sort data. It uses multidimensional scaling to explore the relationships between individual and group norms.**
The study methodology may have yielded richer information with the addition of community member participation, and direct community member involvement might also be a strategy to address challenges related to limited data availability as described above [10].

**Results and Discussion**

The strategic review of programme effectiveness resulted in an overview of performance vis-à-vis the 11 effectiveness parameters, the relative importance and degree of difficulty to improve each effectiveness parameter, as well as participants’ perceptions of current opportunities, challenges, and recommendations for improved VAS programme effectiveness.

![Figure 2: Consensus findings in Mauritania – parameter importance and ease of improvement](image)

Figure 2: Consensus findings in Mauritania – parameter importance and ease of improvement
VAS outcomes depend directly on access, availability, and sustainability of service delivery. [...] I think these are the most important factors that need to be improved.”

- Mauritania participant

Sustainability was considered ‘difficult to improve’ in both countries, whereas availability was perceived as ‘easiest to improve’ in both countries. Service quality and access were considered more difficult to improve in Sierra Leone than in Mauritania.

Differential perceptions of the importance of equity and clinical outcomes were notable between the countries. Equity was thus considered ‘most important’ (and somewhat challenging to improve) in Sierra Leone but ‘less important’ (and ‘somewhat challenging’) in Mauritania. Clinical outcomes were considered ‘less important’ and ‘difficult to improve’ in Sierra Leone but ‘most important’ and ‘easiest to
improve’ in Mauritania. These variations in perceptions across countries might be expected given differences in delivery strategies. In Mauritania, VAS delivery uses a campaign approach helping to ensure relatively equitable coverage. Although the mortality rate has fallen in Mauritania, the absolute number of under-five deaths has remained stagnant, which may explain the higher importance placed on clinical outcomes. Sierra Leone delivers VAS through routine contacts and is achieving relatively lower coverage; perhaps this is why equity was given more weight. Both countries acknowledge that improving equity is challenging.

The dialogue stations resulted in elaborate descriptions of opportunities, challenges, and recommendations for each of the 11 parameters. For each country, participants generated more than 150 parameter-related recommendations for improvement in VAS delivery effectiveness. These recommendations fell into four thematic areas: (1) greater resources (human and financial resources); (2) increased programme capacity (know-how and ability); (3) enhanced integration (public health programmes/campaigns); and (4) stronger enabling environment (political will).

The strategic review in Sierra Leone, for example, generated recommendations for improved effectiveness in service quality, focusing on continuous training and supervision of health staff, improving communication between health facilities/workers and communities, and enhancing monitoring and evaluation of service quality (increased capacity). Examples of recommendations are listed in Annex 5.

**Promising Practices**

Several promising practices emerged from the strategic reviews in Mauritania and Sierra Leone:

- Structuring the workshops around the UNICEF delivery effectiveness framework was successful in encouraging in-depth discussion. The framework was well understood, and all effectiveness parameters were considered relevant.
- Giving national VAS programmes a leading role in the review and interpretation of data for the workshop ensured country ownership of the data and strategic review process.
- Purposefully selecting participants to reflect stakeholder diversity across ministries of health, programme leadership, and non-governmental organizations worked well in both countries. However, in the future participation should be widened to include community and end-user representatives.
- Small-group deliberations with a focus on single effectiveness parameters encouraged consensus building among participants.

**Lessons Learned**

The two strategic reviews suggested that the notion of delivery effectiveness has lacked conceptual clarity and specificity at the country level. The delivery effectiveness framework was well received by programme stakeholders in Mauritania and Sierra Leone and proved an excellent starting point for deliberations on performance data and experiences. The delivery effectiveness framework and the workshops’ deliberative and iterative format guided participants to consensus based on an assessment of performance data beyond coverage data. Including both government and non-government actors as participants in the strategic review allowed for insights from multiple perspectives. As such, the lesson
for programme delivery is that a structured process for the review of effectiveness can play a strategic role in building consensus and guiding programme actions.

However, we also learned that at least three aspects of the review process should be strengthened in future workshops. First, the data for discussion in the workshops were selected jointly by the country and project teams. The strategic review workshop used the data to start a discussion on the 11 effectiveness parameters, but future workshops should include explicit opportunities for participants to refute the proposed data, for example, in response to a direct question about the data’s validity and relevance.

Second, reaching consensus in the Mauritania and Sierra Leone workshops was relatively straightforward, perhaps because of the closeness of participants’ viewpoints. An important lesson learned was that programmatic perspectives may have been overrepresented. What was most obviously missing was the perspective of the end-user. Participation of stakeholders from the community level is required to present all perspectives on VAS delivery effectiveness and to reach meaningful consensus. Community-level representation was not included in the first two workshops and effective ways to engage stakeholders at this level should be identified for future workshops.

A third lesson learned was that methods used to elicit consensus must be sufficiently simple and rapid to deliver results within the workshop. The pile sorting exercise used in the two workshops required time-consuming analysis, and findings were not available on the same day. For practical reasons, the self-recorded recommendations could also not be analysed and presented in the workshop. The methodology for consensus elicitation regarding the relative importance of parameters may have to be adapted in future workshops.

**Implications for Practice and Future Research**

**Practice**
The study findings show that a strategic review that unpacks programme effectiveness into parameters and builds consensus on programme goals and strategy has potential benefits in the form of better decision-making and eventually higher coverage. What is required is an iterative and inclusive process that encourages evidence-based deliberation and consensus building among stakeholders.

To enable this iterative and inclusive process, *future research* should include reviews of methods for stakeholder engagement and real-time consensus building, as well as test different models in practice. A centralized knowledge management system may help to standardize the documentation of outcomes and share programme-specific lessons learned with regional and global audiences.
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References


