Case Studies

Achieving High Coverage of Two-dose Vitamin A Supplementation

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INTRODUCTION

To maximize the population-wide benefit of vitamin A, a minimum of 80 percent of children must receive two-doses of life-saving vitamin A each year. However, the last decade has seen coverage rates of vitamin A decline globally, and by even more in the poorest countries with the greatest need. This is leaving too many children at risk of death and disease, reversing gains made in reducing child mortality globally.

More recently, we have seen this general downward trend in coverage compounded by the effect of the COVID-19 pandemic in 2020, and many countries had to postpone their semester 1 campaign events or limit outreach activities due to COVID-19 mitigation measures, such as physical distancing, movement restrictions and the prohibition of large group gatherings. This has left children unprotected: we estimate that up to 100M children missed at least one dose of VAS. This sudden drop in VAS coverage parallels that in other vaccinations. Moreover, as measles vaccination drops, VAS becomes even more critical.

Urgent work is needed to support countries where vitamin A deficiency remains a public health problem and VAS remains a critical life-saving intervention to ensure that vitamin A is delivered consistently and safely in the context of COVID-19, and beyond. The opportunity ahead of us is to support these countries to improve and institutionalize their VAS delivery – whether through campaigns or routine health services – to ensure consistent high two-dose coverage (i.e. regular VAS delivery twice a year, four to six months apart.)

OUR APPROACH

In countries where VAS is recommended as a life-saving intervention, Nutrition International supports governments to deliver VAS to children 6-59 months, with an aim to increase or maintain coverage in a tailored manner. Nutrition International works alongside government to help identify gaps and find cost-effective solutions – both at the national and sub-national level – to boost coverage rates over 80 percent and deliver VAS with quality to children. Different countries require different levels and types of support, as barriers to sustainable high-coverage rates vary between different groups of countries, and context matters.

Nutrition International provides support across three broad typologies of VAS programs:

- **Campaigns**: Refer to a group of countries where the conditions may not be ready to incorporate VAS into routine health system delivery, and where a biannual campaign is the most cost-effective approach to reach a high proportion of children 6-59 months of age. Nutrition International's objective is to maximize the number of countries that reach over 80 percent of children 6-59 months twice a year with VAS through CHD campaigns.

- **Routine Health Services**: Includes countries that have already begun routine delivery and those that are preparing to. Nutrition International's objective is to improve the capacity of the routine health system to deliver VAS to all children 6-59 months twice a year.
- **Roadmap to Scale Back**: Some countries have made progress in reducing VAD among preschool children, such that VAS is no longer essential for some or all of the population. Nutrition International's objective in a country in this situation will be to work with government to determine whether it is appropriate to scale-back universal VAS. If so, design and implement the best path for doing so, at the subnational level or for a segment of the age group.

Typology	Proposed Countries
Campaigns	Nigeria Benin Angola
Routine Health Services	Sierra Leone Zimbabwe Mozambique
Roadmap to Scale-Back	Pending discussion with GiveWell

BACKGROUND

As a result of a series of conversations between GiveWell and Nutrition International between late 2020 and early 2021, Nutrition International conducted a rapid scoping exercise with our country teams, partners and key informants in Ministries of Health to determine country candidates and a scope for support with additional resources from GiveWell. Primary consideration was given to countries demonstrating high needs in terms of VAD burden, under-five mortality, and whose VAS programs have been most disrupted by COVID-19 (with marked gaps in recent coverage). We also considered whether a country had existing partner commitments.

Our scoping and country selection is guided by a determination to add value: while we want to see more money for nutrition, we are deeply committed to ensuring more nutrition for the money spent. This means ensuring that available resources are targeted to where they are needed most and that any additional funds do not displace existing available funds. We achieve this by working closely with partners and governments and ensuring that we coordinate our efforts.

In the following case studies, we present an introduction to the context of each country's current VAS program, highlight specific problems that have been voiced by key

informants in the country, and provide a summary of the proposed work. While these case studies present an initial list of potential countries, this list may be reprioritized as contexts and situations on the ground change.

CAMPAIGNS

1. NIGERIA

NIGERIA	
U5MR (per 1,000)	117.2
Two-dose coverage (2018)	80%
Eligible children (National, 6-59 months)	30,068,424
Annual Funding Estimate (USD)	$2,500,000
3-year Funding Estimate (USD)	$7,500,000

VAS is delivered primarily through campaigns in Nigeria as part of the country's Maternal Newborn Child Health Week (MNCHW) strategy. Despite a clear national strategy to deliver VAS as part of a package of services every May and November, the decision and budget to carry out the campaigns is made at the state-level. Over the years, as a long-time partner to the government in Nigeria, Nutrition International has observed a considerable difference within and between states in terms of their VAS delivery. Some states succeed in carrying out their MNCHW on time every six month and achieve over 80 percent coverage; others may be carrying out the campaigns yet are reporting coverage as low as 30 percent and 40 percent; and others repeatedly fail to carry out two campaigns in a calendar year resulting in children going more than 6 months between doses. Part of this variation can be explained by the lack of consistent, sustained funding required for planning, reporting, and monitoring. The campaigns are heavily reliant on partner funding, and with the exit of key partners over the last few years in Nigeria, like the World Bank's Saving One Million Lives project, several states have demonstrated significant drops in coverage that have only been exacerbated by COVID-19. In 2020, there was no MNCHW in semester 1 in any state of Nigeria due to the pandemic and only 11 out of the country's 36 states and the Federal Capital Territory implemented the MNCHW in semester 2 – meaning most states missed either one or both rounds, leaving millions of children unprotected. Most of the states quote the lack of funding (from government and partners) as the main reason[1] for not implementing a VAS round.

Nutrition International currently supports the government in eight out of 36 states in Nigeria to deliver VAS through their MNCHW campaigns. Through state-level technical assistance embedded in the government and additional financial assistance, Nutrition International has helped these states raise their two-dose coverage to between 70 percent and 95 percent. With this proven model of working alongside government, Nutrition International is keen to extend this support to four new states in Nigeria: Rivers, Delta, Zamfara, and Gombe. Nutrition International estimates that up to 80 percent of

1 Other reasons include lack of an enabling environment, absence of multiyear plans, and unsustainable financing.

funds will be used to support campaigns[2], while the remaining 20 percent will be used to support outreach efforts to target missed children in the most hard-to-reach areas of each state. Over a 3-year period, Nutrition International will ensure equitable VAS delivery in all targeted states and a consistent 2-dose coverage of over 80 percent.

To implement these activities, Nutrition International estimates an additional budget of USD $7,500,000 over three years.

2. BENIN

BENIN	
U5MR (per 1,000)	90.3
Two-dose coverage (2018)	0%
Eligible children (6-59 months)	1,686,780
Annual Funding Estimate (USD)	$1,000,000
3-year Funding Estimate (USD)	$3,000,000

Benin has adopted a mixed approach to VAS coverage, using routine health services to target the 6-11 months age group and campaigns to reach the 12-59 months age group. Benin uses an integrated approach to their campaigns, delivering a range of child survival interventions, including VAS, immunization, nutrition screening, deworming; as well as services for other age groups such as SRH services for adolescents. Two-dose coverage has declined dramatically over the last few years, from a high of 94 percent in 2016 when VAS was delivered using Supplemental Immunization Campaigns (SIA) campaigns to zero percent in 2018. Furthermore, COVID has had a dramatic impact on coverage: Benin did not have any campaigns in 2020 because of the pandemic.

Nutrition International would use additional funds to strengthen VAS distribution through twice yearly campaigns. Activities are likely to include microplanning, delivery, training of health workers, social mobilization activities at the community level, monitoring and research to understand the boosters and challenges to coverage.

Nutrition International estimates an additional budget of USD $3,000,000 for three years to implement these activities.

3. ANGOLA

ANGOLA	
U5MR (per 1,000)	74.7
Two-dose coverage (2018)	4%
Eligible children (6-59 months)	5,103,423
Annual Funding Estimate (USD)	$1,500,000
3-year Funding Estimate (USD)	$4,500,000

Angola had been co-delivering VAS with polio NIDs, but with the withdrawal of the need for polio campaigns over the last few years the country has been implementing VAS through routine health services. As expected, this has coincided with a huge drop in coverage from the high 90s to less than five percent over the last five years. In addition, whenever possible, efforts have been made to integrate VAS into immunization campaigns. For example, as part of the

2 Activities related to MNCHW support include microplanning, training, implementation, demand creation and supportive supervision of the MNCHW.

emergency response to a measles outbreak in Angola in 2020, Angola was able to integrate VAS with a campaign for polio and measles. Preliminary data shows high coverage reached in the different provinces.

Nutrition International would use additional funds to implement mass VAS at scale twice yearly through campaigns to ensure high coverage. To implement these activities, Nutrition International estimates an additional budget of USD $4,500,000 for three years.

ROUTINE HEALTH SERVICES

4. SIERRA LEONE

SIERRA LEONE	
U5MR (per 1,000)	109.2
Two-dose coverage (2018)	69%
Eligible children (6-59 months)	314,914
Annual Funding Estimate (USD)	$600,000
3-year Funding Estimate (USD)	$1,800,000

For most of the past decade, Sierra Leone had been delivering VAS through CHD campaigns with significant success[3]. In 2017, Sierra Leone began transitioning to delivering vitamin A through routine health services with support from UNICEF (and funding by Global Affairs Canada until 2021). Significant disparities exist between and within districts – especially in the north and east, with Kailahun, Koinadugu, Falaba, Pujehun particularly challenging. Hard-to-reach areas are consistently underserved by health facilities, necessitating outreach support, some of which must be delivered house-to-house. With further interruptions to routine service delivery from COVID-19, the national coverage rate currently sits at 69 percent. The Ministry of Health has recognized the continued need for campaigns to supplement and extend the coverage achieved by routine delivery in the near-term, but this requires proper planning and monitoring of the campaigns to ensure the quality of the service (e.g. avoidance of over-dosing children reached through the routine primary healthcare services, and efficient utilization of resources).

With additional funding, Nutrition International proposes to extend the reach of Sierra Leone's VAS program during this transition period. Activities will align to Sierra Leone's plan to transition to routine with a focus on ensuring that coverage does not drop. To make this happen, Nutrition International's activities will focus on ensuring that the government's new VAS strategy and plan have a strong monitoring system, tools and protocols for regular quarterly or semester mop-up intensification activities that may include mobile outreaches, where necessary, and for districts to roll back to campaign, where required. Building the capacity of and supporting community health workers to efficiently plan, deliver, track and report on community-based distribution of VAS will also be a priority.

3 The 2011 PEC reports 91 percent coverage. Source: "Measles immunization and vitamin a supplementation post event coverage survey report", Final Report January 2013, Ministry of Health and Sanitation, Sierra Leone.

To implement these activities, Nutrition International estimates an additional budget of USD $1,800,000 over three years.

5. ZIMBABWE

Zimbabwe has been delivering VAS through a mix of campaigns and routine health services. While Zimbabwe had been planning to hold campaigns in 2021, because of COVID-19 they are planning for routine supplementation only. Coverage rates have remained low, hovering between 35 percent and 45 percent over the past five years. The low VAS coverage may be partly explained due to poor data management. While Zimbabwe has successfully rolled out community-based VAS task sharing, the information system needs strengthening.

ZIMBABWE	
U5MR (per 1,000)	54.6
Two-dose coverage (2018)	40%
Eligible children (6-59 months)	1,924,227
Annual Funding Estimate (USD)	$1,500,000
3-year Funding Estimate (USD)	$4,500,000

Nutrition International would use additional funds to develop and support the implementation of an articulated country plan for VAS including the implementation of mass VAS at scale twice yearly through mop-up campaigns to ensure high coverage through the transition and provide expertise to assess coverage of campaigns PECS.

To implement these activities, Nutrition International estimates an additional budget of USD $4,500,000 for three years.

6. MOZAMBIQUE

Mozambique delivers VAS through routine health services, but coverage remains low, ranging from 55 percent to 65 percent. Mozambique integrates VAS with other routine health services through three complementary platforms: fixed site (providing VAS to children who live within three miles of the facility), outreach (four times per year, health workers travel in mobile brigades to deliver VAS to children who live more than three miles away), and household visits (community health workers deliver VAS to children who lives more than five miles away).

MOZAMBIQUE	
U5MR (per 1,000)	74
Two-dose coverage (2018)	64%
Eligible children (6-59 months)	4,543,047
Annual Funding Estimate (USD)	$2,500,000
3-year Funding Estimate (USD)	$7,500,000

Nutrition International would use additional funds to strengthen and scale-up this package of interventions with implementation of clear mop-up protocols along with support for adequate quality data informed microplanning and implementation of mobile brigades.

To implement these activities, Nutrition International estimates an additional budget of USD $7,500,000 for three years.

ANNEX: DATA TABLE

Country	U5MR (per 1,000)[4]	Two-dose coverage (2018)[5]	Eligible children (6-59 months)	Partner Presence	Additional Annual Funding Estimate (USD)	Additional 3-year Funding Estimate (USD)
Nigeria	117.2	80%	30,068,424	NI, HKI	$2,500,000	$7,500,000
Delta State	*n/a*	*0% (92.5% S1 only)*	*1,111,020*			
Rivers State	*n/a*	*0% (96.5% S1 only)*	*1,441,523*	*NI*		
Zamfara State	*n/a*	*n/a*	*883,701*			
Gombe State	*n/a*	*n/a*	*638,105*			
Benin	90.3	0%	1,686,780	UNICEF (ECHD)	$1,000,000	$3,000,000
Angola	74.7	4%	5,103,423		$1,500,000	$4,500,000
Sierra Leone	109.2	69%	314,914	UNICEF (ECHD), HKI	$600,000	$1,800,000
Zimbabwe	54.6	40%	1,924,227		$1,500,000	$4,500,000
Mozambique	74	64%	4,543,047	UNICEF (ECHD), HKI	$2,500,000	$7,500,000

4 2019 World Bank

5 2018 UNICEF