GAVAMONITORING OF VITAMIN A SUPPLEMENTATION

A GUIDE FOR NATIONAL PROGRAMME MANAGERS











This guidance document was developed with the aim of providing information to national level program managers to develop simplified monitoring plans for their vitamin A supplementation (VAS) programs, and to facilitate the improved use of data for programme decision making.

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PREFACE

On behalf of Global Alliance for Vitamin A (GAVA) partners, Monitoring of Vitamin A Supplementation: A Guide for National Programme Managers was developed by the Micronutrient Initiative (MI), UNICEF, Helen Keller International (HKI), and the U.S. Centers for Disease Control and Prevention (CDC). This guidance document was developed with the aim of providing information to national level program managers to develop simplified monitoring plans for their vitamin A supplementation (VAS) programs, and to facilitate the improved use of data for program decision making. A complementary guide designed for district (area-based) managers is also available.

ACKNOWLEDGEMENTS

The Guides for national and district level managers have been developed collaboratively over an extended period of time. In addition to the current working group members and writers, we gratefully acknowledge the many individuals who contributed to the technical content over the years: Jonathan Gorstein, Robin Houston, Ame Stormer, Jenny Cervinskas, Shawn Baker, Phil Harvey, Silvana Faillace, Zo Rambeloson, Emily Wainwright, Tracey Goodman, Lynnette Neufeld, and Katie Tripp.

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ACRONYMS

BCC Behaviour change communication

CDC U.S. Centers for Disease Control

and Prevention

CHD Child Health Day

GAVA Global Alliance for Vitamin A

HKI Helen Keller International

HMIS Health management

information system

IU International Units

LMIS Logistics management

information system

LQAS Lot Quality Assurance Sampling

MI Micronutrient Initiative

NID National Immunisation Day

PECS Post event coverage survey

SIA Supplemental immunisation

activity

SMS Short messages services

(text messaging)

VAS Vitamin A supplementation

UNICEF United Nations Children's Fund

WHO World Health Organization

GLOSSARY

GLOSSARY

Activity (in context of logic model and logframe)

Actions, events, and processes required for programme implementation and performance including the execution of inputs, for example, development of policies and guidelines. Activities are required to produce the logframe outputs.

Age-appropriate dose

The recommended dose for children 6-11 months of age is 100,000 IU of vitamin A, and for children 12-59 months of age it is 200,000 IU. Therefore, for example, the age-appropriate dose for a 10-month old child is 100,000 IU.

Child-centred reporting

Reporting based on records for individual children, as compared with reporting based on total numbers of children reached. Child-centred reporting enables reporting on the number of eligible children receiving one vitamin A supplement in the previous semester, through any delivery method.

Child health card

A card used to record key health-related information from birth. Usually used to record birth date and immunisations received. Can also include fields to record other clinical actions, such as vitamin A supplementation (VAS) and deworming. Facilitates child-centred reporting.

Coverage

The number of people reached in relation to the target number of people over a specific period of time. For example, the percent of eligible children in a defined area who received vitamin A in a semester.

Denominator

This is the bottom half of a fraction. In this guide, it is the total number or population for an indicator. For example, total number of children 6-59 months of age in the district.

Disaggregation (of data)

Analysis of data by different sub-groups, for example, analysis of data by smaller administrative units or by different age groups.

District

For the purpose of this guide, "district" refers to a defined sub-national administrative area.

Enabling policy environment

In a country, the programme policy is well defined and the related planning and budget are integrated into national processes, indicating national ownership.

Enabling programme environment

Clear guidelines for programme implementation exists in a country.

Supporting policies, budget and planning have national support and ownership.

Equality1

'Equality' in coverage implies treating all eligible children as equal in some respect, for example, their right to VAS regardless of age.

Equity^{1,2}

Equity is defined as fair or just outcomes for all sub-groups of a population. Deciding whether outcomes have been equitable in VAS programmes would involve analysis of data by different sub-populations, such as ascertaining whether VAS coverage varies by age, sex, subnational geographical area, ethnicity, religion, household composition, or citizenship status, for example.

Event-based delivery

A service that is of finite duration and periodically available, e.g. when VAS is made available through a Child Health Day, a Child Health Week or special immunisation events.

Input (in context of logic model and logframe)

Resources invested in the intervention. This includes personnel, funding, policy and strategy support.

Lot Quality Assurance Sampling (LQAS)

A sampling method that can be used locally, to identify priority areas or indicators that are not reaching established targets.

GLOSSARY

It involves taking a small random sample of a population (for example, children, caregivers or health personnel), and identifying where the issue of interest, for example, VAS or knowledge about VAS, meets the expected target level.

M-Health

A collective term which applies to the use of mobile technology in existing health delivery platforms to improve effectiveness.

Micro-plan

Refers to bottom-up planning, also called Area Planning. The micro-planning process is a multi-level, decentralized planning approach that allows for area-specific detailed implementation plans.

Numerator

This is the top half of a fraction. In this guide, it is the number achieving the criteria for an indicator or population. For example, number of children 12-59 months of age who received vitamin A through one delivery mechanism in a given semester.

Outcome (in context of logic model and logframe)

Specific benefits or changes among intervention participants during or after the intervention. For VAS the outcome is coverage.

Output (in context of logic model and logframe)

Direct effect or product of activities. For example, availability of sufficient supplies at a distribution site.

Post distribution exercise and/or post event coverage survey (PECS)

A post-event coverage survey (PECS) is used to verify administrative or tally sheet coverage data following event-based vitamin A delivery. It can also be used to determine factors that affected coverage, for example, knowledge about vitamin A and other services. PEC surveys should ideally be conducted within 4-6 weeks after the event. The sampling method allows for a population-based point estimate of coverage.

Routine health system contact

A service that is available on a continuous, daily, basis, either through a fixed service site health facility or through scheduled outreach from the health facility.

Semester

A 6 month period, usually considered to be January-June or July-December. When referring to VAS delivery per semester, the intended period of time between deliveries should be 4-6 months.

Supportive supervision

A supervisory approach that focuses on direct, personal contact on a regular basis to problem solve and motivate staff. A form of on-the-job training intended to strengthen the quality of service delivery.

Tally sheet

A tally sheet is used to record the vitamin A doses administered at an event-based delivery. Numbers (tallies) of doses delivered at different events are aggregated and sent to the next level (e.g. district) to estimate coverage.

Two-dose coverage (annual)

Children who receive their age-appropriate dose in each semester when delivered 4 to 6 months apart over a calendar year. Eligible children who receive two-dose coverage annually are considered to be fully protected.

Universal Coverage

The ultimate goal of reaching all children to ensure equity.

^{1.} Stewart, F. (2013) Approaches towards Inequality and Inequity: Concepts, measures and policies. Office of Research Discussion Paper No.2013 -01, UNICEF Office of Research, Florence

^{2.} http://www.mymande.org/?q=what_is_equity

SECTION 1



INTRODUCTION

TERMINOLOGY

The term **national** is used to refer to the policy-making administrative level. However, in some cases, this level of administrative independence may operate at a sub-national level (e.g. State level), in which case reference to the National Guide should be taken to refer to the guide for State level.

The term **district** as used in this Guide, applies to any sub-national administrative/ programme unit from which data is sent directly to the national level (or the equivalent administratively-independent level). For example, it could be a smaller unit like a commune or a larger unit such as a region or province.

The term **semester** is used to define a 6 month period of the calendar year during which each eligible child should receive one age-appropriate vitamin A supplement. For example, the first Semester is often described as the period from January 1 to June 30, and the second Semester from July 1 to December 31.

1.1 PURPOSE OF THIS GUIDE

The purpose of this Guide is to advise on the selection, measurement and reporting of indicators that reflect the implementation of vitamin A supplementation (VAS) at the national level³. The intent is to strengthen national VAS monitoring processes; improve support and recommendations to district managers; and improve the overall quality and use of data to optimise the equitable delivery of vitamin A to children 6-59 months of age through both routine health system contact and event-based delivery (see Text Box 1, in section 1.2)

^{3.} This Guide does not include reference to monitoring the provision of therapeutic doses of vitamin A. In addition, the Guide does not include extensive advice on programme adjustments that may be required to address identified gaps in programme implementation or information about the biological assessment of vitamin A status. These issues are beyond the scope of this Guide.

The Guide also introduces different review and assessment options to verify the data and identify the causes of any problems with implementation in order to improve VAS in subsequent semesters. Where a problem is identified, appropriate follow-up (corrective actions) should be determined at the district and/or national level, depending on the local context and the cause and magnitude of any problem.

OBJECTIVES OF THE GUIDE

- 1. To improve the quality of national VAS coverage estimates and reporting by semester and annually—by providing clear guidance on how to calculate and report coverage, taking into account different vitamin A delivery systems and different target age groups (6-11 months and 12-59 months of age).
- 2. To improve programme performance and coverage—through support for strengthened national level monitoring, data reporting and use, using a logical framework approach to define indicators for different programme components.

AUDIENCE

The audience for this Guide is the national, or equivalent administratively-independent, manager responsible for implementing and reporting preventive VAS for infants and children 6-59 months of age.

FORMAT

This Guide uses a logical framework format for monitoring VAS, which includes indicators to assess national level policy, the programme environment, supplies, human resources, social mobilisation and coverage. The logical framework indicators are introduced in Section 2 and described in detail in Section 4 and Appendices B and C. Case studies and text boxes are used to illustrate specific programme points in additional detail.

The logical framework indicators and the majority of case studies have been constructed to reflect the most typical situation for VAS programmes globally, however efforts have been made to recognise and address exceptions that are known to occur.

RATIONALE NEW AND SCOPE OF SEPARATE GUIDES FOR NATIONAL AND DISTRICT MANAGERS

GAVA published two guides for monitoring VAS programmes for programme managers at district (GAVA 2017) and national levels (this document).

National and district level VAS managers have different roles and responsibilities, therefore separate VAS monitoring guides have been developed in order to focus on the issues most relevant to each level. Respective responsibilities may vary according to the level of centralisation in different national contexts; however, there will always be some indicators, such as overall national coverage estimates, that require monitoring at the national level.

This National Guide focuses on monitoring overall programme performance in terms of policy, resource allocation, coordination, and reporting on national VAS coverage by semester and annually for both routine health system contact and event-based delivery. The District Guide also provides guidance on the monitoring and use of indicators for VAS programme processes and semester coverage within the defined local area for each delivery method, as well as on reporting this information for national use.

Both Guides provide information on areas of overlapping responsibilities; such as procurement, logistics, and the management and use of data.

1.2 BACKGROUND

WHO GUIDELINE FOR VITAMIN A SUPPLEMENTATION FOR INFANTS AND CHILDREN 6-59 MONTHS OF AGE

WHO recommends VAS for children 6-59 months of age as a low-cost intervention shown to reduce child morbidity and mortality in countries where vitamin A deficiency is a public health problem⁴. The recommended dose for 6-11 month old children is 100,000 IU, and for children 12-59 months of age it is 200,000 IU (Table 1).

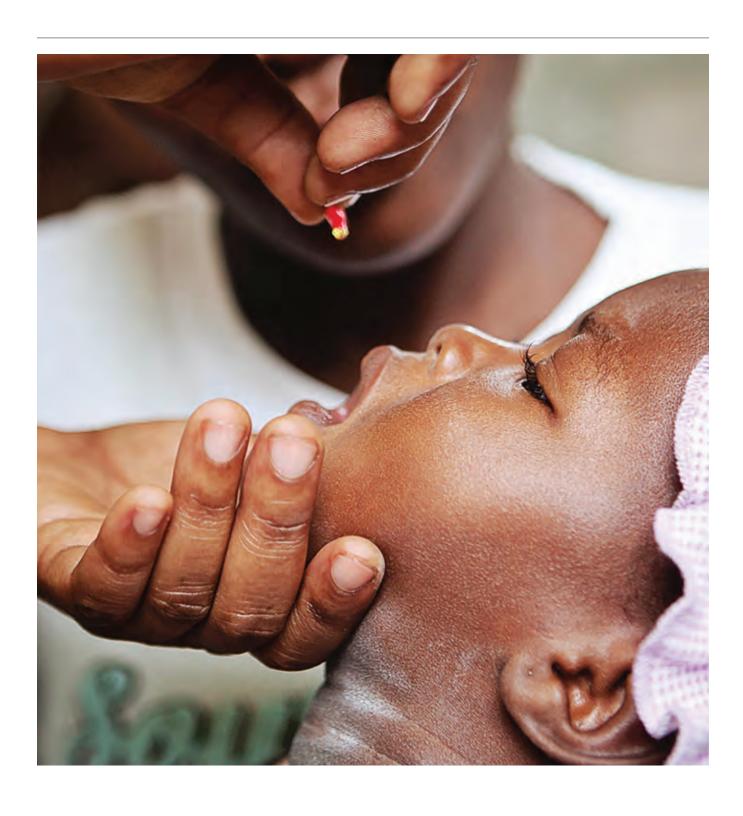
The protective effect of a single, large (age-appropriate) dose of oral vitamin A has been shown in clinical trials to last for up to, but not exceeding, 4-6 months⁵. As such, children 6-59 months of age are considered fully protected for a calendar year when they receive their age-appropriate dose every semester (4 to 6 months apart), for a total of two doses over 12 months.

^{4.} Guideline: Vitamin A supplementation in infants and children 6-59 months of age. 2011. Geneva, World Health Organization.

^{5.} Amanda C Palmer, Keith P West, Jr, Nita Dalmiya and Werner Schultink (2012). The use and interpretation of serum retinol distributions in evaluating the public health impact of vitamin A programmes. Public Health Nutrition, 15, pp 1201-1215.

TABLE 1 SUGGESTED VITAMIN A SUPPLEMENTATION SCHEME FOR INFANTS AND CHILDREN 6-59 MONTHS OF AGE				
DOSE	100,000 IU (30mg RE) vitamin A	200,000 IU (60mg RE) vitamin A		
FREQUENCY	Once	Every 4-6 months		
ROUTE OF ADMINISTRATION	Oral liquid, oil-based preparation of retinyl palmitate or retinyl acetatea. ^a			
SETTINGS	Populations where the prevalence of night blindness is 1% or higher in children 24-59 months of age or where the prevalence of vitamin A deficiency (serum retinol 0.70 Qmol/l or lower) is 20% or higher in infants and children 6-59 months of age.			

a Usually delivered using soft gelatin capsule, or else from a single dose dispenser or using a graduated spoon. The higher dose (200,000 IU) capsules are generally red and the lower dose (100,000 IU) capsules are generally blue.



INTRODUCTION

COVERAGE INDICATORS

The outcomes of a 2006 Global Alliance for Vitamin A (GAVA) Technical Advisory Group meeting on monitoring VAS programs concluded that VAS monitoring and reporting should assess whether supplements were delivered according to international recommendations to optimise impact⁶ (i.e. to ensure children receive their age-appropriate dose 4-6 months apart, twice a year). As a result, the current VAS coverage indicators are based on the following:

- i. Number of infants 6-11 months of age reached during the first semester of the calendar year (January to June)⁷;
- **ii.** Number of infants 6-11 months of age reached during the second semester (July to December);
- **iii.** Number of children 12-59 months of age reached during the first semester of the calendar year (January to June);
- **iv.** Number of children 12-59 months of age reached during the second semester (July to December).

Depending on the national policy for which delivery system(s) to use for each age group, a national two-dose (annual) coverage estimate can usually be calculated based on the above indicators. Calculation of all coverage indicators are explained in detail in section 4.1.1.

^{6.} Proceedings Monitoring Vitamin A Supplementation. Global Alliance for Vitamin A (GAVA) Technical Advisory Group Meeting. New York, 19-20 July 2006.

^{7.} The timing in terms of calendar months covered by each semester may vary depending on national budget and planning cycle, e.g. the first semester may be April to September and the second semester October to March. However, the period of time for each semester should not exceed six months.

TEXT BOX 1

VAS DELIVERY METHODS

There are two main methods for delivery of vitamin A supplements, which are referred to throughout this manual as "event" and "routine health system contact".

EVENT-BASED DELIVERY usually occurs twice a year as part of a child health day or similar event. These events are the main delivery platform used to provide essential preventive services to children under five years of age in countries where routine health services are less established, under-utilised, and generally do not reach children older than 12 months of age. Using this delivery platform, VAS is often co-delivered with other child survival/health interventions targeted to pre-school children, such as immunisation and deworming.

The term "event" may refer to a range of service delivery strategies, including door-to-door administration of vitamin A supplements lasting for a few days, or to the mobilisation of communities to visit fixed sites for a distinct period of time (often a day, a week or a month) in order to receive the defined preventive services.

ROUTINE HEALTH SYSTEM CONTACT

DELIVERY refers to the service being available on a continuous basis via the existing health system with children receiving the services when they are due for them. Delivery is either through a fixed-site facility or through scheduled mobile or outreach activities from the health facility to boost fixed site coverage. In most countries a fixed site facility provides services to the surrounding community. Communities far away from the fixed site facility receive a scheduled outreach visit by health staff to provide essential medical services, including immunisation and other preventative health services.

SECTION 2



LOGIC MODEL AND LOGICAL FRAMEWORK FOR VITAMIN A SUPPLEMENTATION

Logic models and logical frameworks (logframes) are often used as tools to structure and organise programme-related information. They can also be used to outline information needs and the processes required to collect this information; i.e. they can be designed to represent monitoring systems. This Guide presents a version of the WHO/CDC logic model for micronutrient interventions in public health⁸, adapted by GAVA to apply to VAS programmes.

The two different formats (logic model and logframe) represent the same programme process and can be related to each other; different logframe indicators can be linked to relevant logic model components.

This Guide focuses primarily on the use of the logframe for VAS, which provides operationally-applicable detail for monitoring.

TERMINOLOGY FOR PROGRAMME INDICATORS

The following terms are used to categorise VAS programme indicators used in the logic model and the logframe:

- Programme Inputs (or resources for the programme) For example: health workers, vitamin A capsules, money.
- Programme Activities (or what the VAS programme and health workers actually do)
 For example: development of policies and social mobilisation strategies.
- Programme Outputs (or tangible products or the results of activities) For example: sufficient supply to meet demand; well-trained, knowledgeable personnel delivering vitamin A supplements.
- Programme Outcome (or the result of the activities) For example: coverage of vitamin A supplementation among
 6-59 month old children.

Programme inputs, activities, outputs and outcome are all considered part of the programme process. The above terminology is used throughout this Guide to facilitate cross-reference with the logic model (illustrated in Appendix A). The logic model shows the relationship between these different indicator categories along with a description of the type of VAS programme components considered within each category.

z.ı LOGIC MODEL FO

LOGIC MODEL FOR VITAMIN A SUPPLEMENTATION (APPENDIX A)

The logic model provides a high level strategic overview of VAS programme components: inputs, activities, outputs and outcome; and the inter-relation between these (see Appendix A). It is important to have indicators to monitor the effective implementation of each type of component. These indicators help identify where obstacles to implementation may occur, and which related components will be affected by the obstacles.

Text Box 2 includes a description and example of how programme managers can use the programme cycle represented in a logic model to complement the detail provided in a logical framework, as described below.

TEXT BOX 2

FUNCTIONS OF THE LOGFRAME AND COMPLEMENTARY RELATIONSHIP BETWEEN A LOGFRAME AND A LOGIC MODEL

The main functions of a logframe are to:

- Structure and organise monitoring information
- Identify realistic and measurable indicators
- Facilitate stakeholder understanding and agreement on the programme, related monitoring strategies and responsibilities to achieve the monitoring targets
- Act as the reference point for comparing the actual functioning of the programme with the intended function throughout the programme cycle (as visualised in the logic model)
- Hold programme managers and staff accountable for the performance of the programme

The logic model should facilitate programme management through easier visualisation of how a constraint identified with one logframe indicator may negatively affect achievement of subsequent programme components.

For example, where implementation of a strategy for caregiver behaviour change is weak (logframe output indicator 1.12a), it can be seen from the logic model that subsequent expected targets for access to and demand for VAS (logframe output indicators 1.12b and c) may not be achieved, resulting in poor coverage (logframe outcome indicators 1.1 and 1.2 for coverage).

2.2

LOGICAL FRAMEWORK FOR VITAMIN A SUPPLEMENTATION (APPENDIX B)

The logical framework (logframe) for vitamin A supplementation is included as the framework for monitoring VAS programmes at the national level (see Appendix B). It provides a standardised structure that should require only minimal adaptation for use in each national context. The logframe should be used consistently throughout the programme cycle by those responsible for implementing and managing the monitoring system. Text Box 2 lists some of the main functions of a logframe.

The VAS logframe describes the intervention in terms of indicators for the activities, outputs and expected outcome (coverage); with a brief outline of the information required for each component. The logframe indicators and applications are described in more detail in Section 4 (refer to Text Box 3) and Appendix C.

SECTION 3



PROGRAMME MONITORING CONCEPTS AND THEIR APPLICATION TO VAS MONITORING

In general, the term "programme monitoring" refers to the on-going collection, analysis, reporting, interpretation and use of indicators of programme inputs, activities, outputs and outcomes, as a basis for decision-making. A programme should be continuously monitored to assess its function based on predefined objectives, targets, and performance indicators. Monitoring data are then used to decide whether corrective action is needed to improve programme performance. This can be termed "monitoring for programme management".

The monitoring process should be designed to provide programme managers with regular feedback on agreed-upon indicators. This enables the effective assessment of programme activities to determine whether the programme is:

- **i.** Being implemented as planned (output indicators).
- **ii.** Progressing to achieve the programmatic goal, i.e. Universal coverage—reaching all infants and children 6-59 months of age (outcome indicators).

An indicator should be written so that it is clear what is to be monitored. This will help determine how it is best monitored, including the kind of information that must be collected. Indicator targets establish the standard that is aimed for in a programme.

All monitoring information planned for and collected should link directly to decisions and actions that will improve the function and quality of the programme.

A good quality indicator should be:

- Based on data that are readily available or easy and affordable to collect.
- Easy to understand.
- Relevant to the information needs of the programme manager, i.e. linked to corrective action (that is specific action that can be taken to improve performance).

Indicators should be continuously reviewed and adapted as required during the annual or biannual programme planning period. If indicator targets are not being achieved, other information and monitoring data should be used to help identify the reason and to facilitate timely corrective action to improve future implementation and VAS coverage. The national manager responsible for VAS is expected to conduct regular reviews of programme indicators, communicate and collaborate with district teams, and take follow-up actions (for routine health system contacts and event-based delivery) as required. Effective programme practices should also be identified, supported and shared.

The timing of data collection and review will vary depending on the availability of data, the purpose of monitoring a specific indicator, and the knowledge of the programme. The logframe matrix and additional notes (Appendices B and C) include recommendations for the timing of reviews and the use

of information collected for each indicator. Monitoring indicators as described in Appendices B and C allows national VAS managers to work with district mangers to:

i. Identify gaps in VAS coverage and/or problems with programme implementation (e.g. inequality in coverage by age, weaknesses in programme management, supply, human resource availability, capacity and capability and/or service demand) in a timely manner.

- **ii.** Generate a comprehensive programme overview by combining data from different indicators that can help assess programme status, detect the most likely causes of problems and determine whether further investigation is required.
- **iii.** Identify possible solutions and support district teams in following-up promptly with corrective action to improve future implementation and coverage.
- **iv.** Track semester level indicator data over time to determine whether VAS programme adjustments resulted in improved programme implementation and progress toward achieving expected coverage, in accordance with national guidelines.
- **v.** Determine whether additional verification investigations may be required in some areas and, if so, identify the appropriate type and design.

Most programme performance and management indicators are indicated for review at the end of each semester but this may vary; for example:

- End of semester review is recommended to improve aspects of the programme, such as social mobilisation for subsequent semesters.
- In some instances, annual review may be sufficient (e.g., if targets have been consistently achieved in previous semesters).
- On-going situation assessment and review are recommended to troubleshoot known problems which can potentially be addressed as they arise, (e.g., to prevent stock-outs of vitamin A supplements at VAS events) or when programme changes are being implemented.

KEY POINTS

When designing a monitoring system, consider:

- The purpose and objectives of the monitoring system
- Who will use the monitoring data, and how the information can be tailored to meet their needs
- Timing of data collection, to coordinate with the programme planning and review cycle
- Resource availability*:
- Human and financial resource requirements for monitoring should be considered as a standard component of programme costs.
- Non-human resource needs may include training time and materials, transport, field work tools, and the data management system infrastructure (e.g. computers, software, storage capacity, and, potentially, mobile technology equipment)
- How the information and results will be used to make programme adjustments where needed.
- * Depending on the national context, district-level resource allocation may be determined either at national and/or at district level. For either situation, it is important for district and national managers to communicate and be aware of any constraints that may arise from unmet needs

SECTION 4



MONITORING VITAMIN A SUPPLEMENTATION—COLLECTING, REPORTING AND USING INFORMATION TO IMPROVE COVERAGE

This section is based on the VAS logframe (Appendix B). More detailed information about the definition and calculation of all the indicators is provided in Appendix C, which is arranged in tabular form and includes information under the headings described in Text box 3.

The national level VAS management team will design the monitoring system for the national level. In some cases, for example where administrative procedures are more centralised, aspects of the district level monitoring system for VAS may also be incorporated into the national level system. In all cases, VAS management teams (national and district) need to communicate to understand: where respective responsibilities lie, the rationale behind the indicators, and when to make adjustments (e.g., if selected indicators are not found to be relevant and/or where alternative indicators may be more helpful).

The logframe structure provided in this Guide should be tailored to each national situation. Key points for supporting the effective use of the logframe indicators in this guide include:

• Review all indicators periodically to see whether they are (continue to be) relevant for the national VAS programme then delete, adapt, or add more effective indicators as needed. For example, if all decisions on budget and resource allocation are made at the district level, some of the related activity indicators may not be required at the national level. Similarly, newer and more effective indicators may be identified during the implementation phase and should be included in the logframe. It is important that revisions of the logframe and its indicators are archived for reference as needed.

• Ensure that information considered valuable to monitoring programme performance is collected in a manner consistent with the indicator "information Source and Frequency of Collection". Amend national-level collection forms and checklists to include critical measures so that they can be compiled and reviewed with planned frequency. When considering the information needs for monitoring the programme, it is important to consider whether information sources: (1) exist or will need to be reformulated/created, (2) provide specific, reliable information, and (3) are accessible at a reasonable cost.

Where amendments to checklists are not currently possible, include the proposed indicators in any programme verification or other assessment exercise.

- Revise the frequency of indicator review as required. The frequency of indicator review should be changed as required. For example where good practice is well-established and coverage is consistently high, it may be possible to reduce the frequency of review for some indicators. However, where problems are identified, more frequent review may be required to monitor corrective action(s) taken and to prevent the problem from reoccurring. This may result in different review cycles for different districts.
- Monitor indicators by different sub-groups
 Disaggregation, or analysis of data by
 different sub-groups (e.g. target age group or
 location), is important for determining
 programme strengths (e.g. strategies that are
 working to reach children) and weaknesses
 (e.g. identifying the location and likely cause of
 coverage shortfalls). National managers
 can use this information to support district
 teams to learn from the programme
 strengths within their own district and in
 other districts. This information can be
 used to modify implementation, improve
 delivery and increase VAS coverage
 in subsequent semesters.

Better understanding of the population that remains unreached by a programme, in turn, allows managers to design precise corrective actions specifically aimed at improving delivery (or improving the accuracy of delivery records) to the unreached group.

- Identify districts with shortfalls in coverage and/or problems with implementation using the monitoring data and, where relevant, any additional verification data for each indicator. National and district managers should coordinate to investigate problems, identify programme adjustments and implement corrective actions to improve coverage in subsequent semesters. This step requires periodic data reviews and documentation of review findings along with timely feedback and discussion with district teams and possibly other partners.
- Confirm that the listed assumptions remain **true** and adjust the indicators as needed. For example, an assumption may be that there is no overlap in coverage numerator or denominator counts between different districts. It is important to understand the assumptions underlying the definition and calculation of an indicator. If these assumptions are not met, data collection and accuracy may be compromised. Risks, as well as assumptions, should be acknowledged as they can also impact the ability to measure an indicator. National-level indicators should be adjusted or deleted when assumptions are found to be invalid, or if risks negatively impact monitoring.

TEXT BOX 3

DESCRIPTION OF THE INDICATOR SUB-HEADINGS IN THE LOGFRAME APPENDICES B AND C

PROGRAMME COMPONENT TYPE

Activities, outputs and outcome

INDICATOR TITLE AND CATEGORY (OUTCOME, OUTPUT OR ACTIVITY)

Indicators help measure outcomes, outputs and activities more precisely. Titles describe the focus of an indicator and numbers refer to their location in the logframe and their relation to other indicators.

- Outcome indicators demonstrate what difference the intervention processes and actions made among the population.
- Output indicators measure changes in skills, abilities or capacities that result from the completion of activities within an intervention.
- Activity indicators relate to actions taken or work performed through which resources are mobilised to produce specific outputs.

PERFORMANCE AND COMPONENT INDICATORS

Performance indicators are a qualitative or quantitative means of measuring an outcome, output or activity with the intention of gauging the performance of a programme.

Component indicators contribute to the overall performance indicator. For example, a performance indicator assessing stock out may have component indicators for each type of capsule (100,000 IU and 200,000 IU).

OPERATIONAL DEFINITION OF THE INDICATOR AND SUB-GROUP ANALYSES

A description of how the indicator should be measured (e.g. count, percentage, occurrence (Yes/No)) including calculations and recommendations for disaggregate, sub-group, analyses as relevant.

TARGET

Target specifies a particular value that relates to the desired goal an indicator should reach.

INDICATOR INFORMATION SOURCE AND FREQUENCY OF COLLECTION

- Monitoring information sources or data needed to calculate the indicator, which may vary with national context and should be defined to fit the local situation.
- Frequency of collection refers to whether data or reviews are required annually, each semester or only as problems are identified.

ASSUMPTIONS

Assumptions are the variables or factors that need to be in place for the indicator to be measured and the target achieved. Some of these may be fully or partially beyond the control of the programme manager.

RESPONSIBILITIES AND USE OF DATA

Roles and responsibilities of the program manager and different partners in data collection and use are detailed for the achievement of a given output and outcome.

OPERATIONAL NOTES

Suggested approaches for managing potential obstacles to high coverage and reporting in order to improve programme function.



4.1

OUTCOME (COVERAGE) INDICATORS— INCLUDING FACTORS THAT COMMONLY AFFECT THE COLLECTION, INTERPRETATION AND USE OF DATA IN COMPUTING VAS COVERAGE ESTIMATES

This section provides details on monitoring national-level vitamin A supplement coverage (i.e., the percentage of children that received a supplement in a given time period). The section starts with rationale and guidance on how to manage factors that can affect the reliability and accuracy of VAS coverage monitoring. The sub-section that follows provides specific information and examples on how to calculate VAS coverage estimates.

OUTCOME 1.1. SEMESTER-LEVEL COVERAGE MONITORING BY SEMESTER

The main outcome indicator for VAS programmes is the percentage of children 6-59 months of age who received an age-appropriate vitamin A supplement in each semester, either through a routine health system contact or an event-based delivery mechanism. Semester-specific coverage indicators are shown in Table 2 with more detailed information provided in the logframe and expanded logframe (Appendices B and C) as well as in Section 4.1.1.

SEMESTER LEVEL VAS COVERAGE DATA INDICATORS			
SEMESTER 2 (USUALLY JULY-DEC)	Percentage of children 6-11 months of age who received a 100,000 IU dose during this time period.	Percentage of children 12-59 months of age who received a 200,000 IU dose during this time period.	

Obtaining reliable, representative semester-level data is a programme priority because these data provide operationally-linked information that can be used to identify issues and form the basis of corrective action to improve coverage in the following semesters.

Semester-level coverage should be analysed by factors such as: age group, delivery and recording mechanism, the denominator used to calculate coverage, and timeliness of reporting. These analyses provide information about the quality of VAS coverage data and program implementation and they indicate where any follow up support/action may be required. These factors are discussed in more detail below.

MONITORING BY AGE GROUP

Monitoring by each age group (6-11 months and 12-59 months of age) is necessary to ensure all infants and children are receiving their age-appropriate dose of vitamin A and helps managers identify when coverage is noticeably different between age groups. Coverage by age group is often linked to the VAS delivery mechanism so these factors are considered together below.

MONITORING BY DELIVERY MECHANISM

Text Box 1 in Section 1 describes the two main VAS delivery mechanisms: event-based and routine health system contact-based delivery. In some cases, these mechanisms are not well coordinated and often have separate recording and reporting systems (see Text Box 4 for a more detailed description of VAS recording and reporting for each delivery method⁹).

As such, current practice is to capture the number of children within each age group (6-11 months and 12-59 months of age) reached with vitamin A supplements by each delivery mechanism (event-based; routine health system contacts), for every semester.

The relative importance of routine health system contact versus event-based delivery of VAS will vary according to national and district strategies; however, many countries include some combination of both delivery methods and coverage through each must be monitored separately. Examples of different delivery scenarios are:

i. Event-based coverage (primary delivery mechanism) with on-going delivery through routine health system contacts. The primary delivery mechanism aimed at achieving high VAS coverage may be via biannual events for all children 6-59 months of age, however delivery

^{9.} Examples of recording and reporting forms for each type of delivery method are provided in Appendices E and F (routine health system contacts and event-based respectively).

TEXT BOX 4

VAS RECORDING METHODS

Routine health system contact delivery: VAS delivered through routine health system contacts is often recorded in health facility registers, facility-based daily, weekly and/or monthly tally sheets as well as on home-based health records. Aggregated service delivery information is then reported by facilities to districts and upward to the national level, often through health management information systems (HMIS). Appendix E provides an sample reporting form used to send compiled data from district to national level^a.

Districts usually send VAS data to the national programme office on a monthly basis after review by the district VAS manager. Upon receipt, the national VAS manager should review each district report for completeness, and for consistency with prior reporting periods. This will allow any problems to be identified and addressed in a timely manner, in coordination with district teams.

At the national level, information from all district reports should be combined at the end of the semester to calculate the total number of children 6-11 months of age and 12-59 months of age who received an age-appropriate VAS through routine health contact delivery in the last semester (where both age groups are targeted through this delivery method)

EVENT-BASED DELIVERY: Event-based tally sheets record the total number of vitamin A doses administered to children 6-11 months of age, and 12-59 months of age during the event. Data from these tally sheets are summarised in aggregate form at the district

level as soon as possible after the event to estimate the total number of children in each age group reached with vitamin A supplements in the district (example provided in Appendix F). District-level sheets with total numbers are sent to the national VAS manager within the time period specified in the national guidelines, to review coverage estimates for each age group for the semester.

FOR BOTH DELIVERY METHODS: Where reports from a district have not been received as expected or are incomplete, timely follow up action should be taken by the national VAS manager.

For all distribution methods, paper-based systems are still the norm, but SMS and other technologies are increasingly being piloted and used to improve data transfer.

Recording vitamin A supplementation (date of delivery and dose) on child health cards is the recommended method to obtain accurate assessments of semester-level and two-dose annual coverage, however this is not currently being effectively implemented at the national level anywhere. Additional guidance will be made available as such systems are applied in different countries.

a. Example forms for reporting from lower administrative levels to district are provided in the District Guide

through routine health system contacts always continues with the aim of increasing overall coverage. This is often particularly effective for infants 6-11 months of age who visit health facilities for the recommended infant immunisation series.

ii. Routine health system contact (primary delivery mechanism) with periodic event-based delivery. The primary delivery mechanism may be through routine health system contacts however opportunities may arise to integrate VAS with a periodic event, such as a supplementary immunisation activity (SIA) for measles, or other health event targeted to the VAS target age groups in any given semester.

iii. Primary delivery mechanism varies by age group. The primary delivery mechanism may differ by age group: infants 6-11 months of age may receive VAS mainly through routine health system contacts (often with the measles vaccination at around 9 months of age or at a 6 month contact point specifically for VAS); while children 12-59 months of age may receive VAS mainly through biannual events designed to access this specific age group with interventions such as VAS and deworming.

The use of different delivery and recording methods presents challenges for monitoring coverage. In settings where VAS is implemented through routine health system contacts and event-based delivery, adding numerator (supplements delivered) data from each source to estimate coverage could result in double counting of some infants and children who may have received supplements through both delivery methods. Therefore, the best method to estimate coverage is to report semester-level estimates for each delivery mechanism and for each age group separately. Selection of denominators to calculate coverage will be discussed in more detail below and in section 4.1.1.

TIMELINESS AND COMPLETENESS OF DISTRICT REPORTS

To manage the programme on a semester by semester basis, prompt receipt of complete data is necessary for reliable coverage estimation, timely programme review, in-depth investigation into low coverage areas, and implementation of corrective actions. Minimum standards for timeliness of reporting to each administrative level should be well defined in the national VAS Programme Guidelines. Where VAS is delivered via routine health system contacts, the reporting timelines follow the health system Standard Operating Procedures for receipt of monthly reports, but where VAS is delivered via an event, a maximum of 2 months post-event is usually recommended as the reporting standard.

In situations where data for a particular period, or district are late, the late report should be included in an addendum to the semester report. Data submitted late should not be rejected or ignored, but should be used to update the existing data at all levels.

Incomplete reporting, where some districts may not send a report or else send a report that does not cover all sub-district areas, makes it difficult to calculate representative national-level coverage. All efforts should be made to receive timely reports from 100% of districts; however it is often the case that some will still be incomplete.

National-level VAS coverage should only be estimated when reports are received from enough districts to account for 80% of the total population of children 6-59 months of age based on the agreed upon national denominator. The national VAS manager should follow up every time a district submits late and/or incomplete reports. Identifying and addressing reporting barriers should be a priority to ensure that national estimates can be generated and to have an information base from which to further investigate any issues with coverage.

SELECTING TARGET POPULATION DENOMINATORS AND CHALLENGES WITH DENOMINATORS

The denominators for national semester-level planning and coverage reporting should be determined at the national level and national VAS managers should communicate this information clearly with district managers to avoid misunderstandings and confusion.

In many settings, accurate estimates of the number of infants 6-11 months of age and children 12-59 months of age are extremely difficult to obtain and the source of data used to determine the denominator at the district and national levels may be different. An example of the potential impact of using different denominators to calculate coverage at national level is described in more detail in Text Box 5.

In addition, different delivery mechanisms usually use different information sources to estimate the number of children they intend to reach (denominator). To calculate coverage, the denominator reflects 100% of the population targeted for that delivery mechanism (e.g., 100% of children 12-59 months for event-based VAS delivery). Where VAS is integrated into the routine health service contacts, the denominator is set by the health system and the VAS manager is usually not involved in the decision. For event-based distribution, when VAS is integrated into

events for all children under the age of five years, the denominator is usually determined by the MOH, through a process which may (e.g. VAS-specific Child Health Day), or may not (e.g. Measles SIA) include the VAS manager in the decision. Table 3 provides an overview of which denominator sources are generally used for the different delivery mechanisms in most countries.

Any changes to denominators for national-level reporting should be made with the VAS management and coordination team and be clearly documented. For example, if there is evidence that the HMIS data allow for better planning of supplies and logistics than relatively old census data, a meeting of the VAS management and coordination team should be called. The meeting should discuss and agree on whether a change to the denominator is justified and, if so, achieve agreement on the new data source to use.

Unfortunately, determining which target population source is most valid is often extremely difficult to ascertain. Conducting a time-series review of target population data with an eye for inconsistent patterns can be a useful exercise¹⁰.

TEXT BOX 5

AN EXAMPLE OF THE EFFECT OF USING DIFFERENT DENOMINATORS AT THE DISTRICT AND NATIONAL LEVEL

EXAMPLE SCENARIO

A district VAS manager reports coverage to the national VAS manager based on a locally determined denominator that differs from the nationally sourced denominator. The district-level estimate of the target population is greater than the national-level estimate for that district, and is also considered to be more accurate. The resulting percentage of VAS coverage for that district would therefore be over-estimated at the national level.

POSSIBLE OUTCOMES

- a. National VAS managers would fail to identify an actual coverage shortfall and to initiate the required follow-up to identify and address the underlying problem(s).
- **b.** The national management team would underestimate VAS-related supply requirements for the next semester, potentially leading to a stock-out of supplements.

^{10.} The World Health Organization has recently developed a guide to assist immunisation programme managers assess estimates of target population size. The guide can be obtained online at http://www.who.int/immunization/monitoring_surveillance/data/Denominator_guide.pdf?ua=1.

TABLE 3				
RECOMMENDED DENOMINATOR SOURCES FOR NATIONAL REPORTING, BY DISTRIBUTION MECHANISM				
DISTRIBUTION MECHANISM FOR VITAMIN A SUPPLEMENTS	RECOMMENDED DENOMINATOR SOURCES	COMMENTS		
Routine Health System Contacts	Ministry of Health, health systems denominators (HMIS). Based on data from the National Statistics Office	The National Statistics Office produces annual population estimates based on the most recent census plus estimates for population growth rates.		
		The published reference document should be referred to in, or included with, the coverage report.		
EVENT-BASED DELIVERY				
Child Health Events Measles Supplemental Immunisation Activity (SIA)	Ministry of Health/HMIS estimates	Alternatives sometimes used: CHD-specific planning documents and EPI programme denominator estimates		
Polio National Immunisation Days	Polio/EPI programme denominator	Based on: the number of children immunised in the previous NID, which may include children outside of the administrative area and/or intended age group, plus factors for wastage and risk aversion associated with outbreaks.		
		Generally the largest of all denominators.		



The decision process for selecting a denominator for different delivery mechanisms must be documented and presented along with all coverage estimate calculations in order to avoid misinterpretation. Ideally a copy of the report/denominator source document should be also be appended to coverage reports. In addition, any potential limitations of using the agreed denominator should be clearly stated and considered when reporting and interpreting coverage data.

It is also important for both district and national VAS managers to appreciate that there may be sudden fluctuations in population numbers. These fluctuations are sometimes temporary and may be caused by migration into, out of, or within the country. In this situation the national VAS manager may need to re-direct and/or adjust estimates for district-level and national-level supplies and other resources. This should be agreed upon by the VAS management and coordination team. In the case of significant migration into the country, the VAS management and coordination team may decide that coverage for this group should be reported separately. In all cases, national coverage estimates should be accompanied with documentation of the event.

KEY POINTS

- In many settings it is difficult to accurately estimate the total number of infants
 6-11 months of age and children 12-59 months of age. Different data sources exist and different sources are often used for different VAS delivery methods. With this uncertainty, national VAS managers should:
- Determine the denominators to be used at the national level for VAS planning and coverage reporting (for each delivery method separately) and communicate this to district managers.
- Always report the denominator source used for national VAS planning and for coverage calculations for each delivery method.
- Clearly state any potential limitations of using the national denominator when reporting and interpreting national VAS coverage data.
- Report coverage for each delivery method separately.

4.1.1 DETERMINING VAS COVERAGE ESTIMATES

ESTIMATING NATIONAL SEMESTER-LEVEL VAS COVERAGE

District-level data should be received from each district VAS manager each semester (either in the form of monthly reports or as an end-of-semester report). District reports should include data compiled from all reporting units/administrative areas within their district, for each delivery mechanism and age group separately. In other words, the national manager should have received the following information from each district, after the end of each semester within the time period defined by the national VAS guidelines:

- **1.** For routine health system contact delivery (usually reported on a monthly basis and summarised for the semester at the national level):
- **a.** The number of children 6-11 months of age reached with vitamin A supplements (numerator data) through routine health system contacts in the defined semester.
- **b.** The target population of children 6-11 months of age (denominator data) determined for routine health system contacts VAS delivery.
- **c.** The number of children 12-59 months of age reached with vitamin A supplements (numerator data) through routine health system contacts in the defined semester.

- **d.** The target population of children 12-59 months of age (denominator data) determined for routine health system contacts VAS delivery.
- 2. For event-based delivery:
- **a.** The number of children 6-11 months of age reached with vitamin A supplements (numerator data) through events in the defined semester.
- **b.** The target population of children 6-11 months of age (denominator data) determined for event-based VAS delivery.
- **c.** The number of children 12-59 months of age reached with vitamin A supplements (numerator data) through events in the defined semester.
- **d.** The target population of children 12-59 months of age (denominator data) determined for event-based VAS delivery.

The national VAS programme staff should review these data in a timely manner in order to quickly identify and respond to discrepancies and programme challenges within and across districts and to follow-up with the district team(s) in a timely manner. Part of the review should include a comparison with the same data from previous semesters.

To produce overall national-level semesterspecific coverage estimates through routine health system contacts for children 6-11 months of age, follow these steps:

- 1. Ensure complete data are reported from all districts for the number of children 6-11 months of age reached with vitamin A supplements through routine health system contacts (numerators). Based on the agreed upon national denominator, check whether district reports reflect at least 80% of the number of children 6-11 months of age planned to be reached through this delivery method in each district. If 'yes', proceed with the coverage calculation (step #2), but still follow up with any districts that are not sending complete reports. If 'no', make additional efforts to obtain more complete district reports before proceeding to step #2.
- **2.** Sum the numerator data for routine health system contact delivery of vitamin A supplements for children 6-11 months of age for the given semester across all districts.
- **3.** Divide the sum of the numerators across districts by the agreed-upon national-level denominator for vitamin A delivery to children 6-11 months of age through routine health system contacts (see Table 3, and additional information in the section on "Selecting target population denominators and challenges with denominators" on page 23).

4. Multiply this value by 100. The resulting percentage is the national-level semester-specific vitamin A supplementation coverage achieved through routine health system contacts for children 6-11 months of age.

Semester-specific routine health system VAS coverage, for children 6-11 months of age

∑ (across all districts): number of children 6-11 months of age reached with vitamin A supplements through routine health system contacts during the semester

- x100

Agreed-upon national-level denominator for children 6-11 months of age for delivery of vitamin A through routine health system services

Repeat the same steps for **children 12-59** months of age to obtain coverage data through routine health system contacts for this age group.

To produce national-level semester-specific coverage through routine health system contacts for children 6-59 months of age:

- **1.** Sum the nationally calculated numerator, as described above, for children 6-11 months of age with that for children 12-59 months of age (for delivery through routine health system contacts for both age groups).
- **2.** Sum the agreed-upon national denominator, as described above, for children 6-11 months of age with that for children 12-59 months of age (for delivery through routine health system contacts for both age groups).
- **3.** Divide the overall numerator for children 6-59 months of age by the overall denominator for children 6-59 months of age and multiply this value by 100.

The resulting percentage is the national-level, semester-specific, vitamin A supplementation coverage achieved for children 6-59 months of age through routine health system contacts.

To produce national-level semester-specific VAS coverage estimates for **event-based delivery for children 6-11 months of age**, follow these steps:

1. Ensure complete data are reported from all districts for the number of children 6-11 months of age reached with vitamin A supplements through event-based delivery (numerators). Check whether district reports reflect at least 80% of the number of children 6-11 months of age planned to be reached through event-based

- delivery. If 'yes', proceed with the coverage calculation (step #2) but still follow up with any districts that are not sending complete reports). If 'no', make additional efforts to obtain more complete district reports before proceeding to step #2 for this age group.
- 2. Sum the numerator data for event-based delivery of vitamin A supplements for children 6-11 months of age for the given semester across all districts.
- **3.** Divide the sum of the numerators across districts by the agreed-upon national-level denominator for vitamin A delivery to children 6-11 months of age through the specific event-based delivery (see Table 3, and additional information in the section on "Selecting target population denominators and challenges with denominators" on page 23).
- **4.** Multiply this value by 100. The resulting percentage is the national level semester-specific vitamin A supplementation coverage achieved through event-based delivery for children 6-11 months of age.

Semester-specific event-based VAS coverage, for children 6-11 months of age

∑ (across all districts): number of children 6-11 months of age reached with vitamin A supplements through event-based delivery during the semester

x100

Agreed-upon national-level denominator for children 6-11 months of age for delivery of vitamin A through eventbased delivery

Repeat the same steps for children 12-59 months of age to obtain coverage data through event-based delivery for this age group.

To produce national-level semester-specific coverage through **event-based delivery for children 6-59 months of age**:

- **1.** Sum the nationally calculated numerator, as described above, for children 6-11 months of age with that for children 12-59 months of age (for delivery through event-based delivery for both age groups).
- **2.** Sum the agreed-upon national denominator, as described above, for children 6-11 months of age with that for children 12-59 months of age (for delivery through event-based delivery for both age groups).
- **3.** Divide the overall numerator for children 6-59 months of age by the overall denominator for children 6-59 months of age and multiply this value by 100.

KEY POINTS

- All efforts should be made to achieve 100% complete reporting of VAS data from districts.
 District reports used to calculate VAS must reflect at least 80% of the target number of children to calculate coverage estimates.
- Calculate national level VAS coverage estimates for each age group by each delivery mechanism.
- Review the national-level semester-specific VAS coverage estimates, including comparison with previous semesters, and follow up with district team(s) as needed
- **4.** The resulting percentage is the national level, semester-specific vitamin A supplementation coverage achieved for children 6-59 months of age through event-based delivery.

Examples of national-level semester-specific coverage calculations are presented in Appendix D. Also in Appendix D is an illustration of how data may be used under different VAS delivery scenarios for infants 6-11 months of age and children 12-59 months of age.

Text Box 6 describes examples of various VAS delivery scenarios and the implications for which VAS coverage estimates are calculated. Examples of the type of forms sent to the national level with summary district VAS coverage data are included in Appendix E (for routine health system contact delivery) and Appendix Fi and Fii (for event-based delivery).

TEXT BOX 6

EXAMPLES OF COVERAGE INDICATORS TO CALCULATE WITH DIFFERENT VAS DELIVERY SCENARIOS, WHICH ARE FURTHER DESCRIBED IN APPENDIX D

SCENARIO 1: Both age groups are targeted to receive vitamin A through both routine health system contacts and event-based delivery in the same semester. In this scenario, the national manager will calculate six coverage estimates per semester for the country:

- i) Coverage of 6-11 month olds through routine health system contacts
- **ii)** Coverage of 12-59 month olds through routine health system contacts
- iii) Coverage of 6-59 month olds through routine health system contacts
- iv) Coverage of 6-11 month olds through the event-based delivery
- v) Coverage of 12-59 month olds through the event-based delivery
- vi) Coverage of 6-59 month olds through the event-based delivery

SCENARIO 2: Children 6-11 months of age are targeted to receive vitamin A through both routine health system contacts and event-based delivery, while children 12-59 months of age are targeted to receive vitamin A only through event-based delivery during the semester. In this scenario, the national manager will calculate four coverage estimates per semester for the country:

- i) Coverage of 6-11 month olds through routine health system contacts
- ii) Coverage of 6-11 month olds through the event-based delivery

- **iii)** Coverage of 12-59 month olds through the event-based delivery
- iv) Coverage of 6-59 month olds through the event-based delivery

SCENARIO 3: Children 6-11 months of age are targeted to receive vitamin A only through routine health system contacts, and children 12-59 months of age are targeted to receive vitamin A only through event-based delivery during the semester. In this scenario, the national manager will calculate two coverage estimates per semester for the country:

i) Coverage of 6-11 month olds through routine health system contacts

ii) Coverage of 12-59 month olds through the event-based delivery

Note: in this scenario, while calculating a coverage estimate for the full age group of 6-59 month olds by combining the two numerators is possible, it will be unreliable because the denominators are often very different by delivery mechanism.

In some situations, different vitamin A delivery scenarios may be implemented in different districts within the same country. In this case, the appropriate national coverage estimates for each age group and delivery method need to be developed in consultation with the national VAS management and coordination committee. A forthcoming UNICEF methods paper on VAS coverage will provide

OUTCOME 1.2 TWO DOSE COVERAGE: ESTIMATING TWO-DOSE ANNUAL VAS COVERAGE

The overall VAS programme objective is to prevent the public health consequences of vitamin A deficiency. This is achieved by ensuring that each child receives an age-appropriate dose of vitamin A every 4 to 6 months between 6 and of 59 months of age.

Two-dose VAS coverage, based on the semester-level coverage data, is a proxy indicator to assess annual progress toward this goal, and indicate progress toward higher level child survival goals. For the same reasons, it is the indicator used for global reporting.

Not only the reach, but also the timeliness of the two doses is critical. If the two doses are delivered much more than six months apart in a calendar year, then the protective effect of two-dose coverage cannot be considered as having been achieved.

This secondary coverage indicator is usually only calculated at the national (not district) level, and may be included in the national VAS monitoring logframe to assess overall programme status against nationally established targets; however it has limited use for programme management, where the focus should remain on maximizing coverage in each semester.

All available coverage data, be it from routine health system contacts or event-based delivery, should be considered when estimating two-dose coverage.

Steps for determining two dose coverage:

1. Determine the estimate of VAS coverage to represent each semester. Review the calculated VAS coverage estimate for each distribution mechanism in semester 1 as defined in outcome 1.1 of the logframe Appendix B (e.g. e=VAS coverage through routine; and f=VAS coverage through event). Determine which coverage estimate, e (routine) or f (event), is higher and select the higher one to represent semester 1¹¹. Repeat for semester 2.

^{11.} NB (i) in some cases there may have only been one distribution mechanism making it by default the higher of the two; and (ii) in cases where the timing between semester 1 and semester 2 is not about 6 months apart, it might not be possible to use the distribution mechanism with the higher coverage to represent the semester (see step 2).

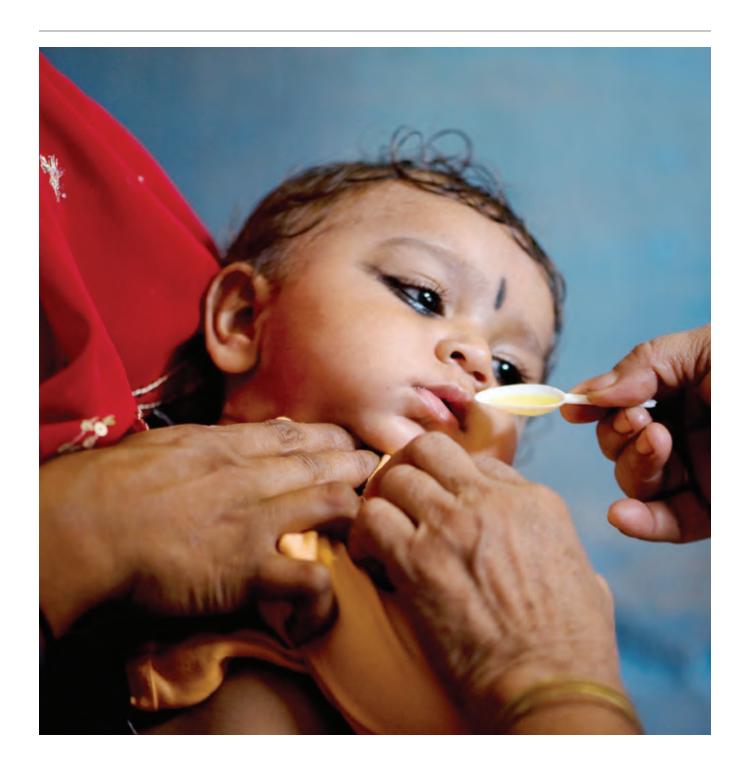


TABLE 4A

SEMESTER-SPECIFIC AND ANNUAL TWO-DOSE VAS COVERAGE ESTIMATES BY DELIVERY MECHANISM

COVERAGE OF CHILDREN 6-59 MONTHS OF AGE

	Routine health system contacts	Event-based delivery	Semester coverage used for the two-dose calculation
SEMESTER 1	24%	(Feb) 53%	53%
SEMESTER 2	12%	(Aug) 88%	88%
TWO-DOSE ANNUAL VAS COVERAGE	NA	NA	53%

2. Determine the timing of delivered doses and decide if the estimates selected in step 1 should be included in the two-dose estimate: If the selected distribution mechanisms in step 1 were implemented about 6 months apart¹², continue to step 3 below. If the selected distribution mechanisms were NOT implemented about 6 months

apart, the coverage for at least one of the selected distribution mechanisms in step 1 cannot¹³ be considered in the two dose estimation (see Tables 4B-4D for scenarios of coverage estimates that would apply).

^{12.} At the global level, the calculation of two dose coverage allows for a window of 4-8 months recognizing that an event may end up being slightly more than 6 months. However, this does not mean that routinely going 8 months between doses would allow full protection.

^{13.} This is because coverage estimates for a given delivery mechanism can only be used for estimating two-dose coverage if doses were delivered with a periodicity that would confer protection over the entire calendar year, namely about 6 months apart.

TABLE 4B

SEMESTER-SPECIFIC AND ANNUAL TWO-DOSE VAS COVERAGE ESTIMATES BY DELIVERY MECHANISM — ADAPTED TO ILLUSTRATE THE PROCESS WHERE AN EVENT WAS DELAYED

COVERAGE OF CHILDREN 6-59 MONTHS OF AGE

SCENARIO 1	Routine health system contacts	Event-based delivery	Semester coverage used for the two-dose calculation
SEMESTER 1	24%	(Jan) 53%	53%
SEMESTER 2	12%	(Oct) 88%	12%
TWO-DOSE ANNUAL VAS COVERAGE	NA	NA	12%

3. Take the lower of the two semesters: Once the value to use for each semester is determined using step 1 and step 2 above, annual two-dose national VAS coverage is estimated as the lower of the two semester-specific VAS coverage values.

Several situations are described in the Tables below to help illustrate the instructions above.

Table 4A illustrates an example where VAS was delivered on a national-scale through both routine health system contacts and event-based delivery, and the interval between doses delivered through events is about 6 months. Applying the instruction above and

assuming the same children were reached by both distributions, annual two-dose VAS coverage will be estimated at 53%.

Table 4B illustrates the same scenario as
Table 4A, but where the events were carried
out more than six months apart. In this example,
the semester 2 child health day (CHD) was
delayed to October, which means that even
though the semester 2 CHD achieved 88%,
targeted children 6-59 months of age were not
fully protected throughout the calendar year
through the event-based deliveries.

TABLE 4C

ADAPTED TO ILLUSTRATE WHEN AN EVENT WAS DELAYED, AND DISTRIBUTION THROUGH ROUTINE DID NOT OCCUR

COVERAGE OF CHILDREN 6-59 MONTHS OF AGE

SCENARIO 1	Routine health system contacts	Event-based delivery	Semester coverage used for the two-dose calculation
SEMESTER 1	0%	(Jan) 53%	53%
SEMESTER 2	0%	(Oct) 88%	0%
TWO-DOSE ANNUAL VAS COVERAGE	NA	NA	0%

They were protected for six months in Semester 1 (Jan-June), left unprotected for approximately three months (July-Sept), and protected again at the end of Semester 2 for up to six months following the October CHD. Therefore, for the purpose of estimating two-dose annual coverage only, the semester 2 event-based coverage cannot be considered in the two-dose annual calculation and only the routine health system contact data can be used. Applying the instruction above and assuming the same children were reached by both distributions, annual two-dose VAS coverage will be estimated at 12%.

Table 4C illustrates the example where a two-dose coverage estimate may be zero, despite efforts to deliver two annual-doses to all children. In this example, there was no VAS delivered through routine health system contacts (0% coverage through routine) and event-based delivery in the second semester was delayed and implemented 9 months after the first semester as in 4B. In this example however, because the coverage achieved through routine

TABLE 4D

ADAPTED TO ILLUSTRATE WHEN AN EVENT WAS DELAYED, AND AN ESTIMATE FOR TWO-DOSE COVERAGE CANNOT BE GENERATED

COVERAGE OF CHILDREN 6-59 MONTHS OF AGE

SCENARIO 1	Routine health system contacts	Event-based delivery	Semester coverage used for the two-dose calculation
SEMESTER 1	No data	(Jan) 53%	53%
SEMESTER 2	No data	(Oct) 88%	No data
TWO-DOSE ANNUAL VAS COVERAGE	NA	NA	No data ¹⁴

health service delivery was zero and the time between doses delivered through the events was too large to confer protection over the calendar year, annual two-dose VAS coverage will be estimated at 0%.

Table 4C illustrates the example where it is not possible to generate a two-dose coverage estimate, despite efforts to deliver two annual-doses to all children. As per examples 4B and 4C, semester 1 and semester 2 doses were too far apart to use semester 2 coverage

in the two dose estimate. The difference in this example is that VAS was delivered through routine health system contacts but the country was unable to report on coverage either because reporting on routine is not done or the available data are not deemed to be of sufficient quality (i.e., not representative of the full age group, or geography) to include.

The forthcoming UNICEF methods paper on VAS coverage will provide additional guidance on calculating the estimates as above and on the process to follow for less straight forward scenarios.

^{14.} The reason this is No data instead of zero is because there was likely some coverage through routine health systems, but the data for this is not available.

SECTION 4

4.2 PROGRAMME ACTIVITY AND OUTPUT INDICATORS

Activity and output indicators help to better characterize the programme components that impact VAS distribution and, in turn, influence the programme outcome indicator which is VAS coverage (Outcome 1). VAS programme indicators have been categorised based on their contribution to the programme process: Enabling Policy and Programme Environment, Supplies, Human Resources and Social Mobilisation. The logframe (see Appendix B) and Appendix C provide more operational detail for monitoring.

District and national roles in monitoring decisions and responsibilities will vary between countries, usually based on the extent of de-centralisation. Where programme management is very de-centralised, some of the indicators that would normally be a national responsibility, may be monitored primarily from the district level. In some instances, indicators are uniquely suited to national- or district-level monitoring, management or measurement (e.g. this National VAS Monitoring Guide includes

some policy indicators that are not included in the District Guide¹⁵ such as Indicator 1.1: National VAS policy exists which defines the national programme goals). It is important, however, that district and national personnel responsible for VAS discuss and understand their respective roles and responsibilities in monitoring programme indicators and achieving the defined national programme goal.

ENABLING POLICY AND PROGRAMME ENVIRONMENT INDICATORS

Monitoring the enabling policy and programme environment for VAS requires the collection of data for indicators related to policies, workplans, management, coordination, personnel and budget allocation. A strong enabling policy and programme environment requires the regular review, revision and dissemination of national policy and guidelines, as well as the coordination of partner activities at all levels. Ideally, the

VAS policy and budget allocation should be integrated within an overarching national health and nutrition policy and the VAS management and coordination team should be integrated with, or strongly connected to, a larger national health and nutrition coordination group.

There are six logframe indicators (Output 1.1, 1.2, 1.3, 1.4, 1.5 and 1.6) linked to an enabling programme environment that should be monitored at the national level even where some of the indicators may be measured and managed primarily at the district level. These six indicators are listed in Table 5. Each indicator is described in more detail in Appendices B and C.

In addition to clearly defining programme goals and incorporating global recommendations, a national VAS policy should reference delivery mechanisms likely to achieve the goals and designate an implementing authority.

Typically, the implementing partners are key to achievement of activities and resulting outputs. As such, it is critical that the national VAS programme manager:

- Communicates policy and programme goals to district-level managers;
- Advocates for implementation of national VAS policy and programme goals; and
- Ensures that resources are available to support the management and coordination system.

Annual work-plans and estimate of needs (supplies, human resources, budget) should take district plan and past requirements into consideration (taking into account any known changes in population) and incorporate a long-term, multi-year strategy. Planning should be conducted in collaboration between national and district management with national oversight to identify gaps in work-plans and follow-up where district work-plans are not received. Follow-up may also be required to investigate whether low reported VAS coverage may be related to inadequate supplies, human resources and/or budget.

VAS planning should be integrated into the broader primary health care system to ensure sufficient VAS programme budget is allocated nationally. The national programme manager should ensure that VAS budget allocations are sufficient to meet programme costs at the national and district level and reprioritise programme spending and/or advocate for budget increases if allocation is insufficient.

TABLE 5

OUTPUT INDICATORS RELATED TO ENABLING POLICY AND PROGRAMME ENVIRONMENT¹⁶.

- 1.1 National VAS policy exists which defines the national programme goals and is aligned with the latest global recommendations
- a. A national VAS policy exists
- **b.** The national VAS policy includes well-defined programme goals
- **c.** The programme goals align with latest global recommendations
- 1.2 A recognised VAS-related management and coordination group exists, with a well-defined role to develop and amend national VAS guidelines as necessary and to use district-level data for planning and management at the national level according to global guidelines
- **a.** VAS-related management and coordination group with defined roles and responsibilities exists
- **b.** Administrative data and supervision reports from districts were used to plan for VAS for the following semester
- 1.3 National VAS work-plan exists for the forthcoming year indicating timing for events and routine health system outreach and with estimated semester-level needs for both routine health system contact and event-based distribution of VAS:
- **a.** Timelines for event-based and routine health system outreach-based VAS distribution
- **b.** Supplies (vitamin A supplements, for routine health system contacts and for events)

- **c.** Supplies (non-supplement, for routine health system contacts and events, e.g. scissors and forms)
- **d.** Human resources (e.g. trainers, VAS-related health care workers, supervisors, social mobilisation team, drivers)
- e. Budget (e.g. for social mobilisation)
- 1.4 The national Public Health Care (PHC) system budget includes sufficient allocation for VAS programme costs

Sufficient VAS programme costs are allocated in the national PHC system budget to reach the national annual two-dose coverage targets

1.5 All VAS delivered through events and routine health system contacts in the last semester were conducted according to the timing and planned reach specified in district micro-plans

All districts reported that all VAS events and scheduled routine health system outreach activities were conducted as planned in the micro-plan, with no interruptions in the previous semester.

1.6 Coverage reports submitted to the national level from all districts are complete and timely, according to national guidelines

Coverage reports submitted to the national level according to national VAS guidelines (timeliness and completeness) by all districts.



When there are problems with programme implementation (e.g. an event did not start on scheduled date, or an interruption in preventative VAS delivery occured at a health facility) it can impact the programme environment in subsequent semesters as well as the current one. For example, when caregivers have been mobilised to attend a scheduled event, a date change is likely to decrease attendance at the newly scheduled event, as well as decreasing caregiver motivation for future events/visits.

Timely (monthly and end-of-semester) reporting of VAS delivery data from districts allows national managers to work with district managers to investigate any areas that might be contributing to lower than expected coverage. When reports are not submitted in the required time period it limits the national VAS manager's ability to investigate and support district teams to correct problems before the following semester VAS planning and implementation begins. National programmes can encourage complete and timely reporting by ensuring that reporting formats and schedules are clearly defined, included in annual and semester planning documents and made available to district VAS managers.

SUPPLY INDICATORS

Maintaining sufficient stocks (avoiding stock outs) of vitamin A supplements and other supplies (e.g. scissors, reporting forms) is essential for conducting VAS effectively for all children. Ideally, vitamin A supplies should be integrated in a national supply management chain for ease of monitoring distribution and stock levels. Monitoring available supplies

for VAS involves collection of data related to: stocks of usable vitamin A supplements (i.e. that are unexpired and in good condition) for each dose level, and the availability of other supplies necessary for delivery and recording VAS (determined according to national guidelines). National managers should monitor whether routine health system contact and event-based distribution reported sufficient supplies. This can be directly monitored (in the context of a centralised system) and/or monitored by review of reports from districts (in more decentralised systems).

There are three logframe indicators linked to supplies (Output 1.7, 1.8 and 1.9) that should be monitored at the national level. These three indicators are listed in Table 6. Each indicator is described in more detail in Appendices B and C.

Methodologies for managing, collecting and reporting supply data may differ by country and by delivery method. Data sources for supply indicators are generally district routine health system and event-based VAS summary reports and other reports (e.g. supervision reports). These alert national managers to problems encountered during the semester. Non-supplement supplies at fixed-site health facilities may be used for more than one programme activity and are, therefore, more likely to be generally available and/or supplied using other resources. Monitoring of nonsupplement supplies is most relevant for event-based and for the outreach visits which make up part of the routine health system contact-based delivery.

TABLE 6

OUTPUT INDICATORS RELATED TO SUPPLY

- 1.7 All districts had sufficient stocks of appropriate vitamin A supplements for distribution to children 6-59 months of age through routine health system contacts at all times in the previous semester.
- **a.** Districts with sufficient stocks of 100,000 IU capsules for routine health system contact-based delivery in the previous semester
- **b.** Districts with sufficient stocks of 200,000 IU capsules for routine health system contact-based delivery in the previous semester
- 1.8 All districts had sufficient stocks of appropriate vitamin A supplements for distribution to children 6-59 months of age through event-based delivery at all times in the previous semester.
- a. Districts with sufficient stocks of 100,000 IU capsules for events in the previous semester
 b. Districts with sufficient stocks of 200,000 IU capsules for events in the previous semester

For both 1.7 and 1.8: where other forms of supplements, not capsules are used, these indicators should be changed to refer to the specific type of supplement used. Similarly, when only one dose type is divided or multiplied to adapt it for use in both age groups, the indicator should be adjusted accordingly.

- 1.9 All districts had sufficient supply of non-vitamin A supplement resources (e.g. scissors, reporting forms) to implement planned VAS activities during the previous semester.
- **a.** Districts had sufficient non-vitamin A supplement supplies for routine health system contact-based VAS in the previous semester.
- **b.** Districts had sufficient non-vitamin A supplement supplies for event-based VAS in the previous semester

Regardless of distribution method, the national VAS management team generally relies on the district manager to alert them of any issues with supply stocks (supplement and nonsupplement). To support communication about this, district summary and supportive supervision report forms should include an entry field to specifically note the occurrence of shortages or stock-outs. In some instances, a logistics management information system, which could be mobile technology-based, may allow VAS-related stock levels and requirements to be reported via short messages services (SMS) message.

Managers at all levels should be prepared to coordinate and take timely corrective action in the case of stock-out of any essential supply item. When problems do arise, supply-related indicators should be compared with planning estimates and with coverage and supervision reports as part of a semester review; then amendments made for subsequent semesters. It may be necessary to support further local investigation and/or a verification process (see Section 5) to help determine the cause(s) and any necessary follow-up actions to prevent these issues in the future.

HUMAN RESOURCES INDICATORS

Human resources are an additional requirement to achieving VAS coverage of all infants and children. Effective monitoring of human resource availability and capacity helps ensure that VAS proceeds according to national guidelines and, where the minimum standard of service is not met, contributes information that can be used to identify and solve problems.

Monitoring human resource indicators requires collection of data related to personnel numbers, adequacy of training and supervision, and to the timeliness of VAS, against the expectations/indicators for each in the national VAS guidelines. Human resource-related logframe indicators (Output 1.10 and 1.11) are shown in Table 7. Each indicator is described in more detail in Appendices B and C.

National-level management should:

- Clearly define training curricula content, duration, and expected frequency for training and refresher training;
- Verify training and trainee-related budget (including per diem) requirements;
- Provide supportive supervision;
- Establish and communicate training schedules in relation to VAS schedules and targets;
- Recognise good practice;
- Provide support and direction when corrective action is needed.

TABLE 7

OUTPUT INDICATORS RELATED TO HUMAN RESOURCES¹⁷.

1.10 In all districts, personnel involved in VAS (routine health system contact- and event-based) have been trained and provided with refresher training according to national VAS guidelines, and staff meet minimal knowledge criteria.

- **a.** Districts where all personnel involved in distributing vitamin A supplements (routine health system contact- and event-based) had been trained according to the national VAS guidelines
- **b.** Districts where all personnel involved in distributing vitamin A supplements meet the minimum knowledge criteria.

This indicator may not be feasible to measure in all situations; it requires supportive supervision to be in place and/or some type of qualitative verification assessment.

1.11 All districts had sufficient human resources (according to national VAS guidelines) to implement VAS activities for infants and children during the previous semester.

Districts reporting insufficient human resources in the previous semester

National guidelines for VAS should clearly define training expectations (e.g. frequency, content and minimum knowledge criteria).

National managers are responsible for compiling, reviewing and communicating training and refresher training curricula to district managers.

They should consult with district and supervisory support teams to determine whether training of personnel involved in VAS distribution is being conducted as planned.

In districts where gaps in personnel numbers and/or capacity are identified, national managers should support investigation to increase and/or strengthen training and respond to requests for related resources. Specifically, human resource allocations (nationally and in partnership with district teams) should be monitored to check sufficiency of each type of human resource required against that recommended in the national guidelines with particular attention to districts with shortfalls in human resources (e.g. gaps in numbers, training and knowledge).

Selection and inclusion of these human resource indicators in a semester-specific monitoring exercise should be considered in relation to: available information (what is feasible to monitor), budget, and whether other data suggest weakness in these areas is a likely cause of low VAS coverage.

SOCIAL MOBILISATION INDICATORS

A successful VAS programme depends upon effective supply and logistics to deliver the supplements, but it is just as important that the community values, supports and demands vitamin A supplements. To ensure that VAS services meet the needs of communities, district managers and health workers must form a close partnership with the community. An informed community is more likely to participate actively in VAS activities. Social mobilisation, therefore, is essential to motivate caregivers to bring a child to a health facility for delivery of vitamin A through the routine health system and/or to improve attendance at event-based distributions. As such, social mobilisation is a key factor in reaching children with vitamin A and should be monitored routinely and further investigated whenever district summary and/or supervision reports indicate that attendance is a problem or coverage is low.

Monitoring the effectiveness of social mobilisation involves assessment of different data sources reporting on community awareness and caregiver motivation and/or ability to bring a child to a VAS event and/or for delivery through routine health system contacts. The main logframe indicator for social mobilisation (Output 1.12) is shown in Table 8. This indicator is described in more detail in Appendices B and C.

District activity reports can be used to determine whether social mobilisation activities were conducted in accordance with national guidelines and district plans. Caregivers recollection of key social mobilisation messages can be assessed through exit interviews, where these are conducted (usually by supervisory support teams) during an event. However, these only capture information from caregivers who attended the event. Other methods, such as focus group discussions and post-event community/household surveys can be used to determine recall of messages among caregivers who did not attend an event, recognizing that focus groups or other qualitative methods may be useful but will not provide data for a quantifiable indicator. These community-based assessments would be part of a broader in-depth investigation into the causes of low coverage; they are discussed briefly in section 5 and in more detail in the District Guide¹⁸.

TABLE 8

OUTPUT INDICATORS RELATED TO SOCIAL MOBILISATION INDICATORS.

1.12 Social mobilisation activities conducted in accordance with national and/or district plans in all districts.

- **a.** % of districts implemented social mobilisation activities in line with national guidelines and district plans.
- **b.** % of districts reported that a significant percentage (pre-defined by the national management team) of caregivers attending events could recall key messages of the social mobilisation activities defined in the plans.
- **c.** % of districts reported that a significant percentage of caregivers NOT attending events could recall key messages of the social mobilisation activities defined in the plans (only monitored when additional verification activity implemented).

National managers should follow-up and support district-level social mobilisation coordinators prior to events, in particular where problems (for either event- or routine health system contact-based delivery) have been identified in previous semesters. In addition, national managers should support decisions about, and design of, more in-depth, post-event verification (e.g. exit interviews, community/household surveys) as needed. Where determined to be useful the design should include methods to understand and address any barriers preventing caregivers bringing a child for VAS or using health services in general.

PLANNING TOOLS

The following tools available in the Appendices of this Guide (Appendix E-I) are included as examples that may be helpful in recording and monitoring some of the above output indicators.

Appendix E: Example VAS reporting form district to national—routine health system contacts.

Appendix F: Reporting VAS form district to national — for event-based delivery

Fi: The example provided is a provincial level listing of vaccination and VAS-related data from districts within the province, to be sent up to national (federal) level. This form would apply in the same way for a listing of sub-districts within a district, to be sent directly to the national level in the case where there is no intermediate administrative level.

Fii: The example is a simpler summary sheet of event-based delivery of vitamin A by district together with calculation of coverage estimates.

Appendix G: Budget planning for events (including VAS) at the national level.

Appendix H: Action plan to prepare for events (including VAS) at the national level.

Appendix I: Vitamin A supplement supply planning and stock assessment at the national level.

4.3

IMPROVING COVERAGE AND PROGRAMME DATA COLLECTION AND USE: SUPPORTIVE SUPERVISION, REVIEW MEETINGS AND M-HEALTH APPLICATIONS

The following sub-sections describe methods for:

- a) Supportive supervision
- b) Review meetings
- c) Collection of data using mobile technology

These methodologies can result in improved information and programme performance, quality of data collected and confidence in the validity of resulting information.

4.3.1 SUPPORTIVE SUPERVISION

Supportive supervision is a supervisory approach that focuses on direct, personal contact with VAS-related personnel on a regular basis to problem solve and motivate. It is a process that helps staff continuously improve their work performance. It is often used as a form of on-the-job training for VAS personnel, intended to strengthen the quality of service delivery¹⁹. Most importantly, supportive supervision is carried out in a respectful and non-authoritarian way. It is focused on using contact points as opportunities to improve knowledge and skills of health staff.

Management and reporting of supportive supervision is done at the district level. However, national programme managers are responsible for ensuring support for the process. Best practices for supportive supervision include the use of established checklists based on delivery guidelines for specific events and on the type of social mobilisation activities implemented

in the district²⁰. Supportive supervision may be targeted randomly and/or within low performing areas. Additional details on the type of checklist, site selection and reporting are provided in the District Guide²¹.

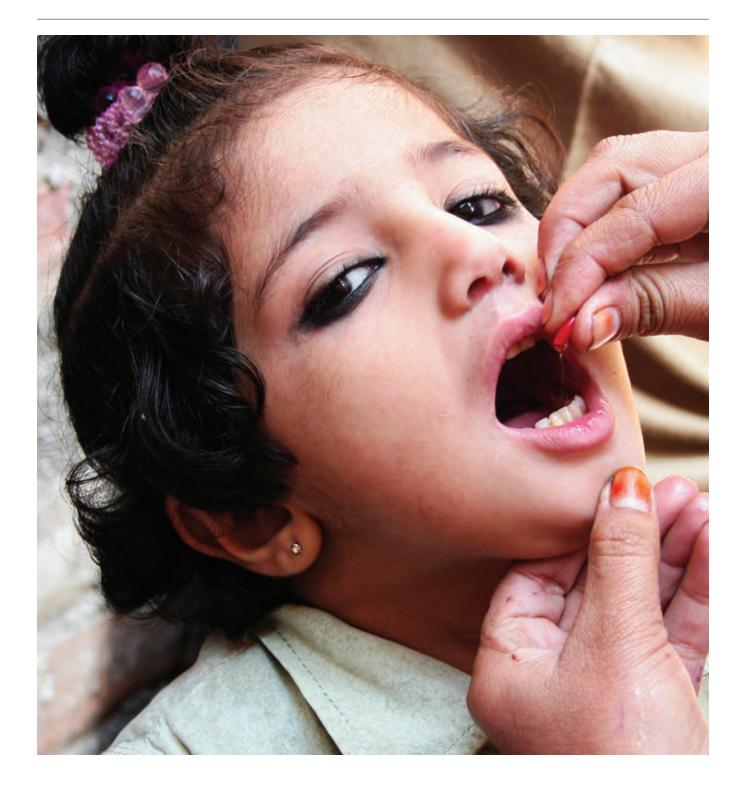
National managers should work collaboratively with district teams to rapidly correct gaps in practice or knowledge, or other issues such as stock-outs, which may be highlighted through supportive supervisory visits. A collaborative (national-district) review of supportive supervision reports in areas with low VAS coverage can help determine the likely cause, since supervisory reports would provide details of interruptions to VAS delivery (e.g. stock-outs or delays in the implementation of planned VAS events; output indicators 1.5, 1.7, 1.8) and identify which programme areas may need additional support (e.g. amending personnel training or improving social mobilisation strategies) (Output indicators 1.10, 1.11 and 1.12).

National managers should follow-up to ensure that solutions have effectively improved programme function and coverage in subsequent semesters. The process also improves the national VAS manager's ability to transfer experiences and good practices to other districts.

^{19.} USAID. Management science for health, supportive supervision to improve integrated primary health care; Washington, DC: USAID; 2006. Occasional Paper No. 2.

^{20.} Supportive supervision may cover observation-based categories related to organisation of the event, adequacy and performance of staff, availability of vitamin A and other supplies, timeliness of service delivery and exit interviews with selected caregivers.

^{21.} Global Alliance for Vitamin A (GAVA). Monitoring of Vitamin A Supplementation: A Guide for District (Area-based) Programme Managers. Ottawa: Micronutrient Initiative, 2015.



4.3.2 REVIEW MEETINGS

Review meetings are an important factor to enhance performance and are conducted regularly for all health programmes in some countries. Biannual review meetings are held at the national level to review programme performance (including VAS), share experiences and solve problems. They are usually conducted using a standard set of indicators and procedures, which facilitate the identification of priority areas for follow-up with district teams and an improved actionplan for the subsequent semester. The review meeting serves as a tool to rank the districts by VAS performance, which identifies areas most in need of support. The district ranking also creates a sense of achievement among well-performing districts. The experiences of managers from districts that have performed well should be shared with others to learn from potentially innovative practices.

4.3.3

M-HEALTH APPLICATIONS

M-Health is a collective term that refers to the use of mobile technology in existing health delivery platforms to improve effectiveness. M-Health applications are useful in addressing challenges in areas such as communication, reporting, behaviour change and awareness. The decision to use this type of technology is generally made at the national level and its application can then be rolled-out across districts gradually.

M-Health applications should be designed to meet identified VAS programme challenges and should only be considered where there are sufficient resources and adequate capacity to establish and maintain the system. The use of personal telephones by health workers to send data by SMS is a simple, low cost first step. In general, messages are sent to the district level where data are aggregated, therefore additional details are included in the District Guide²². General examples of where M-Health may be most applicable to the monitoring and implementation of the VAS programmes (including where it is a direct link to the national level) are:

Stock reporting and monitoring

M-Health can improve tracking of supplies and deliveries of VAS capsules and other essential supplies, either at the district level or directly to the national level. Using either SMS or pre-built forms with smart phones, stocks can be monitored at each transit point, using a coding system, as they are transferred to the health facility. Additionally, health facilities can use SMS to record remaining stock and the need for additional stock in real time. These systems can eliminate wastage throughout the transfer process and help ensure that health facilities receive stocks in a timely manner.

Behaviour change communication (BCC) and social mobilisation

Blanket or (more usually) targeted messaging with key information can be sent prior to a VAS-distribution event, including facts on when and where it will take place, who should attend, and what will be received. It is generally recommended that the messaging is targeted to key community members such as community health workers, community leaders and religious leaders who can then mobilise the community to attend.

Monitoring other VAS indicators

M-Health offers the opportunity to digitalise reporting of routine health system contact delivery of vitamin A supplements. Aggregated monthly data may be sent from district to national level using a form on a smartphone or via an SMS-based structure. The advantage of SMS is that any working phone can be used. A practical example of using SMS for routine

reporting is the mTrac system in Uganda (http://mtrac.ug). The mTrac system uses SMS-based forms that contain equivalent information fields to HMIS paper forms. For VAS programmes, aggregated reported at the end of a series of VAS events, or at the end of a month for supplements delivered through routine health system contacts, would be sent via SMS from district to national level.

The advantage of digital reporting lies in the speed at which data can be aggregated, sent and analysed, as well as the reduction in reporting error. In some countries, it may take weeks, months or even a year for paper reports to reach the national level to be aggregated and analysed to inform decision-making.

Verification of VAS Programme (post-event or periodically)

When a verification exercise is determined necessary (see Section 5), the use of smart phones or tablets to collect data is ideal for reducing data entry errors. It also reduces the time needed to report data in a form that can be used to inform decision making. Additionally, smart phones offer the ability to incorporate photographs and GPS points into data collection (monitoring or surveys) which allow for locations to be identified, enumeration areas to be reviewed and for resulting data to be spatially analysed.

SECTION 5





SYSTEMATIC ASSESSMENT OF PROGRAMME AND COVERAGE DATA TO DETERMINE WHERE ADDITIONAL INVESTIGATION AND VERIFICATION ARE REQUIRED

A systematic assessment of monitoring data will inform programme strategy, help determine which districts to prioritise for additional support to identify the cause of any problems or inconsistencies, and where additional verification of data may be required.

PURPOSE OF SYSTEMATIC ASSESSMENT EXERCISES

- i. To assess the quality of monitoring data
- **ii.** To identify specific gaps in programme implementation or available data
- iii. To verify reported VAS coverage
- **iv.** To recommend additional verification of data during subsequent semesters in specific districts, where needed.

ASSESSMENT OF MONITORING DATA

A systematic assessment exercise is usually conducted at the district or sub-district level, to investigate data sources in areas identified as having low or unexpected changes in VAS coverage data. The national team may propose such an investigation and would support the district team in any investigation that does take place.

The main purpose would be to answer the question: "Are we confident in the coverage data?" i.e. is the estimated coverage in line with previous semesters for the same/similar distribution mechanism, with that of other co-delivered interventions (e.g. measles vaccination), and with programme implementation data (for human resources, supplies, social mobilisation, etc.), and is it believed to be indicative of the overall status of the VAS programme and other co-delivered interventions, in each district.

If the VAS management group conducts such an assessment and is not satisfied that the data represent the actual situation for coverage and/or programme implementation, then an additional investigation could be considered.

The District Guide²³ includes more detailed guidance on the type of sub-district assessment that may be conducted and the type of outcome that would suggest that an additional verification assessment would be useful. National VAS guidelines should include similar guidance on the assessment process and when further verification would be recommended to improve and the quality of data. It is generally recommended that verification assessments include assessment of the delivery of other health interventions, to ensure efficient use of resources.

The format and scale of a verification assessment should be discussed and agreed by the national and district VAS management teams and may be implemented from either level. Verification methods initiated at the national level usually include survey-based assessments, for example Post-Event Coverage Surveys (PECS)^{24,25}. Text Box 7 gives an example of how verification data were used during the initial stages of a programme to deliver health interventions which helped developed confidence in the administrative data so that verification surveys were no longer considered necessary.

^{23.} Global Alliance for Vitamin A (GAVA). Monitoring of Vitamin A Supplementation: A Guide for District (Area-based) Programme Managers. Ottawa: Micronutrient Initiative. 2015.

^{24.} PECS is the specific term used for verification surveys implemented by Helen Keller International. Other national and international partners also support this type of verification exercise, for example in combination with the immunisation programme.

^{25.} A GUIDE TO VITAMIN A SUPPLEMENTATION (VAS) POST-EVENT COVERAGE SURVEYS (PECS). Helen Keller International, January 2012.

TEXT BOX 7

EXAMPLE OF WHEN DATA VERIFICATION SURVEYS ARE NOT REQUIRED

Post-Event Coverage Surveys (PECS) are not always required as a component of the data assessment framework. For example, in Cote d'Ivoire, a PECS was implemented after each of the two rounds of health intervention deliveries (including VAS) in 2011 and 2012. Both surveys found high correlation between administrative data and PEC data, as well as high and consistent coverage of over 90% for all interventions including VAS.

Administrative data were subsequently accepted as an appropriate and valid source of data for VAS coverage. A PECS or other investigation would only be considered necessary if changes were made in the implementation and monitoring of the distribution events or if large, unexpected, changes in data were observed.

Verification initiated and conducted at the district level could include rapid household survey-based assessments such as Lot Quality Assurance Sampling (LQAS)²⁶. Both PECS and LQAS methods can be used to measure coverage and quality of services.

Verification is often likely to involve an initial detailed review and investigation at the point of delivery (routine health system contact or event-based) to assess the supporting environment and implementation process and compare these with reported coverage.

Verification methods in this case may involve key informant interviews with supervisory support team members and health facility personnel, as well as focus group discussions with caregivers to identify issues preventing caregivers taking their children for VAS.

These are discussed in a little more detail in the District Guide²⁷.

^{26.} Steps to carry out an LQAS are described in a UNICEF's Guidebook: *An equity-focused programming and monitoring approach to enhance district performance for better maternal and child health outcomes*. For more information about this Guidebook, contact your country UNICEF office.

^{27.} Global Alliance for Vitamin A (GAVA). Monitoring of Vitamin A Supplementation: A Guide for District (Area-based) Programme Managers. Ottawa: Micronutrient Initiative, 2015.

SECTION 6



ADJUSTMENT AND SUSTAINABILITY OF VAS MONITORING SYSTEMS

Whenever changes to the scope or implementation of the VAS programme occur within the country, the monitoring system and use of data must be reviewed to ensure they are in line with the changes. For example:

i. If the main delivery method for children 12-59 months of age changes from routine health system contacts and event-based to be event-based only, then the target for VAS coverage for this age group for each delivery method will need to be changed and some of the monitoring indicators related to routine health system contact-based delivery to this age group can be removed from the logframe.

ii. If recording of VAS becomes more child-centred in the future then greater emphasis will be placed on child health cards as a data source, which would make numerator calculations more accurate.

This type of programme amendment and subsequent alteration of guidelines is usually the responsibility of the national VAS manager. Any related changes to the logframe should be made at the same time and district managers responsible for VAS should be consulted and informed of final changes to data collection tools and reporting processes.

SECTION 7



SUMMARY OF KEY COMPONENTS AND TOOLS FOR MONITORING VITAMIN A SUPPLEMENTATION

7.1

KEY COMPONENTS FOR VAS MONITORING

- i. Only collect information that is useful to, and will be used to improve or sustain, the VAS programme.
- ii. Adapt the logical framework (logframe) to fit with the specific national context (add, delete, or amend indicators). Identify and prioritise for monitoring, the key bottlenecks and barriers which affect implementation (Note: these may be vary by district).
- **iii.** Amend or move applicable indicators of the framework between district and national levels according to the level of decentralisation in country.
- **iv.** Review all data from district managers responsible for VAS and verify that coverage calculations use nationally-agreed denominators. (District managers should provide numerators and denominators, separately for each delivery methods and for each age group for each semester).

- **v.** Report semester-level coverage from each delivery method for each age group where implemented, and estimate semester coverage for each delivery method for the age groups combined. Where feasible report:
- **a.** A single semester-level VAS coverage estimate (for children 6-59 months of age by either delivery method)
- **b.** A two-dose annual VAS coverage estimate.
- **vi.** Schedule routine end-of-semester assessments of key monitoring indicators and allow for additional reviews with district managers in order to make timely programme amendments and improve coverage.
- vii. Track programme output and outcome (coverage) indicators over time to determine areas of weakness in programme implementation and make the required programme amendments. Where needed, support further investigation and verification of the information at the district/sub-district level before amending the programme.

SECTION 7

7.2

TOOLS FOR VAS MONITORING

The following tools are included in Appendices A-H and provide useful examples for efficient planning and data collection. National VAS managers should also be familiar with the tools used for data collection, planning and verification at the district level (see District Guide²⁸).

- A. VAS logic model.
- B. VAS logframe.
- C. Detailed VAS logframe indicator notes.
- **D.** VAS coverage calculations under different scenarios targeting different delivery methods for different age groups.
- **E.** Example VAS reporting form district to national routine health system contacts.

- **F.** Reporting VAS form district to national for event-based delivery
- **Fi.** The example provided is a provincial-level listing of vaccination and VAS-related data from districts within the province, to be sent up to national (federal) level. This form would apply in the same way for a listing of sub-districts within a district, which are to be sent directly to the national level where there is no intermediate administrative level.
- **Fii.** The example is a simpler summary sheet of event-based delivery of vitamin A by district together with calculation of coverage estimates.
- **G.** Budget planning for events (including VAS) at the national level.
- **H.** Action plan to prepare for events (including VAS) at the national level.
- **I.** Vitamin A supplement supply planning and stock assessment at the national level.

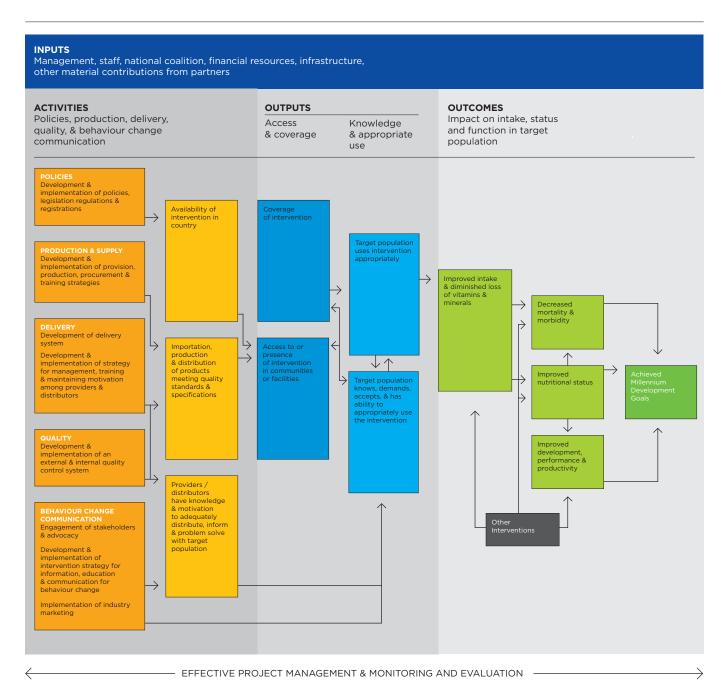


APPENDICES



APPENDIX A

LOGIC MODEL FOR VITAMIN A SUPPLEMENTATION (NATIONAL LEVEL)



APPENDIX B

NATIONAL LEVEL LOGICAL FRAMEWORK (LOGFRAME) FOR MONITORING VITAMIN A SUPPLEMENTATION (VAS) PROGRAMMES

Indicator Title NATIONAL PRIORIT	Programme Indicator and Component Indicators TIES OR GOALS: ELIMINATION OF VITAMIN	Operational Definition of the Indicator and Component Indicators A DEFICIENCY AND ITS CONSEQUENCES
Programme (Cover	age) Indicators	
Outcome 1.1: Semester-level Coverage: All children aged 6-59 months receive an age-appropriate dose of vitamin A in the semester (usually January to	Proportion of children 6-11 months of age that received a 100 000 IU dose of vitamin A in the semester a. % of children 6-11 months of age who received a 100 000 IU vitamin A supplement in the semester through a routine health system contact b. % of children 6-11 months of age who received a 100 000 IU vitamin A	∑ (across all districts): number of children 6- 11 months of age reached with 100 000 IU vitamin A supplement through routine health system contacts during the semester Agreed-upon national-level denominator for children 6-11 months of age for delivery of vitamin A through routine health system services ∑ (across all districts): number of children 6- 11 months of age for delivery
June or July to December).	supplement in the semester through event-based delivery Proportion of children 12-59 months of age that received a 200 000 IU dose of vitamin A in the semester c. % of children 12-59 months of age who received a 200 000 IU vitamin A supplement in the semester through a routine health system contact	b. Σ (across all districts): number of children 6- 11 months of age reached with 100 000 IU vitamin A supplement through event-based during the semester Agreed-upon national-level denominator for children 6-11 months of age for delivery of vitamin A through event-based delivery c.
	d. % of children 12-59 months of age who received a 200 000 IU vitamin A supplement in the semester through event-based delivery OVERALL: The proportion of children 6-59 months of age that received an age- appropriate dose of vitamin A in the semester	∑ (across all districts): number of children 12-59 months of age reached with 200 000 IU vitamin A supplement through routine health system contacts during the semester Agreed-upon national-level denominator for children 12-59 months of age for delivery of vitamin A through routine health system services d.
	e. % of children 6-59 months of age who received an age-appropriate dose of vitamin A in the semester	Σ (across all districts): number of children 12-59 months of age reached with 200 000 \times 100

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
Set by national VAS management and coordination team for each of a,b,c and d according to agreed target delivery strategy. Overall target: to achieve 100% VAS coverage of all children 6-59 months of age in the semester		Both age groups are eligible for VAS in all districts. Reliable denominator estimates are agreed upon and documented at the national level. There is no overlap in numerator or denominator counts between different districts. District reports are	National manager: Compile district data to calculate national coverage estimates, for each semester as described. Investigate unexpected findings. Provide district programme managers with regular feedback. Identify and promote effective VAS practice with all districts, with a focus on low	This is the key indicator of programme implementation and should be reviewed in close collaboration with district teams and in comparison with data from previous semesters to assess change. Coverage and key process indicators (below) should be used to determine which aspects of the programme are working well and which need strengthening to improve coverage during the subsequent semesters. Review forms from districts as they are received (monthly for routine health system contact reports), to ensure timely follow up where unexpected data are observed.
		complete and timely according to a timeline specified in the national programme guidelines and reflect at least 80% of the number of children targeted per indicator.	performing districts. Support district managers to submit complete and timely VAS reports, in accordance with national guidelines. Data Use: Identify shortfalls in coverage and problems with implementation	

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
	through a routine health system contact	IU vitamin A supplement through event- based during the semester
	f. % of children 6-59 months of age who received an age-appropriate dose of vitamin A in the semester through event-based delivery	Agreed-upon national-level denominator for children 12-59 months of age for delivery of vitamin A through event-based delivery
		e.
		Numerator for a. + numerator for c. X 100
		Denominator for a. + denominator for c.
		f.
		Numerator for b. + numerator for d. X 100
		Denominator for b. + denominator for d.
		Where districts implement similar delivery strategies for both age groups, it is possible to calculate an overall national level coverage estimate for the semester for children 6-59 months of age by selecting the highest of the coverage figures from e and f
Outcome 1.2: Two-dose	The proportion of children 6-59 months of age that received an age-appropriate	The lower of the two semester-specific VAS coverage values from the previous 12 months
Coverage: All children aged 6-59 months of age	dose of vitamin A in each semester of a given calendar year (with each dose being delivered about 6 months apart).	(Provided that VAS delivery in the second semester was conducted about 6 months later than delivery in the first semester).
received an age- appropriate dose of vitamin A in each semester (about 6 months apart) annually		i. Determine the estimate of VAS coverage to represent each semester. Review the calculated VAS coverage estimate for each distribution mechanism in semester 1 as defined above in outcome 1.1 (e.g. e= VAS coverage through routine and f=VAS coverage through event). Determine which coverage estimate, e (routine) or f (event), is higher and select the higher one to represent semester 1. Repeat for semester 2.

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
		The process is applied every semester.	and/or denominator definitions Use data to support timely corrective actions to the identified problems.	
100%	Sources: District VAS reports. National reports of coverage by age group and delivery method for each semester (Outcome 1.1)	All assumptions for the semester-level coverage indicator are met Delivery methods for each age group allow for calculation of single coverage estimates for children 6-59 months of age per semester	National manager: Conduct all calculations required to determine semester-level VAS coverage estimates (Outcome 1.1) Investigate unexpected findings, either substantially higher or lower than	It is not always feasible to calculate a two-dose VAS coverage estimate including both age groups and delivery methods. This indicator has limited operational programme application.

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
		ii. Please note that (i) in some cases there may have only been one distribution making it by default the higher of the two; and (ii) in cases where the timing between semester 1 and semester 2 is not about 6 months apart, it might not be possible to use the distribution mechanism with the higher coverage to represent the semester (see step 2).
		iii. Determine the timing of delivered doses and decide if the estimate selected in step 1 should be included in the two-dose estimate or not: If the selected distribution mechanisms in step 1 were implemented about ¹ 6 months apart, continue to step 3 below. If the selected distribution mechanisms were NOT implemented about 6 months apart, the coverage for at least one of the selected distribution mechanisms in step 1 cannot be considered in the two dose estimation (see Tables 4b – 4d, and the accompanying text in this Guide for examples of different scenarios that would need to be applied). iv. Take the lower of the two semesters: Once the value to use for each semester is determined using step 1 and step 2 above, annual two-dose national VAS coverage is estimated as the lower of the two semester-specific VAS coverage values.

^{1.} At the global level, the calculation of two dose coverage allows for a window of 4-8 months recognizing that an event may end up being slightly more than 6 months. However, this does not mean that routinely going 8 months between doses would allow full protection.

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
	Frequency: Annually	Children reached with VAS in one semester are likely to be the same children reached in the subsequent semester. Data on the timing between delivery of VAS doses is available.	previous annual estimates.	

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
Enabling Policy and	Programme Environment Indicators	
Output Indicator 1.1: National VAS policy exists which defines the national programme goals and is aligned with the latest global recommendations	 a. A national VAS policy exists b. The national VAS policy includes well-defined programme goals c. The programme goals align with latest global recommendations 	 a. A national VAS policy exists
Output Indicator 1.2: A recognised VAS- related management and coordination group exists, with a well-defined	 a. VAS-related management and coordination group with defined roles and responsibilities exists b. Administrative data and supervision reports from districts were used to plan for VAS for the following semester. 	 a. A national VAS management and coordination group with defined roles and responsibilities exists Yes/No b. Administrative data and supervision reports from districts were used to plan for VAS for the following semester Yes/No

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
a. Yes b. Yes c. Yes	Sources: National VAS policy document Frequency: Annual. Additional review as required, e.g. if global recommendatio ns change or there are problems achieving the coverage targets set	Continued national government commitment to VAS programme goals that are aligned with the latest global recommendatio ns.	National manager: Communicate national policy and programme goals to district-level managers Advocate for implementation of national policy goals at all levels Review and revise national policy and programme goals as necessary Data Use: Strengthen policy and programme environment if targets for this indicator are not achieved Develop and disseminate new policy as required	Recommendations: The national policy should clearly define VAS programme goals, incorporating the latest global recommendations. The policy should also include reference to distribution mechanisms likely to achieve and sustain these goals and designate an implementing authority. Ideally the VAS policy should be integrated within the national health and nutrition policy.
a. Yes b. Yes	Sources: National VAS guideline National VAS management plan	Terms of reference exists that details the expected composition, role and responsibilities of a VAS	National manager: Ensure resources are available to support a strong VAS management and coordination system National guidelines are updated and	Ideally the coordination team should be integrated with, or strongly connected to, a larger national health and nutrition coordination group.

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
role to develop and amend national VAS guidelines and to use district level data for planning and management at the national level according to global guidelines.		
Output Indicator 1.3: National VAS work-plan exists for the forthcoming year indicating timing for events and routine health system outreach and with estimated semester-level needs for both	National VAS work-plan exists and includes estimated semester-level: a. Timeline And needs for b. Supplies (VAS supplements) c. Supplies (non-supplement) d. Human resources e. Budget For each of routine health system outreach and event-based Additional indicator where districts are responsible for their own work-plan:	A national annual work-plan exists Yes/No a. National VAS work-plan includes timelines for routine health system outreach and event-based distribution. Yes/No - for each of routine health system outreach and event-based b. National VAS work-plan includes VAS supplement supply estimates for routine health system outreach and event-based distribution. Yes/No - for each of routine health system outreach and event-based

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
	Management meeting minutes Frequency: Every semester for event-based VAS delivery Quarterly for delivery through routine health system contacts	management and coordination team District managers compile data as requested and attend national review meetings Assessment of this indicator is not conducted by the members of the national VAS management team, to avoid bias.	disseminated as needed The management group has access to data from previous semesters. Data Use: Use to establish or improve the VAS management and coordination group and improve programme guidance.	
Yes for national plan exists and a, b, c, d & e. For each of routine health system outreach and event-based Additional indicator100%	Sources: National work- plan for the forthcoming year. (District work- plans where applicable) Frequency: Annual More frequently as needed,	Planning is conducted in collaboration with district management teams and based on experience from previous semesters. Previous workplans are reviewed to identify gaps	National manager: Develop and review the VAS work-plan with the district and national management teams to ensure it is in line with national guidelines and reflects expected district level requirements. Provide support to district teams in	The annual work-plan and estimates of timing and needs should be developed with relevant partners and based on the long term multi-year VAS strategy, district plans and requirements from the previous years. The national annual work-plan should fit within a strategy for other child health and nutrition interventions as appropriate. It will provide a useful reference against which semester-level district micro-plans are developed and decisions can be made.

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
routine health system contacts and event-based distribution of VAS	# of districts that submitted VAS workplans addressing each of the following: a. Timeline b. Supplies (VAS supplements, for routine and events) c. Supplies (non-supplement, for events) d. Human resources e. Budget (e.g. social mobilisation, outreach sites, transportation, fuel)	c. National VAS work-plan includes non-supplement supply estimates for routine health system outreach and event-based distribution Yes/No - for each of routine health system outreach and event-based d. National VAS work-plan includes an estimate of human resource needs for routine and event-based distribution Yes/No - for each of routine health system outreach and event-based e. National VAS work-plan includes an estimate of budget required for routine health system outreach and event-based distribution Yes/No - for each of routine health system outreach and event-based Additional indicator where districts are responsible for their own work-plan: Number of districts submitting complete annual work-plans Total number of districts implementing preventive VAS
Output Indicator 1.4: The national Public Health Care (PHC) system budget includes sufficient allocation for VAS programme costs	The national Public Health Care (PHC) system budget includes sufficient allocation for VAS programme costs. The majority of costs may be covered at the district level, depending on the degree of decentralisation	Sufficient VAS programme costs allocated in the national PHC budget to reach the national annual two-dose coverage targets. Yes/No

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
	e.g. if there are problems with any of the components	and modify estimates as indicated. Each district has a management team responsible for developing a work-plan. The national team will support amendments as justified based on monitoring indicators from the previous semester(s).	developing resource estimates as needed. Data Use: Use to fill any identified gaps in the work-plan. Allocate supplies, budget and human resources to districts, for transfer to health facilities and event teams. Respond to resource shortfalls and rapidly re-allocate resources where appropriate. Investigate with district managers, reasons for any differences between national and district resource estimates & resolve as necessary.	
Yes	Sources: National PHC system budget and VAS work- plan for the forthcoming year	Assumptions: A costing exercise has been conducted for the VAS programme. The national PHC budget is complete and accurately reflects national	National manager: Review PHC system documentation at the national and district levels to ensure sufficient VAS budget is allocated	VAS planning should be integrated into the broader PHC system to ensure sufficient VAS programme budget is allocated in the PHC plan, with reference to national guidelines for VAS delivery Where budget allocation is decentralised, ensure that VAS budget allocations are sufficient to meet programme costs in all district plans.

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
Output Indicator 1.5: All VAS events and routine health system contact distribution in the last semester were conducted according to the timing and planned reach specified in district microplans	% of all districts reporting all VAS event or scheduled routine health system outreach activity were conducted as planned in the micro-plan, and no interruptions in preventive VAS delivery as part of routine health system contact at health facilities in the previous semester	Number of districts reporting all VAS delivery conducted as planned (event and routine health system contact) Total number of districts implementing preventive VAS during the semester

Target	Information Source and Frequency of Review Frequency: Annual Or by semester according to the PHC planning cycle	Assumptions costs for VAS implementation. It is clear where district level budgets are being used to support district work-plans, leaving only national costs in the national PHC budget.	Responsibilities and Use of Data Advocate for a VAS costing exercise as needed Data Use: Reprioritize programme spending and advocate for budget increase if allocation is insufficient	Operational Notes
100%	Sources: District VAS monitoring, coverage and supportive supervision reports Health management information systems for scheduled routine health system outreach visits and for routine health system contacts at health facilities.	Assumptions: District microplans with dates and duration of VAS events and routine health system outreach exist and are available. Health facilities are continuously distributing VAS to children attending the facility as part of routine health system contacts. Supportive supervision forms include a data entry field to record relevant details of VAS events	National manager: Investigate reasons for delayed or incomplete implementation of VAS activities Support districts where problems have been identified during the preparation period for both event- and routine health system outreach-distribution of VAS. Data Use: Provide support to district managers in: Determining whether and a more in-depth investigation of delayed or incomplete VAS activities should be conducted	

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
Output Indicator: 1.6 Coverage reports submitted to national level from all districts are complete and timely according to national guidelines	% of all districts where coverage reports were complete and submitted to the national level in in a timely manner the previous semester according to national VAS guidelines	Number of districts submitting VAS coverage reports in line with national guidelines X 100 Total number of districts implementing preventive VAS during the semester

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
	Frequency: Every semester	(planned start date, actual start date, details of any interruption to delivery, etc.)	Identifying solutions that ensure timely, complete implementation in subsequent semesters	
100%	District reports, including planned reporting date and record of receipt for complete reports at the national level Frequency: Every semester at a minimum. Typically due one month after the end of a semester, may vary by delivery method and specific national guidelines	Assumptions: National guidelines for VAS activities: - Specify "timely" and "complete" reporting. - Include expected reporting schedule and data entry standards - Are available to district VAS managers. Report forms include entry fields for date of report submission and date of report receipt at national level.	National manager: Follow up and support timely submission of complete reports each semester Investigate reasons for delayed or incomplete reporting Data Use: Provide feedback and support to district teams to prevent delayed or incomplete reporting in subsequent semesters, as needed	Ensure reporting format and schedule are clearly defined and included in annual and semester planning documents and available to district VAS managers. Facilitate sharing of expertise and experiences between districts to support best practices with reporting and other aspects of VAS delivery.

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
Output Indicator 1.7: All districts had sufficient stocks of appropriate vitamin A supplements for distribution to children aged 6-59 months through routine health system contacts at all times in the previous semester.	 during the previous semester b. % of all districts reporting sufficient stocks of 200 000 IU capsules for routine health system contact delivery during the previous semester 	a. Number of districts not reporting stock outs of 100 000 IU capsules (blue) for routine health system contacts Total number of districts implementing preventive VAS during the semester b. Number of districts not reporting stock outs of 200 000 IU capsules (blue) for routine health system contacts Total number of districts implementing preventive VAS during the semester X 100

Target	Information Source and Frequency of	Assumptions	Responsibilities and Use of Data	Operational Notes
	Review			
a. 100% b. 100%	Sources:	Assumptions:	National manager:	Ensure regular training and supervision at district level to improve supply predictions
b.100%	District VAS summary reports for delivery through routine health system contacts Other reports from districts alerting national level of problems during the semester Records of VAS stock including estimated and delivered supply and order receipts. Frequency: Every semester at a minimum More frequently where a stock-out has been	District teams monitor sufficiency of supplement supplies for delivery through routine health system contacts according to the District Guide. Sufficiency of vitamin A supply includes provision for handling and other expected losses as well as estimated treatment dose requirements Records of supply orders and receipts exist. District routine	Review all data sources to check the sufficiency of each type of capsule Work with district teams to investigate the cause and approximate timing of stock-outs and take corrective action Data Use: Use data and other available information (e.g. field reports) to determine the likely cause of stock-outs and make relevant adjustments Determine the appropriate stock of VAS for delivery through routine health system contacts and adjust national and	district level to improve supply predictions and efficiency of supplement use, reduced wastage, etc. Ensure district level supplement requirements are defined in semester and annual work-and micro-plans Develop a contingency plan to supply additional supplements in case of increased demand for treatment doses. Ensure that district routine health system and supportive supervision reports include an entry field to detail stock-outs.
	reported early in the semester or coverage is low	health system and supportive supervision VAS reports include an entry field to	district work-plans accordingly Provide guidance and support to district VAS management teams to	

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
Output Indicator 1.8: All districts had sufficient stocks of appropriate vitamin A supplements for distribution to children aged 6-59 months	 a. % of all districts reporting sufficient stocks of 100 000 IU capsules for event-based delivery during the previous semester b. % of all districts reporting sufficient stocks of 200 000 IU capsules for event-based delivery during the previous semester 	a. Number of districts not reporting stock outs of 100 000 IU capsules (blue) for event- based delivery Total number of districts implementing preventive VAS during the semester b.
through event- based delivery at all times in the previous semester.		Number of districts not reporting stock outs of 200 000 IU capsules (blue) for event- based delivery Total number of districts implementing preventive VAS during the semester

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
		detail stock- outs. Vitamin A capsules are integrated in a national supply chain management guide Both supplement dose capsules are distributed (adapt where only one type or a different form of supplement is used)	determine likely cause of any stock out and prevent future stockouts	
a. 100% b. 1100%	Sources: District VAS summary reports for event-based delivery Other reports from districts alerting national level of problems during the semester Records of VAS stock including	Assumptions: District teams monitor sufficiency of supplement supplies for event-based delivery according to the District Guide. Sufficiency of vitamin A supply includes provision for	National manager: Review all data sources to check the sufficiency of each type of capsule Work with district teams to investigate the cause and approximate timing of stock-outs and take corrective action	Ensure regular training and supervision at district level to improve supply predictions and efficiency of supplement use, reduced wastage, etc. Ensure district level supplement requirements are accurately defined in semester and annual work-and micro-plans Develop contingency plan to supply additional supplements in case of unusual causes, such as migration into an area. Ensure that district event-based VAS, and supportive supervision reports include an

APPENDIX B

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
	estimated and delivered supply and order receipts. Frequency: Every semester at a minimum More frequently where a stockout has been reported early in a series of event-based deliveries or coverage is low	handling and other expected losses Records of supply orders and receipts exist. District event-based and supportive supervision VAS reports include an entry field to detail stock-outs. Vitamin A capsules are integrated in a national supply chain management guide Both supplement dose capsules are distributed (adapt where only one type or a different form of supplement is used	Use data and other available information to determine the likely cause of stock-outs and make relevant programme amendments Determine the appropriate stock of VAS for event-based delivery in subsequent semesters and adjust national and district work-plans accordingly Provide guidance and support to district VAS management teams to determine likely cause of stock outs and prevent future stock-outs	entry field to detail stock-outs and facilitate corrective action.

Indicator Title		ne Indicator and ent Indicators	Operational Definition of the Indicator and Component Indicators	
Output Indicator 1.9: All districts had sufficient supplies of non-vitamin A supplement resources (e.g. scissors, reporting forms) to implement planned VAS activities during the previous semester.	non-vitamin health syster previous sem b. % of all distrinon-vitamin	cts reporting sufficient A supplies for routine m contact VAS in the nester cts reporting sufficient A supplies for event- the previous semester	a. Number of districts reporting sufficient nonvitamin A supplies for routine health system contact VAS Total number of districts implementing preventive VAS during the semester b. Number of districts reporting sufficient nonvitamin A supplies for event-based VAS Total number of districts implementing preventive VAS during the semester	X 100

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
a. 100% b. 100%	Frequency of	Assumptions: National guidelines, district work-plans and microplans include an estimate of the type and quantity of nonsupplement supplies required for planned VAS through routine health system contact- and event-based distribution for the semester. District teams monitor sufficiency of non-supplement supplies for routine health system contact- and event-based distribution for the semester.	· ·	Ensure regular training and supervision at district level to improve supply predictions and efficiency of us. Ensure district level non-supplement supply requirements for events and routine health system contacts are accurately defined in semester and annual work-and micro-plans Develop a contingency plan to supply additional non-supplement supplies in case of unexpected increased demand Ensure that district event-based and supportive supervision reports include an entry field to detail shortages and facilitate corrective action.
	More frequently where a stock- out has been reported early in	delivery. District routine health system contact- and event-based summary	management teams to determine likely cause and prevent stock-outs in the future	

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
Output Indicator 1.10: In all districts, personnel involved in VAS (event and routine health system contact) have been trained and provided refresher training, according to national VAS guidelines, and staff meet minimum knowledge criteria in all districts.	a. % Districts reporting that all personnel had received training/refresher training according to national guidelines in the past six months b. % Districts reporting that all personnel meet the minimum knowledge criteria for VAS This indicator may not be feasible to measure in all situations; it requires supportive supervision to be in place and/or some type of qualitative staff assessment.	a. Number of districts where all VAS delivery sites had personnel trained according to national guidelines X 100 Total number of districts implementing preventive VAS during the semester b. Number of districts where all personnel met minimum knowledge criteria Total number of districts implementing preventive VAS during the semester

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
	the semester or coverage is low	reports and supportive supervision reports include an entry field to detail stock outs. Records of nonsupplement supply orders and receipts exist at district level.		
a.	Sources:	Assumptions:	National manager:	Ensure that all district VAS managers are aware of expected VAS training schedule
100% b. 100%	supervision reports. Training records and training curriculum Personnel job descriptions District health facility or VAS are available at the distribution is being conducted as planned and that sufficient resources are available for training Compile and review training and refreshed training curricula and training records for	training of personnel involved in VAS distribution is being conducted as planned and that sufficient resources are available for training Compile and review training and refresher training curricula and	gaps in personnel knowledge as part of annual review For districts identified as having personnel who do not meet the criteria, determine the proportion of VAS sites where this is a	
	survey reports (where conducted) Frequency:	available at the national and/or district level to train personnel	VAS distribution, as feasible Data Use:	problem, e.g. > 5% VAS sites not meeting the criteria. To enable prioritisation of support.

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators	
Output Indicator 1.11: All districts had sufficient human resources (according to national VAS guidelines) to implement planned VAS activities during the previous semester	% Districts reporting insufficient human resources in the previous semester	Number of districts reporting sufficient human resources Total number of districts implementing preventive VAS during the semester	

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
	Every semester at a minimum With more indepth analysis annually or where human resource issues are identified	involved in VAS distribution. Training curricula and records for VAS personnel are available. Information on personnel recruitment and the number of personnel trained each semester is available.	Provide additional support to identify the cause of gaps in training and knowledge and to reduce gaps where identified Support districts with particular problems in strengthening training and responding to requests for resources	
100%	Human resource requirement estimates (district and national), personnel allocation per district, job descriptions and district supervision reports Frequency: Annual review	Assumptions: National guidelines, district work-plans and microplans include estimates of the type and number of personnel required for VAS distribution. Sufficient budget has been allocated for per diems and other	National manager: Review human resource and related budget allocation in partnership with district teams, to check sufficiency of each type of human resource required (and available budget) against that recommended in the national guidelines. Particular attention to districts with gaps in human resources.	Ensure human resource and related budget requirements well-defined in the national guidelines and in district micro-plans; for the expected VAS-related activities in the semester Assess adequacy of allocated resources against expected requirements, including per diem costs, for events Ensure that district reports include an entry field to note any human resource or related budget shortage and facilitate corrective action.

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators		
Output Indicator 1.12: Social mobilisation activities conducted in accordance with national and/or district plans in all districts.	 a. % Districts where social mobilisation activities were implemented in line with national guidelines and district plans. b. % Districts reporting that a significant percentage of caregivers attending events (pre-defined by the national management team) could recall key messages of the social mobilisation activities defined in the plans. 	a. Number of districts reporting that all social mobilization conducted according to plan Total number of districts implementing preventive VAS during the semester b.		

Target	Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
	By semester as required, e.g. where a human resource problem reported	human resources costs. Records of human resource allocation and job descriptions exist at the district level. Supportive supervision and health facility reports are available and highlight any insufficiency of human resources.	Work with district teams to investigate the reason for any shortfall in human resources, including allocated budget, e.g for per diems. Data Use: Determine the appropriate human resource requirements for VAS, adjust national and district work-plans as needed Support corrective follow up action to plan, budget for and/or recruit additional personnel where needed	
a. 100% b. 100% c. 100%	sources: a. District reports b. Exit interviews (occasionally, as data are available b and c. Household or	Assumptions: National VAS guidelines include guidance on and targets for mobilisation. The targets are pre-defined by national	National manager: Follow up and support district level social mobilisation coordinators prior to events, in particular where problems have been identified in previous semesters	Ensure that social mobilisation guidance (including expected resource requirements) is included in national guidelines and district micro-plans Ensure that social mobilisation is designed and conducted to reach all populations and uses channels of communication appropriate to the communities targeted Ensure district summary and supervision reports include an entry field to record any

Indicator Title	Programme Indicator and Component Indicators	Operational Definition of the Indicator and Component Indicators
	c. % Districts reporting that a significant percentage of caregivers NOT attending events (pre-defined by the national management team) could recall key messages of the social mobilisation activities defined in the plan (only monitored when additional verification activity implemented.)	Number of districts reporting adequate recall of key messages by caregivers attending events Total number of districts implementing preventive VAS during the semester c. Number of districts reporting adequate recall of key messages by caregivers NOT attending events Total number of districts implementing preventive VAS during the semester

Target Information Source and Frequency of Review	Assumptions	Responsibilities and Use of Data	Operational Notes
community survey outcomes (occasionally, as data are available) Frequency: Annual review (or more frequently as indicated, e.g. attendance exceptionally low) b and c. Occasionally, as needed (where supervisors report problems or coverage is low than expected) and as data are available.	management team. Plans reflecting for social mobilisation exist for all districts. Materials and other resources required for social mobilisation activities for VAS are available at the district level.	Investigate the reason for any delayed, incomplete or ineffective social mobilisation activities Data Use: Identify districts with particular problems to prioritise support in the following semester Determine where exit interviews and/or household/community surveys may be required to further investigate problems and support strengthening of future social mobilisation efforts Modify guidance, messages, activities and resource	caregiver awareness related issues, to facilitate corrective action.

DETAILED DESCRIPTION OF EACH LOGFRAME INDICATOR FOR MONITORING VAS AT THE NATIONAL LEVEL

The logframe indicators refer to vitamin A supplementation with the assumption that these are provided as capsules. Where vitamin A is provided as syrup from a bottle, the national team should review and change the wording of the logframe indicators so they apply to this.

COVERAGE

OUTCOME 1.1

SEMESTER LEVEL COVERAGE:

All children 6-59 months of age receive an age-appropriate dose of vitamin A every semester²⁹.

INDICATOR

The proportion of children 6-59 months of age that received an age-appropriate dose of vitamin A in a given semester

COMPONENT INDICATORS

Proportion of children 6-11 months of age received a 100,000 IU dose of vitamin A in the semester

- a. % of children 6-11 months of age who received a 100,000 IU vitamin A supplement in the semester through a routine health system contact
- b. % of children 6-11 months of age who received a 100,000 IU vitamin A supplement in the semester through event-based delivery

Proportion children 12-59 months of age received a 200,000 IU dose of vitamin A in the semester

c. % of children 12-59 months of age who received a 200,000 IU vitamin A supplement in the semester through a routine health system contact

29. For each age group and for age groups combined, the indicator is calculated and reported for routine health system contacts and event-based delivery separately (except in exceptional situations, such as illustrated in section 4.1.1, scenarios 2 and 3, of the main text).

d. % of children 12-59 months of age who received a 200,000 IU vitamin A supplement in the semester through event-based delivery

Proportion children 6-59 months of age received an age-appropriate dose of vitamin A in the semester

- e. % of children 6-59 months of age who received an age-appropriate dose of vitamin A in the semester through a routine health system contact
- f. % of children 6-59 months of age who received an age-appropriate dose of vitamin A in the semester through event-based delivery

RATIONALE FOR MONITORING:

Evidence shows that the desired strategic result of reduced child (6-59 months of age) mortality can be achieved if the target for this coverage indicator is met. The component indicators provide valuable operational data on programme performance that allows corrective action to be taken where required. It is therefore a key indicator to assess.

OPERATIONAL DEFINITION OF THE COMPONENT INDICATORS

Assessed as:

Coverage of children 6-11 months of age in the semester

- **a.** The percent of children 6-11 months of age who received a 100,000 IU vitamin A supplement (usually a blue capsule) in the semester through routine health system contacts
- Σ (across all districts): number of children 6-11 months of age reached with 100,000 IU vitamin A supplement through routine health system contacts during the semester

- x100

Agreed-upon national-level denominator for children 6-11 months of age for delivery of vitamin A through routine health system services

- **b.** The percent of children 6-11 months of age who received a 100,000 IU vitamin A supplement (usually a blue capsule) in the semester through event-based delivery
- Σ (across all districts): number of children 6-11 months of age reached with 100,000 IU vitamin A supplement through event-based delivery during the semester

Agreed-upon national-level denominator for children 6-11 months of age for delivery of vitamin A through event-

based delivery

Coverage of children 12-59 months of age in the semester

- **c.** The percent of children 12–59 months of age who received a 200,000 IU vitamin A supplement (usually a red capsule) in the semester through routine health system contacts
- ∑ (across all districts): number of children 12-59 months of age reached with 200,000 IU vitamin A supplement through routine health system contacts during the semester

×100

Agreed-upon national-level denominator for children 12-59 months of age for delivery of vitamin A through routine health system services

- **d.** The percent of children 12-59 months of age who received a 200,000 IU vitamin A supplement (usually a red capsule) in the semester through event-based delivery
- Σ (across all districts): number of children 12-59 months of age reached with 200,000 IU vitamin A supplement through event-based delivery during the semester

- x100

Agreed-upon national-level denominator for children 12-59 months of age for delivery of vitamin A through eventbased delivery

Coverage of children 6-59 months of age in the semester

e. The percent of children 6-59 months of age who received an age-appropriate dose of vitamin A in the semester through routine health system contacts

Numerator for a.+ numerator for c.

- x100

Denominator for a.+ denominator for c.

f. The percent of children 6-59 months of age who received an age-appropriate dose of vitamin A in the semester through event-based delivery

Numerator for b.+ numerator for d.

- x100

Denominator for b.+ denominator for d.

Where all districts implement more or less the same strategy of targeting both age groups through both delivery methods, it is possible to calculate an overall national level coverage estimate for the semester. Calculate this single national VAS coverage estimate for children 6-59 months of age by selecting the highest of the coverage figures from e and f.

As indicated by these indicator definitions, coverage should always be calculated by delivery mechanism, ensuring that the

denominator used is correct for the associated numerator source. The denominator reflects 100% of the population targeted for that delivery mechanism.

See section 4.1.1 of the main text for examples of coverage calculations in scenarios for different delivery methods by age group.

INDICATOR TARGET

The national VAS management and coordination team should set targets for each indicator a, b, c, and d according to agreed target delivery strategies.

Overall target: to achieve 100% VAS coverage of children 6-59 months of age each semester

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: District reports for vitamin A delivery by both routine health system contacts and event-based for the semester.

Frequency: Each semester, at the end of the time period stated in the national guidelines for receiving all district data for that semester.

ASSUMPTIONS

In defining the indicator, it is assumed that: i. Children of both age groups in each district are eligible for VAS

- **ii.** Reliable denominator estimates for each delivery method and district are available, agreed on by the national VAS management team and have been documented.
- **iii.** There is no overlap in numerator or denominator counts between different districts.
- **iv.** District reports are complete and timely according to a timeline specified in the national programme guidelines and reflect at least 80% of the number of children targeted per indicator.
- v. The process is applied every semester

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- **i.** Compile district data to calculate national estimates of coverage for each semester as described above.
- ii. Investigate unexpected findings: either substantially higher or lower than previous semesters, or if vitamin A is delivered by two different delivery mechanisms yet achieved well over 50% coverage by each method within the same age group.
- **iii.** Provide district programme managers with regular feedback

- **iv.** Identify and promote effective practices for reaching all children with VAS with each district, but with a focus on low performing districts.
- v. Support district VAS managers to submit complete VAS reports in a timely manner, in accordance with national guidelines.

 Immediate follow up where reports are missing or incomplete.

Use of data:

- i. Use coverage data for each semester, with that from any additional investigations, to identify problems with either VAS implementation and/or with the definition of denominators for VAS.
- **ii.** Use data to support timely corrective actions to the identified problems.

RECOMMENDATIONS

This is the key indicator of programme implementation and should be reviewed in close collaboration with district VAS teams. Coverage indicators should also be considered along with some of the key process indicators below to determine which processes are working well and should be further supported, and which need to be strengthened to improve coverage during the following semesters.

Start reviewing reports from districts as they are received during the semester to ensure timely follow up investigations or corrections where unexpected data are observed.

OUTCOME 1.2 TWO-DOSE COVERAGE:

All children 6-59 months of age receive an age-appropriate dose of vitamin A in each semester (about six months apart) annually

INDICATOR

The proportion of children 6-59 months of age who received an age-appropriate dose of vitamin A in each semester of a given calendar year (with each dose being about 6 months apart)³⁰.

RATIONALE FOR MONITORING

Annual two-dose coverage reflects the programme management objective to prevent the public health consequences of vitamin A deficiency³¹. It is therefore one of the key indicators against which national targets are set and is used for national programme management accountability and for reporting.

OPERATIONAL DEFINITION OF THE INDICATOR

Assessed (where applicable based on delivery methods for each age group) as:

The lower of the two semester-specific VAS coverage values from the previous 12 months (provided that VAS delivery in the second semester was conducted about 6 months later than delivery in the first semester).

i. Determine the estimate of VAS coverage to represent each semester. Review the calculated VAS coverage estimate for each distribution mechanism in semester 1 as defined above in outcome 1.1 (e.g. e= VAS coverage through routine and f=VAS coverage through event). Determine which coverage estimate, e (routine) or f (event), is higher and select the higher one to represent semester 1. Repeat for semester 2. Please note that (i) in some cases there may have only been one distribution making it by default the higher of the two; and (ii) in cases where the timing between semester 1 and semester 2 is not about³² 6 months apart, it might not be possible to use the distribution mechanism with the higher coverage to represent the semester (see step 2).

- **30.** Two-dose coverage of children 6-59 months is estimated based on coverage in each semester of a calendar year and assessment of the timing between doses as they should be no more than 6 months apart (section 4.1 and 4.1.1 of the main text).
- **31.** Palmer AC, West KP, Jr., Dalmiya N, Schultink W. The use and interpretation of serum retinol distributions in evaluating the public health impact of vitamin A programmes. *Public health nutrition*. Jul 2012;15(7):1201-1215.
- **32.** At the global level, the calculation of two dose coverage allows for a window of 4-8 months recognizing that an event may end up being slightly more than 6 months. However, this does not mean that routinely going 8 months between doses would allow full protection.

ii. Determine the timing of delivered doses and decide if the estimate selected in step 1 should be included in the two-dose estimate or not: If the selected distribution mechanisms in step 1 were implemented about 6 months apart, continue to step 3 below. If the selected distribution mechanisms were NOT implemented about 6 months apart, the coverage for at least one of the selected distribution mechanisms in step 1 cannot be considered in the two dose estimation (see Tables 4b-4d, and the accompanying text in this Guide for examples of different scenarios that would need to be applied).

iv. Take the lower of the two semesters: Once the value to use for each semester is determined using step 1 and step 2 above, annual two-dose national VAS coverage is estimated as the lower of the two semester-specific VAS coverage values.

INDICATOR TARGET

100%

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: National reports of coverage by semester, by age group and delivery method (outcomes of the semester level coverage indicator above). Information based on District VAS reports.

Frequency: Annually

ASSUMPTIONS

In defining the indicator, it is assumed that:

i. All assumptions for the semester-level coverage indicator are met

ii. VAS delivery methods for each age group allow for calculation of single coverage estimates for children 6-59 months of age per semester (otherwise a more complicated process of assessment is required-in consultation with the national VAS management and coordination team)³³

iii. Children reached with VAS in one semester are likely to be reached in the subsequent semester (i.e. the lowest semester level coverage reflects the same children in both semesters, which cannot be verified without further investigation)

iv. It is not always feasible to calculate as a single two-dose VAS coverage estimate including both age groups and delivery methods depending on the VAS delivery methods in a given context.

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- i. Conduct all calculations required to determine semester-level VAS coverage estimates (as indicator above)
- **ii.** Investigate unexpected findings: either substantially higher or lower than previous calendar years

Use of data:

Report to the national VAS management and coordination team and to other national bodies, on achievement against the national target for two-dose VAS coverage.

RECOMMENDATIONS

Although this may be a key national programme target, it has limited operational programme application and semester level estimates by age group and delivery method should be used to determine where there may be barriers to effective programme performance and related follow up requirements.

PROGRAMME (ENABLING) ENVIRONMENT

OUTPUT 1.1.

National VAS policy exists which defines the national programme goals and is aligned with the latest global recommendations.

COMPONENT INDICATORS

- a. A national VAS policy exists
- b. The national VAS policy includes well-defined programme goals
- c. The programme goals align with latest global recommendations

RATIONALE FOR MONITORING

A national policy is important to clearly define country-level programme goals and provide an established structure on which to base national- and district-level planning and management.

OPERATIONAL DEFINITION OF THE INDICATOR

Qualitative indicators, calculated as Yes or No

- a) A national VAS policy exists Yes/No
- **b)** The national VAS policy includes well-defined programme goals Yes/No
- **c)** The programme goals align with latest global recommendations Yes/No

INDICATOR TARGET

- a. Yes
- **b.** Yes
- c. Yes

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: Review national VAS policy document.

Frequency: Annual review. Additional review of component indicators when warranted, for example if global recommendations change or there are problems achieving the coverage targets set.

ASSUMPTIONS

Continued national government commitment to VAS programme goals that are aligned with latest global recommendations.

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- i. Communicate national policy and programme goals to district-level managers
- **ii.** Advocate for implementation of national policy and programme goals at all levels.
- **iii.** Review and revise national policy and programme goals as necessary

Use of data:

i. Assessment of whether targets for these indicators are achieved provides information about the strength of the policy and programme environment and highlights where this may need to be strengthened, including development of new or revised policy as required.

RECOMMENDATIONS

The national policy should clearly define VAS programme goals, incorporating the latest global recommendations. In addition it should include reference to distribution mechanisms likely to achieve and sustain these goals and designate an implementing authority. Ideally the VAS policy should be integrated within the national health and nutrition policy.

OUTPUT 1.2.

A recognised VAS-related management and coordination group exists, with a well-defined role to develop and amend national VAS guidelines as necessary and to use district level data for planning and management at the national level according to global guidelines.

COMPONENT INDICATORS

- a. VAS-related management and coordination group with defined roles and responsibilities exists
- b. Administrative data and supervision reports from districts were used to plan for VAS for the following semester.

RATIONALE FOR MONITORING:

A recognised group with responsibility for management and coordination of VAS-related activities at the national level facilitates VAS planning, implementation, reporting and programme adjustments as needed.

OPERATIONAL DEFINITION OF THE INDICATOR

Qualitative indicators, calculated as Yes or No

- **a)** A national VAS management and coordination group with defined roles and responsibilities exists Yes/No.
- **b)** Administrative data and supervision reports from districts were used to plan for VAS for the following semester Yes/No.

INDICATOR TARGET

- a. Yes.
- **b.** Yes

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: Review national VAS guideline (last updates) and the national VAS management plan for meeting schedule, definition of group members and their roles, responsibilities and expected deliverables for the forthcoming year (would expect national guidelines to specify that the group meets twice a year at minimum, to review semester data and plan).

Review meeting minutes for evidence that verification and interpretation of data from previous semesters was used to guide planning.

Frequency:

i. Every semester for event-based VAS delivery; quarterly for delivery through routine health system contacts.

ASSUMPTIONS

In defining the indicator, it is assumed that:

i. A terms of reference, or similar document?,
exists that details the expected composition,
role and responsibilities of a VAS management
and coordination team

- **ii.** District managers compile data as requested and attend national review meetings
- iii. Assessment of this indicator is not conducted by the members of the national VAS management team which could lead to bias in the findings. Someone from a Ministry of Health or partner agency monitoring and evaluation unit not involved in the national VAS management team could help with this assessment.

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to ensure that:

- i. Resources are available to support a strong VAS management and coordination system that functions in line with national guidelines.
- **ii.** National guidelines are updated and disseminated as needed.
- **iii.** The management group has access to data and the outcome of any data verification exercises from previous semesters.

Use of data:

i. Follow up to establish or improve the VAS management and coordination group: establish a strong and effective team and improve programme guidance and performance at all levels.

RECOMMENDATIONS

Ideally the coordination team should be integrated with or strongly connected to a larger national health and nutrition coordination group.

OUTPUT 1.3

National VAS work-plan exists for the forthcoming year indicating timing for events and routine health system outreach and with estimated semester-level needs for both routine health system contacts and event-based distribution of VAS including:

- **a.** Timelines for event-based and routine health system outreach-based VAS distribution
- **b.** Supplies (vitamin A supplements, for routine health system contacts and for events)³⁴
- **c.** Supplies (non-supplement, for routine health system contacts and for events, e.g. scissors and forms)
- **d.** Human resources (e.g. trainers, VAS-related health care workers, supervisors, social mobilisation team, drivers)
- **e.** Budget (e.g. social mobilisation, per diem, transport to outreach sites, fuel)

Depending on the level of decentralisation, the national work-plan may need to include details for each district. In other cases the district work-plan may be developed by district teams then reviewed and incorporated into a master national plan with the above component parts.

Additional indicator where districts are responsible for developing their own work-plans:

 Percent of districts that submitted VAS work-plans including each of the points a-e above.

RATIONALE FOR MONITORING:

Clear and complete national and district level work-plans with activities, timelines and responsibilities defined according to national policy guidance is important to creating and sustaining an enabling programme environment for high coverage with vitamin A supplements.

OPERATIONAL DEFINITION OF THE INDICATOR

Qualitative indicator, calculated as Yes or No for the national work-plan.

Overarching indicator: A national annual work-plan exists Yes/No.

Sub-indicators if the national plan exists: these sub-indicators are based on an assessment of requirements outlined in district level annual work-plans where these exist (see District Guide). Where the programme is fully centralised, the assessment needs to be conducted at the national level.

- **a.** National VAS work-plan includes timelines for routine health system outreach and event-based distribution for each semester.
- **b.** National VAS work-plan includes vitamin A supplement supply estimates for routine health system contacts and event-based distribution

^{34.} Supply estimates generally include a buffer stock to account for variable population estimates, as specified in national guidelines.

- **c.** National VAS work-plan includes non-supplement supply estimates for routine health system outreach and event-based distribution
- **d.** National work-plan includes an estimate of human resource needs for routine health system contacts and event-based distribution
- **e.** National work-plan includes an estimate of budget required for VAS for routine health system contacts and event-based distribution

Yes/No for all a, b, c, d and e.

 Additional indicator where districts responsible for developing their own work-plan:

Number of districts submitting annual workplans

_ x100

Total number of districts implementing preventive VAS

INDICATOR TARGET

Yes for sub-indicators for each distribution system: a., b., c., d. and e.

 Additional indicator: 100% of district work-plans (where applies).

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: National work-plan for the forthcoming year.

Where districts are responsible for their own work-plan: District work-plan.

Frequency: Annually, or more frequently as needed. E.g. Where problems with budget, human resources or supplies are identified during the year then review and amend the work-plan accordingly.

ASSUMPTIONS

In defining the indicator, it is assumed that:

i. Planning is conducted in collaboration
with district management teams and based
on experience from previous semesters.

- **ii.** Previous work-plans are reviewed to identify gaps and modify estimates as indicated.
- **iii.** Each district has a management team responsible for developing a work-plan and identifying resource requirements. The national team will provide support to make amendments as justified based on monitoring indicators from the previous semester(s).

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- i. Develop and review the VAS work-plan with the district and national management teams to ensure it is in line with national guidelines and reflects expected district level requirements.
- **ii.** Provide support to district teams in developing resource estimates as needed.

Use of data:

- i. Follow up to fill any identified gaps in the work-plan or where work-plans not received.
- **ii.** Allocate supplies, budget and human resources to districts, for transfer to health facilities and event teams.
- **iii.** Respond to resource shortfalls: review work-plan and rapidly re-allocate resources where appropriate and feasible.
- **iv.** Investigate with district managers reasons for large differences between national and district resource estimates, look at actual requirements and use these to develop estimates for the forthcoming year.
- **v.** Discuss the sources of district estimates with district level management and support teams to make amendments to the allocations as needed.

RECOMMENDATIONS

The annual work-plan and estimates of timing and needs (supply, human resource and budget) should be developed with relevant partners and based on the long term multi-year strategy, on district plans and on requirements from the previous years, taking into account any known changes in the population.

The national annual work-plan should fit within a multi-year strategy for VAS, and other child health and nutrition interventions as appropriate, and provide a reference against which semester-level district micro-plans are developed and decisions can be made.

OUTPUT 1.4

The national Public Health Care (PHC) system budget includes sufficient allocation for VAS programme costs.

The majority of costs may be covered at the district level, depending on the level of decentralisation.

RATIONALE FOR MONITORING:

Allocation of VAS budget within the PHC system demonstrates national ownership and commitment to VAS, facilitates cost-sharing with other interventions delivered through the same mechanism, and provides some protection from changes in funding that may otherwise threaten implementation.

OPERATIONAL DEFINITION OF THE INDICATOR

A qualitative indicator, calculated as Yes or No

Sufficient VAS programme costs are allocated in the national PHC system budget to reach the national annual two-dose coverage targets Yes/No.

INDICATOR TARGET

Yes.

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: The national PHC system budget and VAS work-plan for the forthcoming year.

Frequency: Annually, or by semester, according to PHC system planning cycle.

ASSUMPTIONS

In defining the indicator, it is assumed that:

i. A costing exercise has been conducted for the VAS programme

ii. The national PHC budget is complete and accurately reflects national costs for implementation of VAS (as defined in the work-plan).

iii. It is clear where district level budgets are being used to support district work-plans, leaving only national costs in the national PHC budget.

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- i. Review PHC system documentation and budget at the national and district levels to ensure sufficient budget is allocated for VAS.
- ii. Advocate for VAS costing exercise as needed

Use of data:

i. Reprioritise VAS programme spending and advocate for budget increase if allocation is insufficient

RECOMMENDATIONS

VAS planning should be integrated into the broader PHC system to ensure sufficient VAS programme budget is allocated, with reference to national guidelines for VAS delivery.

Where the budget is decentralised, ensure that VAS budget allocations are sufficient to meet programme costs in district plans as needed.

OUTPUT 1.5

All VAS events and routine health system contact distribution in the last semester were conducted according to the timing and planned reach specified in district micro-plans.

INDICATOR

All districts reporting that all VAS events and scheduled routine health system outreach activities were conducted as planned in the micro-plan (e.g. started on the scheduled date, reached the planned communities), and no interruptions in preventive VAS delivery as part of routine health system contacts at health facilities in the previous semester.

RATIONALE FOR MONITORING:

To promote caregiver motivation and facilitate maximum attendance, it is important that events and scheduled routine health system outreach activities start on the communicated dates and continue for the expected duration. Health facilities also need to consistently deliver preventive vitamin A supplements, according to the guidelines.

OPERATIONAL DEFINITION OF THE INDICATOR

Assessed as the percent of districts reporting that all VAS events and scheduled routine health system outreach was conducted as planned, and all health facilities conducted consistent preventive VAS delivery through routine health system contacts, during the past semester.

Percentage of districts where all VAS events or scheduled routine health system outreach was initiated and conducted as planned (micro-plan) and health facilities implemented VAS continuously during the previous semester.

Number of districts reporting that VAS delivery was conducted as planned

x100

Total number of districts implementing preventive VAS during the semester

INDICATOR TARGET

100%

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: District VAS monitoring, coverage and supportive supervision reports. Health management information systems (HMIS) for scheduled routine health system outreach visits including VAS and for health facility-based routine health system contact distribution.

Frequency: Every semester.

ASSUMPTIONS

In defining the indicator, it is assumed that:

i. District micro-plans with dates and duration for VAS events and routine health system outreach exist and are available.

- **ii.** Health facilities are continuously distributing preventive vitamin A to eligible children attending the facility as part of routine health system contacts.
- **iii.** Supportive supervision forms include a data entry field to record relevant details (e.g. planned and actual start dates, details of any interruptions to delivery) of VAS events.

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- **i.** Investigate reasons for delayed or incomplete implementation of VAS activities in districts where this is reported.
- **ii.** Support districts where problems have been identified during the preparation period for both event- and routine health system outreach- distribution of preventive vitamin A.

Use of data:

Support districts managers to:

- i. Determine whether a more in-depth investigation of delayed or incomplete VAS activities should be conducted and, if so, what type of investigation.
- **iii.** Identify solutions and ensure timely and complete VAS intervention in subsequent semesters.

RECOMMENDATIONS

- i. Support districts where problems have been identified, in preparation for both routine outreach and event-based VAS, to foresee and overcome any obstacles to timely and complete implementation.
- ii. Ensure that national guidelines and policy support the inclusion of reporting fields in VAS event and outreach visit and in supportive supervision reports to record the planned and actual start and end dates for VAS.

OUTPUT 1.6

Coverage reports submitted to national level from all districts are complete and timely, according to national guidelines.

INDICATOR

Coverage reports submitted to the national level according to national VAS guidelines (timeliness and completeness) by all districts.

RATIONALE FOR MONITORING:

Ensuring timely and complete reporting is crucial to enable any necessary investigation and subsequent programme amendments to be made as soon as possible (to improve implementation of activities and coverage in subsequent semesters).

OPERATIONAL DEFINITION OF THE INDICATOR

Assessed as the percent of all districts where coverage reports were submitted in line with national guidelines.

Coverage reports for VAS distribution submitted to national managers according to the national guideline for reporting.

Number of districts submitting VAS coverage reports in line with national guidelines

- x100

Total number of districts implementing preventive VAS

INDICATOR TARGET

100%

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: District reports, including planned reporting date and record of receipt for complete reports at the national level.

Frequency: Every semester at a minimum. Typically due one month after the end of a semester, but may vary by delivery method and specific national guidelines.

ASSUMPTIONS

In defining the indicator, it is assumed that: i. National guidelines for VAS activities:

- **ii.** Specify the definition of "timely" and "complete" reporting
- iii. Include expected reporting schedule and data entry standards
- iv. Are available to district VAS managers.
- v. Report forms include entry fields for date of report submission and of report receipt at national level.

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- **i.** Follow up and support timely submission of complete reports every semester.
- **ii.** Investigate reasons for delayed or incomplete reporting.

Use of data:

i. Provide feedback and support to district teams to prevent delayed or incomplete reporting in subsequent semesters, as needed.

RECOMMENDATIONS

- i. Ensure reporting format and schedule are clearly defined and included in annual and semester planning documents and available to all district VAS managers.
- **ii.** Facilitate sharing of expertise and experience between districts to support best practices with reporting and other aspects of VAS delivery.

SUPPLIES

OUTPUT 1.7

All districts had sufficient stocks of appropriate vitamin A supplements for distribution to children 6-59 month olds through routine health system contacts at all times in the previous semester.

COMPONENT INDICATORS

- a. All districts had sufficient supplies of 100,000 IU capsules for routine health system contact-based delivery in the previous semester
- b. All districts had sufficient supplies of 200,000 IU capsules for routine health system contact-based delivery in the previous semester

Where only one type (dose) of capsule is used then report for that type of capsule only. Where vitamin A capsules are not used, this indicator should be "% of all districts not reporting stock-outs of vitamin A supplements, e.g. syrup, in the previous semester". The operational definition should be revised accordingly.

RATIONALE FOR MONITORING:

Sufficiency of age-appropriate vitamin A supply for routine health system contact-delivered preventative VAS³⁵ is important to ensure coverage of all eligible children and to maintain caregivers' motivation to bring a child for VAS according to the recommended schedule.

OPERATIONAL DEFINITION OF THE INDICATOR

Assessed as the percent of districts not reporting stock-outs of vitamin A supplements for routine health system contacts (facility-based and scheduled outreach) during the previous semester for:

- a. 100,000 IU (blue) capsules
- **b.** 200,000 IU (red) capsules
- a. % Districts with sufficient 100,000 IU vitamin A capsules for routine health system contact during the previous semester

Number of districts not reporting stock outs of 100,000 IU capsules (blue) for routine health @ system contact

Total number of districts implementing preventive VAS

b. % Districts with sufficient 200,000 IU vitamin A capsules for routine health system contacts during the previous semester

Number of districts not reporting stock outs of 200,000 IU capsules (red) for routine health @system contact

x100

Total number of districts implementing preventive VAS

INDICATOR TARGET

- a. 100%
- **b.** 100%

- x100

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: District VAS summary reports for delivery through routine health system contacts. Other reports from districts alerting the national level of problems during the semester. Records of VAS stock including estimated and delivered supply and order receipts.

Frequency: Every semester (minimum), more frequently where a stock-out has been reported early in the semester or coverage is low.

ASSUMPTIONS

In defining the indicator, it is assumed that:

i. District teams monitor sufficiency of vitamin A supplies for delivery through routine health system contacts according to the District Guide³⁶.

- **ii.** Sufficiency of vitamin A supply includes provision for handling and other expected losses as well as for estimated requirements for treatment doses (which will vary depending on the prevalence of certain diseases).
- iii. Records of supply orders and receipts exist.
- **iv.** District routine health system and supportive supervision VAS reports include an entry field to detail supplement stock-outs.
- **v.** Vitamin A capsules are integrated in a national supply chain management guide.
- vi. Both 100,000 IU and 200,000 IU supplement doses are distributed where capsules are used (in some countries only one or the other is used to supplement all children by combining or dividing the dose, in which case only one of the indicators a. or b. would be applicable).

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- i. Review all data sources to check the sufficiency of each type of capsule.
- **ii.** Work with district teams to investigate the cause and approximate timing of any stock-out and take corrective action.

Use of data:

- i. Use data on stock-outs with other available information (e.g. field reports) to determine the likely cause of stock-outs and to make relevant programme amendments.
- **ii.** Determine the appropriate stock of vitamin A supplements for delivery through routine health system contacts in subsequent semesters by district and adjust national and district work-plans accordingly.
- **iii.** Provide guidance and support to district VAS management teams to determine the likely cause of any stock-out and strengthen supply estimates and management systems to prevent future stock-outs.

RECOMMENDATIONS

- i. Ensure regular training and supervision at the district level to improve supply predictions and efficiency of supplement use, reduce wastage, etc.
- **ii.** Ensure district level vitamin A supplement requirements are accurately defined in semester and annual work- and micro-plans.
- **iii.** Develop a contingency plan to supply additional supplements in case of increased demand for treatment doses of vitamin A.
- **iv.** Ensure that district routine health system contact reports for VAS and supportive supervision reports include a data entry field to detail stock-outs (e.g. damaged supplies, unanticipated attendance numbers) and facilitate corrective action.

OUTPUT 1.8

All districts had sufficient stocks of appropriate vitamin A supplements for distribution to children 6-59 month olds through event-based delivery at all times in the previous semester.

COMPONENT INDICATORS

- **a.** All districts had sufficient supplies of 100,000 IU capsules for events in the previous semester
- **b.** All districts had sufficient supplies of 200,000 IU capsules for events in the previous semester

Where only one type (dose) of capsule is used then report for that type of capsule only. Where vitamin A capsules are not used, this indicator should be "All districts had sufficient supplies of vitamin A supplements, e.g. syrup, in the previous semester". The operational definition should be revised accordingly.

RATIONALE FOR MONITORING:

Sufficiency of age-appropriate vitamin A supply at events is important to ensure coverage of all eligible children and to maintain caregivers' motivation to bring a child for VAS according to the recommended schedule.

OPERATIONAL DEFINITION OF THE INDICATOR

Assessed as the percent of districts not reporting stock-outs of vitamin A supplements at events during the previous semester for:

- a. 100,000 IU (blue) capsules
- **b.** 200,000 IU (red) capsules

a. % Districts with sufficient 100,000 IU vitamin A capsules for events during the previous semester

Number of districts not reporting event-based stock outs of 100,000 IU capsules (blue)

- x100

Total number of districts implementing preventive VAS events

b. % Districts with sufficient 200,000 IU vitamin A capsules for events during the previous semester

Number of districts not reporting event-based stock outs of 200,000 IU capsules (red)

_ x100

Total number of districts implementing preventive VAS events

INDICATOR TARGET

- **a.** 100%
- **b.** 100%

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: District VAS summary reports for event-based delivery. Supportive supervision and other reports from districts alerting the national level of problems during the semester. Records of VAS stock including estimated and delivered supply and order receipts.

Frequency: Each semester (minimum), more frequently where a stock-out has been reported early in a series of event-based deliveries or coverage is low.

ASSUMPTIONS

In defining the indicator, it is assumed that, at the district level:

- **i.** District teams monitor sufficiency of vitamin A supplies for event-based delivery according to the District Guide³⁷.
- **ii.** Sufficiency of vitamin A supply includes provision for handling and other expected losses.
- iii. Records of supply orders and receipts exist.
- **iv.** District event-based and supportive supervision VAS reports include an entry field to detail supplement stock-outs.
- **v.** Vitamin A capsules are integrated in a national supply chain management guide.
- **vi.** Both 100,000 IU and 200,000 IU supplement doses are distributed where capsules are used (in some countries only one or the other is used to supplement all children by combining or dividing the dose, in which case only one of the indicators a. or b. would be applicable).

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- i. Review all data sources to check the sufficiency of each type of capsule.
- **ii.** Work with district teams to investigate the cause and approximate timing of any stock-out and take corrective action.

Use of data:

- i. Use data on stock-outs with other available information (e.g. field reports) to determine the likely cause of stock-outs and to make relevant programme amendments.
- **ii.** Determine the appropriate stock of vitamin A supplements for event-based delivery in subsequent semesters by district and adjust national and district work-plans accordingly.
- **iii.** Provide guidance and support to district VAS management teams to determine the likely cause of any stock-out and strengthen supply estimates and management systems to prevent future stock-outs.

RECOMMENDATIONS

- i. Ensure regular training and supervision at the district level to improve supply predictions and efficiency of supplement use, reduce wastage, etc.
- **ii.** Ensure district level vitamin A supplement requirements are accurately defined in semester and annual work- and micro-plans.
- **iii.** Develop a contingency plan to supply additional supplements in case of increased demand due to unpredictable causes, such as migration into an area.
- **iv.** Ensure that district event-based VAS and supportive supervision reports include a data entry field to detail stock-outs (e.g. damaged supplies, unanticipated attendance numbers) and facilitate corrective action.

OUTPUT 1.9

All districts had sufficient supplies of non-vitamin A supplement resources (e.g. scissors, reporting forms, etc.) to implement planned VAS activities³⁸ during the previous semester.

OUTPUT COMPONENTS

- a. All districts had sufficient non-vitamin A supplement supplies for routine health system-based VAS in the previous semester.
- b. All districts had sufficient non-vitamin A supplement supplies for event-based VAS in the previous semester.

RATIONALE FOR MONITORING

Sufficiency of non-vitamin A supplement supplies increases the efficiency of VAS distribution, which helps improve coverage of children and increase caregivers' motivation to bring a child for VAS according to the recommended schedule.

38. Non-supplement supplies are required for both routine health system- and event-based vitamin A distribution therefore this indicator should be used to monitor sufficiency for both purposes. However it would be expected to focus mostly on event-based and routine health system outreach delivery. The level of responsibility of the national VAS manager in monitoring this indicator will depend on the level of centralisation in the country. They may have a supporting role (in a more decentralised context) or a more direct responsibility (in a more centralised context).

OPERATIONAL DEFINITION OF THE INDICATOR

Assessed as the percent of districts which did not report insufficient supplies of non-vitamin A supplement resources required to implement planned VAS activities by both delivery methods during the previous semester.

a. % Districts with sufficient non-vitamin A supplement supplies to implement VAS through routine health system contact-based delivery as planned during the previous semester, according to the national guidelines.

Number of districts reporting sufficient non vitamin A supplement supplies for routine health system contcat delivery

x100

Total number of districts implementing preventive VAS events

b. % Districts with sufficient non-vitamin A supplement supplies to implement VAS through event-based delivery as planned during the previous semester, according to the national guidelines.

Number of districts reporting sufficient non vitamin A supplement supplies for event-based delivery

_ x100

Total number of districts implementing preventive VAS events

INDICATOR TARGET

a. 100%

b. 100%

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: District routine health system contact- and event-based VAS summary reports. Other reports from districts alerting national level of problems during the semester. Records of non-vitamin A supplement stock, including estimated and delivered supply and order receipts.

Frequency: Every semester at a minimum, more frequently where a stock-out has been reported or coverage is low.

ASSUMPTIONS

In defining the indicator, it is assumed that:

i. National guidelines, district work-plans and micro-plans include an estimate of the type and quantity of non-supplement supplies required for planned VAS through routine health system contact- and event-based distribution for the semester.

- **ii.** District teams monitor sufficiency of non-supplement supplies for routine health system contact- and event-based delivery according to the District Guide.
- **iii.** District health system contact- and event-based summary reports and supportive supervision reports include an entry field to detail non-supplement supply stock-outs.
- **iv.** Records of non-supplement supply orders and receipts exist.

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- i. Review supply records and district reports to check sufficiency of different non-supplement supplies.
- **ii.** Work with district teams to investigate the cause and approximate timing of any occurrence of inadequate non-supplement supplies and take corrective action.

Use of data:

- i. Determine the appropriate stock of non-supplement supplies required for routine health system contact- and event-based delivery in subsequent semesters by district and adjust national and district work-plans accordingly.
- **ii.** Provide guidance and support to district VAS management teams to determine the likely cause and prevent stock-outs in the future.

RECOMMENDATIONS

- i. Ensure regular training and supervision at the district level to improve supply predictions and efficiency of non-supplement supply use.
- ii. Ensure district level non-supplement supply requirements for routine health system contact- and event-based delivery are accurately defined in semester and annual work and micro-plans.
- **iii.** Develop a contingency plan to supply additional non-supplement supplies in case of increased demand due to unpredictable causes
- **iv.** Ensure that district routine health system contact- and event-based VAS and supportive supervision reports include a data entry field to detail stock-outs and facilitate corrective action.

HUMAN RESOURCES

OUTPUT 1.10

In all districts, personnel involved in VAS (routine health system contact- and event-based) have been trained and provided with refresher training according to national VAS guidelines, and staff meet minimum knowledge criteria in all districts.

COMPONENT INDICATORS

- a. Districts where all personnel involved in distributing vitamin A supplements (routine health system contact- and event-based) had been trained according to the national VAS guidelines.
- b. Districts where all personnel involved in distributing vitamin A supplements meet the minimum knowledge criteria.

Relevant personnel includes anyone involved in VAS, e.g. health workers/other national staff, or volunteers.

This indicator may not be feasible to measure in all situations, it requires supportive supervision and/or some type of qualitative staff assessment to be in place.

RATIONALE FOR MONITORING:

Regular, complete, staff training that is consistent with national guidelines, helps improve the quality of VAS implementation and reporting, especially the use of correct supplement type by age group and timeliness of reporting. It is essential that new personnel are trained when starting in the position. Further, regular refresher training is important to develop and support personnel skills and confidence, and to identify and prevent potential problems related to gaps in personnel knowledge and ability.

OPERATIONAL DEFINITION OF THE INDICATOR

Assessed as the percent of districts where all personnel involved in VAS distribution:

- **a.** Had received training/refresher training according to the national VAS guidelines
- **b.** Meet the minimum knowledge criteria for VAS.
- a. % Districts reporting that all personnel had received training/refresher training according to the national guidelines in the past six months.

districts where all VAS delivery sites had personnel trained according to national guidelines

- x100

Total number of districts implementing preventive VAS events

b. % Districts reporting that all personnel meet the minimum knowledge criteria for VAS.

districts where all VAS delivery sites had personnel who met minimum knowledge criteria

___ x100

Total number of districts implementing preventive VAS events

INDICATOR TARGET

- a. 100% (see national VAS plan)
- **b.** 100% (see national VAS plan)

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: District and supportive supervision reports, training records, training curriculum and personnel job descriptions. District health facility or community survey reports (where conducted).

Frequency: Every semester at minimum (with more in depth analysis annually or where human resource problems are identified).

ASSUMPTIONS

In defining the indicator, it is assumed that:

i. National guidelines for VAS are available at the district level and define training expectations (frequency, content and the minimum knowledge criteria).

- **ii.** Resources are available at the national and/or district level to train personnel involved in VAS distribution (indicator 1.3).
- **iii.** Training curricula and records for VAS personnel are available.
- **iv.** Information on personnel recruitment and the number of personnel trained each semester is available.

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- i. Assess whether training of personnel involved in VAS distribution is being conducted as planned (frequency and curriculum content), and that sufficient resources are available for training.
- **ii.** Compile and review training and refresher training curricula, along with training records for personnel involved in VAS distribution, as feasible.

Use of data:

- i. Provide additional support to identify the cause of gaps in training and knowledge and to then reduce these gaps.
- **ii.** Support districts with particular problems in strengthening training and respond to requests for resources, as appropriate.

RECOMMENDATIONS

- i. Ensure that all district VAS managers are aware of the expected VAS training schedule and content.
- **ii.** Include an entry field on district summary reports to report on personnel training and any training/knowledge-related concerns with VAS delivery.
- **iii.** Review district reports for any potential gaps in personnel knowledge as part of the annual review.
- iv. For districts identified as having personnel who do not meet the criteria for training and knowledge, determine the proportion of VAS sites where this is a problem, e.g. >5% VAS sites not meeting the criteria, to enable prioritisation of support. This minimum target percentage for the proportion of VAS sites per district meeting the minimum training and knowledge criteria should be defined in the national VAS plan.

OUTPUT 1.11

All districts had sufficient human resources (in accordance with national VAS guidelines) to implement planned VAS activities during the previous semester.

INDICATOR

All districts reported sufficient human resources in the previous semester.

RATIONALE FOR MONITORING:

Sufficient personnel helps ensure the efficiency and timeliness of VAS distribution and reporting. This helps improve VAS coverage for infants and children and increase caregivers' motivation to bring a child for VAS according to the recommended schedule.

OPERATIONAL DEFINITION OF THE INDICATOR

Assessed as the percent of districts reporting sufficient human resources for VAS (both routine health system contact- and event-based distribution) in the previous semester.

a. % Districts with sufficient human resources to implement VAS according to the national guidelines, in the previous semester.

Number of districts reporting sufficient human resources

- x100

Total number of districts implementing preventive VAS

INDICATOR TARGET

100%

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: Human resource requirement estimates (district and national), personnel allocation per district, job descriptions and district supervision reports.

Frequency: Annual review minimum. By semester as required (e.g. where supervisors reported a human resource problem or where coverage is low).

ASSUMPTIONS

In defining the indicator, it is assumed that:

i. National guidelines and district work-plans and micro-plans include estimates of the type and number of personnel required for VAS distribution for both routine health system contact- and event-based delivery.

- **ii.** Sufficient budget has been allocated for per diems and other human resource-related costs (indicator 1.3).
- **iii.** Records of human resource allocation and job descriptions exist at the district level.
- **iv.** Supportive supervision and health facility reports are available and highlight any insufficiency of human resources.

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- i. Review human resource and related budget allocation in partnership with district teams, to check sufficiency of each type of human resource required (and available budget) against that recommended in the national guidelines. Particular attention should be paid to districts with gaps in human resources
- **ii.** Work with the district teams to investigate the reason for any shortfall in human resources, including allocated budget, e.g. for per diems.

Use of data:

- i. Determine the appropriate human resource requirements for VAS along with allocated budget, adjust national and district work-plans as needed.
- **ii.** Support corrective action to plan, budget for and/or recruit additional personnel where needed.

RECOMMENDATIONS

- i. Ensure human resource and related budget requirements are well-defined in the national guidelines and in district micro-plans; for the expected VAS-related activities in the semester (routine health system contact and event-based).
- **ii.** Assess adequacy of allocated resources against expected requirements, including per diem costs for events. Ensure that district reports include an entry field to record any human resource or related budget shortage, to facilitate corrective action.

DEMAND/SOCIAL MOBILISATION

OUTPUT 1.12

Social mobilisation activities conducted in accordance with national and/or district plans in all districts.

COMPONENT INDICATORS

- **a.** All districts implemented social mobilisation activities in line with national guidelines and district plans.
- **b.** All districts reported that a significant percentage of caregivers attending events could recall key messages of the social mobilisation activities defined in the plans.
- c. Districts reported that a significant percentage of caregivers NOT attending events could recall key messages of the social mobilisation activities defined in the plans (only monitored when additional verification activity implemented).

APPENDIX C

RATIONALE FOR MONITORING:

Monitoring to ensure that social mobilisation activities have been conducted according to the national guidelines and the district micro-plans helps maintain or increase caregiver motivation and attendance and, consequently improves VAS coverage.

OPERATIONAL DEFINITION OF THE INDICATOR

Assessed as the percent of districts where all social mobilisation activities were conducted according to national guidelines and district gduring the past semester.

a. % Districts reporting that social mobilisation activities were all conducted according to national guidelines and the district micro-plan, during the previous semester.

- x100

Number of districts reporting that all social mobilisation conducted according to plan

Total number of districts implementing preventive VAS

b. % Districts reporting that a significant percentage of caregivers attending events (pre-defined by the national management team) could recall key messages defined in the social mobilisation plan.

Number of districts reporting adequate recall of key messages by caregivers attending events

- x100

Total number of districts implementing preventive VAS

c. % Districts reporting that a significant percentage of caregivers not attending events (pre-defined by the national management team) could recall key messages defined in the social mobilisation plan.

Number of districts reporting adequate recall of key messages by caregivers not attending events

- x100

Total number of districts implementing preventive VAS

The target percentage for caregivers in each district who could correctly recall social mobilisation messages and the criteria to assess adequate recall should be defined in the national guidelines.

INDICATOR TARGET

- **a**. 100%
- **b.** 100%
- **c.** 100%

INFORMATION SOURCE AND FREQUENCY OF REVIEW

Data sources: District reports. Exit interviews, household or community survey outcomes (as data are available).

Frequency: Annual review or more frequently as required (e.g. where district supervisors reported a likely problem with social mobilisation or where attendance at an event is reported to be lower than expected).

ASSUMPTIONS

In defining the indicator, it is assumed that:

i. National VAS guidelines include guidance on, and targets for, social mobilisation.

The targets are pre-defined by the national management team.

- **ii.** Plans reflecting national guidelines for social mobilisation exist in all districts.
- **iii.** Materials and other resources required for social mobilisation activities for VAS are available at the district level.

RESPONSIBILITIES AND USE OF DATA

National VAS Manager to:

- i. Follow up and support district level social mobilisation coordinators prior to events, in particular where problems have been identified in previous semesters.
- **ii.** Investigate the reason for any delayed, incomplete or ineffective, social mobilisation activities.

Use of data:

- **i.** Identify districts with particular problems to prioritise support in the following semester.
- **ii.** Determine where additional investigation (exit interviews, household or community surveys) may be required to further define problems and support strengthened social mobilisation in the following semesters.
- **iii.** Modify social mobilisation guidance and/or activities and related resource availability as needed.

RECOMMENDATIONS

- i. Ensure social mobilisation guidance (including expected resource requirements) is included in national guidelines and in district micro-planning documents.
- **ii.** Ensure that district summary and supervision reports include an entry field to record any caregiver awareness related issues, to facilitate corrective action.
- **iii.** Ensure that social mobilisation is designed and conducted to reach all populations and uses channels of communication appropriate to the communities targeted.

APPENDIX D

DETAILED SCENARIOS FOR CALCULATING SEMESTER-LEVEL VAS COVERAGE

EXAMPLE SCENARIO 1(i) AND 1(ii).

Calculation of national coverage for children 6–11 months of age, children 12–59 months of age and the combined age group of children 6–59 months of age for one semester. In the situation where both age groups (6–11 months of age and 12–59 months of age) are targeted to receive vitamin A through both routine health system contacts and through event-based delivery.

INSTRUCTIONS FOR NATIONAL VAS MANAGERS

Scenario 1

Both age groups are targeted to receive vitamin A through both routine health system contacts and event-based delivery (a NID event in this scenario) in all districts during the same semester. In this scenario, the national manager will aim to calculate six national coverage estimates, as follows:

- i) Coverage of 6-11 month olds through routine health system contacts during one semester
- **ii)** Coverage of 12-59 month olds through routine health system contacts during one semester
- **iii)** Coverage of 6-59 month olds through routine health system contacts during one semester

- **iv)** Coverage of 6-11 month olds through the event-based delivery during one semester
- v) Coverage of 12-59 month olds through the event-based delivery during one semester
- vi) Coverage of 6-59 month olds through the event-based delivery during one semester

These coverage breakdowns (i, ii, iv, and v) allow a national manager to assess how well each delivery method is performing in reaching each of the 6-11 and 12-59 month age groups.

The numbered paragraphs below refer to the numbers in boxes in the above example table and help explain the calculation process:

Scenario 1(i)

1. Denominators for routine health system contact and event-based delivery may be based on different sources giving different population estimates. Enter the source of denominator estimates here. In this scenario, the respective example denominator sources are: Central Statistics Office annual bulletin based on Census 2009 plus population growth estimate, and the polio/EPI programme denominator.

- **2.** Enter nationally-agreed denominators for each district for each age group and delivery method here*. For example:
- 2a) the official nationally-agreed denominator used for routine health services (Central Statistics Office with update for population growth in this scenario) should be entered in column A for each district.
- 2b) if vitamin A is also distributed through an event in the district, then list the nationally-agreed denominator (NID/EPI programme in this scenario) in column C for each district.
- **3.** Enter numerators indicating the number of children to whom vitamin A was delivered in the semester. Enter the numerator for each age group and for each delivery method separately. For example:
- 3a) The total number of children 6-11 months of age who received a supplement through routine health system contacts in District 1 in the semester was 72,400. This is the sum of the number of children 6-11 months of age reported in monthly health system reports as having received a vitamin A supplement over a defined semester (6 month period) for District 1.
- 3b) The total number of children 6-11 months of age reported in event tally sheets as having received a vitamin A supplement from all event-based delivery activities during the semester (6 month period) was 20,211 children in District 1.

- **4.** Calculate coverage by each age group for each delivery method separately. Coverage is calculated by dividing the numerator for the specific age group and delivery method over the associated denominator. **Always use the numerator and denominator that apply to the same specific delivery method and age group.** For example, coverage of children 6-11 months of age through routine health system contacts for District 1 = (numerator of children 6-11 months receiving vitamin A through routine health system contacts (column E) denominator of children 6-11 months of age targeted to receive vitamin A through routine health system contacts (column A) x 100. This works out to be (72,400/97,235) x 100 = 74%.
- **5.** In this scenario, national-level VAS coverage of children through routine health system contacts is 59% for infants 6-11 months of age and 17% for children 12-59 months of age; whereas national VAS coverage at the Polio NID events reached 13% of children 6-11 months of age and 61% of children 12-59 months of age. This breakdown allows a national manager to assess how well each delivery method is doing in reaching each age group, in each district to prioritise follow up.

^{*}If you only have estimates for the denominators for the whole age group 6-59 months of age, the denominators for each age group can be estimated. Within the age group of 6-59 months of age, the proportion of children who are 6-11 months of age is generally estimated to be 0.111 and the proportion of children who are 12-59 months of age is generally estimated to be 0.889.

Scenario 1(ii) generating VAS coverage estimates for both age groups combined

- **6.** Enter the denominator for each VAS delivery method for children 6-59 months of age by adding together the denominator for infants 6-11 months of age with that for the same delivery method for children 12-59 months of age. For example:
- 6a) 583,410 is the sum of denominators for routine health system contacts for both age groups in District 1, columns A and B from the table Scenario 1(i).
- 6b) 756,408 is the sum of denominators for event-based (NID) delivery for both age groups in District 1, columns C and D from the table Scenario 1(i).
- 7. Enter the numerators for each VAS delivery method for children 6-59 months of age by adding together the numerator for infants 6-11 months of age with that for the same delivery method for children 12-59 months of age. For example:
- 7a) 124,990 is the sum of numerators for routine health system contacts for both age groups in District 1, columns E and F from the table Scenario 1(i).
- 7b) 406,162 is the sum of numerators for event-based (NID) delivery for both age groups in District 1, columns G and H from the table Scenario 1(i).

- 8. Calculate coverage for the combined age group for each delivery method separately, at the district and the national level. Coverage is calculated by dividing the numerator for the specific delivery method over the associated denominator. Always use the numerator and denominator that apply to the same specific delivery method. For example:
- 8a) Coverage of children 6-59 months of age through routine health system contacts = (numerator of children 6-59 months receiving vitamin A through routine health system contacts ÷ denominator of children 6-59 months of age targeted to receive vitamin A through routine health system contacts) x 100. This works out to be:

For District 1 = $(124,990/583,410) \times 100 = 21\%$

Nationally = (632,806/2,650,212) x 100 = 24%

8b) Coverage of children 6-59 months of age through event-based delivery = (numerator of children 6-59 months receiving vitamin A through event-based delivery ÷ denominator of children 6-59 months of age targeted to receive vitamin A through event-based delivery) x 100. This works out to be:

For District 1 = $(406,162/756,408) \times 100 = 54\%$

Nationally = (1,677,399/3,171,468) x 100 = 53%

APPENDIX D

9. Where all districts implement approximately the same strategy of targeting both age groups through both delivery methods, it is reasonable to conduct an additional step and calculate an overall coverage estimate for the semester at the district and national levels. This figure may be useful for reporting and to feed into a calculation of two-dose annual coverage, however it has limited programmatic relevance. Coverage for each age group by each delivery method (point 5 above) is the most important information from which to assess district and national performance and decide on programme-related follow up.

Calculate the single national VAS coverage estimate for the whole age group 6-59 months of age by selecting the highest coverage figure for this age group from routine health system contacts compared with event-based delivery. For example, for District 1, event-based VAS coverage for children 6-59 months of age was higher (54%) than routine health system coverage for the same age group (21%). Therefore the overall semester coverage estimate is 54% for District 1. Similarly, event-based coverage was higher when data from all districts were combined. Therefore the overall semester coverage estimate is 53% from event-based delivery at the national level.

			Scenario 1	(i) – VAS cove	erage by deli	very method	and age group	for one semes	ster			
		Denom	inators			Num	erators			Cove	rage	
Semester-level	Rou	tine	Event	(NID)	Rou	utine	Event	: (NID)	Rou	ıtine	Event	(NID)
data by age group	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months
Data source	CSO - Census 2009 + pop growth ¹	CSO - Census 2009 + pop growth ¹	Polio/EPI Programme	Polio/EPI Programme	Combined monthly reports from district	Combined monthly reports from district	NID tally sheet district summary	NID tally sheet district summary				
Formula									1	J	K	L
reference:	A	В	C	D	E	F	G	Н	E/A	F/B	G/C	H/D
District 1	97,235	486,175	126,068	630,340	72,400	52,590	20,211	385,951	74%	11%	16%	61%
District 2	122,760	613,800	144,261	721,305	99,498	157,908	5,800	701,096	81%	26%	4%	97%
District 3	68,009	340,045	79,029	395,145	38,765	95,898	23,739	196,125	57%	28%	30%	50%
District 4	153,698	768,490	179,220	896,100	50,458	65,289	18,521	325,956	33%	8%	10%	36%
to												
District n												
NATIONAL TOTAL	441,702	2,208,510	528,578	2,642,890	261,121	371,685	68,271	1,609,128	59%	17%	13%	61%
	1	2a		2b		3a		3b	4	4	5	

^{1.} CSO = Central Statistics Office annual bulletin: e.g. Census 2009 plus estimate for population growth

Important to report and use (for programme management): four coverage estimates, columns I-L

	Scenario 1	(ii) – VAS cov	erage by com	bined age grou	ps and delivery	y method for	one semester		
Community of	Denomi	inators	Num	erators	Cover	age	Overall semester		
Semester-level data from Scenario	Routine	Event (NID)	Routine	Event (NID)	Routine	Event (NID)	coverage		
1 (i)	6-59 mont (comb	_		nths of age bined)	6-59 mont (comb	_	6-59 months of age		
Data source	CSO - Census 2009 + pop growth ¹	pop EPI/ Polio reports from sheet district							
Formula reference (from Scenario 1 (Di)):	A+B	C+D E+F		G+H	E+F/A+B	G+H/C+D	Highest coverage (M)		
District 1	583,410	756,408	124,990	406,162	21%	54%	54%		
District 2	736,560	865,566	257,406	706,896	35%	82%	82%		
District 3	408,054	474,174	134,663	219,864	33%	46%	46%		
District 4	922,188	1,075,320	115,747	344,477	13%	32%	32%		
to									
District n									
NATIONAL TOTAL	2,650,212	3,171,468	632,806	1,677,399	2.4%	53%	53%		
	6a	6b	7a	7b	8a	8b	9		

Column M (combined delivery methods and age groups) may be used as input for calculation of overall two-dose annual coverage, however it is not useful for programme management and may not be possible to generate in more complicated situations.

^{1.} CSO = Central Statistics Office annual bulletin: e.g. Census 2009 plus estimate for population growth

EXAMPLE SCENARIO 2 (i) AND 2 (ii).

Calculation of national coverage for children 6-11 months of age, children 12-59 months of age and the combined age group of children 6-59 months of age for one semester. In the situation where both age groups (6-11 months of age and 12-59 months of age) are targeted to receive vitamin A through event-based delivery (in this example a Child Health Day), however only infants 6-11 months of age are targeted to receive vitamin A through routine health system contacts.

INSTRUCTIONS FOR NATIONAL VAS MANAGERS

Scenario 2

During the semester, both age groups in all districts are targeted to receive vitamin A through event-based delivery (a CHD event in this scenario), however only infants 6-11 months of age are targeted to receive vitamin A through routine health system contacts. In this scenario, the national manager will aim to calculate four national coverage estimates as follows:

- i) Coverage of 6-11 month olds through routine health system contacts during one semester
- **ii)** Coverage of 6-11 month olds through the event-based delivery during one semester
- **iii)** Coverage of 12-59 month olds through the event-based delivery during one semester
- **iv)** Coverage of 6-59 month olds through the event-based delivery during one semester

These coverage breakdowns allow a national manager to assess how well each delivery method is performing in reaching the 6-11 month age group, and how well the event-based (CHD) delivery is performing in reaching the 12-59 month age group, in each district.

The numbered paragraphs below refer to the numbers in boxes in the above example table and help explain the calculation process. Refer to numbers and explanation for the Scenario 1 table where these still apply (for example entering denominators and numerators).

In this scenario, the respective denominator sources for routine health service contact and for event-based delivery are: Central Statistics Office annual bulletin based on Census 2009 plus population growth estimate, and Ministry of Health HMIS estimates (for CHD event).

Scenario 2 (i)

- 1. Do not enter any data for numerators for routine health system contact delivery to children 12-59 months of age since these children were not targeted, so therefore the numerator will be zero.
- 2. The numerator for 6-11 month olds reached through Child Health Day (event-based) delivery in District 4 is zero. This may be an error but it could be intentional. The VAS coverage through routine health system contacts was high in this district so it is possible the District manager decided to focus the event-related social mobilisation on caregivers bringing only their 12-59 month olds to the Child Health Day for VAS.
- **3.** Coverage calculations are calculated as for Scenario 1, however note that estimates for VAS coverage through routine health system contacts are only expected for infants 6-11 months of age (3a) and not for children 12-59 months of age (3b). Whereas coverage estimates for both age groups are expected for event-based delivery (3c).

Scenario 2 (ii)

- **4.** Estimating coverage for both age groups combined is only possible for event-based delivery since children 12-59 months of age were not targeted through routine. The example in Table Scenario 2(ii) shows combined age group data only for event-based (CHD) delivery.
- **5.** The national combined coverage estimate for event-based delivery is calculated as $(2,300,327/3,595,987) \times 100 = 64\%$

			Scenario	2 (i) - VAS co	verage by de	livery metho	od and age gro	oup for one	semester			
		Denom	inators			Nume	erators			Cov	erage	
Semester- level	Rout	tine	Event	(CHD)	Rou	tine	Event	(CHD)	Rou	tine	Event (CH	D)Event
data by age	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months
Data source	CSO - Census 2009 + pop growth ¹	CSO - Census 2009 + pop growth ¹	MOH HMIS estimate	MOH HMIS estimate	Combined monthly reports from district	Combined monthly reports from district	CHD tally sheet district summary	CHD tally sheet district summary				
Formula reference:	А	В	С	D	E	F	G	н	l E/A	J F/B	K G/C	L H/D
District 1	206,894	986,175	235,063	1,067,306	162,657	(-)	24,025	885,852	79%	(-	10%	83%
District 2	134,152	613,800	149,001	749,175	87,200	- \	25,800	376,852	65%	1	17%	50%
District 3	158,226	768,490	164,590	806,490	78,610	-	32,974	636,125	50%	-	20%	79%
District 4	56,807	340,045	68,732	355,631	52,933	\ - /	0	318,699	93%	-	0%	90%
to							1					
District n							/					
NATIONAL TOTAL	556,079	2,708,510	617,386	2,978,601	370,400	-	82,799	2,217,528	69%	-	13%	74%
						1	2	3:	a 3b		3c	

^{1.} CSO = Central Statistics Office annual bulletin: e.g. Census 2009 plus estimate for population growth

	Scenario 2(ii		by combined age gro for one semester	oup for one delivery
	Denominators	Numerators	Coverage	
Semester-level	Event (CHD)	Event (CHD)	Event (CHD)	Overall semester coverage
data by age group	6-59 months	6-59 months	6-59 months	
Data source	MOH HMIS estimate	CHD tally sheet district summary		
Formula reference (from Sceanrio 2(i)):	C+D	G+H	G+H/C+D	Not possible to combine delivery methods and age groups with this different delivery choice by age
District 1	1,302,369	909,877	70%	group scenario
District 2	898,176	402,652	45%	
District 3	971,080	669,099	69%	
District 4	424,363	318,699	75%	
to				
District n				
NATIONAL TOTAL	3,595,987	2,300,327	64.0%	
4			5	

Calculating a coverage estimate for combined delivery methods and age groups is not possible in this scenario due to (intentionally) missing numerator data for 12-59 months old for routine health system contact delivery. APPENDIX D

EXAMPLE SCENARIO 3

Calculation of national coverage for children 6-11 months of age and children 12-59 months of age for one semester. In the situation where infants 6-11 months of age are targeted to receive vitamin A through routine health system contacts only and children 12-59 months of age are targeted to receive vitamin A through event-based delivery only.

INSTRUCTIONS FOR NATIONAL VAS MANAGERS

Scenario 3

During the semester, infants 6-11 months of age in all districts are targeted to receive vitamin A only through routine health system contacts, and children 12-59 months of age are targeted to receive vitamin A only through event-based delivery (a CHD event in this scenario). In this scenario, the national manager will aim to calculate two national coverage estimates as follows:

- i) Coverage of 6-11 month olds through routine health system contacts during one semester
- **ii)** Coverage of 12-59 month olds through the event-based delivery during one semester

These coverage breakdowns allow a national manager to assess how well each targeted delivery method is performing in reaching the separate age groups in each district.

The numbered paragraphs below refer to the numbers in boxes in the above example table and help explain the calculation process. Refer to numbers and explanation for the Scenario 1 table where these still apply (for example entering denominators and numerators).

In this scenario the respective denominator sources for routine health service contact and for event-based delivery are: Central Statistics Office annual bulletin based on Census 2009 plus population growth estimate, and Ministry of Health HMIS estimates (for CHD event).

Scenario 3

- **1.** Denominators are only entered for the delivery method used for each age group.
- 2. Coverage is calculated separately for each age group by designated delivery method. There is no option to combine data for age groups and/or delivery methods.

			inators	verage by der	ivery method		rators	CJCI	Cove	erage
-	Rou			(CLID)	l l Rou			(CLID)		Ü
 Semester-level	Kou	tine	Event	(CHD)	l Kou	tine	Event	(CHD)	Routine	Event (CHD
data	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months	6-11 months	12-59 months
Data source	CSO - Census 2009 + pop growth ¹	CSO - Census 2009 + pop growth ¹	MOH HMIS estimate	MOH HMIS estimate	Combined monthly reports from district	Combined monthly reports from district	CHD tally sheet district summary	CHD tally sheet district summary		
Formula reference:	А	В	С	D	E	F	G	Н	I E/A	J H/D
istrict 1	110,492	(-)		1,191,460	79,600	-	-	1,043,804	72%	88%
istrict 2	138,224	/ - \	- \	1,107,040	93,992	-	-	879,408	68%	79%
istrict 3	272,036	-	/ - \	2,531,824	251,948	-	-	2,544,500	93%	101%
istrict 4	409,388	-	-	3,602,272	346,272	-	-	3,294,796	85%	91%
0										
istrict n			\ /							
IATIONAL OTAL	930,140	-	1	8,432,596	771,812	-	-	7,762,508	83%	92%

Important to report and use (for programme management): two coverage estimates, columns I and $\mbox{\bf J}$

Calculation of a coverage estimate for the combined age group (6-59 months of age) is not possible in this scenario

^{1.} CSO = Central Statistics Office annual bulletin: e.g. Census 2009 plus estimate for population growth

APPENDIX E

APPENDIX E ROUTINE REPORTING DISTRICT TO NATIONAL LEVEL

Routine Vitamin A Supplementation and Deworming and Nutritional Screening Zonal Reporting Format

			Child	ren 6-59	months	Supplem	nented wi	th Vitan	nin A	Child	ren 24-59	m dew	ormed		
S	Name of Woreda	Target Children 6-59m	6-1 suppler with Vit	1m mented	(E 12-5 suppler with Vit	59m mented	(A+ # of ch 6-59 supplen with Vit	ildren 9m nented	Vitamin A Coverage (%)	Children	# of chi 24-5 dewor	9m	Deworming coverage (%)	# of ch 6-59m so with bi ode M	reened lateral
									(, -,				(70)		
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14 15															
16															
17											_				
	Total														

Region:	Date of Report
Reported Zone:	Report by (Name & Signature)
Reported HC:	

Nutritional Screening for children 6-59 months and PLW # of children # of children Total 6-59m 6-59m # of children # of # of PLW screened with screened with 6-59m screened Action OTP=1, children no odema & # of # of # of received no odema & SC=2, TSF=3, with no odema MUAC MUAC # of 6-59m Screening PLW PLW Screening PLW Iron or & MUAC <11cm screened coverage 11 to <12cm 11 to >= 12cm Gorsa=4) PLW coverage Target screened screened referred Iron PLW <23cm PLW (%) counselled to TSFP М F М F М F (%) М F >=23cm folate

APPENDIX FI EVENT-BASED REPORTING TO NATIONAL LEVEL

										Da	-	eedba heet to		-		ly by	y Pr	ovir	cia	l Fo	cal	perso	on)						
rovince:																Can	npai	gn R	oun	d:		Ca	ımpa	ign D	ay:				
ıcy	DSC		Ps/D	ting of HMTs H	AlCs	Inforn	nation		eam: rmat			et childre			cine		D	aily 1				dren «		ars			Misse	ed child	drer
Name of District/Agency	Total Expected	Attended	Meeting	Who chaired the meeting	AICs working today	AICs reported	in the evening	Total teams working today	Teams	reported in the evening	Daily target children	Stock balance of OPV vials at the start of the	OPV vials given	OPV vials used	OPV vials returned	Daily target children		U-5 Months	o 44 Mantha	SILLI MOULUS		12-59 Months	-	lotal	Mobile children		e back	ren rece side of eet	
Nam	n	n	%		n	n	%	n	n	%	n	n	n	n	n	n	n	%	n	%	n	%	n	%	n	NA*	R	Total	%
																													H
																													-
	-																												L
																													L
TAL																													

Sign. of Provincial Focal Person for Control Room.....

*	NA	Children	includes	locked houses	

eporte	d by 1	eams		Tar	get child	dren and	vitami	n A dis	stributio	on reco	ord		6-4	59 mon	et & chi ths giv	en en	N	Nissec	l/unrea		child		ported		
Re	ecorde	d misse overed		Daily target children	Stock balance Electric of vitamin A	capsules at the start of a the day	GIVEN	Blue	RETURNED	GIVEN	Red	RETURNED	Daily target children	6-11 months and	12-59 months a	Total	no	the b	ren reco ack side	orded	Re	ecorde nildren	d misse covere		Issues and actions taken
NA*	R	Total	%	n	n	n	n	n	n	n	n	n	n	n	n	n	NA*	R	Total	%	NA*	R	Total	%	

APPENDIX Fii

APPENDIX FII EVENT-BASED REPORTING TO NATIONAL LEVEL

	-					-				
		Та	rget Population D	ata			Cov	erage		
Number	Name of District	6 – 11 months	12 – 59 months	6 – 59 months	6 – 11 month olds received vitamin A	Coverage 6-11 months (%)	12-59 month olds received vitamin A	Coverage 12-59 months (%)	6-59 month olds received vitamin A	Coverage 6-59 months (%)
		Α	В	С	D	D/A	E	E/B	D+E	D+E/C
1										
2										
3										
Region 1										
4										
5										
6										
7										
8										
9										
10										
Region 2										
11										
12										
13										
14										
15										
16										
Region 3										
17										
18										
19										
20										
Region 4										
21										
22										
23										
24										
25										
26										
Region 5										
27										
28										
29										
30										
Region 6										
TOTAL										

APPENDIX G

EVENT BUDGET PLANNING TOOL

	Number	Number Units/Number Days	Unit Cost	Total
HUMAN RESOURCES - Per Diems	A	В	C	A'B'C
National Supervisors				
National Communication Supervisor				
National Monitoring Supervisor			100	
Local Mobilisers			-	
Communication Focal Points				
Local Animators				
Community Volunteers				
Data Managers				
Central-level Coordinators				
TRAINING				
Vaccination Teams				
District Supervisors				
Local Mobilisers				
MEETINGS				
National Planning Meeting				
Local Meetings with Community Leaders				
Review Meetings				
	_			
REFRESHMENTS	_	_		
Refreshments for District Supervisors			-	
Refreshments for District Coordinators			_	
Refreshments for District Drivers	_	-		
Refreshments for Vaccination Teams			-	
Refreshments for Regional Directors				
Refreshments (or Regional Drivers				
FUEL and TRANSPORTATION				
District Level				
Motorcycle Rental for Vaccination Teams				
Fuel for Motorcycles			-	
Vehicle Rental for Districts				
Fuel for District Supervisors				
Regional Level				
Vehicle Rental for Regional Supervisors				
Fuel for Regional Teams				
National Level				
Vehicle Rental for National Supervisors				
Vehicle Rental National Data for Monitoring Supervisors				
Vehicle Rental for National Communication Supervisors				
Fuel for all National Supervisors				
SOCIAL MOBILISATION AND COMMUNICATION				
Mass Media				
Television Spots				
Radio Spots				
Local Communication Activities				
Briefing Session for Local Journalists and Radio				
Briefing Session for Local Animators				
Local Radio Spots		- 17		
SUPPLIES				
Monitoring Forms - Photocopy				
Chalk, Scissors, Pens				
TOTAL	_	1		

APPENDIX H

NATIONAL EVENT ACTION PLAN

							:			
ſ			MARCH	CH			AP	APRIL		
	ACTIVITIES	w1	w2	w3	w4	w1	w2	w3	w4	Comments
		TECH	INICAL	SUB-CO	TECHNICAL SUB-COMMITTEE	33				
1	Develop an Action Plan for Polio Plus NID (deworming and VAS)									
2	Organise meetings for the National Polio Plus Committee									
3	Draw up the application for the Polio Plus campaign for April									
4	Share the budget request with the partners									
5	Present the Action Plan to the Ministry of Health									
9	Identify national supervisors and consultants									
7	Train the national supervisors and consultants									
8	Organise the departure of the national supervisors									
9	Organise the cross-border preparations (trainings, cross border deployments)									
10	Participate in the training for the vaccinators and local supervisors									
11	Implement the Polio Plus campaign									
12	Organise the Mop-Up sessions for the low coverage areas									
13	Debrief with the national supervisors and consultants									
14	Present the results of the Polio Plus campaign to the Ministry of Health									
	OS	CIAL MC	BILISA	TION S	UB-CON	SOCIAL MOBILISATION SUB-COMMITTEE				
15	Organise briefings for national media									
16	Organise an information session with the network of NGOs									

17	Organise an information session with members of Civil Society Organisation			
18	Identify national communication supervisors			
19	Organise the briefing for the national communication supervisors			
20	Organise the briefing for the members of the documentation team			
21	Ensure the deployment of the national communication supervisors			
22	Organise the inauguration launch for the Polio Plus campaign			
23	Coordinate all communications activities			
		LOGISTICS SUB-COMMITTEE		
24	Develop a logistics plan for the Polio Plus campaign			
25	Receive all the management tools, marking pens, chalk, forms, brochures, t-shirts, hats and banners for the Polio Plus campaign			
26	Distribute all the management tools, marking pens, chalk, forms, brochures, t-shirts, hats and banners for the Polio Plus campaign			
27	Deliver the vaccines and other commodities to the regional depots			
28	Return all unused vaccines			
		FINANCE SUB-COMMITTEE		
29	Mobilise national resources			
30	Receive the funds from the partners and the government			
31	Make the campaign funds available to the districts			
32	Receive all supporting documents			

APPENDIX I

VITAMIN A CAPSULE PLANNING TABLE

MIL			
m#ili		ALCOHOL MAN TO A STATE OF THE S	
mai	DET ORDUE - CHILDREN (I TO MENON) HIS OF AGE. PHYLACTIC Needs for Semester 1 (January - Janua)	100,000 fU (Bluet Capylins	700,000 to (Red Capability
1	Target population for synnihosocial delivery	D'	4
9	is this National or Sut-national?	Sibratoris	Drop Down Los
4	Please provide the number of districts determing through Compagn cryle executs. What source was used to obtain population examples when tilling in the form Hor VAS supply.		
	(oraciding?	Grop Down List	Drop Down List
5	If other, please specify		
2.1	Expected coverage Brough EVENT-based delivery (i.e. during a line bound period e.g. child health- stay/versi, Massies SIA: Point NID1 (%)	176	100
2	What is the murn type of event to be used in this semester?	Orep Down List	Drep Down List
21	If other please epicify	The second second second	DISC FORMED
3	In what month is distribution expected to start?	Drop Down List	Drop Down List
17	Target population for routine feasifit system sorrtacts	Drop-Down Last	Direct Down List
13	is the National or Sub-national?	Confirmation	THE DOWN THE
3.4	What source was used to obtain population extremes when filling in this form for NAS supply	binimin of a	No. (No. of the last of
	forecasting?	Grop Down List	Dreg Down Lat
3.5	If other, please specify		
1	Expedied coverage through ROUTINE HEALTH SYSTEM CONTACTS () a prophylacte coverage during routine yields to the health system during the entire period between January & June) (%)	1%	
id	Constitute control of a land to be stated that the stated that	9-	
41	Expected gapsule needs for prophyladic distribution		
	PHYLACTIC Needs for Semester 2 (July - December)		
u.	Target population for event-based delivery	D D	Down the country
2	Is the National or Sub-national?	Drop Down List	Drup Down List
1.4	What source was used to obtain population estimates wren filling in the form I for VAS expoly	Dank Discoving	Para March Co.
	Torresing?	Drop-Down Est	Drop Down List
5	It other, please specify		
13	Expedied coverage through EVENT-based delivery (i.e. during a time abound period e.g. child feelth- say/week, Macalles SIA, Polic NID) [%]	0.00	79V
1.2	What is the main type of event to be used in this serventer?	Oreo-Down Last	Drop Down List.
21	If other, please specify		
2.3	in what month is distribution expected to start?	Drop-Down List	Drop Down LsM
3.1	Target population for routine freath system contacts	Date Project of	Fine Chain tint
12	is this National or Sub-national?	Orog Down Ltd.	Drop Down List
3.4	What source was used to obtain population; intimates when filling in the form for IMS accent tomosting?	Strop Down List	Circly Diswin Line
3.5	If citivit, pleuse specify		
61	Expected coverage through ROUTINE HEALTH SYSTEM CONTACTS (i.e. prophylindin powrange during fourtine visits to the fealth system during the entire period between July & December) (%)	796	Pi Pi
5.1	Expected capsular mandy for prophyladic distribution	D.	-
ν,			
Treat	ment Needs for 2016		
Treat	VACS for TREATMENT OF MEASLES, XEROPHTHALMIA	D.	- 4
Treat	VACS for TREATMENT OF MEASLES, XEROPHTHALMIA VACS for TREATMENT OF SAM AND MAM	D.	- 4
Treat	VACE for TREATMENT OF MEASLES, XEROPHTHALMIA VACS for TREATMENT OF SAM AND MAM SALICIDE Requirements		8 8
Treets 1 2 4 Hand	WAGs for TREATMENT OF MEASLES, XEROPHTHALMIA WAGs for TREATMENT OF SAM AND MAM Subtrict Repairments Sing Losses (valuality up to 5% but more may be requisited if electrics)	D.	
Treat	VACE for TREATMENT OF MEASLES, XEROPHTHALMA VACS for TREATMENT OF SAM AND MAM Suicitor Requirements Ing Losses Handling losses (usually up to 5% but more may be required if mending) (ii) Confirm no handling losses in resided by choosing "Confirming handling loss is 0 %" on the drop	D	
Treets 1 2 4 Hand	WACs for TREATMENT OF MEASURES, XEROPHTHALMAN WACs for TREATMENT OF SAM AND MAN Subtotal Requirements Was before Requirements Was bosses Handling losses (unusity up to this but more may be required if needing) (ii) Confirm to handling losses is needed by choosing "Confirming handling task is 0"%" on the drop does fall	D D Drop Down Last	Drop Down Lett
Treets 1 2 4 Hand	WAGs for TREATMENT OF MEASLES, XEROPHTHALMIA WAGs for TREATMENT OF SAM AND MAM Subtrial Repulsiments ling Losses (valuatily up to the bad more may be required if needles) (ii) Confern no handling losses is needed by choosing "Confirming handling loss is 0"%" on the drop down field Subtrial Requirements, including territing overlage.	D	
Treet:	WACs for TREATMENT OF MEASURES, XEROPHTHALMAN WACs for TREATMENT OF SAM AND MAN Subtotal Requirements Was before Requirements Was bosses Handling losses (unusity up to this but more may be required if needing) (ii) Confirm to handling losses is needed by choosing "Confirming handling task is 0"%" on the drop does list.	D D Drop Down Last	
Treet:	WAGs for TREATMENT OF MEASLES, XEROPHTHALMIA WAGs for TREATMENT OF SAM AND MAM Subtrial Repulsiments ling Losses (valuatily up to the bad more may be required if needles) (ii) Confern no handling losses is needed by choosing "Confirming handling loss is 0"%" on the drop down field Subtrial Requirements, including territing overlage.	D D Drop Down Last	
Treet:	WAGs for TREATMENT OF MEASLES, XEROPHTHALMIA WAGs for TREATMENT OF SAM AND MAM Subtrial Repulsiments ling Losses (valuatily up to the bad more may be required if needles) (ii) Confern no handling losses is needed by choosing "Confirming handling loss is 0"%" on the drop down field Subtrial Requirements, including territing overlage.	D D Drop Down Last	
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