Module 13: How to organize effective polio NIDs and measles SIAs
### Mid-Level Management Course
**for EPI Managers**

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Mid-Level Management Course for EPI Managers

BLOCK V: Supplementary immunization

Module 13: How to organize effective polio NIDs and measles SIAs
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Abbreviations and acronyms

AD auto-disable (syringes)
AEFI adverse events following immunization
ACSM advocacy, communication and social mobilization
AVW African Vaccination Week
CBO community-based organization
CSO civil society organization
cMYP comprehensive multi-year plan
EPI Expanded Programme on Immunization
FBO faith-based organization
GAPPD Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea
Gavi Global Alliance for Vaccines and Immunization
ICC interagency coordinating committee
IEC information, education, communication
ITN insecticide-treated bed net
M&E monitoring and evaluation
MOH ministry of health
MNTE maternal and neonatal tetanus elimination
MR measles–rubella
NCC national coordinating committee
NGO nongovernmental organization
NID national immunization day
OPV oral polio vaccine
PIRI periodic intensification of routine immunization
RCM rapid convenience monitoring
RED/REC Reaching Every District/Reaching Every Community
RI routine immunization
RSPI Regional Strategic Plan for Immunization (2014–2020)
SIAs supplementary immunization activities
SNID subnational immunization day
TT tetanus toxoid
VVM vaccine vial monitor
VPD vaccine-preventable disease
WCBA women of childbearing age
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<th><strong>Activity</strong></th>
<th>Relevant intervention to implement each strategy, distributed in time and space in the workplan. It is a task or a set of interrelated tasks aimed at generating a product or a result.</th>
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<td><strong>AEFI</strong></td>
<td>Any untoward medical occurrence which follows immunization and which does not necessarily have a causal relationship with the usage of the vaccine.</td>
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<td><strong>Annual plan</strong></td>
<td>A plan which covers period starting January and ends in December of each year; in some countries, however, the annual planning cycle may differ.</td>
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<td><strong>Dropout</strong></td>
<td>A comparison of the number of children or women who start receiving immunization and the number who do not receive later doses for full immunization.</td>
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<td><strong>Evaluation</strong></td>
<td>A periodic assessment of overall programme status: performance, effectiveness and efficiency. It is linked to policies, programme processes, systems under which the programme operates, strategic choices, outcomes and impact.</td>
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<td><strong>Hard-to-reach (inaccessible) population</strong></td>
<td>People living in remote areas difficult to access throughout the year or during certain periods of the year (e.g. during the rainy season).</td>
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<td><strong>Indicator</strong></td>
<td>A variable that is used to measure progress towards the achievement of targets and objectives. It is used to compare performance in terms of efficiency, effectiveness and results. It is also used to measure impact of interventions.</td>
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<td><strong>Immunization coverage</strong></td>
<td>The proportion of vaccinated individuals among the target population.</td>
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<td><strong>Micro-plan</strong></td>
<td>Translation of an annual plan of work into detailed operational plans usually at district (or health facility) level indicating specific activities, implementation schedule, name of the responsible persons and needed human, material and financial resources and their source.</td>
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<td><strong>Missed opportunity</strong></td>
<td>When a health worker fails to use every contact with women or caregivers to immunize a child or a woman.</td>
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<td><strong>Monitoring</strong></td>
<td>A systematic and continuous process of examining data, procedures and practices to identify problems, develop solutions and guide interventions. Monitoring is conducted on a regular basis (daily, weekly, monthly and quarterly). It is linked to implementation of programme activities. The information collected is used to direct programme activities on continuous basis.</td>
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<td><strong>Objective</strong></td>
<td>A quantifiable product or a positive change expected from implementation of a plan. It is the end result a programme, project or institution seeks to achieve.</td>
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<td><strong>Performance</strong></td>
<td>Level of fulfilment of operational capacity of a programme or a person.</td>
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<td><strong>Strategic or multi-year plan</strong></td>
<td>For the purpose of this module, multi-year plan covers a period of five years. The plan provides mid-term strategies and resource potentials for achieving strategic goals and objectives (e.g. EPI routine coverage levels exceeding 80% or arriving at certification status of polio eradication, etc.).</td>
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1. Introduction

1.1 Context

The Expanded Programme on Immunization (EPI) is a key global health programme. Its overall goal is to provide effective and quality immunization services to target populations. EPI programme managers and staff need to have sound technical and managerial capacities in order to achieve the programme’s goals.

The immunization system comprises five key operations: service delivery, communication, logistics, vaccine supply and quality, and surveillance. It also consists of three support components: management, financing and capacity strengthening.

National immunization systems are constantly undergoing change, notably those related to the introduction of new vaccines and new technologies, and programme expansion to reach broader target populations beyond young children. The EPI programme also faces external changes related to administrative decentralization, health reforms, as well as the evolving context of public-private partnerships (PPPs) for health, among others.

To ensure the smooth implementation of immunization programmes, EPI programme staff have to manage these changes. This requires specific skills in problem-solving, setting priorities, decision-making, planning and managing human, financial and material resources as well as monitoring implementation, supervision and evaluation of services.

National immunization programmes (NIPs) operate within the context of national health systems, in alignment with global and regional strategies. For the current decade, 2011–2020, the key global immunization strategies are conveyed through the Global Vaccine Action Plan (2011–2020) (GVAP) and the African Regional Strategic Plan for Immunization (2014–2020) (RSPI).

These strategic plans call on countries to:

- improve immunization coverage beyond current levels;
- complete interruption of poliovirus transmission and ensure virus containment;¹
- attain the elimination of measles and make progress in the elimination of rubella and congenital rubella syndrome;² and
- attain and maintain elimination/control of other vaccine-preventable diseases (VPDs).

The key approaches for implementation of the GVAP/RSPI include:

- implementation of the Reaching Every District/Reaching Every Community (RED/REC) approach and other locally tailored approaches and move from supply-driven to demand-driven immunization services;
- extending the benefits of new vaccines to all;
- establishing sustainable immunization financing mechanisms;
- integrating immunization into national health policies and plans;
- ensuring that interventions are quantified, costed and incorporated into the various components of national health systems;
- enhancing partnerships for immunization;
- improving monitoring and data quality;
- improving human and institutional capacities;
- improving vaccine safety and regulation; and
- promoting implementation research and innovation.

The RSPI promotes integration using immunization as a platform for a range of priority interventions or as a component of a package of key interventions. Immunization is a central part of initiatives for the elimination and eradication of VPDs, and of the integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD) by 2025.

It is understood that while implementing the above strategies, EPI managers will face numerous challenges and constraints that they need to resolve if the 2020 targets are to be met. Building national capacity in immunization service management at all levels of the health system is an essential foundation and key operational approach to achieving the goals of the global and regional strategic plans.

In view of this, the WHO Regional Office for Africa, in collaboration with key immunization partners such as the United Nations Children’s Fund (UNICEF), United States Agency for International Development (Maternal and Child Survival Program) (USAID/MCSP), and the Network for Education and Support in Immunisation (NESI), have revised the Mid-Level Management Course for EPI Managers (MLM) training modules. These modules are complementary to other training materials including the Immunization in Practice (IIP) training manuals for health workers and the EPI/Integrated Management of Childhood Illnesses (IMCI) interactive training tool.

This module (13) titled *How to organize effective polio NIDs and measles SIAs* is part of Block V: Supplementary immunization.

1.2 Purpose of the module

The purpose of this module is to provide guidance for immunization programme managers and the other course participants (teachers in training institutions, partners, etc.) on the operational aspects of planning and implementing high quality supplementary immunization activities (SIAs) for the control of VPDs, and on the monitoring and evaluation of SIAs.

1.3 Target audience

This module is intended for EPI managers at national, regional and district levels. Partners, teachers at health training institutions and those involved in the planning and implementation of SIAs can also use it as a learning tool.

1.4 Learning objectives

At the end of this module, participants should be able to:

- Describe the principles of VPD control and the role of SIAs.
- Discuss the various levels of planning in SIAs.
- Use the key elements of logistics, training, communications and social mobilization, as well as monitoring, in planning for and preparing SIAs.
- Develop a sound SIAs macro-plan.
- Critically appraise a district level SIAs micro-plan.
- Develop a communications plan for SIAs.
- Design and implement a monitoring system for SIAs.

1.5 Contents of the module

This module contains the following sections:

1.6 How to use this module

To ensure effective use of the module, the following approach is proposed:

- Read the relevant text of the reference modules.
- Follow the audio-visual presentations by the facilitators.
- Ask for necessary clarifications.
- Discuss the key concepts in plenary session.
- Go through the relevant exercises/case studies individually or in small groups.
- Exchange your findings with other colleagues and the facilitators.

To master the details of each step, participants should move systematically from one exercise to another. This module can also be used as reference material by all stakeholders in the health sector.
2. Principles of vaccine-preventable disease control and the role of SIAs

The control of all vaccine-preventable diseases involves the following:

- Provision of routine scheduled doses of vaccine.
- Provision of supplementary doses of vaccine through mass vaccination of persons in eligible population groups to close immunity gaps.
- Conducting high quality disease surveillance.
- Providing case management depending on the goals of the control programme and the type of diseases.
- Conducting mop-up vaccination efforts in areas of known circulation of the etiologic agent, to meet vaccination requirements for travellers to endemic areas, etc.

Both the RSPI and GVAP are intended to improve harmonization in eliminating inequities in access to immunization services within countries and across regions. Efforts to ensure that everyone is reached with immunization services will require the political and financial commitment of all stakeholders. Immunization can be delivered through routine services and/or supplementary immunization activities (SIAs). Most countries use a combination of these approaches in order to respond appropriately to changes in disease patterns or to rapidly increase herd immunity through high immunization coverage. Expanding the benefits of immunization to population groups other than infants and women of childbearing age (WCBA) – for example, to older children for booster doses and to adults for epidemic prevention and control – has the potential to prevent high morbidity and mortality.

In the past, the distinctions between routine immunization (RI) and campaigns appeared clear and straightforward. For RI, the general objectives are to achieve high coverage with all antigens in the target group of children and with tetanus toxoid (TT) in pregnant women. By contrast, vaccination campaigns generally seek to reduce the transmission of particular selected diseases in an age group (of children) that is expanded for the duration of the campaign. However, campaigns to support the maternal and neonatal tetanus elimination (MNTE) usually provide at least three doses of TT to WCBA who ordinarily have very limited access to health services.

At the other end of the continuum, national or subnational immunization days (NIDs and SNIDs), or SIAs as they are also known, are often multi-intervention activities that use the SIAs platform to provide vitamin A, insecticide-treated nets (ITNs) and other commodities or services that can be provided on an occasional basis.

Falling between routine activities and campaigns are periodic events whose aim is to boost routine coverage, that is, increase doses of some or all vaccines in children under one, as well as among pregnant women. These activities are called periodic intensification of routine immunization (PIRI). These activities are time-limited and are intended to augment RI, not replace it. They may also provide other health interventions. Alternatively, such events may take the form of communication or information campaigns to increase community support and demand for RI. The best example of the latter is African Vaccination Week (AVW), an annual event that takes place over a period of one week, in line with the global initiative to boost community awareness and use of immunization services.
MLM Module 13: How to organize effective polio NIDs and measles SIAs
3. Planning SIAs

The planning of SIAs starts with the development of a macro-plan, to be used primarily as a means to define the objectives and expectations of the planned activity, but also to bring partners and stakeholders together around the same objectives and to mobilize resources. The SIAs should be included in the comprehensive multi-year plan (cMYP) and budgeted for.

The macro-plan should be developed clearly defining the tasks, responsibilities and deadlines at all levels at least 12–18 months in advance. The plan needs to be continuously updated and shared with partners at different levels. A spreadsheet (Excel or other) can be helpful to organize the data on the basis of dates, persons, tasks, etc.

A plan should be organized by category of activities (e.g. social mobilization, logistics, training) and should list specific tasks (e.g. “Contact the radio station”, “Repair the refrigerated truck”, “Print training materials”) under each category. A plan that is too vague and too general will rarely be followed up.

Key groups to contact during the planning of mass vaccination campaigns or SIAs:
- government officials at all administrative levels
- district, village and ward development committees
- health service providers, doctors, clinics (government and the private sector)
- medical and specialization associations
- local organizations, mothers’ groups, parent teacher associations
- all schools and preschools (e.g. nursery schools)
- religious organizations, faith-based organizations
- volunteer groups, community-based organization (CBOs)
- Rotary and Lions clubs, Red Cross and Red Crescent societies
- local partners, NGOs, line ministries (education, local government, water and sanitation, etc.).

3.1 Target population for SIAs

Supplementary immunization activities should reach the members of the population who are most vulnerable to the targeted disease (such as measles, poliomyelitis, yellow fever or meningitis) in order to reach the disease eradication and elimination goals.

All children and adults in the target age group should be vaccinated, regardless of their history of vaccination or illness. This eliminates screening and provides protection for the intended target age group who have not developed immunity with their initial doses of vaccine, thus giving them another opportunity to become protected. Even if a child has received the routine dose of vaccine a few days earlier, it will still be eligible for the SIAs dose. This does not increase the risk of adverse events related to the vaccine.

3.2 Duration of SIAs

To ensure that the campaign is well prepared, the planning of SIAs may take some time but the actual vaccination activities are conducted within a short period to maintain the momentum and avoid unnecessary disruption of routine activities of health services. Activities often take place over four to seven days. Most countries initiate activities at the end of the working week, and use the weekend as well to conduct mass vaccination. This is to help busy parents and caregivers in bringing their children and targeted adults for services during the weekend break. In the first days of the SIAs, it helps to deploy more teams to densely populated areas to help deal with the workload. In general, the more health workers available to vaccinate, and the better the logistics preparation, the shorter the duration SIAs need be.
3.3 Target areas for SIAs

It is strongly recommended that SIAs be conducted in large, contiguous districts or ideally nationwide. In the absence of resources needed to launch nationwide SIAs, a “rolling” approach can be adopted where SIAs are conducted in smaller but contiguous regions, eventually covering the whole area within the shortest possible timeframe.

Exercise 1

For all groups.
Task 1: Participants brainstorm on which stakeholders and partners to invite during a national consensus-building meeting to initiate the planning of a measles mass vaccination campaign. Each proposal for invitation should be justified by the group.

Task 2: Participants develop an outline and key areas for a plan of action for national measles SIAs. The facilitator asks groups to present the results of their discussions to the plenary.

3.4 National level planning

Macro-planning at national level helps to develop realistic budget estimates to secure policy level commitment and mobilize resources; obtain commitments from key partners; and order vaccines, cold chain equipment and related supplies.

The national level planning process has to include a thorough review of previous performance in order to highlight best local practices that have been associated with successful outcomes in the past and allow for adoption and scaling up. The plan has to ensure that these practices will be scaled up and rigorously implemented.

At national level, planning for SIAs includes the following elements:

- Obtaining the go ahead from policy-makers.
- Soliciting high-level political commitment.
- Involving the EPI interagency coordinating committee (ICC).
- Conducting stakeholder mapping and identifying key approaches to engage various stakeholders.
- Establishing appropriate intersectoral subcommittees (e.g. planning, social mobilization, logistics, monitoring and evaluation, resource mobilization, training, etc.).
- Resource mobilization strategies and possible sources including partner mapping at all levels.
- Developing a plan of action that specifies the target population, target area, timelines for the various activities.
- Developing training materials/guidelines, job aids, etc.
- Developing social mobilization and communication materials to create awareness.
- Developing logistics planning and monitoring tools.
- Conducting micro-planning workshops.
- Organizing district-level training.
- Procurement of vaccines and other supplies.
- Distribution of vaccine, supplies and other campaign materials to national and subnational levels.
- Developing strategies to reach hard-to-reach populations.

The proposed budget in the national level macro-plan is expected to address the above issues adequately. A budgeted macro-plan with a timeline to be used for resource mobilization should be discussed within the ministries of health and finance to decide the allocation of resources for the planned SIAs. This is easier if the SIAs’ plan is already included in the budgeted cMYP. See Annex 1: Steps and timeline for planning high quality measles SIAs.

Coordination is essential to ensure that all necessary steps in a campaign are taken in a timely, well-coordinated and transparent manner. Setting up a coordination structure, comprising following elements, should be the first step in SIA preparations:

- Immediate formation of a task force/steering committee at all levels (provincial and district) with representatives of the ministry of health and partners (WHO, UNICEF, Rotary International, religious leaders, minority groups and other key partners).
- Assignment of smaller technical subcommittees to deal with logistics, social mobilization, fundraising, etc.
- Ensuring proper information sharing, orally as well as by distributing minutes of meetings, between the subcommittees themselves and with the task force is critical.
3. Planning SIAs

- Regular scheduled meetings should be held as follows:
  - On a monthly basis, or when required to deal with specific problems; the task force should meet to discuss the general outline of the campaign, workplan, key responsibilities, progress in the preparations, major obstacles and contingency plans.
  - A weekly meeting of the subcommittees to ensure smooth operational preparations and quick problem-solving.
  - The meeting of the subcommittees becomes more frequent – daily – during the last two weeks before the start of the campaign. This meeting is critical to streamline the final preparations.
  - Each meeting should function on the basis of a number of standard procedures: simple agenda, minutes, action points from previous meetings, progress, problems encountered, proposed solutions, new action points with responsibilities and deadlines.

- Assigning operations rooms with clearly visible and updated workplan and maps adapted to the relevant level:
  - At central and regional level the charts and maps should indicate key surveillance data, routine EPI and SIAs indicators, target populations, itineraries for vaccine distribution, districts with specific risks, places requiring cross-border coordination.
  - At district level, the maps should indicate the occurrence of the targeted disease, key surveillance data, SIAs and EPI routine indicators, itineraries for vaccine distribution, areas with specific high risks, places requiring cross-border coordination, areas with unclear delimitation.
  - At health centre level, the maps should display the occurrence of the targeted disease, specific risk groups, distances, vaccine distribution points, transit points for travellers (bus and railway stations, airports, police checkpoints, entry and exit points of main roads), other relevant landmarks (mosques, churches, schools, markets, etc.), transport itineraries and target areas for supervisors and teams.

- Preparing specific workplans for each level (central, regional, district and health centre) which clearly define persons, tasks, responsibilities and deadlines at the various levels is of paramount importance. The plans need to be continuously updated and shared with partners.

3.5 Micro-planning

The micro-planning exercise is a bottom-up approach of planning that should start at the district level. This will be one of the key activities to ensure the planning of the campaign lays out all operational aspects of an SIA at the district and lower levels. It is the translation of the national macro-plan to the local situation. This exercise should try to come up with valid and realistic estimates of the resource needs based on the target population and the reality on the ground with regard to existing and locally available human and material resources. The opportunity should be maximally used to look into the cold chain status and waste management issues. The involvement of other ministries, nongovernmental organizations (NGOs), and faith-based organizations (FBOs), civil society groups and other stakeholders in the planning stage helps to pull resources that normally may not be readily available.

3.5.1 Information about assigned catchment areas

Guidelines for preparation of the micro-planning workshops should be provided in advance so that participants come to the workshop with the following information regarding their specific catchment areas:

- Target population by community; percentage of population in rural and urban zones.
- Cold chain situation: equipment numbers, locations, availability of alternative sources from private or other sectors.
- Number of vehicles and their types, number of health workers, volunteers that can be mobilized locally.
- A list of traditional and potential new partners (organizations, sectoral offices, private institutions, etc.) working at local level, and their potential contributions to the SIAs.
- Daily roadmap of each vaccination team and each supervisor.
- Distances to position vaccines and devices, as well as other inputs in the region/district.
- Hard-to-reach areas and populations (hesitant groups, migrant populations, transit populations), with suggested solutions to reach them.
- Maps illustrating all the above.

The national level should also clarify that the review and synthesis of micro-plans, should be done at provincial/state and district/local government levels. This may include some upward or downward revision of the district level planning figures (in consultation with the lower levels) for the sake of consistency, and to address any previously unforeseen factors. Micro-planning exercises should include the mapping of service delivery posts, identification and mapping of high-risk areas and
3.5.2 Requirements for successful SIA micro-planning

- Delegation of planning responsibility to the appropriate administrative level (e.g. subdistrict or health centre) where the activities will take place. Include the supervisors in the planning!
- The national standards (number of children/team/day, fuel consumption of vehicles, daily mileage for vehicle, local means of transport etc.) should serve as guides, rather than prescriptions, and be adapted to local constraints. The adapted plans should be communicated to the higher levels to finalize the budget.
- Meetings should be held with village leaders (councillors in urban areas), and influential members of society to gain insights into what will work best as well as involve these people in the planning itself and in the selection of a member of their community as a team member.
- Meetings should also be held with other government ministries, NGOs, associations, private companies, educational institutions, community leaders, religious leaders and any other sector that might be able to give support to the campaign in terms of money, means of transportation, cold chain, staff, knowledge, etc.
- Plans should be based on local conditions, accessibility, geography, population movements, working hours (when people are at home), culture, etc. in the catchment area.
- Micro-plans must pay particular attention to special groups mentioned below and in the risk areas.
- Micro-plans must include epidemiology based social mobilization activities (distribution, location, size of target population, etc.).
- Micro-plans need to include details on: numbers of teams, supervisors, cars, boats, etc.; areas to be covered by day per supervisor and teams; special areas like bus and train stations, markets, schools, brick kilns, border crossings; special events like feasts, religious events, etc.; information on accessibility by season; contacts with community members, NGOs, associations, private companies, etc.

Evaluations in many countries show that the same population groups are missed by the routine programme as well as by SIA campaigns. Missed populations should not be equated with remote populations. Everywhere people are missed, because the target population is underestimated or health staff target a certain number of children rather than a geographic area.

3.5.3 Critical steps in micro-planning

- Start with making a workplan at (sub) district level laying out clearly the activities that need to take place with deadlines and responsibilities.
- Set up a coordination structure: persons, responsibilities, meeting schedule and operations room.
- Obtain maps from the area and indicate distances, population spread, landmarks, borders, population movements, seasonal particularities (floods, etc.). Maps can be simple road maps or can be provided by veterinary services, ministries, statistical offices, etc.
- Obtain a list of potentially useful ministries (defence, home affairs, transport), demographic and political institutions, churches, NGOs and other useful organizations. Contact them officially for contributions like means of transport, staff, security, cold chain, early enough.
- Ensure that all are regularly involved, or, to prevent overloading of meetings, at least inform them of major developments, especially if their services are requested.
- Calculate the target population at the level of the lowest planning unit using experience from previous campaigns, monitoring data, data from RI, or census data.
- Using the national guidelines on the number of children to be immunized per team and per day, calculate the approximate number of house-to-house teams, supervisors, number and types of means of transport in urban, semi-urban and rural settings. Use these numbers as guidance only and adapt them to the local realities.
- Select supervisory staff, review the numbers from the previous point and develop team itineraries accordingly.
- Decide on special teams in bus/train stations, markets, at feasts etc. where people gather or pass.
- Present the plans with the maps to community leaders and local health officials to discuss and adapt them to the reality. Pay special attention to contentious or unclear areas, areas with difficult access, special local events, seasonal activities, and risk groups mentioned previously. Ensure full understanding and buy-in by local community leaders where required agreement with border districts for accessing communities that need to be reached.
3. Planning SIAs

- For the selection of the vaccination teams, ensure they are acceptable in terms of gender, age, religion and other locally specific requirements. At least one team member should always come from the area to be vaccinated.
- Team itineraries should be finalized by supervisors together with the teams during the training.
- Names of team members and supervisors should appear in the micro-plan.
- Micro-plans should be updated before each round to ensure integration of past experience, monitoring data, changing conditions in relation to the seasons (migration, flooding, sowing and harvesting), etc.

3.5.4 Reaching hard-to-reach populations

It is important to immunize the hard-to-reach and underserved populations who are often missed by routine vaccination. These populations may not necessarily be living in remote corners with poor geographic access. Actually, most large cities have either “gated communities” or slums where people are likely to be reached only during SIAs. Here, the questions, which need to be answered, are who and where are the hard-to-reach or hard-to-access populations? These will lead to the next question of why these populations are underserved, and help managers to develop effective strategies to reach them. These groups include:

- Populations known to have a disproportionate share of the disease burden.
- Areas of unimmunized or under-immunized children in urban and peri-urban areas.
- Populations with poor sanitation.
- Populations inhabiting difficult or mountainous terrain.
- Difficult to reach populations like nomads, fishermen, but also urban slum dwellers, travellers, who may be on the road or in the train when the campaign takes place.
- Undocumented urban settlers/squatters.
- Migrant workers.
- People with working hours that do not coincide with the team visits (agricultural seasons, night shifts, etc.).
- People living in houses between settlements (“no man’s land”).
- People that have lost their faith in the health programme, because of low quality of services provided, lack of communication, and/or rude behaviour of vaccinators or supervisors.
- People of specific socioeconomic status which take a special effort to reach.
- Refugees, internally displaced persons and other transient populations.
- Minority groups: politically or socially marginalized and suspicious populations.
- Certain religious groups who oppose vaccination.
- Persons living in areas of civil unrest.
- Populations in areas near to international or provincial borders.
- Immunization rejecters in high class, well off, urban or suburban communities.

Examples of pre-campaign strategies for underserved and hard-to-reach populations include:

- Developing detailed maps to carefully plan the extra logistics and social mobilization needed to reach these populations.
- Involving local ethnic and religious leaders of the underserved population in planning and social mobilization, including special efforts to dispel false rumours.
- Understanding and overcoming barriers (cultural, educational, logistical, political, language or religion) that keep underserved populations from bringing their children for immunization.

Examples of campaign implementation strategies for such hard-to-reach populations include:

- Using “mobile fixed sites” during SIAs, i.e. teams that set up an immunization post at a fixed site for a few hours, then move the post to a new site after completing their task.
- Placing extra posts in highly visible and/or highly convenient sites (e.g. schools, churches, mosques).
- Placing extra posts in strategic sites such as markets, etc. to reach transient populations.
- Providing additional logistical support such as vehicles and mobile teams in areas with underserved populations.
- Starting the implementation of the campaign early and, if necessary, extending the duration of the SIAs by a few days more in these areas.
- Starting daily immunization activities very early in the morning before people leave home, or extending activities to the early evening hours after they return from their daily chores.
- House to house canvassing and community line listing.
- Providing teams assigned to these areas with experienced supervisors.

One to two weeks before SIAs, the supervisors should visit the most underserved, high-density urban areas to verify that mothers know about SIAs. This will give enough time to correct the situation through intensified communication activities. Before and during SIAs, the supervisors should actively and frequently supervise preparations and efforts to reach underserved populations.
Exercise 2

The following is a summary of the micro-plan from Karoo District, which is preparing to do a multi-intervention integrated SIAs campaign using a fixed-post approach over four days. Please make a rough validation of the micro-plan summary table by looking at the entries against the various items. Record the results of your assessment in the column “Remarks”.

Karoo District
- General description of the district: urban and peri-urban.
- Target population for measles SIAs: 160 000 children aged 6 to 59 months.
- Additional interventions: OPV and vitamin A administration.
- Activity – fixed-post vaccination over four days.

<table>
<thead>
<tr>
<th>Items</th>
<th>Amount in micro-plan</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of measles vaccine vials</td>
<td>17 600</td>
<td></td>
</tr>
<tr>
<td>Number of OPV vials</td>
<td>19 000</td>
<td></td>
</tr>
<tr>
<td>Number of AD syringes</td>
<td>176 000</td>
<td></td>
</tr>
<tr>
<td>Number of reconstitution syringes</td>
<td>18 900</td>
<td></td>
</tr>
<tr>
<td>Number of safety boxes</td>
<td>2600</td>
<td></td>
</tr>
<tr>
<td>Number of vitamin A capsules</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Number of finger markers</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Number of vaccination posts</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Number of vaccination teams</td>
<td>220</td>
<td></td>
</tr>
<tr>
<td>Number of health workers</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>Number of town criers/animators for social mobilization</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Number of volunteers</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Number of supervisors</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Number of hard-to-reach communities and estimated population</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Number of clinics and health centres in the district</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>Currently available cold chain space in the district (in litres)</td>
<td>3 refrigerators, 20 vaccine carriers, 100 cold boxes</td>
<td></td>
</tr>
<tr>
<td>Amount of additional cold chain space required for the SIAs</td>
<td>15 refrigerators, 80 vaccine carriers, 100 cold boxes</td>
<td></td>
</tr>
<tr>
<td>Amount of fuel required in litres for vaccine distribution and supervisors</td>
<td>2000 litres of petrol, 1000 litres of diesel</td>
<td></td>
</tr>
<tr>
<td>Number of vehicles required for the SIAs in the district</td>
<td>1 truck, 2 four-wheel drive cars, 10 motorcycles</td>
<td></td>
</tr>
<tr>
<td>Number of pre-schools to be used as temporary fixed posts for service delivery</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Other sites to be used for service delivery</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
3.6 SIA Readiness Assessment Tool

Good preparation for SIAs is a fundamental requirement for achieving high coverage with safe vaccination. Ideally, this preparation should begin more than a year before the planned SIA, as financing of the campaign through government and donors must consider that budget cycles usually occur on an annual basis, and annual vaccine forecasting is needed to ensure availability of required amounts of vaccine and injection equipment.

To improve the quality of SIA preparation and monitor readiness to conduct a high-quality SIA, the SIA Readiness Assessment Tool was developed to periodically monitor SIA preparation at the national and district levels. This is essentially a management tool that provides a simple-to-use, periodic quantitative assessment of preparedness at both national and subnational levels. It identifies specific strengths and weakness related to SIA preparations over time, identifies gaps and needed actions, and responsible persons at the local level to address those gaps. It facilitates reporting of preparedness data to higher level authorities for timely interventions, including potential decisions to postpone or partially postpone (i.e. in some districts) the SIA until adequate readiness is achieved.

The SIA Readiness Assessment Tool stresses that at any given point in time prior to the SIAs, certain critical activities should be completed in order to ensure the quality of the SIA is high. The main objective of the tool is to ensure a high quality campaign through excellent preparations. Refer to Annex 2 for a sample of the Readiness Assessment Tool.

- **By six months before** the SIA, national SIA guidelines, a budgeted national logistics plan, and a budgeted national plan for advocacy, communication and social mobilization (ACSM) should be concluded. Cold chain assessments should be done, and orders for vaccines, injection equipment, safety boxes and other logistics should also be placed by this time.
- **By four months before** the SIA, funds for training, advocacy and planning activities should be received at least to the district level. Micro-planning workshops and advocacy and planning meetings at the provincial and district levels should be held at this time.
- **By three months before** the SIA, training materials, supervisor and vaccination team guidelines or pocket guides, forms, tally sheets and checklists should be printed and distributed to the local level.

- **By two months before** the SIA, supervision and monitoring plans and waste management should be in place at each level. Advocacy, communication and social mobilization materials should be developed and distributed and plans implemented in the run-up to the campaign. Micro-planning should be completed. SIA launch ceremonies should be planned.
- **During the month before** the SIA training of vaccinators and volunteers should be conducted, supervision plans finalized, social mobilization and communication activities implemented and bundled vaccines and other inputs distributed.

3.7 Strengthening RI through SIAs

SIAs are a great opportunity to strengthen RI. This can be achieved if the various structures such as coordination, micro-planning, monitoring and implementation of SIAs are utilized to also strengthen RI. A “best practice” SIA can and should build national capacity and strengthen existing immunization service delivery through renewed attention to core components of programme management. Specific activities to strengthen RI are carried out before, during and after the completion of a SIA. At the outset of the SIA, three to five objectives to strengthen the RI programme should be identified and agreed on to be included in the SIA, based on the country’s RI assessment. A focal person should be identified at each of the national subcommittees to oversee and ensure the implementation of these activities.

For example, during social mobilization of SIAs, particular messages on advocating for RI vaccines should be given. Even logistics procurement, e.g. cold chain equipment, can be undertaken during SIA preparations because it not only benefits the SIA but also for RI long after the SIA is completed.
4. Logistics and cold chain for SIAs

4.1 Ensuring effective logistics

Advance planning of logistics is critical to the success of SIAs. The major steps in ensuring excellent logistics during an immunization campaign are:

- Use the best demographic data available and a standard formula throughout the country to make the best possible estimate of the size of the target population at every level. If in doubt, overestimate it!
- Use the standardized logistics spreadsheets from the national level to calculate requirements.
- Order vaccines and consumables at least six months before the date of the SIAs.
- Develop a written distribution plan specifying when and how supplies will be sent to the various levels.
- Pay particular attention to logistics needs for hard-to-reach and underserved areas.
- Ensure that vaccine, diluents, droppers, auto-disable (AD) syringes, reconstitution syringes and safety boxes are always distributed together (bundling) in matching quantities.
- Detailed planning is required for daily collection of safety boxes and other wastes from vaccination posts for incineration.

4.2 Transportation requirements

Requirements for transportation for the distribution of logistics supplies include:

- A good choice of transport for vaccine and all injection materials, depending on the weight and volume of goods to be distributed at central and provincial levels. The type of transport could be trucks, plane and boat, according to the local reality. Heavy-duty trucks to transport vaccines, injection materials, information, education, communication (IEC) supplies, recording and reporting forms, etc. from the national to the provincial levels.
- Light trucks to redistribute SIAs supplies from the first subnational (provincial) levels to the district levels. In some countries boats may be used for transporting SIA goods.
- Vehicles or motorcycles or animals (horse-drawn carts, donkeys, mules, camels etc.) are needed to transport vaccines and other logistic supplies from distribution points to vaccination sites.
- Vehicles are also required for the staff involved in the operations of the SIAs.

4.3 Vaccine and supplies distribution

Organizing the means of transportation for SIAs may be done through rental of vehicles or from government agencies, the military or partner agencies. A plan should be made for distribution of vaccine/injection equipment at each level: from the central level to the districts, to the subdistrict and the immunization posts. The plan should consider:

Exercise 3

In small groups, based on your previous experience, list all the operational gaps that you face in logistics during SIAs. Use, as examples, polio NIDs, measles SIAs, tetanus toxoid SIAs and meningitis campaigns. Try to identify four or five causes for the identified gaps.
• Number of kilometres (round trip) for vaccine distribution with fuel costs.
• Method of transportation for vaccine distribution.
• Human resource requirements (drivers, cold chain technicians and maintenance staff).
• Time required for distribution.

4.4 Maintaining the cold chain system

A functional cold chain is crucial at all levels, before, during and after the SIAs. It will be useful to identify additional storage points for vaccines at central, regional and district levels. Ensure that vaccine vials have vaccine vial monitors (VVM) and manage them according the VVM status.

4.4.1 Role of the vaccine vial monitor in SIAs

Cumulative heat exposure can now be monitored with the help of the VVM. Currently all vaccines supplied by UNICEF have VVMs attached to the vaccine vials. Oral polio vaccine is the most heat sensitive of all EPI vaccines. The VVM allows the user to see at any time if the vaccines can still be used in spite of possible cold chain interruptions. The VVM makes it feasible to plan a more flexible, less stringent and cheaper cold chain option, which is of particular importance for immunization campaigns.

During polio NIDs the advantages of using the VVM are:

• Teams can go further in time and geographic distance, due to less bulky equipment and decreased dependence on re-supply of ice.
• Difficult access and weak cold chain cease to be reasons not to immunize population groups usually missed during NIDs and routine services.
• Health workers and stock managers can decide which vials to use first or in nearby areas on the basis of the change of colour of the VVM.
• Reduction of wastage – with the help of the VVM several countries have abandoned the policy of discarding OPV vials at the end of a session or in the case of cold chain failure. This has led to important reductions in wastage, from 25% to 10% or lower. Experience in many countries now shows that few VVMs reach the discard point during campaigns.
• Cold chain costs can decrease due to these factors.

A weak cold chain has been one of the main obstacles to overcome for the implementation of high quality campaigns. To reach all children, a considerable investment has to be made in assuring the cold chain. Storage and transport of vaccines have to comply with good cold chain practices. The SIAs present a golden opportunity to strengthen the cold chain for routine health services (through the provision of equipment, improving preventive maintenance of available equipment, etc.). For uninterrupted operations during SIAs, the provincial and district EPI managers and EPI logisticians should:

• Ensure that the cold chain is working both at the district and health centre level during SIAs.
• Organize backup capacity for national and provincial cold rooms including generators and spares.
• Ensure that adequate power supply is available at all times.

General vaccine handling instructions for vaccinators

• Protect the vaccine carrier and the vaccine vials from sunlight.
• In the vaccine carrier, vaccine vials should be wrapped in plastic to prevent them from floating in the water and labels detaching.
• Open only one vial at a time.
• Open the lid of the carrier only after finishing the previous vial to take out another vial.
• Use only vaccines with the VVM in stages 1 and 2.
Exercise 4 – Case study

In Miombo District of Montana Province an integrated measles and polio vaccination campaign is planned to be conducted from 1–15 June. All the preparation has been completed and the district is ready to commence the campaign. Halima, a community nurse, is responsible for vaccinating her catchment area children in three days – Wednesday, Thursday and Friday. On Tuesday evening she collected the required vaccines based on her target population from the health centre. She collected measles and polio vaccine vials and four frozen ice packs in a vaccine carrier. On Wednesday she vaccinated children at her clinic. She left the remaining polio vaccine vials in the vaccine carrier and hurried home. On Thursday, Halima left for the outreach site early in the morning. It was already hot. When she arrived at the site, people are waiting for her. She opened the vaccine carrier and found that the ice packs had melted. The thermometer in the vaccine carrier read +16°C.

a) What should she do now?
b) What should she do in the future to prevent this problem?

4.5 Ensuring proper waste management

In addition to national level policy decisions regarding how immunization waste will be managed, the district level must:

- Make an inventory of the waste management facilities.
- Identify the status and location of incinerators, burn and bury sites.
- Include within the task descriptions of the post supervisor the responsibility to ensure daily incineration of filled safety boxes and other dry waste.

- At the service delivery post, syringes should be discarded into the safety boxes provided at the vaccination post. At end of each implementation day, each team will bring back their three-quarters filled safety boxes to the incinerators located in health facilities.

Some common programme errors and operational gaps occurring in planning and implementation logistics of SIA

- Failure to clearly determine early enough the exact amounts and timing of campaign supplies (vaccines, bed nets, deworming tablets, consumables) arriving in country.
- Lack of a clear logistics distribution plan.
- Failure to budget adequately for port clearance, transportation and storage of campaign inputs.
- Disruption of distribution of supplies to peripheral/service delivery level.
- Mismatch in the amount of vaccines and devices distributed to the district level.
- Inadequate functional cold chain equipment, dial thermometers, etc.
- Frequent electrical power interruptions endangering the cold chain.
- Lack of an alternative source of power for central/provincial cold stores.
- Delay in financial/technical support to build/rehabilitate incinerator.
- Fuel and vehicle shortage hindering the movement of vaccination teams/supervisors.
- Unreliable vehicles with frequent breakdowns disrupting operations.
- Delay in distribution of campaign tools (tally sheet and other forms) to the peripheral level.
5. Training for SIAs

5.1 Training for SIAs

At least three months before the SIAs, the national level should elaborate training plans that incorporate training needs for different levels, methods and key areas of focus, training and resource materials, the agenda, a framework of “what-who-where-when”, and a budget. The plan for training may be preceded by a formal training needs assessment, to address specific gaps in health worker knowledge and to correct malpractices, if any. The national level may hold a consultation to pool lessons from previous SIAs, or may conduct a review of previous SIAs reports to tailor the training for optimal results.

All key players in SIAs should take part in training sessions in preparation for SIAs. These include coordinators, supervisors, vaccinators, committee members, social mobilization officers, logisticians, surveillance officers and other health staff. Training for SIAs should occur as a cascade with the central level providing training to the provincial level, the provincial level training the district level, and the district level in turn training community volunteers and health workers. Training approaches should be simple but should address the specific needs of different levels.

These training sessions should take at least two days, and be as interactive as possible, with the inclusion of role play, practical demonstrations, case studies and exercises, as well as group work to stimulate discussion. Organizers of training sessions should always weigh the number of people trained in one session against the advantage of having smaller groups that can be coached very well. The alternative of increasing the number of facilitators should be considered.

Training should be as practical as possible to ensure that participants are fully conversant with the concepts and procedures. Specific areas that work best with practical exercises include the organization of immunization sites, filling in of tally sheets, roles of the different team members, and the supervisory process. Training materials are best presented in local languages as far as possible.

It may be useful to include an objective means of assessing the effectiveness of the training exercise by introducing pre- and post-tests.

5.2 Developing content for SIAs training

Training at each level should include information on the following points, but needs to be modified depending on the type of campaign and degree of integration of interventions.

**Introduction**
- Update on the global and national status of the targeted disease.
- Justification and objectives of SIAs.
- Interventions involved (other interventions, e.g. ITNs, vitamin A).
- Target age group and dates of SIAs.
- Partnerships and resources.
- Chronology/schedule of events and activities.

**Advocacy, communication and social mobilization issues**
- Advocacy with political and administrative authorities.
- Key messages to mobilize the community and strategies to ensure community involvement.
- Responding to community and media concerns about the campaign.

**Logistics issues in the preparation of measles SIAs**
- Consistent calculations for the allocation of supplies and assignment of personnel.
- Storage and transportation of the key supplies.
- Timing and modality of distribution of the different supplies (bundled vaccine, social mobilization materials, recording and summary forms, funds, etc.).
• Adapting logistics to ensure that hard-to-reach populations are provided with services.

Tasks and activities during the campaign
• Organization and management of vaccination teams and posts.
• Team composition and task allocation.
• How to organize house-to-house vaccination activities.
• How to manage the flow of services and crowd control at a static immunization site.
• How to do house and finger marking.
• Screening for the different age groups/types of interventions.

Handling vaccines and issues of vaccination safety
• Ensuring effective cold chain and its maintenance.
• Care of vaccines and diluents (if applicable):
  o how to use VVMs
  o how to reconstitute vaccine, if applicable, and safely administer vaccine.
• How to prevent needle stick injuries, and safely dispose of the syringes, if applicable.
• How to identify, investigate and manage adverse events following immunization (AEFI).

Recording, documentation and review and daily reporting
• How to complete tally sheets and summary sheets.
• How to complete logistics forms at each level.
• Daily activity review at different levels of coordination and problem-solving.

Monitoring and supervision
• Objectives, methodology and tools.
• Pre-implementation supervision of preparations.
• Intra-campaign supervision.
• Rapid convenience monitoring and troubleshooting during the campaign.
• Introduction to the different supervisory checklists and monitoring tools.
• Strengthening various aspects of the RI delivery.
• Vaccine needs forecasting and vaccine management.
• Monitoring coverage and programmatically addressing coverage gaps.
• Case-based surveillance for disease control and elimination:
  o case definitions, case investigation and specimen collection procedures
  o tools for specimen collection and case reporting.
In order to achieve good quality SIAs, effective advocacy, communication and social mobilization need to be planned and implemented to get support of and participation of decision-makers, individuals, families and communities. Planned activities should be based on experience as well as an assessment of the best methods of getting across to the community. The objectives of a good ACSM strategy in SIAs is to ensure that:

- All parents/caregivers are aware of the campaign and demand immunization.
- A strong government visibility and commitment are in place at the national, provincial, district and community levels.
- Religious, social and civic partners in immunization activities are actively involved at all levels.
- Underserved populations or communities are identified and efforts intensified to reach them.

### 6.1 Planning communication and social mobilization activities

The national committee should develop a plan to address priorities including the development of and dissemination of key messages, factsheets and other written materials, involving mass media at all levels, and coordinating with provinces and districts. Planning for social mobilization should be done at least six months in advance as part of the overall SIAs micro-planning. At each level (national, district and community), a workplan with objectives, activities, responsible persons and budget should be prepared.

The presence of social mobilization committees at all levels is a key factor in successful mass vaccination campaigns; the committees should be multisectoral with clearly defined responsibilities.

### Key lessons for social mobilization for SIAs:

- Community/ traditional structures are more important than the mass media in rural areas.
- Town criers are very effective to pass social mobilization messages.
- Volunteers from civil society (e.g. Red Cross/ Red Crescent societies) are invaluable in mobilizing communities.
- Involvement of telecommunication operators (especially cellular phone networks in urban areas) is quite helpful in passing text messages to the subscribers.

### 6.2 Advocacy activities

During the preparatory phase, the MOH should obtain high-level commitment early from national authorities and major partner agencies to support the SIAs. Advocacy with various leaders at all levels must also be conducted for building community acceptance and support. Target groups for advocacy may include heads of state and government, parliamentarians, religious leaders, heads of partner/donor agencies, MOH decision-makers and community opinion leaders. A variety of advocacy activities will therefore need to be implemented at various stages including:

- Preparation of convincing briefs, e.g. impact of SIAs on morbidity and mortality reduction, success stories.
- Briefings with health practitioners, professional medical societies, key groups and individuals.
- Using goodwill ambassadors or popular celebrities.
- Using the ICC to lobby with the policy- and decision-makers.
- Using the mass media for advocacy and re-enforcing commitment of decision-makers.
- Launching of SIAs by eminent persons.

Key advocacy messages will have to be drawn up and may include the burden of the disease in the community, the effectiveness of SIAs in reducing morbidity with concrete examples, the social and economic benefits, and the safety of the vaccines.
The launching or opening ceremony can be an important occasion if attended by eminent personalities such as heads of state, celebrities, etc. Key public figures should be contacted well in advance to ensure their participation.

Social mobilization activities should be planned to enlist all feasible support from various groups, institutions, organizations etc. These may include health committees, religious and community groups, NGOs, women's clubs, and any other organizations in the area. SIAs should reach all eligible children and particularly those whose parents show hesitancy towards vaccination, or those who are simply busy. Clear messages therefore need to be designed and disseminated through methods that are suitable for reaching such parents and others who can influence or motivate them. While these methods include the traditional media, experience has shown that interpersonal communication or word of mouth plays a major role in informing and convincing parents to bring out their children.

Another opportunity for massive advocacy efforts is the African Vaccination Week (AVW) which is celebrated around April each year in the African Region and in association with other WHO regions globally. The AVW underscores the proven life-saving power of vaccines and encourages vaccination of children, adolescents and adults against deadly diseases. In some countries, the implementation of SIAs can be associated or harmonized with AVW to amplify the importance of both initiatives (SIAs and AVW) in the control of VPDs.

Social mobilization activities in the districts and communities should start two months in advance and be intensified in the last two weeks before the SIAs. While actual activities will depend on each region/community these may include door-to-door canvassing, media campaign (especially through radio programmes and spots), and announcing the SIAs days at all community meetings and religious gatherings.

Informational and promotional materials such as posters, brochures, letters, T-shirts, caps, post banners and street banners should be designed, and ordered early on, and should be distributed about a month before the date of the SIAs. In addition to local social mobilization activities, the mass media is very effective in mobilizing for SIAs.

Efforts should be made to reach underserved populations or special populations. These may include minority groups or marginalized populations, religious communities that may resist public health interventions, nomadic/migratory groups, refugees, elite groups and their staff. Such efforts might include:

- Social mobilization committees holding meetings with the opinion leaders of those communities.
- Intense house-to-house visits by local volunteers from the same minority groups.
- Working closely with leaders of the minority communities.
- Working with local NGOs that provide assistance to the groups.

The social mobilization budget should be reflected in the overall plan. Any social mobilization funds from the national level need to be disbursed to districts early so that social mobilization activities can be conducted in good time ahead of the immunization days. Nevertheless, local activities should not wait for funds from elsewhere. Resources should be mobilized at all levels to support feasible activities.

**Major operational gaps in communication and social mobilization based on experience of past campaigns**

- Failure to address all the target groups for the different interventions in social mobilization messages.
- Failure to address vaccination refusals and hesitant groups.
- Lack of an adequate distribution plan for social mobilization materials leading to delayed dissemination of IEC materials and media messages.
- Parents/caregivers not given adequate information about routine EPI, type of vaccines given, possible side-effects, etc.
- Relying too much on the mass media and too little on community structures.
- Lack of banners or other identifying marks at the service delivery posts.
Exercise 5 – Case study

For all groups.
The Northeastern Province in Narina continues to have measles immunization coverage of less than 60%; for the past 10 years and as a result has suffered from repeated measles outbreaks. The province has a total population of 4.2 million, and the capital city of the province has an estimated 1 million people. The last census was done more than 12 years ago.

The provincial health administration has decided to undertake a supplementary measles campaign to ensure that all susceptible children between six months and under 14 years of age receive a dose of measles vaccine. In the past, the district faced a number of challenges in reaching all children, through routine EPI as well as during campaigns and child health days. There is a religious group which continues to refuse immunization, with more than 5000 families refusing routine and supplementary immunization on religious grounds. At the same time, a few districts in the province have a significant population of nomads who are passing through from bordering areas.

There is a strong traditional leadership within the rural communities in the province. The people are 60% Christian and 40% Muslim. Given the target age group, there are plans to use schools as possible vaccination sites. The district health administrator has convened a communications committee to assess the situation and to develop a communications plan for the district to ensure that all the issues highlighted above are resolved and all children are fully immunized.

Task: In your groups, develop an appropriate communications plan to submit to the provincial health administrator. Present your plan to the plenary.

Exercise 6 – Role play

For all groups.
Design a brief role play for each of the following scenarios with clear learning objectives for each scenario:
Group 1: Supervisor and vaccinator in a situation where there are obvious vaccine handling problems.
Group 2: Vaccinator and a mother who does not want her child injected with measles vaccine for fear of side-effects.
Group 3: Supervisor instructing a town crier on messaging for a polio NID activity (the fifth one since the start of the year).
Group 4: District level SIAs coordinator undertaking an advocacy visit to the district chamber of commerce to solicit in-kind support for the SIAs.
Each group should brainstorm on the key issues and prepare a short role play for the plenary.
7. Operational aspects of SIA campaigns

The vaccination strategy in mass campaigns can be decided by national level based on the type of vaccination and the intended objectives to achieve. Mass polio vaccination mostly uses house-to-house strategy. Measles, TT, yellow fever and meningitis SIAs often using a fixed-post vaccination strategy due to the nature of the vaccination (injection of the vaccine). Vaccination posts employed during SIAs may be fixed (permanent or temporary) or mobile.

- **Permanent – fixed immunization posts**: These posts are located at health facilities. Immunization is provided at the health facilities for the whole day for the seven days of the campaign. These sites will also serve as depots for storage and distribution of vaccine to temporary fixed sites and mobile teams.

- **Temporary – fixed immunization posts**: These posts are located at schools, churches, bus depots, road blocks and market areas. Immunization is provided at these sites for either the duration of the campaign or depending on the population density.

- **Mobile – immunization posts**: These posts move from community to community reaching populations living in hard-to-reach areas who may not have access to a fixed site. Populations are usually small in size and an immunization post is set up at a fixed site for a few hours, then moved to a new site after completing the task. Using the house-to-house vaccination strategy, mobile vaccination teams visit every house/dwelling in an area and identify and vaccinate all target children. Well-planned and supervised house-to-house vaccination can achieve very high coverage of target population.

House-to-house strategy has been used selectively in the past during mop-up campaigns. In the case of SIAs, a household may refer to an actual house, a tent or the back of a camel. It is therefore critical that team members fully understand and adhere to this strategy. If a compound has several households, the vaccination team should enter the compound and visit each household separately. Each household should be marked (see below on house marking) and the entrance to the compound should also be marked to indicate if children are still missing.

**Remember**
In a house-to-house vaccination activity, each household must be visited. The names of vaccinated children are not recorded. However, the names of children that were absent when the team visited the household will be recorded on the back of the tally sheet. A team is assigned to a geographic area to vaccinate all target children, whether or not they reside in that area.

Mobile vaccination teams are expected to cover key areas such as markets, transportation hubs and stations, slum areas, housing areas with mobile/migrant populations, remote areas/islands, the upper floors of apartment buildings and areas with poor road access.

In the case of polio NIDs, house-to-house teams should be provided with a simple map of the area that the team is expected cover each day; sufficient vaccine and diluent if applicable; vaccine carrier with ice, ice packs; tally sheets to record doses administered, houses visited, houses for revisit (child absent, refusal, locked house); and also chalk for house-marking and pens for finger marking.

The team should also receive training on how to do the job, and how to deal with non-cooperating/refusing parents.
8. Monitoring and evaluation of SIAs

8.1 Definition of terms

Monitoring: Systematic and continuous process of examining data, procedures and practices to identify problems, develop solutions and guide interventions. Monitoring is conducted on a regular basis (daily, weekly, monthly and quarterly). It is linked to implementation of programme activities. The information collected is used to direct programme activities on a continuous basis. Monitoring assists programmes to determine which areas require greater effort as well as identify areas that contribute to improved performance. Indicators selected for monitoring will differ depending on the reporting level within the health system and the range of interventions integrated. At the national and subnational levels monitoring of inputs (human resources, financing and supplies), processes (procurements and training) and outputs (services delivered) is needed for understanding the complete picture of programme activities for improved performance.

Evaluation: Periodic assessment of overall programme status — performance, effectiveness and efficiency. It is linked to policies, programme processes, systems under which the programme operates, strategic choices, outcomes and impact. Evaluations can be used to link any two parts of the monitoring and evaluation (M&E) framework (inputs, processes, outputs, outcomes or impact). For example, one could evaluate whether financial inputs are effectively generating the desired trainings or services delivered.

During and after campaigns, programmes collect data on resources utilized and the administrative coverage of the interventions. Increasingly, programmes include assessment of coverage at household level and commission special studies such as an economic analysis, the impact of different social mobilization approaches, etc. Clearly, each country should determine the most important questions to be answered based on their unique needs and the available resources.

Once the M&E questions are identified, the immunization programme must develop a matrix, which may include the following components:

- indicators
- methodology of data collection
- source of information
- responsible person(s) for collection of the data
- frequency of data collection

This module touches upon the standardized approach for the M&E of SIAs, and involves assessing three aspects of performance:

- **Process:** How well staff are prepared for and implemented the campaign. In particular, how well they identified and vaccinated all target-age children, and how they addressed quality and safety of vaccination services.
- **Outcome:** The immediate observable achievements of the campaign activities (measured by vaccination coverage).
- **Impact:** The resultant reduction in disease burden over time (i.e. mortality and morbidity as measured through surveillance).

8.2 Key monitoring and evaluation activities

The following list includes key M&E activities in a typical SIAs setting.

**Pre-campaign activities:**

- Review of preparations by the national coordinating body or by various SIAs subcommittees via bi-monthly and weekly review of preparations across the key planned activities against the timeline.
• Review of preparedness using the pre-campaign supervisory checklist and SIAs readiness assessment tool at district and implementation level.

Intra-campaign activities:
• Supervision of activities.
• Daily review meetings of all team supervisors at subdistrict level to review cumulative daily coverage data from their respective areas, and discuss qualitative issues including turnout, vaccination safety, logistics distribution, etc.
• Daily summary of administrative coverage data using the service delivery tally and summary sheets.
• Rapid convenience monitoring (RCM) to identify children missed by the SIAs and the reasons for being missed.

Post-campaign activities:
• Post-campaign coverage surveys (household or health facility surveys).
• Case-based surveillance.
• Economic analysis studies.

8.3 Estimating coverage through administrative field reports

Using district summary reports compiled from tally sheets filled in by each vaccination team, programme managers can estimate vaccination coverage by comparing the number of doses given during the campaign (numerator) versus the known target based on the data from micro-planning workshops or from the last known census figures (denominator). The formula for calculating coverage is:

\[
\frac{\text{Number children in target-age immunized in the district X}}{\text{Total number of children in target-age group in district X}} \times 100 = \text{ .............. \%}
\]

Programme managers can plot the daily cumulative number of reached children and the percentage coverage for each district on a graph (see Figure 8.1). During the course of the SIAs, daily monitoring of administrative coverage gives programme managers the opportunity to follow the progress of the SIAs, and to intervene where there are lags in the pace of the SIAs implementation. Such interventions may take the form of redistributing human resources, extending the duration of the activities, providing additional supervisory and logistics support, etc.

Sometimes, there are drawbacks in using coverage as determined by the administrative method. Frequently, official statistics lack accurate or up-to-date information on population figures particularly for hard-to-reach areas. Unfortunately, vaccination coverage often relies on census or registration data that may not accurately reflect the actual target population. Coupled with migration and other factors, the resulting denominators may skew coverage estimates, generating unrealistically low or high rates (e.g. 130% coverage). It is therefore important to use the latest census data or population estimates or other approaches to verify administrative coverage results.
Figure 8.1 Daily cumulative SIAs coverage, data as of day 7 (sample)

Exercise 7

Group discussion.
You are taking part in the evening meeting of supervisors in Turaco District at the end of the third day of a six-day multi-intervention campaign. The table you are looking at below is for measles vaccination coverage and is showing data from four subdistricts.

<table>
<thead>
<tr>
<th>Subdistrict</th>
<th>Administrative coverage as of day 3</th>
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<tbody>
<tr>
<td>A</td>
<td>28%</td>
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<tr>
<td>B</td>
<td>77%</td>
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<tr>
<td>C</td>
<td>12%</td>
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<tr>
<td>D</td>
<td>40%</td>
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</tbody>
</table>

What are the possible reasons for the difference in coverage data you see in the table, and what are some solutions you might propose to ensure that the campaign attains its objectives?
8.4 Intra-campaign rapid convenience monitoring

The most important objective of the rapid convenience monitoring activity is to find unvaccinated children in order to vaccinate them. Additional objectives include the identification of reasons for non-vaccination and the planning and execution of rapid corrective action. RCM data provide information on the general performance of the SIA and suggest how to refine strategies for reaching the hardest-to-reach children. RCM data also provide very useful information that can help improve the RI programme. RCM is a pass/fail assessment of the areas surveyed, not a coverage assessment. RCM data are collected using methods that are not designed to be representative of the population targeted for the SIA and, therefore, do not produce valid coverage estimates. RCM should be used while the SIA is still ongoing.

RCM is an excellent programmatic tool for local managers to identify poorly performing areas for immediate action. RCM also helps as an evaluation tool to assess the success of the campaign strategies in reaching the hardest-to-reach children. Rapid convenience monitoring helps to identify pockets of unvaccinated children for immediate mobilization or later mop-up efforts, and to help evaluate the effectiveness of social mobilization.

The steps for doing RCM include:

1. Determine who should conduct these monitoring activities, (e.g. supervisors, health staff, independent monitors not involved in SIAs planning and implementation, etc.).
2. Select high-risk areas or populations in which to conduct RCM.
3. Plan to conduct multiple monitoring activities in each high-risk area or at least two in each area covered by a vaccination team.
4. Visit the geographic area selected. Start in a central location, pick a direction at random to start, and begin with the first household.
5. In each household, ask the parent or caregiver for eligible children. Ask for their age and whether all eligible children have received a dose of the antigen during the SIAs, and if not, the reasons for non-vaccination. Record the responses on the suggested monitoring tool. Continue to the next closest household, until 20 different households with children have been tallied.
6. For children unvaccinated during the campaign, summarize the top three to five reasons given for non-participation. This will help focus social mobilization efforts immediately and for future campaigns and RI programmes.
7. If the number of “unvaccinated" in a given locality is more than two children out of 20 households, organize a further house-to-house investigation, and organize logistics and mobilization efforts to scale-up the vaccination efforts. Where the reason is resistance or specific rumours, more experienced supervisors should work with key informants and local leaders to try to overcome these difficulties.

8.5 Independent post-campaign monitoring of SIAs

Immediately after all SIA vaccination activities have been completed, it is critical to conduct independent monitoring using the RCM methodology in all areas where initial data (coverage, intra-SIA RCM) or local knowledge suggests poor coverage. The main objective of post-SIA independent monitoring is to find unvaccinated children so that they can be targeted during mop-up activities one to two weeks after the SIA. In addition, such monitoring provides independent and critical information on SIA performance that would be very useful for future SIAs as well as for the RI programme.

Independent monitoring should be planned and budgeted for during the macro- and micro-planning and budgeting activities. Independent monitors need to be recruited and adequately trained on the use of RCM and should undertake an independent assessment of SIA performance in predefined areas (at least one area per district). Areas selected for independent monitoring are the ones most likely to have children missed by the SIA.

Independent monitoring is critical to guiding any necessary corrections if gaps or problems are found. The basic elements of monitoring include recording the number of children monitored, the percentage of children whose fingers are marked to prove they were vaccinated (both in house-to-house monitoring and out-of-house) and the proportion of districts monitored. Real-time, independent monitoring data answer the question, “How many children did we reach with vaccine?” and allow rapid changes to be made to cover missing children and stop, for example, polio transmission more quickly.

Independent monitoring of SIAs is an objective measure of SIA quality that can be used to guide improvements to reach more children by enabling corrective action both during SIAs and in planning for the next rounds. Independent monitoring does not replace supervision! For polio NIDs, the results of the independent monitoring are made available internationally within 15 days of each immunization round.
8.6 Coverage surveys and impact monitoring using disease surveillance

Coverage surveys should be conducted as soon as possible after the SIAs to assess the coverage reached during the SIA, the coverage reached in children previously not vaccinated against measles (or rubella), the reasons for non-vaccination, and what communications channels informed people about the SIA. When a survey covering RI, such as a demographic health survey, Multiple Indicator Cluster Survey or standalone EPI survey, has not been done for a few years, and none is planned in the next couple of years, the post-SIA survey can be designed to also provide estimates of routine coverage. However, adding the estimation of routine coverage can greatly increase the sample size, costs and complexity of a post-SIA coverage survey. Surveys should be done quickly as finger markings from indelible ink fade quickly with time, children/adolescents may try to remove them and SIA vaccination cards may be lost.

Ideally, coverage surveys should provide coverage data valid not only for the national, but also for the regional/provincial and district level, to provide information regarding areas insufficiently vaccinated. The capacity of surveys to provide district-level coverage data depends mainly on time and on resource availability.

The methodology for coverage surveys is discussed in detail in Module 17: Conducting immunization coverage survey. The details on the monitoring of the impact of disease control activities using case-based surveillance is discussed in Module 14: How to conduct effective vaccine-preventable diseases case-based surveillance.
MLM Module 13: How to organize effective polio NIDs and measles SIAs
Recommended reading


Websites


Polio Global Eradication Initiative – Supplementary immunization: http://polioeradication.org/who-we-are/strategy/supplementary-immunization/


### Annex 1: Steps and timeline for planning high quality measles SIAs

**12 to 9 months before the SIAs:**

- **At the national level**
  - Establish SIA subcommittees with terms of reference, appoint coordinators.
  - Develop micro-planning forms, initiate micro-planning meetings with districts, update logistics spreadsheets.
  - Place order for vaccines and injection devices.
  - Initiate planning for programme components: advocacy, communication, social mobilization, logistics, training, monitoring (including AEFI, RCM, independent monitors) and supervision.

- **At the district level**
  - Establish district coordination committee and relevant subcommittees.
  - Prepare targeted group size, inventory, human resources information for the national level.

**9 to 6 months before SIA you should finalize planning:**

- **At the national level**
  - Finalize plans for programme components: advocacy, communication, social mobilization, logistics, training, monitoring (including AEFI, RCM, independent monitors) and supervision, and for SIA evaluation (including coverage survey).
  - Finalize SIA field guide.
  - Meet with district health officials.
  - Assess SIA readiness.

- **At the district level**
  - Complete micro-planning spreadsheets in coordination with health centre levels.
  - Define SIA strategies for underserved, hard-to-reach and special populations.
  - Provide cold chain capacity information as part of logistics assessment before SIA.
  - Verify modes of transport availability.

- **At the health centre level**
  - Attend meeting at the district level for micro-planning.

**6 to 2 months before SIA you should initiate preparations:**

- **At the national level**
  - Revise budget based on validated micro-plans and feed back to the districts.
  - Distribute SIA guide to the districts.
  - Finalize training materials and training guides/tools/monitoring forms.
  - Transfer of funds for preparation activities.
  - Prepare SIA promotional materials and media announcements.
  - Print developed supervisory checklists, tally sheets and other forms.
  - Confirm participation at launching ceremony.
  - Assess SIA readiness at six, four, three and two months prior to the SIA.

- **At the district level**
  - Validation of micro-plans and feed back to the health centre level.
  - Advocacy meetings.
  - Prepare posters and street banners.
  - Invite supervisors, health workers and community volunteers to attend training.
  - Assess SIA readiness at two months prior to the SIA.

- **At the health facility level**
  - Attend meeting at the district level for validation of micro-plans.

**8 to 4 weeks before the launch of the SIA you should:**

- **At the national level**
  - Assess SIA readiness at national and at district levels.
  - Increase the frequency of meetings of the national subcommittees to review readiness and address gaps.
  - Prepare for transferring vaccine and supplies from the central store.
  - Start preparations for the opening ceremony.
  - Verify that all media adverts are prepared.
  - At the district level
  - Verify modes of transport availability.
  - Receive/collact vaccine from the central store.
  - Begin social mobilization and communication activities.
Annex 1: Steps and timeline for planning high quality measles SIAs

- **At the health facility level**
  - Final team planning: identify means of transport, finalize maps of catchment areas, start recruitment of local volunteers.

4 weeks to 1 day before the SIA launch you should:

- **At the national level**
  - Assess SIA readiness, undertake supervisory visits to selected districts (at four, two and one week prior to the SIA).
  - Begin newspaper, TV and radio announcements.
  - Confirm preparations of opening ceremony.
  - Prepare supervisory teams for SIA.
  - Prepare site for opening ceremony (one to two days before SIA).

- **At the district level**
  - Intensify social mobilization and communication activities.
  - Conduct training.

- **At the health facility level**
  - Attend training.
  - Train volunteers.
  - Intensify social mobilization and communication activities.
  - Confirm means of transport.
  - About one week before SIA: start freezing water packs.
  - One to two days before SIA: transfer vaccine to posts, prepare posts.

During the SIAs you should:

- **At the national level**
  - At the first day: conduct opening ceremony, have press briefing.
  - During SIA: supervise posts/teams, address emerging problems, calculate national daily and cumulative vaccine coverage and AEFI rate, prepare daily report to inform MOH or as appropriate.

- **At the district level**
  - Supervise posts/teams.
  - Compile, calculate and report daily coverage and AEFI to the national level.
  - Coordinate back-up teams.
  - Data analysis and supervision.
  - Review intra-SIA RCM results and take actions as appropriate (for areas with low coverage).

- **At the health facility level**
  - Start vaccinations (each day with a new set of tally sheets).
  - Assist/relocate teams.
  - Report daily tallies after verifying accuracy.
  - Report observed AEFIs.
  - Identify areas/populations (through intra-SIA RCM or other means) not achieving coverage and report to supervisor.
  - Return unused supplies to the district.
## MLM Module 13: How to organize effective polio NIDs and measles SIAs

### Annex 2: SIA Readiness Assessment Tool (national level)

<table>
<thead>
<tr>
<th>Critical activities</th>
<th>Desired timeframe for completion</th>
<th>15m</th>
<th>12m</th>
<th>9m</th>
<th>6m</th>
<th>4m</th>
<th>3m</th>
<th>2m</th>
<th>1m</th>
<th>2 wk</th>
<th>1 wk</th>
<th>If not completed, give reason</th>
<th>Action required</th>
<th>Deadline</th>
<th>Person responsible</th>
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<tbody>
<tr>
<td>1. Budgeted macroplan developed in line with the MWP for resource mobilization purposes</td>
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<td>2. SIA budget prepared with MoH and ministry of finance collaboration or approval</td>
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<td>3. Political commitment at highest level</td>
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<td>4. Agreements with local partners to mobilize local resources</td>
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<td>5. National coordinating committee established and meeting regularly</td>
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<td>6. National subcommittees established: 1) technical, 2) vaccine, cold chain &amp; logistics, 3) advocacy, social mobilization &amp; communication, and others (e.g. risk management/media relations)</td>
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<td>7. National SIA guidelines and microplanning tools prepared and distributed</td>
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<td>8. Funds available to the district level for operational costs</td>
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<td>9. Microplanning workshops conducted at district level</td>
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<td>10. Pocket guides, supervisory checklists, tally sheets, report forms, AEFI forms, etc. developed, printed and distributed</td>
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<td>11. Training materials developed and distributed</td>
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<tr>
<td>12. Plan and budget for administrative &amp; &quot;special&quot; monitoring (including independent monitors, RCM, AEFI) and evaluation (including Coverage Evaluation Surveys) of SIAs completed</td>
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<td>13. Conduct supervisory visits to province and/or district levels to assess preparedness</td>
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<td>14. Order placed for the purchase of vaccines, injection devices, safety boxes or alternate disposal method and additional commodities (e.g. VR, deworming, insecticide-treated bed nets, etc.)</td>
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<td>15. Cost chain assessment completed at all levels and action taken</td>
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<td>16. Vaccines and other inputs distributed to province and district levels</td>
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<td>17. Advocacy plan for advocacy, social mobilization and communication developed and finalized</td>
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<td>18. Advocacy &amp; planning meetings held with partners and stakeholders, e.g. other line ministries (e.g. education, local government, religion), NGOs, professional/scientific societies, journalists, civil society groups (e.g. scouts, FRC, Lions Clubs International, LDS, and others)</td>
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<td>19. Advocacy, social mobilization and communication materials developed and distributed (e.g. pamphlets, posters, t-shirts, caps, banners, posters, cassettes, jegues, radio/TV announcements, etc.)</td>
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<td>20. Preparation of launch confirmed before the SIA</td>
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**Total score (no. of items with "Y")**: 3

**Target number of completed activities**: 15

<table>
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<tr>
<th>Circle time of assessment</th>
<th>15m</th>
<th>12m</th>
<th>9m</th>
<th>6m</th>
<th>4m</th>
<th>3m</th>
<th>2m</th>
<th>1m</th>
<th>2 wk</th>
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Is the national level on track to conduct the SIA as scheduled?