DRAFT

Planning Guide to Reduce
Missed Opportunities for Vaccination (MOV)

...For decision makers and programme managers at the national and subnational levels

January 24, 2017
# Table of Contents

About this Planning Guide .............................................................................................................. 3  
Introduction .................................................................................................................................. 5  
What is a missed opportunity for vaccination (MOV)? .................................................................. 5  
How can the MOV strategy increase immunization coverage? .................................................. 5  
How much could immunization coverage increase if MOVs were reduced? ............................. 6  
What are the core principles of the MOV strategy? ...................................................................... 7  
What are the steps for implementing the MOV strategy? ............................................................ 8  
STEP 1: Plan for an MOV Assessment .......................................................................................... 10  
STEP 2: Prepare for the assessment and secure commitment for follow-up interventions ........... 12  
STEP 3: Conduct field work for the rapid assessment of MOV .................................................. 18  
STEP 4: Analyze preliminary data and develop draft recommendations ....................................... 19  
STEP 5: Brainstorm on proposed interventions and develop an implementation work plan .......... 21  
STEP 6: Debrief with MOH leadership and immunization partners on proposed next steps ........ 23  
STEP 7: Implement the interventions .......................................................................................... 24  
STEP 8: Provide supportive supervision and monitor progress .................................................... 25  
STEP 9: Conduct rapid field evaluation of outcomes/impact of interventions (6-12 months later) .......................................................................................................................... 26  
STEP 10: Incorporate into long term immunization plans to ensure gains are sustainable. .......... 27
About this Planning Guide

This guide is for decision-makers and national or district managers interested in using the Missed Opportunities for Vaccination (MOV) strategy to improve vaccine uptake and immunization coverage by reducing the number of missed opportunities for vaccination.

This guide gives a brief overview of the MOV strategy from beginning to end. It provides:

1. **Background information** on why reducing the number of missed opportunities can help to provide life-saving vaccines to a large number of children/persons who have not received any doses (unvaccinated) or who are not fully vaccinated (partially vaccinated/missing doses);

2. **The steps to plan and conduct** an assessment of missed opportunities and **how to analyze** and report on the results of an MOV assessment;

3. **Guidance on how to use the findings of an MOV assessment to design and implement interventions** or solutions to reduce missed opportunities for vaccination.

This **Planning Guide** is the first of three MOV documents that have been developed to be used together:

1. **Planning Guide** to Reduce Missed Opportunities for Vaccination (this document): For use by decision-makers and programme managers at national and sub-national levels. The MOV strategy involves assessment of the magnitude and causes of missed opportunities, immediately followed by tailored health system interventions to reduce such missed opportunities, leading to an increase in vaccination coverage and timeliness of vaccinations.

2. **Methodology for the Assessment of Missed Opportunities for Vaccination** (advocacy step): Provides the detailed instructions, standard methodology, and tools for conducting field work, including: sample questionnaires for the health facility exit interviews; health worker knowledge, attitude, and practice (KAP) questionnaire; and detailed guidance for conducting key informant interviews and focus group discussions. Although in some countries it may be desirable to obtain an estimate of the proportion of missed opportunities in health facilities, the major outcome of the assessment field work is to build a strong case for reducing MOVs by convening multiple in-country immunization partners to identify and address this problem. The brainstorming steps performed during field work are intended to accomplish this outcome.

   - In some situations, it may not be desirable to conduct the standard assessment outlined in this methodology. Countries, districts or health facilities may have anecdotal or pre-documented evidence of the existence of missed opportunities, and there may already be sufficient support for reducing missed opportunities as a strategy to improve coverage and equity. In such circumstances, health facilities may choose to implement health facility-level workshops to directly find local solutions to reduce missed opportunities in affected districts. Additional detail for such workshops is provided in the **Intervention Guidebook** described below.
3. **Intervention Guidebook for Reducing Missed Opportunities for Vaccination**: This provides practical guidance for translating the findings of the MOV assessments into actionable work plans. It includes: a list of frequently found reasons for MOVs; a list of potential interventions to reduce MOVs; health facility level guidance for working through facilitator-led activities and processes for exploring locally tailored interventions to reduce MOVs. In situations where an MOV assessment is not planned, the MOV Intervention Guidebook could also be used as a **stand-alone guide** for directly planning actions to reduce MOVs in selected health facilities.
Introduction

What is a missed opportunity for vaccination (MOV)?

MOVs include any contact with health services by a child (or adult) who is eligible for vaccination (unvaccinated, partially vaccinated or, not up-to-date, and free of contraindications to vaccination), which does not result in the individual receiving all the vaccine doses for which he or she is eligible.

Most missed opportunities are due to failures to execute already established policies and procedures. Previous MOV assessments suggest several common reasons why opportunities for vaccination were missed in health facilities, including: 1) the failure of health providers to screen patients for eligibility; 2) perceived contraindications to vaccination on the part of providers and parents; 3) vaccine shortages; 4) rigid clinic schedules that separate curative services from vaccination areas; and 5) parental or community resistance to immunizations.

With the introduction of many new vaccines into national immunization schedules, the opportunities to vaccinate, as well as the opportunities to catch-up on delayed vaccinations during regular health service encounters, have both vastly increased.

Reducing missed opportunities for vaccination (MOV) is a strategy to increase immunization coverage simply by making better use of existing vaccination sites (at health centres, hospitals, outreach/mobile services etc.).

The MOV strategy answers three important questions:

1. How many opportunities for vaccination are missed at existing vaccination sites?

2. Why are opportunities for vaccination being missed at the different vaccination sites?

3. What can be adjusted or done differently (e.g. policies, behaviours, structural or organizational changes) so that we do not continue to miss any opportunity to vaccinate?

Beyond improving immunization coverage, reducing MOVs will also improve timeliness of vaccination, improve health service delivery in general, and promote synergy between treatment services and preventive programmes at the health facility level.

How can the MOV strategy increase immunization coverage?

The MOV strategy is about establishing a system so that any child/person eligible for vaccination who comes to a health facility/mobile health service (for whatever reason), receives the needed vaccines during their visit.

Missed opportunities for vaccination occur:

1. During visits to health facilities/mobile health services for immunization (“immunization contact”), as well as
2. During visits to health facilities/mobile health services for curative services (e.g. treatment of mild fever, cough, diarrhoea, bruises; “treatment contact”) or other preventive services (e.g. growth monitoring, nutrition assessments and oral rehydration training sessions, etc.);
How much could immunization coverage increase if MOVs were reduced?

Reducing MOV can contribute towards achieving the 2020 Global Vaccine Action Plan (GVAP) goal of “90% national coverage and 80% in every district or equivalent administrative unit, for all vaccines in the national immunization schedule.”

A 2014 analysis using data from recent Demographic Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) estimated the potential gains in coverage if the children who were in contact with health services received the doses of vaccine(s) that were due. For example, bridging the MOV gap could potentially improve Penta3/DTP3 coverage by as much as 10 percentage points, depending on the country (Table 1). At a sub-national level (e.g. poor performing districts or facilities) these coverage gains could be even greater, up to 30%.

Recent field assessments of the magnitude of MOV in the Region of the Americas (AMR) (2014) and the African Region (AFR) (2015) of the World Health Organization (WHO) have shown that between 23% to 96% of eligible children who visited a health facility for vaccination or for medical care, left the health facility without receiving the vaccine doses that they needed. These are children who are already being reached by health services (and not necessarily so-called “hard-to-reach” or underserved populations). Missing the opportunity to vaccinate these children, when they are already present at the health facility/outreach site, is unacceptable.

Table 1: Current and estimated 2013 DTP3 coverage by country, if missed opportunities for vaccination were to be completely eliminated

<table>
<thead>
<tr>
<th>Country</th>
<th>WUENIC² DTP3 (2013)*</th>
<th>Estimated new DTP3 (2013)**</th>
<th>Estimated % gain in coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>69</td>
<td>77</td>
<td>8%</td>
</tr>
<tr>
<td>Cambodia</td>
<td>92</td>
<td>95</td>
<td>3%</td>
</tr>
<tr>
<td>DRC</td>
<td>72</td>
<td>80</td>
<td>8%</td>
</tr>
<tr>
<td>Ghana</td>
<td>90</td>
<td>92</td>
<td>2%</td>
</tr>
<tr>
<td>India</td>
<td>72</td>
<td>84</td>
<td>12%</td>
</tr>
<tr>
<td>Kenya</td>
<td>76</td>
<td>81</td>
<td>5%</td>
</tr>
<tr>
<td>Liberia</td>
<td>89</td>
<td>95</td>
<td>6%</td>
</tr>
<tr>
<td>Malawi</td>
<td>89</td>
<td>96</td>
<td>7%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>78</td>
<td>92</td>
<td>14%</td>
</tr>
<tr>
<td>Niger</td>
<td>70</td>
<td>80</td>
<td>10%</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>92</td>
<td>97</td>
<td>5%</td>
</tr>
</tbody>
</table>

¹ Unpublished data. WHO analysis of potential coverage gains if missed opportunities were eliminated, using recent DHS and MICS surveys and other ancillary data.
² WHO/UNICEF estimates of national immunization coverage
What are the core principles of the MOV strategy?

**Principle #1. Focuses on implementing actions at the local level, where most of the reasons for missed opportunities for vaccination are identified**

The MOV strategy relies on a bottom-up approach that obtains information on the reasons for MOV from service providers and the users of health services, at the facility level. The strategy then seeks the commitment, knowledge and experiences of the local staff and users to resolve any identified issues. When health workers and local communities take ownership and responsibility for reducing missed opportunities, the impact on number of children vaccinated is intensified.

**Principle #2. Emphasizes country leadership**

MOV assessments should not be performed as stand-alone research projects by an academic institution; rather every effort should be made to have the Ministry of Health (MOH) EPI team incorporate reducing MOV in their programme improvement plans and to use the MOV strategy to optimize health service processes, policies and mechanisms. In order to achieve long-term gains, the MOV strategy in each country begins with a country-led assessment of why opportunities for vaccination are missed and then specifically addresses them using locally-tailored interventions. The MOV strategy is designed to be low-cost and action oriented, and is intended to be fostered by the national and sub-national level, but mostly implemented and managed by the health facility staff.

**Principle #3. Capitalizes on existing platforms and builds synergies**

The MOV strategy should be integrated with other ongoing country work plans and activities for increasing routine vaccine coverage and equity. For instance, where applicable, the MOV strategy can be built into health systems strengthening activities, as it promotes synergies with other non-immunization services/programmes. The focus on health facilities seeks to improve the management, organization and integration of service delivery at the lowest level possible. As a result, the coverage of other health services can also be improved.

**Principle #4. Invests in sustainable monitoring and supervision**

Reducing MOVs requires an investment in regular monitoring of coverage and frequent supportive supervision from the next higher level of the health system. It is important to monitor the number of children vaccinated, and compare this from month to month, as well as compare similar months from year to year. The monitoring charts should be large enough to be displayed and visible to all users of the health facility as well as for review during community meetings.

---

### Table 1 footnotes:

* WHO-UNICEF estimates of national immunization coverage.

** Using estimates (from recent DHS and MICS) of the proportion of un-/under-vaccinated children who had visited a health facility for treatment of cough, fever and diarrhea in the preceding two weeks, we estimated what the national DTP3 coverage would have been, had they all used the health visit to take all the vaccines for which they were eligible. Such a healthcare encounter was considered a missed opportunity only if the missed vaccine dose was more than 3 months overdue and there were no contraindications to vaccination.

<table>
<thead>
<tr>
<th>Country</th>
<th>DTP3</th>
<th>MCV</th>
<th>MOV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanzania</td>
<td>91</td>
<td>99</td>
<td>8%</td>
</tr>
<tr>
<td>Uganda</td>
<td>78</td>
<td>89</td>
<td>11%</td>
</tr>
<tr>
<td>Zambia</td>
<td>79</td>
<td>88</td>
<td>9%</td>
</tr>
</tbody>
</table>

---

Tanzania 91 99 8%
Uganda 78 89 11%
Zambia 79 88 9%
What are the steps for implementing the MOV strategy?

There are ten steps in the MOV strategy, each leading naturally to the next. These 10 steps are summarized below:

**Step 1**: Plan for an MOV assessment and intervention

**Step 2**: Prepare for the assessment and secure commitment for follow-up interventions

**Step 3**: Conduct field work for the rapid assessment of MOV

**Step 4**: Analyze preliminary data and develop draft recommendations

**Step 5**: Brainstorm on proposed interventions and develop a work plan for the interventions

**Step 6**: Debrief with MOH leadership and immunization partners on proposed next steps

---

For more on how to make a monitoring chart tracking doses administered and dropouts, please refer to *Immunization in Practice, Module 6: Monitoring and surveillance*. WHO, 2015.

Step 7: **Implement** the interventions

Step 8: **Provide** supportive supervision and monitor progress

Step 9: **Conduct** rapid field evaluation of outcomes/impact of interventions (6-12 months later)

Step 10: **Incorporate** into long term plans to ensure gains are sustainable.

For each step, this Planning Guide outlines the key actions that need to be taken and any lessons learned from country experiences. The ten steps are further categorized into:

1. Steps to be completed by the planning team at the national or subnational level:
   - Steps 1 & 2;
   - Steps 7 – 10;

2. Steps to be completed by the field team responsible for conducting and analyzing the assessments:
   - Steps 3 – 6;

A summary of the 10 steps MOV strategy, including responsible actors, recommended timelines, detailed tasks to be carried out under each step and expected outcomes is found in **Annex 1**.

### The 10-step process of the MOV strategy

- **Plan and prepare for the MOV strategy**
  1. Plan for the assessment
  2. Prepare for field work and secure funding

- **Conduct the field work**
  3. Collect field data (including qualitative data)
  4. Analyse data
  5. Debrief to partners
  6. Brainstorm on potential interventions (draft a work-plan)

- **Implement and monitor interventions**
  7. Implement agreed-on interventions
  8. Provide on-going supportive supervision
  9. Rapid outcome assessments
  10. Incorporate into long-term health (immunization) system improvement plans
### STEP 1: Plan for an MOV Assessment

| Who: MOH, with support from all in-country immunization partners |
| When: 2–4 months before field work |

---

#### Task 1.1: Decide whether an MOV strategy is needed

The causes of missed opportunities for vaccination and the interventions to reduce them vary widely in different countries. Experience from countries where the strategy has been implemented shows that the MOV strategy and tools are applicable across low-, medium- and high-coverage immunization programmes. Each country needs to critically appraise the findings of its recent immunization programme reviews and decide whether addressing MOVs will be a useful strategy to increase immunization coverage and timeliness of vaccination.

#### Task 1.2: Achieve high-level support from the Ministry of Health (MOH)

Once Task 1.1 is completed, the EPI programme should put together a detailed plan to obtain high-level MOH support. Such a support is usually obtained by making presentations to the MOH leadership that include: a listing of some of the known problems with the immunization programme and how the MOV strategy could provide solutions to improve both immunization and other services; a listing of possible sources of funding, such as an upcoming Health Systems and Immunization Strengthening (HSIS) application or similar funds; etc. This task is critical for the post-assessment phase, when new activities and policy changes may require high-level political support for sustainable implementation and funding.

#### Task 1.3: Identify an Assessment Coordinator and members of the MOV Planning Team (preferably multi-partner; may be a sub-committee of the Inter-agency Coordinating Committee [ICC] or similar body)

Identifying “MOV champions” early in the planning phase is one of the critical steps for success. The Assessment Coordinator may be the EPI Programme Manager or other official from the MOH or other immunization partners. Ideally, the MOV Planning Team should include a representative from each of the key immunization partners, for example, one person each from the MOH, WHO, UNICEF, etc. A team of 3 – 5 persons is ideal. The planning team does not need to be a new committee, but could be a sub-committee/working group of the ICC or similar body.

With support from the MOV Planning Team, the Assessment Coordinator is responsible for advocating for the MOV strategy at the different high-level fora of the MOH and for coordinating the logistics and funding for the implementation among the immunization partners. He/she is also expected to lead the
report writing following the assessment, to disseminate the work plan from the brainstorming sessions, and to lead the implementation of long-term activities to reduce MOVs.

**Task 1.4: Identify funding sources from within and/or outside the EPI programme**

Although the cost of MOV field work is not very high, it is necessary to identify potential sources of funding for the field work as well as the post-assessment interventions. This is to ensure that the entire MOV strategy can be fully implemented. Conducting the MOV assessment and determining the causes of MOVs (Steps 3-6), without supporting the implementation and monitoring of corrective interventions/actions (Steps 7-10) constitutes a failure of the strategy. For long-term funding of interventions and supervision activities, explore early synergies with existing (funded) programmes and/or other platforms (e.g. HSIS funds) to enhance sustainability. Sources outside the EPI programme, such as family planning, ante-natal, and nutritional services, may provide synergistic opportunities in some settings.

**Task 1.5: Prepare a schedule of activities and include in annual work plan, with approval of ICC or similar body**

The final task in the planning phase is to ensure that the ICC or similar high-level body backs the activities proposed. Many countries consistently experience very crowded annual EPI work plans. Country experience shows that including the MOV assessment and interventions in an annual EPI work plan, remarkably improves the chances that sufficient time and resources are allocated for its implementation.

**Typical human resource requirement for conducting an MOV assessment:**

- Assessment Coordinator
- MOV Planning Team (3-5 members; multi-partner team)
- Field team (10-20 interviewers, two per team; 5-10 supervisors)
- Data manager/data analyst
STEP 2: Prepare for the assessment and secure commitment for follow-up interventions

Who: MOV Planning Team, MOH and other key immunization partners
When: 1–2 months before field work

Task 2.1: Collect, compile and review available information on the immunization programme, including recent programme reviews and coverage estimates

Task 2.2: Decide on the scale of the MOV work (nationwide or only in selected low-coverage districts(s))

Task 2.3: If appropriate, select subnational areas for field work

Task 2.4: Agree on sample size, the number of field staff and the number of days for field work needed

Task 2.5: Finalize the budget for the assessment field work

Task 2.6: Prepare a draft budget for the post-assessment interventions

Task 2.7: Share plan with ICC or appropriate body (and partners) for final approval of the plan

Task 2.8: Clarify whether ethical approval is necessary and commence the process.

Task 2.9: Review generic questionnaires, and if necessary adapt to country context and vaccine schedule

Task 2.10: If needed, finalize arrangements for the translation of the updated questionnaires and training materials into the local language(s)

Task 2.1: Collect, compile and review available information on the immunization programme, including recent programme reviews and coverage estimates

Where available, routine administrative data (such as District Vaccination Data Management Tool (DVD-MT), Stock Management Tool (SMT) and Health Management Information System (HMIS) data), recent coverage survey and programme review reports are invaluable in preparing for the MOV assessments, particularly for prioritizing districts or types of health facilities to focus the interventions. Review of these reports and data sources may help identify missed opportunities in general or assist to prepare and focus the field work.

Data elements to explore may include whether the proportion of fully-immunized children is below Penta3 and/or MCV1 coverage, number of doses administered by month, number of days of stock-out by antigen, stock-outs of syringes, recording tools or other injection devices. Although the data quality from many of these sources may not be consistently of high quality, they may confirm the existence of MOVs, orient field work to certain districts and/or highlight additional questions that may need to be included in the questionnaires (e.g. policy and practice on catch up if a child misses one of the due antigens because of stock out).

Task 2.2: Decide on the scale of the MOV work (nationwide or selected districts[s])

The MOV methodology is adaptable to different levels of the health care system. This is because the solutions to the problems identified are mostly applicable at the service delivery point, but national policies and guidelines may sometimes need to be modified. It is noteworthy that even though the assessments may be performed in a limited number of sentinel districts/health facilities, the follow-up interventions may be scaled-up nationwide. Figure 2 shows an example of the selection of multiple districts as part of a nationwide sample.
Task 2.3: If appropriate, select subnational areas for field work

Some countries have selected the largest or worst-performing districts for the MOV assessments and interventions, with the understanding that this would provide the greatest benefit as well as the best use of limited resources. In the example illustrated in Figure 3, the largest district (25% of the population) was selected for the first phase of the assessments and interventions; the MOH plans to scale up the interventions to additional districts following the proof-of-concept phase in the largest district.

Figure 2. Example of sampling for an entire country: Malawi
(Total n=600 children and 300 health workers)
Figure 3. Example of sampling within ONE district: Timor Leste

Task 2.4: Agree on sample size, the number of field staff needed and the number of days for field work

Decisions about sample size and scope will likely be impacted by the availability of financial, human and time resources. In general, each team of two interviewers is expected to complete the interviews (exit, health worker, and key informant) in one health facility per day, plus at least 2 focus group discussions (FGD) in total. Using this estimate, as well as the number of days available for field work, the distances and terrain in different countries, etc., the MOV Planning Team should determine the number of interviewers and supervisors needed to form the Field Team. Interviewers and supervisors should be drawn from the MOH and other in-country immunization partners.

The Planning Team may choose to conduct an assessment at the national, regional or district level. In each case, a minimum sample size of 500 mother/caregiver (exit) interviews and 300 health worker interviews are needed for the analysis of causes of MOVs (whether at the national, regional or district level). In health systems with lower vaccination card (home-based record) availability, larger samples may be needed. If time and resources permit, a sample of 1,000 or larger will allow for more detailed sub-analyses, such as estimation of missed opportunities by vaccine antigen, age, reason for visiting the health facility and other demographic sub-classifications.

With the cumulative experience from recent assessments in varying settings, the sampling has been simplified using the following considerations:

1. To minimize the burden of the assessment by completing field work in three days or less. We recognize that limiting the number of days of field work may risk introducing a systematic bias
against assessing MOVs in smaller facilities where EPI services are less frequent and number of patients seen daily is low. However, the triangulation of data from key informant interviews will minimize the impact of this bias;

2. To minimize the cost of the field work and channel any remaining funds towards implementing the interventions to reduce missed opportunities;

3. To prioritize “identifying” and advocating MOVs as a problem rather than calculating a statistically precise “estimate” (with a narrow confidence interval);

Standard sample size calculations:

Using the standard sample size calculation and a realistic estimate of MOV (30-40%), the data collection effort may become unmanageable due to the large sample size:

\[ n = z^2 \times \frac{(P \times (1-P))}{e^2} \]

where:

- \( n \) = number of children under 5 years of age
- \( z \) = constant for 95% CI
- \( P \) = estimated % un/under-vaccinated (~MOV)
- \( e \) = margin of error

If \( p = 0.30 \), \( e = 0.025 \) and \( z = 1.96 \) then \( n = 1,290 \)

Simplified sampling strategy:

- Because \( P \) is so large, the only other factor that can be varied is \( e \) (margin of error) to have a reasonable sample size, \( n \);
- Given varying vaccination card availability rates in different settings, a target sample size of at least 500 will yield enough data for the detailed analysis of causes of MOV;
- The current methodology uses the pragmatic approach of triangulation of data from qualitative interviews (focus group discussions and key informant interviews) to compensate for any (perceived) data gaps;
- A concerted effort is made to spread data collection across many health facilities also helps to capture some of the variability in missed opportunities;

The following guidelines will improve the strength of the study design:

1. Spread data collection across several unique health facilities (for example, 10 interviews in each of 50 health facilities \([n=500]\), rather than 25 interviews in each of 20 health facilities \([n=500]\));
2. Where possible, assess a mix of health facilities, in terms of size (small/medium/large), type (private/public) and location (rural/urban), etc.
3. If the private sector (private practitioners, NGOs, FBOs, etc.) provides vaccination services in the geographic area assessed, the MOV Planning Team should ensure that private health facilities make up at least 30% of the assessment sample.

4. Conduct a fixed number of interviews at each health facility selected:
   - 10 exit interviews for infants 0-11 months old;
   - 10 exit interviews of children 12-23 months old;
   - 10 KAP interviews of health workers (self-administered);

District selection is expected to be performed at the national level, by the MOV Planning Team. In general, a minimum of 25% of districts/counties or other administrative subdivisions should be included. In general, a national sample should include at least 8–10 districts/counties. This simplified sampling scheme is suggested, as the results are not intended to be nationally representative. Instead, to the extent possible, the selection of districts/counties should cover the full range of geographic and service experiences (including rural/urban, public/private, size of facility, and performance level of each district/facility).

**Sampling of health facilities is purposive.** Within each district, the MOV Planning Team will pre-select at least three health facilities for the assessment (a mix of public/private, as well as large/medium/small facilities). Efforts should always be made so that at least 30% of the final sample is comprised of private health facilities.

**Example of district and health facility selection:**

For Country X, a simplified sampling strategy was agreed upon, as the results were not intended to be nationally representative. Within each district, the MOV Assessment Team pre-selected three health facilities (HF) for the assessment (by public/private ownership and by size of facility), as shown in Table 2.

**Table 2: Selection of assessment districts in Country X (8-10 districts selected)**

<table>
<thead>
<tr>
<th>Urban districts (4 or 5)</th>
<th>Rural districts (4 or 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government HF</strong></td>
<td><strong>Government HF</strong></td>
</tr>
<tr>
<td>(large)</td>
<td>(small or medium)</td>
</tr>
<tr>
<td>n=10 (0-11 months)</td>
<td>n=10 (0-11 months)</td>
</tr>
<tr>
<td>n=10 (12-23 months)</td>
<td>n=10 (12-23 months)</td>
</tr>
<tr>
<td>n=10 (health workers)</td>
<td>n=10 (health workers)</td>
</tr>
<tr>
<td>n=1 (key informant)</td>
<td>n=1 (key informant)</td>
</tr>
<tr>
<td>n=2 (FGDs, mothers or health workers)</td>
<td>n=2 (FGDs, mothers or health workers)</td>
</tr>
<tr>
<td><strong>Government HF</strong></td>
<td><strong>Government HF</strong></td>
</tr>
<tr>
<td>(large)</td>
<td>(small or medium)</td>
</tr>
<tr>
<td>n=10 (0-11 months)</td>
<td>n=10 (0-11 months)</td>
</tr>
<tr>
<td>n=10 (12-23 months)</td>
<td>n=10 (12-23 months)</td>
</tr>
<tr>
<td>n=10 (health workers)</td>
<td>n=10 (health workers)</td>
</tr>
<tr>
<td>n=1 (key informant)</td>
<td>n=1 (key informant)</td>
</tr>
<tr>
<td>n=2 (FGDs, mothers or health workers)</td>
<td>n=2 (FGDs, mothers or health workers)</td>
</tr>
</tbody>
</table>

**Task 2.5: Finalize the budget for the assessment field work**

Based on the decisions in Task 2.4 (above), a budget should be easy to work out. It is important to include costs associated with the training of field staff, printing of materials, and daily transport during field work. (Cross-reference: Example budget template in Annex 6 of the MOV Methodology).
Task 2.6: Prepare a draft budget for the post-assessment interventions

In addition to the MOV assessment budget, it is advisable at this stage to start preliminary discussions around different cost scenarios for potential interventions, given what is known about the performance of, and bottlenecks in, the immunization programme. Possible budget items may include training of health workers, printing of promotional materials, printing of job aids, funding for supportive supervision, printing of wall posters, etc.

Potential funders should be contacted during the planning stage. The inclusion of potential funders in the planning and assessment phases increases the likelihood that they will be interested in funding the needed interventions. In addition, such early engagement may necessitate modifications in the design of the MOV assessment to meet upcoming funding requirements and guidelines.

Task 2.7: Share plan with ICC or appropriate body (and partners) for final approval

At the next meeting of the ICC, the MOV Planning Team should present the proposed plan, budget and timelines for approval. The primary purpose of the MOV assessment is to use the data and results for advocacy and action (e.g. adapt policies, processes) and design corrective interventions/solutions that will reduce MOVs. Solid endorsement from the ICC or similar body is therefore a critical factor for successful implementation of interventions.

Task 2.8: Clarify whether ethical approval is necessary and commence the application process

In many countries, the MOV assessment has been undertaken as a routine programme evaluation. In such situations, it may be exempted from formal ethical clearance. This should be clarified with the responsible body as early as possible. If formal ethical clearance is needed, the Assessment Coordinator should adapt the generic methodology and study tools for submission to the Institutional Review Board (IRB) in a timely manner.4

Task 2.9: Review generic questionnaires, and if necessary adapt to country context and vaccination schedule

With leadership from the Assessment Coordinator, the MOV Planning Team should review and adapt the generic exit interview questionnaire (Cross-reference: MOV Methodology, Annex 2) and Health Worker KAP Questionnaire (Cross-reference: MOV Methodology, Annex 3) to the country context. Such adaptations may include updating the generic questionnaires with the local vaccination schedule, health facility classifications and health worker professional qualifications, etc. To maintain comparability of the results with other country assessments, these modifications should be kept to a manageable minimum.

Task 2.10: If needed, finalize arrangements for the translation of the updated questionnaires and training materials into the local language(s)

If needed, translation of all instruments should commence as soon as possible. This is because training cannot start until translation is completed and validated. In addition, if electronic data collection is planned, additional time will be needed to convert the translated tools into an electronic format and to pilot test the e-platforms.

---

4 If IRB review is required, this can easily add 1-2 months on to the planning stage and should be determined well in advance.
STEP 3: Conduct field work for the rapid assessment of MOV

The tasks for conducting the assessment (Steps 3-6) are presented here in summary form. A detailed description of each task is provided in the companion document, *Methodology for the Assessment of Missed Opportunities for Vaccination (MOV Methodology)*.

**Who:** Assessment coordinator, MOH and in-country immunization partners  
**When:** 1-2 weeks duration, depending on training needs and travel distances

| Task 3.1: Print questionnaires and/or prepare electronic tablets or smartphones for data collection |
| Task 3.2: Train supervisors and interviewers on the assessment process and logistics (3 days) |
| Task 3.3: Administer exit surveys to the mothers/caregivers of children less than two years old, in the selected health facilities (2–3 days - *mornings*) |
| Task 3.4: Extract vaccination data from health facility registers for children with no vaccination cards (1/2 day) |
| Task 3.5: Administer health worker KAP (knowledge, attitude and practices) assessment (2–3 days - *afternoons*) |
| Task 3.6: Conduct focus group discussions for mothers/caregivers (1/2 day) |
| Task 3.7: Conduct focus group discussions for health workers (1/2 day) |
| Task 3.8: Conduct key informant interviews with the pre-determined number of senior staff and health administrators (1/2 day) |

The MOV strategy uses a bottom-up approach that seeks to assess the reasons for missed opportunities as well as potential interventions at the vaccination point - from the service providers and the mothers/caregivers. The assessment strategy uses triangulation from multiple assessment components, as listed in the schematic below:

**Step 3 (Tasks 3.1-3.8): Schematic for understanding the contributions of the five assessment components**

<table>
<thead>
<tr>
<th>Expected outcomes</th>
<th>Assessment components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Identify the magnitude, extent and causes of missed opportunities</strong></td>
<td>1. Health facility exit interviews (interviewer-administered)</td>
</tr>
<tr>
<td></td>
<td>2. Health worker KAP interviews (interview- or self-administered)</td>
</tr>
<tr>
<td></td>
<td>3a. Focus group discussions (for mothers/caregivers and health workers)</td>
</tr>
<tr>
<td></td>
<td>4a. Key informant interviews (for health administrators)</td>
</tr>
<tr>
<td><strong>B. Identify potential interventions to reduce MOVs</strong></td>
<td>3b. Focus group discussions (for mothers/caregivers and health workers)</td>
</tr>
<tr>
<td></td>
<td>4b. Key informant interviews (for health administrators)</td>
</tr>
<tr>
<td></td>
<td>5. Work group brainstorming sessions</td>
</tr>
</tbody>
</table>
STEP 4: Analyze preliminary data and develop draft recommendations

**Who:** Assessment coordinator and representatives from MOH and partner organizations

**When:** 1-2 days, during and following field work

**Task 4.1:** Tally data from sampled questionnaires for analysis, or download preliminary data from the electronic data collection platform

**Task 4.2:** Collate the facilitator notes taken during the qualitative interviews

**Task 4.3:** Conduct a quick-and-dirty analysis of preliminary data, to identify key themes and major results for discussion in Step 5

**Task 4.4:** Prepare for detailed analysis of complete data, as well as data cleaning (Cross-reference: Annex 8, MOV Protocol)

---

**Task 4.1: Tally data from sampled questionnaires for analysis, or download preliminary data from the electronic data collection platform**

A data manager should assist with data collation during and following field work. For the first phase of the analysis in preparation for the debrief, a simple analytic software such as Visual Dashboard in EPIinfo is ideal. This can produce simple frequencies and easily updates simple charts automatically. More detailed analysis can be conducted using STATA or SAS software. Examples of frequencies and analyses are included in the annex of the MOV Methodology.

The draft results are needed for the debrief presentation, which takes place 1-2 days after completion of field work. Experience in countries that have completed the MOV assessments shows that this step is facilitated by the use of electronic data collection platforms (electronic tablets or smartphones). When possible, use of such electronic tools is highly encouraged. If data is collected on paper forms, a (random) sample of forms should be entered into a database for a quick analysis in preparation for the debrief presentation.

**Task 4.2: Collate the facilitator notes taken during the qualitative interviews**

If a social scientist is part of the Field Team, they would be responsible for conducting the qualitative interviews. They can submit preliminary analysis results and important quotes for inclusion in the presentation for the brainstorming (Step 5) and debrief presentations (Step 6). Otherwise, the Assessment Coordinator should compile important quotes and themes discussed during the focus group sessions for the debrief presentation.

**Task 4.3: Conduct a quick preliminary data analysis, to identify key themes and major results for discussion in Step 5**

Together with the MOV Planning Team, the Assessment Coordinator should compile the results from the different assessment components into a set of presentation slides. It should be emphasized that these data and results are preliminary. However, experience shows that the final results rarely differ markedly. Please note that it will be nearly impossible to derive an “estimate” of the proportion of children missed at this stage of the analysis. This requires further data cleaning, reclassification and subgrouping (Task 4.4).
Task 4.4: Plan for detailed analysis of complete data, as well as data cleaning

Detailed data analysis should commence as soon as possible after the debrief, and certainly final results should feed into the planning of the post-assessment interventions. If analysis cannot be performed in-country due to time and capacity constraints, it should be outsourced as soon as possible. (Cross-reference: Annex 8 of the MOV Methodology)
STEP 5: Brainstorm on proposed interventions and develop an implementation work plan

Who: Assessment coordinator, field supervisors and MOH-EPI leadership (health facility, district and/or national level)

When: 1 day, following field work

Task 5.1: **Present** the preliminary data from **Step 4** and ask for reactions from the group

Task 5.2: Facilitate a discussion on **ideas for reducing MOVs** in the selected district(s)/the entire country

Task 5.3: Develop a **detailed framework, work plan and chronogram** for reducing MOVs over the next 6-12 months

Task 5.4: Assign **roles and responsibilities to different partners** using the work plan from Task 5.3, including a clear supervision, monitoring and evaluation plan

Task 5.5: Propose existing systems, opportunities and activities to **ensure community participation** during the intervention phase

Task 5.1: **Present** the preliminary data from **Step 4** and ask for reactions from the group

All participants in the assessment should reconvene to debrief and discuss the preliminary data compiled. A facilitated open discussion format with note-taking is encouraged for this task.

Task 5.2: **Facilitate a discussion on ideas for reducing MOVs** in the selected district(s)/the entire country

As a lead up to the work plan for reducing MOVs, the process for the brainstorming sessions should include:

- A discussion of the key findings from the MOV assessment to identify main causes of missed opportunities (plenary);
- Brainstorming on potential interventions to address the causes identified (in work groups of 3-5 persons);
- A listing of a chronogram of activities to reduce MOVs, to be implemented over the next 6-12 months (within each work group of 3-5 persons):
  - Each activity should have a clear timeline
  - The technical assistance needs for each activity should be assigned to one of the partners with comparative advantage in that area of work
  - Whenever possible, the listed activities should leverage existing funding streams and be aligned with current country plans;
- A presentation of each working groups chronogram to the plenary for discussion (plenary)
- A final list of activities, chronogram and potential funding sources that will be included in the debrief slides (Next Steps and Follow-up activities);

Task 5.3: **Develop a detailed framework, work plan and chronogram** for reducing MOVs over the next 6-12 months

Following the discussions in Task 5.2, compile ideas from all working groups into an integrated list of activities, responsible persons and timelines for the debrief presentation. (Cross-reference: See a generic example in **Annex 9 of MOV Methodology**).
Task 5.4: Assign roles and responsibilities to different partners using the work plan from Task 5.3, including a clear supervision, monitoring and evaluation plan

Ensure that immunization partners with expertise in different aspects of the programme are willing to take their respective roles and responsibilities (e.g. communications, health worker trainings, policy refinement or dissemination, improvements in the cold chain, funding of interventions, etc.). These roles may need to be negotiated further following the debrief presentation.

Task 5.5: Propose existing systems, opportunities and activities to ensure community participation during the intervention

Long-term sustainability of immunization programmes require ongoing community participation and community demand for high quality services. A plan should be in place to invite civil service organizations (CSOs) and community development committees to the final debrief session (Step 6). Use the opportunity to solicit their input and assistance with implementing the proposed interventions.
STEP 6: Debrief with MOH leadership and immunization partners on proposed next steps

**Who:** All immunization partners and related programmes (such as family planning, ante-natal services, reproductive health, etc., with leadership by MOH

**When:** ½ day, following development of the implementation work plan

---

**Task 6.1:** Present the summary objectives of the assessment, the process of the field work and the updated results and recommendations from Step 5

**Task 6.2:** Present the proposed work plan and request feedback and/or endorsement of the work plan from the MOH and partner leadership

**Task 6.3:** During the debrief, commence discussion on funding of the interventions or including them in existing immunization or health system improvement plans

---

**Task 6.1**: Present the summary objectives of the assessment, the process of the field work and the updated results and recommendations from Task 5

The objectives and results of the assessment components and the districts covered should be presented in a set of PowerPoint slides. See more details in the MOV Methodology.

**Task 6.2**: Present the proposed work plan and request feedback and/or endorsement of the work plan from the MOH and partner leadership

Sufficient time should be allocated to discussion of the proposed work plan. If additional ideas are raised, these should be included and a final version endorsed by the end of the debrief.

**Task 6.3**: During the debrief, commence discussions on funding of the interventions or inclusion in existing immunization or health system improvement plans

To ensure that the proposed intervention activities are implemented in a timely manner, concrete discussions on new funding sources or the re-programming of existing funds should commence during the debrief. In addition, new ideas for including the MOV strategy in upcoming funding applications should be explored. A major output of Step 6 is a detailed work plan such as the one shown below:

<table>
<thead>
<tr>
<th>Main issues identified</th>
<th>Proposed interventions</th>
<th>Immediate next steps</th>
<th>Responsible person/organization</th>
<th>Timeline</th>
<th>Remarks on sustainability/funding plans</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This work plan should form the basis of more detailed discussions at the highest MOH level possible. It should be noted that the majority of the proposed interventions will likely not require additional funds. This is especially true for most of the practice changes that need to take place at the health facility level/vaccination point. For such activities, immediate actions can commence while the work plan is being discussed at the national level.
STEP 7: Implement the interventions

The tasks for implementing the interventions (Steps 7-10) are presented here in summary form. A detailed description of each task is provided in the companion document, Intervention Guidebook for Reducing Missed Opportunities for Vaccination (MOV Intervention Guidebook) (cross-reference hyperlink).

Who: Health facility staff, MOH and immunization partners
When: 6-12 months following the assessment phase

Task 7.1: Based on the findings of the MOV assessment, implement interventions to address specific findings, e.g. additional tailored trainings; mass media to build community demand; etc.

Task 7.2: Provide additional policy guidance, directives, job aids and other communication materials from the national level

Task 7.3: Using the MOV Intervention Guidebook as a starting point, encourage local/tailored solutions for reducing MOVs in each health facility

Task 7.1: Based on the findings of the MOV assessment, implement interventions to address specific findings, e.g. additional tailored trainings; mass media to build community demand; etc.

It is important that the proposed interventions to reduce MOVs target the problems that were identified during the assessment. These problems may differ by district or by type of health facility (e.g. urban/rural or public/private).

Task 7.2: Provide additional policy guidance, directives, job aids and other communication materials from the national level

The MOV Planning Team should work with the MOH and ICC to institute policy and other types of guidance to address specific issues, e.g. on vaccination of children who are older than 12 or 24 months, implementation of the open vial policy, addressing false contra-indications, etc. Measures to ensure that such new or updated policies are implemented at the vaccination point should be addressed.

Task 7.3: Using the MOV Intervention Guidebook as a starting point, encourage local/tailored solutions for reducing MOVs in each health facility

The MOV Intervention Guidebook provides guidance and options for interventions at the national, district or health facility level. The MOV Intervention Guidebook should assist the MOV Planning Team in designing workable solutions for the different levels of the health system. It also provides suggestions for supportive supervision, monitoring and evaluation of proposed activities.
STEP 8: Provide supportive supervision and monitor progress

**Who:** MOH, with support from key immunization partners  
**When:** 6-12 months following the assessment phase

**Task 8.1:** Establish a clear monitoring and supervision plan  
**Task 8.2:** Provide funds for supportive supervision and corrective actions  
**Task 8.3:** Provide monitoring charts and ensure compliance, with visible display of monthly coverage estimates

**Task 8.1: Establish a clear monitoring and supervision plan**

The focus of the supervisory visits should be to correct any identified implementation problems. To avoid duplication of efforts, the monitoring and supervision plan should strengthen existing systems whenever possible. These need to be systematized and regular, preferably monthly and from the next higher level of the health system. MOV Planning Team should provide templates for reporting to higher levels. A collation method should also be established for onward reporting and feedback to affected health staff.

**Task 8.2: Provide funds for supportive supervision and corrective actions**

It should be emphasized that the supervisory visits should not be designed merely for reporting to higher levels. Instead, these should emphasize and support practice changes to improve vaccination coverage as well as overall efficiency of service delivery. In most countries, additional funding for supervisory visits may be required at the initial phases, and these should be budgeted for, as appropriate. Similarly, corrective actions may require funds for implementation, and these should be accounted for in estimating the intervention budget.

**Task 8.3: Provide monitoring charts with visible display of coverage estimates, and ensure compliance**

Clear and easy-to-use wall monitoring charts should be printed centrally and distributed to all health facilities. The charts should provide a blank space for personalization, such as facility/village name, date, etc. Emphasis should be placed on **numerator tracking for different antigens**, as this is sufficient to monitor changes from month to month, or to compare with similar months from previous years. Examples of charts are provided in the MOV Intervention Guidebook.
STEP 9: Conduct rapid field evaluation of outcomes/impact of interventions (6-12 months later)

**Who:** MOH, with support from key immunization partners

**When:** 6-12 months following Step 7-8

**Task 9.1:** Following 6-12 months of implementation of activities, conduct evaluation of effectiveness of the interventions in selected health facilities

Following 6-12 months of implementation of interventions and supportive supervision, a re-assessment of MOVs should be conducted in (a subset of) the original health facilities (in Step 3). This evaluation should use a similar methodology as the initial assessment. However, it should incorporate an assessment of the adherence of different health facilities to the originally proposed interventions.

The objective is to assess any changes in practice styles and proportion of MOVs that may have occurred as a result of the interventions. The MOV Planning Team should ensure that the results of this evaluation are shared widely and that the MOH leadership is updated with the outcomes. Areas that need strengthening should be identified and further supported. The objective is to make reducing MOVs a regular part of normal clinical practice in all health facilities, private as well as public.

As an ancillary assessment, if there were no MOV interventions in some parts of the country/districts, such locations could serve as controls to further illustrate the impact of the interventions on service quality and vaccine coverage.

Similarly, monthly numerator tracking from year to year (prior to and post-intervention) should be used to further document changes in vaccination coverage within the intervention and non-intervention districts/health facilities.
STEP 10: Incorporate into long term immunization plans to ensure gains are sustainable.

**Who:** MOH, with support from key immunization partners  
**When:** Ongoing

**Task 10.1:** To ensure sustainability, include interventions to reduce MOV in long-term immunization plans (e.g. cMYP and annual EPI workplan)

The MOV strategy should not be conceived as a project or a one-time activity to increase vaccine coverage. Rather, it is a health system-wide service integration effort to improve vaccination as well as other health services. As such, from the outset, the MOV Panning Team should ensure that MOV activities and processes are included as part of country plans such as the cMYP and the annual EPI workplan. The intervention activities should be routinized and sustained, by ensuring the availability of sufficient funding and political will. Periodic supportive supervision and monitoring of MOVs should continue on a monthly or quarterly basis, as part of the regular monitoring and supervision plan for health services in general.
Annex 1. Summary Table of the MOV Strategy:

<table>
<thead>
<tr>
<th>Step</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
<th>Step 6</th>
<th>Step 7</th>
<th>Step 8</th>
<th>Step 9</th>
<th>Step 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>What</td>
<td>Plan for an MOV assessment and intervention</td>
<td>Prepare for the assessment and secure commitment for follow-up interventions</td>
<td>Conduct field work for the rapid assessment of MOV</td>
<td>Analyze preliminary data and develop draft recommendations</td>
<td>Brainstorm on proposed interventions and develop an implementation work plan</td>
<td>Debrief with MOH leadership and immunization partners on proposed next steps</td>
<td>Implement the interventions</td>
<td>Provide supportive supervision and monitoring</td>
<td>Conduct rapid field evaluation of outcomes/impact of interventions</td>
<td>Incorporate into long term immunization plans to ensure gains are sustainable</td>
</tr>
<tr>
<td>Who</td>
<td>MOH, with support from all in-country immunization partners</td>
<td>MOV Planning Team, MOH and other key immunization partners</td>
<td>Assessment coordinator, MOH and in-country immunization partners</td>
<td>Assessment coordinator and representatives from MOH and partner organizations</td>
<td>All immunization partners, with leadership by the MOH</td>
<td>Health facility staff, MOH and immunization partners</td>
<td>MOH, with support from key immunization partners</td>
<td>MOH, with support from key immunization partners</td>
<td>MOH, with support from key immunization partners</td>
<td></td>
</tr>
<tr>
<td>Timing/Duration</td>
<td>2–4 months before field work</td>
<td>1-2 months before field work</td>
<td>1-2 weeks duration, depending on training needs and travel distances</td>
<td>1-2 days</td>
<td>1 day</td>
<td>½ day</td>
<td>6-12 months</td>
<td>6-12 months</td>
<td>6-12 months following Step 7/8</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Tasks</td>
<td>Task 1.1 Decide whether an MOV strategy is needed</td>
<td>Task 2.1 Collect, compile and review available information on the immunization programme, including recent programme reviews and</td>
<td>Task 3.1 Print questionnaires and/or prepare electronic tablets or smartphones for data collection</td>
<td>Task 4.1 Tally data from sampled questionnaire or download preliminary data from the electronic data collection</td>
<td>Task 5.1 Present the preliminary data from Step 4 and ask for reactions from the group</td>
<td>Task 5.1 Present the summary objectives of the assessment, the process of the field work and the updated results and</td>
<td>Task 6.1 Based on the findings of the MOV assessment, implement interventions to address specific findings, e.g. additional</td>
<td>Task 8.1 Establish a clear monitoring and supportive supervision plan</td>
<td>Task 9.1 Following 6-12 months of implementation of activities, conduct evaluation of effectiveness of the interventions in selected</td>
<td>Task 10.1 To ensure sustainability, include interventions to reduce MOV in long-term immunization plans (e.g. cMYP and annual EPI)</td>
</tr>
</tbody>
</table>
### For the Planning Team at national and subnational level

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
<th>Step 6</th>
<th>Step 7</th>
<th>Step 8</th>
<th>Step 9</th>
<th>Step 10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MOH</strong></td>
<td><strong>Task 1.3</strong></td>
<td>Identify an Assessment Coordinator and members of the MOV Planning Team (preferably multi-partner; may be a subcommittee of the Inter-agency Coordinating Committee (ICC) or similar body)</td>
<td><strong>Task 2.2</strong></td>
<td>Decide on the scale of the MOV work (national or only in selected low-coverage districts)</td>
<td><strong>Task 3.3</strong></td>
<td><strong>Task 4.2</strong></td>
<td><strong>Task 5.3</strong></td>
<td><strong>Task 6.2</strong></td>
<td><strong>Task 8.3</strong></td>
</tr>
<tr>
<td><strong>Task 1.4</strong></td>
<td>Identify funding sources from within and/or outside the EPI programme</td>
<td><strong>Task 2.3</strong></td>
<td>If appropriate, select subnational areas for field work</td>
<td><strong>Task 3.4</strong></td>
<td><strong>Task 4.3</strong></td>
<td><strong>Task 5.4</strong></td>
<td><strong>Task 6.3</strong></td>
<td><strong>Task 8.4</strong></td>
<td><strong>Task 10</strong></td>
</tr>
<tr>
<td><strong>Task 1.5</strong></td>
<td>Prepare a schedule of activities and include in annual work</td>
<td><strong>Task 2.4</strong></td>
<td>Agree on sample size, the number of field staff needed and the number of days for field work</td>
<td><strong>Task 3.5</strong></td>
<td><strong>Task 4.4</strong></td>
<td><strong>Task 5.5</strong></td>
<td><strong>Task 6.5</strong></td>
<td><strong>Task 8.5</strong></td>
<td><strong>Task 10</strong></td>
</tr>
</tbody>
</table>

### For the Field Team conducting and analyzing the assessment (Steps 3 to 6 could be skipped if not needed)

<table>
<thead>
<tr>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
<th>Step 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task 2.6</strong></td>
<td>Prepare a draft budget for the post-assessment interventions</td>
<td><strong>Task 3.5</strong></td>
<td><strong>Task 4.4</strong></td>
</tr>
<tr>
<td><strong>Task 2.7</strong></td>
<td>Share plan with ICC</td>
<td><strong>Task 3.6</strong></td>
<td><strong>Task 4.5</strong></td>
</tr>
</tbody>
</table>

### For the Planning Team at national and subnational level

| Task 6.3 | During the debrief, commence discussions on funding of the interventions or including them in existing immunization or health system improvement plans |
| Task 8.3 | Provide monitoring charts and ensure compliance with visible display of monthly coverage estimates |

---

**January 24, 2017**

**PLANNING GUIDE TO REDUCE MISSED OPPORTUNITIES FOR VACCINATION**
<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
<th>Step 6</th>
<th>Step 7</th>
<th>Step 8</th>
<th>Step 9</th>
<th>Step 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>plan, with approval of the Inter-agency Coordinating Committee (ICC) or similar body</td>
<td>or appropriate body (and partners) for final approval of the plan</td>
<td>assessment</td>
<td>Task 3.6 Conduct focus group discussions for mothers/caregivers</td>
<td>intervention phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 2.8 Clarify whether ethical approval is necessary and commence the process.</td>
<td></td>
<td></td>
<td>Task 3.7 Conduct focus group discussions for health workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 2.9 Review generic questionnaires, and if necessary adapt to country context and vaccination schedule</td>
<td></td>
<td></td>
<td>Task 3.8 Conduct key informant interviews with the predetermined number of senior staff and health administrators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 2.10 If needed, finalize arrangements for the translation of the updated questionnaires and training materials into the local language(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Expected outcomes**

- High level commitment from MOH
- MOV
- Finalized chronogram for MOV activities
- Finalized budget
- Printed questionnaires and interview guides
- Basic frequencies from the questionnaire data to elicit
- List of proposed activities to reduce MOVs (to be
- Finalized recommendations
- Finalized and
- Interventions implemented nationally or in selected
- Supportive supervision reports with
- Reduction in MOVs reported in evaluations
- MOV interventions and processes included as part of country
<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
<th>Step 6</th>
<th>Step 7</th>
<th>Step 8</th>
<th>Step 9</th>
<th>Step 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>strategy included in the annual EPI work plan</td>
<td>for MOV assessment</td>
<td>- Field staff fully trained on assessment process</td>
<td>discussions in Step 5</td>
<td>prioritized by MOH</td>
<td>endorsed work plan, with clear implementation timelines</td>
<td>districts/health facilities</td>
<td>corrective measures</td>
<td>- Increase in number of children vaccinated when compared to previous year’s numbers</td>
<td>plans such as cMYP and annual EPI plans</td>
</tr>
<tr>
<td>National Planning Team for MOV constituted</td>
<td>- Draft budget for MOV post-assessment interventions</td>
<td>- Field staff proficient in completing the questionnaires on paper as well as on the tablets</td>
<td>- Critical quotes from the focus group discussions that capture the key findings</td>
<td>- Frame work and 6-12 month work plan for reducing MOVs</td>
<td>- Catalytic funding and/or plans for integration with existing programmes</td>
<td>correct measures</td>
<td>- Monitoring charts completed and visibly displayed in all health facilities</td>
<td>- Funding is available for implementation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Exemption from ethical approval process, or approval, as appropriate</td>
<td>- Completed exit interviews, KAP assessments and qualitative interviews (focus group discussions and key informant interviews)</td>
<td>- A list of proposed interventions to reduce MOVs from all assessment components</td>
<td>- Outline of roles and responsibilities of different partners</td>
<td>- Plans for social mobilization and communication materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Finalized questionnaires and training materials for field work training (including plans for translation, if needed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>