Methodology for the Assessment of Missed Opportunities for Vaccination
Methodology for the Assessment of Missed Opportunities for Vaccination
For more information visit: http://www.who.int/immunization/programmes_systems/policies_strategies/MOV/en/
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Preface

Missed opportunities for vaccination (MOV) include any contact made with health services by a child (or adult) who is eligible for vaccination, but which does not result in the individual receiving all the vaccine doses for which he or she is eligible.

National immunization programmes across the globe continue to seek alternative strategies to explore the reasons for stagnating vaccination coverage and to design tailored strategies to address them. This suite of documents provides an additional strategy in the toolbox of a programme manager at the national or subnational level. Using a participatory mixed-methods approach, it provides step-by-step guidance on how to conduct a bottom-up root-cause analysis of bottle-necks in the immunization programme and to design relevant strategies to address them. When applied appropriately, the steps outlined in these guides have the potential to result to an increase in vaccination coverage and equity and an improvement in timeliness of vaccination.

The MOV strategy should not be viewed as a stand-alone or discreet “project”; rather as complementary to existing microplanning and programme improvement approaches such as RED (‘Reaching Every District’). The MOV strategy is conceived as a health system-wide service improvement effort targeted at vaccination as well as other health services.

This document is one of a three-part document, designed to be used together.

For up-to-date information on the MOV strategy and the latest tools and materials, please visit: http://www.who.int/immunization/programmes_systems/policies_strategies/MOV/en/.
Acknowledgements

This document was developed by the World Health Organization (WHO) and was written by Ikechukwu Udo OGBUANU of the Department of Immunization, Vaccines & Biologicals, WHO headquarters (WHO-HQ).

We are grateful to our colleagues who contributed to the preparation of this document through their unwavering support of the strategy and by reviewing the early drafts and providing constructive comments, including the following (in alphabetical order): Blanche-Philomene Melanga ANYA (WHO-AFRO), Laura CONKLIN (US-CDC), Danni DANIELS (US-CDC), Michael FAVIN (MCSP/JSI), Rebecca FIELDS (JSI), Tracey GOODMAN (WHO-HQ), Terri HYDE (US-CDC), Anyie Li (US-CDC), Joseph OKEIBUNOR (WHO-AFRO), Ana Maria Henao RESTREPO (WHO-HQ), Stephanie SHENDALE (WHO-HQ), Lora SHIMP (MCSP/JSI), Robert STEINGLASS (MCSP/JSI), Aaron WALLACE (US-CDC), Kathleen A. WANNEMUEHLER (US-CDC) and Kirsten WARD (US-CDC).

Special thanks are due to the numerous other organizations and partners who contributed to the development of these documents through their membership on the MOV partner coordination platform (in alphabetical order): Agence de Médecine Préventive (AMP), the Bill and Melinda Gates Foundation (BMGF), United States Centers for Disease Control and Prevention (US-CDC), the Clinton Health Access Initiative (CHAI), Gavi, the Vaccine Alliance, John Snow, Inc. (JSI), Médecins San Frontières (MSF), the Pan-American Health Organization (PAHO), VillageReach, UNICEF and the ministries of health in 18 countries in the Americas, sub-Saharan Africa and South-East Asia.

During its April 2016 meeting, the Strategic Group of Experts on Immunization (SAGE) reviewed the initial results from the MOV pilot countries and provided valuable inputs to this methodology to make it more programmatically feasible and useful to countries at different levels of development. Similarly, two WHO advisory committees reviewed early drafts and provided constructive criticism: the Immunizations and Vaccines related Implementation Research Advisory Committee (IVIR-AC) and the Immunization Practices Advisory Committee (IPAC).

Finally, we would like to specifically thank our colleagues at the ministries of health and WHO country offices in Chad and Malawi for allowing us to pilot the draft methodology in their respective countries in 2015. The experiences of the pilot helped to refine and finalize the methodology as presented in this suite of documents.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFR</td>
<td>WHO African Region</td>
</tr>
<tr>
<td>AMR</td>
<td>WHO Region of the Americas</td>
</tr>
<tr>
<td>cMYP</td>
<td>comprehensive multi-year plan</td>
</tr>
<tr>
<td>CSO</td>
<td>civil society organization</td>
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<tr>
<td>DTP</td>
<td>diphtheria-tetanus-pertussis vaccine dose 3</td>
</tr>
<tr>
<td>DHIS2</td>
<td>district health information system, version 2</td>
</tr>
<tr>
<td>DHS</td>
<td>demographic and health survey</td>
</tr>
<tr>
<td>DVD-MT</td>
<td>district vaccination data management tool</td>
</tr>
<tr>
<td>EPI</td>
<td>Expanded Programme on Immunization</td>
</tr>
<tr>
<td>FBO</td>
<td>faith-based organization</td>
</tr>
<tr>
<td>FGD</td>
<td>focus group discussion</td>
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<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>GVAP</td>
<td>Global Vaccine Action Plan</td>
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<tr>
<td>HMIS</td>
<td>health management information system</td>
</tr>
<tr>
<td>HSIS</td>
<td>health system and immunization strengthening</td>
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<tr>
<td>HF</td>
<td>health facility</td>
</tr>
<tr>
<td>ICC</td>
<td>interagency coordinating committee</td>
</tr>
<tr>
<td>IDI</td>
<td>in-depth interview</td>
</tr>
<tr>
<td>IRB</td>
<td>institutional review board</td>
</tr>
<tr>
<td>JRF</td>
<td>joint reporting form</td>
</tr>
<tr>
<td>KAP</td>
<td>knowledge, attitude and practices</td>
</tr>
<tr>
<td>MCV</td>
<td>measles-containing vaccine</td>
</tr>
<tr>
<td>MICS</td>
<td>multi-indicator cluster sampling survey</td>
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<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>MOV</td>
<td>missed opportunity for vaccination</td>
</tr>
<tr>
<td>PII</td>
<td>personally identifiable information</td>
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<tr>
<td>RED</td>
<td>reaching every district (strategy)</td>
</tr>
<tr>
<td>SMT</td>
<td>stock management tool</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<tr>
<td>WUENIC</td>
<td>WHO-UNICEF estimates of national immunization coverage.</td>
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About this document

The Methodology for the Assessment of Missed Opportunities for Vaccination (MOV) provides the detailed steps for conducting the field work component of the MOV assessment and the brainstorming sessions, both of which contribute to the development of a detailed action plan for reducing MOV. These activities constitute Steps 3-6 of the 10-step MOV strategy listed below, as outlined in the MOV Planning Guide:

### PLAN AND PREPARE

<table>
<thead>
<tr>
<th>STEP 1</th>
<th>Plan for an MOV assessment and intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEP 2</td>
<td>Prepare for the assessment and secure commitment for follow-up interventions</td>
</tr>
</tbody>
</table>

### FIELD WORK

<table>
<thead>
<tr>
<th>STEP 3</th>
<th>Conduct field work for the rapid assessment of MOV</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEP 4</td>
<td>Analyze preliminary data and identify key themes</td>
</tr>
<tr>
<td>STEP 5</td>
<td>Brainstorm on proposed interventions and develop an action plan for the interventions</td>
</tr>
<tr>
<td>STEP 6</td>
<td>Debrief with MOH leadership and immunization partners on proposed next steps</td>
</tr>
</tbody>
</table>

### IMPLEMENT AND MONITOR

<table>
<thead>
<tr>
<th>STEP 7</th>
<th>Implement the interventions</th>
</tr>
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<tbody>
<tr>
<td>STEP 8</td>
<td>Provide supportive supervision and monitor progress</td>
</tr>
<tr>
<td>STEP 9</td>
<td>Conduct rapid field evaluation of outcomes/impact of interventions (12-18 months later)</td>
</tr>
<tr>
<td>STEP 10</td>
<td>Incorporate into long term plans to ensure gains are sustainable</td>
</tr>
</tbody>
</table>
This Methodology is the second of three MOV guides developed to be used together:

1. **Planning Guide to Reduce Missed Opportunities for Vaccination** ("Planning Guide"): Intended for use by decision-makers and programme managers at national and sub-national levels, this manual provides an overview of the MOV strategy, which involves an assessment to demonstrate the magnitude and identify causes of missed opportunities, followed by tailored health system interventions to reduce these missed opportunities, ultimately leading to an increase in vaccine coverage and timeliness of vaccinations.

2. **Methodology for the Assessment of Missed Opportunities for Vaccination** (the present document): This manual provides the detailed instructions, standardized methodology, and tools for conducting field work (including sample health facility exit interviews and health worker knowledge, attitude, and practice (KAP) questionnaires), and detailed guidance for conducting in-depth 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 MOV assessment field work is to build a strong case for reducing MOV by convening multiple in-country immunization partners to identify the underlying causes and address these problems. The brainstorming sessions following the field work are intended to achieve this outcome.

   **Note:** In some situations, it may not be necessary to conduct the standard MOV 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, programmes may choose to move directly to implementation of locally-tailored interventions to reduce missed opportunities in affected districts or health facilities using guidance provided in the Intervention Guidebook described below.

3. **Intervention Guidebook to Reduce Missed Opportunities for Vaccination** ("Intervention Guidebook"): This manual provides practical guidance for translating the findings of the MOV assessments into actionable work plans. It includes: a list of frequent reasons for MOV, an overview of potential interventions to reduce MOV, examples of job aids and other materials for use at the health facility level, and guidance for activities and processes to explore and design locally tailored interventions to reduce MOV. The Intervention Guidebook could also be used as a stand-alone guide to plan actions to reduce MOV in selected health facilities even when a full MOV assessment has not been conducted.

All MOV documents and supporting tools can be accessed at:

**Introduction**

**What is a missed opportunity for vaccination (MOV)?**

Missed opportunities for vaccination (MOV) 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), but 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 established policies and procedures. Previous MOV assessments suggest several common reasons why opportunities for vaccination were missed in health facilities. These include: 1) the failure or inability of health providers to screen patients for eligibility (for instance due to poor retention or limited availability of home based records); 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.

In 1988, the World Health Organization (WHO) published a simple methodology for assessing MOV that used purely quantitative methods (health facility exit interviews). This methodology was revised and expanded in 2013 by the Pan American Health Organization (PAHO). Although the revised methodology was an improvement over the previous version (adding health worker interviews and addressing the greater number of antigens in many immunization programmes), it required a significant increase in time and resources to execute. The 2017 revision is an attempt to simplify the methodology’s implementation. It does not require the involvement of research institutions and qualitative elements have been added to the protocol. Importantly, this version links and translates the findings of the MOV assessment into actionable solutions to reduce missed opportunities, especially at the facility level where vaccination services are provided.

Reducing MOV is a strategy to increase vaccination coverage by making better use of existing vaccination sites (at health centres, hospitals, outreach/mobile services etc.). Reducing MOV will improve both immunization coverage and timeliness of vaccination, improve health service delivery in general, and promote synergy between treatment services and preventive programmes at the health facility level.

**What’s new?**

This revised and updated assessment methodology includes detailed guidance for conducting the MOV field work, as well as accompanying generic materials to be adapted by each country (such as training materials, sample questionnaires and other field tools). The results from the field work are linked directly to the development of an intervention action plan composed of specific actions to reduce missed opportunities over the next 6-12 months. These action plans are to be endorsed by the in-country immunization partners during the field work. The revised methodology includes a built-in post-intervention evaluation to assess the impact of implemented actions.

The 2017 revision also increases the amount of data needed for triangulation. In order to thoroughly assess the magnitude and causes of missed opportunities, the current methodology captures additional quantitative information, including explanatory demographic variables. There is also significant emphasis on qualitative information, based on anthropological field methods. The combination
of quantitative and qualitative assessment techniques allows for a broader and more detailed understanding of the survey data. This is expected to result in more appropriate, contextual and better tailored interventions to reduce missed opportunities within each local context.

**MOV assessment objectives**

1. To evaluate the magnitude of missed opportunities for vaccination in a given health facility, district, province/state or country;

2. To understand the underlying causes of missed opportunities in the selected health facilities or districts;

3. To explore what can be adjusted or done differently to reduce missed opportunities and improve coverage and equity.

**FIGURE 1. Key questions addressed by the MOV strategy**

- **HOW MANY opportunities are missed?**
  - Exit interviews with mothers/caregivers
  - Health worker KAP questionnaires
  - Focus group discussions (mothers/caregivers and health workers)

- **WHY are these opportunities being missed?**
  - In-depth interviews

- **WHAT can be adjusted or done differently?**
  - Brainstorming sessions
The assessment objectives are achieved using the different components as listed in the table below:

<table>
<thead>
<tr>
<th>EXPECTED OUTCOMES</th>
<th>ASSESSMENT COMPONENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify the magnitude and causes of missed opportunities</td>
<td>• Health facility exit interviews (interviewer-administered)</td>
</tr>
<tr>
<td></td>
<td>• Health worker KAP questionnaires (interview- or self-administered)</td>
</tr>
<tr>
<td></td>
<td>• Focus group discussions (with mothers/caregivers and health workers)</td>
</tr>
<tr>
<td></td>
<td>• In-depth interviews (with senior staff and health administrators)</td>
</tr>
<tr>
<td>Identify potential interventions to reduce MOV</td>
<td>• Focus group discussions (with mothers/caregivers and health workers)</td>
</tr>
<tr>
<td></td>
<td>• In-depth interviews (with senior staff and health administrators)</td>
</tr>
<tr>
<td></td>
<td>• Work group brainstorming sessions</td>
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</table>

**Intended/Potential Use of Findings**

Missed opportunities contribute significantly to the under-vaccination of children.\(^1\) A concerted effort to reduce or eliminate missed opportunities, especially by addressing those factors that are relatively easy to correct, could result in measurable improvements in vaccine coverage in multiple settings. This is especially applicable to countries with low baseline immunization rates, where the impact is expected to be greatest. It is anticipated that vaccine coverage could be improved by up to 30% in many settings by eliminating missed opportunities.

In addition to using the collected data to improve local vaccination coverage in the assessed countries, the data can also be analyzed and published to share learnings and contribute to a better understanding of MOV in similar settings.

**High-level overview of procedure and methods**

**Sample size**

A target sample size of 600 mother/caregiver exit interviews and 300 health worker questionnaires are ideal for the analysis of causes of MOV (whether at the national, regional or district level). In health systems with lower home-based record (vaccination card/health passport) availability, larger samples may be needed. Time and resources permitting, a larger sample size will allow for more detailed sub-analyses, such as an estimation of missed opportunities by vaccine antigen, age, reason for visiting the health facility and other demographic sub-classifications.

See the MOV Planning Guide for instructions on determining sample size.

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**Target population**

The MOV assessment targets mothers/caregivers of children between the ages of 0–23 months who attend a health facility in the selected districts on the day of the assessment. It also targets all health workers (both preventive and curative department staff) that work in the selected health facilities on the day of the assessment.

**Consent procedure**

Prior to each interview, mothers/caregivers and health workers should be requested to provide verbal consent. They should be made aware that participation is voluntary and optional.

**Enrollment process**

All mothers/caregivers exiting the health facility with a child that appears to be between 0-23 months are eligible and should be asked to participate. The interviewer should explain the process and ask for verbal consent to participate in the interview. The questionnaire should be administered to consenting mothers/caregivers of eligible children, or any other consenting adult member (defined as being ≥15 years of age) accompanying the child, who is knowledgeable about the mother's background and the vaccination status of the child. If an adult is accompanied by more than one child, the interview should focus on the youngest child (younger children are expected to have greater home-based record availability).

All health workers (from both preventive and curative departments) working in the selected health facilities on the day of the assessment are eligible to be interviewed.

**Data collection**

Data should be collected using a standardized paper interview questionnaire or an electronic data platform (tablets or smartphones).

**Mother/caregiver exit interview questions should include the following information:**

1. socio-demographic information;
2. child’s vaccination history (received through routine immunization only);
3. awareness of opportunities for routine immunizations;
4. home-based record (vaccination card/health passport) availability and retention;
5. reasons for non-vaccination; and
6. feedback on the quality of the vaccination service received.

Vaccination status should be documented from the information on the home-based records or health facility registers, where possible. The interview team should NOT rely on mothers’ recall if the home-based record has been lost or is otherwise unavailable. This is particularly important because the date of vaccination is critical in assessing MOV. If no home-based record is available, and the child’s records cannot be later located in the facility register, then the space for vaccination dates on the questionnaire should be left blank.
Health worker KAP questionnaires should include the following information:

1. knowledge about vaccination including antigens, immunization schedules, and contraindications to vaccination;
2. attitudes regarding vaccination services and immunization-seeking behavior of caregivers in their community; and
3. practices regarding immunization service delivery.

The questionnaires should be customized, to align with the specific vaccination schedule and terminology used in each country. Generic questionnaires are available from WHO in English or French and ideally should be translated into the local language. Mother/caregiver exit interviews should be conducted by trained interviewers in the appropriate local language.

**Facilitator workshop and pilot test of data collection instruments**

Facilitators should meet 1-2 days prior to the beginning of field team training. This workshop should be used to finalize the remaining logistic details for the assessment (such as finalizing the list of sampled facilities, transport arrangements, training logistics, etc.), as well as to adapt and finalize the data collection tools.

Where possible, a pilot test of the data collection instruments should be conducted in one health facility prior to starting field team training. This is highly recommended and will ensure that questions are clear to interviewees (in terms of translation accuracy, question comprehension and appropriate response categories). The pilot test will generate practical experience and a report of “lessons learned” that will allow problems/challenges to be anticipated and addressed before the field work. Issues related to translation will also be flagged and addressed. **All modifications to the wording of questions should be completed prior to the training of field teams.**

**Composition and training of field team**

As outlined in the MOV Planning Guide, field teams (interviewers and supervisors) should ideally be drawn from the MOH staff and other in-country immunization partners. All participants should be centrally trained over a period of 2-3 days, depending on their previous experiences with the EPI programme, with field data collection, as well as their level of familiarity with using tablets/smartphones for data collection. The MOV assessment is designed to be completed in less than 10 days, including training, data collection and preliminary data analysis. Field teams should plan to spend one day only in each health facility.

Depending on the number of districts to be covered and the geographic spread within the country, the MOV Strategy Team will determine the number of field teams needed to complete data collection in 3-5 days. Previous assessments have used two-person teams for each health facility, with a supervisor overseeing two or three teams, depending on distances to be travelled and terrain. Each

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

- Assessment Coordinator
- MOV Strategy Team (3-5 members; multi-partner team)
- Field teams (10-20 interviewers, two per team; 5-10 supervisors)
- Data Manager
- Social scientist (if possible), or someone familiar with qualitative research methods
team is expected to complete 20 mother/caregiver exit interviews and 10 health worker interviews each day. Supervisors should travel separately to spend 1 day with each of the teams for which they have oversight.

Where possible, a social scientist or professional with expertise in qualitative research methods should lead the qualitative elements (in-depth interviews (IDIs) and focus group discussions (FGDs)) of the assessment. This individual could also train a subset of the field team (especially any other participants with previous experience or familiarity to qualitative data collection and analysis methods) to facilitate the FGDs and IDIs for their teams. The social scientist should review the quality of the incoming data, particularly near the beginning of the data gathering process.

Finally, a Data Manager will be needed to collate all the data from the teams and compile them for the brainstorming session and debrief presentations. Should the Assessment Coordinator have experience with Epi Info™ or other simple analytical software, they are likely able to fulfil this role. Further in-depth data analysis can be completed off-site if needed.

**Data entry, analysis and data management**

In order to make preliminary results immediately available for the brainstorming and debrief sessions (Steps 5 and 6), it is recommended that data collection be performed using e-platforms, such as tablets, smartphones or other mobile platforms. (See more on this in Task 3.1 below.) All data on paper forms as well as the electronic data platform should be exported into Excel, and then to Epi Info™, Stata®, or SAS® for data cleaning, data management and analysis.

On the final day of field work, a simple analysis of quantitative and qualitative data should be carried out, based on preliminary data already submitted by the field teams. This will consist mainly of simple frequencies and bivariate analyses of quantitative data and a preliminary interpretation of key themes arising from the qualitative data. Preliminary results can then be presented at the opening of the brainstorming session (Step 5). These descriptive analyses and other anecdotal information from the field should be used to inform the development of an action plan to reduce MOV.

In the weeks following field work, a more detailed analysis should be carried out once the data from all the districts/health facilities are compiled. The detailed analysis should estimate the extent of MOV as well as examine associations between MOV and other explanatory and demographic factors. Estimates of the proportion of children with missed opportunities should be calculated, as well as the proportion of visits with missed opportunities and the number of eligible doses that were missed, by antigen. Other analyses may include home-based record availability and vaccine coverage by antigen. These analyses should be stratified using other explanatory variables in the dataset, as appropriate. Where possible, the results should be compared to other recent surveys in the country, including Demographic Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS).

In addition, thematic analysis of data from the qualitative aspects of the assessment should be conducted and included in a final report, presenting the scope of interviews, observations, representative verbatim quotes and key conclusions. This thematic analysis may be conducted using standard qualitative data analysis software (such as OpenCode, which is open access, ATLAS.ti, or NVivo). Where possible, community and key informant recommendations for reducing missed opportunities should be included along with other results from the MOV assessment.
Data security

Although there should be minimal collection of personally identifiable information (PII), all paper data collection forms should be stored securely, under lock and key. Similarly, any electronic datasets with PII should be password-protected. All electronic databases should have PII removed before any off-site analysis.

The smartphones/tablets should automatically record the time of the interview as well as the location where the forms were completed. Supervisors will review all data collection forms for completeness and accuracy prior to submission to the Assessment Coordinator.

Interviewers should upload data every evening, so data quality checks can be conducted by the Assessment Coordinator at the central level. Final quality control of data entry will be conducted post-hoc by the data analyst. To enable the best quality data entry, the data entry forms should be designed using value constraints and data validation checks to the extent possible.

Limitations

The MOV assessment process is subject to the limitations and biases inherent in the simplified sampling methodology as well as the convenience sample of all children present at the selected health facility on the day of the exit interviews, including selection bias. It is also possible that home-based records (vaccination cards/health passports) may be inaccurate or largely unavailable, and that the health facility staff may modify their practices on the day of the assessment. To minimize the impact of any changes in practices, the administration of health worker KAP questionnaires should take place in the afternoon, after the vaccination clinic sessions for the day have been completed. Similarly, the focus group discussions should be conducted with different health workers (at a different health facility) than those that completed the health worker questionnaires.

To the extent possible, the MOV Strategy Team should purposefully select districts that cover a wide range of service delivery models in each country. However, the assessment will need to be interpreted with caution, as the sample will not be nationally representative. Thus, the results may not be generalizable beyond the districts assessed.

Dissemination of results

Summary reports should be developed for each district as well as for the entire country. Where possible, results may be presented by type of facility, such as private versus public. As part of the field work, preliminary results will be presented and discussed at the brainstorming sessions and debrief meetings. Results will also be reported to the district, provincial and national-level immunization programme staff, using regular feedback and training meetings. Results may be presented at professional meetings, and national, regional or international scientific meetings. To accelerate cross-country and peer-to-peer learning, it is encouraged that results from the MOV assessment be written up for publication in peer-reviewed journals.
In the following sections of this document, the specific details on how to plan and conduct each of the field assessment tasks is provided. Following the 10-step process in the MOV Strategy as outlined in the MOV Planning Guide, the field assessment portion consists of steps 3-6:

<table>
<thead>
<tr>
<th>FIELD WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STEP 3</strong> Conduct field work for the rapid assessment of MOV</td>
</tr>
<tr>
<td><strong>STEP 4</strong> Analyze preliminary data and identify key themes</td>
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<td><strong>STEP 5</strong> Brainstorm on proposed interventions and develop an action plan for the interventions</td>
</tr>
<tr>
<td><strong>STEP 6</strong> Debrief with MOH leadership and immunization partners on proposed next steps</td>
</tr>
</tbody>
</table>

**FIGURE 2. Activities and outputs under Steps 3-6**

Field Work (Step 3) ➔ Preliminary data analysis (Step 4) ➔ **OUTPUT:** Preliminary results for brainstorming ➔ Brainstorming session (Step 5) ➔ **OUTPUT:** Preliminary results (updated for debrief) ➔ **OUTPUT:** Action plan for implementation ➔ Final debrief with MOH leadership and immunization partners (Step 6) ➔ **OUTPUT:** Endorsement of action plan and next steps
STEP 3

**Conduct field work for the rapid assessment of MOV**

<table>
<thead>
<tr>
<th>WHO</th>
<th>Assessment coordinator, MOV Strategy Team, MOH and in-country immunization partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHEN</td>
<td>1-2 weeks duration, depending on training needs and travel distances</td>
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</table>

<table>
<thead>
<tr>
<th>TASK</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Print questionnaires and/or prepare electronic tablets or smartphones for data collection</td>
</tr>
<tr>
<td>3.2</td>
<td>Train field teams (supervisors and interviewers) on the assessment process and logistics (3 days)</td>
</tr>
<tr>
<td>3.3</td>
<td>Conduct exit interviews with the mothers/caregivers of children 0-23 months old, in the selected health facilities (2-3 days - in the mornings)</td>
</tr>
<tr>
<td>3.4</td>
<td>Extract vaccination data from health facility registers for children with no home-based records (in the afternoons following exit interviews)</td>
</tr>
<tr>
<td>3.5</td>
<td>Administer health worker KAP (knowledge, attitude and practices) questionnaires (2-3 days - in the afternoons)</td>
</tr>
<tr>
<td>3.6</td>
<td>Conduct focus group discussions with mothers/caregivers (1/2 day)</td>
</tr>
<tr>
<td>3.7</td>
<td>Conduct focus group discussions with health workers (1/2 day)</td>
</tr>
<tr>
<td>3.8</td>
<td>Conduct in-depth interviews with the pre-determined number of key informants (senior staff and health administrators) (1/2 day)</td>
</tr>
</tbody>
</table>
The MOV strategy uses a bottom-up approach to assess the reasons for missed opportunities and then design and implement corrective interventions at the health facility level where vaccination services are delivered. The results are primarily informed by the opinions of service providers and mothers/caregivers. The strategy design provides a 360-degree assessment of the MOV problem, using data triangulation from multiple assessment components, including quantitative and qualitative data collection methods.

**TASK 3.1**

Print questionnaires and/or prepare electronic tablets or smartphones for data collection

A few weeks prior to the commencement of field work, the MOV Strategy Team should finalize the study design and agree on the number of assessment sites, the number of interviews to be completed, and the language(s) in which interviews will be conducted. Based on these criteria, resources should be made available for adaptation and translation of the generic questionnaires, and for printing the correct number of questionnaires for the training and field work components.

Experience shows that managing the number of paper questionnaires involved (600 – 1,000) requires significant resources. Printing and collation has worked best when it was outsourced to a printing company. If tablets/smartphones are used in addition to paper forms, ALL questionnaires should be pre-numbered with unique identification numbers prior to deployment for field work, to ensure easy data linkage at the end of the assessment. If paper-based questionnaires are to be used, it is highly recommended that the questionnaire is pre-tested so any adjustments to the language of the questions can be made prior to printing.

To facilitate the immediate availability of data for the brainstorming sessions (Step 5), the MOV Strategy Team should strongly consider collecting field data electronically, on tablets or smartphones. Such equipment can be borrowed or rented from local immunization partners, in-country research organizations, or WHO-HQ. Another option is to ask interviewers to bring along their own tablets and smartphones for the exercise. The decision to collect data electronically has implications for the training of supervisors and interviewers, data management during field work, and post-data collection analysis. Experience from several countries that have completed MOV assessments suggests that the use of e-platforms has several advantages (immediate data availability, saving the cost and inconvenience of a data entry phase, minimizing cost and time for printing, etc.), and even interviewers with minimal prior exposure to smartphones have been able to learn very quickly.

For more guidance on use of electronic tablets for data collection, including considerations for software platforms, please see [http://www.who.int/immunization/programmes_systems/policies_strategies/MOV/en/](http://www.who.int/immunization/programmes_systems/policies_strategies/MOV/en/).
Electronic questionnaires are available from WHO in English and French and, if sufficient time is provided, can be translated into additional languages. If it is expected that some of the interviews will take place in local languages/dialects, it may be helpful to provide a paper-based copy of the questionnaires translated into the local languages for data collectors to use alongside the electronic platform, to ensure consistency of the translation across interviewers.

**TASK 3.2**  
**Train supervisors and interviewers on assessment process and logistics (3 days)**

Sufficient time should be dedicated to the training of supervisors and interviewers. Depending on previous experience with the Expanded Programme on Immunization (EPI) and with tablets/smartphones, 2-3 days are needed to conduct adequate training on the assessment protocol and data collection tools as well as procedures and logistics. Careful attention should be paid to the choice of training venue, such as ambience, availability of training resources (printers, projectors, internet access, flip charts, etc.) and access to group lunch facilities (to minimize time spent on lunch). Depending on the geographic scale of the assessment, supervisor training may be separate from interviewer training in order to address a few administrative/management issues. Generic training materials, including PowerPoint slide sets are available on the MOV website: [http://www.who.int/immunization/programmes_systems/policies_strategies/MOV/en/](http://www.who.int/immunization/programmes_systems/policies_strategies/MOV/en/).

Field teams are expected to spend only one day at each health facility. During the time spent at each health facility the field teams will be required to:

- Conduct 20 exit interviews with mothers/caregivers (ideally, 10 with mothers/caregivers of infants 0-11 months old, 10 with mothers/caregivers of children 12-23 months old)
- Administer KAP questionnaires to 10 health workers
- Conduct in-depth interviews with key informants (senior staff and health administrators such as District Health Officer, the health facility in-charge, head nurse, matron, etc.)
- Check registers for missing vaccination data of children who did not have their home-based records.

According to the field work plan distributed during the training, focus group discussions (FGDs) with mothers/caregivers and with health workers should be conducted, where possible, in a different health facility within the same district/geographic area.
A typical day in the field

The table below illustrates an example of the expectations for each team during each day of field work. The MOV Strategy Team may modify this schedule, depending on how many members make up the field teams, distances between facilities, etc. Previous experience shows that it takes an average of 20 minutes to correctly complete an exit interview (it takes longer at the beginning and much shorter by the second day of field work).

Each team of two interviewers should plan to spend an entire day at each facility. Supervisors may be able to move between teams on the same day, depending on distances. If insufficient numbers of health workers and mothers/caregivers are available for interview in the selected facility, a nearby facility, ideally with similar characteristics to the sampled facility, may also be visited in order to conduct additional interviews to complete the team quota. It is critical that an efficient means of communication exists between the teams and the supervisors (e.g. SMS or WhatsApp group) so as to address any issues that arise, including selection of additional facilities, if necessary, and technical issues with the tablets and smartphones.

The focus group discussions should be conducted, where possible, by individuals trained in qualitative research methodology. Depending on the country situation, this might necessitate adding such individuals to each field team or having a separate qualitative survey team that is responsible for conducting and analyzing all the FGDs.

On the final day of the training, each interviewer will be provided with a means of transportation (not necessarily a vehicle), a list of the health facilities (mix of health clinics, hospitals, private health facilities) to be visited, a tablet/smartphone or paper questionnaires, contact information of the supervisor and Assessment Coordinator, and other materials that may be needed (such as airtime vouchers, backup power batteries, etc.).

Critical elements to emphasize during training of field teams

A. Questionnaire Review: A critical part of the training is the review of the questionnaires. Adult learning methods should be applied to the extent possible, including role play. Depending on their experience with the immunization programme, field teams should spend a significant part of the training time practicing how to fill out the questionnaires and how to extract data from real home-based records (vaccination cards/health passports - multiple versions available in many countries) and health facility registers.

B. Training on use of tablets/smartphones: Ample time should be dedicated to practicing the use of the tablets, including how to save and retrieve saved forms. Training should also include how to take legible photos of the home-based records and facility registers and how to properly save and upload them. Field teams should also master how to connect to WIFI, upload data from the tablets and trouble shoot common problems. Supervisors and interviewers should be provided the cell phone number of a senior supervisor (or the Assessment Coordinator), who has sufficient experience to answer methodological questions and is able to address any technical issues or unforeseen emergencies which may arise during field work.

C. Role plays at the training venue: Interviewers should take turns interviewing each other (in pairs) during the training. If some of the interviewers have young children, they should contribute to discussions about the wording of questions and manage realistic expectations of the level of knowledge and cooperation from mothers/caregivers attending clinics.
<table>
<thead>
<tr>
<th>DAYS OF FIELD WORK</th>
<th>TIME OF DAY</th>
<th>TASKS TO BE COMPLETED</th>
<th>RESPONSIBLE PERSONS</th>
<th>SITE OF THIS ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>Morning</td>
<td>Exit interviews with mothers/caregivers (20)</td>
<td>Field team (interviewer-administered)</td>
<td>Health facility #1</td>
</tr>
<tr>
<td>Day 1</td>
<td>Afternoon</td>
<td>In-depth interviews – health facility admin (1)</td>
<td>Field team (interviewer-administered)</td>
<td>Health facility #1</td>
</tr>
<tr>
<td>Day 1</td>
<td>Afternoon</td>
<td>Health worker KAP questionnaires (10)</td>
<td>Field team (interviewer- or self-administered)</td>
<td>Health facility #1</td>
</tr>
<tr>
<td></td>
<td>Afternoon</td>
<td>Data extraction from health facility registers</td>
<td>Field team</td>
<td>Health facility #1</td>
</tr>
<tr>
<td>Day 1</td>
<td>Evening</td>
<td>Upload/send data to Assessment Coordinator and Data Manager</td>
<td>Field team</td>
<td>Field team</td>
</tr>
<tr>
<td>Day 2-3</td>
<td>Repeat Day 1 activities, in Health facilities 2 and 3...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 4</td>
<td>Morning</td>
<td>Focus group discussions [mothers/caregivers] (1)</td>
<td>Field team (Qualitative experience preferred)</td>
<td>Health facility #4</td>
</tr>
<tr>
<td>Day 4</td>
<td>Afternoon</td>
<td>Focus group discussions [health workers] (1)</td>
<td>Field team (Qualitative experience preferred)</td>
<td>Health facility #4</td>
</tr>
<tr>
<td>Day 4</td>
<td>Afternoon</td>
<td>In-depth interviews – district level (1)</td>
<td>Field team (interviewer-administered)</td>
<td>District health office</td>
</tr>
<tr>
<td>Day 5</td>
<td>All day</td>
<td>Return from the field Data analysis and collation of results</td>
<td>All participants</td>
<td>Central location</td>
</tr>
</tbody>
</table>

**TABLE 1**

Generic DAILY WORK PLAN for field teams during the MOV field assessment
It is important that the field teams are very familiar with the questionnaires prior to commencing field work. This will improve the flow of the interview and will prevent questions from being accidentally skipped.

**D. Pilot interviews in nearby health facilities:**
As part of the training, field teams should spend an hour or two interviewing real mothers and health workers in a nearby health facility. Practice sites should not be included in the sampled sites for the actual field work. During the pilot interviews, field teams should complete the questionnaire exactly as if they were conducting a real interview. The results from these pilot interviews should be uploaded to the web platform or returned to the training room for review. Participants should be prepared to discuss any problems that arose during the pilot process.

Finally, the field teams should become conversant with the requirements for daily maintenance and security of the tablets/smartphones, including the following:

1. To save battery power, disable Bluetooth, WIFI and Location Services (GPS); if battery is low, switch on the Battery Save/Low-power mode. Please note that if the GPS location of each health facility needs to be captured, then the GPS should be left on.
2. Reduce the brightness of the screen and set screen time-out for one minute or less
3. Charge overnight, every night
4. Protect from rain and from direct sunlight
5. Do not drop
6. Do not leave unattended

**Task 3.3**

Conduct exit interviews with mothers/caregivers of children 0-23 months old, in the selected health facilities (2–3 days - mornings)

The quantitative component of the MOV assessment consists of two questionnaires: one for mothers/caregivers and a second, for health workers. To minimize logistical complications, both interviews should be administered at the same health facilities on the same day. As suggested above, exit interviews are better conducted in the morning hours and health worker questionnaires in the afternoons.
**Target for exit interviews:**
All caregivers of children age 0-23 months exiting the health facilities on the day of the assessment, **regardless of the reason for visiting the health facility**, their place of residence or relationship to the child, are eligible to be interviewed. The caregiver may be the person who gave birth to or adopted the child, or is otherwise taking care of the child, such as an aunt, grandmother, or father. Caregivers need to be at least 15 years of age.

**Sampling method:**
A minimum sample size of 600 mother/caregiver exit interviews and 300 health worker interviews are needed overall. The MOV Strategy Team, when designing the scope of the assessment, should aim to visit at least 30 health facilities, when possible, with a minimum of 20 health facilities visited.

If the private sector offers immunization services, the proportion of health facilities included in the sample should mirror the volume of routine vaccinations that occur at private health facilities. This volume may differ between urban and rural areas. When the level of participation of the private sector is unknown, a general guide is to aim for about 30% of the sample being composed of private health facilities.

At each health facility visited, the field team will conduct 20 exit interviews with mothers/caregivers. Each potential participant will be pre-screened on age of child only. A mix of caregivers with infants (0–11 months) and one-year olds (children 12-23 months) is desirable, if possible (aim for 10 interviews for each age group). It is also desirable to interview mothers/caregivers who attend the facility for a variety of purposes (i.e. immunization as well as other services). The interviewers may have to move around to interact with mothers/caregivers exiting at different points of the facility complex in situations where the EPI clinic is located separately from the outpatient department.

Field teams conducting the interviews should be aware of the following core principles:

- Aim to conduct a fixed number of interviews at each health facility selected (‘quota sampling’):
  - 10 exit interviews with mothers/caregivers of infants 0-11 months old;
  - 10 exit interviews with mothers/caregivers of children 12-23 months old;
- Aim to speak with mothers/caregivers attending the facility for different purposes:
  - If possible, a 50/50 mix of immunization vs. other services is ideal.
- Whenever possible, data collection should be spread across several different health facilities (for example, no more than 20 exit interviews in any one facility)
• If smaller health facilities are selected, it may not be possible to interview up to 20 mothers/caregivers. In such instances, additional health facilities may need to be visited to make up the sample quota of health care worker interviews for each field team. In these situations, the additional facilities should have similar characteristics to the one originally sampled, e.g. size/patient flow, private/public, district of location, etc.

**Scheduling of interviews:**
We recommend that all interviews be conducted on a day when vaccination services are being held at each selected health facility. As vaccination services are sometimes only held in the mornings, exit interviews should be conducted in the morning, as mothers/caregivers are exiting the health facility, after receiving care.

**Interview Procedure:**
The mothers/caregivers are to be interviewed after they have received services for the day (as they leave the health facility). Ideally, the interviewers will be positioned at the exit of the health facility or other strategic location. The primary source of data for the exit interviews should be the man or woman accompanying the child, with the home-based record in their possession. However, all consenting adults should be interviewed, irrespective of the availability of home-based records. Information on which vaccines have been administered and the dates of administration should only be copied from the home-based records, temporary vaccination records, or directly from the immunization register (later in the day).

All information should be recorded directly on the standardized questionnaire at the time of the interview. No data should be entered from interviewer memory. Any additional comments or contextual information should be included on the last page of the questionnaire as indicated. (See Annex D for an example of a paper-based exit interview questionnaire).

**A. Preparing for the Interview**
Before heading off to the health facility, make sure your appearance is neat and appropriate for the weather and culture. You should plan to spend one full day at each selected health facility. The morning session should be used for exit interviews while the lunch period/early afternoon sessions should be used for the health worker KAP questionnaires, in-depth interviews, and for data extraction from health facility immunization registers/records. In remote districts, the daily time commitment might require taking food and drinks for lunch.

Additionally, you should have the following minimum appropriate materials with you:

• Pens;
• If using paper-based questionnaires, enough copies of the questionnaires to conduct the interviews planned for the day (20 exit interviews, 10 health worker KAP questionnaires, plus 5 extra of each type, in case of loss or error); If using tablets/smartphones, bring a few copies of each type of questionnaire in case of electronic malfunction;
• Tablets/smartphones and chargers;
• Sticky notes (for affixing the questionnaire ID to home-based records/vaccination cards when taking the photos);
• Reading glasses, if needed.
B. Arrival at the health facility

When introducing yourself to the health facility in-charge, explain who you are and the general purpose of your visit. Ask for assistance in gathering health workers to participate in the KAP surveys (later in the day) and explain that you’d like to interview health workers from all departments in the facility, not just immunization services (see Task 3.5 below). Place yourself at or near the exit of the facility so that you can speak with mothers/caregivers as they are leaving, after they have received services for the day.

C. Starting the Interview

The first impression you make will set the tone for the interview. When approaching a potential interviewee, the first thing you should do is smile and greet the person politely: “Good morning” or “Good afternoon.” Introduce yourself as being from the Ministry of Health and make small talk, as culturally appropriate (e.g. the weather or the nice clothes their baby is wearing, etc.). Then state the purpose of your interruption. Always be friendly and polite. Try to encourage their participation; don’t over-pressure mothers/caregivers to participate.

D. Pre-screening by age eligibility

It saves the interviewer and interviewee time if a quick assessment of the child’s age is made prior to or while approaching the participant. Any child 24 months or older is not eligible for the MOV assessment.

E. Completing the Informed Consent (if needed)

After introducing yourself, explain that you have some information about the interview that you need to present to them, so that they can decide whether or not to participate. Read the entire script on the top of the first page of the questionnaire, which covers:

- Informing them of approximately how long the interview will take;
- Assuring them that their participation is voluntary and confidential;
- Answering any questions they may have;
- Asking for their consent to participate.

It is important that the participant understands everything that you say. Do not rush through this step and do not only provide a summary. If the participant does not understand, you may paraphrase. Do not paraphrase unless they ask you to clarify something.

If they choose to participate, you may begin the interview.

For those participants who refuse to consent, do not argue with them. You could gently reassure them that the questionnaire is anonymous, that their responses will not affect the quality of care they receive, that the information will be kept confidential, and that the purpose of the interview is to help the district by learning what needs to be done to improve vaccination services. If they still refuse, thank them for their time and move on to the next potential participant.
Depending on the cultural norms, it may be difficult for mothers to speak truthfully about their experiences at the clinic if they are concerned about any potential negative consequences from their responses. It is therefore always advisable to conduct these interviews beyond earshot of the clinic staff, even it means setting up a location under some distant tree around the exit.

F. Conducting the Interview

- It is important to read the questions clearly, in a normal speaking tone, exactly as they appear on the questionnaire. Do not shorten or skip questions (except using the in-built skip pattern). Do not rush through the interview.

- If the participant does not understand the question, read it again as it is worded.

- Lastly, you could explain or rephrase the question, but be careful not to change the meaning of the question. This is especially important when you are translating from English (or French) to the local language. Ensure to use the local dialect and the exact meaning of different diseases and processes. Local dialect terms should be agreed upon during the field team training or provided as a paper-based translation of the questionnaire (as suggested earlier).

If the respondent hesitates or does not want to answer some questions, you may stress once again that their responses will be kept confidential. If they still do not wish to answer, move on to the next question as if nothing has happened. **Do not push too hard for an answer.**

G. Extracting data from home-based records (vaccination cards/health passports)

In the MOV assessment, vaccination history will only be obtained from written records (home-based records such as vaccination cards/health passports, or health facility registers). **DO NOT** take a verbal vaccination history from mothers/caregivers. It is critical to correctly copy birth dates and vaccination dates, since these are essential for estimating eligibility and the proportion of missed opportunities. These should be practiced during training, with real life examples.

If the mother/caregiver does not have the home-based record in their possession, additional information should be obtained to enable you to find the child’s data in the health facility immunization register later in the day (Cross-reference: Annex D2).

For data validation, it is essential to take photos of the immunization section of the child’s home-based record (avoid including personally identifiable information when possible). When the home-based record is not available, take a photograph of the page of the health facility immunization register that
corresponds to the child’s vaccination record (being careful to include the entire entry in the photo). **Proper technique for taking and storing photos should be covered during a practical training session.**

**Entering Vaccination Dates:** It is important to note that some health workers may sign or put a check mark against an antigen without writing a date. Sometimes dates may be ineligible, even though the vaccine has been given.

For each vaccine listed in the questionnaire, assume that the vaccine was given if any deliberate (pen) mark has been made within the “date given” column on the home-based record. Such a mark may be the date, the healthcare worker’s signature or initials, a stamp, or other similar marks. If there is no deliberate mark, assume that the vaccine has not been given.

**If a vaccine has been given,** copy the date indicated, paying attention to the appropriate local date format (e.g. DD/MM/YY or MM/DD/YY). If part of the date is missing or illegible, record as instructed during the training.

**SPECIAL NOTE:** If you judge that a vaccine has NOT been given, then leave the date space blank. Do NOT write anything in the date column at all. A blank date field indicates to the data analysis team that a vaccine was NOT given.

**H. Ending the Interview**

There should not be any blank responses to the questions asked (except for those skipped using the built-in skip pattern) at the end of each interview. Double-check to ensure the questionnaire is completed and all responses marked. If there is anything missing, go back and repeat the question(s). If a team supervisor finds blank answers, they will assume that a question was skipped. Thank the respondent warmly, and make sure you have all your paperwork and belongings (and have also returned theirs, especially the home-based record) before saying good-bye.

**General instructions on filling the questionnaire form**

1. Read the questions exactly as written.

2. If you see a thick black arrow (→), this indicates a “skip pattern.” It means that you will move on to a different question next, depending on the answer given. Skip patterns are built in to the survey app if collecting data electronically. **Using skip patterns is not optional; it is necessary.** They save time and ensure that the interview makes sense. For example:

<table>
<thead>
<tr>
<th></th>
<th>IS THIS HEALTH CENTER IN THE VILLAGE/TOWN WHERE YOU LIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Yes ☐ ➔ Skip to question 11</td>
</tr>
<tr>
<td>2.</td>
<td>No ☐ ➔ Continue with question 10</td>
</tr>
<tr>
<td>3.</td>
<td>DK ☐ ➔ Skip to question 11</td>
</tr>
</tbody>
</table>
3. There are multiple choice answers provided for some of the questions. It is preferable that you check one of the boxes provided, rather than write a text answer. You may have to use your best judgment about how the participant’s response matches the responses provided on the form. For example, if in response to Question 10 (below), the mother/caregiver says “Because this is a big hospital with many doctors”, then choose Option 5: “Because this facility offers various health services” instead of writing that text in “other”:

<table>
<thead>
<tr>
<th>10. WHY DO YOU COME TO THIS FACILITY?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No health services in my village/town of residence</td>
</tr>
<tr>
<td>2. There are health services in the municipality where I live, but their treatment of patients is not good</td>
</tr>
<tr>
<td>3. This facility is on the way to my workplace</td>
</tr>
<tr>
<td>4. This facility is in the same village/town as the child’s day care or school</td>
</tr>
<tr>
<td>5. Because this facility offers various health services</td>
</tr>
<tr>
<td>6. I have always brought this child here</td>
</tr>
<tr>
<td>7. Other - Specify: ______________________</td>
</tr>
<tr>
<td>7. Other - Specify: Services are offered free of charge</td>
</tr>
</tbody>
</table>

4. If the response given by the mother/caregiver is not among the listed responses, you should select “Other, specify” and write the mother’s/caregiver’s specific response on the blank line (preferably in English or French). **However, first try to find a response that best fits the answer, among the choices provided.**

5. Sometimes the mother/caregiver may provide several answers to the question. This is acceptable for questions that ask you to “CHECK ALL THAT APPLY”. In other cases, only **ONE main or best answer** to the question is acceptable. You may have to clarify the preferred response with the mother/caregiver from among those provided.

6. If using paper questionnaires, complete the forms using a pen. **Avoid using pencils.**

7. Whenever a mistake is made, or a correction is needed, please cross it out using two lines [example]. Do not try to erase it.

8. Fill in the questionnaire neatly and write clearly. Remember that other people will read the questionnaires you have filled in (supervisors, data manager).

9. Ensure you have learnt how to use the tablets/smartphones to take photos and how to save them appropriately.
METHODOLOGY

**Task 3.4 Extract vaccination data from health facility registers for children with no home-based records (afternoons, following exit interviews)**

The assessment of MOV is dependent on credible dates of birth and dates of vaccination. As such, when these dates are unreliable, these children are excluded from the final data set. Where possible, data extraction from health facility registers should be undertaken to compensate for data gaps for children without a home-based record.

Recording practices of vaccination data on health facility registers vary markedly across countries and districts. Finding a child’s record may be challenging. The field team should work closely with the health facility staff to find and extract these data.

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**Tips for taking photos of home-based records**

A photo of the home-based record (vaccination card/health passport) or the health facility register is critical for data validation and to ensure that no data is lost.

- Ensure that the survey ID label is affixed to the vaccination card or register and visible on all photos
- Hold the camera/tablet steady
- Ensure there is good lighting and that glare from the sun or artificial light is not affecting the legibility of the card
- Avoid including personally-identifiable information when possible (i.e. only take photos of the page with the vaccination dates)
- Take multiple photos
  - Sometimes not everything will fit in one photo — that is ok!
  - You can attach multiple images to one survey
- Check the photo after you take it
  - Is it blurry?
  - Can you see ALL vaccination dates and information?
- Take it again!
  - If you’re not sure or the photo didn’t turn out well, take another picture!
Administer the health worker KAP (knowledge, attitude and practices) questionnaires (2–3 days - afternoons)

**Target for KAP questionnaires:** All health personnel who work at the health facility, regardless of their department of work (curative or preventive), are eligible for interview. Such staff should include vaccination as well as non-vaccination staff: outpatient, in-patient, doctors, nurses, nurse assistants, nutrition staff, counselors, etc.

**Sampling method**

For logistical reasons, the health worker KAP questionnaires should be administered at the same health facilities where the exit interviews are conducted. Efforts should be made to include health workers from different departments. We recommend a maximum of 10 health worker questionnaires per health facility. In smaller health facilities, all the health workers should be invited to complete the questionnaires. Interviewers may also need to visit nearby health facilities to attain the desired sample size for that interview date.

**Timing of health worker KAP questionnaires**

All health worker questionnaires should be administered on a day that vaccination services are offered at each selected health facility. Field teams should take into account workload and other logistics in discussing the best time of day for completing the health worker KAP questionnaires. In general, vaccination clinics are conducted in the morning hours. Therefore, health worker KAP questionnaires may be administered after lunch.

**Interview Procedure**

As with the exit interview, introduce yourself, explain the purpose of your visit, and ask for their consent to participate. When explaining the purpose of the exercise, it is important to be truthful but as vague as possible, to avoid biasing the responses of the health workers. For example, explain that you are there to conduct an assessment of immunization services in the (district/country) but avoid mentioning missed opportunities for vaccination up front, as this may skew the responses provided.

It is important to reassure the health workers that this questionnaire is not a test and that their responses are anonymous. The aim is to improve immunization coverage, not to evaluate their work performance, knowledge or abilities.

If using tablets, then the KAP questionnaires should be administered by the interviewers. In order to reduce bias, the questions should be read aloud to the interviewee exactly as written. Do not offer any suggestion about the correct answers, or assist the respondents in any way. The tablet screens may be shared with the health workers, especially for long questions.
If using paper-based questionnaires, it may be preferable to have the health workers self-complete the forms. This decision may be dictated by local needs (e.g. literacy levels, etc.). (see Annex E for an example of the paper-based KAP questionnaire).

In exceptional circumstances, it may be efficient to have all the health workers complete the paper-based questionnaires in one room during lunch or their regular weekly/monthly meeting. If this strategy is used, it is important to ensure they do not collaborate on the responses. Other locally workable solutions to minimize work flow disruption may also be explored.

**SPECIAL NOTE:** Although it may be tempting, the interviewer should not intervene by correcting or counseling the health workers if incorrect responses are given, as this risks biasing subsequent responses and compromising the integrity of the data collected. This applies for the exit interviews as well. Even if an interviewer determines that a child is missing one or more vaccine doses, no intervention should be made during the data collection component of the MOV assessment.

**TASK 3.6**

*Conduct focus group discussions (FGDs) for mothers/caregivers (1/2 day)*

See Task. 3.7 below.
Task 3.7  Conduct focus group discussions (FGDs) for health workers (1/2 day)

General Introduction to Focus Group Discussions (FGDs)

Focus group discussions, (a technique borrowed from marketing research) elicit “selling points”, “resistance points”, and other information normally withheld in individual interviews. Individuals feel a sense of anonymity when taking part in a discussion with a relatively homogenous group. Because of the group nature, FGDs are particularly useful in exploring new topics, especially where there is little prior research, and allow identification of a range of perspectives.

A secondary benefit of FGDs is their participatory research nature. Participatory research first identifies groups of special importance to a problem under investigation, and then elicits their participation in undertaking research into the causes and solutions of the problem at hand. For example, involving mothers in a missed opportunities FGD might facilitate explaining and helping to overcome feelings that vaccinations are not worthwhile for children. Including health staff in an FGD can be the catalyst to their learning about the need to integrate and maximize every health encounter for vaccination. They may suggest innovative ideas which will be critical for brainstorming potential interventions to reduce MOV.

FGDs as a critical tool in the MOV Strategy:

Where logistically feasible (time, budget and expertise), focus group discussions and in-depth interviews should be conducted to explore causes of MOV, as well as potential solutions and barriers to implementation of proposed interventions. To enable a full understanding of core issues with the vaccination programme as well as ways to reduce missed opportunities, the field work should include two types of FGDs: one with mothers/caregivers; and, one with the health care workers. Not only does this technique collect data that might not otherwise be obtained; the very process of involving these groups can often remedy the problem.

Ideally, the FGDs should be conducted in health facilities that were NOT sampled for the quantitative interviews. This is necessary in order to reduce the information bias that may result from eliciting only socially desirable responses from health workers who have already been interviewed. As a minimum of 6 participants is needed for the FGDs, medium to larger sized facilities should be chosen. Insights from health workers in the smaller facilities can be gathered with the in-depth interviews (IDIs) (see Task 3.8, below).

Since most vaccination clinics operate in the morning, the field work plan should schedule the exit interviews in the morning hours and the health worker KAP questionnaires and the FGDs in the afternoon.
Where possible, the FGDs should be conducted by individuals who are familiar with qualitative data collection methods. If a social scientist is available and resources permit, ideally the qualitative assessments should be carried out by a single designated expert/qualitative survey team, to maintain consistency. However, in many settings, this may not be possible and it will be necessary to provide a brief overview training for a subset of facilitators from the field teams on qualitative data collection methodology.

**FGD logistics:**
A total of 6-10 FGDs for mothers/caregivers and 6-10 FGDs for health workers should be scheduled. The ideal size of each focus group is 6-8 participants. A trained FGD facilitator should direct the group to discuss pre-determined subjects, being careful not to restrict the form or flow of the discussion in any way.

If conducting an in-depth qualitative component with a social scientist, and where logistically feasible, culturally appropriate, and with the consent of all the participants, the sessions may be recorded on tablets/smartphones/other voice recorders. This may be useful for review and compilation of key issues and direct quotes at a later time. Confidentiality of all participants must be assured. If no social scientist is available, it is often sufficient to proceed with detailed note-taking.

Each FGD is expected to last about 45 minutes, but no more than 90 minutes. If possible, the FGDs with the mothers/caregivers should take place away from the clinic areas and outside the hearing range of the health workers. This will encourage unhindered discussion, especially about potential solutions to reduce MOV. The FGD facilitator should locate an appropriate site near each facility and arrange to move the group of participants to that site. The seating arrangement should be circular, on comfortable chairs, with the facilitator at the same level and undifferentiated from the participants (preferably same gender, race, language, etc.). In some cases, the health facility in-charge, or head nurse may be able to help facilitate with gathering and arranging participants (but should not remain for the discussion).

**Proposed methodology for the FGDs**
1. If a social scientist or someone with appropriate experience in qualitative research methods is unavailable, conduct a brief training for FGD facilitators on qualitative research methodology
   a. It is best to identify individuals with previous experience in FGDs to lead different groups
   b. Otherwise, use generic slide sets to conduct a crash course on FGDs and qualitative data collection methods
2. Agree on the number of FGDs to conduct, per district or per health facility
3. Do not mix participants:
   a. There should be a separate FGD for mothers/caregivers and another for health workers
   b. Even among health workers, it may be useful to separate different categories of staff and, at the very least, levels of seniority to ensure a homogenous group that can speak freely

4. Encourage note-taking by multiple facilitators for each FGD
   a. Each note-taker should focus on two or three participants only
   b. Capture verbatim quotes as much as possible

5. Each note-taker should then submit typed notes from the FGD, highlighting the key issues that were raised, including direct quotations where possible
   a. Notes should be submitted each evening (by email) following the FGD to the designated qualitative expert/social scientist (and copying the Assessment Coordinator)

6. Collation of results and presentation to the brainstorming and debrief sessions should be performed by the qualitative expert/social scientist (or individuals with qualitative analysis experience).

**General structure of the FGD**

Questions should be open-ended to encourage discussion. The sample questions provided may serve as a guiding framework, but the facilitator should be prepared to improvise as the discussion progresses. The FGD should flow as follows:

- **Introduction**: group introductions, background on the purpose of the MOV assessment, ethical issues (consent if recording)
- **Opening questions**: Easy to answer and broadly related to the discussion topic
- **Key questions**: Essential data generating questions, including probes
  - These questions are not intended to be read out sequentially. Rather, the facilitator should familiarize themselves with all the listed questions and use them only as a guide. Otherwise, they will be quite repetitive.
- **Closing**: Summarize, end on a positive note, and include a message about reducing MOV.

FGD guides with sample introduction text and guiding questions can be found in Annex F. Similar questions for health workers can be used for the in-depth interviews (IDIs) (see Task 3.8).
Conduct in-depth interviews (IDIs) with the pre-determined number of key informants (senior staff and health administrators) (1/2 day)

Similar to FGDs, in-depth interviews (IDIs) should be conducted by individuals with qualitative research experience. The target for IDIs should be individuals considered to be particularly insightful or influential about the health facility or the community, such as the health facility heads or in-charges, directors, matrons and administrators. At least one IDI per health facility is ideal, as this fosters data triangulation with other data elements. Where possible or appropriate, those responsible for the EPI Programme at the district and sub-district level should also be interviewed.

The sample questions used for the health worker FGDs (Task 3.7, see Annex F) can also be used for the IDIs.

The interviews will collect information regarding the informants’ perception of the causes and cures for childhood illnesses, the community and health facility dynamics affecting immunization services, informant support or opposition to immunization, etc. Finally, key informants should be requested to explain various health worker and caregiver behaviors/responses and suggest or validate/refute previously proposed interventions to reduce missed opportunities.
## STEP 4

**Analyze preliminary data and identify key themes**

<table>
<thead>
<tr>
<th>WHO</th>
<th>Assessment Coordinator, Data Manager, qualitative expert/social scientist, and representatives from MOH and partner organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHEN</td>
<td>1-2 days, during and immediately following field work</td>
</tr>
</tbody>
</table>

### TASKS

| 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 (FGDs and IDIs) |
| TASK 4.3 | Conduct a quick preliminary data analysis, 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 |
**TASK 4.1**  
**Tally data from sampled questionnaires for analysis, or download preliminary data from the electronic data collection platform**

Data collation should start during field work (with uploaded data) and be completed as soon as field teams return to the central level. The Data Manager or Assessment Coordinator is responsible for this step. 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 platforms is highly encouraged. Web-based electronic platforms also allow daily upload of data during field work and synchronous data quality checks.

If data were collected on paper forms only, a sample of questionnaires should be selected and the data entered quickly by the Data Manager. These sampled data will allow for a simple analysis and presentation of preliminary results for the brainstorming (Step 5) (see Task 4.3) and debrief sessions (Step 6). For this first phase of the analysis, a simple analytic software such as Excel or Visual Dashboard in Epi Info™ is ideal. This can produce simple frequencies and easily updates simple charts automatically. More detailed analysis can later be conducted using Stata®, SAS® or similar software.

**TASK 4.2**  
**Collate the facilitator notes taken during the qualitative interviews (FGDs and IDIs)**

The social scientist or facilitators of the FGDs are responsible for collating the notes from the qualitative interviews. They can submit preliminary summary results and important verbatim quotes for inclusion in the presentations for the brainstorming and debrief. Otherwise, the Assessment Coordinator should compile important quotes and themes discussed during the focus group sessions for this purpose.
**TASK 4.3**

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

Together with the Data Manager, with input from the field teams once they return to the central level, the Assessment Coordinator should compile the preliminary 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 due to the tight timeline it will be nearly impossible to derive an “estimate” of the proportion of MOV at this stage of the analysis. This requires further data cleaning, reclassification and subgrouping (Task 4.4).

A series of charts of simple frequencies is all that is needed for discussion during the brainstorming sessions, and can be easily created with Excel or Epi Info™. The list below is an example of the simple analyses that can be quickly compiled into a PowerPoint presentation for this purpose.

1. Summary of field work (# days of field work, # field teams, # interviews completed, # FGDs completed)

2. Preliminary results of exit interviews, showing the responses to the following questions:
   a. Distribution of respondents by health facility or district
   b. What was the reason for your visit today?
   c. Has this child ever been vaccinated?
   d. Was this child vaccinated today?
   e. Did the health worker ask for the vaccination status of the child today?
   f. Does your child have a home-based record (vaccination card/health passport)?
   g. What is the purpose of the home-based record?
   h. Did the health worker ask for the home-based record today?
   i. Why do you NOT have the home-based record with you today?
   j. Did the health worker tell you which vaccines were administered today?
   k. Did the health worker tell you the date of the next appointment?
   l. Have you ever been denied vaccination? (if so, what were the reasons given?)

3. Preliminary results of health worker KAP questionnaires, showing the responses to the following questions:
   a. Distribution of respondents (by health facility, professional training, area or department of work)
   b. Do you have enough staff to conduct vaccinations in your facility?
   c. Have you ever received training on vaccine-preventable diseases?
   d. Why do you think children miss their due vaccinations?

---

2 A sample slide deck “Preliminary results for brainstorming” can be found at: www.who.int/immunization/programmes_systems/policies_strategies/MOV/en/
4. Results of Focus Group Discussions
   a. Key findings: Mothers/Caregivers – highlight major themes that were discussed, include important and illustrative verbatim quotes
   b. Key findings: Health workers – highlight major themes that were discussed, include important and illustrative verbatim quotes

5. In-depth interviews
   a. Highlight key barriers or bottlenecks as well as potential solutions discussed

**Prepare for detailed analysis of complete data, as well as data cleaning**

Detailed data analysis should commence as soon as possible after the completion of field work. The 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. If outsourced, every effort should be made to keep the key players at the MOH fully engaged throughout the analysis and report writing phases. The final report and any resulting manuscripts should be co-authored and pre-approved by the MOH.
### STEP 5

**Brainstorm on proposed interventions and develop an action plan for implementation**

<table>
<thead>
<tr>
<th>WHO</th>
<th>Assessment Coordinator, field teams and MOH-EPI leadership and partner organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHEN</td>
<td>1 day, following field work</td>
</tr>
</tbody>
</table>

| TASK 5.1 | Present the preliminary data from Step 4 and ask for reactions from the group |
| TASK 5.2 | Facilitate a brainstorming discussion on ideas for reducing MOV in the selected district(s)/the entire country |
| TASK 5.3 | Develop a detailed framework, work plan and chronogram for reducing MOV 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 |

At least one full day should be dedicated to the brainstorming session. When possible, two days will be better so as not to rush the process. All key immunization partners, MOH leadership, as well as all the field staff should actively participate in this process.
Present the preliminary data from Step 4 and ask for reactions from the group

The objective of Step 5 is to collate and triangulate the available data in order to achieve consensus on priority interventions. This step should begin with a presentation of all the preliminary results from the quantitative and qualitative data collected. This should be followed by a facilitated open discussion of the relevance of each of the key findings presented. Note-taking is encouraged for this task. It is helpful to have the field teams participate in the brainstorming discussions, as this is an opportunity to receive additional contextual comments and respond to any questions. As much as possible, the discussion should be led by the MOH staff and the field teams.

Facilitate a brainstorming discussion on ideas for reducing MOV in the selected district(s)/the entire country

A structured process should be used to elicit ideas from the multi-partner group. It is useful to begin by presenting the methodology and key findings in plenary, followed by break-out working group sessions.

Depending on the number of participants, split the plenary into two or three working groups of about 5 participants each. Each working group should include a senior MOH staff, an interviewer (field team member) and a staff from one of the in-country immunization implementation partners.

Each working group is tasked with creating a draft work plan or “action plan” to reduce missed opportunities. This plan should map out a list of potential interventions to reduce MOV and identify timelines, responsible organizations for technical assistance (TA) and potential funding sources. Proposed actions to reduce missed opportunities should leverage existing funding streams and country immunization plans, to the extent possible.

After about 60 minutes, the plenary is reconvened to discuss and collate the ideas from each working group.³

³ PowerPoint slide templates for the working group sessions are provided at www.who.int/immunization/programmes_systems/policies_strategies/MOV/en/
The brainstorming should follow this process:

1. Using a flip chart or similar visual display (including Post-its), assign a rapporteur from each working group to list at least 5 major causes of MOV (based on the preliminary data just presented as well as field team experiences).

2. List ALL interventions for reducing missed opportunities from the group. There should be no value judgment at this stage. All ideas should go on the flip chart.

3. Next, the group should spend some time grouping the ideas on the flip chart into similar themes. During this stage, proponents of ideas may elaborate further on their proposed interventions.

4. Each working group should prioritize the interventions they have come up with, based on both the importance of the contribution they would make to coverage and equity and their feasibility of implementation.

   » This stage should involve discussions of what ideas need to be presented to the plenary; individuals are expected to defend their original ideas based on their feasibility (in the short to medium term) and potential impact on reducing missed opportunities.

5. After prioritizing the top 3 issues and activities or interventions to reduce MOV, each working group should lay out a draft action plan for the next 6-12 months.

   » Wherever possible, explore synergies with existing work plans and funding streams!

**Expected output from each working group (draft action plan)**

<table>
<thead>
<tr>
<th>MAIN ISSUES IDENTIFIED (PRIORITIZE 3 PER WORKING GROUP)</th>
<th>PROPOSED INTERVENTIONS (3 PRIORITY ACTIVITIES/ACTIONS)</th>
<th>IMMEDIATE NEXT STEPS</th>
<th>TIMELINE FOR COMPLETION</th>
<th>RESPONSIBLE PERSON/ORGANIZATION</th>
<th>REMARKS ON SUSTAINABILITY/FUNDING OF ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>These details can be discussed further in plenary (Tasks 5.3 and 5.4 below)</td>
</tr>
</tbody>
</table>

These details can be discussed further in plenary (Tasks 5.3 and 5.4 below)
TASK 5.3 Develop a detailed framework, action plan and chronogram for reducing MOV over the next 6-12 months

All working groups should reconvene at the plenary. Following the discussions in Task 5.2, compile ideas from all working groups (3-5 priorities) into an integrated list of interventions, timelines, responsible persons and potential funding sources, for future endorsement by the ICC or similar body.

The critical element of this step is the prioritization of the listed interventions. This could be done through consensus building and negotiation. In some countries, an objective system of scoring each item on feasibility and potential impact has been used in order to arrive at a final short list.

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

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

A monitoring and evaluation plan should also be included as part of the proposed intervention. More detail on this aspect can be found in the MOV Planning Guide and MOV Intervention Guidebook.
Long-term sustainability of immunization programmes requires ongoing community participation and community demand for high quality services. Identify broader civil society organizations (CSOs) and community development committees that can facilitate implementation and invite them to the final debrief session (Step 6). Use the opportunity to solicit their input and assistance with implementing the proposed interventions.

**By the end of the brainstorming session, the following should be prepared, for presentation at the final debrief (Step 6):**

1. Additional data cleaning and analysis to preliminary results, to be presented in Step 6

2. Detailed action plan (for implementation of MOV interventions over 6-12 months) to be presented and endorsed in Step 6

3. Plan and timelines for:
   a. Finalizing the data cleaning and detailed data analysis
   b. Dissemination of the final report (and publication of results)

4. Plans for ongoing supportive supervision to continue to identify and take action to address MOV

5. Plans for re-evaluation of MOV post-intervention
**STEP 6**

Debrief with MOH leadership and immunization partners on proposed next steps

<table>
<thead>
<tr>
<th>WHO</th>
<th>All immunization partners and related programmes (such as family planning, ante-natal services, reproductive health, etc,) with leadership by MOH</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHEN</td>
<td>½ day, following brainstorming and development of the implementation action plan</td>
</tr>
</tbody>
</table>

**TASK 6.1**

Present the summary objectives of the assessment, the process of the field work and the preliminary results and recommendations from Step 5

**TASK 6.2**

Present the proposed action plan and request feedback and/or endorsement of the action plan from the MOH and partner leadership

**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 6.1**

Present the summary objectives of the MOV assessment, the process of the field work and the preliminary results and recommendations, as refined in Step 5

The objectives and preliminary results of the MOV assessment (including the districts covered) should be presented in a set of PowerPoint slides.

**TASK 6.2**

Present the proposed action plan and request feedback and endorsement of the action plan from the MOH and partner leadership

Sufficient time should be allocated to discussion of the proposed work plan. Additional ideas should be solicited and included in the final report and follow-up steps. A final version should be endorsed by the MOH at the conclusion of the debrief session.

**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 interventions are implemented in a timely manner, concrete discussions about new funding sources or the re-programming of existing funds should commence during the debrief. Ideas about including the MOV strategy in upcoming funding applications should also be explored.
This detailed action plan is crucial to ensure the proposed interventions for reducing missed opportunities are integrated into the EPI work plan. It should also form the basis of more in-depth discussions at the highest possible MOH level. Experience shows that, to be successful in reducing MOV, the work of the MOV Strategy Team should intensify AFTER the debrief, with a focus on taking forward the discussions and activities that were endorsed at the debrief. The advocacy step ends with the debrief. The impact of reducing MOV, such as improvements in coverage, timeliness and equity, can only be identified after the interventions are successfully implemented.

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 implemented at the service delivery level. For such activities, immediate actions can commence while the action plan is being discussed at the national level. Further details are provided in the MOV Intervention Guidebook.
HEALTH FACILITY EXIT SURVEY

Good morning/afternoon. My name is _______________________________ and I am working on a programme assessment of the vaccination of children in this locality. Our goal is to help improve the vaccination programme in general. I would like to respectfully ask for your help in answering the questions in this survey. I know you are busy, so we will interview you for only a few minutes. Your participation is completely voluntary and anonymous. Would you be willing to answer these questions? Thank you very much.

Questionnaire Serial Number

This is pre-assigned centrally

Date of interview

Interview start time:

Day |__| Month |___| Year |___| Hour |__| Minutes |___|

Name of interviewer: ____________________ Supervisor: ________________

Name of health facility: ____________________

Sub-county ____________________ County ________________

A. Classification of this health facility

1. Public/Government service

2. Private

3. Non-Profit

4. Faith-based organization

5. Other Specify: ____________________

B. Type of health facility

1. Hospital

2. Clinic

3. Health center

4. Health Post

C. Filter

The child appears to be <24 months

1. Yes CONTINUE

2. No THANK THE PERSON AND MOVE ON TO THE NEXT

SECTION 1: DATA ON THE CHILD

(In case of more than one child, choose the youngest child)

1. Date of birth

Day |__| Month |___| Year |___|

2. Sex or Gender of child

1. Male

2. Female

3. Why did you bring the child to this health care facility today? (Do not read out the choices)

1. For medical consultation (child is sick)

2. For vaccination

3. Healthy child visit or growth/development check-up

4. Child is only accompanying (not for treatment, vaccination)

5. Hospitalization (child was admitted or is still on admission)

6. Other Specify: ____________________
### SECTION 2: DATA ON THE CHILD’S CAREGIVER, PARENT/GUARDIAN

5. What is your relationship to the child?
   1. Mother
   2. Father
   3. Grandparent
   4. Uncle/aunt
   5. Brother/sister
   6. Other Specify: ________________

6. Can you read and write?
   1. Yes
   2. No

7. Level of formal education
   1. No formal education
   2. Did not complete primary (less than 6 years)
   3. Completed primary
   4. Completed secondary school
   5. More than secondary

8. What do you do for a living?
   1. Housewife (work is housekeeping)
   2. Employee or laborer
   3. Farming
   4. Self-employed
   5. Boss or employer
   6. Teacher
   7. Student
   8. Other Specify: ________________

9. By what means of transportation do you usually come to this facility?
   1. Walk
   2. Bicycle
   3. Motorcycle
   4. Car
   5. Bus
   6. Other Specify: ________________

10. How long does it take you to get here? _____ Hours _____ Minutes

11. Have you heard or seen messages on vaccination in the last one month?
   1. Yes
   2. No CONTINUE WITH QUESTION 12
   3. No SKIP TO QUESTION 13
12. Where/how did you hear or see the message?  (DO NOT READ OUT THE OPTIONS. CHECK ALL THAT APPLY)
   1. Radio
   2. Television
   3. Newspaper
   4. Health facility
   5. Telephone message
   6. Facebook or internet
   7. Children’s school
   8. Place of worship
   9. During home visit by health workers/health outreaches
   10. Community meetings
   11. Other [ ] Specify: ____________________

13a. Do you feel that you know the vaccines your child needs?
   1. Yes
   2. No
   3. Not sure

   IF YES --> 13b. Do you feel that you know WHEN the vaccines should be given?
   1. Yes
   2. No
   3. Not sure

14. Has this child ever been vaccinated?
   1. Yes
   2. No

   IF NO --> 14b. If no, why not?
   1. The necessary vaccines or supplies were not available
   2. I am not in favour of vaccination
   3. My husband/the decision maker is not in favour of vaccination
   4. I have not visited the health facility on a vaccination day
   5. I did not know that the child was eligible to be vaccinated
   6. Other [ ] Specify: ____________________

15. Have you ever requested vaccination service for this child and been refused?
   1. Yes
   2. No [ ] SKIP TO QUESTION 17

16. If so, why didn’t they vaccinate the child?
   1. The doctor or nurse said it couldn’t be done because the child was sick
   2. There were no vaccines, or there were no syringes or some other supply needed for vaccination
   3. It was not a vaccination day
   4. The vaccination area was closed
   5. The person in charge of vaccination was not there
   6. We didn’t have the vaccination card/passport
   7. The hours for vaccination are limited
   8. Other [ ] Specify: ____________________
17. In your home, who primarily makes the decision to vaccinate the children
   1. Father
   2. Mother
   3. Other relatives
   4. Consensus of father and mother
   5. Other
   Specify: ______________________

SECTION 3: USE OF VACCINATION CARD/HEALTH PASSPORT AND INFORMATION ON VACCINES ADMINISTERED

18. Does your child have a vaccination card/health passport?
   1. Yes, and I have it with me
   2. Yes, but I do not have it with me
   3. No
   4. Consensus of father and mother
   5. Other
   Specify: ______________________

19a. Could you tell us why you do not have the vaccination card/health passport with you today?
   1. It is at the nursery school/day care center
   2. I left it at home (because I forgot to bring it)
   3. I left it home (because I didn’t know it was important to bring it along)
   4. I lost it
   5. The card/health passport has been damaged
   6. I have never been given one
   7. Because vaccination was not the reason for this visit
   8. Other
   Specify: ______________________

19b. Why don’t you have a vaccination passport?
   1. I lost it
   2. I have never been given one
   3. I don’t know
   4. Other
   Specify: ______________________

Whenever the vaccination card or health passport is not with the caregiver today, request to complete the information in Annex D2 (Health Facility Register Follow-Up Form). Assure them that this information will only be used to match the records in the health facility register.

At the end of all the interviews, use the information from Annex D2 to complete the table below.
Remember to ALSO take a picture of the relevant pages/lines of the register.
20a. Request and examine the child’s vaccination card/health passport or temporary vaccination document to fill out the following table.  

*Remember to take pictures of all the completed pages on the vaccination card/health passport!*

<table>
<thead>
<tr>
<th>Vaccines</th>
<th>Date Administered, as written on the vaccination card or health passport</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dose 0</td>
</tr>
<tr>
<td>BCG</td>
<td></td>
</tr>
<tr>
<td>Oral Polio</td>
<td></td>
</tr>
<tr>
<td>IPV</td>
<td></td>
</tr>
<tr>
<td>DTP-HepB-Hib</td>
<td></td>
</tr>
<tr>
<td>Rotavirus</td>
<td></td>
</tr>
<tr>
<td>Pneumo (PCV)</td>
<td></td>
</tr>
<tr>
<td>Measles or MR</td>
<td></td>
</tr>
<tr>
<td>Yellow Fever</td>
<td></td>
</tr>
</tbody>
</table>

20b. Please review the entire maternal and child health booklet and indicate which recording areas are available and which ones have been filled. A recording area is considered filled or marked if ANY deliberate mark or information is included. If it is unclear whether there are deliberate markings or recorded information, perhaps due to damage to the document, then mark that you are unsure. CHECK ALL THAT APPLY

<table>
<thead>
<tr>
<th>Recording area available?</th>
<th>Recording area marked?</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>a) Child background information</td>
<td></td>
</tr>
<tr>
<td>b) Vaccination history</td>
<td></td>
</tr>
<tr>
<td>c) Vitamin A</td>
<td></td>
</tr>
<tr>
<td>d) Growth monitoring chart</td>
<td></td>
</tr>
<tr>
<td>e) Early eye or vision problems</td>
<td></td>
</tr>
<tr>
<td>f) Newborn child delivery</td>
<td></td>
</tr>
<tr>
<td>g) Not applicable (Document is not an official country-issued booklet)</td>
<td></td>
</tr>
</tbody>
</table>

21. Have you ever lost a vaccination card/health passport for this child?

1. Yes ☐
2. No ☐ ☝️ SKIP TO QUESTION 23

22. Did you encounter difficulty getting it replaced?

1. Yes ☐
2. No ☐
23. Could you tell me what purpose the vaccination card/health passport serves?  
*DO NOT READ OUT THE OPTIONS. CHECK ALL THAT APPLY*  
1. To know what vaccines the child has had and which ones are missing  
2. Birth certificate and/or identification  
3. Overall health record and growth monitoring  
4. Record and remind for return visit dates  
5. Other  
6. Don’t Know/No Response  
   Specify:  

**SECTION 4: TODAY’S VACCINATION**

24. During today’s visit, did the personnel/staff ask you for the child’s vaccination card/health passport?  
1. Yes  
2. No  
   SKIP TO QUESTION 25

25. If No, did they ask for the vaccination status of the child?  
1. Yes  
2. No  

26. Was your child vaccinated here today?  
1. Yes  
2. No  
   SKIP TO QUESTION 29

27. Why was your child not vaccinated today?  
*FIRST LISTEN TO THE REASONS GIVEN BY THE CAREGIVER AND THEN TRY TO CHOOSE THE RIGHT OPTION FROM BLOCK A, B OR C BELOW - Please DO NOT read the options out loud*  

**BLOCK A: REASONS RELATED TO THE HEALTH WORKERS**  
1. The doctor/nurse said that the child was not eligible for vaccination today  
2. The health worker who saw us did not tell me about vaccinating the child today  
3. The doctor/nurse said that the child could not be vaccinated because s/he was sick  
   IF BECAUSE OF ILLNESS, WHAT TYPE OF DISEASE OR TREATMENT DID THE CHILD RECEIVE TODAY?  
1. Minor illnesses such as mild fever, cold, cough, or diarrhoea  
2. Major illnesses requiring admission, such as severe pneumonia or severe malaria  
3. Other illnesses such as intestinal parasitosis, malnutrition, anaemia, dehydration, urinary tract infection  
4. Child is taking medications:  
   Write down generic name  
5. HIV or AIDS  
6. Other  
   Specify:  

**BLOCK B: REASONS RELATED TO THE CAREGIVER**  
1. The last time the child was vaccinated, he/she got sick or had a reaction.  
2. My religion doesn’t permit vaccination or I don’t believe in vaccines  
3. Vaccination was not the purpose of this visit  
4. This child is already fully vaccinated for his/her age  
5. I don’t trust the health workers/the vaccines in this health facility  
6. I forgot to take my child to the vaccination area  
7. I didn’t have time today to wait for vaccination  
8. Other  
   Specify:  

Page 6 of 9
BLOCK C: REASONS RELATED TO THE HEALTH FACILITY (LOGISTICS & ORGANIZATION)

1. There were no vaccines in the health facility today
2. There were no syringes or other vaccination supplies
3. Today is not a vaccination day in this health facility
4. The vaccination area was closed
5. The person in charge of vaccinations was not there
6. There would have been a long wait
7. The staff treated us badly
8. Other Specify: ____________________

28. If your child was eligible for vaccination but was not vaccinated today, did the health worker refer you to or inform you where you can receive the missing vaccine doses?
1. Yes
2. No

SECTION 5: QUALITY OF THE VACCINATION SERVICE

29. How long did you wait today for your child to be vaccinated? Hours: _____ Minutes: _____

30. Did they tell you today what vaccines they gave the child?
1. Yes
2. No

31. Today, did they tell you the date of the next vaccination appointment?
1. Yes
2. No

32. Today, did they write down for you the date of the next vaccination appointment?
1. Yes
2. No

33. Did you receive information today on the reactions or side effects that can occur following vaccination?
1. Yes
2. No

34. If so, what did they mention? (choose all that apply)
- Pain at injection site
- Fever
- Rash
- Diarrhea
- Vomiting
- Other Specify: ____________________

35. Did you receive information today on what you should do if the child has reactions or side effects to the vaccines?
1. Yes
2. No

36. Are you satisfied with the service provided today?
1. Yes
2. No
37. Why were you satisfied with the service? (CHECK ALL THAT APPLY)
   1. Immediate attention
   2. Friendly treatment by staff
   3. No charge for service
   4. The necessary vaccines and supplies were available
   5. Other Specify: __________

38. Why were you NOT satisfied? (CHECK ALL THAT APPLY)
   1. Had to wait a long time
   2. The staff was discourteous
   3. The language that the health workers use is not clear
   4. They did not explain what vaccines they had given the child
   5. The necessary vaccines or supplies were not available
   6. Other Specify: __________

39a. Have you ever been asked to pay for vaccines given to a child?
   1. Yes
   2. No

39b. What type of health facility asked you to pay?
   1. Public
   2. Private
   3. Don’t know

40a. Have you ever been asked to pay for a health card/passport for a child?
   1. Yes
   2. No

40b. What type of health facility asked you to pay?
   1. Public
   2. Private
   3. Don’t know

SECTION 6: REASONS TO VACCINATE CHILDREN

41. Could you tell me the purpose of vaccines? (CHECK ALL THAT APPLY) Please DO NOT read out the options
   1. To prevent diseases
   2. So children will grow up healthy
   3. To cure/heal diseases
   4. They don’t do any good
   5. Not sure what they are for
   6. Other Specify: __________

42. Do you think your child could get diseases if you don’t vaccinate him/her?
   1. Yes
   2. No
43. What suggestions do you have to improve vaccination services? *(CHECK ALL THAT APPLY)*
   1. There should be more vaccination personnel
   2. There should be less of a wait
   3. Hours and days when vaccination services are available should not be limited
   4. Vaccination should remain free
   5. The treatment of the public, and of the children being vaccinated, should be friendlier
   6. Vaccines should always be in stock
   7. They should provide information on the vaccines that are being given, on the diseases
      that they prevent, and on the reactions that they produce.
   8. More outreach services
   9. Other ☐ Specify: ______________________
   10. None ☐
   11. Don’t know ☐

**Interviewer:** Thank the interviewee and note the time when the interview ended. Read the following statement:

"Remember that vaccination is a right for all people. Demand this right and remember to bring your
child’s vaccination card to the health facility each time you visit the centre for any reason."

**Interviewer’s remarks:** __________________________________________
____________________________________________________________________
____________________________________________________________________

**Supervisor:** Please check the completed form for accuracy and completeness

1. Form is complete and accurate (skip patterns adequately observed) ☐
2. There are no errors or inconsistencies on the form ☐

**Supervisor’s remarks:** __________________________________________
____________________________________________________________________
____________________________________________________________________

Supervisor’s full name: __________________________________________
Supervisor’s signature: __________________________________________
Annex D2. Health Facility Register Follow-up Form

Health Facility Register Follow-up Form
(Please use one form per health facility)
Assessment of Missed Opportunities for Vaccination

District: __________________________
Sub-district: ________________________
Name of health facility: ____________________________
Interviewer name: ____________________________ Supervisor name: ____________________________
Date (DD/MM/YYYY): ___ ___ / ___ ___ /2016

[Please complete one row if the vaccination card/health passport is not immediately available. Use this information to find the vaccination dates in the health facility register.]

<table>
<thead>
<tr>
<th>Q. #</th>
<th>Child’s Last name</th>
<th>Child’s First name</th>
<th>Date of Birth</th>
<th>Address</th>
<th>Mother’s Name</th>
<th>Registration number</th>
</tr>
</thead>
</table>
Annex E. Health Worker Questionnaire

HEALTH WORKER QUESTIONNAIRE

The Ministry of Health, in collaboration with the World Health Organization and UNICEF wishes to strengthen the technical skills of all health workers, especially those who provide immunization services. This questionnaire has been designed to identify future training topics in immunization for all health workers. Your collaboration is greatly appreciated. Your name is not included in this questionnaire and your participation is voluntary.

If you decide to participate, please use a pen to mark answers that in your opinion respond appropriately to the question or problem presented. Responses will not serve as the basis for any evaluation of your professional abilities. Read each section of the questionnaire carefully, and please do not leave any questions blank.

Questionnaire Serial Number

Date of interview Day | | Month | | Year | |

GEOGRAPHICAL LOCATION

Name of interviewer: ____________________ Supervisor: ______________
Name of health facility: ____________________
Sub-county ____________________ County _____________

A. Classification of this health facility
1. Public/Government service ☐
2. Private ☐
3. Non-Profit ☐
4. Faith-based organization ☐
5. Other ☐ Specify: ______________________

B. Type of health facility
1. Hospital ☐
2. Clinic ☐
3. Health center ☐
4. Health Post ☐

I. BACKGROUND INFORMATION

PLEASE MARK THE CORRECT ANSWER IN THE FOLLOWING SECTION:

1. Gender or sex ☐1. Male ☐2. Female

2. Age ☐1. Under 20 years ☐2. 20-29 ☐3. 30-39 ☐4. 40-49
☐5. 40-49 ☐6. 50 or over

3. What is your professional training?
1 Doctor ☐
2 Nurse ☐
3 Clinical Officer ☐
4 Public Health Office ☐
5 Other ☐ Specify: ______________________
4. Area (or department) in which you predominantly work
   1. In-patient Department (in the admission wards)
   2. General Out-Patient (OPD)
   3. Emergency Department
   4. Immunization, preventive medicine and epidemiology
   5. Nutrition
   6. IMCI (Integrated Management of Childhood Illnesses)
   7. Dental/Oral Unit
   8. Family Planning and STI
   9. Ante-Natal Clinic (ANC)
   10. Other Specify: ____________________

5. For how long have you been working in this profession? [ ___ | ___ ] years [ ___ | ___ ] months

6. During your basic training in nursing, midwifery or medical school, were you trained in the control of vaccine-preventable diseases?
   1. Yes
   2. No

7. Since your basic training, have you received training or participated in courses on vaccination or control of vaccine-preventable diseases?
   1. Yes
   2. No → SKIP TO QUESTION 9

8. If YES, when were you last trained?
   1. <1 year ago
   2. 1-2 years ago
   3. 2-3 years ago
   4. >4 years ago

II. KNOWLEDGE OF VACCINATION

FOR QUESTIONS 9 - 11, PLEASE CHECK ALL CORRECT OPTIONS

9. Vaccines that healthy children should receive include: PLEASE CHECK ALL THAT APPLY
   1. BCG
   2. Measles
   3. Pentavalent
   4. Polio vaccine
   5. Rotavirus vaccine
   6. Pneumo (PCV)

10. Contraindications against being vaccinated with polio vaccine include:
    1. Breastfeeding
    2. Axillary or rectal temperature of 37.5 C
    3. Mild malnutrition
    4. Mild diarrhea
    5. None of the above
11. Please match the vaccines listed below with the age at which they should be administered.
Please write in the blank column of the first box the number (e.g. 5) that corresponds to the correct answer in the second box.

<table>
<thead>
<tr>
<th>Blank column</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentavalent</td>
<td>1</td>
<td>IPV</td>
<td>BCG</td>
<td>OPV</td>
<td>1st dose of Measles or MR vaccine</td>
</tr>
</tbody>
</table>

1. At birth, and 6, 10 and 14 weeks
2. 6, 10, 14 weeks
3. 9 months
4. 14 weeks
5. At birth

12. Vaccine-preventable diseases (VPDs) in the process of eradication or elimination include:

**PLEASE MARK ONLY ONE ANSWER**

1. TB
2. Whooping cough
3. Poliomyelitis and measles
4. Diarrhea
5. None of the above

13. Absolute contraindications against ANY vaccine include: **PLEASE CHECK ALL CORRECT OPTIONS**

1. Local reaction to previous dose
2. Light fever
3. Seizures under medical treatment
4. Pneumonia or other serious diseases
5. None of the above

III. ATTITUDES

FOR QUESTIONS 14-15, PLEASE MARK ONLY ONE CORRECT ANSWER.

14. From day to day, who should evaluate the vaccination status of children, review vaccination cards/health passports, and ensure that children are up to date according to the national schedule?

1. The child’s parents
2. The health worker responsible for immunization
3. Physicians in external consultations, inpatient services, and emergency rooms
4. All of the above

15. In which of the following situations should you inquire about the doses that children have received and those that are missing according to their age?

1. During a child’s wellness visit
2. Consultation for any illness
3. When a child is accompanying a caregiver during a pre-natal check-up
4. When a child is accompanying a caregiver visiting a health care facility for any reason
5. All of the above
16. Why do you think that some children are not up to date on their vaccination? **PLEASE CHECK ALL THAT APPLY**
   1. Parents’ negative beliefs related to vaccination
   2. Hours of vaccination incompatible with parents’ busy lives
   3. Physicians, nurses, and health workers do not ask about children’s vaccination schedules
   4. Physicians, nurses, and health workers do not review children's vaccination records
   5. False contraindications for vaccination by health workers
   6. Distance from vaccination site
   7. All of the above

17. Do you believe that the vaccines administered in private practice vary in quality from those provided by the Ministry of Health?
   1. Yes
   2. No
   3. Don't know

18. Please explain your response in Question 17: ________________________________

**IN THE FOLLOWING SECTION, DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS:**

19. My knowledge of vaccines and vaccination is insufficient or outdated
   1. Agree
   2. Disagree

20. I am very concerned about, and fear, adverse reactions from vaccines
   1. Agree
   2. Disagree

21. Completing nominal vaccine registries (books/notebooks/vaccination cards) delays the timely vaccination of children
   1. Agree
   2. Disagree

**IV. PRACTICES**

**IV.I DECISION MAKING IN DAILY PRACTICE**

**FOR QUESTIONS 22-25, MARK THE ONE CORRECT ANSWER**

22. A female infant comes to the clinic today. She is aged 3 months. She has a documented history of one dose of BCG and one of OPV, both administered at birth. The mother seeks service to assess the child’s growth and development. What vaccines would you give the child today?
   1. None
   2. Only Polio (OPV)
   3. Only Pentavalent
   4. Measles vaccine
   5. Polio, Pentavalent, Rotavirus, and PCV
   6. Don’t know
23. Female infant aged 6 months with documented history of one dose of BCG, two doses of pentavalent, and two doses of polio vaccine. The last doses of vaccines were given when the child was 4 months old. According to the mother, the child experienced fever and seizure one month ago and is now receiving medical treatment. Following EPI guidelines, what vaccines would you give her?

1. I would not vaccinate her
2. Only polio vaccine and I would refer her to a specialist
3. DT5
4. Polio and pentavalent
5. Only measles vaccine
6. Don’t know

24. Are vaccination services offered every day at this facility?

1. Yes, for all antigens
2. Yes, services are offered but not for all antigens
3. No, certain days are scheduled as immunization days

25. Do you work in the area of immunization or provide vaccines as part of your job?

1. Yes
2. No

NOTE: If you work in the area of immunization or provide vaccines as part of your job, please continue. If you work in other departments, STOP HERE and thank you for your time.

IV. PRACTICES

IV.2 IMMUNIZATION PRACTICES AND DECISION MAKING

[THE SECTION IS ONLY FOR ALL HEALTH CARE PROFESSIONALS WHO ADMINISTER VACCINES]

26. Under what circumstances would you tell the parent what vaccines you are administering AND provide advice regarding what to do in case the child experiences an adverse reaction following immunization?

1. Only if the vaccine administered could produce a severe reaction
2. Only when the parent or guardian requests this information
3. Never, since this information can be counterproductive and discourage participation in the immunization programme
4. Always, regardless of the vaccine used and type of reaction that might be expected
5. The probability that an adverse event related to vaccination is so low that I would rarely have to provide this information

27. Today, you vaccinate a female child aged 2 months with the first doses of pentavalent, polio and PCV vaccines. After telling her parents which vaccines she received, what other information and recommendations would you provide her caregivers? PLEASE CHECK ALL THAT APPLY

1. The child may experience a bit of fever, diarrhea, or discomfort following vaccination
2. The symptoms above generally do not require treatment; however, in the case of fever, the child should be lightly dressed and should NEVER stop breastfeeding
3. The parent should return to the health center if these symptoms persist so that the child may be seen by a doctor
4. All of the above
5. None of the above
28. What should be done if you notice that there are children with delayed or missed vaccines in the vaccine registry? **PLEASE CHECK ALL THAT APPLY**
   1. Make a weekly list of children with incomplete schedules  
   2. Contact parents or guardians by telephone, email, or any other means of communication to remind them to vaccinate their children  
   3. Make home visits to encourage the family to complete the child’s vaccination schedule and administer missing doses while there  
   4. All of the above  
   5. None of the above

29. What could be done to follow up on vaccination of children after hospitalization or outpatient treatment for a chronic condition? **PLEASE CHECK ALL THAT APPLY**
   1. Coordinate with clinical areas, inpatient and emergency departments in hospitals, so that they can review the child’s vaccination card/health passport  
   2. Send patients whose physicians consider them eligible for vaccination to the immunization unit so that they can be vaccinated before leaving the hospital  
   3. In hospitals, a health worker in the immunization unit could visit inpatient departments to review the medical records of children who will be discharged that day, thereby identifying children to start or complete the vaccination schedule  
   4. All of the above  
   5. None of the above

30. At 8:00 AM, you prepare a vaccination cold box for the morning shift at the health facility. You place two vials of 10 doses of measles vaccine in the cold boxes. At 3:00 pm, a mother requests that her 14 month old child receive one dose of measles vaccine. The child has not yet received measles vaccine but has received other vaccines for children aged < 1 year. The child has no contraindications. Only two doses from the first vial have been administered since 8:30 am, when the first dose was given. Which of the two vaccine vials in the cold box would you use to vaccinate this child?
   1. I would use the first open vial to prevent vaccine wastage  
   2. I would tell the mother to return the next day, since I cannot open a new vaccine vial and there are no more children to vaccinate  
   3. I would open the second vial of measles vaccine to immunize the girl  
   4. I would recommend that the mother take the child to another health center to be vaccinated  
   5. None of the above

31. What instructions do you USUALLY give to caregivers the first time you issue them a new vaccination card? **PLEASE CHECK ALL THAT APPLY**
   1. Keep the card safe  
   2. Bring this card to all visits to the health facility  
   3. Bring this card only when you come for vaccinations  
   4. No instructions are given  
   5. Others: Specify: _________________________
32. What do you do for a caregiver that forgot the vaccination card/health passport at home:
   1. I do not vaccinate the child and ask mother to return with card next time
   2. I issue a new card, vaccinate and record today’s vaccinations in the new card and in the register
   3. I issue a new card, vaccinate and record old vaccinations from the register
   4. I issue a temporary card, vaccinate, record in register, and ask them to bring the old card for next visit
   5. I will vaccinate without the replacing card, but I will document in register only
   6. Other: Specify: __________________________

33. If a caregiver reports that the child’s card has been lost or damaged, what do you usually do?
   1. I issue a new card and record all future vaccines in the new card
   2. I issue a new card and transcribe all previous vaccines from register
   3. I issue a new card and ask woman to tell me of all previous vaccinations so I can write them down
   4. Vaccinate without replacing card, document in register only
   5. Other: Specify: __________________________

IN THE FOLLOWING SECTION, DO YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS:

34. Today, I have enough vials of vaccines for all patients who seek immunization services
   1. Agree
   2. Disagree

35. Today, I have all the materials that I need to vaccinate patients who seek immunization (including syringes, recording sheets, vaccination cards/health passports, and other materials)
   1. Agree
   2. Disagree

36. When the professional in charge of vaccination is unavoidably absent, another health care professional is available to replace him or her
   1. Agree
   2. Disagree
37. There is sufficient staff offering immunization services at this facility

1. Agree [ ]
2. Disagree [ ]

ADDITIONAL COMMENTS:

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

Thank you for your time and have a wonderful day!
Sample introduction:

Good afternoon! My name is [Name] and I will be facilitating the discussion this afternoon. This is [Name2] and he/she will be taking notes and helping me. Thank you so much for taking the time to be here today. We will be discussing childhood vaccinations and we are interested in finding out from you what you know about vaccination of children in this community. This information will be anonymized and will be treated as confidential. If at any point you do not want to continue participating in this discussion, you are free to leave the group and we will no longer be asking you any more questions. The information discussed today will help us to understand what can be done to improve childhood vaccination programmes in [Country].

If recording: We would like to record this discussion. Even though we will be taking notes, we are not able to write everything down and want to be able to go back and listen to any information we might have missed. All notes and the recording will be kept safely and securely. Is everyone okay with recording this conversation? (Confirm that all participants consent)

We ask that you please take turns while speaking and do not interrupt anyone. We are interested in what all of you have to say, so please be respectful of each other’s opinions. This discussion will last about 45 minutes.

Before we begin, does anyone have any questions?

Sample FGD questions for Mothers/Caregivers

Opening questions:

1. What are some health problems that affect children in this community?

2. How are your children protected from being affected by these health problems/diseases?
   a. Probe: If vaccination is not mentioned, ask: What about vaccination?

Key questions: General vaccination

3. How does the community feel about childhood vaccination?

4. What can you tell us about the childhood vaccination services in this community?
   a. Probe for levels of satisfaction with the vaccination services they receive from public and/or private clinics/hospitals, ask: What is good and what is not so good about the vaccination services?
   b. Probe for reasons for their satisfaction or dissatisfaction, ask: Why?

5. In your opinion, what are some of the ways these vaccination services can be improved?
Key questions: Vaccine compliance

6. In [Country], as you may be familiar with, the national programme sets a vaccine schedule. How would you describe compliance with vaccination schedules in this community?

7. Many children do NOT receive all their recommended vaccines on time. What are some of the reasons children do NOT receive all their vaccines at the right time?

8. What will be your suggestion for helping children to receive all their recommended vaccines according to the schedule?

Key questions: Missed opportunities

9. In some cases, children who visit health facilities, for different reasons, still do not get all the needed vaccines. In your opinion, what are some reasons some health workers may not be willing or able to give children all their recommended vaccines on time, when they visit the clinic/hospital?

10. Some children receive some, but not all the vaccines they need. In your opinion, what are some of the reasons mothers/caregivers may not be willing or able to ensure that their children receive all their recommended vaccines on time when they visit the clinic/hospital?

11. What are the ways you can recommend for ensuring that children receive all their recommended vaccines on time whenever they have the opportunity of visiting a clinic/hospital for any reasons? (They may be visiting for immunization, nutrition, treatment of other ailments, or accompanying an adult to the clinic/hospital)?

Closing questions

12. Are there any additional suggestions/ideas you would like to share at this time? Anything else to add?

13. Remember to close on a positive message about vaccines and reducing MOV!

Sample FGD questions for Health Workers

(Similar questions can also be used for the in-depth interviews, see Task 3.8)

Opening questions:

1. What are some of the health problems that affect children you see at this facility?

2. How are children protected from being affected by these health problems/diseases? (Probe for individual health workers’ roles; If vaccination is not mentioned, ask: What about vaccination?)
Key questions: Vaccination services

3. What can you tell us about vaccination services in this health facility?
   a. Probe for levels of satisfaction among clients with the vaccination services they are providing
   b. Probe for perceptions regarding the vaccination programme among different groups including health workers

4. What are some challenges to delivering vaccination services at this health facility?

5. In your opinion, what are some of the ways vaccination services can be improved?

Key questions: Vaccination compliance

6. In [Country], as you are aware, the national programme sets a vaccine schedule. How would you describe compliance with the vaccination schedules in this community?
   a. Probe for proportion of children that receive all their recommended vaccines on time
   b. Probe for reasons why some of the children DO NOT receive all their vaccines at the appropriate time

7. In some other health facilities, we have been told that there are circumstances when children that come to the facility are not vaccinated. Can you tell me the circumstances when you, or other staff, would not vaccinate a child in this clinic?
   a. Probe for contraindications: over age, vial doses, vaccination days, no vaccines, etc.

8. What are your suggestions for helping children to catch up with their vaccinations, if needed?

Key questions: Missed opportunities

9. Some children who may not be up-to-date on their vaccinations may visit a health facility for a variety of reasons (immunization, nutrition, treatment of other ailments, accompanying an adult to the clinic/hospital) and may leave without receiving any immunizations. What is your experience with such children at this health facility?
   a. Probe: How can they be made to receive the vaccines they are eligible for when they visit the clinic?

10. What strategies, if any, can the ministry or this health facility employ to improve the number of children receiving all of their recommended vaccinations on time?
   a. Probe for ideas or strategies that other critical actors/entities can employ

11. In your opinion, what are the possible barriers to implementing any of these interventions to reduce missed opportunities?
   a. Probe for possible solutions to any barriers that have been mentioned

Closing questions

12. Are there any additional suggestions/ideas you would like to share at this time? Anything else to add?