

Toolkit to Identify, Reach, Monitor, Measure, and Advocate for Un- and Under-Immunized Children and Communities

Guidance for immunization program managers and
national-level staff

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Abbreviations

EPI	Expanded Programme on Immunization
HMIS	health management information system
IRMMA	Identify, Reach, Monitor, Measure, Advocate
M&E	monitoring and evaluation
REC	Reaching Every Community
RED	Reaching Every District

Introduction

One of the goals of the Immunization Agenda 2030 (IA2030) is to achieve full vaccination coverage and leave no one behind.¹ While there has been progress, there is still a high proportion of un- and under-immunized children in many low- and middle-income countries. The COVID-19 pandemic contributed to disruptions in immunization programs and services, and deepened access issues and immunity gaps.²

The overall goal of this toolkit is to provide guidance and tools to support EPI teams to identify, reach, follow-up, and evaluate the impact of interventions to reduce the number of un- and under-immunized children and missed communities.

Specific objectives:

- Apply the Identify, Reach, Monitor, Measure, Advocate (IRMMA) Framework to reduce the numbers of un- and under-immunized communities.
- Provide decision-making criteria and tools to identify, reach, vaccinate, and follow up with un- and under-immunized communities.
- Support EPI managers and their teams to triangulate immunization data to validate accuracy and reliability to inform decisions and design/implement targeted surveys to estimate the un- and under-immunized population including number, location, and reasons why they have not been reached.
- Link to resources that complement the use of the IRMMA Framework.

In this guide, we will use the terms un-unvaccinated and under-immunized capture a range of vaccination status including zero-dose children (which Gavi defines as those who lack the first dose of diphtheria-tetanus-pertussis containing vaccine [DTP1]) and communities, which include children, adolescents, and adults vaccinated which corresponds to those who have had no vaccinations at all and those who have been partially vaccinated, respectively. By applying this definition, we hope this toolkit helps EPI teams reach communities unable to access any or all vaccination services. This guide is inclusive of unvaccinated (also called zero-dose) children. Annex 1 contains definitions of key terms regarding unvaccinated or zero-dose children.

Features

This toolkit is organized around the IRMMA Framework. Each component of the framework corresponds to a stage (we have combined Stages 3 and 4). The toolkit links to other frameworks like the Reach Every District (RED) and Reach Every District-Quality Improvement that are already in use by EPI teams or are recommended for district teams to increase coverage and access. The toolkit contains decision-making criteria, analytical tools, and survey guides to assess, reach, vaccinate, and follow-up with communities working to achieve IA2030 goals.

Intended Audience

This toolkit is aimed at program managers, supervisors, and monitoring and evaluation (M&E) officers operating within the national EPI. Partners and stakeholders working with EPI may also find these materials useful as they support immunization activities. There is a companion subnational toolkit that is aimed at district EPI teams.

¹ World Health Organization. Immunization Agenda 2030: A global strategy to leave no one behind. Geneva: WHO; 2021. <https://www.who.int/docs/default-source/immunization/strategy/ia2030/ia2030-document-en.pdf>

² World Health Organization / UNICEF. Wuenic report. <https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/global-monitoring/immunization-coverage/who-unicef-estimates-of-national-immunization-coverage>

How to Use the Toolkit

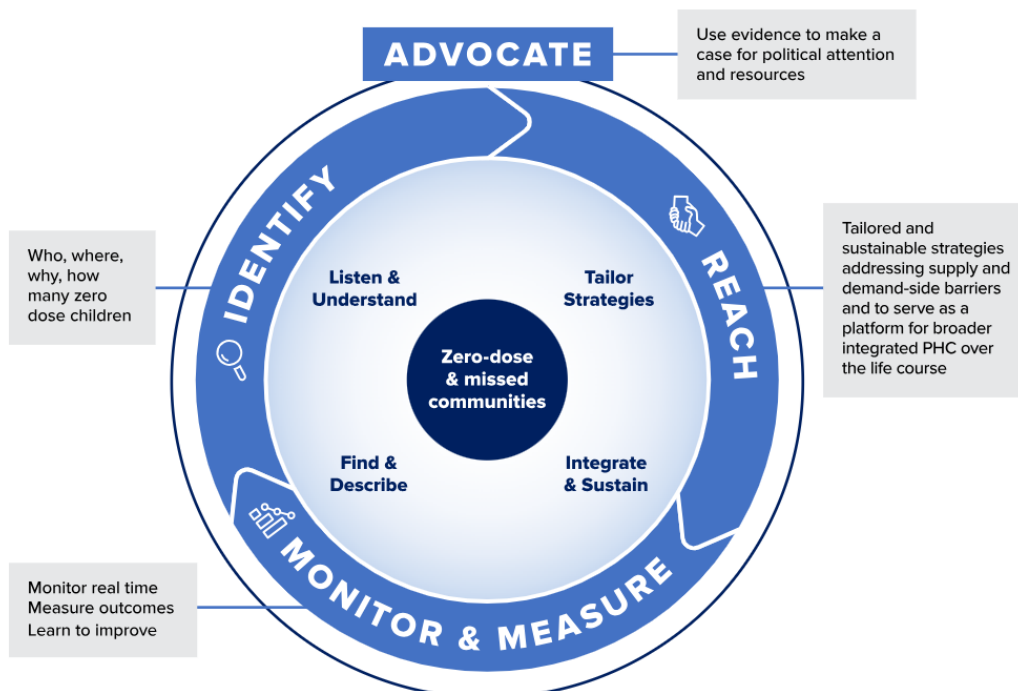
This toolkit addresses a global audience, and the sequencing of actions may differ from country to country. However, it is expected that the principles and guidance in this toolkit will be broadly relevant. To get the most from this toolkit, each program must understand its context of operation, policies, approved indicators for measurement, and stakeholders needed to succeed.

Before using the toolkit:

- Review the structure of the document to understand its flow.
- Identify sections that are particularly relevant to you and review the resources and tools associated with them.
- Ensure the team you have selected to support you has the experience, skills, and knowledge to use this toolkit effectively. Make sure its members understand its content and provide training as necessary.
- Remember that while national-level personnel do not ordinarily implement activities, they must understand and support subnational activities and needs.
- Review the content of the companion subnational toolkit.

The IRMMA Framework guides the reader through five essential steps for reducing the prevalence or widespread presence of un- and under-immunized communities (Figure 1).

Figure 1. The IRMMA Framework



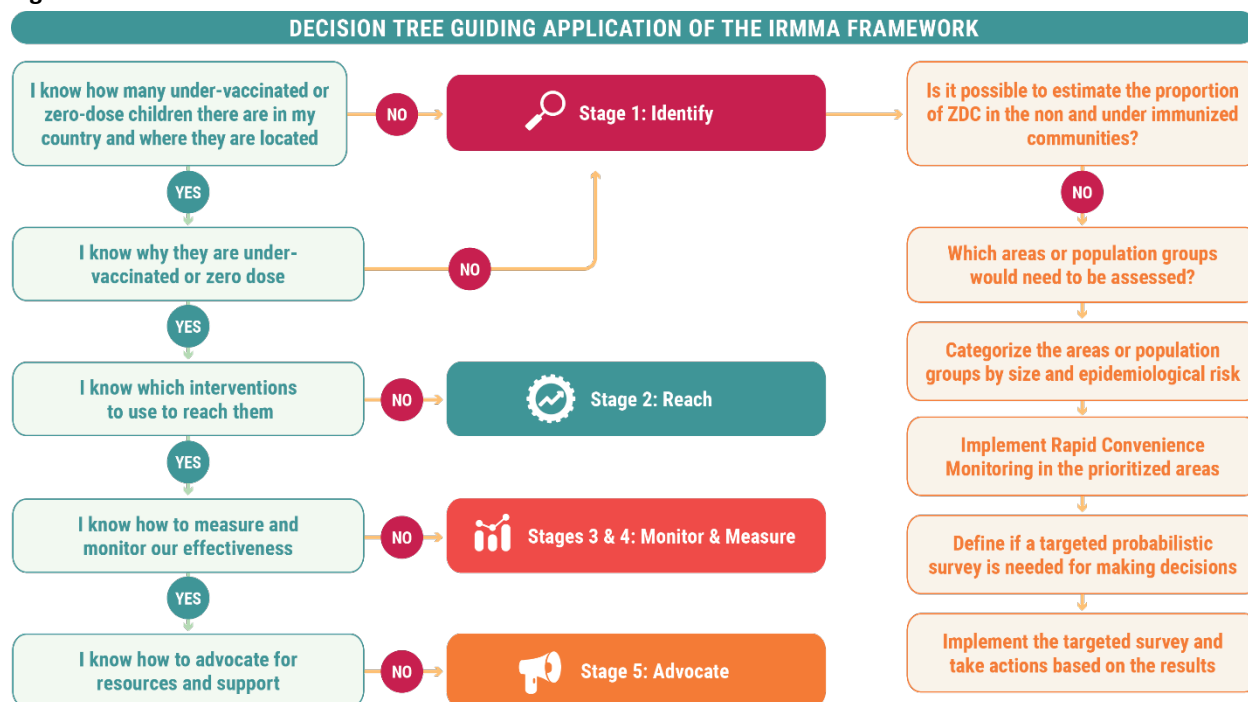
Source: <https://zdlh.gavi.org/resources/evidence-map>

The IRMMA Framework can be applied to find communities that are or who are at risk of being un- or under-immunized. As depicted in Figure, its stages are:

1. **Identify:** Determine who is un- or under-immunized, where and how many they are, and why they are un- or under-immunized.
2. **Reach:** Co-create and implement sustainable, doable, and context-appropriate **interventions** to overcome supply and demand barriers.
3. **Monitor** interventions to ensure proper implementation. Take corrective action where necessary and learn from the process.
4. **Measure** impact of the interventions to see if they have achieved the intended goal.
5. **Advocate:** Advocacy is critical to obtain support, be it political, financial, or technical. Use the evidence you gain to advocate for the needs of the program.

These stages are used iteratively. Use the decision tree in Figure 2 to decide at which stage you will start. While national personnel do not normally implement programs, you, particularly supervisors, should be familiar with what happens on the ground. Depending on your context, you may or may not conduct all stages of the outlined in this toolkit.

Figure 2. Decision Tree





Stage 1. Identify

Steps:

- 1 Mobilize stakeholders and obtain their agreement.
- 2 Review and triangulate data.
- 3 Characterize un- and under-immunized communities.



Goal and Output

Goal:

- Locate and characterize un- and under-immunized communities.

Outputs:

- Documentation of magnitude and distribution of un- and under-immunized communities.
- National map highlighting areas with high prevalence of un- and under-immunized communities.
- List of prioritized areas/districts for focused support.

Step 1. Mobilize stakeholders and obtain their agreement

Having an active and engaged stakeholder group is important for the success of a national EPI program in implementing activities successfully.

National programs generally know who their key stakeholders are, but a quick scan of the environment can capture new stakeholders such as upcoming funding agencies and new groups working in immunization. EPI stakeholders should include:

- Program managers.
- Policy makers.
- Social mobilization officers/health educators.
- Representatives from relevant organizations including UNICEF, the World Health Organization, and Gavi.
- Interested financiers.
- Private sector.
- Representatives from other ministries and government organs with interest in immunization
- Community members and users of the immunization services.
- Nongovernmental and civil society organizations.
- Federal/national, provincial, and local government officials who are directly or indirectly linked with the project and representatives from other ministries and government agencies that are interested in immunization.
- Elected representatives of municipalities.
- Doctors, nurses, and other medical staff who provide immunization services and support.
- Community health workers.
- Traditional leaders and other gatekeepers.



The actual composition will vary by context. A program can undertake a systematic approach to identify, prioritize, and engage critical stakeholders. If your program needs to do this, follow the guidance in Annex 2.

Leverage an existing working group focused on routine immunization or create one comprising stakeholders with the right mix of knowledge and skills for the task at hand. This working group should be involved in all stages of the toolkit. Illustrative composition of a national working group:

- EPI manager and national supervisors.
- District representative.
- M&E and surveillance personnel.
- Logistics and supply expert.
- Data analyst.
- Geographic information system expert.
- IT specialist.
- Training specialist.
- Communications and advocacy expert.
- Non-governmental and funding agencies
- Central statistics or equivalent representation.
- Researcher.
- Other relevant government ministries/local governments.

Step 2. Review and triangulate data

With your working group, determine the extent of un- and under-immunized communities.

Definitions related to un- and under-immunized communities are provided in Annex 1. Use your country's definitions and conduct data triangulation to estimate the national distribution of un- and under-immunized communities.

Data triangulation is synthesis of **existing** data from two or more sources to answer questions for program planning and make decisions. Data triangulation increases the reliability of your conclusions.

Data triangulation will help you:

- Mitigate limitations of any one data source.
- Mitigate limitations of any one data collection methodology.
- Gain deeper insight by making sense of complementary information in a broader context.

Criteria for triangulation includes having:

- Access to two or more data sources, including diverse data sets.
- Data management/analysis capacity in your multi-disciplinary working group.
- Commitment to acting on the outcome of your findings.

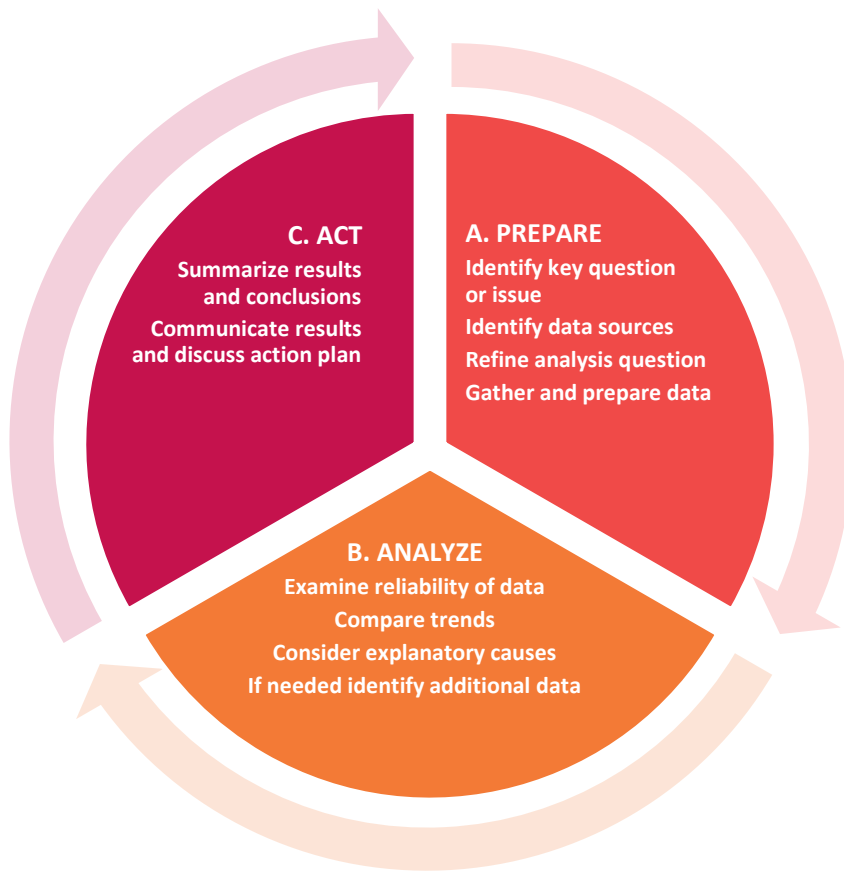
Data triangulation broadly involves:

1. Asking the key question.
2. Identifying data sources to answer the question you have posed with your working group.
3. Summarizing data and local context.
4. Developing an action plan.

For national staff, these have been refined to reflect three phases with 10 key actions (Figure 3). These are aligned with the four steps above, only more detailed.



Figure 3. National-Level Triangulation Process and Phases



Adapted from [data triangulation training slides](#).

A. PREPARE

1. Ask questions

With your working group, pose questions that can help you understand more about un- and under-immunized communities to provide tailored services and close the immunization coverage gap. Examples of typical questions:

1. Are there high-risk populations in the country that are likely to have unvaccinated or under-vaccinated children?



2. How big or widespread is the problem of unvaccinated children in our country?



3. Who are they, where are they, how many are they, and why are they not vaccinated?





2. Identify existing data sources

After you have posed your questions, identify data sources that will help you find the information you need to answer them. Typical sources include:

- Immunization campaign data.
- Routine immunization data.
- Survey data.
- Reports on disease outbreaks.
- Risk assessment reports.
- Special studies.
- Partner reports and peer reviewed publications.

Talk with relevant staff and partners within and outside the program (e.g., statistics office) to identify additional data sources that might help answer your question. For triangulation to be more robust, data sources being compared should be diverse, independent in collection methods, and matched in either geography or time period.

Immunization program indicators used in data triangulation include number of children under one year of age who have received BCG vaccine; number of children under one year of age who have received first dose of pentavalent vaccine; and number of children under one year of age who have received third dose of pentavalent vaccine. For more information see [Data Triangulation Tool](#).

Create a list of your data sources and archive them for easy retrieval. Take note of the strengths and weaknesses of each source (see Annex 8). Compile data in usable format to prepare for analysis.

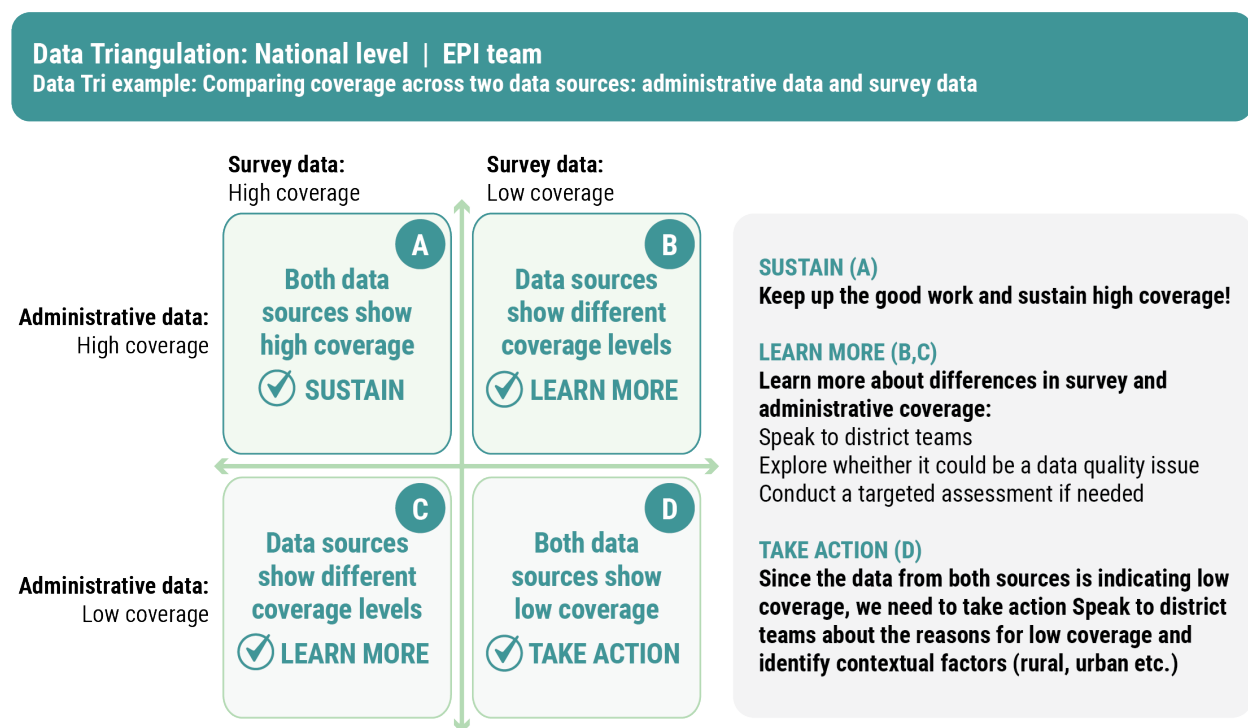
B. ANALYZE

1. **Examine data reliability.** Check each data source for completeness and internal consistency (see [handbook on use collection and improvement of immunization data](#)).
2. **Compare trends.** Summarize and analyze data by comparing trends across data sets, assess coverage indicators by geographic area, and map gaps. To assist this process, use tools like District Health Information System version 2 dashboards, Excel files, tables, and graphs for data visualization. Map the areas manually or use a geographic information system. See [Communicating Immunization Data](#) for examples of how to go about this. When your graphs are done, ask:
 - What are the areas of agreement or disagreement across the data sets?
 - Is there missing data that could facilitate understanding of the prevailing situation on the ground? If so, you may need to gather these data.

Case study: [GIS mapping: A promising approach to identifying and reaching zero-dose children in Zambia](#).



Figure 4. Example of Triangulation with Two Datasets



3. Consider explanatory causes

Use local knowledge and critical thinking to attribute causes to the pattern and spread of identified un- and under-immunized communities. You will need to brainstorm multiple hypotheses to explain findings. For example, if you find a match between administrative and survey coverage data, you need to interrogate the reliability of the data (i.e., was it fabricated)?

Data interpretation requires that you and your team know how data fit together and their limitations. Factors that you must consider include quality of reported data, robustness of survey methods, population movements, and role of the private sector. When you are dealing with vaccination status and cases of diseases, you may also want to consider program history such as vaccine introduction, supplementary vaccination exercises, and epidemiology.

4. Summarize data and local context

At the end of this exercise, you should be able to answer the following questions:

- Where are the un- and under-immunized communities?
- What characteristics do the affected areas have in common?
- Do the affected groups belong to a specific or special sub-population (e.g., migrants, nomadic, conflict-affected populations, refugees, ethnic minorities)?
- How many are there and what proportion do you plan to target?

Some areas may have better data than others and you may need to collect additional data in areas that are deficient. The output of this analysis will inform your action plan.



TIP– VACCINE COVERAGE SURVEYS

If you cannot adequately answer your questions from the data triangulation exercise, conduct a cross-sectional vaccine coverage survey (see Figure 2).

Targeted Assessments

If you and your team decide that you still require a targeted assessment to gain better understanding of the numbers and distribution of un- or under-immunized communities, select the type that best suits your needs (Table 1).

Table 1. Examples of Targeted Assessments

Assessment	Purpose
Rapid convenience monitoring	Identify reasons why children have not been immunized and which targeted actions should be implemented to increase or maintain vaccination coverage. This tool is meant to be applied at the household level but can be combined with a facility level tool.
Lot quality assurance sampling	Measure coverage at the district, subdistrict, or community level.
WHO vaccination coverage cluster survey	Measure vaccination coverage at the household level.
Harmonized Health Facility Assessment (formerly known as Service Availability and Readiness Survey)	Assess service availability and readiness, quality of care, and management and finance.
Service provision assessment	Comprehensive overview of a country's health service delivery.
Health Resources and Services Availability Monitoring System	Assess availability of essential health services in humanitarian emergencies and fragile states.
Frequent Assessments and System Tools for Resilience	A compilation of health facility tools to strengthen decision making through rapid data collection and use cycles.
Behavioral Social Drivers of Vaccination	Surveys and interview guides to assess drivers of childhood vaccinations aimed at caregivers, health workers, community influencers, and program managers.

Prioritize health areas: Use information from your analysis of un- and under-immunized communities to identify the most affected areas. Take the districts or areas with the highest prevalence and prioritize them (see [Annex 3](#)) by setting a cut-off point for inclusion. For example, any district that has 30 percent or more of its eligible children unimmunized will be classified as an intervention district.



Step 3. Characterize un- and under-immunized communities

Characterize the identified areas to help plan interventions. Table 2 has sample questions and data sources to help you do this.

Table 2. Illustrative Questions to Help Prioritize Intervention Areas

Question	Data Source(s)
Is the population urban or rural?	National demographic surveys
Is the population in a remote area?	National demographic surveys and maps
Is the affected area prone to instability (e.g., ethnic, religious, or political)?	National development plans and census
Is the population nomadic?	National demographic surveys
Is the area at risk of natural disasters such as floods and famine?	National development plans
Is the area a new settlement?	Census, national demographic reports and development plans
Is the community displaced?	National demographic reports and development plans
Is the area underdeveloped in terms of infrastructure (e.g., communication, health facilities, road access)?	National development plans

You may also need to conduct key informant interviews to understand issues in intervention areas.



Stage 1 Tools and Resources

Step 1: Mobilize stakeholders and obtain their agreement

Refer to guidance documents cited in [Annex 2](#) for activities 1-6.

Step 2: Review and triangulate data

- ▶ [General triangulation guidance for national level](#) to gain understanding of how to use triangulation.
- ▶ [Case Study: Mapping ZDC through data triangulation.](#)
- ▶ [Annex 1: Definitions related to zero-dose and under-vaccinated communities.](#)
- ▶ [Data triangulation training slides](#)
- ▶ [IA2030 Agenda](#)
- ▶ [Handbook on use collection and improvement of immunization data](#)
- ▶ [Communicating Immunization Data](#)

Step 3: Characterize un- and under-immunized communities

- ▶ [Characterizing Zero-Dose Children](#)



Stage 2. Reach

Steps:

- 1 Assess capacity of prospective implementation team.
- 2 Document capacity related gaps and determine root causes.
- 3 Develop capacity building plan.
- 4 Examine contextual factors that drive efficiency and effectiveness.

Develop strategies to help subnational implementers **reach and vaccinate** those who need it (the subnational toolkit will also help them do this). Work with national partners and stakeholders to ensure that affected district management teams (or equivalent, depending on country setup) are fully supported to find and vaccinate those in need.

Goal and Outputs

Goal

- Support implementers to reduce the prevalence of un and under immunized communities.

Output

- Documentation of capacity-related gaps in affected areas.
- Plan to support lower levels to close immunization gaps.
- Key performance indicators and targets, assessment questions, and mechanisms for process monitoring (aligning with indicators monitored through the national health information management system (HMIS to the extent possible).
- Optional: Allocation of roles and responsibilities for national staff and supporting partners, depending on structure and modus operandi of the national immunization program.

Step 1. Assess capacity of prospective implementation teams

To assess the capacity of a team to implement immunization activities, several factors need to be considered. The Organizational Capacity Assessment (OCA) will help you assess critical elements of organizational management and identify areas that need to be strengthened to ensure success. To conduct this assessment in a focused intentional manner, refer to the companion subnational toolkit

Seven OCA domains:

- Governance.
- Administration.
- Human resources management.
- Financial management.



- Organizational management.
- Program management.
- Program performance management.

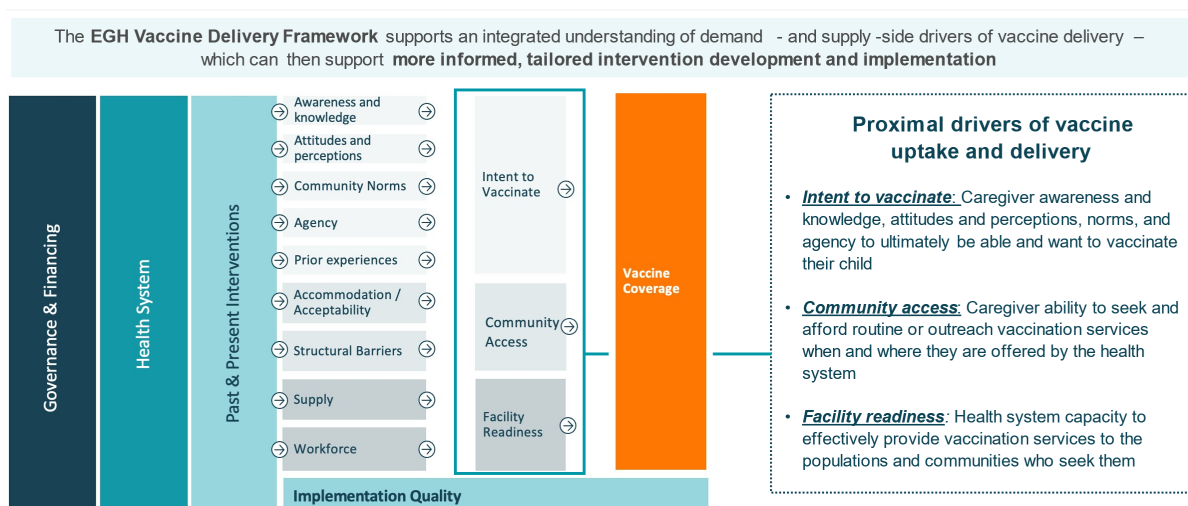
Important issues to consider:

- Skills and knowledge.
- Adequacy of human resources.
- Adequacy of financial resources.
- Inhibiting/facilitating policies.
- Supply and logistics management.
- Accessible technical support if required.
- Adequacy of reference materials and job aids.
- Peculiarities of operational context.
- Likely causes of failure to reach un- and under-immunized communities.

For each prioritized intervention area or district, document the capacity gaps through record reviews and conversations with informed district team members. At the end of the assessment, you should have a good sense of subnational capacities. This information will help you plan how to support the subnational level. Familiarize yourself with the tools that districts use, such as RED/Reaching Every Community and microplanning frameworks (Annex 5), to make the capacity assessment more robust. For broader context issues, see Figure 5. Focus on intent to vaccinate, community access, and facility readiness.

Figure 5. Vaccine Delivery Framework

EGH VACCINE DELIVERY FRAMEWORK: BRINGING TOGETHER KEY DRIVERS THAT CAN FACILITATE OR HINDER CHILDHOOD VACCINATION





Review this framework as a team, and consider how you can support the subnational teams in:

- **Facility readiness:** Determine facility readiness to vaccinate, looking at critical factors such as supply and workforce. See Annex 6 for examples of questions to ask.
- **Intent to vaccinate:** This relates to immunization program vaccinators and their attitudes, perceived norms, and perceived control. Review facility reports and, when possible, talk with district and health facility supervisors and vaccinators to get a sense of their “intent to vaccinate.”
- **Community access:** With subnational supervisors and vaccinators, identify potential community barriers to vaccination services, such as misconceptions, negative service experiences, religious beliefs, and inaccessibility.

Step 2. Document capacity-related gaps and determine root causes

Document capacity-related gaps for each prospective area of intervention. If there are too many to address, prioritize them using guidance in Annex 3.

Conduct a root cause analysis (RCA) (Annex 4) of the prioritized gaps. Remember the five whys and fishbone are brainstorming tools, and the outcomes are hypothetical. You still need to validate your brainstormed outputs with objective data. Once the root causes have been determined, develop strategies that are pro-access and selected based on certain criteria. For example, is the strategy:

- Feasible within the current context of operation?
- Affordable?
- Feasible with available human resources?
- Effective?
- Acceptable to the target audience?

Develop criteria that suit your context and select strategies accordingly.

Step 3. Develop capacity building plan

Based on the assessments, collaboratively develop a scalable plan to detail how you will support implementers to improve performance, have impact, and reduce the prevalence of un- and under-immunized communities over the long term. The capacity building process must define the who, what, where, when, why, and how of building district capabilities and should focus on functional outcomes and performance (behavioral) outcomes. Use a [human centered design](#) approach to capture the target populations’ needs and behaviors. Human-centered design is a problem-solving process that begins with understanding the human factors and context surrounding a challenge. It is an iterative process that seeks to answer five questions:

1. **What is our objective?** Prioritize the user group, define the improved state, describe the biggest obstacles, and formulate the objective. **Output: Objective.**
2. **What do we think we know?** Collect existing knowledge, note assumptions, and compose and document learning goals for reference. A thorough job at this stage will avoid duplicating work that may have been done in the past without success and avoid overlooking conclusions from previous areas of exploration. **Output: Learning goals.**
3. **What stands in our way?** Use techniques of rapid inquiry to explore the user environment, interpret collected stories, and propose opportunities for design. **Output: creative prompts.**



4. **How could we respond?** Generating and evaluating solutions is experimental and iterative. Conceptualize, design quick examples, and prototype with users. **Output: Tested solutions.**
5. **How could we improve?** As ideas are implemented, there is opportunity for further learning and improvement. Plan for iteration, evaluate effectiveness, and improve initiatives. **Output: Revised adaptation plan and proven ideas.**

Identify performance indicators and develop evaluation questions for the capacity building plan. Cost your plan and identify financial and human resources to ensure its implementation.

► Reference [Human-centered Design 4 Health](#) and the [Field Guide to Human-centered Design](#).

Step 4. Examine national contextual factors of drive efficiency and effectiveness

In addition to assessing subnational capacity, it is important for the national level to assess its own capacity. Examine supply-related and contextual factors of success and failure. The OCA guide can be adapted to help your team examine domains of the context within which you operate to determine the success or failure of your support to subnational teams. Table 3 shows OCA domains, sample questions, and data sources.

Table 3. OCA Domains, Questions and Data Sources

Domain	Illustrative Questions	Data Source
Governance	Are there any governance problems that if not solved will hinder implementation of interventions to reduce un- and under-immunized communities?	Ministry of Health (MOH) organizational structure and related governance documents
Administration	Are operational policies, procedures, and systems appropriate? Will they facilitate activity implementation?	MOH organizational structure and related governance documents
Human resources management	Are there human resource management problems that need to be solved? Is the workforce sufficient and equipped to implement required activities?	MOH human resources establishment and deployment documents
Financial management	Are financial management systems functioning properly to ensure that implementers have the resources they need to do a good job?	MOH annual reports and standard operating procedures
Organizational management	Are there problems that need to be solved, especially related to the program and wider MOH?	MOH and program annual reports, minutes of meetings with MOH directors or equivalent
Program management	Is the program equipped to fulfill its responsibilities to the subnational level? Are there gaps that need to be filled?	Program country reviews and assessments/evaluations
Project performance management	Do the tools you have capture accurate information on health worker performance?	Annual program performance and supervisory reports
Supply and logistics management	Is the logistics management system responsive to the needs of the program and able to deliver supplies in a timely manner?	Program reports on operations and other assessments/reviews; regular program performance reports if available

Document the gaps you identify and develop a strategy to fill each. Strategies may involve:

1. Negotiations with senior management.



2. Adjustments to standard operating procedures.
3. Request for additional financial and human resources.
4. Obtaining special permissions.
5. Working with other government organizations.



Stage 2 Tools and resources

Step 1 Assess capacity of prospective implementation teams

- ▶ [Guide for developing immunization policies](#)

Step 2 Document capacity-related gaps and determine root causes

- ▶ Annex 4 (Root Cause Analysis)
- ▶ Annex 6 (Illustrative questions to assess facility readiness)
- ▶ [Building capacity for immunization management](#)
- ▶ [Capacity building under PEPFAR](#)

Step 3 Develop capacity building plan

- ▶ [Human centered design](#)
- ▶ [Field guide to human centered design](#)



Stages 3 & 4. Monitor and Measure

Steps:

- 1 Define performance indicators and frame learning questions.
- 2 Develop monitoring, evaluation, and learning plan.
- 3 Implement monitoring, evaluation, and learning plan.

The third and fourth stages focus on monitoring interventions, course correcting, learning and applying lessons to increase the effectiveness of the national immunization program. The measure component focuses on determining the effectiveness and efficiency of the strategies for reaching un- and under-immunized communities selected in Stage 2.



Goal and Outputs

Goal

- Track progress toward set targets and standards.
- Determine effectiveness and cost-efficiency of interventions to reduce the number of un- and under-immunized communities.

Outputs

- Monitoring reports.
- Plans to actualize action points.
- Documentation of lessons.
- Assessment plans (may include surveys, process evaluation, etc.).

Step 1. Define performance indicators and frame learning questions

Conduct the following activities with your team of stakeholders:

- Agree on critical performance indicators that will answer questions (see [Developing Performance Indicators](#) for examples).
- **Align indicators with those collected in the routine national HMIS. Add new indicators only if necessary.**
- Decide where and **how the data for these indicators will be collected, by whom, and how often.**
- **Identify the human, financial, and other logistical resources** required to collect data and assure its quality.



Step 2. Develop monitoring, evaluation, and learning plan

Based on the output of Step 1, develop a monitoring, evaluation, and learning plan that includes questions about program effectiveness and cost-efficiency. See [M&E of Immunization Programs](#) and [Monitoring and Data Management for EPI Managers](#).

Develop or adapt appropriate data collection tools and a template to capture lessons. Pre-test your data collection tools. The template should at a minimum capture the objectives, milestones, successes, and failures, and a summary of the lessons. At this stage you and your team should also plan how you will share information with stakeholders.

Step 3. Implement monitoring, evaluation, and learning plan

Execute the monitoring evaluation and learning plan activities, ensuring timely collection of high-quality data. Analyze data and share outcomes with partners and key stakeholders as appropriate. Take corrective action as necessary and document important lessons. To facilitate the implementation process:

- Assemble a qualified team to conduct the assessment.
- Identify financial resources.
- Conduct periodic assessments in line with your M&E plan, analyze data, and generate lessons learnt.
- Communicate findings to key stakeholders.
- Plan to address shortfalls identified from the assessment.

Remember that effective supportive supervision is critical for the success of this step.



Stage 3 & 4 Tools and Resources

Step 1: Define Performance Indicators

- ▶ [Developing Performance Indicators](#)
- ▶ [PAHO Immunization ToolKit](#)
- ▶ [Monitoring and Evaluation Toolkit](#)
- ▶ [Triangulation-Use of health facility reporting tools](#)

Step 2: Develop Monitoring, Evaluation and Learning Plan

- ▶ [IA2030 Monitoring and Evaluation Framework](#)
- ▶ [PAHO Immunization Toolkit](#)
- ▶ World Health Organization /Regional Office for Africa. [Module 18: Conducting assessment of the immunization programme](#). Geneva: World Health Organization; 2017. License: CC BY-NC-SA 3.0 IGO.

Step 3: Implement Monitoring, Evaluation and Learning Plan

- ▶ World Health Organization /Regional Office for Africa. [Modules 15. Monitoring and data management](#). Geneva: World Health Organization; 2017. License: CC BY-NC-SA 3.0 IGO.
- ▶ World Health Organization /Regional Office for Africa. [Module 16: Supportive supervision by EPI managers](#). Geneva: World Health Organization; 2017. License: CC BY-NC-SA 3.0 IGO



Stage 5. Advocate

Steps:

- 1 Identify issues that require advocacy.
- 2 Build support base.
- 3 Develop advocacy plan.



Goals and Output

Goal:

- Synthesize data from monitoring and measuring activities to identify advocacy issues.
- Conduct evidence-based advocacy activities to ensure the program is well resourced and supported by stakeholders.

Output:

- Advocacy plan.

Step 1. Identify issues that require advocacy

Synthesize information from Stages 3 and 4 (Monitor and Measure) to identify issues that require advocacy. Issues that could emerge include inadequate financing, limited human resources, and lack of appropriate transportation. Build a case for each issue and display your data in simple graphs or charts to ensure your audience understands the need. Identify policy issues and practices related to what you are advocating for and collect stories on the consequences of ignoring the issue.

Step 2. Build support base

Identify your audience—the people you intend to approach to support your advocacy efforts. They will facilitate connections and add credibility to your cause. These may include:

- Potential partners:
 - government agencies.
 - aid organizations.
 - nongovernmental organizations, researchers, and others who have a stake in immunization
 - private sector.
- Immunization policy and decision makers.
- The public.
- Mass media.

Research the knowledge, attitudes, and practices of your audience and plan to work with them simultaneously. It is also wise to identify potential opponents so you can plan to counter their objections.

Step 3. Develop advocacy plan

[Advocacy for Immunization](#) elaborates the key steps involved in advocacy. In summary:

- Develop objectives (e.g., the Ministry of Finance will increase funds by 10 percent a year for three years to improve immunization services for mobile populations and hard to reach areas).
- Assess financial and human resources required to conduct the advocacy activities.
- Determine scope, timeline, and budget.
- Create compelling messages and brief, visual, and descriptive materials.

Case study: Implementing a comprehensive stakeholder engagement and advocacy strategy in Nigeria

The Country Learning Hub in Nigeria, part of the Zero-Dose Learning Hub project, is using civil society organization networks to implement an engagement and advocacy strategy to involve legislators, government officials, international partners, traditional and religious leaders, and communities in improving routine immunization. Methods include advocacy visits, workshops, and disseminating learning materials to mitigate challenges such as siloed data and non-specific budget allocations for immunization. Support from the National Emergency Routine Immunization Coordination Center, the State Emergency Routine Immunization Coordination Center, and LGAs facilitated opportunities to assess progress, overcome challenges, and refine strategies in real-time. Through these efforts, the Country Learning Hub has laid the groundwork for its next phase, emphasizing the necessity of inclusive and participatory approaches in immunization programs to achieve sustainable health outcomes.

Gavi Zero-Dose Learning Hub. 2024. "Gavi's Zero-Dose Learning Hub IRMMA Aligned Interventions: Semiannual Update—Nigeria (May 2024)." <https://zdlh.gavi.org/resources/gavis-zero-dose-learning-hub-irmma-aligned-interventions-semiannual-update-nigeria-may>.



Stage 5: Tools and resources

Step 1: Identify Issues that require Advocacy

- [Identifying and Defining Problems](#)

Step 2: Build Support Base

- [Advocacy Training Guide](#) (SARA/AED)
- [Building a Coalition of Advocates](#)

Step 3: Develop Advocacy Plan

- ▶ [Immunization Advocacy Toolkit](#)
- ▶ [Advocacy for Immunization](#)

Annex 1

Key Terms and Definitions

Unimmunized children	Those who have not received any vaccine as defined in the national immunization schedule.
Missed communities	Communities with clusters of un- and under-immunized children. These communities often face multiple deprivations and vulnerabilities, including lack of services, and related barriers for males and females.
Under-immunized	Those missing the third dose of diphtheria, tetanus and pertussis (DTP)-containing vaccine (DTP3).

References: Zero dose Analysis Card: https://www.linkedimmunisation.org/wp-content/uploads/2021/08/Gavi_Zero-dose_AnalysisCard.pdf and <https://www.gavi.org/our-alliance/strategy/phase-5-2021-2025/equity-goal/zero-dose-children-missed-communities>

RESOURCES

- ▶ [The Zero-Dose Child: Explained](#)
- ▶ [Reaching Zero-Dose Children](#)
- ▶ [IA2030 Annex 1: Monitoring and Evaluation Framework](#)
- ▶ [IA2030 Scorecard: IG 2.1 Leave no child behind](#)
- ▶ [Defining the Zero-dose Child](#)

Annex 2

Stakeholder Analysis

Three steps:

1. Identifying the key stakeholders and their level of interest (positive or negative) in your work.

2. Assessing the influence, importance, and level of impact of each stakeholder.

3. Identifying how best to engage the stakeholders.

A stakeholder analysis involves the following steps:

- 1. Identify stakeholders:** Compile a list of potential stakeholders who can help reduce un- and under-immunized communities. These may include:
 - Information system and M&E personnel.
 - People from line ministries whose mandate overlaps with EPI's.
 - National Statistics Unit staff.
 - Local government officials.
 - Public health institute staff.
 - Immunization partners and private sector entities.
 - New entrants and non-traditional partners.
- 2. Prioritize stakeholders** based on level of **influence** and **interest** so you can focus efforts on those who can significantly advance efforts to reduce un- and under-immunized communities.
- 3. Understand expectations and concerns:** conduct a rapid stakeholder survey to understand the expectations, needs, and concerns of each. This is important information for tailoring communication strategies, addressing emerging issues, and managing expectations.
- 4. Develop strategies for engagement:** Use a power map to devise ways to engage stakeholders and manage relationships with different groups. Develop communication plans and conflict resolution approaches.
- 5. Mitigate risks:** Assess the risks associated with each stakeholder, and to the extent possible, mitigate challenges and conflicts, and enhance the likelihood of success.

Assess influence and interest: Once stakeholders are identified, evaluate their level of influence and interest in reducing un- and under-immunized communities. Influence refers to the ability to have an effect on the decision-making process, while interest is the extent to which a stakeholder is affected by the outcome.

Work with your team to prioritize your stakeholders by power and interest (Figure 1). You and your team will agree on which quadrant, in the grid, to place each stakeholder based on the information you have. The purpose of this exercise is to have a visual that helps you tailor engagement strategies, identify areas of risk or potential resistance, and prioritize engagement:

- Select the important characteristics (e.g., level of power, influence, interest, support or opposition, predictability, knowledge etc.).
- Place one characteristic on the Y-axis (vertical) and the other on the X-axis (horizontal) and indicate “low” or “high” as shown in the grid below.

- For each stakeholder, assign a level for both sets of characteristics. If you know your stakeholders well, this can be a brainstorming exercise where you assign levels using a scale (e.g., 1–10 or simply low, medium, and high). If you do not know the stakeholders well, review their institutional documents and reports. If possible, have informal conversations with them. Once you have the information required, determine their level of power and interest as indicated above.
- Plot stakeholders into the appropriate quadrant.

Figure 1 shows an example of a stakeholder matrix whose quadrants are filled as follows:

- ▶ **1 (top left):** High-power/low-interest might consist of senior district members who do not conduct immunization activities directly. Your engagement strategy for this group would be to meet their needs.
- ▶ **2 (top right):** High-power/high-interest might include the MOH or agencies funding immunization programs. Manage this group closely.
- ▶ **3 (bottom right):** Low-power/low-interest might include support staff. This group needs to be kept generally informed regularly. It does not require urgent attention.
- ▶ **4 (bottom left):** Low-power/high-interest might include community health workers. Consider this group when making important decisions.

Figure 1. Stakeholder Matrix



RESOURCES

- ▶ [Stakeholder Mapping Guide](#)
- ▶ [Stakeholder Analysis](#)
- ▶ [Stakeholder Analysis e-Learning](#)

Annex 3

General Prioritization Tools

It is helpful to approach prioritization in a structured manner. One way to do this is through the use of a prioritization framework ([Prioritization tools](#)), which offer a systematic approach to evaluate and rank tasks based on predefined criteria and which range from simple to complex. Select the one that works for your team.

Key steps in prioritization:

1. Brainstorm and list the issues that you need to address.

2. Develop rating criteria. For example, importance, impact, effort required.

3. Identify a scoring system.

Programmatic/performance gap prioritization

When you and your team have identified programmatic or performance gaps, you can develop rating criteria. Here are examples of criteria:

- What is the urgency? Will ignoring the gap have significant consequences for the immunization program?
- How practical is it to fill the gap?
- Do we have financial resources to fill the gap?
- What benefits will accrue from filling the gap?
- Does it align with the program's strategic goals?

You can use a Likert Scale to prioritize gaps.

Example

Define the Likert Scale as 1 = strongly agree; 2 = agree; 3 = neutral; 4 = disagree; and 5 = strongly disagree and use it to evaluate the criteria and prioritize gaps.

Gap	Urgency	Feasibility	Affordability	Benefit	Alignment
1	3	1	2	2	1
2	1	1	1	1	1
3	4	5	3	2	1
4	2	1	2	2	1
5	3	3	1	3	1
6	2	3	2	2	1
7	1	2	1	1	1
8	5	1	2	3	1

Scores from this fictitious scenario: Gap 1=9; Gap 2=5; Gap 3=15; Gap 4=8; Gap 5=11; Gap 6=10; Gap 7=6; and Gap 8=12. This means that if we decide to put gaps in order of importance, the lineup will be Gaps 2, 7, 4, 1, 6, 5, 8, and 3. If the team decides to focus on the top three, they will be Gaps 2, 7, and 4.

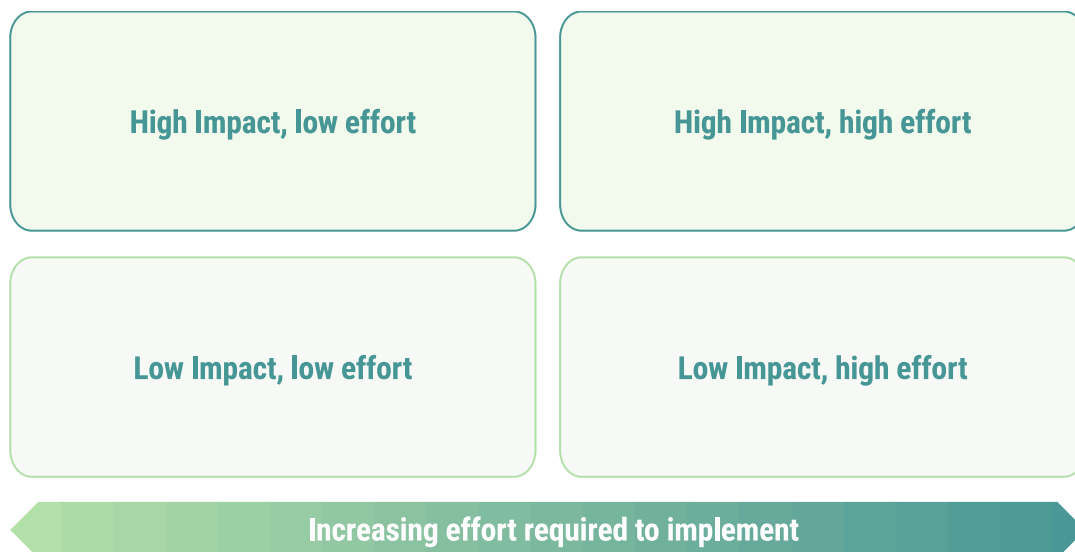
Example of an impact vs. effort matrix for prioritization of stakeholders

An impact vs. effort matrix is a simple two-by-two chart that can be used to prioritize issues that need to be addressed. You will use a square that is divided into four smaller squares. The x-axis (horizontal line) represents a scale for “effort,” and the y-axis (vertical line) represents “impact.” This approach is helpful when you have multiple tasks which are competing for resources, and you need to know what to focus on. The matrix helps you identify interventions of high impact with low amount of effort.

Process:

1. List the issues or interventions you want to undertake.
2. Rate them - give each task two scores – one for how much impact it will have (high or low) and another for how much effort it will take (high or low).
3. Plot them into the appropriate quadrant:
 - a. Top left: High impact, Low effort (quick wins).
 - b. Top Right: High impact, high effort (important but requires planning).
 - c. Bottom left: Low impact, low effort (gap fillers).
 - d. Bottom right: low impact, high effort (not worth it).
4. Prioritize them.
 - a. Identify quick wins and plan to do these (easy to do but make a big difference).
 - b. High impact/ high effort – these are important but need careful planning.
 - c. Low impact, low effort – can be done and fill in the gaps.
 - d. Low impact, high effort – usually not worth investing in.

Example of Impact/Effort Matrix



RESOURCES

- **Review** [the 9 Prioritization Frameworks + Tools to Help You Use Them](#) for additional prioritization tools.

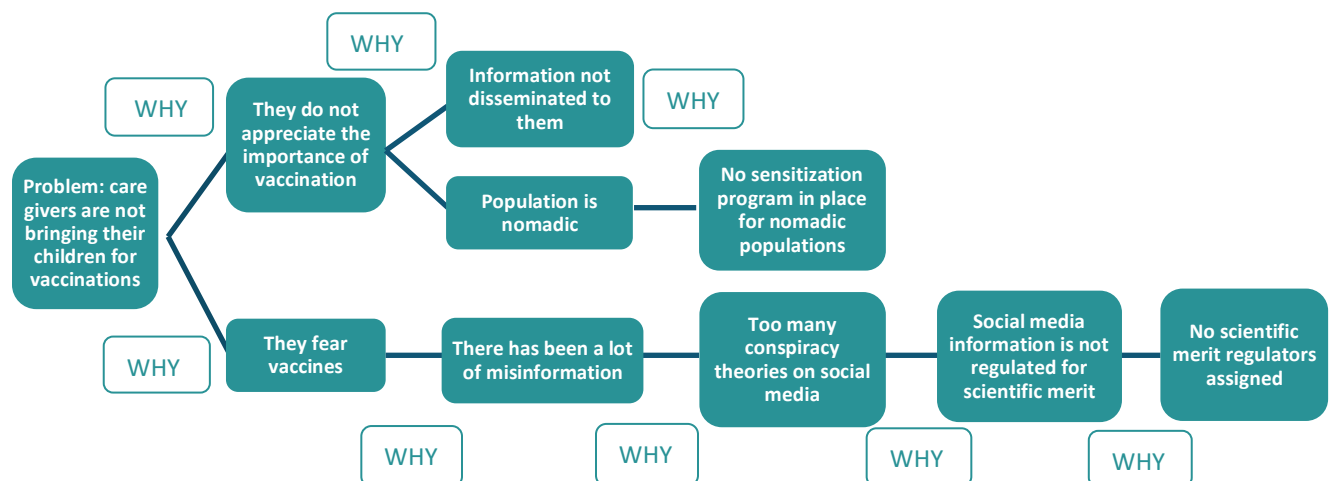
Annex 4

Root Cause Analysis

Root cause analysis will help your team to understand and solve problems. Its steps are:

- **Define problems** - What is happening and what are the specific symptoms?
- **Collect data** to prove that the problem exists, for how long, and its impact. Fully analyze the situation before you start looking for causes. This exercise must be conducted with experts and frontline staff who understand the situation because they can lead you to a better understanding of the issues. At this stage, the [CATWOE](#) tool can help you to examine the problem from the customers' and people (actors) who implement solutions perspectives; the transformation process that's affected; the world view; the process owner; and environmental constraints
- Once you have a clear understanding of the problem, **find the root causes**. Identify as many causal factors as possible. With RCA, you need to dig deep. Avoid a superficial analysis of the causes. There are several [RCA tools](#). One of the most used is the [5 Whys](#). While simple, the proposed causes must be grounded in fact. Each arrow in the example below represents a "why" question.

Example of 5 Whys RCA Tool



- **Find solutions** based on the identified root causes; in the example above, one would be a tailored sensitization program for the nomadic population combined with specific vaccination outreaches.
- Develop strategies to correct or prevent re-occurrence of the problem.
- Report out.
- Monitor solutions and close the loop.

RESOURCES

- ▶ [Root Cause Analysis Tools – Tableau](#)
- ▶ [Mind Tools](#)

Annex 5

Frameworks Used in Conjunction with this Toolkit

Framework	Application (Primary Use)	Benefits	Potential Limitations	Source/Reference
IRMMA	<p>Consists of 5 steps that support the locating and characterizing un- and under-immunized children and the communities associated with them. Detailed reference to application in a fragile setting:</p> <ul style="list-style-type: none"> http://www.mdpi.com/2076-393X/12/2/154 	<p>Advantageous for locating children and communities missed through regular vaccination. Has ability to improve vaccination coverage and access, especially among vulnerable groups such as the hard to reach, mobile populations, and people in fragile countries.</p>	<p>National definitions of unimmunized children.</p> <p>(Gavi definitions: https://www.linke.dimmunisation.org/wp-content/uploads/2021/08/Gavi_Zero-dose_AnalysisCard.pdf)</p>	<p>https://www.gavi.org/our-alliance/strategy/phase-5-2021-2025/equity-goal/zero-dose-children-missed-communities</p> <p>WHO definitions: https://iris.who.int/bitstream/handle/10665/259202/9789241512947-eng.pdf?sequence=1</p>
Reach Every District (RED)/Reach Every Community (REC)	<p>Based on proven immunization management and implementation practices and tools.</p> <p>https://www.afro.who.int/sites/default/files/2018-02/Feb%202018_Reaching%20Every%20District%20%28RED%29%20English%20F%20web%20v3.pdf</p>	<p>Improves coverage and access based on:</p> <ol style="list-style-type: none"> 1. Resource planning and management. 2. Engaging with communities. 3. Supportive supervision. 4. Monitoring and using data for action. 5. Reaching all eligible populations. 	<p>Inadequate human and financial resources in some low- and middle-income countries.</p>	<p>Published evaluations:</p> <p>https://www.cominit.com/unicef/content/depth-evaluation-reaching-every-district-approach-african-region-2007</p> <p>https://www.cominit.com/unicef/content/reach-every-district-redreach-every-community-rec-strategy-evaluation-pakistan-201418</p>
Vaccine Service Delivery	<ul style="list-style-type: none"> • Conceptual framework outlining 3 principal determinants of vaccine use: <ol style="list-style-type: none"> 1. Intent to vaccinate (demand side). 2. Facility readiness (supply side). 3. Community access. 	<p>Each of the determinants is also influenced by contributing factors such as attitudes, norms, and perceptions for Intent to vaccinate, and supply and workforce for facility readiness.</p>	<p>Expertise and resources to execute aspects of the framework.</p>	<p>Phillips DE, Dieleman JL, Lim SS, Shearer J. Determinants of effective vaccine coverage in low and middle-income countries: a systematic review and interpretive synthesis. BMC Health Serv Res 2017; 17: 681.</p> <p>Bednarczyk RA, Hester KA, Dixit SM, et al. Examples in vaccine delivery protocol: a case-study-based identification and evaluation of critical factors in achieving high and sustained childhood immunization coverage in selected low-income and lower-middle-income countries. BMJ Open 2022; 12: e058321</p>

Microplanning

- Identify priority communities.
- Mitigate barriers.
- Develop workplans with solutions.
- Involve local people in identifying their resources, needs, and opportunities to overcome problems through active participation.

Improves coverage and access through district- and health facility-level microplanning in the context of the RED/REC strategy.
([https://www.who.int/publications/i/item/microplanning-for-immunization-service-delivery-using-the-reaching-every-district-\(red\)-strategy](https://www.who.int/publications/i/item/microplanning-for-immunization-service-delivery-using-the-reaching-every-district-(red)-strategy))

Has potential to increase the reach of immunization services to those who are hard to reach.

Limited human resources with correct skills mix and financial resources for execution.

https://iris.who.int/bitstream/handle/10665/70450/WHO_IVB_09.1_eng.pdf?sequence=1

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8496523/>

Annex 6

Illustrative Questions to Assess Facility Readiness

Question	Data source
Does the district/area have high-quality data recording and reporting practices?	Data quality assessments; supervision reports; consultations with district supervisors and health facility leads.
Can records available at subnational level capture information needed to reach un- and under-immunized communities?	Data collection tools; consultations with district leads.
Is the organizational environment supportive of activities to vaccinate communities in need?	District operational, supervisory, financial, logistical support system, and administrative reports; staff establishment (adequacy of HR); clear job descriptions; institutional support systems including those related to motivation and supervision.
Do we have the skills, knowledge, and readiness to conduct, monitor, and document activities to vaccinate un- and under-immunized communities?	Training and capacity building, human resource evaluation, program performance and assessment, and employee record reports.
Is there national political support evidenced by readiness to fund and prioritize the additional immunization activities?	Documentation and release of budgetary commitments.
Is there local political support to mobilize targeted children and communities?	Reports from past stakeholder and government activities
Does the targeted district/area have the capacity and capability for the activities?	Infrastructure; transport; communication systems; budgetary allocation; critical equipment (e.g., cold chain maintenance).

Adapted from [Bednarczyk RA, et al. BMJ Open 2022;12:e058321. doi:10.1136/bmjopen-2021-058321](https://doi.org/10.1136/bmjopen-2021-058321) and https://iris.who.int/bitstream/handle/10665/149025/WHO_HIS_HSI_2014.5_eng.pdf?sequence=1

Annex 7

Advantages and Disadvantages of Different Data Sources

Source	Advantages	Disadvantages
Administrative vaccination data	<ul style="list-style-type: none"> Provides real-time periodic data to monitor coverage and take corrective actions for each type of vaccine, target population, place, and time. 	<ul style="list-style-type: none"> Numerators can be affected by inaccurate recording of the place of residence or inclusion populations that were not considered in the denominator. Denominators might be affected by errors or biases.
Vaccine cluster coverage survey	<ul style="list-style-type: none"> Sampling design is probabilistic, with random selection of the population. Assesses routine vaccination and post-supplementary immunization activity (SIAs) coverage. Can include questions to assess missed opportunities, caretaker knowledge/attitudes, vaccine hesitancy, etc. Coverage surveys can include collection of biological samples to directly measure immunity. 	<ul style="list-style-type: none"> Requires detailed planning and skilled professionals, resources, and logistics. Information bias if vaccine records are missing, incomplete, or inaccurate. Provides statistical inferences usually at subnational level, but not at small areas where unvaccinated communities may be. Hard to reach populations (e.g., migrants, street children) can be missed, compromising representativeness of results. Does not provide real-time monitoring unless done immediately after SIA.
Lot quality assurance sampling³	<ul style="list-style-type: none"> Randomly selects lots that are relatively uniform internally. Establishes a minimum and a maximum value as criteria for acceptance. Does not require information on all lots to make decisions; specific action can be taken for each lot as soon as results are available. 	<ul style="list-style-type: none"> Does not estimate coverage of each lot; only indicates if a lot met acceptance criteria. Same cost and logistics limitations as cluster surveys.
EPI 30 clusters survey	<ul style="list-style-type: none"> Relatively simple to understand but moderate difficulty in implementing has been reported.⁴ 	<ul style="list-style-type: none"> Selection procedure introduces bias toward the center of the cluster and produces unstable results in heterogeneous clusters.^{5, 6}
Rapid coverage monitoring	<ul style="list-style-type: none"> Simple, low-cost and provides information immediately. Performed by the local teams and facilitates program performance evaluation. 	<ul style="list-style-type: none"> A convenience sample so results are not representative of the surveyed population. Depending on the selected area, results may give the false impression that the entire population in the study area is well or un-mm.

³ D. A. Rhoda, S. A. Fernandez, D. J. Fitch, and S. Lemeshow. "LQAS: User Beware," *International Journal of Epidemiology*, vol. 39, no. 1, pp. 60–68, Feb. 2010, <https://doi.org/10.1093/ije/dyn366>.

⁴ Lumen ET, Worku A, Berhane Y, Martin R, Cairns L. Comparison of two survey methodologies to assess vaccination coverage. *International Journal of Epidemiology* 2007;36:633–641 doi:10.1093/ije/dym025.

⁵ Turner AG, Magnani RJ, Shuaib M. A Not quite as quick but much cleaner alternative to the expanded programme on immunization (EPI) cluster survey design. *Int J Epidemiol* 1996;25:198–203.

⁶ Milligan P, Njie A, Bennett S. Comparison of two cluster sampling methods for health surveys in developing countries. *Int J Epidemiol* 2004;33:1–8.

Serosurveys

- Population immunity estimates based on coverage data are more accurate in settings where epidemiologic systems are weak.
- Tetanus antigen is a good biomarker of immunity because tetanus antibodies are largely derived from immunization rather than natural infection.
- High cost and logistically challenging.
- Integration and collaboration between epidemiologists and laboratory technicians needed.
- Requires adequate laboratory capacity.
- Logistical requirements.

Vaccine-preventable disease surveillance

- All member states have this capacity.
- Provides qualitative data on susceptibility across subgroups relative to each other.
- Requires a highly sensitive surveillance system.
- Limited usefulness when incidence is low or zero as immunity gaps might not provide quantitative data on susceptibility levels.
- Many member states lack reliable historic surveillance data to monitor vaccine-preventable disease trends.