NATIONAL

Expanded Programme on Immunization (EPI)
Monitoring and Evaluation Framework

2026

Department of Child Health and EPI
Ministry of Health Development (MoHD)

SOMALILAND

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EPI M&E Acronyms Table

Acronym / Abbreviation	Definition
AD	Auto-disable syringes
AEFI	Adverse Events Following Immunizations
AFP	Acute Flaccid Paralysis
BCG	Bacillus Calmette–Guérin (Tuberculosis vaccine)
cMYP	Comprehensive Multi-Year Plan
CBOs	Community-Based Organizations
CHW	Community Health Worker
DHMT	District Health Management Team
DPT	Diphtheria, Pertussis, Tetanus vaccine
DPT-HepB-Hib	DPT, Hepatitis B, Haemophilus influenza type b vaccine
EPHS	Essential Package of Health Services
EPI	Expanded Program on Immunization
EST.	estimate
EVM	Effective Vaccine Management
FHW	Female Health Worker
Gavi	Global Alliance for Vaccines and Immunization
GVAP	Global Vaccine Action Plan
HMIS	Health Management Information System
ICC	Inter-agency Coordination Committee
IEC	Information, Education, Communication (for immunization)
ILRs	Ice Lined Refrigerators
IPV	Inactivated Polio Vaccine
JRF	Joint Reporting Format (UNICEF/WHO)
MCH	Maternal and Child Health
MCH/OPDs	Maternal and Child Health / Outpatient Departments
MNT	Maternal and Neonatal Tetanus
MoHD	Ministry of Health Development
NID	National Immunization Days
NITAG	National Immunization Technical Advisory Group
NRA	National Regulatory Authority
OPV	Oral Polio Vaccine
REC	Reaching Every Child strategy
RHMT	Regional Health Management Team
RMNCH	Reproductive, Maternal, Neonatal, and Child Health

SIA	Supplementary Immunization Activity
SWOC	Strengths, Weaknesses, Opportunities, and Challenges
Td	Tetanus-diphtheria vaccine
UHC	Universal Health Coverage
LQAS	Lot Quality Assurance Sampling
DQA	Data Quality Audit / Assessment
KPI	Key Performance Indicator
DHIS2	District Health Information System, Version 2
SIA Monitoring	Monitoring of Supplementary Immunization Activities / campaigns
GIS Mapping	Geographic Information System for planning and monitoring coverage
HepB	Hepatitis B vaccine
Hib	Haemophilus influenza type b vaccine
Measles	Measles vaccine
MR	Measles-Rubella vaccine
MMR	Measles, Mumps, Rubella vaccine
TT	Tetanus Toxoid (maternal immunization)
JE	Japanese Encephalitis vaccine
PCV	Pneumococcal Conjugate Vaccine
RV	Rotavirus Vaccine

FOREWORD
Minister of Health Development

The Expanded Programme on Immunization (EPI) and Child Health is a cornerstone of Somaliland's public health system and a key national priority. Protecting children from vaccine-preventable diseases is essential to the wellbeing of our communities and to advancing primary healthcare.

This EPI Monitoring and Evaluation (M&E) Framework provides a clear and structured approach to guide planning, strengthen oversight, and support evidence-based decision-making across all levels of the health system. It reflects the Ministry of Health Development's commitment to transparency, accountability, and equitable access to immunization services, while aligning with national health strategies and promoting sustainable health system strengthening.

I commend the leadership of Mr. Mohamed Abdi, Director of EPI, for his strategic guidance. I also recognize the valuable contributions of Mr. Hasan Abdirahman Mubarak (Lead Consultant) and Mr. Abdirahman Ibrahim (Consultant), whose technical expertise and dedication were instrumental in developing this practical and context-responsive framework. I further acknowledge the important support of our development partners in ensuring its quality and alignment with international standards.

By endorsing this framework, I call upon all health workers, partners, and stakeholders to ensure its effective implementation and translate its guidance into action. Together, we can achieve high-quality, equitable immunization coverage and improve health outcomes for all children in Somaliland.

This framework serves as a vital instrument to advance our national health priorities and safeguard the wellbeing of future generations.

Hon. Bashir Hussein Hersi
Minister, Ministry of Health Development (MoHD)
Republic of Somaliland, Hargeisa

FOREWORD

Director General

The EPI Monitoring and Evaluation (M&E) Framework for the Expanded Programme on Immunization (EPI) and Child Health represents a comprehensive technical roadmap for strengthening Somaliland's immunization systems. It standardizes data collection, reporting, and analysis, facilitating timely, evidence-based decision-making and enhancing accountability at national, regional, and district levels.

This framework adheres to WHO standards and is aligned with the EPI programme and the MoHD monitoring system, establishing robust performance indicators to assess coverage, equity, and service quality. It addresses operational challenges, including reporting inconsistencies, logistical constraints, and gaps in data utilization, providing practical guidance to optimize program performance and support continuous system strengthening.

I wish to acknowledge the invaluable contributions of Mr. Mohamed Abdi, Director of EPI and Child Health, and his team, the DHIS2 team, WHO, UNICEF, Gavi, and all development partners, alongside MoHD's experts and consultants Mr. Hasan Abdirahman Mubarak and Mr. Abdirahman Ibrahim. I urge all health workers, program managers, and stakeholders to diligently apply this framework to reinforce monitoring, enhance accountability, and ensure that every child in Somaliland benefits from safe, timely, and high-quality immunization services.

Dr. Ahmed Mohamoud Jama

Director General, Ministry of Health Development (MoHD)

Republic of Somaliland, Hargeisa

CHAPTER 1: INTRODUCTION AND EPI MONITORING & EVALUATION FRAMEWORK

1.1 BACKGROUND

Immunization is one of the most cost-effective public health interventions, averting vaccine-preventable diseases (VPDs) and substantially reducing child morbidity and mortality. Somaliland's health system operates in a resource-constrained environment, shaped by limited domestic financing, prolonged international non-recognition, and heavy reliance on external donor funding. These structural challenges weaken health infrastructure, constrain workforce capacity, disrupt supply chains, and undermine the continuity of essential preventive services.

The Expanded Programme on Immunization (EPI) policy, established in 2020, aimed to protect infants, children, adolescents, and women of reproductive age through routine, outreach, and mobile immunization services delivered across urban, rural, and nomadic populations. However, despite this policy framework, immunization coverage remains critically low, with marked regional disparities and inequitable access among different population groups.

1.2 EPI MONITORING AND EVALUATION FRAMEWORK

The Expanded Programme on Immunization (EPI) Monitoring and Evaluation (M&E) Framework, established in 2026 and to be implemented and reviewed from 2026 to 2030, provides a robust system for strengthening performance tracking, improving data quality, and supporting evidence-based decision-making across the national immunization program. It ensures systematic monitoring of coverage, service delivery quality, and equity, reaching all children, including those in underserved, rural, and nomadic communities (WHO, 2014; UNICEF, 2019).

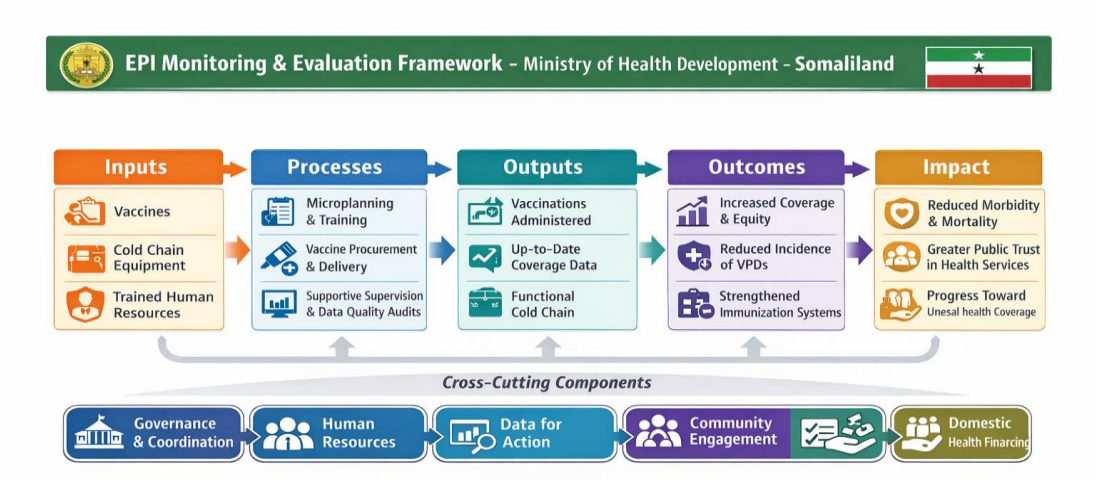
The framework's core objectives are to:

- **Strengthen Coverage Monitoring** – Track vaccine uptake and progress toward national and WHO targets.
- **Enhance Data Quality and Use** – Ensure timely, accurate, and actionable data for planning and decision-making.
- **Promote Equity and Access** – Reach all children, including underserved and hard-to-reach populations.
- **Reduce Dropouts and Missed Vaccinations** – Ensure children complete their immunization schedules.
- **Increase Accountability and Program Performance** – Use indicators, reporting, and regular reviews to guide continuous improvement.

1.2.1 CONCEPTUAL FRAMEWORK

The EPI M&E conceptual framework links inputs, processes, outputs, outcomes, and impact to improve immunization performance in Somaliland.

Figure 1.1: EPI M&E Conceptual Framework



1.3 DEMOGRAPHICS AND TARGET POPULATIONS

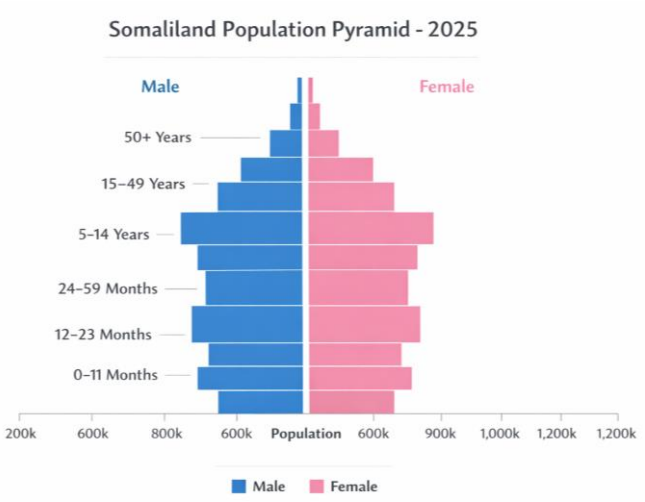
Somaliland's estimated population in 2025 is 6.3 million, distributed as approximately 45% urban, 30% rural, and 25% nomadic. This population structure significantly influences immunization planning, service delivery strategies, and denominator estimation for monitoring and evaluation.

KEY EPI TARGET POPULATIONS (2025 ESTIMATES)

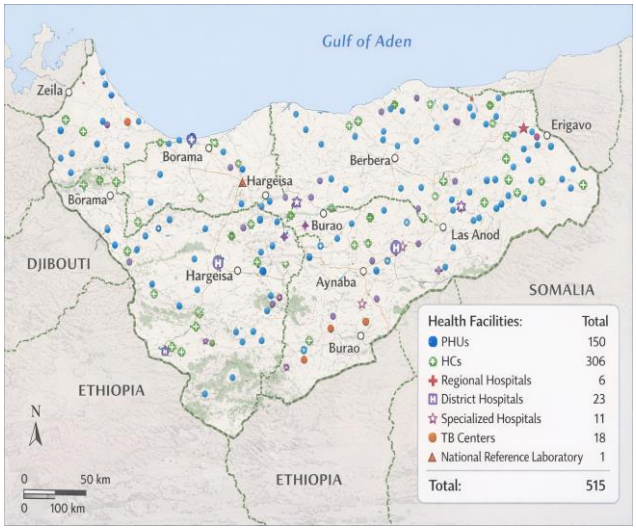
Population Group	Male (~49%)	Female (~51%)	Total	M&E Use
Infants (0–11 months)	150,000	160,000	310,000	Routine immunization
Children (12–23 months)	150,000	160,000	310,000	Fully immunized child indicator
Children 2–4 years (24–59 m)	260,000	273,000	533,000	Catch-up vaccination / child survival
Children <5 years (0–59 m)	560,000	593,000	1,153,000	Child survival denominator
Women 15–49 years	—	1,426,000	1,426,000	Td / MNT elimination
Men 15–49 years	1,225,000	—	1,225,000	Adult health planning
Population ≥50 years	568,000	593,459	1,161,459	Elderly / chronic disease planning
Other (unspecified group)	194,000	—	194,000	Remainder to balance total
Total Population	**2,907,000**	**3,378,459**	**6,285,459**	—

FIGURE 1.3: POPULATION DISTRIBUTION BY AGE GROUP

Population classification by age and sex provides key denominators for immunization planning and monitoring. In EPI M&E, age groups such as infants and children under five are used to measure vaccination coverage and program performance, while sex disaggregation helps monitor equity in access to immunization services.



DISTRIBUTION OF HEALTH FACILITIES IN SOMALILAND – 2025



The map shows the geographic distribution of health facilities across Somaliland's six regions, including primary health units, health centers, district and regional hospitals, specialized hospitals, TB centers, and the national reference laboratory. In the context of EPI monitoring and evaluation, these facilities represent the service delivery points for routine immunization, outreach activities, and disease surveillance. The distribution highlights regional differences in service availability and helps identify gaps for improving immunization coverage, supervision, and equitable access to vaccination services.

1.4 Epidemiology of Vaccine-Preventable Diseases

Persistent low immunization coverage maintains the risk of outbreaks and high morbidity:

- Measles & polio: risk amplified by low coverage and prior outbreaks
- Diphtheria, pertussis, tetanus: continued vulnerability due to suboptimal coverage
- Pneumonia & diarrhea: leading causes of under-five morbidity
- Neonatal mortality: 4–5 per 1,000; under-five mortality: 0.3–0.6 per 1,000 (likely underestimated)

ROUTINE IMMUNIZATION COVERAGE 0–11 M (2025)

Coverage for key antigens remains critically low (<55%) with high dropout rates and zero-dose children concentrated among rural and nomadic populations.

Vaccine / Indicator	Denominator / Age	2025 Baseline (%)	2030 Target (%)				
			2026	2027	2028	2029	2030
BCG	0–11 m	46.3	57	68	78	88	**≥90**
FIC	0–11 m	44.2	55	66	77	88	**≥90**
IPV 1st	0–11 m	51.4	61	70	79	88	**≥90**
IPV 2nd	0–11 m	24.6	40	55	70	84	**≥90**
OPV 0	0–11 m	28.3	41	54	66	82	**≥90**
OPV 1	0–11 m	60.9	69	76	83	91	**≥90**
OPV 2	0–11 m	53.5	63	71	79	88	**≥90**
OPV 3	0–11 m	54.1	64	72	80	89	**≥90**
MCV1	0–11 m	43.4	54	65	76	87	**≥90**
MCV2	12–23 m	19.2	38	57	73	86	**≥90**
PCV1	0–11 m	25.9	41	56	70	84	**≥90**
PCV2	0–11 m	14	33	52	70	84	**≥90**
PCV3	0–11 m	7.8	28	47	66	82	**≥90**
Penta1	0–11 m	61.1	70	77	84	91	**≥90**
Penta2	0–11 m	53.7	63	71	79	88	**≥90**
Penta3	0–11 m	54	64	72	80	89	**≥90**
Rota1	0–11 m	24.5	40	56	71	84	**≥90**
Rota2	0–11 m	9.3	30	50	68	83	**≥90**

1.8 RATIONALE FOR NATIONAL EPI M&E FRAMEWORK

The establishment of a National EPI Monitoring and Evaluation (M&E) Framework is essential to ensure a standardized, coordinated, and accountable immunization system across all administrative levels. Without a unified framework, inconsistencies in indicator definitions, reporting formats, and supervision practices can weaken data quality and limit effective decision-making.

The 2026 EPI M&E Framework provides a harmonized structure for indicator definition, data collection, reporting, supervision, verification, and performance review. It strengthens data quality, timeliness, and systematic use of information, while promoting evidence-based planning and accountability.

The mobile populations in Somaliland, a national framework is critical to identify zero-dose and under-immunized children and address inequities in service delivery. By institutionalizing clear monitoring standards, the framework supports targeted, equity-focused interventions and advances progress toward universal immunization coverage.

CHAPTER 2: GOVERNANCE, COORDINATION, AND HUMAN RESOURCES MANAGEMENT

2.1 INSTITUTIONAL AND GOVERNANCE FRAMEWORK

The Expanded Programme on Immunization (EPI) in Somaliland is coordinated under the Ministry of Health Development (MoHD) through the EPI and Child Health Directorate. The EPI Monitoring and Evaluation (M&E) Framework strengthens program performance by systematically tracking coverage, service quality, equity, and workforce performance, guiding evidence-based decision-making, and enabling timely response to gaps.

By integrating governance, coordination, and human resources management, the framework ensures uninterrupted service delivery and addresses the needs of vulnerable populations, including rural and nomadic communities. It links resources, processes, and data to outputs, outcomes, and long-term impact, ensuring that every level of the health system contributes to immunization program effectiveness.

2.1.1 GOVERNANCE STRUCTURES

EPI M&E is supported by a multi-level governance system that clarifies roles, accountability, and decision-making at national, regional, district, and facility levels.

NATIONAL LEVEL – MOHD RESPONSIBILITIES:

- Formulate and update national immunization policies, SOPs, and strategic plans.
- Set annual and multi-year performance targets aligned with IA2030 priorities.
- Allocate human, technical, and material resources for immunization activities.
- Integrate M&E into the national Health Information System (HIS) and maintain dashboards for coverage, equity, and operational performance.
- Conduct national-level performance reviews, audits, and supervision visits to ensure compliance and quality.
- Provide technical guidance on vaccination standards, cold chain management, quality assurance, and outbreak preparedness.

NATIONAL STEERING COMMITTEE:

- Chaired by senior MoHD leadership, providing strategic oversight and policy alignment.
- Reviews key EPI performance indicators, including antigen-specific coverage, zero-dose children, equity gaps, cold chain functionality, and workforce performance.

SUPPORTED BY TECHNICAL SUB-COMMITTEES FOR:

M&E: Data quality audits, analysis, reporting, and dashboards.
Supply Chain: Vaccine procurement, distribution, cold chain maintenance, stock management.
Demand Generation & Advocacy: Health promotion, community mobilization, social behavior change communication.
Equity & Zero-Dose Monitoring: Identifying underserved populations, nomadic communities, and low-coverage districts (WHO, 2016; UNICEF, 2023).

REGIONAL AND DISTRICT LEVELS:

- Regional Offices: Validate and analyze data, provide technical support to districts, monitor cold chain logistics, and manage vaccine/resource redistribution.
- District Offices: Implement microplanning, conduct supportive supervision, oversee vaccination session schedules, track defaulters, and coordinate with health partners.
- Committees operate under standardized terms of reference to ensure consistent reporting, clear accountability, and alignment with national guidelines.

FACILITY LEVEL:

- Deliver routine and outreach immunization services according to microplans.
- Maintain cold chain systems, vaccine safety, and infection prevention measures.
- Record and report immunization data using DHIS2 and other digital tools.
- Conduct defaulter tracing, follow-up visits, and community engagement, including health education and demand generation activities.
- Adhere to SOPs, vaccination protocols, and quality assurance standards (WHO, 2016; UNICEF, 2023).

KEY FEATURES:

- Clear lines of responsibility and decision-making at all levels.
- Integration of M&E data into planning, supervision, and resource allocation.
- Harmonization of reporting tools, SOPs, and procedures.
- Multi-sectoral and partner coordination to optimize coverage and resources.
- Equity focus, targeting zero-dose, under-vaccinated, and hard-to-reach populations.

2.2 HUMAN RESOURCES MANAGEMENT

Human resources are a critical pillar for immunization program sustainability, quality, and coverage. EPI M&E integrates workforce planning, performance tracking, and competency management into accountability mechanisms.

2.2.1 Workforce Assessment

Monitoring focuses on:

- Staff availability & deployment: Ensuring trained vaccinators are present at fixed, outreach, and mobile sessions.
- Competency & training: Tracking completion of pre-service/in-service training, refresher courses, mentorship, and e-learning for immunization schedules, cold chain management, AEFI reporting, and data recording.
- Workload & supervision: Monitoring distribution of tasks, frequency and quality of supervision visits, and adherence to SOPs and national guidelines.
- Performance evaluation: Using M&E findings from dashboards and audits to inform corrective actions such as staff redistribution, targeted training, and vaccination session optimization.

2.2.2 Roles and Responsibilities

- Facility Level: Service delivery, accurate data collection, case identification, defaulter follow-up, and community engagement.
- District Level: Data verification, analysis, outreach supervision, problem-solving, and resource coordination.
- Regional Level: Oversight of data quality, reporting, technical support, and supervision.
- National Level: Aggregate M&E data, disseminate reports, update policies, lead performance reviews, and manage dashboards.

2.3 Coordination Mechanisms

Interagency Coordination Committees (ICCs) in Hargeisa align partner activities including technical assistance, digital monitoring support, capacity-building programs, and periodic assessments with national priorities. ICCs ensure resource optimization, avoidance of duplication, and alignment with equity goals.

2.3.1 Performance Review Platforms

- Facility Level: Monthly data review meetings with staff and community health workers.
- District Level: Quarterly performance reviews and supportive supervision.
- Regional Level: Biannual performance assessments.
- National Level: Annual immunization review.

Equity metrics guide decisions to target zero-dose, under-vaccinated, and high-risk populations. ICC meetings review dashboards on cold chain functionality, workforce gaps, and antigen-specific coverage. Based on analyses, actions include staff reallocation, cold chain expansion, refresher trainings, and resource distribution, demonstrating the integration of governance, coordination, and human resources in EPI M&E systems.

2.4 EPI M&E Governance Framework (Inputs → Processes → Outputs → Outcomes → Impact)

Component	Details
Inputs	Vaccines, cold chain and logistics, trained staff, M&E and digital tools, supervision and audit mechanisms, partner support.
Processes	Microplanning, training, routine and outreach vaccination sessions, supervision, data collection, analysis, reporting, corrective actions.
Outputs	Vaccinations delivered, functional cold chain, verified coverage data, workforce deployed, community engagement, defaulter follow-up.
Outcomes	Increased immunization coverage, improved equity, reduced missed children, strengthened program coordination, enhanced data-driven decision-making.
Impact	Reduced morbidity and mortality, improved child and maternal health, stronger health system resilience, progress toward universal health coverage.

CHAPTER 3: IMMUNIZATION SERVICE DELIVERY MONITORING

3.1 Objective

The objective of this chapter is to strengthen EPI monitoring and evaluation to ensure high coverage, equitable access, and safe immunization services. Specifically, it aims to:

- Increase coverage by identifying service gaps and reaching all target populations.
- Reduce zero-dose and dropout rates through tracking, follow-up, and outreach.
- Ensure equity and accessibility by monitoring performance across regions and vulnerable groups.
- Support evidence-based decision-making through timely, accurate data and feedback.

3.2 Routine Facility-Based Immunization

Routine immunization is monitored to ensure coverage, safety, and data quality. EPI M&E tracks antigen-specific coverage (BCG, OPV1–3, Pentavalent1–3, IPV, MCV1–2) and the proportion of fully immunized children.

Supervision verifies session implementation, vaccine availability, cold chain functionality, AEFI reporting, and timely, complete reporting. Findings guide corrective actions such as session rescheduling, staff allocation, refresher training, and supply adjustments (WHO, 2015; UNICEF, 2023).

3.3 Outreach Services and RED/REC

Outreach under RED/REC strategies extends services to underserved populations. Monitoring evaluates microplan completion, coverage, cold chain compliance during transport, and trained staff availability.

Data guide workforce deployment, outreach scheduling, and resource allocation to ensure equitable

coverage in hard-to-reach communities (WHO, 2016; PATH, 2022).

3.4 Mobile Services and SIAs

Mobile sessions and Supplementary Immunization Activities (SIAs) require focused monitoring. Key indicators include coverage, vaccine supply, cold chain integrity, staff deployment, and AEFI incidence.

Real-time monitoring enables rapid problem-solving, ensuring campaigns meet targets, maintain safety, and reach underserved children (WHO, 2023; UNICEF, 2023).

3.5 Private Sector Integration

Private providers are included in EPI M&E to ensure standard compliance. Monitoring covers staff training, vaccine handling, cold chain adherence, and reporting into the national system, supporting data completeness and accountability (WHO, 2016).

3.6 Zero-Dose, Under-Vaccinated, and Defaulter Tracking

EPI M&E prioritizes identification and follow-up of zero-dose and under-vaccinated children. Facility registers and electronic immunization registries track missed doses, while defaulter tracing and outreach ensure follow-up.

Key Dropout Indicators (2025–2030)

Indicator	2025 Findings	2030 Target (%)	WHO Standard / Benchmark
BCG → MCV1 Dropout	8.5% – 17.2%	<3%	<10% dropout threshold
Penta1 → Penta3 Dropout	6.1% – 16.7%	<3%	<10% dropout threshold
Regional Range (Awdal, Maroodi-Jeh, Sahil, Sanaag, Sool, Togdheer)	0.4% – 9.8%	<3%	

3.7 Epidemiology and Feedback Loops

M&E is linked to disease surveillance. Incidence data guide intensified vaccination, while outbreak response monitoring ensures rapid action. Feedback loops ensure findings from supervision, coverage, and surveillance lead to timely corrective measures, enhancing service quality, responsiveness, and equity (WHO, 2023).

3.8 Key Indicators

Key EPI service delivery indicators include:

- Antigen-specific coverage (BCG, OPV1–3, Pentavalent1–3, IPV, MCV1–2)
- Fully immunized child proportion
- PENTA1 coverage (access)
- PENTA3 coverage by district or catchment area (equity)
- Dropout rates between doses (utilization)
- Session implementation and AEFI incidence
- Workforce performance and supervision quality

3.9 Equity, Accessibility, and Universal Coverage

Equity, accessibility, and universal coverage are integrated into EPI monitoring. Disaggregated data identify gaps across districts, rural and urban areas, nomadic populations, and other vulnerable groups.

Accessibility is monitored through service availability, outreach completion, and stock management. Universal coverage is assessed via full immunization rates, antigen-specific coverage, dropout trends, and service continuity during emergencies.

Integrating these dimensions ensures vaccines reach all children, supports data-driven decisions, and promotes equitable and universal immunization coverage (WHO, 2016; UNICEF, 2023; Gavi, 2022).

CHAPTER 4: COLD CHAIN, LOGISTICS, AND EPI EPIDEMIOLOGY

4.1 Cold Chain Monitoring

Cold chain monitoring ensures vaccines are consistently stored and transported within +2°C to +8°C, preserving potency and safety. Temperature logs are maintained at all levels from central stores to health facilities and outreach points using manual thermometers, data loggers, or remote monitoring systems with SMS alerts. Excursions trigger immediate corrective actions, including redistribution, emergency refrigeration, or session rescheduling. Staff receive regular training on cold chain SOPs and emergency procedures (WHO, 2016; UNICEF, 2022).

Equipment functionality and maintenance are monitored routinely. Inventories record equipment type, capacity, age, and power source. Preventive maintenance, timely repairs, and contingency plans including backup generators and trained personnel ensure uninterrupted service. Stock management follows FEFO, with monthly counts and wastage tracking by cause (expiry, freezing, breakage, or VVM changes) (PATH, 2022; WHO, 2015).

4.2 Logistics Monitoring

Vaccine distribution is tracked from central stores to districts, facilities, and outreach points to ensure timely delivery, cold chain integrity, and proper stock rotation. Transport vehicles are validated, and temperature is monitored throughout transit. Inventory management covers delivery schedules, cold chain integrity, stock levels, and equipment functionality. Logistics performance is linked with service delivery: stock availability and transport reliability directly influence routine, outreach, and mobile sessions (WHO, 2015; UNICEF, 2023).

4.3 Epidemiology and Feedback Integration

EPI M&E integrates VPD surveillance with service delivery and logistics data. District-level incidence data identify areas needing intensified immunization or rapid outbreak response. Outbreaks trigger immunization campaigns within 72 hours, with monitoring of vaccine supply, cold chain, and staff deployment. Coverage, dropout, and defaulter data are analyzed with epidemiology trends to inform microplans, SIAs, and outreach strategies. Supervisory feedback loops ensure corrective actions are implemented promptly, supporting accountability, equity, and responsiveness (WHO, 2023; PATH, 2022).

Key Indicators for Cold Chain, Logistics, and EPI Epidemiology (2025–2030)

Domain	Indicator	2025 Est. Baseline (%)	Target (%) 2030					Frequency	Responsible Level
			2026	2027	2028	2029	2030		
Cold Chain	Temperature compliance	70	75	80	85	88	≥90 %	Daily (facility), Weekly (district), Monthly (region)	Facility / District / Region
Cold Chain	Equipment functionality	65	70	75	80	85	≥90 %	Monthly	District / National
Cold Chain	Contingency readiness	50	60	70	80	85	≥90 %	Quarterly	District / National
Cold Chain	Stock adequacy	60	68	75	82	87	≥90 %	Monthly	Facility / District
Cold Chain	Stock-out frequency	2 months	1.5	1	0.5	0	0 months	Monthly	District / National
Cold Chain	Wastage rate	25	22	19	17	15	<15 %	Monthly	Facility / District
Logistics	On-time delivery	70	75	80	85	88	≥90 %	Per delivery	District / National
Logistics	FEFO adherence	60	68	75	80	85	≥90 %	Monthly	Facility / District
Logistics	Transport integrity	65	70	75	80	85	≥90 %	Each delivery	District / National
Epidemiology	VPD incidence	Est. Baseline local	↓10%	↓20%	↓30%	↓40%	Rapid detection	Weekly	District / Region

		data							
Epidemiology	Outbreak response	50	65	75	82	88	≥ 90 %	Per outbreak	District / Region
Epidemiology	Feedback loop implementation	40	55	68	78	85	≥ 90 %	Monthly	Facility / District

ESSENTIAL NOTE:

- Supervisory visits, data audits, and performance reviews support corrective actions and continuous improvement.
- Data are integrated into national EPI dashboards for real-time monitoring and resource allocation.
- Cold chain and logistics performance are directly linked to immunization coverage, equity, and service accessibility, especially in remote and underserved communities.
- Training, mentorship, and contingency planning ensure operational resilience during emergencies, stock-outs, or climate-related disruptions (WHO, 2016; PATH, 2022; UNICEF, 2023).

CHAPTER 5: SOCIAL MOBILIZATION, DEMAND GENERATION, AND ADVOCACY

Social mobilization, demand generation, and advocacy form a core component of the EPI M&E framework, ensuring that immunization services are accessible, accepted, and utilized across all communities. In Somaliland, effective monitoring requires considering local social beliefs, cultural norms, and religious practices, as these factors influence caregivers' perceptions, vaccine acceptance, and health-seeking behaviors (WHO, 2016; UNICEF, 2023).

5.1 PRIORITY TARGET POPULATIONS

EPI M&E prioritizes populations most at risk of under-immunization, including:
Caregivers of children under five, who may follow traditional beliefs affecting vaccination compliance.
Pregnant women eligible for maternal immunization, whose decisions may be influenced by family or religious guidance.
Hard-to-reach or underserved groups, including nomadic populations, urban informal settlements, and residents in conflict-affected areas.
Monitoring emphasizes mapping and inclusion of these groups while documenting barriers linked to cultural or religious beliefs, such as gender norms, mobility patterns, or vaccine misconceptions. This ensures that communication, outreach, and advocacy interventions are tailored and culturally sensitive (Somaliland MoHD, 2026).

5.2 Communication and Community Engagement Channels

Interpersonal Communication

Trained community health workers, local leaders, and peer educators engage households and communities directly. EPI M&E tracks:

- Frequency and reach of household visits
- Engagement quality, including respect for cultural norms and gender-sensitive approaches
- Feedback from caregivers regarding perceived barriers or religious concerns
- Monitoring ensures that interpersonal strategies address misinformation, build trust, and respect local customs (WHO, 2015).

Community-Based Engagement: Community dialogues, school initiatives, religious gatherings, and cultural events are critical platforms. M&E focuses on:

Participation rates across genders, age groups, and social hierarchies

Incorporation of religious and cultural leaders' endorsements to enhance credibility

Adaptation of messages to local beliefs, language, and practices

This approach fosters community ownership and social legitimacy of immunization programs.

Mass Media and Digital Channels: Mass communication campaigns including radio, television, social media, and mobile messaging are monitored for:

Reach among populations with limited literacy or remote access

Use of culturally appropriate messaging and religiously aligned narratives

Community feedback and interactive engagement

WHO recommends pre-testing messages with local focus groups to ensure cultural sensitivity and acceptance (WHO, 2016).

5.3 Advocacy Strategies and Stakeholder Engagement

Advocacy ensures political commitment and social legitimacy of immunization programs. EPI M&E monitors:

- Engagement with policymakers and local authorities, ensuring inclusion of religious and cultural considerations in policy and budget allocations
- Involvement of religious leaders, elders, and influential community figures to address vaccine hesitancy linked to beliefs
- Coordination with development partners to align advocacy campaigns with national priorities and local norms
- Tracking these engagements supports the sustainability of immunization programs and culturally appropriate interventions (UNICEF, 2023; Somaliland MoHD, 2026).

5.4 Social Mobilization and Advocacy

5.4.1 Coverage of Communication Activities

Monitoring ensures planned community meetings, media broadcasts, and outreach sessions are implemented while respecting religious practices, local festivals, and cultural schedules.

- Target: ≥90% of planned activities implemented

- Responsible: Facility and district health teams

Knowledge, Attitudes, and Practices (KAP) Improvements: Caregiver KAP assessments are adapted to capture beliefs, social norms, and religious considerations that influence vaccination.

- Target: ≥20% improvement in knowledge and positive attitudes compared to baseline
- Methods: Surveys, focus groups, community feedback mechanisms

Stakeholder Engagement: EPI M&E evaluates the proportion of advocacy events conducted with religious and community leaders' participation and documented outcomes.

- Target: ≥90% engagement implemented
- Responsible: District and national program managers

Effectiveness of Defaulter Follow-Up: Monitoring ensures that defaulter tracing respects cultural practices, including gender-sensitive approaches and household dynamics, to maximize return to immunization. Target: ≥80% of identified defaulters successfully followed up

Integration of Social Mobilization Indicators: Indicators are fully integrated into the national EPI M&E system, including cultural and religious considerations, to guide planning, implementation, and corrective actions.

CHAPTER 6 : HEALTH FINANCING AND RESOURCE TRACKING

Immunization programs require sustainable financing to maintain high coverage, safe delivery, and equity. The EPI M&E framework integrates financial monitoring with operational and service delivery data to ensure resources are efficiently allocated, transparently managed, and linked to program outcomes (WHO, 2016; UNICEF, 2023; MoHD, 2026).

6.1 BUDGET PLANNING AND ALLOCATION FROM AN M&E PERSPECTIVE

EPI M&E tracks the extent to which resources are allocated to vaccines, cold chain equipment, workforce deployment, outreach activities, and social mobilization. Budget allocations are reviewed in the context of coverage and equity indicators to ensure that high-risk populations including remote, nomadic, or underserved communities receive proportionate resources.

Financial monitoring integrates microplanning and service delivery data, allowing managers to identify underfunded areas, forecast supply needs for upcoming campaigns, and plan contingencies for emergency responses. This proactive approach ensures that financial decisions are evidence-based and responsive to program performance trends (Somaliland MoHD, 2026; WHO, 2016).

6.2 TRACKING OPERATIONAL AND FINANCIAL RESOURCES

Resource tracking under the EPI M&E framework involves continuous monitoring of both availability and utilization of funds, personnel, and essential supplies. Operational tracking assesses whether vaccine stock levels, cold chain equipment, transport, and fuel are sufficient for planned immunization activities. Financial tracking evaluates disbursement timelines, procurement

processes, and adherence to approved budgets.

Integrating these data streams enables program managers to detect funding gaps, delayed procurement, or misallocation, linking these challenges directly to coverage or service delivery performance. This ensures that programmatic objectives and financial inputs remain aligned, and corrective measures can be applied promptly to avoid service disruptions (UNICEF, 2023; WHO, 2023).

6.3 Real-Time Financial Monitoring and Dashboards

EPI M&E leverages digital dashboards and integrated reporting systems to provide real-time insights into resource utilization and operational readiness. Dashboards display budget execution, vaccine consumption, cold chain performance, and human resource deployment, enabling managers to make timely reallocations to maintain coverage targets.

Monitoring also tracks the proportion of planned activities executed within budget and the timeliness of expenditures, allowing identification of bottlenecks that may hinder program efficiency. Linking financial dashboards to national health information systems ensures that financial and service delivery data inform one another, supporting integrated planning and accountability (PATH, 2022; MoHD, 2026).

6.4 Financial Data Triangulation and Corrective Actions

Financial M&E emphasizes triangulation of data from accounting systems, field verification, and expenditure reports to ensure accuracy and transparency. Any discrepancies are investigated, and corrective actions such as reallocation of funds, replenishment of critical supplies, or adjustments to campaign budgets are implemented promptly.

Regular financial review meetings at facility, district, and national levels integrate coverage, dropout, defaulter, and HR performance indicators to ensure alignment between financial resources and program outcomes. This approach strengthens fiduciary responsibility, reduces wastage, and ensures that resources contribute effectively to equitable immunization coverage (WHO, 2016; MoHD, 2026).

CHAPTER 7 : EMERGENCY AND CRISIS RESPONSE

Immunization programs in Somaliland must be resilient to emergencies and crises, including natural disasters, conflict, or disease outbreaks. EPI M&E focuses on continuity of services, cold chain integrity, workforce readiness, and timely data-driven decision-making to maintain vaccine coverage and safety (WHO, 2023).

7.1 Emergency Preparedness for Immunization Delivery

Emergency preparedness integrates pre-positioning of vaccines, functional cold chain systems, and contingency planning for transport, power, and workforce deployment. Monitoring assesses the

availability and operational readiness of cold chain equipment, emergency vaccine stocks, and surge personnel.

M&E tracks whether immunization sessions are conducted as planned during crises, ensuring that ≥95% of operational cold chain capacity is maintained. Indicators also include rapid identification of stock-outs, equipment failures, or coverage gaps, allowing timely corrective action to prevent interruptions in immunization delivery (PATH, 2022; MoHD, 2026).

7.2 Roles, Coordination, and Command Structure During Emergencies

EPI M&E ensures clear roles and responsibilities at national, district, and facility levels during emergencies. The EPI manager coordinates logistics and cold chain operations, while field teams monitor vaccine storage, distribution, and session execution. Coordination with humanitarian actors and local authorities is assessed to ensure timely resource deployment, compliance with SOPs, and rapid reporting of vaccine use.

M&E indicators measure adherence to command structures, completeness of reporting, and responsiveness of emergency workforce deployment, ensuring accountability and continuity of services even in crisis contexts (UNICEF, 2023; WHO, 2023).

7.3 Emergency M&E Requirements

Monitoring and evaluation in emergencies emphasizes continuity, safety, and timely data utilization:

- Cold Chain Monitoring: Real-time tracking of temperature-sensitive storage and transport using loggers or remote monitoring systems.
- Vaccine Stock Tracking: Continuous recording of consumption, wastage, and replenishment to prevent shortages.
- Service Delivery Reporting: Tracking session completion, coverage, and defaulter follow-up in affected areas to maintain accountability.
- AEFI Surveillance: Prompt reporting and investigation of adverse events even in crisis contexts to safeguard public health.
- Indicators are adapted to rapidly evolving contexts, enabling evidence-based decision-making and immediate corrective action to maintain vaccine potency, coverage, and equity (WHO, 2023).

KEY INDICATORS FOR EMERGENCY EPI SERVICES (2025–2030)

Domain	Indicator	2025 Estimated Baseline (%)	2030 Target %					Frequency	Responsible Level
			2026	2027	2028	2029	2030		
Cold Chain	Functional equipment during emergencies	60	70	75	80	85	≥95 %	Monthly	Facility / District
Vaccine Stock	Availability and replenishment	60	70	75	80	85	≥90 %	Monthly	Facility / District
Service Delivery	Session completion and coverage	60	70	75	80	85	≥90 %	Monthly	District / Facility
Defaulter Follow-Up	Tracing and return of missed children	60	68	73	77	79	≥80 %	Monthly	Facility / District
AEFI Surveillance	Timely reporting and investigation	60	70	75	80	85	≥90 %	Weekly	Facility / District

CHAPTER 8: PRIVATE SECTOR ENGAGEMENT

Private sector participation in immunization services strengthens coverage and expands access, particularly in urban, semi-urban, and hard-to-reach populations. EPI M&E frameworks systematically monitor the quality, safety, and reporting compliance of private providers to ensure alignment with national standards and equitable service delivery (WHO, 2016; MoHD, 2026).

8.1 FACILITY QUALIFICATION AND ACCREDITATION CRITERIA

Private facilities must meet national EPI standards, including functional cold chain systems, trained immunization staff, and adherence to the national immunization schedule. Accreditation involves verification of storage equipment, temperature monitoring devices, and workforce competency. EPI M&E tracks these elements through structured audits and supervisory visits, ensuring corrective actions are implemented when standards are not met, and supporting continuous improvement in service delivery.

8.2 Compliance with National EPI and Cold Chain Standards

Private facilities are required to maintain vaccine potency by adhering to WHO-recommended storage temperatures and handling protocols. M&E frameworks assess compliance with temperature logs, equipment functionality, and vaccine inventory management. Deviations are flagged, analyzed, and addressed to prevent stock-outs or cold chain failures, thereby safeguarding vaccine effectiveness and coverage reliability (UNICEF, 2023; MoHD, 2026).

8.3 Supportive Supervision and Data Quality Assurance

Routine supervision and data quality audits evaluate adherence to cold chain and reporting standards. Supervisors verify temperature logs, stock management, and session documentation, integrating private facility data into the national health information system. This enables real-time monitoring of vaccine distribution, session performance, and coverage indicators, and strengthens accountability and decision-making (MoHD, 2026).

Table 4.X: Key M&E Indicators – Private Sector (20226–2030)

Domain	2025 Estimated Baseline (%)	2027-2030 Target / Standard (%)	Frequency	Responsible Level
Cold Chain Compliance	60	≥ 90%	Monthly	EPI Focal / DS
Vaccine Stock Availability	70	≥ 90 %	Monthly	District / Facility
AEFI Reporting	0.00	0.00 %	Monthly	EPI Focal / DS
Supervision Coverage	60	≥ 90 %	Quarterly	District / Facility
Data Quality	60	≥ 90 %	Quarterly	District / Facility

CHAPTER 9: RECORDING, REPORTING & DATA MANAGEMENT

Accurate recording, reporting, and data management are critical for supporting routine immunization, outbreak response, and program evaluation. The EPI M&E system ensures systematic documentation, validation, and integration of immunization data across all levels, facilitating evidence-based decision-making, program monitoring, accountability, and timely corrective actions. Reliable data are essential for identifying coverage gaps, defaulters, stock-outs, and cold chain failures.

9.1 Facility, District, and Regional Recording & Reporting

Facility-level recording forms the primary data source for EPI M&E. Health workers document every immunization encounter using standardized tools, capturing vaccine type, dose number, child or maternal identifiers, vaccination date, session type, and cold chain conditions.

District and regional health authorities compile facility-level data, validate entries, and submit consolidated reports to national authorities. Supervisory mechanisms assess alignment between registers and summary reports, verify cold chain monitoring, and confirm stock management documentation. Regular monitoring ensures adherence to reporting schedules and identifies discrepancies for prompt correction.

Key EPI Data Management & Reporting Indicators (2025–2030)

Indicator	Est. 2025 Baseline (%)	2026-2030 Target (%)	Frequency	Responsible Level
Record completeness	60	≥ 90%	Monthly	Facility In-Charge / EPI Focal
Timeliness of entry/reporting	60	≥ 90 %	Monthly	Facility / DS
Data accuracy	60	≥ 90%	Quarterly	DS / EPI Supervisor
Report completeness (district/regional)	60	≥ 90 %	Monthly	DS / Regional Health Officer
Cold chain verification	60	≥ 90 %	Quarterly	Cold Chain Officer / EPI Focal

9.2 National Data Integration, Dashboards & Data Security

At the national level, immunization data from districts and facilities are integrated into centralized platforms such as DHIS2 and EPI databases. Dashboards consolidate coverage, cold chain performance, vaccine stock, defaulter follow-up, and AEFI surveillance.
EPI M&E monitors data completeness, timeliness of entry, system interoperability, and consistency between source documents and digital records. Integrated datasets enable near real-time tracking

of coverage, dropout trends, stock adequacy, and outbreak alerts, facilitating prompt, evidence-based decisions.
Data security protocols protect sensitive information through controlled access, secure storage, and compliance with national guidelines. Both paper-based and electronic records are stored according to standards, with regular audits to verify compliance.

Key Indicators:

Indicator	2025 Est. Baseline	2026-2026-2030 Target	Frequency	Responsible
DHIS2 data completeness	60	≥ 90 %	Monthly	National EPI / HMIS Team
Dashboard utilization	60	≥90%	Monthly	Facility / DS
Defaulter tracing	60	≥90%	Monthly	CHWs / EPI Focal
AEFI reporting	60	≥ 90 %	Monthly	Facility / EPI Focal
Data security compliance	60	≥ 90 %	Quarterly	DS / National IT Team

CHAPTER 10: SURVEILLANCE OF VPDS AND OUTBREAK RESPONSE

EPI M&E integrates routine immunization, vaccine-preventable disease (VPD) surveillance, and outbreak response to ensure early detection, rapid response, and evidence-based planning. This system strengthens health security, guides microplanning, informs resource allocation, and ensures equity in service delivery.

10.1 Surveillance Capacity, Guidelines, and Rapid Response

EPI M&E requires SOPs, training manuals, and competent personnel for VPD surveillance at national, regional, district, and facility levels. Continuous mentorship and refresher training guarantee high-quality data and rapid response readiness.
Rapid Response Teams (RRTs) are established at all levels with clear activation protocols, ensuring timely containment of outbreaks. Logistics and laboratory support include sample collection tools, reliable transport, cold chain management, and laboratory testing. Timeliness, specimen integrity, and lab turnaround are closely monitored to inform microplanning, outbreak response, and vaccination campaigns.

Key VPD Surveillance & Outbreak Response Indicators (2025–2030)

Indicator	2025 Est. Baseline (%)	2026- 2030 Target (%)	Frequency	Responsible Level
Staff trained	60	≥ 90 %	Annually	DS / EPI Training Team
SOP availability	60	≥ 90 %	Quarterly	DS / National EPI
RRT readiness	60	≥ 90 %	Quarterly	DS / EPI Supervisor
Lab turnaround	60	≥ 90 %	Monthly	Lab / DS
Sample integrity	60	≥ 90 %	Monthly	Lab / DS

10.2 Reporting, Feedback, and Surveillance Data Monitoring

Clear reporting channels and functional feedback loops ensure timely data flow, verification, and corrective actions. Aggregate and case-based surveillance data are used to identify trends in incidence and immunization coverage. Dashboards visualize disease trends, coverage, dropout, and defaulter data in real-time to enable rapid intervention.

Key Indicators:

Indicator	**2025 Est. Baseline (%)**	**2026-2030 Target**	**Frequency**	**Responsible**
Report completeness		≥ 80 %	Weekly	DS / Facility In-Charge
Feedback action		≥90%	Monthly	DS / Regional Officer
Case investigation		≥ 80 %	Weekly	DS / EPI Focal
Integration with RI/SIAs		≥ 80 %	Per outbreak	DS / EPI Supervisor

10.3 Outbreak Detection, Response, and Monitoring

EPI M&E monitors outbreak detection, response timeliness, cold chain integrity, and immunization coverage. Supervisory dashboards integrate coverage, dropout, and defaulter data with epidemiological trends to guide corrective actions, including RRT deployment, staff mobilization, and prioritization of high-risk populations.

Key Outbreak Response Indicators (2025–2030)

Indicator	2025 Est. Baseline (%)	2026-2030 Target (%)	Frequency	Responsible Level
Outbreak detection	80	≥ 90 %	Weekly	DS / EPI Supervisor
Cold chain maintenance	60	≥ 90 %	Per outbreak	Cold Chain Officer / EPI Focal
Coverage in outbreak areas	60	≥ 95 %	Per outbreak	DS / Facility In-Charge
Rapid data feedback	60	≥ 90 %	Monthly	DS / EPI S

CHAPTER 11: INJECTION SAFETY AND AEFI MONITORING

Injection safety and monitoring of Adverse Events Following Immunization (AEFI) are critical for protecting patient safety, maintaining program integrity, and sustaining public confidence in immunization services (WHO, 2015). The EPI monitoring and evaluation (M&E) system tracks adherence to safe injection practices, staff competency, and the timely detection and management of adverse events in accordance with WHO standards (WHO, 2023).

Indicator	2025 Findings
Total Immunization Doses	~1.48 million doses administered (Jan–Dec 2025); peak in August (178,763)
AEFI Reporting	Not documented

Monitoring focuses on the exclusive use of auto-disable (AD) syringes, adherence to aseptic techniques, hand hygiene, safe handling of equipment, proper disposal of sharps and medical waste, and adherence to cold chain requirements. EPI M&E identifies breaches or unsafe practices and ensures corrective measures are implemented promptly. AEFI detection emphasizes complete and timely reporting, standardized investigation, causality assessment, and corrective actions. Continuous supportive supervision, refresher training, and follow-up visits reinforce compliance across public and private facilities.

KEY SAFE INJECTION & AEFI MANAGEMENT INDICATORS (2026–2030)

Indicator	2025 Est. Baseline (%)	2026-2030 Target (%)	Frequency	Responsible Level
Injections administered using AD syringes	60	≥ 90 %	Monthly	Facility / District EPI Officer
Sharps and medical waste safely disposed	60	≥ 90 %	Monthly	Facility / District EPI Officer
Staff trained and competent in safe injection practices	60	≥ 90 %	Quarterly	District / Regional EPI Officer
Completeness of AEFI reporting	60	≥ 90 %	Monthly	Facility / District EPI Officer
Timeliness of serious AEFI reporting	48 hours	≤24 hours	Monthly	Facility / District EPI Officer
AEFI cases investigated with causality assessment	60	≥ 90 %	Quarterly	National EPI / MoHD
Facilities implementing corrective actions	60	≥ 90 %	Quarterly	District / Regional EPI Officer

CHAPTER 12: DATA COLLECTION SYSTEMS

Effective data collection systems are foundational for EPI M&E, enabling accurate, timely, and complete information to guide decision-making, resource allocation, and program improvement (WHO, 2021). Facilities use a combination of paper-based registers, electronic immunization registries, temperature loggers, and mobile reporting platforms. Data are validated at district and regional levels and integrated into national databases such as DHIS2.

EPI M&E monitors adherence to standardized tools, completeness, accuracy, and interoperability of data systems. Routine audits, discrepancy reconciliation, and data quality checks ensure reliability. Accurate data collection enables monitoring of coverage, cold chain performance, vaccine stock levels, AEFI reporting, and overall service delivery trends.

KEY INDICATORS – DATA COLLECTION SYSTEMS

Indicator	**Frequency**	**2025 Est. Baseline (%)**	**2026-2030 Target**	**Responsible**
Completeness of facility-level reporting	Monthly	60	≥ 90 %	Facility / District EPI Officer

Timeliness of reporting to district level	Monthly	60	≥ 90 %	Facility EPI Officer
Accuracy of data entry (register vs report)	Quarterly	60	≥95%	District / Regional EPI Officer
Use of electronic systems (DHIS2, HMIS)	Weekly	60	≥ 90 %	Facility / National EPI Officer
Routine data review meetings conducted	Quarterly	60	≥ 90 %	Facility / District / National EPI Officer

CHAPTER 13: MONITORING PROGRAMMATIC SUPPORT AND MICROPLANNING

Microplanning ensures equitable immunization coverage, efficient use of resources, and effective program implementation. Microplans cover routine, outreach, mobile services, and Supplementary Immunization Activities (SIAs). They include target population estimates, geographic mapping, session schedules, human resource allocation, vaccine and cold chain needs, transport logistics, and contingency plans for hard-to-reach, mobile, or emergency contexts (WHO, 2020).

EPI M&E monitors microplan completeness, updates, and quality at facility and district levels. Supervision identifies operational bottlenecks, ensures adherence to planned activities, and provides mentoring to improve service delivery. Community engagement and social mobilization are integrated into microplans to address vaccine hesitancy and increase uptake among underserved populations. Triangulation of data from registers, outreach reports, supervision findings, and community feedback ensures corrective actions are evidence-based.

Key Planning, Implementation & Community Engagement Indicators (2025–2030)

Indicator	2025 Est. Baseline (%)	2026-2030 Target (%)	Frequency	Responsible Level
Microplans completed and updated	60	≥ 90 %	Quarterly	Facility / District EPI Officer
Immunization sessions conducted as planned	60	≥ 90 %	Monthly	Facility / District EPI Officer
Vaccine and cold chain resource allocation aligned with plan	60	≥ 90 %	Monthly	Logistics / Facility EPI Officer
Coverage of target population	60	≥90 %	Monthly	Facility / District EPI Officer
Community engagement activities implemented	60	≥ 90 %	Monthly	Facility / District EPI Officer

CHAPTER 15: EVALUATION, CQI, AND PERFORMANCE MONITORING

Evaluation, Continuous Quality Improvement (CQI), and performance monitoring are essential for assessing immunization program performance, identifying gaps, implementing corrective actions, and sustaining high-quality services (WHO, 2015). Structured evaluations include midterm and endline reviews, WHO Effective Vaccine Management (EVM) assessments, and external program audits. CQI identifies service bottlenecks, monitors coverage gaps, cold chain functionality, vaccine wastage, and AEFI surveillance.

Integrated dashboards consolidate KPIs, outbreak response data, and microplanning outputs, enabling real-time decision-making and resource allocation. Regular performance reviews at facility, district, and national levels guide corrective actions and evidence-based improvements. Policy review and alignment with national and global standards ensure the EPI M&E system remains responsive and compliant.

KEY INDICATORS – EVALUATION & CQI

Indicator	Frequency	Est. Baseline	Target	Responsible
EVM reviews completed	Biennial	60	≥ 90 %	MoHD / Logistics Unit
Midterm/endline program evaluations conducted	Every 3–5 years	60	≥ 90 %	MoHD / EPI Unit
Coverage gaps identified and addressed	Monthly	60	≥ 90 %	District / Regional EPI Officer
Cold chain issues resolved	Monthly	60	≥ 90 %	Logistics Unit
Vaccine wastage ≤5%	Monthly	60	≤5%	Facility / District EPI Officer
Dashboard utilization	Monthly	60	≥ 90 %	MoHD / EPI Unit
Performance review meetings conducted	Monthly / Quarterly	60	≥ 90 %	Facility / District / National EPI Officer
Policy review meetings conducted	Annually	60	≥ 90 %	MoHD / Policy Unit
Policy updates disseminated	Annually	60	≥ 90 %	MoHD / EPI Focal

EPI (M&E) FRAMEWORK – PART II: IMPLEMENTING PART I

PURPOSE

The purpose of part II operationalizes the M&E framework established in Part I by translating its principles, standards, data management requirements, and accountability mechanisms into practical tools and structured implementation guidelines. It provides clear operational procedures to ensure systematic data collection, validation, analysis, and use across all administrative levels.

Through Templates T1–T11, Part II standardizes assessment, verification, documentation, corrective action, and data use across all levels of the immunization system, ensuring consistent supervision, improved data quality, accountability, and continuous quality improvement.

1. STANDARDIZED OBSERVATION & VERIFICATION (T1–T8)

In line with Part I, supervisors must verify each item through:

- Direct observation
- Documentation review
- Staff interviews

Each template contains Yes/No and explanation verification fields aligned with MoHD standards, ensuring:

- Every indicator is assessed against a defined national benchmark
- Compliance is objectively recorded
- Non-compliance includes written justification
- This prevents subjective supervision and ensures nationwide harmonization.

2. EVIDENCE-BASED SUPERVISION

Part I requires evidence attachment where possible. Templates operationalize this by requiring verification of:

- EPI registers, tally sheets, and control books (T4)
- Temperature monitoring logs and stock cards (T5)
- Training certificates and HR records (T2)
- Surveillance and IDSR reports (T3)
- Community engagement attendance lists (T7)
- Where permitted, photos or log extracts support verification. This also strengthens transparency and accountability.

3. STRUCTURED CORRECTIVE ACTION & ACCOUNTABILITY

(T9)

Part I mandates that all "No" findings require immediate corrective action and follow-up.

Through T9 – Supportive Supervision, supervisors must:

- Record the identified gap
- Summarize explanation provided in earlier templates
- Define corrective action
- Assign responsible person
- Set clear timeline
- Document follow-up status

This ensures supervision results in measurable improvement.

4. Follow-Up & Continuous Improvement

Part I emphasizes follow-up supervision. Implementation follows this cycle:

- Gap identified (T1–T8)
- Action documented (T9)
- Timeline assigned
- Follow-up visit conducted
- Compliance re-verified
- Unresolved issues are escalated to district or regional levels.

5. Data Use & Feedback Mechanism

Part I requires that findings inform planning and decision-making. Templates support this by enabling structured data flow:

- Facility → District → Regional → National

Findings are used for:

- Updating microplans
- Resource allocation decisions
- HR redistribution
- Cold chain replacement planning
- Equity targeting (zero-dose, nomadic, IDPs)
- Performance review meetings
- Feedback must be provided back to facilities to close the supervision loop.

6. Risk Identification & Preventive Action

Supervisors must identify operational risks during assessment, including:

- Cold chain failure risks
- Vaccine stock-out risks
- Data discrepancies

- Infection prevention breaches
- AEFI reporting delays
- Preventive measures must be recorded in T9.

7. Equity & Inclusion Monitoring

Part I emphasizes equity. Templates support this by tracking:

- Zero-dose children
- Dropout rates
- Hard-to-reach populations
- Nomadic and IDP coverage gaps
- Gender and geographic disparities
- Supervisors must ensure corrective outreach actions are documented.

8. Ethical Standards & Data Protection

Supervisors must ensure:

- Confidential handling of child and facility data
- Secure storage of records
- Use of data strictly for public health purposes
- Templates reinforce responsible data management.

9 EPI M&E Templates (T1–T11)

The following eleven (11) templates (T1–T11) provide structured tools for supervision, data verification, workforce assessment, cold chain monitoring, and performance review, ensuring consistent M&E implementation and evidence-based corrective actions.

T1: Facility Infrastructure & Staffing Assessment Tool
Objective: To assess facility readiness, staffing capacity, and operational conditions for quality immunization service delivery.
Scope: Public and private health facilities providing EPI services.

#	Assessment Criteria	Yes	No	Details (Evidence/Findings)	Corrective Action / Follow-Up
0	Facility registered with NHPC & MoHD Health Services	☐	☐	Verify valid registration certificate	Facilitate compliance if not registered
1	Facility operational and accessible to clients	☐	☐	Record opening hours; assess physical access	Address barriers (e.g., signage, accessibility issues)
2	Adequate staffing (nurses, vaccinators, data clerk)	☐	☐	List staff names, positions, duty roster	Recommend staff redistribution or

					recruitment
3	Staff trained in EPI & cold chain management	☐	☐	Document training dates, certificates	Schedule refresher or new training
4	Cold chain equipment functional	☐	☐	Inspect fridge, freezer, thermometers; record temperatures	Repair/replace equipment; ensure temp monitoring
5	Vaccine stock available and within expiry	☐	☐	Check stock registers, expiry dates, stock cards	Reorder vaccines; improve stock management
6	Reliable power supply (electricity/solar/generator)	☐	☐	Document availability and backup system	Provide alternative energy support
7	Clean water and sanitation facilities available	☐	☐	Verify handwashing stations and hygiene standards	Improve WASH infrastructure
8	Functional waste management system	☐	☐	Sharps disposal, safety boxes, biohazard handling	Strengthen infection prevention measures
9	Transport available for outreach services	☐	☐	Vehicle/motorbike available and documented	

T2 – Cold Chain & Logistics

Guidance: Maintain vaccine potency, monitor temperature, and ensure logistical readiness.

#	Criteria	Yes	No	Details	Guidance / Notes / Corrective Action
1	Daily temperature monitoring for vaccine storage	☐	☐		Review min/max logs; document deviations
2	Adequate cold boxes & ice packs for outreach	☐	☐		Ensure readiness for all outreach sessions
3	Vaccine wastage monitored & within acceptable limits	☐	☐		Record wastage percentages per antigen
4	Contingency plan for cold chain failure	☐	☐		Verify documented plan & responsible staff
5	Inventory registers updated daily	☐	☐		Ensure accurate stock levels recorded
6	Adequate syringes, safety boxes, and accessories	☐	☐		Check availability for scheduled sessions
7	Transport functional for vaccine	☐	☐		Inspect vehicle condition and

	delivery				fuel availability
	Equipments functionalities	☐	☐		

IMMUNIZATION SERVICE DELIVERY– T3

Guidance: Ensure all target populations are reached safely and on schedule.

#	Criteria	Yes	No	Details	Guidance / Notes / Corrective Action
1	Fixed EPI sessions conducted per schedule	☐	☐		Record dates, attendance, and missed sessions
2	Outreach sessions conducted per plan	☐	☐		Document locations, dates, and coverage achieved
3	Mobile teams operational where required	☐	☐		Confirm route plans and beneficiary lists
4	All target age groups served (0–12 months)	☐	☐		Verify inclusion of all infants
5	Zero-dose & defaulter tracking implemented	☐	☐		Record identified children and follow-up plan
6	Infection prevention & safety protocols observed	☐	☐		Check PPE, hand hygiene, sharps disposal
7	Community mobilization conducted for sessions	☐	☐		Verify announcements, CHW involvement, and IEC materials

VACCINE SAFETY & AEFI MONITORING – T4

Guidance: Ensure early detection, management, and reporting of adverse events following immunization (AEFI).

#	Criteria	Yes	No	Details	Guidance / Notes / Corrective Action
1	AEFI reporting form available and up-to-date	☐	☐		Attach recent forms for review
2	Staff trained on AEFI identification & management	☐	☐		Include training dates & refresher records
3	Severe AEFI cases referred & documented	☐	☐		Note patient outcomes and follow-up actions
4	Cold chain maintained to reduce risk of AEFI	☐	☐		Review temperature logs and equipment status
5	Community awareness on AEFI reporting	☐	☐		Verify IEC materials and CHW education efforts

SUPERVISION & QUALITY ASSURANCE – T5

Guidance: Ensure proper oversight, feedback, and continuous improvement.

#	Criteria	Yes	No	Details	Guidance / Notes / Corrective Action
1	Supervision schedule available & implemented	☐	☐		Monthly/quarterly plan documented
2	Standardized supervision checklist used	☐	☐		Attach completed forms
3	Observations of vaccination sessions conducted	☐	☐		Record gaps, good practices, and recommendations
4	Feedback provided to staff	☐	☐		Document corrective actions and responsible staff
5	Follow-up on previous supervision conducted	☐	☐		Include improvement status
6	Lessons learned documented	☐	☐		Use findings for planning & training

COVERAGE MONITORING & DEFAULTER TRACKING – T6

Guidance: Ensure accurate coverage calculation, dropout monitoring, and targeted follow-up.

#	Criteria	Yes	No	Details	Guidance / Notes / Corrective Action
1	Coverage data calculated per antigen	☐	☐		Compare against target population
2	Dropout rates calculated (BCG–Measles, Penta1–3)	☐	☐		Record trends and causes
3	Zero-dose children identified & listed	☐	☐		Include follow-up plan
4	Defaulter list maintained & updated	☐	☐		Home visits or recalls conducted
5	Equity analysis conducted (gender, location)	☐	☐		Identify underserved populations
6	Corrective action plans implemented	☐	☐		Include responsible staff and timeline
7	Data utilized for planning and decision-making	☐	☐		Include examples of program adjustments

COMMUNITY ENGAGEMENT & DEMAND GENERATION – T7

Instructions: Verify community involvement, CHW activities, awareness sessions,

advocacy, and feedback mechanisms.

#	Criteria	Yes	No	Details	Notes / Corrective Action
1	CHWs assigned & active	☐	☐		List names & coverage area
2	CHWs trained in EPI messaging	☐	☐		Training dates
3	Community awareness sessions conducted	☐	☐		Attach attendance lists
4	Advocacy with local leaders	☐	☐		Meeting minutes & outcomes
5	IEC materials available	☐	☐		Posters, leaflets, radio messages
6	Household visits for zero-dose / defaulters	☐	☐		Number & follow-up documented
7	Feedback mechanism functional	☐	☐		Suggestion boxes, hotline, community meetings
8	Community barriers identified	☐	☐		Record main reasons & solutions
9	Community satisfaction / acceptance measured	☐	☐		Survey or verbal feedback

RECORDING, REPORTING & DIGITAL HEALTH – T8

Instructions: Ensure accurate recording, timely reporting, digital data entry, and use of data for decisions.

#	Criteria	Yes	No	Details	Notes / Corrective Action
1	Vaccine register updated daily	☐	☐		Check completeness
2	Child health card issued	☐	☐		Verify accuracy
3	Monthly summary reports completed	☐	☐		Timely submission
4	Electronic reporting functional (DHIS2 / HMIS)	☐	☐		Upload timely & accurate
5	Data entry accuracy verified	☐	☐		Cross-check paper vs system
6	Backup of records maintained	☐	☐		Physical & digital
7	Data used for decision-making	☐	☐		Evidence of action
8	Data quality audit conducted	☐	☐		Findings documented
9	Reporting compliance maintained	☐	☐		Timely submission to MoHD

SUPPORTIVE SUPERVISION – T9

Instructions: Confirm supervision is conducted, documented, and followed up to improve EPI performance.

#	Criteria	Yes	No	Details	Notes / Corrective Action
1	Supervision schedule available	☐	☐		Monthly/quarterly
2	Supervisors trained in EPI	☐	☐		Training date & type
3	Supervision checklist used	☐	☐		Completed during visit
4	Observation of vaccination sessions	☐	☐		Performance gaps noted
5	Feedback provided to staff	☐	☐		Corrective actions documented
6	Follow-up on previous supervision	☐	☐		Check implementation
7	Supervision report submitted	☐	☐		Date & recipient
8	Lessons learned documented	☐	☐		For planning & improvement

DATA QUALITY AUDIT & COVERAGE/EQUITY – T10

Instructions: Verify audits, completeness, accuracy, coverage, equity, and corrective actions.

#	Criteria	Yes	No	Details	Notes / Corrective Action
1	Audit checklist completed	☐	☐		Include date
2	Sampled records cross-checked	☐	☐		Register vs card vs report
3	Data completeness verified	☐	☐		Missing entries identified
4	Data accuracy verified	☐	☐		% correct calculation
5	Coverage & dropout rates calculated	☐	☐		By antigen & age group
6	Equity analysis conducted	☐	☐		Gender, rural/urban, marginalized
7	Corrective action plan developed	☐	☐		For gaps found
8	Feedback to facility & district	☐	☐		Document date & follow-up
9	Improvements tracked	☐	☐		Evidence of trend over time

CAMPAIGN / SIA MONITORING – T11

Instructions: Ensure campaigns/SIAs are planned, implemented, monitored, and documented for improvement.

#	Criteria	Yes	No	Details	Notes / Corrective Action
1	Campaign microplan available	☐	☐		Date & coverage area
2	Vaccination teams assigned	☐	☐		Names & roles

3	Vaccines & supplies allocated	☐	☐		Stock & distribution verified
4	Teams trained	☐	☐		Training dates
5	Daily coverage reporting	☐	☐		Timeliness & completeness
6	Zero-dose children identified	☐	☐		Follow-up plan
7	Adverse event monitoring functional	☐	☐		Reporting & response
8	Supervisory visits conducted	☐	☐		Checklist & feedback
9	Post-campaign coverage survey	☐	☐		Findings & corrective actions
10	Lessons learned & recommendations	☐	☐		For next campaign

CONCLUSION

Part I sets the supervisory standards, verification procedures, accountability requirements, and data use principles for EPI. Part II operationalizes these through Templates T1–T11, providing Yes/No verification, structured evidence documentation, corrective action tracking, continuous supervision, and data-driven decision-making. Together, they ensure standardized supervision, high-quality data, accountability, and continuous improvement, strengthening immunization services in alignment with WHO and GVAP/IA2030 standards.

REFERENCES

- Ministry of Health Development (MoHD), Somaliland. (2009). *Essential Package of Health Services (EPHS)*. Hargeisa, Somaliland.
- Ministry of Health Development (MoHD), Somaliland. (2025). *National Health Policy*. Hargeisa, Somaliland.
- Ministry of Health Development (MoHD), Somaliland. (2026). *Expanded Programme on Immunization (EPI) Policy*. Hargeisa, Somaliland.
- PATH. (2022). Improving Cold Chain Management in Low-Resource Settings. Seattle, WA: PATH.
- UNICEF. (2023). Supply Chain and Cold Chain Management Guidelines. New York, NY: UNICEF.
- UNICEF & World Health Organization. (2023). *Estimates of National Immunization Coverage (WUENIC): 2023 Revision*. Geneva, Switzerland: WHO.
- World Health Organization. (2015). Immunization in Practice: A Practical Guide for Health Staff (2nd ed.). Geneva, Switzerland: WHO.
- World Health Organization. (2016). *Effective Vaccine Management (EVM) Assessment Tool*. Geneva, Switzerland: WHO.
- World Health Organization. (2017). *Reaching Every District (RED) Strategy Implementation Guide*. Geneva, Switzerland: WHO.
- World Health Organization. (2018). *Monitoring and Evaluation of Immunization Systems*. Geneva, Switzerland: WHO.