AFENET
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AEFI & VACCINE-RELATED EVENTS (VRE) BASELINE ASSESSMENT FINDINGS

Building a Safer Immunization Ecosystem for Nigeria

2025

Federal Ministry of Health

NCDC
NIGERIA CENTRE FOR DISEASE CONTROL AND PREVENTION

NAFDAC

CDC
U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION

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Acknowledgements

The successful implementation of the Vaccine Safety Project in Nigeria would not have been possible without the collective effort, dedication, and collaboration of numerous institutions, partners, and individuals.

We extend our sincere gratitude to the Federal Ministry of Health (FMoH), the National Primary Health Care Development Agency (NPHCDA), the Nigeria Centre for Disease Control and Prevention (NCDC), the National Agency for Food and Drug Administration and Control (NAFDAC), and other key national stakeholders for their technical leadership and strong policy support throughout the project.

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Finally, we deeply appreciate the participation of caregivers, community representatives, and key informants who shared their experiences and insights during the qualitative assessment. Your voices have enriched the project and will help guide the development of a more inclusive and resilient vaccine safety surveillance system.

Together, we have laid a strong foundation for advancing AEFI and VRE surveillance in Nigeria and reaffirmed our shared commitment to protecting public health through safe and trusted immunization programs.

Contents

Executive Summary

The U.S. Centers for Disease Control and Prevention (CDC)-supported Vaccine Safety Project, implemented by the African Field Epidemiology Network (AFENET) through Nigeria's Stop Transmission of Polio (NSTOP) platform, strengthened national Adverse Events Following Immunization (AEFI) surveillance and Vaccine-Related Events (VREs) response systems while building public trust in immunization programs. This initiative proved particularly vital as Nigeria introduced new vaccines and targeted zero-dose children.

The project pursued five objectives: stakeholder engagement on vaccine safety roles, interagency collaboration, comprehensive baseline assessment, data-driven improvements, and developing a national VRE response framework.
A February 2025 stakeholder meeting with key health agencies and seven state representatives established implementation strategies while identifying systemic challenges like inconsistent reporting and investigation protocols. The assessment trained 70 field staff who engaged 2,709 participants across all health system levels, conducted 206 interviews, and reviewed 444 documents.

Findings showed all six national agencies maintained AEFI systems, yet only half performed timely causality assessments, with 83% still paper-dependent despite 67% digital capacity. States demonstrated full system functionality but showed gaps in designated focal persons (86%) and quarterly reviews (43%). While 98% of LGAs had functional systems, training and reporting inconsistencies persisted. Facility assessments revealed 74% operational AEFI systems but inconsistent focal persons (59%) and reviews (50%). Caregivers showed high vaccine acceptance (95%) but variable AEFI awareness (14-96% by state).

Key challenges included 79% underreporting, outdated documents, and digital fragmentation between platforms like DHIS2 and MedSafety. Misinformation about COVID-19 and HPV vaccines emerged as a persistent barrier. Immediate needs include updated guidelines, digital expansion, and workforce training, while long-term solutions require unified policies, private sector engagement, and sustainable funding. While Nigeria's vaccine safety infrastructure shows strong coordination foundations, achieving optimal surveillance demands improved workforce capacity, system interoperability, and public communication strategies.

About AFENET

The African Field Epidemiology Network (AFENET) is a non-profit organization established in 2005 to strengthen public health systems across Africa and beyond. Working in close collaboration with Ministries of Health and other key partners, AFENET focuses on building sustainable capacity and effective programs to address critical health challenges. Through training, technical assistance, and hands-on field epidemiology support, AFENET empowers countries to enhance disease surveillance, outbreak response, and overall health system resilience. Its mission centers on advancing evidence-based public health interventions that save lives and foster long-term improvements in health outcomes.

Overview of AFENET'S MISSION, VISION AND VALUES






VISION

A Healthier Africa.

MISSION

Strengthen field epidemiology & public health laboratory capacity to address major public health problems in Africa.

GOAL

To ensure effective prevention & control of epidemics & other priority public health problems in Africa.

CORE VALUES

Accountability & Transparency, Professionalism, Networking and collaboration.

The Vaccine Safety Project

PROJECT OVERVIEW

The Vaccine Safety Project, launched in January 2025, is a strategic initiative led by the National Primary Health Care Development Agency (NPHCDA) in collaboration with key partners: the African Field Epidemiology Network (AFENET), the Federal Ministry of Health and Social Welfare (FMoHSW), the National Agency for Food and Drug Administration and Control (NAFDAC), and the Nigeria Centre for Disease Control and Prevention (NCDC). The project receives technical and financial support from the U.S. Centers for Disease Control and Prevention (US CDC).

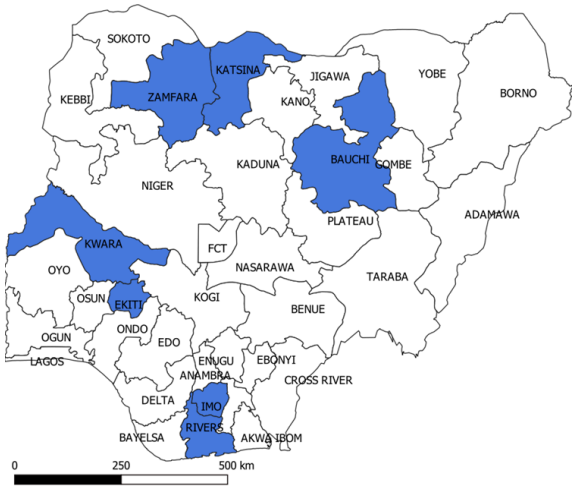
PROJECT GOAL

This project aims to strengthen surveillance systems, enhance vaccine safety monitoring, and improve response mechanisms for immunization-related events.

PROJECT OBJECTIVES

- To strengthen inter-agency collaboration between national & sub-national health agencies & regulatory bodies (e.g., NPHCDA, NAFDAC, NCDC, FMoH etc.)
- To conduct AEFI Surveillance & VRE baseline assessments in seven states using a mixed method approach.
- To disseminate findings and develop a robust framework for VRE Response Plan.
- To utilize data generated for programmatic improvements, strengthen immunization policies, & ensure evidence-based decision-making at all levels.

CRITERIA FOR STATES' SELECTION



7 states | 42 LGAs | 376 Health Facilities

States were selected based on key factors to ensure comprehensive representation, including geographic diversity, health indicators, system functionality, and accessibility. This approach supports balanced data collection and operational feasibility.

IMPLEMENTATION HIGHLIGHTS

The project secured government buy-in, engaged stakeholders, developed protocols, trained assessors and conducted nationwide baseline assessments.

Findings were analyzed, reported, and disseminated, culminating in a strategic VRE workshop to drive action.

ACTIVITIES

Phase 1

PLANNING & PREPARATION

- High-level advocacy
- Stakeholder engagement meeting
- Concept note/protocols/tools development
- Ethical approval

Phase 2

IMPLEMENTATION

- Field assessor training
- Baseline assessment activities
- Data cleaning/analysis

Phase 3

REPORTING & ACTION

- Baseline report writing
- Findings dissemination
- VRE workshop

ACHIEVEMENTS

Phase 1

POLICY & STAKEHOLDER WINS

- Government buy-in secured
- Multi-sector collaboration established

Phase 2

OPERATIONAL MILESTONES

- Assessment tools finalized
- 70+ field assessors trained
- Nationwide baseline data collected

Phase 3

KNOWLEDGE TO ACTION

- Evidence-based report completed
- Stakeholders engaged
- VRE response framework activated

STAKEHOLDERS ENGAGEMENT MEETING HIGHLIGHTS

On February 27, 2025, NPHCDA partnered with AFENET-NSTOP and U.S. CDC to convene key stakeholders from seven states and three federal agencies (FMoH, NCDC, NAFDAC) in Abuja. The meeting successfully launched the Vaccine Safety Project, achieving consensus on national priorities and implementation strategies. Participants demonstrated strong commitment to inter-agency collaboration and policy integration, while identifying critical challenges including inconsistent reporting systems and training gaps. These insights informed concrete next steps focusing on capacity building and improved coordination, establishing a solid foundation for strengthening Nigeria's vaccine safety surveillance.

FIELD ASSESSORS

SELECTION, TRAINING & DEPLOYMENT

A total of 70 field assessors were recruited from Nigeria Field Epidemiology and Laboratory Training Program (NFELTP) graduates and residents, prioritizing regional representation, technical competency, and availability to strengthen vaccine pharmacovigilance systems. The cohort underwent a two-day intensive capacity-building workshop, facilitated by 30 AFENET staff and partners (U.S. CDC, FMoH, NPHCDA, NCDC, and NAFDAC).









SUMMARY OF FINDINGS

Summaries of Interviews at National and Sub-national Levels

2,709 respondents participated in the baseline assessment activities

- **National level:** 6 respondents
- **State level:** 21 respondents
- **LGA level:** 127 respondents from 42 LGAs
- **Health facilities:** 376 facilities surveyed
- **Caregiver interviews:** 1,999 respondents
- **Qualitative interviews:** 206 stakeholders

NATIONAL LEVEL

STUDY RESPONDENTS OVERVIEW

Total Respondents:
6 national-level stakeholders

INSTITUTIONS FMoH&SW, NAFDAC, NCDC, NPHCDA, WHO

ROLES AEFI Focal Persons, WHO Partners, Heads of Surveillance, SORMAS Focal Persons

EXPERIENCE 14 ± 7.23 years (mean ± SD); range: 5–25 years

Vaccine Safety Document Availability and Updates

PREPARED & IMPLEMENTED DOCUMENTS	Majority of documents were prepared and implemented **(Lists of reportable AEFI, Guidelines for AEFI reporting, Guideline for AEFI Investigation, Guideline for AEFI Causality Assessment, Agenda for AEFI Causality Meetings and Meeting Minutes for Causality Assessment)** across organizations
	NPHCDA has the most **recently updated** documents, especially for **AEFI guidelines**
DELAYS IN DOCUMENT UPDATES	NCDC has **over 5 years old** documents for AEFI investigation and causality assessment
	NPHCDA has **Less than a Year** updates for key documents
DOCUMENT PREPARATION GAPS	Some documents were still in **preparation** or **not prepared**, particularly **AEFI causality meetings**
MOST RECENT UPDATES	**NPHCDA** had the most **recent updates** (2-3 years ago) e.g. **Guidelines for AEFI reporting**
	NCDC had several outdated documents (over 5 years ago) e.g. **Guidelines for AEFI reporting**

AEFI Detection, Notification, Reporting, and Causality Assessment

6/6 (100%) national entities (FMoH, NPHCDA, NCDC, NAFDAC, and 2 technical partners) had systems for investigating serious AEFIs.

	Systems for AEFI Investigation?	Investigation Initiated Within 1 Week?	Causality Assessment Completed Within 2 Weeks?	Quarterly Causality Meetings?	Dedicated Resources & Records?
FMoH&SW	✓	✗ No (Longer timelines)	✗ No (> 1 month)	✗ Irregular/None	✗ No
NPHCDA	✓	✓	✓	✓	✓
NCDC	✓	✓	✗ No (> 1 month)	✗ Irregular/None	✓
NAFDAC	✓	✓	✓	✓	✓
Technical Partner A	✓	✓	✓	✓	✓
Technical Partner B	✓	✓	✗ No (> 1 month)	✗ Irregular/None	✗ No
TOTAL (%)	**6/6 (100%)**	**5/6 (83%)**	**3/6 (50%)**	**3/6 (50%)**	**4/6 (67%)**

STRENGTHS
- All agencies have AEFI investigation systems
- 83% initiate investigations promptly

GAPS
- 50% lag in causality assessments (FMoH, NCDC, Partner B)
- 33% lack resources (FMoH, Partner B)
- 50% have irregular meetings (FMoH, NCDC, Partner B)

AEFI Reporting Systems and Data Sharing

This evaluation of Nigeria's AEFI surveillance analyzed reporting methods across six key agencies and partners. Findings reveal both **progress in digital adoption** and **persistent reliance on paper-based systems**, **highlighting opportunities to strengthen integration** and **standardization** for improved vaccine safety monitoring.

Reporting Methods Used

Method	Prevalence	Implementing Agencies
Electronic Systems	67% (4/6)	NPHCDA, NAFDAC, NCDC, 1 partner
Paper-Based	83% (5/6)	FMOH, NPHCDA, NCDC, NAFDAC, 1 partner
Telephone	17% (1/6)	FMOH
Excel Spreadsheets	33% (2/6)	NCDC, 1 partner

System Characteristics

Coexistence Phenomenon: 5/6 agencies (83%) maintain parallel reporting systems

Primary Electronic Tools: MedSafety, VigiMobile, DHIS2

Connectivity Barrier: Paper dominance in low-resource settings

The coexistence of fragmented digital and manual systems creates challenges for data harmonization, real-time surveillance, and national scalability.

Sharing of AEFI Reports with Vigibase Uppsala Monitoring

Only 50% (3/6) of Nigeria's key agencies; NAFDAC, NPHCDA, and one technical partner currently share AEFI reports with VigiBase, WHO's global safety database. The remaining 50% (FMOH, NCDC, and one partner) lack integration, creating gaps in comprehensive vaccine safety monitoring.

Standardizing VigiBase reporting would strengthen Nigeria's pharmacovigilance system.

AEFI Surveillance and Pharmacovigilance in Nigeria

The data collected provided key insights into **four critical areas of vaccine pharmacovigilance in Nigeria**:

1. Legal Mandate for Vaccine Pharmacovigilance

- All 6/6 respondents (100%) - FMoH, NPHCDA, NCDC, NAFDAC, and two technical partners - confirmed NAFDAC holds the legal mandate for vaccine pharmacovigilance in Nigeria

2. Status of National AEFI Surveillance Guidelines

- 3/6 respondents (50%) - NPHCDA, NCDC, and one technical partner - confirmed existence of national AEFI surveillance guidelines
- 3/6 respondents (50%) - FMoH, NAFDAC, and one technical partner - reported no such guidelines exist

3. Development and Updating of AEFI Guidelines

- 2/6 respondents (33.3%) - NPHCDA and one technical partner - identified NPHCDA as responsible
- 2/6 respondents (33.3%) - FMoH and one technical partner - attributed responsibility to FMoH
- 1/6 respondent (16.7%) - NAFDAC - pointed to NAFDAC

4. Last Update of AEFI Surveillance Guidelines

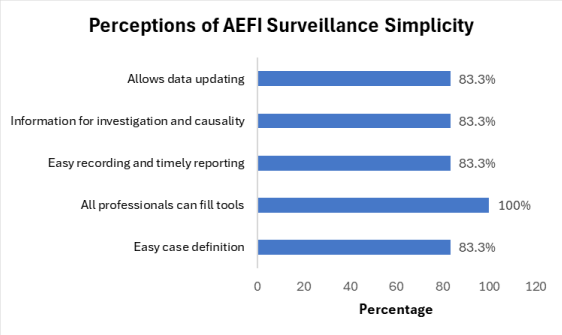
- 3/6 respondents (50%) - NPHCDA, NCDC, and one technical partner - reported last update was 2022
- 2/6 respondents (33.3%) - FMoH and NAFDAC - indicated guidelines had never been updated

AEFI Response, Investigation, Causality Assessment, and Feedback System

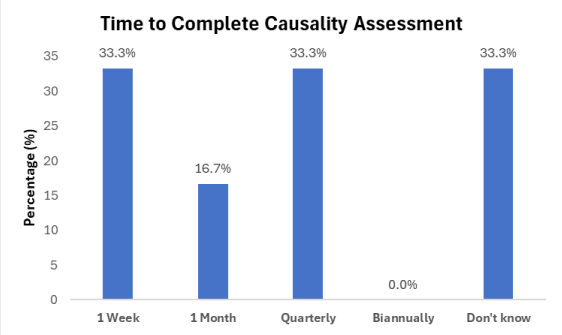
The data collected provides insights into the presence, training, and functionality of teams involved in AEFI management

	Team Presence	Training Status
AEFI Investigation	50% NPHCDA, NAFDAC, 1 partner	100% All agencies
Causality Assessment	50% NPHCDA, NAFDAC, 1 partner	100% All agencies
AEFI/VRE Response	66.7% NPHCDA, NCDC, NAFDAC, 1 partner	66.7% NPHCDA, NCDC, NAFDAC, 1 partner
Serious/Non-Serious AEFI Classification	50% NPHCDA, NAFDAC, 1 partner	100% All agencies
Non-AEFI VRE Response	66.7% NPHCDA, NCDC, NAFDAC, 1 partner	66.7% NPHCDA, NCDC, NAFDAC, 1 partner FMoH, 1 partner (no training) 33.3%
Emergency Risk Management	66.7% NPHCDA, NCDC, NAFDAC, 1 partner	50% NPHCDA, NAFDAC, 1 partner

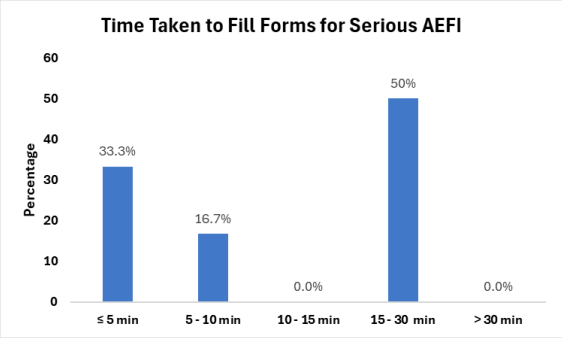
Surveillance System Attributes Assessment



Perceptions of AEFI Surveillance Simplicity: All respondents agreed AEFI reporting tools are user-friendly and can be completed by healthcare professionals.



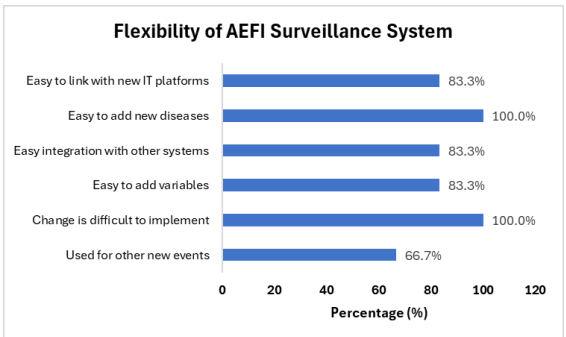
Time to Complete Causality Assessment: Serious AEFI reports: 15-30 minutes (average)



Time taken to fill forms for Serious AEFI: Most of the respondents had no idea while some responded within 1 week or quarterly

FINDINGS: NATIONAL LEVEL

AEFI Surveillance System – Flexibility and Data Quality

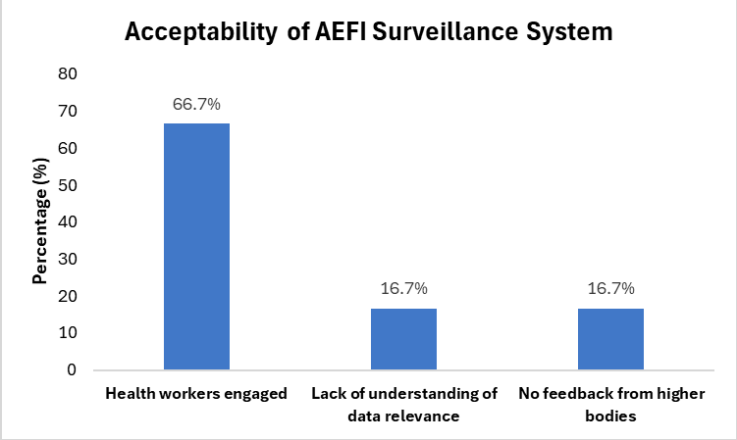


Adaptability
Majority agree system is integrative, though format modifications remain challenging

Data Completeness
Majority agree system is integrative, though format modifications remain challenging

Data Clarity
Majority found recorded information clear and interpretable

AEFI Surveillance System - Acceptability, Representativeness & Timeliness



AEFI Surveillance Acceptability:

- **High Engagement:** Majority reported health workers actively participate in AEFI reporting
- **Key Challenges:**
  - Limited awareness of data utility among staff
  - Insufficient feedback/recognition from leadership

AEFI Surveillance System – Representativeness, Timeliness, Completeness & Stability

METRIC	FINDINGS
Representatives	All respondents confirmed system detects AEFI occurrence across all communities
Timeliness	- Most reported on-time facility submissions (2024) - <50% tracked timely LGA-level reporting
Completeness	All reported completeness in reporting in 2024 (Target 80%)
Stability	- Most cited restructuring affected AEFI surveillance procedures - Most reported resource shortages disrupted AEFI surveillance

Community Listening and Vaccine-Related Event (VRE) Communication: Insights and Challenges

Indicator	Findings
ACSM/RCCE Focal Person	4/6 (66.7%) confirmed availability
Community Listening Activities	3/6 (50%) conducted
Feedback Methods	Community meetings, stakeholder engagement, surveys (each 2/6, 33%)
Concerns Assessment	- Direct feedback/leader consultations (1/6, 17%) - Social media monitoring (1/6, 17%) - General community concerns (2/6, 33%)
Top Vaccine Concerns	Misinformation & safety issues (3/6, 50%)
Engagement Frequency	After/during/before campaigns (each 2/6, 33%)
Key Challenges	Communication barriers, staff shortages, time, training, participation (each 1/6, 17%)
Community Assessment Plans	4/6 (67%) lacked formal VRE/AEFI plans
Social Media Monitoring	- 3/6 (50%) had SOPs - 4/6 (67%) no listening reports - 1/6 (17%) had framework
Media Engagement	- 4/6 (67%) never used social media - 1 media briefing in 6 months
Crisis Communication Plans	3/6 (50%) had vaccine-event plans

To build public trust and strengthen vaccine safety surveillance, Nigeria must institutionalize community listening and effective communication strategies for vaccine-related events (VREs), ensuring that concerns are heard, misinformation is addressed, and timely, transparent responses are delivered at all levels.

Operational Challenges and Issues with AEFI surveillance

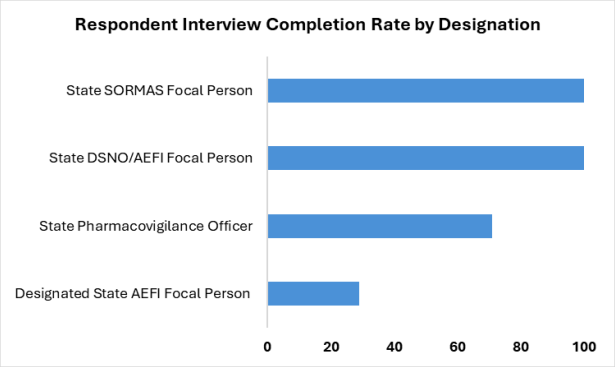
Category	Findings
Reporting Timeliness & Tracking	- 60% reported facility submission delays (2024) - 66.7% lacked tracking of timeliness to next level
Resource Shortages	5/6 (83%) reported insufficient personnel, tools, and logistics
Impact of Restructuring	4/6 (60%) cited restructuring disrupted system efficiency
Workload & Training Challenges	33% reported work overload and time-consuming formats delayed reporting
Health Worker Involvement and Training	- 4/6 (67%) use standardized case definitions - 2/3 submit reports in correct format
Surveillance System Performance	- 100% confirmed AEFI detection across communities - 83% noted rural communities were disadvantaged
Key Barriers	83% identified financial constraints, limited HR, and logistics as primary challenges

National Level: Key Gaps and Challenges

STATE LEVEL FINDINGS

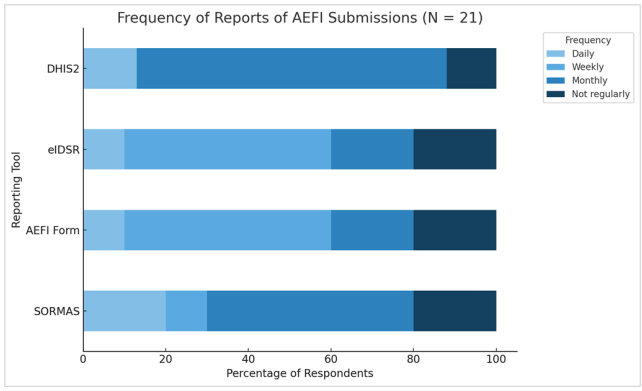
Summary of Targeted vs. Interviewed Respondents

Overall Response Rate: 21 out of 28 **targeted respondents** were **interviewed** – **75% response rate**



Designation of Respondents	Bauchi	Ekiti	Imo	Katsina	Kwara	Rivers	Zamfara	Total
State pharmacovigilance	1	1	1	1	1			5
SORMAS	1	1	1	1	1	1	1	7
AEFI Focal person		0	0		1	0	1	2
SDSNO	1	1	1	1	1	1	1	7

Status of AEFI Surveillance Systems



STATE	FOCAL PERSON AVAILABILITY	STATUS
Bauchi	66.7% - 100%	✓
Ekiti	66.7% - 100%	✓
Imo	66.7% - 100%	✓
Kwara	66.7% - 100%	✓
Rivers	66.7% - 100%	✓
Zamfara	66.7% - 100%	✓
Katsina	33.3%	✗

FINDINGS: STATE LEVEL

1. Functional AEFI Systems

All 7 states (100%) have functional AEFI surveillance systems

2. Availability of AEFI Focal Persons

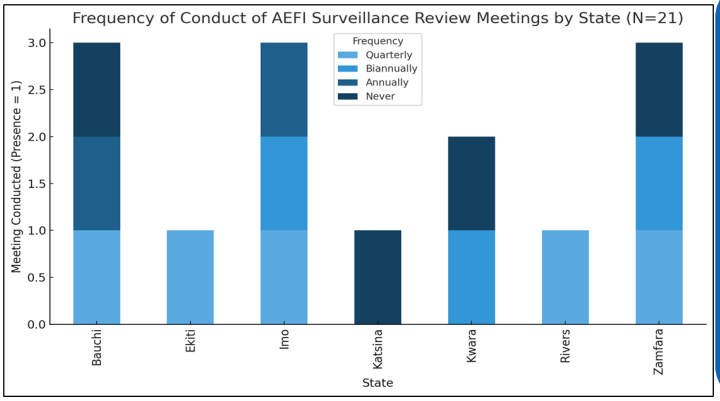
91% of states have assigned personnel for AEFI reporting

3. Reporting Tools Usage

- **Most Consistently Used:**
  - WHO AEFI Reporting Form (100% adoption)
  - AEFI Investigation Form (100% adoption)
- **Monthly Reporting:**
  - DHIS2 (75%)
  - SORMAS (50%)
- **Weekly Reporting:**
  - eIDSR (50%)
  - AEFI Case Investigation Forms (50%)
- **Irregular Reporting:**
  - 20% of users report inconsistencies across most tools, highlighting gaps in routine submissions

This calls for strengthened digital infrastructure and standardized tool adoption to improve the consistency and effectiveness of AEFI surveillance nationwide.

AEFI Surveillance Review Meetings



- **Importance:** Conduct of meetings indicates active AEFI case review and resolution
- **Inconsistencies:** Varied implementation across states
- **Quarterly Meetings Reported:** Ekiti, Rivers, Zamfara
- **Most Compliant:** Ekiti & Rivers
- **No Meetings Reported:** Katsina

- **Impact of Low/No Meetings:**
  - Delays in decision-making
  - Hindered detection of systemic AEFI issues

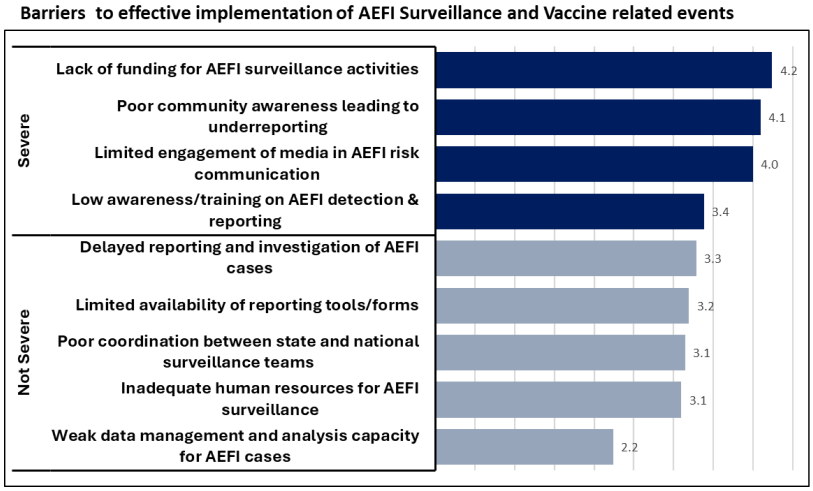
Frequency of Report Submissions Across States

Tool	Monthly	Weekly	Daily	Irregular
DHIS2 (n=21)	76%	14%	0%	10%
eIDSR (n=21)	19%	52%	10%	19%
Case Form (n=21)	19%	52%	10%	19%
SORMAS (n=21)	52%	9.50%	19%	19%

- DHIS2 dominates monthly reporting (76%)
- eIDSR and Case Forms show identical weekly patterns (52%)
- SORMAS has most varied reporting times
- No daily reporting in DHIS2

Platform	Standard Submission Timeline	Reference/Justification
WHO AEFI Case Investigation Form	Within 24 - 48 hours of identifying a serious or clustered AEFI	WHO recommends immediate notification and full investigation within 72 hours
DHIS2 (AEFI Reporting Module)	Monthly	Used for routine data aggregation and national reporting
eIDSR	Weekly	Follows IDSR guidelines for weekly reporting of priority conditions
SORMAS	Real-time/Daily or Weekly, depending on case urgency	Designed for real-time disease surveillance and case-based reporting
NAFDAC Reporting (via MedSafety App)	Immediately (real-time) for serious AEFIs	Encourages prompt pharmacovigilance for safety signal detection

Barriers to Effective Implementation of AEFI Surveillance and Vaccine-Related Events Response Plan



Most Severe Barriers

- Lack of Funding for AEFI Activities (Severity: 4.2)
- Poor Community Awareness → Underreporting (Severity: 4.1)
- Limited Media Engagement in Risk Communication (Severity: 4.0)

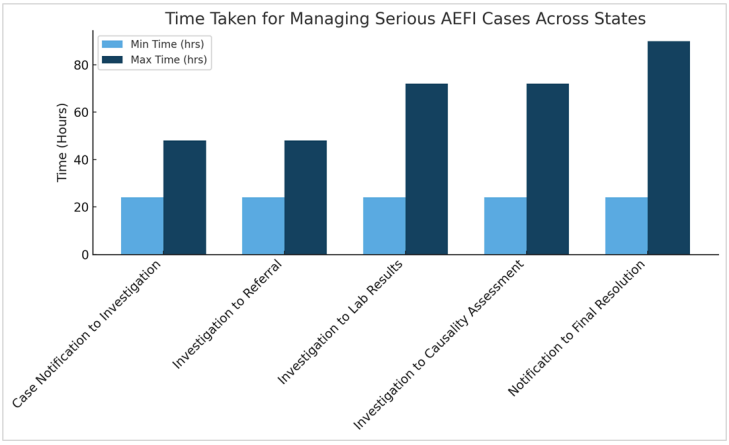
Least Severe Barrier

- Weak Data Management & Analysis Capacity

AEFI Case Management Timelines

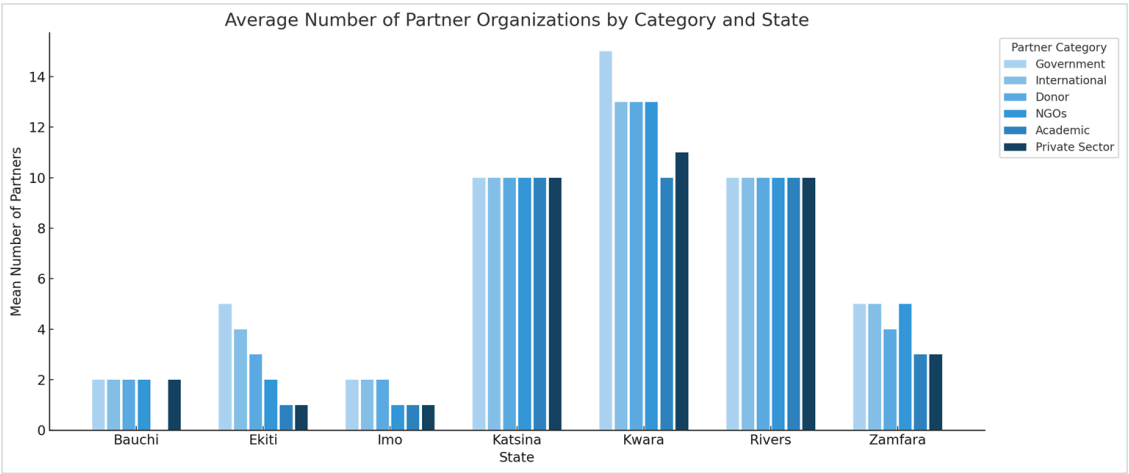
Assessment Revealed Valuable Insights into the Timeframes Associated with Various Stages of AEFI Case Management

- **Most processes (initiation, referrals, results) completed within 24 hours**
- **Longest delay for results: 10 days**
- **Causality assessment:**
  - <50% completed within 24 hours
  - Some delays up to 14 weeks
- **Case resolution:**
  - 19.0% within 1 month
  - Wide variability in timelines



FINDINGS: STATE LEVEL

Partner Involvement in AEFI Surveillance



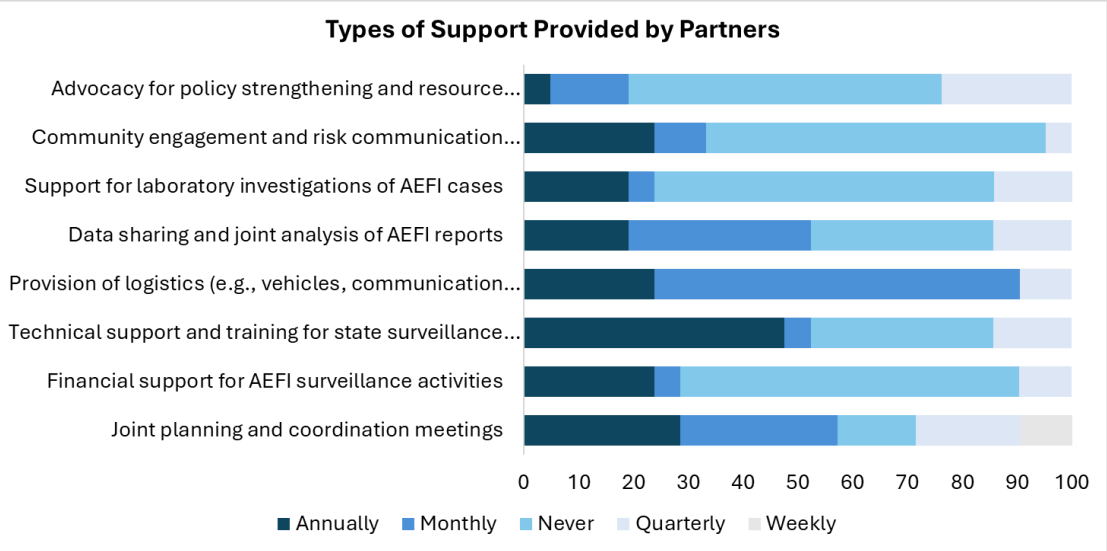
Support from: Government agencies, international organizations, NGOs, academic institutions, private sector

Kwara: Highest engagement (government, donors)

Katsina & Rivers: High partnerships across all categories

Bauchi & Imo: Low NGO/academic institution engagement

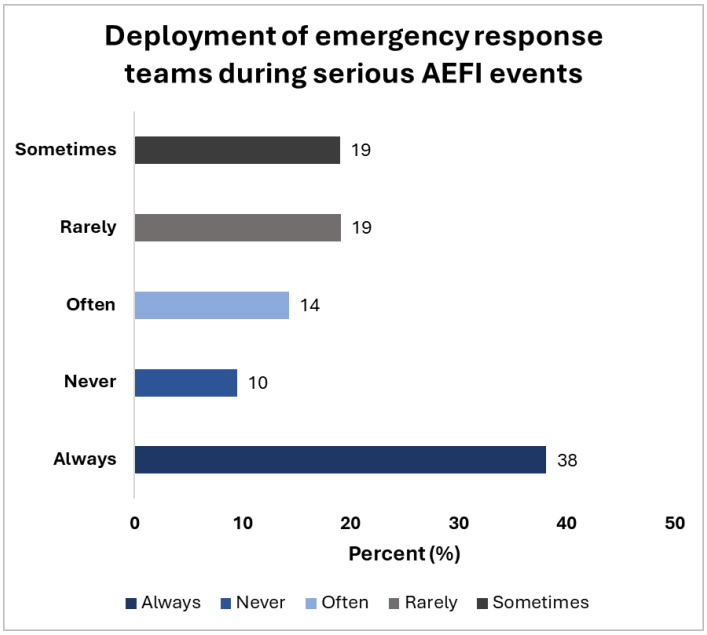
Government and Partners Engagement in AEFI Surveillance and VRE Response Across States



- Highest Engagement: Kwara (strong government/donor support)
- Consistently High: Katsina, Rivers (all partner categories)
- Low Engagement: Bauchi, Imo (NGOs/academic institutions)

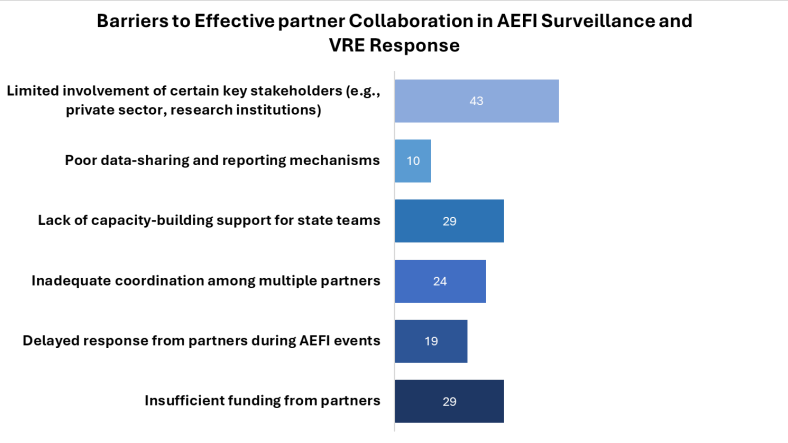
Partners included government agencies, international organizations, NGOs, academia, and private sector.

Deployment of Emergency Response Teams during Serious AEFI events



- Implications: Risks to timely case management, public trust, and immunization program credibility
- **Urgent Need:** Institutionalize regular team deployment nationwide to strengthen clinical outcomes and vaccine safety systems.

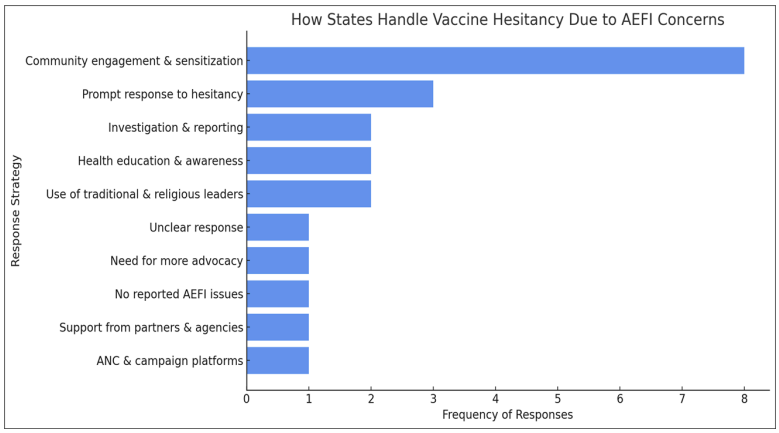
Barriers to Effective Partners Collaboration in AEFI Surveillance and VRE Response



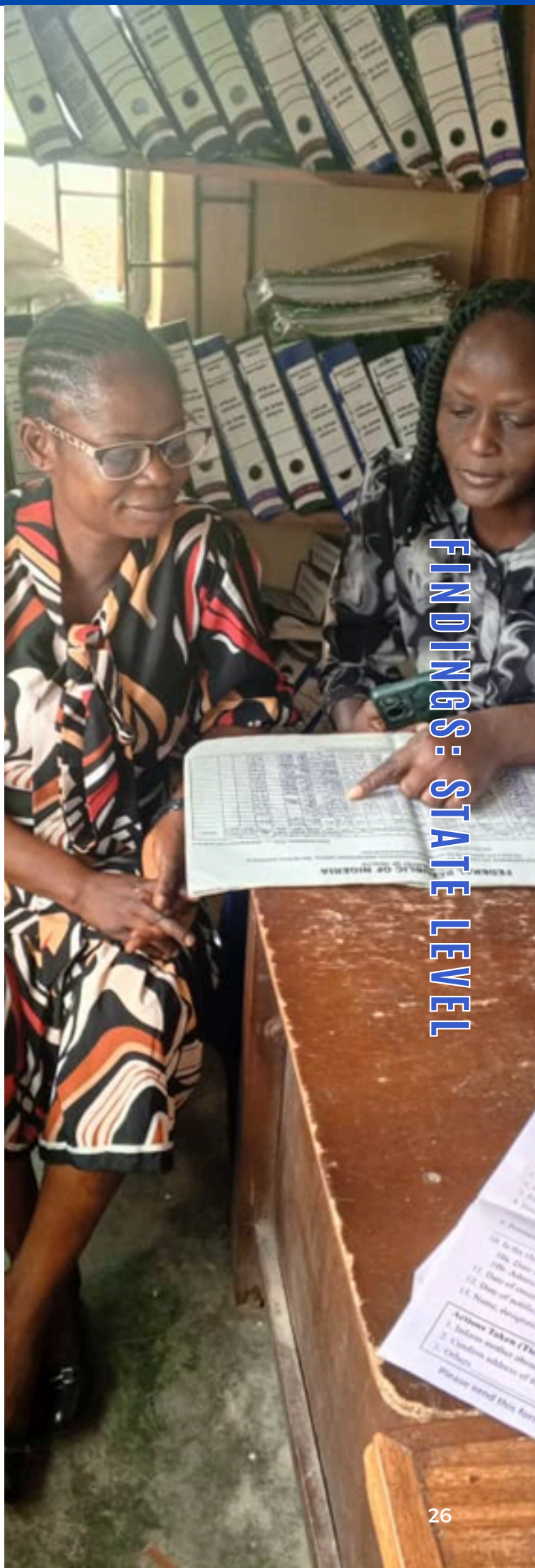
Key Barriers to Partner Collaboration in AEFI/VRE Response

- Limited stakeholder involvement
- Insufficient capacity-building
- Inadequate funding
- Poor coordination
- Delayed responses
- Gaps in data sharing

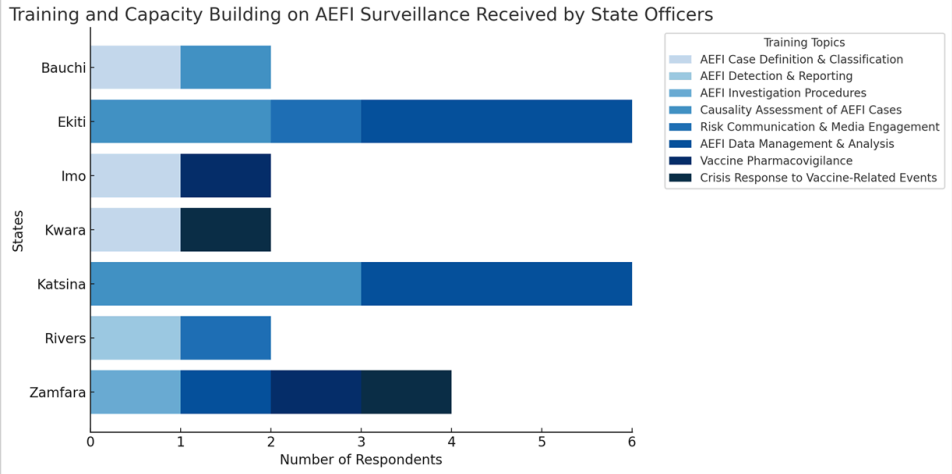
State Responses to Vaccine Hesitancy In Relation to AEFI Concerns



- **Primary Strategy:** Advocacy & sensitization efforts **(65%)**
- **Most Frequent Tactic:** Community engagement & sensitization **(48%)**



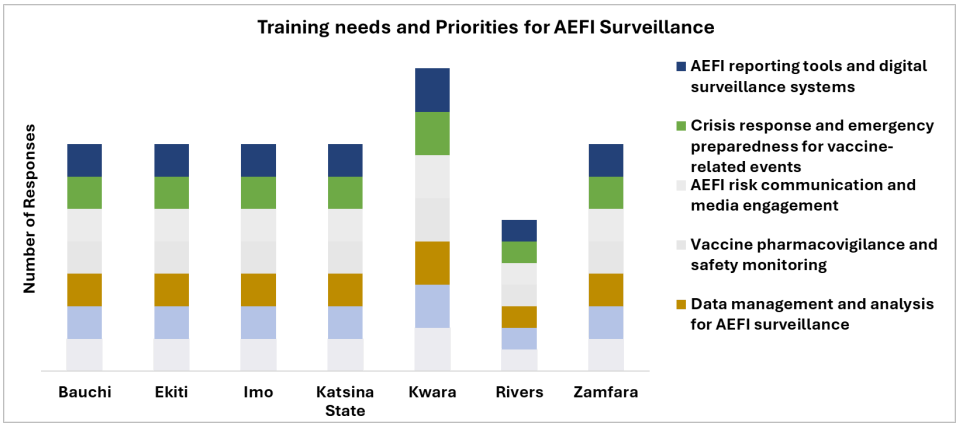
Training Gaps and Priorities Among State Officers



AEFI surveillance trainings received by state officers:

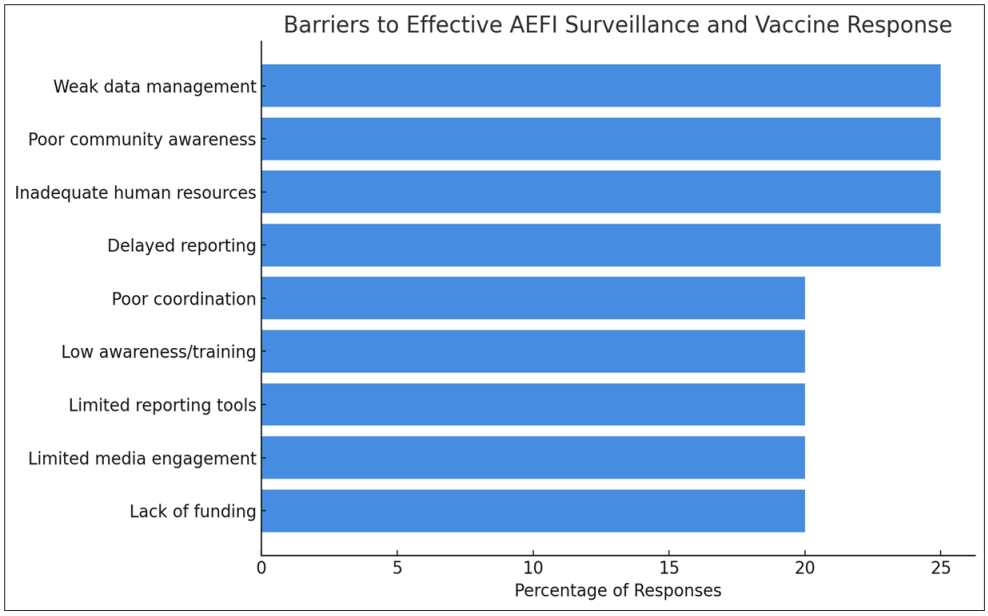
- AEFI Case Definition & Classification
- AEFI Detection & Reporting
- Causality Assessment of AEFI Cases
- Risk Communication & Media Engagement
- AEFI Data Management & Analysis
- Vaccine Pharmacovigilance
- Crisis Response to Vaccine-Related Events

Training needs and Priorities for AEFI Surveillance



- **All respondents identified training needs**
- **62% require training in reporting tools & digital systems**

Barriers to Effective Implementation of AEFI Surveillance and Vaccine Response

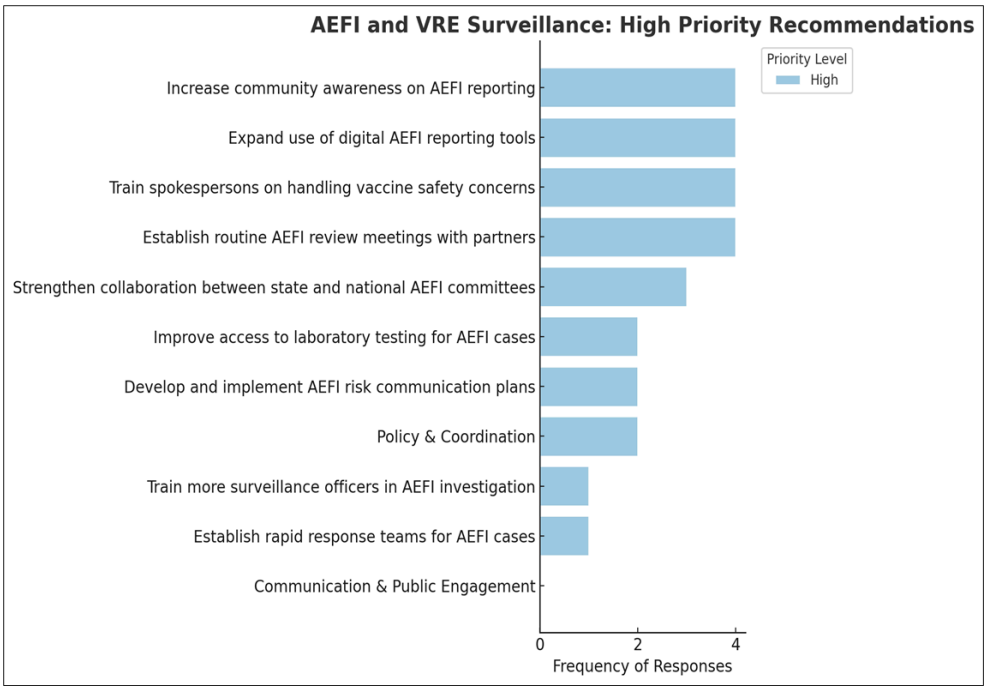


Critical Need

- Lack of funding for AEFI surveillance activities, with 71% of respondents rating it as highly severe (Scale 5)

Top 3 Recommendations

1. **Develop & implement risk communication plans**
2. **Train spokespersons on handling vaccine safety concerns**
3. **Train more surveillance officers in AEFI investigation**



State Level: Key Gaps and Challenges

State-level AEFI surveillance faces multiple challenges: weak community awareness, no VigiBase reporting staff, case resolution delays (up to 14 weeks), inadequate digital tool training, and inconsistent data review meetings. These gaps hinder effective vaccine safety monitoring.

01
Inconsistency in review meetings and data use for decision-making

02
Poor community awareness & limited media engagement

03
Lack of awareness of VigiBase and no designated personnel for reporting

04
Variability in referral & resolution timeframes; some delays up to 14 weeks

05
Training gaps in reporting tools and digital systems

LGA LEVEL FINDINGS

Coverage: 7 states, 42 LGAs total
Sampling: 6 LGAs per state, 6 respondents per LGA

Respondents: LGA DSNOs, Assistant DSNOs, AEFI Focal Persons, WHO LGA Focal Persons, UNICEF Field Volunteers

Status and Functionality of the AEFI Surveillance System at the LGA Level

AEFI Surveillance System Status

Metric	Overall	Rivers State
Functional AEFI Systems	98% (41/42 LGAs)	100%
Designated Focal Persons	69% (29/42 LGAs)	100%

Review Meeting Frequency

State	Quarterly	Biannual	Irregular/None
Ekiti	100%	–	–
Rivers	100%	–	–
Bauchi	Partial	Partial	50% never held
Katsina	Partial	–	67% irregular
Imo	–	–	67% irregular
Zamfara	–	–	33% none

Reporting Tool Usage

Tool	Highest Adoption	Lowest Adoption
DHIS2	Bauchi (100%), all states ≥80%	–
eIDSR	Ekiti (83%), Imo (65%)	Zamfara (50%)
SORMAS	Bauchi (60%), Ekiti (50%)	Rivers (10%), Katsina (30%)

FINDINGS: LGA LEVEL

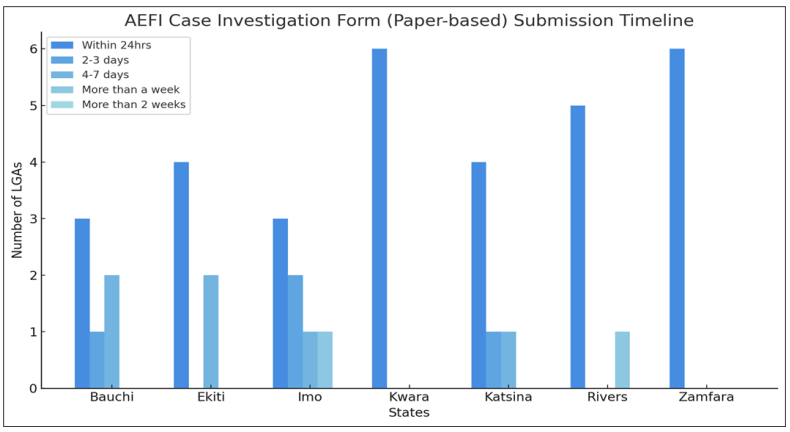
Key findings from 42 LGAs across 7 states reveal:

1. Near-universal AEFI system functionality (98% of LGAs)
2. Variable focal person coverage (69% average, 100% in Rivers)
3. Mixed review meeting compliance (100% quarterly in Ekiti/Rivers vs irregular/none in others)
4. Uneven digital tool adoption (universal DHIS2 use vs patchy eIDSR/SORMAS implementation)

The data shows robust system establishment but highlights opportunities to:

- Strengthen human resource allocation
- Standardize review processes
- Expand digital reporting capabilities

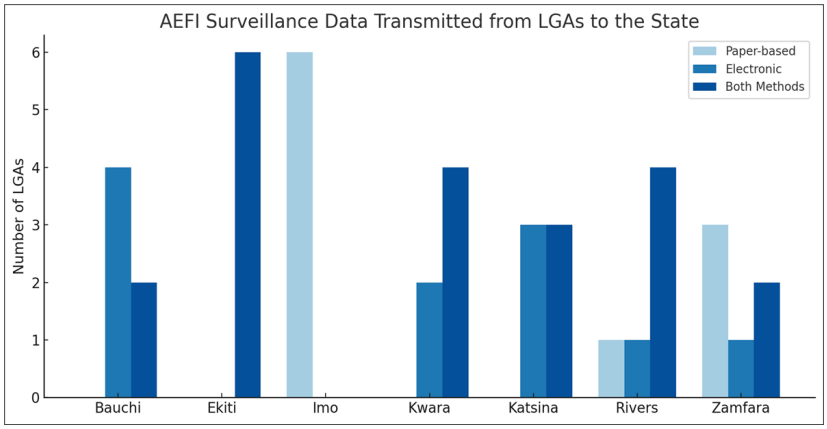
Submission Timeline for AEFI Case Investigation



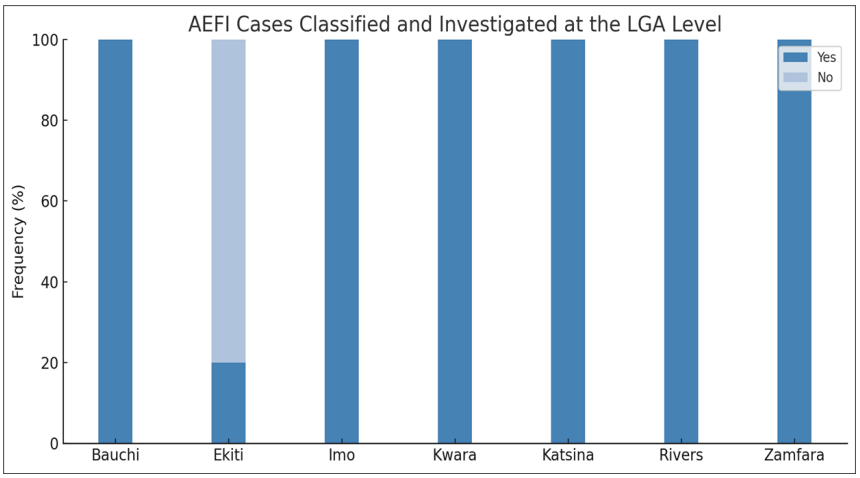
- **24-hour submission:** Highest in Kwara & Zamfara (6 LGAs each)
- **Delayed submission (>24 hours):** Bauchi, Ekiti, Imo, Katsina (up to >1 week)

Transmission of AEFI Surveillance Data from LGAs to State Level

- **Paper-based only** dominant in Imo (6 LGAs) & Zamfara
- **Electronic only** common in Bauchi & Katsina (3 - 4 LGAs)
- **Both methods** used most in Ekiti, Kwara, & Rivers (4 - 6 LGAs)

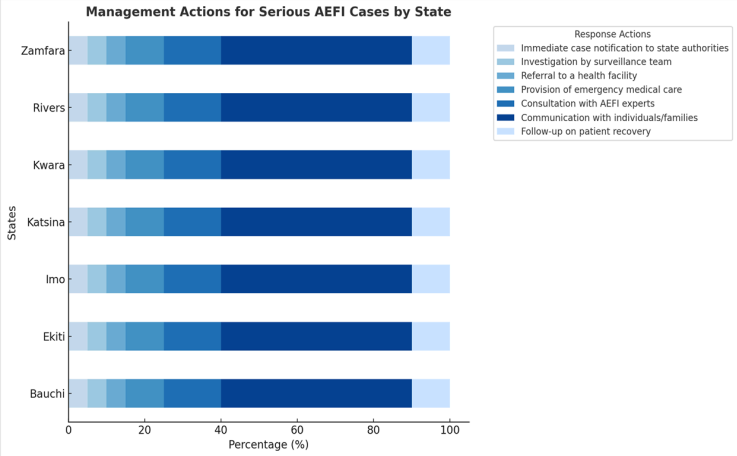


AEFI Case Classification & Investigation



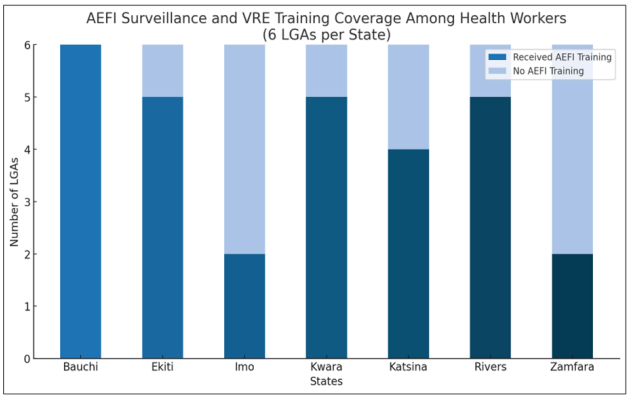
- **All states** demonstrate **consistent case classification at LGA level**
- **6/7 states** show **100% investigation compliance**
- **Ekiti** had the **lowest performance,** with only **20% investigated**

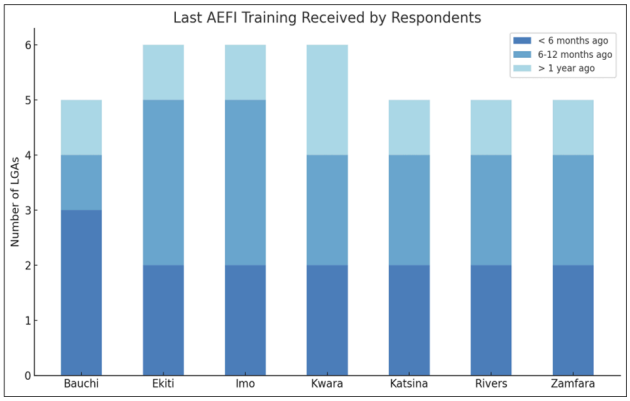
Management and Investigation of AEFI



- **Initial Response:** Immediate notification/referral/investigation occurred in all states (infrequent)
- **Consistent Practices:** Follow-up & family communication (all states)
- **Variable Performance:** Emergency care & expert consultation (moderate, state-dependent)

AEFI Surveillance and VRE Response Training





FINDINGS: LGA LEVEL

Recent Training Disparities:

- **Zamfara (60%) & Kwara (50%):** Highest ≤6-month training rates
- **Imo, Katsina, and Rivers:** >70% trained >1 year ago

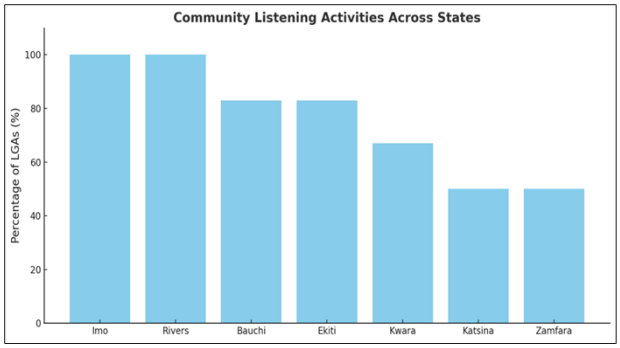
Content Gaps:

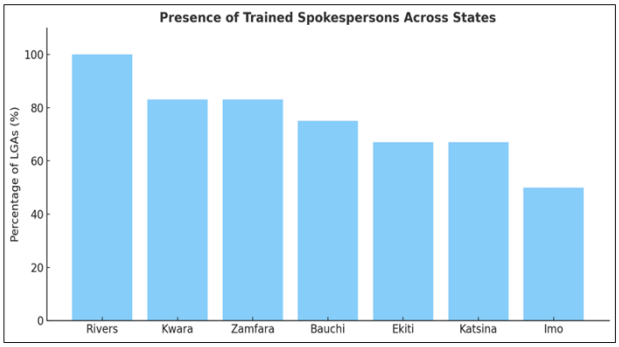
- **Universal coverage in core skills** (case ID, reporting)
- **Limited advanced training** (<40% in causality assessment, digital tools)

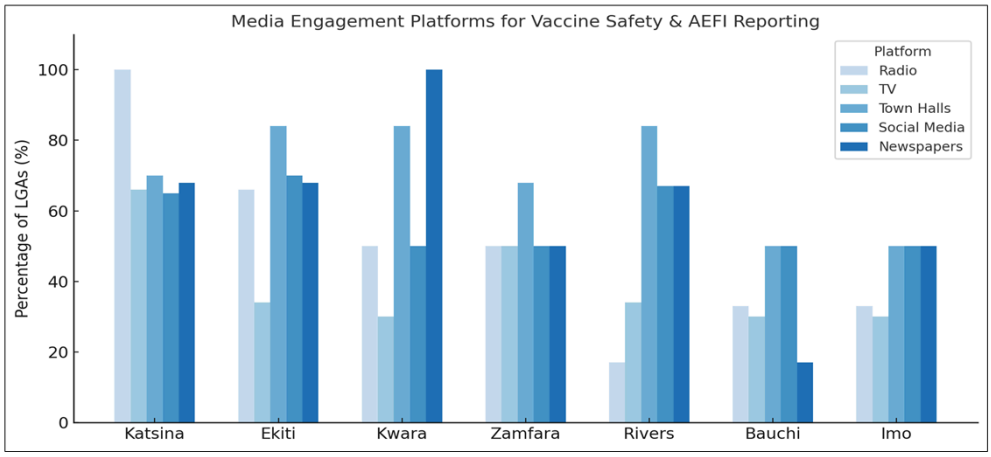
Priority Needs:

- **Refresher training in 3 states** (Imo/Katsina/Rivers)
- Expand **advanced modules nationwide**

Status of Community Listening & Media Engagement







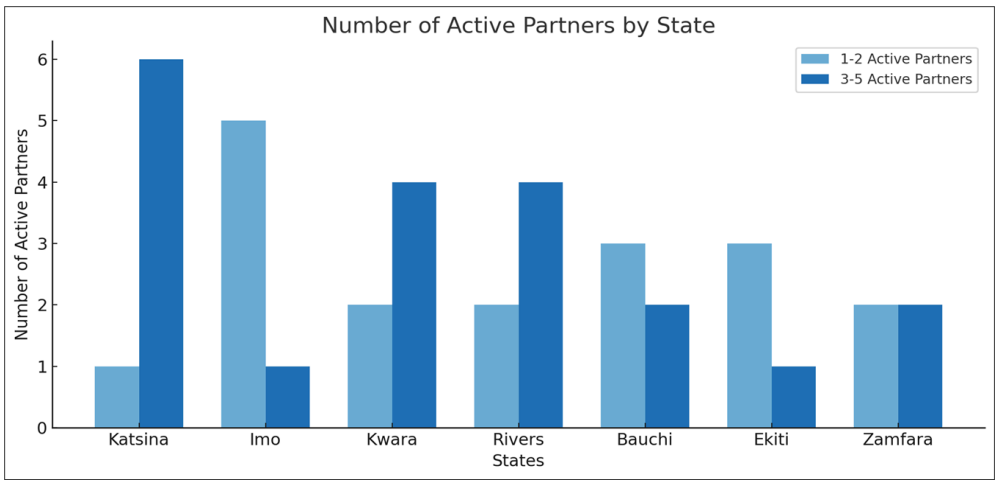
Community Listening:
- **Imo, Rivers: 100%** (6/6 LGAs)
- **Bauchi: 83%** (5/6)
- **Kwara: 67%** (4/6)

Media Engagement:
- **High:** Rivers, Kwara (town halls, radio, social media)
- **Low:** Bauchi, Ekiti

Trained Spokespersons:
- **Rivers: 100%** (6/6)
- **Kwara: 83%** (5/6)
- **Other states, lower coverage**

FINDINGS: LGA LEVEL

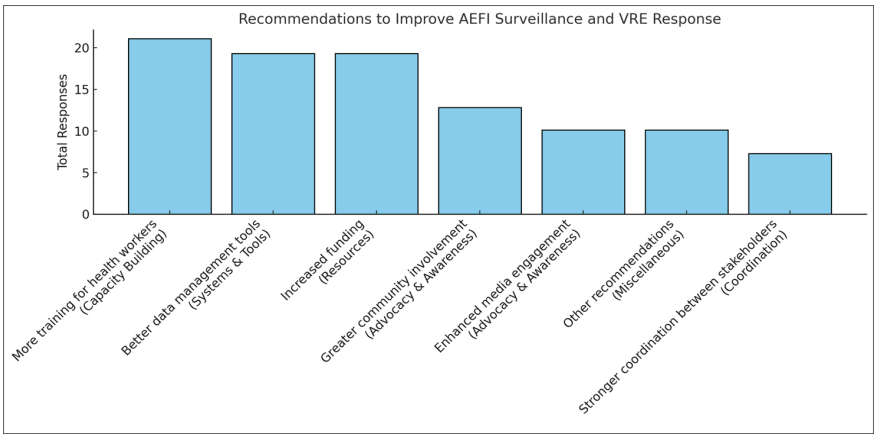
Partner Support for AEFI Surveillance



- **Support Frequency (All LGAs):**
  - Regular: 33%
  - Occasional: 33%
  - Rare: 12%
  - None: 21%
- **Active Partners per State:**
  - **Bauchi/ Ekiti /Imo:** 1 - 2 partners (most LGAs)
  - **Other states:** 3 - 5 partners (most LGAs)

Common High-severity Challenges across States

Respondents' Recommendations to AEFI Surveillance and VRE Response



Top 3 Priorities recommended:

- More training for health workers (21%)
- Better data management tools (19%)
- Increased funding (19%)

HEALTH FACILITY LEVEL FINDINGS

Health Facility Demography

Health Facility Survey Summary (N=376)

Facility Type

Category	Count	%	Highest Proportion (States)
Primary (PHC)	316	84%	• Katsina (92%) • Ekiti (91%)
Secondary	44	12%	–
Tertiary	16	4%	–

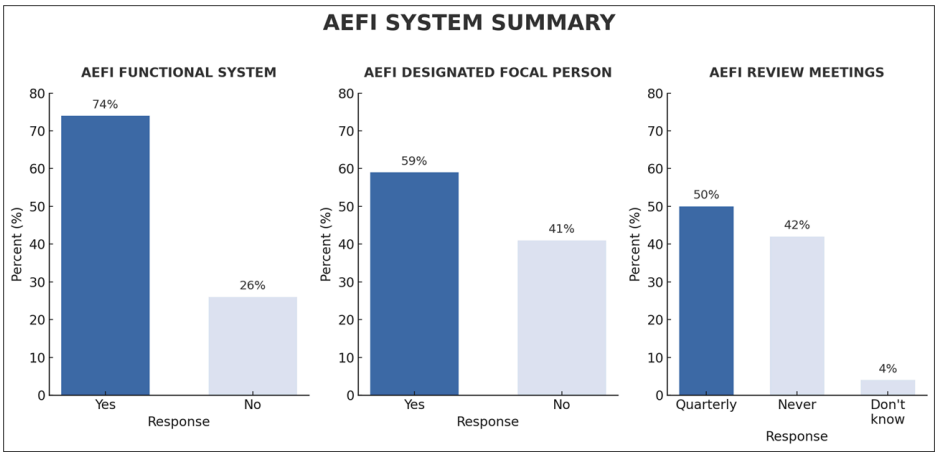
Ownership

Category	Count	%	Notable Observations
Public	348	93%	Katsina & Zamfara: 100% public
Private	28	7%	Zamfara: 0 private

Geographic Distribution

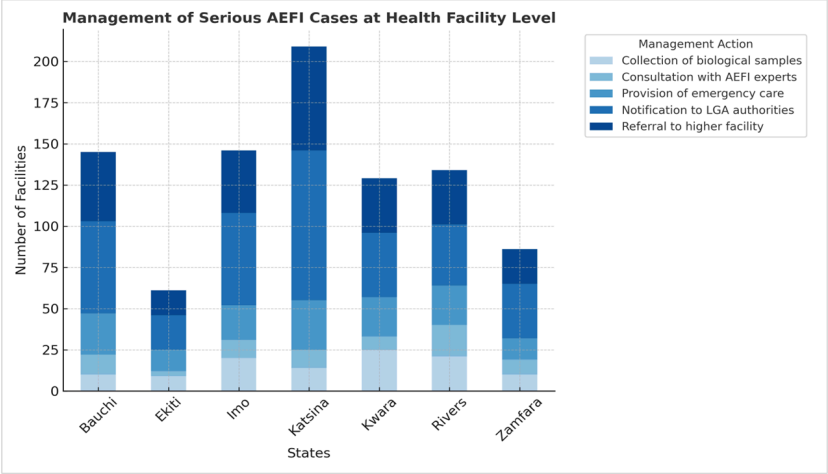
Category	Count	%	Highest Representation (States)
Rural	216	57%	–
Urban	142	38%	Imo, Rivers
Semi-urban	18	5%	Ekiti (9%), Zamfara (10%)

Functional AEFI Surveillance System, Availability of Designated HF AEFI Focal Person and Frequency and Consistency of AEFI surveillance Review Meeting



- **AEFI Functional System**
  - 74% of the HF reported having a functional AEFI system in place
- **AEFI Designated Focal Person**
  - 59% reported that a designated AEFI focal person is available
- **AEFI Review Meetings**
  - 50% of sites conducted AEFI review meetings quarterly
  - 42% reported never holding such meetings
  - 4% of respondents did not know the meeting frequency

Management of Serious AEFI Cases and Reporting Systems at the Health Facility Level



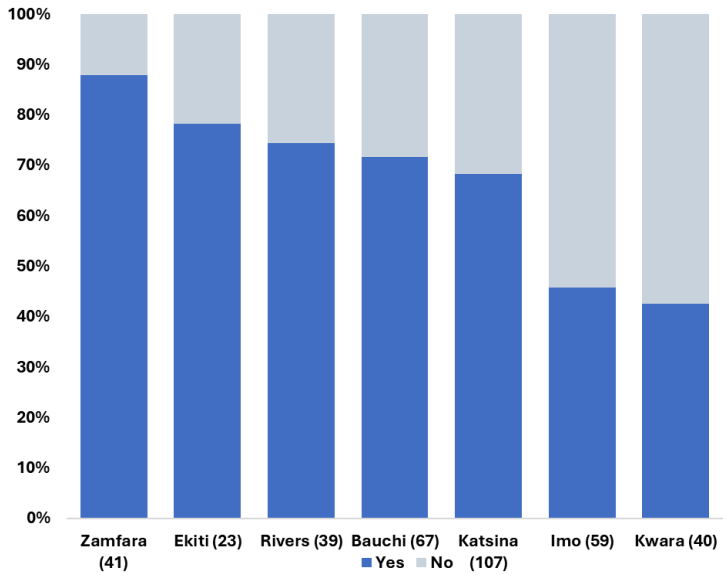
- **Notification to LGA authorities** was the **most common action**, reported in **over 90% of facilities in most states**
- **Referral to higher facilities and emergency care** were **widely practiced**, especially in **Kwara and Rivers**
- **Biological sample collection** was **less common**, though **higher in Kwara and Rivers**
- **Consultation with AEFI experts** was **least practiced**, notably **low in Ekiti and Kwara**

Method of Transmission of AEFI data from the HF Level to the LGA Level

Method	Facilities Using (%)	Top States	Lowest Adoption
Paper-based Only	81% (304/376)	Zamfara (95%), Katsina (81%)	Ekiti (74%), Rivers (77%)
Hybrid (Paper + Electronic)	15% (55/376)	Ekiti (26%), Rivers (23%)	Zamfara (5%), Bauchi (10%)
Electronic Only	1% (5/376)	Imo (3%), Katsina (2%)	Zamfara (0%), Kwara (0%)

- Overwhelming paper reliance: 819% use paper-only systems.
- Limited digital progress: Only 1% use electronic-only methods.
- Hybrid systems emerging: 15% adoption, led by Ekiti and Rivers.

Training and Capacity Building on AEFI Surveillance and VRE Response Received by Health Facility Staff



- **66% (248/376) of health workers** received formal AEFI training
- **Highest coverage:** Zamfara (88%)
- **Lowest coverage:** Imo (46% untrained), Kwara (58% untrained)
- **Recent training (≤6 months):**
  - Zamfara (81%)
  - Rivers (55%), Kwara (35%) – notable delays
- **Key training gaps:**
  - Causality assessment: Only 35% trained (Katsina: 10%, Imo: 22%).
  - Risk communication: Just 51.6% (Katsina: 27%).
  - High demand: 99% requested more training especially Kwara & Imo

Management of Serious AEFI Cases and Reporting Systems at the HF Level

Significant variations in management of serious AEFI were observed:

NOTIFICATION PRACTICES	SAMPLE COLLECTION	EMERGENCY CARE AVAILABILITY	REFERRAL SYSTEMS	INVESTIGATION OF AEFI-RELATED DEATHS	EXPERT CONSULTATION
• **89%** of facilities **reported serious AEFI cases** to LGA authorities	• Only **29% of facilities collected samples for AEFI cases**—a critical gap	• Wide variation observed: • **28%** of facilities in **Katsina provided emergency care** • **62%** of facilities in **Rivers offered emergency response**	• **65%** of facilities had **referral mechanisms** in place • Notable **gaps in Bauchi and Zamfara**	• Only **60% of respondents** indicated such **deaths are investigated** • **Imo and Kwara** reported **no investigations at all**—potentially **compromising surveillance integrity**	• **80% had referral pathways**, yet only **19% of serious AEFI cases involved expert review**

Community Listening and Media Engagement

COMMUNITY LISTENING SESSIONS	ENGAGEMENT FREQUENCY	COMMUNICATION CAPACITY
• **66%** of facilities **conducted sessions** • **Highest participation: Bauchi (85%)** • **Lowest participation: Imo (49%)**	• **Monthly sessions most common** overall • **Ekiti** led **monthly sessions (77%)** • **Zamfara** adopted a more intensive model with **weekly sessions in 52% of facilities** • **Low-frequency engagement in Imo (21%)** and **Kwara (7%)** ; sessions held rarely	• Only **47% of facilities** have been trained on **vaccine safety communication** • Major gaps in **Bauchi (75% lacked)** and **Katsina (65% lacked)** • **Best coverage in Rivers (80%), Kwara (66%),** and **Zamfara (66%)**

Stakeholders Involvement and Collaboration in AEFI Surveillance

KEY PARTNER INVOLVEMENT	COLLABORATION TYPES	STATE HIGHLIGHTS	PRIVATE SECTOR ENGAGEMENT
• **WHO** was the most **consistently involved** partner: • **93%** of facilities in **Bauchi** • **98%** in **Kwara** • **MoH participation varied**: • **85%** in **Rivers** • Only **25%** in **Bauchi** • **UNICEF** had **strong presence** in **Katsina (54%)** but **minimal in Zamfara (12%)**	• **Technical support** and **training** were **most common**: • **Bauchi led** with **75%** of facilities **receiving support** • **Gaps** in: • **Laboratory investigation support** (only 47 instances) • **Emergency team deployment** (only 74 instances)	• **Rivers** demonstrated a **strong, multi-dimensional approach** with: • **Joint coordination meetings (67%)** • **Financial support (44%)** • **Logistics provision (46%)** • **Imo** had **low engagement**: • Only **20% received technical support** • Just **3% received financial support**	• High engagement: 70% of facilities in Kwara partnered with private providers • Low engagement: Only 19% in Katsina, indicating potential surveillance gaps • 65% of facilities reported no private sector involvement

Barriers to Effective Partners Involvement in AEFI & VRE Surveillance

Funding Constraints

- **39.1%** of facilities reported **severe funding issues**
- Highest in **Ekiti (57%), Bauchi (52%),** and **Imo (52%)**
- Zamfara had fewer **high-level issues (20%)** but still faced **moderate shortages (34%)**

Coordination Challenges

- **Most pronounced** in **Rivers (31%)** and **Imo (27%)**
- **Kwara reported no high-level coordination issues**
- **Inadequate Capacity Building:**
  - **High insufficiency in Imo (36%)** and **Rivers (36%)**

Data-Sharing Gaps

- **Rivers** had the **most challenges,** with **44% of facilities reporting issues**
- **Weak Stakeholder Engagement:**
  - Severe gaps in **Bauchi (55%), Ekiti (48%),** and **Imo (46%),** especially with private sector and research institutions

LGA and Health Facility: Key Gaps & Challenges

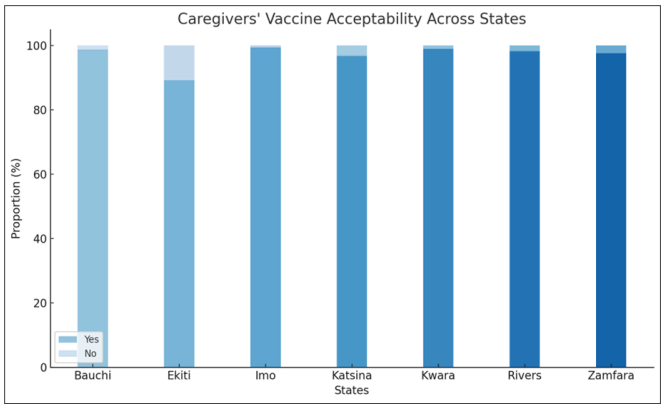
COMMUNITY LEVEL FINDINGS

- **Caregiver interviews:** 1,999 surveyed, with demographic variations across 7 states
- **Mean age:**
  - Bauchi & Katsina: 27 (youngest)
  - Rivers: 32 (oldest)

Demographic variations across the caregivers surveyed in seven Nigerian states

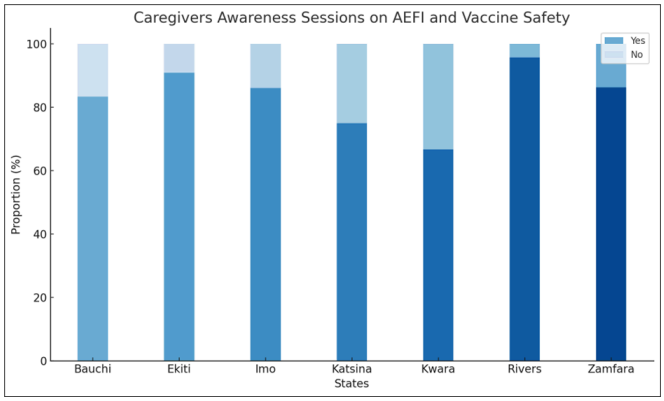
- **Religion:** 64% Muslim
- **Gender:** 99% female
- **Relationship to child:** 97.8% mothers
- **Education:** 38% completed secondary education
- **Place of delivery:** 62% at PHCs
- **High Traditional Birth Attendant (TBA) deliveries:**
  - Bauchi: 43% (143/331)
  - Katsina: 62% (346/559)
  - Zamfara: 62% (131/211)

Caregivers' Vaccine Acceptability



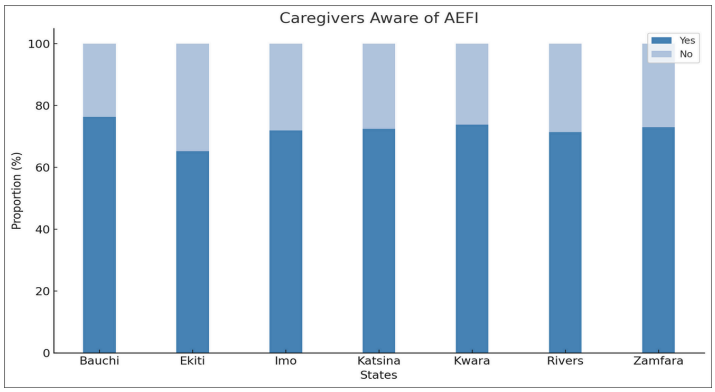
- **Vaccine acceptability:**
  - Bauchi: 99%
  - Ekiti: 90% accepted, 11% declined
- High overall acceptance, but some caregivers saw no need for vaccines

Caregivers' Participation in Awareness Sessions on AEFI & Vaccine Safety



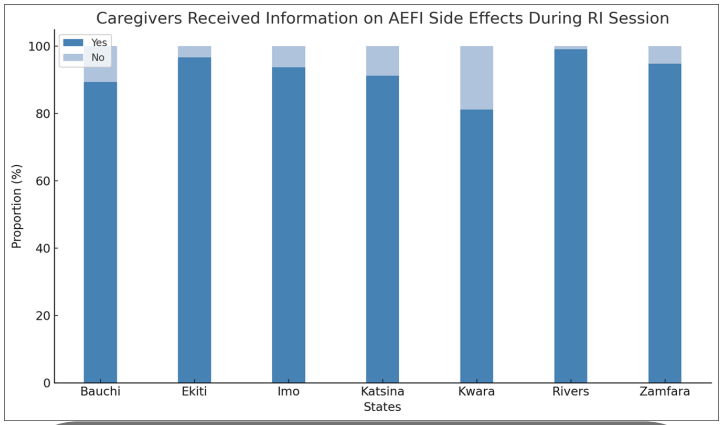
- **Awareness session participation:**
  - Rivers: 96%
  - Ekiti: 91%
  - Over 75% participation in reporting states

Caregivers' Awareness on AEFI



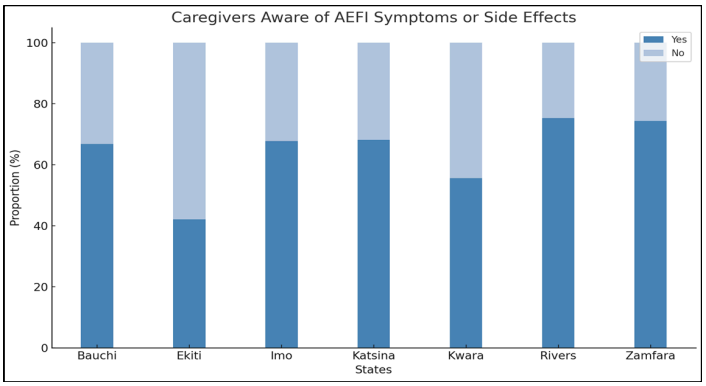
- **AEFI Awareness:**
  - Bauchi: 77%
  - Rivers: 73%
  - Katsina: 74%
  - Ekiti: 34%

Caregivers' Received Information on AEFI Side Effects during RI Session



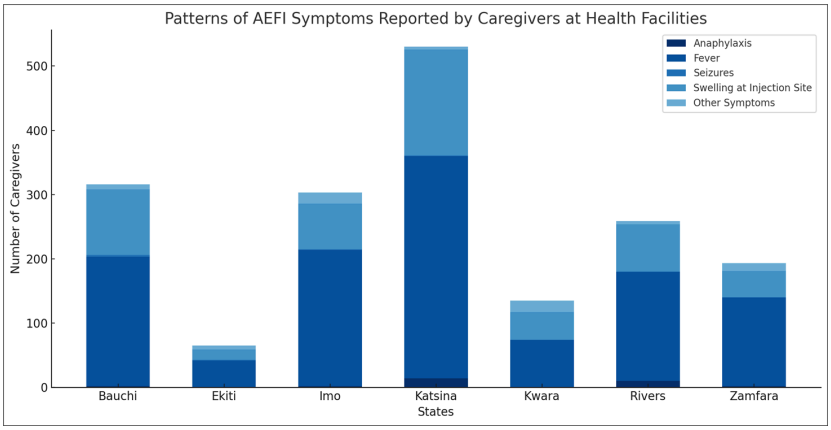
- **AEFI Side Effects Info During RI Sessions:**
  - Most caregivers received info
  - Near-universal coverage in Rivers & Ekiti

Caregivers' Awareness on AEFI Symptoms



- **AEFI Symptom Awareness:**
  - Rivers: 75%
  - Zamfara: 74%
- **Key Insight:** Widespread AEFI awareness, but some states need targeted education

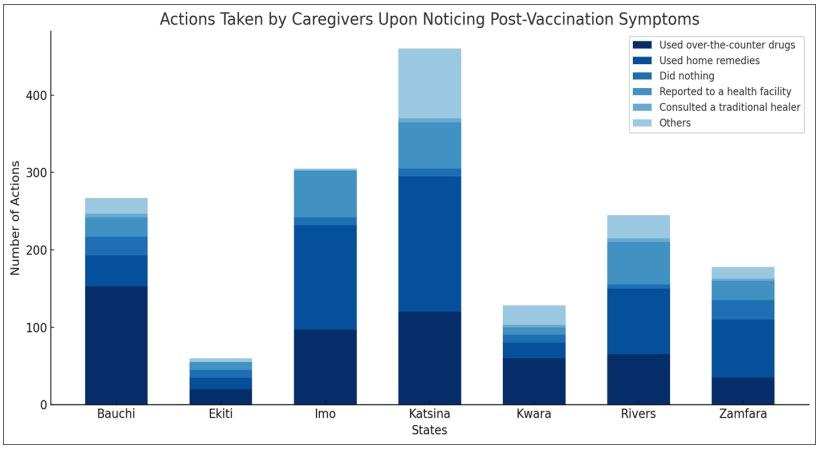
Patterns of AEFI Symptoms Reported by Caregivers at the Health Facilities



- **Reported AEFI Symptoms:**
  - **Most common:** Fever
  - **Second:** Swelling at injection site
  - **Rare:** Anaphylaxis (Bauchi: 1%, Katsina: 3%, Rivers: 4%)

Actions Taken by Caregivers Upon Noticing Post-vaccination Symptoms

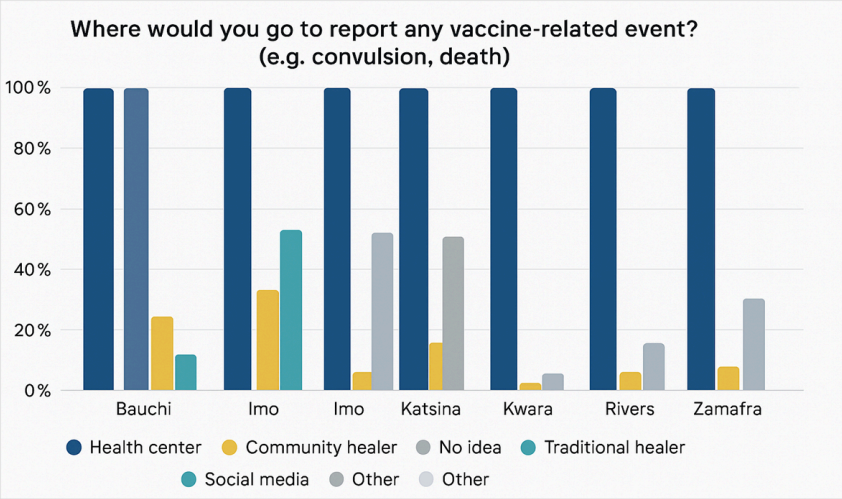
- **Caregiver Responses to Symptoms:**
  - **OTC drug use:** Bauchi (29%), Imo (18%), Katsina (22%)
  - **Home remedies:** Imo (25%), Katsina (33%)
  - **Health facility reporting:** Rivers (16%), Katsina (18%)
  - **Rare:** Traditional healer consultation (Kwara: 3%, Zamfara: 7%)



Behavioural and Social Drivers of Vaccine Safety

- **Domain A: Thinking and Feeling**
  - 99.8% believe vaccines are safe for children
  - 92% are very confident in vaccine safety
- **Domain B: Motivation**
  - 95% would continue vaccinating despite child developing fever
  - Katsina: 96%
  - Imo: 96%
  - Rivers: 92%
- **Domain C: Social Processes**
  - Main vaccine info source: Healthcare workers
  - Bauchi: 95%
  - Ekiti: 94.2%
  - Imo: 96%
  - 99% agree healthcare workers should educate on AEFIs
- **Domain D: Practical Issues**
  - **Perceived symptom severity:**
    - Katsina: 50%
    - Bauchi: 53%
  - **AEFI reporting barriers:**
    - Facility delays: Katsina (1%), Zamfara (4%)
    - Traditional care & transport costs
  - **Health service barriers:**
    - Long waiting time: Rivers (51%), Katsina (39%), Bauchi (22%)
    - Limited facility hours
    - Unfriendly health workers
  - **Socio-economic barriers:**
    - Transport costs: Rivers (30%), Katsina (17%)
    - Household duties: Rivers (20%), Katsina (12%)
    - Work/time constraints: Rivers (20%), Imo (12%)

Caregivers Involvement in Vaccine Related Events Response



VRE Reporting Preferences:

- **Health centers:** Rivers (98%), Ekiti (97%)
- **Traditional/community healers:** Katsina (7%), Imo (6%)

Community Level: Key Gaps & Challenges

Variability in awareness levels; some states had <35% caregiver awareness

High use of home remedies and low health facility reporting

Misinformation, safety concerns, and weak caregiver engagement

Low documentation of risk communication and public awareness strategies

DESK REVIEW

- **Desk Review Participants:**
  - Total: 444
  - National: 6
  - State: 20
  - LGA: 42
  - Health Facility (HF): 376
- **Respondent Institutions:**
  - FMoH, SMoH, NPHCDA, SPHCDA, NAFDAC, NCDC
- **Review Locations:**
  - Health Facility: 85%
  - LGA: 10%
  - State: 5%
  - National: 1%

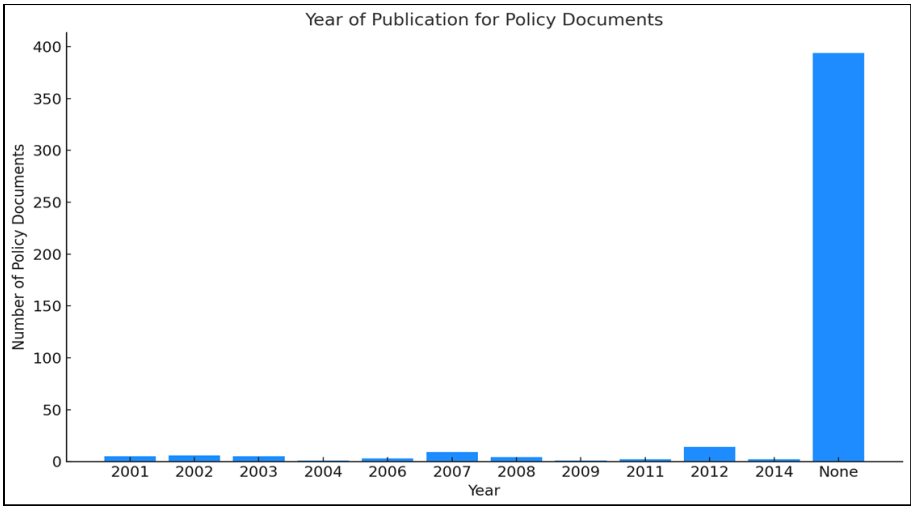
Desk Review Methodology

- **Objective:** Assess vaccine safety surveillance systems and identify AEFI reporting/monitoring gaps
- **Focus:** Barriers for caregivers/health workers in reporting vaccine-related events
- **Purpose:** Inform policy, strengthen surveillance, improve safety responses
- **Method:**
  - Examined records, reports, databases, past assessments
  - Data sources: Routine immunization programs, health facilities, AEFI reports
  - Reviewed national guidelines, immunization strategies, surveillance reports

Surveillance System Gaps

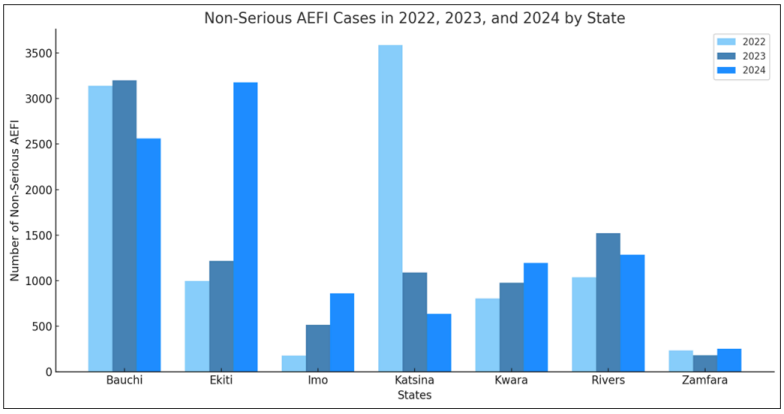
- **Surveillance System Gaps (444 assessments):**
  - Under-reporting: 79% (351/444)
  - Delayed reporting: 69% (306/444)
  - Lack of trained personnel: 74% (328/444)
- **Key challenges:** Completeness, timeliness, human resource capacity

Documents Reviewed



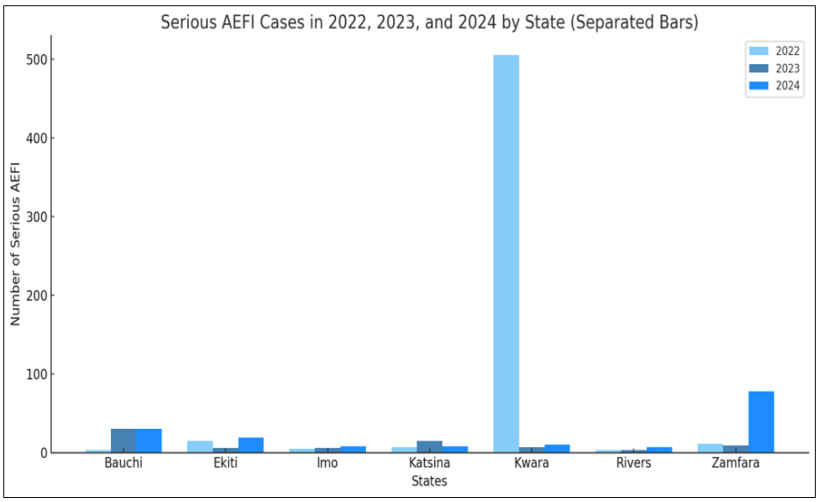
- **Documents Reviewed:**
  - Multiple documents: 47.7%
  - Policy documents: 0.9%
  - National guidelines: 3.6%
  - Surveillance reports: 5.4%
  - Immunization coverage reports: 10.4%
  - Other strategic/technical documents: 8.8%

Routine Reporting of Non-serious and Serious AEFIs (2022 – 2024)

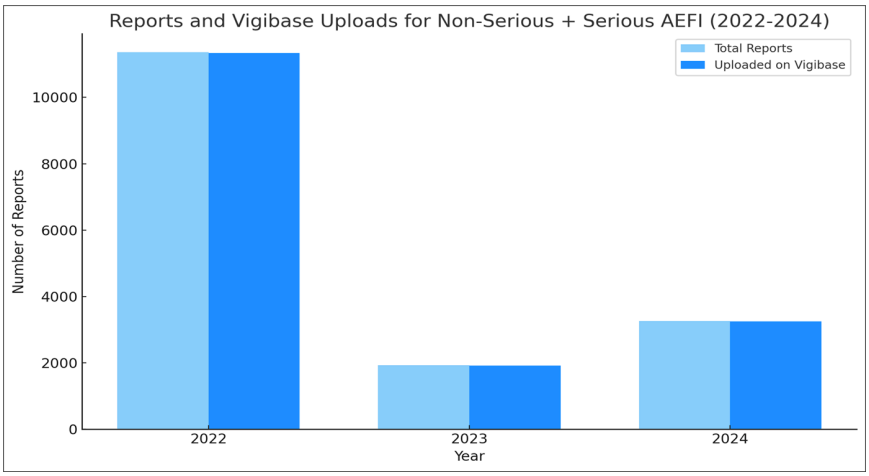


- **AEFI Reporting (2022-2024)**
  - Non-serious AEFIs:
  - Katsina & Bauchi – highest & most consistent reporting

- **Serious AEFIs:**
  - Kwara: Drastic drop after 2022 (505 cases → minimal in 2023/2024)
  - VigiBase Uploads (National): >99% compliance (consistent global reporting)

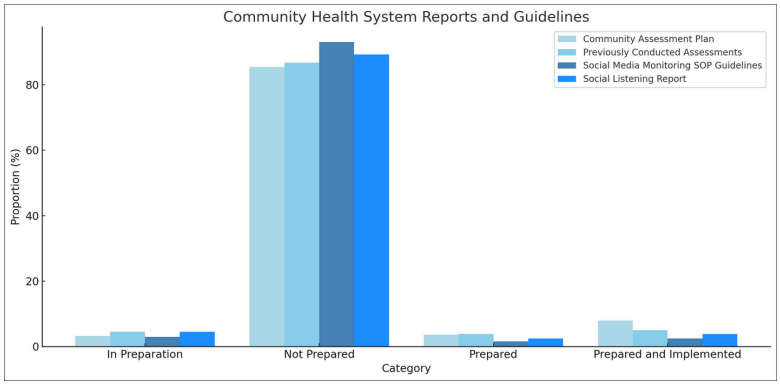


Evidence of Vigibase Uploads for Non-serious and Serious AEFI (2022-2024) at the National Level



- **VigiBase AEFI Reporting (2022-2024):**
  - >99% upload rate for both serious and non-serious cases
  - Demonstrates strong compliance with global vaccine safety standards
  - Ensures AEFI data contributes to international monitoring and analysis

Availability Community Assessment Plan, Social Media Monitoring SOP Guidelines, and Social Listening Reports (2022-2024)



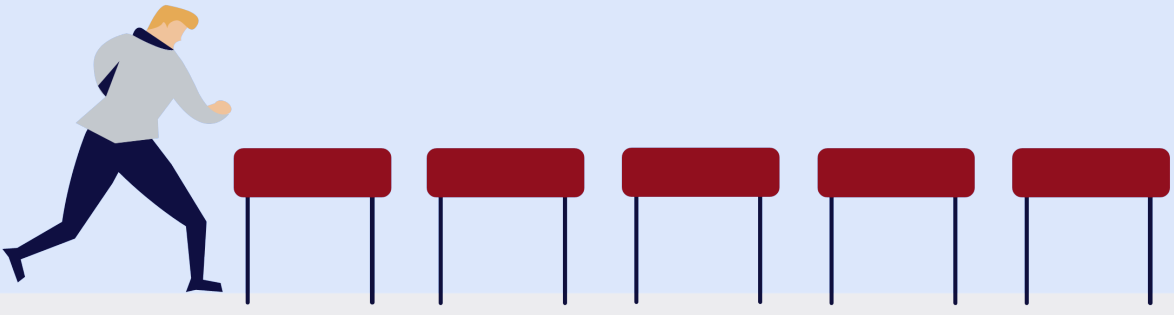
- **Document Availability (2022-2024):**
  - **Community Assessment Plans:** Mostly unavailable
  - **Social Media Monitoring SOPs:** Mostly unavailable
  - **Social Listening Reports:** Mostly unavailable

Vaccine Safety and Risk Communication

- **Risk communication strategies:** Mentioned in documents but no clear plans
- **Public concerns/misconceptions:** Acknowledged but lacked detailed analysis
- **Monitoring processes:** Described in most documents

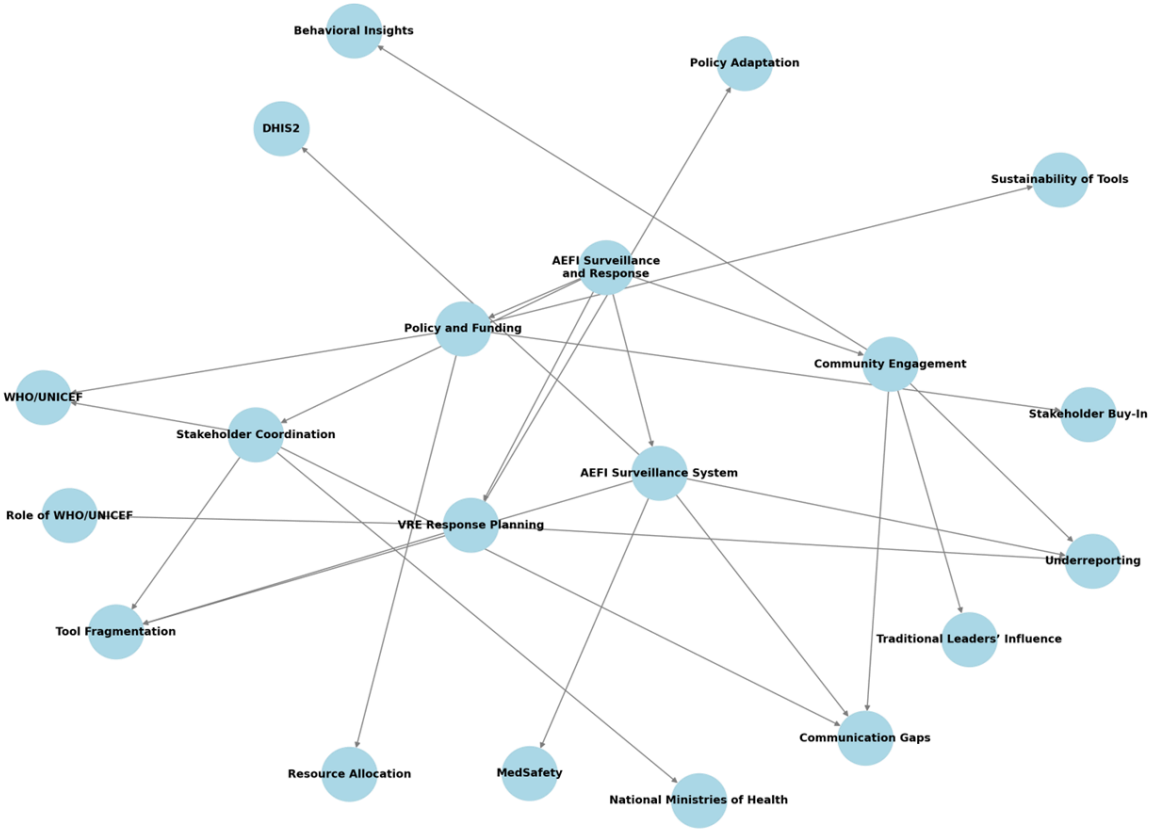
System Wide Gaps

- Gaps in feedback mechanisms; didn't report findings
- Poor use of MedSafety App for AEFI Reporting
- Non-availability of serious AEFI investigation forms
- Lack of formal community assessment plans
- No comprehensive vaccine safety communication strategy



QUALITATIVE ASSESSMENT

Key Themes in AEFI Surveillance and Response



AEFI REPORTING SYSTEM

At the center of this system is the node "AEFI Surveillance and Response," which acts as a nexus linking core domains such as:

- AEFI Surveillance System
- VRE Response Planning
- Community Engagement
- Policy and Funding
- Stakeholder Coordination

Strengths of AEFI Surveillance in Nigeria

"*National Primary Health Care Development Agency is the federal body responsible for immunization... We have a full AEFI division within the Department of Disease Control. We also have the AEFI National Expert Committee, which conducts causality assessments.*"

- NATIONALLEVEL_KII_DIREC...

"We are the coordinating national pharmacovigilance centre. The warehouse for all AEFI data is in NAFDAC NPC. We maintain the national digital database that houses both drug and vaccine safety data."

- NATIONALLEVEL_KII_DIREC...

A major strength of Nigeria's AEFI surveillance system is its structural integration into key public health institutions; NPHCDA and NAFDAC

Digitization and Availability of Coordination Platforms are among the Key Strengths Noted

STRENGTH AREA	INSTITUTIONS INVOLVED	GEOGRAPHIC REACH	DESCRIPTION OF STRENGTH
Integration into National Systems (Policy integration)	NPHCDA, NAFDAC	National	AEFI surveillance is formally part of Nigeria's primary healthcare and regulatory framework Clear institutional roles (NPHCDA - service delivery; NAFDAC - pharmacovigilance)
Digital Surveillance Tools **Digital Transition**	DHIS2 AEFI Module, MedSafety App	Expanding across some states	Digital tools like DHIS2 and MedSafety App are used to enhance real-time AEFI data entry and analysis Adoption of DHIS2 and MedSafety App in several states
Technical Oversight	NPHCDA, NAFDAC	National level assessments	AEFI National Expert Committee handles causality assessments systematically
Stakeholder Collaboration	NCDC, NAFDAC, NPHCDA	Expanding across some states	Regular coordination among NCDC, NAFDAC, NPHCDA, and development partners
Surveillance Foundation	NPHCDA, NAFDAC	National	Active linkage to WHO global systems and national surveillance architecture
Causality Assessment Mechanism	AEFI National Expert Committee	National level assessments	A functional National Expert Committee conducts causality assessments for reported AEFI cases

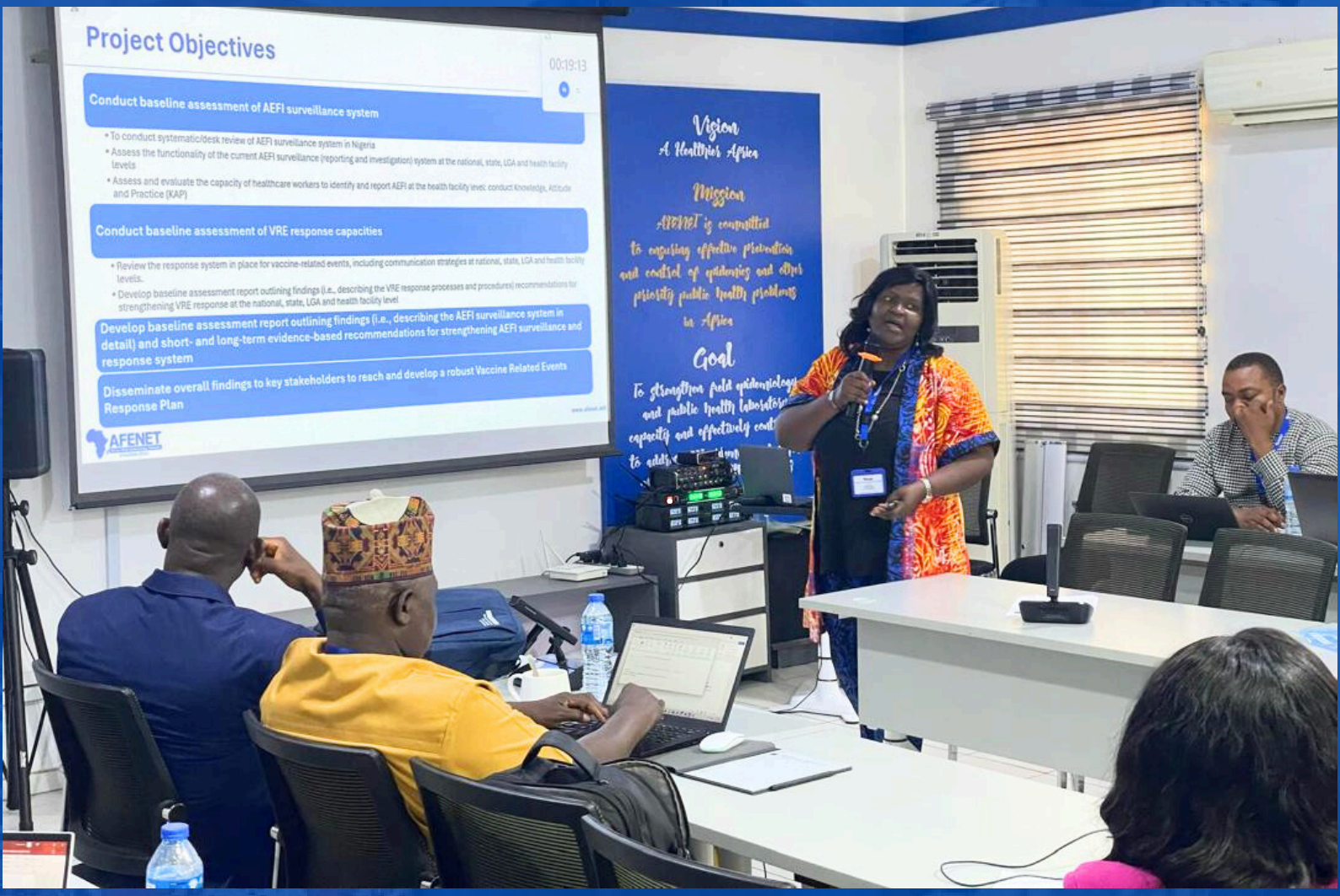
AEFI National Expert Committee for Causality Assessment

- **AEFI National Expert Committee:**
  - Conducts standardized causality assessments (focus on serious AEFIs)
- **Enhances:**
  - Confidence in AEFI response integrity
  - Alignment with WHO safety standards
  - National capacity for independent vaccine safety management

> *"We belong to the AEFI Technical Working Group, and the AEFI National Expert Committee is responsible for causality assessment. Reports are reviewed and uploaded into the global database via NAFDAC."*
>
> **- Director, Disease Control and ImmunizationNATIONALLEVEL_KII_DIREC...**

AEFI Surveillance Gap

GAP AREA	IMPLICATION	VERBATIM QUOTE
Fragmented Reporting Tools	Multiple tools (MedSafety, DHIS2, paper) create parallel systems with no consolidated data source.	*If our data are scattered... it doesn't really make sense. — National Director of Surveillance*
Lack of Interoperability	Data from different platforms cannot be easily merged, affecting national analysis and global reporting.	*There should be one integrated reporting system... everyone should access the same data. — NAFDAC*
Underreporting of Non-serious AEFIs	Non-serious AEFIs are not documented, leading to incomplete safety surveillance data.	*People just give their children paracetamol... parents hardly come out and report. — NPHCDA*
Frontline Worker Knowledge Gaps	Healthcare workers unsure what constitutes an AEFI or when to escalate for investigation.	*Health workers don't even know what is AEFI... they just vaccinate and go. — SYDANI*



Recommendations

National Level

Matrix table categorizing the recommendations based on feasibility, impact, and timeline:

Recommendations	Feasibility	Impact	Timeline
1. Update and Standardize AEFI Guidelines: Regularly update and standardize guidelines for reporting, investigation, and causality assessment.	High	High	Long-term (>1 yr)
2. Improve Reporting System Integration: Enhance the integration and standardization of electronic reporting systems (e.g., DHIS2, MedSafety, SORMAS).	High	High	Short-term (1 yr)
3. Enhance Personnel Training: Conduct ongoing, regular training programs for healthcare workers and stakeholders.	High	High	Short-term (1 yr)
4. Timely Data Submission: Establish clear timelines and strengthen monitoring systems for timely submission of AEFI reports.	High	High	Short-term (1 yr)
5. Improve Causality Assessment Processes: Streamline the causality assessment process for more efficient completion.	High	High	Short-term (1 yr)
6. Establish and Formalize Community Listening Protocols: Develop and implement formalized community engagement protocols for AEFI and VREs.	Medium	High	Long-term (>1 yr)
7. Increase Social Media and Digital Engagement: Leverage digital tools (e.g., social media, online surveys) for feedback collection.	High	Medium	Short-term (1 yr)
8. Improve Crisis and Risk Communication: Develop and implement comprehensive crisis communication plans for vaccine-related events.	High	High	Short-term (1 yr)
9. Increase Funding and Resources: Address resource shortages in personnel, finances, and equipment to ensure sustainability.	Medium	High	Long-term (>1 yr)
10. Enhance Stakeholder Training: Organize regular training sessions for stakeholders to improve communication capabilities.	High	High	Short-term (1 yr)
11. Foster Greater Collaboration Between Agencies and Partners: Improve collaboration between national and state-level health agencies.	High	High	Long-term (>1 yr)
12. Formalize and Expand Partner Involvement: Encourage greater involvement of international and local partners in training, data collection, and AEFI response efforts.	Medium	High	Long-term (>1 yr)
13. Combat Misinformation Through Targeted Communication: Conduct targeted communication campaigns using traditional and digital media.	High	High	Short-term (1 yr)
14. Promote Public Transparency: Make AEFI causality assessment findings and vaccine-related event data publicly available.	Medium	High	Long-term (>1 yr)
15. Establish Regular Monitoring and Evaluation Mechanisms: Implement routine monitoring and evaluation to track effectiveness.	High	High	Long-term (>1 yr)
16. Standardize Data Reporting and Feedback Loops: Strengthen feedback systems between health facilities, states, and the national level.	High	High	Short-term (1 yr)

State Level

Matrix table categorizing the recommendations based on feasibility, impact, and timeline:

Recommendations	Feasibility	Impact	Timeline
1. Update and Standardize AEFI Guidelines: Regularly update and standardize guidelines for reporting, investigation, and causality assessment.	High	High	Long-term (>1 yr)
2. Improve Reporting System Integration: Enhance the integration and standardization of electronic reporting systems (e.g., DHIS2, MedSafety, SORMAS).	High	High	Short-term (1 yr)
3. Enhance Personnel Training: Conduct ongoing, regular training programs for healthcare workers and stakeholders.	High	High	Short-term (1 yr)
4. Timely Data Submission: Establish clear timelines and strengthen monitoring systems for timely submission of AEFI reports.	High	High	Short-term (1 yr)
5. Improve Causality Assessment Processes: Streamline the causality assessment process for more efficient completion.	High	High	Short-term (1 yr)
6. Establish and Formalize Community Listening Protocols: Develop and implement formalized community engagement protocols for AEFI and VREs.	Medium	High	Long-term (>1 yr)
7. Increase social media and Digital Engagement: Leverage digital tools (e.g., social media, online surveys) for feedback collection.	High	Medium	Short-term (1 yr)
8. Improve Crisis and Risk Communication: Develop and implement comprehensive crisis communication plans for vaccine-related events.	High	High	Short-term (1 yr)
9. Increase Funding and Resources: Address resource shortages in personnel, finances, and equipment by increasing investments in these areas.	Medium	High	Long-term (>1 yr)
10. Enhance Stakeholder Training: Organize regular training sessions for stakeholders to improve communication capabilities.	High	High	Short-term (1 yr)
11. Foster Greater Collaboration Between Agencies and Partners: Improve collaboration between national and state-level health agencies.	High	High	Long-term (>1 yr)
12. Formalize and Expand Partner Involvement: Encourage greater involvement of international and local partners in training, data collection, and AEFI response efforts.	Medium	High	Long-term (>1 yr)
13. Combat Misinformation Through Targeted Communication: Conduct targeted communication campaigns using traditional and digital media.	High	High	Short-term (1 yr)
14. Promote Public Transparency: Make AEFI causality assessment findings and vaccine-related event data publicly available.	Medium	High	Long-term (>1 yr)
15. Establish Regular Monitoring and Evaluation Mechanisms: Implement routine monitoring and evaluation to track effectiveness.	High	High	Long-term (>1 yr)
16. Standardize Data Reporting and Feedback Loops: Strengthen feedback systems between health facilities, states, and the national level.	High	High	Short-term (1 yr)

LGA Level

Matrix table categorizing the recommendations based on feasibility, impact, and timeframe (short term vs. long term)

Recommendations	Feasibility	Impact	Timeframe
Improve Regularity of AEFI Review Meetings	**High**	**High**	Short term (1 yr)
Address Gaps in Focal Person Appointments	**High**	**High**	Short term (1 yr)
Standardize the Use of Reporting Tools	**High**	**High**	Short term (1 yr)
Improve Timeliness of AEFI Reporting	**High**	**High**	Short term (1 yr)
Increase Training on Advanced AEFI Detection & Digital Tools	**Medium**	**High**	Long term (>1 yr)
Focus on Training for Data Management & Analysis	**High**	**High**	Short term (1 yr)
Provide More Frequent Training for Health Workers	**High**	**High**	Short term (1 yr)
Enhance Community Engagement	**High**	**High**	Short term (1 yr)
Increase Media Engagement	**Medium**	**High**	Short term (1 yr)
Involve Traditional and Religious Leaders	**High**	**Medium**	Long term (>1 yr)
Increase Funding for AEFI Surveillance	**Low**	**High**	Long term (>1 yr)
Diversify Funding Sources	**Medium**	**High**	Long term (>1 yr)
Strengthen Inter-Agency Coordination	**High**	**High**	Short term (1 yr)
Improve Collaboration with Private Sector and NGOs	**Medium**	**High**	Long term (>1 yr)
Improve Immediate Response to AEFI Cases	**High**	**High**	Short term (1 yr)
Ensure Referral Pathways for Serious AEFI Cases	**Medium**	**High**	Short term (1 yr)
Strengthen Data Sharing and Reporting	**Medium**	**High**	Short term (1 yr)
Enhance Data Management Tools	**High**	**High**	Long term (>1 yr)

Health Facility Level

Matrix table categorizing the recommendations based on feasibility, impact, and timeframe

Recommendations	Feasibility	Impact	Timeframe	Category
Increase Training for Health Workers	**High**	**High**	Short-term (1 yr)	High feasibility, high impact, short-term
Secure Increased Funding for AEFI Surveillance	**Low**	**High**	Long-term (>1 yr)	Low feasibility, high impact, long-term
Enhance Coordination Between Stakeholders	**High**	**High**	Short-term (1 yr)	High feasibility, high impact, short-term
Improve Data Management Tools	**High**	**High**	Short-term (1 yr)	High feasibility, high impact, short-term
Enhance Media Engagement	**Medium**	**Medium**	Short-term (1 yr)	Medium feasibility, medium impact, short-term
Strengthen Private Sector Engagement	**Medium**	**Medium**	Long-term (>1 yr)	Medium feasibility, medium impact, long-term
Improve Timeliness and Consistency in AEFI Surveillance	**High**	**High**	Short-term (1 yr)	High feasibility, high impact, short-term
Address Barriers to AEFI Reporting	**High**	**Medium**	Short-term (1 yr)	High feasibility, medium impact, short-term
Improve Crisis Response and Investigations	**Medium**	**High**	Long-term (>1 yr)	Medium feasibility, high impact, long-term
Expand Stakeholder Support	**High**	**Medium**	Short-term (1 yr)	High feasibility, medium impact, short-term

Community Level - Caregivers' Exit Interview

Matrix categorizing the recommendations based on feasibility, impact, and timeframe

Recommendations	Feasibility	Impact	Timeframe	Category
Enhance Secondary and Tertiary Care Access	**Low**	**High**	Long-term (>1 yr)	Low feasibility, high impact, long-term
Targeted Awareness and Education Campaigns	**High**	**High**	Short-term (1 yr)	High feasibility, high impact, short-term
Healthcare Worker Education	**High**	**High**	Short-term (1 yr)	High feasibility, high impact, short-term
Increase Reporting Clarity and Improve Reporting Channels	**High**	**High**	Short-term (1 yr)	High feasibility, high impact, short-term
Improve Health Facility Accessibility and Address Health System Challenges	**Medium**	**High**	Long-term (>1 yr)	Medium feasibility, high impact, long-term
Address Socioeconomic Barriers	**Medium**	**High**	Long-term (>1 yr)	Medium feasibility, high impact, long-term
Integrate Community-Based Approaches	**High**	**Medium**	Short-term (1 yr)	High feasibility, medium impact, short-term
Develop Tailored Training Materials	**High**	**Medium**	Short-term (1 yr)	High feasibility, medium impact, short-term
Improve Vaccine Safety Education Based on Behavioral Drivers	**High**	**High**	Short-term (1 yr)	High feasibility, high impact, short-term
Strengthen Social Processes and Access to Information	**High**	**Medium**	Short-term (1 yr)	High feasibility, medium impact, short-term

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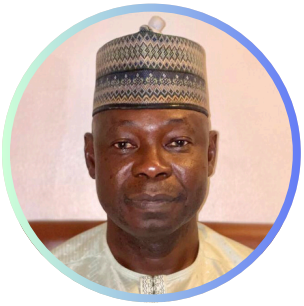

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20 YEARS ANNIVERSARY

AFENET
African Field Epidemiology Network
A healthier Africa

TO OUR STAKEHOLDERS:

Your trust and collaboration over 20 years have fueled AFENET's mission to advance public health.

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