



Optimizing Early Infant Diagnosis Services in Taraba and Rivers States in Nigeria:

Results Brief

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Johnson & Johnson



**Elizabeth Glaser
Pediatric AIDS Foundation**
Fighting for an AIDS-free generation

Introduction

The Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) in Nigeria provides highly targeted technical support to the sub-national and national stakeholders supporting the HIV response for children, adolescents, and pregnant women with the aim of developing sustainable quality interventions. EGPAF Nigeria has implemented and scaled up innovative models to improve access to Early Infant Diagnosis (EID), HIV testing and counseling, and pediatric and adolescent HIV service delivery in close collaboration with the State and Federal Ministry of Health (MoH), in order to strengthen the quality of pediatric HIV services and elevate advocacy for children and families living with HIV.

In Rivers and Taraba states of Nigeria, EGPAF is dedicated to identifying HIV-exposed infants (HEI) and ensuring they receive life-saving care through a quality Early Infant Diagnosis (EID) program. To increase overall EID coverage, EGPAF implemented the HIV Point of Care (POC) Diagnostics Toolkit while simultaneously utilizing EGPAF’s validated “Program Optimization Approach” (POA) to optimize the overall EID cascade in both states. The project’s main objectives were to:

1. Identify key gaps and barriers in the EID cascade in the Rivers and Taraba states
2. Increase EID coverage in both states by utilizing the POA approach and digitally based monitoring platforms
3. Develop and disseminate EID tools and resources (conventional and POC EID) to strengthen EID implementation and quality

To achieve these objectives, all 11 health facilities (Table 1) implemented Quality Improvement (QI) which is a methodology that mobilizes health facility-based teams to make ongoing and swift changes within their power. Using the Plan-Do-Study-Act (PDSA) systematic cycle of rapid improvement and learning, facility-based QI teams make incremental changes informed by use of QI methods such as Process Mapping, Root Cause Analysis and Data Monitoring. These processes and changes are expected to lead to improvement in the quality of care offered to clients; changes leading to improvement at health facilities can inform initiatives to scale-up similar practices in other settings. This brief highlights the key results from QI projects in Nigeria focused on strengthening EID services and shares key lessons learned from this experience.

RIVERS STATE (6)	TARABA STATE (5)
CHC Oyigbo	FMC Jalingo
MPHC Churchill	General Hospital Bali
Zonal Hospital Ahoada	General Hospital Wukari
Zonal Hospital Bori	General Hospital Zing
Zonal Hospital Isiokpo	TSSH Jalingo
Zonal Hospital Okrika	

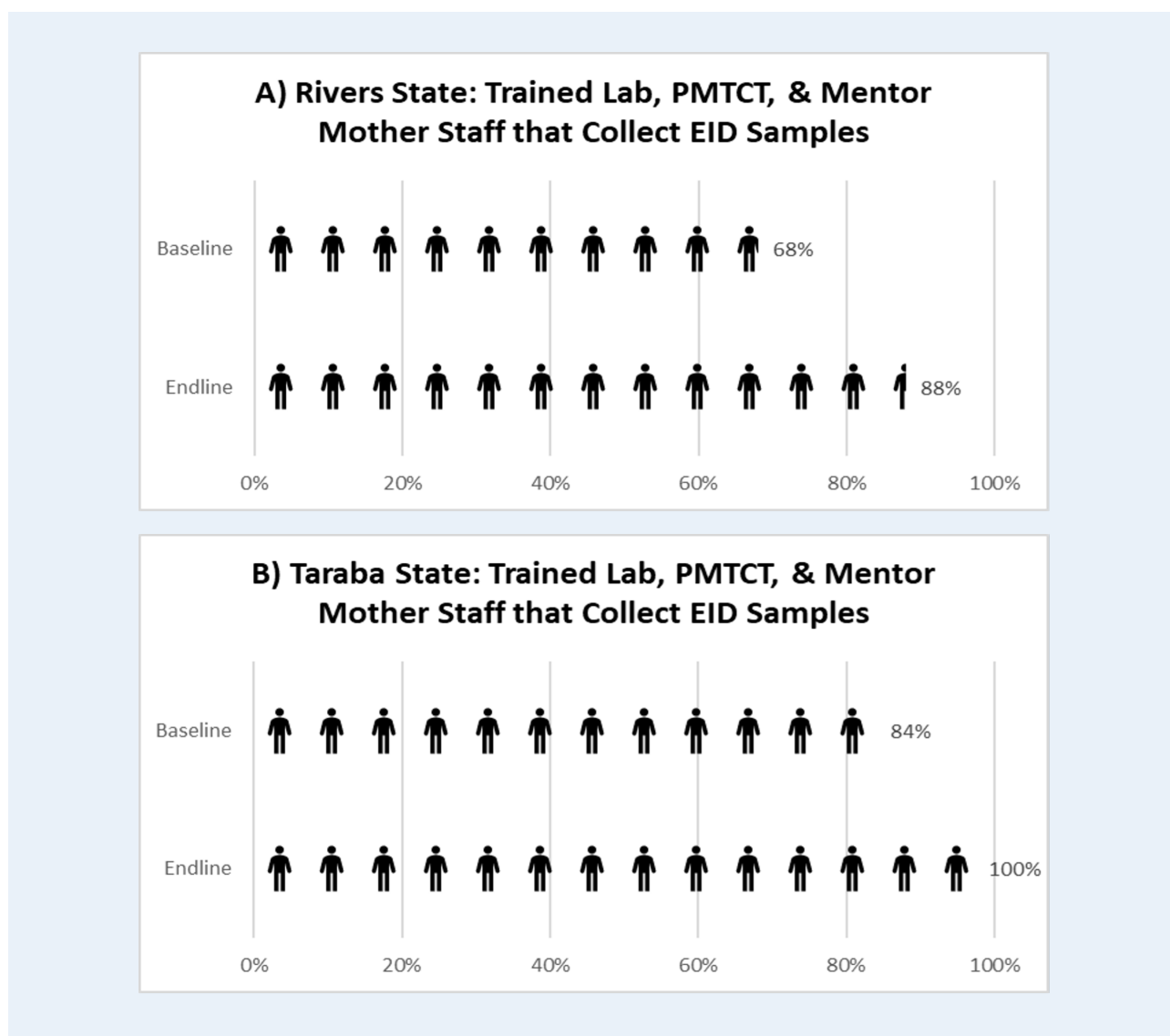
Overall Project Impact on EID Service Delivery

EID results from both states showed improvements in the EID cascade after the project implementation. Improvements could be attributed to factors such as the facilities' HCWs being trained on QI. HCWs also took ownership of QI implementation, exemplified by their leadership of root cause analyses of the challenges responsible for the sub-optimal EID coverage, as well as their roles in planning and implementing interventive measures to address prioritized root causes.

Trained Facility Staff that Collect EID Samples


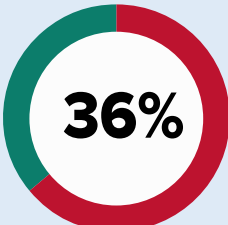
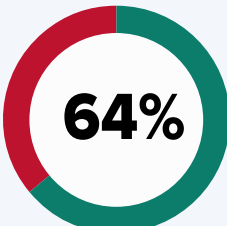
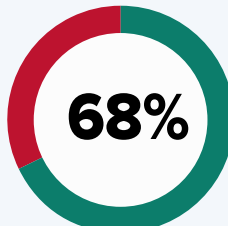
Figure 1 shows the percentage of trained facility staff that collect EID samples. Before project implementation began in Rivers state, 13 (68%) of 19 trained staff collected EID samples; by endline, this proportion increased to 88% (23 of 26 staff). Similarly, in Taraba, the proportion of staff trained on EID sample collection increased from 51 (84%) of 61 at baseline, to 100% of the 33 staff by the endpoint..

Figure 1: Trained Facility Staff that Collect EID Samples in A) Rivers and B) Taraba State



QI Team Members Trained on QI

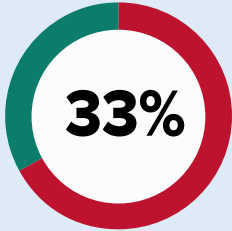
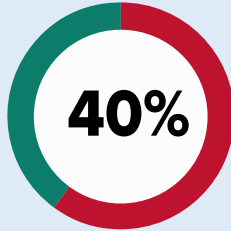


In Rivers state, 33 (100%) out of 33 QI team members across all focus facilities reported having been trained on QI at baseline (Table 2). However, this proportion dropped to 64% by the endpoint because of the jump to 87 QI staff by endline. In Taraba state, only 4 (36%) out of 11 QI team members reported to have been trained on QI at baseline; even as the number of QI team members increased substantially to 88 by endline, QI training was able to keep pace with 60 (68%) of these staff trained on QI by endline.

Table 2: QI Team Members Trained on QI		
	Rivers	Taraba
Baseline		
Endline	* 	
Key	<p>Green - % of QI team members trained on QI</p> <p>Red - % of QI team members not trained on QI</p> <p>*The decrease in the percentage of QI team members in Rivers state reported to have been trained on QI at baseline and endpoint was due to an increase in the number of QI team members during the project, thus increasing the indicator's denominator of QI team members to be trained.</p>	

Comprehensive Facilities with QI Team

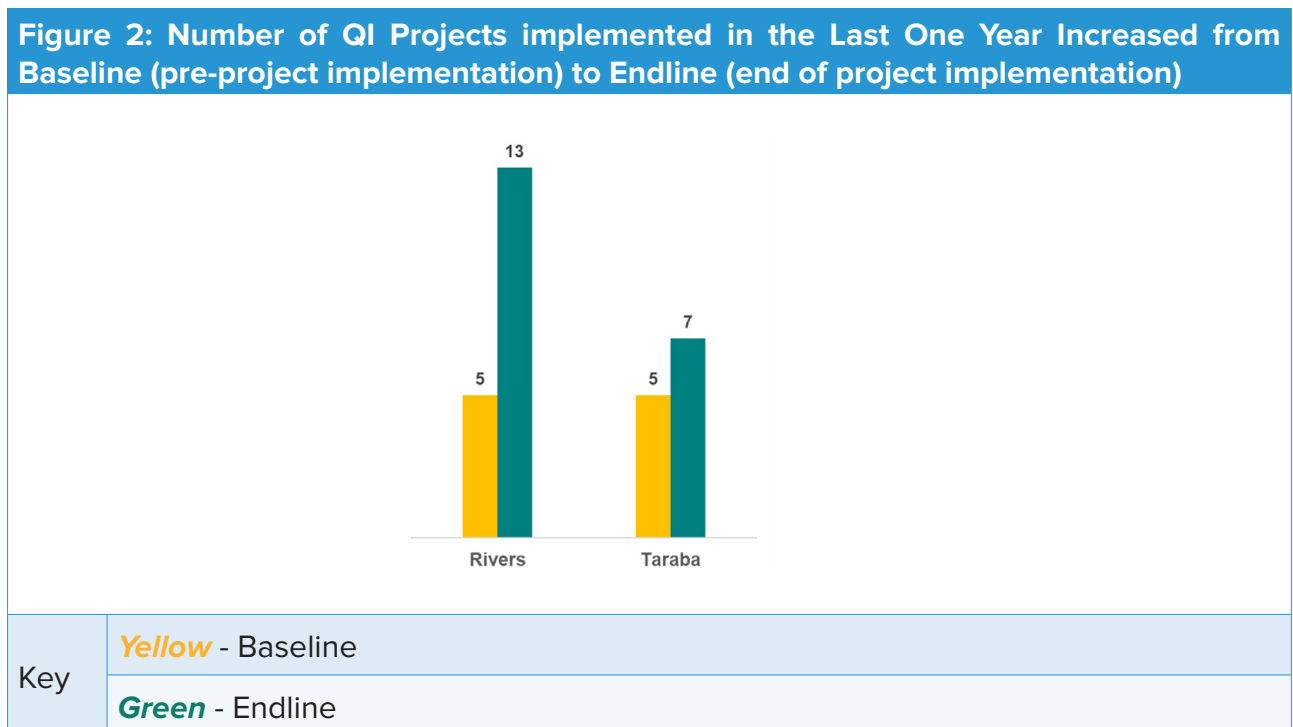
Before the project implementation, only 2 (33%) of 6 comprehensive facilities* in Rivers and only 2 (40%) of 5 comprehensive facilities in Taraba state, had a functional QI team (Table 3). However, by the end of project implementation, all comprehensive facilities in both states had functional QI teams and held monthly QI meetings.

**Comprehensive facilities are sites that provide the full HIV continuum of care services including prevention and PMTCT services.*

Table 3: Comprehensive Facilities with QI Teams		
	Rivers	Taraba
Baseline	 33%	 40%
Endline	 100%	 100%
Key	Green - % of comprehensive facilities with QI Team Red - % of comprehensive facilities without QI Team	

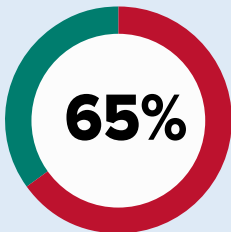
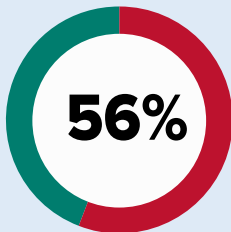
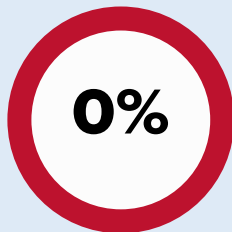
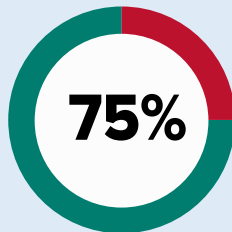
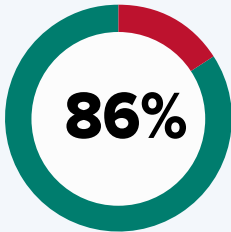
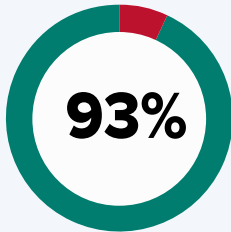
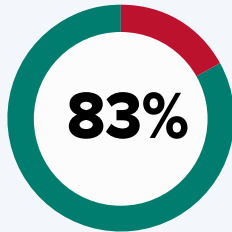
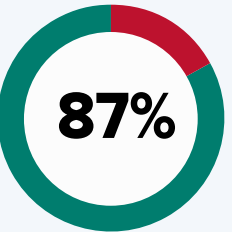
Number of QI Projects implemented

Before the EID project, both states had implemented five QI projects each; however, by the time endline data was collected, Rivers had implemented and documented a total of 13 QI projects, while Taraba state had implemented and documented a total of seven QI projects (Figure 2).



EID Cascade Coverage

EID coverage at 6 weeks showed a 20% increase from 65% (220 out of 339) at baseline to 84% (312 out of 372) at endline (Table 4). There were improvements in the EID result return rate as well from 56% (178 out of 317) at baseline to 93% (338 out of 364) at endline. HEI testing coverage at 9 months was significantly improved from 0% (1 out of 534) at baseline to 83% (387 out of 469) at endline. Results also revealed an increase in the documented final outcome from 75% (344 out of 458) to 87% (534 out of 612).

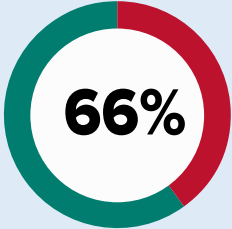
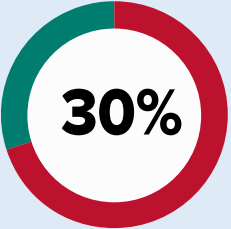
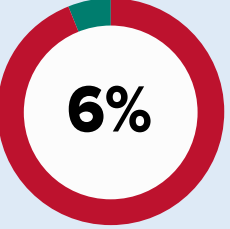
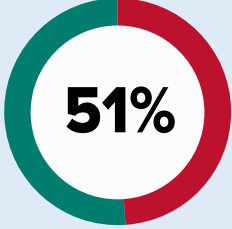
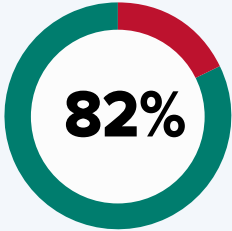
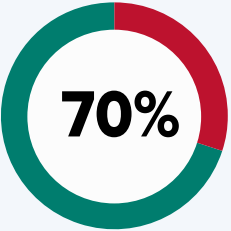
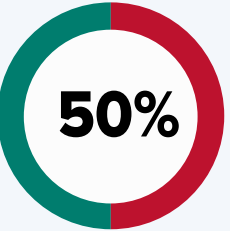
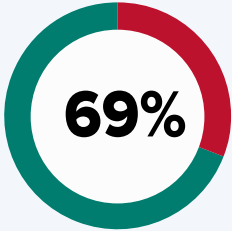
Table 4: EID Cascade Coverage for Rivers State				
	EID Coverage at 6 weeks	EID Result Return Rate	HEI Testing Coverage at 9 Months	HEI Documented Final Outcome Coverage
Baseline	 65%	 56%	 0%	 75%
Endline	 86%	 93%	 83%	 87%
Key	Green – EID coverage Red – No EID Coverage	Green – EID result return rate Red – EID results Not returned	Green – HEI testing coverage at 9 months Red – Not covered	Green – HEI documented final outcome Red – Not covered

“The ongoing EID POC optimization project implementation at Zonal Hospital Ahoada is a lifesaving project for our PMTCT, as it has changed and propelled the entire EID program in the facility with benefits ranging from same day EID results, reduce clinic waiting time, timely drugs intervention for positive clients, improving clinic attendance, etc.”

- Dr. Konne Joel Burabari, QI Lead, Zonal Hospital Ahoada

EID coverage at 6 weeks showed a 16% increase from 66% (350 out of 527) at baseline to 82% (464 out of 568) at endline (Table 5). There was a significant improvement in the EID result return rate as well as from 30% (132 out of 447) at baseline to 70% (390 out of 558) at endline. HEI testing coverage at 9 months was also significantly improved from 6% (25 out of 424) at baseline to 50% (295 out of 587) at endline. There was an increase in the documented final outcome from 51% (124 out of 243) to 69% (410 out of 596).

Table 5: EID Result for Taraba State

	EID Coverage at 6 weeks	EID Result Return Rate	HEI Testing Coverage at 9 Months	HEI Documented Final Outcome Coverage
Baseline	 66%	 30%	 6%	 51%
Endline	 82%	 70%	 50%	 69%
Key	Green – EID coverage Red – No EID Coverage	Green – EID result return rate Red – EID results Not returned	Green – HEI testing coverage at 9 months Red – Not covered	Green – HEI documented final outcome Red – Not covered

“The EID POC Optimization project implemented at FMC Jalingo (Taraba) has greatly decreased the turnaround time from sample collection to receipt of result which has helped in timely initiation of ARVs in positive clients. This has also helped in the overall reduction of morbidity and mortality in infants with HIV. It is a highly commendable initiative”.

- Dr. Helen Ogonna, Chairperson, Taraba State Pediatric and Adolescent Technical Working Group, FMC Jalingo

Overall Effect of the Project on EID Service Delivery

The overall effect of this project on EID service delivery extends beyond the quantitative results. Healthcare workers all shared glowing reflections on the value of QI for their facilities and praised the project’s tremendous benefits. Dr. Helen Ogonna at FMC Jalingo called the project a “highly commendable initiative” because not only were measurable decreases in EID time for sample collection and receipt of results reported, but the project also contributed to decreases in infant morbidity and mortality. At another facility, Dr. Randolph Samba Paul echoed Dr. Ogonna’s sentiments that the project yielded improvements in care for infants and added the project’s secondary benefit of affording healthcare workers another opportunity to educate parents and caregivers on the EID cascade, thereby contributing to a “drastic reduction” in HIV vertical transmission. For Zonal Hospital Ahoada, the project was described as “lifesaving” by Dr. Konne Joel Burabari, who reflected that this time-bound project had

positively “changed and propelled the entire EID program in the facility” and would continue to pay dividends. These reflections from healthcare workers - who ranged from bright-eyed QI newcomers to re-energized QI aficionados - illustrate the broader impact of this project on strengthening the quality of EID service delivery and saving the lives of infants.

“EID POC optimization project as implemented in our facility has improved the diagnosis, treatment, and follow-up of infants. More importantly, it afforded us as HCWs the opportunity to educate parents and caregivers on the EID cascade which helped in a drastic reduction in transmission of HIV from mother to child”. - Dr. Randolph Samba Paul, Pediatric ART focal person and QI Lead, Taraba State Specialist Hospital, Jalingo

Lessons Learned

Reflecting on the results and their first-hand experience of implementing this project, the team captured a number of lessons. Other health facilities and programs across similar settings can reference these lessons learned as building blocks for enhancing their approaches to QI and continuously strengthening the quality of EID services.

1. Updating contact details of mothers with HIV-exposed infants (HEIs) in the patients’ medical records. Increased commitment of mentor mothers and pediatric case managers to enhance tracking of mothers with HEIs. Sending SMS reminders to patients prior to clinic visits or home visits, or scheduled appointments
2. Strong will and cooperation of the facility QI team members to implement the QI projects
3. Regular meetings among QI team members to assess project progress, ensuring proper counseling and testing of HEI to avoid interruptions in the EID testing algorithm
4. Immediate rescheduling of appointments for those who missed their initial appointments
5. Comprehensive education during antenatal clinic visits by Pregnant HIV Positive Women (PPW), on prevention-of-mother-to-child transmission (PMTCT)/EID services was instrumental to patients’ understanding and adherence during EID testing as mothers understood the importance of EID and the algorithm.
6. Effective follow-up on Traditional Birth Attendants (TBAs), Faith-Based Organizations (FBOs), and unsupported Health Facilities (HFs) for tracking, testing, sample collection, and expanding HEI reach. Working closely with the community and health facility staff including gatekeepers from the host communities facilitated achieving testing targets and collecting DBS samples, especially in security-prone areas.
7. The QI team’s adoption of home visits, in contrast to the conventional practice of expecting patients at health facilities.
8. Providing continuous mentorship, including motivational, and technical assistance to the QI team for consistent implementation of QI projects.

Contact Information

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