

Nigeria Health, Population, and Nutrition (HPN) Multi-Activity Evaluation

Sustainability Sentinel Indicators

Data for Impact (D4I) is conducting a mixed-methods, portfolio-level evaluation of four USAID/Nigeria Health, Population, and Nutrition (HPN) activities with a focus on comparing the strengths and challenges of an integrated health programming approach with a disease-focused approach (malaria). A set of 15 sentinel indicators¹ were identified to measure progress in commitment/engagement and capacity outcomes across five domains that are expected to support sustainability. Data were gathered from the HPN implementing partners (IPs), state governments, and a 2021 health facility assessment (HFA) and 2022 organizational network analysis (ONA) conducted by D4I.

How do we define sustainability?

“The capacity to maintain program services at a level that will provide ongoing prevention and treatment for a health problem after termination of major financial, managerial and technical assistance from an external donor.”

Sustainability of Development Programs. Washington, DC: USAID, 1998

Indicator Selection Criteria

- Indicators are feasible to populate with available data and resources
- Indicators are relevant for comparing integrated and disease-focused programming
- Data are available for all three case study states
- Manageable number of indicators representing multiple domains

The D4I team reviewed the following resources to identify potential sentinel indicators: 1) potential indicators proposed by IPs in the annual evaluation results review meeting in June 2022; 2) dashboards associated with the Memorandums of Understanding of Ebonyi and Kebbi states; 3) monitoring, evaluation, and learning plans of IPs; 4) PEPFAR’s [Nigeria Sustainability Index and Dashboard](#) (SID); and 5) the results of the D4I 2022 sustainability assessment and ONA.

Strategic Health Planning Indicators

1. Strategies exist for malaria, family planning (FP), and antenatal care (ANC); are less than 5 years old; and have measurable goals

| | |
|----------------|---|
| Ebonyi | No state plan for malaria, have adapted national strategic plan; no state strategy for FP and ANC |
| Kebbi | In progress for malaria, FP; have ANC strategy |
| Zamfara | Have FP strategy |

2. A finalized primary healthcare (PHC) Annual Operational Plan (AOP) exists

| | | 2020 | 2021 | 2022 |
|----------------|---|-------------------------------------|-------------------------------------|-------------------------------------|
| Ebonyi | Harmonized AOP includes PHC and malaria AOP | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Kebbi | PHC AOP is incorporated into the LGA AOP; malaria is integrated in harmonized AOP | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Zamfara | Has separate malaria and PHC AOPs | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

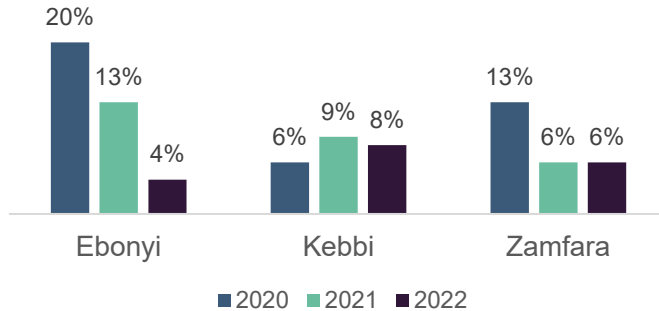
Reported to exist Have in Hand

¹ Sentinel Indicators” is an approach championed by USAID’s Complexity-Aware M&E Team, comprising system proxies that can signal the need for further investigation if trends deviate from expectations.



Health Financing Indicators

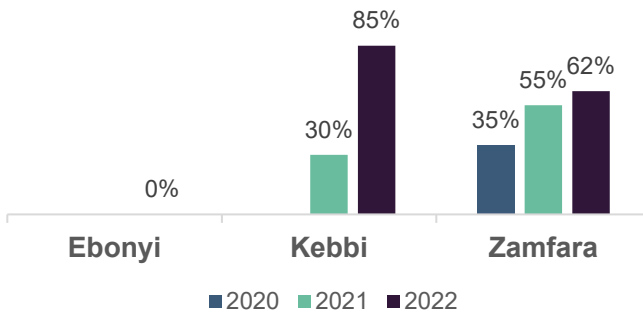
3. General state health expenditure as a percentage of general state government expenditure



* % of general state health budget as a proportion of general state budget

Sources: Ebonyi: www.ebonyistate.gov.ng, Kebbi: www.kebbistate.gov.ng, Zamfara: PMI-S

4. Allocated PHC funding released as a percentage of amount budgeted for PHC at the state level



Note: Data not available for Ebonyi in 2020 or 2021, or for Kebbi in 2020. 0% percent of PHC funding was released in Ebonyi in 2022.

Sources: Ebonyi: www.ebonyistate.gov.ng, Kebbi: www.kebbistate.gov.ng, Zamfara: PMI-S

Governance and Leadership Indicator

5. Percentage of PHCs that offer FP, ANC, intermittent preventative treatment of malaria in pregnancy (IPT, IPTp), tetanus toxoid (TT) immunization, and case management for simple, uncomplicated malaria, 2021

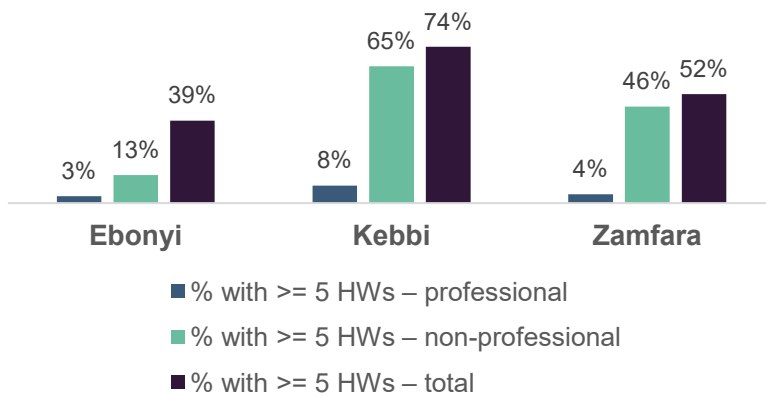


Ebonyi N=120, Kebbi N=120, Zamfara N=120

Source: HFA

Human Resources for Health Indicators

6. Percentage of PHCs that have at least five healthcare workers assigned and employed per Basic Health Care Provision Fund (BHCPF) requirement levels, 2021



Ebonyi N=120, Kebbi N=120, Zamfara N=120

Source: HFA

Professional health workforce includes (per D4I HFA) medical doctor, youth corps doctor, obstetrics consultant, pediatrics consultant, registered nurse, registered midwife, registered nurse/midwife, pharmacist, and laboratory scientist. Nonprofessional health workforce includes community nurse, community health officer, community health extension worker, junior community health extension worker, environmental officer, pharmacy assistant, pharmacy technician, laboratory technical/technologist, and laboratory assistant.

7. Percentage of PHCs reporting that staff experience delays in salary payments, 2021

| | Ebonyi | Kebbi | Zamfara |
|---------------|--------|-------|---------|
| Never | 0% | 0% | 3% |
| Seldom | 16% | 30% | 28% |
| Often | 57% | 50% | 53% |
| Always | 28% | 20% | 17% |

Ebonyi N=51, Kebbi N=10, Zamfara N=76

Source: HFA

Community Participation and Accountability Indicators

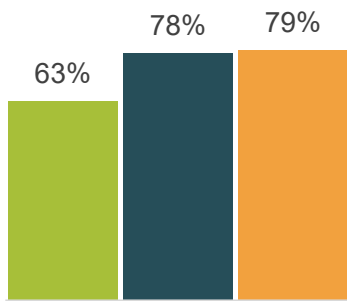
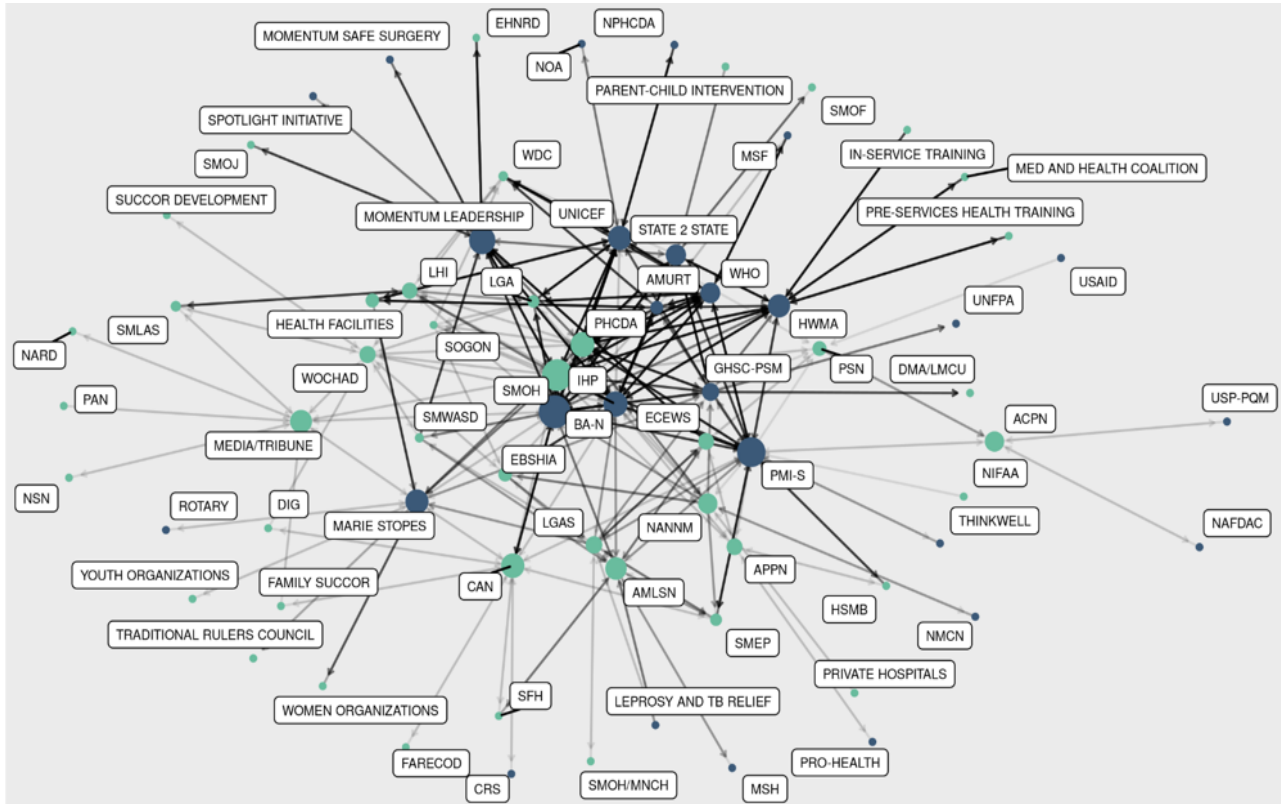
Relative Betweenness Centrality (RBC) of Community Organizations

- Betweenness Centrality (BC) measures an organization's importance as a broker in a network. Relative Betweenness Centrality (RBC) is the percent of noncommunity organizations with lower BC than the mean BC for community organizations.
- When community organizations are more central (RBC is higher), removing other organizations would affect the network less, likely reflecting higher program sustainability.
- We used a definition of "community" that includes subnational government structures, adapted from USAID's definitions of "local partner" and "local entity."



8. RBC of community organizations in information sharing

Information sharing network in Ebonyi



Ebonyi Kebbi Zamfara

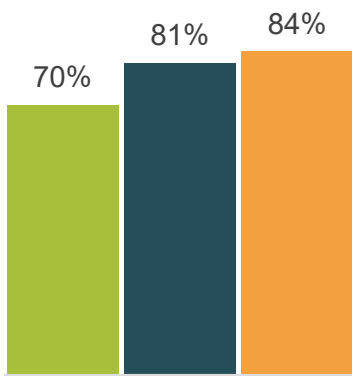
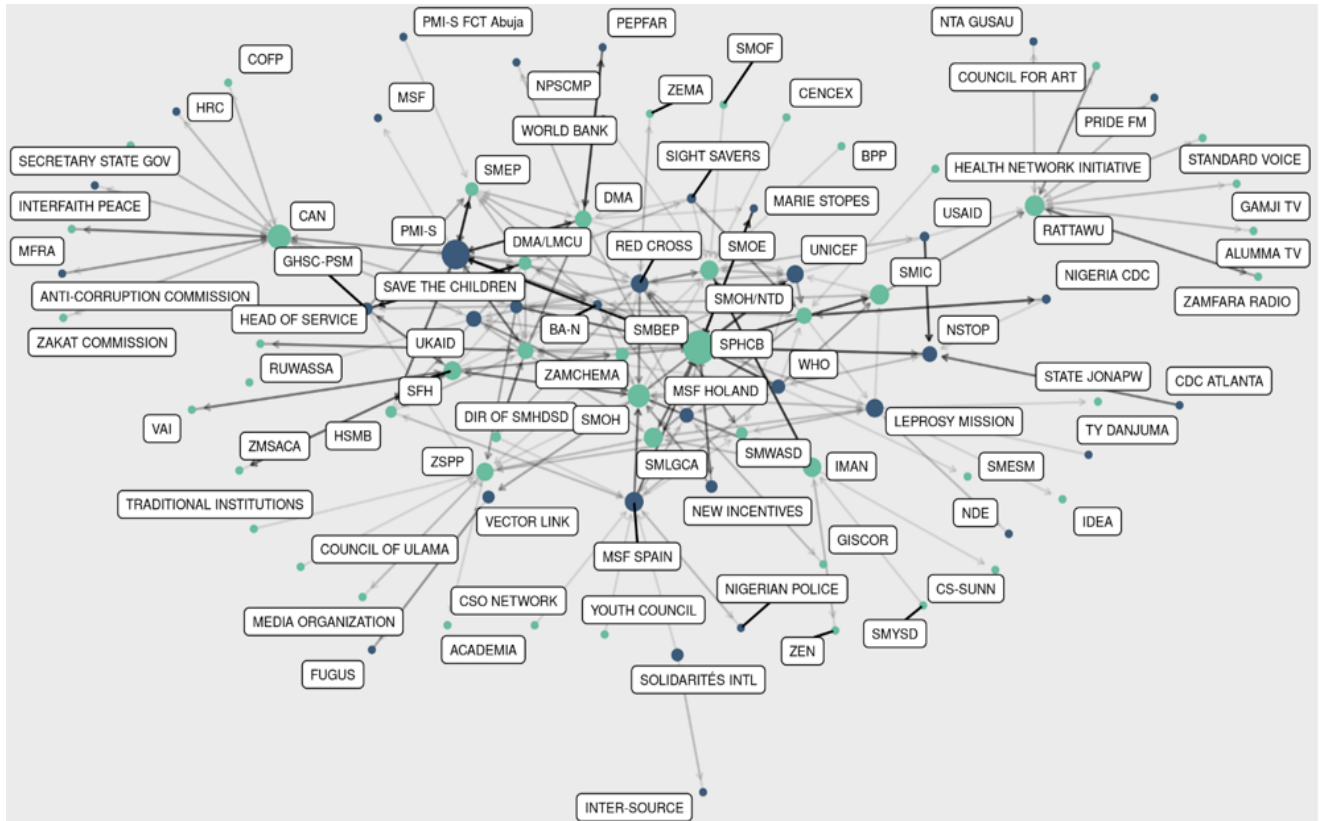
Interpretation: In Ebonyi, the mean BC of community organizations is > 63% of BC values among noncommunity organizations.

Source: [ONA](#)



9. RBC of community organizations in resource sharing

Resource sharing network in Zamfara



Ebonyi Kebbi Zamfara

Interpretation: In Zamfara the mean BC of community organizations is > 84% of BC values among noncommunity organizations.

Source: [ONA](#)



10. Percentage of Breakthrough ACTION-Nigeria (BA-N) assisted wards that have functional Ward Development Committees (WDCs)



- Adheres to national guidelines



- Holds monthly meetings



- Has a community action plan

Source: BA-N

| | 2020 | 2021 | 2022 | 2022 |
|----------------|---|-------|-------|-------|
| Ebonyi | 0% | 11.7% | 11.7% | 23.4% |
| Kebbi | 8.9% | 33.3% | 33.3% | 49.8% |
| Zamfara | BA-N approach is different in malaria-focused states. Individual WDC members are engaged to support community social and behavior change (SBC) activities but not as a group. | | | |

11. Percentage of PHCs that reported having a routine system for eliciting community input into facility management decisions, 2021



Ebonyi N=120, Kebbi N=120, Zamfara N=120

Source: [HFA](#)

Access to Essential Drugs, Diagnostics, and Supplies Indicators (EDDS)

12. Percentage of facilities with malaria rapid diagnostic tests (mRDTs) and with stockout of mRDTs and Artemisinin-based combination treatment (ACT) in the last 4 weeks, 2021

| | Ebonyi | Kebbi | Zamfara |
|--|--------|-------|---------|
| Facility has mRDT in stock (observed, not expired) | 76.7% | 85.7% | 80% |
| Facility had stockout of mRDTs in last 4 weeks | 20.8% | 26.1% | 35.8% |
| Facility had stockout of ACT in last 4 weeks | 20.0% | 19.3% | 42.5% |

Ebonyi N=120, Kebbi N=120, Zamfara N=119

Source: [HFA](#)

13. Percentage of facilities with ANC tracer commodities observed and not expired, 2021

| | Ebonyi | Kebbi | Zamfara |
|--------------------------|--------|-------|---------|
| Iron tablets | 74.8% | 68.7% | 59.8% |
| Folic acid tablets | 80.7% | 67.8% | 68.0% |
| Tetanus toxoid vaccine | 77.3% | 78.3% | 92.8% |
| IPT medicine (SP) | 90.8% | 62.6% | 43.3% |
| Insecticide-treated nets | 0% | 2.6% | 6.2% |

Ebonyi N=119, Kebbi N=115, Zamfara N=97

Source: [HFA](#)



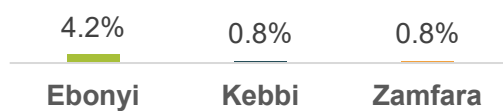
14. Percentage of facilities with FP tracer commodities observed and not expired, 2021

| | Ebonyi | Kebbi | Zamfara |
|---|--------|-------|---------|
| Combined estrogen progesterone oral contraceptive pills | 89.0% | 83.3% | 69.7% |
| Injectable contraceptives | 88.1% | 93.0% | 82.8% |
| Condoms | 91.5% | 71.1% | 59.6% |

Ebonyi N=118, Kebbi N=114, Zamfara N=99

Source: [HFA](#)

15. Percentage of facilities that receive any non-salary operational funds from a Drug Revolving Fund, 2021



Ebonyi N=120, Kebbi N=119, Zamfara N=119

Source: [HFA](#)

Summary State Comparison of Indicator Status

There do not appear to be strong systematic differences in sentinel indicator status between states where HPN activities are implementing an integrated or disease-focused approach or a combination of the two. Kebbi (integrated) tends to perform best overall across the different domains, ranking first across the three states for most of the indicators in most domains except availability of EDDS, where it typically ranks second. Zamfara (malaria-focused) and Ebonyi (combined) perform similarly overall, but Ebonyi tends to be weakest in the health financing, HRH, and community participation and accountability domains, while Zamfara tends to be weakest in the governance and leadership domain (availability of services) and EDDS domain. Most of the indicators represent a snapshot in time and will be updated in 2024, and this may shed light on whether one of the approaches seems to contribute more to improved sustainability outcomes. However, it is likely that a variety of contextual factors contribute to the sustainability of the systems strengthening efforts, such as the political economy, state priorities, and other programs operating in each state.

| Domain | Indicator | Status |
|--|---|--|
| Strategic health program planning | 1. State level strategies exist for malaria, FP, and ANC | Kebbi and Zamfara in progress; Ebonyi does not have state level strategies |
| | 2. Finalized PHC AOP in place | All states met the benchmark for 2022 |
| Health financing | 3. Percentage of general state health expenditure as a proportion of general state government expenditure | Declined in Ebonyi and Zamfara in the last 3 years and is currently at 4%–8% |
| | 4. Percentage of PHC allocated funding released as a proportion of the amount budgeted for PHC at the state level | Increased in Zamfara and Kebbi; Kebbi is the closest to 100% in 2022; No releases in Ebonyi in 2022. |
| Governance and leadership | 5. Percentage of PHCs that offer FP, ANC, IPT, IPTp, TT immunization, and case management for simple, uncomplicated malaria | All states lacking some services, but Zamfara is the lowest |
| Human resources for health | 6. Percentage of PHCs that have at least 5 healthcare workers BHCPF requirement levels | Kebbi is the highest at 75% |
| | 7. Percentage of PHCs reporting that staff experience delays in salary payments | All states have at least 70% of PHCs reporting “always/often”; Highest in Ebonyi. |



| | | |
|---|--|--|
| Community participation and accountability | 8. RBC of community organizations in information sharing | Similar in Kebbi (78%) and Zamfara (79%); lower in Ebonyi (63%) |
| | 9. RBC of community organizations in resource sharing | Similar in Kebbi (81%) and Zamfara (84%); lower in Ebonyi (70%) |
| | 10. Percentage of BA-N assisted wards that have functional WDCs | Improving over time for Ebonyi/Kebbi; Zamfara has different approach and not measured |
| | 11. Percentage of PHCs that reported having a routine system for eliciting community input into facility management decisions | Ranged from 85–95% across states, with Kebbi and Zamfara highest |
| Access to EDDS | 12-14. Stockout rate of tracer commodities for malaria; maternal, newborn, and child health; and FP commodities at service delivery points | Insecticide treated nets are poor everywhere, other indicators are varied; FP is lowest in Zamfara |
| | 15. Percentage of facilities that receive any non-salary operational funds from a Drug Revolving Fund | Minimal across states, but lowest in Zamfara and Kebbi |

Additional Sustainability Findings

- [Nigeria HPN Multi-Activity Evaluation: Findings from Most Significant Change Workshops in Ebonyi, Kebbi, and Zamfara](#)
- [2022 Sustainability Assessment Results: Nigeria Health, Population, and Nutrition Multi-Activity Evaluation](#)