



Action Plan to *Crash* Maternal and Child Mortality

Geospatial Analysis and Risk Stratification of LGAs and Interventions





Outline

1 Methodology

2 Prioritization of LGAs

3 Proposed Archetypes and intervention suites



To prioritise the geographies for the implementation of the MAMI programme, there have been efforts at basic and advanced analytics using different approaches, indicators, and data sources

Deciding the LGAs

- Downloaded NDHS 2018, fully recognising the limitations
- Analysed survey responses around maternal and under-5 mortality
- Picked out LGAs where the highest proportion of respondents show that women and children are dying

Confirming the LGAs

- Preliminary validations with programmes to sense check findings
- Developed this briefing for the RMNCAH TWG and validation by stakeholders
- Planned additional validation with States

Deciding how to intervene in the LGAs

- Reviewed core indicators on antenatal attendance, delivery by skilled attendants, and PHC density
- Reviewed the major known delays that shape maternal outcomes along the maternal journey and interventions to address them
- Identified four core buckets of LGAs based on the **dominant problem** and this will shape how we prioritise intervention
 - Intent
 - Service availability
 - Service quality
 - A mix of all three

Results

- 172 poorest performing LGAs identified contributing **55% of the MMR** and 18% of the U5MR reported in NDHS 2018
- Bottom 70 LGAs had similar performances, so could not stop at 150
- Defined intervention suites for each cluster of LGAs



Outline

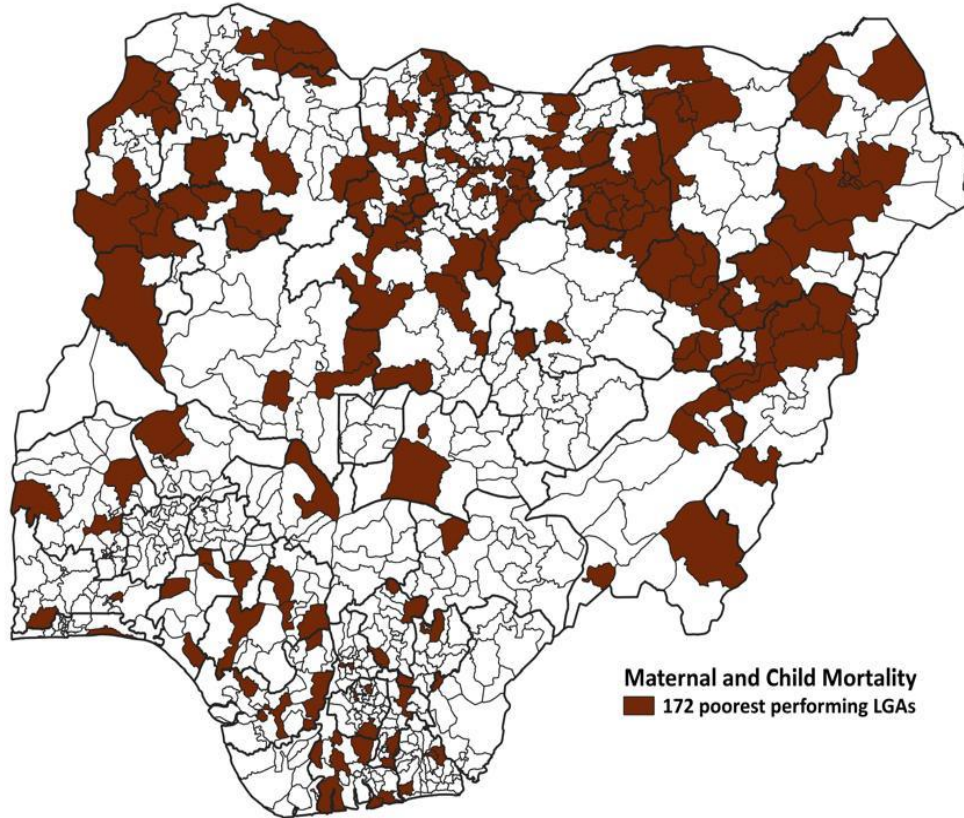
1 Overview of Methodology

2 Prioritization of LGAs

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Having recognised the limitations of the NDHS in terms of power for decision-making, we have analysed the survey responses from the LGAs and have identified these priority LGAs.../1



Geographic distribution of priority LGAs

Geopolitical Zone	State	No. of LGAs	Geopolitical Zone	State	No. of LGAs
Northwest	Jigawa	7	South-south	Akwa Ibom	3
	Kaduna	7		Cross River	1
	Kano	18		Delta	5
	Katsina	15		Edo	4
	Kebbi	11		Rivers	6
	Sokoto	4		Southeast	Enugu
	Zamfara	4	Imo		3
Northeast	Adamawa	9	Abia		3
	Bauchi	11	Anambra		2
	Gombe	8	Ebonyi		2
	Taraba	5	Southwest		Lagos
	Yobe	5		Ogun	2
	Borno	13		Ondo	5
North-central	Kogi	1		Oyo	4
	Nasarawa	2			
	Niger	4			
	Plateau	1			
	Benue	1			
	Kwara	2			
					172



Having recognised the limitations of the NDHS in terms of power for decision-making, we have analysed the survey responses from the LGAs and have identified these priority LGAs.../2

Zone	State	# of LGAs	Prioritized LGAs	
Northeast	Bauchi	11	Itas/Gadau, Dambam, Darazo, Dass, Gamawa, Giade, Jama'Are, Katagum, Misau, Shira, Kirfi	
	Borno	13	Bayo, Biu, Damboa, Gubio, Hawul, Jere, Kaga, Konduga, Kukawa, Mafa, Maiduguri, Mobbar, Shani	
	Gombe	8	Funakaye, Nafada, Kwami, Yamaltu/Deba, Kaltungo, Billiri, Dukku, Shomgom	
	Taraba	5	Zing, Lau, Ardo-Kola, Gashaka, Ussa	
	Adamawa	9	Lamurde, Maiha, Demsa, Ganye, Gombi, Hong, Numan, Shelleng, Song	
51 LGAs (30%)	Yobe	5	Bursari, Bade, Jakusko, Nangere, Yusufari	
	Niger	4	Borgu, Gbako, Munya, Paikoro	
	North-central	Benue	1	Gwer West
		Kwara	2	Ilorin East, Moro
	11 LGAs (6%)	Kogi	1	Lokoja
		Nasarawa	2	Nasarawa, Keffi
Plateau		1	Jos East	
Southwest	Ogun	2	Ado Odo/Ota, Ijebu North East	
	Ondo	5	Akure South, Ese Odo, Ifedore, Ondo West, Owo	
	Oyo	4	Afijio, Ibadan South West, Iwajowa, Ori Ire	
	Lagos	1	Ibeju Lekki	
12 LGAs (9%)				

Zone	State	# of LGAs	Prioritized LGAs	
Northwest	Sokoto	4	Sabon Birmi, Dange Shuni, Isa, Goronyo	
	Kano	18	Tofa, Gaya, Bunkure, Doguwa, Makoda, Sumaila, Albasu, Ajingi, Bagwai, Dala, Garko, Kano Municipal, Kumbotso, Madobi, Rogo, Takai, Tarauni, Warawa	
	Zamfara	4	Anka, Gummi, Shinkafi, Tsafe	
	Katsina	15	Charanchi, Mashi, Mai'Adua, Dan Musa, Dutsi, Faskari, Ingawa, Kafur, Kurfi, Kusada, Mani, Musawa, Sabuwa, Zango, Danja	
	Jigawa	7	Gagarawa, Auyo, Jahun, Maigatari, Kafin Hausa, Gwaram, Taura	
	Kebbi	11	Suru, Koko-Besse, Bagudo, Argungu, Arewa Dandi, Wasagu-Danko, Augie, Fakai, Sakaba, Shanga, Gwandu	
66 LGAs (38%)	Kaduna	7	Kudan, Kauru, Chikun, Zaria, Kubau, Giwa, Kagarko	
	South-south	Akwa Ibom	3	Ikot Abasi, Uruan, Uyo
		Rivers	6	Ahoada West, Akuku Toru, Andoni, Bonny, Emohua, Etche
19 LGAs (11%)	Cross River	1	Abi	
	Delta	5	Aniocha North, Ndokwa East, Sapele, Udu, Ughelli North	
	Edo	4	Esan South-East, Esan West, Ovia North-East, Owan East	
Southeast	Anambra	2	Idemili South, Onitsha South	
	Abia	3	Bende, Obi Nwga, Ukwa East	
	Ebonyi	2	Ivo, Ohaukwu	
	Enugu	3	Isi-Uzo, Igbo-Eze North, Oji-River	
	Imo	3	Njaba, Ideato South, Ngor-Okpala	
13 LGAs (8%)				



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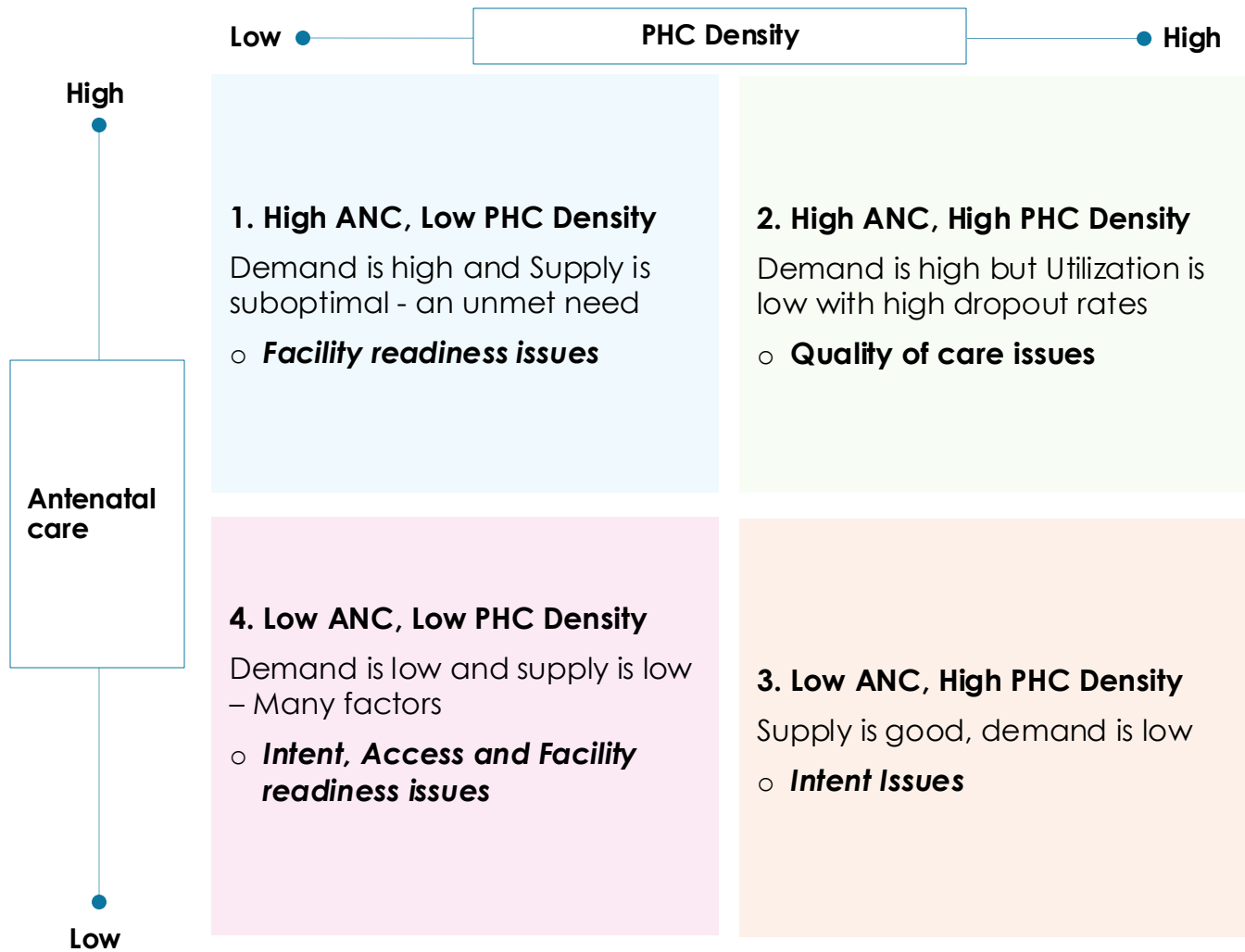
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The LGAs with high Maternal and Child Mortality can be divided into distinct archetypes based on antenatal care attendance and the availability of nearby primary healthcare centres



Intervention Suites	% LGAs*
Guarantee facility readiness <ul style="list-style-type: none"> PHC revitalization: Facility upgrades and HRH optimization while strengthening Quality of care Potentially include community midwifery scheme 	24%
Ensure Access/Birth preparedness and Strengthen Quality of Care <ul style="list-style-type: none"> CHWs for Linkage and Follow-Ups along the continuum + Birth plans Strengthen Quality of care and availability of full suites of services 	24%
Rebuild trust in health systems and deepen community awareness <ul style="list-style-type: none"> Community linkages through CHWs Birth preparedness Emergency transport Services 	22%
Ensure facility readiness alongside intense demand generation <ul style="list-style-type: none"> PHC revitalization: Facility upgrades and HRH optimization while strengthening Quality of care and facilitating access Strengthen demand generation and community linkages comprehensively 	30%

Key considerations
All identified LGAs have low SBA performance



Schematic – Linking interventions to the root causes of the delays along the delivery journey

DELAY 1: Decision to Seek Care

- Distrust in health system
- Poor Knowledge & awareness
- Sociocultural norms and birth practices

Intent/ Knowledge and Awareness

- Community Health Workforce/ MAMII Vanguard
- Partnerships with traditional and religious leaders

Emergency transport services (NEMSAS)

Paid ambulance services (procure vs outsource)

DELAY 2: Reaching care

Delays in transportation from community to health facility

PHCs

DELAY 3: Delay in receiving adequate care

a. Infrastructure and HRH
Poor service experience; infrastructure; HRH gaps; low QoC

b. Commodities availability
Shortages/Stock Outs; Poor cold chain infrastructure; Weak regulatory mechanisms

Improve facility readiness

- PHC Upgrades/bEMONC empanelment
- Recruitment and retention of HCWs
- MNH Innovations – PPH Bundle; MMS;

Commodities Supply chain

- Pooled procurement
- Last mile deliveries
- DRFs

Delay in Referrals
Prompt Referral Systems

CEMoNC empanelment

SHFs

OTHERS: High OOPe and low socioeconomic status; Poor domestic financing for health

Health financing I

- Vulnerable Group Fund
- Expansion of Health Insurance
- BHCPF 2.0

F. Enablers

- Performance tracking and M/E – DHIS2 scorecards, Mini-DHS
- Strong governance and accountability mechanisms
- Rewards and Awards of Excellence ceremonies (with media partnerships)
- Strengthening WDCs



Monitoring, Evaluation, and Learning will be structured across five key thrusts to support routine reviews and iteration of interventions in the initial priority LGAs and as we scale up

1

Deep-dive diagnostics in the 172 LGAs

- Detailed review of PHC assessment findings
- Mixed-method consultations with communities over the next 6 weeks
- Ethnography in LGAs with mainly demand-side gaps over the next 6 months



2

Further advanced analytics and modelling studies

- Use mathematical models to estimate and track the effects of different intervention mixes
- Use geostatistical models to estimate and track how each of the LGAs contribute to maternal mortality



3

Strengthening maternal and perinatal death surveillance and response (MPDSR)

- Targeted capacity strengthening for States and LGAs on MPDSR
- Routine data quality audits and spot checks for MPDSR



4

Strengthening overall tracking of outputs and outcomes

- RMNCH priority scorecard assessment and updates
- Mini-DHS survey following 24 months of implementation
- Quarterly spot checks using modified health facility assessments and community surveys



5

Getting to zero – Tracking the journey

- Establish an electronic countdown dashboard tracking the reach and impact of each Mamii programme activity and investment against maternal deaths
- Tracking would be based on a set annual milestone counting down



Source: Proposed data use for decision making support for the SWAp coordinating office

LGAs: Local Government Areas; PHC: Primary Healthcare; MPDSR: Maternal and Perinatal Death Surveillance and Response; DHS: Demographic and Health Survey



Next steps

1. **Conduct additional LGA Validation with states**
2. **Conduct LGA-level diagnostics on the demand-side, to better understand the drivers of awareness, acceptance, intent, and facilitators of action**
3. **Co-develop implementation plan with states**