Ebonyi State, Nigeria: Country Case Study

An Unfinished Agenda in Maternal Health: Meeting the Needs of Women with PE/E and Washington DC, June 13th
HAUSA PROVERB

“Duniya mace mai ciki ce – ba a San abin da za ya huta ba.”

The world is like a pregnant woman-you never know what will happen/come out.
Outline

• Background Context
• Ending Eclampsia and MCSP projects’ scope and collaboration
• Quality, Equity, Dignity Network opportunities (national/state-level) to strengthen PPH and PE/E
• Collaboration with MOH: Recent PE/E and PPH QI activities
• Discussion and participant feedback
998 maternal deaths and 1451 near misses (SMOs)

- Majority (91.8%) admitted in critical condition
- Leading causes of mortality/severe morbidity:
  - pre-eclampsia/eclampsia 23%; PPH 14%
- Median time between diagnosis and critical intervention (not arrival) was 60 minutes; in 22% of cases it was > 4 hours
- Late presentation (35%), lack of health insurance (17%) and non-availability of blood products (12.7%) most frequent problems associated with care deficiencies
Ebonyi State, Nigeria

- Population Ebonyi State: 2.79 million
- ANC I coverage: 85%*
- SBA coverage: 62%*
- 13 LGAs (districts)
- 1 Tertiary hospital
- 6 Mission Hospitals
- 13 General Hospitals (GH)
- 430 PHCs

*2013 DHS
## Facility Infrastructure, Supplies, Commodities

<table>
<thead>
<tr>
<th>Facility Feature</th>
<th>Primary (n=104)</th>
<th>Secondary (n=25)</th>
<th>Tertiary (n=1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has electricity</td>
<td>36.5%</td>
<td>64.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Functional handwashing station (running water)</td>
<td>7%</td>
<td>24%</td>
<td>100%</td>
</tr>
<tr>
<td>Essential supplies and equipment easily accessible in facility</td>
<td>22.1%</td>
<td>36.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Stock of essential MNH emergency medications available in the facility (Oxytocin, MgSO₄)</td>
<td>14.4%</td>
<td>52.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Functioning Toilet in delivery room</td>
<td>4.8%</td>
<td>16%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Facility Assessment MCSP 2015
### Ebonyi: Selected EmONC functions, referral protocols, MPDSR

<table>
<thead>
<tr>
<th>Function</th>
<th>Primary (n=104)</th>
<th>Secondary (n=25)</th>
<th>Tertiary (n=1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MgSO4 administered in last 3 months</td>
<td>21%</td>
<td>52%</td>
<td>100%</td>
</tr>
<tr>
<td>Parenteral oxytocin administered last 3m</td>
<td>3.6%</td>
<td>32%</td>
<td>100%</td>
</tr>
<tr>
<td>Manual removal of placenta</td>
<td>1.9%</td>
<td>20%</td>
<td>100%</td>
</tr>
<tr>
<td>Health management committee in situ</td>
<td>77.9%</td>
<td>48.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Written formal referral protocol</td>
<td>56%</td>
<td>72%</td>
<td>100%</td>
</tr>
<tr>
<td>Maternal, Perinatal and Neonatal death reported to higher levels</td>
<td>15%</td>
<td>36%</td>
<td>100%</td>
</tr>
<tr>
<td>Functioning MPDSR committee</td>
<td>3.8%</td>
<td>12.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Facility Assessment MCSP 2015
HMIS: Data Flow in Nigeria/Ebonyi State

Types of forms and common data flows

- Patient record (e.g., ANC booklet; maternity record)
- Registers
- Summary forms

Facility

HMIS data flow example: Nigeria

DHIS2 or other software

*No standardized Maternity patient record
*In collaboration with SMOH introducing standardized patient record
Ending Eclampsia and MCSP projects collaborate in Ebonyi State to support MOH and key stakeholders to improve maternal health services
MCSP MNH Objectives in Ebonyi State – supporting 120 facilities

• Improve quality of facility-based maternal, newborn, child (MNCH)/postpartum family planning services (and community CH health services)
• Improve health information systems to monitor service delivery and health outcomes
• Increase use of life-saving innovations, including UBT
Ending Eclampsia core activities in Ebonyi, Cross River, and Kogi

- Training and routine mentoring of PHC/GH health workers on early detection and management of PE/E during ANC.
- Training and mentoring of health educators to provide PE/E-related information prior to ANC.
- Conduct IR around task-shifting for prevention and management of hypertension during pregnancy.
- Harmonize PE/E & PPH national guidelines, training, protocols, & tools.
Ending Eclampsia PHC PE/E Model for increasing access to MgSO₄

- Ebonyi: PHC PE/E Model + anti-hypertensives at PHC
- Cross River: PHC PE/E Model + women’s groups
- Kogi: PHC PE/E Model
EE Assessment: Provider knowledge of How to Manage HDP (baseline)

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Providers who correctly know when to introduce antihypertensive drugs</td>
<td>8.5</td>
<td>4.2</td>
<td>12.7</td>
</tr>
<tr>
<td>% Providers who correctly know when to stop administering antihypertensive drugs after commencement of treatment in a woman with HTN</td>
<td>9.7</td>
<td>2.8</td>
<td>12.5</td>
</tr>
<tr>
<td>% Providers who correctly know when to rapidly lower the risk of stroke in a woman with HTN</td>
<td>8.3</td>
<td>6.9</td>
<td>15.3</td>
</tr>
<tr>
<td>% Providers who correctly know when to administer MgSO4 to a woman with severe PE</td>
<td>45.8</td>
<td>29.2</td>
<td>75</td>
</tr>
</tbody>
</table>

Ending Eclampsia 2016
**EE Assessment: Facility Prescription Practices (baseline)**

<table>
<thead>
<tr>
<th></th>
<th>Facility currently prescribes antihypertensive</th>
<th>labetalol</th>
<th>Alpha Methyldopa (Adomet)</th>
<th>Nifidipine</th>
<th>Hydralazine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intervention</strong></td>
<td>18.1</td>
<td>4.3</td>
<td>8.7</td>
<td>26.1</td>
<td>8.7</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>15.3</td>
<td>0</td>
<td>13</td>
<td>17.4</td>
<td>8.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>33.3</td>
<td>4.3</td>
<td>21.7</td>
<td>43.5</td>
<td>17.4</td>
</tr>
</tbody>
</table>

*Ending Eclampsia 2016*
Leveraging Nigeria’s participation in QED Network to accelerate improvement in PE/E and PPH services: National and State-level activities

Nigeria Delegation at WHO QED MNH Network Launch
Malawi, February 2017
Key Action Items Agreed by Nigeria Delegation at WHO Network Launch Meeting

• Finalize costed National RMNCH QoC Strategy and seek approval by the National Council on Health
• Build capacity for Quality Improvement among all key MNCH stakeholders (e.g. MOH managers, Professional Associations, providers)
• Agree on National MNH Core Quality Indicators and begin tracking
• Establish learning Platforms
Ebonyi QI Work: State MOH, LGA, Facility Level

State QI operational plan created
• State quality committee established
• Facility QI teams established and meeting regularly to improve routine MNH/PPFP care, tracking quality measures (using QI dashboard)
• Ongoing supportive supervision (using MOH standard checklist), clinical & QI capacity building/mentoring (on-site and off-site)

Illustrative Challenges
• **Stock outs** of key MH commodities (e.g. uterotonics, MgSO4) especially in PHCs and General Hospitals
• **Lack of standardized patient record** (ANC, Birth, PNC).
Several QI Workshops in Ebonyi State (2016-2017) including PPH/PEE QI workshop February 2017 co-convened with MOH

Participants:

- SMOH and LGA managers
- Facility representatives PHC, Hospitals (Managers, Nurses/CHEWS, Midwives, Obstetricians)
- Professional Associations (SOGON, NANNM)
PPH & PE/E QI Workshop (cont’d)

Key Activities:

• Reviewed updated MCPC PPH and PE/E clinical guidelines
• Adapted local PPH & PEE clinical bundles, QI measures to local context – tailored to care level and care phase (pregnancy, birth, PP)
• Reviewed barriers to PPH/PEE care and prioritized solutions, leveraging local assets
• Reviewed referral protocols/process, gaps and needs
• Supported clinical, QI and measurement capacity-building
• Structured visits to PHC, hospitals with MOH
Building MOH and stakeholder supervision, clinical, QI skills to regularly support PHC and Hospital Health teams

- Case scenarios (clinical skills and decision-making)
- Priority clinical interventions
- Indicator Definitions, Data Sources, Availability
- Calculate, Plot, Analyze Trends
- Analyze QoC gaps, root cause analysis
- Identify promising feasible and sustainable changes to test
Clinical Skills and Decision-making Competencies

• Demonstrations
• Drills
• Simulations
• Case scenarios
• Standardization
Provider Support Tools

Postnatal Care
Pre-discharge Checklist

*integrated Maternal, Newborn, PPFP content
Simulated QI Team Exercises

Brainstorm changes

Now that your QI team has identified underlying causes of common quality gaps in care for women with PE/E and newborns with asphyxia brainstorm some changes your QI team can test to close important identified quality of care gaps. Focus on changes you think will be feasible and sustainable over the long term.

<table>
<thead>
<tr>
<th>Important cause of gap (above table)</th>
<th>Changes you might test</th>
</tr>
</thead>
</table>
| Lack of awareness among community members of danger signs and the importance of timely attendance at the hospital | • Evidence based advocacy  
• Awareness raising among community levels (jingles with messages around danger signs in pregnancy and when to go to the facility)  
• Women’s groups  
• Women’s empowerment |
| Financial constraints                                                                               | • advocate for a community health insurance scheme or funding pool to pay for emergency transport |
| Equipment non-functional or missing                                                                  | • advocate for SMOH provision of inventory (e.g. advocacy to First Lady for incubator support)  
• start a schedule of regular maintenance to check status of inventory and alert the biomedical technicians to request repairs |
| Unavailability of MgSO4 (for more than 1 year facilities haven’t received free EML drugs)           | • Establishment of a functional DRF |
## Consensus Priority Indicators

### Pre-Eclampsia/Eclampsia

<table>
<thead>
<tr>
<th>ANC</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>PHC &amp; Hospitals:</strong></td>
<td>• % of women seen in ANC with BP checked and documented</td>
</tr>
<tr>
<td><strong>PHCs:</strong></td>
<td>• % of pregnant women with severe PE/E given first dose of MgSO4 and referred to higher level care</td>
</tr>
</tbody>
</table>

**Admission, Labour, Childbirth and Postnatal Care**

| PHCs: | • % women with severe PE/E administered first dose of MgSO4 and referred to hospital |

**Hospital:**

- % of women with severe PE/E treated with full dose of MgSO4 (labor/post-partum) (loading and maintenance for at least 24 hours after birth or after last convulsion)
- % women with severe elevated BP treated with antihypertensive

**Outcome measures (All Levels):**

- Institutional maternal mortality rate due to PEE (pre-discharge)
- % women with severe PE and eclampsia (incidence)
- % women with severe PE and eclampsia who died due to PEE (case fatality)

### Postpartum Hemorrhage

<table>
<thead>
<tr>
<th>ANC</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHC &amp; Hospitals:</strong></td>
<td>• % pregnant women who receive IFA during ANC</td>
</tr>
</tbody>
</table>

**Labour, Childbirth and Postnatal Care**

| PHCs and Hospitals: | • % of women who receive preventive uterotonic (oxytocin) immediately following birth (AMTSL) |
| | • % of women with PPH who received therapeutic uterotonic |

**Outcome measures (All Levels):**

- Institutional maternal mortality rate – classified by cause
- Institutional early maternal mortality rate (pre-discharge) due to PPH
- % women who develop PPH (incidence)
- % women with PPH who died (PPH case fatality rate)
Facility Visits (PHC/hospital) to understand a woman’s pathway in a facility, organization of services, data collection and use, provider clinical skills

Sample diagram of patient pathway for CEmONC

SECTIONS OF THE PATIENT PATHWAY TOOL
1. Referrals
2. Hospital gate
3. Emergency evaluation area
4. Labor and delivery room
5. Operating theater (including change & scrub room)
6. Post-op recovery room
7. Post-op ward

Categories by Room:
- Policies and Guidelines
- Infrastructure
- Equipment and Supplies
- Infection Prevention
- Human Resources
- Laboratory and Blood Bank Services
- Medicines
Reflections

• Health systems and QI approaches are needed to promote access to quality under-utilized interventions to effectively address PE/E and PPH.
• Strengthening supply chain for essential MNH commodities to improve availability is critical for effective management of PE/E and PPH.
• Engage the private sector effectively to address referral challenges.
• Harmonizing efforts nationally and globally helps to identify key PE/E, PPH and maternal health research and implementation priority areas.
• Collaborative engagement with MOH, policy and country partners is essential for advancing an improved policy and implementation environment for effective PPH and PE/E program implementation.
Hausa Proverb

“Tsaya daia ba ta shara”
(A single straw will not sweep)

Team work and collaboration is everything if we want to improve care for women with PEE and PPH!
Thank you!
What PPH/PEE data exist in routine information systems?  
Selected HMIS Results Rwanda, Madagascar, Kenya, Tanzania, Nigeria

<table>
<thead>
<tr>
<th>Mortality by cause</th>
<th>Rwanda</th>
<th>Madagascar</th>
<th>Kenya</th>
<th>Tanzania</th>
<th>Nigeria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal mortality</td>
<td>Summary Form: Yes</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Antepartum Hemorrhage</td>
<td>Summary Form: Yes</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PPH</td>
<td>Summary Form: Yes</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hypertensive disorders</td>
<td>Summary Form: Yes</td>
<td>Facility Register: No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hemorrhage</th>
<th>Rwanda</th>
<th>Madagascar</th>
<th>Kenya</th>
<th>Tanzania</th>
<th>Nigeria</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC - Anemia</td>
<td>Summary Form: Yes</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>ANC - Hb level</td>
<td>Summary Form: No</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>L&amp;D - Uterotonic use to prevent PPH</td>
<td>Summary Form: No</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>L&amp;D - Antepartum Hemorrhage diagnosis</td>
<td>Summary Form: Yes</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>L&amp;D - Antepartum Hemorrhage treatment</td>
<td>Summary Form: No</td>
<td>Facility Register: No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>L&amp;D - PPH diagnosis</td>
<td>Summary Form: No</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>L&amp;D - PPH treatment</td>
<td>Summary Form: No</td>
<td>Facility Register: No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<thead>
<tr>
<th>Hypertensive disorders</th>
<th>Rwanda</th>
<th>Madagascar</th>
<th>Kenya</th>
<th>Tanzania</th>
<th>Nigeria</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC - Blood pressure monitoring</td>
<td>Summary Form: No</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ANC - PE/E diagnosis</td>
<td>Summary Form: No</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>L&amp;D - Blood pressure monitoring (at admission)</td>
<td>Summary Form: No</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>L&amp;D - Anti-hypertensive treatment for elevated BP</td>
<td>Summary Form: No</td>
<td>Facility Register: No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>MgSO4 available</td>
<td>Summary Form: No</td>
<td>Facility Register: No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>L&amp;D - E/PE diagnosis</td>
<td>Summary Form: Yes</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>L&amp;D - Anticonvulsant/MgSO4 administered for PE/E</td>
<td>Summary Form: Yes</td>
<td>Facility Register: No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Support to National and State MNCH Structures and Policies

• National Level Support
  • National Core Technical Committee on RMNCAH
  • National MNCH Planning weeks
  • National Technical Working group on MNH QoC
  • Updates on new MNCH guidelines e.g. New WHO ANC recommendations.

• State Level Support
  • State Core Technical Committee on MNCH
  • State MPDSR Committee
  • State Quality Improvement Committee
  • State MNCH Weeks
Nigeria: Emergency Transport Scheme

• Working with the National Union of Road Transport Workers (NURTWs) and other stakeholders
• Previous successful Emergency Transport Schemes established in Nigeria.
• Advocacy completed and will be supporting the training of drivers on handling pregnant women with health emergencies.
• Starting with 6 LGAs and communities around 5 MCSP supported facilities in each LGA
• Developed draft MoU for the States and NURTWs on ETS
Nigeria: Maternal Health IEC Materials

- Safe motherhood Posters
  - Attend ANC
  - Early detection of unusual signs during pregnancy
  - Safe delivery at a facility
  - Protect yourself and baby from malaria
  - Take antimalarial drugs, iron & folic acid and TT injections

- Birth Preparedness and Readiness Cards
- Postnatal Care Posters and pre-discharge checklist
- Maternal Health Record Booklet introduced in Kogi and Ebonyi states (standardized patient record)