Improving Maternal Health in Low-resource settings: Niger Case Study, Part I

Kathleen Hill, M.D. M.P.H.
MCSP Maternal Health Team Lead
February 2016 Annual Meeting
American College of Preventive Medicine
Outline

• Global burden of maternal mortality and morbidity: Where, When, Why?
• Unique Challenges for Improving Quality of Maternal Care in Low Resource settings
• WHO Quality of Care Framework for Maternal and Newborn Health (2015-2016)
• Niger Case Study: post-partum hemorrhage
ABOUT 830 WOMEN DIE EACH DAY due to complications in pregnancy and childbirth.

This is despite a **44%** reduction in maternal deaths between 1990 and 2015:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>DEATHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>532,000</td>
</tr>
<tr>
<td>2015</td>
<td>303,000</td>
</tr>
</tbody>
</table>

NO WOMAN SHOULD DIE IN PREGNANCY AND CHILDBIRTH

© World Health Organization 2015
WHERE IS IT MOST DANGEROUS TO HAVE A BABY?

IN FRAGILE SETTINGS

Countries experiencing crisis and conflict - where over 1/2 of all maternal deaths take place.

Lifetime risk of dying in pregnancy and childbirth:

Fragile settings: 1 in 54

Developed countries: 1 in 4900

NO WOMAN SHOULD DIE IN PREGNANCY AND CHILDBIRTH
Birth is the time of greatest risk of death and disability for mothers and newborns (40% of all deaths occur within 24 hours of birth).

- 1.2 million intrapartum stillbirths
- ~113,000 maternal deaths
- > 1 Million neonatal deaths

75% neonatal deaths 1st week
WHAT ARE PREGNANT WOMEN DYING FROM?

28% Pre-existing medical conditions exacerbated by pregnancy (such as diabetes, malaria, HIV, obesity)

27% Severe bleeding

14% Pregnancy-induced high blood pressure

11% Infections (mostly after childbirth)

3% Blood clots

8% Abortion complications

9% Obstructed labour and other direct causes

WHO 2014
The Issue of Quality in Health Care

“Every system is perfectly designed to achieve exactly the results it achieves”

(Batalden & Stolz 1993)
Moving beyond Inputs and System Building Blocks in Global Maternal Health….

(Source: Donabedian)

Structure (inputs)
- Human resources
- Infrastructure
- Materials (i.e. vaccine)
- Information
- Technology

Process
1. What is done
2. How it is done

Outcomes
- Patient health status/outcomes
- Change in health behavior
- Patient perception and experience of care

(Source: Donabedian)
Achieving Quality Maternal Health Care: What are the Challenges in Low Resource Settings?

<table>
<thead>
<tr>
<th>Resources</th>
<th>Processes</th>
<th>Results (Outcomes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe workforce shortages; low provider skills</td>
<td>Non-adherence with evidence-based standards</td>
<td>Negative maternal health outcomes (high mortality &amp; morbidity)</td>
</tr>
<tr>
<td>Standards not up to date</td>
<td>Poor organization of care (inefficiency, third delay)</td>
<td>Poor quality of care</td>
</tr>
<tr>
<td>Poor infrastructure; essential commodities lacking</td>
<td>Late recognition of problems &amp; inaccurate diagnoses</td>
<td>Inequitable care</td>
</tr>
<tr>
<td>Non-standardized records; missing data</td>
<td>Weak referral systems</td>
<td>Poor client satisfaction</td>
</tr>
<tr>
<td>Rare tracking and use of quality measures</td>
<td>Non-dignified care</td>
<td>→ low utilization of MH services</td>
</tr>
<tr>
<td>Demotivated workers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WHO Quality of Care Framework for Childbirth (BJOG 2015)

Structure

Health system

Quality of Care

Process

Provision of Care

1. Evidence based practices for routine care and management of complications
2. Actionable information systems
3. Functional referral systems

Experience of Care

4. Effective communication
5. Respect and dignity
6. Emotional support

7. Competent and motivated human resources
8. Essential physical resources available

Outcome

Individual and facility-level outcomes

Coverage of key practices
People-centred outcomes
Health outcomes
Each of 8 Domains has a Single Standard and Several Quality Statements and Measures

**Standard:** Description of what is expected to be provided to achieve high quality care around the time of childbirth (Aspirational Goal)

**Quality statement:** Concise prioritized statement designed to drive measurable quality improvements in the care around childbirth

**Quality measures:** Criteria that can be used to assess, measure and monitor quality of care
<table>
<thead>
<tr>
<th>Standard 1: Every woman and newborn receives <strong>evidence-based routine care and management of complications</strong> during labour, childbirth and early postnatal period.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard 2:</strong> The <strong>health information system</strong> enables the use of data for early and appropriate action to improve care for every woman and newborn.</td>
</tr>
<tr>
<td><strong>Standard 3:</strong> Every woman and newborn with condition(s) that cannot be dealt with effectively with the available resources is appropriately <strong>referred</strong>.</td>
</tr>
<tr>
<td><strong>Standard 4:</strong> <strong>Communication with women and their families</strong> is effective and in response to their needs and preferences.</td>
</tr>
<tr>
<td><strong>Standard 5:</strong> Women and newborns receive <strong>care with respect and dignity</strong>.</td>
</tr>
<tr>
<td><strong>Standard 6:</strong> Every woman and her family are provided with <strong>emotional support</strong> that is sensitive to their needs and strengthens her own capabilities.</td>
</tr>
<tr>
<td><strong>Standard 7:</strong> For every woman and newborn, <strong>competent and motivated staff</strong> is consistently available to provide routine care and manage complications.</td>
</tr>
<tr>
<td><strong>Standard 8:</strong> The health facility has <strong>appropriate physical environment</strong> with adequate <strong>medicines, supplies and equipment</strong> for routine MNH care and management of complications.</td>
</tr>
</tbody>
</table>
## Illustrative Quality Statements For Domain Seven: Competent and Motivated Human Resources

<table>
<thead>
<tr>
<th>STANDARD: For every woman and newborn competent and motivated staff are consistently available to provide routine care and manage complications.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality statement 7.1:</strong> Every woman and newborn has access at all times to at least one skilled birth attendant and a helper for routine care and support of a team to manage complications.</td>
</tr>
<tr>
<td><strong>Quality statement 7.2:</strong> The skilled birth attendants have appropriate competencies and skills mix to meet the needs during labour, childbirth and early postnatal period.</td>
</tr>
<tr>
<td><strong>Quality statement 7.3:</strong> The health facility has a leadership committed to supporting, implementing and monitoring quality improvement interventions in maternal and newborn care.</td>
</tr>
</tbody>
</table>
WHO QoC MNH Initiative: 2016

**WHO meeting Jan 21-22** – Experts reviewed draft country MNH QI high-level implementation guidance

- Focus on district as unit of improvement – with strong linkages to facilitating national structures

  - Local adaptation and leveraging of country assets
  - Regular shared learning to accelerate improvement (intra- and inter country)
  - Institutionalizing capacity in country health systems for continuous improvement
  - 6-10 “wave one” focus countries

**Follow-up meeting spring 2016** with multiple country stakeholders to launch multi-country MNH QI implementation and learning network
Coming Down to the Ground: Niger Case Study
NIGER:

- MMR: 553 per 100,000 live births
- Lifetime risk maternal death 1:23 (*U.S. 1:3,800)
- Annual # maternal deaths: 5,400
- Institutional Birth Rate: 30%
- Leading Causes Maternal Mortality:
  - PPH
  - Eclampsia
  - Infection
  - Obstructed Labor
  - Other
Midwives and Auxiliary Nurses provide most maternal health care in Niger - Maiduguri Maternity
MAIDUGURI DISTRICT

- Institutional birth rate: 42%; ANC 1 visit: 80%; ANC 4: 45%
- 40 Health Posts (ANC only); Seven Health Centers (ANC, Delivery, PNC)
- District Hospital: no surgical capacity/no blood bank
- Nearest regional hospital: 2 hours driving; irregular transport
- Frequent power outages (electricity piped in from Nigeria)
- Running water: approximately 12 hours per day in health centers
- Frequent stock outs: uteronic, MgSO4, IVF, soap – families sent to purchase
- Average age of marriage: 16 years; average lifetime fertility: 6.5 children
- Prevalence moderate/severe anemia (Hgb < 8): 44%
For more information, please visit
www.mcsprogram.org

This presentation was made possible by the generous support of the American people through the United States Agency for International Development (USAID), under the terms of the Cooperative Agreement AID-OAA-A-14-00028. The contents are the responsibility of the authors and do not necessarily reflect the views of USAID or the United States Government.

facebook.com/MCSPglobal    twitter.com/MCSPglobal