Scaling up facility initiated KMC in Malawi

Q Dube
Every day in Malawi, 41 babies in their first month of life die.

- **23 deaths** per 1,000 live births
- **42% of all under-5 child deaths** taking place in the neonatal period.
- **One-third** of all newborn deaths results from direct complications of prematurity
- **18%** of live births occurring before 37 completed weeks of pregnancy.
- The Malawi Every Newborn Action Plan (ENAP), launched in 2015, sets out an ambitious agenda to end preventable neonatal deaths.
- KMC was introduced in Malawi in 1999 – uptake has been slow.

http://www.childmortality.org/
## Country Profile

<table>
<thead>
<tr>
<th>Total population</th>
<th>17 mil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of annual births</td>
<td>665,000</td>
</tr>
<tr>
<td>Skilled Birth Attendance</td>
<td>90%</td>
</tr>
<tr>
<td>Preterm Birth Rate (&lt;37wks)</td>
<td>18%</td>
</tr>
<tr>
<td>Number of babies born preterm/yr (&lt;2500gms)</td>
<td>120,000</td>
</tr>
<tr>
<td>Low Birth Weight Rate</td>
<td>12%</td>
</tr>
<tr>
<td>Teenage Child Bearing</td>
<td>29%</td>
</tr>
<tr>
<td>Neonatal mortality (per 1000 live births)</td>
<td>27</td>
</tr>
<tr>
<td>Maternal Mortality (per 100,000 live births)</td>
<td>439</td>
</tr>
</tbody>
</table>

### Preterm Births and Deaths

- **Preterm birth rate (babies born <37 weeks):** 18%
- **Low birth weight rate (babies born <2,500g):** 13%
- **Babies born preterm per year:** 120,000
- **Ratio of boys to girls born preterm:** 1.17
- **Babies born per year <28 weeks:** 5,900
- **Impaired preterm survivors per year:** 3,100
- **Direct preterm child deaths per year:** 4,800

- **Baby weighed at birth:** 81%
- **Skilled Birth Attendance (%):** 90%
- **Early initiation of breastfeeding within 1 hour:** 80%
- **PNC within 2 days (Mother):** 42%
- **PNC within 2 days (Newborn):** 60%

Source: 2015-16 MDHS

HISTORY OF KMC IN MALAWI

- **1999**: Introduced at Zomba Central Hospital
- **Between 2000-2005**
  - Scale up to 6 more hospitals
  - KMC Integrated in Essential Newborn Care (ENC) in Malawi
- **2004**: National KMC policy
- **2005**: National guidelines for KMC
- **2007**: Evaluation of the state of KMC implementation in Malawi
- **Between 2008-2011**:
  - KMC Integrated in integrated MNH training manual;
  - 56% of facilities practicing KMC (296 of 528); and
  - National expansion of KMC corners and community KMC
- **2012**: revision of national KMC guidelines
- **2013**: KMC analysis all 3 regions in Malawi
- **2015**: ENAP launched and National Newborn Steering committee established
- **2016**: KMC indicators in DHIS2; implementation research (wrapper and follow up)
- **2017**:
  - Quality of care Network launched
  - Pilot of Family Led Care Model in Balaka
  - KMC included in preservice training
  - Special care nurseries for newborns
  - Rolling out of BCPAP
### KMC FACILITIES

<table>
<thead>
<tr>
<th>Year</th>
<th># facilities</th>
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<tr>
<td>1999</td>
<td>1</td>
</tr>
<tr>
<td>2002</td>
<td>2</td>
</tr>
<tr>
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<tr>
<td>2006</td>
<td>1</td>
</tr>
<tr>
<td>2007</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
</tr>
</tbody>
</table>

**GOVT -104**  **CHAM- 17**

**Central teaching hospital**

**Slow take-up**

- **Pre-2008**: 7
- **2008**: 11
- **2009**: 14
- **2010**: 54
- **2011**: 45

**TOTAL**: 121

**Country-wide scale-up**
KMC evaluation

STAGES OF CHANGE

6. Sustain new practices
5. Integrate into routine practice
4. Implement
3. Prepare to implement
2. Commit to implement
1. Create awareness

PRE-IMPLEMENTATION
IMPLEMENTATION

INSTITUTIONALISATION
National Milestones: KMC in Malawi

- Malawi ENAP related milestones:
  - 2015-2017: Establishment of sick newborn care units in all the district hospitals

- Malawi ENAP related indicator:
  - Eligible Newborn with low birth weight / Prematurity managed With KMC at facility (%)
    - By 2020 at 75%
    - By 2025 at 80%
    - By 2030 at 85%
Improving standards of care for sick newborns in Malawi

Focus areas:

• Setting up space for care of small and sick newborns in health facilities

• Capacity building for health workers on care of small and sick newborns
  - Development of the ‘Care of the Infant and new-born’ (COIN) training manual
  - COIN training implemented

• Addressing health information needs to meet the needs of small and sick newborns
  - Improving documentation of newborn data
  - Neonatal Death Audits

• Equipment and supplies for small and sick newborns
Improving documentation of newborn data

At first

• No admission sheets, use of improvised registers

Intervention

• Monitoring tools – developed in collaboration with RHD, other partners
  • Critical Care Pathway forms
  • Death audit, admission forms, registers
    • Harmonised available documents
    • Piloted in facilities prior to rolling out
    • National roll out of newborn register and admission forms in progress
• EVIDENCE GENERATION
Research studies related to KMC

• Readiness of hospitals to provide Kangaroo Mother Care (KMC) and documentation of KMC service delivery: Analysis of Malawi 2014 Emergency Obstetric and Newborn Care (published Oct, 2017)

• EmONC assessment (2014)

• Early outcomes among newborns discharged from facility based KMC in Malawi (2016/7)

• Improving uptake of KMC using a customized wrap (2016/7)

• Shifting social norms and practices for preterm and low birth weight babies (Improving value for the newborn) – campaign (2016/7)
Early outcomes among newborns discharged from facility based KMC

• In 2016, a hospital-based prospective cohort study was conducted in two hospitals to follow up babies discharged alive from facility-based KMC.

• Preliminary findings:
  • Mortality outcomes have improved: Mortality rate for small babies discharged alive and followed up until 60 days post discharge from facility was at 2.5%.
  • Preterm babies remain vulnerable after discharge: Most deaths occurred more than 10 days after hospital discharge, highlighting the continued threats small babies face as they mature.
  • Families are more likely to adhere to follow-up care closer to home: 89% of mothers and babies followed up at health facilities within 30 days.
  • Breastfeeding small babies is feasible and achievable with near universal coverage of breastfeeding Mothers adhere to KMC practice at home: Mothers adhered to KMC in the community, with 99% reporting continuing skin-to-skin practice following discharge.
Improving uptake of KMC using a customized wrap

• In 2016, implementation research was conducted to assess the acceptability and effectiveness of introducing a customized KMC wrap to improve skin-to-skin practices in three hospitals. 301 mothers were enrolled, half used the customized wrap and half used a traditional wrap.

• Preliminary findings
  • Women accept KMC: Women reported high levels of acceptability of KMC regardless of the wrap used.
  • Longer KMC practice results in more weight gain: Babies held in skin-to-skin for 20 hours or more per day gain more weight regardless of the type of wrap used.
  • Women preferred a customized wrap: Women using the customized wrap were more satisfied with KMC and practiced skin-to-skin for more hours every day.
  • Care for preterm babies requires quality improvement and mentorship: Implementation of KMC with a customized wrap needs to be part of a comprehensive package.
  • Follow up care requires more attention: Only half of mothers returned to the health facility for follow-up within 7-15 days of discharge and critical gaps in counselling on skin-to-skin and feeding practices were noted.
Challenges

• General challenges around quality of care for newborns especially preterm
  • Poor staff attitude
  • Poor supervision and mentorship
  • Lack of investment
  • Follow up system
  • Monitoring of newborns
  • Comprehensive care of the sick and small/preterm newborn

• Documentation, reporting and data use
  • Poor documentation and data management across all levels
  • Limited support on HMIS functionality at health facilities

• Staff turn-overs due to staff rotations, transfers and promotions
  • Health care providers
  • District management team members

• Limited budgetary support for refurbishment of neonatal units

• Community linkages
  • Linkage between the facilities, the HSAs and other community health workers
Lessons learnt

• **Strengthen leadership commitment** (RHD and DHMT at national and district levels) and partnerships (Newborn Steering committee at the national level)

• **Continue to invest** efforts in KMC uptake and quality improvement and mentorship to encourage **improved** KMC and feeding practices

• **Integrate** special care with KMC to ensure early initiation of KMC.

• **Continue to invest** in comfortable and practical newborn unit spaces in facilities to facilitate skin-to-skin practice continuously and in conjunction with special care (oxygen, IV fluids, etc)

• **Ensure clear** hospital policies are in place regarding discharge weights and follow-up procedures.

• **Promote** the use of a customized wrapper through district health system planning and produce the customized wrapper locally

• **Undertake additional research** to better understand the observed gaps in documentation of KMC services

• **Identify and invest in community-based approaches** to increase support for mothers and their families to practice KMC in the community
THANK YOU