Early outcomes of preterm babies hospitalized in Kangaroo Mother Care units in Rwanda

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Global Problem

• In 2010, 15 million babies were born prematurely
• 60% of preterm births occurred in sub-Saharan Africa
• 1.1 million deaths were due to preterm complications, 75% of which are preventable
• Preterm death is the 2\textsuperscript{nd} leading cause for under five mortality, after pneumonia*

Rwandan Statistics (2013)

- Of 297019 live births, 18583 (6%) were LBW
- Of LBW newborns, 6,309 were premature (34%)*
- 71% of newborns in neonatology were hypothermic**
- **2007**: KMC was introduced in the pilot site of Muhima District Hospital
- **2007-2010**: Scaling up of KMC units to 8 DHs

* HMIS 2013 **Neonatal death audit (2013)

Rwanda Family Health Project
Background

2010-2014: Interventions implemented by MoH and partners

• Training of healthcare providers on ENC, including KMC in referral, district hospitals and health centers
• Training of CHWs (ASM) on KMC as part of the C-MNH scale-up of neonatal services—includes a separate KMC unit for mothers with stabilized babies in all DHs
• Guidelines for hospitals provided by MoH and partners
Interventions implemented by MOH and partners, cont.

- Integration of KMC training module in ENC for healthcare providers
- Integration of KMC protocols in national neonatal protocols
- In 2014: Challenges related to quality of care of preterm infants remain in some health facilities, specifically a lack of standardized follow-up after discharge until 40 weeks, corrected gestational age or 2.5kg
Objectives

- Describe the number of admissions, length of stay and outcomes (death, changes in weight) of preterm babies hospitalized in KMC units in districts hospitals
- Describe the number of patients with documented follow-up after discharge from the KMC units
Methods

• Review of neonatal and KMC registers in DHs
• Only RFHP supported districts: 14 selected districts with 19 DHs (44% of all DHs)
• 5,919 babies admitted in neonatology service; 1,378 admitted to a KMC unit from January to August 2014
Republic of Rwanda

RFHP MCH-Supported Districts

RFHP - SUPPORTED HEALTH FACILITIES, 2014

Legend
- FHP Supported Facilities
- HIV Supported Districts
- MCH Supported Districts
- Malaria Supported Districts
- District Boundary
- Lakes

Source: Rwanda Family Health Project, July 2014.
Results

January to August 2014

- Admissions in neonatology services: 5,919 babies
- Neonatal death: 743 (12.5%)
- Admissions in KMC unit: 1,378 (23.2%)
- Deaths after starting KMC: 44 (3.1%)
- Average length of stay in KMC unit: 13 days
Results, cont.

- Average weight gain: 117 grams
- Documented follow-up of babies discharged from KMC unit:
  - 8 out of 19 DHs documented the 1\textsuperscript{st} follow-up (F/U) visit
  - 2 out of 8 DHs continued F/U until four standard visits
- Documented number of babies who received the 1\textsuperscript{st} F/U visit: 274
- Documented number of babies who received the 4\textsuperscript{th} F/U visit: 24
Results, cont.

Admission in neonatology and KMC

Rwanda Family Health Project
Admissions and death in neonatology

Republic of Rwanda

Ministry of Health

Rwanda Family Health Project
Results, cont.

Prematurity death among neonatal death

<table>
<thead>
<tr>
<th>Location</th>
<th>Prematurity Death (%)</th>
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<tbody>
<tr>
<td>Ruhango DH</td>
<td>48.5%</td>
</tr>
<tr>
<td>Remera Rukoma DH</td>
<td>4.50%</td>
</tr>
<tr>
<td>Kayigyi DH</td>
<td>38.5%</td>
</tr>
<tr>
<td>Nyagatare DH</td>
<td>44.7%</td>
</tr>
<tr>
<td>Masaka DH</td>
<td>56.5%</td>
</tr>
<tr>
<td>Ruli DH</td>
<td>33.9%</td>
</tr>
<tr>
<td>Byumba DH</td>
<td>22.2%</td>
</tr>
<tr>
<td>Gitwe DH</td>
<td>52.5%</td>
</tr>
<tr>
<td>Kigeme DH</td>
<td>50.0%</td>
</tr>
<tr>
<td>Rwanagana PH</td>
<td>47.4%</td>
</tr>
<tr>
<td>Kibagabaga DH</td>
<td>30.4%</td>
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<tr>
<td>Rutongo DH</td>
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<tr>
<td>Kahuza DH</td>
<td>33.3%</td>
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<tr>
<td>Murunda DH</td>
<td>25.8%</td>
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<tr>
<td>Nemba DH</td>
<td>34.4%</td>
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<tr>
<td>Kinshasa DH</td>
<td>38.9%</td>
</tr>
<tr>
<td>Gahini DH</td>
<td>Total:</td>
</tr>
</tbody>
</table>

Rwanda Family Health Project
Admissions and death in KMC

Name of district hospitals

- Admission KMC
- Death in KMC

Rwanda Family Health Project
Conclusion

• Case fatality rate for newborns is still high in Rwandan district hospitals
• The average weight gain in KMC units is insufficient
• KMC is done in all RFHP-supported districts but there is a need to improve documentation of all activities done in KMC unit
• The follow-up for four standard visits was low
Recommendations

- Improve data with a separate register for KMC
- Continue regular mentorship to improve quality of preterm care in DHs
- Create a link between DHs, HCs and communities for babies discharged from neonatology units (e.g., rapid SMS offers an opportunity for feedback)
- Create ambulatory newborn clinics at HCs to improve their follow-up with clear guidelines, including referral
Acknowledgements

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