KANGAROO MOTHER CARE IN RWANDA

OVERVIEW

The Ministry of Health has committed to improving the health outcomes of preterm and low-birthweight (LBW) babies by leading the scale-up of facility-based kangaroo mother care (KMC) services in collaboration with partners and stakeholders since 2007. Currently, KMC is provided in all district hospitals. KMC has been included in the national reproductive, maternal, newborn, and child health policy and the national guidelines for care of small babies, including the *Neonatal Protocols* manual and the *Essential Newborn Care Reference Manual*. The *Neonatal Protocols* manual outlines that health care providers should encourage all mothers of stable LBW babies (<2.5 kg) to provide KMC to prevent hypothermia, enable frequent breastfeeding, and allow for earlier hospital discharge. The *Essential Newborn Care Reference Manual* describes KMC along with its advantages, discharge criteria, and the importance of follow-up within 1 week of discharge from the district hospital. As the country transitions from the scale-up of KMC services to sustainability and quality, there are opportunities for improvement, such as increasing the number of beds designated for KMC at each hospital, standardizing the follow-up after discharge, and improving data quality.

Table 1. Status of kangaroo mother care in Rwanda by strategic area

Domain	Prior to and during 2014	2015–2017
Policy		
National Health Policy	Facility-based kangaroo mother care (KMC) was included in the National Child Health Policy in April 2009.	The Ministry of Health (MOH) is currently reviewing a reproductive, maternal, newborn, and child health (RMNCH) policy that includes KMC. It is expected that the MOH will sign and approve the policy later this year (2017).
National Guidelines	• KMC was integrated in the basic reference manual of emergency obstetric and newborn care in 2009, the *Neonatal Protocols* manual (Rwanda MOH 2011), the *Essential Newborn Care Reference Manual* in 2011, *Neonatology Clinical Treatment Guidelines* (Rwanda MOH 2012), the National Neonatal Care Protocol (Rwanda MOH 2014), and the maternal community health worker trainings. • National KMC guidelines were developed and published in November 2011.	• KMC guidelines are being updated with greater detail. • KMC continues to be part of the *Essential Newborn Care Guidelines*; the most recent version was published in December 2015.

Domain	Prior to and during 2014	2015–2017
Country Support/Implementation		
Levels and types of facilities implementing KMC	KMC was introduced as a pilot in Muhima District Hospital in Kigali in 2007. Subsequently, KMC was scaled to eight district-level facilities from 2007 to 2010 (Kayinamura 2014). According to an assessment conducted in 2012, 30 of 40 sampled district hospitals had some KMC services (Bergh et al. 2012).	It is recommended in Rwanda's *Neonatal Protocols* that there should be at least four to six beds in each district hospital designated for KMC. LBW babies born in first-level facilities are referred to district hospitals, where they are stabilized and initiated in KMC.
Percentage of low-birthweight (LBW) newborns initiated on facility-based KMC		An estimated 75% or more of LBW newborns are initiated on facility-based KMC, as KMC is part of the national protocol. District hospitals are implementing KMC, but data are needed to support this estimate.
Funding	The national health insurance scheme, Mutuelle Santé (used by 90% of Rwandans), includes KMC in its coverage.	Because KMC is under the RMNCH umbrella and KMC is integrated in newborn care, KMC funding mostly comes from the MOH.
Research		
Major or program-based studies being conducted related to KMC currently		A study was conducted in Kabutare District Hospital about KMC follow-up after discharge (Cannoodt and Kayinamura 2015).
Knowledge Management		
Centers of excellence or state-of-the-art facilities for KMC/care of LBW babies	Muhima District Hospital was established as a center of excellence in August 2007. This initiative was led by the MOH with support from the ACCESS project.	
Monitoring and Evaluation		
KMC indicators included in the national health management information system (HMIS)	KMC indicators were integrated in the HMIS in 2013. KMC admission and KMC follow-up in district hospitals were disaggregated by preterm and LBW babies.	KMC indicators continue to be included in the HIMS. However, the denominator of the KMC indicator includes all newborn babies. Currently, there are discussions about changing the denominator to babies who weigh 2 kg or less.
KMC data recorded at health facilities	KMC was not documented in a standard way prior to 2013.	Health facilities providing KMC services track service delivery using the KMC register. Facilities then submit monthly reports on KMC indicators that are included in the HMIS. There are opportunities for improvement of data quality and completeness.

Domain	Prior to and during 2014	2015–2017
Advocacy		
Professional organizations that endorse KMC	There were two main professional organizations endorsing KMC: the Rwanda Paediatrics Association and the Rwanda Association of Midwives.	The Rwanda Paediatrics Association and the Rwanda Association of Midwives have endorsed KMC; both organizations promote KMC through training and mentorships in health facilities.
Champions	There were champions at different levels, such as the MOH, partners, and health care facilities advocating for KMC. Some of the champions were Dr. Agnes Binagwaho, former minister of health, and Dr. Mwali (Assumpta) Kayinamura.	There are strong local KMC champions but a lack of resources for monitoring and follow-up. The MOH continues to be a strong champion given its commitment and continuous engagement with KMC.

Table 2. Demographic and Health Survey (DHS) proxy indicators for kangaroo mother care (DHS 2014–15)

Identification of Low-Birthweight Babies	Characteristic	Percentage
Percentage of live births in the 3 years preceding the survey by mother's estimate of baby's size at birth, according to background characteristics	*Very small*	3
	Smaller than average	12.9
Percentage of births that have a reported birthweight		92.2
Percentage of babies weighing less than 2.5 kg among births with a reported birthweight		6.3
Initial Breastfeeding		**Percentage**
Percentage of children born in the past 2 years who started breastfeeding within 1 hour of birth		80.5
Percentage of children born in the past 2 years who started breastfeeding within 1 day of birth		95.7
Skin-to-Skin Contact		**Percentage**
Percentage of births that have skin-to-skin contact among most recent live births in the 3 years preceding the survey		N/A

CHALLENGES

- There are major funding gaps for KMC, a need for more beds and space for KMC at the hospitals, lack of food at hospitals for new mothers, and lack of nutritional support for LBW babies.
- It is not always possible for mothers to bring the babies back to the health facilities for checkups due to long distances and lack of access to transportation.

LESSONS LEARNED

- The strong leadership from the MOH and the support of partners and other stakeholders have been essential to the scale-up of KMC. KMC has been integrated in national policies and guidelines as well as in the HMIS and registers.
- WhatsApp is used in some districts to follow up with mothers of LBW babies.

FUTURE ACTIONS

- Review neonatal protocols against best practices to promote early and exclusive breastfeeding using minimum enteral nutrition (MEN) approaches.
- Offer mentorship on MEN approaches and complete documentation of feeds (nutrition methods, types, frequency) in existing national newborn medical record forms.
- Develop guidelines and a clear plan to follow up with preterm/LBW babies after discharge until they reach 1 year of age.
- Engage leaders, such as the minister of health, the director of affairs, and the directors of hospitals, to continue advocating for the acceleration of KMC.
- Include quality improvement activities focused on family-centered care (ongoing promotion of companion of choice, intermittent KMC, engagement of family members in KMC, and improved counseling).
- Integrate KMC in the nursing curriculums.
- Engage private practitioners and private clinics.

DOCUMENTS AND RESOURCES

Document Title	Link to Document
Neonatal Protocols (2011)	www.childrenshospital.org/~/media/research-and-innovation/divisions/newborn-medicine/neonatalprotocolsrwanda.ashx
Neonatology Clinical Treatment Guidelines (2012)	www.moh.gov.rw/fileadmin/templates/Norms/Neonatology-Clinical-Treatment-Guidelines-OTHER-VERSION.pdf
Evaluation of Kangaroo Mother Care Services in Rwanda (2012)	http://reprolineplus.org/system/files/resources/Rwanda%20KMC%20Evaluation%20Report_0.pdf
"Early Outcomes of Preterm Babies Hospitalized in Kangaroo Mother Care Units in Rwanda" (2014)	http://fundacioncanguro.co/wp-content/uploads/2017/10/KMC-DAY213.-Early-outcomes-PPT-Assumpta-Mwali-Rwanda.pdf
"Follow-Up Assessment of Preterm Infants in Southern Rwanda: Final Results" (2015)	www.vlaamsegezondheidszorg.com/sites/default/files/august10_ppt_for_moh_3_dec_2015.pdf

REFERENCES

1. Bergh A, Sayinzoga F, Mukarugwiro B, Zoungrana J, Abayisenga G, Karera C, Ikiriza C. 2012. *Evaluation of Kangaroo Mother Care Services in Rwanda*. Kigali: Rwanda Ministry of Health (MOH).
2. Cannoodt, L, Kayinamura M. 2015. "Follow-Up Assessment of Preterm Infants in Southern Rwanda: Final Results." Presented at: Rwanda MOH; December 3; Kigali.
3. Kayinamura M. 2014. Early Outcomes of Preterm Babies Hospitalized in Kangaroo Mother Care Units in Rwanda. Presented at: 10th International Conference on Kangaroo Mother Care; November 17–19; Kigali, Rwanda.
4. Ntigurirwa P, Mellor K, Langer D, et al. 2017. A health partnership to reduce neonatal mortality in four hospitals in Rwanda. *Globalization and Health*. 13:28. doi: 10.1186/s12992-017-0252-6.
5. Rwanda MOH. 2011. *Neonatal Protocols*. Kigali: Rwanda MOH.
6. Rwanda MOH. 2012. Neonatology Clinical Treatment Guidelines. Kigali: Rwanda MOH.
7. Rwanda MOH. 2014. *Neonatal Protocols*. 2nd ed. Kigali: Rwanda MOH.
8. Rwanda MOH. 2015. *Essential Newborn Care Reference Manual*. Kigali: Rwanda MOH.

This document is 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 Maternal and Child Survival Program and do not necessarily reflect the views of USAID or the United States Government.