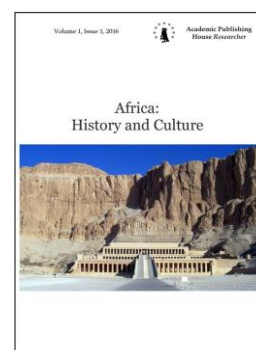


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## Ghana's Kangaroo Mother Care: A Historical Review on Eastern Regional Hospital KMC Excellence Centre

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### Abstract

Ghana, which is part of sub-Saharan Africa is also noted for preterm and low-birthweight births. Following the inception of Kangaroo Mother Care in Colombia, this method has gained the approval of the World Health Organization as a standard approach for the care of preterm and low-birthweight infants. Though Ghana adopted this method in 2007, the standard Colombian approach was comprehensively introduced in Ghana after the 2015 training of 3 health professionals from the Eastern Regional Hospital. Consequently, the Eastern Regional Hospital has championed this care and trained several health workers and students. The centre has participated in several clinical and scientific meetings to share their findings.

**Keywords:** eastern regional hospital, excellence centre, Ghana, historical review, Kangaroo Mother Care.

### 1. Introduction

Kangaroo Mother Care (KMC) began in 1978 in Bogotá, Colombia by Dr Edgar Rey Sanabria, Dr Héctor Martínez Gómez and others at the Instituto Materno Infantil as an intervention to curb the overcrowding and inadequate resources in Neonatal Intensive Care Unit (NICU). This act decreased congestion in incubator space and number of care givers at the NICUs in those days (Almeida et al., 2007). Having gone through several scientific trials and validations, KMC has been accepted as a World Health Organization's standard of care to decrease morbidity and mortality rates among preterm and low-birthweight infants (Baley, 2015; Charpak et al., 2005; Nunes et al., 2017).

Today, KMC has the following key components:

“(1) early, continuous, and prolonged skin-to-skin contact between the mother or caregiver and the infant;

(2) exclusive breastfeeding or breast milk feeding;

(3) early discharge after hospital-initiated KMC with continuation at home; and

(4) adequate support and follow-up for mothers at home.”

These key components form the basis of care within a typical KMC clinic and provide a focus for all multidisciplinary consultations. Experts of multidisciplinary consultations include paediatrician, nurses (all categories), psychologists, optometrists/ophthalmologists, ear, nose and

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throat specialists, physiotherapists, public health experts, social workers, and biomedical scientists. Globally, KMC has gained the acceptance of low-, middle-, and high-income nations alike (Charpak et al., 2005). In a randomized control trial among 28 neonates, babies via KMC increased in weight, breastfed, bonded and were discharged earlier compared to those offered standard care (Kadam et al., 2005). These benefits have been confirmed by several studies over 2 decades, making KMC an effective and safe method of care (Boundy et al., 2016, Charpak et al., 2005). In addition, a 20-year study by Charpak et al. (2017) revealed that KMC interventions positively affected children significantly vis-à-vis social and behavioural protective outcomes.

## 2. Discussion

### History of Ghana's KMC

KMC was first introduced into Ghana in the year 2007 as KMC Ghana initiative (Nguah et al., 2011). During this period, the KMC Ghana initiative was rolled-out in Central, Northern, Upper East and Upper West Regions. Much emphasis was placed on the early, continuous, and prolonged skin-to-skin contact position while little was done regarding the other components. Major hospitals like Korle Bu Teaching Hospital also adopted and included it as a protocol of care for preterm care (Bergh et al., 2013). By 2015, the concept of KMC had gained much acceptance in Ghana and most hospitals, regional and district levels started to practice this method of care. Skin-to-skin KMC became a popular thing in most paediatric care settings and one of such places was the Eastern Regional Hospital of Ghana.



**Fig. 1.** Participants and Director of Kangaroo Foundation  
(From left: Psychologist, Medical Officer, Director of Kangaroo Foundation, and Nurse)  
Photo credit: J.O. Sarfo

As concerns for newborn morbidity and mortality kept growing, the Colombian Government through the Embassy of Colombia in Ghana under H. E. Claudia Turbay Quintero initiated the first KMC specialist training of Ghanaians at the Kangaroo Foundation in Bogotá, Colombia. This initiative was also supported by Ghana Health Service, management of Eastern Regional Hospital, Koforidua and agencies like PATH. As a result, a three-member team comprising of Diana A. Apanga (Medical Officer), Jacob Owusu Sarfo (Clinical Psychologist) and Cynthia Yomor Martey (Nurse) from the Eastern Regional Hospital were selected and trained in KMC in Colombia between 2nd and 14th November, 2015. Their training included various sessions at the Kangaroo Foundation, San Ignacio University Hospital and San José University Hospital for Children (Sarfo et al., 2018). Following their training and certification in Colombia (see Fig. 1), the new KMC Excellence Centre was established at the Eastern Regional Hospital in the beginning of 2016 with the support of hospital's management. This new clinic took over the old KMC clinic that was adapted from the KMC Ghana initiative to implement the multidisciplinary Colombian model of KMC. Though the clinic was running in full session, the physical structures were not fully completed.



**Fig. 2.** New KMC Out-Patient KMC Set-up at the Eastern Regional Hospital  
*Photo credit: J.O. Sarfo*

By the middle of 2016, the management of the Eastern Regional Hospital headed by Dr Kwame Anim-Boamah (Medical Director) constructed the new KMC Out-Patient KMC Set-up at the Eastern Regional Hospital following the Colombian 'Open Out-Patient KMC' Model (see [Figure 2](#)). Between 25<sup>th</sup> and 29<sup>th</sup> July, 2016, two experts (Silvia Fernandez Iriate [*paediatrician*] and Zandra Patricia Grosso Gomez [*neonatological nurse*]) from the Kangaroo Foundation came for follow-up visit to provide support in the process of implementation of the KMC programme in Koforidua (see [Figure 3](#)).



**Fig. 3.** New KMC Out-Patient KMC Set-up at the Eastern Regional Hospital  
*Photo credit: J.O. Sarfo*

### **Eastern Regional Hospital's KMC Excellence Centre**

Following the visit of experts from Kangaroo Foundation, the KMC Excellence Centre at the Eastern Regional Hospital was validated as one of the recognised sites in Africa for clinical care and training in KMC programme. The new centre expanded its training scope to train several health professionals and students in KMC (see [Figure 4](#)). Today, the Eastern Regional Hospital's KMC Excellence Centre stands as the first clinic model in Ghana to provide comprehensive In-patient and Out-patient KMC following the existing Colombian multidisciplinary model. Consequently, the clinic runs an in-patient Kangaroo clinic where caregivers are introduced to KMC and allowed to practice intermittent skin-to-skin method with their babies before discharge from the Neonatal Intensive Care Unit. Again, an Out-Patient Kangaroo clinic is organised to follow-up care after

discharge. The Out-Patient Kangaroo Mother Care clinic provides several multidisciplinary specialist services.



**Fig. 4.** KMC Workshop for Some Health Workers in Ghana  
*Photo credit: J.O. Sarfo*

General set-up for the Out-Patient Kangaroo Mother Care programme at the Eastern Regional Hospital includes a section where nurses assess the vital signs and anthropometric assessment like temperature, weight, height and head circumference. The nurses also run an In-Patient Adaptation for families who are yet to begin KMC. Workshops on KMC position, feeding, massage and need for follow-ups are stressed at this section. The next section is the paediatric consultation where doctors consult together in an open space. This open review helps to provide peer support and motivation to KMC families as they see preterm/LBW babies of one another.

In addition to these two teams is the psychological unit attached to the Out-Patient Kangaroo Mother Care clinic. Psychologists and psychologist assistants assess the cognitive-developmental performance of babies at 6th and 12th month-corrected ages. Once a child passes the 12th month-corrected age assessment, the psychology team approve for their graduation. They also assess and manage psychological conditions like depression, anxiety and marital distress that KMC families go through. Also, the psychology unit provides group therapy sessions to both babies and their families to deal with both clinical and psychosocial problems.

Furthermore, physiotherapy referrals are made for babies with suspected developmental deficits while optometric/ophthalmological assessments are done concurrently for these babies for early identification of ocular pathologies in infants. Additionally, ear, nose and throat specialist assessments are also done for babies during this period to identify any problems. The social welfare and public health units are linked up to ensure follow-up visit for clients, especially those with social problems and other related issues like KMC defaulters. Finally, a WhatsApp group page managed by KMC staff brings together all families in the programme and specialists to ensure information sharing. Reminders for follow-up reviews, special programmes and issues related to care are shared on this platform.

As part of its achievements, the centre has seen over 800 babies and successfully trained several doctors, nurses, physiotherapists, psychiatric officers and psychologists in Ghana. Also, it has established 10 new KMC centres across Ghana between 2017 and 2018 (Sarfo et al., 2018). It has also hosted both general public and distinguished visitors including the Ambassador of Colombia to Ghana (see Figure 5) (Embassy of Colombia to Ghana, 2018), government dignitaries, officials from Ghana Health Service and Ministry of Health. The centre is also known for its research and policy interests. So far, it has participated in international kangaroo conference, workshops on newborn care and assisted in the development of the national KMC policy.



**Fig. 5.** Visit by the Colombian Ambassador to Ghana to Eastern Regional Hospital  
Photo credit: J.O. Sarfo

Notwithstanding these achievements, the Eastern Regional Hospital's KMC Excellence Centre hopes to expand KMC coverage from 10 to 100 clinics in Ghana by 2035. It also hopes to access funding opportunities to provide technical and logistical support to all new KMC facilities in Ghana. Also, the centre is working to establish collaborations with researchers, KMC specialist and stakeholders to develop innovations in care.

Finally, the centre hopes to expand its training capacity with support from Government of Colombia, Kangaroo Foundation – Bogotá, D.C., UNICEF, PATH and other stakeholders to train professionals from other neighbouring West African countries like Liberia, Sierra Leone, Burkina Faso, Togo, Mali, Benin and Côte d'Ivoire.

### 3. Conclusion

Though Ghana's KMC Excellence Centre at the Eastern Regional Hospital is young, it is making key strides in promoting quality KMC for preterm and LBW babies and their families. It has also promoted national KMC training and capacity building. In future, the centre is hopeful of spreading KMC to other West African countries. This will not only enhance KMC coverage, but also improve the regional cooperation between Colombia, Ghana and these sister countries.

### 4. Conflicts of interest

The author declares no conflicts of interest.

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