# Evaluating Kangaroo Mother Care at a teaching hospital in The Gambia

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3rd March – 24th April 2018

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Introduction

The first part of a child's life is critically important for its development and survival. 46% of all under-5 deaths worldwide occurred in the first 28 days after delivery, amounting to 2.6 million in total in 2016[1]. Furthermore, the global burden of neonatal deaths is geographically unequal and linked closely with a country's income[2,3]. Wealthier countries are more likely to have a lower level of neonatal mortality, and Sub-Saharan Africa and South-East Asia carry the highest neonatal mortality rates regionally[4].

Providing good care for neonates is a challenge in The Gambia, a small country on Africa's West coast. The Gambia has a neonatal mortality rate of 28 per 1000 births, which is over 9 times that of the UK[4]. Being a low-income country, The Gambia must try to care for its neonates with scarce financial resources and few specialist staff. Conventional neonatal care is expensive, logistically demanding and requires constant support and monitoring from highly trained healthcare personnel[5]. It is therefore important to develop low-cost solutions aimed at caring for this vulnerable population if reducing Gambian neonatal mortality is the priority.

Low birthweight (<2000g) amongst neonates is recognised as an important indirect cause of death both globally[2] and, more specifically, in the setting of the Edward Frances Small Teaching hospital (EFSTH) paediatrics department in Banjul, Gambia's capital city[6]. Kangaroo Mother Care (KMC), a form of nursing treatment for low birthweight involving extended periods of early, continuous skin to skin contact, has been shown to reduce mortality in low birthweight (LBW) babies in low income settings[6] and so has a potentially very important role in neonatal care at EFSTH. It is "equivalent to incubator care in terms of safety and thermal protection"[7], whilst also requiring far less financial resources and specialist healthcare expertise to implement and maintain. As well as reducing mortality in LBW neonates, KMC also confers multiple other benefits, such as encouraging breastfeeding and bonding between mother and baby[7]. A KMC unit was established at EFSTH in 2017, providing care for Gambian LBW neonates and training for mothers to provide their children with KMC.

In my elective, I will be conducting an audit into the outcomes for babies admitted to the KMC ward at EFSTH as part of the University of Aberdeen's medical elective exchange scheme. I will be posted at EFSTH for 2-3 days a week, and will spend the remainder of my time at the Medical Research Council hospital in Fajara attending ward rounds for clinical teaching. I hope to highlight areas of good clinical practice in the KMC ward and identify any areas that could be improved upon. I also hope my data and analysis will contribute towards my supervisor's project, which aims to evaluate the effectiveness of KMC in improving mortality and morbidity in unstable neonates.

Methods

Data was collected on all patients admitted to the KMC ward at EFSTH between 21/09/17 and 21/03/18. Recorded parameters were as follows: date and day of admission, birth weight, weight and age on admission, length of stay, age and weight on discharge, time to follow up (days) after discharge and weight at follow up. Twin status, admissions to the NNU, reasons for admission to NNU, outcome of admission to NNU and known deaths on or away from the ward were also recorded. These data were written into a book by the nurses staffing the unit and will later be transferred into a Microsoft excel spreadsheet for analysis. Patients with inconsistencies in their recorded data, patients admitted to NNU and patients known to have died following KMC care will be followed up in more detail via a retrospective examination of case notes and medical charts. All further analysis of the data will then be carried out using Microsoft Excel.

## Outcomes

Following the audit, I will be able to highlight trends in the data and evaluate the care at the unit based on outcomes such as weight gained per day on the ward and weight gained per day at first follow up. I will also be comparing outcomes for patients admitted more recently with those admitted closer to the opening of the ward, and examining whether outcomes differed for those admitted with very low and extremely low birth weights. Via examination of the notes of those patients that were admitted to the NNU and those that died following admission, I hope to begin looking at the factors that led to their deterioration, and whether this can be avoided in future. If any barriers to best practice are identified, I hope to briefly explore why it is that these barriers exist and possible ways in which they can be surmounted. I will aim to produce a robust report of a high scientific standard.

Personally, I will gain research skills and valuable experience working in a low resource setting. As someone who has been involved with student global health groups throughout university and completed an intercalated degree in global health, medicine in settings outside the UK is something that I am very interested in. During this placement, I will also obtain a greater practical understanding of medical paediatrics, which is a career I am considering. Finally, I will gain greater understanding into the process of conducting an audit. I hope to apply the knowledge I will gain in future audits and projects that I am involved in, both in the UK and in other settings throughout my career.

## Bibliography

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