

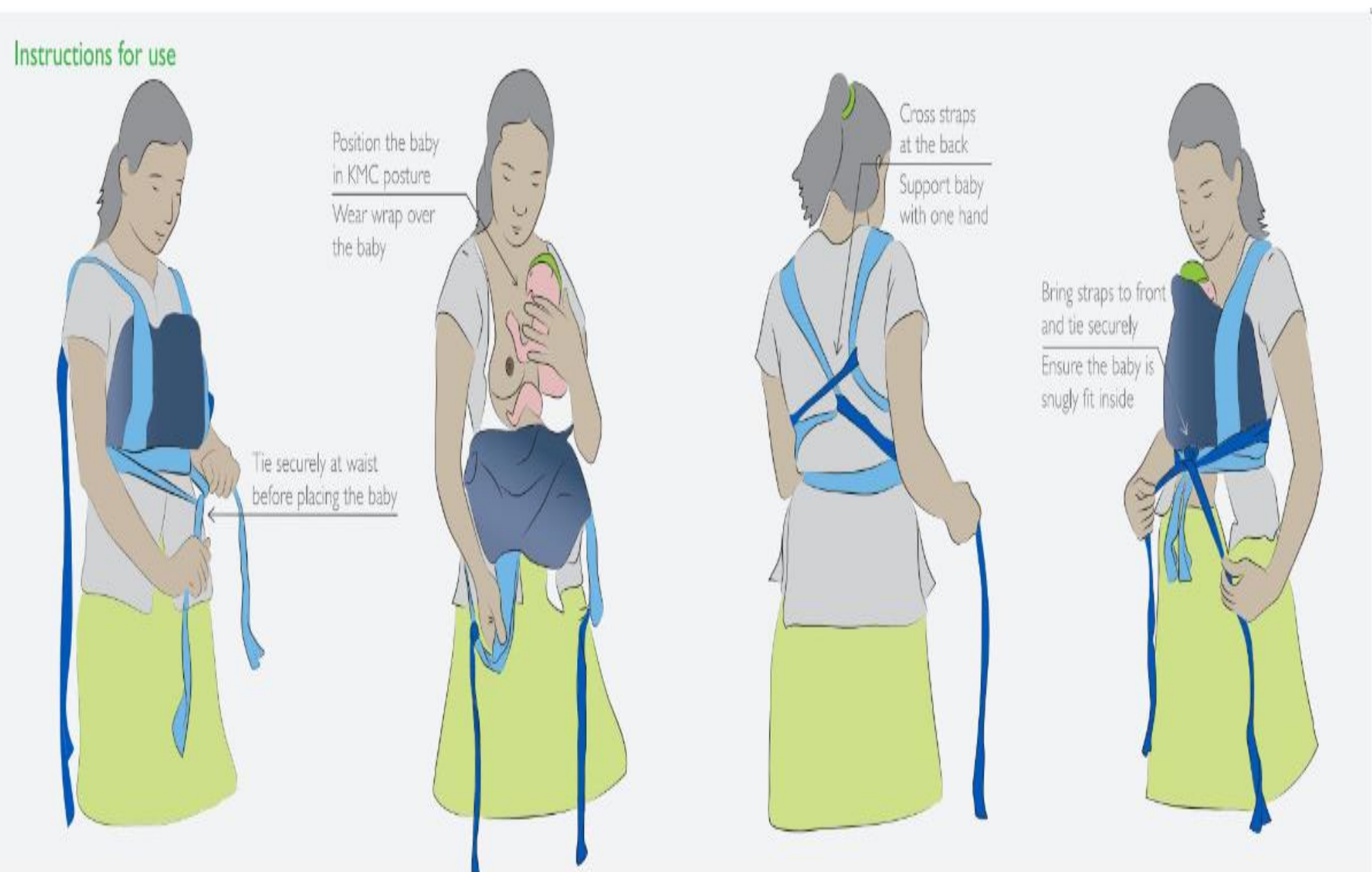
Queen Dube<sup>1</sup>, Gedesi Banda<sup>2</sup> and Kondwani Chavula<sup>2</sup>  
1. Queen Elizabeth Central Hospital and College of Medicine, University of Malawi; 2. Save the Children Malawi

## Background

Malawi has the highest rate of preterm births worldwide, with 18% of live births occurring before 37 completed weeks of pregnancy. The Government of Malawi has prioritized Kangaroo Mother Care (KMC) as part of their effort to increase access to quality health services for mothers and children.

Despite Malawi’s success as an early adopter of KMC, uptake has been slow. Women have identified that using the traditional wrapper – chitenje – to keep the baby skin-to-skin is difficult.

In an effort to improve KMC, Lærdal Global Health (LGH) developed the CarePlus wrap, an ergonomic baby carrier with the potential to be produced locally at low cost.



## Methodology

This operations research study was conducted in three large hospitals in the southern region of Malawi: Machinga district hospital, Thyolo district hospital, and Queen Elizabeth Central Hospital (Blantyre district) between May 2016 and December 2016. It was a randomized control trial, in which eligible mother-baby dyads were randomized to receive either the CarePlus wrap or a traditional chitenje printed with KMC messages.

Outcomes included adherence to skin-to-skin practices in the facility and the community and acceptability of the wrap as well as average rate of weight gain. Enrolled mother-baby dyads were assessed while in the facility KMC ward, at discharge from facility, and 7-10 days post-discharge from facility through a home visit

## Findings

A total of 301 mother-baby dyads were enrolled in the study, with 152 receiving the customized wrap and 149 receiving the traditional chitenje.

Regardless of the wrap, the vast majority of women, reported being satisfied with their baby’s progress on KMC (94%) and would recommend KMC to others (99%).

Reported adherence to KMC practices and recorded weight gain while in facility KMC varied significantly by study site regardless of study arm, indicating other factors influenced the outcomes beyond the wrap used.

## Findings (con’t)

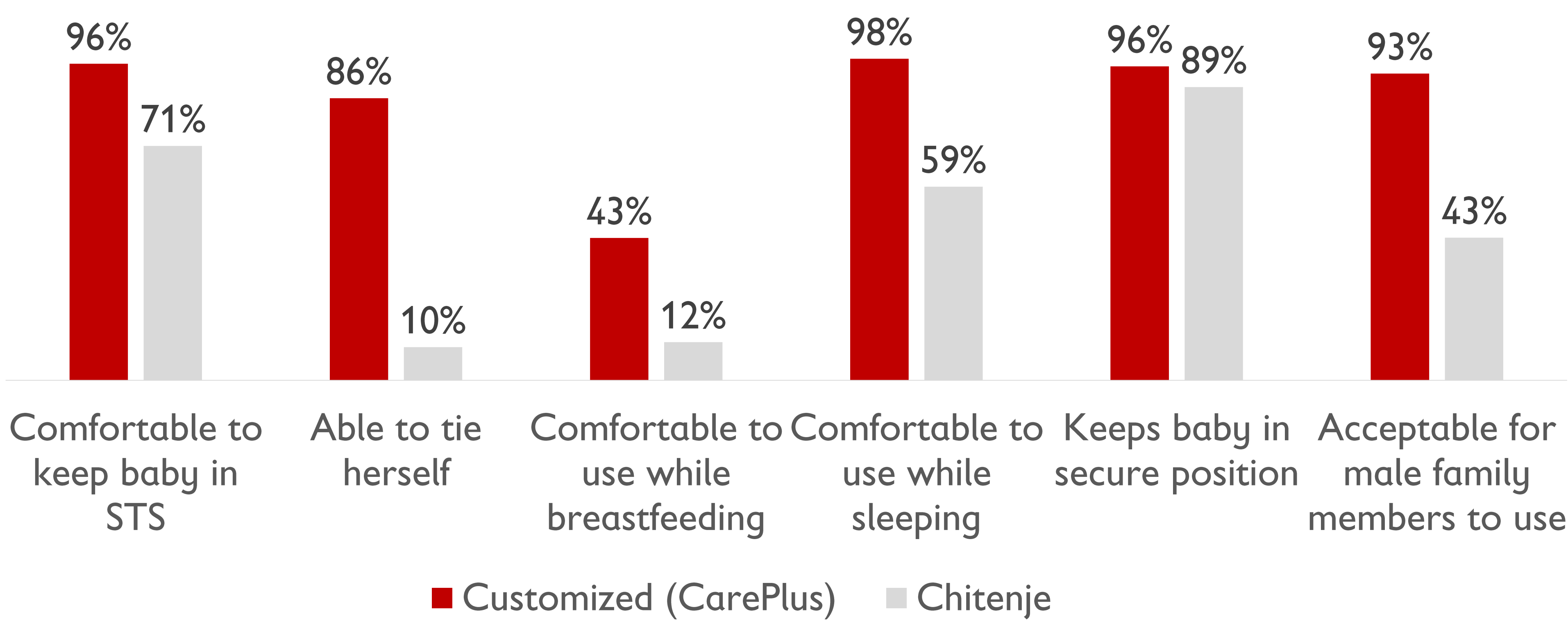
Study Outcome	Key Finding
Acceptability of the wrap	<b>Women prefer a customized wrap</b> More women using the customized wrap reported it was comfortable to use, even while sleeping and that they could tie it themselves (Figure 1).
Duration of skin to skin practice	<b>A customized wrap can facilitate longer skin-to-skin practice</b> Women using the customized wrap were more satisfied with KMC and practiced skin-to-skin for more hours every day.
Weight gain among babies enrolled in KMC	<b>Longer skin-to-skin practice results in more weight gain</b> Babies held in skin-to-skin for 20 hours or more per day gained more weight regardless of the type of wrap used.
Feeding Support	<b>High rates of breastfeeding are possible, but mothers need additional support</b> Nearly all babies were able to breastfeed but 88% required use of cup and spoon to support feeding at the time of discharge.
Family and Social Support	<b>Families and communities support mothers practicing KMC</b> 2/3 of women had another family member (usually mother or sister) involved in the KMC training and nearly all reported some form of family support from community members including friends and women’s groups.
Follow-up after discharge from facility	<b>Follow up care requires more attention</b> 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.
Local production of the Customized wrap	<b>Customized wraps can be produced locally</b> 2/3 of women were willing to return the wrapper and 70% expressed willingness to use a recycled wrap.

## Study Overview

In partnership with the Ministry of Health, Save the Children implemented an operations research study to determine whether the customized CarePlus wrap improves KMC practice and whether its uptake is feasible across Malawi.

**Objective:** To evaluate the acceptability and effectiveness of introducing a custom KMC wrap to improve adherence to skin-to-skin practices within selected hospitals with established KMC programs in Malawi.

Figure 1:Acceptability of wrap while in facility-based KMC by type of wrapper received



## Recommendations

A customized wrap should be promoted in Malawi as an evidence-based method to improve maternal satisfaction around KMC and to increase adherence to recommended skin-to-skin practices. District hospitals must also invest in ongoing mentorship and quality improvement initiatives with attention paid to promotion of appropriate feeding, skin-to-skin practice and providing adequate resources and space to encourage such practices. Further investigation is needed on KMC documentation and low levels of facility follow-up and home visits by community health workers.