

Quality of Care Strategies and the Subsequent Improvement of Kangaroo Care Incidence Rates in Premature Infants

Sarah Anderson, BSN student; Lisa McGee, DNP; Alice Carpenter, BSN; Shannon Haynes, MSN; Peter Giannone, M.D., Prasad Bhandary, M.D., Aparna Patra, M.D.
College of Nursing, University of Kentucky
Lexington, KY

Purpose

The purpose of this study is to investigate specific quality of care measures and their impact on the incidence of Kangaroo Care (KC) in premature infants being treated in neonatal intensive care units.

Research Question

Will specific quality of care measures increase the rate of Kangaroo care occurrence in premature infants?

Specific Aims

1. To develop and implement strategies to increase Kangaroo Care occurrence
2. To increase Kangaroo Care utilization from 41% to $\geq 75\%$

Significance

- Kangaroo Care is endorsed for all low birth weight infants (those <2500 grams) by the World Health Organization (WHO, 2016).
- Kangaroo care is associated with decreased infant mortality, hypothermia, hospital stay time, and nosocomial infection rates (Conde-Agudelo & Diaz-Rossello, 2016).
- However, rates in neonatal intensive care units still remain low.



Methods and Materials

KC occurrence was monitored in a total of 364 infants with a birth weight ≤ 1250 grams. Different strategies to improve incidence rates were implemented in phases.

Included interventions:

- Kangaroo care education for nurses
- Improved nurse-to-patient ratio
- Emphasis of KC in multidisciplinary rounding
- Improved documentation of KC
- Obtaining securement devices to prevent extubation or dislodgement of invasive lines
- Involvement of respiratory therapists in transferring intubated infants
- Providing KC pamphlets and one-on-one education to NICU patents.

Weekly KC occurrence was reviewed on all NICU infants with birth weight ≤ 1250 grams by the clinical nurse specialist.

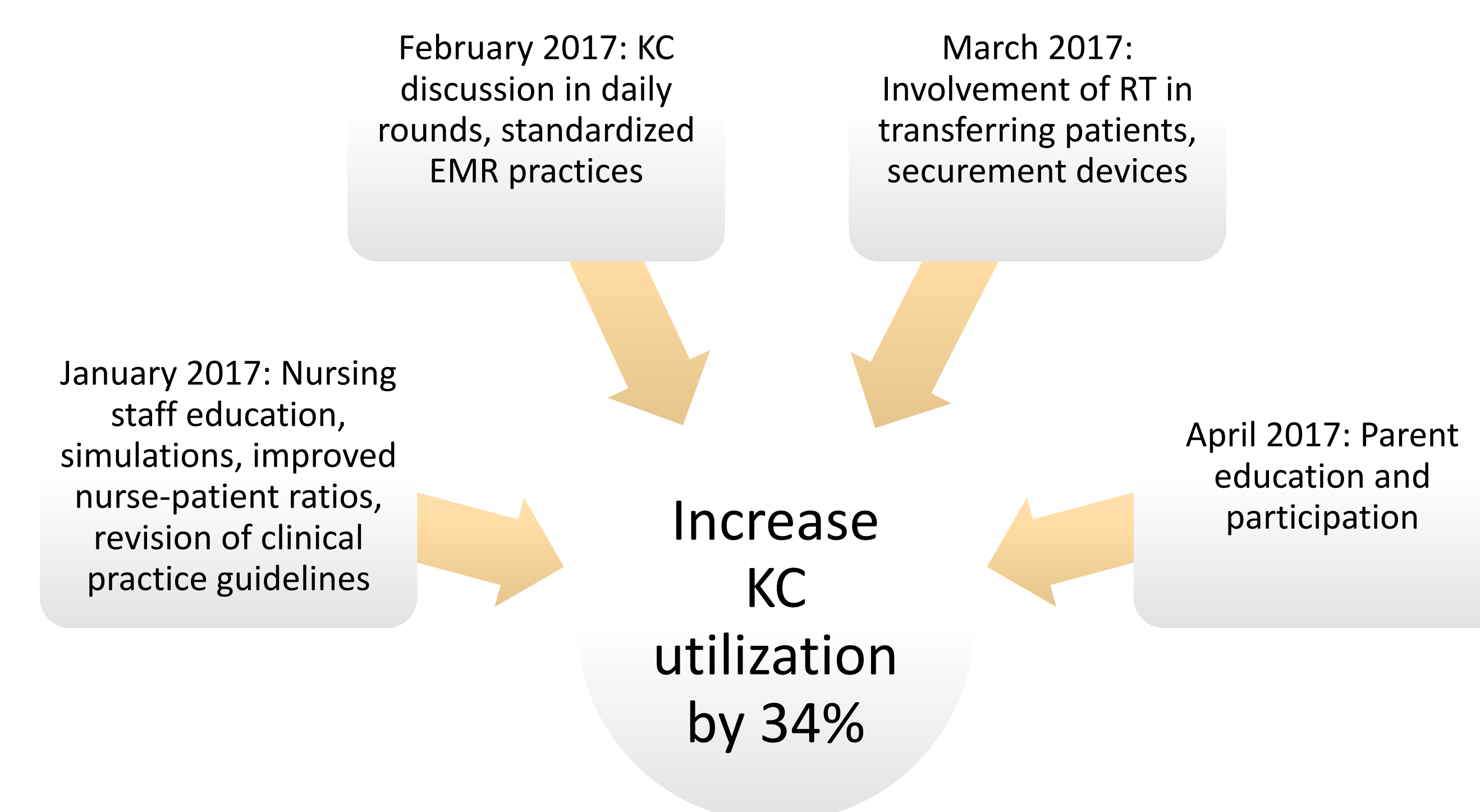


Figure 1. Drivers of Change

Data Analysis

Weekly occurrence reviews were performed for all new admits to the neonatal ICU as well as in all babies <1250 grams. Evaluations of the incidence rates occurred monthly. Comparisons were made of kangaroo care before and after implementation.

Limitations

Inability to determine which specific intervention was most impactful

Results

- KC utilization was analyzed in two separate time periods- August through December 2016 and January through July 2017.
- Mean utilization for the 2016 period was **41%**
- Mean utilization for the 2017 period was **65.9%**.
- This reflects a 60% increase in occurrence following the measures implemented to improve KC rates (p=0.02, t-test for independent variables).

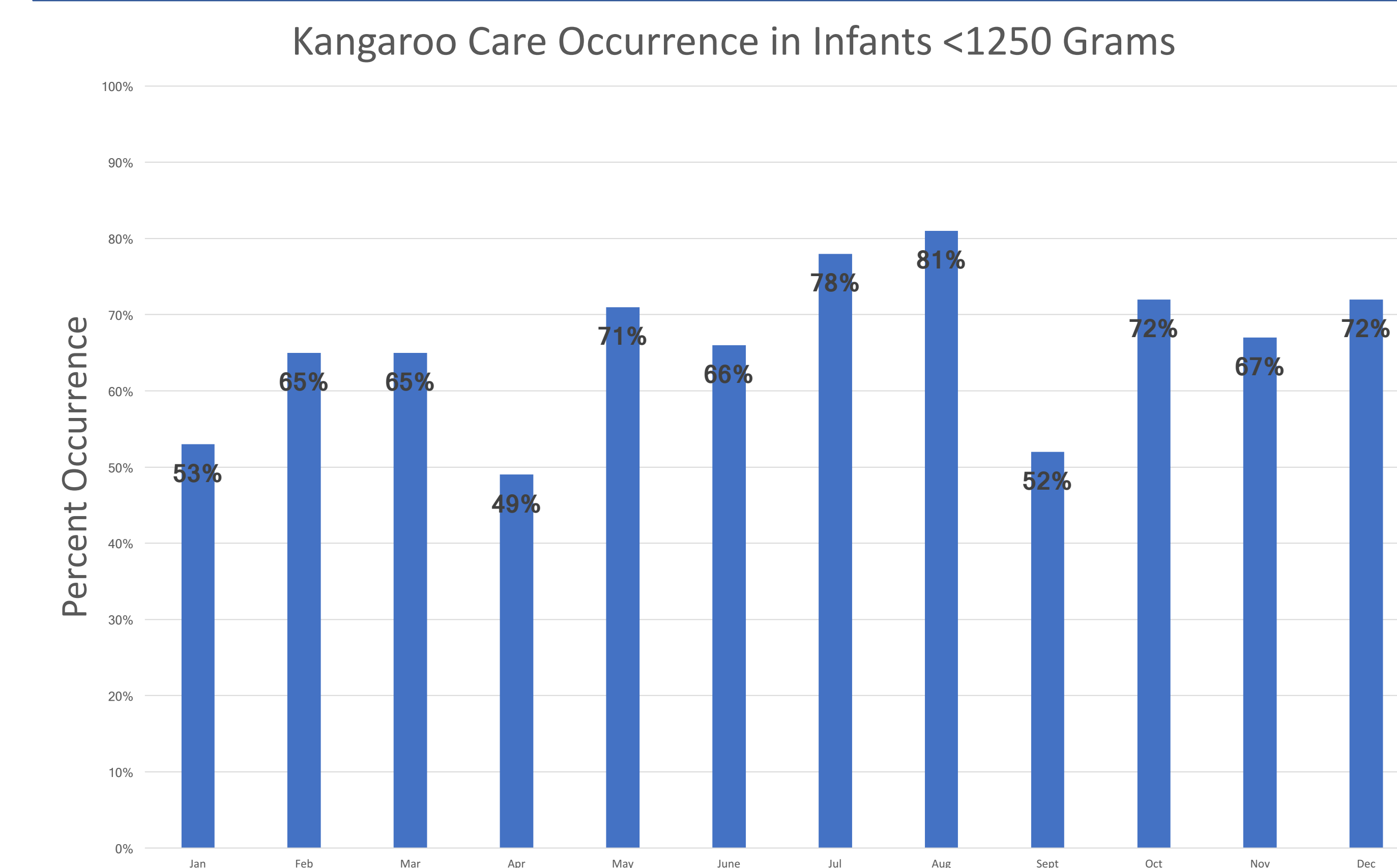


Figure 2. Percent of Kangaroo Care Occurrence by Month

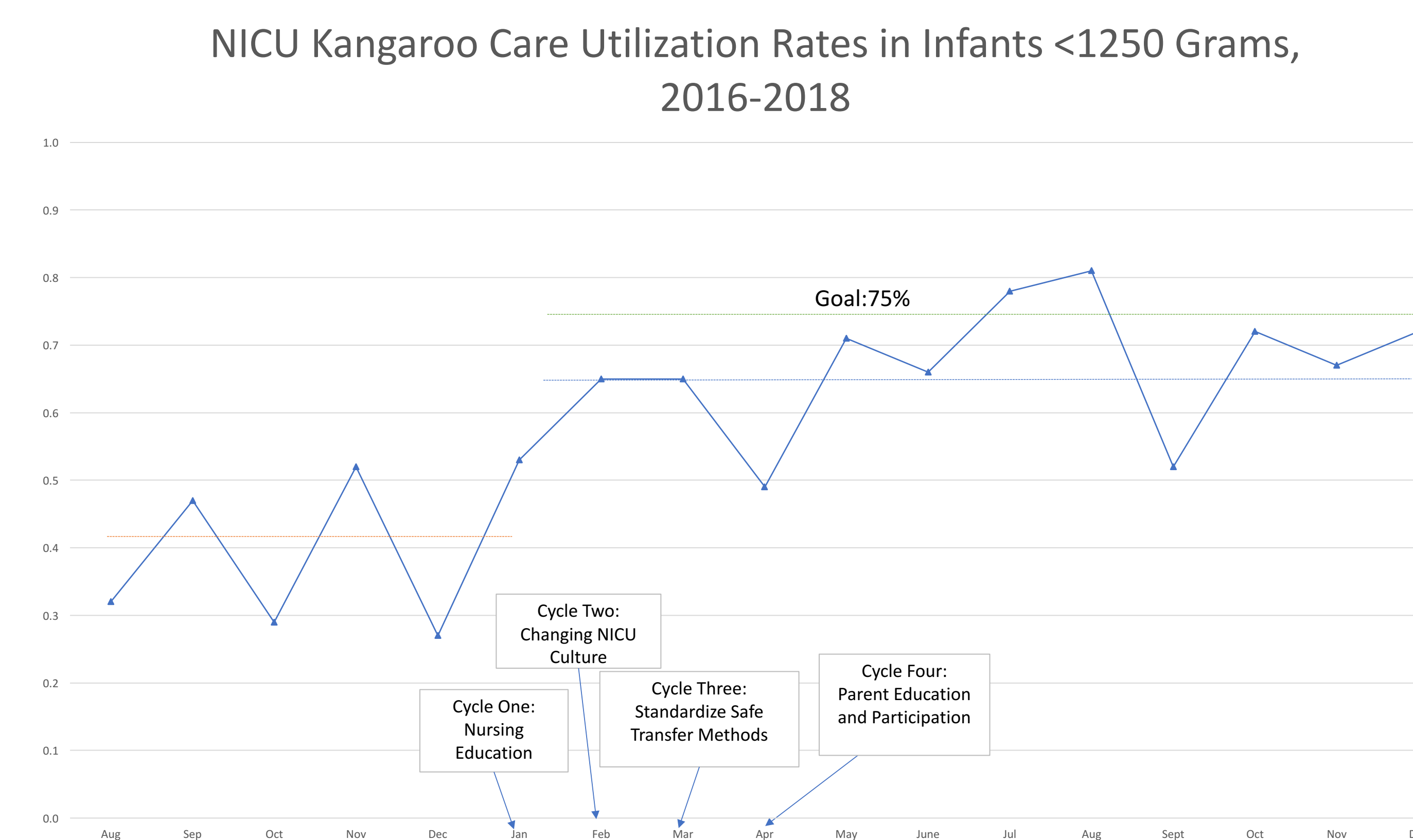


Figure 3. Change in Kangaroo Care Occurrence with Corresponding Quality of Care Implementation

Discussion

- A 60% increase was made in KC utilization in low birth weight infants due to the implementation of a variety of measures.
- These measures and the results have indicated that establishing kangaroo care as a standard of care in very low birth weight infants is obtainable.
- Audits will continue being collected each month on KC to verify a continued increase.