

“Wait A Minute”: A Feasibility-Based Qi Initiative to Improve Delayed Cord Clamping in Preterm Infants

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Introduction - Delayed cord clamping (DCC) in preterm infants is a simple, evidence-based intervention associated with significant improvements in neonatal outcomes. Systematic reviews and meta-analyses show that DCC can reduce mortality and transfusion needs.

Objective - To increase the rate of delayed cord clamping (≥ 60 seconds) in preterm infants less than 34 weeks of gestation at NICU - TH Badulla from a baseline average of 25% (measured between January and June 2023) to at least 75% by the end of the intervention period.

Method - A multidisciplinary QI team-initiated interventions using Plan–Do–Study–Act (PDSA) cycles. These included staff education sessions, implementation of a standardized delivery room checklist, use of T piece device with PEEP during vaginal deliveries for non-breathing infants, and protocol modifications for caesarean sections to allow safe DCC in stable neonates. Infants with contraindications were excluded.

Results - Among 284 eligible preterm infants, 34 were excluded due to clinical contraindications. The final analysis included 250 infants, with a median gestational age of 30 weeks and a median birth weight of 1240 g (range: 480–1750 g). By the end of the intervention period in 2024 (January to December), the overall annual rate of delayed cord clamping (≥ 60 seconds) increased to 80.2%.

In caesarean section deliveries, the DCC ≥ 60 seconds rate rose significantly from 13% (Jan–Jun 2023) to 70.1% (Jan–Dec 2024). In vaginal deliveries, it improved from 40% to 94.4% over the same period. Additionally, the proportion of infants receiving DCC for at least 30 seconds reached 85.5% in caesarean sections and 97.2% in vaginal deliveries during 2024.

Discussion - This feasibility-focused QI project significantly improved DCC rates in preterm infants. Even in low-resource settings, simple, structured strategies can make “waiting a minute” a life-saving act

Keywords - Delayed Cord Clamping, Preterm Infants, Quality Improvement, Neonatal Resuscitation, Low-Resource Settings