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IMPROVING THE IMPLEMENTATION OF EARLY SKIN-TO-SKIN CONTACT IN THE LABOR ROOM: A QUALITY IMPROVEMENT INITIATIVE

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Abstract
Background: Early skin-to-skin contact (SSC) immediately after birth promotes thermoregulation, bonding, and early breastfeeding initiation. However, implementation is often suboptimal, especially after cesarean deliveries.
Objectives: To identify barriers to early SSC and improve the proportion of eligible neonates receiving SSC within the first hour of birth.
Methods: This quasi-experimental quality improvement (QI) study was conducted in the labor room of a tertiary care center over 20 months. A baseline audit revealed only 30% of eligible neonates received SSC within one hour, all following vaginal deliveries. Root cause analysis using Fishbone diagrams identified barriers in four domains: people, policies, procedures, and place. Targeted interventions were introduced through four PDSA (Plan-Do-Study-Act) cycles involving staff training, protocol integration, role designation, and parental sensitization.
Results: SSC rates improved from 30% to 66%, including neonates born via cesarean section. No adverse events were reported. Improvements were sustained for over 6 weeks post-intervention.
Conclusion: Structured QI interventions can effectively enhance early SSC practices in both vaginal and cesarean births. This model is scalable and sustainable across similar settings.

Keywords: skin-to-skin contact, quality improvement, neonatal care, PDSA, cesarean section, early bonding

INTRODUCTION

Early SSC has well-documented benefits, including improved thermoregulation, reduced neonatal stress, enhanced bonding, and early initiation of breastfeeding. Global guidelines, including those from WHO and UNICEF, recommend uninterrupted SSC within the first hour of life. Despite these recommendations, actual implementation remains low — especially after cesarean births — due to staffing limitations, lack of training, and unclear protocols.
At our institution, a baseline audit revealed that only 30% of eligible neonates received SSC within one hour, all of whom were born via normal vaginal delivery. Recognizing the missed opportunity for early neonatal care, we designed a Quality Improvement initiative using a structured approach to address implementation gaps.

Aim

To improve the percentage of eligible neonates receiving SSC within one hour of birth from 30% to at least 60% over 12 weeks through targeted QI interventions.

Methods

Interventions: Four PDSA cycles (3 weeks each) were implemented:

• PDSA Cycle 1: Conducted focused training sessions for doctors and nurses on the benefits and timing of SSC, using visual aids and orientation checklists.

• PDSA Cycle 2: Introduced a standardized SSC checklist in the labor room to prompt staff during deliveries, ensuring it was embedded into routine documentation.

• PDSA Cycle 3: Designated specific team roles at each delivery (e.g., nurse or pediatric resident) to initiate SSC, especially in cesarean cases where handover is delayed.

• PDSA Cycle 4: Engaged families during antenatal visits and pre-delivery counseling to prepare them for SSC and secure cooperation post-delivery.

Monitoring: Weekly run charts tracked SSC rates.

Results

SSC within 1 hour improved from 30% to 66%, including cesarean births.

Sustained improvement for 6+ weeks post-intervention. No adverse events.

Table: SSC Rates Pre- and Post-Intervention

Parameter	Baseline	Post Intervention
Overall SSC	30%	66%
SSC after C section	0%	58%

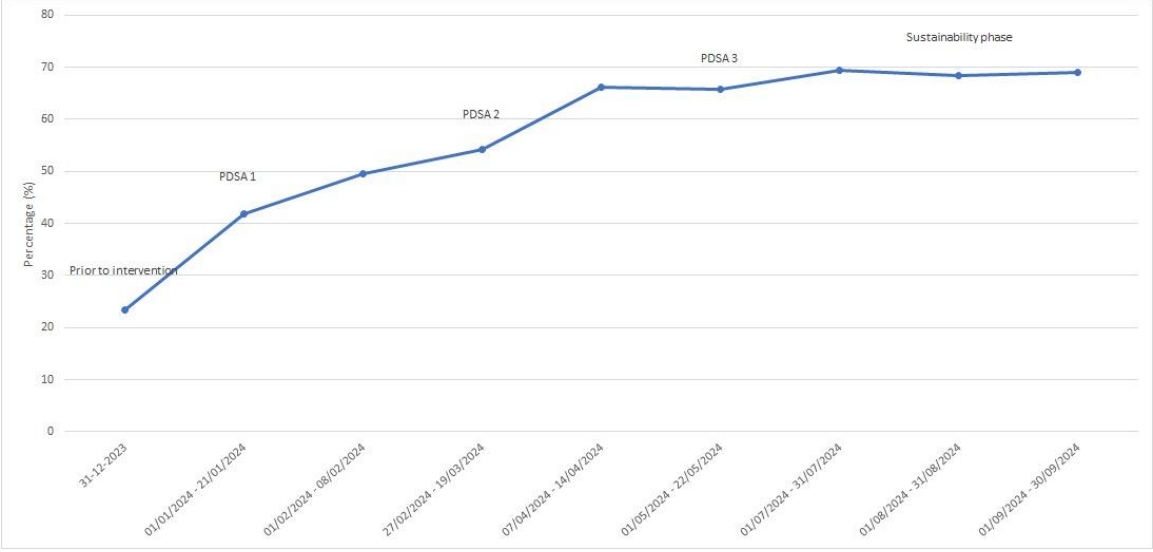

Fig 1:- Run chart visualizing progress over time

DISCUSSION

The initiative significantly improved SSC rates using structured, low-cost interventions. Cesarean SSC rates notably improved via theater coordination and role clarity. Each PDSA cycle built on the previous one, allowing real-time refinement. The educational sessions addressed knowledge gaps, while visual reminders and role assignments helped institutionalize SSC as a routine step. Parental involvement further increased accountability and created a culture of shared responsibility for newborn care.

Comparison: Aligns with global QI evidence (e.g., BMJ Open Quality, 2020) that simple interventions, when

implemented iteratively, can lead to sustained clinical improvement. This reinforces the power of context-specific adaptations in QI methodology.

Limitations: Single-center, short-term follow-up, and lack of data on breastfeeding rates or bonding outcomes limit generalizability. Nevertheless, the project demonstrates how frontline-led changes can close known gaps in neonatal care delivery.

CONCLUSION

QI methodology successfully enhanced early SSC implementation, especially following cesarean births where delays are typically highest. The structured, team-based approach ensured that knowledge translated into action. Importantly, this model is low-cost, does not require advanced technology, and relies on existing staff, making it adaptable for other resource-constrained settings. Beyond SSC, this project illustrates how building a culture of continuous improvement can positively impact broader perinatal outcomes.

RECOMMENDATIONS

• Integrate SSC into delivery protocols
• Extend training to NICU/postnatal wards
• Study long-term impact on breastfeeding and bonding

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Conflicts of Interest
None declared.
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