

Background

The first 60 minutes of life for a newborn, known as the *golden hour*, are vital because practices at this time are known to have both immediate and long-term impacts¹. This first hour is when many physiological changes occur and contribute to the transition into extrauterine life¹. Two key aspects of care when transitioning are immediate skin-to-skin contact (SSC) and early chest feeding initiation.

While many of the transitions into extrauterine life occur without assistance, newborns do rely on secure handling by parents, caregivers, and hospital staff in the early moments after birth to safeguard their health³. Of the births in the U.S., nurses are often in attendance². Nurses serve as critical members of the maternity care team. Their beliefs and knowledge of the *golden hour* can contribute to practice changes in the first hour of life².

Aims of the Project

Primary Aim

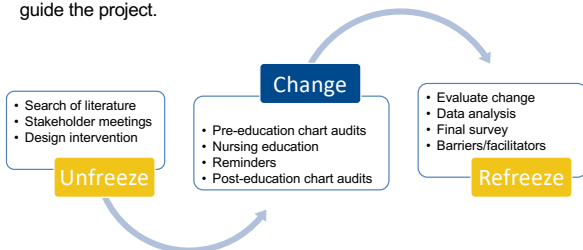
- ❖ Determine if nursing education and periodic reminders about SSC and early breastfeeding initiation in the first hour of life can increase implementation of the institution's newborn care policies.

Secondary Aims

- ❖ Determine if SSC and early breastfeeding within the first hour impact newborn transition through temperature and respiration data.
- ❖ Explore nursing facilitators and barriers to implementation.
- ❖ Evaluate if nursing total years of experiences and total years working at the project site are related to their practice of initiating SSC and early breastfeeding.

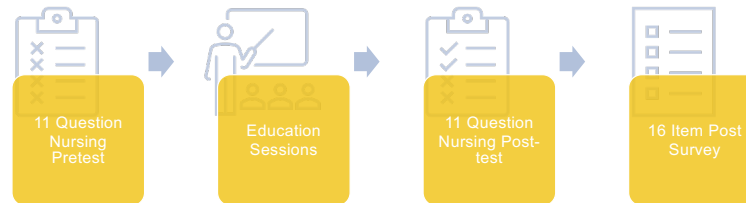
Intervention

This was a pre- and post-intervention, mixed methods design, quality improvement project. Approval for the project was received from Johns Hopkins IRB before any data collection. The pre- and post-design consisted of two components: chart audits and a pre- and post-education tests. Lastly, a final survey was administered. Lewin's Theory of Planned Change (TPC)⁵ was used as the theoretical framework to guide the project.



Data Collection and Analysis

Nursing Education Component



Prospective and Retrospective Deidentified Couplet Chart Data Collected

Newborn temperature and respiration at 1 hour	Was SSC started within 5 min of life and with whom?	SSC duration	Location of newborn during 1-hour vitals
Was Breastfeeding initiated in 1st hour?	Breastfeeding duration	Was weight charted within the 1st hour?	Patient feeding preferences

Analysis Tests

The following tests were used to analyze the data: Wilcoxon signed ranks test (pre/post tests and 2 survey questions), descriptive statistics (9 survey questions), Chi Square (couplet chart audits), ANCOVA (temperature and respiration data), Spearman's rho (survey data), and content analysis (qualitative survey data). To determine how many chart audits were necessary, a power analysis was conducted for an alpha of 0.05 and an effect size of $f=0.15$, resulting in 197 charts pre and post intervention.

Outcomes Measures or Results

Primary Aim

- ❖ 44 nurses attended education; 38 completed both pre- and posttests
- ❖ Statistically significant increase in nursing newborn care test scores after education
- ❖ 74% strongly and ~26% somewhat agreed intervention was helpful
- ❖ At 30 min of life ~ 35% **more** vitals taken STS post education ($X^2 = 10.28, p = .001$)
- ❖ At an hour of life ~33% **less** vitals taken STS post-education ($X^2 = 14.07, p < .001$)
- ❖ Breastfeeding initiated within 1st hour 71% of the time pre- and 79.2% post-education

Secondary Aims

- ❖ 142 charts met criteria pre-education and 53 met criteria for review post-education.
- ❖ No significant difference in newborn vital signs for SSC >1 hour to <1 hour
- ❖ Barriers: need for newborn weight; patient factors; staffing
- ❖ Enablers: knowledge; staffing; policy; patient preference or satisfaction
- ❖ Significant difference in work status, to the frequency of nurses' support of couplets with BF and SSC

Implications for Practice



Lessons Learned

- ❖ Continuous education/retraining is more beneficial than one-time education.
- ❖ Policy launch for different projects should occur one at a time, and policies must align so nurses can safely practice.
- ❖ Addressing staffing concerns may strengthen nurse practice and help to ensure sustainability of skin-to-skin and early breastfeeding support.

References

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