Structured Interdisciplinary Bedside Rounding in the Perinatal Setting: A Tool for Improving Interdisciplinary Communication and Maternal Outcomes

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PROBLEM

BACKGROUND: A need was identified for stronger interdisciplinary communication, collaboration, teamwork, and trust between the nursing staff, midwives, and physicians on the maternity unit at a midsize hospital in the southeastern US. Communication problems are at least partially causative in 85% of cases of severe maternal morbidity or death (Guise & Segel, 2008).

PICOT QUESTION: By improving obstetric team communication through the implementation of structured interdisciplinary bedside rounding (SIBR), will a reduction in maternal hemorrhage (MH) incidence and severity be seen by May 2025?

PURPOSE: To improve interdisciplinary communication among clinicians on the maternity unit, and thereby improve maternal outcomes, as measured by the maternal hemorrhage (MH) rate experienced by birthing people on the unit.

OBJECTIVES

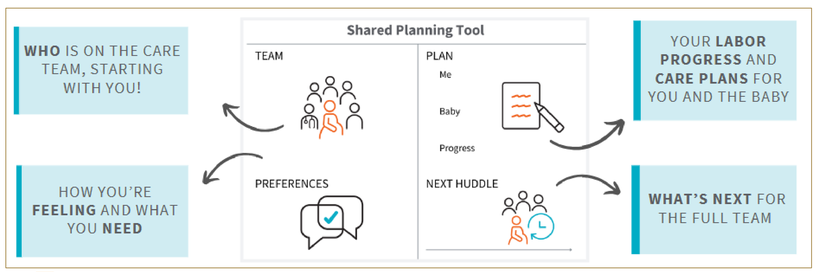
Within 6 months of intervention initiation:

1. Improve clinician perceptions of interdisciplinary teamwork and communication.
2. Improve patient perceptions of interdisciplinary teamwork and communication.
3. Improve MH rate & perinatal outcomes related to interdisciplinary teamwork & communication.

EBP INTERVENTION

Implemented TeamBirth, a structured interdisciplinary bedside rounding protocol, designed for the perinatal setting that has been shown to improve interdisciplinary teamwork and communication, patient satisfaction, and maternal outcomes.

- TeamBirth creates a framework for shared decision making through bedside huddles.
- Huddles occur on admission and at key decision points in care.
- Huddles are comprised of the patient, their chosen support people, the primary nurse, and the obstetrical care provider.
- Huddles cover 4 key topics
  1. Who are the team members?
  2. What are the patient's preferences?
  3. What is the current plans for the birthing person, the baby, and labor progress?
  4. When will the team huddle next?



THEORETICAL FRAMEWORK

Malhotra's 'Conductor-less Orchestra' (1981): A phenomenological demonstration of integration and teamwork among individual contributors with distinct skill sets employed in a specific time and place in the interest of a greater work.

Conceptual Framework for Communication in Healthcare (Manojlovich et al., 2021): Communication is layered and serves many purposes, including information exchange, knowledge building, & relationship and trust building.

METHODS

- Trained 97.6% of nurses and 21.9% of midwives and physicians on the TeamBirth care process through 1-hour live virtual training sessions.
- Created and installed custom whiteboards that follow the TeamBirth framework.
- Administered Safety Attitudes Questionnaire (SAQ) to RNs, CNMs, and MDs before the intervention & after 4 months of TeamBirth huddles. Results were compared via *t*-tests.
- Obtained patient satisfaction data from unit's post discharge patient survey tool.
- Obtained data on MH from the electronic medical record system. A chi-square test of independence was performed to examine the differences in MH rates.

RESULTS/OUTCOMES

- **Objective 1**: Cumulative RN perception of interdisciplinary teamwork and communication improved from an average score of 71.56 (n = 66) to 72.87 (n = 37) ($t(101) = -0.41$, p=.34).
- 12 RNs completed both the pre and post survey. *T*-test statistical analysis of these matched pairs revealed a statistically significant improvement, from an average score of 68.75 to 76.60, $t(11) = 2.18$, $p = .03$.
- **Objective 2:** Patient perception of interdisciplinary teamwork and communication improved from the 20-25 percentile range to the 25-30 percentile range.
- **Objective 3**: MH rates on the unit decreased significantly from 13.11% to 10.75%, $x^2(1, N = 2814) = 3.7$, $p = .05$.
- Units of packed red blood cells (pRBCs) transfused was significantly reduced from 48 units to 18, z=3.98, $p < .0001$.
- Nulliparous term singleton vertex (NTSV) cesarean delivery rates were reduced from 20.81% to 17.84%, z=1.19, $p = .23$.

Improving interdisciplinary communication/teamwork			
Group	Pre-Intervention score (n)	Post Intervention score (n)	t test, p value
RNs	71.53 (66)	72.87 (37)	t (101) = -0.41, p = .34
CNMs	41.92 (5)	51.92 (1)	**
MDs	84.94 (6)	*	**

** No MDs completed the post-survey*
*** Unable to calculate*

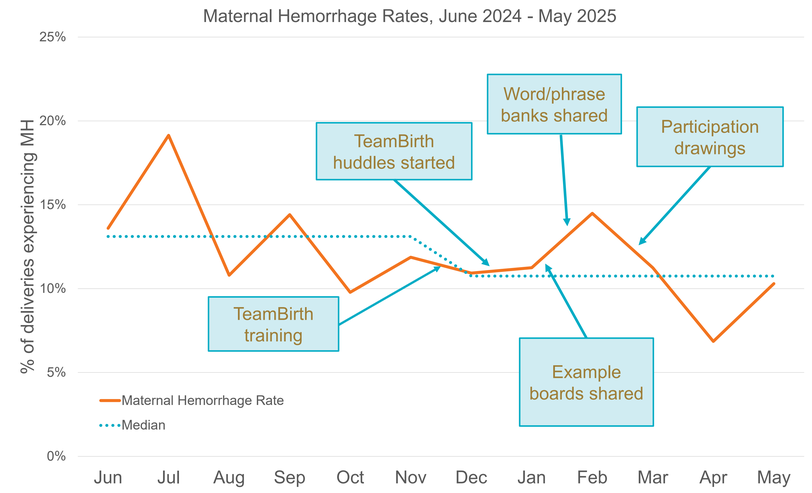
Paired pre/post scores for RNs			
	Pre-Intervention	Post-Intervention	t test, p value
RNs who completed both surveys n = 12	68.75	76.60	$t(11) = 2.18$, **p = .03**

Improving patient perceptions of communication/teamwork			
Positive response to the NRC Health post-discharge survey question: Was there good communication between the different doctors and nurses?			
	median score	N	percentile range
PRE-INTERVENTION June 2024 to Nov 2024	70.2	173	20-25
POST-INTERVENTION Dec 2024 to Apr 2025	73.2	172	25-30

Maternal hemorrhage rates		
PPH Rate (n) Jun 2024 - Nov 2024	PPH rate (n) Dec 2024 – May 2025	x^2, p value
13.11% (1381)	10.75% (1433)	$x^2(1, N = 2814) = 3.7$ **p = .05**

RESULTS/OUTCOMES (CONT'D)

Maternal hemorrhage rate



Ancillary maternal outcomes data			
Measure	Jun 2024 – Nov 2024	Dec 2024 – May 2025	z score, p value
Units of pRBCs transfused due to MH (n: # *deliveries*)	48 (*1381*)	18 (*1433*)	z = 3.98, **$p < .0001$**
NTSV Cesarean Rate (n: *NTSV deliveries*)	20.81% (*495*)	17.84% (*510*)	z = 1.19, p = .23

RECOMMENDATIONS

Lessons Learned & Implications for Practice

- Implementing a new care process amidst numerous concurrent structural and staffing changes on the unit proved to be a significant challenge.
- Better interdisciplinary communication appears to improve quality metrics beyond MH, including NTSV rates.
- ROI: TeamBirth implementation is straightforward and requires little cost beyond training time and materials for a shared planning tool (which can be a whiteboard, laminated card handout, or similar). By decreasing the MH rate and blood product utilization, this implementation demonstrated a cost-benefit ratio of up to $81 saved for every $1 invested. The cost savings seen December 2024 – May 2025 totaled $414,961.
- Ariadne Labs has observed that unit communication dynamics often initially appear to worsen before improving during TeamBirth implementation, as clinicians begin to engage more directly. This was experienced in this implementation as well.
- TeamBirth is an easily enacted rounding protocol to help clinicians in the perinatal setting improve interdisciplinary communication, patient satisfaction, and perinatal outcomes.

REFERENCES

TEAMBIRTH RESOURCES