**Significance**

Top 4 root causes of maternal and perinatal death and injury are:

1. Human factors errors
2. Communication failures
3. Assessment deficiencies
4. Leadership failures

Checklists in non-obstetric areas have:

- Reduced human error
- Standardized processes
- Improved team performance
- Improved patient outcomes

Current obstetric checklists:

- Focus on technical rather than non-technical skills from root causes
- Address only a single complication rather than multiple complications
- Not designed to prospectively guide care for vaginal delivery teams (as events unfold).

**Goals & Objectives**

Develop & test a vaginal delivery safety checklist

**Research Design – 3 Phases**

**PHASE 1 - DEVELOP VaDS AND ESTABLISH CONTENT VALIDITY**

2. Identified top 3 emergencies associated with vaginal delivery:
   - Shoulder Dystocia (SD)
   - Neonatal Resuscitation (NRR)
   - Postpartum Hemorrhage (PPH)
3. Ascertained common risk factors and management strategies for each emergency.
4. Determined content validity -10 nursing experts and 10 medical care provider experts rated each item on the checklist for relevance.
5. Assessed agreement among and between healthcare providers using Cronbach’s alpha.

**Research Design – 3 Phases**

**PHASE 2 - PILOT THE VaDS**

Used in 36 births at two Level III Centers.

- Delivery teams utilized the VaDS during a pre-delivery brief.
- Team reviewed the "RISK" items on the checklist together to determine if the patient was at risk for SD, NRR, PPH. If risk factors were present, the team planned potential interventions using "INTERVENTION" side of the VaDS.

**VaDS reviewed twice**:

1. Prior to delivery
   - At a convenient & meaningful time
   - Outside of the patient room
2. Close to the delivery - the team asks:
   - "Has the checklist changed?"
   - If "yes" team re-reviews item & plans

Following every delivery, surveys were completed by each team member:

- Time to complete VaDS
- VaDS usefulness, feasibility
- Effect on teamwork

**DISCUSSION: RESULTS PHASE 1**

- Cronbach’s alpha scores above .80 indicate acceptable agreement among raters.
- Expert ratings for each emergency were remarkable for lack of agreement, especially interventions.
- These differences indicate teams may not have a shared mental model of the patient or situation.
- Result? Miscommunication, inefficient team work and poorer patient outcomes.
- These findings highlight the need for VaDS.

**Results of VaDS Pilot**

**PHASE 3 - DETERMINE EFFECT OF VaDS ON DELIVERY TEAM’S DECISION-MAKING**

- Teams at a tertiary academic center (who’d never seen the VaDS) assessed 15 cases for possible birth complications first without, then with the VaDS.

**RESULTS**

- Without - teams took up to 40 minutes to decide.
- Identified 54 potential complications, yet only 17 related to vaginal delivery emergencies.
- With VaDS - discussions were focused, took < 10 mins. Two cases of SD that had occurred in the actual deliveries were identified when VaDS used.

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