

## **Can Interprofessional Simulation-Based Team Training Improve Collaboration on Labor and Delivery?**

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**Background:** Labor and Delivery (L&D) is an acute care setting with the ever-present, unpredictable potential for emergencies. This clinical and educational environment can lead to high stress and communication breakdown. Needs Assessment: An external audit of our institution revealed that many care providers viewed L&D as a “hot spot” for tension and conflict among team members. The authors sought to determine if inter-professional/interdisciplinary activity involving simulation based team training (SBTT) improves communication, empathy, and confidence among L&D team members.

**Curriculum Design:** L&D nurses, obstetric and anesthesiology residents participated in a four-hour SBTT. The SBTT included two concurrent scenarios: post-partum hemorrhage (PPH) and cardiac arrest. Team members participated in the scenarios twice with team debriefing after each (see Figure 1). The SBTT has been offered on two separate occasions with 22 participants each time (6 RNs, 10 Ob residents, 6 Anesthesiology residents) One week post-SBTT participants were surveyed to evaluate the impact, if any, SBTT had on team dynamics. A survey at 3- and 6- month intervals was administered to both participants and non-participants to assess team dynamics on L&D. A five-point Likert scale was used for surveys with opportunity for free text comments.

**Curriculum Evaluation:** One week post- SBTT, 77% of participants reported to be more confident in their own clinical crisis skillset. When asked to evaluate specific teams, 77% of all participants reported having more confidence in the OB team; 73% had more confidence in the anesthesiology team; and 86% had more confidence in the nursing team. More than 90% of participants reported an increased familiarity and trust of other team members. More than 90% of participants credited the SBTT with providing important team building opportunities. At 3- and 6-months post SBTT, L&D care providers were surveyed regardless of whether or not they participated in any of the SBTT activities. Both participants and non-participants perceived SBTT as having a positive impact on team dynamics, specifically team communication, empathy, and patient care.

**Conclusions:** Interprofessional/ interdisciplinary SBTT had a positive impact on individual providers, the L&D care team, participants and non-participants alike. To our knowledge this is the first study to evaluate the “ripple effect” of SBTT with non-participants interpreting the SBTT intervention as positive. While assessment of the direct impact of SBTT on patient care was beyond the scope of this study, the perception of team collaboration on L&D improved following the implementation of a SBTT curriculum at our institution.

**Figure 1:**  
Simulation-Based Team Training Schedule

| <b>Time</b>       | <b>Green Team</b>                                      | <b>White Team</b> |
|-------------------|--|-------------------|
| 0800- 0820        | Pre-brief participants                                 |                   |
| 0825- 0835        | PPH scenario   | Cardiac arrest    |
| 0835- 0905        | Debrief  | Debrief           |
| 0905- 0915        | PPH scenario   | Cardiac arrest    |
| 0915- 0940        | Debrief  | Debrief           |
| 0940- 0945        | Teams move to next simulation                          |                   |
| 0945- 0955        | PPH scenario   | Cardiac arrest    |
| 0955- 1025        | Debrief  | Debrief           |
| 1025- 1035        | PPH scenario   | Cardiac arrest    |
| 1035- 1100        | Debrief  | Debrief           |
| <b>1100- 1130</b> | <b>Teams debrief together<br/>&amp; lunch provided</b> |                   |

Figure 2:



Figure 2: Participants 1-week post SBTT

Figure 3:

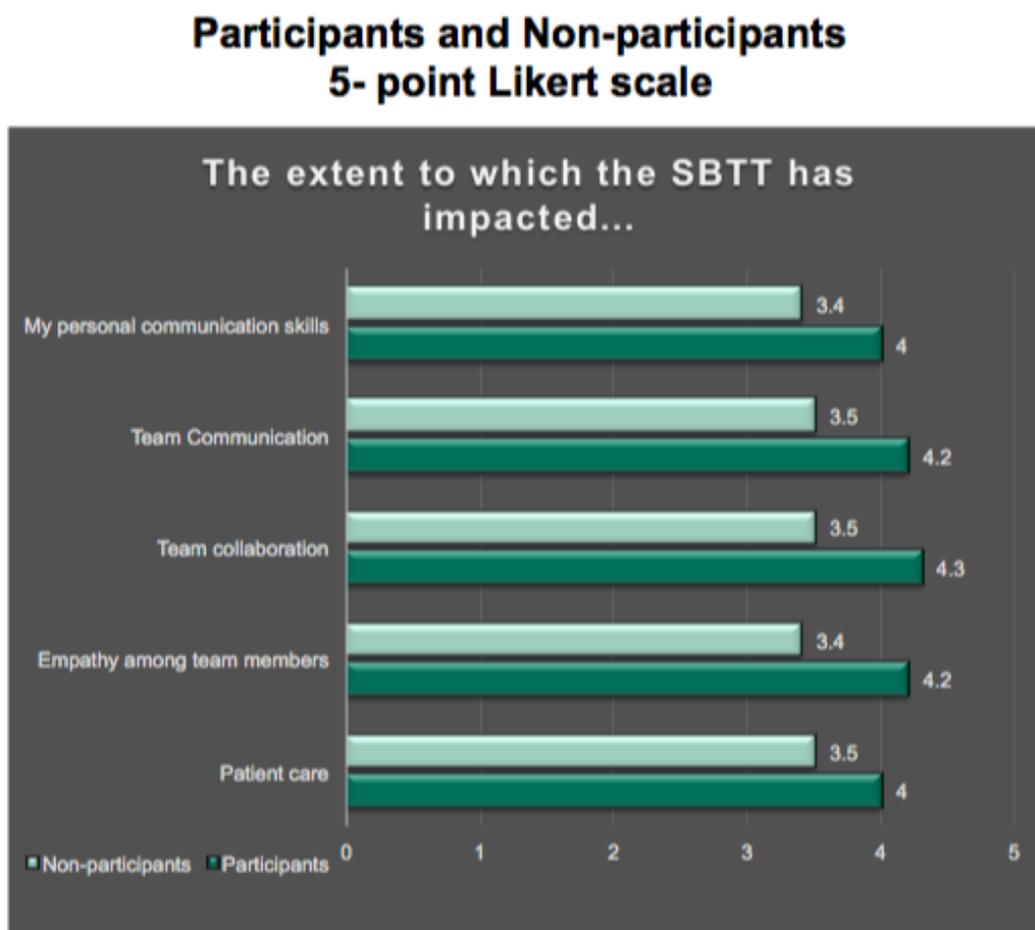


Figure 3: Average responses to 5-point Likert scale: 1= significantly negative impact; 2= somewhat negative impact; 3= no impact; 4= somewhat positive impact; 5= significantly positive impact.