Simulation for Postpartum Hemorrhage Management: An Organization Strategy Reconfigured to Include Professional Wellness

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Introduction

Postpartum hemorrhage (PPH) is a leading cause of maternal morbidity and mortality worldwide; maternal safety is dependent on effective PPH management. **Simulation training** is an organizational strategy that prepares multidisciplinary teams for the clinical management of PPH.[1]

During emergencies, like PPH, **elevated stress levels** deplete coping mechanisms and can lead to **burnout** with associated **medical errors**. Organizational approaches to **professional wellness** relate clinician well-being and team dynamics to safe care for peripartum patients.

Simulation Training

#ProfessionalWellnessforMaternalSafety

Case Presentation

In preparation for a **new free-standing obstetric hospital**, an interdisciplinary steering committee developed a **simulation curriculum** to prepare staff for organizational changes and maintain safety from one facility to the next.

- Designed to **orient** the obstetric anesthesiology team to the different landscape and workflows
- Focused on maternal **safety** and site-specific **resources**

The **COVID-19 pandemic** unexpectedly disrupted simulation programming.

- Institutional mandates **prevented in-person team-building** initiatives
- Required redesign of training to **tele-simulation** to accommodate safe distancing

Plan of Management

Redesign learning strategy for PPH management using:

- **Simulation theory**
- **Patient-centric approach**
- **Perspective of clinician**

Simulation adapted to connect team members:

- Combat **emotional isolation** which contributes to clinical burnout
- **Foster team relationships** needed for coordinated PPH management

Interventions

For clinician resilience the curriculum included:

- **Mentored orientation** with **checklist** including site-specific context for clinical interventions (i.e., blood bank communication)
- Workflow cognitive aids aligned with **Crisis Resource Management theory**[2]

To foster a supportive environment:

- **Standardization of competency training** (i.e., thromboelastography interpretation)
- **Saturation in Training Model** for **mutual support**

Discussion

The development and implementation of simulation curriculums are **strategic organizational opportunities** for **professional wellness initiatives.**

- A dynamic training platform to **pro-actively support clinicians' evolving needs**
- Imperative for the high stakes and wide-ranging clinical responsibilities of the obstetric anesthesiology team

PPH management training promoted best practices by reconfiguring the simulation curriculum to address patient-centered interventions and the clinicians' perspective concurrently. This multifaceted simulation training approach **supports a shared mental model**, a defining trait of **high-performing obstetric anesthesiology teams**, enabling **organizational empathy.**

Professional Wellness

*"Organizational approaches to mitigate stress and reduce the potential impact of burnout exist along a **spectrum…***

*…with promoting **individual resilience** at one end and building **a supportive environment** on the other."*[3]

Organizational Empathy

References

1. Ring L, Landau R. Postpartum hemorrhage: Anesthesia management. *Semin Perinatol*. 2019;43(1):35-43. doi:10.1053/j.semperi.2018.11.007
2. Gaba DM. Crisis resource management and teamwork training in anaesthesia. *Br J Anaesth*. 2010;105(1):3-6. doi:10.1093/bja/aeq124
3. Kjaer K, Kowalsky R, Rubin LA, et al. A grassroots approach to protecting physicians against burnout and building an engaging practice environment. *NEJM Catal*. 2021;2(12). doi:10.1056/CAT.21.0275