OPSC Review of Maternal and Perinatal Events

A Patient Safety Reporting Program Report Review

Lessons from Oregon's Patient Safety Reporting Program

The theme of World Patient Safety Day this year is **safe maternal and newborn care**. The Oregon Patient Safety Commission (OPSC) reviewed adverse event reports involving a mother, fetus, and/or neonate submitted to the Patient Safety Reporting Program (PSRP) to share some of what Oregon hospitals have learned about the causes of these events.

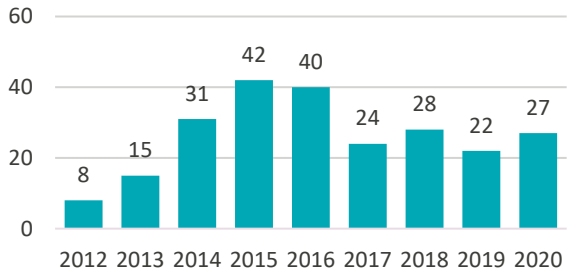
Key Takeaways

- Maternal and perinatal adverse events happen all over the world, including in Oregon
- Many of the adverse events reported involved care delays, including failure to recognize a mother or baby's changing condition during a long labor, a misinterpretation of or lack of communication about questionable fetal heart tracings, and a breakdown of communication between providers and staff both within and across units, specifically in emergent situations.

Maternal and Perinatal Events

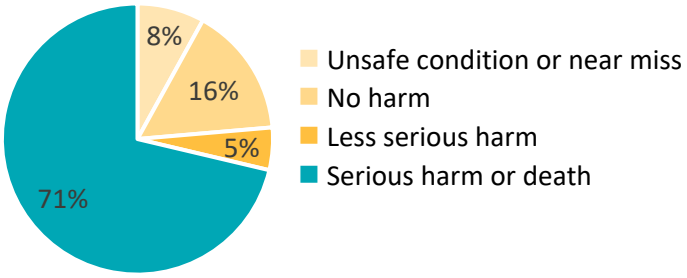
Our review included PSRP hospital reports of involving a mother, fetus, and/or neonate. Between 2012 and 2020, 34 hospitals submitted 237 adverse event reports as maternal or perinatal events, or events that occurred in labor and delivery, mother/baby, or critical care (e.g., pediatric, newborn intensive care unit (NICU)).

Event Frequency by Year (2012-2020)



Harm Categories

The reporting program emphasizes reporting serious adverse events but accepts reports of events at all levels of harm.



Most Frequent Event Types

- Perinatal (30%)
- Maternal (27%)
- Care delay (16%)
- Medication or other substance (8%)
- Retained object (7%)
- Fall (4%)

Event Types Associated with Fewer than 4% of Reports in Dataset: healthcare-associated infection (HAI), device or supply, air embolism, failure to follow-up test results, surgical or other invasive procedure, elopement, irretrievable loss of irreplaceable specimen, other, anesthesia, blood or blood product, burn, electric shock.

Patient Demographics

The mothers impacted by these events had an average age of 30 years (range: 16 to 42 years). The neonates impacted by these events had an average age of 3.1 days (range: 0 hours to 28 days).

Where Maternal and Perinatal Events Occurred

- Labor and delivery (62%)
- Mother/baby (23%)
- Critical care (pediatric, NICU) (9%)
- Operating/procedure room (3%)
- Inpatient (pediatric, nursery) (1%)
- Post anesthesia care unit (1%)

Root and Proximal Causes from Oregon Facilities

Below is a sample of root and proximal causes from the 237 adverse events submitted to PSRP that involved perinatal or maternal patients from 2012 to 2020. Many of the adverse events involved care delays, including failure to recognize a mother or baby's changing condition during a long labor, a misinterpretation of or lack of communication about questionable fetal heart tracings, and a breakdown of communication between providers and staff both within and across units, specifically in emergent situations.

Staffing levels

- Inadequate staffing in general and specifically related to provider staffing for difficult cases
- Inadequate staffing to support frequent rounding, resulting in infant fall when mother fell asleep during breastfeeding

Availability of provider or staff with necessary training, experience, competency and/or certification

- Related to device, equipment, or supply (e.g., Bakri balloon, need for preservative-free saline for infants)
- Related to intubating and/or resuscitating infants (especially low-birthweight infants)
- Related to specialty teams* during emergent situations, especially in off-hours

Normalization of high-risk situations, desensitization of staff

- Alarm fatigue
- Loss of situational awareness

Communication among providers and staff

- Function or use of organizational systems for communication (e.g., hand-offs or documentation between specialty teams* and staff, communication systems like paging and code announcements, organization of information in EHR)
- Inconsistent interpretation among providers and various staff members related to fetal heart tracings
- Interruptions and distractions, simultaneous emergent situations

Inadequate, absent, or unclear policy or procedure

- Co-sleeping allowed, with patient education about co-sleeping risk, resulting in infant suffocation
- Emergency department COVID protocols did not include standard for obstetric (OB) patients
- Inadequate hand hygiene and environmental cleaning in NICU
- Inadequate or unclear policy for escalating care and communicating urgency (e.g., related to fetal heart tracings)
- Inadequate standard and verification process for IV compounding and dilution, resulting in overdose
- No fail-safe to ensure correct patient consent process resulting in incorrect procedure
- Policies did not align with evidence-based practice

Lack of standardization

- Inconsistent policies across health system
- Practice or process varies among providers or departments (e.g., fetal monitoring, counting surgical items like sponges and vaginal packing, obtaining quantity of blood lost during surgery)

Availability of device, equipment, or supply

- Availability of neonate intubation or resuscitation equipment (including in the correct size)
- Availability of operating rooms, blood products, rescue medications or appropriate technology (e.g., bedside echocardiograph) during emergent situations, especially in off-hours

Design or function of device, equipment, or supply

- Defective epidural supplies
- No fail-safe to prevent device from being used incorrectly (e.g., previous patient's fetal heart tracing data remained after discharge, staff selected incorrect infusion pump due to similar labels)

* Specialty teams include but are not limited to blood bank, pathology, radiology, rapid response teams, respiratory therapy.