

# Newborn Falls/Drops in the Hospital Setting

Minnesota Hospital Association

6/20/11

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**There are no financial relationships to disclose.**

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# Learning Objectives:

- Recognize there is an undefined & under reported incidence of newborn falls/drops in the hospital.
- Identify 3 inherent factors during hospitalization that increase the risk of a newborn fall/drop.
- Describe 4 potential interventions to prevent newborn falls.

# Newborn Falls/Drops

- 2005- identified regular unusual occurrence reports of newborn falls/drops-began tracking incidence & narratives
- Common scenarios identified-many were mothers falling asleep & the newborn falling from the mother's bed to the floor

# Newborn Falls/Drops

- Partner/other adult fell asleep & dropped the newborn
- Adult carrying the newborn fell, tripped or had a seizure, dropping the newborn
- Mother/partner awake & newborn fell from mother's bed

# Common themes:

- Regular documentation that families were reluctant to report the fall.
- Nursing staff rarely discussed-providers not aware of the risks of newborn falls.

# Case Studies

# Joint Commission

- 2010 National Patient Safety Goal # 9:  
Reduce the risk of patient harm resulting from falls.
- Preventable injury & death- “never” events

# Literature Search

- Virtually nothing published in the U.S. until August 2008-Intermountain Healthcare published newborn fall/drop data
- UK reported term newborn death in January of 2004
- UNICEF UK Baby Friendly Initiative (2004)  
Babies sharing their mother's bed while in the hospital. A sample policy.

# Maternal Risk Assessment:

- Individualized risk assessment of maternal clinical status
- A designated level of supervision implemented based on the maternal risk assessment results prior to placing the newborn in the maternal bed

# Levels of Supervision:

- Constant supervision for mothers whose clinical condition means that they cannot take any responsibility for their baby.
- Frequent supervision, every 5-10 minutes, check on mothers.
- Intermittent checks to ensure that the mother has not fallen asleep & that no dangers are present for the baby.

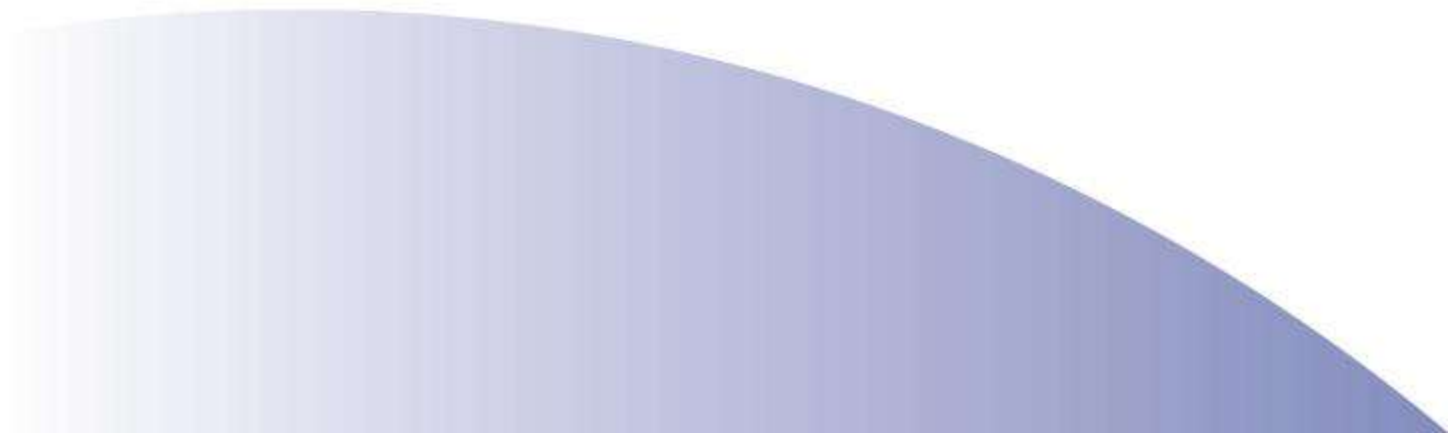
# Newborn Fall/Drop Queries

- ~2006-Council of Women's and Infants' Specialty Hospitals (CWISH)- hospitals that responded were not formally tracking- no formal risk reduction interventions
- Providence Health & Services System- 5 states, 24 Perinatal units- reported cases- no formal work on issues

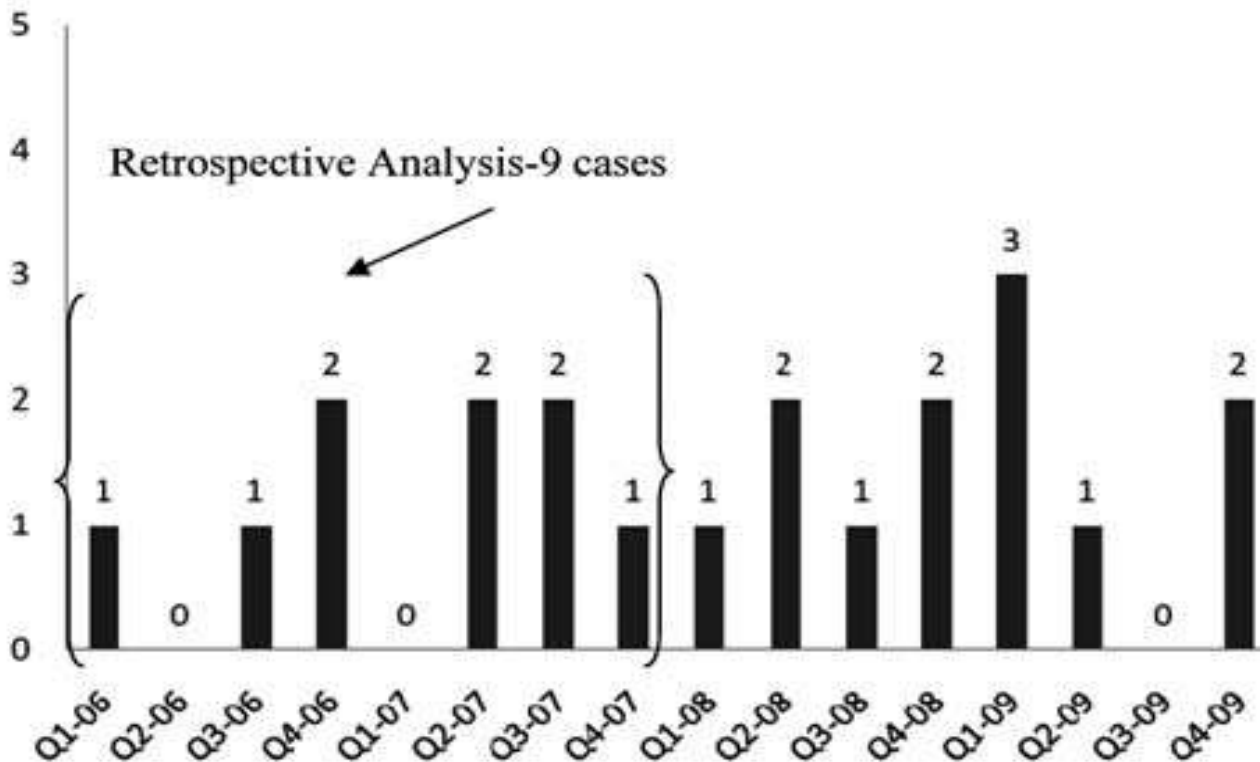
# Chartered Newborn Falls Committee

- Multidisciplinary-neonatologist, nursing, materials management, quality management, data analyst, & educators
- Representatives from each hospital
- Public Relations, Risk Management

# Newborn Fall/Drop Incidence?



## Number of Newborn Falls Across Seven Oregon Hospitals, 2006–2009, by Quarters

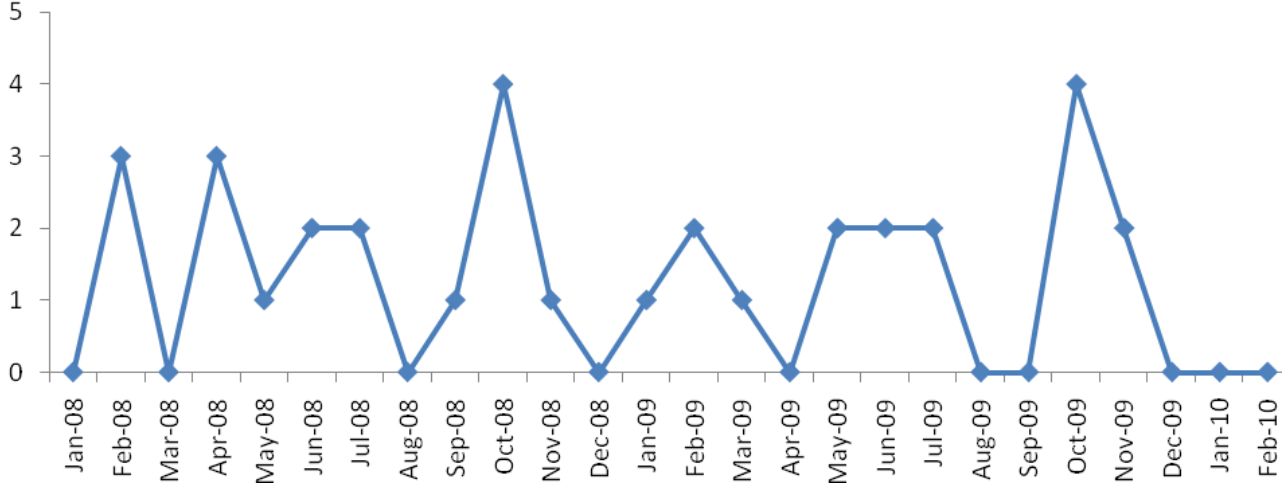


Source: Providence Health & Services UOR Database 2006-2009

# Alerts:

- System-wide “Sentinel Event Alert” through PH&S Corporate Office ~ potential preventable injury & death
- Oregon Women & Children’s Program filed a report with Oregon Patient Safety Commission
- Oregon Patient Safety Commission issued state-wide alert to all acute care facilities in Oregon

**All Providence Health & Services Regions  
22 Hospitals- 79,681 Live Births  
33 Fall Events**



Source: Providence Health & Services UOR Database January 2008-February 2010

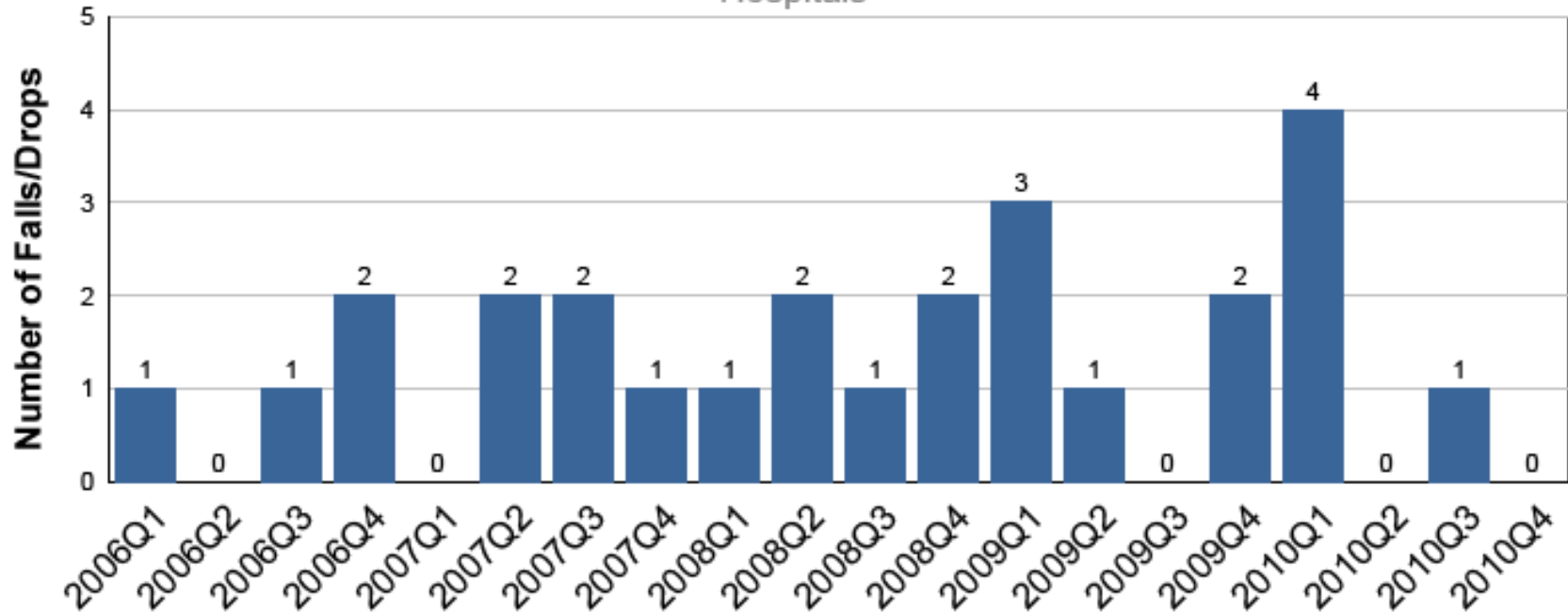
# Infant Falls - Quarterly Results

This document reports Infant Falls occurring on Maternity/OB/Perinatal Units at PH&S Oregon Facilities (except PHRMH) for the time period listed below.

The infant falls reported here occurred at [PH&S Oregon Hospitals](#) between [2006Q1](#) and [2010Q4](#).

## Number of Infant Falls/Drops

at PH&S Oregon  
Hospitals



# Newborn Fall/Drop Incidence

- 1.6-4.14/10,000 Live Births
- 600-1600 Newborn Falls/Year in the U.S.
- PH&S Data-1:2500 births

# Initial Interventions:

- Parent Education:
  - ❖ Safety Letter for parents on admission
  - ❖ Verbal reminders
  - ❖ No co-sleeping policy
- Fall risk reduction interventions in newborn safety policy for nursing staff
- Quarterly newborn fall reports posted on our OB/Newborn Dashboard of quality measures

# Additional Interventions:

- Modify maternal preprinted order sets
  - ❖ Remove PRN hypnotics-order with consideration for newborn safety
- Hourly nursing staff rounding
- Newborn Fall Debrief Form
- Report published in Joint Commission Journal on Quality and Patient Safety-July 2010

# Current initiative work:

- Maternal hospital bed/bassinet
- Retrospective newborn fall/drop analysis:
  - ❖ Joint Commission- Failure mode, effects, & criticality analysis (FMECA)
  - ❖ Cause Mapping-ThinkReliability-Mark Galley
- Post newborn fall diagnostic work-up
- Combined electronic UOR/Debrief

# Maternal Hospital Bed/Bassinet

- Historically, maternal 10-day LOS
- Significance of newborn being with parents to facilitate attachment
- Promote rooming-in
- Facilitate successful breastfeeding by unrestricted mother-newborn time together (skin-to-skin)
- Bassinet independent unit in maternal room

# U.S. Maternal Hospital Bed Design

- LDRP-patients remain in delivery bed during postpartum phase
- Postpartum bed-lower & wider











# Hospital Bed Manufacturers

- Collaborate with hospital bed manufacturers for re-design of maternal bed for increased newborn safety
- SMDA Voluntary Report to FDA
- Hospital Bed Safety Work Group

# Voluntary FDA Report

- FDA report posted on a website viewed by U.S. bed manufacturers
- Hospital Bed Safety Work Group-FDA subgroup-established U.S. hospital bed manufacturing standards

# Risk Reduction Brainstorming:

- Sling securing newborn to mother
- Padding on floor around the bed
- Netting along sides of bed
- Newborn on mother's chest under tucked in bath blanket

# Retrospective Newborn Fall/Drop Analysis

- Joint Commission- Failure mode, effects, & criticality analysis (FMECA)
- Cause Mapping-ThinkReliability-  
Mark Galley

# Failure Mode, Effects, & Criticality Analysis

. . . a systematic approach for identifying the ways that a process can fail, why it might fail, and how it can be made safer.

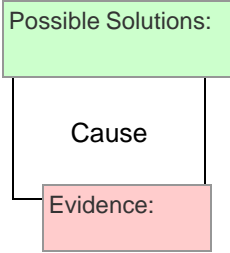
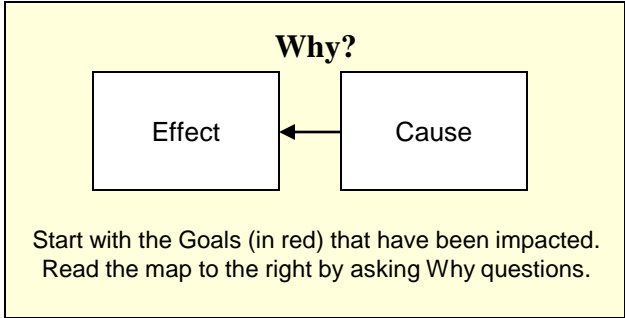
Joint Commission on Accreditation of Healthcare Organizations

# Cause Mapping

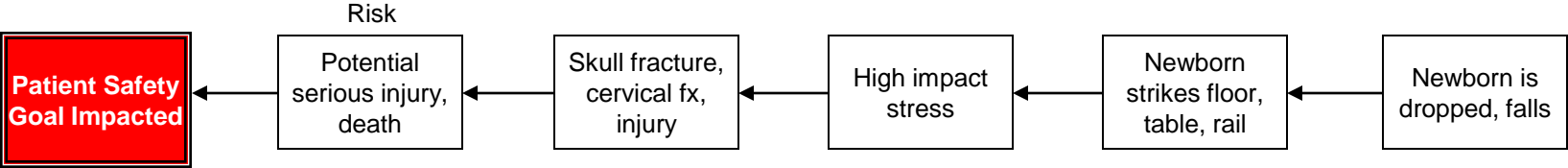
- ThinkReliability-Mark Galley
- Root cause analysis
- Analyze, document, communicate and solve problems

AND

OR



# Newborn Falls

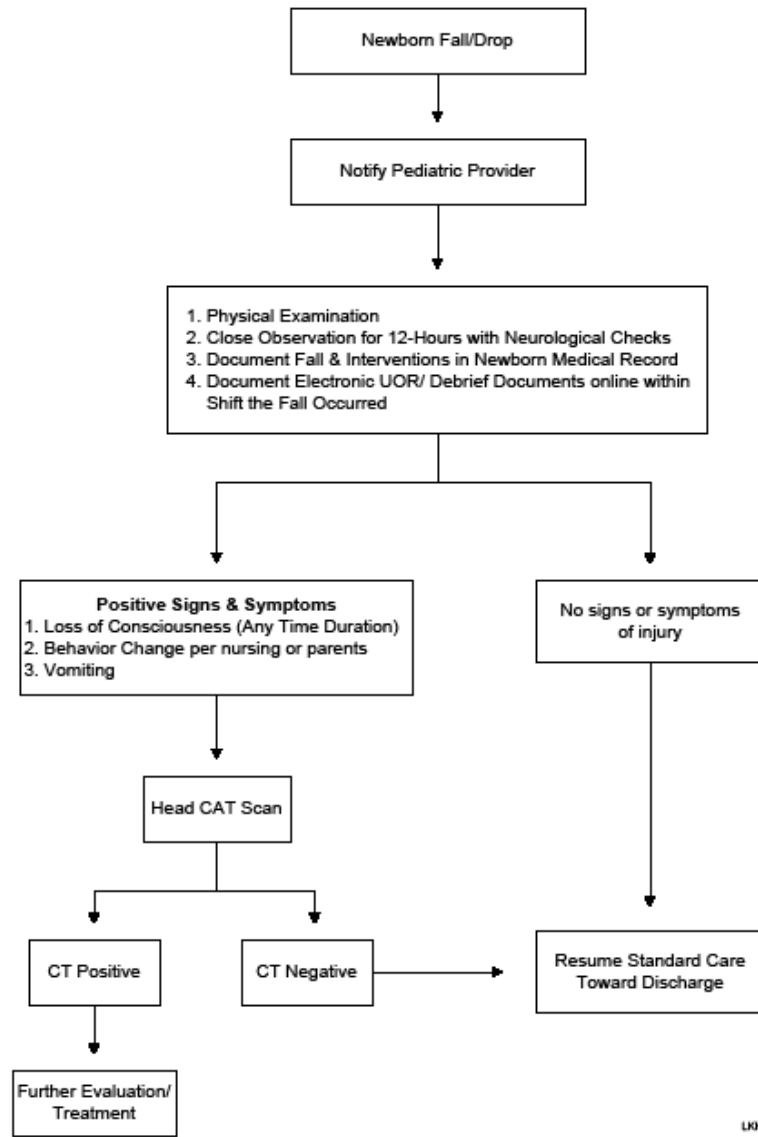




# Diagnostic Work-Up Post Newborn Fall

- Marked variation-clinical diagnostic work-up
- Subcommittee developed to review literature & develop algorithm:
  - ❖ Pediatric ED physician
  - ❖ Pediatrics Medical Director/Hospitalist
  - ❖ NICU & Newborn Medical Director/Neonatologist
  - ❖ Pediatric Radiologist

# Newborn Fall/Drop-Clinical Work Up Algorithm



LKH 4/10

# Dr. Nathan Kuppermann:

- Younger the infant, the greater the risk of traumatic brain injury from a fall
- Fall of  $\geq 3$  feet increases risk of brain injury
- Skull fracture & scalp hematoma most sensitive indicators of brain injury

# Theoretical Estimates of Radiation Exposure

- Head CT scan:
  - ❖ 1,000 one-year olds= 1 lethal malignancy
  - ❖ Several additional non-lethal malignancies
- Age & size-related radiation reduction efforts ongoing in the U.S.

# Electronic UOR/Debrief Process

- Combine UOR & fall debrief into one document
- Electronic entry & data retrieval
- Completed within the shift the fall occurred

# Raise Awareness-Drive Reporting

- Actualize transparency in adverse event reporting
- Proactive risk reduction to insure patient safety
- Recognize these events may be underreported by parents because of their feelings of being at fault
- Facilitate identifying true incidence

# National Safety Platform:

- Newborn falls & drops in the hospital setting should be included in the national falls prevention work in the U.S.
- Identify & report true incidence
- Improve safety for newborns in the hospital

# References:

- AAP Policy Statement (March 2000) Changing Concepts of Sudden Infant Death Syndrome; Implications for Infant Sleeping Environment and Sleep Position. Available: [www.aap.org](http://www.aap.org)
- Helsley, L., McDonald, J.V. & Stewart, V.T. Addressing In-Hospital “Falls” of Newborn Infants. *The Joint Commission Journal on Quality & Patient Safety* July 2010;327-333.
- Monson, S.A., et al, In-Hospital Falls of Newborn Infants: Data from a Multi-hospital Health Care System. *Pediatrics* 2008;122;e277-e280.
- UNICEF UK Baby Friendly Initiative sample policy (October 2003)  
<http://www.babyfriendly.org.uk/pdfs/bedsharingpolicy.pdf>