Prevention of Infant Falls on the Mother Baby Unit

The Problem
There has been a recent increase in infant falls on the Mother Baby Unit (MBU) resulting in neonatal intensive care admission and diagnostic imaging. Thankfully no infants were harmed in these falls, however, each is potentially preventable. These events are not unique to BIDMC, but are an increasingly reported phenomenon nationally.

The Team
Christina Botelho-RN, Janine Caruso-Unit Educator, Meghan Dalton-Nursing Director, Donna Evans-RN, Toni Golen-Vice Chair, Department of Obstetrics and Gynecology, Munish Gupta-QI Director Neonatology, Jan Gutweiler-Coordinator Lactation Program, Jeanne Hanlon-RN, Deb Harvey-Coordinator Childbirth Education Program, Donna King-Luft-RN, Gayle Matheson-Chief Administrative Officer Neonatology, Jessica McCann-RN, Dave Miedema-Neonatology, Melissa Murray-Administrative Resource Nurse, Mary Ann Ouellette-Nurse Specialist, Kate Petralia-RN, DeWayne Pursley-Neonatologist In-Chief, Jane Smallcomb-Senior Director Perinatal Services Wendy Timpson-MD, Ellen Walsh-RN, Phyllis West-Associate Chief Nurse

Aim
To decrease the infant fall rate to 0 in 365 days by implementing targeted patient interventions and staff education.

Methods
- Developed a multidisciplinary team to evaluate the problem and brainstormed ways to address it
- Performed root cause analysis of the four actual fall events and identified the following risk factors:
  - Events are more likely to occur in the early morning hours
  - Infant falls may be correlated with rooming in
  - Events may be linked to maternal exhaustion
- Performed an extensive literature search and review to guide practice
  - Search terms: infant fall prevention; infant falls; rooming in; newborn falls
  - Yielded ten articles, four of which were high quality

The Interventions
- Identified near miss events as a proxy measure, given the challenges of reacting to rare actual infant falls
- Initiated use of the RLS Patient Safety and Feedback System to track near misses
  - Patients and families sleeping with infant
  - Infant unattended on surface other than crib
  - Infant positioned at risk for falling
  - Began hourly patient safety rounding on 12/18/15 to ensure infants are held properly and in safe sleep position
- Tracked interventions and progress
  - Call bell use data
  - Time of event
  - Days between infant falls

The Literature

<table>
<thead>
<tr>
<th>Authors</th>
<th>Date</th>
<th>Level</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Janiszewski, H.</td>
<td>2015</td>
<td>III</td>
<td>The team developed and used the Curtain Risk Assessment tool to determine infant fall risk. Key criteria on the tool were mode of delivery, maternal hemoglobin, and maternal mobility.</td>
</tr>
<tr>
<td>Heisley, L.</td>
<td>2010</td>
<td>V</td>
<td>Performed literature review to make recommendations for unit improvements to decrease infant falls. This team focused on family contracts about fall risk and an event debriefing form.</td>
</tr>
<tr>
<td>Teuten, P.</td>
<td>2015</td>
<td>V</td>
<td>Clinical update suggesting methods to reduce infant falls which included nursing neonates in cots along the bedside, close monitoring of high risk mothers, monitoring mothers with predisposed health conditions, conducting regular rounds especially on night shift and education.</td>
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<tr>
<td>Wallace, S.C.</td>
<td>2015</td>
<td>VI</td>
<td>Team tracked and recorded near misses of infant falls. Identified maternal risk factors for infant falls which included fatigue, cesarean delivery, pain medication use, maternal age, experience with newborns, mental status and sedation level. Interventions were education, quiet hours and a signed safety contract. Identification of risk factors and interventions prevented falls for 11 months.</td>
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Lessons Learned and Next Steps
- Clinical staff are excited to participate in outcome driven quality work
- There is a need for stronger evidence and literature to guide practice
- The number of near misses were initially under predicted by our team
- Continue PDSA cycles to evaluate ways to decrease risk for infant falls
- Implement quiet hours to help to decrease parental exhaustion and prepare families for the night ahead
  - Two hour block of time daily to encourage families to rest
  - Non-essential hospital activities stop
  - Services include: photography, hearing screening, food services, Environmental Services (EVS) rounds, birth registry, flower deliveries, research consents
- Roll out education to all staff who enter patients rooms about identification of infants at risk for falling and a systematic way to report it to the appropriate clinician
  - Staff include: photography service, environmental services, food services, hearing screen technicians, birth registry staff, pediatrics, obstetricians
- Investigate medical equipment that may help solve the problem
  - Bassinets
  - Attached co-sleepers
- Track additional risk factors that may drive the development of new interventions
  - Parity
  - Maternal opioid use for pain control
  - Maternal age
  - Age of infant at time of event

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