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Patient Safety Tip of the Week

September 10, 2019

Joint Commission Naming Standard Leaves a Gap

In our March 26, 2019 Patient Safety Tip of the Week "Patient Misidentification" we noted Joint Commission's new requirement for **newborn naming** (TJC 2018). The convention required use of two distinct methods of identification for newborn patients. You need distinct naming conventions using the mother's first and last names and the newborn's sex (for example, "Smith, Judy Girl" or "Smith, Judy Girl A" and "Smith, Judy Girl B" for multiples). You also need standardized practices for identification banding (for example, two body-site identification and bar coding). You also need to establish identification-specific communication tools among staff (for example, visually alerting staff with signage noting newborns with similar names).

That new requirement was effective January 1, 2019. But already there have been two publications citing errors related to that new requirement.

ISMP (ISMP 2019) received several reports of errors from hospitals that have implemented this change. Most of these reported mix-ups have been between the mother and newborn, rather than between different newborns with similar names. Concerns have been that TJC newborn naming convention makes the mother's and newborn's names too similar.

In one example given, Rho immune globulin intended for the mother instead appeared as an order for the infant. In another, surfactant intended for the infant appeared as an order for the mother. Fortunately, in both cases the error was discovered before the drugs were actually administered to the wrong patient. In another example, it was unclear whether an order for an EKG was for the mother or infant.

In yet another hospital, the long length of a mother's last and first names led to truncation of the names on bracelets of newborn identical twins, leading to identical names on the both infants' bracelets and on the mother's bracelet. The result was that both newborns had the same identifying name, which was also the same as their mother's name.

Also, truncation of names on EHR screens could lead to misidentification between mother and newborn.

In other error examples, confusion arose when pharmacists knew the actual given names for the newborns and used those for orders for parenteral nutrition (PN), which was an outsourced product. The EHR order used the TJC convention for naming. So, there was difficulty matching the name on the label for the outsourced product with the name on the EHR order.

While the ISMP reports found errors mostly between mother and newborn, Jason Adelman and colleagues, whose work on patient identification errors we've highlighted in so many columns, were concerned that names in the new TJC convention might be too similar in cases of **multiple births** (essentially differing only by one digit). So they did a study (Adelman 2019) which confirmed that multiple-birth infants had a higher risk of wrong-patient order errors compared with singleton babies in the neonatal intensive care unit (NICU). **Twins, triplets, and higher-order multiples had a significantly higher risk of wrong-patient order errors compared with singleton births** (adjusted odds ratio 1.75).

Their study was a retrospective one in 6 NICU's that used distinct temporary names for newborns per the requirements of The Joint Commission. They used the Wrong-Patient Retract-and-Reorder (RAR) Measure, which we've discussed in several of the patient misidentification columns listed below. This measure was used to detect RAR events, which are defined as 1 or more orders placed for a patient that are retracted (ie, canceled) by the same clinician within 10 minutes, then reordered by the same clinician for a different patient within the next 10 minutes.

The overall wrong-patient order rate was significantly higher among multiple-birth infants than among singleton-birth infants (66.0 vs 41.7 RAR events per 100 000 orders, respectively; adjusted odds ratio, 1.75). The rate of "extrafamilial" RAR events among multiple-birth infants was similar to that of singleton-birth infants (36.1 vs. 41.7 per 100 000 orders, respectively). But the excess risk among multiple-birth infants (29.9 per 100 000 orders) appeared to be owing to "intrafamilial" RAR events. The risk increased as the number of siblings receiving care in the NICU increased; a wrong-patient order error occurred in 1 in 7 sets of twin births and in 1 in 3 sets of higher-order multiple births.

Infants in NICU's are especially prone to misidentification errors. Previous work by Adelman et al. had shown wrong-patient errors were more common in NICU patients than in non-NICU pediatric patients (Adelman 2017). In several columns we've noted the work of Gray et al. (Gray 2006), who found multiple patients with the same last names on 34% of all NICU days during a full calendar year, and similar sounding names on 9.7% of days. When similar appearing medical records numbers were also included, not a single day occurred where there was no risk for patient misidentification.

Wrong-patient errors in neonatal nurseries and NICU's most often involve medication errors but occasionally also result in wrong procedures. Could they result in switched babies (recall our November 17, 2009 Patient Safety Tip of the Week "Switched Babies") or breast milk mixups (see our April 8, 2014 Patient Safety Tip of the Week "FMEA to Avoid Breastmilk Mixups")? A recent near-miss (Colgrove 2018) illustrates how such an accident might happen. A father with the last name Perry went to get his newborn son out of the nursery. "The boy was sitting in the same spot," Perry said. "He had a card that said Perry. It didn't have height or weight or anything on the card. He had sandy blonde hair and was rolled up. He looked like my baby." He says his baby had been in a cart labeled 204, and this baby was in cart 205. Perry said 'This is my baby, why is he in the wrong cart?' The nurse said someone must have messed up," "She went and marked it (205) out and put 204. I rolled the baby on down there." For about 2 hours, family and relatives held the newborn and took pictures, not realizing it was the wrong baby. They say a nurse came into their room and checked the baby's armband number, and then the nurse came back later with their real son. Perry says the family became distraught when they realized what had happened. "They were crying, upset, couldn't believe it, scared," Perry said.

In the editorial accompanying the current Adelman study, Freed (Freed 2019) notes that the "excess risk was almost exclusively attributed to errors among siblings and not other, unrelated infants in the NICU. Additionally, the risk increased with the number of siblings an infant had in the NICU. Adding to the strength of their findings was that the elevated risk of wrong-patient errors for siblings was consistent across institutions, electronic medical record systems, and patient populations." He notes that well-intentioned patient safety interventions can have **unexpected and unintended consequences** unless we are careful to assess the impact of such changes.

Adelman et al. propose alternate strategies that may mitigate the risk of newborn misidentification, particularly among multiple births. First, they propose that hospitals use the newborn's given name, when available, or use a pseudonym when the newborn's given name is not yet chosen or when cultural or religious beliefs preclude its use. On return for care after hospital discharge, the pseudonym will be changed according to the infant's birth certificate.

Second, they propose that hospitals switch from the temporary name to the given name as soon as it becomes available if the infant is admitted to the NICU, with the caution that systems interoperability should be tested and any issues should be addressed.

Third, they propose that obstetricians consider approaches to encourage parents, particularly of multiple gestation pregnancies, to select names or pseudonyms to use at birth, while respecting parents' cultural and religious practices.

They stress that implementing these solutions would require changes to health information technology systems, workflows, and training, with the potential for additional costs and unintended consequences.

Both the ISMP and Adelman articles are stark reminders that unintended consequences pop up after even our most well-intended solutions to problems. Whenever we implement new interventions, it is imperative that we plan for assessing the impact of those interventions, whether positive or negative. That is why we consider the most important of the three quality improvement questions we always ask is "How will we know we improved {problem x}?".

Some of our prior columns related to identification issues in newborns:

November 17, 2009 "Switched Babies"
December 20, 2011 "Infant Abduction"
September 4, 2012 "More Infant Abductions"
December 11, 2012 "Breastfeeding Mixup Again"
April 8, 2014 "FMEA to Avoid Breastmilk Mixups"
August 2015 "Newborn Name Confusion"
January 19, 2016 "Patient Identification in the Spotlight"
July 19, 2016 "Infants and Wrong Site Surgery"
August 1, 2017 "Progress on Wrong Patient Orders"
March 26, 2019 "Patient Misidentification"

See some of our other Patient Safety Tip of the Week columns dealing with unintended consequences of technology and other healthcare IT issues:

- June 19, 2007 "Unintended Consequences of Technological Solutions"
- May 20, 2008 "CPOE Unintended Consequences – Are Wrong Patient Errors More Common?"
- June 17, 2008 "Technology Workarounds Defeat Safety Intent"
- August 26, 2008 "Pattern Recognition and CPOE"
- September 9, 2008 "Less is More….and Do You Really Need that Decimal?"
- December 16, 2008 "Joint Commission Sentinel Event Alert on Hazards of Healthcare IT"
- February 2009 "Healthcare IT The Good and The Bad"
- March 3, 2009 "Overriding Alerts…Like Surfin' the Web"
- October 2009 "A Cautious View on CPOE"
- November 24, 2009 "Another Rough Month for Healthcare IT
- April 20, 2010 "HIT's Limited Impact on Quality To Date"
- March 22, 2011 "An EMR Feature Detrimental to Teamwork and Patient Safety"
- January 24, 2012 "Patient Safety in Ambulatory Care"
- June 26, 2012 "Using Patient Photos to Reduce CPOE Errors"
- June 2012 "Leapfrog CPOE Simulation: Improvement But Still Shortfalls"
- July 17, 2012 "More on Wrong-Patient CPOE"
- January 2013 "More IT Unintended Consequences"
- April 30, 2013 "Photographic Identification to Prevent Errors"

- October 8, 2013 "EMR Problems in the ED"
- March 11, 2014 "We Miss the Graphic Flowchart!"
- October 2014 "Ebola Exposes Fundamental Flaw"
- January 2015 "Beneficial Effect of EMR on Patient Safety"
- March 2015 "CPOE Fails to Catch Prescribing Errors"
- March 31, 2015 "Clinical Decision Support for Pneumonia"
- August 2015 "Newborn Name Confusion"
- December 2015 "Opioid Alert Fatigue"
- January 12, 2016 "New Resources on Improving Safety of Healthcare IT"
- January 19, 2016 "Patient Identification in the Spotlight"
- February 9, 2016 "It was just a matter of time…"
- April 5, 2016 "Workarounds Overriding Safety"
- May 2016 "Name Confusion in the Pharmacy"
- May 3, 2016 "Clinical Decision Support Malfunction"
- May 24, 2016 "Texting Orders – Is It Really Safe?"
- August 23, 2016 "ISMP Canada: Automation Bias and Automation Complacency"
- November 22, 2016 "Leapfrog, Picklists, and Healthcare IT Vulnerabilities"
- January 2017 "Joint Commission Thinks Twice About Texting Orders"
- February 28, 2017 "The Copy and Paste ETTO"
- March 2017 "Yes! Another Voice for Medication e-Discontinuation!"
- April 2017 "How Much Time Do We Actually Spend on the EMR?"
- June 27, 2017 "Texting – We Told You So!"
- August 1, 2017 "Progress on Wrong Patient Orders"
- January 2018 "Can We Improve Barcoding?"
- January 16, 2018 "Just the Fax, Ma'am"
- January 30, 2018 "Texting Errors Revealed"
- June 19, 2018 "More EHR-Related Problems"
- September 2018 "More Clinical Decision Support Successes"
- December 11, 2018 "Another NMBA Accident"
- January 1, 2019 "More on Automated Dispensing Cabinet (ADC) Safety"
- February 5, 2019 "Flaws in Our Medication Safety Technologies"
- March 26, 2019 "Patient Misidentification"
- May 2019 "Too Much Time on the EMR"
- May 21, 2019 "Mixed Message on Number of Open EMR Records"
- July 23, 2019 "Order Sets Can Nudge the Right Way or the Wrong Way"

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