

Patient Safety Tip of the Week

December 11, 2012

Breastfeeding Mixup Again

Many were shocked at the news of an incident last week in Minnesota in which a newborn was breastfed by a woman on the maternity unit who was not his mother ([AP 2012](#)). But in reality what's amazing is that we don't hear about many more similar incidents. Our November 17, 2009 Patient Safety Tip of the Week "[Switched Babies](#)" had an extensive discussion of the risk factors and contributory factors to incidents of both switched babies and breastmilk mixups. If you do a FMEA (failure mode and effects analysis) in your own organization we suspect that you will find numerous potential vulnerabilities to either error.

In the Minnesota case the wrong infant was given to another new mother to breastfeed. That mother initially sensed this might not be her own newborn but her husband apparently reassured her she was just tired so she proceeded to breastfeed ([Lerner 2012](#)). Several minutes later she noted the ID tag on the infant was not the name of her own newborn infant. They immediately contacted nurses, who confirmed this was not her baby. In addition to causing anxiety and stress for both families and staff, the newborn who received the wrong breastmilk will need to undergo HIV testing over the next year, adding to the stress even though the ultimate risk of HIV transmission in this case is probably quite low.

In our November 17, 2009 Patient Safety Tip of the Week "[Switched Babies](#)" we did a fairly extensive review of the problem of the wrong babies being given to the wrong mothers. The exact incidence of this problem is unknown but in doing our research at that time we found an article in the news about such switches occurring somewhere almost every year. Another incident occurred in 2010 in Virginia and a Washington Post article about that case noted several other near misses in the Washington, DC area ([Suh 2010](#)). And in our September 2011 What's New in the Patient Safety World column "[Another Breastfeeding Mixup](#)" we highlighted another episode that occurred in Australia ([Cooper 2011](#)). So the occurrence of yet another case this year comes as no surprise. In fact, one whitepaper from Intel Corporation and partners estimates that of over 23 million infant transfers to and from mothers during initial hospital stays in the US annually, there are over 23,000 erroneous infant-mother transfers per year ([Dalton 2005](#)) but it is not clear where that data came from.

As is typical in most serious incidents a single error is seldom responsible for the adverse outcome. Instead, a cascade of errors and contributing factors come together to enable the event to occur. The current incident is no different. In the Minnesota case the failure to match the ID bracelets of the baby and mother was only the immediate cause at the sharp end. Prior to that the babies apparently had been placed in the wrong bassinets ([Daily Mail 2012](#)). Add to that a form of confirmation bias or ignoring disconfirming evidence (the mother was uncertain this was her baby but the husband attributed her concern to her being tired). The mother who did the breastfeeding also apparently had just given birth to twins ([Kennedy 2012](#)). Could that have played a role in the identification process? Did it somehow contribute to the infants being in the wrong bassinets? And we don't know what root causes will be uncovered in the hospital's root cause analysis (RCA). But undoubtedly they will look at issues such as workload, time pressures, staffing issues, change of shift, handoffs, staff education and orientation. And the safety culture will be addressed. The most difficult question to answer will be how often do nurses or aides bring a baby from a bassinet to a mother's room for breastfeeding and actually check the ID bracelets against each other.

The latter error (failure to check that the ID bracelets match) is, in fact, **a predictable error**. In the Australian case details of the hospital's investigation are sparse but apparently there was failure to verify identities on the bracelets ([Cooper 2011](#)). And in the Virginia case an aide apparently failed to ensure that the ID bracelets matched ([Suh 2010](#)). It is no different from the wrong patient errors we frequently saw in medication incidents before widespread adoption of barcoding systems. So we know that under enabling circumstances (for example, a busy night with several deliveries or C-sections pending and maybe suboptimal staffing) an anticipated human error might be to bring a baby to a mom and forget to match the ID bracelets.

We've done FMEA's (Failure Mode and Effects Analysis) on this potential issue in the past and no matter how safe you think your present system is your FMEA will likely uncover potential vulnerabilities. See our November 17, 2009 Patient Safety Tip of the Week "[Switched Babies](#)" for an extensive discussion of the risk factors and contributory factors to incidents of both switched babies and breastmilk mixups.

Aside from the failure to match the ID bracelets on mother and baby, there are numerous other potential problems that can contribute to misidentifications. One potential problem involves **similar names**. Often newborns have not yet been named so their ID tags often have names like "baby boy smith" or "bb smith" (the "bb" standing for baby boy) and you might have more than one family with the last name "Smith" at one time. In our May 20, 2008 Patient Safety Tip of the Week "[CPOE Unintended Consequences – Are Wrong Patient Errors More Common?](#)" we noted you would be surprised to see how often patients with the same or very similar names may be hospitalized at the same time. [Shojania \(2003\)](#) described a near-miss related to patients having the same last name and noted that a survey on his medical service over a 3-month period showed patients with the same last names on 28% of the days. The problem is even more significant on neonatal units, where multiple births often lead to many patients with the same last name being hospitalized at the same time and medical record numbers being similar except for

one digit. [Gray et al \(2006\)](#) 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.

Language barriers, of course, might be another contributing factor in some cases. While all hospitals are required to have access to translation services, it is not clear how often those are accessed just for the act of breastfeeding a newborn.

And what about **room changes**? In the Virginia incident apparently the baby's mother had had a room change ([AP 2012](#)). There are a variety of reasons a patient might be moved from one room to another. Particularly in cases where something like a bassinet number in the nursery is "tied" to a room number special care must be taken ensure that "tie" to the mother is appropriately maintained.

The **mother's ability to recognize the baby** is also an issue. The mother may be **tired** or may have received **sedating drugs**. In some cases the mother has **only seen the baby once or twice**. The baby may be **swaddled** and only his/her face showing. The babies often wear **similar caps** (blue for boys, pink for girls). And if the baby is brought for breastfeeding at **night** the room may be relatively dark, further impairing recognition of the baby.

Certainly, a number of patient safety tools are available that might reduce the chance of baby mixups. These include both high tech and low tech tools. **Barcoding** is an obvious tool, given that so many hospitals have now moved to barcoding systems to improve medication safety. And, though barcoding is a great tool, it doesn't help if the bracelets/labels were already mixed up and it can often give rise to a false sense of security.

We discussed design issues related to ID bracelets in our November 17, 2009 Patient Safety Tip of the Week "[Switched Babies](#)". The hospital in the Virginia case moved to a digital monitoring system that responds to incompatibility of the baby and mother by sounding an audible alarm ([AP 2012](#)). Incorporating **RFID (radiofrequency identification) technology** into systems is another technological advance ([Dalton 2005](#)) capable of helping in correct identification. And one has to expect **Bluetooth** technological solutions can't be far behind. If we can use low-power Bluetooth to sound an alert on our keychain when our smartphone is no longer within 80 feet, someone will figure out how to use that to keep our infants nearby.

But even technological solutions will have failures. With barcoding systems we've certainly seen instances where the wireless access fails or the batteries in the scanners run down and providers resort to shortcuts and workarounds. Barcoding systems and other new technologies are still subject to numerous **workarounds** (see our June 17, 2008 Patient Safety Tip of the Week "[Technology Workarounds Defeat Safety Intent](#)").

So what about low tech solutions? The **timeout** is a logical tool to use. Just as in the OR we use a timeout to verify the correct patient (and many other things) you could use a timeout to verify the correct baby/mother combination or identify the correct baby going for any other procedure. Certainly at least asking the mother to verbally provide her name and date of birth plus the name of the baby makes sense.

Use of **checklists** could also be very valuable. Almost all maternity units keep at the bedside a log where the mother or nurse records the time breastfeeding took place. It would be very easy to add a checklist item to that for the mother/baby verification.

What about **double checks**? A point we have made over and over is that double checks are very weak safety interventions (see our October 16, 2012 Patient Safety Tip of the Week “[What is the Evidence on Double Checks?](#)”). From all industries we know that the error rate when a supervisor checks someone else’s work may be 10% or higher. And we don’t know what influence the double check has on the error rates of the original person. It is quite conceivable that the original person may make more errors if they feel that their errors will be intercepted by a second reviewer. We did discuss the possibility of using double checks to prevent mother/baby mismatching in our November 17, 2009 Patient Safety Tip of the Week “[Switched Babies](#)”. We noted there might be some potential benefit if double checks, particularly at discharge, were applied to the baby/mother identification verification process. However, we suspect that requiring double checks for every breastfeeding occurrence on a maternity unit would be burdensome and become easily susceptible to workarounds.

And, importantly, we feel that you must have some way of **auditing** your processes to ensure compliance with your well-intentioned policies. The best policies in the world will not help if no one adheres to them. Plus auditing helps you identify when workarounds are being used. Workarounds are almost always indicative of a flaw in your policy or procedure and should tip you off that you need to fix the underlying system. The audits could be random spot audits or “secret shopper” type audits.

Our November 17, 2009 Patient Safety Tip of the Week “[Switched Babies](#)” also discussed the risk of babies being fed **expressed breast milk from the wrong mother**. The Pennsylvania Patient Safety Authority issued a Patient Safety Advisory on Mismanagement of Expressed Breast Milk in 2007 ([PPSA 2007](#)). The Pennsylvania Patient Safety Reporting System (PA-PSRS) had received 20 reports of infants being fed another mother’s expressed breast milk. They identified risk factors that involved not only identification issues but also labeling issues, and problems with verification, storage and dispensing. The Advisory has good recommendations on risk reduction strategies and **an excellent section on how to respond and manage patients when such exposures do occur, particularly managing the risk for infectious disease transmission**. All those recommendations obviously would also apply in cases where infants were directly exposed to breastfeeding by the wrong mother.

So, is your organization at risk? This is another great topic for a FMEA (failure mode and effects analysis).

See also our columns on infant abductions, which contain further pertinent information about infant identification:

- December 20, 2011 Patient Safety Tip of the Week “[Infant Abduction](#)”
- September 4, 2012 Patient Safety Tip of the Week “[More Infant Abductions](#)”

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