

I've been thinking...



Baby With Bathwater
September 2009

I've been thinking about babies, bar codes, and bathwater.

Twenty years ago, I made the obligatory pilgrimage with my five kids to Chuck E Cheese. Ugh. A few months ago, I made my second and final visit—this time with my grandson. Two noteworthy changes: Chuck E's token-gobbling entertainment technology has been upgraded, and he's installed a Kid-Check security system with the commitment: "Everyone that comes together, leaves together." On the way in, whole families are now stamped with unique identifiers in invisible ink. On the way out, stamps are black-lighted to ensure all children belong to the adults with whom they are departing. This is not your father's Chuck E Cheese.

Similar, though more sophisticated, technologies are being utilized in hospitals to ensure infants belong to the adults with whom they are leaving. To prevent abductions, newborns are tagged with radio-frequency identification (RFID) bracelets or anklets, which trigger alarms and even lock doors when unauthorized persons attempt to remove babies from secured areas. Beyond newborns, a good case could be made for hospitals tagging older children. In a UK hospital this past June, a woman nearly succeeded in kidnapping a 9-month old from a pediatrics unit¹.

Our first son (adopted) used to tell people he was abducted. Not all babies who leave hospitals with the wrong parents are kidnapped. In some cases, staff confuses one baby's identity with another's. In March, two newborns were unintentionally switched² in an Illinois hospital after they were circumcised. One boy was sent home with the wrong woman, while his mother remained in the hospital. Half a day later, the staff realized what had happened thought it might be a good idea to ask the family to return the child and pick up their own. DNA testing confirmed who belonged to whom.³ Thank God, the error was caught. This is not always the case.

Recently, two 57-year old women, who were born in a tiny rural Oregon hospital on 3 May 1952 (both hairless and weighing six pounds), met for the first time. Turns out, their mothers had not left with the daughters they had

¹ www.dailymail.co.uk/femail/article-1193963/Hospital-horror-mother-sees-woman-snatch-newborn-baby.html

² www.dbtechno.com/curiosity/2008/04/12/baby-sent-home-with-wrong-family-from-illinois-hospital

³ www.dbtechno.com/curiosity/2008/04/12/baby-sent-home-with-wrong-family-from-illinois-hospital

carried into labor. Because of the mix-up⁴, each had been raised by the other's parents. Fortunately, the women (who refer to themselves as "twisters") and their parents have forged a bond in spite of the hospital's error. Nevertheless, ponder their losses.

Positive ID technologies are important for stays as well as departures, helping to ensure that whatever is done is done with the right persons. Utilizing bar-code-enabled patient/process/product identification before milk collection, feedings, medication administrations, blood transfusions, specimen collections, and vital-sign monitoring prevents errors from reaching both mothers and children.

At a Brooklyn hospital in January, two mothers (each with the first initial "S" and last name "Brown") were confused, and one of their children was taken to the wrong mother for his first feeding.⁵ Matching the infant's and mom's bar-coded bracelets could have prevented this error. Systems like LacTrack⁶ incorporate bar-code labeling of expressed milk at the point of collection as well as verification scanning of mother's milk and/or manufactured formula at the point of feeding. Systems like TotGuard⁷ not only issue infant RFID tags for security purposes but also mothers' RFID tags for pairing purposes. When babies are handed to mothers, their radio signals interrogate each other and audibly confirm or deny a match.

It's critical that these child-protection technologies be used properly. A few weeks ago, in Hong Kong's Queen Elizabeth Hospital, two infants were mixed up⁸ and breast-fed by the wrong mothers for four days. Staff had confused the children in the process of applying bar-coded ID bands. I know someone will use this story to float arguments against the efficacy of bar coding. But I'd argue the hospital had a process rather than a technology problem. Not unlike four of the five Chuck E Cheeses in the San Antonio area. In November of last year, a local television station with hidden cameras was able to get children through each restaurant's security check with the wrong adults. However, just because a good technology was used in a poor manner is no reason to throw the baby out with the bathwater. Did I just say that?

Anyway, fail-safe processes must be designed and enforced for bar-code tagging babies and mothers just as they are for bar-code labeling medications. (See: I've Been Thinking About Verifying Bar Codes on Wristbands⁹). A single bar-coded ID band should be printed for each newborn, then verified, applied, and tested for accurate mapping to its

⁴ www.guardian.co.uk/world/2009/may/14/women-birth-switch-oregon

⁵ abclocal.go.com/wabc/story?section=news/local&id=6729070

⁶ www.neoterictech.com/lactrack.html

⁷ <http://guardrfid.com/healthcare/48/totguard-tag-family>

⁸ edu.singtao.com/eng-s/digest_details.asp?article_id=332&catid=1

⁹ www.hospitalrx.com/patientwristband.html

mother's—all before either leaves the delivery room. Why not print a matching label for the baby's bed at the same time? Scanning can verify that the right baby is being placed in the right crib, the same way it's being used to verify that drugs are being stored in and retrieved from the correct compartments (See: I've been thinking about positive product ID¹⁰).

One Sunday in 1988 BC (before cellular), we took two cars to church. Upon arriving home, only four of the five kids were with us. Our missing child hadn't been abducted. His parents had failed to communicate. So much for No Child Left Behind. Hey, at least we left him at church. Could have been Chuck E Cheese. In any case, you should know that we revisited and refined our parental kid-counting protocols.

What do you think?



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¹⁰ www.hospitalrx.com/PPID.html