

I've been **thinking**...



Pediatrics to Geriatrics
August 2011

I've been thinking about geriatrics, births, pediatrics, deaths, and bar-code safety systems.

In the early 1970s, Alan Haberman (then in his early forties) chaired an ad hoc committee that chose the UPC bar code for the grocery industry. For the next decade Alan unrelentingly worked to persuade manufacturers, retailers and the public to accept machine-readable codes at the point of sale. Several decades passed before bar coding wound its way to the point of care in America's hospitals.

Geriatrics

Haberman died last month at age eighty-one in Newton-Wellesley Hospital, which utilizes bar-code medication-administration technology and, as a result, has [demonstrated](#) significant reduction in transcription, administration, and total medication errors of 56 percent, 53 percent, and 56 percent respectively. Haberman's work unwittingly helped pave the way to a safer point of care for himself and his family. Yours and mine too. Thanks Alan.

Two weeks ago, I visited two geriatric patients (two days apart) in a Northern California Kaiser hospital—one in critical care, the other in emergency. I was pleased to observe nurses scanning bar codes on their wristbands and medications to ensure a match. Pleased, because the first patient, Juanita, was my eighty-nine-year old mother. The second, Edgar, was my ninety-year-old father.

Unfortunately, Mom was sent home to hospice. Fortunately, Dad escaped death and was able to return to mom's side. It was an honor to watch him tenderly support her through her final days as he had for 68 years of marriage. Of course, bar coding could not have prevented my mother nor Alan Haberman from dying. Their time had come.

Such was not the case earlier this year for an elderly woman in a UK hospital who was given a tenfold overdose of potassium chloride, an error which bedside bar coding could have prevented.

Pediatrics

A few days after Mom changed addresses (her words), my niece gave birth to Edgar and Juanita's ninth great-grandchild. The little guy was immediately tagged with a bar-coded ankle band not only to prevent medication administration errors, but



also to make sure he was not breast fed by or sent home with someone else's mother.¹

Over the past few years, we've heard too many reports of infants whose lives were lost because of preventable medical errors. The landmark episodes involved the infamous heparin errors of 2008 in Indianapolis and Texas. Adult doses of heparin (10,000 units/mL) were given to neonates instead of 10-units/mL doses used to flush pediatric intravenous lines. It turns out that adult-dose vials were mistakenly placed in automated dispensing cabinets located in pediatric care units. Bar coding at the bassinette could have intercepted the dispensing errors. Bar-code scanning at the point of stocking the machines could have prevented the high-risk drugs from reaching the infants in the first place.

Bar Coding

While we've made significant progress, still more than half the hospital beds in our country are without bar-code scanning. And we are not doing as well with our vulnerable infants as we are with adults. This is mainly because most medication packaging and delivery systems are designed for adult populations.

Manufacturers failing to respond to requests for producing more pediatric-sized doses and hospitals lagging in the standardization of pediatric dosing require too much dose preparation and labeling in pharmacies. Meanwhile, though hospitals will never reach cGMP² precision, bar-code and scale-assisted technologies can go a long way in reducing errors in pediatric dose preparation.

When infusions are involved, bar coding not only matches infants with the right drugs but some systems also trigger auto-programming of pumps, which helps prevent giving the right drug the wrong way. With manual entry there is greater potential for missed decimals, double bumping of numbers, and extra zeros.

Beyond patients and their families, we are also concerned about the dedicated, conscientious caregivers whose careers are often lost after committing errors that technology could have prevented. I'm thinking of the nurse in Seattle whose life-taking error this year at Seattle Children's sent her on a downward spiral that ended in taking her own life.

There is so much more to understand about pediatric medication safety than I've briefly brushed above. Thus, I am honored to be the host of Talyst's [Pediatric Safety Summit](#) this September here in my neck of the woods—beautiful Bellevue, Washington. Would you consider joining us? It's hard to beat Pacific Northwest weather in September.

Meanwhile, I will continue to unrelentingly work to persuade drug manufacturers, technology companies, and healthcare institutions to do their part in assuring that Owen Edgar Neuenschwander will grow up in a world where he will be protected by bar-code

¹ On July 18, two newborn babies were mistakenly given to the wrong mothers at a Victorian hospital when staff failed to check their ID bracelets. A family member discovered the mistake more than eight hours after the babies were handed over at the St John of God Hospital at Geelong, southwest of Melbourne. In the meantime, they were breastfed by the wrong mothers. Source: [Sydney Morning Herald](#)

² current Good Manufacturing Practices

point-of-care safety systems whenever and wherever he is hospitalized throughout his life.

What do you think?



Mark Neuenschwander a.k.a. Noosh

BTW. Each time nurses scanned my dad's wristband in the ER, they got his electronic medication administration record. However, when a care coordinator attempted to pull up Dad's medical record using her keypad, she unknowingly pulled up my brother's medical record. Good thing I was there. My brother (who passed away in April) and my dad are both named Edgar Herman Neuenschwander. I knew which was Edgar the second and which was Edgar the third.

Briefs: A few years ago, an elderly woman who shared a hospital room with my mom told me that she asked a old guy if he preferred boxers or briefs. He said, "Depends."

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