

I've been thinking...



Pros and Cons of RFID Tracking
October 2007

I've been thinking about the pros and cons of utilizing radio-frequency identification (RFID) technology in hospitals.

In the middle of the Bible, a poet puts a rhetorical question to God: "Where can I flee from your presence?" A few lines earlier, he had answered his own question:

You know when I sit and when I stand;
you perceive my thoughts from afar.
You discern my going out and my coming in;
you are familiar with all my ways.

I imagine the concept of his never being out of range was at once comforting and disturbing. This reminds me of the ambivalence some hospital caregivers are feeling about the prospect of being tagged with radio-frequency chips.

Forward-thinking caregivers generally anticipate the day when each point-of-care handheld is equipped with an RFID reader, which by interacting with staff-ID tags automatically knows which nurse has picked it up, immediately signs her on, and instantly identifies the patient she is with.

Likewise, nurses are interested in the idea of RFID systems assisting them in locating available infusion pumps more quickly. Who wouldn't be happy to eliminate those aggravating room-to-room searches by simply flipping through a few screens on a PDA?

Yet, as caregivers connect the dots, future shock sets in when they realize RFID systems could also be utilized to track their own going in and coming out (e.g., where they are on campus, how long they have been in given patients' rooms, whether or not they washed their hands upon arrival, how long they were on break, and where they spent it). More than a few have reasoned, "It's one thing to track the assets we need to do our jobs; it's quite another thing to invade our privacy."

So what do I think? Well, I'm pretty high on RFID when it comes to positive identification of caregivers and patients in the medication-use process. To read conventional bar codes on wristbands, scanners must be within line of sight. Too often, this involves fishing for patients' wrists under pillows and blankets, maneuvering over and under tubes, stretching arms, and twisting bands—simultaneously annoying caregivers and disturbing patients. In contrast, radio

chips (requiring only proximity) can be read from a distance by handhelds—not so irksome and less disruptive.

There are other advantages in forcing functions that require nurses to identify patients with RFID-chip reads, not the least of which is that they help prevent the practice of high-risk work-arounds—like printing out surrogate bar codes, then scanning them down the hall in a med room, rather than on patients in their rooms.

Likewise, I'm excited about the value of tracking and locating medical devices via RFID networks. In addition to saving nurses' time and frustrations, other departments benefit from knowing where infusion pumps are hiding and learning from a distance which ones need to be serviced or sterilized. All this saves significant dollars for hospitals that previously compensated for poor asset management by purchasing more pumps than necessary.

However, when it comes to tracking staff, well, I need to think some more about that one.

First, I should mention that while I have heard people talk about tracking nurses, I have not heard of a hospital where this is actually being done. Next, some significant differences exist between the larger active battery-powered transmitters hospitals are putting on infusion pumps, computers, beds, and other assets and the small passive chips they are attaching to staff IDs. The former can be read a football field away; the latter require being within inches. Slipping tiny chips in people's pockets so they can be monitored from CIS via satellites is reserved for the likes of Jack Bauer on 24 (the same guy whose cell phone never seems to lose reception).

Asset-tracking systems are not yet tracing the “standing up and sitting down” of the staff. To do a precise job of monitoring people would require installing radio readers on every doorway or issuing bulky anklets like Martha Stewart had to wear while under house arrest. I wonder if they come in white?

Of course, the ability to more easily track caregivers will improve as RFID chips and readers become more precise. However, solving such technological problems does not address the ethical, legal, and labor-union issues created by Big Brother playing God. Sen. Patrick Leahy recently warned, "The RFID train is beginning to leave the station, and now is the right time to begin a national discussion about where, if at all, any lines will be drawn to protect privacy rights." But that's another discussion.

Meanwhile, I don't think the possibility of inappropriate tracking tomorrow should prevent us from using RFID technologies for the important benefits they can bring us today.

What do you think?

A handwritten signature in black ink, appearing to read 'Mark Neuenschwander', written in a cursive style.

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