



First Reported Case of IT Department Saving A Life

Information Systems Director Joan Williams thought it would be a good idea if one of her staff examined daily data arriving electronically from the first patient to test **Duplin Home Care & Hospice's** new home telehealth system, "*well.at.home*," from **Patient Care Technologies** (PtCT). Little did she know this procedural decision would lead to a life-saving event.

"We usually get in a little earlier than the clinical staff," Williams begins the story. "First we check to make sure systems that exchange data with the patient's Compaq Ipaq running *well.at.home* are operating properly. Later, a nurse looks at it again from a clinical perspective. One day during one of these routine checks, my assistant, April Vance, noticed that our first test patient – a CHF patient on constant oxygen flow – had an 88% pulse oxygen reading. She remembered it had always been 97-100% on previous mornings and immediately called the patient's home.

"Fortunately the patient has a live-in caregiver. April had her check the oxygen equipment and, sure enough, a tube had become disconnected, meaning the patient was getting no oxygen at all, possibly all night long. There is no way of knowing how long that tube would have gone undetected if we hadn't installed *well.at.home*."

Following such a dramatic technology success story, operational efficiencies and back office cost savings resulting from automation tend to pale, but Duplin Home Care & Hospice has plenty of those to tell as well, thanks in large part to administrator Lynn Hardy's belief in the importance of technology. "She is not afraid to take a risk in favor of automation," Williams reports. "She invested in point-of-care *during IPS* even though everyone told her she was crazy, but it has paid off well for us."

The Kenansville, North Carolina, agency was selected by PtCT to test *well.at.home* because it had been a star user of the vendor's point-of-care system for three years. "Point-of-care has saved us a tremendous amount of time," Williams explains. "We have only 15 nurses in the field but they used to generate enough paper to keep one extremely fast transcriptionist busy all day every day entering assessments into HAVEN. Now, the only thing that person has to do with patient data is send OASIS files to the state from time to time. PtCT does all the other steps automatically. That person has been freed up to help out in a number of other areas."

One of the reasons Duplin's point-of-care project has gone so well can be traced to Williams' emphasis on training. With a B.S. in Computer Information Systems and working on a Masters Degree in Adult Education, she understands that the "garbage in, garbage out" maxim starts when users learn how to use a new software application. "There is a direct path from training nurses to improving patient care through Outcomes Based Quality Improvement (OBQI)," Williams asserts. "When management examines historical data to find ways to improve care plans, it has to be looking at accurate data. Accurate data can only be achieved through accurate data input. Investing in training pays off later."

Duplin's investment was three months for existing staff and additional time to develop an ongoing training plan for future hires. Williams divided Duplin's 15 clinicians into two groups to keep class size small and limited classroom instruction to three days at a time. "After they learned one portion of the system, they went out and used just that portion for the rest of the month," Williams explains. "By the time they returned for three more days of training the next month, they knew the first piece well because they had been using it every day." After a third series of monthly 3-day sessions, nurses had learned the entire PtCT system not just in theory but in practice as well.

A side benefit has been virtually transparent ORYX processes. "As a JCAHO-certified agency, we spend almost no extra time fulfilling our ORYX obligation," Williams says. "Since PtCT is an ORYX-approved vendor, the process of extracting the data set is built into their point-of-care system. Nurses gather the data without even knowing it; in fact, if you asked them about ORYX, they might not know exactly what it is. The transcriptionist who used to spend her day typing now spends an extra five minutes from time to time creating the ORYX file and sending it in."

Lastly, Williams believes point-of-care automation is helping prepare Duplin for HIPAA. "When you think about it, a laptop computer or portable Windows CE device is 10 times more secure than paper," she argues. "Which are you more likely to leave lying around for others to see: a stack of paper, or an electronic device that you have signed your name to protect or replace at your own expense? And if you were to leave both lying around in the presence of someone who was trying to read personally identifiable patient health information, which is easier to peek at? Paper, which you just pick up and read? Or a computer that you have to click and point and scroll to get at the information?"