



from the Automation Expert

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REALIZING YOUR PhIS POTENTIAL: THE POWER OF INFORMATION

I'VE BEEN THINKING ABOUT OIL WELLS, WOODEN boats, and pharmacy information systems.

I read about a husband and wife that struggled, but failed, to survive the Great Depression on several acres of dust bowl in Oklahoma.

Upon their death, an oil company snapped up the property in probate, and shortly thereafter, a drilling rig struck a gusher. The couple had died in poverty while residing on untapped wealth.

Too many errors happen in our hospitals' medication-use process. In the interest of reducing these errors, it is important to notice when and where they occur, and

how they can be caught before reaching the patient.

Research conducted by esteemed physician and medication safety advocate, Lucian Leape, informs us that for every 100 medication errors, approximately 39 take place when physicians order, around 38 occur when nurses administer, and the rest are related to transcribing the orders (12) and dispensing the drugs (11). While nearly half of the 39 physician-order errors are intercepted before reaching the patient, it is eye opening to note that only 2 percent of the 38 nurse-administration errors are intercepted before reaching the patient.

Pharmacists and nurses have the opportunity to intercept errors that occur between the time the physician orders a med and the time the patient receives it. The fact that over half of physician-order errors are intercepted is in no small measure attributable to the almost-universal use of pharmacy information systems (PhIS).

In the '70s, the unit dose drug-distribution system ushered in the best-practice doctrine

that pharmacists should always review physician orders before medications are dispensed to nurses and administered to patients. Over the years, the widespread adoption of computers and the maturation of pharmacy information software have helped ensure that more orders are indeed reviewed. PhIS have helped pharmacists achieve a more thorough clinical evaluation process—filtering orders for allergies, interactions, proper dosing, and other vital tests of reasonableness.

To realize their PhIS' potential, hospitals must invest significant amounts of time in writing tables and rules and keeping them up to date. Additionally, pharmacists must put forth the effort required to not just enter the orders into patient profiles, but also to actually run those orders through the rules. Apparently, however, too often, these feature-rich systems sit like untapped oil wells beneath the medication-use process.

A few years back, Billy Woodward, recipient of the 2004 Whitney Award (hospital pharmacy's Heisman trophy) told me "in our hospital, the pharmacy information system is grossly underutilized." Numerous pharmacists have told me they have similar experiences in their facilities. Each has assured me it is not for lack of belief in a thorough review process; instead, they maintain that they simply do not have enough personnel to handle, write, and maintain the rules and thoroughly process the orders.

One oft-ignored threat to the realization of PhIS potential is the pressure hospitals feel to rush to computerized physician order entry (CPOE). Some have told me that CPOE initiatives actually threaten to reduce the number of clinical pharmacists on their staff.

Studies show that closer interaction between clinical pharmacists and physicians not only prevents as many or more errors than CPOE, but more serious errors are caught and errors are intercepted sooner, once they have occurred. All this, I might add, comes at a fraction of the cost of CPOE. Hence, it is not too difficult to argue that a better next investment for most hospitals would be an increase in the

number of pharmacists on staff, rather than a CPOE implementation.

Some years ago, my wife and I bought a classic boat, circa 1927. We believed we would be on this gorgeous piece of wood moving through the beautiful waters of the Pacific Northwest every weekend. Two years into the venture, we were barely using the vessel once every two or three months. So we put it up for sale. Just before it sold, the broker showed me a larger wooden classic just put up for sale. Oh, my gosh. She was irresistible. For the space of an hour, I actually imagined that, if we had this boat, we would be on it every weekend.

If a hospital does not have the budget and pharmacy personnel to utilize its current PhIS to its potential, will they do any better with a new CPOE system, which will cost much more and be more complex to implement and maintain, not to mention a much greater user-buy-in challenge?

Why not use a fraction of the precious funds slated for a costly CPOE implementation to hire more clinical pharmacists to drill into the value of the PhIS? Even with the increase in staff, you would still have enough left in your budget to implement a bar code point-of-care (BPOC) system that hits the error-prevention sweet spot – the patient bedside – and further exploits the benefits of the PhIS. With this automation-implementation strategy, hospitals will realize a quicker and more significant return in patient safety than if they had implemented CPOE alone.

Needless to say, we didn't buy the boat. **FR&P**

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