

Increased automation makes immediate impact on hospital's bottom line

Pyxis® Products



CAPE COD HOSPITAL *Cape Cod Healthcare*

Automated Medication Management System

Situation:

Cape Cod Hospital discovered during a routine audit that they had been failing to capture charges for the administration of IV, intramuscular and subcutaneous drugs. In theory, the staff was supposed to manually input the details of every drug administration into the hospital's computer system. But in practice, that wasn't happening, allowing an important source of revenue to slip through the cracks.

The problem was particularly severe in the emergency department, where drugs are often ordered and administered in the span of a few seconds. In such a hectic, unpredictable environment, finding time for documentation is difficult.

"It's a very fluid environment, very dynamic," said Peter Scarafile, the pharmacy operations manager at Cape Cod Hospital.

Given the critical nature of emergency care – plus the fact that the hospital has the busiest emergency

department in the state during the summer tourist season – hospital administrators knew that asking emergency department staff to take the time to manually record the details of each drug administered would not work.

"We can't have nurses doing that kind of stuff," said Barbara Kilroy, a registered nurse who serves as the hospital's corporate clinical reimbursement manager. "So we looked for another method."

The solution:

Peter Lavigne, a pharmacist who manages the hospital's clinical information systems, proposed a novel and inexpensive solution: using their existing Pyxis MedStation® systems to capture data on drug administration. They already were using the Clinical Data Category feature to



Cape Cod Hospital has been selected as one of America's Top 100 Hospitals for 5 of the past 9 years. Cape Cod Hospital is a 225-bed community hospital serving residents of and visitors to Cape Cod, particularly those living and visiting the towns surrounding Hyannis and as far east as Provincetown.

Website:

www.capecodhealth.org

Address:

27 Park Street
Hyannis, MA 02601

Staff:

314 physicians
629 registered nurses
17 pharmacists

Patient volume:

17,000 patient discharges
(annually)
225 licensed beds



Cape Cod Hospital Case Report

collect data on drug dispensing, Lavigne reasoned, so why not use the customizable software tool to gather information on how drugs were being administered?

Lavigne created an onscreen query and devised an algorithm to ensure only the appropriate route or routes for any given drug could be chosen as an answer. For example, "IV administration" is not an option for a drug that should only be delivered subcutaneously or intramuscularly.

"Whenever you take a drug out, it now asks how the drug is to be administered," said Jean Milne, Cape Cod's pharmacy supervisor.

Working in partnership with a Cardinal Health product engineer and a third-party interface developer, Lavigne established a link from the Pyxis MedStation® system to the hospital's billing system. Data on drug administration is relayed from the Pyxis MedStation® units in the emergency department to the Pyxis MedStation® console in the pharmacy, then to a server, which relays it to a custom interface that transfers the data to the hospital pharmacy central information system.

Results

Cape Cod Hospital estimates they are now capturing better than two times the \$500,000 they had originally thought they were failing to capture in administration charges, thanks to an automated system that lets the ER staff focus on treating patients rather than keeping records.

As a next step, the hospital is looking forward to refining the system by adding a feature that will automatically credit back the administration charge whenever a drug is returned to the Pyxis MedStation® system. Ultimately, Cape Cod hopes to extend the solution to every care area.

The benefit:

It was originally estimated that the hospital was failing to capture between \$250,000 and \$500,000 in administration charges, but Lavigne said the actual figure now appears to be in the millions. Although charge captured and amount collected differ, the increased revenue stream will make a significant impact on the hospital's bottom line year after year. The minimal out-of-pocket expense for the third-party interface (a few thousand dollars) has paid off better than anyone expected. The unexpected, additional return on the hospital's Pyxis MedStation® system investment is a huge bonus.



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* 1996, 1997 and 1998 annual surveys conducted Solucient Leadership Institute, formerly HClA.

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