

Aventura Hospital and Medical Center and The Doug Williams Group Work Together for Dramatic Process Improvement Statistics Indicate Highly Successful Effort

by John Fries



The past few years have been a time of progress and growth at Aventura Hospital and Medical Center, a 407-bed, acute care facility that serves the South Florida cities of Aventura, Hallandale Beach, Pembroke Park, Hollywood, Golden Beach, Sunny Isles Beach and North Miami Beach. Five years ago, prompted by a 10-percent growth in market share, the hospital launched a \$130 million facility expansion plan that includes the addition of a nine-story tower

with 245 private patient rooms with private bathrooms, six-story parking garage, and numerous features and amenities.

Aventura, an affiliate of HCA Corporation, is both progressive and proactive regarding quality and internal processes, and continually identifying ways to improve both. Kathleen Morris, administrative director of quality management, leads these initiatives.

For the past several months, Aventura Hospital has been working closely with The Doug Williams Group, a highly respected management consulting firm that specializes in performance improvement. The firm, which has offices in Miami and Jacksonville, helps hospitals and other companies and organizations to improve customer and employee satisfaction and increase profitability. The Williams Group enjoys an excellent reputation and has a distinguished client roster that is a virtual "Who's Who" of successful South Florida businesses, many of whose testimonials appear on the firm's web site.



Since February, The Doug Williams Group has been working with Aventura to identify, evaluate and improve a number of processes. First on the list was the need to shorten the time it takes for inpatients to receive their prescribed medications.

This is, essentially, a five-step process that encompasses people and technology: a physician prescribes medications at the patient's bedside. The order is sent to the hospital pharmacy, where a pharmacist fills the order, and sends it to the nursing unit. The medications are then administered to the patient.



Brian Wilson, senior management consultant with The Doug Williams Group, is a quality improvement expert who has extensive experience in facilitating hospital quality improvement processes. Wilson is also a registered nurse, who, prior to joining the Williams Group, had spent more

than 20 years working in acute care hospitals, with the majority of his experience in emergency services. He has an extensive knowledge of – and strong familiarity with – the hospital environment, having both led and served on countless QI teams. Since February, Wilson has been working extensively on-site at Aventura, facilitating the hospital's quality improvement efforts.

Facilitating Development of a New Process

"I met with Kathleen several months ago to discuss her goals and objectives," said Wilson. "Then, I performed an audit of the hospital's existing medication administration process. This enabled me to pinpoint where there were obstacles and opportunities for improvement," said Wilson.

Wilson then worked with Morris to assemble an internal process team.

"It was important that the team consist of staff-level employees who are part of the process on a daily basis," said Morris. The team is made up of representatives of the nursing and pharmacy departments and the intensive care, telemetry and med/surg units. There's also a physician on the team, who serves as liaison with the hospital's medical staff."

Once the team was in place, Wilson and Morris began meeting with them on a regular basis to facilitate. As in many quality improvement initiatives, it was necessary for members of the team to break the medication administration process down to its component parts, and address each. "This enabled us to determine where there were opportunities for improvement," he said. "For example, we identified opportunities to improve communications between the nursing units and the pharmacy.

Once the opportunities were identified, various solutions were explored and evaluated, ultimately shaping what would become the revised process. A key part of the initiative – and the team's number one priority, according to Morris – was the development of new sub-processes that would enable the hospital to track and document the timeliness of ordering, receiving, dispensing and administering STAT medications to patients.

"Ultimately, we developed an action plan that allowed us to improve the process so that it would be much more efficient. The revised process incorporated a series of checks and balances throughout the process to ensure that it was going as planned. "We also included a process to monitor and ensure compliance with hospital policies and procedures," said Wilson.

The revised process was put in place over the summer, and staff throughout the hospital was educated regarding its use.

The Technological Side

In mid-summer, new digital scanning technology was put into place. Medication orders are no longer faxed to the pharmacy, but are now digitally scanned.

"When a physician writes a prescription for an inpatient, the script is digitally scanned on the nursing unit and a digital record is instantly sent via computer to the hospital pharmacy. Once the

record is received and opened, the pharmacist can enlarge the onscreen image for enhanced readability. He or she also reviews the medication order with the patient's prescription history, drug interaction information and more, that is stored in a database.

"We've also developed a new prescription order sheet for physicians that will be implemented this fall," said Morris. "All STAT orders will be marked with a special box indicating the need for immediate response. As the computer processes the hundreds of pharmacy orders that are entered each day, a special optical character recognition feature will read the STAT notation and place each STAT order at the top of the list of orders to fill in the pharmacy."

A significant further enhancement to the safe delivery and administration of medications will be implemented in January 2005, with the implementation of the Electronic Medication Administration Record, or eMAR for short. "This is an HCA corporate initiative that further improves the safety of medication administration," said Morris.

"With eMAR, when the medication arrives back at the unit, a nurse uses a personal computer at the patient's bedside and scans barcodes on the medication package, the patient's medication administration record, and a bar-coded wristband worn by the patient. This immediately confirms for the nurse that the correct dose of the correct drug is being provided to the correct patient," said Morris.

For as much efficiency and safety as this technology ensures, even it is being improved upon, thanks to the efforts of Morris and Wilson.

In the not-too-distant future, Aventura Hospital is planning to take yet another giant leap forward by installing a robot in its pharmacy. Using existing barcode scanning technology, the robot will dispense and package the medications more accurately and efficiently than the present manual system. This automated process will further improve the timeliness of the medication delivery.

Although the process improvement initiatives have been in place for a relatively short period of time, efforts are proving highly successful. There has been a significant decrease in the time it takes for patients to receive their medications, as well as a decrease in the number of process errors related to the overall medication administration process.