

# DocuSys' Anesthesia Information Management System

**S**outheast Alabama Medical Center is a not-for-profit, 370-bed regional referral center located in Dothan, Alabama, serving approximately 600,000 people from a tri-state area that includes southeast Alabama, the Florida panhandle, and southwest Georgia. The hospital houses two operating room suites with a total of 23 operating rooms and averages roughly 1,200 cases per month. It also offers a full range of healthcare services through its main campus, including family-centered women's care, advanced cardiovascular and cancer treatments, surgical procedures, and comprehensive pain management services.

## The Challenges

Some of the challenges we faced in terms of anesthesia information and medication management included managing handwritten documentation and having to enter and audit charges manually. Our handwritten narcotic orders had to be manually reconciled. We also had incomplete labeling of syringes, making us noncompliant with The Joint Commission. When antibiotics were given in the operating room, the pharmacy was not alerted, and hence could not prepare post-op antibiotics. We also had trouble tracking expiration dates in the OR. We faced all of the disadvantages of a paper system, along with the inconsistencies and lack of reliability that left us prone to errors. We recognized the writing on the wall; it was time to automate our processes. We wanted an electronic solution for the benefit of our institution and our patients.

## The Solution

We chose the DocuSys Anesthesia Information Management System (AIMS) for its significant focus on patient safety. All of the AIMS systems do an excellent job recording vital signs and tracking cases, but what brings true benefit in the operating room are safety features, particularly drug management safety features.

The process of medication delivery is significantly different in the operating room than it is on patient floors. On the floor, a bar coding system works well because every order goes through multiple safety checks, all of which are key points for intercepting an error. In the operating room, you often have only the anesthesia provider serving in the safety check role, sometimes with all of five seconds to review a drug prior to administration. Thus, a system that can catch all of the potential errors that can occur from ordering through administration — and do so efficiently — is key to safety in the operating room. To help our anesthesia providers to positively impact drug delivery safety, we began implementation of the DocuSys AIMS in early 2005 and went live that summer.

## Results

One of the benefits of the DocuSys system is that all of the components are fully integrated. For example, after a patient's pre-anesthesia evaluation is performed elec-

tronically using DocuView, all of their conditions, allergies and medications are available in the system. This is valuable information in the operating room, when you need to determine the appropriateness of a drug quickly.

On the pharmacy side, the system automatically tracks narcotics and reconciles what was used and what was returned. Because it is a closed system, we can run a report to determine whether any narcotics are missing, tally what has been used, and

have the charges sent automatically to the pharmacy system and then to the financial department, complying with Joint Commission regulations. The time of administration for antibiotics also appears on the pharmacy system profile, allowing for the set up of post-op antibiotics. Because piggybacks and IVs can also be bar coded and scanned into the system, we can also track and accurately charge their administration. We have also found several reports from the system to be helpful for narcotic reconciliation. All medications are labeled in the pharmacy with a printed, Joint Commission-compliant label placed on a cradle that is applied to each

syringe. This label includes the expiration date of the drug. If a clinician inserts an expired drug into the delivery unit, a warning response brings attention to the expired nature of the contents before delivery, similar to the alert messaging that is delivered before delivery if the patient is allergic to the drug, if the drug is contraindicated based on a drug the patient is already taking or based on a comorbid health condition, or if the syringe has already been used on another patient. After inserting the syringe in its labeled cradle into the DocuJect, the bar code is immediately read and within 2-3 seconds either warning messages appear or the green light is given for administration. Once the clinician begins pushing the plunger, a digital camera tracks the plunger movement, allowing accurate determination of the dose delivered, immediate documentation of the dose on the anesthesia record, and charging for the dose.

The bottom line is: with DocuSys our records contain detailed and legible documentation and that alone prevents errors. Furthermore, our data is now much more accurate, making it easier to analyze or defend what happened in the OR. This greatly facilitates process improvements to increase safety, quality, and efficiency. ■

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## WHERE TO FIND IT:

**DocuSys, Inc.** ..... **Circle reader service number 91**  
or visit [www.docusys.com](http://www.docusys.com)