

## Resident's research will increase doctors' efficiency, help patients

"There must be a better way..."

That notion, often the mother of invention, has led a third-year Campbell Clinic resident to create a more efficient way for residents working at The Med to record and share patients' medical information.

The result, third-year resident Matt Busbee believes, could improve patient care as well as enable residents to make smarter use of their time during their trauma rotation.

"The way residents at The Med have been collecting, recording and sharing patient information has been not just a duplication but a triplication of efforts," said Matt, who began planning the project last fall and completed it in early spring 2007.

Before, a resident wrote out a patient's medical history and account information in longhand for the Consult sheet that stays with a patient's chart. The resident then entered the same information in the PDA that he or she carries at the hospital. In a third step, each resident entered the information again in a PowerPoint presentation, downloading a patient's x-rays into the presentation so that other residents could review the record when they came on duty.

Each Campbell Clinic resident must complete a research project during his or her residency, and Matt decided to tackle the record-keeping boondoggle as his project. "My goal," he said, "was to create a process so that residents could enter the information one time, and everything else could be generated from the original input."



DR. MATT BUSBEE

His research adviser was Campbell Clinic surgeon Dr. George Wood, who provided numerous suggestions and constant encouragement, according to Matt.

"I had to learn Visual Basic computer programming, and I'd never done programming before," Matt said. "I literally started with *Microsoft Access for Dummies*. I created a template based on the Campbell Clinic Health History form, and I programmed in standard codes for diagnoses and procedures. Setting up the codes was the most time-consuming." In total, Matt estimates he spent hundreds of hours on the project in a three-month period.

Residents at The Med began using the new system April 1, 2007. Information for the Consult sheet, PDA and PowerPoint are all generated as the result of one data entry session.

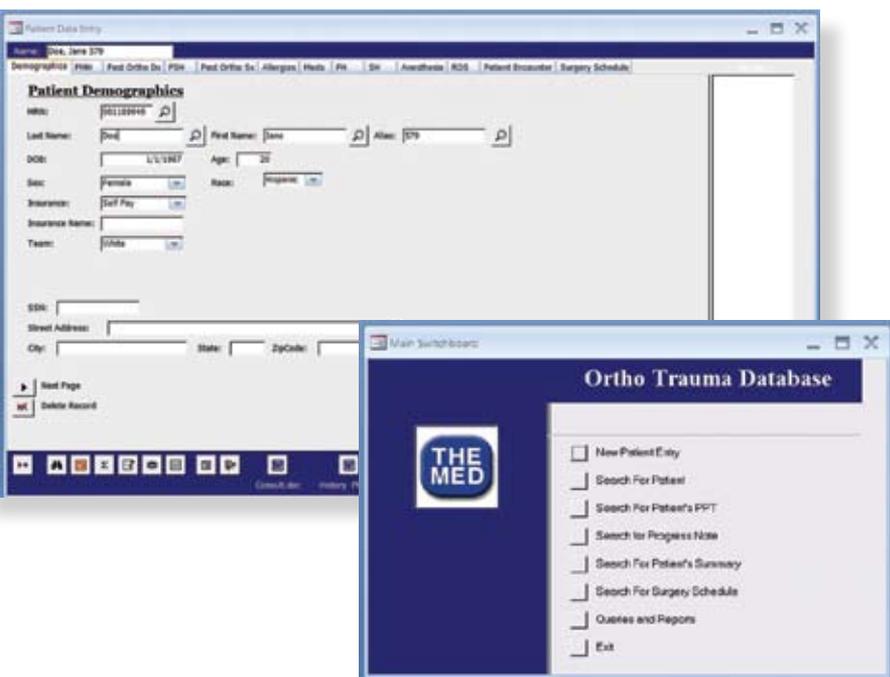
The new records system ... will allow a resident to take a laptop into a patient's room, pull up x-rays and other information, and have a bedside discussion.

"There's a learning curve, but we've had a lot of positive response," Matt said. "The case managers, nurses, doctors and others on a patient's case like the fact that everything is typed instead of handwritten, and that standard codes are used. It helps us communicate better with each other, and you can find the information you are looking for more quickly."

The new records system can also improve doctor-patient communication, Matt said. When The Med's newly-purchased server is working fully, the system will allow a resident to take a laptop into a patient's room, pull up x-rays and other information, and have a bedside discussion.

As an additional benefit, residents conducting research in the future will be able to search the database by patient diagnosis or outcome, rather than having to manually search patient files, Matt said.

"Residents will also be able to 'crunch' the data, looking at all the cases during a time period," said Matt. "It will help us understand what we did well and see where we need to improve, which is important for quality control."



NEW DATABASE SCREENS DEVELOPED BY DR. MATT BUSBEE FOR HIS RESIDENCY RESEARCH PROJECT WILL HELP SAVE TIME AND IMPROVE COMMUNICATION FOR TRAUMA RESIDENTS.