

June 2004

The Wild Way

Shands Transplant Center enlists staff skeptics as database designers.

With databases, less is definitely more. Just ask Ian Jamieson, manager of the Shands Transplant Center at the University of Florida, Gainesville.

For more than a decade, Jamieson had to contend with multiple-and unconnected-databases to monitor the 300 new transplant patients who passed through the facility each year. Things were made difficult because the center's six transplant programs tracked their own patients. Using outdated software programs, the staff of 70 created their own spreadsheets, independently defined their own content and, at times, kept close guard on their work.

"Some groups did not want others to have access to their data," acknowledges Gigi Lipori, MBA, assistant to the executive vice president and COO at Shands HealthCare, which is affiliated with the University of Florida Health Science Center. "They stayed in fiefdoms."

But the existing system wasn't benefiting clinicians, Lipori adds. "We are serving more multiple transplant patients, and need continuity in their records."

That's why Shands opted for a new software package that would consolidate the disparate specialty databases-whose maintenance had become an IS department headache. Even though the planning and implementation wound up taking nearly four years, it was worth the effort, say Jamieson and Lipori, the project leaders. "We did it the wild way," Lipori says. "Our staff doubted that any one vendor could do what we wanted to do, so we decided we needed a database design, like we were writing our own system. It became a painstakingly long and detailed effort."

Over a nine-month period, the two managers convened a work group from the six transplant divisions. The group devised a model for a center-wide database for Shands to present to potential vendors. The effort revealed far more commonality among the specialty data than the staff predicted, Jamieson says. "We thought we might only have 30 percent commonality across the groups," Jamieson says. "It was closer to 80 percent."

When the database model was finished, the group had identified 1,184 fields divided into 116 tables. The tables comprised 27 subjects under four broad categories. Not only did the architectural model help Shands choose a compatible vendor, the design effort facilitated staff acceptance of a consolidated application, Lipori says.

Armed with the detailed blueprint, Shands considered six transplant database vendors. "Our difficulty was finding a true transplant system, not just a database that could be customized," Lipori says. "Some products were labeled as 'transplant,' but turned out to have a more general purpose."

Shands settled on HKS Medical Information Systems, an Omaha, Neb.-based vendor whose Organ Transplant Tracking Record (OTTR) software is used in 33 hospitals. Then the fun began.

Before it implemented OTTR, Shands converted about a decade's worth of data for the new system. David Tomlin, a senior applications systems analyst, led the two-year effort. Tomlin created programs to route 12 million lab results appropriately into the new software. "We needed the data in OTTR to support medical research," he explains.

Interfaces between the transplant database and Shands's lab, pathology and radiology systems allow for a more streamlined work flow. OTTR can also pull information from the organization's patient record system from Siemens Medical Solutions. The center plans to close the loop, funneling information fed into OTTR to the Siemens system, Lipori says. "Even though the conversion has been painful, consolidated data helps the operation."

- Gary Baldwin