



Organization: University of Pittsburgh Medical Center

Headquarters: Pittsburgh, Pennsylvania

URL: www.upmc.com

Industry: Healthcare

Technical Environment: IBM, HP/Compaq, Unix, Windows NT, Cerner, PeopleSoft

About the Organization: The University of Pittsburgh Medical Center (UPMC) is the leading health care system in western Pennsylvania and one of the largest nonprofit integrated health care systems in the United States.

Challenge: Transitioning to paperless patient records across the UPMC system while maintaining high availability across a dynamic IT environment.

Results:

- > Automated critical processes and ensured accuracy
- > Increased availability of business-critical applications
- > Reduced costs with automated and proactive management
- > Optimized limited IT resources from budget constraints
- > Ability to provide proactive and corrective actions and notification to maintain business availability

UPMC Automates Critical Processes Tied to Patient Care with Business Service Management

Challenge

The University of Pittsburgh Medical Center enjoys a strong national and international clinical and research reputation, drawing patients from throughout the United States and across the globe. UPMC's health care facilities include 20 tertiary care, specialty and community hospitals. The health system also includes primary care and specialist physician practices, cancer care, imaging and surgery facilities, rehabilitation services, in-home services including hospice care and durable medical devices, retirement living and long-term care, pharmacy services, and an array of health insurance products. Through its affiliation with the University of Pittsburgh School of Medicine and other schools of the health sciences, UPMC shares in the academic mission of the university by providing a broad range of programs in education, biomedical research, training, health promotion, diagnosis, and treatment of disease and disability. UPMC is consistently recognized by U.S. News & World Report magazine as one of the top hospitals in its annual "best of the best" rankings.

Technical Project Director Joe Furmanski manages 25 percent of UPMC's IT infrastructure. The challenge his team faces each day is providing customers – UPMC employees – on-demand IT service and high availability. The stakes were raised when the organization initiated its ambitious electronic health care project – powered by Cerner – aimed at eliminating patients' paper charts and records and creating electronic healthcare records across the

entire enterprise. Whether it's a patient's medical chart in the hospital room or at the nurse's station, this information can be accessed from any hospital in the UPMC system.

Beyond customers' high expectations, Furmanski said, another challenge is keeping up with the new technologies and applications being introduced within the enterprise. "We have to do a lot of work and put a lot of safeguards into our systems to maintain a high level of availability," Furmanski says. On top of the technology- and process-related obstacles, UPMC faces what virtually every IT organization does today: doing more with fewer resources.

Customer's Perspective

"Our clients don't expect to know us," Furmanski said. "In delivering IT infrastructure for our customers, they just want it to 'be there' like the plumbing or electricity in your house."

Solution

The relationship among UPMC, Cerner and BMC Software evolved during the electronic health care record project. Initially, Furmanski's team implemented BMC Software's solutions to help automate processes that were done manually in the past. "We called it the 'under-the-radar project' — to get it in without people noticing we did it," Furmanski said. "One of the first things we did early on was install PATROL to automate the health-check

Key Products Used

- > PATROL for Millennium component from Cerner
- > SQL Explorer for Oracle
- > Space Expert for Oracle
- > DBXray for Oracle
- > PATROL for Oracle
- > PATROL for MS Windows Servers
- > PATROL for Unix
- > PATROL for WebSphere MQ Integrator
- > PATROL for WebSphere MQ for DS
- > PATROL for Unix - Perform
- > PATROL for Unix - Predict
- > PATROL Central Console
- > BMC Impact Manager Service Components
- > BMC Impact Adapters
- > BMC Impact Manager
- > BMC Impact Explorer
- > PATROL for PeopleSoft
- > PATROL for BEA Weblogic
- > SmartDBA Performance Assurance for Oracle
- > PATROL for BEA Tuxedo

About BMC Software

BMC Software, Inc. (NYSE:BMC) is a leading provider of enterprise management solutions that empower companies to manage their IT infrastructure from a business perspective. Delivering Business Service Management, BMC Software solutions span enterprise systems, applications, databases and service management. Founded in 1980, BMC Software has offices worldwide and fiscal 2004 revenues of more than \$1.4 billion. For more information about BMC Software, visit www.bmc.com.

For more information on Remedy Solutions from BMC Software, please visit www.remedy.com.

process that our technicians would do five times a day – three times a day for our production systems, and twice a day for our developing systems. In all, we're talking about 28 different systems."

"Manually, each health check took about 15 minutes to complete. Once PATROL was installed we were able to automate that process in just a few days," Furmanski added. "And now it's getting done more consistently and without the errors typically found in manual processes." Next, the team relied on a more traditional implementation approach in terms of business impact management, service desk and other ITIL processes.

"We're working with Cerner and BMC to take the Cerner product as it is and help them develop a solution that will create business impact models in BMC Event Manager and BMC Impact Manager tools," Furmanski said. "And we're looking to take that even further, through our ITIL implementation process as well as service desk and configuration management. We'll be able to tie our change management into the process and get to an area where we can do root cause analysis quicker and hopefully put in more controls to prevent problems from happening in the first place."

"The Business Service Management approach we're taking is important to us because we often communicate in terms we understand but our customers don't – especially our end-users, the physicians and other clinicians," Furmanski said. "They don't want to know that H1PRD is down. They don't know what that means. They know that the health record system is down or that they aren't able to deliver prescriptions — those are things they understand. And the BSM work that we're doing helps us to translate what happens in technology events into what's really impacted in the business."

Perhaps no other industry illustrates the value of linking technology to the performance of key business processes than in the world of healthcare. While UPMC worked its Cerner project, Furmanski saw a new and critical opportunity to apply BMC Software's solutions, this time to PeopleSoft.

"We upgraded PeopleSoft on our financials and material managements systems but it ran horribly

slow and the team couldn't figure out why," Furmanski remembered. What the team did know was that the system's sluggish performance had serious implications for the organization as well as surgery patients. "We use a just-in-time delivery process for supplies used in medical procedures and surgeries in the hospital. The system was impacting our materials management systems dramatically," he said. "During this situation, supplies were getting delivered almost on time. And we had to eliminate more and more from the system just to get the materials and supplies delivered in a timely fashion. We had a lot of pressure to find a solution."

"The implementation team worked for about a week trying to figure it out and they weren't making much headway. We were asked to come in and see if BMC tools could help resolve the problems. After applying the tools and analyzing the data, we found out in a couple of days what the hardware problems were. We fixed those problems and then we focused on the applications side — where the real problems were."

A BMC consultant with knowledge of the PeopleSoft module visited UPMC to help solve the problem. "The consultant worked for a day and a half with us to help instrument the application and web servers and put in the knowledge module," Furmanski said. "We were then able to show our analyst and the PeopleSoft consultants where the problems were in the application. And after another two weeks of work we had the application stabilized and running well."

"Beyond what we're doing with Cerner and ITIL we're looking to take the BMC enterprise automation tools across the rest of our enterprise," Furmanski said. "We have other clinical applications from other vendors and we have our financials and our material managements and payroll systems for PeopleSoft which we intend to automate and monitor with BMC tools."

Customer's Final Words

"At UPMC, we believe Business Service Management helps us communicate better with our clients and will positively impact the care our patients receive," Furmanski said.

