

The William W. Backus Hospital

With Support from HP, MEDITECH and JJWild, The William W. Backus Hospital Aligns Its IT Infrastructure To Meet Business Objectives

The William W. Backus Hospital continuously evolves to meet the needs of changing times, adhering to the philosophy upon which it was founded in 1893: To improve the health of its community. The hospital's core values of excellence through continuous quality improvement, ethical and compassionate behavior, respect for patient rights and dignity, and a commitment to community service, continue to help it provide a network of high quality services to the people of eastern Connecticut.

Two and a half years ago, as part of its strategic plan, the hospital hired its first Chief Information Officer (CIO) to help orchestrate the design of an information technology (IT) plan focused on aligning IT infrastructure with the business objectives of the hospital.

Disadvantageous, Disparate Systems

Ed Fisher, the hospital's CIO, explained, "In addition to meeting the Hospital's business objectives, we sought to create a system that would allow us to proactively address improvements in patient safety and privacy. These issues had received immense attention nationwide. When I assessed the legacy environment – which had disparate applications, all of which had custom functionality and interfaces – it became clear that the hospital needed to take the opportunity and search for an integrated system strategy.

"Our system now improves access to clinical information, reduces medical errors, decreases repetitive paperwork and improves communication between caregivers – all while meeting the very latest standards for patient medical record-tracking and privacy."

A Single Solution from Three Partners

Fisher investigated application infrastructures built upon one consolidated database containing a single set of patient records per healthcare member. He recalled, "It came down to applications from two vendors and based upon our needs and environment, we selected Medical Information Technology, Inc.'s (MEDITECH) Health Care Information System (HCIS) as the best fit.

In addition, we knew we would need assistance with implementation and transition to the new computing environment and MEDITECH offered a tight relationship with JJWild, Inc. for design, implementation and support services utilizing HP based hardware."

MEDITECH's Client/Server HCIS distributes data across the entire enterprise on a standard platform of Intel® processors, running on Microsoft Windows®, including Microsoft SQL Server 2000 as the underlying architecture for the MEDITECH Data Repository.

Fisher said, “Our legacy hardware comprised different 1970-80’s UNIX® and AS/400® servers. We therefore needed new Intel-based servers and we narrowed the evaluation down to Compaq – now HP. In discussion with JJWild about our business goals, it was evident that any risk surrounding the hardware installation and transition to the MEDITECH HCIS could be best mitigated by the partnership of HP and JJWild.”

He continued, “We asked HP to share with us the future plans for the proposed servers. HP was eager to share its ProLiant roadmap and, in partnership with JJWild, was willing to install its current servers immediately and include an automatic upgrade to its new servers being released in four months’ time. It did not make sense to purchase and install servers that would be ‘old’ technology in four months.”

Staging for Success

In August 2002, all of the HP servers and HP eva5000 storage were initially staged, tested, and MEDITECH-certified at JJWild’s managed facility in Arizona. The cabinets were then repackaged and shipped to The William W. Backus Hospital’s data center.

“JJWild’s pre-staging made the hardware very easy to install over just one weekend – it was an excellent process and it included prepping every server ready for the application,” noted Fisher.

In November, Fisher’s staff, working with MEDITECH’s knowledgeable outside consultants installed the HCIS application software and performed the data conversions from the legacy environment. The old and new systems were then run in parallel processing for about one month prior to going live.

JJWild returned in December and upgraded the main departmental servers with the new HP ProLiant DL380 G3 servers – a next-generation 2U server offering robust high availability features. Today, 46 HP ProLiant servers are in production, running MEDITECH’s HCIS application environment, and are backed by HP Critical Systems Support to maintain the highest levels of availability.

HP Storage for Central Access to Data Enabling Effective IT

“JJWild and my team did a lot of analysis around the database’s needs and our storage growth rate. It made sense to invest in a storage area network (SAN) solution to efficiently enable data access from all of our servers, which would allow the addition of storage capacity in a simple way. We went with JJWild’s recommendation of HP StorageWorks SAN Switches based on Brocade technology and the HP StorageWorks Enterprise Virtual Array 5000 (eva5000) modular disk array. HP StorageWorks eva5000, which is MEDITECH certified, is high performance, high capacity and high availability “virtual” RAID storage that removes the time, space and cost boundaries of traditionally designed storage,” explained Fisher.

HP StorageWorks eva5000 uses virtualization at the individual storage system level to create large pools of storage behind the controllers, which improves the utilization of capacity, simplifies management, and provides high performance.

Enabling Effective IT

The MEDITECH application environment went live in April 2003 – allowing the hospital to use the system to help meet new patient privacy regulations that took effect that month.

“The biggest gain we immediately saw was in operational efficiency throughout the organization. There’s less paper having to change hands and many of the delays waiting for internal reports via ‘snail mail’ to arrive have been greatly reduced. We’re all able to instantly access any patient record and make changes real-time that others using the same record are able to see. Physicians have commented that it’s nice to be able to go to just one place to get all of the information they need, rather than having to go to four or five different systems, or chase paperwork down around the hospital,” noted Fisher.

The efficiency improvements translate into better patient care – with medical record information being available in a timely manner, physicians are able to respond faster. Even discharging patients has become a faster process because of the immediate availability of information.

Fisher commented, “Over time, we do expect to see cost savings when it comes to budgeting, cost analysis, cost containment, speeding up the billing cycle, and improved cash flows, etc. I’m even saving money in the data center, because the older servers took up a lot more floor space and consumed a great deal more power at higher costs to maintain. Plus, we have recently re-deployed three computer operators because we no longer need them to manage the MEDITECH HCIS environment as it is so much more automated than our legacy systems.”

Alignment with HP Brings Success at Many Levels

In reflecting on the new infrastructure, Fisher noted, “I have been really impressed with HP’s willingness to work with a community hospital. It has formed a strong partnership with us and that includes HP staff coming on site to demonstrate the next generation of tablet PCs and iPAQs so our employees can see the new technology that we may deploy here very soon.”

Since going live with HCIS, the hospital has taken advantage of a business-to-business relationship with HP. Fisher explained, “We configure and order all of our non-MEDITECH ProLiant servers on-line, directly with HP. This is a huge benefit to us because it saves us time from chasing paper copies of orders around – we can just go on-line to track our own orders and be prepared for the arrival of the server in our computer room.”

He concluded, “The William W. Backus Hospital continues to improve community health by utilizing every practical opportunity for enhancing services through the development of new or expanded state-of-the-art programs and technology. With support from HP, MEDITECH and JJWild, we have successfully re-aligned our IT infrastructure to meet the hospital’s business goals both today, and in the future. We have increased the quality of patient care and reduced the risk of medication errors, while reducing operational costs.”

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– Ed Fisher

Chief Information Officer

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Challenges

- *Design a strategic IT plan focused on alignment with the business issues of the hospital*
- *Reduce the operational complexity and cost*
- *Consolidate patient records into one database accessible to all care providers*
- *Meet/exceed healthcare regulations*

Solution

- *MEDITECH Health Care Information System*
- *46 HP ProLiant DL380 G3 servers*
- *HP StorageWorks Enterprise Virtual Array 5000 (eva5000) disk array*
- *HP StorageWorks SAN Switch infrastructure based on Brocade technology*
- *HP Critical Systems Support*
- *Comprehensive design, implementation and support services from JJWild*

Results

- *Improved operational efficiency throughout the organization translating into better patient care*
- *Saving data center floor space and power costs*
- *Reduced operational staff*
- *Anticipated cost savings through cost analysis, cost containment, faster billing cycles, and improved cash flows*

Organization: *The William W. Backus Hospital*

Location: *Norwich, Connecticut*

Founded: *1893*

Telephone: *(860) 889-8331*

Url: *www.backushospital.org*

Primary business: *A 213-bed, acute care community hospital, Backus Hospital is the primary source of health services for some 150,000 people. Backus Hospital has developed and enhanced specific centers of excellence; most recently, it has expanded cardiovascular services, including the addition of a diagnostic cardiac catheterization laboratory. Backus also provides comprehensive services for diabetes management and cancer care. Backus Hospital is the only trauma center east of the Connecticut River, and it is the only regional facility that can receive, via air medical transport helicopter, patients with severe traumatic injuries.*

JJWild

