Park Nicollet Health Services breathes new life into healthcare systems

Decreasing patient mortality and ensuring continual data access with IBM Power Systems

Overview

The need

Park Nicollet Health Services needed a new electronic medical record (EMR) system and server platform to support analytics to improve patient care, ensure continual data access and lower costs.

The solution

The organization deployed IBM® Power Systems™ with IBM AIX®, integrated with IBM System Storage® DS8000® series, IBM XIV® Storage System and System Storage TS7650 ProtecTIER® Deduplication Appliances.

The benefit

Park Nicollet lowered its patient mortality rate using analytics, reduced failover time from more than two hours to less than two minutes and reduced its EMR server footprint by more than 75 percent.

Since 1892, Park Nicollet Health Services has provided healthcare services through its network of 25 clinics, six urgent care sites and one hospital. From its headquarters in St. Louis Park, Minnesota, the organization provides inpatient and outpatient services, emergency care, pharmacy services, and health and wellness programs.

Taking an innovative approach to healthcare IT, Park Nicollet operates an integrated health delivery network. Although many other healthcare organizations operate hospitals as separate entities from physicians, which can inhibit information sharing, Park Nicollet set out more than two decades ago to create an integrated care network designed to encourage collaboration. According to Don Tierney, senior IT director of enterprise services at Park Nicollet, "Being able to have the right information at the provider's fingertips is critical to improve the quality of care for our patients."

Overcoming IT challenges for improved quality of care

Although Park Nicollet had established an innovative, integrated network, the organization found that it was starting to fall behind technologically. By late 2008, the staff realized that they needed a more efficient medical record system to improve productivity. "The technology we were using wasn't going to enable us to improve our patient care further, so we decided to convert to a new medical record system," comments Julie Flaschenriem, chief information officer at Park Nicollet.

Before selecting a new EMR system, the organization carefully considered its requirements for a new system. Based on its primary goal of improving quality of care, the organization crafted a strategic vision to

leverage data from its integrated systems and apply advanced analytics to this data to support innovative new preventative care measures. Other key goals included reducing the cost of care for patients and improving staff efficiency.

Making an impact on patient's lives with advanced analytics

After evaluating its goals and creating a plan, Park Nicollet moved to replace its EMR system with a new EMR system from Epic supported by new IBM Power Systems servers. By implementing Power Systems servers, Park Nicollet not only provided a solid foundation for its Epic system, it was able to make significant impacts on the lives of patients using powerful analytics functions.

Two of the organization's programs—one designed to help prevent diabetes and one to help prevent congestive heart failure—have benefitted immensely from the hospital's new analytics capabilities. By pulling data from multiple sources—such as EMR data on medications and allergies, laboratory results, and data from patients' in-home monitoring systems—program staff are able to run analytics on this data, identify potential risks (such as pre-diabetic conditions) and perform patient interventions as needed.

Since its initiation, the organization's Congestive Heart Failure Program has produced dramatic results. By leveraging the solution's new capabilities, the program has helped to reduce the hospital's congestive heart failure mortality rate by about 20 percent. The hospital also has reduced hospitalizations and emergency center visits by between 50 and 70 percent, which has enabled the organization to "make a real difference in people's lives, as they can stay home and be with their families longer," says Flaschenriem.

In addition to making a positive impact on the lives of patients, the IBM Power® platform also has contributed to the hospital's improved IT performance and efficiency. The Power Systems servers have enabled the organization to condense its rack-space requirements by more than 75 percent compared to its previous EMR servers and to significantly reduce energy consumption. Since the new solution has been

Solution components

Hardware
- IBM® Power Systems™
- IBM System Storage® DS8000® series
- IBM XIV® Storage System
- IBM System Storage TS7650
  ProtecTIER® Deduplication Appliances

Software
- IBM AIX® v6.1
- IBM PowerVM® Enterprise Edition
- IBM Tivoli® Storage Manager
  Extended Edition

Services
- IBM Global Technology Services

IBM Business Partner
- Evolving Solutions

implemented, Park Nicollet has experienced zero unplanned downtime. The organization also has been able to reduce failover time from more than two hours with the old EMR system to less than two minutes with the new system.

Providing a solid foundation for a powerful IT solution

By working with IBM and IBM Premier Business Partner, Evolving Solutions, Park Nicollet has been able to make its IT transformation possible. To support its new EMR system, the organization replaced its previous servers with two Power Systems servers running the AIX operating system. The hospital also relies on IBM storage solutions, including the System Storage DS8000 series to support Epic, an XIV Storage System to store ancillary data and System Storage TS7650 ProtecTIER Deduplication Appliances to support virtual tape backup.

Park Nicollet also uses IBM PowerVM® technology for server virtualization, along with IBM Tivoli® Storage Manager software to support the ProtecTIER devices. Park Nicollet has engaged IBM Global Technology Services for maintenance and technical support for its IBM solutions.

Continuing to innovate with IBM

According to Curt Boehm, chief medical information officer at Park Nicollet, the organization plans to expand its use of analytics to other areas, including medical imaging. Andy Standke, application hosting and storage system manager at Park Nicollet, firmly believes that "analytics are the way of the future for healthcare."

Having worked with IBM on many previous projects, Park Nicollet continues to recognize the value of its IBM partnership. "IBM has been a critical partner in the implementation of our infrastructure, helping us meet the demands of our transition in the healthcare business," says Boehm. The organization also plans to continue working with Evolving Solutions, its IBM Premier Business Partner. "Evolving Solutions provides instant answers, and I think they are really a key player with our relationship and involvement with IBM," says Standke.

Creating a strong collaborative effort for success, Park Nicollet, IBM and Evolving Solutions plan to continue to demonstrate leadership in healthcare, using the latest technology to get the most out of medical data and to improve the health and healthcare experience of patients.

For more information

Contact your IBM representative or IBM Business Partner, or visit us at:
ibm.com/power

For more information about IBM Premier Business Partner Evolving Solutions, visit: evolvingsol.com

For more information about Park Nicollet, visit: parknicollet.com