

Case Study



Bloomington Hospital has been innovative in providing quality care to south central Indiana communities for more than a century. Offering a comprehensive continuum of care, Bloomington Hospital is a not-for-profit organization and has a patient base of 413,000 in 10 counties (Brown, Daviess, Greene, Jackson, Lawrence, Martin, Monroe, Morgan, Orange and Owen). Bloomington Hospital currently operates two hospital campuses (Bloomington and Orange County) with regional specialty offerings for heart and vascular, behavioral health, cancer, women and children, neurology, and orthopedic services. As a leading hospital in Indiana, Bloomington Hospital enhances health by advancing the art and science of medicine through the use of new technologies, procedures and care.

Bloomington Hospital Boosts Quality, Safety and Efficiency with Integrated Technologies

Leveraging a broad range of McKesson solutions, Bloomington Hospital has transformed from a paper-based system with a multitude of disparate technologies into a truly integrated, patient-centric delivery model. The organization has significantly improved safety, coordination of care and access to information across a continuum of hospitals, outpatient facilities and physician practices.

Thanks to a fully automated, closed-loop medication workflow, medication errors at Bloomington Hospital have decreased by 75% overall, including: a 98% reduction in omitted doses, a 48% reduction in wrong doses and a 67% reduction in the wrong drug. Rapid access to information has made diagnosis and treatment much more efficient, especially in radiology where turnaround time has declined dramatically from up to two days to less than four hours. Additionally, invoicing, inventory and supply-chain management enhancements have saved the system more than \$600,000 annually and increased revenue by \$15 million.

Challenges

For more than 100 years, Bloomington Hospital has served the communities of south-central Indiana as a not-for-profit,

regional referral center with a reputation for clinical excellence, innovation and collaboration. But the hospital's best-of-breed, department-centric IT structure wasn't aligned with its patient-centric mission and vision.

When Mark McMath became Bloomington Hospital's chief information officer in 2003, he quickly realized that change was necessary.

"Clearly, we needed a different approach," McMath explains. "We had to align IT across the organization to support our vision for an integrated delivery system that would provide the high-quality, safe and affordable healthcare our region needs and deserves."

The organization faced three overriding challenges:

- Synchronize disparate systems and create a common framework to assimilate complete patient information across all facilities
- Provide fast, easy access to that information
- Improve quality, coordination and costs while boosting medication and patient safety

Specifically, Bloomington Hospital sought to implement a closed-loop medication management process to reduce or eliminate adverse drug

At a Glance

Organization

Bloomington Hospital
Bloomington, Ind.

- Regional referral center with two hospital locations, 18 outpatient facilities and five physician practices
- 355 licensed beds
- 13,102 annual admissions (excluding newborns)
- FY2009: 51,834 emergency department visits, 48,417 urgent care visits, 11,821 outpatient surgeries and 5,921 inpatient surgeries

Solution Spotlight

- AcuDose-Rx®
- Horizon Admin-Rx™
- Horizon Clinicals®
- Horizon Meds Manager™
- Horizon Medical Imaging™
- Horizon Patient Folder™
- Horizon^{VP}® Physician Portal
- McKesson Pharmaceuticals
- McKesson Radiology Manager™
- MedCarousel®

Critical Issues

- Lack of alignment with department-centric IT strategy
- Quality, safety and coordination of patient care
- Lack of fast, easy access to information across continuum of care
- Inventory and supply-chain management redundancies

events, improve medication charge capture, accelerate invoicing and improve inventory and supply-chain management. Additionally, Bloomington wanted to coordinate the electronic exchange of health information across providers.

“Once we determined that IT was a fundamental component of all our strategies, we opted for an enterprisewide design,” says Mark Moore, president and CEO. “We knew this approach would enhance patient care, improve decision making, and optimize clinical and operational efficiencies.”

Answers

When selecting a vendor to implement this sweeping, multilayered model, Bloomington Hospital’s physicians, staff and leaders chose McKesson. Early successes with McKesson’s document imaging products helped sway the team — so did a common vision, timeline and can-do attitude.

“We needed functionally rich products that would go wide and deep, and McKesson was the only company that could meet our comprehensive requirements,” McMath recalls. “The company’s performance, strong and rapid implementation methodology, and wide-ranging integration capabilities sealed the deal.”

In record time, a comprehensive suite of McKesson clinical, financial and connectivity solutions were up and running. Countless safety and quality improvements were also in the works.

Creating a Patient-Centric Framework

Bloomington Hospital has leveraged McKesson technology to create a patient-centric, common framework that shares information across the care continuum. A full suite of financial and clinical solutions helps identify patients seen at Bloomington Hospital’s facilities and centrally store information and images across encounters. McKesson’s physician portal and document imaging solution provide a single point of access to everything from medication administration data and emergency department reports to radiology and cardiology images. In fact, there are nearly 800 logins to the portal daily.

“Horizon^{VP}® Physician Portal gives clinicians quick access to a comprehensive view of vital patient information,” explains Todd Rowland, M.D., director of medical informatics. “It is the first level of decision support at the point of care and allows for faster and more informed decisions.”

Another leap forward was the migration from manual drug distribution to a fully automated, online, real-time process via a closed-loop medication workflow.

“McKesson enabled us to create a comprehensive, bar-coded medication use system – from ordering the product from the distribution center to administering it to our patients – which is safe, effective and efficient,” says Michael Melby, MS, FASHP, director of pharmacy. He also cites another upside: Nursing and pharmacy have developed a much closer working

relationship. “We are a cohesive team, partnering to ensure safe medication use for our patients.”

Solutions for medication administration and automated dispensing cabinets have reduced medication errors overall by 75%, including: a 98% reduction in omitted doses; a 48% decrease in wrong doses; and a 67% decrease in the wrong drug. The solutions improved workflow, boosted turnaround times and freed nurses to spend more time at the patient’s bedside. Patients are happier, and nurse satisfaction with the medication-use process tops 90%.

Fax imaging and McKesson’s enterprise pharmacy information system have improved the transcription process. Orders are digitally manipulated for optimal clarity, and order entry is safer because pharmacists are now alerted to potential drug therapy issues. Medications are available only after a pharmacist reviews the orders to ensure safety and regulatory compliance. Usage data generated by the systems also enable better management of inventory and precious healthcare dollars.

McMath notes that McKesson is the only company that offers an end-to-end medication safety solution that completely closes the loop. “Medications now go from the warehouse to the patient’s bedside with the entire flow locked down,” he says. “We’ve put many safety checks and a fully automated supply chain in place between those two points.”

Currently, two Bloomington Hospital locations (Bloomington,

Ind. and Paoli, Ind.) use Horizon Emergency Care™ and McKesson’s order management solution to equip physicians with computerized provider order entry (CPOE) capabilities in the emergency departments. Planning is underway to expand CPOE use systemwide with Horizon Expert Orders™, which will also enable clinical decision support and alerts for pharmacy, radiology and laboratory.

Results

By employing McKesson IT solutions across its continuum of care, Bloomington Hospital has created an integrated system that delivers quality, safety, efficiency and value to patients across the enterprise.

The overall patient experience is improved, and quality of care is enhanced:

- Rapid access to information has made diagnosis and treatment processes much more efficient, thus reducing wait times, unnecessary repeat tests and added costs. Physicians make timelier, fully informed clinical decisions that help speed treatment to patients
- Pharmacy distribution and workflow process changes have increased efficiencies and improved staff satisfaction
- Automated medication dispensing has cut nearly an hour per shift from the time nurses spend administering medications
- Radiology results turnarounds at Bloomington Hospital have dropped from up to two days to less than four hours. Systemwide, stat turnaround times improved by 67% and routine turnaround times by 75%

At a Glance

Results

- Created a patient-centric, common technology framework that shares information across the continuum of care
- Decreased radiology results turnarounds from two days to less than four hours
- Improved stat turnaround times by 67% and routine turnaround times by 75%
- Reduced medication errors by 75% overall, including: a 98% decrease in omitted doses; a 48% decrease in wrong doses; and a 67% decrease in incorrect drug
- Reduced the time nurses spend per shift tracking missing medications from 60 to 5 minutes
- Increased nursing satisfaction with the drug distribution process to 91%
- Achieved 100% compliance with ID band checks prior to administering medications
- Reduced unresolved controlled substance discrepancies by 88%
- Reduced medication cabinet overrides from 4.2% to 1.1%
- Reduced monthly pharmacy drug costs by \$50,000
- Increased inpatient revenue capture rates by 37% for an annual increase of \$15 million
- Created the radiology efficiencies that saved \$50,000 in staff costs and \$330,000 in film costs – a 95% decrease
- Reduced days in A/R from 75 to 55, and eliminated off-site record transportation and warehouse storage costs

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Michael Melby, MS, FASHP
Director of Pharmacy
Bloomington Hospital

Patient care is safer:

- A medication administration solution and automated dispensing cabinets have reduced medication errors by 75% overall
- The hospital has achieved 100% compliance with ID band check by nurses prior to administering medications
- Unresolved controlled substance discrepancies have dropped by 88%, and nurses spend 92% less time counting controlled substances

Costs are down and efficiency is up:

- Inpatient revenue capture rates are 37% higher, increasing annual patient revenues by \$15 million
- Systemwide, monthly pharmacy costs have dropped by \$50,000. Missing medication doses have decreased by 83%, saving \$71,631 in drug costs annually
- In 2008, medication error reduction resulted in \$500,000 in cost avoidance
- Electronic auditing capabilities helped uncover \$1.6 million in lost charges
- Radiology efficiencies saved \$50,000 in staff costs and \$330,000 in film costs — a 95% decrease

- The ability to access and electronically sign charts reduced days in A/R from 75 to 55, and eliminated off-site record transportation and warehouse storage costs
- MedCarousel® decreased inventory by 70%. The time spent crediting supplies is down by 95%, and the hours per day handling returns and credits has dropped by 67%

“The Bloomington Hospital-McKesson partnership thrives thanks to personal commitment at the highest levels of both organizations,” McMath says. **“It’s a commitment that remains to this day. McKesson helps us to deliver on the expectation.”**

McKesson Provider Technologies

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