

CLINICAL SURVEILLANCE IMPROVES PATIENT SAFETY AND REDUCES COSTS

Case Study

Clinical Workflow Solutions

BAPTIST HEALTH

Replacing manual chart review with automated patient identification puts high-risk patients at the top of the list.

BAPTIST HEALTH (BAPTIST), a seven-hospital system based in Little Rock, Ark., provides quality, patient-centered care to thousands throughout the state — but it still used inefficient manual chart review processes to identify clinical intervention opportunities.

Previously, doctors had to manually search through individual patient charts and multiple information systems to see a full view of each patient's clinical status. Pharmacists were also doing manual reviews to find intervention opportunities. These manual processes were typically performed once daily, substantially increasing the risk of missing a change in condition or a critical intervention.

BAPTIST wanted to give clinicians real-time access to critical patient data via a system that would continuously monitor patients' conditions and alert caregivers to intervention opportunities. By doing so, clinical interventions would occur more efficiently, frequently, and rapidly, contributing to improved outcomes and reduced cost of care.

COURSE OF ACTION

BAPTIST began with the goal of leveraging its current IT infrastructure to give clinicians the tools to quickly identify patients needing intervention so critical care could start sooner. To achieve this goal, their objectives were three-fold.



- 1) Give clinicians a single view of patient information by consolidating data from disparate hospital information systems (HIS)
- 2) Provide clinicians with anytime, anywhere access to this critical patient data
- 3) Use clinical surveillance to alert clinicians of the need to intervene before a specific patient's condition deteriorated

As a result, BAPTIST began transitioning clinicians away from paper-based chart review by:

- Deploying the **Clinical Xpert™ Navigator** clinical workflow solution to deliver real-time patient data via smartphone, desktop, and mobile devices.
- Deploying **Clinical Xpert CareFocus** clinical surveillance profiles — which included a combination of diagnoses, lab values, patient demographics, prescription medications, and free-text search of transcribed reports — to create targeted lists of high-risk patients and notify clinicians of intervention opportunities.
- Integrating the CareFocus clinical surveillance profiles into the clinician's daily workflow to ensure that patients with hospital-defined criteria would automatically populate rounding lists.



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2009 HEALTHCARE ADVANTAGE AWARD

BAPTIST HEALTH

Location:
Little Rock, Ark.

Size:
2,145 beds

Scope and services:
BAPTIST HEALTH (BAPTIST), the largest and most comprehensive health system in the state of Arkansas, offers quality healthcare through more than 180 access points including major medical centers, family clinics, and therapy and wellness centers.

Solutions:
Clinical Xpert™ Navigator
Clinical Xpert CareFocus
Clinical Consulting Services



BAPTIST pharmacists collaborated with the Thomson Reuters **Clinical Consulting Services** team to develop CareFocus profiles that included:

- Targeting renally impaired patients on renally eliminated medications for evaluation and management (e.g., Glyburide™, Zosyn™, Levaquin™, etc., and an elevated level of serum creatinine).
- Identifying patients with positive preliminary or finalized microbiological cultures to ensure cost-effective utilization of expensive medications (e.g., active order for Zynox™ without an appropriate culture result).
- Alerting pharmacists to the possible serious side effects caused by targeted medications and monitoring for therapeutic levels (e.g., Warfarin™ with an elevated INR, Epogen™ with an elevated hemoglobin, or Heparin™-Induced Thrombocytopenia).
- Monitoring for appropriate, cost-effective medication therapy (e.g., appropriate antibiotic orders for pneumonia diagnosis and IV-to-oral dose conversions for costly medications once the patient is clinically stable).

OUTCOMES

Today, clinicians throughout the BAPTIST system spend more time providing care and improving outcomes instead of manually reviewing charts and data from disparate IT systems. Currently, the pharmacy department uses 40 clinical surveillance profiles, which are further broken out into 278 facility- and unit-based rounding lists for improved medication management.

“CareFocus has allowed us to focus our energies on the patients who need us most without having to manually sift through overwhelming amounts of data,” said Kevin Robertson, Pharm.D., BCPS, Pharmacy Clinical Coordinator for Baptist Health Medical Center – North Little Rock.

Using Navigator and CareFocus, BAPTIST has achieved:

- A 30% increase in necessary pharmacy interventions
- An average cost savings of \$39,000 per month in the pharmacy at just one of its 220-bed facilities
- A total of over \$1 million in cost savings by proactively identifying patients who could receive more cost-effective medications — a number that continues to grow

“The idea was to identify at-risk patients faster, allowing our clinicians to intervene earlier, lower costs, and improve outcomes. CareFocus enables us to do that.”

David House

Vice President and Chief Information Officer
BAPTIST HEALTH

- A minimum time savings of 30 minutes per day, per clinician — administrative time previously spent searching or waiting for patient information and constructing manual rounding lists

“CareFocus adds a safety net for our patients against adverse events from medications,” adds Becky Layes, Pharm.D., Pharmacist Coordinator at BAPTIST HEALTH Rehabilitation Institute. “It places patients who might be at increased risk of having a drug reaction in front of us immediately.”

Clinical Xpert Navigator and CareFocus are currently used at five of BAPTIST’s seven hospitals. BAPTIST has also deployed an additional 63 CareFocus profiles to other departments across the system, including nursing, infection control, case coordination, stroke center, nutrition and food services, and respiratory care.

“This solution places the powerful clinical information we have in our system into a single, easy-to-use format and allows our clinicians to be more responsive to patient needs,” said David House, vice president and chief information officer at BAPTIST HEALTH.

In 2009, BAPTIST was acknowledged for its accomplishments with the Thomson Reuters Healthcare Advantage Award in the category of Health and Clinical Outcomes. It also received recognition as a Laureate in the 2009 *Computerworld*® Honors Program for its use of CareFocus to improve clinical quality and reduce healthcare costs.

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Thomson Reuters
777 E. Eisenhower Parkway
Ann Arbor, MI 48108 USA
Phone +1 877 843 6796

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PRO-6747 06/09 MD

