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CASE STUDY

Reducing Readmissions with Predictive Analytics

CONWAY REGIONAL MEDICAL CENTER
Conway, AR

VITALS
Conway Regional Medical Center
Location: Conway, AR, Five central Arkansas counties
Size: 160-bed

Type: Not-for-profit Acute Care Medical Center.
Facilities: Medical Center, Women's Center, Health and Fitness Center, Home Care, Imaging Center, Personal Training Studio, Rehabilitation Hospital and Therapy Center.

Since the inception of the Affordable Care Act in 2011, studies have highlighted the alarming cost and rate of unplanned and early hospital readmissions, and its overall impact on health care in the United States[1]. Findings suggest that high rates of readmission are a widespread issue causing millions in lost revenue due to higher costs, and are not limited to any specific number or type of hospitals.

At Conway Regional Health, readmission reduction was a key focus for improving overall care and outcomes.

The Challenge

Reducing readmission rates had been a top priority for Conway Regional Medical Center, which provides complete health care services – including cardiovascular and general surgery, orthopedic, cancer diagnosis and treatment, home health, women's services, senior mental health and rehabilitation therapy services – to patients in the growing communities of north central Arkansas.

After disproving the assumption, through their own internal data analysis, that the majority of readmissions came from nursing home residents, Conway's quality analyst Cathy Van Cleve considered utilizing the L.A.C.E. Index to help identify and manage patients at high risk for early readmission. They quickly realized, however, the many barriers to operationalize this labor-intensive process, such as manual calculations and difficulty stratifying patients on a daily basis.

The Solution

Conway Regional was already using Medisolv's business intelligence solution, RAPID, for quality management and for Meaningful Use reporting. They discovered that RAPID provided an automated, predictive readmission risk report similar to the L.A.C.E. Index.

Conway knew the predictive tool within RAPID was exactly what the hospital was looking for. RAPID is one of the only analytics solutions in the market to offer daily risk scoring reporting as a built-in analytics tool, providing hospital administrators, clinicians, and case managers with near real-time information

to help decrease readmission rates and improve patient safety. RAPID automatically pulls data from Conway's EHR on a daily basis, scores each patient, and makes recommended interventions readily accessible to the entire organization. This allows users to successfully apply interventions without having to devote resources to compiling and verifying data for each individual patient.

Results

Conway Regional made the decision to incorporate RAPID into all case management activities focused on readmission reduction. It quickly became their "go to" solution for preventing early readmissions.

In just 10 months, Conway saw a 3.31% decrease in their overall readmissions.

"I just completed the latest Corporate Score Card which includes the readmissions rate graph below," explains Cathy Van Cleve. "As you can see, the year-to-date cumulative and the monthly rates are all trending downward!"

Having identified the patients at the highest risk for readmissions, admission/discharge nurses work with each patient to educate them on the reasons for their hospitalization, any previous diagnoses affecting their well-being, any new medications they might be prescribed, and any changes to their plans of care. The patient's primary care physician is also alerted
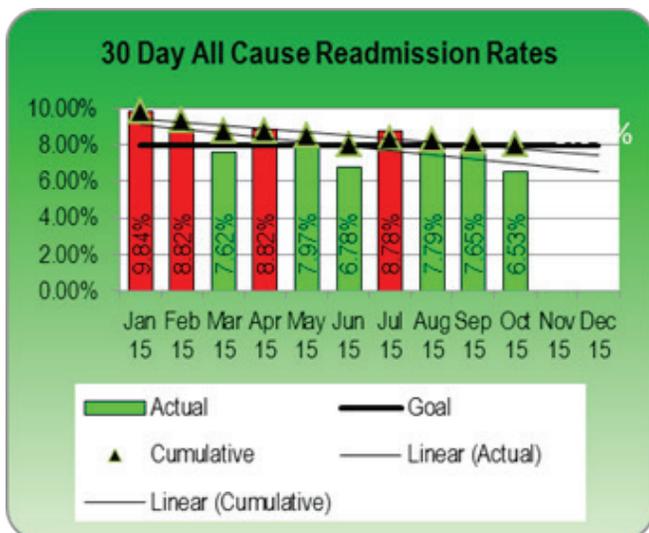
> "Using RAPID's predictive readmission risk tool and implementing new processes has successfully shown a downward trend in readmissions at our facility."
>
> *- Cathy Van Cleve, Quality Analyst, Conway Regional Medical Center, Conway, AR*

to the higher risk score, so that the physician can ensure the patient goes for a follow-up appointment within the first three days post-discharge.

30 Day All Cause Readmission Rates

Further, Conway Regional's Case Management staff holds regular meetings with admission/discharge nurses, home care staff, representatives from area nursing homes, home care agencies, rehab facilities, and hospice agencies to ensure that each member of a patient's care team is fully educated about how RAPID's risk scoring system works, and understands the protocol pertaining to patients with higher scores.

[1]*http://circ.ahajournals.org/content/131/20/1796.long*