

3M Health Information Systems

Case study: Hospital Executive Council (HEC)

Syracuse, New York

“Without the data, you cannot do the intervention. More importantly, use of the data over time lets health providers track the sustainability of improvements and make modifications. With data, you can base your actions on a real view of the situation over time.”

— Ronald J. Lagoe, PhD, executive director, Hospital Executive Council

Snapshot of the Hospital Executive Council (HEC)

The Hospital Executive Council (HEC) is the cooperative planning organization for three hospitals that work together to improve healthcare efficiency and outcomes in Central New York State.

The challenge

For decades, hospitals have used traditional inpatient metrics drawn from clinical or discharge data to improve efficiency with measures such as length of stay. But with the shift to performance-based payment systems, new measures and metrics are needed to identify potential opportunities for improving care delivery and patient outcomes while also reducing the risk of financial penalties from adverse outcomes.

Because they impact patient outcomes and costs, hospital-acquired complications (HACs) and inpatient complications and readmissions are targeted by payers. The Centers for Medicare & Medicaid Services (CMS) now levies “value-based” financial penalties for Medicare payments if hospitals exceed expected rates for complications and readmissions—making hospital initiatives in these areas critical.

Recognizing the challenges of transitioning to performance-based payment, the three hospitals asked the HEC to search for innovative approaches and new data sources to identify and analyze complications and readmissions.

The 3M advantage

Over a four-year period, using 3M™ Potentially Preventable Complications (PPC) Grouping Software, Crouse Hospital and St. Joseph’s Hospital Health Center in Syracuse, New York, achieved significantly lower total complication rates by 34 and 42 percent overall, respectively. However, neither hospital was able to sustain all of the improvements.

In year five, 3M PPCs measured where and how much interventions lost ground, alerting managers to the problem at its possible causes. After six years, Crouse and St. Joseph’s have net reductions of 20 and 21 percent—and greater appreciation for the effort needed to sustain improvements.

Case Study: Hospital Executive Council (HEC)

The 3M solution

Spend five minutes talking with Ron Lagoe, executive director of the HEC, and you quickly realize he has a passion for using data to improve health care. For more than a decade, Lagoe and the HEC's member hospitals have relied on 3M products that use the **3M™ APR DRG Classification System** to evaluate and improve healthcare utilization and outcomes. With 3M APR DRGs, Lagoe can drill down into the data to evaluate levels of illness for an entire range of conditions for each patient, not just an individual diagnosis or procedure.

When the HEC decided to address complications, it turned again to 3M and the **3M™ Potentially Preventable Complications (PPC) Grouping Software** to identify and analyze hospital inpatient populations that develop complications after admission. With 3M, hospitals can analyze large amounts of data at both the aggregate and patient level, so they can develop and evaluate clinical management initiatives, adjust their interventions, and drive improvements. Best of all, 3M PPCs can help hospitals identify patients who are at risk of complications.

The HEC approach

The HEC evaluated inpatient complications during a six-year program (2009-2014) at **St. Joseph's Hospital Health Center (SJHHC)** and **Crouse Hospital**. Using 3M PPC reports provided by HEC, hospital managers implemented a process for identifying and reducing inpatient complications that began with determining whether patient medical records and the complications identified by the 3M software were in sync.

SJHHC and Crouse then identified ways to improve their inpatient documentation and coding for complications. This review helped with the next step—identifying the patients who were treated for but still experienced complications from these specific HACs: Pneumonia, urinary tract infections, clostridium difficile colitis, pulmonary embolism and septicemia. After analyzing more than 60 PPCs available in the 3M software, the HEC and hospital managers decided to target those five HACs, since they potentially had a major impact on inpatient outcomes and costs.

Focusing on one PPC at a time, the hospital managers reviewed charts to uncover issues with existing care delivery and interventions, plus identify opportunities for improvement and best practices. For example, data analysis from a nursing chart review revealed increased use of incentive spirometry and mouth care was one of the most effective pneumonia interventions. Likewise, reducing urinary tract infections was best achieved by minimizing use of urinary catheters and strictly adhering to catheter care standards. Managers now routinely make changes in clinical management as needed to improve care and reduce complications.

The findings

Using the 3M PPC Grouping Software, Crouse Hospital and SJHHC achieved significantly lower total complication rates—34 and 42 percent (respectively)—overall over a four-year period. The improvements included declines in pneumonia complications by 43.

Yet neither hospital was able to sustain all of the improvements.

In year five, 3M PPCs measured where and how much the interventions had lost ground, alerting managers when performance started to decline. Beginning in 2012, overall complication rates began to plateau and then increased. Between 2012 and January-March 2014, 3M PPC rates at Crouse Hospital increased by 14 percent and at SJHHC by 21 percent.

The HEC worked with the hospital staffs to figure out why. Their analysis revealed challenges that hospitals in many metropolitan areas experience:

- Most changes in performance are associated with high-volume diagnoses—especially pneumonia—and a small minority of hospital patients (2–4 percent)
- Over time, physicians and nursing staff often become less vigilant in following the specific practices that generated the initial improvements

“Distractions within the hospitals, including the implementation of new programs, provided too much competition for these efforts over time,” says Lagoe.

In spite of these developments, after six years, Crouse and SJHHC have net reductions in complications of 20 and 21 percent—and a greater appreciation for the effort needed to sustain improvements.

Case Study: Hospital Executive Council (HEC)

Moving forward

Such experiences demonstrate the importance of using data to generate improvements in quality of care. Most importantly, they emphasize the need to use data to sustain improvements over time.

“The real challenge is maintaining reductions down the road. You expect to see big improvements, as we did, in the first two years. On the front end, you can take a lot of excess out. The challenge is to keep it out,” concludes Lague.

The 3M software provides valuable support for this process. But software and data alone cannot sustain improvements in care. Lasting change means using the data in the nursing units to keep a constant watch on performance.

Using the **3M™ Potentially Preventable Readmission (PPR) Grouping Software**, the Hospital Executive Council and its hospitals are now analyzing their data to identify why patients are readmitted and determining how they can manage a wide range of conditions to substantially reduce their readmission rates.

Call today

For more information on how 3M software and services can assist your organization, contact your 3M sales representative, call us toll-free at **800-367-2447**, or visit us online at **www.3Mhis.com**.

Why choose 3M PPCs?

- The methodology is relevant to all hospital staff, including nurses, physicians, quality and financial staff. Relevancy means everyone involved in process improvement understands the measurements and their contributing roles.
- The methodology allows reviewers to look at a hospital's aggregate data and then drill down to patient-level data.
- Each hospital can review and analyze broad categories of complications, then prioritize and target the conditions that have the biggest impact on their PPC-reduction goals.



Health Information Systems
575 West Murray Boulevard
Salt Lake City, UT 84123 U.S.A.
800 367 2447

www.3Mhis.com

3M is a trademark of 3M Company.

Please recycle. Printed in U.S.A.
© 3M 2015. All rights reserved.
Published 02/15
70-2011-6518-3