



Business Impact

“The Patient Protection and Affordable Care Act requires the development of programs to reduce readmissions, and CMS will begin to penalize hospitals in fiscal year 2012 that fail to meet set readmission standards.”

After Hospitalization: A Dartmouth Atlas Report on Post-Acute Care for Medicare Beneficiaries
Dartmouth Institute for Health Policy and Clinical Practice, Sept. 28, 2011

Challenges

- **Lack of information.** Since providers don't understand which patients are most likely to be readmitted or the causal drivers associated with an individual risk score, they cannot intervene for prevention.
- **Generic patient outreach.** Patients don't receive tailored outreach and selective targeting of custom messages to improve their participation. Likewise, it's difficult for providers to match the optimal intervention investment to the patient.
- **No real-time risk scoring.** Current systems don't alert providers to real-time changes to readmission risks as they occur, so practitioners cannot predict which interventions will yield the optimal results for a particular patient while still in their care.
- **Scattered, inaccessible data.** With disparate information systems, it is difficult to see patterns that affect readmissions because the data is not integrated for a broader, comprehensive view.

How can I use analytics to reduce our readmission rates?

YOUR GOAL: Avoid penalties from Medicare and other payers, improve patient outcomes and increase operating margins.

Health care providers the world over are feeling the pressure to reduce avoidable readmission rates for several reasons, including the impacts of payer penalties, patient outcomes and financial repercussions. In fact, the UK and the US are imposing penalties and/or nonpayment for high readmission rates. Providers need to score patients for readmission risk so that they can modify care delivery at the point of care. This scoring requires not only a historical view of data, but a predictive view that encompasses and models many data points to provide the right intervention to the right patient at the right time.

SAS® for readmission analytics extends beyond the fundamentals of simple risk scoring by allowing providers to incorporate and analyze unstructured data; interpret data in near-real time; recommend intervention alternatives at the point of care; personalize and automate pre-admission and post-discharge outreach; facilitate care coordination across multiple facilities; and execute and continually adapt multiple parallel outreach and intervention models concurrently.

OUR APPROACH

SAS for readmission analytics supports health care providers in both the prediction and prevention of avoidable readmissions, thereby improving patient health and system profitability. We approach the problem by providing software and services to help you:

- **Identify and predict patients at high risk of readmission.** By discovering individual patient readmission rates with SAS, you can understand and manage the key causal drivers to predict those most likely to be readmitted and tailor your intervention strategy to their specific needs.
- **Exercise the most cost-effective and appropriate patient-specific interventions.** SAS uses predictive analytics for real-time decision making by physicians and other care team members. By incorporating both clinical and other nonclinical information about patients, SAS is able to predict propensity to change, preferred communication channels, and the most suitable message or intervention at the individual level.
- **Capture and analyze patient data on demand for a real-time readmission risk score.** With SAS, you can incorporate new information to reprioritize intervention recommendations during patient interactions to produce the best outcomes and to inform workflows with new insights.
- **Pool cross-system data to see patterns needing optimization.** Readmissions analytics from SAS provides a powerful array of optimization, simulation and project scheduling techniques to identify the actions that will produce the best results, while operating within resource limitations and other relevant restrictions. With SAS software's proven data management capabilities, you can profile, cleanse, augment and integrate data from disparate systems to create consistent, reliable information.



With SAS, you can prioritize resources for the greatest impact to reduce avoidable readmissions, understand clinical and nonclinical factors affecting readmissions, and assess the financial impact of employing resources to reduce these rates.

THE SAS® DIFFERENCE: Assess risk to improve patient intervention

With SAS analytics for readmissions, SAS arms providers with the most advanced technology available to gain insight far beyond simple risk scoring:

- **The industry-leading predictive capabilities of SAS** use traditional and nontraditional data sources to improve individual risk scoring capacity and accuracy. Convert unstructured and narrative data – such as clinical observations and comment fields – into useful information for analytics.
- **SAS is a proven leader in applying advanced analytics** to understand individual behavior and using predictive analytics to influence that behavior.
- **On-demand updating of readmission risk scores** allows you to determine the best course of action to reduce that risk.
- **Incorporating optimization analytics** not only adds structure and repeatability to decision-making processes, it can optimize your readmission risk investments, allowing you to get the best readmissions rate with your available resources.

No other analytical platform captures the power of analytics necessary to proactively manage readmissions as well as SAS does.

CASE STUDY: Improving patient outcomes with a data-driven approach

Situation

Crouse Hospital wanted to improve quality in three areas: decreasing post-operative infections, reducing readmissions and analyzing length of stay.

Solution

Integrating data from multiple sources, the hospital uses SAS Analytics to easily track quality initiatives and create models to help the most vulnerable patients receive the services they need to stay healthy. The hospital also uses analytics to study patient severity to reduce unplanned readmissions. The analysts studied which factors – such as pre-existing conditions, age and reason for stay – were most highly correlated with a readmission. This information was then used to develop a predictive model to identify those high-risk patients upon admission to help avoid readmissions.

Result

A 60 percent reduction in post-operative infections in hip-surgery patients; improved results in pre-surgery antibiotic timing; the ability to identify and intervene when patients are at greater risk of readmission.

What if you could ...

Predict readmissions

What if you could identify an avoidable readmission risk before it happened, and understand which intervention strategy could prevent the readmission?

Engage patients

What if you could reduce readmission rates by investing and engaging with patients more effectively, going beyond a one-size-fits-all communication, and being more selective in your care transitions strategy?

Incorporate new information

What if you could update your readmission risk score as new information about your patient becomes available?

Optimize risk investments

What if you could determine which actions would be most effective for the patients whom you have an ability to influence, within your resource limitations?

**You can. SAS gives you
The Power to Know®**

SAS FACTS

- SAS has served the health care industry for more than three decades.
- SAS has employees with in-depth domain knowledge and experience, and our solutions meet the specific needs of payer and provider organizations.
- SAS has been in business since 1976 and today has customers at more than 60,000 sites in 135 countries.

Learn more about SAS software
and services for health insurance:
sas.com/healthcare



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