



Business Impact

“The way SAS helps us is that we can push out critical information – which we all know drives improvement – to the frontline staff.”

Doug Salvador
Associate Chief Medical Officer
Maine Medical Center

Challenges

- **Multiple systems and data sources.** Silos of information dispersed across multiple systems and nonstandard data limit the ability to make proper decisions with regard to patient care.
- **Incomplete view of patient.** Health care providers struggle to produce a complete, cohesive view of each patient, which makes it difficult to detect, predict and evaluate potential safety issues and problems.
- **Unstructured and incomplete data.** Because much of the available data is incomplete (i.e., missing or inconsistent values) or comes in the form of unstructured text, health care providers are unable to quickly derive safety insight from it.

How can we maintain both quality care and patient safety?

YOUR GOAL: Increase the quality of care to maintain good patient safety

The World Health Organization reports that medical errors affect at least one in 10 patients who receive health care in facilities that are well-funded and technologically advanced each year. That translates into tens of millions of injuries and deaths annually, and billions of dollars in additional medical expenses. In the US alone, more than 100,000 die every year from preventable medical errors.

There has been little progress in reversing this trend. The lack of integration among health care providers, insurers, patients and communities at large means that providers do not have full access to patient information, nor do they have a culture that supports such openness. Hospitals and other providers themselves are unable to capture and analyze medical errors and, therefore, lack the ability to understand root causes. Even so, the sheer volume of clinical and operational data being generated on a daily basis represents a gold mine of information that could be turned into evidence-based knowledge that providers could act on to improve their quality of care, productivity and patient/staff relations – if that data could be harnessed and analyzed.

OUR APPROACH

With growing pressure to identify potential patient safety issues before they become a reality, health care providers need a way to transform diverse data sources for analysis so they can accurately predict and medically investigate patient safety signals. We approach the problem by providing software and services to help you:

- **Access and integrate patient data from virtually any source in any format**, then transform, cleanse and standardize the data so it is ready for analysis.
- **Enhance the accuracy of predictions about patient safety** with a streamlined data mining process that uses highly accurate predictive and descriptive models based on innovative algorithms to proactively scan both structured and unstructured text for safety issues, treatment variations and more.
- **Uncover hidden insights in unstructured data sources**, such as patient letters and physician notes, by using text mining capabilities to proactively scan unstructured text for insights on safety signals, patient/provider concerns and other things that may have an impact on the patient’s care.
- **Improve your planning capabilities** by using predictive models to forecast demand for services so you can plan staffing resources and service locations accordingly to keep both patient satisfaction and revenue high.

SAS® provides the data management and advanced analytics to drive innovation and quality improvement by transforming diverse data sources for analysis so you can accurately predict and investigate patient safety signals.



THE SAS® DIFFERENCE: Accurate, reliable analysis of patient safety data

SAS can help you effectively manage quality of care and drive sustainable improvements by measuring and viewing clinical performance, resource utilization, cost-effectiveness and evidence-based decision making. With SAS, you get:

- **Superior data management.** SAS eases access to patient safety data from multiple sources, regardless of computing platform or location.
- **Powerful data mining and predictive analytics.** Create highly accurate predictive and descriptive models based on analysis of vast amounts of patient data from across the organization.
- **State-of-the-art text mining.** SAS enables you to transform both structured and unstructured data into meaningful insights that would otherwise remain hidden.
- **Advanced forecasting capabilities.** With SAS, you can generate high-quality forecasts quickly and use that information to plan more effectively.

SAS assures accurate, consistent and reliable analysis of all your patient data. By providing a way to access, transform, manage and analyze patient data more efficiently and effectively, SAS enables you to transform data into clinical insights quickly, and then act on those insights to improve patient safety.

CASE STUDY: Maine Medical Center

Situation

As both a teaching and a community hospital, Maine Medical Center regards patient safety as a key priority. The hospital turned to SAS to help it keep patient safety and quality of care at the highest level, and to improve the quality of patient care in measurable ways.

Solution

SAS provided a solution that enabled the hospital to:

- Understand how it is performing against key patient care metrics, including national guidelines issued by organizations like the Joint Commission on the Accreditation of Healthcare Organizations and US Health and Human Services Centers for Medicare and Medicaid Services.
- Balance performance metrics against financial objectives so hospital staff can see how changes affect patient care and financial health.

Results

- 100 percent of heart failure patients are getting quality care as benchmarked by national organizations.
- The hospital's medication error reduction process has improved by 35 percent.

What if you could ...

Aggregate data from any source

What if you could access and cleanse data from all relevant sources to gain a more complete picture of patient safety?

Improve quality of care decisions

What if you could analyze and predict variances in care so you could take proactive measures to intervene in time to achieve improved outcomes?

Take full advantage of both structured and unstructured data

What if you could include vital information from text sources – such as patient letters and physician notes – in your analyses for safety issues, treatment variations and more?

Improve planning capabilities

What if you could clearly understand the demand for services at different times under various conditions?

You can. SAS gives you THE POWER TO KNOW®.

SAS FACTS

- SAS has been in business since 1976 and today has customers at more than 50,000 sites worldwide.
- SAS Text Analytics was named a "Trend-Setting Product for 2010" by *KMWorld* magazine.
- More than 600 hospitals are SAS customers.

Learn more about SAS software and services for health care:

www.sas.com/industry/healthcare/



SAS Institute Inc. World Headquarters +1 919 677 8000
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