



NEWS RELEASE

Premier Inc. Analysis Finds Hospitals Making Significant Strides in Optimizing Blood Use

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Nearly 650 hospitals reduced blood use by 20 percent on average, including a 75 percent reduction in blood transfusions for orthopedic procedures

CHARLOTTE, N.C.--(BUSINESS WIRE)-- **A nationwide analysis** of 645 hospitals found a 20 percent decrease in blood utilization across 134 diagnoses that account for 80 percent of red blood cell use, according to Premier Inc. The analysis illustrates the strength of having comparative data analytics to drive performance improvement.

Premier, a leading healthcare improvement company, conducted the analysis using inpatient data on more than 27 million discharges from 2011 through the first half of 2016. Significant decreases in blood use were a direct result of provider efforts to optimize care by improving stewardship of this costly commodity through the use of evidence-based practices around blood use.

Blood transfusions can cost upwards of \$1,000 per unit when accounting for all direct and indirect costs. When used unnecessarily, blood transfusions can also diminish quality of care, increasing the likelihood of allergic reactions, fever, lung injury, immune suppression, iron overload and other adverse events. Transfusions have also been linked to increased risk of morbidity and mortality – **one study** found blood transfusions were associated with a 66 percent increased risk of mortality when accounting for comorbidities and other factors during cardiac surgery.

“Today’s healthcare providers face constant pressures to improve quality and reduce total costs. Given this reality, more providers are looking to optimize blood use, a very expensive resource that can lead to adverse events if not properly managed,” said Leigh Anderson, Premier’s chief information officer. “However, managing blood use can be

a challenge without strong data and analytics to measure total utilization rates, compare against peer benchmarks and spot areas for improvement. Leveraging our data to pinpoint opportunity areas, this analysis proves that with consistent data and measurement, providers can greatly enhance their blood stewardship.”

In 2012, Premier published a **comprehensive blood utilization analysis** identifying opportunities for its members to save millions of dollars by reducing usage and maintaining positive patient outcomes. Premier has worked with its members to implement these best practices by leveraging its PremierConnect® performance improvement database. Using cost and quality data analytics, Premier produces regular optimization reports that help providers spot cost and quality variations in blood use, as well as the sources or departments that are contributing to the problem, so that leaders can target efforts designed improve the overall cost and quality of patient care.

These reports have aided Premier members in achieving dramatic reductions in overall blood use. Specifically, Premier’s recent analysis documented the following improvements since its 2012 analysis.

- Blood use cut nearly in half across the 10 procedures that use the most blood: When isolating the top 10 procedures that account for the most use in blood, the data highlights a staggering 40 percent decline in patients who received blood during this period.
- Orthopedic procedures show steepest declines: Most notably, orthopedic surgeries experienced a steady drop in transfusions recorded over a nearly six-year period. When looking at major joint replacements, nearly 75 percent fewer cases recorded a blood transfusion. Additionally, nearly 30 percent fewer patients undergoing hip and femur surgeries received a blood transfusion.
- No compromise in quality of care: When compared with quality data, trends suggest that reduced blood utilization didn’t negatively impact patient outcomes – as rates of mortality, complications and readmissions also fell.

“From the data, any two patients receiving the same surgery may or may not have received a transfusion, depending on a provider’s understanding of appropriate blood use – which can compromise quality of care,” said R. Bruce Wellman, MD, Medical Director of Transfusion Service, Coagulation and Laboratory Information Systems at Carle Foundation Hospital based in Urbana, Ill. “Using Premier’s data and benchmarks, we could better understand internal trends and how Carle’s performance stacked up against our peers. Understanding evidence-based practices gave us a powerful motivator to drill deeper and educate the high utilizers, to improve outcomes.”

Example of success at member health systems include:

- Carle Foundation Hospital (Urbana, Ill.) decreased the number of blood transfusions administered by 35 percent and generated a savings of \$2 million over the course of two years.

- Mercy Health (Cincinnati) realized \$6.2 million in savings as a result of conserving red blood cell, platelet, plasma and cryo use (70 percent of the savings resulted from reducing blood use). The savings reflects conservation efforts in both inpatient and outpatient facilities over a three-year period.
- BayCare Health System (Tampa, Fla.) experienced a 54 percent decrease in red blood cell use, which amounts to more than 58,000 units saved. While the focus of this effort has been devoted to improving quality of care, BayCare has also been able to significantly reduce spending on blood.

The findings are highlighted in the first of a new series of reports, titled, "Spotlight: Margin of Excellence." The reports provide a detailed view on total costs across the continuum and can be leveraged to implement evidence-based strategies and tools designed to tackle inefficiencies in healthcare, ranging from variation in clinical practice and resource utilization. The analyses tap Premier's robust database, linking clinical, financial and supply chain data. The results can be leveraged by providers seeking to pinpoint areas of improvement by examining how their performance compares to trend data.

Methodology

The blood utilization analysis included data from 645 facilities based in 45 states, representing more than 27 million discharges from 2011-June 2016. Only inpatient cases were included and reviewed charges for blood transfusions from 134 Medicare MS-DRGs which account for more than 80 percent of blood utilization at these hospitals (excluding pediatric and trauma patients).

About Premier Inc.

Premier Inc. (NASDAQ: PINC) is a leading healthcare improvement company, uniting an alliance of approximately 3,750 U.S. hospitals and more than 130,000 other provider organizations. With integrated data and analytics, collaboratives, supply chain solutions, and advisory and other services, Premier enables better care and outcomes at a lower cost. Premier, a Malcolm Baldrige National Quality Award recipient, plays a critical role in the rapidly evolving healthcare industry, collaborating with members to co-develop long-term innovations that reinvent and improve the way care is delivered to patients nationwide. Headquartered in Charlotte, N.C., Premier is passionate about transforming American healthcare. Please visit Premier's news and investor sites on www.premierinc.com.

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