

Reducing blood transfusions improves patient safety and cuts costs

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A Loyola University Hospital study has demonstrated how the hospital has improved patient safety and cut costs by reducing the number of blood transfusions.

In 2009, the average amount of blood products transfused per patient at Loyola was 10 percent lower than it was in 2008, saving \$453,355. The average amount of blood products transfused dropped from 2.03 units per patient in 2008 to 1.82 units per patient in 2009.

Results were reported at the recent annual meeting of the College of American Pathologists.

"We are giving the right blood component, in the right amounts, to the right patient at the right time, with the goal of improving patient care," said Phillip J. DeChristopher, MD, PhD, medical director of Transfusion Medicine, [Blood Bank](#) and Apheresis.

DeChristopher is senior author of the study. First author is Omar Habeeb, MD, a fourth-year pathology resident at Loyola.

Blood transfusions save lives, but they also carry risks. Studies during the past 10 years have found that transfusions make patients more susceptible to infections and increase the risks of poor outcomes such as longer hospital stays, cancer recurrences and multi-organ system failures. "The more you transfuse, the higher you put patients at risk for unintended consequences," DeChristopher said.

Transfusions of [red blood cells](#), platelets, plasma and other blood products were approved decades ago without randomized controlled clinical trials to establish optimal uses. Consequently, doctors sometimes order more transfusions than necessary, DeChristopher said. He noted, for example that the amount of plasma transfused per patient in the United States is two to three times higher than the amounts transfused in Canada and Europe.

Loyola launched a new initiative for blood utilization as part of its Blood Management Program. The program implemented blood-use protocols that included evidence-based indications, educational programs for doctors and nurses and oversight of the Blood Utilization Review Committee.

The initiative resulted in some patients receiving less blood or no blood at all -- without compromising patient care. For example, instead of successively administering two units of blood, a doctor might now instead order one unit and then reassess later to see if a second unit is needed.

"We don't want to expose patients to blood products unless we have to," DeChristopher said.

While patient safety is the primary goal, blood management also can result in significant cost savings. The study documented only the amount saved in purchasing blood. It did not include the larger savings involved in storing, compatibility testing, transfusing blood and treating adverse effects. "The savings we documented are just the tip of the iceberg," DeChristopher said.

Blood management also can help relieve chronic shortages in the blood supply, especially during summers and holiday seasons when donations drop.

"Blood products are a vital community resource, and we need to be good stewards," DeChristopher said. "The less blood we use, the more patients benefit, and the less strain we put on the blood supply."

Provided by Loyola University Health System

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