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Area hospitals collaborate to hold down costs, improve efficiency for blood supply

By Anne Polta

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For years, the blood distribution system to area hospitals worked like this: Blood was shipped to each hospital once or twice a week from the American Red Cross North Central Blood Services office in St. Paul.

If the blood wasn't used and was nearing its expiration date, it was sent back to St. Paul so it could be redistributed to metro-area hospitals.

In an emergency, local hospitals that needed more blood could either call a neighboring hospital or have Red Cross send extra units by Federal Express.

"It was the way everybody did it," said Becki Blake, regional account manager with the Red Cross regional blood service.

There were drawbacks, however.

Because blood products might be shipped only once a week, the hospitals had to keep a larger supply on hand. Many of these units simply couldn't be used and were shipped back to the Twin Cities.

A lack of coordination also meant that both the Red Cross and the hospitals were spending time on the road as they shuttled blood units back and forth.

Eight years ago, the laboratory staff at Rice Memorial Hospital started to ask if the process could be streamlined to increase efficiency and reduce duplication.

Today, a regional system has been created that has cut down on costs, managed the regional blood supply more effectively and improved the ability of local hospitals to respond to the community need for blood.

This approach is now being adopted in the 10-state Mid-America Division — including urban centers such as Chicago — of the American Red Cross.

"You can't believe the efficiencies that are gained when you roll up like that," Blake said. "I think you will see it used by some of the other divisions as well."

John Thon, laboratory director at Rice Memorial Hospital, and Joel Halbritter, the lab's hematology and blood bank section head, said they've been surprised at how far-reaching the benefits have been.

"I don't think we ever dreamed we would see the number of benefits that came out of this," said Halbritter.

At first, the Rice Hospital lab and Red Cross were simply looking for a more efficient way to ferry blood to area hospitals across a rural region that covers some 5,000 square miles.

Rice Hospital already was sending a daily courier to most of these hospitals to pick up and deliver lab specimens, X-rays and medical equipment, Halbritter said.

"We saw that Red Cross was visiting the same hospitals on a biweekly basis and we thought: Why not combine this with our courier service?" he said.

Thirteen area hospitals — in Appleton, Benson, Dawson, Granite Falls, Litchfield, Madison, Marshall, Montevideo, Olivia, Ortonville, Paynesville, Redwood Falls and Willmar — agreed to sign on.

As the new system was implemented and refined over the next several months, the extent of the benefit became clear.

Blood products are now shipped from Red Cross to Rice Hospital at least three times a week and in turn delivered to area hospitals by Rice's daily courier service. As a result, the hospitals have managed to reduce their inventory of blood products by almost one-third.

Turnover has increased. Instead of maintaining a two- to four-week supply of red cells, the 13 hospitals have cut this down to a one-week supply. Although their overall use of blood products hasn't significantly changed, they're making better use of what they have on hand and sending fewer units back to St. Paul, a move that's boosted the regional utilization rate for red cells from 54 percent to 97 or 98 percent.

"What we have in place now is much more of an on-demand system," Halbritter said.

The system has since expanded with the addition of hospitals in Glencoe and in Milbank, S.D. The St. Cloud Hospital also joined the system as a transfer center, where blood products nearing their expiration date can be sent and used.

"That allows us in essence to reduce shortdated units so we can order fresher units," Halbritter said. "It frees up our inventory of shortdated units without having to send them to St. Paul."

This regional approach "is way more responsive to the communities. The communities, we feel, have been better served," said Blake.

Given the demand for blood, effective utilization is critical, she said.

Red cells, the most commonly used component, have a shelf life of 42 days. For platelets, it's even shorter — five days. At the same time, fewer than 5 percent of Americans eligible to donate blood actually do so, and this trend is likely to continue, Blake said.

The efficiencies gained with a regional blood distribution system also have cost implications.

While blood itself is free, there's a cost attached to testing it for infectious disease, processing it, transporting it and covering the administrative expenses, Blake said.

"This has helped prevent cost escalation," she said of the regional approach. "We've been able to show that with each of the participants."

The system created by the local hospitals — believed to be the only one like it in the U.S. — may have promise as a national strategy for managing the blood supply. Last year, Halbritter and Blake, along with Dr. Robert Skeate of the American Red Cross North Central office, were chosen to be among the presenters at a conference of the National Association of Blood Banks.

"It was nice to be able to share a success for best practice," Halbritter said. "We've seen so much blossom out of this. That's what's been rewarding."