



Successful Blood Management Programs

New approach can help patients and cut costs

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By Amanda Koehler

Kathrine Frey, MD, was building a mountain -- Blood Mountain, to be exact. In 2009, to show what blood overuse looked like at her hospital, she used empty boxes of the size used by her blood supplier, (those able to hold 33 red blood cell [RBC] units/box) to draw attention to the size of the problem. When completed, the "mountain" of potentially avoidable RBC units used in her hospital was 17 feet wide, 10 feet tall and 6 feet deep. She decorated it with photos of all different kinds of people to note blood donor variety and emphasize where blood components come from. She also wrote labels showing the cost of each box -- \$54,000.

Frey created Blood Mountain to focus her hospital's attention on the importance of evaluating and managing the use of blood products, which results in both better patient outcomes and cost savings. She advocated for what is called a patient blood management (PBM) program. PBM programs have another important byproduct: getting laboratory administrators and pathologists out of the laboratory and working with other healthcare professionals. Through dedicated interdisciplinary efforts at her hospital, Frey notes 2,500 fewer RBC units have been transfused every year, and other component transfusions are also down by 30 percent.

What Does PBM Include?

PBM examines what is the best course of treatment for an anemic patient who may need blood products. This means a PBM program looks at several elements including transfusion appropriateness, bleeding and anemia management, said Frey, pathologist and director of Patient Blood Management at Fairview Southdale Hospital, Edina, MN. "For a long time, blood management was synonymous with transfusion, and the approach was one size fits all. Now it's patient-centered, not product-centered, and includes use of medications to stop bleeding or enhance red cell production, as well as anemia tolerance," said Frey, who is also a member of AABB PBM Standards Program Unit. "That's the beauty of PBM."

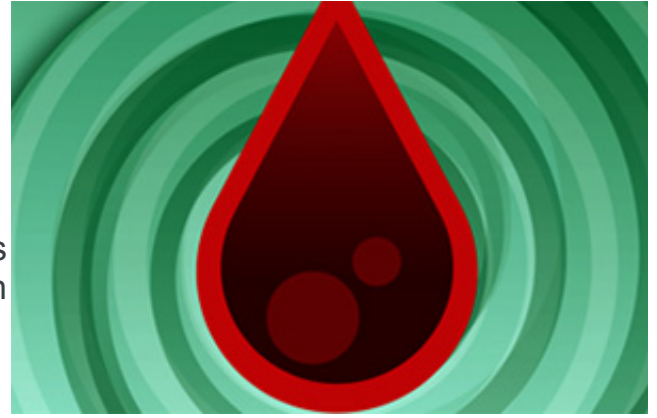
Using a PBM program, healthcare professionals can evaluate what a patient truly needs -- maybe it's a transfusion, or medication or even nothing at all, Frey told *ADVANCE*. This approach can make some patients more at ease with their treatment course, noted Kathleen Puca, MD, MT(ASCP)SBB, medical director at Blood Center of Wisconsin, Milwaukee.

"Patients don't really want a blood transfusion -- they'll take it if they need it. But if they have a choice and a safe alternative, they would rather avoid it," Puca said. For example, during a surgical procedure where there could be a lot of blood loss, many patients would opt for getting their own blood back to help decrease the chance for them needing a blood transfusion. "With a PBM program, it makes you take a step back and think, 'If we can do 'X' and prevent the patient from getting the transfusion, that's a much better approach.' We can then save the blood for the people who really need it."

Working Together

This timely approach is a multidisciplinary one more than anything. "All disciplines need to be on the same page with this program, which can be tough," Frey said. "They need to be able to communicate."

One challenge of PBM programs for laboratory administrators and pathologists may be making themselves known to other clinicians and becoming an active partner in this initiative. "I was a lab tech for a long time, and all too often the lab was more siloed than it should have been from the patient care team," Puca explained. "The hospital transfusion service issues blood products as part of a treatment plan for a patient, just like the hospital pharmacy dispenses medications. Pharmacists assist clinicians and nurses on dosing, appropriateness and compatibility of medications. With PBM, pathologists and medical laboratory scientists in the transfusion service have the opportunity to do the same so as to guide clinicians on the dosing, timing and appropriateness of blood products and recommend testing to guide appropriate product selection," she continued. "It's an interdisciplinary service and you need to get out of the four walls you work in. By going to the patient's bedside and talking with physicians and nurses, better communication ensues and it becomes evident that you're there to assist them in providing the best care for their patient."



Those who are interested in starting a PBM program, might consider these steps:

1. Get the C-suite executives involved -- it's crucial, Frey said. Coming to them with data on blood utilization is important. Communicate what's being done currently and what can be done better, Puca added. Including outcome data such as infection rate, length of stay, or adverse events associated with the transfused patients can help drive the need for change.
2. After the hospital administration is on board, enlisting a program coordinator is best. This champion can help keep the program's focus and facilitate certain jobs, Puca said.
3. Then it's time to educate the whole hospital about what a PBM program could do. Use a one-on-one approach, post fliers or hold a classroom-type lecture -- whatever helps to get the word out. Frey's Blood Mountain worked wonders -- everyone from the CEO and CFO to the loading dock personnel knew the problem a PBM program was out to solve.
4. Get representatives from all relevant departments on your blood management committee, Frey said. "It's easier to tell you what areas aren't applicable -- mental health and nutrition services, perhaps," she said. Representation from administration, surgeons (cardiovascular, orthopedics, general and trauma), other physicians (anesthesia, intensive care unit, hospitalists, cardiology and oncology), nursing (units to coincide with medical specialties previously listed) perfusion, quality, finance, pharmacy and communication is critical for success. PBM is a medical hierarchy leveler, Frey said. Some of those committee members should be program champions, Puca said. "I think the better programs are the ones where the champion is ready to stand up on the soapbox and say, 'This is what's best for our patients,'" she explained. "And your champions have to be within the field that you're trying to change." The more people that are involved, the more you can accomplish. "Much of the work we've done at my hospital hasn't felt like work at all because so many of us are lifting together," Frey said.
5. After the committee and its champions are in place, it's time to sit down and brainstorm, Puca said. Visiting other programs is important to see what else is out there and what others are doing. But remember -- "don't try to take on the whole elephant at one time," Puca said. "Just do

something -- try *one* thing," Frey said. For example, start with your transfusion committee, she added. Evaluate if the right people are on that committee, review existing guidelines and update if needed. Build on the program's successes one at a time.

A Recipe for Success

Hospitals won't see cost savings from a PBM program right away, Puca said. But they will be there. "Anytime you start a new program, it'll cost you in the beginning," she noted. "The saved dollars are downstream. For the program that I'm involved with, it wasn't until about the third year when we began to see savings, and now it's more than \$200,000 every year."

Frey's 400-bed hospital has seen a 35 percent decrease in blood component use as well as a decrease in transfusions.

"Whereas it is necessary that savings be a part of what is measured, it's only one of many performance data points. Documenting best care of the patient is most important, with measurements to show that outcomes are as good or better than without transfusion," Frey added. She also noted to make sure that some of the dollars saved are redirected into the program for sustainability. "Once blood use has decreased there may be temptation to consider the matter fixed. It is important to understand that it is real work to sustain appropriate blood use. That requires people, informatics and other items, such as specialty medications and laboratory equipment, particularly those related to coagulation testing. Someone on the committee needs to be tenacious when it comes to documenting the data, and eventually, the cost savings, Frey said. The documenting of savings is key to more funding.

Although the PBM program ball isn't necessarily always in the pathologist or lab administrator's court, it should be, Dr. Frey said. "It's a loss if a PBM program doesn't have front-and-center pathologist involvement," she noted. "The lab needs to claim a big portion of this and be a big presence. This work for me has been some of the best work and most satisfying I've ever done."

And helping patients is a big payback for all of the committee's hard work. "In a sense, I'm beginning to feel that PBM programs are giving the patient more of a choice in their treatment," Puca concluded. "Physicians are better educated about alternatives, so they can give patients a choice. With a PBM program, this patient-centered care is what can lead to better outcomes for our patients and possible avoidance of transfusions."

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