There have been transfusion safety officer (TSO) -like positions in the United States since the 1960s, although the specifics of the role have been somewhat of a mystery to many. Awareness of the position increased after AABB published *Transfusion Medicine’s Emerging Positions: Transfusion Safety Officers and Patient Blood Management Coordinators* (2013, AABB Press). The book observed that beyond blood product safety, transfusion safety includes a number of diverse areas, including mitigation of the risks of transfusion-transmitted pathogens and patient care errors, particularly in three areas: patient sample collection, medical decision to transfuse and bedside administration of the product. Addressing transfusion safety is further complicated because it is a multi-disciplinary practice with parts of the process occurring outside of blood bank laboratories and in different hospital departments.

The role of a TSO may encompass everything from educating a wide variety of professionals on current transfusion guidelines and monitoring the transfusion process, to establishing, monitoring and maintaining safety protocols and tracking transfusion reactions and incidents. *AABB News* interviewed TSOs from three institutions to explore how different establishments view the role and its responsibilities.

**Cassandra Deen**

A typical day for Cassandra Deen, MSN, RN, who is a TSO at Renown Health in Reno, Nevada, involves reviewing a number of documents and processes, Deen told *AABB News*. She reviews the not-for-profit health system’s patient safety event module for events involving blood, including blood wastage, transfusion reactions and whether a patient did not receive an ordered prescription. She also reviews the list of patients who were transfused the previous day and any transfusion reactions that have not yet received a final pathology report. In addition, said Deen, she follows up with any providers who ordered a transfusion that fell outside of transfusion guidelines. She also attends a daily patient safety meeting with the nursing leadership, teaches an RN blood administration class and works on any ongoing projects for the Patient Blood Management Program. Deen works continuously with the lab, pharmacy and infection prevention.
teams, so she feels very integrated with the rest of the hospital system.

To encourage physicians to follow transfusion guidelines that might conflict with their long-standing practices, Deen explained, “We use a lot of EMR [electronic medical record] support. We limit the number of units that can be taken at a time. Unless a provider chooses ‘active bleeding’ as an indication, only one unit of blood can be ordered.” She added, “A provider has to enter the indication for the product and the patient’s associated lab value populates in the order. If the patient’s hemoglobin (Hgb) level is >7, a BPA [best practice advisory] will pop up if a patient’s Hgb is higher than the indication the provider is choosing. We also try to meet yearly with groups of providers,” Deen said. “Cardiac, ortho, oncology... We work closely with our trauma department physicians, who tend to help champion our changes.”

Sometimes a discrepancy arises between health care providers about how much blood a patient needs. When this happens, it is resolved through the quality/peer-review process. “For example,” said Deen, “if it’s found that a patient may have received an insufficient amount of blood, the case would be reviewed at a confidential section meeting with the prescriber’s peers to determine if anything had been missed.”

Renown Health has taken a number of steps to optimize patient safety, she said. The committee has revised standing blood orders and worked to eliminate transfusions based on nursing communications. In addition to continuing the two-person bedside check before a transfusion, Renown now scans the blood unit bar code and documents in the EMR. “The blood bank is very strict on the samples they will allow for testing,” she said, “and we want to ensure all safety measures are taken by both blood bank and nursing staff prior to the patient beginning transfusion.”

Before she started in this position, Deen said, it was common to prescribe two units of blood. “Now it is very rare outside of our actively bleeding patients.” There has been an overall decrease in blood utilization, and the percentage of patients receiving a transfusion has decreased from around 25% to 18%. “Along with the total number of units transfused house-wide, the number of units of all components has decreased from 3.7 to 2.7 per patient, she added. “We continue to see more patients but not increased blood usage.”

Deen said she was drawn to this line of work because she “loved the idea of being part of big changes and working with a team that was very passionate about evidence-based medicine.” She added that patient safety is very important to her and that she thinks that policies, procedures, education and the EMR can be very useful in educating providers and staff and keeping patients safe.

Val Strockbine

“I’m not sure anyone in health care has a ‘typical day,’” said Val Strockbine, MSN, RN, CPHQ, TSO, Johns Hopkins Hospital, Baltimore, “but some of my routine activities include participating in transfusion medicine rounds, investigating and addressing adverse event reports, auditing transfusion documentation, performing direct observation audits of transfusions, attending hospital safety meetings, providing education and supporting transfusion medicine’s quality improvement initiatives.”

Strockbine said she came to transfusion safety after working in quality improvement, which was a heavily data-driven role but further away from patient care than she wanted. “As a transfusion safety officer, I am able to use data in collaboration with frontline caregivers to improve safety and transfusion practices. For me, it’s a great blend,” she said. 
To increase patient safety, the hospital has instituted barcode scanning in addition to requiring two-person verification for blood administration. This is monitored through direct observation audits, said Strockbine. “Our blood bank has implemented the culturing of every platelet product to prevent septic transfusion reactions and avoid patient harm,” she added.

To encourage the physicians to follow the institution’s transfusion guidelines, the director of the patient blood management (PBM) program sends monthly reports to the department chairs, said Strockbine. The reports include data on red blood cell (RBC), plasma and platelet utilization at the level of individual providers, she explained. “The data is disseminated to individual providers who can provide comments or feedback around particular cases. Often, providers are not aware of their blood ordering practices until they see the data,” she said. “The reports also foster friendly competition among department faculty and staff.”

Because a representative of the transfusion medicine staff is typically not at the bedside when blood orders are placed, discrepancies over the appropriate amount of blood to transfuse are usually addressed retrospectively, said Strockbine. She added that for some services, including the Sickle Cell Infusion Center and the Apheresis Clinic, “there is an ongoing conversation around population and individual blood needs, strategies to reduce overutilization and waste reduction.” In one initiative, the PBM program was able to reduce the standard number of blood products issued for liver transplant patients. “After collecting utilization data,” she said, “we partnered with the anesthesia department to convince them and the transplant surgical service that we were packing coolers with far more blood than was typically used. This initiative reduced our blood wastage and reduced non-value-added work by the blood bank.”

In the nearly two years since Strockbine began working in transfusion medicine, she has seen the number of platelet transfusions decrease significantly in the ambulatory oncology setting. “We know that in our health system, we have maintained quality outcomes using less blood in patients treated for hip fractures and cardiac and spinal surgery patients,” she added. “The challenge of vein-to-vein transfusion safety and utilization practices varies by patient population, setting and situation,” she said, “and all need to be on our radar. Certain patients with rare antibodies or hematologic disease need special attention. But so does the patient receiving a transfusion in an area of the hospital where transfusions don’t occur very often.”

Overall, the number of transfusions of all blood products has gone down, a change she attributes to the hospital’s “Why give two when one will do?” campaign, which has raised awareness about judicious transfusion practices among all health care team members.

Heather Toeppner

Heather Toeppner, MSN, RN, is the transfusion stewardship officer at the Medical University of South Carolina in Charleston, S.C., a position created in 2015. “Keeping our patients safe, with or without transfusions, is our number one goal,” she said. “I work within the patient safety department, so I work alongside a number of subject matter experts inside and outside of transfusion services.” She described her day as consisting of email correspondence from multidisciplinary professionals, mostly nursing and health care providers; scheduling and attending meetings related to transfusion-related safety initiatives; patient safety investigations related to incident reporting; preparing presentations; and aggregating data so it is meaningful to care team members. She also researches and audits documentation related to...
specific patient cases in the EMR. “My favorite days are when I am teaching or providing ‘at the elbow’ support for our care team members,” she said.

When assessing patients’ blood needs, Toeppner’s top considerations include past medical history, hemodynamic stability, lab values — including a restrictive Hgb threshold of 7-8 g/dL for stable, non-bleeding patients — and the appropriateness of the decision to transfuse based on the patient’s clinical presentation. She said she works with a wide variety of patients, including those in the ICU, and oncology and surgical patients.

Toeppner’s professional background includes intensive care unit experience and a master’s in nursing education. “After working in nursing professional development for 3 years, I wanted to expand my scope and knowledge base to a more specialized focus, like transfusion medicine, while maintaining the ability to educate nurses and other care team members,” she said. “Education is a big part of this role, and it’s something I’m very passionate about.”

Toeppner has been in her current role for 3 and 1/2 years, and in that time, she said, the Medical University of South Carolina (MUSC) has implemented a number of practices to optimize patient safety, including barcode scanning for blood product administration, a second ABO/Rh sample to confirm a patient’s blood type and a hemoglobin BPA for RBC orders to reinforce adherence to a restrictive Hgb threshold. There are also approximately four more transfusion safety projects in the planning stage to address specific issues, for example notifying providers about positive antibody screens.

To encourage those who order transfusions for patients to comply with transfusion guidelines, she said that the program provides annual PBM metrics education, online resources and “just in time” education, as needed. MUSC also holds an annual patient safety fair and a monthly PBM Management Committee meeting, where participants discuss evidence-based guidelines and opportunities to improve patient care. There are also opportunities to meet quarterly with department operations committees, and discuss ordering practices.

“Intra-hospital variation in transfusion practices inside and outside the organization is not uncommon. Networking and collaborating with outside hospitals, specifically with other TSOs, is invaluable,” said Toeppner. “We tackle this issue by providing evidence-based data, guidelines and resources and evaluating transfusion practices. We have a robust transfusion service comprising our hardworking medical technicians, who review orders and will engage providers when discrepancies exist.” She collaborates with the transfusion services medical director and manager on provider ordering data and communicates this information in departmental quality assurance performance improvement (QAPI) meetings.

Toeppner said that every year, she’s seen increased adherence to evidence-based transfusion guidelines, in addition to a decrease in organizational blood product utilization and reduced expenses for MUSC’s blood product supply. “There’s still a lot of work to be done and I look forward to taking our hospital there.”

“Transfusion safety is about creating the safest environment possible for our providers, clinicians and patients, if and when blood products are warranted,” she said. “As the transfusion stewardship officer for MUSC Health, my role is dedicated to educating our care team members and increasing awareness; monitoring best practices for optimal patient outcomes; promoting blood product conservation; and, above all, keeping our patients out of harm’s way while they’re under our care.”