

Reaching a Higher Standard

A panel discussion on advancing patient and healthcare worker safety through closed IV catheter systems.

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Panelists

Brenda J. Baker, MN, RNC, CNS is a Nursing Practice Specialist at the Carilion Health System in Roanoke, Virginia.

Jeff Clark, RN, BSN is the Patient Care Director and Director of Nursing at West Calcasieu Cameron in Sulphur, Louisiana.

Marion Gillen, RN, MPH, PhD is the Academic Coordinator and Deputy Director at the Center for Occupational and Environmental Health at the University of California, Berkeley, School of Public Health in Berkeley, California.

Deb Richardson, RN, MS is a Clinical Nurse Specialist and Consultant for the Infusion Therapy Team at the University of Texas M. D. Anderson Cancer Center in Houston, Texas.

Darin Roark, BSN, RN is the Director of Clinical Products Review at Advocate Health Care in Oak Brook, Illinois.

Kathy Walther, RN, BSN, CRNI has been an infusion therapy consultant and educator for over 20 years. Currently she is the Nurse Educator for the Infusion Nurses Society (INS) based in Norwood, Massachusetts.

In 2001 Congress passed the Federal Needlestick Safety and Prevention Act. Intended to protect healthcare professionals from the dangers of needle-related injuries, the act's impact has reached across the entire industry to change the way clinicians practice. Today, a higher standard of safety is expected in nearly every facet of patient care. As a result, blood exposure related to peripheral IV catheters has become an especially urgent concern. On February 13, 2007, BD Medical brought experts from across the country together in San Antonio, Texas, to discuss the challenges and solutions associated with this issue in an open roundtable discussion. The following is an excerpt of that session.

Nursing2007

As seen in *Nursing2007*

The discussion was moderated by Alicia Mares, RN, CRNI. She is a Clinical Marketing Manager at BD Medical in Sandy, Utah, where she has developed and implemented numerous clinical education programs related to infusion therapy.

How has the Federal Needlestick Safety and Prevention Act changed the way nurses practice?

Darin Roark It's really helped support what we call a culture of safety. Now, we not only look at the safety of the patients we're caring for, but also at the safety of those that have to deliver the care.

Marion Gillen In California, we looked at five years of needlestick data, two years before the California Needlestick Safety Act passed and several years after the law went into effect, and any way that we look at it, we've seen a definite decrease in needlestick rates.

Jeff Clark I think it has made a positive impact. It's increased awareness, but it's also increased education and changed the way nurses practice. On the other hand, there is a learning curve. It's always difficult for frontline nurses to make changes when they've been practicing a certain way for years and years.

Kathy Walther The new safety devices and guidelines have made all healthcare workers reexamine their practices. The positive from this is that many healthcare workers recognize the need to have continuing education with infusion therapy. There has been a major shift in practice guidelines, policies and procedures.

Brenda Baker The law has helped push the leadership to protect their staff. But the hard part is that you still see strongholds that continue with unsafe devices, even when they're being provided with safer alternatives.

Deb Richardson Right now, there are so many safety products that have been brought to the market that it's confusing to clinicians. They're not sure which products are best and how to use them.



Marion Gillen

What are some of the reasons peripheral IV catheter blood exposure has been acceptable for so long in the healthcare community?

Deb Richardson Remember the time when cars didn't have seat belts, or if they did, you weren't required to wear them? Then the use of seat belts was mandated by law. It was hard for those of us who grew up without seat belts to implement this practice and become comfortable with it, even though there was clear documentation that the use of safety belts decreased our risk of injury and death. It's the same sort of situation in health care. We all started out in an environment where blood exposure was just the way it was.

Jeff Clark I remember they used to put a towel under somebody's arm when they'd start an IV because you knew that they were going to have blood flow. Now there's a drop of blood and that's unacceptable.

Darin Roark It's not just caregivers. Society as a whole has changed their focus. Now everyone is looking for opportunities to be safer. Patients today

are sensitive to blood exposure. They don't like the sight of their own blood. So when you're not creating a mess, you're raising the level of patient satisfaction.

Deb Richardson Patients have every form of media providing them with information on a daily basis. Before they even walk in the doors of our facilities, they have expectations. If a clinician comes in to start an IV and there's a lot of blood, the patients think something's not right and you are doing something wrong.

Darin Roark Most patients are safety savvy and aware of the potential for medical errors. Patients today truly second guess your abilities when you do any type of procedure.

How does blood exposure and the IV insertion affect patient satisfaction scores?

Deb Richardson That's probably the biggest issue that patients complain about. They talk about the discomfort or blood loss. They'll say the clinician didn't appear to be competent in their skills.

Darin Roark Our patients have no idea if you properly auscultated their lung sounds, but they certainly know how much pain they felt with the insertion of the IV catheter.

Jeff Clark Start multiple IVs with a tough stick and all of a sudden you're a bad nurse.

From the patient's perspective, what determines whether the IV experience is positive or negative?

Jeff Clark It's the number of insertions and the amount of pain. It's the caregiver communicating what to expect. With the pediatric population, it's making sure that the parents and the children are comfortable with the process.



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DARIN ROARK

Darin Roark I think that a positive or negative IV experience is the integral bond that the caregiver develops with the patient. One negative experience and you have to win that patient over again. That’s why it’s important to listen to the patients and make sure they’re well informed about the product being used and the technique you’re going to use.

Deb Richardson We have patients that repeat, coming again and again throughout their treatment process. If they have a good experience the first time around, they’re not so afraid the next time they come in for their treatment. And if they have a bad experience, it’s harder. Ultimately, the number of insertion attempts and the amount of pain dictate the experience for the patient.

What are the risks associated with blood contamination in the patient-care environment?

Deb Richardson Any time you have blood exposure, there is a risk to the clinician. We don’t really know what type of pathogens or organisms that particular patient may harbor. And yet, we’re putting ourselves at risk every time we do any type of invasive procedure, particularly with the peripheral IV. And when we dispose of our equipment others run the risk of exposure as well—housekeeping and biohazard management personnel, for example.

Brenda Baker When I looked back through the employee health exposure logs, we had two events where nurses had blood splashed in their eyes

when they took off their gloves after inserting IVs. Nobody would have predicted that could happen, but it did. Twice.

Is blood exposure on the radar of healthcare organizations, such as CDC, OSHA and INS?

Kathy Walther INS is very much aware of blood exposure. I get calls constantly asking what should be done with blood-exposure-related issues. They want to know what are the acceptable forms of practice. INS has had many presentations on healthcare safety at our annual meetings and will continue to do so.

Brenda Baker This is becoming a bigger issue all across the nation, now that quality and safety are in the forefront. Consumers expect it now. A lot of outside organizations are pushing for it, too. They want to see our data. They want to see what products we’re using to create improvements.

Marion Gillen I think it’s very much on the radar screen of OSHA, but their resources are limited. They only have so many staff.

Deb Richardson Some decisions are being driven by recommendations or guidelines from outside organizations such as OSHA, the CDC, etc. So it’s definitely on the radar for these organizations, but it’s one of many blips on their radar screen. The real driving force needs to come from the clinicians and the community of healthcare workers.

Are there other issues related to blood exposure that INS would ever put in their standards?

Kathy Walther We have things already written on safety devices, securement and stabilization, as well as blood exposure. But as we go into this next level with healthcare worker safety, not only will there be issues as far as low tolerance with infections and manipulation at the insertion site, there will definitely be low tolerance for blood exposure.

What do you think is the next level of healthcare worker safety?

Deb Richardson Now we need to provide further education and get people to move forward and accept the need to protect themselves and ultimately protect the patient. Not everybody buys into the use of certain safety products. You have some groups that won't use them at all and I don't believe that should be an option.

Kathy Walther The 2006 Standards of Practice are talking about more stabilization, and enclosed IV systems that are all-inclusive. Basic issues such as reducing infections and proper hand hygiene are still being addressed. Nurses need clear direction in their practice.



Brenda Baker I know that after we switched to a closed system with our catheters, our staff got used to the protection it gave them from blood exposure. From there on they found it totally unacceptable to have a product that exposed them to blood. I've had staff come back to me with other products that don't have those safety features and ask, "Can this be like our closed catheter product? Can we get it like that?"

Marion Gillen When we conducted research on a closed system, the prospect of not being exposed to blood while starting an IV was a revelation to everyone in the group. They didn't even know this kind of technology was available.

With all the different safety devices that are available, how do you make that choice?

Deb Richardson Within our institution we have a multidisciplinary committee that is responsible for product decisions. The individual clinical departments look at the available products and decide which ones we think would be beneficial to staff and patients. At that point an evaluation is proposed for that particular product and, if approved, an evaluation is performed. We look at the product not only



from a staff and technical standpoint but also from the standpoint of patient care. Ultimately, how safe is it going to be for the staff and the patient? Does it work well, etc.?

Darin Roark We have several hospitals that are Magnet-accredited, and as part of that process they look at occupational opportunities for injury and illness, and certainly blood exposure was a part of that focus. So we looked at the market to see what type of products could limit blood exposure and eliminate caregiver needlestick injuries.

Marion Gillen One of the things that I learned from the research that I did is that clinicians do not want to have a device that interferes with their relationship with the patient.

What are your perspectives on closed IV catheter systems?

Deb Richardson If you have an all-in-one system it decreases the risk of user error and the potential risk of contamination.

Jeff Clark Any time that you're opening separate sterile packages and connecting devices together, you always run the risk of contamination. If you have a device that lets you make just one connection, you're reducing that risk of creating an infection.

Kathy Walther To me, a closed IV catheter system would mean that when I go ahead and perform my venipuncture, I don't have to put any other add-on devices on to that particular system. I could be sure that once this catheter was in, neither my patient nor I will be exposed to any blood at all. INS does not endorse products but concepts. The Standards are based upon evidence-based practice and research. The concept of a closed IV system is much needed with the research that accompanies this issue.

Darin Roark The closed IV catheter system also provides an opportunity for the reduction of the introduction of pathogens at the hub because you're not manipulating the hub.

Kathy Walther I also think it's important to consider that many teams across the country are just having



Deb Richardson

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DEB RICHARDSON

their peripheral catheters put in by staff nurses with limited educational experience. If you have a catheter that is simple for them to put in that has all the add-on devices attached, I really feel this is going to reduce the amount of mechanical complications and chemical complications that you will find at the insertion site.

What kind of changes have you seen from implementing a closed IV catheter system?

Brenda Baker Our facility made the conversion and saw our needlestick injuries related to catheters go from 13 one year to 5 the next year. And two of those were combative patients. So we’ve seen a significant improvement.

Jeff Clark After implementing a closed system, we had zero needlesticks from IV catheters for ‘06, which is pretty phenomenal. A local TV station even did a piece on us. As patients access our facility, they’ll sometimes say, “Oh, that’s the IV I saw on TV. It’s not going to hurt right?” Staff is safe and that makes me happy.

Should we be tracking outcomes of peripheral IV catheters, aside from phlebitis and infiltration?

Deb Richardson That’s an area of great deficit. We do a really good job of looking at bloodstream infec-

tions with central lines, but the work done in the peripheral IV arena is pretty minimal.

Brenda Baker About the only time we hear about peripheral IVs is if there was a bad outcome.

Jeff Clark It’s difficult to track because there are so many variables. Is it dwell time? Is it the clinician’s technique of putting it in? Is it manipulation?

Darin Roark It would be great if there were technology out there that would more or less automate that process for us because we certainly don’t have the resources to do it manually.

Should we be looking at catheter-related bloodstream infections related to peripheral catheters?

Jeff Clark Should we be? Probably yes, if only for the reason that we’ve looked at the central lines and it’s improved our outcomes.

Kathy Walther The INS is absolutely interested in looking at that. But the manpower to develop the criteria for the data has to come from the acute and alternate sites. We need evidence-based research and literature from them before we can develop a standard.

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Our panel and moderator. From left to right: Brenda J. Baker, Darin Roark, Kathy Walther, Deb Richardson, Alicia Mares (moderator), Marion Gillen, Jeff Clark

Looking at all these issues—blood exposure, contamination, clinician and patient safety—what are the real costs to healthcare organizations?

Darin Roark It costs an enormous amount of dollars to treat a bloodstream infection, or a blood exposure or a needlestick injury. By implementing safer policies and practices and using products that are going to improve caretaker and patient safety, we save healthcare dollars. This model demonstrates our belief that delivering the best in clinical outcomes is not only good for our patients, it's good for the nation as a whole. ■

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