



veinplicity
POWERFUL. PORTABLE. PRECISE.

WWW.VEINPLICITY.COM

FEB 09, 2017

How can we overcome needle phobia?

By Physeon

Consider two of the most frequently heard phrases in healthcare: “I’m going to draw a little blood” and “Let’s start your IV therapy.” They’re spoken by nurses every day, in every language. But for many patients, they signal an experience that can range from stressful to downright terrifying.

“It’s like when you get punished for something the first time and you know you’re going to have to do it again,” said Sharon, a patient in Switzerland who has an autoimmune disease, poor peripheral veins and hard-to-access deep veins. “I’m literally scared – I just keep my fingers crossed and hope it will be OK.”

Writing for the *British Journal of Nursing*, McGowan said the psychological impact of peripheral intravenous (IV) cannulation should not be underestimated. The invasive procedure “often causes patients considerable anxiety and distress, especially those patients who have to endure multiple and possibly painful and difficult cannulations” (2014, p. S4).

‘Needle phobia’ – the term commonly used for the anxiety and distress linked to peripheral IV cannulation – does not discriminate. It affects patients from all walks of life, medical backgrounds and geographies. As many as one in 10 people suffer from it, as reported by McGowan (2014).

And the scope for impact is enormous. Researchers estimated over 1 billion venipunctures for blood

samples occur annually and over 90% of hospitalized patients may require peripheral cannulas for IV therapy (Lamperti & Pittiruti 2013, p. 888). Patients like Sharon need both during hospitalization. Although blood draws may seem trivial or routine at first glance, “if you don’t have the results, then you don’t know what treatment to proceed with. It can quickly become scary.”

The most vulnerable

Perversely, it is often the most vulnerable patients who experience the most psychological distress: people with serious illnesses and those with difficult venous access (DVA).

For people with life-threatening or terminal illnesses, gaining peripheral IV cannulation can feel like adding insult to injury. Cancer patients receiving IV chemotherapy “are significantly more likely to experience such psychological complications” that lead to ‘anticipatory’ psychological side effects such as nausea, vomiting or loss of appetite (McGowan, 2014, p. S4). Mackereth also noted the added burden on patients receiving chemotherapies: “This ‘needing but not wanting’ a cannula can remind patients that they are ill and dependent on venous access” (2016, p. S27).

People who are dehydrated, have fragile veins due to diabetes, veins damaged by cardiovascular or sickle cell diseases, or veins ‘blown-out’ by regular IV therapy are all at risk for DVA (Walsh 2008). And unfortunately, DVA patients are often the very

people who must endure multiple sticks. Sharon said her worst – experience came a week into hospitalization for her autoimmune disease. “My nurses couldn’t gain venous access. They tried three or four times before a specialist had to come in.”

McGowan cited three factors that influence the psychological impact of peripheral IV cannulation: the underlying disease, the importance of the therapy and each patient’s prior experiences – and noted over 50% of phobias are formed through personal traumatic experiences (2014). Since DVA patients frequently experience failure *and* related complications – and often have a serious illness as well – it is easy to see how they might develop needle phobia.

Veinplicity: The revolution in venous access

The Veinplicity® device is CE marked and registered as a Class IIa medical device in the European Union and as a Class II medical device in Canada. We are seeking FDA approval.

The device is manufactured within the ISO 13485 standard in the United States.

A dangerous cycle

Needle phobia can trigger a downward spiral, psychologically and physiologically. "The fact that you know you have DVA, and you're going for a blood draw – it becomes a vicious circle," said Sharon.

Mackereth related it to the 'fight or flight' response (2016, p. S27). "The fear of cannulation or needles sticks activates the sympathetic nervous system, which in turn causes vasoconstriction" (Wells 2008, p. 40). Thus, when fear and anxiety cause peripheral veins to constrict – they up the ante for failure, said McGowan. "This makes the insertion of the cannula more difficult, which may lead to failed or repeated cannulation attempts making subsequent attempts more challenging and distressing for these patients" (2014, p. S6).

Failure to attain peripheral IV cannulation can both intensify needle phobia and carry physical dangers. Additional venipunctures are frequently more painful and linked with higher rates of extravasation, vascular perforation (causing hematoma or hemorrhage) and phlebitis (Walsh, 2008, p. 198). Furthermore, any nausea, anxiety, increased heart rate and fainting brought on by repeated attempts "may in turn lead to the refusal of life-saving or life-prolonging treatments" (McGowan 2014, S6).

Impact on practitioners

Insertion failure and complications are also dangerous because they can delay or interrupt vital treatment. Sharon faced this when she was hospitalized and her caregivers couldn't attain venous access. "My treatment had to be delayed, because the results of my blood draw were late. I was already anxious and without the blood draw I didn't know if the treatment was effective or not."

This, said McGowan, is distressing to nurses as well (2014). Walsh agreed: failure "can cause the nurse to feel frustration and have a sense of inadequacy" (2008, p. 198). There is also external pressure. Some facilities expect placement on the first attempt (Mackereth & Tomlinson 2016, p. S27). Others have adopted the *Journal of*

Infusion Nursing: Standards of Practice recommendation that a nurse makes only two attempts, "since the number of sticks a patient receives can significantly affect his/her experience and alter overall perception of patient care" and failed attempts can erode a patient's trust and confidence (Walsh, 2008, p. 198).

After telling her nurses that she had deep veins, Sharon remembers "one particular nurse called someone else immediately because she wasn't comfortable proceeding. If someone's not confident, they're going to make it worse. I appreciated the nurse who turned it over to a specialist."

And yet, hospitals are reducing specialist IV teams to cut costs. This, despite studies indicating first-attempt peripheral IV insertion success rates are higher with nurses who conduct placements on a regular basis or are specially trained (Walsh 2008), and reports indicating IV therapy is "rapidly expanding" in hospital settings (McGowan 2014, p. S9).

The good news

Nurses are in an ideal position to help patients overcome needle phobia. Mackereth and Tomlinson suggested avoiding language that 'warns' patients of complications. "The 'sharp scratch coming' catchphrase triggers tension in patients, with veins literally retreating in fear" (2016, p. S27). McGowan agrees, nurses can alleviate psychological complications through "knowledge and understanding of the effective methods that are used to manage and minimize" them (2014, p. S4).

Using the Veinplcity venous access device is one method that can minimize both physiological and psychological complications linked to peripheral IV cannulation.

The rapid but gentle stimulation delivered prepares veins for successful cannulation by increasing local and peripheral blood flow. Deep veins, small veins, dehydrated veins and even damaged veins become engorged, stiffen and expand. The result: veins are more visible and accessible, more stable for palpation



and physically larger for nurses to target. Indeed, vein lumen diameter can increase by up to 50%.

Such marked, physiological changes can lead to first-attempt success, plus reduce complications like vascular perforation or extravasation. Anxious patients will be less likely to see their fears played out. Besides halting a dangerous, downward spiral that could delay or interrupt therapy, a positive experience could help needle-phobic patients relax during subsequent blood draws or treatments. Furthermore, by improving first-attempt success rates, Veinplcity can prevent patients from developing needle phobia in the first place.

And, it is only natural that more relaxed practitioners translate into more relaxed patients.

References

- Lamperiti, M, & Pittiruti, M 2013, 'Difficult peripheral veins: turn on the lights', *British Journal of Anaesthesia*, vol. 110, no. 6, pp. 888-891.
- Mackereth, P, & Tomlinson, L 2016, 'Considering the relationship between the needle, patient and cannulator', *British Journal of Nursing*, vol. 25, IV Therapy Supplement, pp. S27-S28.
- McGowan, D 2014, 'Peripheral intravenous cannulation: managing distress and anxiety', *British Journal of Nursing*, vol. 23, IV Therapy Supplement, pp. S4-S9.
- Walsh, G 2008, 'Difficult peripheral venous access: recognizing and managing the patient at risk', *Journal of the Association for Vascular Access*, vol. 13, no. 4, pp. 198-203.