

A light touch and a caring approach ease childhood needle experiences

August 14 2023



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Vaccinations, blood tests, or IVs—it's fair to say that no child likes a needle. So, when it comes to the jab, a light touch and a caring approach is incredibly welcomed—both by the child and the parent.

Now, world-first research from the University of South Australia shows that while many [children](#) suffer distress, new ultrasound-guided techniques could provide much-needed reprieve.

Offered by the Fast Access and Advice for Intravenous Routes with Imaging (FAAIRI) service by the SA Medical Imaging (SAMI) service Nurses at the Women's and Children's Hospital (WCH), the ultrasound techniques ensure needles and cannula are inserted in the "right line, first time," ensuring optimal care for children with chronic disease.

Conducted in partnership with SAMI and the WCH Network, the UniSA study explored the experiences of children who needed regular needle treatments, particularly those who had failed cannulation attempts due to "difficult venous access" (DVA).

Researchers found that children with DVA experienced significant distress before (as insomnia, anxiety), during (fear or terror) and after their needle experience (in some instances [psychological distress](#)).

It also noted that many clinicians were too "job focused," getting on with the practicalities of readying an IV without properly considering the [child](#) and their care. Behaviors such as failing to introduce themselves, taking a long time to prepare, and rattling tools all aggravated a child's stress.

Lead researcher, Dr. Rebecca Sharp from UniSA's Rosemary Bryant AO Research Center, says the research highlights an acute need to change clinical practice.

"Intravenous cannulas (IVs) are one of the most common invasive hospital procedures for pediatric patients. But while these are a routine part of everyday health care, many children describe IVs as one of the most painful procedures in hospital," Dr. Sharp says.

"Children with [chronic health conditions](#), such as cancer and [cerebral palsy](#), are at greater risk because they're required to undergo repeated treatments via intravenous cannulas.

"Up to 50% of children are highly distressed during these procedures, and 25% panic to the point where they often need to be held down.

"Repeat failed cannulation attempts can cause a child (and their parents) extreme distress. Already, more than half of children require two attempts, with some suffering 10 attempts or more.

"It's vital that clinical practices change. Clinicians must recognize the specialist skills required for intravenous cannulas and swiftly refer patients to specialists if a child has a history of DVA."

UniSA researcher and Pediatric Vascular Access Nurse Consultant, Catherine Baring, says ultrasound technologies have changed the landscape for children with DVA.

"When a child has endured multiple and painful needle experiences, they're understandably very distressed when they have to face another procedure," Baring says.

"By using ultrasound technology, we can accurately guide the cannula in, ensuring we get it right, first time. Ultrasound allows us to see exactly where the vein is and to quickly insert a needle with as little discomfort as possible."

Part of FAAIRI's approach involves using behavioral strategies to reduce pain and distress, including hypnotic communication and empowering children to reduce fear.

"We pride ourselves on patient-focused care. We listen to children,

engage their families, and explain what we are going to do," Baring says.

"A child's well-being is at the heart of every FAAIRI interaction. We use a calm, quietly confident style of communication during these procedures which helps to reassure a child and let them know they're safe."

The FAAIRI team is also educating the next generation of medical professionals.

"We train every new group of doctors about how to identify DVA so that patients who have predicted difficulty can be referred immediately to the FAAIRIs," Baring says.

"We also teach doctors strategies to approach IV insertion for children who aren't predicted to have DVA, to improve patient and family experience, using the results of our research.

"I believe we are rapidly improving care for children who have DVA at the Women's and Children's Hospital and hope our research recommendations are adopted elsewhere."

More information: Rebecca Sharp et al, The parent, child and young person experience of difficult venous access and recommendations for clinical practice: A qualitative descriptive study, *Journal of Clinical Nursing* (2023). [DOI: 10.1111/jocn.16759](https://doi.org/10.1111/jocn.16759)

Provided by University of South Australia

Citation: A light touch and a caring approach ease childhood needle experiences (2023, August 14) retrieved 10 May 2024 from

<https://medicalxpress.com/news/2023-08-approach-ease-childhood-needle.html>

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