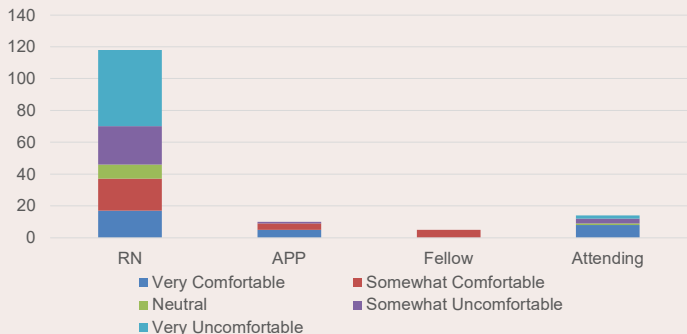


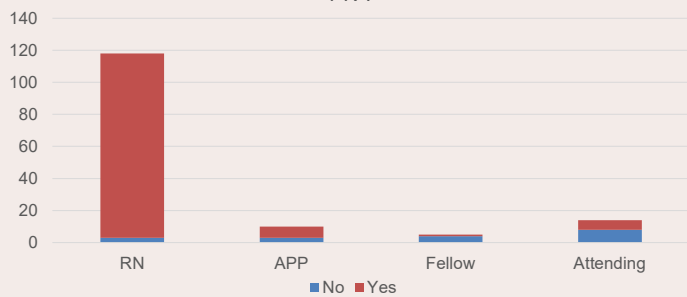
Problem

Nurses in our pediatric intensive care unit (PICU) have raised concerns about the risk of patient harm related to extravasation while administering short-term vasoactive medications through a peripheral IV (PIV). Our work group drafted and distributed a pre-intervention survey to gauge self-identified barriers to PIV vasoactive administration between bedside nursing and providers.

How comfortable do you feel ordering/administering vasoactives via PIV?



Do you have concerns about administering vasoactives via PIV?



Clinical Question

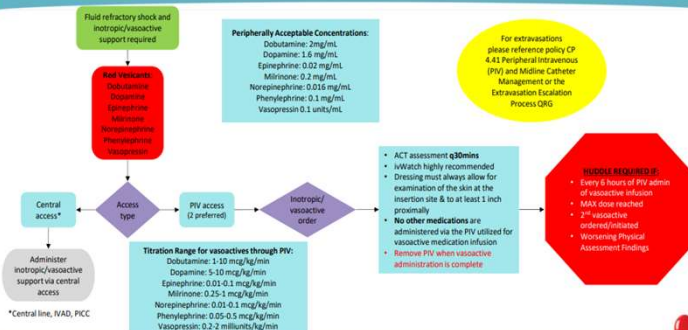
Would the creation of a standardized process map increase PICU nursing comfort level and decrease concerns related to infusing vasoactive medications through a PIV?

Literature Review

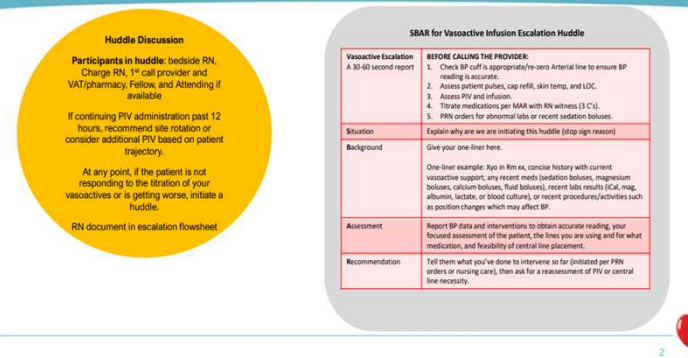
- 9 studies: 6 pediatric, 3 adult, with 1 systematic review
- Vasoactive agents in literature: epinephrine, norepinephrine, dopamine, vasopressin, and phenylephrine
- Mean duration for infusing PIV vasoactive medications: between 2 hours and 22 hours with the longest recorded at 72 hours
- Extravasation rates between 1.5%-3.4% with no serious harm recorded
- Most studies included a clear protocol or guideline for the use of vasoactive medications via PIV
- Scan QR code for references



Vasoactive Administration Process Map



How to Huddle for Vasoactive Escalation:



Practice Implications

After a thorough literature review, we assembled an interdisciplinary team to create a plan to address these concerns. Our team held that the most effective way to listen and combat the underlying issues at hand would be to develop a process map that would support safe PIV vasoactive administration and encourage advocating for a central line for their patient when specific criteria are not met. This process map would provide physicians with evidence-based practice guidelines to support the use of PIVs when administering vasoactives short-term as well as recommend limits to PIV delivery of these high-risk medications. We then utilized feedback from the survey in our development of the process map.

Next Steps

Because extravasations were a concern from our bedside staff and are a reportable measure of patient safety, our team has continued to track the extravasation rate both pre- and post-intervention. We distributed our post-implementation survey in January 2024 and received responses that the concern from nursing staff to administer vasoactives over a short period of time has diminished. We also recognized there is a barrier for staff regarding where to find the process map and how to initiate the conversation with their provider. We are looking for alternative methods to increase accessibility. Additionally, we have had conversations to expand this project hospital-wide.