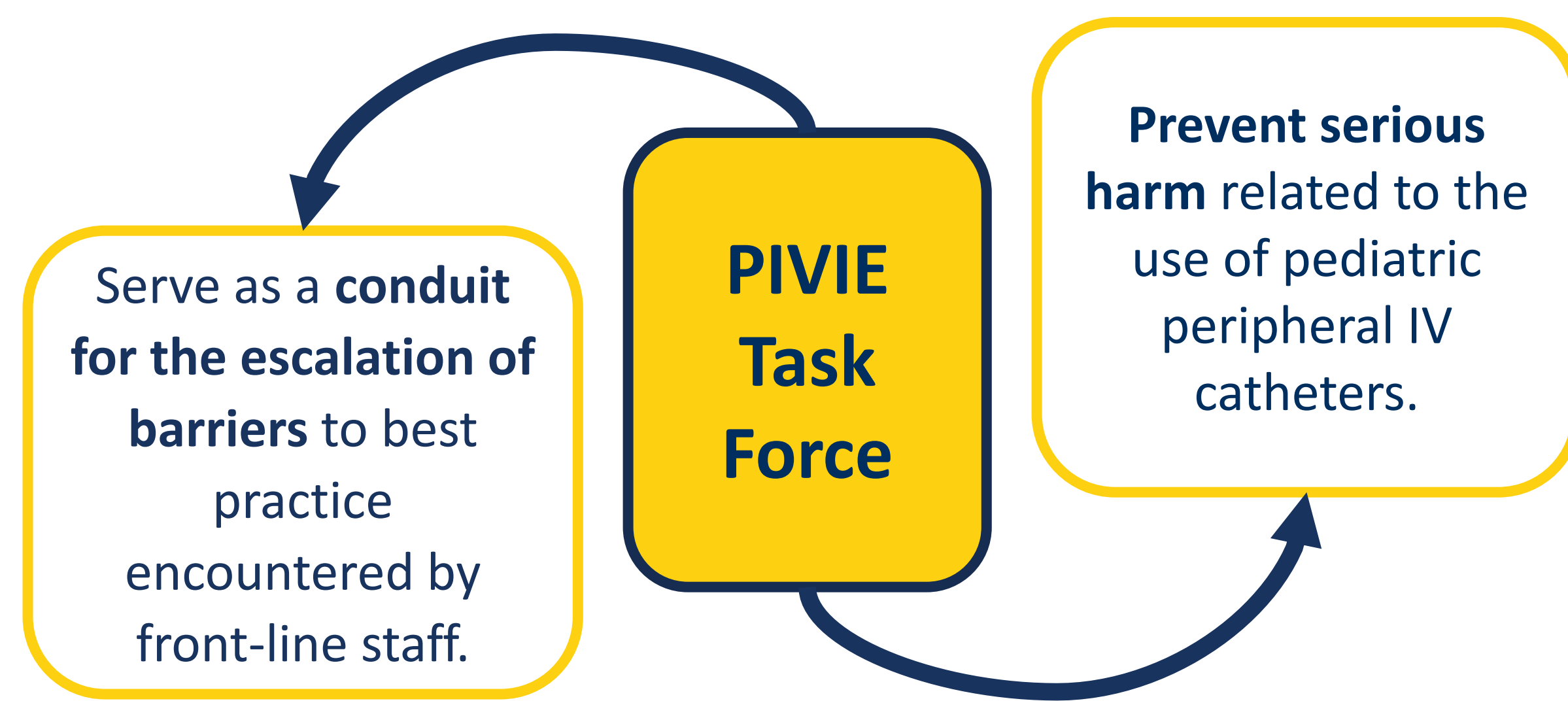


## BACKGROUND

Patients at C.S. Mott Children's Hospital are experiencing more peripheral IV infiltrations and extravasations (PIVIE) with serious harm as compared to similar pediatric hospitals. Therefore, a segment-led PIVIE Prevention Task Force was created.



## LITERATURE REVIEW

Many healthcare providers view the placement of peripheral IV catheters (PIV) as routine and without risk; however, it is estimated that 80% of patients with PIVs suffer complications.

**Children with PIVs are at greater risk for complications** due to smaller vein size, fragility, and difficulty in providing adequate catheter stabilization.

PIVIE prevention best practice includes a **Touch-Look-Compare (TLC) assessment of the PIV site at least every 60 minutes.**

The adjacent poster describes the necessary elements required for a TLC assessment.

**TLC for Pediatric IV Safety**  
To keep our patients safe, while staying at C.S. Mott Children's Hospital, TV checks happen at least every 60 minutes, day or night, awake or asleep.

**T TOUCH**  
Touch every 60 minutes. IV site should feel:  
• soft  
• warm  
• dry  
• pain free at all times

**L LOOK**  
Look every 60 minutes. IV site should look/be:  
• uncovered  
• dry  
• without redness

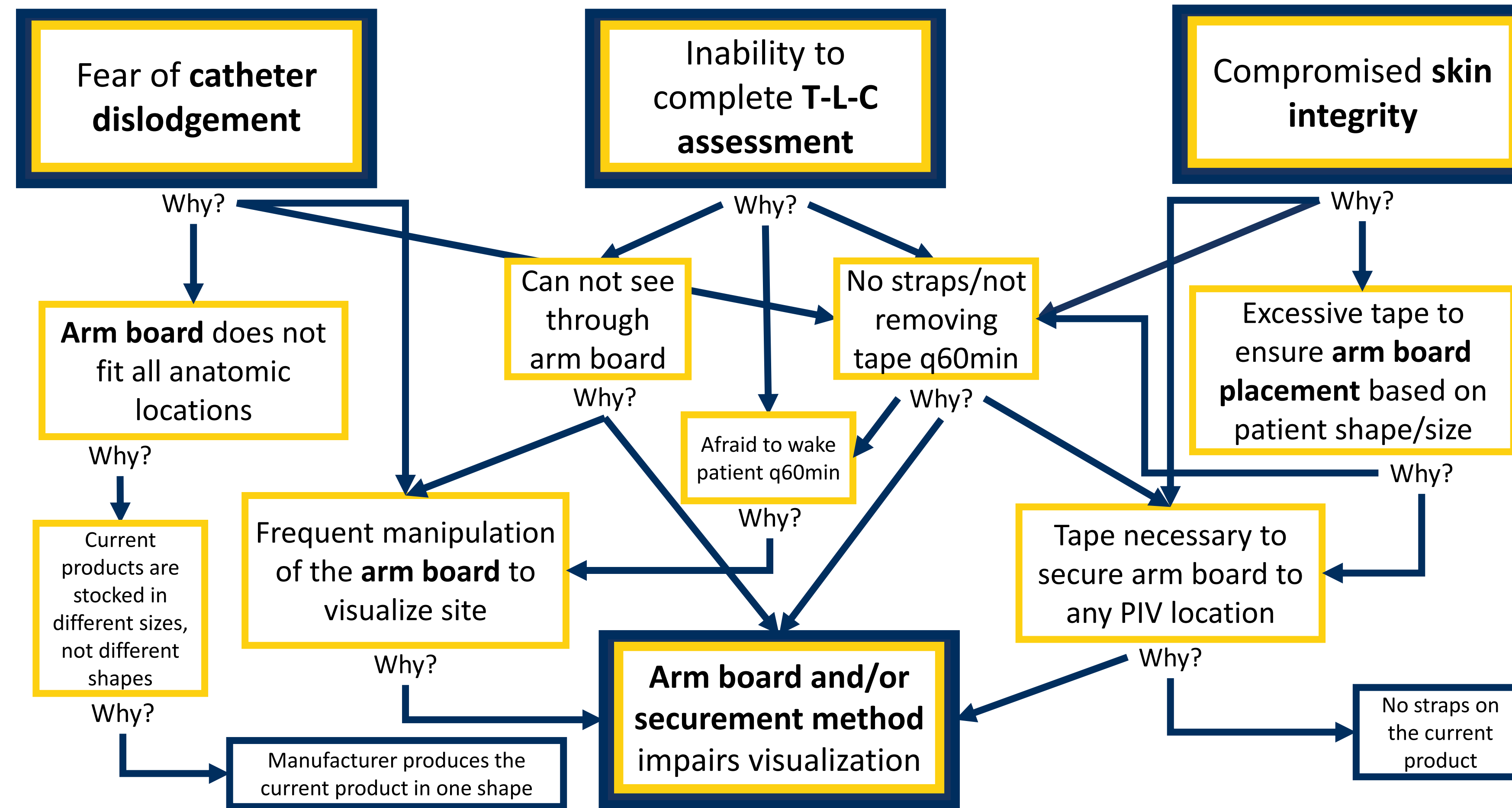
**C COMPARE**  
Compare every 60 minutes. IV site should be:  
• same size as other side  
• without swelling

Parents & Caregivers: Please tell your nurse right away if an IV site is:  
• painful or swollen  
• red or bruised  
• hot or cold  
• wet

C.S. MOTT CHILDREN'S HOSPITAL  
UNIVERSITY OF MICHIGAN HEALTH

## PROBLEM

From January 2023 – March 2023, the following **barriers to best practice** were escalated to the PIVIE task force by front-line nurses and nursing leaders:



## INTERVENTIONS

Based on the above analysis of the problem, a proposed product change was reviewed by the task force and is expected to offer the following strategic and clinical benefits:

- Increase clinical workflow efficiency
- Improve nurse satisfaction
- Improve the quality of PIV site assessments
- Decrease serious patient harm related to pediatric PIV infusions

**Legacy Product**  
Arm Boards  
Vendor: Tarry Medical



**Proposed Product**  
TLC Splints - Wrist, Elbow, Foot  
Vendor: I.V. House



## TIMELINE

**May-Aug 2023:** Value analysis committee presentations and approvals

**Aug-Sept 2023:** Pre-trial education including on-site and virtual vendor education

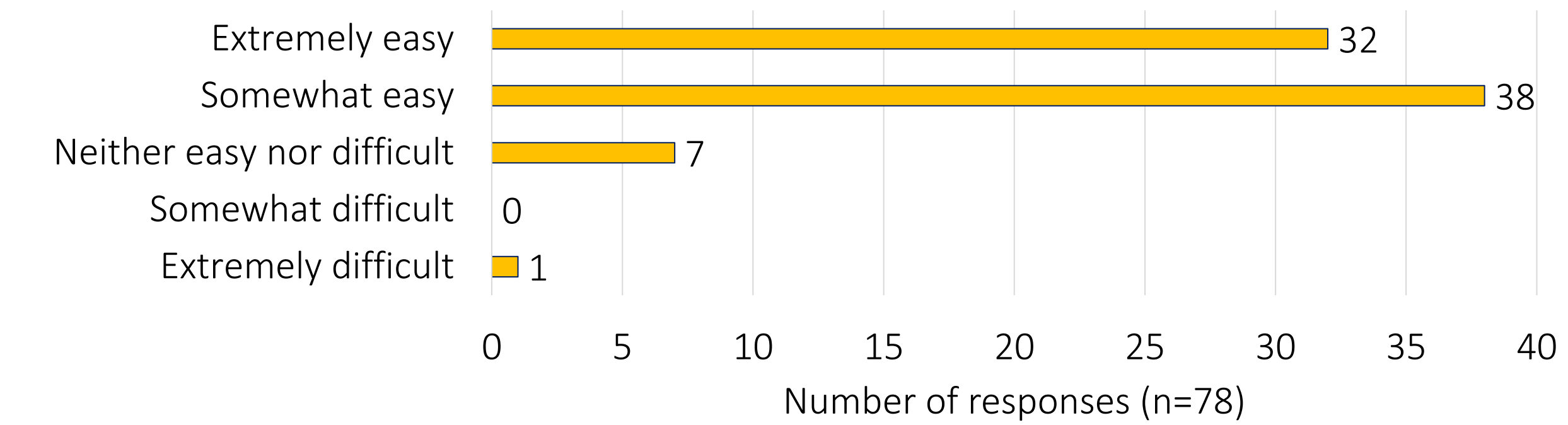
**September 25, 2023 – October 20, 2023:** I.V. House trial timeframe

**Oct-Dec 2023:** Trial data review and presentation to value analysis **PRODUCT APPROVED**

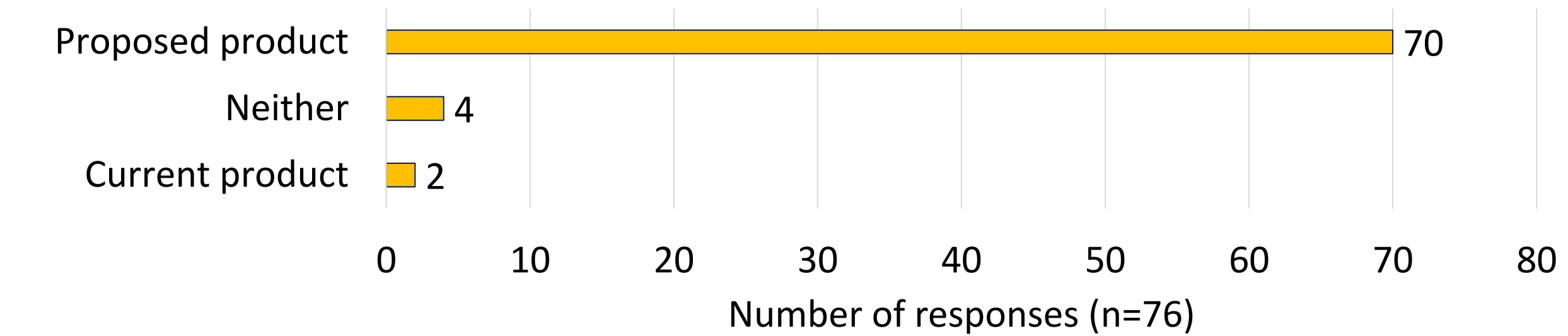
## RESULTS

A trial survey was distributed to end users with the following results:

**Ease of Use:** Compared to the current product, is it easier or more difficult to perform IV site assessments aligned with pediatric nursing best practices?



**End User Preference:** Which peripheral IV securement device do you prefer?



Trial survey free-text comments:

"THESE PRODUCTS WILL DIRECTLY PREVENT PATIENT HARM BY ALLOWING US TO BETTER ASSESS OUR IV."

"This device makes it so much easier to assess the IV site without taking off a bunch of tape and risk losing the site."

PCTU is loving these (splints) so far! Positive feedback from our OT/PT colleagues as well. Please stock in PCTU!!!!

## CONCLUSIONS AND NEXT STEPS

The task force and end users supported the transition to the proposed product, and I.V. House TLC Splints were approved for use in C.S. Mott Children's Hospital.

The next steps for the task force include a review of the number of PIVIE events, level of harm, and time to PIVIE identification since house-wide implementation.

## ACKNOWLEDGEMENTS

Thank you to all stakeholders who assisted in this work, including:

- C.S. Mott Children's Hospital PIVIE Task Force
- Michigan Medicine Value Analysis Team

## REFERENCES

Please scan the adjacent QR code for a complete list of task force members and references.

