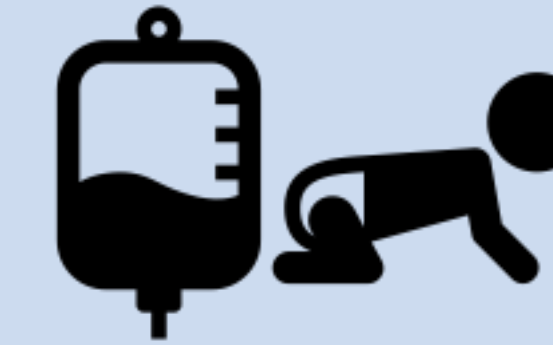




# Development of a Pediatric PIV Maintenance Bundle

Christal Cabanting BSN, RN

Loma Linda University Children's Hospital



## BACKGROUND

- PIV loss results in delays in administration of medications potentially impacting treatment options and length of stay
- Premature loss of IV access results in multiple IV starts and an increase in the number of pokes a child must undergo creating a painful traumatic experience
- Many times successful IV insertion in children requires 2-3 attempts
- There can be limited parental knowledge of how to assist with PIV care

## PURPOSE

To reduce the loss of peripheral intravenous lines (PIV) in children and create an IV maintenance bundle for the pediatric step-down unit

## IMPLEMENTATION

- The project was guided by the following PICOT statement: For pediatric patients on the step-down ICU unit, can the use of a PIV maintenance bundle reduce the risk of loss compared with the standard practice within a thirty-day period?
- Input and approval was obtained from nursing leadership, professional governance council, unit staff meeting, 1:1 nurse discussions and children's hospital clinical practice council. The PIV maintenance bundle consisted of the IV House Ultradome and TLC splints. Prior to implementation a creative bedside sign, educational video and poster for staff were developed and initiated.

## IMPLEMENTATION TOOLS



Keep your IV safe with a little TLC

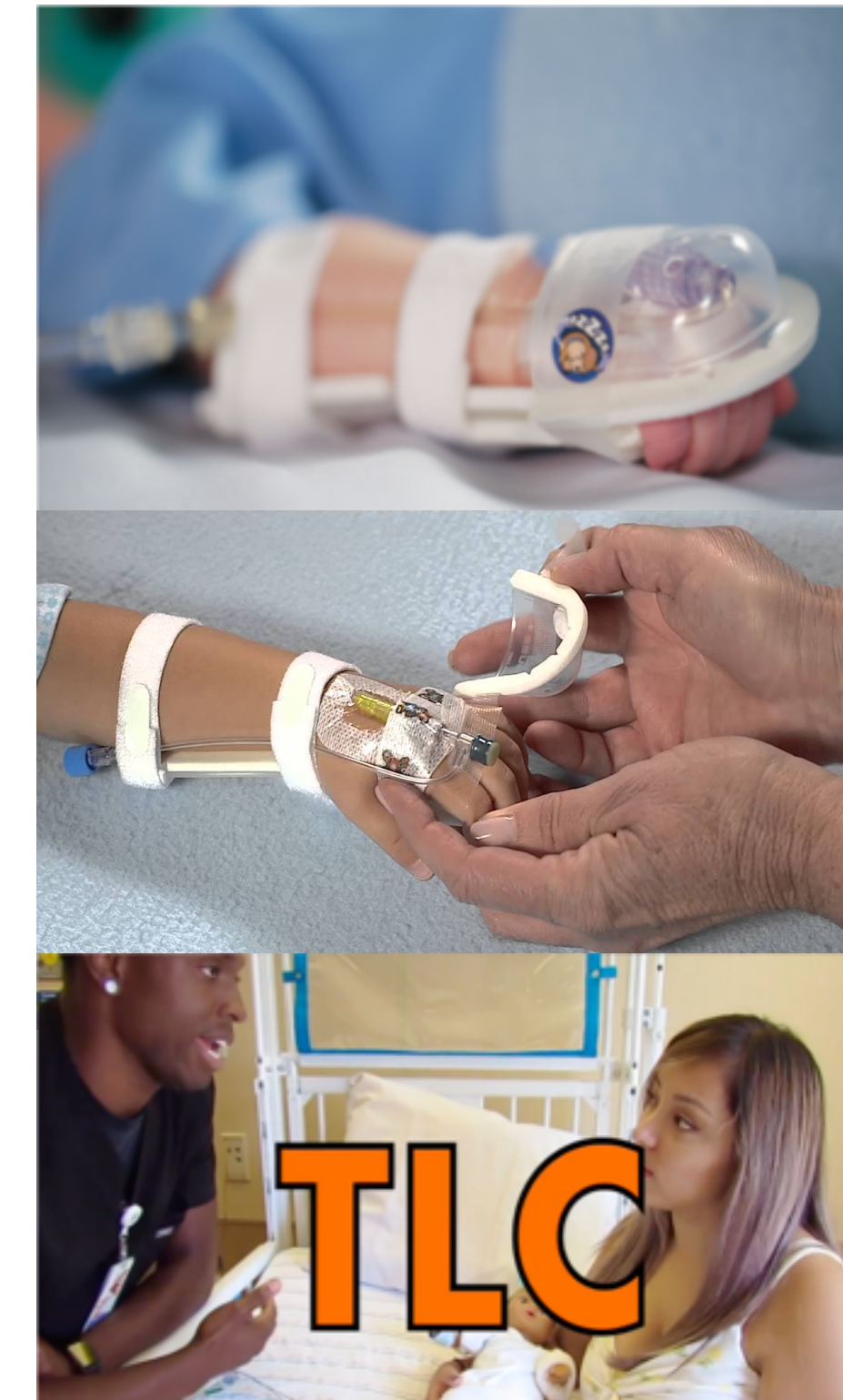
**TOUCH** the site, does it feel alright?

**LOOK** at the color. Is there redness peeking under?

**COMPARE** with the other, do they look like each other?

Inform your nurse if you think your child's IV may be showing signs of going bad. YOU make a difference.

\*TLC\* adapted from Cincinnati Children's Hospital



## CONCLUSIONS

A PIV maintenance bundle that includes splints and domes is effective in maintaining PIV site in children. Visual aids such as the 'TLC' sign can be helpful to remind staff and parents about PIV loss prevention. Staff felt that the IV dome was easy to use. However, ease of use of the splints was variable depending on the type of splint needed or required.

## IMPLICATIONS FOR PRACTICE

The use of a PIV maintenance bundle can result in:

- a reduction in the number of pokes a child must undergo
- increased parental knowledge
- parental participation in keeping a PIV intact.

The preservation of a PIV can improve the quality of the stay in the hospital for both the child and the parent.

## ACKNOWLEDGEMENTS

I would like to acknowledge the assistance and support provided by:

- the clinical nurses of the stepdown ICU
- the nursing leadership of the stepdown ICU
- Sarah Capalla, MS, RN Director of the Vascular Access Team
- Patti Radovich, PhD, CNS, FCCM
- Elizabeth Barklage, IV House Representative

## RESULTS

Implementation was from 8/20/18 - 9/16/18. A total of 59 children 0-18 participated with total of 182 PIV sites. The IV maintenance bundle was used in 61 (34%) of PIV sites. There was a 25% loss of PIVs in sites that did not use a bundle and a 5% loss in sites that utilized the bundle.

	Results	N	%
Number of Children	TBD	59	
Length of Stay	1- 8 days		
PIV Sites	antecubital/arm	65	36%
	hands	85	47%

