

# Innovative Solutions in Pediatric Emergency Medicine: Physician feedback on the use of a novel LP cradle

Natasha Colli, MD, Adrienne L. Davis, MD, MSc,  
Division of Pediatric Emergency Medicine, The Hospital for Sick Children

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## BACKGROUND

- Lumbar puncture (LP) in neonates has low success rates.
- NeoCLEAR trial reported: improved first-pass success rate in the seated position vs. lateral decubitus.
- An LP cradle is a novel device that secures infants in a seated position

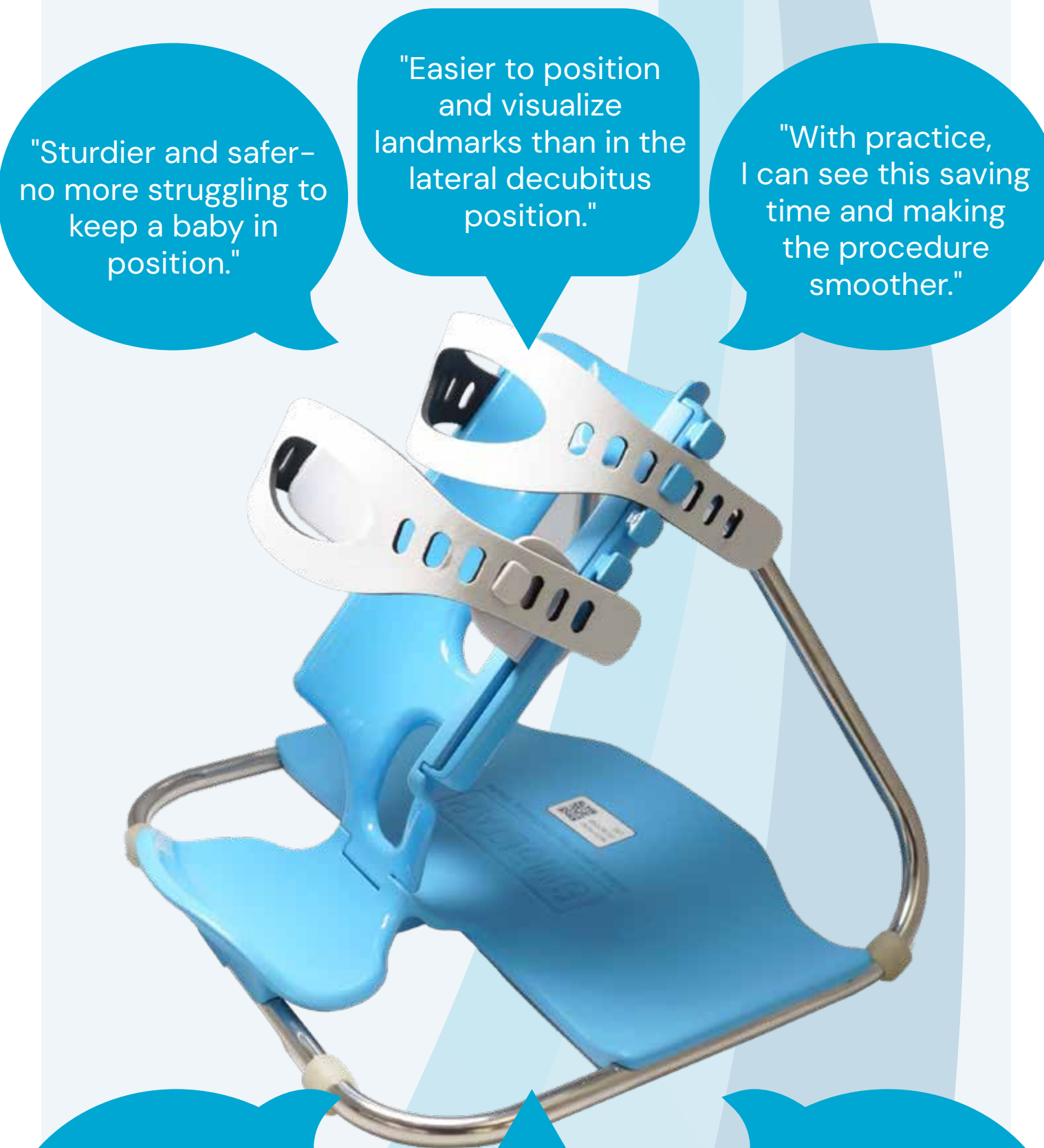
## STUDY AIMS

- Assess pediatric emergency medicine (PEM) MD acceptability & feasibility of using a novel LP cradle.
- Secondary outcomes: first-pass success, overall success (CSF obtained with <10,000 RBC/hpf) and non-traumatic taps (<1000 RBC/hpf).

## METHODOLOGY

- Mixed methods study.
- 17 PEM staff & fellows using the LP cradle for the first time.
- Pre-procedure just-in-time demonstration.
- Post procedure survey administered, capturing qualitative feedback, whether CSF was obtained, number of attempts and rbc/hpf.

PEM physicians reported positive experiences with the LP cradle, citing feasibility, safety, and potential procedural efficiency.



"Sturdier and safer—no more struggling to keep a baby in position."

"Easier to position and visualize landmarks than in the lateral decubitus position."

"With practice, I can see this saving time and making the procedure smoother."

"Felt like the LP process was quicker from start to finish."

"Freed up nursing staff to continue their tasks more efficient for everyone."

"I felt more confident knowing I had a clear, stable view of the airway."

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## RESULTS

**82%**  
Easy to use  
(adjust and clean 100%)

**47%**  
Preference for the cradle  
(29% no preference)

**94%**  
Device stability

**65%**  
First-pass success

**71%**  
Perceived safer than traditional methods

**88%**  
Saved overall procedure time

**82%**  
CSF obtained

**76%**  
Non-traumatic taps

## IMPLICATIONS

- High acceptability from first time users—highlighting minimal learning curve and just-in-time training viability.
- Cradle may be particularly valuable as obviates need for holder during LPs.
- Pilot efficacy data supported next steps (comparison of cradle to no cradle on first-pass success rates & traumatic tap rates).