

Small Change, Big Impact: Improving the Post Anesthesia Care Experience for Pediatric Ventriculoperitoneal Shunt Patients

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Background

The Post Anesthesia Care Unit (PACU) workflow committee recognized issues with pediatric post operative ventriculoperitoneal (VP) shunt patients. Postoperative VP shunt series x-rays performed in PACU can be stressful for patients and staff, specifically with patients on our institution's sensory pathway. The sensory pathway is intended for patients who either self report or parent reports sensory sensitivities and advises to decrease bright lights, loud noises, and excessive touching. The VP shunt x-ray series include several bright lights, loud noises and different patient positioning which contributes to excessive stimulation for sensory pathway patients. PACU nurses also identified an increase in narcotic administration while the x-rays were being obtained.

Sensory Risk

Does the patient meet sensory alert?: Yes
 Is your child sensitive/avoidant to any of the following: Auditory stimulation (certain sounds, music, etc.)
 Does your child enjoy/seek stimulation from any of the following: Visual stimulation (lights, videos, etc.)
 How does your child prefer to communicate: Verbal
 Your child learns best by: Other
 Specific triggers or things that may upset your child: loud noise, groups of people
 Dominant hand: Right

Enjoys/Seeks	Visual Stimulation (light up toys, certain colors, videos); Auditory Stimulation (music, songs, certain sounds); Touch/Texture (fidget toys, certain textured items)
Sensitive/Avoidance	Visual Stimulation (bright lights, certain colors, crowded room); Auditory Stimulation (loud noises, medical equipment, certain sounds); Smells (alcohol wipes, perfume, food, cleaning supplies); Touch/Texture (monitors, hospital gowns, certain textures, light touch)
Triggers and Stressors	Lack of routine/Other (specify)
Behaviors child will show when upset or becoming upset	Hits your hand--fights with you
Calming/De-escalation	Quiet environment/limited staff/Parents presence/Explain order of events/Other (specify)
Preferred Sensory Tools	Picking fidget
Preferred Comfort Person	Grandmother
Other Coping/De-escalation Techniques	Deep breathing (Dragon's Breath*)
Expressive Language	Speaking
Learns Best By	Touch (touching, exploring); Hearing (verbal explanation or being told what is going to happen)

Purpose

Evaluate the impact of obtaining postoperative VP shunt x-rays in the operating room while the patient is still sedated to decrease stimuli. A secondary goal was to decrease narcotic administration for this patient population leading to more accurate neuro exams.

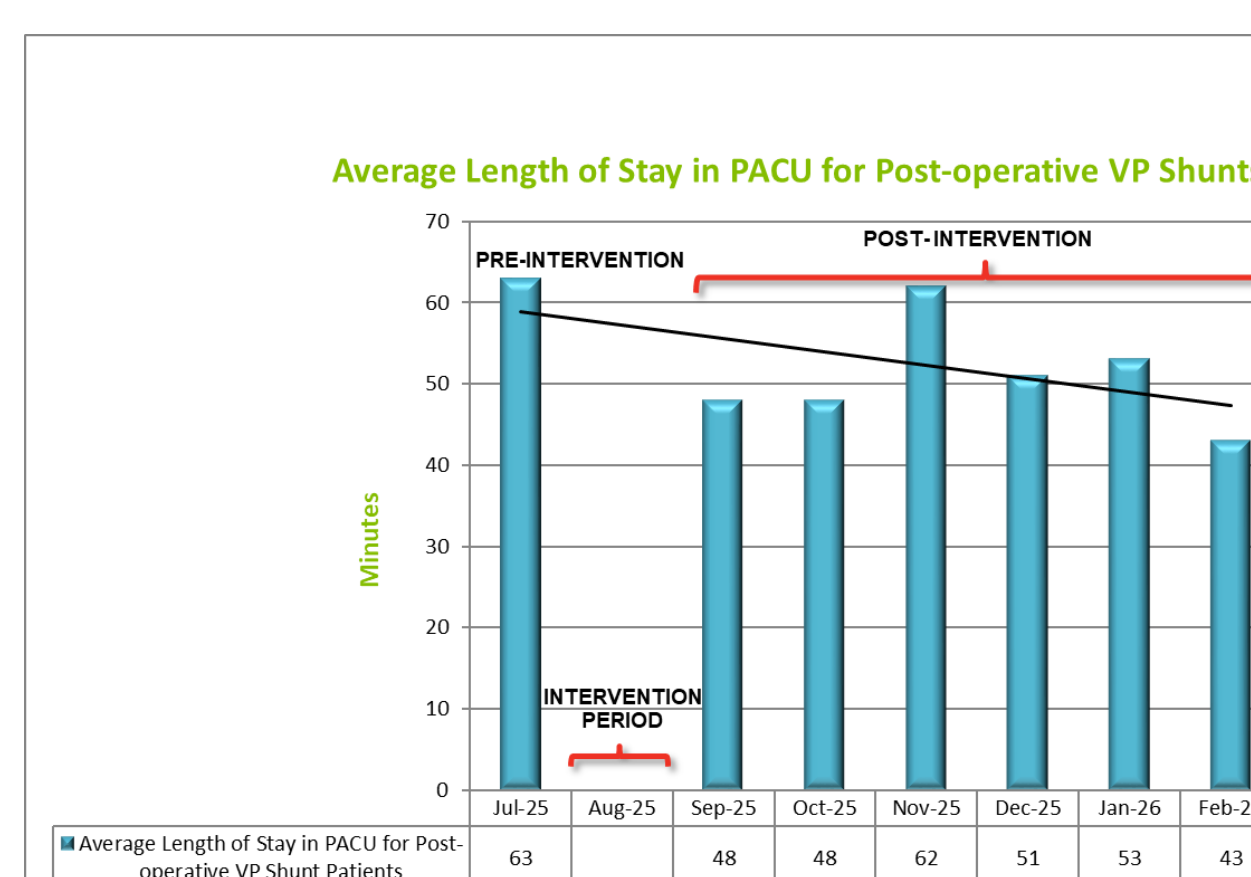
Multidisciplinary Approach

- Anesthesia Medical Director
- Chief of Neurosurgery
- OR Director
- PACU Director
- OR staff
- PACU Workflow Committee

PACU workflow chairperson presented the proposal to surgical services management and the anesthesia medical director. With support from anesthesia and leadership, PACU was able to obtain the feasibility as well as barriers for the OR, and neurosurgery agreed to implement the proposed protocol.

Outcomes

PACU nurses were surveyed regarding the VP shunt patients receiving their postoperative x-rays in the OR prior to coming to PACU. 10 surveys were collected during the first month of implementing new protocol. 100% of PACU RNs reported improved pain management as well as decreased post-operative stimuli. 40% of the patients surveyed were on our institution's sensory pathway. PACU nurses also reported less narcotic administration, which aided in more accurate neurological exams in the immediate post-operative period. They also noted the recovery duration was shorter which enabled them to reunite the patient with their family quicker which leads to higher patient and family satisfaction. An additional survey was completed 6 months post implementation that resulted in the same outcomes.



FEEDBACK & FOLLOW UP

VP shunt series in the OR

How long was your PACU care time? (in PACU until Phase 1)

Do you feel pain management was easier or the same without shunt series x-rays in PACU?

Did obtaining the shunt series in the OR improve the overall PACU experience for the patient? Explain.

Was your patient on the sensory pathway or have care considerations noted in their chart? Did decreasing stimuli in PACU improve their experience?

Additional comments or feedback

Patient Name / DOB / MRN

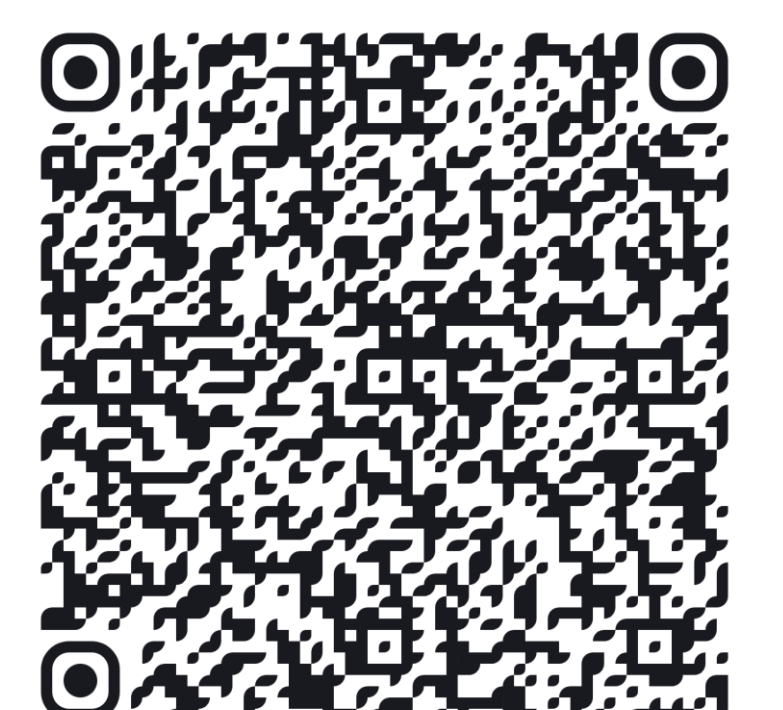
Discussion

Obtaining VP shunt x-rays in the operating room while the patient is still sedated has greatly improved the immediate post-operative period for patients, especially those on the sensory pathway. PACU nurses identified:

- Improvement in patient comfort
- Decrease in recovery time
- Decrease narcotic administration
- More accurate neurological exam
- Improved RN job satisfaction

Conclusion

PACU staff has learned to advocate for our patients by questioning and evaluating processes to promote changes that result in better patient outcomes.



References

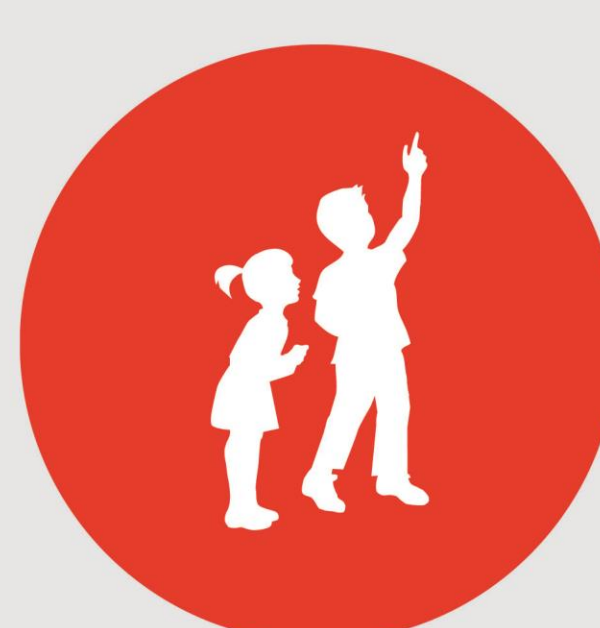
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