Challenges of Caring for the Pediatric Population in Radiology Nursing

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Objectives

- Describe the importance of family centered care and list ways on how to include the child in the plan of care
- Describe common radiology exams that commonly require anesthesia
- Participants will be able to list two reasons coordinating exams under anesthesia will benefit the pediatric patient and their family.
- Attendees will learn strategies on how to utilize Child Life Specialists to change hospital culture in the context
 of preparing children for imaging studies
- Participants will understand the importance of working on a team to enhance children's coping skills
- Participants will learn various tools to improve success with pediatric patients and decrease sedation/anesthesia costs

Safety first

Children need special equipment to fit their body size and needs

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- <u>Safety</u>:
 - Appropriate emergency training for staff
 - Availability of pediatric crash cart
 - Safety belts on tables
- <u>Procedure</u>:
 - Papoose
 - Head holders
 - Warmers
 - IV supplies
 - Catheters

Family Centered Care

- Why is it important to include the family in the care of a child
- How can the child and family involvement enhance the experience of the patient and family
- What does it mean to a child to have a "say" in how things happen to them



Make the family a part of the team

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- Give concrete instructions to the family.
 - 1. Assist patient change her clothes
 - 2. Help child pick out a movie
 - 3. Engage the child in distraction (hold iSpy book)
 - 4. Positioning for Comfort

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Provide a child friendly environment



What translates to a child friendly environment?

- Have movies available whenever possible (MRI compatible systems)
- Positive reinforcement for child completing goal or request (stickers, coloring pages, toys)
- A child friendly décor (underwater theme or super heroes)
- Twinkle lights in the ceiling that make shapes that the child will recognize



When a child is scheduled for a radiology procedure the *nurses and doctors* envision:





When a child is scheduled for a radiology procedure the <u>child</u> envisions:



A Child patient...

Will not saunter into the room and happily lie down on the procedure table, hold out his arm for an IV and bare his private parts for a catheterization.



Making the IV placement easier

- This is the time when the Child Life Specialist will be your anchor
- Have a tablet with games and videos
- Use lidocaine cream or synera patches
- Use J-tip lidocaine (when time is a factor)
- Have vibrating toys and lights and music toys available



Some of the ways that we help children successfully complete radiology procedures



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When do I consider anesthesia for my pediatric patient?

- Consider the child's age
- Ability to follow commands
- Consider patient's cooperation
- Wishes of the parents

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• History with procedures



Radiology procedures that may require anesthesia

- Invasive IR/Cathlab procedures
- Long MRI studies
- MIBG studies
- Bone scans

- CT angiograms
- Radiation therapy treatments



How coordinating anesthesia events benefit the pediatric patient

- Coordinating anesthesia events allows the patient and family to reduce the number of appointments and number of anesthesia events that the child needs in a given time period
- This can give the patient back more normal days, since less visits are made for procedures and appointments
- This also helps the medical team with follow up, due to most of the needed exams being completed in one day
- <u>Example-</u> Bone scan then BMA then CT scan then MRI for the oncology patient (these scans will be coordinated and performed in one day under anesthesia)

Screening the pediatric patient for anesthesia needs

- Children who are ill have the potential to be very sick and have multiple disease processes going on at the same time
- There must be a trained nurse or nurse practitioner screening the patients for: cardiac DX, endocrine disorders, hypotonia/MH precautions, difficult airway, insulin pumps, programmable shunts just to name some of the concerns.
- These findings should be communicated to the anesthesia team to develop a care plan for the patient

Advances made by LPCH:

- <u>FAST brain MRI</u> This is a 3 sequence scan that last for 6-8 minutes. That gives the neuro surgeon the information needed to evaluate ventricle size (coronal, sagittal, axial, single shot fast spin echo, SSFSE)
- 2. <u>MRI of the brain-</u>using a GE propeller sequence (this is a research technique that will correct for motion of the patient)
- 3. <u>ETV</u> 15 min scan to evaluate cerebral aqueduct flow (done after Endoscopic third ventriculostomy /ETV procedure)
- 4. Free breathing sequences for cardiac/abdominal scan that do not require breath holds
- 5. Flash scans in CT allow for free breathing

What is Child Life?

- Qualifications of Child Life Specialist:
 - Minimum of Bachelors degree. Masters Degree required in 2022.
 - Completion of 480 hour internship under supervision of Certified Child Life Specialist

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- Nationally certified by Child Life Council
- Masters Degree required in 2022

Child Life

- Preparation
- Play
- Sibling & Family Support
- Distraction
- Coping

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- Environmental adaptations

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Importance of Preparation

- Anticipatory anxiety can be decreased when patients/families know what to expect
- Clear up misconceptions from environmental stimuli (ie. school, TV, internet, peers)
- Clarify parental understanding and past experiences
- Provide exploration and manipulation of hospital equipment
- Allow expression of emotions
- "Children who are psychologically prepared for medical experiences will often recover faster with less emotional stress. Their success for future procedures increases when their first experience is positive." –K. McGee



When to Prepare a child?

- Infant/Toddler (0-3 years)
- Preschool & Young School Age (3-5 years)
- Older School Age (5-12 years)
- Adolescents (12+ years)

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Child Life Workflow

- RNs contact parents prior to arrival
- Specialist makes calls to families (as needed) to help support parents in preparing their child
- Specialist meets with patient and parents immediately after checking into Radiology Department

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- Specialist assesses patient's developmental age and gathers information from parents.
- Support and distraction provided at time of IV insertion, during transition to scanner and during scan set up, as needed.

Benefit of Child Life

- Cost Savings Benefit
- Patient Experience





Case Study

- Patient is an 8yo female who recently moved to California from El Salvador in August 2014. She was born with Tetrology of Fallot with cardiac repair at 4 years old. Stanford Pediatric Cardiologist ordered MRI of the chest w/ + w/o contrast to determine cardiac anatomy for upcoming cardiac catheterization.
- Patient presented to Child Life Specialist as very easy to engage in conversation, with assistance of Spanish interpreter. She
 eagerly participated in preparation for MRI using iPad and coped well when using medical equipment for PIV teaching. When it was
 time for her to enter MRI unit, she gripped the chair, screaming and kicking.
- Mom reported that in El Salvador that the families coping plan was to hold her down to get procedures completed. After discussion
 with RN and specialist, mom agreed that synera patches would be placed for IV start with specialist present at primary support for
 distraction during PIV. Mom would also be present during MRI at head of bed for comfort and support.
- At time of scan, the patient became extremely distressed, kicking, screaming and pushing herself out of scanner. MD and RN agreed that since contrast was already administered (Feraheme), patient could have a popsicle. After given popsicle, she was compliant with allowing specialist place head phones and movie goggles over her face while eating. MRI tech very slowly slid bed into scanner with specialist available for back up support.
- Scan was completed successfully using multiple popsicles and patient left MRI department waving, smiling and giving staff hugs.

What can I do?

- Talk to parents ahead of time and encourage them to talk to their child about scan or PIV start.
- Kids.Stanfordchildrens.org
- Simply Sayin' App. (Free)
- Horiuchi Woodcraft

- Ensure pediatric equipment/supplies available
- Think from the child's perspective



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