# PEDIATRIC RISK REVIEW

Fresh insights on enduring safety issues

## Difficult Procedural and Surgical Site Marking

A patient's risk for wrong-site surgeries increases when the site is difficult or impossible to mark due to location or skin concerns. This is common in cases involving teeth, the perineum, mucosal surfaces, multiple digits, casted limbs, internal organs, or lateralized organs such as ureters.

## RISK OF HARM

Procedures performed on the wrong site can result in significant patient harm, as well as the need for additional procedures, prolonged exposure to anesthesia, increased length of hospital stay, and delayed treatment of the actual condition.[3]

CHILDREN'S HOSPITAL ASSOCIATION

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## PEDIATRIC CONSIDERATIONS

In pediatric patients, site marking must be adapted to developmental, emotional, and physical needs. Key things to consider:

- Surgical site skin marking may not be feasible on pre-term infants due to skin frailty and the increased risk for permanent staining or dermatitis with ink absorption.
- Sensory-sensitive or neurodivergent populations may perceive marking as distressing or even traumatic.
- Adolescents may experience discomfort, embarrassment, or distress when marking involves sensitive/private areas, making direct marking inappropriate or impractical due to modesty or anatomical constraints.



*Preventing mistakes in surgery is one of the Joint Commission's 2025 National Patient Safety Goals.*[2]

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## RECOMMENDED ACTIONS

- Identify all procedures involving sites that are technically anatomically impossible or impractical to mark and the settings where they may occur (e.g., bedside, emergency department, ambulatory care, operating room).
- Develop a policy (example) that clearly addresses best practices and protocols for all situations, including when alternative site marking processes are required. Safety Note: Using an alternative form does not replace surgical site verification. It reinforces the need for heightened awareness and strict adherence to the Universal Protocol.
- No matter what method is used, confirm that the surgical site marking remains visible after draping or repositioning and is always accessible to the entire procedural team.
- Ensure the use of timeouts throughout the procedure(s).
- Create an organizational culture that supports family and patient involvement in the marking process.
- Conduct an assessment, such as a GEMBA walk, to validate actual practice compared with written policies and procedures in applicable settings.
- Establish simulated training activities for alternative site marking surgeries and procedures.
- Develop job aides and real-time reminders for caregivers when sites are anatomically impossible or impractical to mark, or when the patient or family refuses marking. Consider utilizing Child Life services.



Find Pediatric Risk Review full text and all citations and references at childrenshospitals.org/riskreview.

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