DIAGNOSTIC URETHRAL CATHETERIZATION
Quantifying Adverse Events in the Pediatric ED

UTI is a Frequently Diagnosed Condition in the Pediatric ED

- UTIs are present in 5% of young children with fever of unidentified source.
- Urethral catheterization (UC) is the gold standard for obtaining urine cultures from these patients.
- However, UC is traumatic for pediatric patients and may cause adverse events.

What proportion of pediatric patients develop complications following a diagnostic UC in the ED?

An Observational Study

- Location: Single Pediatric ED, Saint-Justine University Hospital, Montreal
- Inclusion Criteria: 1) 3-24 months of age 2) Fever ≥ 38°C 3) UC in the ED
- Consent Process: 240 parents approached following UC in the ED with 219 enrolling in the study
- Follow-up Survey: 199 participants contacted by phone, 7-10 days after discharge, 3% lost to follow-up

Record adverse events, which include dysuria, genital pain, urinary retention, gross hematuria and secondary UTI

The Results

1. 41 children out of 199 (21%) reported at least one complication. Two or more complications were reported in 6% of children.
2. Three children (5%) visited a health care facility for a complication possibly related to UC.
3. Most common complications were: dysuria (70%), genital pain (8%), urinary retention (6%) and gross hematuria (4.5%).
4. Male sex and an age between 12 to 23 months were statistically significantly associated with the risk of having an adverse event.

Conclusions

- Urethral catheterization was associated with an adverse event in approximately 1/5 of young children in the week after the procedure. This is likely to be underestimated by physicians, as most parents rarely seek medical help for these complications.
- Limitations of the study include the single-center design without a control group, the reliance on parental judgment about the occurrence of an adverse outcome, and the lack of data about longer-term outcomes.

References:
2. Catheter icon made by Freepik from www.flaticon.com