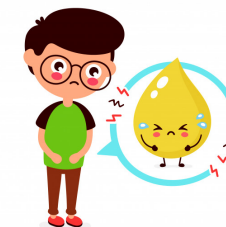




Improving the Investigation of UTI in a Paediatric Emergency Department

Dr. Daniel Hossack, Dr. Karnika Raja
Royal Free London NHS Foundation Trust



Urine sampling is a common investigation in the paediatric ED, often requested at triage

We noticed samples were frequently being incorrectly requested and sent for analysis

This causes unnecessary inconvenience to parents, delayed discharge, needless antibiotics, and significant cost if samples are sent for urgent analysis

We surveyed triage staff to evaluate awareness of the correct investigation for paediatric UTI based on the current NICE guideline (February 2019)

Seen left is the staff survey conducted in October 2019

Paediatric Triage – Urine Sample Questionnaire – 2019

- When triaging, what would prompt you to request a urine sample?
☐ All patients ☐ All patients <3yo ☐ Fever ☐ Unexplained fever ☐ Symptoms of UTI
☐ Vomiting ☐ Abdominal pain ☐ Other
 Other, please specify: _____
- What advice, if any, do you give the parents/patients on how to obtain the sample?

- Under what circumstances would you send a sample for urgent microscopy?
☐ All samples ☐ All patients under 3yo ☐ All nitrite +ve ☐ All leukocyte +ve
☐ Leukocyte +ve, under 3yo ☐ Nitrite +ve, under 3yo ☐ Blood +ve, under 3yo ☐ Other
 Other, please specify: _____
- Are you aware of the NICE guidelines on ED investigations for paediatric UTI?
☐ Yes ☐ No
- If, in practice, you have not followed this guideline, why was this?

- What advice do you give parents if they say they're unable to obtain a sample?

In our initial survey, only 45% (10/22) of staff were aware of the NICE guideline. 59% (13/22) said they would request a urine sample from all patients presenting with fever of any cause. 55% (12/22) would send all samples obtained for patients under 3yo for urgent analysis, regardless of presenting complaint

We updated our hospital guideline, and created a clinical pathway tool (seen right). Staff were trained in when to request urine samples at triage, and how to use the flowchart

Following implementation of the pathway and staff training, staff awareness of the NICE guideline improved to 100% (21/21). Only 14% (3/21) of staff stated they would request a sample from all children attending with fever. The correct age cut-off for samples to be sent for urgent microscopy due to dipstick unreliability was identified by 95% (20/21)

This project demonstrates the benefit of a simple flowchart and training in order to improve staff awareness of paediatric urine sampling. This will reduce the number of samples being unnecessarily requested and sent for analysis, reduce diagnostic errors and time to discharge, and improve patient experience



Paediatric Urine Sampling for Suspected UTI

