Introduction

- Rapid diagnosis of urinary tract infections (UTIs) in young children supports prompt treatment and reduce permanent kidney scarring.
- In contrast to urinary dipsticks, phase contrast urine microscopy (PCUM) has been shown to be highly sensitive and specific as a rapid screen for UTIs in very young children.
- Newcastle upon Tyne Hospitals NHS Foundation trust (NuTH FT) offer a unique PCUM diagnostic service within their paediatric direct access service.
- Observation of the presence of bacteria is used to support laboratory services to rapidly detect potential UTIs and to identify quality specimens for gold standard laboratory culture via indication of contamination.
- Previous training of clinical staff performing the test involved ad-hoc Biomedical Scientist led drop in sessions and unstructured peer support.
- An earlier audit supported the use of PCUM as a screening test for bacteria but indicated a requirement for improved training for the POCT.

Aim: To support the accurate and valuable use of PO CUM, through an improved training model, working towards ISO 22870:2016.

Design and methods

- Project methods aimed to bring a manual, microbiology POCT in line with automated POCTs nursing competency standards via more formal, up to date, technologically enhanced learning.
- Recognising previous challenges faced by the POCT service and difficulties with adoption of quality practices, design of a new training model was approached in a collaborative manner between laboratory medicine and paediatric clinical staff, whilst being led by a UTI specialist nurse and an academic biomedical scientist.
- Project design focused on a shift in roles and ownership (figure 1) and availability of supporting documentation.

Discussion

- Collaborative approaches as used here have been shown to develop good, respectful and valued working relationships raising the standard and the patient outcome.
- Feedback from cascade trainer sessions indicated that sessions were “highly relevant”, “delivered by appropriate staff in an “appropriate location” and “useful in teaching new skills and theory” whilst “affirming what they already knew”.
- Difficulties faced regarding inter-professional and inter-departmental working were able to be somewhat managed with project leads who sit outside the typical departmental staff structure.

Limitations: Constraints of the audit in determining sensitivity to detect bacteria, not UTI.

Next phase: Re-audit of the service to measure the efficacy of the new training model. Further use of technology enhanced learning.

Project outcomes to date

The training model developed followed that proposed in figure 1 and included laboratory medicine trained and supported cascade trainers, online accessible training packs and competency assessment tools in line with those used for clinical skills (Figure 2).

What is unique about this project?

- Work in the discipline of bacterial POCT where there is limited published literature.
- A collaborative approach to training development led by the unique skill set of a specialist nurse and an academic Biomedical Scientist.

References:
2. Shaw, J.L. Practical Challenges related to Point of Care Testing, Practical Laboratory Medicine, 2015; 4:22-29.

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