

EDUCATION AND TRAINING Including medical students in quality improvement projects in primary care

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ABSTRACT

We share our experience as medical students who have recently completed quality improvement projects in primary care. We have found that quality improvement projects, such as audits, are mutually beneficial for clinicians who may need to conduct annual appraisals and students who benefit from the educational experience.

KEYWORDS: Students, primary care, education, audit

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The October 2019 edition of the *Future Healthcare Journal* focused on education.¹ This included the successful quality improvement project by Dormandy *et al* on increasing the use of the 4AT delirium screening tool.²

We would like to share our experience of a medical student quality improvement project in primary care. In response to the National Institute for Health and Care Excellence (NICE) guidelines for sepsis assessment in children published in 2013, we completed an audit cycle investigating the assessment of children aged <5 years presenting with fever (>37.5°C) at an inner-city general practice.³

Investigating febrile illness is important as early recognition of sepsis reduces mortality and morbidity.⁴ The 2013 NICE guideline outlines four signs that should be recorded: temperature, pulse, respiratory rate and capillary refill time (CRT).³

Our first audit in 2018 looked at general practitioners' compliance by analysing the computerised records of 111 consultations with feverish children from May 2014 – May 2018. Table 1 shows all four signs were recorded in only 11% (12/111) of all consultations.

These results were presented to the general practitioners and practice nurses in a weekly clinical meeting in 2018. Not everyone was aware of the NICE guidelines. In addition, CRT was not a commonly used sign when the older clinicians were trained. Everyone agreed to improve recording of signs.

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Table 1. Percentage of signs and symptoms recorded in audit 1 and audit 2

Signs needed for the NICE traffic light system	Audit 1: percentage of 111 consultations before June 2018 recording each sign	Audit 2: percentage of 48 consultations after June 2018 recording each sign
Temperature	100 %	100 %
Pulse	81 %	94 %
Respiratory rate	49 %	42 %
Capillary refill time	32 %	50 %
All four signs	11 %	25 %

In audit 1, the mean age of children was 18 months (range 2–53 months) with the highest temperature recording 40°C. In audit 2 the mean age was 21 months (range 12–48 months) with the highest temperature recording 40.6°C.

A re-audit was undertaken assessing 48 consecutive consultations from June 2018 – June 2019. Only 25% (12/48) of consultations had all four signs recorded, an overall improvement of just 14%.

These findings were presented again at a practice meeting in November 2019. Clinicians said the main reason for such a small improvement was probably that many febrile children seen by general practitioners are not particularly ill. If a child seemed well, was drinking, alert and active, they would not necessarily record all the signs, especially within the constraints of a 10-minute consultation. It would be different if the child was unwell and they were considering referral to paediatric emergency department.⁵ EMIS computerised general practitioner records now have a red 'sepsis' prompt which pops up if abnormal clinical signs, such as high fever and tachycardia, are recorded in a template.

As students, this was exciting as we were able to contribute to a change in clinical practice. Involving medical students in quality improvement projects can be mutually beneficial for clinicians who need audits for their annual appraisals and for students who benefit from the educational experience. ■

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