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What do junior doctors know about Acute Kidney Injury? An educational audit and validation of an educational assessment tool.

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Introduction

Reducing the incidence of Acute Kidney Injury (AKI) and improving its management is a major priority for the NHS, with education being a key intervention.

We designed a teaching assessment tool to investigate the effectiveness of AKI education for junior doctors in a tertiary hospital. We undertook an audit of patient records to correlate clinical practice with the outcomes of the teaching assessment to validate the assessment tool.

Methods

Foundation Programme and Core Medical trainees anonymously completed a series of case-based questions about the practical management of AKI risk, monitoring and management based on NICE clinical guideline 169 before and after their scheduled annual AKI teaching. Answers before and after teaching were scored to identify areas of practice that were well (>70% of trainees correct) or less well understood prior to teaching and those areas where teaching appeared to be effective in improving scores. In response, the teaching intervention went through several iterations to improve areas of poor understanding by changing the teaching methods.

To validate the teaching assessment tool we undertook an audit of documented clinical practice for a series of patients who died in our hospital following an episode of AKI using the NICE AKI audit tool. Data was collected from paper and electronic notes. Areas of good and less good practice were identified from the patient records in relation to AKI risk identification, monitoring and management. The outcomes of the audit were compared to the theoretical practice from the junior doctors identified by the teaching assessment tool. All parts of this service evaluation and audit were registered with and approved by the hospital's Clinical Governance department.

Results

Over two years 155 trainees completed the teaching assessment tool. The first iteration of teaching identified poor recognition of diuretics, age and hypotension and risk factors for AKI with lack of recognition that BP needed to be supported in a hypotensive patient. The need for clinical and medication review in patients with AKI was poorly recognised by trainees. Following changing the teaching intervention to a more interactive and less didactic method the teaching assessment results were similar.

The case audit reviewed the notes of 36 patients (17 male, median age 66 years, 28 non-elective admissions). The patients had been admitted under a wide range of medical and surgical specialties. The outcome of the case audit identified similar areas of poor practice with age and hypotension not recognised as risk factors for AKI, correction of hypotension not adequately addressed and poor documentation of clinical or medication review once the patient was identified as having developed AKI.

Conclusion

Our teaching assessment tool has identified persistent areas of poor knowledge and understanding in junior doctors in relation to AKI prevention and management. The same areas were identified in a case review of patients who died following AKI. This suggests that further work needs to be done to identify better ways of education junior doctors in relation to AKI and that the teaching assessment tool is a valid way of assessing clinical practice.