Evaluating Pharmacist Interventions in Community-Acquired Acute Kidney Injury Emergency Admissions to Salford Royal Foundation Trust

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This study did not require ethics approval

Background

NHS England recognises AKI as a patient safety priority. AKI is associated with one in five emergency admissions and 100,000 deaths in secondary care per annum - over 60% of AKI starts in the community[1][2][3].

NHS England's AKI programme – "Think Kidneys" advocates supporting patients in understanding the risks of AKI and educating them in protection against it. Health care professionals are encouraged to advise patients to stop certain medications with nephrotoxic potential during acute illness[4]. This is commonly referred to as 'Sick Day Guidance'[4]. In collaboration with SRFT, NHS Salford Clinical Commissioning Group's sick day guidance project encourages GPs and community pharmacies to provide sick day guidance information cards and advice to patients who are at risk of AKI. The intention is to increase awareness and reduce AKI incidence in primary care.

Patients admitted to SRFT's Emergency Village with community-acquired AKI have their medicines reviewed by a pharmacist. There is a need to evaluate the scale and impact of pharmacist interventions and to identify whether patients admitted with AKI have previously been advised on sick day guidance. Therefore, this study will look at the medical team's decisions regarding medications considering the availability of pharmacist recommendations, as well as AKI patients' awareness of sick day guidance.

Aim:

To evaluate the role of secondary care pharmacists in the management of community acquired AKI and to investigate the dissemination of sick day guidance advice.

Objectives:

- Identify the number, nature and timing of recommendations made by pharmacists via the AKI Pharmacy Review document.
- Assess the proportion of pharmacist recommendations implemented by the medical team
- Review the status of patients' AKI after the medication intervention during hospital admission
- Identify the number of community acquired AKI patients admitted with a history of taking medicines that have nephrotoxic potential
- Assess the number of AKI patients who have been advised about sick day guidance

Methods

Data was collected from 50 patients admitted to SRFT as emergency admissions over a four-week period in 2016. Pre-admission medications were screened and split into five categories considered to have nephrotoxic potential or pose further risk to patients in AKI[2]: 'ACE inhibitors', 'ARBs', 'NSAIDs', 'diuretics' and 'metformin'. Electronic prescribing records were used to determine whether prescribing decisions were made before or after the Pharmacist AKI review, therefore potentially affecting the medical team's prescribing decisions. Patients taking these medicines were interviewed on their awareness of sick day guidance.

Results
Of 46 patients eligible for an AKI review, 35(76%) occurred within 24 hours and 29(63%) were taking at least one medication from one of the five categories.

Dose adjusting or withholding was recommended for 38(80.9%) nephrotoxic medicines. Pharmacist recommendations were adhered to for 36 medicines (95%). Recommendations included withholding medications, adjusting doses and taking no action. Of patients who had a pharmacist AKI review, 34(77.3%) had no worsening of AKI.

None of the 28 patients suitable for interview recalled sick day guidance or having been counselled that certain medications could affect their kidneys. Therefore, no patient had followed the guidance to stop medicines prior to admission.

Conclusions
Pharmacists were actively involved in the medication review of AKI patients, providing prompt reviews of the patients' medicines and recommendations for protecting renal function. Review of the time to complete the Pharmacist AKI document, the time to the medical team's clinical decisions and the actions of the medical team, suggests that pharmacist recommendations were a readily available source of information utilised by the medical team.

Pharmacists have an important role in the optimisation of potentially nephrotoxic medicines and can contribute positively towards optimal medical management of AKI.

This study suggests that the dissemination of sick day guidance to at-risk patients has not been maximally implemented thus far - possibly indicating that healthcare professionals are cautious about advising a drug holiday from such significant medicines. This highlights the need for further public awareness campaigns and involvement of both primary and secondary care colleagues.

References
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