

Acute kidney injury in medical admissions: results of audits of prevalence and of staff knowledge.

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Introduction

- Acute kidney injury (AKI) is common in acute medical admissions.
- AKI associated with increased mortality and prolonged length of stay
- In patients at risk of AKI, nephrotoxic medications should be stopped during intercurrent illness.
- This intervention may avoid AKI and may reduce admissions.
- “Sick day rules” are advised in the NICE guidelines and the “think kidneys” campaign.^{1,2}

Aims and design

- Our trust has 3 acute sites (Belfast City Hospital, Mater Infirmorum Hospital, Royal Victoria Hospital).
- Identify prevalence of AKI amongst ED attendances.
- Identify staff and patient knowledge of “sick day rules”
- We performed analysis of ED attendances and admissions
- We performed an audit of staff and patient knowledge in the diabetes clinic.
- Prospective data-collection during a one week period (20/11/17 – 27/11/17)

Sick-day rules

- In the event of vomiting or diarrhoea lasting longer than 12 hours, stop the following medications:
 - NSAIDs
 - ACE-inhibitors
 - ARBs
 - Diuretics
 - Metformin
- If vomiting or diarrhoea lasts for longer than 24 hours contact your doctor.
- Please restart your medications once the vomiting or diarrhoea has resolved

Admissions audit

- Total**
- Total attendances: 1945
- Number of U and Es checked: 1261
- Medical and COE admissions: 238
- Number of AKIs: 61
- Prevalence: 26%
- ED**
- Total attendances: 1876
- Number of U and Es checked: 1192
- Medical admissions: 169
- Number of AKIs: 42
- Prevalence: 25%
- COE Direct admissions unit**
- Total attendances: 69
- Number of U and Es checked: 69
- Admissions: 69
- Number of AKIs: 19
- Prevalence: 27%

Table 1: Characteristics of admissions with AKI

	N (%)
On nephrotoxics	30 (49%)
On nephrotoxics and using a blister-pack	6 (10%)
Nephrotoxics held pre-admission	1 (2%)

Knowledge survey

Patients:

- 78% not aware of the nephrotoxic effects of their medications if continued when unwell
- Poor knowledge of which drug classes may be nephrotoxic (Fig 1)

Staff:

- 82% aware of “sick day rules”
- 53% do not discuss sick-day rules with their patients

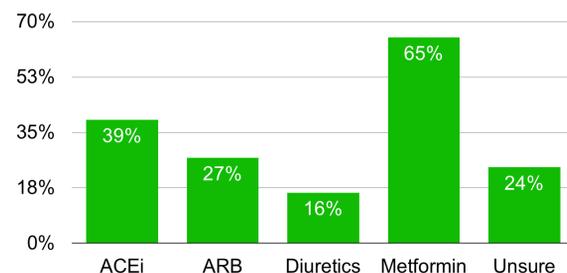


Figure 1: Patient awareness of nephrotoxic potential of medication classes

Conclusions

- High prevalence of AKI in medical admissions
- 49% were taking nephrotoxic medications pre-admission
- Patients have poor awareness of sick-day rules
- Over 50% of staff do not counsel at risk patients in the diabetes clinic about sick-day rules

Next steps:

- Target high risk groups
- NH residents
- Blister-pack
- Patient safety card^{3,4}

References

- NICE CG169: Prevention, detection and management of acute kidney injury up to the point of renal replacement therapy. <http://www.nice.org.uk/guidance/cg169>
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- Martindale AM, Elvey R, Howard SJ, McCorkindale S, Sinha S, Blakeman T. Understanding the implementation of “sick day guidance” to prevent acute kidney injury across a primary care setting in England: a qualitative evaluation. *BMJ Open*.2017;7: e017241
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