

Acute Kidney Injury (AKI) – Sick Day Guidance briefing

Acute kidney injury is associated with an increased risk of death, length of hospital stay, risk of chronic kidney disease (CKD) and cost to the NHS. Particular prescribed medicines have the potential to impair renal function under certain circumstances.^{1,2}

Key recommendations

- For patients taking medication known to increase the risk of AKI or medication that can accumulate as a result of reduced renal function in AKI, ensure that the risk of AKI has been communicated with patients and carers. This should include a discussion about the possible causes, including the need to maintain fluid balance during episodes of acute illness.
- Provide sick day guidance about temporary cessation of medicines during periods of acute illness, to patients deemed at high risk of AKI, based on an individual risk assessment.
- All advice should be tailored to the individual patient.

Identification of patients at risk

Patients prescribed two or more DAMN medicines (Diuretics, ACE inhibitors, ARBs, Metformin and NSAIDs) can be identified using the NHSBSA polypharmacy dashboard - Polypharmacy Prescribing Comparators. These patients are at a higher risk of community acquired AKI if they develop an illness associated with hypovolaemia or hypotension.³

The PrescQIPP GP clinical system or manual searches may be used in conjunction with the PrescQIPP audit to identify patients at high risk of AKI and take action.

Patient factors

There are a number of individual patient risk factors for AKI, during periods of acute illness, which should be taken into account including the use of drugs with nephrotoxic potential such as NSAIDs, aminoglycosides, use of iodinated contrast agents within the past week and aged 65 years or over.⁴ Environmental temperatures can also have an effect on hydration status and subsequent risk of AKI, particularly for vulnerable patients and those with other risk factors.⁵

Medicines sick day guidance

Medicine sick day guidance should be provided to patients deemed to be at high risk of AKI after individualised risk assessment. It is given to patients (or their carers) proactively when they are well, to provide advice on managing their medicines during periods of acute illness that may cause dehydration and increase the risk of AKI. In this context, acute illness is defined as vomiting, diarrhoea or fever.

Medicines should be stopped during this time, with the exception of minor sickness and diarrhoea (i.e. just a single episode). Medicines to consider proactively advising patients to withhold on sick days include:

- Diuretics
- ACE inhibitors
- ARBs
- Metformin
- NSAIDs (prescribed and purchased OTC), but not including low dose aspirin (low dose aspirin can be safely continued in patients with AKI)

Additional consideration should be given to patients taking a combination of these medicines.^{4,6,7}



Generally, medicines that have been temporarily ceased during a period of acute illness or fever should be restarted 24 to 48 hours after the patient is well and eating and drinking normally again.⁶

Safety

There are concerns around the potential harms associated with widespread provision of 'sick day' rules or guidance, particularly when the patients have not been clinically assessed and where it is unclear at what level of ill health the medication should be discontinued. Potential harms include such things as decompensated heart failure when ACE inhibitors or ARBs and diuretics are discontinued.⁷

References

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3. NHSBSA. Epact2 Dashboards. Available at: <https://www.nhsbsa.nhs.uk/epact2/dashboards-and-specifications> Last accessed 17/12/19.
4. National Institute for Health and Care Excellence (NICE). Acute kidney injury: prevention, detection and management. NICE guideline [NG148] Published December 2019. <https://www.nice.org.uk/guidance/ng148> Last accessed 07/02/20.
5. Think Kidneys. Care Homes. Acute kidney injury and hydration guide. A learning guide for care homes. January 2017. Available at: <https://www.thinkkidneys.nhs.uk/aki/wp-content/uploads/sites/2/2016/02/Care-Homes-AKI-guide-FINAL-160217.pdf>. Last accessed 30/09/19.
6. Health Improvement Scotland and Scottish Patient Safety Program. Medicines and Dehydration. Updated briefing for professionals on the medicine sick day rules card. Version 2. 2018. Available at: <https://ihub.scot/media/1402/20180424-web-medicine-sick-day-rules-professionals-leaflet-web-v20.pdf>. Last accessed 30/09/19.
7. NHS England and UK Renal Registry. Think Kidneys. "Sick day" guidance in patients at risk of Acute Kidney Injury: a Position Statement from the Think Kidneys Board. January 2018. Available at: <https://www.thinkkidneys.nhs.uk/aki/wp-content/uploads/sites/2/2018/01/Think-Kidneys-Sick-Day-Guidance-2018.pdf>. Last accessed 25/09/19.

Additional resources available	 Bulletin	https://www.prescqipp.info/our-resources/bulletins/bulletin-260-acute-kidney-injury-aki-sick-day-guidance/
	 Tools	

Contact help@prescqipp.info with any queries or comments related to the content of this document.

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