

# Acute kidney injury (AKI): an audit to assess the clinical impact of publication of NICE guidelines in routine hospital practice

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## Aims

To compare the management and clinical outcome of patients with acute kidney injury (AKI) pre- and post-introduction of NICE guidance.

## Methods

A retrospective case note analysis was performed of all medical patients diagnosed with AKI over a 2-month period (1 February–31 March) in consecutive years before (2013) and after publication of the NICE guideline (2014).

## Results

The number of patients presenting with AKI in the study periods was similar pre- and post-NICE guidance (2013, n=64; 2014, n=61). There was a male preponderance (53.1%; 59% respectively), the mean (standard deviation) age was lower in 2014 (73.21 (17.0) years vs 79.9 (11.9) years,  $p=0.01$ ). Most patients had AKI on admission to hospital (2013, 84%; 2014, 80.39%,  $p=0.55$ ); almost two-thirds were taking nephrotoxic medication.

There were no significant differences between group mortality rates (40.6% vs 32.8%,  $p=0.36$ ). However, there was a trend towards improved survival in 2014 for patients with hospital-acquired AKI (75% in 2014 vs. 60%,  $p=0.45$ ). Stage 2 and 3 AKI was associated with increased mortality rates compared with stage 1 AKI: in 2013, 54% vs 20% ( $p=0.007$ ) respectively; in 2014, 38% vs 26% ( $p=0.31$ ). Patients' age, the presence of heart or liver failure, background chronic kidney injury and stage of AKI were strongly associated with an adverse outcome and death ( $p<0.01$ ).

The median length of stay (LOS) was the same (14 days (interquartile range: 7–36 vs 6–34 days)), with comparable 30-day readmission rates (21% vs 17%,  $p=0.51$ ). There was no statistical difference in the rate of AKI resolution (ie a discharge sCr  $\pm 20\%$  of baseline) between the groups: 2013, n=38 (59%) vs 2014, n=38 (62%).

## Conclusions

AKI is associated with a prolonged LOS and a considerable 30-day readmission rate. This work suggests that the NICE

AKI guideline may have contributed to an observed trend towards improved outcome and reduced mortality in the period following its publication.

Prompt recognition of AKI and education thereon are key to improving patients' outcome; the introduction of regular teaching sessions for medical and nursing staff, as well as early access to a specialist renal opinion, have been instigated locally.

## Conflict of interest statement

Authors declare no conflict of interests. ■

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