Acute Kidney Injury (AKI) in a district general hospital: incidence and mortality.

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Introduction

AKI was identified as a major cause of morbidity and mortality by an NCEPOD report in 2009. A Patient Safety Alert in 2014 required all hospitals in England and Wales to identify and report all cases of AKI monthly to the National Renal Registry.
An electronic algorithm was developed by the ACB to identify AKI, and integrated into LIMS by providers.

Aim

To review the incidence of AKI and subsequent mortality in a district general hospital between 2015-2019.

Location

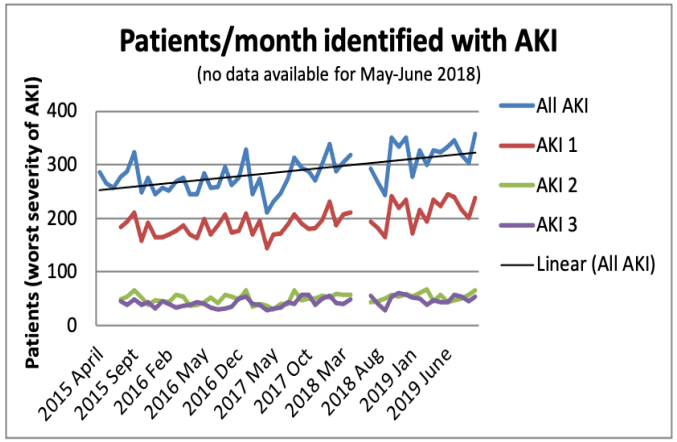
District general hospital in NW Manchester, England, servicing local population of about 285,000.
No specialist renal service on-site (provided by neighbouring teaching hospital).

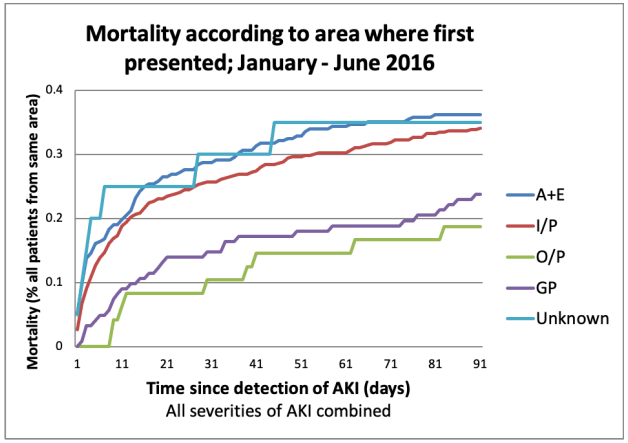
Methods

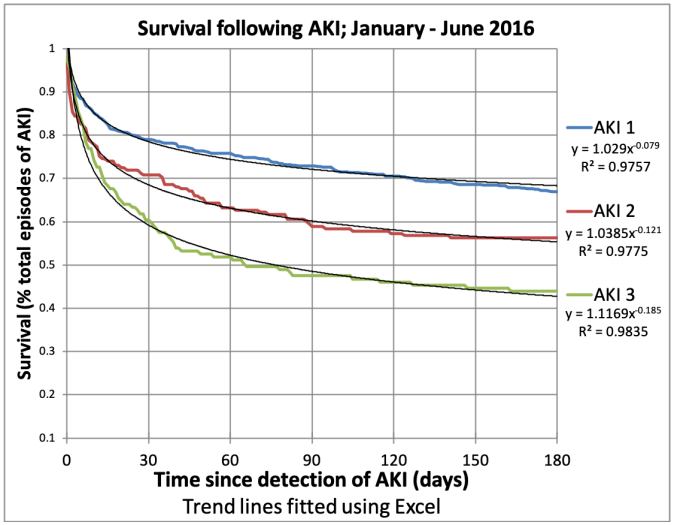
All patient samples between April 2015 – July 2019, with AKI alert attached by ACB algorithm, identified from LIMS.
Patients' date of death (where relevant) obtained from PIMS via a link to LIMS.

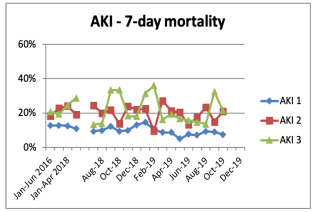
Interventions during study period

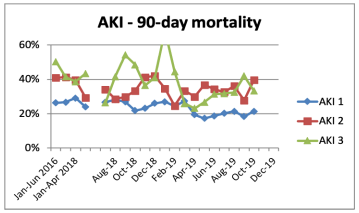
Development of local management guidelines.
Monthly report of incidence and mortality to AKI Clinical Lead.
Regular clinical audit of patient notes.











Survival 90 days post-detection of AKI (Jan-Apr 2017)			
Source	AKI 1	AKI 2	AKI 3
A+E	66% (112/170)	57% (36/63)	53% (28/53)
In-patients	72% (262/365)	53% (41/77)	50% (25/50)
Out-patients	86% (24/28)	100% (5/5)	100% (5/5)
GP patients	91% (61/67)	75% (12/16)	79% (22/28)

Conclusions

- There remains significant increased mortality associated with AKI, which is highest in the first few days following onset but persists for at least 90 days post-onset.
- Mortality is greater in those patients identified in hospital, compared to those identified in out-patient or primary care settings. This difference persists when corrected for AKI stage, suggesting that it is influenced by the underlying cause of AKI or by other factors.
- Mortality in AKI stage 3 has improved since the introduction of AKI alerts and local guidelines, and is now similar on average to that seen in patients with AKI 2.