

Lancashire Teaching Hospital Foundation Trust (LTHTr) acute kidney injury service developments in preventing and managing AKI.

Risk Factors

The current electronic patient record system alerts the Acute Kidney Injury team (AKIT) when a patient triggers an Acute Kidney Injury (AKI) based on their Creatinine results, as a trust we wish to be proactive in our approach and are developing other processes to identify at risk patients.

Identification of Acute Kidney Injury (AKI) risk during preoperative assessment: We completed an audit to identify all patients who are at significant risk of developing postoperative AKI following elective, non-cardiac, major surgeries. The audit based on the 2015 Dundee study, using a validated preoperative scoring system. Our result has shown, that 16 patients out from 143 (11%) developed AKI following elective major surgeries. We would like to extend our preoperative scoring system throughout the Trust, including every surgical speciality based preoperative assessment clinics. The individual score would be communicated to the surgical and acute kidney injury team to guide the patient's perioperative management with an aim to optimise kidney function.

Management of AKI

The AKIT developed a care bundle incorporating NICE guidance to ensure that urinalysis, an ultrasound of the urinary tract where indicated is performed, medication and pharmacist review, ongoing monitoring of creatinine, referral to critical care or a nephrologist as required and delivery of an AKI patient information leaflet is given to patients or their carers within 24 hours of the AKI alert being released by the pathology system. The AKIT review all stage 2 and 3 AKIs within 12- 24hours of the AKI alert. The AKIT is staffed by the critical care outreach team (CCOT) on a rotational basis; during the first year CCOT members have spent 3months at a time in the AKIT to support knowledge and skill development.

A similar care bundle is set to be introduced and trialled for patients with an AKI stage 1 with the emphasis placed on the parent team to implement treatment in a bid to reduce the progression of AKI development or shorten the duration of the AKI.

A combined team of primary and tertiary care staff are participating in the Advancing Quality Alliances, Achieving Effective, Reliable and Sustainable Care in AKI quality improvement programme in early 2017.

Use of technologies

The CCOT and AKIT have recently piloted the use of point of care (POCT) equipment which enables the teams to assess a patient's response to treatment by checking ABGs, haematology and biochemistry results at the bedside. The primary care AKI pathology alerts are set to be switched on later this year following agreement of the AKI guidelines being developed currently.

Measurement for improvement

LTHTr are members of the Advancing Quality Alliance (AQuA) collaborative, we will share our data to date, following service launch Oct 2015. We will discuss the challenges experienced to achieve improvement. The measures used include compliance with our AKI care bundle, mortality, readmission, length of stay for all AKI stage 3, plus AKIT activity for AKI stage 2 and 3.