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## The establishment and provision of an acute kidney injury service at a tertiary renal centre



**Sally Fray**

\*\*\*\*\*@\*\*lthtr.nhs.uk

Consultant Nurse for Critical Care  
Services - Lancashire Teaching  
Hospitals NHS FT Preston  
LANCS

[Twitter](#)

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The acute kidney injury service at Lancashire Teaching Hospitals NHS Foundation Trust was launched in October 2015. Key stakeholders were identified and included in the service development from the beginning and throughout which supported the smooth introduction of the service into the hospitals. This included the renal directorate clinical director, the consultant nurse for critical care services, the critical care outreach team (CCOT), the renal pharmacist, the information technology (IT) department, the radiology department, the pathology and phlebotomy services, the quality and effectiveness lead for the organisation, the coding department, other specialist services such as the palliative care and pain teams, and the heart failure nurses. Finally, in order to provide quality assurances, the service is part of the Advancing Quality Alliance (AQuA). All stakeholders became key partners and had a significant impact on how the service was developed and implemented, especially the links with the IT and pathology department. Working closely with the IT and pathology departments enabled the development of robust processes to identify patients with an AKI and capture service activity.

The AKIT is a bespoke service of the CCOT. Initially, every member of the CCOT rotated into the AKI service for a period of three months to consolidate knowledge and gain experience in the management of patients with an AKI. Nowadays, the team members are allocated to either work in the CCOT or AKI service and are allocated their duties on the rota. In the beginning, the renal directorate practice educator joined the team on a part-time 12 month secondment to support service development and the professional development of the existing CCOT. This resource was invaluable to support the development of resources for ward-based education, and to strengthen partnerships within the renal directorate. Generating the service as an expansion of the CCOT was a deliberate decision taken to utilise the expertise and clinical knowledge of an established team of senior nurses familiar with assessing, planning, implementing and escalating the care of these patients.

The AKIT and the ward pharmacists identify patient activity from a report on all AKI 1, 2 and 3 flags generated by a search on the organisation's pathology system. The AKIT review all newly identified patients with an AKI stage 2 or 3; ensuring that NICE guidance has been completed and that there is an ongoing treatment and monitoring plan in place. The AKI service will follow patients up for one or two days to ensure their blood results are improving which may require further visits or simply checking the blood results remotely. For those patients whose renal function is slow to improve or does not improve, the AKIT refer them on to the renal team. The pharmacists review all patients with a new AKI in their ward areas from Monday to Friday.

The AKIT search the pathology system frequently during the day to identify any new patients in real time as blood tests are processed. The majority of patients identified as having an AKI are admitted to hospital from the community so the majority of the AKIT's time is spent in the hospitals admission areas. One of the quality standards for patients with an AKI 3 is an early expert review. As the service operates 12 hours a day, 7 days a week; the majority of patients are reviewed within a 12 hour window following their blood results. The process for escalation of the patient with an acute kidney injury stage 3 mirrors that of the critical care outreach service but the AKIT escalates to the renal registrar or consultant on call. Good working relationships within the service facilitate daily discussion about patients to ensure best practice is implemented as soon as possible to achieve the best outcome, minimise patient deterioration and promote patient safety. The AQuA AKI patient information leaflet has been adopted locally and is given to patients reviewed by the AKIT to promote patient and carer awareness of the risk factors of AKI.

A large part of the AKIT's responsibility is to provide education for all health care staff in all areas. Established education sessions included in the organisation's postgraduate training programme for nurses include AKI information, recognition and prevention. Students on renal modules at the local university also spend time with the AKIT as do trainee physician assistants, student nurses and medical students etc. As a tertiary renal centre, the AKI service has developed links with other hospitals in the area to support other AKI service improvements. Recognition of acute kidney injury and appropriate coding at patient discharge are also included in the hospital discharge information letter. Ongoing recommendations following patient discharge for GPs in relation to monitoring post AKI and patient information are also included in the hospital discharge letter for all stages of AKI.

As the service matures, we are constantly revisiting all elements to ensure we are satisfied with the service for our patients; which has created new opportunities and potential developments. For example, the service is working closely with the pre-operative team to support the development of a preoperative risk assessment tool.

