

## **Reducing Harm from AKI and Improving Patient Safety**

### **A Dedicated Specialist Service**

Acute Kidney Injury (AKI) is a life threatening condition that is common, harmful and in many cases avoidable.

Wrightington Wigan and Leigh (WWL) is a three site acute trust providing the best possible healthcare for the people of Wigan, Leigh and surrounding areas, we don't have an onsite renal department this is provided by our tertiary centre – Salford Royal NHS Foundation Trust who offer advice 24/7 transferring patients who require immediate specialist renal input in a timely manner. However, many patients do not require immediate transfer and the new AKI service provides close clinical input into the care of these patients to prevent deterioration and to optimise care. This is good both for the care of our patients and in alleviating the pressure on tertiary services / beds from District General Hospital referrals.

The national recognition of AKI as being a significant problem was the result of the NCEPOD report which reviewed the management of AKI in 2009.

In 2012 WWL took part of the National NHS Kidney Care AKI Audit, looking at the management of patients diagnosed with a severe AKI.

National results showed that WWL had higher mortality rates 1 month after severe AKI was diagnosed - 44.2% compared to the study-wide average of 38.3%. It also showed we were performing poorly at medication reviews (59% compared to 85.5% study-wide) and for discussion with renal teams (20.5% compared to 35.7%).

In response to this, and prior to the AKI Specialist Service being developed a three month pilot was set up with the critical care outreach team to drive an AKI specific care bundle with excellent results showing significantly reduced mortality and improvements in the following:

The AKI service was set up in 2014 with a consultant lead and a specialist nurse covering Monday to Friday offering AKI support, advice and clinical reviews.

The e-alerts enable early recognition of patients enabling early review and treatment plans allowing early recognition if referral is needed to renal/higher care services.

To facilitate the integral, timely care of AKI patients, a re-invigorated AKI Care Bundle has been established, including a step by step criteria for the first 24 hours of treatment for all stages of AKI.

Establishing awareness of the new service within the Trust was vital for its successful implementation with education being the main priority.

A teaching programme to educate staff and raise awareness of AKI was developed with regular ward based teaching with over 370 staff taught.

Pre and post knowledge audit of AKI showed promising results of improved knowledge.

Through the recruitment of AKI ward champions we were able to distribute ward based learning and this helped staff on the wards to feel empowered.

Utilising the NICE guidelines as the specific criteria for audit showed sustainable improvements including:

- ☑ Development of the AKI Care Bundle
- ☑ Production of a patient education leaflet
- ☑ Introduction of telephone follow up calls
- ☑ Analysis of patient experience questionnaires
- ☑ Implementation of the AKI electronic alert system
- ☑ Development and delivery of the AKI education programme
- ☑ Identification and skills development of AKI Ward Champions
- ☑ Creation of a service that offers advice and support to all clinical staff caring for those diagnosed with an AKI Stage 3.

The AKI specialist service has embedded an overall awareness of AKI.

Mortality has improved from 44.2% in 2012 (baseline audit) to 18.8%.

Average Length of stay decreased from 14.7 days to 8.8 days.

Average AKI days decreased from 3.8 days to 3.1 days.

The Key areas of timely treatment for AKI has dramatically improved

The service overall has improved patient safety and outcome

Initial problems encountered included defining AKI with new criteria and an increase in inappropriate referrals to specialist renal unit causing increased workload. We targeted these areas through education implementation of electronic alerts and the production of the new AKI care bundle specifying the criteria for referral .

The new AKI service has exceeded expectations and is above and beyond what WWL NHS Foundation Trust had in place originally.

This service has demonstrated that we have dramatically reduced mortality rates, length of stay, AKI days, and has reduced the number of patients being diagnosed with AKI, overall improving safety for our patients and providing care and treatment close to their homes.