

## Ultrasound Kidney in AKI stage 1: do we comply with the current NICE guidelines?

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### Background:

In our department we noticed that patients with Acute Kidney Injury (AKI) stage 1 were having Ultrasound Kidneys (USKUB) even though their AKI had resolved. This led to an audit to look at our AKI management care bundle and whether we were in line with NICE recommendations with regards to USKUB in AKI stage 1. The current AKI bundle recommends that all patients with AKI have a USKUB within 24 hours.

### Methods:

We looked at all USKUB done in our trust over a period of 6 months. Of 2000 scans done, we selected 50 patients who had AKI stage one. Data was collected including any USKUB abnormalities, time taken for AKI to resolve and time taken from request to scan being done. We entered our data on Meridian, our trust data collection site for audits.

### Results:

6/50 patients (12%) had abnormal USKUB

Of the abnormal scans, 4 patients(66%) had mild to moderate hydronephrosis, 1 patient (17%) had old hydronephrosis and 1 patient (17%) had atrophied kidney.

In 42/50 patients (84%), their AKI had resolved within 72 hours.

27/50 (54%) patients had USKUB within 24 hours, 41/50 patients (82%) had their USKUB done within 48 hours from time of request.

14/50 patients (28%) had their USKUB done after AKI resolved.

21/50 patients (42%) had USKUB requested as per AKI care bundle or just for having an AKI without suspicion of obstruction or pyonephrosis.

### Summary:

NICE guidelines for AKI(NG148) state that an USKUB should be done for any patient with AKI where there is a suspicion of pyonephrosis (within 6 hours) or obstruction (within 12 hours) however, ultrasound is not recommended if there is a known cause for the AKI.

Our current AKI care bundle is not in line with NICE guidelines for AKI management with regards to USKUB. As a result of the findings, we have proposed a change to the care bundle to bring our management in line with current NICE guidelines.

The audit has been presented to our Deterioration Patient Group(DPG),Patient Safety Quality Group and at Medical Grand rounds to raise awareness of the guidelines. The DPG and PSQG have approved the new changes to the bundle.

If we can avoid doing 100 US kidney scans a year we could save around £5600(£56/scan). This could also save around 14 scanning days which could improve waiting time for scans. (Calculation based on 67 minutes per scan in an 8hour working day)