# SCOT Statement on identifying and coding Acute Renal Failure/Acute Kidney Injury (AKI) following Orthopaedic Surgery

Acute renal failure (ARF)[or acute kidney injury (AKI)] following total joint replacement (TJR) is monitored by the Scottish Arthroplasty Project. Some units have been identified as outliers based on a higher than expected rate within 30 days. Units with a rate 2-3SD greater than the Scottish average are advised to that they may wish to investigate this internally while units with a rate >3SD are required to conduct an investigation (https://www.arthro.scot.nhs.uk/Reports/Visualisation.html). It is also monitored in national audits of hip fracture ERAS.

The identification of ARF/AKI is undertaken with SMR01 records. These are generated by hospital coding departments for each in-patient episode. The coders rely on Immediate Discharge Letters (IDLs) and Final Discharge Letters (FDLs), with reference to the clinical records for verification. Therefore, if ARF or acute kidney injury (AKI) is mentioned as part of an IDL or FDL this will be coded as such in the SMR01 record. Clinical staff (junior doctors and ANPs) completing IDLs and FDLs may use the term ARF or AKI without reference to the specific diagnostic criteria and as such minor renal impairment may be inappropriately coded as AKI or ARF.

There have been several different diagnostic criteria published for AKI (RIFLE, AKIN or KDIGO). These have been consolidated by a recent NICE Guideline (Acute kidney injury: prevention, detection and management [NG148] December 2019)(https://www.nice.org.uk/guidance/ng148). This summarises (in section 1.3) the following criteria that should be used to diagnose AKI:

- A rise in serum creatinine **of 26** micromol/litre or greater within 48 hours
- A **50% or greater rise in serum creatinine** known or presumed to have occurred within the past 7 days
- A fall in urine output to less than **0.5 ml/kg/hour for more than 6 hours** in adults and more than 8 hours in children and young people

**Recommendation:**

- Units should use the above criteria to identify ARF/AKI.
- Units should emphasise that the terms AKI or ARF should only be used on an IDL/FDL if the above criteria are met.
- Outlying units should consider audit of cases identified as ARF using the above diagnostic criteria.
- Units should familiarise themselves with the contents of NG148 in relation to preventing and managing acute kidney injury in patients undergoing THR. These should be incorporated into pre-operative assessment and peri-operative pathways.

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