



## **AKI Information for Primary Care**

Acute Kidney Injury (AKI) was previously known as Acute Renal Failure and simply means a sudden reduction in renal function. It is not a diagnosis in its own right, rather a syndrome with many different underlying causes.

The presence of AKI acts as a 'force multiplier' and increases the severity of any co-existing acute illness. It occurs in 10 – 20% of hospital admissions and is associated with extremely poor outcomes for patients. More than 20% of these patients will die during their hospital admission, others will not recover their previous level of renal function and overall they have poor long term health outcomes.

Up to two thirds of patients who sustain AKI have already developed it by the time they are admitted to hospital. Further information and resources for primary care is available on the Think Kidneys website: [www.thinkkidneys.nhs.uk](http://www.thinkkidneys.nhs.uk).

### **Risk Factors:**

*Patient specific* – increasing age, existing CKD, Diabetes, Heart Failure, Liver disease, previous AKI

*Situation specific* – Hypovolaemia, Dehydration, Hypotension, Sepsis, Post-operative

*Medication* including Diuretics, NSAIDs, ACEi and ARBs.

### **How to reduce the Risk**

1. Consider educating high risk patients in 'Sick Day Rules' (leaflet available on ICE GP help page)
2. Check renal function in patients at increased risk of AKI with inter-current illness
3. Avoid, if possible, long term use of NSAIDs in high risk patients
4. Avoid prescribing triple combination of Spironolactone, NSAIDs and ACEi/ARB which confers an increased risk in its own right
5. Check renal function one week after starting
  - ACEi / ARBs
  - Spironolactone
  - Loop diuretics in patients with CKD
6. Be wary of prescribing Trimethoprim in patients with CKD as it will increase the serum creatinine, although not affect renal function, and may exacerbate hyperkalaemia.

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### How to recognise AKI

AKI is identified by a rise in serum creatinine and is staged as in the table below.

From April 2016 the hospital laboratory plans to send alerts to GPs for these patients.

AKI Stage	Serum Creatinine criteria
1	<b>Increase in serum creatinine to 1.5 to 1.9 times baseline; OR</b> Increase in serum creatinine by >27micromol/L within 48 hours
2	<b>Increase in serum creatinine to 2.0 to 2.9 times baseline</b>
3	<b>Increase in serum creatinine to 3.0 times baseline: OR</b> <b>Increase in serum creatinine to &gt;354micromol/L; OR</b> Initiation of renal replacement therapy

### Management of Patients with AKI detected in Primary Care

**Patient with new elevation in serum creatinine:**

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