Kettering General Hospital NHS
NHS Foundation Trust

Index No:

ACUTE KIDNEY INJURY GUIDELINES

Version:	1
Date ratified:	18/07/2012
Ratified by: (Name of Committee)	CMT Committee
Name of originator/author, job title and department:	Dr Pius Tansinda
Director Lead (Trust-wide policies) Associate Medical Director (local Policies)	Medical Director
Clinical Management Team / Directorate Applicable to	Medicine
Name of responsible committee for the policy:	Local
Date issued for publication:	18/07/2012
Review date:	17/04/2014
Expiry date: (Date 3 months following review date)	17/07/2014
Equality impact assessed by: (name, job title and department)	
Date impact assessed:	
Registration Requirements Outcome Number(s) (CQC)	NA
NHSLA standard	NA
CNST standard	NA

CONTRIBUTION LIST

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Approval and Authorisation

Completion of the following signature blocks signifies the review and approval of this process.

Name	**Job Title**	**Signature**	**Date**

Local Committee approval (where applicable)

Name of Committee	**Name of Chairperson**	**Date of Approval**
Medicine CMT		18/07/2012

Change History

Version	**Date**	**Author**	**Reason**
1	18/07/2012	Dr Pius Tansinda	

Impact Assessment

Undertaken by	**Date**

A translation service is available for this policy. The Interpretation/Translation Policy, Guidance for Staff (I55) is located on the library intranet under Trust wide policies.

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ACUTE KIDNEY INJURY GUIDELINES, KGH.
In collaboration with Royal Derby Hospital

Introduction

These guidelines are intended for use across all specialities and in all inpatient settings. Where more specialist renal support is required, these guidelines could be superseded by the renal team or ITU team.

Deterioration in renal function is seen in up to 7% of all hospital admissions and is associated with increased hospital stay, morbidity and mortality. The following guidelines are intended to facilitate identification, management and appropriate referral of those patients with AKI. **They are not a substitute for clinical judgement.**

Guidelines

- Biochemistry findings of all KGH patients with kidney damage will have an automatic AKI stage attached to the results with the exception of end stage renal disease-haemodialysis patients. Please specify location when requesting blood tests.

- If a patient has serum creatinine levels >120µmol/L and no previous levels were available, clinicians will be invited to repeat U/Es within 24 hours.

- AKI staging system is based on serum creatinine change. It is up to the clinician to assess urine output and confirm the staging. If the AKI staging based on creatinine differs from staging based on urine output take the highest, provided a proper urine output assessment has been made.

AKI STAGING CRITERIA as recommended by KDIGO

Stage	Serum creatinine (SCr) criteria	Urine output criteria
1 (Risk)	**increase ≥ 26 µmol/L within 48hrs or increase ≥1.5 to 1.9 X reference SCr**	**<0.5 mL/kg/hr > 6 consecutive hrs**
2 (Injury)	**increase ≥ 2 to 2.9 X reference SCr**	**<0.5 mL/kg/ hr for > 12 hrs**
3 (Failure)	**increase ≥3 X reference SCr or increase ≥354 µmol/L or commenced on renal replacement therapy (RRT) irrespective of stage**	**<0.3 mL/kg/ hr for > 24 hrs or no urine output for > 12 hrs**

GUIDANCE on ASSESSMENT and MANAGEMENT of AKI

Stage 1

The cause is most likely to be apparent from clinical history and examination.
Points to consider:
"DONUT"

Dehydration: Optimise fluid status. Aim for minimum SBP>100 mmHg.

Obstruction: if suspected perform a bladder scan and catheterise only if appropriate. Consider USS.

Nephrotoxins: Detailed drug history and stop offending drugs (commonly-diuretics, ACE-I, ARB, NSAIDs, Antibiotics like Gentamycin, Trimethoprim, IV contrast).

Urine: Output: Ensure strict fluid balance is documented
Analysis: if positive and patient has relevant urinary symptoms to suggest UTI ensure MSU taken **PRIOR** to starting antibiotics.
Protein positive→ Request urine protein:creatinine ratio.
Think: Remember AKI is not a diagnosis- what is the underlying cause?

Do the patients presenting features and biochemical findings suggest a multisystem disorder? Especially if urinalysis +ve for blood and protein in the absence of other features suggestive of UTI? If so, **REFER.**

Check U/Es daily.
If renal function does not improve and or AKI stage deteriorates, seek senior advice and consider Nephrology referral.

Stage 2

- Re-visit examination and history and intervene as per stage 1.
- Arrange renal USS in all patients to exclude upper tract obstruction.
- Check venous bicarbonate or ABG.

These patients will usually require discussion with Nephrology (unless obvious treatable cause identified or palliative measures appropriate).

Stage 3

These patients will certainly require Nephrology input in the majority of cases.
Follow guidance as above and refer to Nephrology at the outset.

If in doubt, contact the Renal SpR (bleep 715) for advice after senior review by your team.
For further information: http://www.renal.org/pages/guidelines/current