

**‘THINK
KIDNEYS’**

Bradford Teaching Hospitals **NHS**
NHS Foundation Trust

Acute Kidney Injury (AKI) Prevention & Early Detection

**1 in 5
emergency
admissions is
associated
with AKI**

**1 in every 3 - 4
cases of hospital -
acquired AKI is
preventable**

**AKI prolongs
inpatient care and
increases hospital
mortality**

RECOGNISE, EEVALUATE, INVESTIGATE, ACT, LLIAISE

**‘THINK
KIDNEYS’**

AKI is a sudden reduction in kidney function, often in association with acute sepsis and dehydration

There are 3 AKI STAGES of severity:

AKI STAGE 1

**>1.5x baseline creatinine
or rise >26 μ mol/L in 48h**

and/or

**urine output
<0.5mL/kg/h for 6-12h**

AKI STAGE 2

**>2x baseline creatinine
and/or**

**urine output
<0.5mL/kg/h for \geq 12h**

AKI STAGE 3

**>3x baseline creatinine
or rise >354 μ mol/L**

and/or

**urine output
<0.3mL/kg/h for \geq 24h**

RECOGNISE, EEVALUATE, INVESTIGATE, ACT, LLIAISE

AKI RISK FACTORS:

- **Chronic kidney disease**
- **Advanced age/cognitive impairment**
- **Generalised arteriopathy**
- **Previous AKI**

AKI RISK FACTORS:

- **Sepsis**
- **Dehydration**
- **Nephrotoxic drugs (see care bundle)**
- **Radiocontrast**



**‘THINK
KIDNEYS’**

**‘THINK
KIDNEYS’**

Early Detection of AKI

U&Es are essential for all acute admissions

The laboratory AKI algorithm automatically detects a significant increase in a patient’s serum creatinine.

An AKI alert message appears in ICE alongside the patient’s creatinine result with a link to clinical advice.

RECOGNISE, EVALUATE, INVESTIGATE, ACT, LIAISE

**‘THINK
KIDNEYS’**

Early Detection of AKI

The screenshot displays the Sunquest Ice Desktop interface. At the top, patient information is shown: Patient Name: FOUR EDITPATIENT, Hospital No.: ZC14893527, Sex: Male, Date of Birth: 09 January 1976, NHS no: [redacted], and Telephone No: [redacted]. Below this is a navigation bar with buttons for Cumulative, All, Back, Print, Hide, Audit Trail, Move, and Delete. A table lists reported AKI events:

Reported	Specialty	Location	Clinician	Status
18 Dec 2014 11:37	Blood Sciences	BRI Ward 04 - MAU	Dr J.Stoves (Not Specified)	UN

Below the table, it states "No clinical details given" and provides sample information: "Sample 14.3279466.J (BLOOD) Collected 18 Dec 2014 09:00 Received 18 Dec 2014 09:30". A table shows the following results:

Creatinine	**	200	umol/L	64 - 104
AKI		3		

Below the results, it says "AKI Stage 3 - See AKI document in Resources in ICE". The interface also includes a sidebar with navigation options like Patient Search, Administration, Manuals, Reporting, View Ward Reports, View Patient Reports, Hidden Reports By Patient, Hidden Reports By Sample, Tools, Resources, and Log Off. The Windows taskbar at the bottom shows several open applications including Sunquest Ice and CARE study.

The AKI stage and comment will appear in ICE alongside the U&Es result

BTHFT AKI management advice and guidelines can be accessed by clicking on the 'Resources' link

RECOGNISE, EVALUATE, INVESTIGATE, ACT, LIAISE

The AKI 8 Care Bundle

‘THINK
KIDNEYS’

The screenshot shows the 'icedesktop' web application interface. On the left is a navigation sidebar with the 'sunquest ICE Desktop web access' logo and menu items: Patient Search, Administration, Manuals, Reporting, Tools, Resources, Regional AKI Guidance, BTHFT AKI management, and AKI Care Bundle. At the bottom of the sidebar is a 'Log Off' button. The main content area displays a 'Select an application' dropdown menu with 'The requested resource' selected. Below this is a white box containing the 'AKI 8 – Care Bundle for suspected/ confirmed Acute Kidney Injury' instructions and checklist.

AKI 8 – Care Bundle for suspected/ confirmed Acute Kidney Injury

Please complete the care bundle and affix/file within the patient's clinical notes

- Assess for volume status/ sepsis, consider **iv fluids/ antibiotics**
- STOP** nephrotoxic medications (eg 'prils, 'sartans, NSAIDs, diuretics)
- Perform a urine dip for **Blood/Protein/Leucocytes/Nitrites**
Absent in most pre-renal AKI, present in infection (**BPLN – request urine culture**),
nephritis (**BP – send for urine PCR**) and some cases of obstruction (**B**)
- Manage hyperkalaemia as per intranet guidelines
- Check acid-base balance (venous bicarbonate +/- ABGs)
- Consider additional tests eg serum calcium/CK/CRP/ autoimmune and myeloma screen, and renal USS (**avoid** radiocontrast if possible)
- Monitor fluid balance/ specify frequency of NEWS assessments and repeat blood tests
- Contact renal registrar (#6581) or consultant if AKI Stage 3 +/- hyperkalaemia, fluid overload and metabolic acidosis, plan repeat tests/ review escalation of care/ inform patient or family as appropriate

In the patient **DISCHARGE SUMMARY**, to comply with AKI CQUIN please state:

- 1. HIGHEST stage of AKI during the admission**
- 2. Medication changes made – state YES or NO/ if YES, explain ALL changes, stating whether DUE TO AKI and whether or not medication is to be RESTARTED and WHEN**
- 3/4. Blood tests required post-discharge – state both TYPE and FREQUENCY**

Date and time of completion: _____ Signature and bleep: _____

RECOGNISE, EVALUATE, INVESTIGATE, ACT, LIAISE

The AKI 8



sunquest
ICE Desktop
web access

Patient Search

Administration

Manuals

Reporting

Tools

Resources

Regional AKI Guidance

BTHFT AKI management

AKI Care Bundle

Log Off

icedesktop

Select an application

The requested resource

AKI 8 – Care Bundle for suspected/ confirmed Acute Kidney Injury

Please complete the care bundle and affix/file within the patient's clinical notes

- Assess for volume status/ sepsis, consider **iv fluids/ antibiotics**
- STOP** nephrotoxic medications (eg 'prils, 'sartans, NSAIDs, diuretics)
- Perform a urine dip for **Blood/Protein/Leucocytes/Nitrites**
Absent in most pre-renal AKI, present in infection (**BPLN – request urine culture**),
nephritis (**BP – send for urine PCR**) and some cases of obstruction (**B**)
- Manage hyperkalaemia as per intranet guidelines
- Check acid-base balance (venous bicarbonate +/- ABGs)
- Consider additional tests eg serum calcium/CK/CRP/ autoimmune and screen, and renal USS (**avoid** radiocontrast if possible)
- Monitor fluid balance/ specify frequency of NEWS assess
- Contact renal registrar (#6581) or consultant if AKI Stage 3, fluid overload and metabolic acidosis, plan repeat tests/ refer to patient or family as appropriate

In the patient **DISCHARGE SUMMARY**, to comply with AKI guidelines, state the **HIGHEST stage of AKI during the admission**

2. Medication changes made – state YES or NO/ if YES, explain whether **DUE TO AKI** and whether or not medication is to be reviewed

3/4. **Blood tests required post-discharge** – state both **TYPE** and **FREQUENCY**

Date and time of completion: _____ Signature and bleep: _____

Click on Resources to download the AKI 8 care bundle