Think Kidneys – the role for nurses in the detection and management of acute kidney injury

Yorkshire & Humber AKI Nurses Forum Final Version
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What is acute kidney injury?

Acute kidney injury (AKI) is a rapid deterioration of renal function, resulting in inability to maintain fluid, electrolyte and acid-base balance. It normally occurs in the context of other serious illness (e.g. sepsis) on a background of risk.
Who is most at risk?

- Two patients are admitted via accident and emergency on a Friday night.

- George, an 86 year old man has crushing chest pain and ECG changes consistent with a large heart attack.

- Julia, a slim 56 year old, with long standing diabetes, has not been feeling right - the GP did a blood test and her serum creatinine is 456 umol/L.

- Who should we most be worried about?
Why is it important?

- Associated with other serious illness
- "Force multiplier" for poor outcomes
- Potential to improve care
- Reduce avoidable harm - death and morbidity
- Reduce cost
- Important marker of illness
Thousands die of thirst and poor care in NHS

Up to 40,000 patients die annually because hospital staff fail to diagnose a treatable kidney problem, a figure that dwarfs the death toll from superbugs like MRSA.

"This is completely unacceptable and we can't allow it to continue. Good basic care would save these lives and save millions of pounds for the NHS.

Tragedy of 3,000 patients that die of thirst in hospitals every month

UP to 40,000 NHS hospital patients are dying of thirst every year according to damning official figures released today.
"One in five emergency admissions to hospital will have AKI"

"AKI is 100 times more deadly than MRSA infection"

"Around 20 per cent of AKI cases are preventable"

"Costs of AKI to the NHS are £434-620m pa"
When

When do people sustain AKI? How is early diagnosis supported?

- 60% of AKI arises in the community
- A trigger event e.g. infection, sickness, cardiac event
How

How should AKI be managed?

- Prevention
- Treatment
- Recovery
What

What do people need to know?

Education for the public

Education for patients and carers

Education for professionals
Who is most at risk?

- Two patients are admitted via accident and emergency on a Friday night.
- George, an 86 year old man has crushing chest pain and ECG changes consistent with a large heart attack.
- Julia, a slim 56 year old, with long standing diabetes, has not been feeling right - the GP did a blood test and her serum creatinine is 456 umol/L.
- Who should we most be worried about?
Who is at greatest risk?

- For George, his risk of death is 32.2%
- For Julia, her risk of death is 53.1%

Data adapted from Chawla et al Clin J Am Soc Nephrol 2013
The NHS's campaign to avoid acute kidney injury

100,000 people die in hospital with acute kidney injury each year in the UK. Up to 30% of those deaths could be avoided with the right care and treatment

NCEPOD, Adding insult to injury, 2009

One in five people admitted to hospital in the UK each year as an emergency have acute kidney injury


Just one in two people know their kidneys make urine

Ipsos MORI survey, July 2014

70% of acute kidney injury starts at home

NICE Guidance 2013

Why we need to Think Kidneys
The primary aim of Think Kidneys is to ensure avoidable harm related to acute kidney injury is prevented in all care settings.
Think Kidneys programme – what it is not about

Bad doctors or nurses
- AKI is a patient safety issue and it is recognised that clinicians need the support of robust systems, education, risk assessment, improved diagnosis and reliable interventions

It is not a failing of the NHS
- This is a global healthcare issue
- The NHS will have the first national system to measure the problem and to improve outcomes for patients
‘Think Kidneys’ Programme objectives

- Develop and implement tools and interventions for prevention, detection, treatment and enhanced recovery
- Promote effective management of AKI
- Provide evidence-based education and training programmes
- Highlight importance of AKI to commissioners, health care professionals and managers
Patient Safety Alert

Stage Three: Directive
Standardising the early identification of Acute Kidney Injury
9 June 2014

Alert reference number: NHS/PSA/D/2014/010
Alert stage: Three - Directive

Actions

Who: NHS acute trusts and foundation trusts providing pathology services

When: By 9 March 2015

Patient Safety | Domain 5
www.england.nhs.uk/patientsafety

Contact us: patientsafety.enquiries@nhs.net
Sign up for regular updates: www.england.nhs.uk/patientsafety

Publications Gateway Reference: 01702
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What are NHS patient safety alerts?

- Method by which NHS can rapidly alert the healthcare system to patient safety risks, or to provide guidance on preventing harm

**Level 3:**
Directive: requires specific action(s) within timeframe

**Level 2:**
Specific resource and information sharing

**Level 1:**
Warning of emerging risk
National groups

Renal Association guidelines committee
- Met October 2013
- Nephrologists, biochemists, acute physicians, ICU, patients
- Ratified algorithm
- Guidelines to be produced

British Association Paediatric Nephrologists
- Met Sept 2013
- Paediatric nephrologists, biochemists
- Ratified algorithm with one adaptation for paeds

Specific actions:

- Work with LIMS provider to integrate NHSE AKI detection algorithm into Laboratory Information Management System (LIMS)

- Ensure test results are sent:
  - To hospital patient management systems
  - Into a data message for transmission to a central point (UK Renal Registry)

- Educate primary care physicians as to the use of AKI detection
The Ipsos Mori Survey

- Friday 4 and Monday 14 July 2014
- 2,005 residents of Great Britain aged 15+ questioned in their homes
- Participants were asked a series of questions as part of a larger omnibus survey
- Included in the survey were multiple choice questions about their knowledge of human kidneys
The Findings
Headline findings

- People don’t have a comprehensive understanding of what their kidneys do, how to keep them healthy, or what acute kidney injury is.
- About half of the population don’t think their kidneys make urine, and you’re more likely to know this if you are older.
- Very few people know that kidneys help in the processing of medicines.
- More people in the research believe that the kidneys help remove waste from the body than thought they made urine.
- More people thought the kidneys made urine rather than removing excess fluid from the body.
- A quarter thought that the kidneys helped control the body’s chemical balance.
Kidney Function

- Only 51% of the population know that kidneys make urine, and of those people 59% are graduates/PhD

- The older you are, the more likely you are to know kidneys make urine

- Only 12% of participants thought that the kidneys had a role to play in processing medicines

- More people believe that the kidneys help remove waste from the body (60%) than thought they made urine (51%)

- More people thought the kidneys made urine rather than removing excess fluid from the body
Kidney Function (continued)

- A quarter (24%) thought that the kidneys helped control the body’s chemical balance

- Nearly one in 10 participants (8%) thought the kidneys pumped blood and fluids around the body

- Very few participants (3%) thought they had a role in maintaining the health of bones (Table 5.1)

- One in 14 participants (7%) do not know what the kidneys do
Dangers to kidney health

- Over two-thirds (68%) of the population think that too much alcohol damages kidneys.

- You are more likely to think that alcohol causes harm to kidneys if you live in the north east or west of England, Scotland or Wales.

- There is good understanding that dehydration can have a serious effect on your kidneys’ health (53%).

- Less than a quarter of the population (22%) think that ingredients in medicines present a problem to kidney health.

- Lack of exercise or poor diet are seen as more likely to cause harm by participants aged between 15 and 44, than those over 45.
Dangers to kidney health (continued)

- Only 1% of participants thought that smoking endangers the health of kidneys.
- 35% of participants believe a physical blow endangers the health of kidneys.
- 5% of participants did not know what endangers the health of kidneys.
What, if anything do people know about AKI?

- 15% of interviewees said they had definitely heard of it
- 16% thought they had heard of it
- 31% of interviewees were aware of AKI
- 68% had not heard of AKI
- 1% didn’t know whether they had heard of it

Awareness of AKI is affected little by age, social grade or education.

Wales was the location with the highest percentage of people who had definitely heard of it – at 24%

Londoners were the least likely participants to have heard of it – at 9%
Have you heard the term "Acute Kidney Injury" before today, or not?

- 68: I have definitely heard of it
- 15: I think I have heard of it
- 16: No, I have not heard of it
- 1: Don’t know
What do people think best describes AKI?

- 38% said that it was due to the sudden damage to the kidneys as the result of a physical blow to the kidneys

- This is almost the same as those who guessed the definition after saying they weren’t aware of AKI (32%)

- One third of all participants (34%) think that AKI is sudden damage to the kidneys as the result of a physical blow

- Only one in five (21%) knew or guessed the correct definition of acute kidney injury.
What do people think best describes AKI? (continued)

- Participants over the age of 65 are least likely to know true definition of AKI (17%)

- Nearly one in four (23%) thought AKI was caused by sustained alcohol abuse

- Of those who said they were aware of AKI, only 27% knew what it was, while the percentage that guessed and guessed correctly was 18%
Which, if any of the following, do you think best describes Acute Kidney Injury?

- Two-thirds (66%) incorrectly identified the definition of AKI, and one in 10 (11%) admitted to not knowing
- Over half (51%) guessed that it was the sudden damage to the kidneys as the result of a physical blow to the kidneys
- Younger people are more likely to believe that AKI is the result of poor diet or lack of exercise
- Participants aged 65+ were more likely to give an incorrect answer (83%) compared to participants aged 14-25 (77%)
- More educated participants were more likely to know that AKI is the sudden damage to the kidneys as a complication of another serious illness or dehydration
A nurses role in the detection and management of acute kidney injury

- Knowledge of those patients at risk of AKI
- Knowledge of force multipliers that could make patients susceptible to AKI
- Maintaining fluid balance
- Understanding of medications that can negatively impact on the kidneys
- Knowledge of actions to be taken if AKI is detected

Think Kidneys
Visit our website at www.thinkkidneys.nhs.uk

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