Acute Kidney Injury
Best Practice Guidance for undergraduate nurse educators

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Abstract

Think Kidneys undergraduate education: standardising education and enhancing knowledge of AKI in undergraduate nursing students
Background, context and evidence base for the innovation

- Acute Kidney Injury (AKI) is a topic that has received increasing attention over the last few years.
- In 2009 the National Confidential Enquiry into Patient Outcome and Death (NCEPOD) reported that only 50% of patients with AKI received good care and that 20% of patients had avoidable and predictable AKI.
- It is estimated that approximately 13-18% of all admissions to hospital have AKI costing the health service in excess of £434 million a year (NICE, 2013).
Strategies are needed to tackle AKI including increased education to enable enhanced understanding of the aetiology, identification and management.

Recommendations within the NCEPOD report (2009) highlight the need in undergraduate medical education.

However student nurses are our future workforce and must have the skills necessary to recognise the deteriorating patient and identify patients with and at risk of AKI.
Think Kidneys

- Think Kidneys is an NHS campaign aimed at improving the care of patients with AKI.
- The website includes lots of resources and best practice from institutions around the UK.
- One aspect of this campaign is the generation of resources for undergraduate nursing education.
- To enable standardisation of undergraduate knowledge and understanding around AKI.
- The project produced lesson plans and PowerPoint presentations to enable educators and lecturers to be able to deliver education on AKI without being experts on renal.

Undergraduate nurse education
Implementation of the innovation

- A focus group was established ranging from specialist nurses, matrons, educators and community to design and create resources to support educators with delivering education on AKI.

- Regular meetings were conducted in order to agree on key aspects to be included in the resources.

- The programme would include resources at level 4, 5 and 6 with each year building on the previous session’s slides.
Scoping Exercise

- Paucity of evidence within the literature relating to education of student nurses and renal
- 72 universities were sent a questionnaire.
- AKI delivered in years 2 or 3 of adult pre-registration nursing degrees.
- Education varied from taught sessions, scenarios or as a student choice as part of a case study.
- Education may consist of several sessions or just one.
- Not always specifically addressed within the curriculum.
Renal and AKI Awareness Among General Public

- General awareness of renal is poor.
- Mori poll (2014)

What do the kidneys do?
- Make Urine 51%
- Remove waste 60%
- Processes medicines 24%

Biggest dangers to the kidneys?
- Dehydration 53%
- Some medications 22%

Have you heard of AKI before today?
- I have definitely heard of it
- I think I have heard of it
- No, I have not heard of it
- Don’t know

Undergraduate nurse education
Guidance on AKI for student nurse educators

- Underlines the importance of improving healthcare professional knowledge in relation to the kidneys and AKI.
- This must include:
  - The functions of the kidney, problems leading to reduction in function (AKI and Chronic renal disease) and
  - Identification and management of AKI in patients with complex needs.
- It is hoped that by raising awareness of AKI, it will help to improve outcome (Xu et al., 2014).
Methods used to develop and review the innovation

- Within the meetings it was established that there was an agreement with what would be included within the resources.
- Sharing of resources and information
- Resources regularly reviewed within the focus group.
- Resources have been reviewed by and feedback received from peers.
3 slide sets with lesson plans developed.

- **Year 1** – anatomy and physiology of the renal system, introduction to AKI: risk factors, causes, focus on dehydration, case studies.
- **Year 2** – More in-depth look at AKI detection, prevention, complications and management, introduction to care bundles
- **Year 3** – Interventions, medication management, use of care bundles
- Video case study [https://youtu.be/9YnqCzfDAGg](https://youtu.be/9YnqCzfDAGg)
AKI for undergraduates is not taught consistently and this topic needs to be included in pre-registration education if the numbers of patients with their care complicated by an episode of AKI to be reduced. (NICE, 2014)

In order to support this, the working group have developed lesson plans, slide sets, suggested pre-reading, etc.

These will be available on the Think Kidneys website for educators to download and edit for their own use.
References


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Dehydration

- Mild – no more than 5% of the body's fluid.
- Moderate is 5-10%
- Severe dehydration 10-15% is considered life threatening
- It’s vital to monitor fluid input/output accurately
- Dehydration can be further compounded by continuation with diuretics and anti-hypertensives and other nephrotoxic medications.
- For further information regarding medications optimisation and AKI follow this [LINK](#)
All patients with AKI should have a urine dip. **Blood** and **Protein** in urine is a sign of kidney disease and intrinsic AKI.

**THINK:**

Have your patients passed urine in the last 6 hours?
Cumulative totals should be done every 6 hours as well as daily
Is your fluid balance chart accurate? In a small scale study in one trust 85% of 570 patients seen by the AKI team did NOT have accurate in/out put monitoring!