The detection and management of acute kidney injury up to the point of renal replacement therapy

Stakeholder workshop

6th of April 2011
NICE, MidCity Place, 71 High Holborn, London, WC1V 6NA

Summary notes

The stakeholder scoping workshop is held in addition to the formal consultation on the scope which is taking place from the 17th of May until the 14th of June 2011.

The objectives of the scoping workshop were to:

- obtain feedback on the specified population and key clinical issues included in the first draft of the scope
- seek views on the composition of the Guideline Development Group (GDG)
- encourage applications for GDG membership

The scoping group (Technical Team, NICE and GDG Chair) presented a summary of the guideline development process, the role and importance of patient representatives, the process for GDG recruitment and proposed constituency for this group, and the scope. The stakeholders were then divided into three groups which included a facilitator and a scribe and each group had a structured discussion based around pre-defined questions relating to the draft scope. Comments received from each discussion group have been combined and summarised below.

Scope section	Comments
Guideline title	The stakeholders agreed that the title of the guideline should include prevention as this would be an important key topic area to cover.
4.1.1 Groups that will be covered: • **Adults (18 years and over)** • **Particular consideration will be given to the needs of:** • **Older patients (65 years and over)**	The groups were all happy with the population being covered. They suggested that adults (18 years and over) should be changed to people 16 years and over. They suggested that for some of the key clinical areas, the GDG may like to consider other groups such as patients with sepsis, those undergoing major surgery and/or people with cardiovascular disease.

• **Patients with Chronic Kidney Disease (CKD)**	
4.1.2 Groups that will not be covered	a) Paediatrics – some stakeholders disagreed that there was a different spectrum of causes of AKI in children compared to adults. It was finally agreed that there was little evidence for AKI in children and that their management was a specialist area. It was felt that the AKIN and RIFLE criteria may not apply to children even though there were some suggestions that RIFLE had been validated in children. The Stakeholders finally came to the conclusion that resources would be best used to cover more aspects of management in adults and that a separate paediatric guideline would be more beneficial.
4.3 Clinical management	
a) The use of risk assessment tools such as 'track and trigger' systems in the identification and ongoing assessment of AKI.	It was agreed that this is a very important question to include in the scope of the guideline. The population for this question should include: • All acute admissions • Patients undergoing imaging with contrast – it was noted that risk scores exist for percutaneous coronary angioplasty. • Patients having major surgery (though their pre-operative risk probably covered in CG3 Preoperative tests, post-operative risk not covered although risk scores do exist for cardiothoracic surgery)
b) The use of serum creatinine and urine output in the diagnosis and staging of AKI.	The various definitions of AKI were discussed within the groups. The general consensus was that stakeholders preferred the AKIN or KDIGO definitions. Time points for repetition of tests were discussed: • 24 hours for patients "at risk" • 24 hours post op in "at risk" patients • Post contrast – depends on patient risk and procedure, could range from 12 hours to 7-10days. It was felt that urinalysis should be added as a quick and cheap test to perform that could give information re cause of AKI. GFR was also discussed and stakeholders thought it might be useful to include in the scope as this is

	a commonly used test even though it is only valid for stable patients.
c) Prevention of deterioration: - **Stopping or avoiding nephrotoxic drugs in patients with, or at high risk of AKI** - **The effectiveness of methods such as 'eprescribing' to reduce the inappropriate prescribing of nephrotoxic drugs.**	The stakeholders agreed that this is a very important question to include. However, they did not feel that e-prescribing was widely available and were concerned that health care professionals may assume that this was a "safe system" which could lead to drug errors. They suggested that the medical team and pharmacist should work together to regularly review the drugs for patients with AKI or at high risk of AKI are receiving. Therefore, more general methods for ensuring safe prescribing should be reviewed.
d) Pharmacological management of AKI with: - **Inotropes:** **Dopamine (high and low dose)** **Norepinepherine (Noradrenaline)** **Fenoldopam** - **High dose loop diuretics:** **Furosemide (Frusemide)** **Bumetanide**	The stakeholders agreed that this is an important clinical question to include in order tostop people prescribing ineffective and possibly harmful drugs. The group felt that low dose dopamine should be reviewed. Atrial natriuretic peptide and terlipressin were also mentioned as possible drugs to include as vasopressors/inotropes. They highlighted that fenoldapam is not available on the NHS and therefore should not be included in the guideline. The use of inotropes in patients with AKI in the critical care setting was discussed. The group agreed that high dose loop diuretics should be in the scope, but that these should only be considered as a rescue therapy and not in the treatment of AKI.
e) The use of acetylcysteine or intravenous fluids to prevent contrast induced nephropathy in patients with chronic kidney disease and/or diabetes mellitus	It was pointed out that, although commonly used, a recent large South African trial had shown that acetylcysteine has no benefit and therefore it would be important to include this as it may lead to recommendation against its use. The group felt that the population should be defined as those patients at risk of CIN (not limited to CKD/diabetes although they agreed patients with CKD were likely to be the most at risk). They also discussed the possibility of point of care testing for Creatinine levels in radiology departments
f) The role of ultrasound in the management of AKI: when is it needed?	The stakeholders agreed that ultrasound does play a key role in detecting obstruction and therefore it is important to include this key area in the scope. They felt that the timing of ultrasound depended on the severity of AKI and the stability of the patients. Therefore, they suggested that it may be best to review this question in two parts 1) when to initiate and 2) in which patient group.

g) The timing of nephrostomy in cases of urological obstruction.	The stakeholders agreed that this should not be limited to nephrostomy. Nephrostomy should be changed to "relief of obstruction" as insertion of a urinary catheter or urinary stenting may also be appropriate.
h) Involving critical care or nephrology services in the care of patients with AKI at all the relevant stages in their illness.	CG50 covers critical outreach and stakeholders were happy that patients with AKI could be managed through the same pathway as other acutely unwell patients. They felt that it would be more important to look at referral criteria for nephrology.
i) What is the best stage of AKI to have dialysis initiated?	The stakeholders agreed that 'dialysis' should be changed to renal replacement therapy (RRT). The group agreed to variation of when RRT was started occurred in the ICU setting and that this question should be asked to try and address this. There was consensus that this is a tricky question and may not be high priority one as it mainly relates to ICU. However, some thought that maybe it should be addressed to provide recommendations to all healthcare professionals involved in the management of AKI.
j) Information and support for patients and carers.	All stakeholders agreed that this is a very important question and should be included in the scope.
4.3.2 Clinical issues that will not be covered	Biomarkers There was mainly agreement that the use of biomarkers should not be included in the scope of the guideline. They are not widely available, expensive and as yet there is insufficient evidence to support or refute their use. However, it was widely acknowledged that it is an important developing field in AKI and may be included in future updates of the guideline.
4.3 Clinical Management **GENERAL**	
Have we included any areas that are irrelevant and could be deleted?	None raised
Are there any critical clinical issues that have	The stakeholders suggested the following:

been missed from the scope that will make a difference to patient care?	- Conservative management i.e. who shouldn't have RRT (may link in to end of life care quality standards) - Nutritional support – access to dietician for patients with AKI, especially low potassium diet - VTE prophylaxis in patients with AKI - Investigation and diagnosis of causes of AKI - Risk Factors - Fluid management
4.4 Main outcomes	
	The stakeholders agreed with the main outcomes presented in the scope. - They felt that mortality should be looked at at discharge and 3 months. Longer term mortality would be desirable but they felt would only be available on ITU patients retrospectively from databases. - Short and long term requirement for RRT - HRQoL - agreed - It was discussed that residual CKD (may be captured by other outcomes but may probably not be a main outcome) They also suggested adding the following outcomes: - Length of hospital stay - Complications - Length of stay
GDG Constituency **Do we have the right expertise on the group?**	Stakeholders thought this was an appropriate group constituency for the guideline but it may ultimately depend on the final scope of the guideline and which clinical areas will be covered.

The meeting was closed by a brief summary of the 3 key points discussed at each table. Attendees were informed of the scope consultation dates and process and that GDG recruitment would happen simultaneously. Further comments on the scope and applications for GDG membership were encouraged.