

# Improving the prevention, early detection and management of Acute Kidney Injury (AKI) in Wessex

## The case for change

AKI is recognised as a major public health and patient safety concern nationally and is seen in up to one in five acute hospital admissions. The picture from Wessex 2013/14 hospital episodes statistics (HES) data as below is broadly similar to incidence, length of stay and mortality for the rest of England:



## A clinical collaboration approach

The Wessex Acute Kidney Injury (AKI) Clinical Forum was convened by the Cardiovascular Strategic Clinical Network in January 2014 to address variation in care, to bring together clinical experts from across the region, which includes the Wessex Kidney Centre based in Portsmouth and the Dorset Renal Service, and to share good practice in laboratory systems, acute medicine, nursing care and renal teaching.

The AKI Clinical Forum gathered a range of clinical and commissioning experience to bring the diverse nature of AKI under one leadership for change agenda. Members included consultant nephrologists, acute medicine physicians, GPs, specialist nurses, pharmacists, public health specialists, Wessex AHSN, university academics, biomedical scientists and chemical pathologists supported by the Cardiovascular SCN team. The group set out its over-arching aims:

- ▶ Harmonise the AKI pathway
- ▶ Help education and learning to embed best practice
- ▶ Improve advice/guidance and referral practices to the regional renal units
- ▶ Share expertise, workload and other resources
- ▶ Collaborate on research
- ▶ Provide a point of accountability

## Identify the priorities

The group identified priority areas for improvement, aligned to the national 'Think Kidneys' programme and NICE Clinical Guidelines. Broad work stream areas were prioritised to support and deliver the aims of the group without unnecessary duplication of work underway, e.g. sick day rules, apps, risk calculators etc., and by learning from other early adopter initiatives.



## Key implementation steps to reduce harm and improve AKI care

### Acute hospital care

E-alert subgroup	The AKI Clinical Forum has supported biochemistry leads and pathology lab teams to share good practice and troubleshoot implementation of the national AKI e-alert algorithm. All Trusts were live with AKI e-alerts by March 2015.
AKI acute care pathway	In partnership with nephrologists, acute medical physicians, biochemistry leads, nurse specialists and public health specialists, the group developed a simplified <a href="#">Wessex AKI Care Pathway</a> to raise awareness and support clinical practice.
Hospital education	Trust AKI leads have agreed a Wessex wide approach to improve AKI teaching for all core medical trainees. In collaboration with Health Education Wessex, the group is devising course materials for a new teaching programme.
AKI outreach	The AKI Clinical Forum has shared experience and benefits of nurse outreach. AKI trust leads have championed extension of current outreach roles into AKI and supported business cases to create new AKI nurse specialist roles.

#### Focus point

#### Get the basics right!

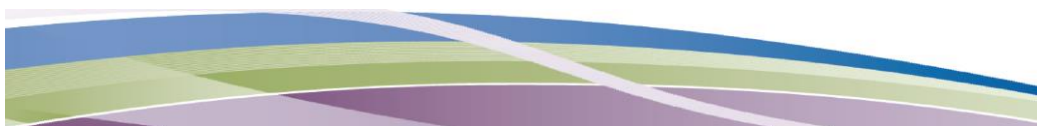
The AKI Clinical Forum reviewed hospital AKI guidelines around the country and considered the challenges of embedding good medical care, assessment of AKI risk and timely, effective clinical interventions in all specialties from AKI stage laboratory result warnings.

The [Wessex AKI Care Pathway](#) emphasises good basic care starting from risk assessment, prevention through to early intervention and escalating for renal advice. The key to getting the message across was simplicity, engaging design and clarity of message on one side of A4.



### Primary care

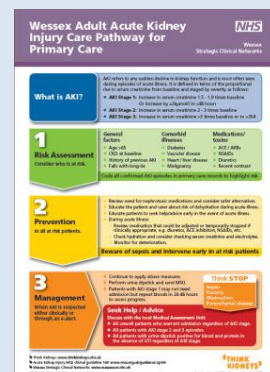
AKI education workshops	A peer-to-peer education workshop was piloted then rolled out across Wessex CCGs informed by feedback from a GP survey and through engagement work with GPs and primary care clinical leads. Around 500 primary and community care staff have attended the workshops and other education events to date.
AKI primary care local guidelines	Local and national hospital audit data showed AKI was community acquired in 65-70 per cent of cases. Clinical support and education resources for GPs were identified as a major priority before the roll out of the AKI stage warning to primary care. <a href="#">AKI Care Pathway local guidelines</a> and <a href="#">AKI Ten Top Tips</a> have been produced to support and prepare primary care colleagues.



### Engaging with primary care

'Local Awareness and Early Detection Initiative' (LAEDI) successfully pioneered by the Wessex Cancer SCN was transformed across to AKI. The SCN facilitated a collaboration of Macmillan Cancer Support and Cancer Research UK GP Advisors with AKI leaders to share engagement and education learning from the Cancer SCN LAEDI programme.

A simple [AKI Care Pathway](#) guideline, adaptable into clinical systems, was co-produced with GPs to support clinical decision making in the community in preparation for AKI stage warnings. Feedback from a GP survey signalled that a range of education resources should be available. A Macmillan style [Top Ten Tips](#) education resource for AKI was also written by GPs for GPs.



### Stakeholder engagement

SCN stakeholder event

The CVD SCN sponsored a Wessex AKI awareness and education day in April 2015 to launch new local guidelines. The event was attended by 100 delegates from across provider and commissioning organisations and specialties. A second event in October 2015 was co-hosted by Dorset CCG to an audience of 125 community and primary care health care practitioners and nurses.

Share and spread

The SCN supported a Twitter campaign to raise awareness of the local AKI guidelines and engaged with CCG communications teams to promote them in 'Hot Topics', newsletters and web portals. The guidelines were presented at national SCN meetings and shared with NHS England South Medical Directorate. Engagement is also underway with NICE and the Wessex LMC.

### Planning for the future

#### Primary and community care

The AKI Clinical Forum will continue to support the planned national roll out of the AKI e-alerts to primary care clinicians in April 2016. Expert led, peer-to-peer education events are on-going in primary care by the AKI Clinical Forum which will also include GP out-of-hours services. AKI awareness is embedded in Macmillan GP practice visits. CCGs will continue to have access to clinical experts for advice and guidance. A Wessex wide engagement and education event is scheduled for community staff groups in February 2016. This event will help to define a local approach to supporting the care of patients living in the community with long term conditions.

#### Education

The Wessex Cardiovascular SCN is working in partnership with deans from Health Education Wessex to embed AKI education in under-graduate and post-graduate medical training. AKI teaching in core medical training will be piloted in two Wessex acute trusts with a planned roll out across the region to include nurse specialists and senior nurses following evaluation. Further partnership working is in hand to develop AKI education content for Wessex GP trainees and continuing education materials with the Wessex Local Medical Committee.

#### Evaluation

The NIHR Wessex CLAHRC at the University of Southampton has formal collaborative links with the Wessex AKI Clinical Forum and the SCN. The CLAHRC is leading the Hampshire AKI Study, a major applied health research project which aims to understand the epidemiology and consequences of AKI. Data

analysis from the Hampshire Health Record will assess the impact of the Wessex CVD Network AKI initiatives as part of the study design by evaluating:

- The effect of introducing AKI e-alerts (and associated hospital clinician education) in Hampshire hospitals on AKI outcomes.
- The effectiveness of an AKI education intervention and e-alerts in primary care on community-acquired AKI identification, management and prevention.

HES data and UK Renal Registry AKI data (when available) will be analysed locally to assess the impact of the project work streams.

Baseline data collated on the GP experience of AKI and their education preferences can be used to evaluate the effectiveness of the project initiatives, by testing changes in GP awareness of AKI and their confidence to manage AKI in the community.

### *Patient and public awareness*

AKI is a national patient safety priority for NHS England. Embedding AKI into patient and public awareness and into local clinical practice can be taken forward in partnership with Think Kidneys, the national AKI Cluster and the Patient Safety Collaborative, hosted locally by the Wessex AHSN.

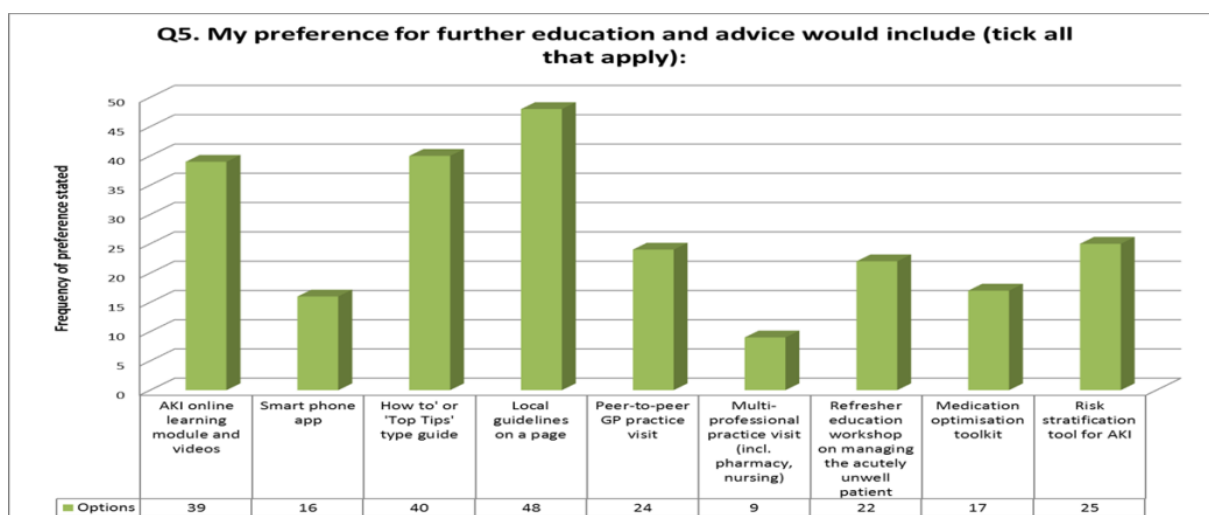
## 7 Lessons learned and feedback so far...

**1 Engage users early.** Collaboration works well when users are involved in the design of a tool or resource at an early stage. Across Wessex the views of 100 GPs were collated via a short survey. A small group of GPs then designed engagement and education interventions aimed at supporting clinical practice and providing additional education resource.

41% of GPs surveyed felt unsure or not confident to determine patient risk of AKI

Over 90% of GPs surveyed agreed they would benefit from more AKI education and advice

Prepare to encounter a wide range of education preferences (see graph below). Some GPs will not be receptive to risk calculators and toolkits; many value the opportunity to have face-to-face contact with hospital specialists; whilst others are early adopters of system interfaces and audits.



**2 Leverage successful programmes used elsewhere.** The SCN support team facilitated transformation of the Cancer SCN primary care engagement model *Local Awareness and Early Detection Initiative* (LAEDI) across to AKI. The LAEDI programme has a proven track record in working with GPs to improve awareness of cancer symptoms and early detection of cancer using referral pathways. A similar peer-to-peer engagement approach for AKI leveraged the expertise and knowledge of Macmillan GP Advisors when designing AKI workshops, clinical scenarios, decision support and education resources for primary care colleagues.

**3 Gather feedback from users.** Workshops have been delivered to seven of nine CCGs to date at locality education meetings. Feedback has been both encouraging and informative. Workshops have been well attended – so far around 500 hundred colleagues working in primary and community care settings have attended. Evaluation shows that key messages about AKI have been received positively with impact on clinical thinking and practice clearly articulated by delegates.



System barrier issues in primary care were identified for taking forward by commissioners. The main feedback has been around the practicalities of more blood taking in the community - access to phlebotomy, collection of samples in a timely manner for effective assessment of at risk patients. There are general workload concerns although local data suggest that AKI incidence could be as low as one patient per GP every six weeks. 'Sick Day Rules' for at risk patients is a regular point of discussion. As yet evidence is not available to know whether widespread use of these is of value.

**4 Extend project reach through clinical leadership.** Engagement of clinical and subject matter experts from across the network and across key clinical areas enabled the project to extend its reach of influence. The clinical forum fostered cross-specialty collaboration and clinical leadership in AKI, which created opportunities for changing clinical practice to provide care more consistently and in more co-ordinated ways, and for building locally on the work of national clinical leaders.

**5 Simplify key messages.** AKI is potentially accompanied by a complex set of clinical scenarios which occur in just about every clinical specialty. The project group felt that resources to support and embed clinical teaching needed to be simple, clear of purpose and designed to engage clinicians. Professional creative input can add value for a small budget.

**6 Borrow from and build on what already works.** The SCN and local renal communities used their combined resources as well as the Think Kidneys website, to learn from the work of innovators in kidney care and AKI and to openly share their own work-in-progress and the tried and tested.

**7 Pilot new initiatives.** A leap of faith is sometimes necessary to try out new approaches and learn from mistakes of the past, particularly where there is a lack of data and clinical evidence on what the right approach is. Confidence may be gained by planning and piloting a new initiative with simple feedback mechanisms to refine and improve before wider roll out. It is important to be clear to

stakeholders what is required: are you trying to define the problem through research or trying to improve practice through change?

## Acknowledgements

Wessex Cardiovascular SCN would like to thank Dr Mark Uniacke, Dr Alastair Bateman, Dr Michelle Chesters, Dr Paul Barker, all members of the Wessex AKI Clinical Forum and the Wessex Macmillan GP Advisors for their time, inspiration and commitment to this project.

## Further information

For further information on this project, please contact [england.wessexscn@nhs.net](mailto:england.wessexscn@nhs.net).

## Author

Caroline Cross, Quality Improvement Lead  
Wessex Strategic Clinical Networks  
NHS England South  
March 2016