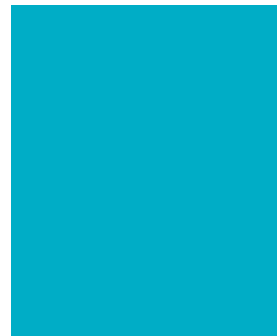


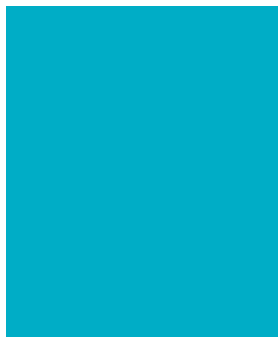
Strategic Clinical Network for Yorkshire and the Humber

# SCN-CVD-Nephrology-**AKI**

Dr John Stoves, Renal Clinical Lead, Yorkshire and the Humber



AKI Nurses Forum  
Northern General  
Hospital, Sheffield  
23<sup>rd</sup> April 2015



## Strategic Clinical Networks

*SCNs operate as engines for change across complex systems of care, maintaining and or improving quality and outcomes. They bring primary, secondary and tertiary care clinicians together with commissioners, partners from social care, the third sector and patients*

*SCNs are nationally mandated, hosted by NHS England and will receive funding for their core functions*



# A profile for Nephrology within a regional Cardiovascular Disease (CVD) Network

- Promote current and future regional priorities
- Strengthen links with primary care, CCGs and Collaborative Commissioning Groups (SYCOM, NEYCOM, 10CC)
- Liaise with renal units, National Clinical Director, other SCN renal leads, specialty leads (cardiac, diabetes, stroke), national Clinical Reference Group leads
- Involve patients and patient representatives

# A profile for Nephrology within a regional CVD Network

- Care Quality indicators
  - Public Health England, QOF, Renal Registry/HES, Service Specifications (best practice, current initiatives, barriers to change)
- Renal Clinical Expert Group
- MDT Regional Forums
  - **AKI**, transplant, home therapies and shared care, conservative care
- Linkages with Academic Health Sciences Networks

# Key renal priorities for Yorkshire and the Humber in 2014-15

- **Acute Kidney Injury**
- Access to Renal Transplantation
- Assessing and managing variation

## Not forgetting ....

- Shared haemodialysis care
- Home therapies
- Conservative and palliative care
- Work Force Planning
- Care Planning
- Primary Care capacity, quality and expertise
- E-consultation
- Anaemia Management
- Emergency Planning
- Capacity Planning for Dialysis
- Transport
- Dialysis Away From Base
- Education (undergraduate, postgraduate, multidisciplinary)

## ... and other areas of interest

- Shared Decision Making
- Adolescent Link Worker/ Adult Support Worker
- Greener healthcare - procurement
- Sharing of patient electronic medical records between primary and secondary care

## AKI- drivers for service improvement

- **Reports, guidelines, structures and pathways**
- NSF, NCEPOD, NICE, RCP Edinburgh Consensus Conference, Francis, Berwick
- A new regional CVD network with broad support for a regional programme
- CCG, primary care and secondary care collaboration with patient involvement
- Advances in IT - laboratory e-alerts, primary care systems
- AKIPP in West Yorkshire, initiatives in all parts of the region, national initiatives (Pathfinder, Renal Registry, CQUIN)



# AKI Patient Care Initiative

A Yorkshire and the Humber forum for sharing and developing best practice

Sharing successes, challenges and barriers to change from  
across the region and beyond

**Wakefield 3/14, Leeds 6/14, Wakefield 10/14, Wakefield 2/15**

Dr Andy Lewington, LTHFT

# A multidisciplinary and multifaceted approach

- Staff and patient education
- IT initiatives – e-alerts, prompts, checklists and metrics
- Risk awareness in both primary and secondary care (patients, staff)
- Medication review at the time of acute illness
- Peri-operative medicines management
- Prevention of contrast-induced AKI
- Fluid balance and physiological observations

## Regional representation

- Airedale
- Barnsley
- Bradford
- Calderdale and Huddersfield
- Chesterfield
- Doncaster and Bassetlaw
- Harrogate and District
- Hull and East Yorkshire
- Leeds
- Mid Yorkshire
- North Lincolnshire and Goole
- Rotherham
- Sheffield
- York

## AKIPCI – sharing of best practice (1)

- 1. Electronic NEWS reporting and escalation of care for the acutely deteriorating patient
- 2. AKI e-alerts linked to prompts, care bundles and an audit trail
- 3. Automated Sick Day alerts at point of accessing the electronic patient record (home, surgery, front door of hospital), local primary care CVD forums

# Sick Day Advice to prevent AKI

Prototype algorithm in SystemOne to remind clinicians to suspend medication to prevent acute kidney injury in high risk patients.



## Sick-day algorithm for patients at risk of acute kidney injury (AKI)

This protocol aims to help clinicians intervene early when patients likely to be at risk of AKI present with acute illness.

The patient whose record you have retrieved is known to have either **CKD stages 3-5** or a previous episode of, or risk factors for, **AKI**

Choose **CONTINUE** to follow the nephrologist's algorithm to manage acute illness in this patient.

This will remind you about acute illnesses which often precipitate AKI (**heart failure; sepsis; diarrhoea/vomiting; hypovolaemia**)

It will prompt you to consider suspending certain regular medications (**ACEI/ARB; antihypertensives; NSAIDs; diuretics**)

CONTINUE

EXIT

MORE INFORMATION

Pause



This patient is known to have either CKD stages 3-5 or previous episode of, or risk factors for AKI.

Such patients are at greater risk of developing AKI when they have acute illness especially:

**heart failure**

**sepsis** (including urinary tract infection)

**diarrhoea and vomiting**

**other acute illness causing hypovolaemia or dehydration**

If this patient's current illness is causing concern for developing AKI you should consider **further checks and suspend certain medications** which could exacerbate this risk.

Choose CONTINUE if this is the case. Otherwise choose EXIT

CONTINUE

EXIT

Pause



When patients at risk of acute-on-chronic kidney disease develop acute illness which increases this risk, the following medications should be reviewed and may need to be suspended:

**ACE inhibitors** ('prils)

**ARB's** ('sartans)

**Antihypertensives**

**Diuretics** (including spironolactone)

**NSAIDs**

Please review this patient's current medication, including items not prescribed here, and consider **suspending** therapy if relevant.

Please check volume status including BP.

Ok

Pause





## Further assessment.

In these circumstances, face-to-face clinical review is recommended and renal function tests including blood AND urine are indicated urgently.

Where these tests raise further concern then urgent advice from nephrologist is recommended.

Thank you for using the Sick Day Protocol for acute-on-chronic kidney disease.

Choose EXIT to end the protocol

or choose MORE to read more about the purpose of this protocol.

EXIT

MORE

Pause

## AKIPCI – sharing of best practice (2)

- Cardiology
- Diabetes
- Primary care
- Prescribing practice
- Education
- Care bundles
- National detection algorithm and risk prediction tools

## AKIPCI – sharing of best practice (3)

- **West Sussex**
- An alert system to identify patients at risk of AKI developed with the support of vital signs system Patientrack
- Algorithm then calculates a patient's score, based on their risk factors, to identify patients who have or may develop AKI
- **East Kent** rolls out Notify alert system (Chris Farmer)
- Real-time alerts about AKI patients to staff at East Kent Hospitals
- Notify application from DocCom sends medical staff real-time alerts to their mobile devices if a patient with a specified condition is admitted

## AKIPCI – sharing of best practice (3)

- **A letter to the Chief Executives** of all 14 Trusts in Yorkshire and the Humber to gauge compliance with NICE guidance
- **A regional dashboard of metrics**
- AKI stage 3 incidence for each Trust, hospital and community-acquired, run charts (self care, pre-emptive transplantation)

## AKIPCI – sharing of best practice (3)

1. **Sharing of care bundles/ management prompts linked to AKI e-alerts**
2. **Sharing of AKI patient pathways to produce a regional document**
  - To agree a final core content for a patient pathway for all centres in Yorkshire and the Humber.
3. **Sharing of a primary care-facing e-learning package**
  - Nick Selby has given permission to share the Derby e-learning package for primary care teams, [http://www.uhl-library.nhs.uk/aki\\_gp/index.html](http://www.uhl-library.nhs.uk/aki_gp/index.html)

## AKIPCI – sharing of best practice (3)

### **4. Sharing of a secondary care-facing e-learning package**

- Modify the e-learning package in Bradford for generic use in other centres - scope to produce a regional module, perhaps including a few slides that are specific to each Trust where variation is unavoidable because of IT configurations etc

### **5. Sharing of details of a new e-Renal Drug Database (to complement the Renal Drug Handbook)**

- Accessed via desktop, tablet and smart phone. It holds up-to-date, accurate and trustworthy information. It is sold on an annual subscription at a range of different pricing points depending on the total number of required users:

# Early Detection of AKI

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 the *'Resources'* link

See the Spotlight section on the BTHFT intranet home page for more information

The screenshot shows the Sunquest ICE Desktop interface. At the top, patient information is displayed: Patient Name, Hospital No., Sex: Male, Date of Birth: 09 January 1976, NHS no., Address, and Telephone No. Below this is a navigation bar with buttons for Cumulative, All, Back, Print, Hide, Audit Trail, Move, Delete, and ICEMail. A table lists reported results with columns for Reported, Specialty, Location, Clinician, and Status. The table contains one row: 18 Dec 2014 11:37, Blood Sciences, BRI Ward 04 - MALU, Dr J.Staves (Not Specified), LIN. Below the table, it states 'No clinical details given' and 'Sample B,14.3279466.1 (BLOOD) Collected 18 Dec 2014 09:00 Received 18 Dec 2014 09:30'. A table shows AKI results: Creatinine 200 umol/L (64 - 104) and AKI 3. A comment below reads 'AKI Stage 3 - See AKI document in Resources in ICE'. The left sidebar contains navigation links: Patient Search, Administration, Manuals, Reporting, View Ward Report, View Patient Reports, Hidden Reports By Patient, Hidden Reports By Sample, Tools, Resources (circled in red), and Log Off. The Windows taskbar at the bottom shows various open applications.

‘THINK KIDNEYS’

Recognise, Evaluate, Investigate, Act, Liaise

## AKI Care Bundle

- STOP nephrotoxic medications (eg 'prils, 'sartans, NSAIDs, diuretics)
- Assess volume status and consider iv fluid replacement with fluid balance monitoring
- Perform a urine dip for **Blood/Protein/Leucocytes/Nitrites** [absent in most pre-renal AKI, present in infection (**BPLN**), nephritis (**BP**) 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/creatinine kinase/ autoimmune and myeloma screen
- Consider renal imaging (ultrasound scan)
- Contact renal registrar (#) or consultant if AKI Stage 3 +/- hyperkalaemia, fluid overload and metabolic acidosis



# AKI CQUIN

- LIMS reporting
- Linkage to PAS/ EPR for coding
- All AKI stages
- Monitoring and medication

# Link to Acutely Deteriorating Patient pathway

- e-NEWS
- Acute sepsis CQUIN
- Fluid resuscitation
- CCOR/ acute response team

## Other key events and activities

- AKI Quality Standards
- AKI Treated with Dialysis tariff
- Regional AKI metric
- Generic Slide sets for Target Days
- SCN CVD Prevention workstream
- **Nurse Forums**

# Y and H CVD Prevention Work Programme

- This is a CCG-led project with the aim of developing, validating and rolling out a CVD prevention strategy across Yorkshire and the Humber.
- We have recommended the inclusion of a primary care acute/acute-on-chronic kidney injury staff and patient education programme, in conjunction with the planned extension of the AKI e-alert to primary care, the option of Sick Day alerts, and the development of AKI reporting and linkage to HES statistics.

## Research opportunities

- Health Foundation Scaling Up Programme (led by Nick Selby, Derby) – impact of education, e-alerts and care bundles
- Local – regional funding to support projects in one or more centres that are transferrable to other centres in Yorkshire and the Humber
  - Sick Day alerts in SystmOne practices
  - Care bundles linked to AKI risk assessment and e-alerts, e-NEWS and sepsis screening tools in York

## Key areas for improvement

- Anticipating AKI (risk assessment)
- Withholding medication
- Giving appropriate fluids
- Recording fluid balance
- Monitoring (NEWS)
- Recognising deterioration
- Escalating
- Challenging
- Sustaining best practice

## Sustainability

- Clinical and patient champions – STOP-AKI, AKI Nurses Forum
- Local Primary Care Nephrology/CVD Forums/ SCN Prevention Workstream
- AHSN involvement, National CKD Audit and Quality Improvement Programme
- ‘Think Kidneys’ national programme
- Longitudinal metrics – AKI stage 3 incidence
- Future AKIPCI meetings in Yorkshire and the Humber