S3 Pharmacists Involvement in AKI

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Acute Kidney Injury Collaborative

&

Evaluating pharmacist medication interventions in community acquired AKI emergency admissions to SRFT

Elizabeth Lamerton
Principal Clinical Pharmacist

What are we trying to achieve (Trust) ?

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Our objectives:

- 10% reduction in all AKI by December 2016
- 25% reduction in preventable “hospital acquired” AKI by December 2016
- 50% reduction in the number of early (Stage 1) progressing to Stage 2 or 3 by December 2016

How? Diagram

10% reduction in all AKI by December 2016

25% reduction in preventable "hospital acquired" AKI by December 2016

Achieve a 50% reduction in the number of early (Stage 1) progressing to Stage 2/3 by December 2016

AKI Driver

Education

- Practice educator roles/ Nurse Preceptorship training
- Allocation of Nurse Champions
- Testing designated AKI nurse/ MDT
- Development of E-learning package
- Review and implementation of national training toolkit
- Trust wide communication strategy
- MDT use of medicine optimization training tool kit (renal pharmacy group)

Detection

- NPSA Algorithm launch
- EPR Implementation
- Communication of flag
- Electronic decision support
- Development of screening risk assessment
- Mechanism to flag AKI patients to pharmacists

Intervention

- Bundle development
- Stop/ start medication tests
- Role allocation and escalation of trigger
- Local guidelines
- Identification and management within the community/ patient education
- Communication at discharge of AKI diagnosis
- Sick day rules

Measurement

- Bundle/ risk assessment compliance
- Local audit
- AQ AKI stage 3 measure
- Education compliance
- Pharmacy knowledge baseline audit
- Medication review data

Who is involved?

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- **13 wards** – nominated AKI Link Nurses on each ward to lead the QI initiative
- **4 Consultant leads**
- **As many junior doctors as possible**
- **Pharmacy Team**
- **Divisional Directors**
- **Support workers**
- **Quality Improvement team**
- **CLAHRC researchers** – project evaluation

QI initiatives so far….

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- Development of E-learning package
- Practice educator / Nurse Preceptorship training
- EPR implementation
- Medication review
- Bundle development
- AKI flag on EPR
- Bundle / risk assessment compliance
- Local audits
- Communication at discharge / patient information
- Loads of little ideas (e.g. magnets on beds, posters, AKI “box” on the wards, order of urine collection pads for incontinent patients, etc….

Pharmacy Team - Just meds reviews?

QI initiatives so far….

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- Development of E-learning package
- Practice educator / Nurse Preceptorship training
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- **Medication review**
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Salford AKI

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'THINK KIDNEYS'

Think SALFORD

			Responsibility				Completed
			Dr	Nr	SW	Phar	
S	Sepsis and other causes - treat		●	●	●	●	
A	ACE/ARB and NSAIDS suspend/ review drugs		●			●	
L	Labs (Repeat Creatinine within 24 hours) & Leaflets (for patients)	Take bloods, send + repeat within 24 hours	●	●		●	
F	Fluid assessment and response (History and examination, initiate fluid chart, measure daily weights – if hypovolaemic give IV 250 mls and reassess)	Start fluid balance and fill in		●	●		
O	Obstruction USS should be performed within 24 hours in non-resolving AKI or unknown cause of AKI	Can also do bladder scan	●	●			
R	Renal/critical care referral Non resolving AKI 3, possible intrinsic renal disease requiring specialist treatment, CKD 4-5, renal transplant, severe AKI complications		●				
D	Dip the urine and record it			●	●		

The "Salford" Bundle

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AKI Progression by Month in Collaborative Wards

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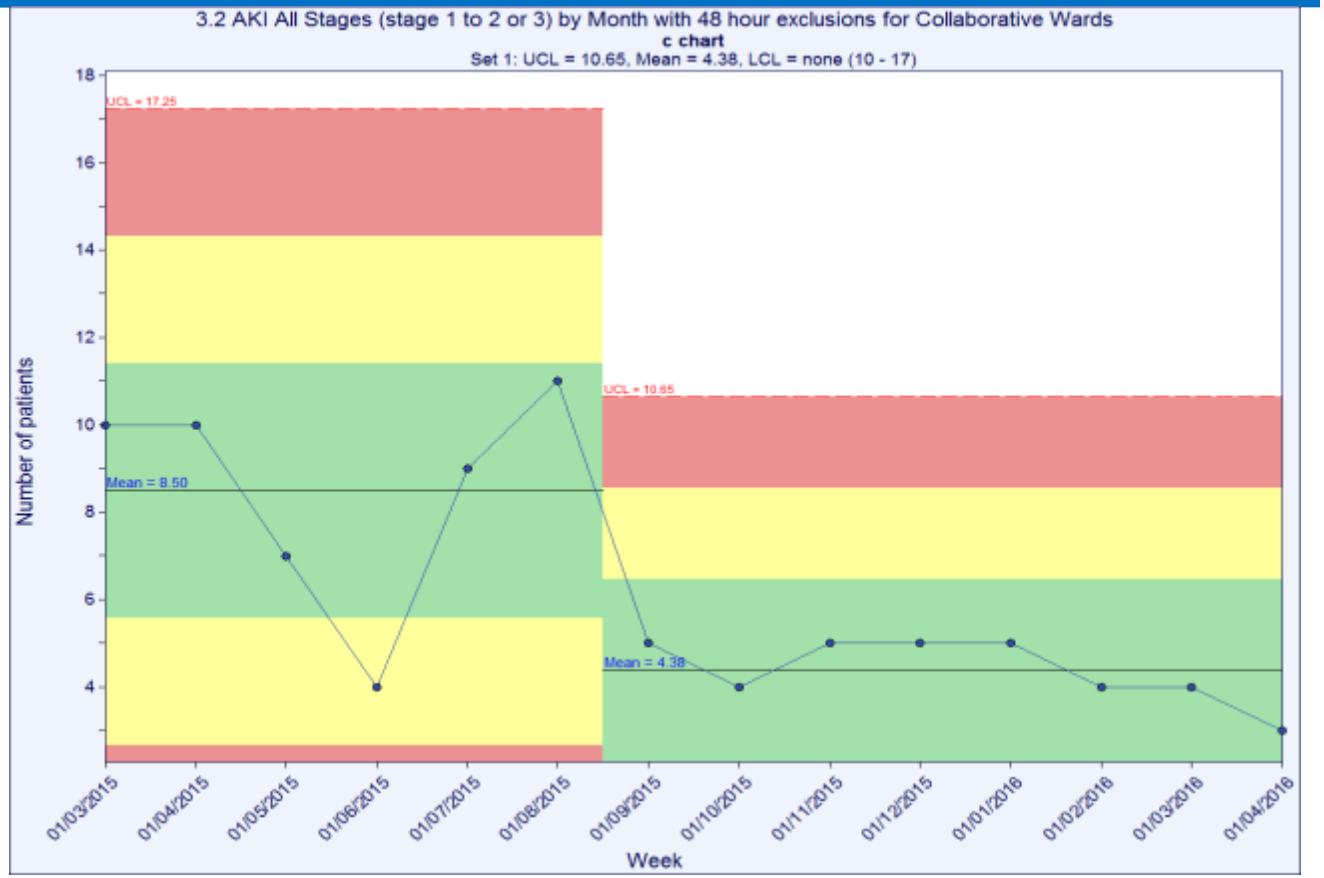

Statistically significant shift in the data equating to a 48% reduction in collaborative wards since the launch of the AKI collaborative

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The role of the pharmacy team in AKI

Aim: 100%of AKI patients should have a pharmacy 'AKI med review' during their admission, by Dec 16

Stretch Aim: 80% of AKI patients to have a pharmacy meds review within 24 hour by Dec 16

Medication Review & Criteria

- Role allocation for AKI 2/3
- AKI bleep for pharmacy
- AKI alert to pharmacy team
- Define pharmacy AKI review at different levels (level 1 and level 2)
- Define timelines and frequency of review for patients 'At Risk' and AKI stage 1,2,3
- Criteria for medication review of patients with different risk factors (e.g. prior to USS, post-op) and disease groups (e.g. sepsis)
- Communication on discharge for patients who have recovered from AKI and who are recovering
- AKI education for pharmacist (online quiz and face to face)

Weekend Working

- Review of AKI alert at weekend
- Remote review (test within dispensary)
- Standardisation of communication with ward following alert

Documentation

-Discharge summary with meds review information (maximizing potential of EPR to pull information through including significant event and health issues)
-Defined pharmacist role to use and document within the AKI EPR bundle
-Standardisation of pharmacist documentation within EPR for AKI review (including when a review has taken place and no further action is needed)

Measurement/ Diagnostics

- Review by senior pharmacist to understand current processes
- CQUIN/AQ data
- Education compliance (online compliance and national education audit)

Pharmacy and AKI

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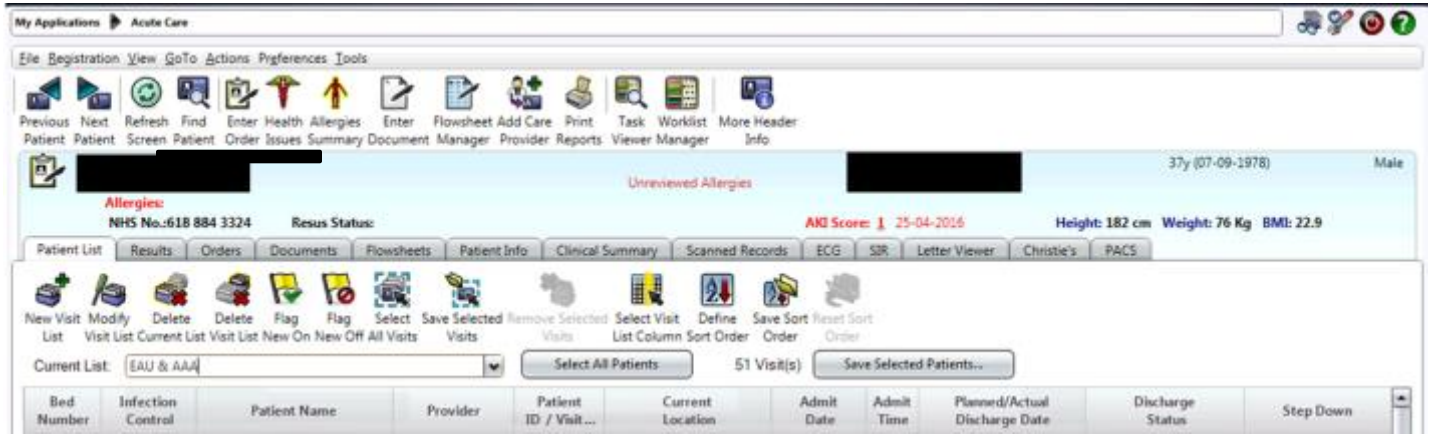
Patients admitted to SRFT with, or those who develop, AKI have their medications reviewed by a pharmacist

Patients are identified using the AKI alert tool and/or daily email to AKI Pharmacy Champions



Bespoke Pharmacist AKI Review Document completed

Pharmacy AKI meds review

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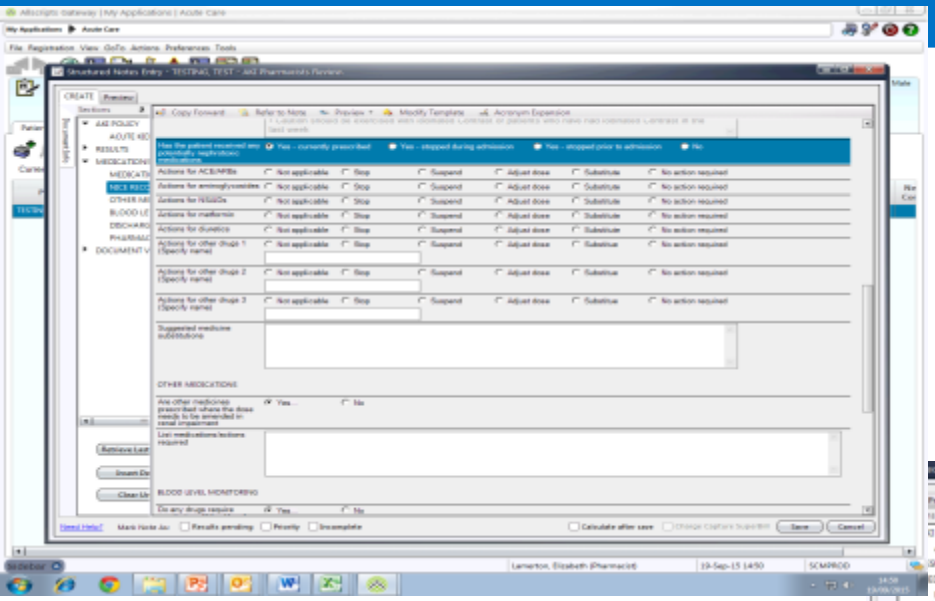

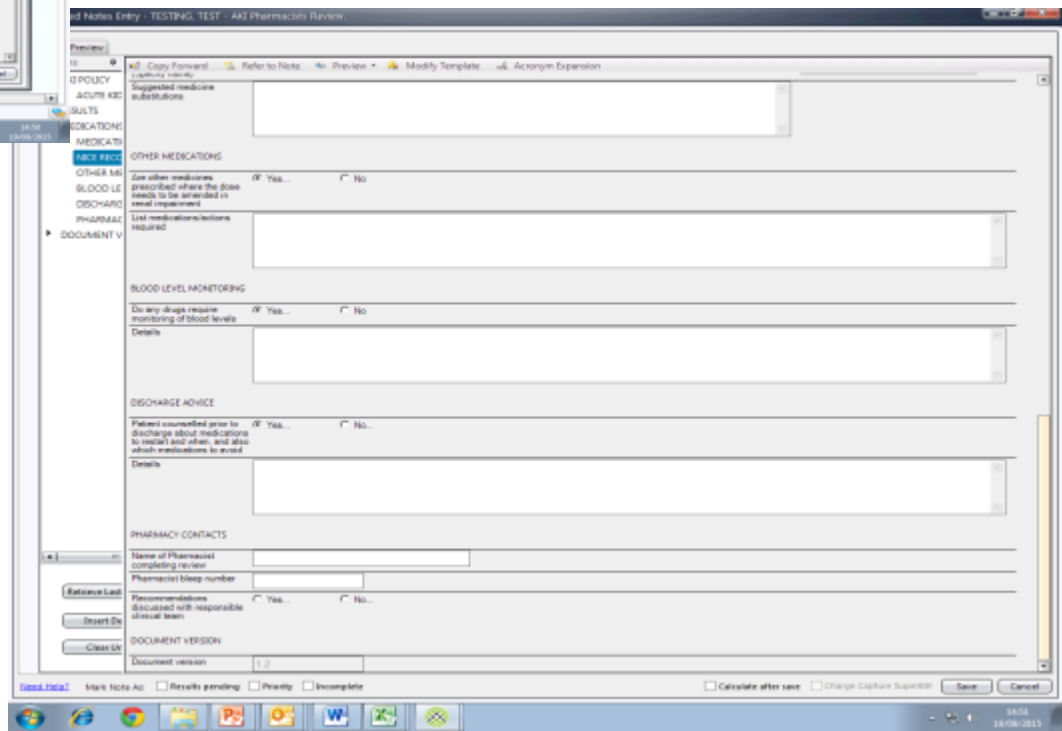

AKI Pharmacy medication review (CQUIN)

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Month	No of pts audited who had an AKI pharmacy review/ 25
April 15	9/25
May 15	7/25
June 15	12/25
July 15	14/25
August 15	19/25
September 15	13/25
October 15	15/25
November 15	17/25
December 15	16/25

Pharmacy AKI reviews

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	<24 hours	24-48 hours	48-72 hours	>72 hours	Not done
January – June 2015	0	2	3	0	1419
January – June 2016	391	328	248	111	359

Role of the pharmacist

- Reviewing obvious medicines?
  - ? Stopping/ suspending
- Reviewing all other medicines
- Restarting?
- Clinical skills
  - Check urine dipstick
  - Check BP
  - Check fluid balance
  - Refer!
- Check bundle
- Check discharge information

AKI CQUIN bloods on discharge

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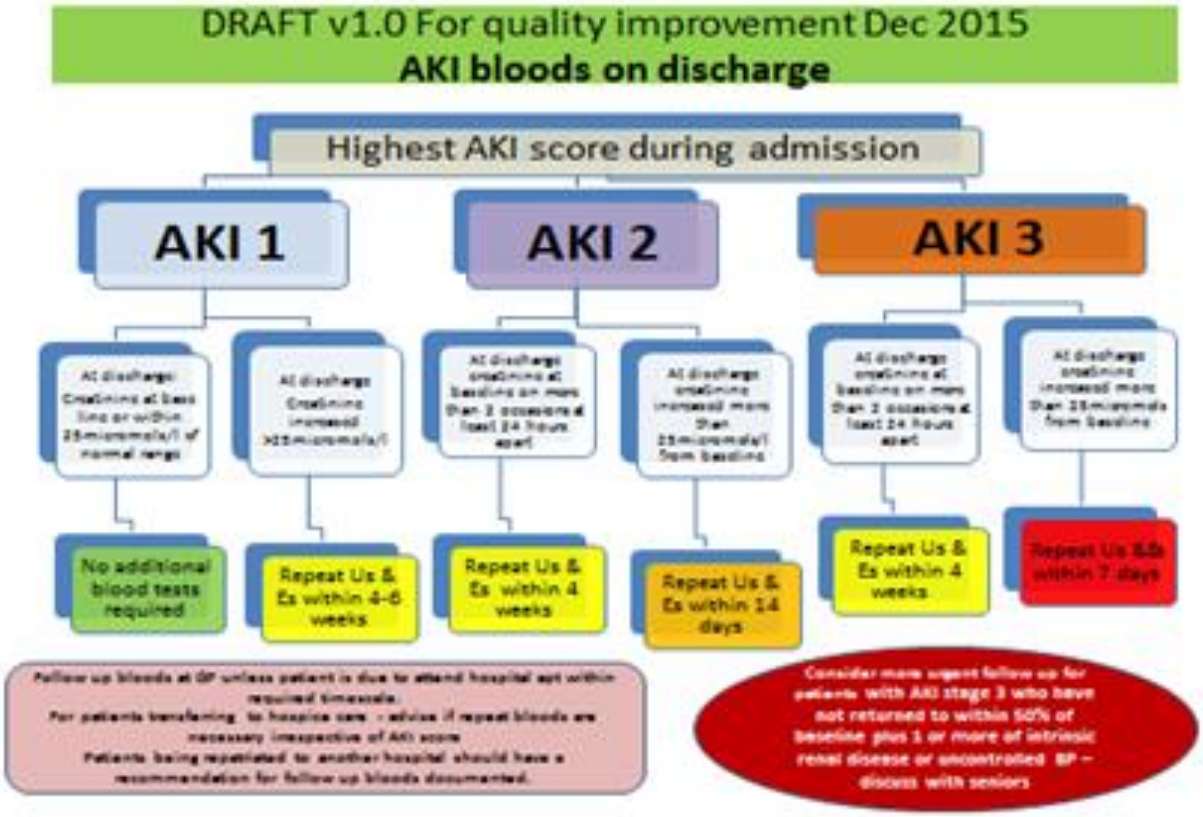

Evaluating Pharmacist Medication Interventions in Community Acquired Acute Kidney Injury Emergency Admissions to Salford Royal NHS Foundation Trust

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Authors: Amelia Reed, Elizabeth Lamerton

Aim:

1. To evaluate the role of secondary care pharmacists in the management of community acquired AKI

2. To investigate the dissemination of sick day guidance advice

The Project

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Objectives:

- Identify the number, nature and timing of recommendations made by pharmacists on EAU via the AKI Pharmacy Review document.
- Assess the proportion of pharmacist recommendations implemented by the medical team
- Review the progression of patients' AKI

- Quantify the number of patients with community acquired AKI admitted to EAU, who had been taking potentially nephrotoxic medicines
- Assess the number of patients with AKI who can recall receiving advise about sick day guidance

Methods

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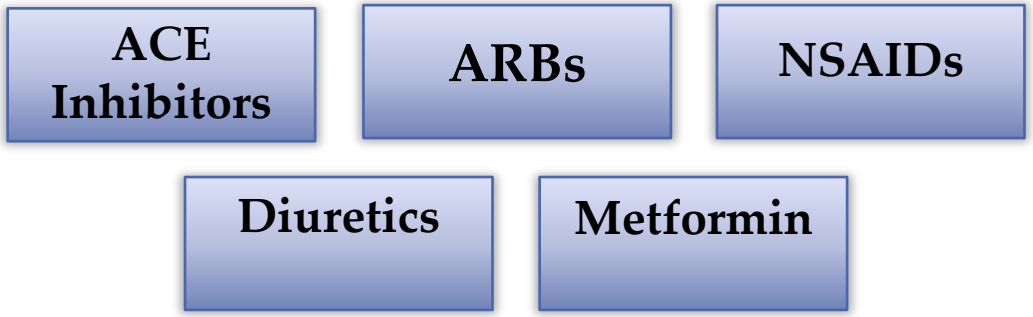
The project ran over a four week period in 2016

Data collected from 50 patients admitted to SRFT as emergency medical admissions over 28 days (including weekends)

Pre-admission medications:

-Five Categories:

-Other



EPR used to determine whether prescribing decisions were made before or after the Pharmacist AKI Review was documented

Patients interviewed on their awareness of sick day guidance

Results

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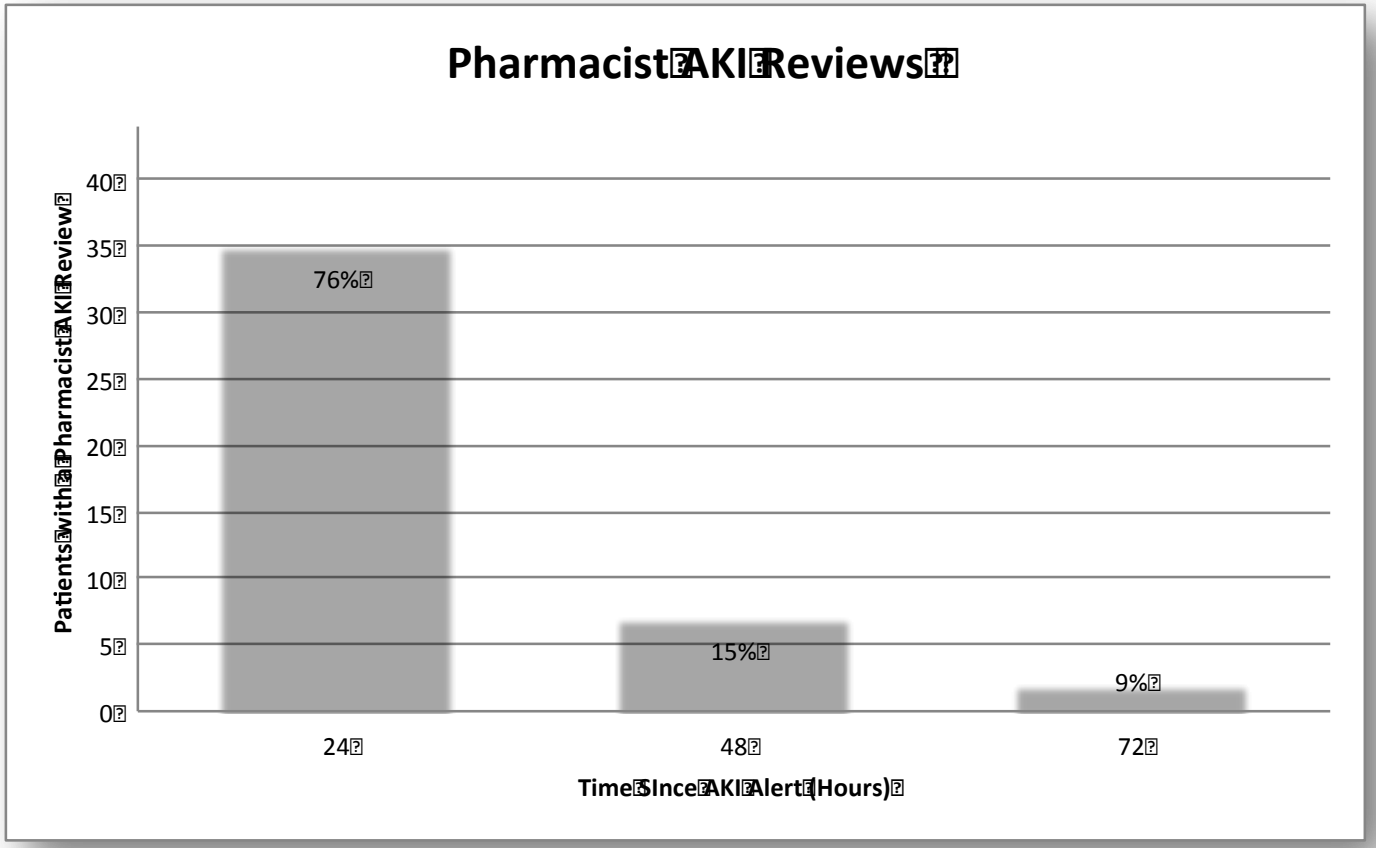
Pharmacists documented reviews for 44 out of 46 (96%)



Results

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30/46 (65.2%) of patients were taking at least one medication from the five risk categories:

ACE Inhibitors 17	ARBs 5	NSAIDs 1	Diuretics 21	Metformin 5

The 30 patients accounted for a total of **49 high risk medications** prior to admission.

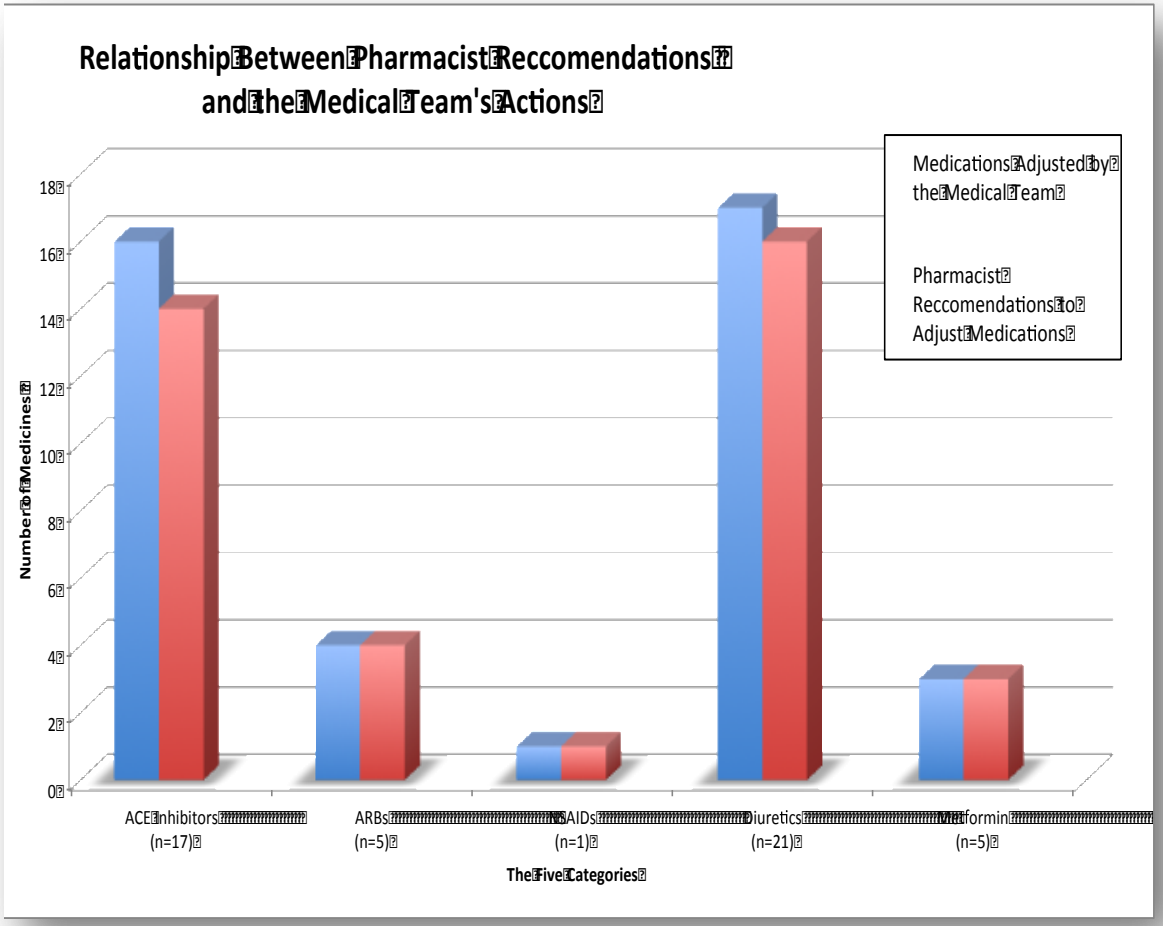
ACE inhibitors and Diuretics were the most common pre-admission medicine

17/46 (37%) were not taking any of these medicines

-3 were taking other antihypertensives

14/46(30%) were not taking any antihypertensives, NSAIDs, Diuretics or Metformin

Results



Pharmacist Recommendations:

- Dose adjusting or withholding of medications – 38/47 (80.9%)
  - Suspend/stop/ withhold the medication – 34/47 (72.3%)
- 14 'Other' medications

Results – pharmacist interventions & outcome

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Pharmacist Recommendations included withholding medications, adjusting doses and taking no action

Pharmacist recommendations corresponded with the action of the medical team for 36/47 medications **(76.5%)**

Of the 44 patients who had a pharmacist AKI review, **34 (77.3%)** had **no progression** of AKI stage.

Results – interviews sick day guidance

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30/46 patients suitable for **interview** regarding sick day guidance advice received in primary care

- **28 (93%)** were able to talk to the interviewer.

No patient

- recalled sick day guidance

- recalled being counselled that certain medications they were taking could affect their kidneys

- had followed the guidance to stop medications

Discussion

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Pharmacists were actively involved in the timely medication review of AKI patients

Providing prompt reviews of medications and recommendations for preserving renal function.

Pharmacist recommendations - Readily available source of information

- Signposted from the medical notes and doctors checklist

Discussion

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Apparent lack of patient awareness of AKI sick day guidance

- indication that patients are not recalling receiving information

- Risks associated with stopping such significant medications,

- Healthcare professionals cautious about advising a drug holiday.

- Further public awareness campaigns

- Involvement of both primary and secondary care colleagues.

Discussion

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FURTHER RESEARCH

Increasing the sample size

Qualitative review of the pharmacy and medical team's perceptions of AKI medicines optimisation

Further research depending on the outcomes of Think Kidneys research on sick days guidance.

Project Conclusion

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Pharmacist medication reviews in AKI appear to be a useful tool in the management of patients with Acute Kidney Injury.

These findings indicate that pharmacists have a key role in the optimisation of potentially risky medication and can contribute positively towards optimal medical management of AKI.

This study suggests that the dissemination of sick day guidance to at-risk patients in the community has not been maximally implemented thus far.

Sick day guidance from THINK KIDNEYS (November 2015)

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- At present it is recommended that professionals offer advice to individuals considered to be at higher risk of AKI should they become unwell and that the advice should include fluid and medicines management.
- It should also include advice about assessment of illness severity and when to seek professional help. It is considered that all antihypertensive medication may increase the risk of AKI. The relative risk of blood pressure therapies is still uncertain and it may be unhelpful to single out ACEi and ARB.
- We would also encourage people to avoid using the term 'nephrotoxic' to describe them.

Next steps at SRFT

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- Systems review to ensure AKI reviews are timely
- Standardise information for clinical staff – secondary and primary care
- Patient information especially sick day advice
- Weekends
  - Priority review of patients outside the EAU with new AKI alert over the weekend

Role of the pharmacists – variety of settings

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Pharmacists-Thinking-Kid

https://www.thinkkidneys.nhs.uk/aki/wp-content/uploads/sites/2/2015/03/Pharmacists-Thinking-Kidneys.pdf

Why pharmacists are important in helping reduce and avoid AKI

All health and care workers need to know about AKI and how we can all impact incidence rates. But pharmacists have the potential to have the biggest impact as their reach and influence is wide. It ranges from sharing detailed knowledge, skill and experience with a wide range of professional colleagues, to one to one conversations with patients and their carers, all equally important.

Community pharmacists potentially have more contact with a patient than any other healthcare professional and as such are in a strong position to help patients who are most at risk of developing AKI; engaging with them, supporting and developing their understanding of risk, and monitoring medicines that can cause problems for kidneys.

Hospital pharmacists and pharmacy technicians working closely with the multidisciplinary team support prescribing decisions for patients with AKI or when the risk is recognised, as well as explaining to patients the effective use of their medicines.

Pharmacists working with CCGs and in GP surgeries can support these messages and ensure continuity of care.

AKI is a challenge for us all
Work with us to make sure you know all you need to know and we'll aim high to lower the incidence rate of AKI.

Endorsed by
ROYAL PHARMACEUTICAL SOCIETY

CPPE
CENTRE FOR PHARMACY POSTGRADUATE EDUCATION

Think Kidneys

Think Kidneys is the NHS's programme for tackling acute kidney injury.

Our aims are to reduce avoidable harm and death for people with acute kidney injury, and to improve care for patients whether in hospital or at home.

During Autumn 2015 we will be working with CPPE (www.cppe.ac.uk) to develop pharmacists' understanding and knowledge of AKI through a campaign which will deliver a high impact AKI learning programme for every pharmacist and pharmacy technician in England.

We'll be encouraging you to take up the learning and apply the changes to your practice to improve patient care and reduce the harm done by avoidable incidences of AKI. Together, it's better.

Our website **www.thinkkidneys.nhs.uk** has lots of useful information and resources on it for pharmacists and this will expand over the coming months.

The Renal Pharmacy Group website can be accessed **www.renalpharmacy.org.uk**

THINK KIDNEYS NHS

Think Kidneys is a national programme led by NHS England in partnership with UK Renal Registry

THINK KIDNEYS

Pharmacists Thinking Kidneys

Working with pharmacists to raise awareness of acute kidney injury, helping to avoid it where possible and improve treatment and care

17:13
21/11/2016

Think Kidneys Medicines optimisation in patients with AKI toolkit

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- https://www.thinkkidneys.nhs.uk/aki/wp-content/uploads/sites/2/2016/03/Guidelines-for-Medicines-optimisation-in-patients-with-AKI-final.pdf

AQ project 2017

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- link to primary care
  - Launching a QI initiative with practice based pharmacists employed by SRFT to help practices deliver the AKI Salford Standard:
  - by ensuring thorough and timely review of patients with AKI.
  - Educate and upskill clinicians
  - Promote integration between different healthcare organisations with the aim of improving the patient journey and reducing further harm.

Maintaining good practice

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- eLearning added to induction training for all clinical pharmacy staff
- Undergraduate and post graduate pharmacy courses to include AKI
- Foundation of pre-registration training
- Quarterly education sessions

AKI & Pharmacists

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Questions?