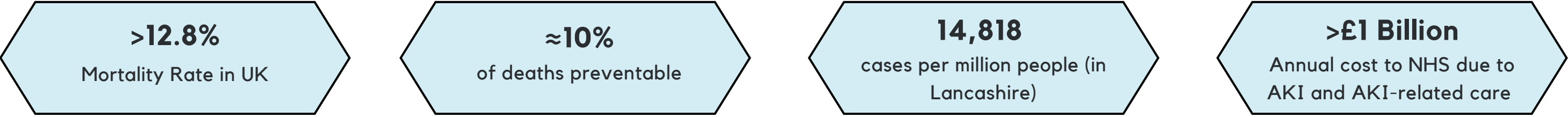


Improving the Management of Acute Kidney Injuries (AKI) at the East Lancashire NHS Hospital Trust (ELHT)

Background:

Acute Kidney Injury (AKI) is characterised by the rapid decrease in kidney function due to multiple causes. Ultimately, due to the lack of a definitive cure, early diagnosis and management are essential to prevent adverse health outcomes (E.g. CKD)



Key issues: Lancashire ranks among the top 5 regions nationwide with the highest AKI incidence rates. A national audit in the UK on AKI diagnosis and management found that 33% of patients lacked timely investigations, and 29% received inadequate management

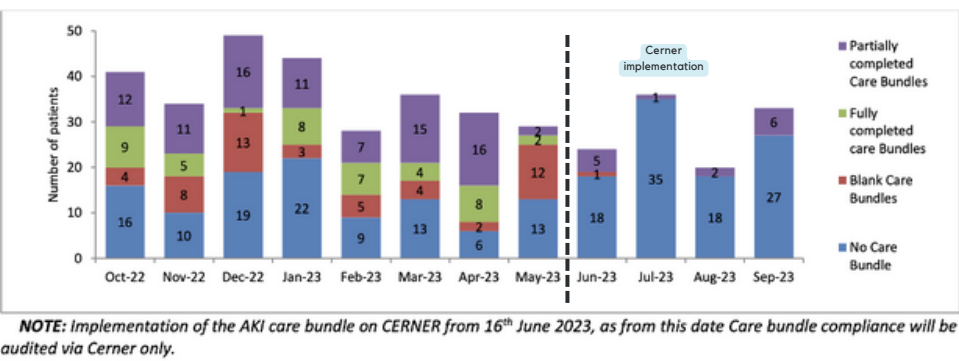
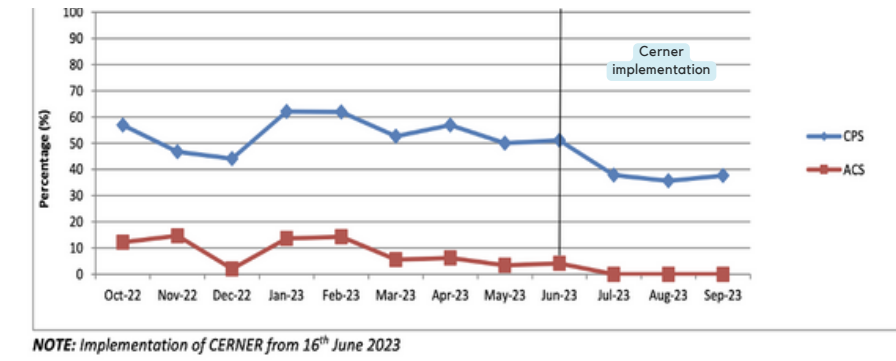
Problem:

AKI Care Bundle compliance significantly declined after the implementation of Cerner (A form of Electronic Patient Record system):

- Appropriate Care Score (ACS) dropped to 0%

• Composite Process Score (CPS) showed a sharp sustained decline
- "No Care Bundles" cases doubled from 37% to 89%

• "Fully completed Care Bundles" decreased from 17% to 0%



ABCDE APPROACH TO ACUTE KIDNEY INJURY (AKI)

East Lancashire Hospitals NHS Trust A University Teaching Trust

Important: (Please circle) Is the patient in the last days and hours of life? Yes / No

Yes - Discontinue AKI Bundle

AKI IS NOT A PRIMARY DIAGNOSIS. PLEASE CONSIDER THE CAUSE

24 HOURS OF AKI ALERT

A

Address Drugs:

• Omit all nephrotoxic drugs unless contraindicated

• Medication Review by Ward Pharmacist

• Beware of anti-hypertensives if Systolic BP <110mmHg

4 HOURS OF AKI ALERT

B

Boost Blood Pressure: Volume status assessed

• IV Fluid bolus if signs of hypovolaemia 250ml - 500ml of crystalloid. (Max 2litrs IV Fluid in 2hrs) Check for signs of Fluid Overload following each fluid bolus

• Maintenance fluids assessed & prescribed where appropriate

• Check Lactate and Bicarbonate Levels either ABG or VBG

• If Hypotension persists discuss with ICU (See reverse)

4 HOURS OF AKI ALERT

C

Calculate Fluid Balance:

• Commence Fluid Balance Chart and maintain hourly fluid intake and output

• Consider catheterisation if unable to measure output

• Ensure urine output 0.5ml/kg/hr

24 HOURS OF AKI ALERT

D

Dipstick the Urine:

• Dipstick urine & document full results in patient notes

• Look for blood and protein—significant in intrinsic kidney disease

• If blood or protein present send urine protein creatinine ratio and CONSIDER sending renal immunology - ANCA, complement C3, C4, anti GBM, immunoglobulins & consider myeloma screen

• Check CK if rhabdomyolysis suspected

AS STATED

E

Exclude Renal Obstruction:

• Renal USS within 6hours if obstruction suspected

• If evidence of obstruction refer to Urology

• Renal USS within 24hours if AKI not resolving / not responding to treatment

AT ALL TIMES, SEEK SENIOR HELP IF CONCERNED

PLEASE TURNOVER FOR FURTHER ESCALATION ADVICE

AKI Care Bundle (Employed at ELHT)

Aim:

Increase CPS to 60% by September 2025 (1 year)

Why Care Bundles Matter:

- Standardise evidence-based care
- Decrease AKI incidence & severity
- Reduce short & long-term mortality
- Enable earlier diagnosis & management
- Improve patient outcomes

Measures:

Proportion of AKI patients at ELHT who have a documented CB commenced for the management of their AKI

Process Measures:

- E-training attendance & completion rates
- Feedback survey (qualitative)
- Post-intervention competency (Likert scale)
- Monthly CPS & ACS reviews

Plan

Act

Do

Study

Plan

- Design e-training module in collaboration with IT & clinical educators
- E-learning contains:
 - Information on AKI diagnosis and management
 - Importance of completing care bundles
 - Short video tutorials on Cerner operability and how to access the care bundle
 - Post-module likert scale questionnaire and feedback

Study

- Review completion rates via the Learning Hub
- Analyse post-module Likert-scale questionnaire and feedback data to measure confidence, competence, and satisfaction post-training

Do

- E-learning will be uploaded onto the learning hub for staff to access, 4-week timeframe provided to complete module
- Staff notified through:
 - Email with direct module link
 - Posters with QR codes displayed in clinical areas

Act

If Successful:

- Integrate as mandatory e-learning + Annual refresher courses for staff and students
- "Train The Trainer" program for ward-based support
- Transfer knowledge to other conditions with care bundle use (E.g. Sepsis)

If Ineffective:

- Conduct semi-structured interviews + Reassess underlying causes
- Consider multi-intervention approach (E.g. E-alerts + training)

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