Tackling Acute Kidney Injury:
A Multi-Centre Quality Improvement Project

Application to Scaling Up Improvement Programme
Why?

- Lack of awareness about AKI
- Difficulties in detecting AKI
- Failure to deliver basic care systematically
Summary of proposal

Electronic detection

Education programme

Care bundle

Selby NM. Curr Opin Nephrol Hypertension 2013
Xu G et al. BMJ Open 2014
Kolhe et al. submitted PLoSONE 2014
Welcome to the Prevention and Management of Acute Kidney Injury (AKI) for GPs

eLearning course

http://www.uhl-library.nhs.uk/aki_gp/index.html
Partners

Lead organisation:

Derby Hospitals NHS Foundation Trust

Evaluation partner:

Dissemination partner:

Implementation partners:

Leeds General Infirmary

St James's University Hospital

Bradford Teaching Hospitals NHS

Ashford and St. Peter’s Hospitals NHS Trust

Frimley Health NHS Foundation Trust

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

Act
- What changes are to be made?
- Next cycle?

Plan
- Objective
- Predictions
- Plan to carry out the cycle (who, what, where, when)
- Plan for data collection

Study
- Analyse data
- Compare results to predictions
- Summarise what was learned

Do
- Carry out the plan
- Document observations
- Record data
Evaluation plan

**Summative**
- Clinical outcomes
  - ‘Has the introduction of the interventions improved standards of basic care and resulted in better outcomes for patients with AKI?’

**Formative**
- to measure implementation and strengthen the project during its lifespan
  - ‘Can the proposed package of interventions be successfully implemented in the partner organisations?’
  - ‘Can the delivery of these interventions be assessed and measured?’
Systematic literature search

- **Databases searched:**
  - **Evidence Based Reviews:** The Cochrane Library, DynaMed,
  - **Healthcare Databases:** MEDLINE, EMBASE, Health Business Elite, HMIC, PubMed, TRIP database
  - **Specialist Website:** NHS Evidence, RCP, Kings Fund

- **Search terms:**

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Results

Changing physician performance. A systematic review of the effect of continuing medical education strategies

JAMA. 1995 Sep 6;274(9):700-5. Davis DA¹, Thomson MA, Oxman AD, Haynes RB.

OBJECTIVE: To review the literature relating to the effectiveness of education strategies designed to change physician performance and health care outcomes.

DATA SYNTHESIS:
99 trials with 160 interventions that met our criteria.
Almost two thirds of the interventions (101 of 160) displayed an improvement in at least one major outcome measure: 70% demonstrated a change in physician performance, and 48% of interventions aimed at health care outcomes produced a positive change.

Effective change strategies included
- reminders
- patient-mediated interventions
- outreach visits
- opinion leaders
- multifaceted activities

Audit with feedback and educational materials were less effective, and formal CME conferences or activities, without enabling or practice-reinforcing strategies, had relatively little impact.
Results

GMC commissioned

A study to assess the impact of continuing professional development (CPD) on doctors’ performance and patient/service outcomes for the GMC

There are a number of examples of CPD contributing directly to patient or service outcomes as part of a wider service improvement project
Need to evaluate the organisational context for success at individual sites, and their improvement expertise

- Knowing whether or how much context explains differences in implementation and effectiveness would help make changes and speed up the spread of improvements proven in other settings.

- Helps determine how robust the intervention actually is. Crucial difference from controlled trials.

- Also consider how the intervention can interact and potentially change the organisation context.

- Performed as part of base-lining and throughout formative assessment.

- Important because of type of intervention we propose may be affected by organisational/external issues
Evaluation

- Staffing, size, previous experience and financing in each organisation
- Baseline AKI work to date
- Level of senior buy in and how this translates into action
- Clinical governance and patient safety structures already in place
- Engagement with project team, cross section of informants' views
Evaluation

• Surroundings
  ▪ Information Technology
    • type of LIMS/alerting options
  ▪ set up of admissions units
  ▪ educational facilities

• Pragmatic testing
  ▪ PDSA cycles would be enhanced by implementers stating their assumptions about the conditions they need and the steps through which changes might affect outcomes
  ▪ Improvers could learn not just whether a change affected outcomes, but why by making their assumptions explicit (theories ‘T’) before testing, and revising these after testing (‘T-PDSA-T’)