IMPROVING CARE FOR PEOPLE IN SCOTLAND, A FOCUS ON DETERIORATION: PREVENTION, RECOGNITION AND RESPONSE

Wherever care is delivered

Chair – Jason Leitch
<table>
<thead>
<tr>
<th>Topic</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Dumfries &amp; Galloway: Relieving the Pressure!</td>
<td>Emma McGauchie, Maureen Stephenson &amp; Donna Craig</td>
</tr>
<tr>
<td>Deteriorating Patient Whole System Approach</td>
<td>Diane Campbell &amp; Keiran Clement</td>
</tr>
<tr>
<td>A Whole System Approach to Reducing Harm from CAUTI</td>
<td>Jane Murkin</td>
</tr>
<tr>
<td>Raising Awareness of Acute Kidney Injury in Tayside</td>
<td>Dr Samira Bell</td>
</tr>
<tr>
<td>Engaging Staff in QI at Team-Level: Wherever Care is Delivered</td>
<td>Andy Cruickshank</td>
</tr>
<tr>
<td>Questions</td>
<td>Jason Leitch</td>
</tr>
</tbody>
</table>

Shona Robison MSP – Cabinet Secretary Address
Join the conversation on Twitter, follow #SPSPConf16 and remember to include it in your tweets

Free Wi-Fi available
Wi-Fi network: delegate
Password: haymarket
## Lunchtime Sessions

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Optional lunchtime sessions, numbers limited to 50 per room, catering provided in the room</td>
<td></td>
</tr>
<tr>
<td>13.15</td>
<td>QI</td>
<td>Harris Level 1</td>
</tr>
<tr>
<td></td>
<td>Service Users and Carers</td>
<td>Ochil Level 1</td>
</tr>
<tr>
<td></td>
<td>U-Lab</td>
<td>Carrick Level 1</td>
</tr>
<tr>
<td></td>
<td>National Mortality Case Record Review</td>
<td>Tinto Level 0</td>
</tr>
</tbody>
</table>
Relieving The Pressure

Maureen Stevenson, Emma McGauchie, Donna Craig
The scale of our Ambition
Quality Improvement Approach

Methodology

Shared Goals

Relationships
Where have **we** been?
Where are we now?
AIM

Reduce pressure ulcers in participating care homes by 50% by December 2017

PRIMARY DRIVERS

Risk Identification and assessment
- Use standardised risk assessment tool
- Development individualised care plan based on risk assessments
- Use multiple methods to identify residents at risk

Reliable evidence-based care
- Implementation of the SSKIN(S) bundle
- Identification and grading of pressure ulcers
- Wound care
- Educating and training all care home staff and attached staff on understanding and using the evidence-based tools
- QI Capacity and Capability building
- Awareness raising around harm
- Learning and sharing the learning from adverse events

Education and training

CHANGE CONCEPT

- Development of a standardised RA tool which categorises key risk factors.
- Use standard tool to develop individualised care plan based on RA
- Develop in the care home with residents ways of highlighting the risks
- Active resident care
- Wound formulary linked to prescribing
- Training needs identification
- Develop team working and confidence building within care homes
- Develop a peer support role within care homes when reviewing PU incidence
- Participating in learning sessions
- Testing changes
- Collecting data
- QI Leads in homes
- Patient stories
- Cost
- PU prevalence
- Use of root-cause analysis / investigation tool
- Use of HIS template to share the learning
AIM

Reduce pressure ulcers in participating care homes by 50%

PRIMARY DRIVERS

Person-centred care

- Resident and family involved in the SSKIN(S) bundle and care plan
- Communication of risk to residents and family
- Focus on ‘What matters to the resident’

Leadership and Culture

- Develop an open and transparent safety culture
- Engage care home managers in QI activity
- Engage care home owners in QI activity

Communication and infrastructure

- Effective and regular communication of the risk assessment and care plan with staff, residents and carers
- Effective multi-agency / multi-disciplinary team working
- Timely access to equipment and treatment
- Effective communication at interface

SECONDARY DRIVERS

CHANGE CONCEPT

- Testing of safety cards for residents and staff
- My Home Life
- Ongoing QI training and communication with inspectors
- CH managers participating in QI learning sessions
- Developing a CH Managers network for sharing learning
- CH managers to keep updated CH owners

- Review of risk assessment and care plan regularly
- Handover that has key safety elements in it
- Process mapping of current state and develop of ideal state
- Process mapping of current state and develop of ideal state
- Build on catheter passport / my medicines wallet
Process map access to dressings and equipment

Using a grab bag

Liaise with outside agency

Use expertise within the team

Measurement of time
Improving Care for People in Scotland, a Focus on Deterioration: Prevention, Recognition and Response

Deteriorating Patient Whole System Approach

Diane Campbell
Keiran Clement
linking it all up...
Deteriorating Patient Whole System Approach

- Supporting Infrastructure
- Quality Improvement Support
- Undergraduate & Postgraduate Education

Acute Hospital Sites
- Scottish Ambulance Service

HSCPs
- District Nursing
- General Practice
- Out of Hours Service
- Prison Service
- Nursing Homes
- Mental Health
• NEWS and Structured Response implemented in acute hospitals by 1st August 2016
• NEWS and Structured Response implemented in community hospitals by 1st August 2016
• NEWS and Structured Response implemented in mental health wards by 1st August 2016

Phase 1

Phase 2
• NEWS implemented in OOHs by December 2016
• NEWS implemented in Prison Service by December 2016

Phase 3
• NEWS and Structured Response implemented in Community Nursing Teams by July 2017
Phase 1

Surgical: Ninewells Crash Cardiac Rate - per 1000 Surgical Discharges

DP Sessions
NEWS /SR implementation
Structured Response

43%
Key Learning.....
Thank You

Diane Campbell  dianecampbell@nhs.net
Keiran Clement  keiranclement@nhs.net
“A Whole System Approach to Reducing Harm from CAUTI”

Jane Murkin, Head of Patient Safety & Improvement
NHS Lanarkshire
30% reduction in Catheter Associated Infections by June 2016

Driver Diagram & Change Package

OUTCOME

AIM
95% Harm Free Care.
30% reduction in CAUTI by June 2016.

PRIMARY DRIVERS

Reduce the overall prevalence of indwelling urinary catheters.

Reliable implementation of CAUTI insertion and maintenance bundle in pilot teams.

Effective, multi-disciplinary, team, work and communication.

Building Capacity and Capability

Leadership and Infrastructure.

SECONDARY DRIVERS

- Clinical indications for catheterisation are met and reasons documented.
- Alternatives to catheterisation considered and documented.
- Prompt removal of catheter if no longer clinically indicated.
- Daily review of need for catheterisation (Acute) and weekly review of the need for catheterisation (Primary Care and Community).
- Reduction in the length of time catheters are in situ.

- Implement CAUTI insertion bundle ensuring all elements are met.
- Implement CAUTI maintenance bundle ensuring all elements are met.
- Weekly planned measurement of compliance with bundles using the NHS Lanarkshire CAUTI data collection tool.

- MDT approach to the improvement work.
- Effective communication at key transition points.
- Engage with other specialist roles in practice development, specialist nursing roles.
- Whole system pathway approach.

- Teaching and coaching teams on patient safety and quality improvement methodology.
- Educating teams on the evidence base and best practice.
- Educate patients, families and carers in their role.

- Designated Executive Sponsor
- Designated Clinical Lead
- Designated Head of Safety and Patient Safety Team
- Designated Improvement Advisor support
- Continuous measurement of improvement
- Visible display of data
- Implementation of the measurement framework
- Tools and resources to implement measurement framework.
Reducing Harm Collaborative

Alignment with local work
Prioritised patient safety plan
Pilot Teams Identified
Charter development

1 day Kickoff Launch Learning Session 1
1 day LS 2
1 day LS 3
1 day LS 4
1 day LS 5
1 day LS 6

Harm national and local context
Aims and measures
Key Changes
Model for Improvement

Supports
Patient Safety Team - Improvement Advisors
Fellows, Executive sponsors, Clinical leads, Multidisciplinary teams, expert clinical faculty
Facilitated action sessions with reducing harm pilot teams
Local networking events and Site Visits

April 2014
June 9th 2014
Sept 2nd 2014
Jan 27th 2015
June 18th 2015
Nov 3rd 2015
June 8th 2016
Reducing Harm Collaborative

• Vehicle to drive the work
• 6 Learning Sessions & 10 Action Period Sessions for CAUTI
Reducing Harm Collaborative

- Establish common ground
  - Same problems, different setting
  - Shared issues at transition
- Establish a common language
  - Harm
  - Quality Improvement approach
  - Measurement for improvement
- Collaborate on ideas to test
- Shared learning from results
- Build relationships
What did teams test?

Reducing the overall prevalence of catheters
- Clinical indications for catheterisation are met and reasons documented
- Alternatives to catheterisation
- Daily review and documented reason of need for continued use of catheter
- Prompt removal of catheter if no longer clinically indicated
- Reduction in the length of time catheters are in situ

Effective implementation of catheter bundles
- Applying aseptic techniques
- Implement CAUTI insertion bundle ensuring all elements are met
- Implement CAUTI maintenance bundle ensuring all elements are met

Effective multidisciplinary team work and communication
- Effective communication at key transition points
- Working in partnership with admitting wards and patients and families
- Alcohol hand gel at intentional rounding

Placement of bundles
- Alerts and prompts

Catheter status added to SBAR
- CAUTI improvement Boards

Clinical indications for catheterisation are met and reasons documented
- Educating teams on the evidence base and best practice
- Implementing CAUTI improvement Boards
- Implementing CAUTI insertion bundle ensuring all elements are met
- Implementing CAUTI maintenance bundle ensuring all elements are met
Our Data

Days between CAUTI, NHS Lanarkshire Collaborative Pilot Teams - T Chart

119 days between at end of collab
66% reduction in catheter usage
Process – Insertion/ Maintenance Bundles

Days between failure of Maintenance Bundle, Monklands Pilot Teams - T Chart

105 days of reliable process

Date of process failure
Community Nursing

- 50 plus days between cauti
- 30% less patients with catheters than in 2014
- Reliable use of Bundle
Process

- Reliable implementation of the catheter insertion bundle
- Reliable implementation of the catheter maintenance bundle

Week commencing
Winner NHS Scotland Safe Care Award - Think CAUTI!

“No Insertion, No Infection”
Motherwell District Nurses 2016
A story...

• [next slide is video]
• Video clip to be embedded
Our learning

• The improvement journey is the same in all parts of our system
• Don’t let context cloud progress, embrace difference
• Not getting too caught up on definitions – just getting started
• Benefits of a whole system approach
• Collaboration between staff across boundaries
• Multidisciplinary team approach
• Understanding different perspectives and challenges - establishing a common ground
• Safe, effective, person centred with financial benefits
• Same amount of resource required to support whole system improvement
Raising Awareness of Acute Kidney Injury in Tayside

Dr Samira Bell

on behalf of NHS Tayside Renal Team
Adding Insult to Injury

A review of the care of patients who died in hospital with a primary diagnosis of acute kidney injury (acute renal failure).
Main Findings

• Only 50% of AKI care was considered good by the advisors
• Poor assessment of risk factors for AKI
• Unacceptable delay in recognising post-admission AKI in 43% fifth (22/107) of post-admission AKI was both predictable and avoidable
• Complications of AKI missed in 13% of cases, avoidable in 17% and managed badly in 22%
Tayside AKI Incidence

- 9% of Orthopaedic Surgery
- 12% of Gastrointestinal Surgery
- 25% of Vascular Surgery
- Overall AKI (primary and secondary care)

2010: 2.3%, 2012: 2.1%
Fig 3 Kaplan Meier plot of overall survival in patients with acute kidney injury compared with no acute kidney injury

Bell et al. BMJ 2015;351:bmj.h5639

©2015 by British Medical Journal Publishing Group
Aims

• To increase awareness of AKI
• To improve early recognition and treatment of AKI in Tayside by implementing electronic alerts for AKI care and implementing Medicines Sick Day rules in both primary and secondary care
How AKI e-alerts appear
Alert Levels

AKI 1

AKI 2

AKI 3
Adding Actions to e-alerts

Whenever you do something to treat the AKI you should record this as an Action.
Link to AKI guidelines
# Acute Kidney Injury (AKI) Guidelines

## Awareness of High Risk Groups for AKI
- Hypotension
- Sepsis
- Deteriorating SEWS
- Contrast (within last week)
- Use of ACEI, ARB, NSAIDs or COX II inhibitor
- Pre-existing CKD
- >65 years old
- Diabetes
- Previous AKI

## Recognition
Measure changes in serum creatinine OR oliga (UO <0.5ml/kg/hr for greater than 6 hours)

### AKI Stage 1
- Increase in Cr ≥1.5 to 1.9 of baseline OR >26,μmol/l

### AKI Stage 2
- Increase in Cr ≥2.0 to 2.9 of baseline

### AKI Stage 3
- Increase in Cr ≥3 of baseline OR >354,μmol/l OR need for RRT

## Full History
- Recent hypoametbolism
- Fever
- Rash
- Joint pains
- Recent change in medication
- Recent antibiotics (trimethoprim, Seprin, gentamicin)

## Examination
- Assess volume status (HR, BP, Peripheral perfusion, JVP, Pulmonary oedema, Oedema)
- Assess for sepsis
- Palpable bladder
- Rash/Joint swelling

## Basic Investigations
- FBC, U&Es (daily), bone profile, bicarbonate, urinalysis, Microbiology (MSU, Blood cultures, CRP if infection suspected)

## Further Investigations
- Renal USS if obstructive uropathy suspected
- Immunology (ANA, ANCA, C3 & C4) if haematurioproteinuria +/- rash, joint pains
- Myeloma screen (Electrophoresis & BJF) if >50yrs or anaemia +/- hyperkalaemia

## Assess Volume Status (ensure accurate fluid balance including catheterisation)
- Hypovolaemia = fluid resuscitate with 250ml boluses of crystalloid, max 1.0L and reassess after each fluid challenge (avoid Hartmanns if K>5.0)
- If no improvement then review by registrar (ST3+)
- Consider transfer to level 2 bed for further monitoring (i.e.CVP line +/- vaspressors, MAP >65mmHg) once well filled
- Hypervolaemia = if hypotensive, consider level 2 for CVP & vaspressors
- If hypertensive, consider furosemide

## Review Medication
- Stop all potentially nephrotoxic drugs (ACEI, ARB, NSAIDs, COX II inhibitor)
- Withhold all anti-hypertensives if hypotensive
- Treat sepsis with appropriate antibiotics (avoid gentamicin, trimethoprim & seprin =d/w micro)
- Adjust essential drugs appropriately for renal function

## Avoid Contrast Induced Nephropathy*

## Relieve Urinary Tract Obstruction – Catheter or nephrostomy

## Indications for Renal Referral (Bleep 4740)
- All AKI 3
- Hyperkalaemia (K >6.5)
- Persistent oligaemia or ongoing deterioration despite above measures
- Suspcion of intrinsic renal disease e.g. vasculitis
- Stage IV or V CKD
- Renal team are happy to advise regarding any concerns

*See guideline

## Management

### Stage 1 & 2 AKI (In well patient)
- DIP Urine
  - Blood +/- protein; consider vasculitis or glomerulonephritis

### Consider Urinary Obstruction / Retention

### Assess Volume Status
- If volume depleted = increase oral intake
- Reduce or stop diuretics

### Consider Stopping Potential Nephrotoxins
- ACEI, ARB, NSAIDs, COX II inhibitor
- Withhold all anti-hypertensives if hypotensive

### Treat Sepsis
- Treat sepsis with appropriate antibiotics (Avoid trimethoprim: risk of hyperkalaemia & causes rise in creatinine)

### Repeat U&Es in 24 - 48 HRS

If patient unwell or has significant co-morbidity, consider discussion with Renal team

### Stage 3 AKI
- Indications for Renal Referral (Renal Registrar Bleep 4740)
  - All AKI 3
  - Hyperkalaemia (K >6.5)
  - Sepsis with hypotension
  - Suspcion of intrinsic renal disease e.g. vasculitis
  - Stage 4 or 5 CKD

- Renal team are happy to advise regarding any concerns
20th to 24th of April 2015

Acute Kidney Injury Awareness Week 2015
Medicines Sick Day Rules

If you have the following for more than 24 hours:

- Vomiting or diarrhoea (unless only minor)
  - OR
  - Fevers, shakes and sweats

Then STOP taking the tablets listed overleaf until you feel well again and have been eating and drinking normally for 24 hours.

If symptoms persist for more than 48 hours, please contact your GP, nurse, pharmacist or NHS 24 (call free on 111)
Medical cards launch

NEW information cards which aim to reduce the incidences of acute kidney injury have been unveiled at the Terra Nova Medical Practice in Dundee.

The cards carry important information on what people can do to protect their kidneys if they’re suffering from extreme sickness or diarrhoea when taking certain medications.

From this week, GPs and practice-based pharmacies across Tayside will be handing out the information cards when they are dispensing high blood pressure and heart failure medications, diuretics and anti-inflammatory painkillers.

Dr Samira Bell, a consultant renal physician, said: “These cards are a simple but effective way of helping people to protect themselves from what can become a life-threatening condition.”

Pictured is Dr Scott Eason from Terra Nova Medical Practice with one of the new cards.
NHS Tayside introduces new kidney injury warning system

23 April 2015 | Tayside and Central Scotland

NHS Tayside has become the first health board in Scotland to introduce an electronic early-warning system to identify acute kidney injuries.

The system could help flag up damage to the kidneys at a much earlier stage, potentially improving survival rates and shortening hospital stays.

Doctors say one in five people in hospital is affected by acute kidney injury to some extent.

The system works by flagging up warning signs to clinicians after blood tests.

Messages are sent to computer systems holding patient results, clearly outlining to doctors the severity of the injury and information on the best course of action.

It means specialist staff from the renal team can be brought in swiftly if expert help is needed.
Impact – Alerts in Primary Care

• A Total of 9871 AKI e-alerts generated over the 12 months period of analysis

• 1610 AKI episodes generated in the community, 150 alerts excluded (duplicate, false positives, dialysis patients)

• Total number of AKI alerts were 1460. Median age 76 (17-103 years)
AKI Stage 1 – Blood sampling repeated?

Median time to perform repeat sample was 5 days (IQR 2-10)
AKI Stage 2 – Blood sampling repeated?

Median time to perform repeat blood sample was 2 days (IQR 1-5)
AKI Stage 3 – Blood sampling repeated?

Median time to perform repeat blood sample was 1 day (IQR 0-2)
Alert actions in hospital

Rates of e-alerts correctly actioned in orthopaedic wards

- Goal
- Median
- Targeted discussion with junior doctors
- Display of posters
- Education delivered

Percentages of e-alerts correctly actioned over a 5-day period:

- Baseline
- Day 1
- Day 2
- Day 3

SSC in Patient Safety - Amy Taylor and Karen Marshall
Education

• Knowledge of AKI improved: 72.4% in the pre-questionnaire vs 80.9% in the post-questionnaire

• Knowledge on alert actioning increased from 53.2% to 72.5%.

• Timely actioning of e-alerts increased from 33% to 57.1% to 75% rising to 75% after speaking to junior doctor staff, reminding and encouraging them to action e-alerts quickly
Next Steps

- AKI teaching early within the Foundation Teaching Programme
- Further AKI Awareness week - developing cards for junior medical staff and nurses
- We have developed and are implementing a risk score in the surgical pre-assessment clinic to identify high risk patients
- Primary care risk score
- Work looking at rates of AKI and outcomes since introduction of alerts
Thank you
IMPROVING CARE FOR PEOPLE IN SCOTLAND, A FOCUS ON DETERIORATION: PREVENTION, RECOGNITION AND RESPONSE

Wherever care is delivered

Chair – Jason Leitch
**COMING NEXT**

Shona Robison MSP – Cabinet Secretary Address

Pentland Suite Level 3