Innovative Improvement
Chair – Brian Robson
### Agenda

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<tr>
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<th>Speaker</th>
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<td>Improving Emergency Laparotomy outcomes (NHS GG&amp;C)</td>
<td>Susan Moug / Jennifer Edwards</td>
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<td>Development of a Frailty at the Front door model (NHS Fife)</td>
<td>Joy Reid/Louise Kellichan</td>
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<td>Prevention and/or early response to the deterioration of mental health (NHS Lanarkshire and NHS Borders)</td>
<td>Suzanne Urquhart (Lanarkshire)                                       Lisa Clark (Borders)</td>
</tr>
<tr>
<td><strong>Questions</strong></td>
<td><strong>Chair</strong></td>
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<tr>
<td>Diabetes - Think, Check, Act (Healthcare Improvement Scotland)</td>
<td>Stuart Ritchie / Debbie Voight</td>
</tr>
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<td>Can Prognosis After Resuscitation (PAR) scoring aid appropriate DNACPR Decisions? (NHS Forth Valley)</td>
<td>Fraser Waterson</td>
</tr>
<tr>
<td><strong>Questions</strong></td>
<td><strong>Chair</strong></td>
</tr>
</tbody>
</table>

**Shona Robison MSP – Cabinet Secretary Address**

Please use the aisle microphones to ask questions to the presenters
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>
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<tbody>
<tr>
<td>13.15</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>
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<td>Service Users and Carers</td>
<td>Ochil Level 1</td>
</tr>
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<td>U-Lab</td>
<td>Carrick Level 1</td>
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<tr>
<td></td>
<td>National Mortality Case Record Review</td>
<td>Tinto Level 0</td>
</tr>
</tbody>
</table>
Improving Emergency Laparotomy Outcomes

Jennifer Edwards & Susan Moug
Royal Alexandra Hospital, Paisley
Emergency Laparotomy patients
who are they?
What is their journey?

The Emergency Laparotomy patient’s journey in RAH

Achievements
On-going and future work
Challenges
Who are Emergency Laparotomy patients?
30 Day Mortality for:

1. **Elective CABG**
   - 1.5%

2. **Elective Colorectal**
   - 2.7%

3. **Emergency Laparotomy**
   - 14.9%
   - **18.7%**
     - (20/107)

Data from HQUIP and Emergency Laparotomy Network 2010/2011

Oct 13 – May 14 RAH audit data
An Emergency Laparotomy Patient’s Journey is

‘Chaotic, protracted and not always patient centred.’
porters

surgical-receiving
consultant-surgeon
haematology
unit
emergency-room-doctors
Emergency-Medical-Retrieval-Service
theatre-scrub-nurse
emergency-room-consultant
high-dependency-unit
anaesthetic-nurse
relatives
patient
anaesthetic-consultant
anaesthetic-trainee
trainee-surgeons
blood-bank
theatre-reception-staff
GP
theatre-recovery-staff
CT
Intensive-care-unit
emergency-room-nurses
biochemistry
The Patient’s Journey at RAH
Data

2013-2016

- RAH Em Lap Audit
- EPOCH Trial
- NELA
- CT Survey
- Analgesia and Antibiotic survey
- Fluid balance and Morbidity

Events:
- EPOCH Pre-Activation Meeting
- EPOCH Scottish Cluster Activation
- RAH Open Meeting
- Location of Operation Note
- Time Spent in Theatre Recovery
- Emergency Theatre Start Times
Part 1—Review of data

80% pre-operative CT scan; 7 hours
Antibiotics & Analgesia; 2 hours
Sepsis Six in use, but no formal documentation evident

98% Consultant Surgeon
95% Consultant Anaesthetist

96% post-op discharge to HDU & ICU

---

**EPOCH “Surgical Survival Six” bundle**

<table>
<thead>
<tr>
<th>Item</th>
<th>Completed Y/N &amp; Initialed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Documented mortality risk estimate</td>
<td>✫ Using a formal risk estimate tool (e.g. P-POSSUM)</td>
</tr>
<tr>
<td>2. Screening for SIRS and Sepsis</td>
<td>✫ If sepsis/severe sepsis present, manage using Sepsis Six / local protocol</td>
</tr>
<tr>
<td>3. Timely surgery</td>
<td>✫ For emergency cases: Patient in theatre within six hours of decision to operate</td>
</tr>
<tr>
<td>4. Fluid therapy guided by cardiac output monitoring</td>
<td>✫ Intravenous fluid given to defined endpoints, using a locally agreed algorithm</td>
</tr>
<tr>
<td>5. Re-evaluate mortality risk estimate</td>
<td>✫ Using formal risk assessment tool (e.g. P-POSSUM)</td>
</tr>
<tr>
<td>6. Plan admission to critical care within six hours of surgery</td>
<td>✫ Patient receives a period of critical care postoperatively</td>
</tr>
</tbody>
</table>
Part 2 - EPOCH Activation...

Team Away Day
Targets
QI training

Ownership
Empowered

Sepsis 6
CT Slots
HDU Target Sticker

<table>
<thead>
<tr>
<th>Date</th>
<th>Target Oxygen sats</th>
<th>Target MAP</th>
</tr>
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<table>
<thead>
<tr>
<th>Target Urine Volumes</th>
<th>Maintenance/prn bolus IV Fluids prescribed for next 12 hours</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Anaesthetist Signature</td>
<td></td>
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<tr>
<td></td>
<td>Recovery Nurse Signature</td>
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</tbody>
</table>
Overview of mortality
Mean 30 day mortality for Emergency Laparotomy Cases at RAH.

- **Baseline**: 18.7% (20/107)
- **Education Advertising**: 11% (20/182)
- **QI Intervention**: 12.9% (13/101)
- **Maintenance**: 12% (15/125)

Date of operation, Range in Months:
- Oct 13 - May 14
- June 14 - May 15
- June 15 - Dec 16
- Jan 16 - Oct 16
Achievements at RAH

Process

• CT Access
• HDU Target Sticker
  – Embedded
• Sepsis six
  – Protocol in SAU
  – Trolley
  – Education

Culture

• Awareness
• MDT group
• Empowerment
• Ground up solutions
Ongoing and Future Work

Surgical Work Patterns

Communication

Participation in Research

‘Em Lap’ Pathway

- Quantify Risk
- Individualise Care
- Deterioration
- Rehabilitation and long-term recovery
Challenges

Data collection and analysis
Variable clinical presentation in emergencies
Maintaining momentum
Thank you to RAH Staff
Improving Care for People in Scotland, a Focus on Deterioration: Prevention, Recognition and Response

Development of a Frailty Model at the front door

Joy Reid – Nurse Consultant: Older People
Louise Kellichan – Integrated Assessment Team Lead
Aims
To deliver the highest quality healthcare services to the people of Scotland

Our vision is that by 2020 everyone is able to live longer healthier lives at home, or in a homely setting
Challenges

• Older people who are discharged under traditional arrangements often have sub-optimal outcomes

• Acute hospital admission may not be the best pathway for managing the older person with frailty

• Frailty therefore identified within NHS Fife as high volume patient flow priority
Innovative ways of working

Old model
• 7 day service 8am-4pm
• PT, OT, SNs within team
• AU1 and ED only
• Minimal shared competencies

New model
• 7 day service 7am-7.30pm
• PT, OT, SN, Frailty NPs and Assistant Frailty Practitioners (Band 4)
• Supported by Geriatrician and Nurse Consultant
• AU1, AU2, ED
• Shared team competencies
Vision

To improve patient experience by promoting independence in patients presenting with frailty to all front door areas at the Victoria Hospital Kirkcaldy by providing alternative pathways rather than acute care and supporting patients as close to home as possible, using a patient centred approach. The team promptly recognises deterioration of the older adult and ensures that appropriate pathways are identified for patients who require acute hospital care.
FRAILTY SCREENING TOOL

Would this person benefit from Comprehensive Geriatric Assessment? If answered “Yes” to any of the following questions please refer to the Integrated Assessment Team

Practitioner Signature: ___________________________ Date: _______________ Time: _______________

1. Has the patient been admitted from a nursing or residential home? □ YES □ NO
2. Does the patient have NEW functional decline? □ YES □ NO
3. Dementia diagnosis or are there any concerns about memory/cognition? □ YES □ NO
4. Is the patient acutely confused, more confused than usual or more sleepy/drowsy than usual? □ YES □ NO
5. Has the patient fallen in the past 6 months or is a fall the reason for admission? □ YES □ NO
6. Does the patient attempt to walk alone although unsteady or unsafe? □ YES □ NO
7. Does the patient or their relatives have fear or anxiety re falling? □ YES □ NO

If YES to Question 3, 4 or 5: Complete 4AT below. THINK DELIRIUM. Initiate FALLS PATHWAY if FALLS and COGNITIVE questions positive. FALLS PATHWAY initiated □ YES □ NO

---

4AT

**Score**

1. **Alertness:** This denotes patients who may be markedly drowsy (e.g. difficult to arouse or obviously sleepy during assessment) or agitated/hyperactive. Observe the patient, if asleep attempt to wake with speech or gentle touch on shoulder. Ask patient to state their name and address at arising.
   - Normal (fully alert, not agitated throughout assessment) 0
   - Mild drowsiness for 10-20 seconds after waking, then normal 1
   - Clearly drowsy 2

   **Score:** _____

2. **AMT 8:** Age DOB, place name and current year. **AMT score** = /8
   - No mistakes = 0
   - 1 mistake = 1
   - 2 or more mistakes = incomplete

   **Score:** _____

3. **Attention:** Ask the patient: “Please tell me the months of the year backwards starting at December.” You can assist with a prompt of “What is the month before Dec?”
   - Achieves 7 or more = 0
   - Starts but score 6 months/10 failed to start = 1
   - Unanswerable (cannot start because unable, drowsy, inattentive) = 2

   **Score:** _____

4. **Acute change of fluctuating course:** Evidence of significant change or fluctuation in alertness/cognition, other mental function (e.g. patients, hallucinations, arising over last 3 weeks and evident in last 24 hours)
   - No = 0
   - Yes = 4

   **Score:** _____

**Total Score:** _____

**4AT Score:**

4 or above: possible delirium +/- cognitive impairment. THINK DELIRIUM. Initiate **TIME BUNDLE**.
3 or below: possible cognitive impairment
0: delirium or severe cognitive impairment unlikely (but delirium still possible if question 4 information incomplete)

---

**Rapid Assessment Test for DELIRIUM**
• Starts at Front Door ED, Medical & Surgical assessment
• CGA + decision-making + Plan + ACTION
• Facilitating discharge direct from ED, AU1, AU2
• Liaising with H@H, Care Homes, GPs and community services including intermediate care & community hospitals
Frailty Huddle
Frailty @ Front door Pathway

- Frailty Screening at point of access to Acute Care
  - AU1
  - ED
  - AU2

- Triaged by IAT
  - 7.00am
  - Telephone calls referrals throughout 12 hour period.

- Frailty Huddle @ 11.00hrs & 14.30hrs
  - Real-time MDT/ Case Conference with access to:
    - Geriatrician of the day (GOD)
    - Older Peoples Nurse Consultant
    - Proactive Pharmacy Team
    - Discharge Hub
    - MOE liaison

- Patients Needs can be supported in alternative to acute care
  - H@H
  - ICASS
  - Supported discharge service
  - Discharge to Assess
  - Community Beds

- Patient Needs Acute Hospital Care
  - Admit MOE
  - Or Specialist Bed

Pathways:
- Falls pathway
- Delirium pathway
- Cognitive impairment pathway
Mrs P’s Story

1. GP Assess
   - Trolley 2: Mefp, Delirium, Falls.

2. IAT Response
   - Time 30 Mins
   - Day 1 @ 19:00.

3. CCA/Frailty Assessment

4. Outcomes
   - Bloods
   - Sepsis
   - 4AT 1
   - MoCA 13/30
   - Mob 2/4.

5. Frailty Huddle
   - Family
   - Bloods
   - Kitchen
   - Naps
   - Mob Ax

6. Short-term discharge support

7. Discharge to Assess

8. Home with Support
   - Day 2 @ 13:00.

9. Day 2 @ 12:00.

Day 1 @ 18:30.
“I felt safe and understood”

“I arrived in a state of panic but soon felt calm”

“Very friendly”

“I feel positive about my future as everything has been better explained to me and I’m going home with ongoing treatment from hospital at home”

“Made me feel at ease”

“Staff were very helpful and kind which makes it more hopeful for the future for us golden oldies”
Number of patients over 65 staying under 24 hours

Victoria Hospital

April 15 - Frailty huddle introduced

8% increase
April 15 - Frailty huddle introduced

51% reduction

Avg length of stay for patients 65+ who are then transferred to MOE

MOE

Victoria Hospital
Avg hospital length of stay for patients discharged from MOE

Count

19% reduction
If we design services for people with only one thing wrong at once but people with many things wrong turn up, the fault is not with the users but with the service, yet all too often these patients are labelled as inappropriate and presented as a problem...

Prof Ken Rockwood 2005
A Therapeutic and Preventative Approach that Reduces Harm

Huntlyburn Ward
Improving Observation Practice

Lisa Clark SCN
Background

- The Scottish Patient Safety Programme - Improving Observation Practice (SPSP-IOP) was commissioned by the Chief Nursing Officer’s Directorate of the Scottish Government to oversee the revision of the observation Good Practice Statement.
- The revision of the Good Practice Statement was recommended based on issues arising from suicide reports and the MWC Enhanced Observation report 2015.
Aims

Test a variety of interventions + Improve the quality, experience and process = Improved observation practice
What is enhanced observation?

- General
- Constant
- Special
What we didn't want

- Staff reading magazines
- Poor documentation
- Discreet constant
- Following patient
- Inconsistent care
- Restrictive care / policy driven
Prevention and Early Response to Deteriorating Mental Health

Reducing harm

- SPSP-MH - Risk Assessment and Safety Care Planning
- Early identification of risks / triggers within 2 hours
- Have provision of therapeutic and recreational activities
- Co-production approach
- Focused allocation / 1-1 time
- Care plans reflect PANEL principles
- Medication round
- Groups
- MDT meetings and HCSW
- Safety briefs - the deteriorating patient / isolation
- Leading by example

Constant observation

- Care planning - making sure its person centred
- Alert Form should detail activity
- Staff handover with patient
- Review daily
- Clear MDT plan for reduction
- Monitor activity
- Have the culture discussion
- Do we need special observation?
Measures in Place

- SPSP-MH data
- Patient stories
- Activity level on ward and during enhanced observation
- Care plan audit
- Staff and patients experience of enhanced observation questionnaires and staff and patient safety survey
- Incidents of restraint
- Incidents of violence
Rate of incidents of restraint

Risk assessment and safety planning

58% reduction
Rate of incidents of physical violence

Risk assessment and safety planning
Impact

For patients - what's important to me -
- “Maintaining dignity and respect”
- “Staff to have belief in me”
- “Having structure to my day”
- “To feel included and welcome”
- “Kindness and respect”
- “Being listened to”
- “Knowing who my nurse is”
- “Having a say in my care plan”

For staff
- Staff feel skilled, knowledgeable and confident
- They have safe and reliable observation practice
- They have a safe and reliable infrastructure that drives collaborative working
- They have a therapeutic and person centred culture towards observation practice
SPSP
Improving Observation Practice

Ward 24, Monklands Hospital
NHS Lanarkshire

Suzanne Urquhart
SPSP-IOP Lead
Background

- Ward 24 is a 24 bed acute mental health admission ward
- It was agreed at the SPSP learning collaborative on 18th June 2015 that an appropriate area of focus for Mental Health services in NHS Lanarkshire would be unscheduled absences. At this event, a definition of unscheduled absences was agreed on. It is:

“When a patient has left the ward without informing staff or a patient on pass fails to return at the agreed time”
Interventions

• Sign in/out book - a sign in/out book was placed at nurses station in ward and all patients and staff informed of its purpose. Includes: name, where they are going, time left, expected time of return. Increased patient responsibility.

• Screening tool - assesses risk of likelihood of unscheduled absence. From City University London – evidence based practice. Altered to suit population.

• “Green dot” - a means of identifying those at high risk according to screening tool on white board. If screening tool shows score of 7 or above then a green dot is placed next to the patient’s name on board. Any member of staff/visiting professionals can see if their patient is at a high risk without having to read through notes/get access to midis. Informs therapeutic interventions.
Results

• Before interventions put into place there were 24 unscheduled absences (Feb-June)
• Following interventions there were 14 unscheduled absences (July-Sept)
• Currently assisting test site in creating a robust/reliable audit tool to use regularly and help illustrate improvement
• Show correlation between interventions and reduction in unscheduled absences
Link to IOP

• More therapeutic interventions of patient choice when identified as ‘high risk’ of unscheduled absences

• Improving patient experience

• Improving experience of people on general observations

• Absconsion has been listed as one of the reasons enhanced observations are commenced by medical staff in a recent questionnaire
Aim

- To improve observation practice on acute mental health ward and make enhanced observations more therapeutic in nature

Measures

- Baseline – patient/staff experience of observation practice, medical questionnaire
- Process – knowledge of programme/aim, feedback, more therapeutic interventions on ward
- Outcome – improved patient/staff experience of observations, all observations to be therapeutic and individualised

Changes

- Make patients/staff aware of programme/aim and allow different avenues for feedback/suggestions for change
- Review current therapeutic interventions and care plans for when an individual is on enhanced observations and if these are being carried out
<table>
<thead>
<tr>
<th>Plan</th>
<th>Make sure all patients and staff are aware of the programme and how they can be involved. Get feedback from patients about their experience of observation practice on the ward.</th>
</tr>
</thead>
</table>
| Do | • Put up posters /patient information leaflet made  
• Put up flipchart paper in day room with post-its and encourage patients and staff to put up suggestions/feedback about observation policy  
• Create patient questionnaire |
| Study | • Record if flipchart is being used and if it is an effective tool by checking weekly for different opinions  
• Check flipchart for common themes and document  
• Collate quantitative and qualitative data from patient feedback questionnaires |
| Act | • Present data from questionnaire in a graph to show patient feedback visually  
• Inform staff and patients of findings and encourage discussion around same |
Results

Still awaiting more patient feedback only 7/24 questionnaires currently completed

Some comments so far

“I felt safe”

“makes me feel safe”

“like having someone to talk to when I want to”

“can’t go out for cigarettes”

“didn’t like someone in room with me all the time”

[didn’t like] “someone watching me”
Next steps

- Review care plans
- Audit therapeutic intervention levels
- Individual plans for each person on enhanced observations i.e. increase in therapeutic interventions, low-stimuli environment, 1:1 interactions
- Test individual care plan on 1 patient then increase numbers
- Re-do patient/staff questionnaires and gather qualitative data on if attitudes have changed/improved
- Audit numbers of unscheduled absences monthly (more therapeutic general observations should attribute to a reduction in these)
- Continue to audit number of physical violence/self harm on enhanced observations
Improving inpatient diabetes care in Scotland

Dr Stuart Ritchie, Consultant Physician, NHS Lothian
Debbie Voigt, Diabetes Specialist Nurse, NHS Tayside
Tom McCarthy, Improvement Advisor, Healthcare Improvement Scotland
Introduction

• Why is inpatient diabetes important?
• Learning from work so far
• Next steps
• Reflections
People with diabetes

Alyssa
- Age: 18
- Recently started university
- Admitted for elective surgery

Betty
- Age: 84
- Lives alone, enjoys gardening and attending book group
- Admitted via ED following fall at home

Jim
- Age: 58
- Lives with his wife, 2 adult daughters
- Admitted to cardiac ward with chest pain

@diabetestca #diabetestca
Background

• In Scotland, diabetes accounts for around 12% of inpatient costs\(^1\)
• 1 in 5 patients in hospital have diabetes.
• 30-40% are insulin treated.
• Only a minority of inpatients have input from specialist diabetes teams.
• Scottish Diabetes Improvement Plan: improve the experience of people with diabetes admitted to hospital\(^2\)
• Realistic Medicine: need to identify and manage clinical risk\(^3\)
Focus of inpatient diabetes improvement

1. Recognition of diabetes and appropriate referral
2. Blood glucose monitoring
3. Safe management of insulin
4. Prevention and appropriate management of hypoglycaemia
1. Recognition of diabetes and appropriate referral
Identification of patients with diabetes

Run Chart

- Median

Date

Identification of patients with diabetes
2. Blood glucose monitoring
Development of dashboard
Data linkage with SCI Diabetes

### Inpatient Overview

**Filter options:**
- Length of stay <= [ ] days
- Hospital is [ ]
- Ward is [ ]
- Inpatient status is [ ]
  - Only inpatients with confirmed diabetes
  - All inpatients on the SCI-Diabetes register

**Show:**
- [ ] Check to create a temporary sub-list of patients - use checkboxes below to select patients first
- [ ] Check to show patients with a Ward BG result < 4.0 in the most recent 4 recordings
- [ ] Check and you can manually discharge patients

Click on the icon to view the admission and transfer history of a patient's inpatient episode

<table>
<thead>
<tr>
<th>Patient ID/CHI</th>
<th>Name</th>
<th>Age</th>
<th>Diabetes Type (duration)</th>
<th>Admission Date</th>
<th>Hospital</th>
<th>Ward</th>
<th>Length of Stay</th>
<th>HbA1c (mmol/mol)</th>
<th>eGFR (ml/min)</th>
<th>Creatinine (umol/L)</th>
<th>Foot Risk</th>
<th>Eye Screening</th>
<th>Ward BG (mmol/L)</th>
<th>Active Foot Ulcer</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>27030301602</td>
<td>ANDREWS, CATHERINE</td>
<td>35y</td>
<td>Type 1 Diabetes Mellitus (6y 11m)</td>
<td>25-Jul-2016 14:28</td>
<td>Ninewells Hospital, Dundee</td>
<td>Ward 12</td>
<td>34.6d</td>
<td>19 (01-Feb-2016)</td>
<td>22 (27-Jun-2016)</td>
<td>22 (01-Feb-2016)</td>
<td>Active Foot Ulcer</td>
<td>(10-Jun-2016)</td>
<td>(06-Jul-2016)</td>
<td>(25-Jul-2016)</td>
<td>(25-Jun-2016)</td>
</tr>
</tbody>
</table>
Patient case study

- Type 1 diabetes (for 57 years)
- 67 years old
- HbA1c 56 mmol/mol
- Treated with Humulin M3 BD
- Congestive heart failure, CKD 4

Connected blood glucose results during three consecutive admissions to hospital

<table>
<thead>
<tr>
<th>Admission 1</th>
<th>Admission 2</th>
<th>Admission 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS 5.7 days</td>
<td>LOS 3.5 days</td>
<td>LOS 8.1 days</td>
</tr>
<tr>
<td>Range 1.8 - 22.6mmol/L</td>
<td>Range 5.1 – 30.5mmol/L</td>
<td>Range 2.3 – 22.4 mmol/L</td>
</tr>
</tbody>
</table>
3. Safe management of insulin

NHS Lothian insulin bundle compliance

Run Chart
Right Dose

Date

Percentage

NO PATIENTS ON INSULIN
4. Prevention and appropriate management of hypoglycaemia
Outcome of improved hypoglycemia management

Introduction of Hypo Boxes in NHSGGC
Continuous Tests of Change introduced

Percentage of Hypo Episodes Correctly treated

% of Patients Appropriately Managed
Linear (% of Patients Appropriately Managed)
Median Line

Acknowledgement: Dr Chris Sainsbury NHS GG&C
Economic analysis

Assumptions made based on findings in the Diabetes - think, check, act test sites and from existing literature:

• Incidence of Hypoglycaemic Episodes can be reduced by 20% and this leads to a length of stay (LoS) reduction of between 1 and 2.5 days.
• Successful management of Hypoglycaemic Episodes can be increased by 50% and this leads to a LoS reduction of 1 day.

Acknowledgement: Dr Chris Sainsbury NHHS GG&C, Nils Michael, Economic Adviser, Scottish Government
Key findings

• The challenge of implementation and improvement
• Enthusiasm is key
• Get the basics right
• Data drives improvement
• Improved hypoglycaemia management and prevention reduces length of stay and costs
e-Learning modules

Five Diabetes - think, check, act e-learning modules developed:
1. Getting the basics right
2. Insulin administration
3. Treatment and prevention of hypoglycaemia
4. Insulin management
5. Intravenous insulin

In addition
6. CPR for Diabetic Feet
Toolkit – in development

Strategies to improve the quality, safety and efficiency of care for patients with diabetes in hospital.

What’s in the toolkit?
• guidelines
• branded resources
• education resources

What’s the toolkit for?
• raise awareness of diabetes management
• measure current standards
• provide recommendations and resources to process improvement
Next steps / Ongoing work

• Share learning and resources nationally
• Utilise inpatient glycaemic data for management performance and outcome measures, in all hospitals
• Collaboration and integration of Diabetes - think, check, act with other improvement programmes
References


2. Scottish Diabetes Improvement Plan 2014
   http://www.diabetesinscotland.org.uk/Publications/Diabetes_Improvement_Plan_2014.PDF

3. Realistic Medicine Chief Medical Officer’s Annual Report 2014-15

For more information visit ihub.scot/a-z-programmes/diabetes-think-check-act/
Can prognosis after resuscitation (PAR) scoring aid appropriate DNACPR decisions?

Dr Fraser Waterson (ST1 – Emergency Medicine) &
Susan Duffy (Staff Nurse – Emergency Department)
• The Deteriorating Patient Improvement Team @ FVRH
• Reducing cardiac arrests – a role for improved DNACPR
• PAR scoring – what it is, what it means
• Methods
• Results & Impact
• Next Steps…
Forth Valley Royal Hospital

• Large DGH – central Scotland  
  • serving a population of 300,000

• September 2015 – the dawn of the DPIT  
  • Deteriorating Patient Improvement Team  
  • Multi-disciplinary team across medical, nursing, therapies, governance, IT  
  • Explicit goal of reducing whole hospital cardiac arrests by 50%
A role for improving DNACPR

• My experience as a junior doctor...
  • It ain’t like casualty!
  • Numerous futile cardiac arrests
    • “they shouldn’t have been for a call”
  • Missed opportunities to discuss DNACPR
  • Are we lacking evidence to support DNACPR decisions?

• SPSP audit work at FVRH confirming the majority of arrests are predictable!
• Matched priorities - a joint collaboration with the DPIT
Prognosis After Resuscitation (PAR) Scoring

• PAR scoring systems have been studied since 1992 to help better predict outcome of patients suffering cardiac arrest

• The PAR score consists of seven, relatively straight-forward to calculate variables, with reported cumulative scores greater than 5 predicting non-survival (Porter et al, Crit Care 2011)

• We aimed to validate PAR scoring as a means of predicting non-survival of cardiac arrest and assess whether it could help provide a structure for DNACPR decisions on admission
Calculating the PAR score

<table>
<thead>
<tr>
<th>Condition</th>
<th>PAR Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metastatic Cancer</td>
<td>10</td>
</tr>
<tr>
<td>Non-Metastatic Cancer</td>
<td>3</td>
</tr>
<tr>
<td>Sepsis at admission</td>
<td>5</td>
</tr>
<tr>
<td>Dependent Functional Status</td>
<td>5</td>
</tr>
<tr>
<td>Pneumonia at admission</td>
<td>3</td>
</tr>
<tr>
<td>Admission creatinine &gt; 130</td>
<td>3</td>
</tr>
<tr>
<td>Age &gt; 70</td>
<td>2</td>
</tr>
<tr>
<td>Acute MI as admission diagnosis</td>
<td>-2</td>
</tr>
</tbody>
</table>

[Porter et al, Crit Care 2011]
Methods

• A retrospective analysis of all patients suffering a cardiac arrest requiring CPR while in admission at FVRH was conducted

• The data set covered the period October 2015 – September 2016

• The PAR score from admission data was calculated and collated on an Excel spreadsheet along with the outcome immediately post arrest (dead, ROSC)
  • CHI number, presenting complaint, arrest date, record of PAR score, patient outcome
Results

Cardiac Arrest Outcome %

- 73.3% Died
- 27.7% ROSC
Results

• A total of 47 patients suffered a cardiac arrest within the data period requiring activation of the 222 response team and active CPR
• 34 patients (72.3%) did not regain ROSC from CPR/ALS* and were PLE*
• 13 patients (27.7%) regained ROSC following CPR/ALS
• 10 of the 13 survivors (76.9%) had PAR scores of 8 or less
• The 3 with PAR scores > 8 all died within 48hrs of initial arrest (with DNACPR)

*CPR: Cardiopulmonary Resuscitation; ALS: Advanced Life Support; PLE: Pronounced Life Extinct
Impact

• We found that all patients who suffered a cardiac arrest with admission PAR scores > 8 did not survive to hospital discharge

• 77% survived to hospital discharge, 33% died within 48hrs

• Creatinine levels > 130 and age > 70 remain the most common elevated features in patients suffering non-survivable cardiac arrests

• Could this evidence support better DNACPR decisions at admission/patient deterioration?
Next steps...

• Predicting outcome post cardiac arrest remains a difficult challenge
• Widening the data set to include other hospitals
  • shared activity recently with Wishaw General Hospital, NHS Lanarkshire
• Introduction of a guideline, based on locally validated PAR score
  • could be used to aid clinicians to make appropriate and early DNACPR decisions
    through discussion of likely futile outcomes with patients and family members
Thank you. Any questions?
Improving Care for People in Scotland, A Focus on Deterioration: Prevention, Recognition and Response

Innovative Improvement
Chair – Brian Robson
COMING NEXT

Shona Robison MSP – Cabinet Secretary Address

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