System enablers – practical aspects

Chair – Lesley Anne Smith
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>
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<tr>
<td></td>
<td>Service Users and Carers</td>
<td>Ochil Level 1</td>
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<td></td>
<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>
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<tr>
<td>Topic</td>
<td>Speaker</td>
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<tr>
<td>Reducing postpartum haemorrhage – Our journey in NHS Fife</td>
<td>Anne Mackinnon &amp; Jenny Boyd (NHS Fife)</td>
<td></td>
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<tr>
<td>Using the Hospital Standardised Mortality Ratio to help improve systems of care</td>
<td>Donald Morrison (Healthcare Improvement Scotland)</td>
<td></td>
</tr>
<tr>
<td>Use of a deteriorating patient structured response to successfully reduce the whole hospital cardiac arrest rate</td>
<td>Wendy Nimmo &amp; Susan Duffy (NHS Forth Valley)</td>
<td></td>
</tr>
<tr>
<td>Delivering deteriorating patient objectives out of hours</td>
<td>Ken MacDonald, Lorraine Matheson, Lorna Malicki &amp; Mary-Anne Gillies (NHS Highland)</td>
<td></td>
</tr>
</tbody>
</table>

Shona Robison MSP – Cabinet Secretary Address
Reducing Post Partum Haemorrhage
Our Journey in NHS Fife

SPSP National Conference
29th November 2016
Problem

- Post partum haemorrhage
- Rising rates
- ? avoidable harm
Challenges

- Culture of “can only be managed”
- It is impossible to prevent it
- Culture of acceptance
“If you always do what you’ve always done, you’ll always get what you’ve always got”

Henry Ford
Aims

• Reduce major PPH’s by 30% by 2016
• Reduce ALL PPH’s by 2016
• Changing the culture of acceptance
Reducing the Incidence of PPH

Outcomes

Reduce the incidence of Major PPH by 30% and the incidence of all PPH by 15% by December 2016

Primary Drivers

Effective Risk Assessment

Early recognition and response

Reliable care processes

Motivating and engaging staff

Secondary Drivers

Structure Checklist and Risk Assessment
Effective communication of risk between teams
Use birth plans to discuss risk and care pathways with women

Optimizing antenatal Hb
Raising awareness with women about Hb
Early measurement blood loss MOEWS

Active Management of 3rd stage
PPH Management Bundle
Report and review ALL PPH’s

Skill training – PROMPT
Provide feedback
Change 1: checklist developed, tested, modified - multiple tests of change

Change 2: education, teams developed and engaged, ground rules identified

Change 3: combined with risk assessment tool

Change 4: interactive whiteboard, report and review ALL bleeds – understanding all the data

Change 5: optimising antenatal Hb, raise awareness with women, audit birth plans

Change 5: management bundle, discussed team briefings, Theatre checklist, PROMPT
Measurement
Process Measures

- Compliance with PPH checklist and risk assessment
- Compliance with surgical briefing
- Compliance with PPH prevention bundle

- Target 95% compliance for each measure
% compliance with structured checklist and PPH risk assessment

- Added to surgical checklist
- PROMPT training
- multiple testing of checklist + risk assessment tool

#SPSConf16
% compliance surgical briefing
Measurement System Measures

• % staff trained in management by attending PROMPT

• 75% midwives
• 57% medical staff
Measurement
Outcome Measures

• Rate of Major PPH
• Rates of all PPH
Structured checklist and PPH assessment.

Displaying data.

Measuring blood loss.

Adding to surgical pause.

PROMPT training.

PPH Rate blood loss >1000mls.
Rate of severe post-partum haemorrhage
## PPH Risk Assessment

Complete admission in labour for IOL or augmentation of labour.
Complete prior to second stage and following delivery.

### Antenatal Risk Factors

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placenta Periarterial Accreta</td>
<td>10</td>
</tr>
<tr>
<td>Placenta Abruptio - signifiant</td>
<td>10</td>
</tr>
<tr>
<td>Multiple Pregnancy</td>
<td>6</td>
</tr>
<tr>
<td>Cerclage Placa</td>
<td>6</td>
</tr>
<tr>
<td>Intraskeletal Death</td>
<td>2</td>
</tr>
<tr>
<td>Severe pre-eclampsia</td>
<td>4</td>
</tr>
<tr>
<td>Maternal Glaucoma Disorder</td>
<td>3</td>
</tr>
<tr>
<td>Previous PPH or Retained Placenta</td>
<td>3</td>
</tr>
<tr>
<td>Parity &gt;4</td>
<td>3</td>
</tr>
<tr>
<td>Parity &gt;6</td>
<td>6</td>
</tr>
<tr>
<td>Current BMI &gt; 26</td>
<td>2</td>
</tr>
<tr>
<td>Uterine Fibroids</td>
<td>2</td>
</tr>
<tr>
<td>Recurrent APLH (minter)</td>
<td>2</td>
</tr>
<tr>
<td>Elective or previous Caesarean Section or emergency C-Section (not in labour)</td>
<td>2</td>
</tr>
</tbody>
</table>

### Perinatal Risk Factors

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction of labour/ Augmentation of labour</td>
<td>2</td>
</tr>
<tr>
<td>Septis /Pyrexia in labour</td>
<td>2</td>
</tr>
<tr>
<td>Prolonged 1st stage of labour &gt; 12 hours (active)</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 12 hours of Synthochron</td>
<td>2</td>
</tr>
<tr>
<td>Prolonged 2nd stage of labour &gt;4hours</td>
<td>2</td>
</tr>
</tbody>
</table>

### Postnatal Risk Factors

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained Placenta</td>
<td>6</td>
</tr>
<tr>
<td>Emergency Caesarean Section (in labour)</td>
<td>6</td>
</tr>
<tr>
<td>Baby &gt;4kg</td>
<td>2</td>
</tr>
<tr>
<td>Operative Vaginal Delivery</td>
<td>2</td>
</tr>
</tbody>
</table>

### Total Score (Antenatal plus Perinatal plus Postnatal)

**Antenatal**

**Perinatal**

**Postnatal**

### Management for 3rd stage and following delivery – alternative plans should be documented in the notes

- Score less than 6
  - Follow Green action PLUS
  - IV access - Grey Veronal
  - Group B Sera FBC
  - Synthochron infusion 500ml 0.9% saline @125ml/h
  - Commence MOEs and record observations at least every 30 minutes for 2 hours.
  - Consider further anticoagulant drugs - ETVF

- Score 6 - 9
  - Follow Amber action PLUS
  - 2nd Grey Veronal
  - Give second Symphochron - Synthochron or Ergometrine IM/V or Hemabate IM
  - Cross match in advance if there are antibodies present

**BE AWARE OF THE CONTRA-INDICATIONS OF USING ERGOMETRINE**
Lessons Learned

- No single factor makes the difference
- Whole culture shift from acceptance to prevention
- Need to engage ALL stakeholders
- The whole team must be signed up to driving improvements locally
- Different strategies needed to engage the different professional groups
Engaging and enabling

Listening = Learning

WHAT'S YOUR STORY?
Engagement Board
Next steps

• Continue to work at preventing all haemorrhages
• Reduce caesarean sections and increase vaginal births
• Improve antenatal health
• Involving the women more
• Achieve a stable situation – spread and sustain the improvement
“Effective communication is the key to all clinical care, particularly in the maternity services, where there may be multiple handovers of care. Communication is effective only if the relevant information is actually made available to, and understood by, those who need to act on it.”

The King’s fund 2008
System enablers – practical aspects

Donald Morrison
How best can NHS boards use hospital mortality data?

How best can Healthcare Improvement Scotland use, and engage with NHS boards about, hospital mortality data?
Use of a deteriorating patient structured response to successfully reduce the cardiac arrest rate
Session outline

- Concept of structured recognition and response
- Successful testing in one ward
- Spread
- The importance of accurate process and outcome data – and who owns it (and the process)
Implementation of a structured response to deteriorating patients had previously been shown to reduce cardiac arrests in the Acute Medicine Unit in NHS Forth Valley by 70%.

However whole hospital cardiac arrest rates remained highly variable. A plan was therefore made to spread the structured response to the downstream medical and surgical wards to improve this.
Aims

- From a baseline of 2.5 cardiac arrests per 1000 hospital discharges, we aimed to reduce this by 50% to 1.25 cardiac arrests per 1000 discharges within 12 months.

- This would be done by reliable spread of the Scottish structured response to deteriorating patients in the downstream medical and surgical wards in Forth Valley Royal Hospital.

- A secondary aim would be to measure the time to critical care from first NEWS trigger across in both the Acute Medical Unit and downstream medical and surgical wards in FVRH.
3 Senior nurses were identified for a 12 month secondment looking at recognition and response to deteriorating patients within Forth Valley Royal Hospital.
WE LOOKED AT...

- ACP
- SEPSIS 6
- SAFETY BRIEFS
- SBAR – H@N

AIM TO REDUCE:
- In hospital cardiac arrest by 50%
- Unplanned ICU admissions from wards.

Data

M&M

NEWS/ESCALATION

FLUID BALANCE

STRUCTURED WD ROUNDS

Recognition Response
A NEWS 5/6 or 3 in one parameter Recognition/Escalation

Date: ________________ Time: ________________
Clinician contacted using SBAR:
Name ____________________
Nurse in charge informed ☐
EWARD signifier entered ☐
Hourly observations until NEWS < 5 ☐
Start fluid balance chart ☐
Completed by (name): ________________

B NEWS 5/6 or 3 in one parameter Response/intervention

1. Time attended ________________
2. Nurse in charge and Nurse providing care meet with responding clinician to discuss patient ☐
3. Document management plan ☐
4. Due to infection? Y/N Complete sepsis 6 sticker ☐
5. Please document (after discussion with patient and family where possible and appropriate)
   a) Would discussion with critical care be appropriate Y ☐ N ☐
   b) Resuscitation status for: CPR ☐ DNACPR ☐ Complete form
   c) Unmet palliative/supportive care needs
Consider SPICT, accessing KIS, discussion with consultant
Mandatory consultant contact in morning if NEWS/6 overnight

Signature/Name __________________________

If no improvement, or NEWS>7, Call for help

PART A NEWS 7 or above Recognition/Escalation

Date: ________________ Time: ________________
Clinician contacted using SBAR:
Name ____________________
Nurse in charge informed ☐
EWARD signifier entered ☐
Hourly observations until NEWS < 5 ☐
Start fluid balance chart ☐
Completed by (name): ________________

PART B NEWS 7 or above Response/intervention

1. Time attended ________________ Grade: ________________
2. Nurse in charge and Nurse providing care meet with responding clinician to discuss patient ☐
3. Document management plan ☐
4. Due to infection? Y/N Complete sepsis 6 sticker ☐
5. Please document (after discussion with patient and family where possible and appropriate)
   a) Would discussion with critical care be appropriate Y ☐ N ☐
   b) Resuscitation status for: CPR ☐ DNACPR ☐ Complete form
   c) Unmet palliative/supportive care needs
Consider SPICT, accessing KIS, discussion with consultant
Mandatory consultant contact in morning if NEWS/7 overnight

Signature/Name __________________________

Mandatory consultant contact if NEWS no better after 60 minutes and no decision made to limit escalation ☐
To reduce cardiac arrests by 50% per 1000 discharges within 12 months.

**Primary Drivers**
- Understanding the system
- Reliable response to deteriorating patients
- Communication of deteriorating patients
- Education of Staff

**Secondary Drivers**
- Data collection
- FMEA
- Safety briefs
- Prioritised areas at risk
- Review/updated observational policy
- Escalation boards
- Updated NEWS chart, accurate
- Recognition and Response checklist
- Hospital huddle awareness
- Implement SBAR handovers for all deteriorating patients
- Implement structured ward rounds
- Local mortality and morbidity review
- Ensure senior clinical involvement in care planning
- Utilise multi-disciplinary safety briefs and highlight at risk patients
- Ensure directorate team involvement
- Education for all ward teams, FY1, students, consultants, undergraduate students
- Learn pro module
Process Measures– Weekly Data Collection

- Frequency/Accuracy of observations
- Escalation checklist use
- Time for response
- Management plan documented (escalation/de-escalation)
- Sepsis consideration
- Mandatory consultant review (NEWS > 7 for more than 1 hr)
- Daily unplanned ITU admission reviews
Time line. Trigger __:__ referral to ITU __:__ Admit ITU __:__ ARREST __:__

WARD..............................

CONSULTANT......................

DATE ADMITTED TO HOSPITAL........

DATE ADMITTED TO WARD...........

DATE ADMITTED TO ITU/CARDIAC ARREST

Admission Diagnosis..............................................................

Reason for admission to ITU..........................................................

Was patient scoring news ≥5 or clinical concern prior to transfer/Arrest? Yes ☐ No ☐

Was the patient scoring for <6 hr ☐ 6-12 hr ☐ 12-24hr ☐ >24 ☐

Has patient been discussed at hospital huddle? Yes ☐ No ☐

What was the time of the last consultant review? Date ------- Time _:_:_

Was there a clear plan of care documented? Yes ☐ No ☐

Was there anticipatory care documented in senior review? (24hr of admit) Yes ☐ No ☐

Level of decision making- FY1 ☐ REG ☐ Consultant ☐ ITU ☐

Was DNA CPR considered? Yes ☐ No ☐ Completed? Yes ☐ No ☐

Evidence of Recognition of sick patient? ..........................................................

Evidence of timely escalation? ...........................................................................

Evidence of appropriate planning? ......................................................................

Evidence of effective communication? ..............................................................

Outcome.

Feedback good practice ☐ Recommend M&M review ☐ SAER ☐
ITU Transfers >24 hours excluding AAU/CAU

Days since last recorded ITU transfer > 24 hours

Transfer no.

FVRH
NHS Forth Valley
October unplanned ITU admissions

Total unplanned ICU Admissions

WARDs

- <6hrs
- 6-12hrs
- 12-24hrs
- >24hrs

NHS Forth Valley

#spocont16
Current Days since last recorded ITU transfer > 24 hours

37
Run chart showing percent compliance with overall use of recognition and response sticker

- Percent
- Median
- Goal

Baseline median 25
Current median 100
Sustained Improvement and on target
Run chart showing percent of triggering patients with hourly observations until NEWS <5

Sustained Improvement and on target
Run chart showing percent of triggering patients with a documented management plan

- **Current median**: 100
- **Baseline median**: 50

Sustained improvement and on target

Percent compliance vs. date (27/10/2015 to 31/10/2016)
Run chart showing percent of patients with documented consideration of sepsis screening

- Current median: 100
- Baseline median: 25
- Median: 77.5

Sustained improvement and on target
Run chart showing Cardiac Arrest Rate per 1000 discharges

Sustained improvement New Temporary Median of 1.16

Provisional reduction of 54%
Challenges

- Sustainability
- Acute Admission area
- End of life decision making
Next Steps

- Team ownership
- Treatment escalation plans
- Community spread
Thanks to the Team

- George Doonan
- Dan Beckett
- Sharon Oswald
- Monica Inglis
System Enablers – Delivering Deteriorating Patient Objectives Out of Hours

29 November 2016
Dr Ken McDonald, Associate Medical Director, Raigmore Hospital
Deteriorating patient programme objectives

• 50% reduction in CPR attempts in general ward setting

• 95% of people with physiological deterioration in acute care will have a structured response and plan
Safety improvements in system design

- Medical Emergency Team with standardised assessment tool
- Patient record incorporating Scottish Structured Response
- Treatment escalation planning
- Handover
- Structured ward rounds
Evolution of MET
• How best to provide urgent medical assessment and intervention in out of hours periods?

• Main challenge outwith acute admission units

• 2011 – Introduction of Medical Emergency Team
Medical Emergency Team (MET)

This ward is NOW covered by the MET. MET aims to improve patient safety by providing a very rapid response to support staff dealing with ANY sick or deteriorating patient. The team includes an experienced nurse practitioner, the medical registrar and staff from ITU. MET does NOT replace the Cardiac Arrest Team (although Cardiac Arrest Team members are part of the MET). If in doubt about any very sick patient always call 2222 to get immediate help (even when they have not had a cardiac or respiratory arrest).

Criteria for calling the MET:
NEWS 7 or more
OR
staff concerned about ill or deteriorating patient
(except where palliative care in place or plan being followed for responding to deterioration or high NEWS)

How do you contact the MET?

Dial 1999
(This is a mobile phone, NOT a bleep)

For more information on MET, contact David Franklin, Bleep 2016, david.franklin@hhs.net or Evelyn Gray, evelyn.gray@hhs.net
Medical Emergency Team (MET)

Procedure for calling the MET

Patient unwell

- Dial 2222
  - Peri-arrest or very rapid deterioration

New NEWS >= 7 or staff concerned

- Are there appropriate ward medical/NP staff available to deal with situation?
  - Yes
    - Ward staff manage patient (usually requires middle-grade involvement). Handover to evening/night team as appropriate
  - No
    - Dial 1999
      - (This is a mobile phone, NOT a bleep)

You will be immediately connected to the MET coordinator (usually the Nurse Practitioner (NP) on duty). Give details of the emergency in SBAR format

- MET coordinator takes call
  - Situation
  - Background
  - Assessment
  - Recommendation

NP attends patient within a specified time (agreed with ward staff and usually immediately)

NP assesses patient and calls MET members as appropriate

NP judges that dual response needed. NP contacts Medical Middle-grade and both attend

NP judges that whole team required immediately. Ward staff asked to dial 2222 immediately

Emergency managed by MET with ward nurses (and ward medical staff as soon as available)

Patient remains in ward area with ward staff looking after them

Patient transferred to level 2 or 3 care (GHOU, MSCU, ITU)

Defined threshold but with allowance for discretion

Alternative escalation route

Standardised communication format

Emphasis on team approach & responsibility
**Medical Emergency Team (MET)**

This team is used to rapidly mobilize staff to assist with unstable or deteriorating patients.

**Criteria for calling the MET:**
- **NEWS 7 or more**
- **Staff concerned about ill or deteriorating patient**

**How do you contact the MET?**

**Dial 1999**

(This is a mobile phone, NOT a beeper)

**Dial 2222**

**Emergency Team: 732129**

---

[Flowchart showing the process for calling the MET]
MET integration with Deteriorating Patient Programme

• Change MET forms to the ‘Deteriorating Patient Record’
• Promote culture of treatment escalation planning
• Progressive roll out of SSR to all wards in Raigmore
• Introduced ‘Deteriorating Patient Follow Up’ forms
• Introduced a diary and whiteboard to handover outstanding TEP/CPR for all MET calls at handovers - 9am, 5pm, 9pm
• Monthly newsletter to Deteriorating Patient group and ANPs
Tools
Deteriorating Patient record
Treatment escalation plan
Structured ward round record
Deteriorating patient follow up form

MET/DEF Follow Up

Date of follow up: __________ Date of initial MET call: __________

Word out: __________ Time of initial MET assessment: __________

Consultant: __________ Time of follow up: __________

NEWS on initial assessment: __________ (please fill in NEWS)

NEWS on follow up: __________ (please fill in NEWS)

Has the treatment plan initiated by MET changed from initial review? Y □ N □

If yes, please give details:

Any learning points? Y □ N □ If yes, give details:

Patient outcome: Improved □ No change □ Deteriorated □

Kept on ward □ Moved to CCU □ MHDD □ SHDU □ ITU □ Died □

A SCOTTISH STRUCTURED RESPONSE (SSR) has occurred only if all 1-7 below have been actioned

1. Access information from Primary Care – PCU/HH
2. Nurse and doctor/RP discuss the plan together
3. Active problems, working diagnosis and management plan recorded
4. Review & increase frequency of observations if appropriate
5. Escalation ceiling recorded/ERP completed: level 1, 2, 3
6. Consider early referral to critical care if ceiling of care would include level 2 or 3 care
7. DNN/CP considered and completed if appropriate

Please select appropriate answer from above for the following questions

What part if any was completed by own team □

Did a SSR take place during initial MET Y □ N □ What part was outstanding?

What is currently outstanding? □

Name: ___________________________ Designation: ____________ Bleep no. __________

Signature: ___________________________ Time assessment completed: __________________________

#SPSPConf16
### Handover Room Whiteboard

#### Metcalls

<table>
<thead>
<tr>
<th>Date</th>
<th>CH/ward</th>
<th>SSR (y/s)</th>
<th>Follow Up TEP/DP</th>
</tr>
</thead>
<tbody>
<tr>
<td>21/02/16</td>
<td>15/02/16</td>
<td></td>
<td>TEP D/DP no required</td>
</tr>
</tbody>
</table>

#### Patients to Handover

- **SSR now live**
  - 4A - SSR goes live Feb 2nd
  - 5C - SSR goes live Feb 8th
  - 9B - SSR goes live Feb 11th

- **PF with Metcalls Daytime/Review Daytime Handover**
  - Needs senior review within 12 hours

- **NEWS > 5, High FiO2, Continuous IV Drug/Blood EOLC/Entирования RA**

- **Routine tasks chasing bloods/urines/gout levels**

- **Trial of 7A for patients**
  - OK if has seen from Specialist
  - Must have got protocol on Whiteboard before starting review: this means any further info from specialist needed
Standardisation at handover

- **RED** - Patients who are clinically unstable, have had additional medical review/MET call during the day. Cannot go another 12 hours without middle grade/senior review.

- **AMBER** - elevated NEWS, continuous drug infusion, blood transfusion, new admission, increased $O_2$ demands or >40%, end of life care. Must have clear plan of action in notes if deteriorates.

- **GREEN** - routine tasks to be completed OOH e.g. gentamicin level, chasing x-rays/blood results. Must be clear what is being looked for and a clear action plan in place if results are abnormal.
Data
MET calls received
MET calls by ward area from 2015
Actions following MET intervention
EWS following MET intervention
MET outcomes: 1 square = 5 patients

- Alive Same Ward (2296)
- Alive but Palliative (33)
- LCP (14)
- Alive Higher Level Care (158)
- Dead (22)
- DNACPR (5)
Next steps

- Roll out of DP record to all patients during day with NEWS of 7 or other concerns
- Day Nurse Practitioners to be the link in the chain for success
- Use DP record as mechanism for feedback
- Highlight DP or ‘at risk patients’ on the white boards in each ward
- Decision making should be proactive, timely & informed and owned by own teams
- Use of technology
- Develop culture - patient management & outcomes can be optimised via standard, structured processes
Coming Next

Shona Robison MSP – Cabinet Secretary Address

Pentland Suite Level 3