

Quality Improvement – making the changes

Kate Hooton – Assistant Director -
Quality and Patient Safety, ABUHB

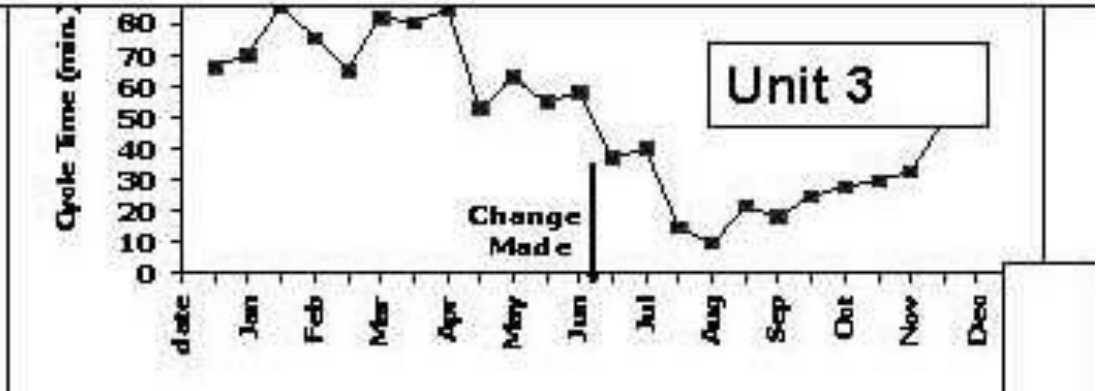
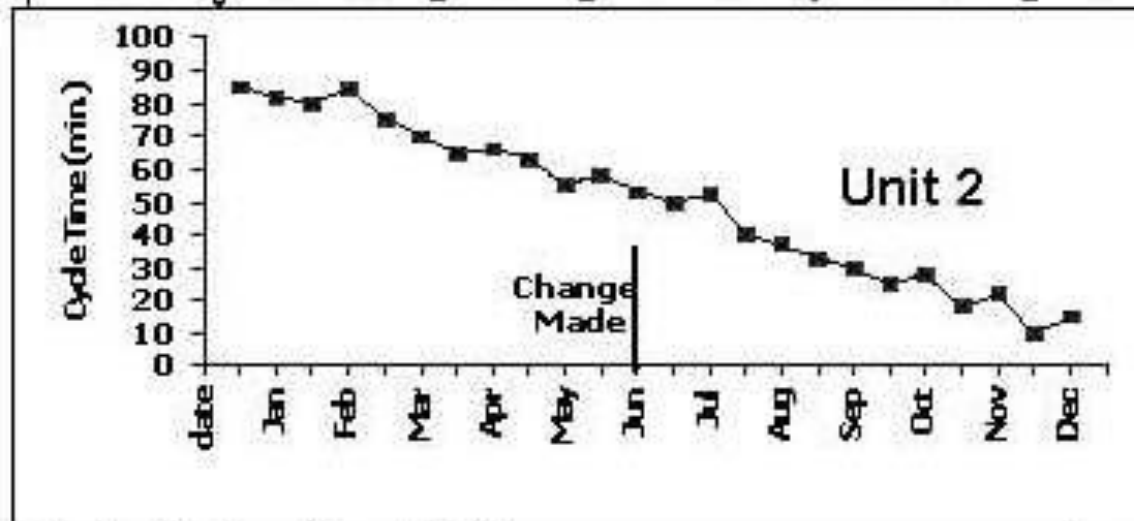
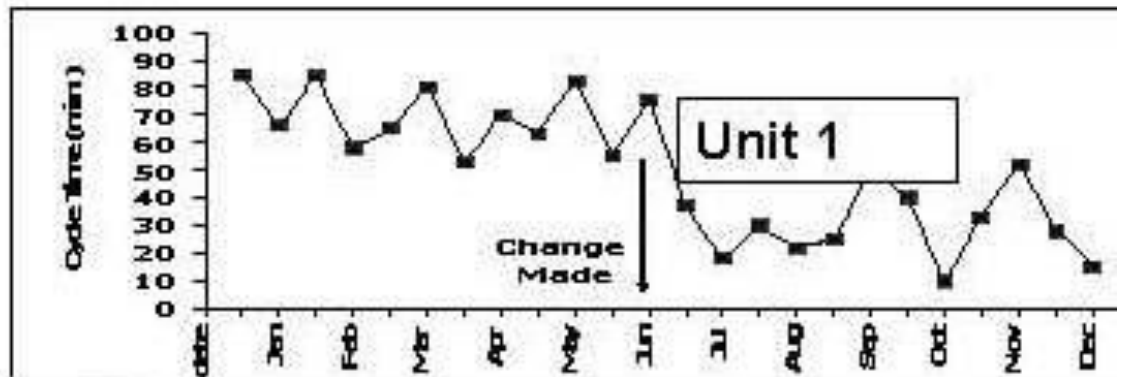
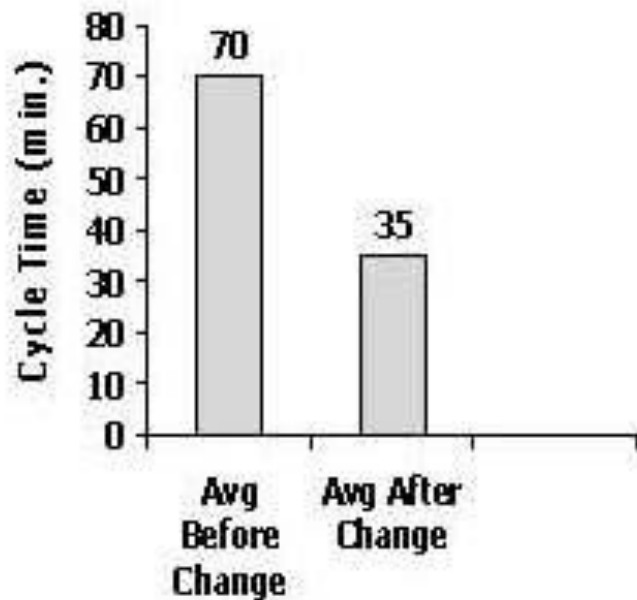
What I want to cover

- What Clinical Audit can and can not do
- Why we need a quality improvement process
- One QI method – IHI Model for Improvement
- Example of using the QI method – sepsis
- Change takes time and persistence

What is Clinical Audit?

- **Clinical audit** is a process that has been defined as "a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change"
- Clinical audit tends to be measurement against criteria – but the change process is neglected

Cycle time results for units 1, 2 and 3



Why does Clinical Audit not help us improve?

- Aggregated data presented in tabular formats or with summary statistics, will not help you measure the impact of process improvement/redesign efforts. Aggregated data can only lead to judgement, not to improvement.
- The audit is therefore the start of the process to help you see where you need to change, and then a measurement to see whether you have improved

Clinical Audit

Snapshot in time of overall performance compared to evidence based standards. Highlights where there are deficiencies in practice

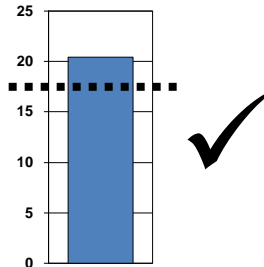
Statistical Process Control

Real-time monitoring of performance over time. Interventions for change are implemented and their effects assessed almost immediately

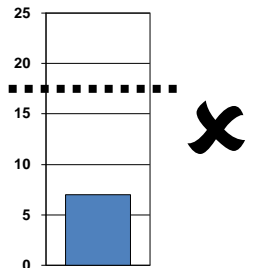
Re-Audit

Snapshot in time of overall performance. Checks that standards are maintained and improved where necessary

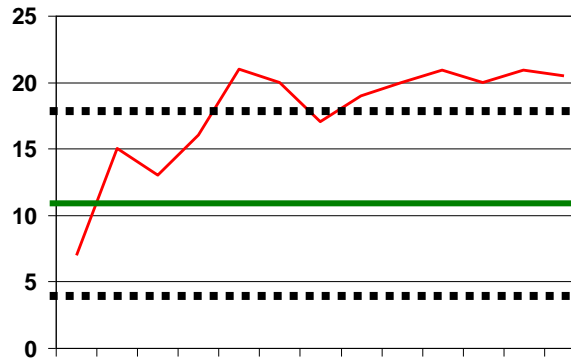
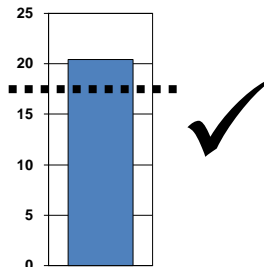
Standard A



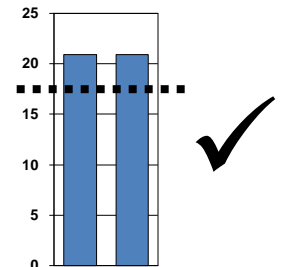
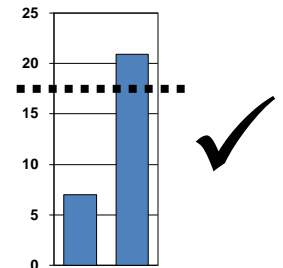
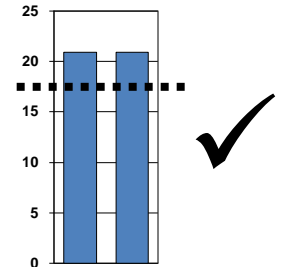
Standard B



Standard C



Courtesy of Rachel Fletcher, ABUHB

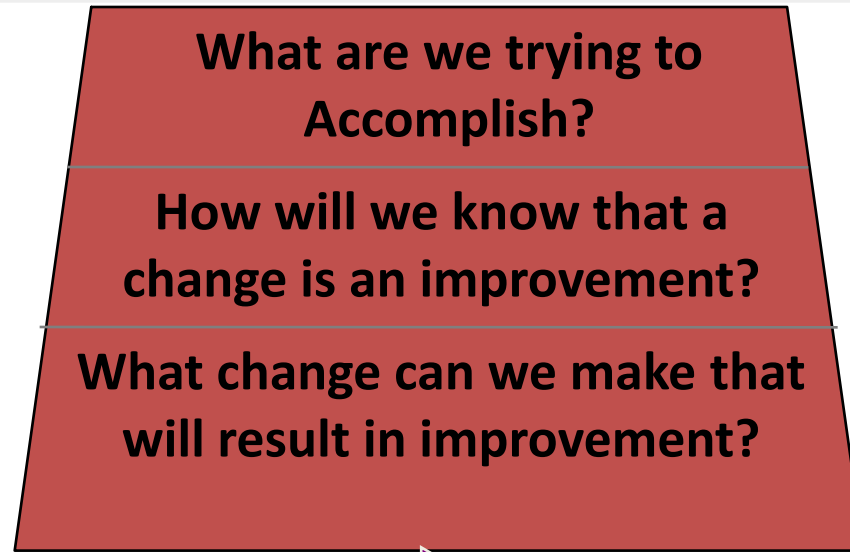


Where to start?

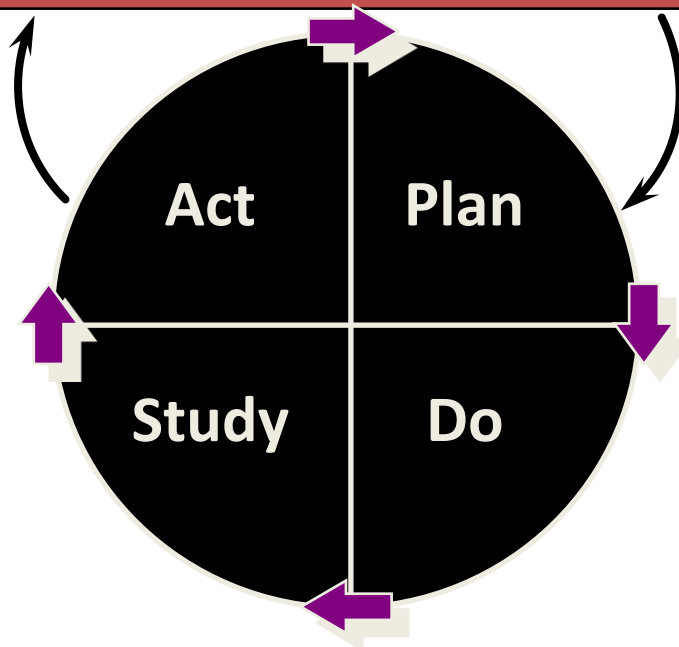
- IBD National Audit – local report
- Leadership committed to improvement
- Which criteria do we want to be better against next audit – important for the patient?
- What is the problem?
- Who do I need to work with if I want to address this problem?
- When and where can we meet each week?

The Model for Improvement

**When you
combine
the 3
questions
with the...**



**PDSA cycle,
you get...**



**...the Model for
Improvement.**

Three Questions

- Aim – How much and by when – to address the problem
- Measures – Outcome measure to see if you have achieved your aim, and process measures to see whether you are making the changes reliably (data relevant to area you are working in)
- Change – either evidence based or your ideas about what will lead to an improvement

The change - PDSA

- Plan – who will do what, where and when?
- Do – try it out: if possible, start small on one patient
- Study: look at your data, ask the staff if that worked?
- Act – make any changes to make it work better

Sepsis - the problem and our approach

- We have done a lot, but we are still not reliably recognising or reliably responding to sepsis in a timely way (incidents, complaints, mortality reviews)
- Aneurin Bevan Collaborative on sepsis – Exec Team support, Project Team to work with small number of areas in 90 day action periods, local multi-disciplinary team, weekly meetings in each area between project team and multi-disciplinary team

Sepsis - the aim and outcome measure

- Aim - To eliminate unnecessary deaths and harm from sepsis
- Outcome measures – Deaths per week from sepsis triggered cohort and mortality rate from sepsis triggered cohort

Sepsis – the changes and process measures

- Changes – multi-disciplinary training using scenarios, new carbonated sepsis screening tool, identification of further changes from review of patients where compliance with sepsis six in one hour was not achieved
- Process measures – number of forms started, number of patients triggering sepsis, % compliance with sepsis six in one hour from trigger

Sepsis Screening Tool

Are any 2 of the following criteria present that are new to the patient?

- | | |
|--|---|
| <input type="checkbox"/> Temperature <36 or >38.3°C | <input type="checkbox"/> Respiratory rate >20/min |
| <input type="checkbox"/> Heart rate >90bpm | <input type="checkbox"/> Acutely altered mental state |
| <input type="checkbox"/> WCC <4 or > 12 x 10 ⁹ /l | <input type="checkbox"/> Glucose >7.7mmol/l [if patient not diabetic] |

If YES patient has SIRS

Is this likely to be due to an infection?

- For example:
- | | |
|--|---|
| <input type="checkbox"/> Cough/ sputum/ chest pain | <input type="checkbox"/> Dysuria |
| <input type="checkbox"/> Abdo pain/ distension/ diarrhoea | <input type="checkbox"/> Line infection |
| <input type="checkbox"/> Headache with neck stiffness | <input type="checkbox"/> Endocarditis |
| <input type="checkbox"/> Cellulitis/ wound infection/ septic arthritis | <input type="checkbox"/> Other |

If YES patient has SEPSIS

Contact Medical/Surgical team and Outreach/ANP using SBAR Open Sepsis Response Box and give sepsis 6 treatment within 1 hour plus hourly observations

ED: Follow standard ED protocol

If NO continue to monitor patient and reassess at regular intervals as per NEWS protocol

Date:..... : Time (Zero) NEWS Score

Sepsis Care Pathway – First Hour Care Duties

Document time : Staff name Designation

Ensure Doctor attends NOW and work together to achieve these tasks

Sepsis Six ©	Time	Initial	Reason not done or result
1. Oxygen: high flow 15 l/min via non-Rebreathe mask Target saturations > 94%			
2. Blood cultures before antibiotics: take at least one set plus all relevant blood tests eg FBC, U&E LFTClotting, glucose. <i>Consider urine / sputum / swab samples.</i>			
3. IV antibiotics Paracetamol Allergies			
4. Fluid resuscitate: if hypotensive give Boluses of 0.9% saline or Hartmann's 20 ml/kg up to a max of 60 ml/kg			
5. Serum lactate and Hb: Ensure Hb > 7g/dl			
6. Commence fluid balance/Consider Catheterisation			

Ward:

Department:

Locate source sepsis:	Patient ID
Urinalysis:	
CXR review <input type="checkbox"/>	
ECG review <input type="checkbox"/>	

Monitor patient as per NEWS protocol. For medical/surgical review at 6 hours
Inform Critical Care Outreach and Doctors as appropriate using SBAR.

Are there any signs of organ dysfunction that are new to the patient?

- | | |
|---|---|
| <input type="checkbox"/> Systolic BP < 90mmHg or MAP <65mmHg | <input type="checkbox"/> Lactate > 2mmol/l |
| <input type="checkbox"/> New need for oxygen to keep SpO ₂ > 90% | <input type="checkbox"/> INR > 1.5 or aPPT >60 seconds |
| <input type="checkbox"/> Urine output < 0.5ml/kg/hr for 2 hours | <input type="checkbox"/> Platelets < 100 x 10 ⁹ /l |
| <input type="checkbox"/> Creatinine > 177 mmol/l | <input type="checkbox"/> Bilirubin > 34µmol/l |

YES

This is SEVERE SEPSIS.

30 minutes observations. Inform senior Doctor IMMEDIATELY! If referral to Critical Care indicated discuss with Patients' Consultant first using SBAR.

Six hour medical review: Due.....HRS Completed.....HRS

Outcome of review

Did patient show signs of Sepsis in previous 24 hours? YES NO

Time patient presented in ED/MAU/EAU

Sepsis Six completed in one hour from diagnosis YES NO

Name (print):

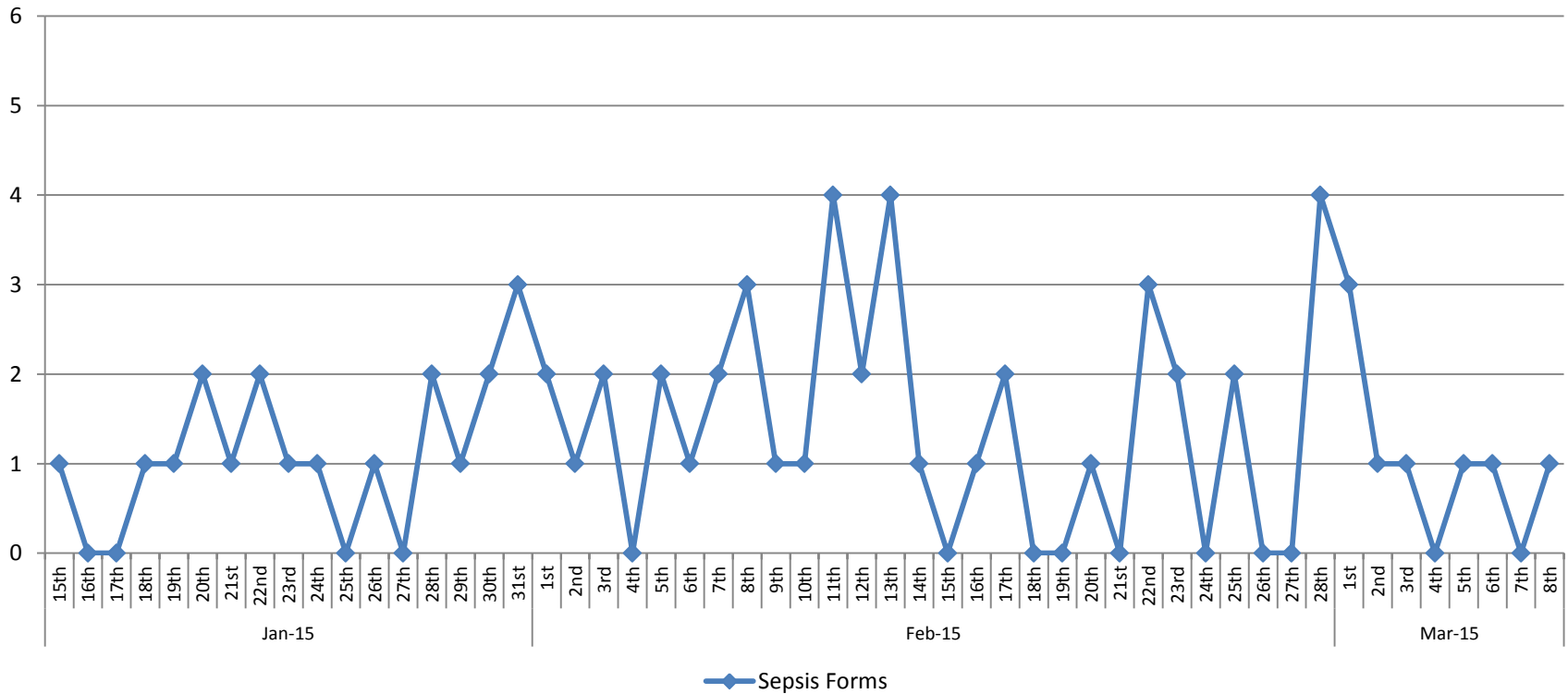
Signature:

Designation:

Bleep:

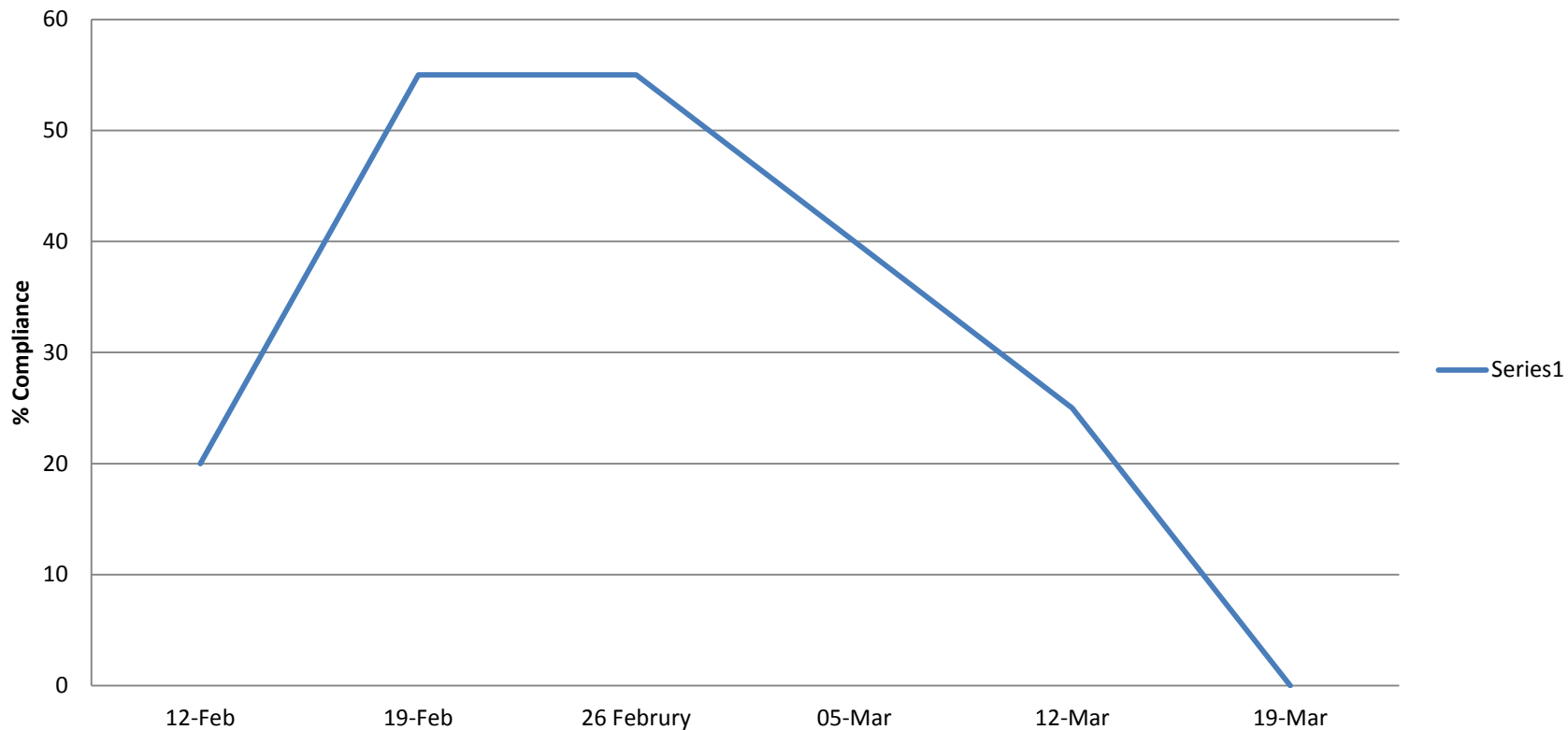
Process Data - Number of forms

A&E NHH Sepsis Screening: Jan-March 2015
(Meeting 12-3-15)

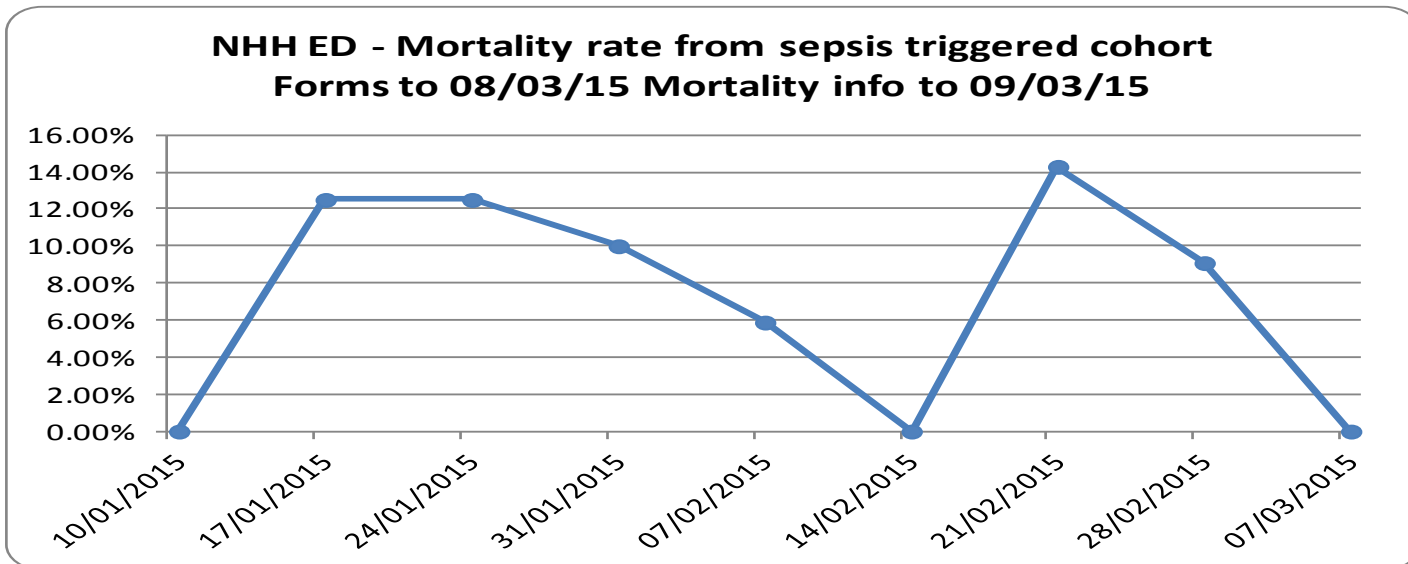
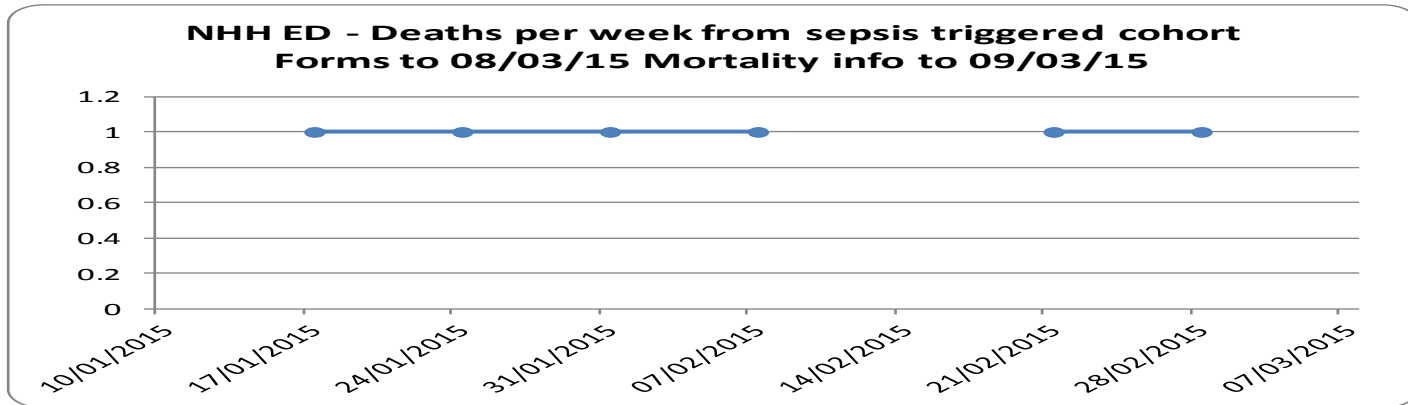


Process Data - % Compliance with sepsis 6 in 1 hr

**% Compliance with Sepsis 6 in 1 hr
NHH A and E**



Outcome Data



Changes Identified

- Training on use of blood-gas machine
- Training on sepsis and use of form
- Changes to the form
- 0% - was it poor documentation on the form or poor care? Go back to the notes for the 8 patients.
- Wards – using PSAG board to flag NEWS score, patients on sepsis 6 and time of 6 hr review
- Flow chart of what to do when, and who to call when

Conclusion

- Need audit and quality improvement process
- Quality improvement process relies real time data
- There are many QI processes – but this one is simple to grasp and effective
- Takes leadership commitment, team working, data collection and regular meetings to review data and agree next steps