People Make Change! Improving outcomes and experience across the pathway of care

Calum McGregor
National Clinical Lead for Acute Care with
Healthcare Improvement Scotland

Transport Museum

People Make Change – Learn and design better systems

1. Respond to opportunities for improvement taking a whole system and person-centred approach

Share SPSP approach to whole system improvement

2. Categorise enablers and barriers and apply the learning to improve the recognition and treatment of deteriorating patients across the pathway

Examples from the deteriorating patient workstream – applying QI methods and developing culture of improvement

3. Have a clear understanding of the deteriorating patient pathway across the secondary and primary care interface

Focus on patient journey

SEPSIS IN SCOTLAND 2012

- 25% of patients with severe sepsis receiving IV antibiotics within an hour
- http://www.stag.scot.nhs.uk/SEPSIS/Main.html

BARRIERS to quality across the pathway of care

- Poorly designed systems
- A culture not receptive to quality improvement
- Unwanted variation
- Silo working with poor communciation
- Patient/carer voice not being heard

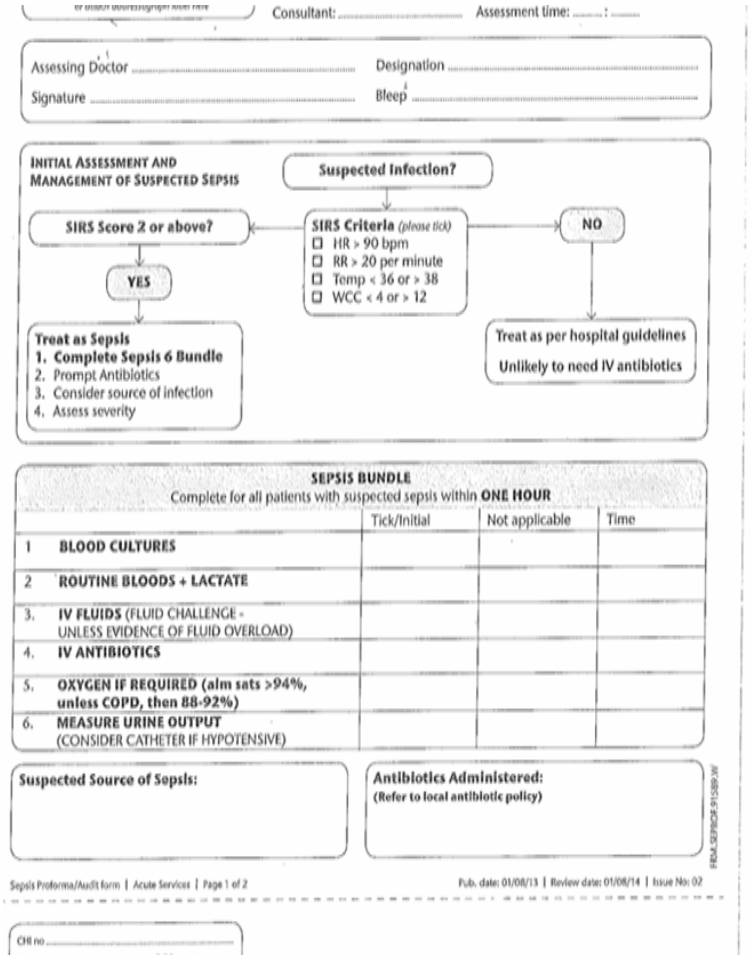
Poorly Designed Systems

“The Aggregation of Marginal Gains”

Poorly Designed Systems / Opportunities to Improve

- Antibiotics not in department
- Patient going to X-ray prior to antibiotics and fluids
- Triage system not robust enough to prioritise sick patients
- Nursing staff not informed of STAT antibiotic prescription
- MEWS added incorrectly
- Not applicable section on form
- Medical Students….
- Lack of awareness

- WE'RE TOO BUSY!



Consultant: ..... Assessment time: ..... : .....

Assessing Doctor ..... Designation .....

Signature ..... Bleep .....

INITIAL ASSESSMENT AND MANAGEMENT OF SUSPECTED SEPSIS

Suspected Infection?

SIRS Score 2 or above?

SIRS Criteria *(please tick)*
- ☐ HR > 90 bpm
- ☐ RR > 20 per minute
- ☐ Temp < 36 or > 38
- ☐ WCC < 4 or > 12

NO

YES

Treat as Sepsis
1. **Complete Sepsis 6 Bundle**
2. Prompt Antibiotics
3. Consider source of infection
4. Assess severity

Treat as per hospital guidelines

Unlikely to need IV antibiotics

SEPSIS BUNDLE

Complete for all patients with suspected sepsis within **ONE HOUR**

		Tick/Initial	Not applicable	Time
1	**BLOOD CULTURES**			
2	**ROUTINE BLOODS + LACTATE**			
3.	**IV FLUIDS** (FLUID CHALLENGE - UNLESS EVIDENCE OF FLUID OVERLOAD)			
4.	**IV ANTIBIOTICS**			
5.	**OXYGEN IF REQUIRED (alm sats >94%, unless COPD, then 88-92%)**			
6.	**MEASURE URINE OUTPUT** (CONSIDER CATHETER IF HYPOTENSIVE)			

Suspected Source of Sepsis:

Antibiotics Administered:
(Refer to local antibiotic policy)

Sepsis Proforma/Audit form | Acute Services | Page 1 of 2

Pub. date: 01/08/13 | Review date: 01/08/14 | Issue No: 02

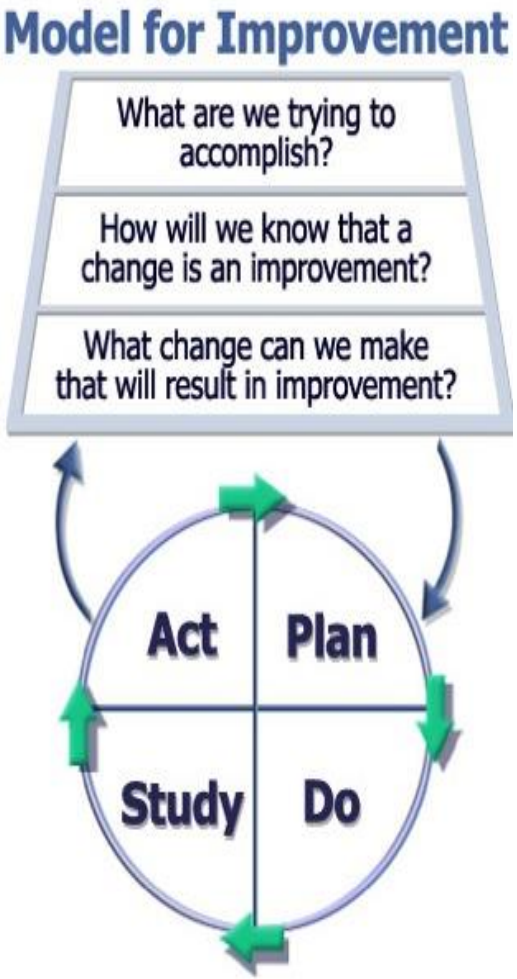
CHI no .....

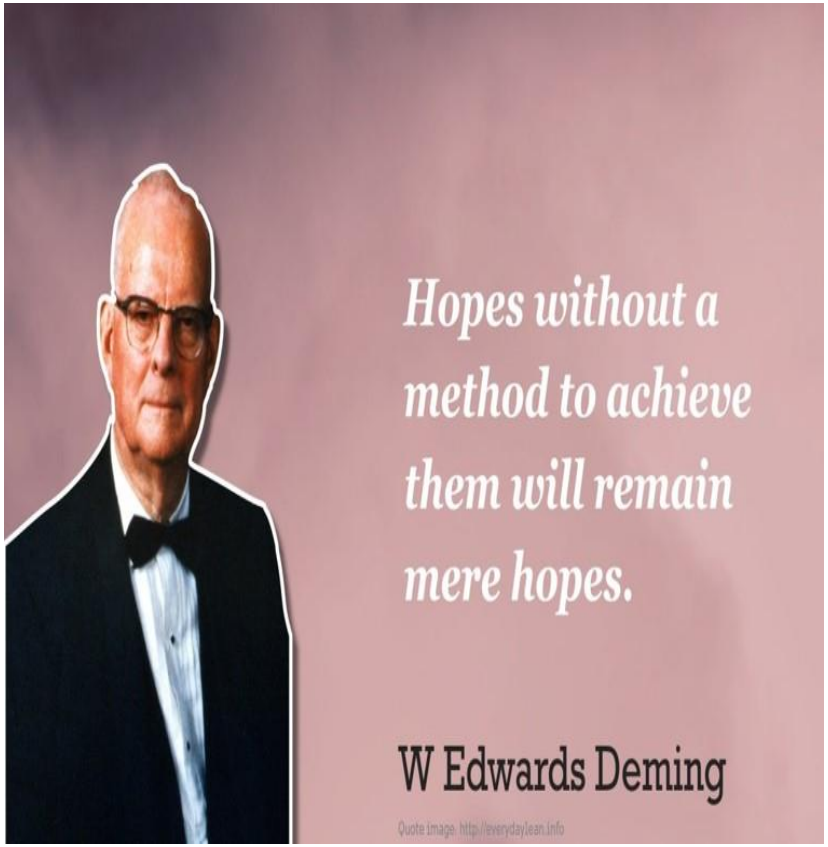
AIM and STRATEGY

- To reduce mortality and harm for people in acute hospitals by reliable recognition and response to acutely unwell patients

- Outcome Measures:
- HSMR
- Sepsis Mortality Rate
- Cardiac Arrest Rate

METHOD for improvement



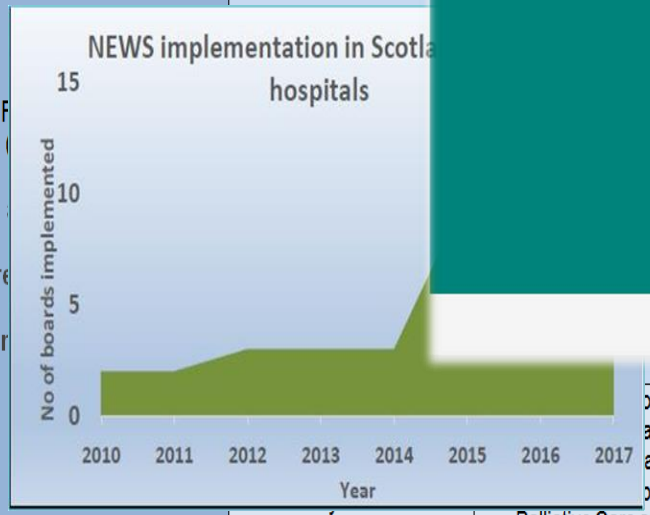


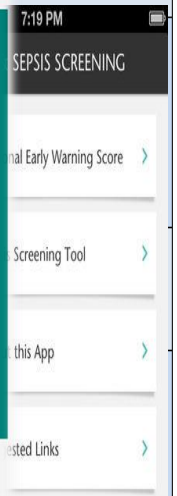
Deming WE 1994 'The New Economics: For Industry, Government, Education' MIT Press: Massachusetts p41

National Improvement

Aim	Primary Drivers
95% of people with physiological deterioration in acute care will have a structured response and person centred care plan	Early, anticipatory planning and person centred care
	Reliable recognition of acute deterioration
	Structured response acute deterioration

Sepsis Toolkit





imited reversibility

on process.
tion of acute

orbidity review that informs improvement plans
ac arrests/2222 calls to inform improvement pl
ation officers in education and improvement
riority: Executive Sponsorship, Clinical Leade
Palliative Care and QI support

- Consider use of electronic track and trigger tools to actively m patients across the sites.

Last updated June 2013, Version 1.0

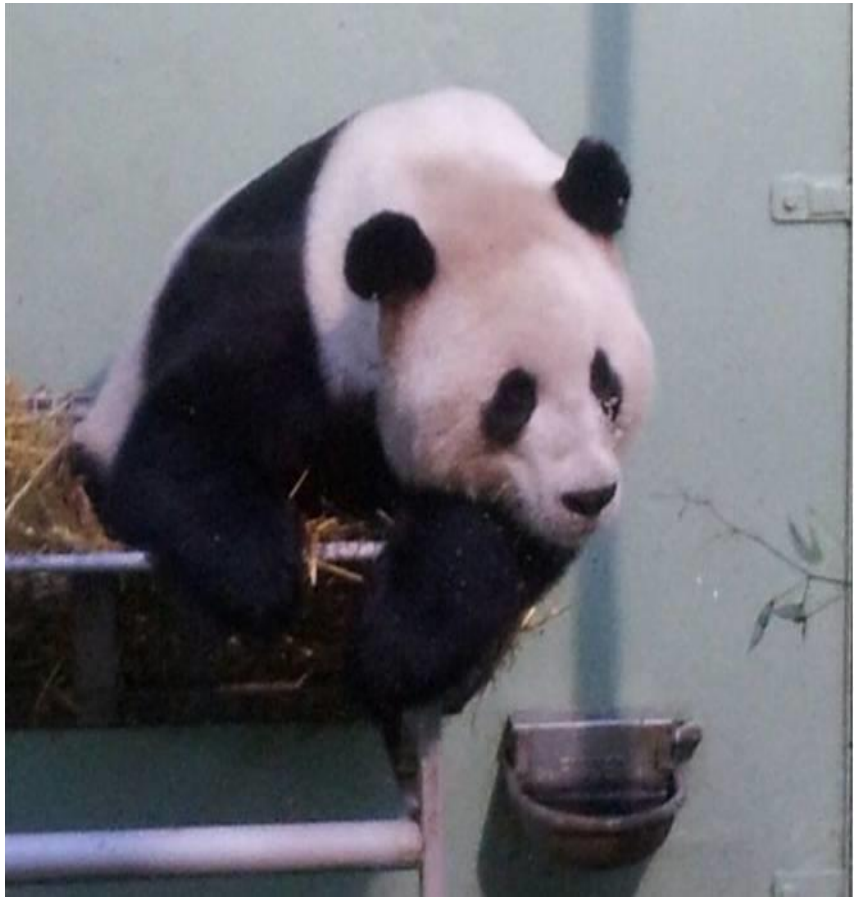
NEWS 2 – Lessons from Highland

NEWS key 0 1 2 3	FULL NAME		DATE OF ADMISSION	
	DATE / TIME			DATE / TIME
A+B Respirations Breaths/min	≥25	3		≥25
	21–24	2		21–24
	18–20			18–20
	15–17			15–17
	12–14			12–14
	9–11	1		9–11
	≤8	3		≤8
A+B SpO_2 Scale 1 Oxygen saturation (%)	≥96			≥96
	94–95	1		94–95
	92–93	2		92–93
	≤91	3		≤91
SpO_2 Scale 2† Oxygen saturation (%) Use Scale 2 if target range is 88–92%, eg in hypercapnic respiratory failure †ONLY use Scale 2 under the direction of a qualified clinician	≥97% on O_2	3		≥97% on O_2
	95–96% on O_2	2		95–96% on O_2
	93–94% on O_2	1		93–94% on O_2
	≥93% on air			≥93% on air
	88–92			88–92
	86–87	1		86–87
	84–85	2		84–85
	≤83%	3		≤83%
Air or oxygen?	A=Air			A=Air
	O_2 L/min	2		O_2 L/min
	Device			Device
C Blood pressure mmHg Score uses systolic BP only	≥220	3		≥220
	201–219			201–219
	181–200			181–200
	161–180			161–180
	141–160			141–160
	121–140			121–140
	111–120			111–120
	101–110	1		101–110
	91–100	2		91–100
	81–90	3		81–90
	71–80			71–80
	61–70			61–70
	51–60			51–60
	≤50			≤50
C Pulse Beats/min	≥131	3		≥131
	121–130	2		121–130
	111–120			111–120
	101–110	1		101–110
	91–100			91–100
	81–90			81–90
	71–80			71–80
	61–70			61–70
	51–60			51–60
	41–50	1		41–50
	31–40	3		31–40
	≤30			≤30
D Consciousness Score for NEW onset of confusion (no score if chronic)	Alert			Alert
	Confusion	3		Confusion
	V			V
	P			P
	U			U
E Temperature °C	≥39.1°	2		≥39.1°
	38.1–39.0°	1		38.1–39.0°
	37.1–38.0°			37.1–38.0°
	36.1–37.0°			36.1–37.0°
	35.1–36.0°	1		35.1–36.0°
	≤35.0°	3		≤35.0°
NEWS TOTAL				**TOTAL**
Monitoring frequency				Monitoring
Escalation of care Y/N				Escalation
Initials				Initials

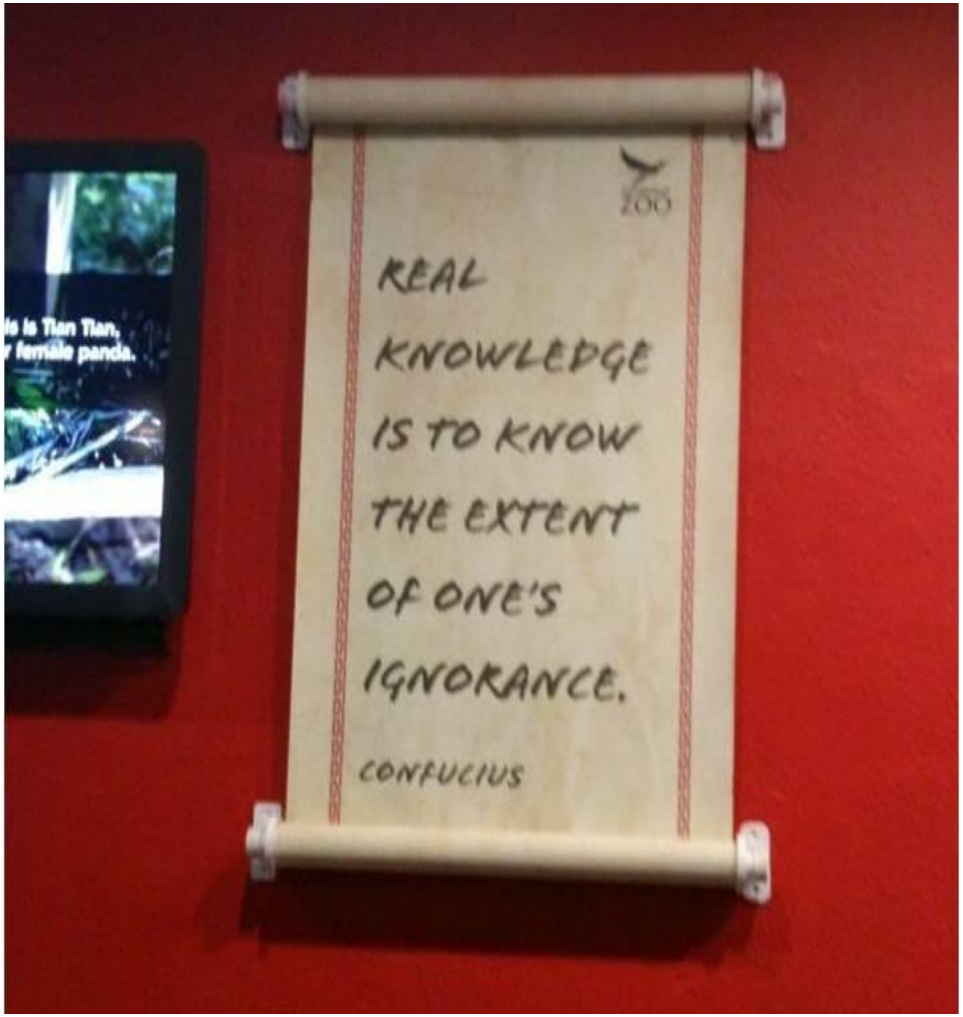
National Early Warning Score 2 (NEWS2) © Royal College of Physicians 2017

Where to focus? – Local Improvement

Aim	Primary Drivers	Secondary Drivers
95% of people with physiological deterioration in acute care will have a structured response and person centred care plan Reduce CPR attempts (chest compressions and/or defibrillation and attended by the hospital-based resuscitation team - or equivalent – in response to the 2222 call) in general ward settings	Early, anticipatory planning and person centred care	• Anticipatory care planning in Community Care • Patient and family at the centre of decisions and planning • Reliable communication across care pathways • Assessment of functional capacity, health trajectory and detection of limited reversibility • Reliable implementation of national DNACPR policy
	Reliable recognition of acute deterioration	• Accurate observations using NEWS • Observations are performed at correct frequency • Healthcare staff are trained in recording of observations and escalation process. • Healthcare staff use NEWS as an adjunct to clinical knowledge in recognition of acute deterioration
	Structured response to acute deterioration	• Screen for all causes of deterioration including sepsis, and initiate Sepsis Six if appropriate • Appropriate care givers meet, agree and document a plan including frequency of observations and review time • Ensure timely review by appropriate decision maker according to local triggers • Monitor accurate fluid balance, • Document treatment escalation plan (after discussion with patient and family where appropriate) including resuscitation status, senior review and goals of care.
	Structured review of acute deterioration	• Risk of deterioration is considered with appropriate care plan documented • Limited reversibility is considered and documented in people at risk of acute deterioration • Treatment escalation plan reviewed and updated, including DNACPR where appropriate • Communications with patient and family on management plan
	Reliable communication within and across multidisciplinary teams	• Hospital huddles and ward safety briefs highlight deteriorating patients & describe plan • Structured wards round in acute care – reliable review of treatment escalation plan • Reliable ongoing patient and family communication that informs treatment escalation plan • Use SBAR to handover across MDT and care teams
	Create a learning system	• Mortality and morbidity review that informs improvement plans • Review of cardiac arrests/2222 calls to inform improvement plans • Involve resuscitation officers in education and improvement • Organisational priority: Executive Sponsorship, Clinical Leadership, Executive Lead for Palliative Care and QI support • Consider use of electronic track and trigger tools to actively measure and manage at risk patients across the sites.

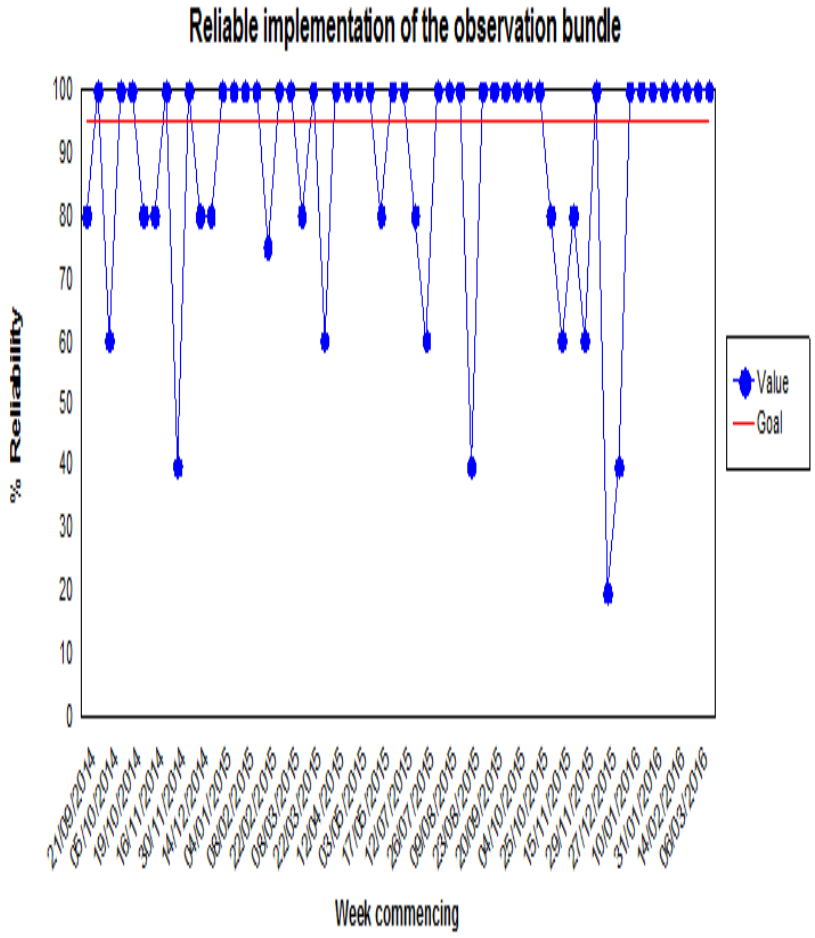


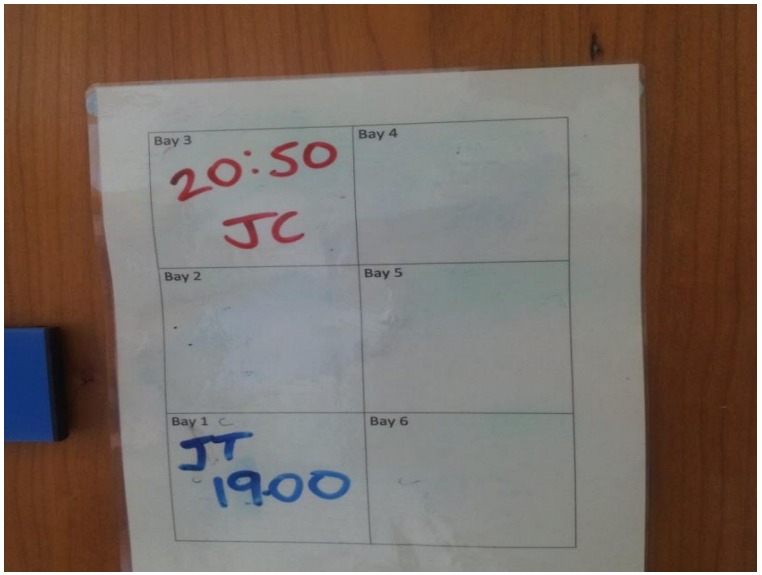
Understand Own Systems

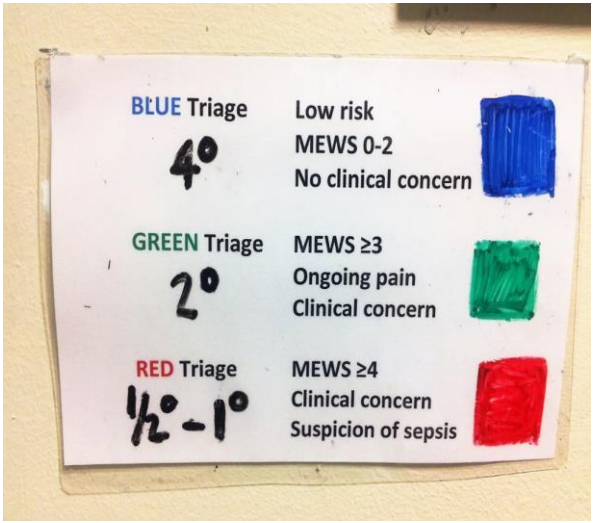


- The measurement and monitoring of safety. Vincent et al. 2013

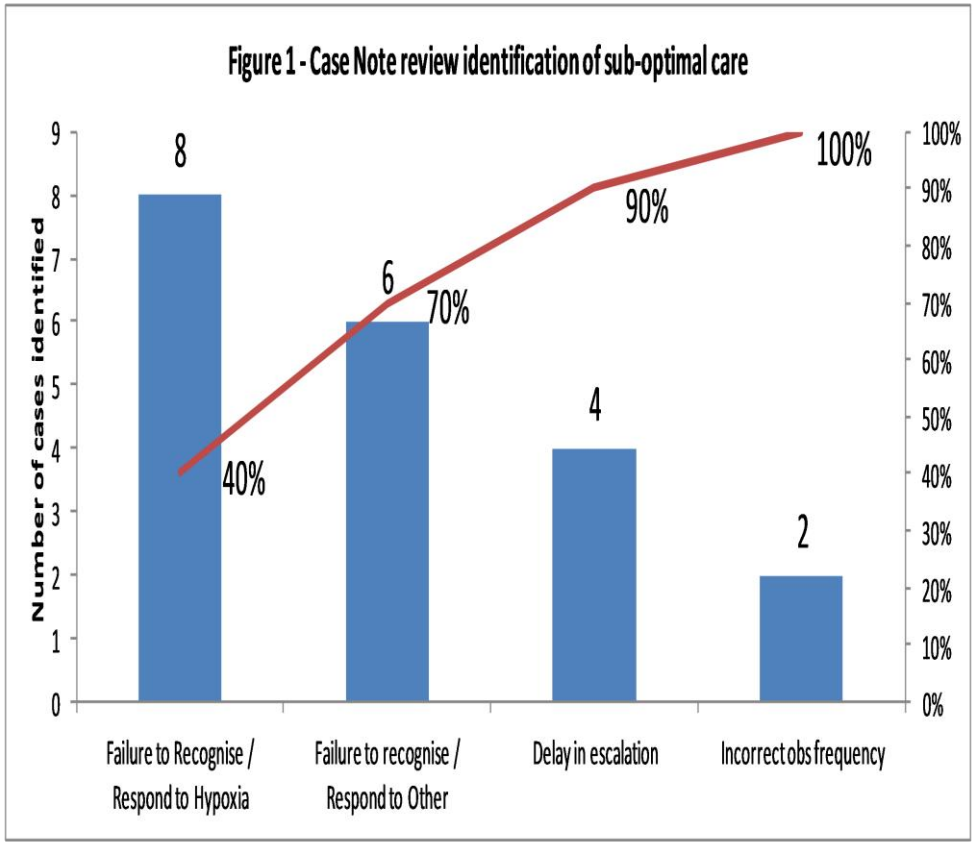
Make it easy for staff to do the right thing

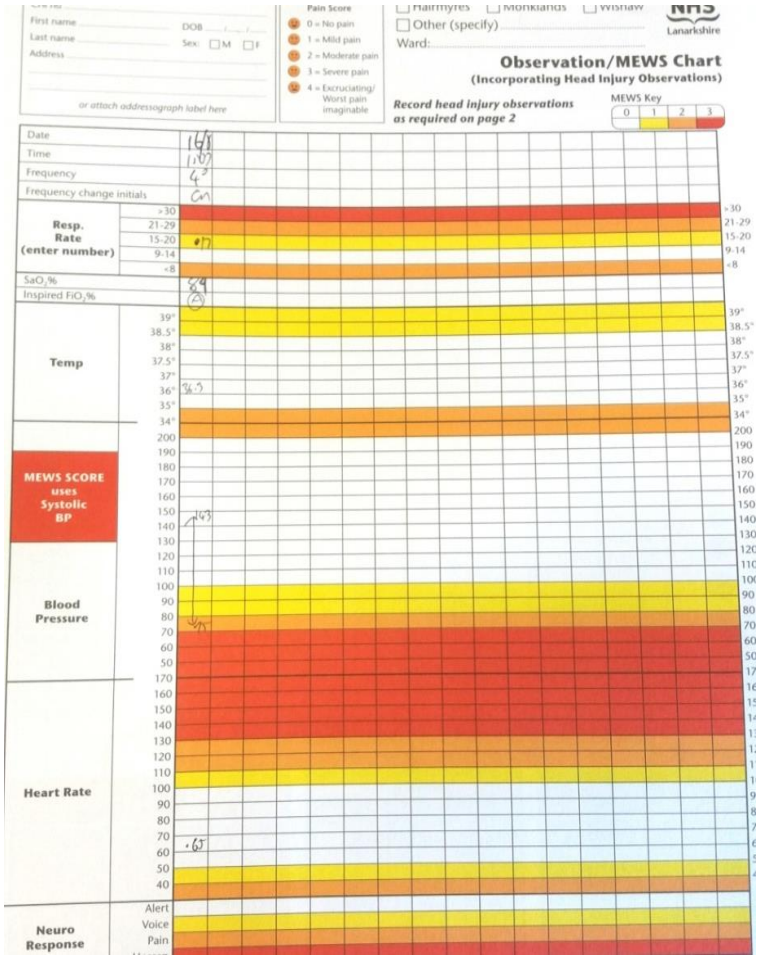


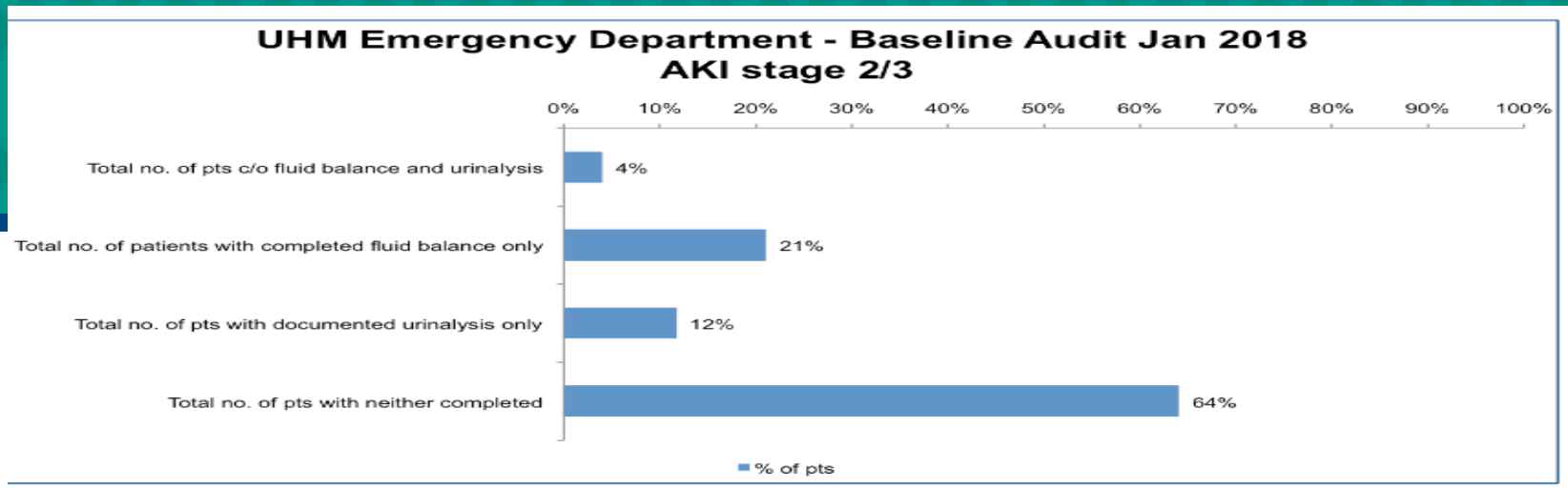


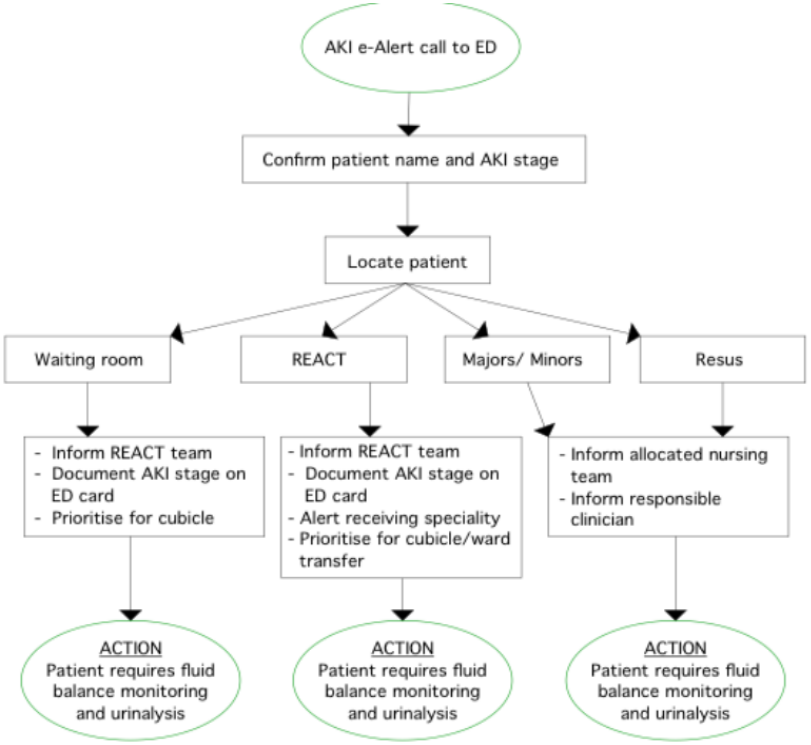


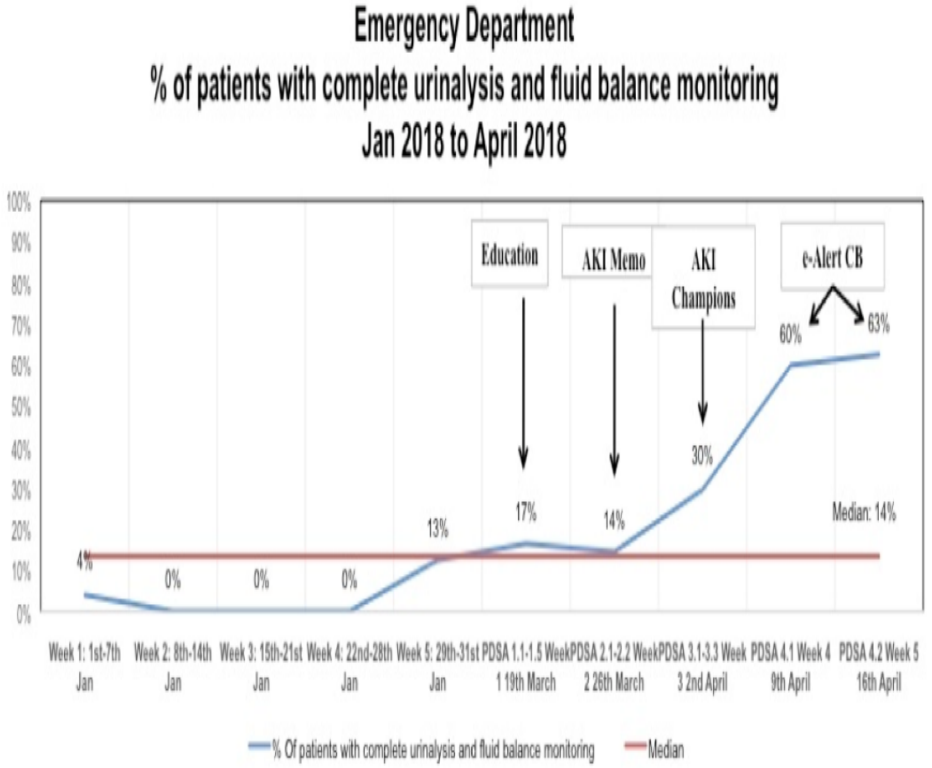
Reduce Unwanted Variation



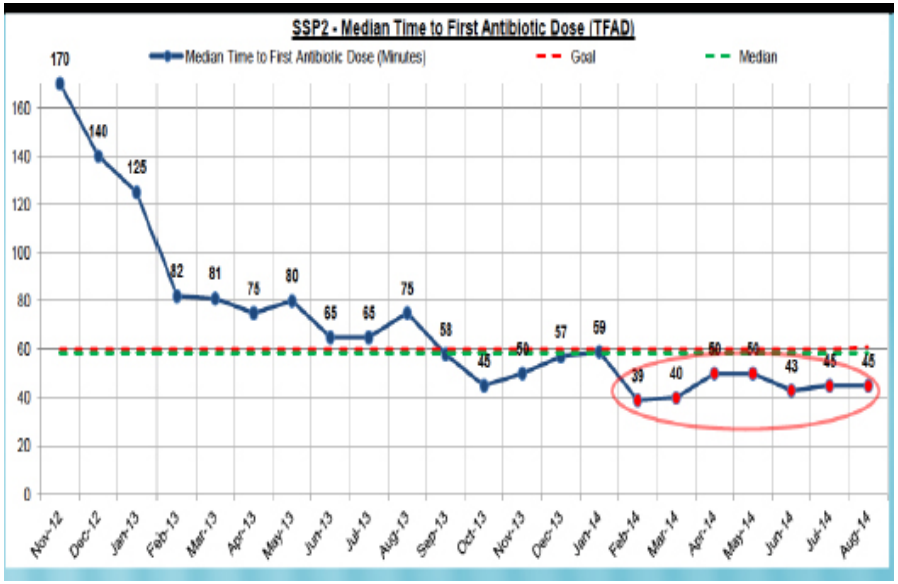


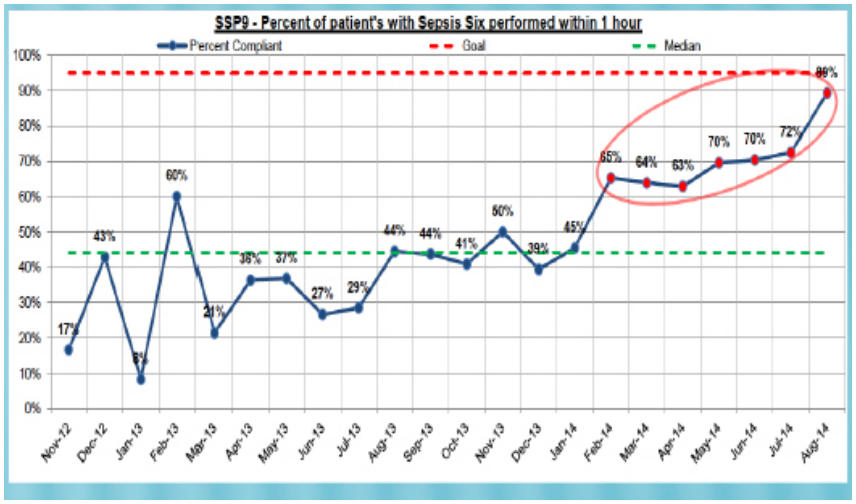

UHM Emergency Department - Baseline Audit Jan 2018
AKI stage 2/3
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Total no. of pts c/o fluid balance and urinalysis
4%
Total no. of patients with completed fluid balance only
21%
Total no. of pts with documented urinalysis only
12%
Total no. of pts with neither completed
64%
% of pts


AKI e-Alert call to ED
Confirm patient name and AKI stage
Locate patient
Waiting room
REACT
Majors/ Minors
Resus
- Inform REACT team
- Document AKI stage on ED card
- Prioritise for cubicle
- Inform REACT team
- Document AKI stage on ED card
- Alert receiving speciality
- Prioritise for cubicle/ward transfer
- Inform allocated nursing team
- Inform responsible clinician
ACTION
Patient requires fluid balance monitoring and urinalysis
ACTION
Patient requires fluid balance monitoring and urinalysis
ACTION
Patient requires fluid balance monitoring and urinalysis

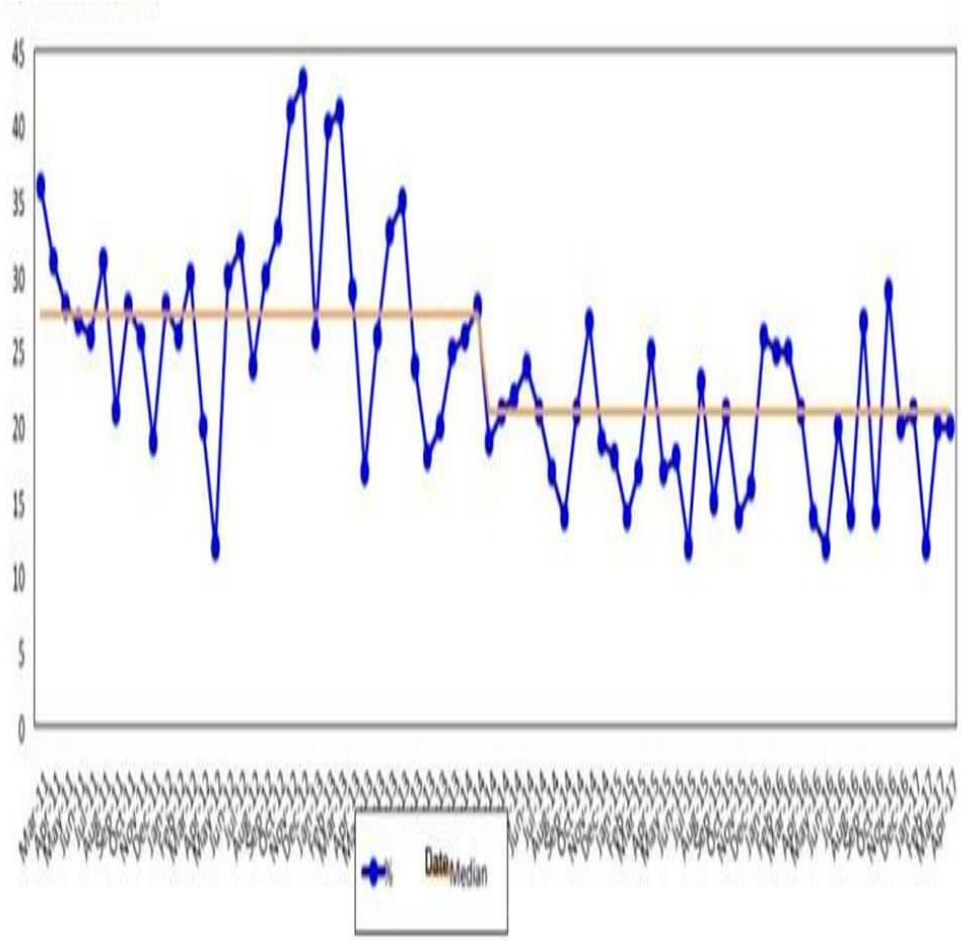

Emergency Department
% of patients with complete urinalysis and fluid balance monitoring
Jan 2018 to April 2018
Education
AKI Memo
AKI Champions
e-Alert CB
4%
0%
0%
0%
13%
17%
14%
30%
60%
63%
Median: 14%
Week 1: 1st-7th Jan
Week 2: 8th-14th Jan
Week 3: 15th-21st Jan
Week 4: 22nd-28th Jan
Week 5: 29th-31st Jan
PDSA 1.1-1.5 Week 1 19th March
PDSA 2.1-2.2 Week 2 26th March
PDSA 3.1-3.3 Week 3 2nd April
PDSA 4.1 Week 4 9th April
PDSA 4.2 Week 5 16th April
% Of patients with complete urinalysis and fluid balance monitoring
Median

Progress:
Local Process and Outcome





Sepsis Mortality Rate



THERE IS
HOPE IN
HONEST
ERROR.
CHARLES RENNIE MAKINTOSH
TORY
I-IX

Culture Change

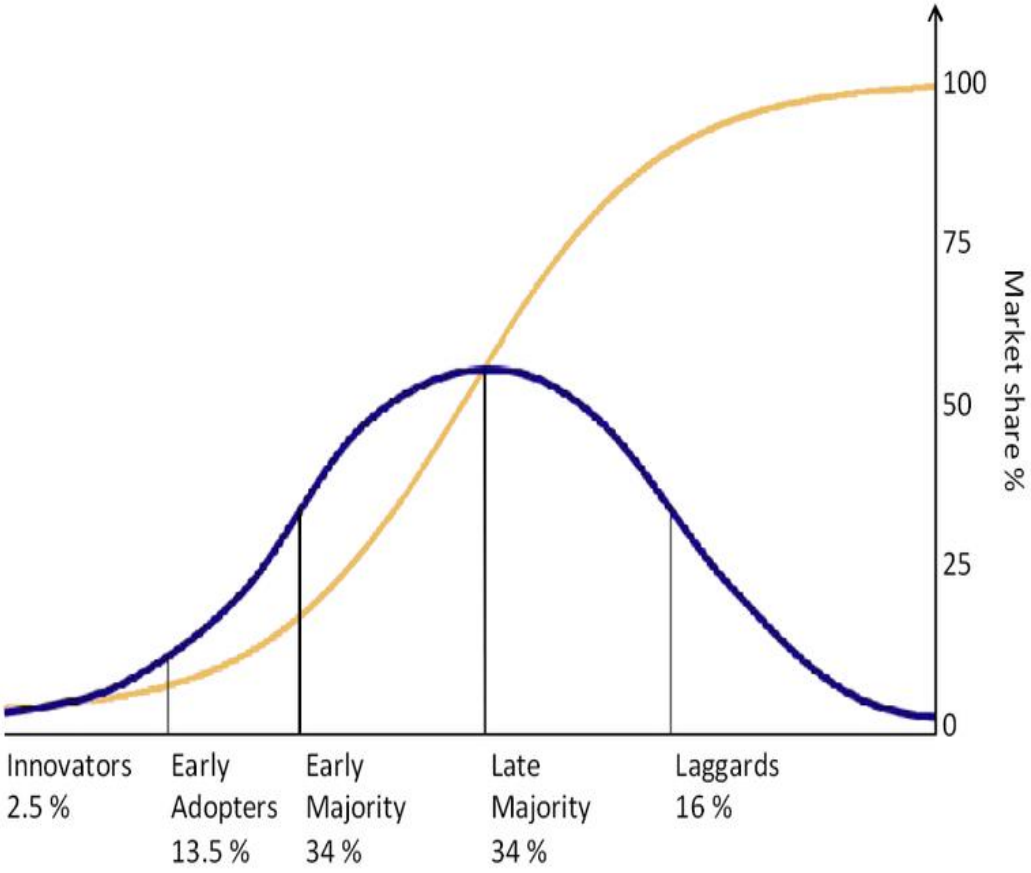
- Berwick Report 2013
- Francis report 2013
- National Patient Safety Foundation 2015

- Need for culture change

- Communication / MDT working / capacity and capability

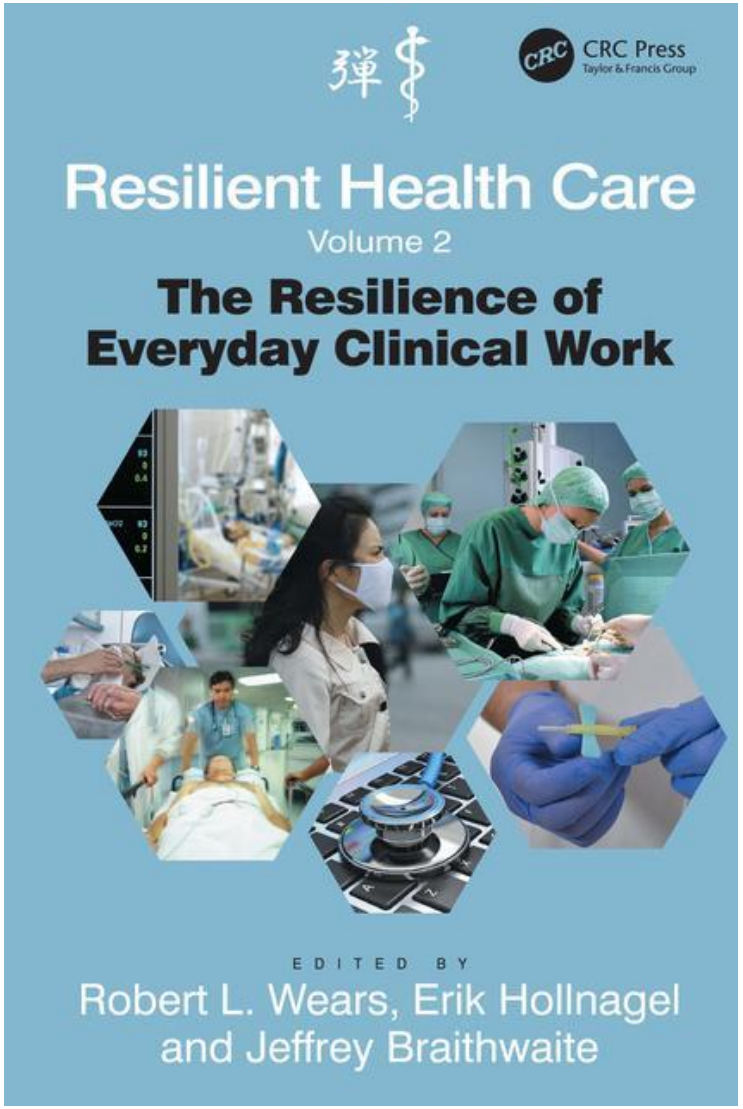
Pride in Work

People Make Change

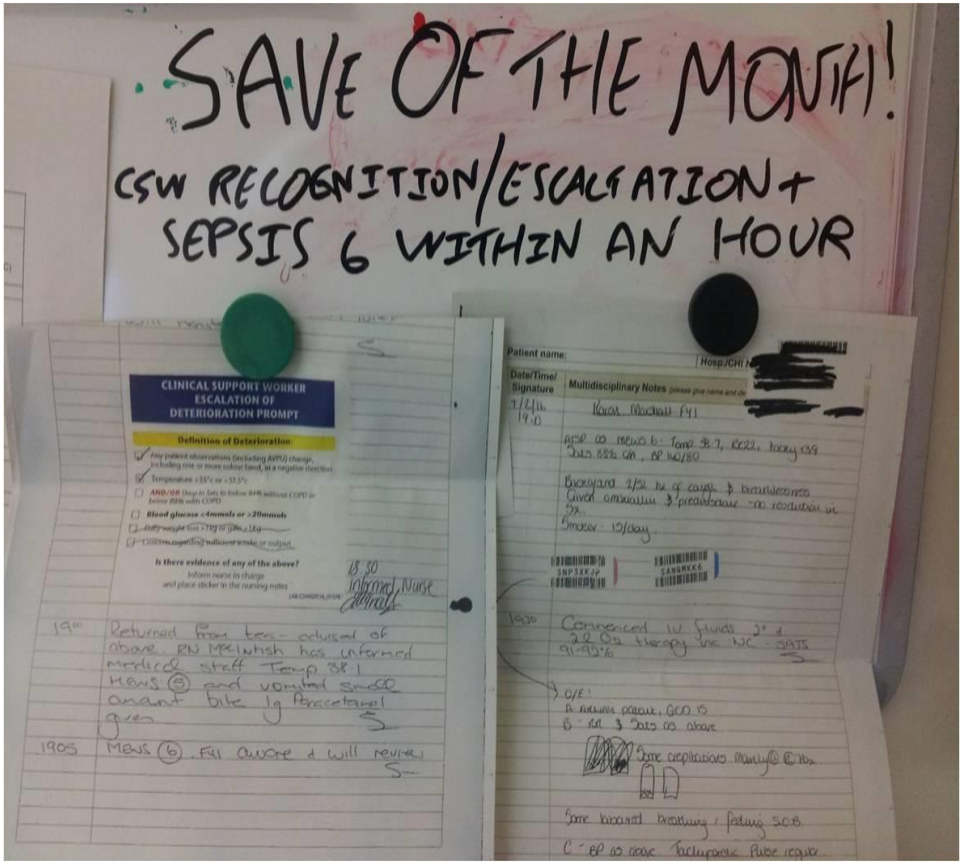


Resilience Engineering

- “Learning from what went well”
- Safety 1 v Safety 2

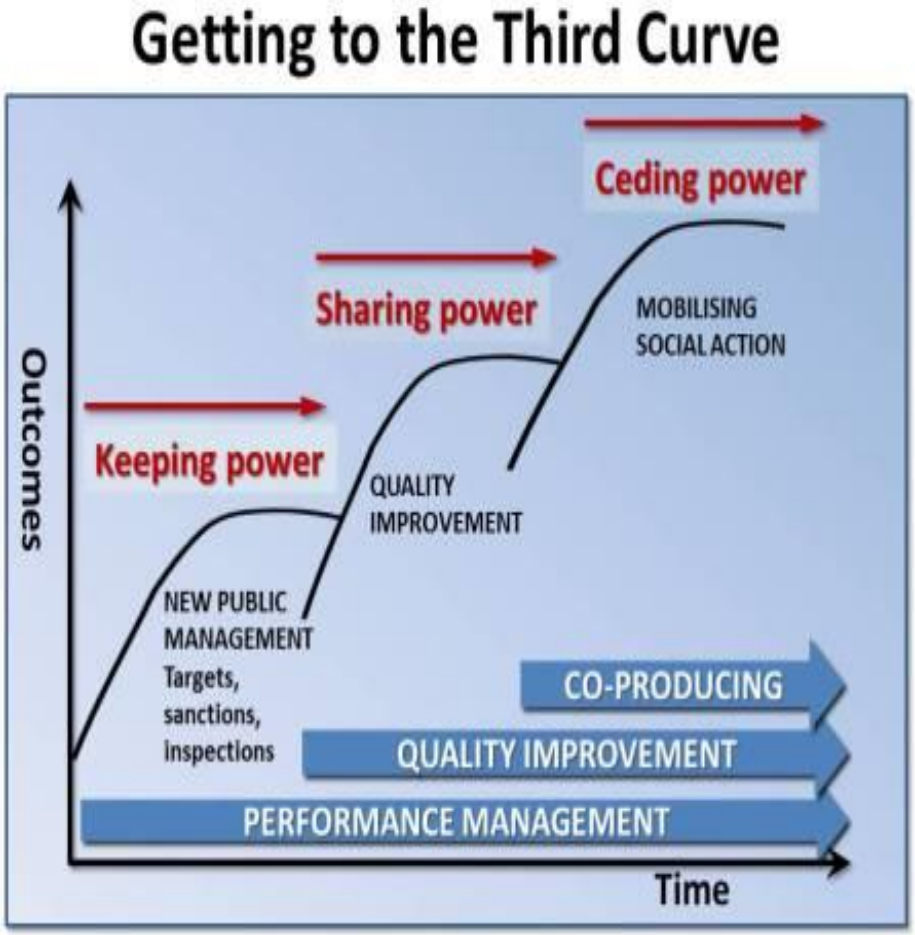


Save of the Month!



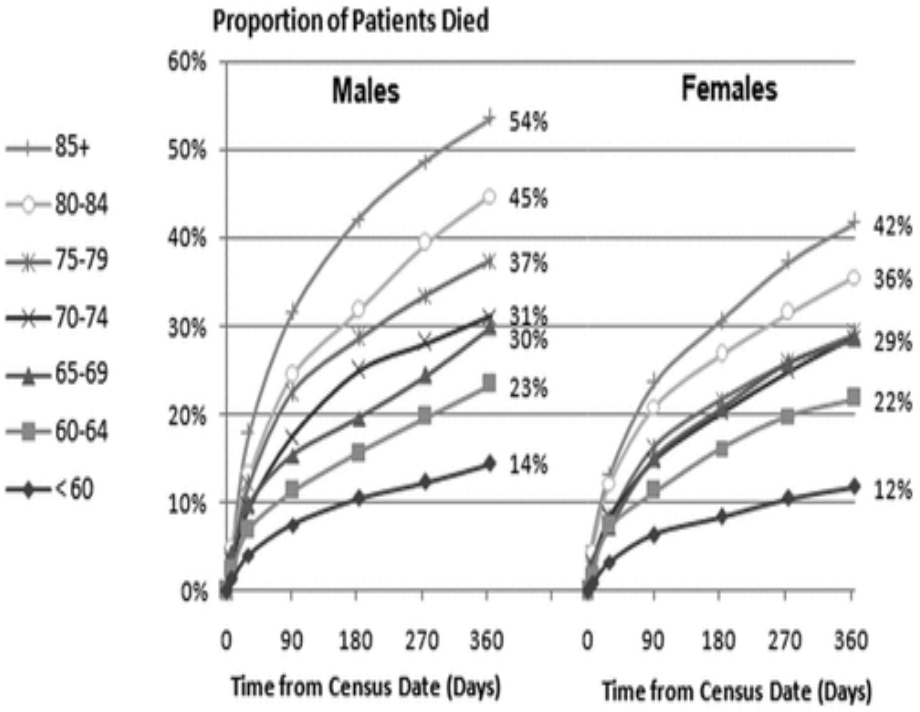
- MDT Review
- Establish what went well
- Aim to increase reliability of desirable “thing”
- Apply model for improvement to test plan (PDSA)

Give power to patients / Carers



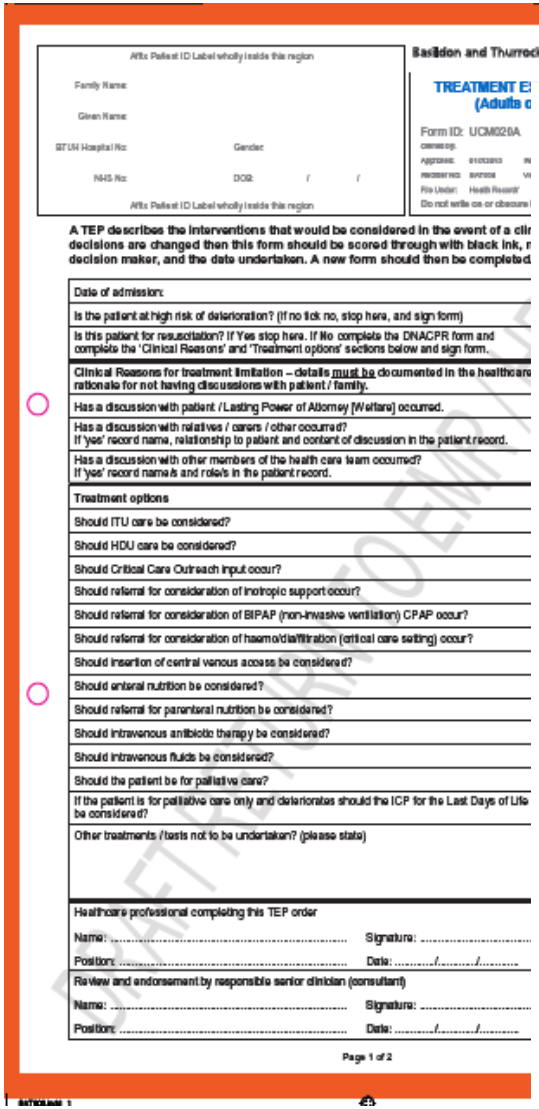
Shared Decision Making
Anticipatory care planning

- 29% of inpatients in last year of life



Clark D et al. Imminence of death among hospital inpatients. Palliative Medicine.2014, 28 (6). 474-479.

Treatment Escalation Planning



Basildon and Thurrock University Hospitals NHS
NHS Foundation Trust

Affix Patient ID Label wholly inside this region

Family Name:

Given Name:

BTUH Hospital No: Gender:

NHS No: DOB: / /

Affix Patient ID Label wholly inside this region

TREATMENT E
(Adults o

Form ID: UCM020A

A TEP describes the interventions that would be considered in the event of a cli
decisions are changed then this form should be scored through with black ink, r
decision maker, and the date undertaken. A new form should then be completed

Date of admission:
Is the patient at high risk of deterioration? (If no tick no, stop here, and sign form)
Is this patient for resuscitation? If Yes stop here. If No complete the DNACPR form and complete the 'Clinical Reasons' and 'Treatment options' sections below and sign form.
Clinical Reasons for treatment limitation – details must be documented in the healthcare rationale for not having discussions with patient / family.
Has a discussion with patient /Lasting Power of Attorney [Welfare] occurred.
Has a discussion with relatives / carers / other occurred? If 'yes' record name, relationship to patient and content of discussion in the patient record.
Has a discussion with other members of the health care team occurred? If 'yes' record name/s and role/s in the patient record.
Treatment options
Should ITU care be considered?
Should HDU care be considered?
Should Critical Care Outreach input occur?
Should referral for consideration of inotropic support occur?
Should referral for consideration of BIPAP (non-invasive ventilation) CPAP occur?
Should referral for consideration of haemo/dialfiltration (critical care setting) occur?
Should insertion of central venous access be considered?
Should enteral nutrition be considered?
Should referral for parenteral nutrition be considered?
Should intravenous antibiotic therapy be considered?
Should intravenous fluids be considered?
Should the patient be for palliative care?
If the patient is for palliative care only and deteriorates should the ICP for the Last Days of Life be considered?
Other treatments /tests not to be undertaken? (please state)

Healthcare professional completing this TEP order

Name: ..... Signature: .....

Position: ..... Date: ...../...../.....

Review and endorsement by responsible senior clinician (consultant)

Name: ..... Signature: .....

Position: ..... Date: ...../...../.....

Page 1 of 2

DRAFT NOT FOR EMPLOYMENT

Treatment Escalation Plan (TEP)

Medical High Dependency Unit
Crosshouse Hospital

NHS Ayrshire & Arran

Affix patient ID label

Surname

First name

Address

DOB

CHI No.

Instructions For Completion - *complete in the context of patient's current condition only. Further guidance notes on the reverse side.*

Circle Yes or No to indicate appropriate ceiling of treatment on the flow diagram

- When possible involve patient/next of kin in decision making and document in medical & nursing notes
- If this conversation has not been possible summarise below and document rationale in medical & nursing notes
- TEP should be completed by Consultant or trainee working at ST6 or above
- TEP should be reviewed at every ward round or whenever clinical circumstances change & documented in patient's daily progress sheet

Valid Only In Medical High Dependency Unit

Yes / No	For full escalation	If Yes: complete discussion box only at bottom of page If No, continue completion to identify appropriate treatment options
Yes / No	For CPR	If No, complete DNACPR form Yes or No - Always continue completion to identify appropriate treatment options
Yes / No	Referral to ICU	
Yes / No	BIPAP	
Yes / No	CPAP	
Yes / No	Hi flo O^2 delivery	
Yes / No	Refer to renal team for renal replacement therapy	
Yes / No	Inotropes	
Yes / No	Central line	
Yes / No	Invasive monitoring	
Yes / No	PEG/NG feeding/medicines	
Yes / No	IV antibiotics	
Yes / No	IV fluids	
Yes / No	*specify other	

Other instructions/comments:

What communication has occurred with patient/family? (See guidance notes on reverse - point 3)

.....

.....

Does patient have capacity Yes/No (if No then please complete AWI form/treatment plan)

Consultant signature and stamp Date .....

..... Time .....

Raigmore Hospital

NHS Highland

TREATMENT ESCALATION PLAN

TEMPT CPR (tick box to confirm)
CPR form completed

THE APPROPRIATE CEILING OF
T BELOW (tick a single box)

re unit

rgical HDU

antibiotics

fics/blood testing

ic care
of life care

Escalation of care

Affix patient ID label

Name:

CHI number:

Date of birth:

Other instructions:

Review date (optional):

Reason for limited ceiling of treatment:

Treatments are unlikely to be successful

Treatments are not in accord with applicable advance healthcare directive/decision

Patient does not wish these treatments

Other:

ient have capacity? YES / NO

n checked? YES / NO

rmation on KIS? YES / NO

lfare attorney? YES / NO

WITH: nursing staff patient relative(s) welfare attorney or guardian

communication with patient and/or relatives/welfare attorney (continue on reverse if required):

ed with patient, document reason:

OMPLETING FORM (must be ST1 or above):

Name: Grade: Date & time:

ENT BY SENIOR CLINICIAN (complete at earliest available opportunity):

Name: Grade: Date & time:

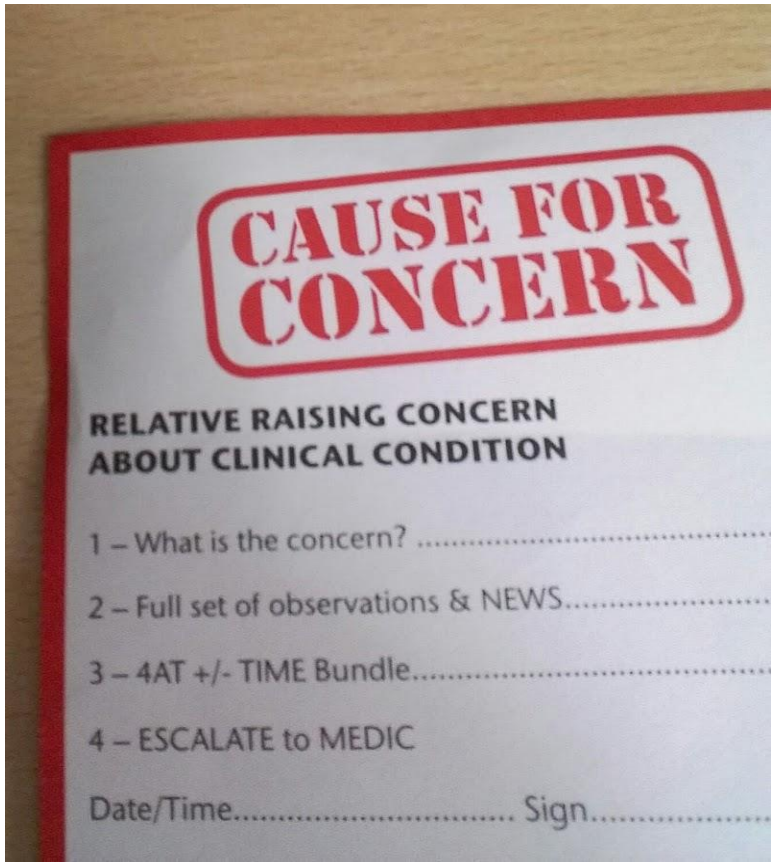
es not substitute for clinical judgement. Review decisions if the clinical situation changes and at
und. See guidance for completion of TEP and instructions for revocation on reverse.

Version 2 (August 2014)

Cede Power to Patients
Help patients make informed decisions

Cede Power to Patients

- Patient Activated Consultant Response

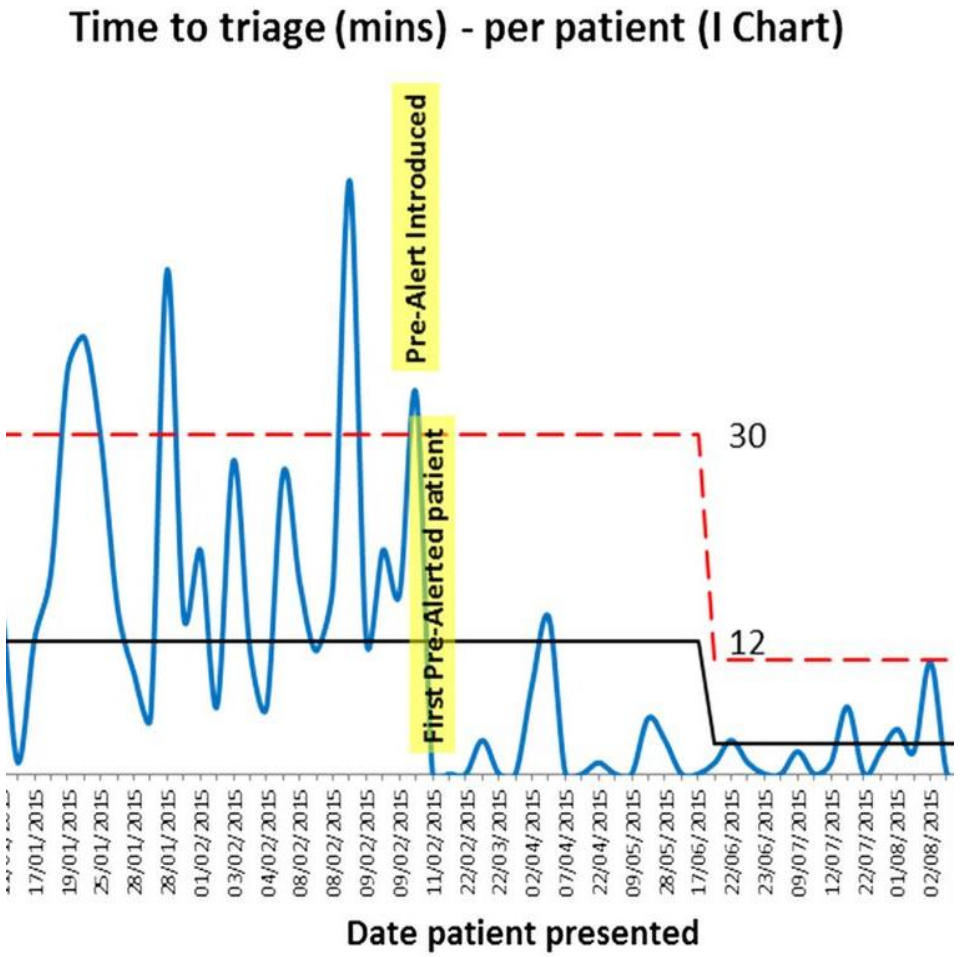


- Nobody Phoned!
- Consultant Response to Activation by Patient (CRAP)
- ? Failed test
- "Felt safe." "Wasn't worried and could tell staff were busy." "No need." "Staff explained there would be a wait"
- Flatten hierarchy and show willing

Focus on Patient Journey

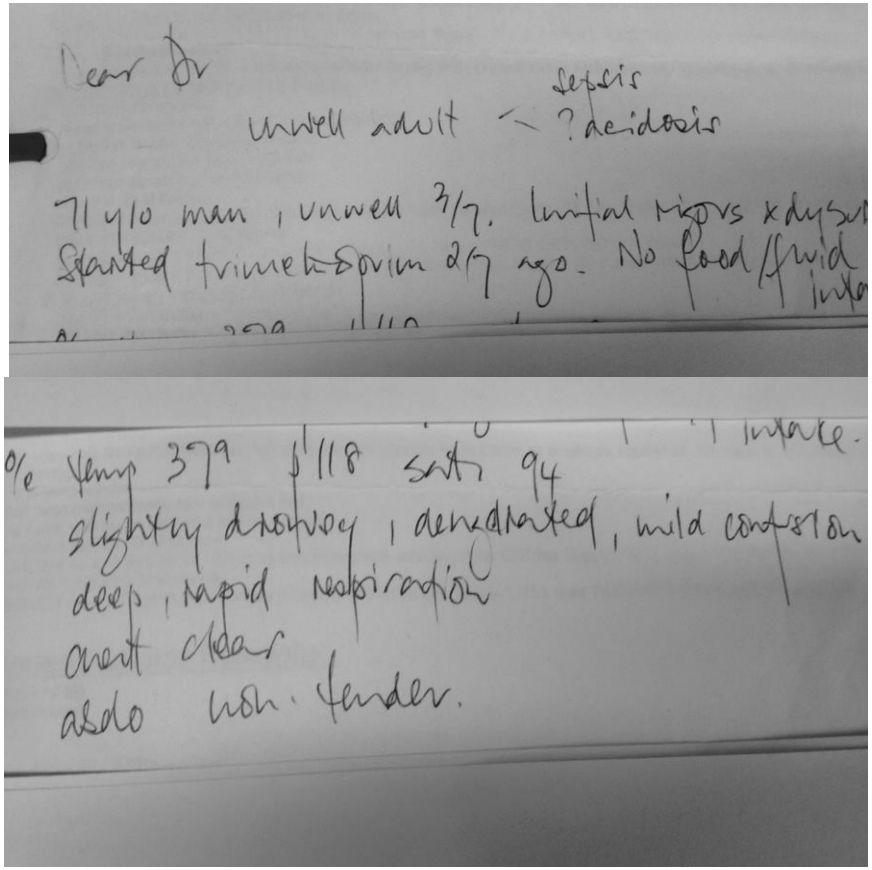
Primary Care / Scottish Ambulance Service

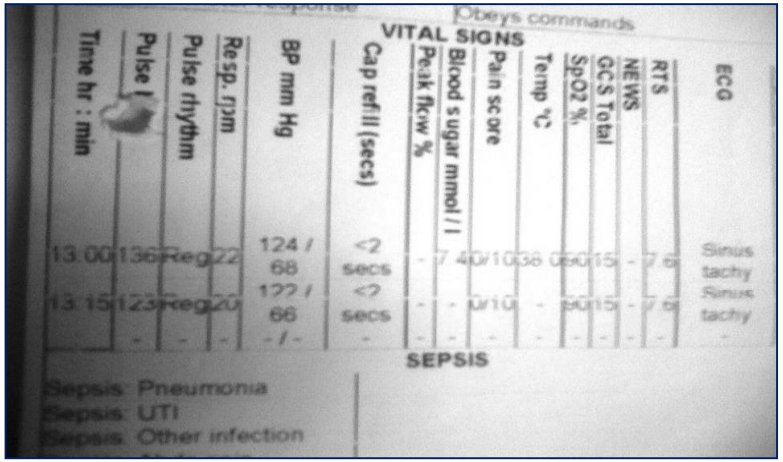
- Pre-Alerting in NHS Lanarkshire, GG and C, Highland and Grampian



Martin Carberry, and John Harden BMJ Qual Improv Report 2016;5:u212670.w5049

Improve Patient Journey

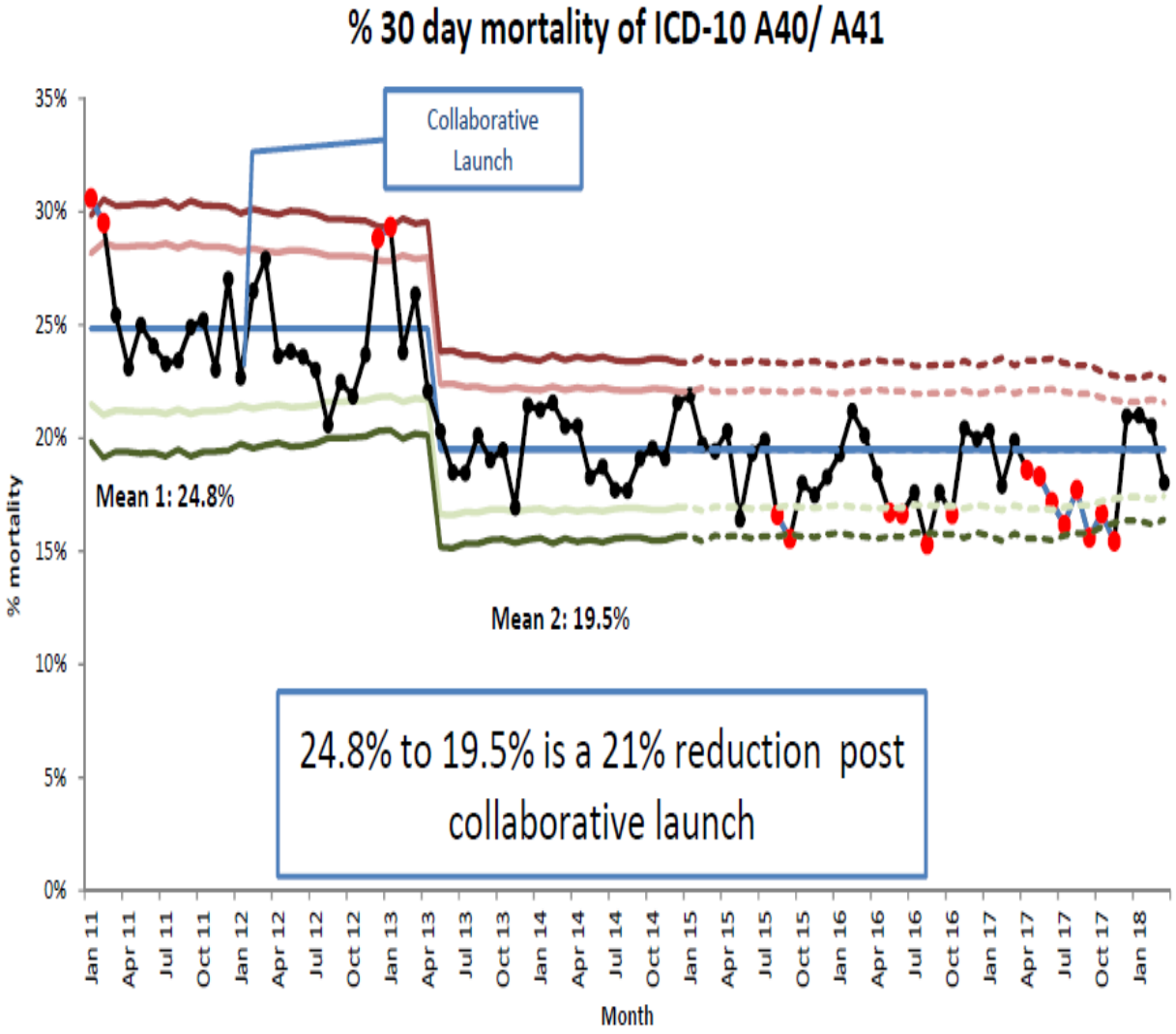




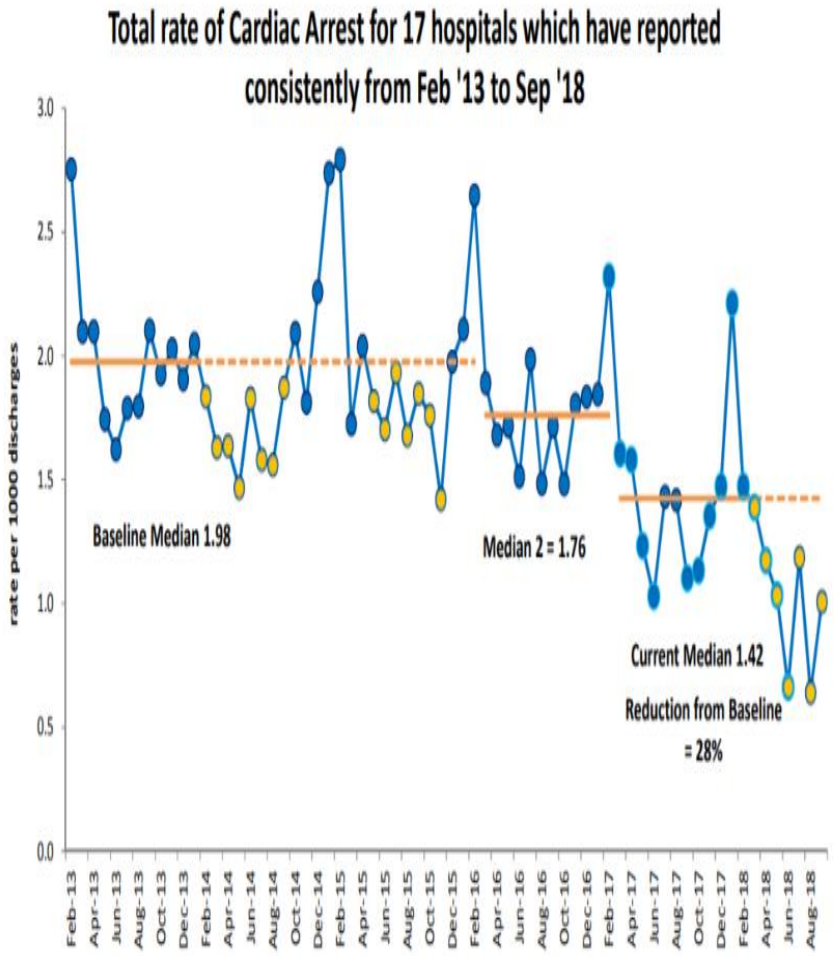
Mr “C” timeline

- Call received – 1223
- Call passed – 1243
- Crew at scene – 1311
- Arrival at Hospital – 1332
- SEPSIS 6: Time zero - 1332
- Completed - 1344

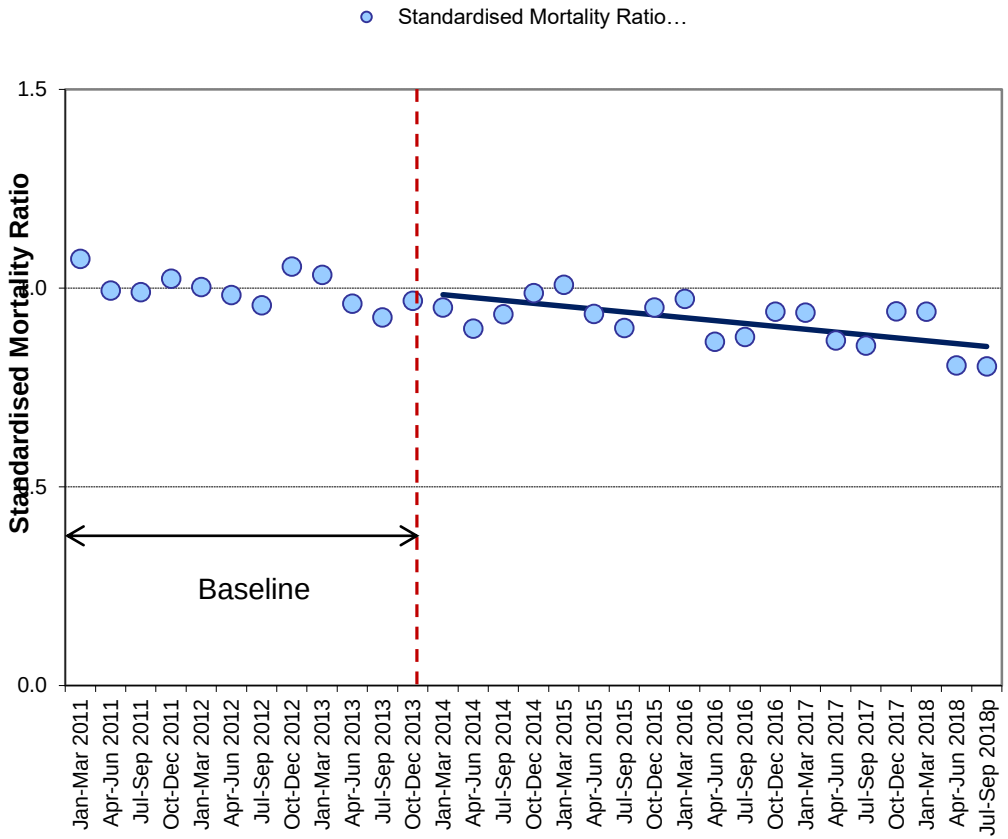
National Outcomes – sepsis



Cardiac Arrest and HSMR

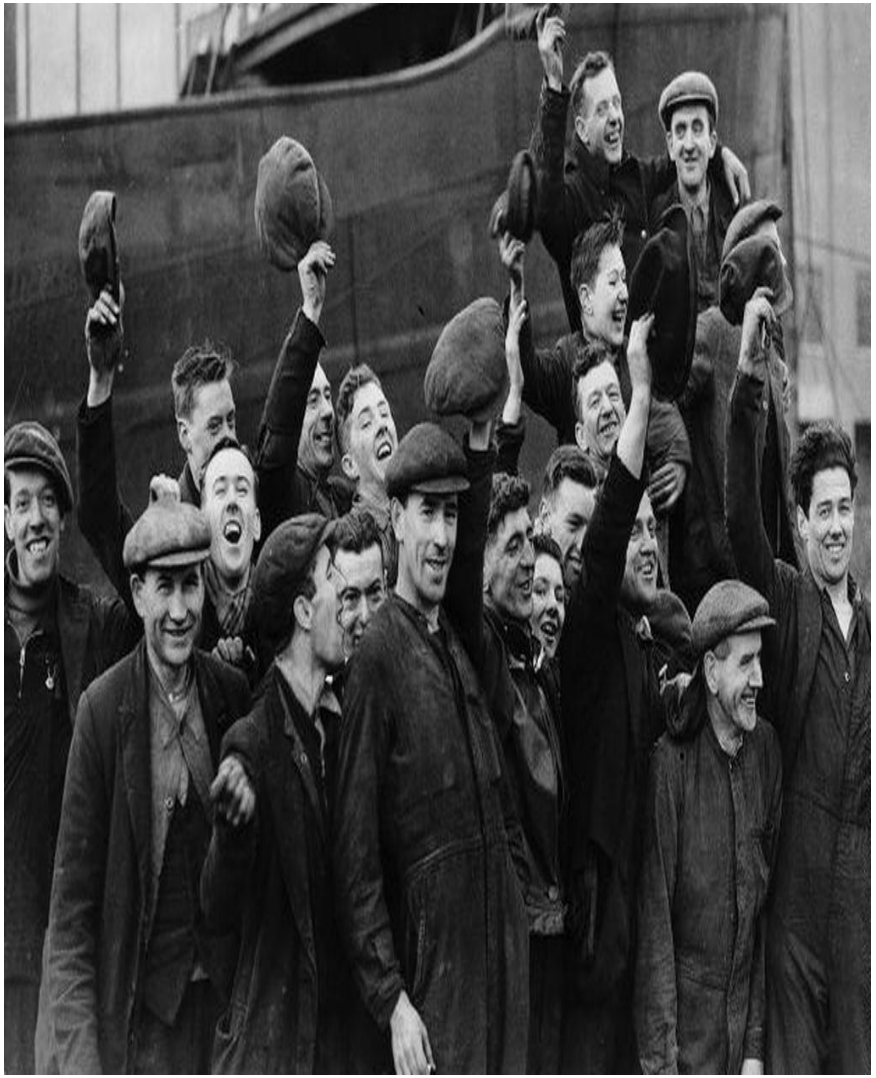


Hospital Standardised Mortality Rate (13.2% reduction)



Summary

Can improve - requires whole system and local level QI input

Make it easier to do the right thing for patients

Learn and design better systems