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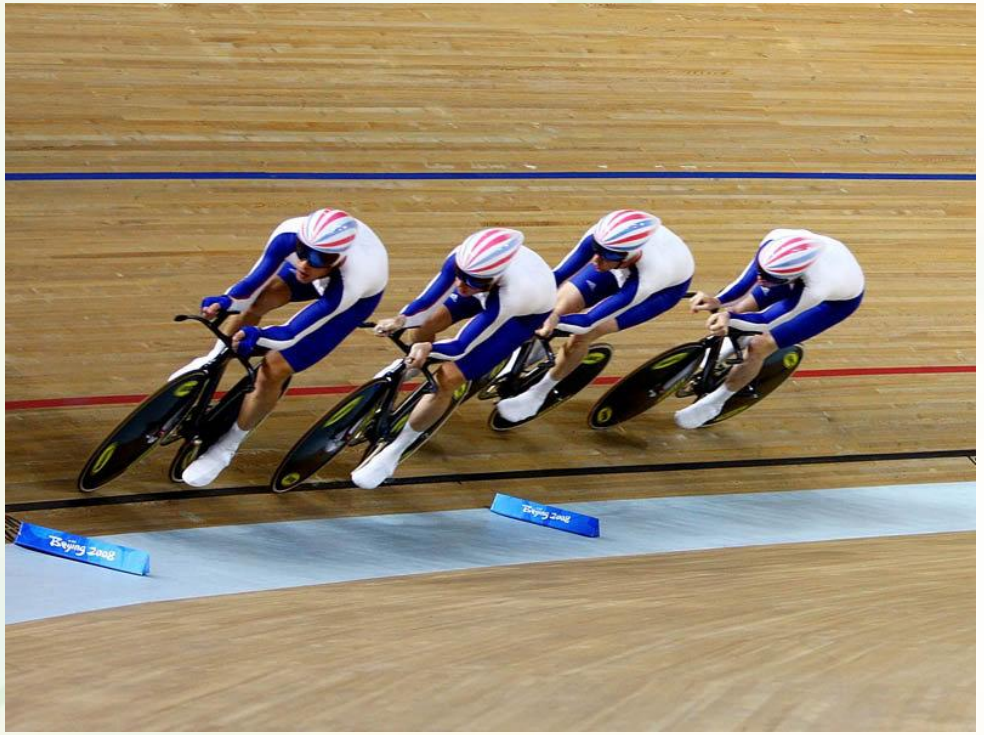
Care of the Acutely Unwell Adult Project

The Salford Royal Experience


HOW LONG HAVE YOU BEEN WORKING IN THIS FIELD PROFESSOR?
CD.ST 89

Do we need a hero?



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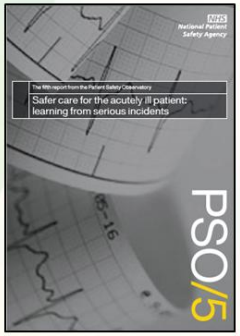
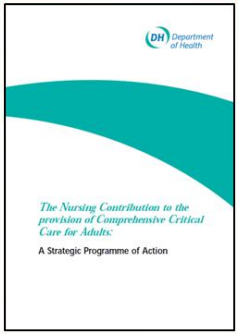
Why Undertake the Initiative?

- Department of Health and other agencies highlighted the complexities of managing acutely unwell patients.

- UK organisations were challenged by NICE to work to dramatically improve the quality of services in accordance with evidence based best practice.

- Comprehensive Critical Care (DOH, 2000) and the nursing contribution to the provision of comprehensive critical care for adults (DOH, 2001) highlighted the need for critical care services to be available to all patients in hospital, regardless of their location.





Why Undertake the Initiative?

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- Adverse incident reports prior to start of project:
  - 29 reported incidents which identified sub optimal care contributing to patient's death
  - A further 100 incidents reported unexpected deterioration

- 135 cardiac arrests (outside units) annually with a survival rate of approximately 10 - 15%

Objectives

- We set a stretch target to:
  - Reduce cardiac arrests outside critical care units by 50% by March 2010

- Why?
  - We knew that a stretch target of 50% would create tension
  - We wanted to create a burning platform
  - Emphasise that the status quo was no longer acceptable

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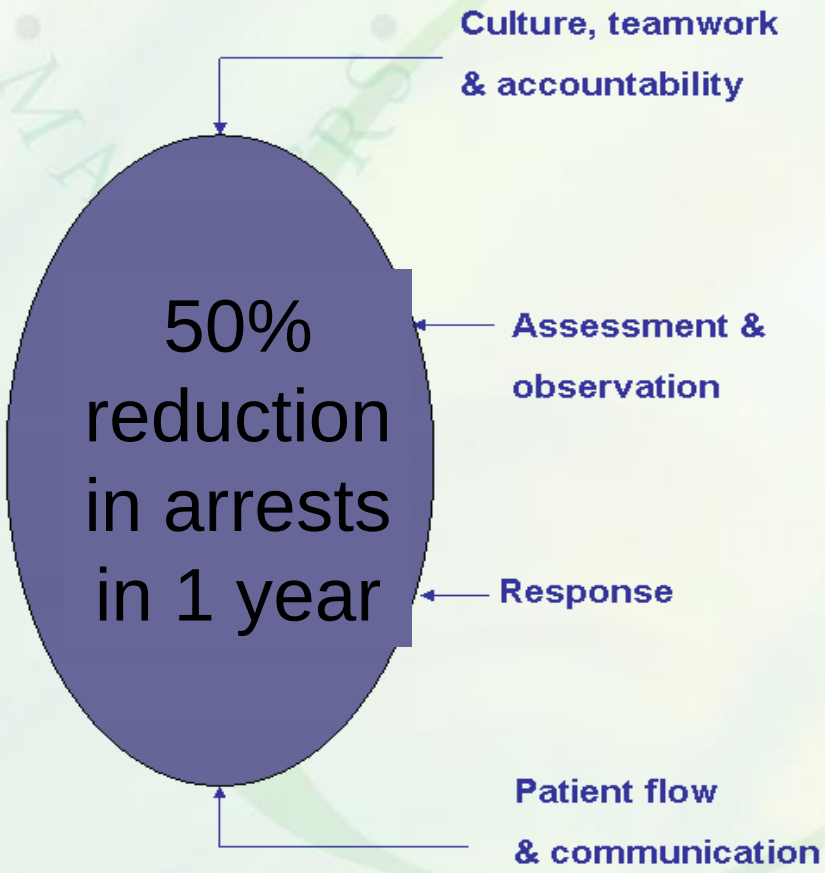
Quality strategy for management of the acutely unwell



- Leadership attention
- Clearly defined protocols
- Root cause analysis & learning
- Psychological safety
- Simulation

- High risk patients identified
- Standardised processes for essential obs
- 100% compliance with observation policy
- Uninterrupted observations
- De-escalation policy adherence
- Care of the dying

- Immediate response to deterioration
- Increased ward level capability
- Optimal patient management – step up / down
- Routine review of step down patients
- Support strategy for assistance
- Open and receptive to all queries

- Right patient, right place, right time
- Efficient handovers & transfers
- Increased understanding of systems
- Cascade of command
- Patient engagement in redesign

Principles for all stages:
System wide education & training for each primary driver
Measurement & feedback
Adherence to NICE guidance

The Process

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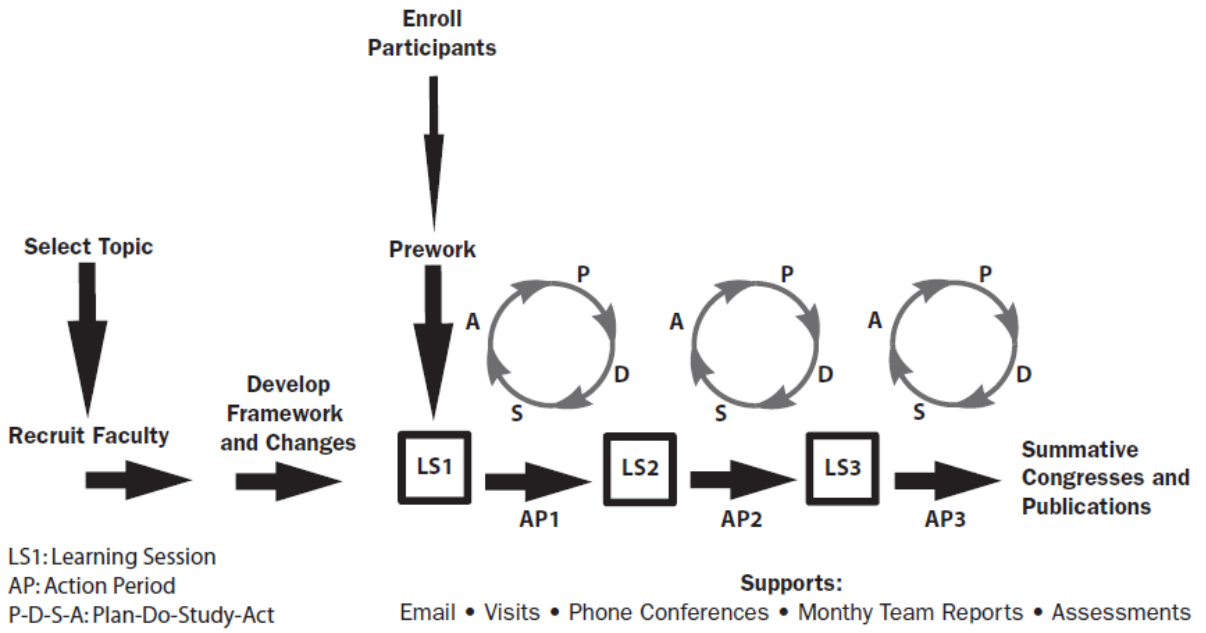
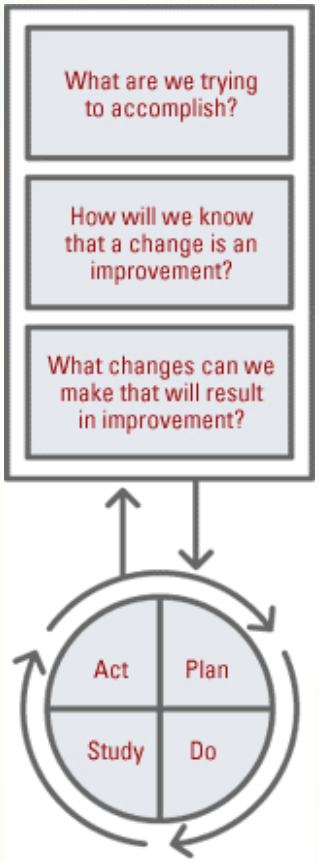
Project Structure



Model for Improvement



Phase 1:

11 wards with highest number of cardiac arrests identified and invited be part of project

Phase 2:

Further 11 wards with highest cardiac arrests invited

Phase 3:

Changes launched across organisation

Recognition – Observation Chart

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Adult Observation Chart

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Forename :	Surname :	
Consultant :	Hospital Number :	
Ward :	D.O.B. :	Age :

Key to Early Warning Scores (EWS)

RR	Respiratory Rate
SBP	Systolic Blood Pressure
HR	Heart Rate
AVPU	Alert, Voice, Pain, Unresponsive
Temp	Temperature
U.O.	Urine Output

Score each parameter accordingly using the EWS table. If the airway is not threatened it should score 0. Each parameter's score should be documented into the appropriate section of the form. On completion of all the parameters, a total score should be calculated.

If the score is equal or greater than 3 - Medical Assistance should be summoned.

● IF YOU ARE CONCERNED ABOUT A PATIENT WHOSE SCORE IS LESS THAN 3 YOU SHOULD SEEK MEDICAL ADVICE ANYWAY ●

IF YOUR PATIENT SUDDENLY DETERIORATES AND YOU ARE UNABLE TO GAIN IMMEDIATE MEDICAL AID TELEPHONE 2222

Frequency of Observations

The frequency of observation recording will depend on the patient's condition. It is the responsibility of the Nurse in charge of the patients care to assess each individual patient and make an appropriate decision about the frequency of observations required.

Early Warning Score			
0-1	2	3-4	≥5
Stable	Potential for deterioration	Deteriorating	Acute / Critically ill
Normal observations	Extra vigilance	Assess and alert	Senior medical review
Minimum 12 hourly observations	Minimum 4 hourly observations	Minimum 2 hourly observations	Minimum 1 hourly observations
		FY1-FY2 medical staff to review within 30 minutes	FY1-FY2 to be alerted and reviewed by SPR within 30 minutes

Minimum Pain Observations

PAIN OBSERVATIONS - SUMMARY

Oral Analgesia
- When analgesia is given.
- One hour later to assess effect.
- At least 4 hourly.

Patient Controlled Analgesia
- Every 15 minutes for one hour.
- Hourly for 4 hours.
- 4 hourly thereafter (hourly for 24 hours if PCA + background infusion).

Opioid Infusion
- Every 15 minutes for one hour.
- Hourly for the first 24 hours.
- Then 4 hourly.

Epidural Analgesia / Intrathecal
- Every 5 minutes for the first 30 minutes after commencement or after a top up.
- Every 15 minutes for the next hour.
- Hourly for the following 12 hours.
- Then 4 hourly provided condition stable.

Intramuscular Analgesia
- When analgesia is given.
- One hour later to assess effect.
- At least 4 hourly.

IV Bolus of Opioid
- Every 15 minutes for 1 hour.
- Then resume routine clinical observations if stable

Pain observations must be maintained as long as the patient requires analgesia.

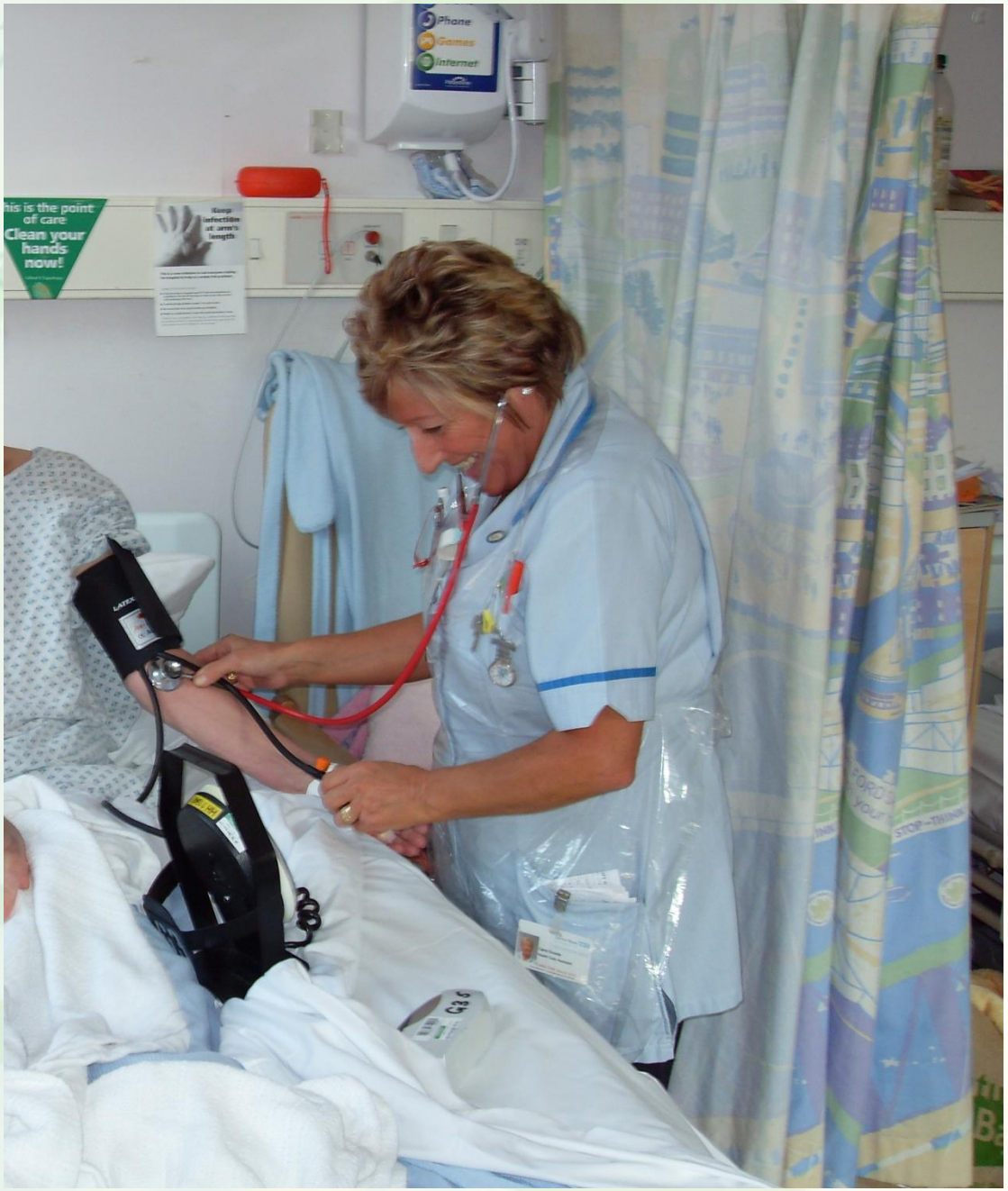
PAIN SCORING INSTRUCTIONS
- Assess score with patient.
- Assess pain at rest and on movement e.g. touching the opposite side of the bed or by asking patient to give a big cough.
- Evaluate any action taken within one hour of administration.
- Pain score of 2/3; analgesia required. If on infusion, rate needs reviewing.

Pain score of 3 and infusion on maximum and analgesia has been given within the last hour contact:
Pain Team - Monday to Friday, 8.00am - 9.00pm, Saturday to Sunday 9.00am - 2.00pm (Bleep 84 5272).
On Call Anaesthetist (via switchboard) any other time.

NAUSEA / VOMITING SCORING INSTRUCTIONS

If nausea / vomiting is a problem : ● Administer anti-emetic ● Re-evaluate within one hour

If nausea / vomiting remains a problem contact medical team to prescribe alternative anti-emetic.
Re-evaluate until patient comfortable.



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Recognition

Parameters	Electronic Reading	Manual Reading
Heart rate/min p<0.000	85 (73-97)	82 (72-94)
Systolic blood pressure mmHg p=NS	110 (99-120)	108 (100-120.5)
Diastolic blood pressure mmHg p=0.013	64 (56-76)	60 (55-72)
SpO2 % p=0.002	97 (87-100)	96 (86-100)
Early Warning Score (range) p=0.001	0 (0-4)	0 (0-3)

Critical language

- Clearly agreed communication model
  - No need to drop hints
- Psychological safety – its ok to speak up
- Flattens hierarchy
  - Removes cultural norms and power distances
- Key phrase
  - CUS programme at United Airlines
  - ‘I am concerned, I am uncomfortable, I am scared’

Cardiac arrest team brief

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- ***Share the plan***
  - "Today we are the cardiac arrest team".
  - We can expect one arrest call today
  - Ensure everybody knows each others name
- ***Set the stage –psychological safety***
  - Everyone speaks up about their concerns
  - No hierarchy
- ***Norms of conduct***
  - Allocation of roles by time of arrival – everybody happy with this?
  - Team leader agreed
  - Non-negotiable mutual respect
- ***Expectations of excellence***
  - The goal is 50% survival

"Say . . . what's a mountain goat doing way up here in a cloud bank?"

Situational awareness

- See the bigger picture
- Thinking ahead
- Agreeing contingencies
- Opening dialogue to agree what to do if the situation changes

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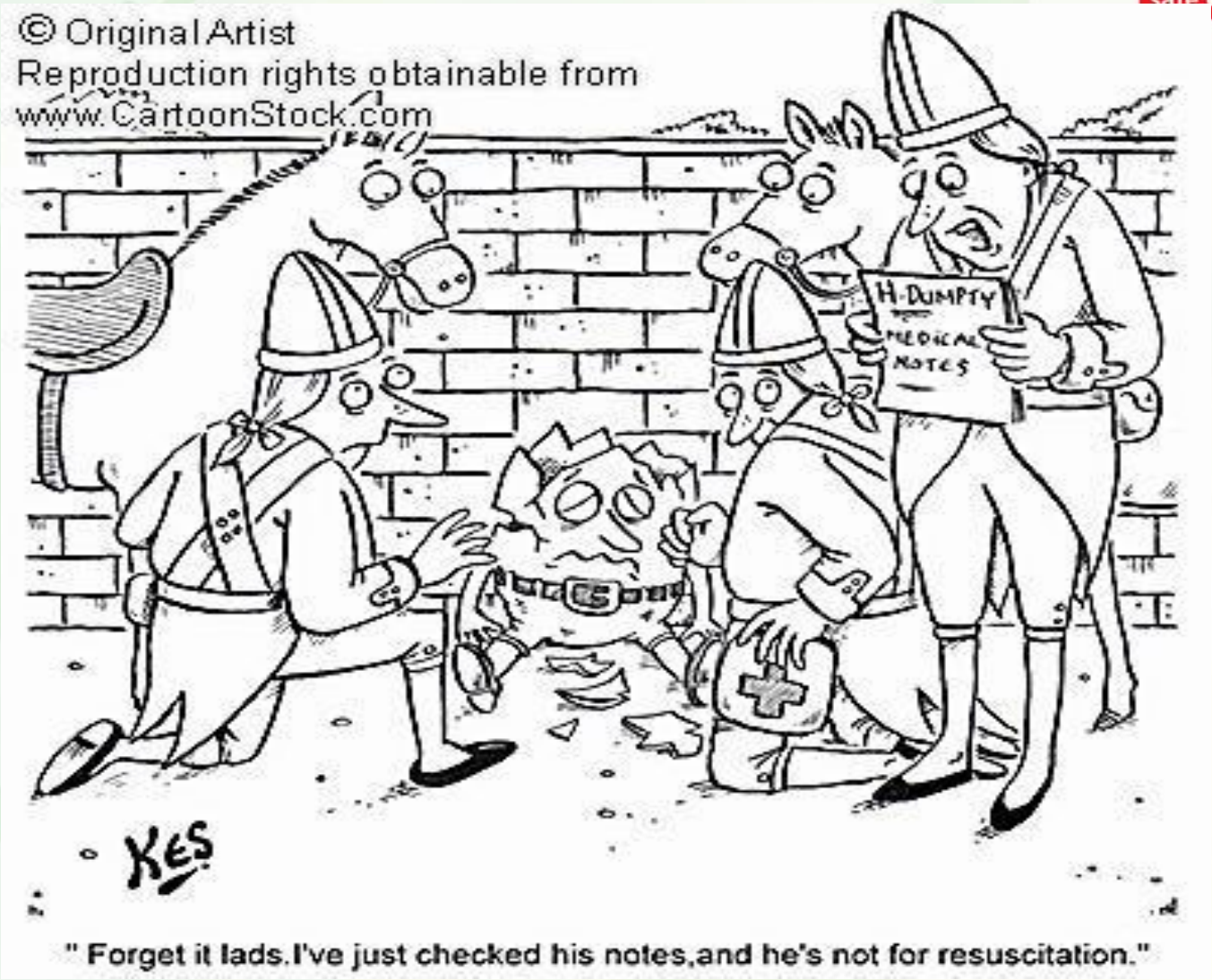
What does DNAR mean?



" Forget it lads.I've just checked his notes,and he's not for resuscitation."

Response

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Patient EWS= 0-1 → **Record observations 12 hourly or if condition changes**

Patient EWS = 2 → **Minimum of 4 hourly observations, closely observe patient**

Patient EWS = 3-4 → Recheck observations manually
Is patient still scoring 3-4?

NO → **Resume appropriate Observations**

YES

1. Inform Nurse in Charge or Colleague
2. Give Oxygen (if prescribed).
3. Sit patient in upright position.
4. Check IV Fluids running to time? If not correct this.
5. Check prescription and give medication, ie. Nebulisers, GTN, Analgesia. Paracetamol
6. Re-check observations within 30 minutes

If **EWS still ≥3, CALL Doctor**

Patient EWS = ≥5 →

1. **CALL DR IMMEDIATELY**
2. **Carry out Actions 1 to 6 as above.**

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Resus Team

- Team briefing
- Role assignment
- Simulation
- Debriefing

What Were the Outcomes?

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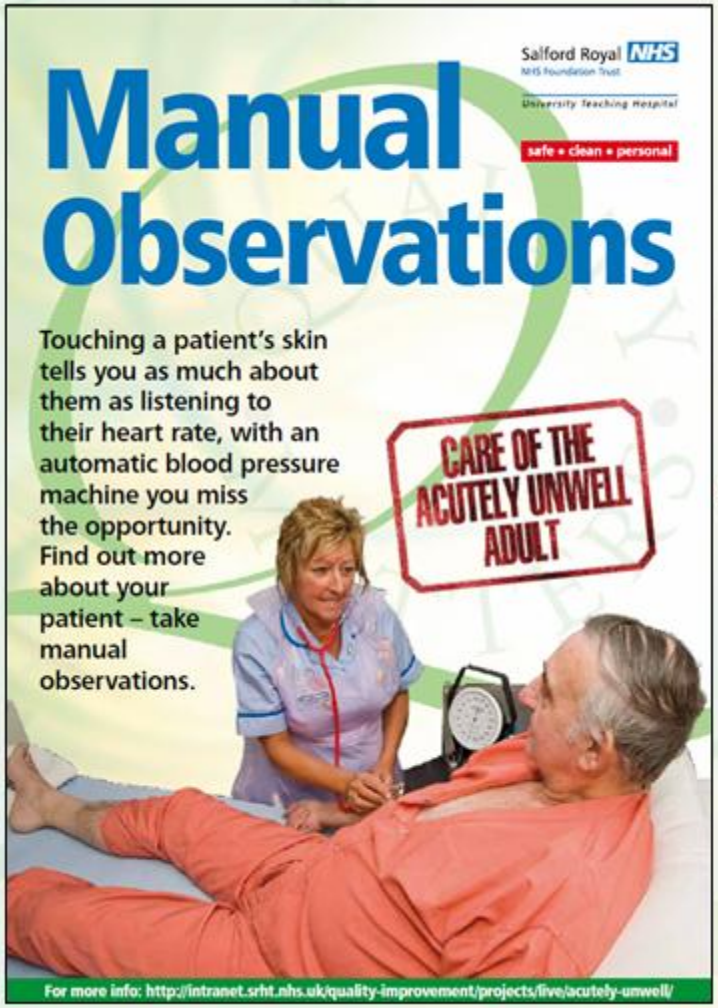
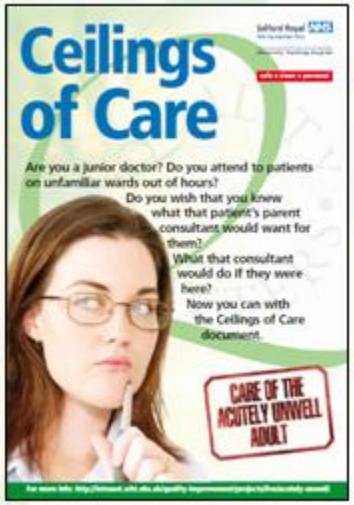
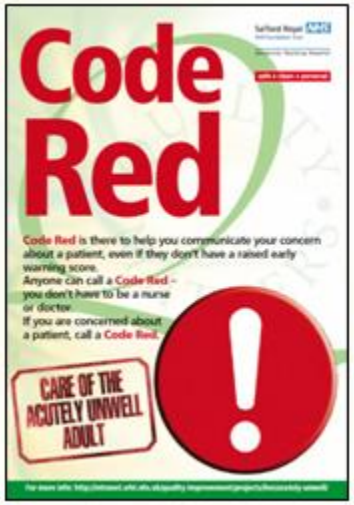
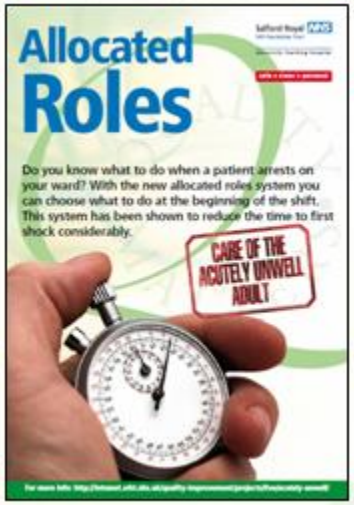
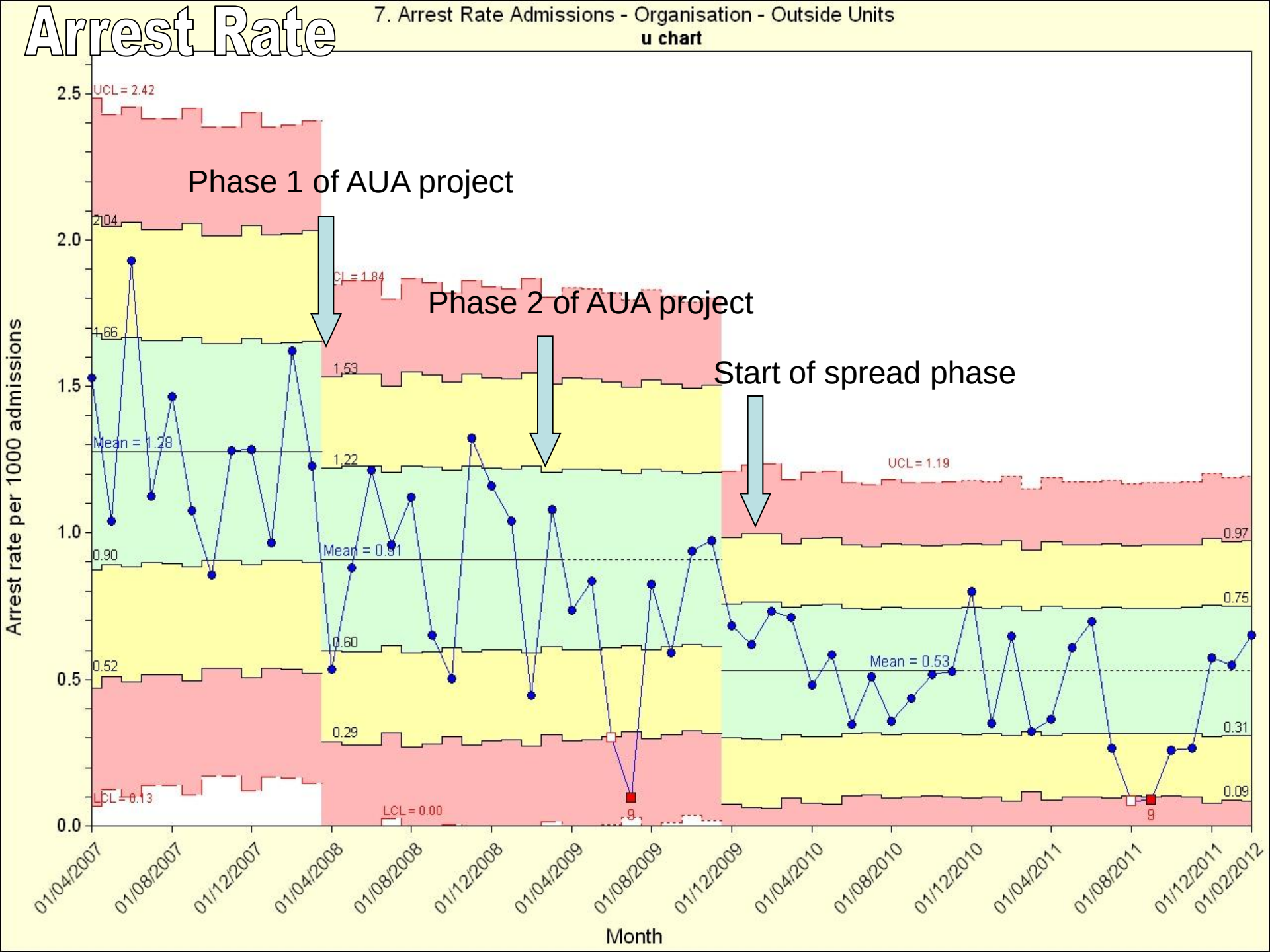








Arrest Rate


7. Arrest Rate Admissions - Organisation - Outside Units
u chart
Phase 1 of AUA project
Phase 2 of AUA project
Start of spread phase
UCL = 2.42
2.04
1.66
Mean = 1.28
0.90
0.52
LCL = 0.13
UCL = 1.84
1.53
1.22
Mean = 0.91
0.60
0.29
LCL = 0.00
UCL = 1.19
0.97
0.75
Mean = 0.53
0.31
0.09
Arrest rate per 1000 admissions
2.5
2.0
1.5
1.0
0.5
0.0
01/04/2007
01/08/2007
01/12/2007
01/04/2008
01/08/2008
01/12/2008
01/04/2009
01/08/2009
01/12/2009
01/04/2010
01/08/2010
01/12/2010
01/04/2011
01/08/2011
01/12/2011
01/02/2012
Month

Impact on Quality

- **Culture change:**
  - We believe that with additional reliability we can achieve ‘no unexpected cardiac arrests’
  - Staff empowered to make changes to improve care that they deliver
- **Improved patient care**:
  - Earlier recognition of unwell patients
  - Better response to unwell patients
  - Proven by the 57% reduction in arrest rate
- **Improved dignity**:
  - Appropriate DNA-CPR decisions
  - Fewer futile arrest calls

Dissemination

At Salford Royal:

- Celebration event
- Meetings opened with script
- Posters
- Certificates
- Change package