

The Right Care to the Right
Patient at the Right Time
CCONs
Critical Care Outreach Nurses
a Possible Solution?

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The CCON's

- Why did we need an outreach service
 - Why did we choose a nurse led service
 - How did we implement it
 - What would we do differently next time
 - How has it been received
-
- Is it working?

A bit about Hutt





Hutt Hospital

- 291 bedded secondary level hospital
- Provides Regional Plastics and Burns, Rheumatology, Cardiac MRI and Public Health
- 22 House surgeons
- 69 Registrars & SHO's



Why Did We Need an Outreach Service

- RDA strike 2006 prompted creation of a nurse response team in the absence of RMOs
- Good level of support from Senior Medical staff and general ward areas for the team
- Pre -existing concerns over levels of care in general areas prior to ICU admission with a lack of recognition and response to the deteriorating patient
- Post strike looked to implement a similar scheme to help support junior medical and nursing staff

Evidence for this approach

- Experience from overseas indicated a need for a clinical support role
 - Medical Emergency Team – Australia
 - Outreach Team / PART – UK
 - Rapid Response Team – USA

Research

- Literature supported the belief patient care was often sub-optimal
 - *McQuillian et al 1998, Hodgetts et al 2002, Hillman et al 2002*
- Literature also suggested patients could be identified before collapse
 - *Hillman et al 2002, Buist et al 2004, McGaughey et al 2005....*

EWS Early Warning Score

- Various track and trigger scoring systems exist
- Score various physiological recordings
- Some include biochemistry results
- Higher scores indicate more seriously ill patients and thus help identify the deteriorating patient earlier

Would these systems have identified patients prior to arrest

- Retrospective audit of emergency resus calls
- Reviewed notes and recorded observations for the immediate and 12, 24 and 48 hours periods preceding the emergency call to identify the earliest time when EWS would have triggered a call to an outreach service

Outcome

- Audit abandoned due to lack of available observations
- Standard of record keeping poor outside of ED
- Completeness of observation taking inadequate
- If deterioration was recorded response to that deterioration was varied

Why Did We Choose a Nurse Led Service

- Hospital size
- Availability of appropriate medical staff
- Recognition of nursing expertise
- Organisational desire to develop nurses

- Money!

- Nurses have more hours hands on
- Perceived as less threatening by ward staff
- Acute area staff able to assess patients and manage interventions
- Liaison between areas

Other factors

- Identified need to support junior nurses and junior doctors in general areas
- Often a lack of experience compounded by lack of knowledge
- Reticence amongst junior doctors to call for senior support early

How Did We Implement It

- Identified a working party to support the process
 - Included medical and nursing leadership
 - ICU support identified as critical early on
 - Management support
- Set up a pilot scheme running for 6 months
 - Less threatening to finance
 - Not seen as permanent
 - Easier to resource initially

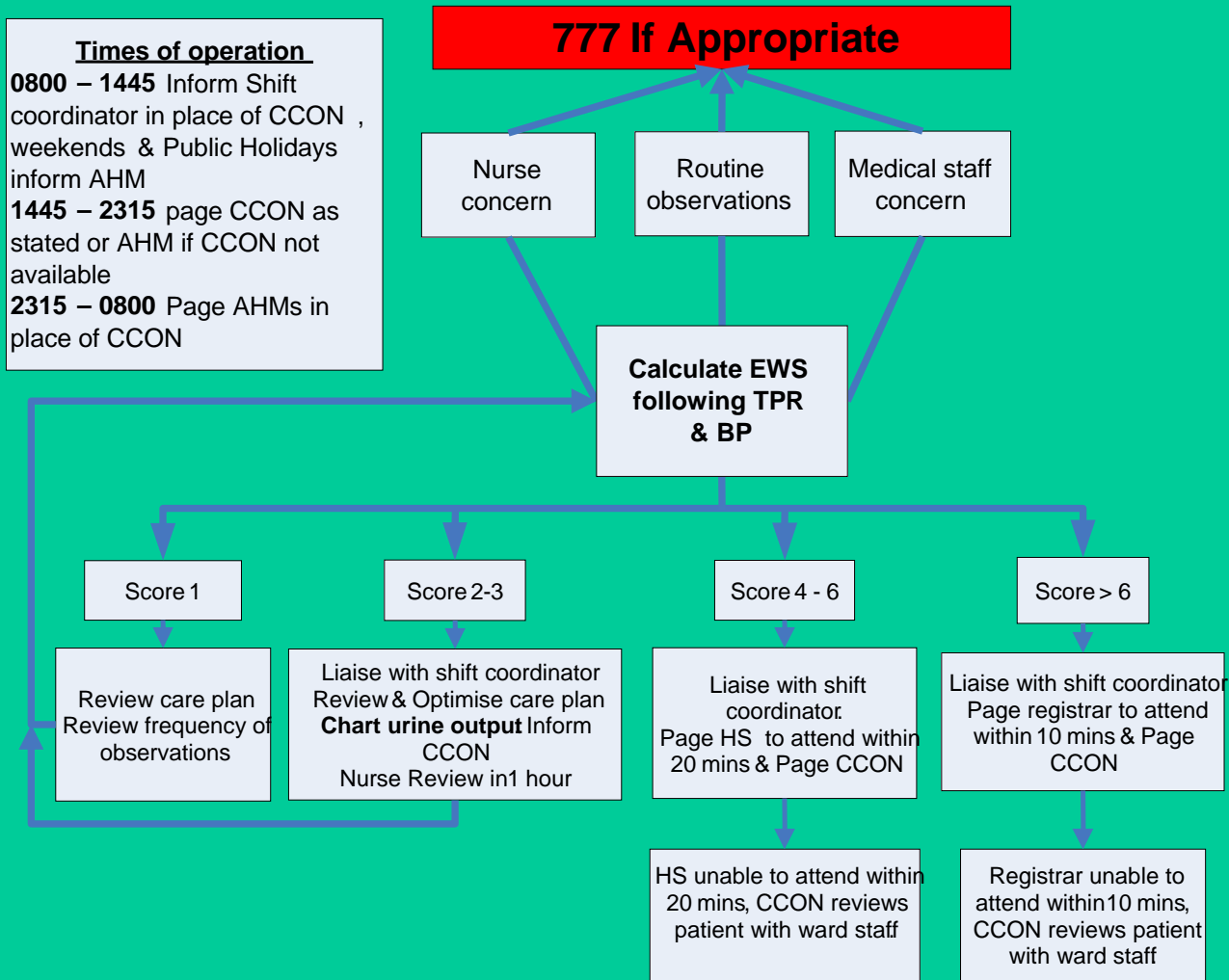
- Identified funding from vacant FTE's in acute areas
- Utilised one years worth of part-time salary to cover some of the six months of full time hours
- Consulted with nurse groups, involved nurse managers and educators to gain buy-in
- Consulted with junior doctors to ensure we met their needs and gain buy-in

- Seconded 3 staff (1x ED, 1 x ICU, 1 x CCU) to cover 1 x FTE position
- Started position before formal roll-out to engage ward areas and educate about the role
- Adapted EWS to fit our perceived needs
- Used CCON position to educate staff around use of EWS
- Established calling criteria and response protocol

- Set start date
- Ensured junior doctors briefed on CCON role
- Ensured nursing staff briefed
- Advertised the role and start date widely before implementation
- Created standing orders for CCON to allow prescription rights within Standing orders
- Ensured framework for referral to ICU team if deemed necessary

Version 6	Value						
	3	2	1	0	1	2	3
Temperature (°C)		< 35.0	35.1 – 36.0	36.1 – 38.0	38.1 – 38.5	>38.6	
Pulse (bpm)		< 40	41 – 50	51 – 100	101 – 110	111 – 130	> 131
Systolic BP (mmHg)	< 70	71 – 80	81 – 100	101 – 179		> 180	
Respiratory Rate (bpm)	< 8			9 – 14	15 – 19	20 - 29	> 30
CNS Level: Patients responds to:		New agitation/ confusion		Alert	Voice	Pain	Unresponsive
Urine output (ml/hr) for 3 consecutive hrs	<9	10 – 30		> 31			

Early Warning Score Escalation Protocol



What Would We Do Differently Next Time

- Ensure we liaise with
 - Fully inform
- and
- Gain the support of

The Senior Medical Staff!

Ensure we have education in
place before the rollout

Education and Support

- **ALERT Course** © Portsmouth Hospital NHS Trust, UK
 - Structured approach to the recognition and management of the deteriorating patient.
 - Multi-disciplinary course
 - Suitable for all specialities
 - Validated improvement in staff knowledge and skills
 - *Smith GB, Poplett N. Resuscitation 2004*

Following ALERT Introduction

- More frequent use of EWS
- More referrals to CCON
- Staff now initiating change within management plan before escalating to CCON / HS

Outcomes

RMOs' view of CCONs

- Initially both sides raised their concerns
 - Concerns from CCONs that they would be used as a cannulation service
 - Concerns from RMOs that they may not get called to see the sick patients
 - Concerns from RMOs re did they have to duplicate CCONs' examinations again and check up on them

Solution was teamwork

- Junior doctor and CCONs were encouraged to meet up at start of the evening shift and work together on the various tasks and reviews that came up
- Trust was built up and also confidence in the CCONs' assessments and skills

Benefits were soon seen

- New RMOs were helped by CCONS who knew wards and where equipment was stored
- Worked alongside the RMO doing ECGs, cannulations, ABGs and advising on management or calling senior staff
- Often when several emergencies arose the CCONs could sort out the more minor issues

Audit of RMOs

- With 3 monthly changeovers of junior staff it was important for
 - CCONs to take part in orientation
 - Ensure RMOs had a better idea of the CCON role, assessment skills and capabilities, hours, contact details and who to escalate issues in their absence

End of Pilot phase

- RMOs greatly appreciated the CCON role
‘Awesome help’ especially in the first few quarters out of Med School
- Could ask them to review patients or see patients together
- 100% did not want the role to go

Nursing views of the CCON role

- Initial concerns over CCON role impinging on autonomy of practice
- Staff expressed concerns over why the role was needed
- Didn't see the need to calculate EWS on "Stable" patients

Halfway Through

- Greater observed use of EWS as pilot progressed
- Increased call-out of CCON for advice and support not triggered by EWS
- Fewer complaints from nurse managers about staff feeling upset by CCON role

End of Pilot Audit

- 17% Nurses and 79% House Surgeons responded
 - 87% felt CCONs were a useful resource
 - 55% felt the service needed no improvement
 - 19% felt some improvements could be made.
- The majority felt that the CCON should be around for longer!

EWS

- Increasing acceptance and use as a tool
- *Helps indicate subtle changes that mean the patients are deteriorating*
- *Good tool for calling for help as gives objective data*
- *Good to have concrete data about a patient to discuss with another nurse*

CCONs

- Over time there has been a marked increase in staff approaching about concerns and not all related to EWS (46%)
- *Good to have a second opinion*
- *Reassuring to have someone check my assessment skills and management plan*
- *CCONs are a helpful support to nursing staff after hours*
- *Called CCON about a medication protocol*

Where to from here

- CCONs are now embedded in the after hours structure
- 4 staff provide a FTE service and now being expanded to cover am shifts at the weekend
- Roll out to all Adult In-Patient Areas
- ALERT training for all staff

Is it working?