Royal College of Physicians | Future Hospital

‘Recognise and Rescue’ programme: improving patient safety

This Future Hospital Programme case study comes from Dr Mark Simmonds at Nottingham University Hospitals (NUH) NHS Trust. He describes how the ‘Recognise and Rescue’ programme is improving the care of the deteriorating patient.

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Improving patient safety

Key recommendations

- Collaboration between clinical teams that focus on care of the deteriorating patient can lead to significant patient safety benefits.

- Analysis of critical incidents and review of Trust-wide audits (eg severe sepsis, acute kidney injury (AKI), early warning score (EWS) policy and emergency theatres) give insights into system failures.

- Engage in direct dialogue with Trust board members and commissioners.

- By promoting a whole hospital approach, shared learning creates a synergistic relationship between groups that were historically disparate. Use strict task prioritisation to overcome large-scale changes.

Local context

Northern Devon District Hospital provides acute services for a population of around 175,000. From January 2015–January 2016 the rheumatology team saw:

- 923 new patients
- 2,959 follow-up appointments
- 322 elective day case treatments.

The challenge

In March 2012, a new programme called 'Recognise and Rescue' (R&R) was formed which brought pre-existing clinical focus groups for sepsis, AKI, our EWS system , emergency theatres and resuscitation together to collaborate alongside key stakeholder departments including critical care, the emergency department and paediatrics. The clinical focus groups did not specifically include patient members, however we have used patient and public involvement (PPI) groups to share our work and discuss communications regarding ICT interventions like 'eObservations'.

Our aims were to improve care of the deteriorating patient by improving recognition and reducing delays to treatment or escalation through a data-driven, multidisciplinary and Trust-wide strategy. Through shared learning, analysis of critical incidents and review of Trust-wide audits (including severe sepsis, AKI, EWS policy and emergency theatres), common themes such as clinical observations, communication and human factors that crossed previous boundaries were identified.

Through direct dialogue with Trust board members and commissioners, an ambitious programme of work was set out with clear goals and defined timescales.

The profile of R&R issues has increased at NUH, with prominent coverage in the Trust Quality Account and direct reporting of metrics to the NUH Board. R&R now represents a central conduit for improvement work and acts as a problem-solving hub that is gaining increasing awareness locally and nationally. Regular updates from each of the clinical groups are given at monthly meetings which also help strengthen the team approach, ensuring that all parties are up to date with latest developments.

Learning from initial work on improving sepsis care, each work stream is now using a range of methodologies to create sustained improvement. For example, care timelines derived from detailed

case analysis allow identification of delays in time critical pathways. Equally, simple individualised feedback on audit cases has been shown to be helpful to change clinical and team behaviours.

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> Dr Mark Simmonds, Nottingham University Hospitals NHS Trust

Outcomes

Overall, R&R has led to improvements in hospital processes that have made our patients safer.

EWS policy	Since February 2013, thanks to a coordinated education and audit/feedback to our admission wards, quantified improvement has occurred in all aspects of escalation, from accurate recording of observations through to timely senior medical review. The greatest improvement has been in standards of nursing escalation where there has been a 46% increase in compliance with the escalation policy (62% February 2014 versus 13% February 2013).
Severe sepsis	Administration of antibiotics within 1 hour has improved from 40% to 90% since December 2011. Compliance with our pre-ICU care bundle has increased from 25% to 75% over the same period. Direct individualised feedback to clinicians is now embedded.
Cardiac arrest	90% of cardiac arrests now receive a root cause analysis and NUH submits all data to the National Cardiac Arrest Audit (NCAA). Paediatrics: There have only been two unexpected cardiac arrests in the Children's Hospital since November 2011. Analysis of medical emergency calls has revealed a drop in 'failure to rescue' cases from 24% to 4.4%.
Critical care outreach team (CCOT)	Activity has almost doubled in the past two years due to improvements in escalation, leading to a substantial increase in CCOT team members and progression towards 24/7 CCOT.
Incidents	'Failure to rescue' incident reporting has increased three-fold since introducing new categories and thematic analysis.
Patient outcomes	Our unadjusted ICU mortality for severe sepsis has improved from 42% to 26% with standardised mortality ratio for sepsis falling from 119 to 86.
Qualitative review	This reveals the extent of shared learning facilitated by the monthly team meetings, with individualised clinician feedback (originally used in sepsis) now being used for EWS, AKI and resuscitation improvement programmes. Equally, 'time-lining' care pathways are being used to illustrate emergency theatres and EWS care having originally been devised by R&R.
Education and training	Through direct links with the School of Nursing, undergraduate and newly qualified nurses now receive defined 'Acute Care Skills' training. All newly qualified

	nurses and nurses new to NUH now receive a 5 day AàE course. Existing nurses are given access to a 1 day refresher course. Direct teaching of foundation doctors also occurs for EWS, sepsis and AKI with accompanying web-based podcasts for other trainees or locums.

Methods

We used our active acute medicine patient group to review information leaflets and we have presented our work to an NUH public member's event. R&R also now has its own Twitter feed - @RecogniseRescue - on which we publish our latest news and data.

Staffing

The staff directly leading the R&R programme constitutes: one PA of consultant time and two whole-time equivalent band 6 nurses (who lead sepsis, EWS and cardiac arrest analysis). NUH also has improvement personnel in our Children's Hospital, emergency theatres and AKI teams which link into the R&R project.

Key learning

System failures are rarely isolated to individual departments. Whilst excellent improvement work is often done in departmental or clinical risk silos, the benefit of combining efforts towards common goals has been profound. All of our work has been founded on robust audit and data collection which has driven investment in quality improvement. The realisation that feedback to individuals with key messages from case analysis can alter team behaviour has also been crucial.

By aiming to improve R&R issues Trust-wide, the project's scale was initially daunting, leading to strict task prioritisation. Integrating paediatric and adult needs were initially seen as challenging but it rapidly became clear that the similarities outweighed the differences. In many ways, due to its size and adaptability, our Children's Hospital has often been the pioneer of great ideas.

Further reading

1. *Simmonds MJR et al. Quality assurance in severe sepsis: an individualised audit/feedback system results in substantial improvements in sepsis care at a large UK teaching hospital Crit Care 2013;17(Suppl 4):61*
2. *Wood, S.D. et al. Our approach to changing the culture of caring for the acutely unwell patient at a large UK teaching hospital: A service improvement focus on Early Warning Scoring tools. Intensive Crit Care Nurs 2015;31(Iss 2):106-15*

What's next?

To improve R&R, we would integrate trainee doctors, frontline nurses and administration support more reliably and seek more learning from external organisations.

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