Reducing Cardiac Arrests: a multifactorial approach

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Purpose

To implement and evaluate recommendations from the National Confidential Enquiry into Patient Outcomes and Death (NCEPOD) "Time to Intervene" report 2012.

Results

Since the introduction of the Trust plan, we have seen a reduction in the number of futile/inappropriate resuscitation attempts and improvement in documented goals of care. National Cardiac Arrest Audit results highlight these improvements.

Materials and Methods

Following the publication of the NCEPOD report, the Resuscitation Department developed an action plan to implement Root Cause Analysis (RCA) following cardiac arrests in non-critical care areas. This would allow identification of specific learning needs and the implementation of plans to improve goals of care.

RCA's highlighted major failings in decision making with goals of care including DNACPR, due to either poor access to senior decision makers or a failure to set goals by medical staff. To improve the acute medical pathway the Trust plan included; the centralisation of acute medical patients onto the Hull Royal Infirmary site (leaving Cardiology and Oncology at Castle Hill Hospital) allowing better use of a 3rd medical registrar, ensuring there are no medical outliers on the Castle Hill site, the division of the Acute Assessment Unit (AAU) into two; Acute Medical Unit (AMU) and the Elderly Assessment Unit (EAU), with the intention of improving Consultant access, timely reviews and improved goals of care.

Alongside these changes, an increased emphasis was placed during staff training; on the recognition of the deteriorating patient, understanding and utilisation of the National Early Warning Score and the DNACPR process. Staff were also empowered to ask for clear well documented decisions.

All NCAA team visits for Hull and East Yorkshire Hospitals

YEAR	Number of CA's/Year	Survivors	Admissions	CA per 1000
2014/15	319	58 (19.58%)	151646	2.10
2015/16	304	66 (22.9%)	149138	2.03
2016/17	260	61 (23.4%)	153277	1.69

Cardiac Arrests in acute Medical patients

YEAR	Number of Cardiac Arrests CHH	Number of Cardiac Arrests HRI	Total
2014/15	151	125	276
2015/16	120	139	259
2016/17	88	122	210

Conclusion

Implementation of the NCEPOD recommendations within Hull and East Yorkshire Hospitals Trust has led to a reduction in the number of cardiac arrests within the Trust.

References

1. Time to Intervene? A review of patients who underwent cardiopulmonary resuscitation as a result of an in-hospital cardiorespiratory arrest. A report by the National Confidential Enquiry into Patient Outcome and Death (2012)
2. Resuscitation Council (UK) and The Intensive Care National Audit and Research Centre (ICNARC). National Cardiac Arrest Audit Report. Castle Hill Hospital 01 April 2014 to 31 March 2015. Date of report 01/06/2015
3. Resuscitation Council (UK) and The Intensive Care National Audit and Research Centre (ICNARC). National Cardiac Arrest Audit Report. Castle Hill Hospital 01 April 2016 to 31 March 2017. Date of report 20/06/2017

Location of cardiac arrests at Castle Hill Hospital

Reduction in cardiac arrests from April 2014 to March 2017