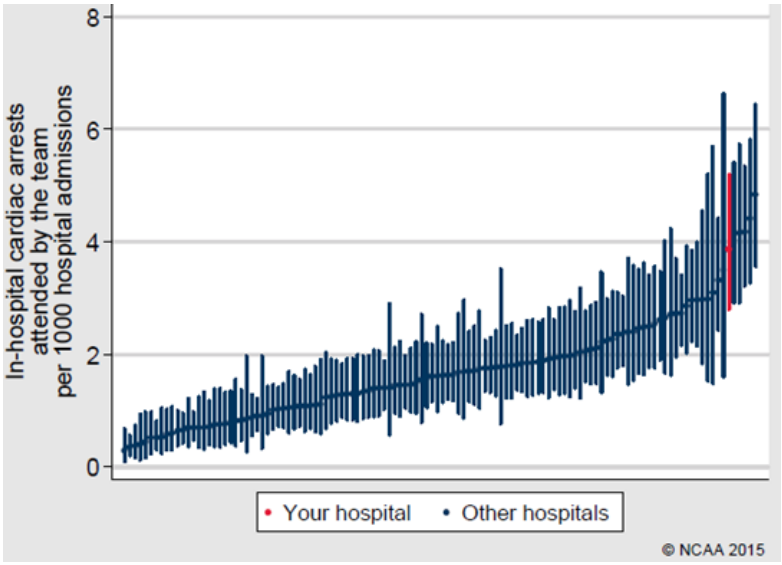
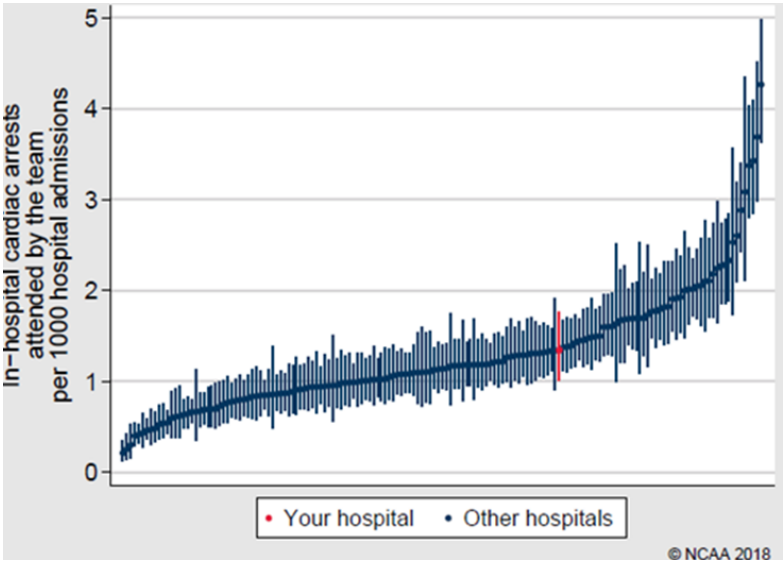
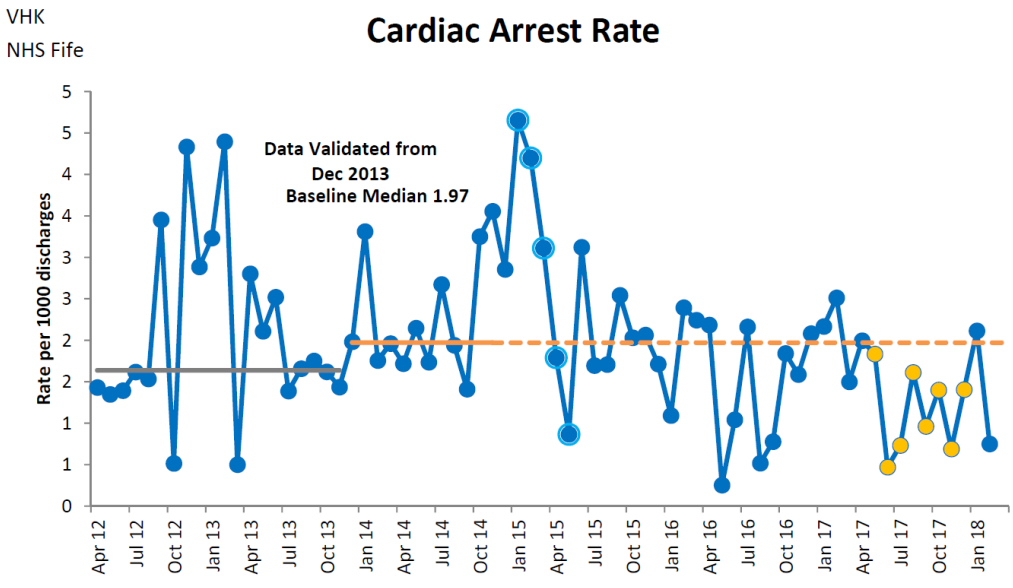
Reducing the incidence of Cardiac Arrest in NHS Fife







What is the improvement?

The improvement was initiated recognising deteriorating trends in the monthly SPSP data combined with benchmarking data from the National Cardiac Arrest Audit (NCAA) indicating a cardiac arrest rate in 2015 was 3.8 per 1,000 discharges. A case note review of cardiac arrests with CPR over a one month period was undertaken to provide essential data for improvement. Key themes identified became the focus of a deteriorating patient working group. This approach, coupled with previous improvement activities, has increased confidence in the management of deteriorating patients and appropriate care planning and resulted in a reduction of cardiac arrest to 1.5 per 1,000 discharges (NCAA data). Data reported to the Scottish Patient Safety Programme (SPSP), which excludes cardiac arrests in emergency admissions and acute coronary syndrome, is showing a recent improvement.

Processes have been tested and implemented so that clinical staff are clear about triggers of deterioration, the expectation relating to the monitoring and management of patients at risk of deterioration, the escalation process to ensure the appropriate level of clinical review and the decision making and interventions required.

Prompt and clear senior clinical decision making is in place to ensure all admitted patients have a confirmed escalation of treatment and CPR status. A local Hospital Anticipatory Care Plan (HACP) has been rolled out across all adult in patient services in Fife. The acute service recorded no CPR attempts have been made on a patient with a DNACPR in place for a 12 month period. This compares with a baseline of an average of 1 attempt per month.

This improvement journey has engaged all adult inpatient and day care services within the NHS Fife Acute Services Division and, for some work streams, has extended to include all community inpatient services.

The initial aim was to reduce cardiac arrest rates within the adult in patient service. Acknowledging the key elements to recognising and managing patients at risk of deterioration, this aim developed beyond reducing cardiac arrest to include the wider management of the deteriorating patient.

Which interventions helped?

The board have identified a number of enablers that allowed this work to progress. These include:

- Executive support; improvements led by senior nursing and senior medical staff with involvement from clinical staff from individual ward teams, quality improvement team and public consultation.

- Early warning score accuracy and compliance with frequency of observation monitoring.

- The review of clinical procedure to support early warning score monitoring and escalation.

- Using data from an electronic system for track, trigger and alert (Patientrack) at the daily hospital safety huddle to allow teams to feedback about the sickest patients using Scottish Structured Response (SSR) criteria to guide actions.

- Using SSR to have a consistent approach and common language around deteriorating patients. As a result of audit, significant changes have been made to the SSR to improve its use in practice.

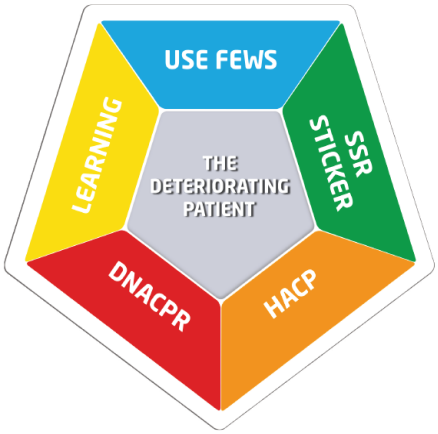
- Development of a Hospital Anticipatory Care Plan (HACP): initial development (learning from literature and colleagues in NHS Lanarkshire), testing and formal review of pilot project, public engagement and evaluation. Findings led to the roll out in March 2017. An audit tool has since been developed to quantify the use of HACP and compliance with key measures. This tool is now embedded and providing assurance and driving ongoing improvement.

- Focusing on appropriate use of DNACPR, supported by HACP to enable a consistent approach to delivering care, with a clear treatment plan with escalations of treatment from the responsible team.

- Introduction of a compulsory review of all in hospital cardiac arrests to ensure all unexpected deaths are investigated. Key outputs following this process include instigation of SSR audit and changes to SSR, updated early warning score and escalation procedure / resources for staff, and amendments to HACP.

- Introduction of a local '***know the score'*** campaign which demonstrates pathways of care, from assessment and decision making on admission to acute care, and then the recognition and management of patients at risk of deterioration.

Know the Score ≥ The 5 key elements
Our patient safety pentagon



Next steps

- Ongoing monitoring, audit and feedback.
- Embedding changes in practice.
- Focusing on DNACPR: getting it right, ensuring effective communication and the DNACPR form following the patient.
- Develop discharge letter to include HACP content.
- Celebrating success: identifying individual ward areas where there has been significant improvement. Re focusing efforts on areas requiring more assistance to progress.
- Focusing on other elements of care that support management of patient deterioration, including fluid balance and oxygen therapy.
- Planning to hold a multi-disciplinary Transformation Event to showcase work on Innovation, Quality and Safety, SPSP 10 years and 70 years of the NHS.

Key learning

- The need to take a system wide approach.
- Common understanding on the issue, and recognition of the value of improvement.
- Breaking down improvements into small steps that collectively have made a difference.
- Focusing on learning as a key to improvement.
- Sharing data and the value of data linked to patient safety and outcomes.
- Clear expectations for standards of care / treatment.
- Understanding it takes time, constant engagement and support.
- Multi professional approach and buy in is essential.
- Strong clinical leadership is required.

For more information, please contact

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