SPSP Acute Adult Collaborative Identifying and understanding cardiac arrests: current practice in Scotland

Adapting a human factors tool: improving healthcare data processes to support learning from events

Overview

Reliable cardiac arrest data collection can be challenging.

To enable sharing of ideas and processes across Scotland, 10 NHS boards shared their current approach to identifying and understanding cardiac arrests.

The SPSP Acute Adult team used an adapted Walk Through Talk Through tool to capture work as done. The findings were used to construct an improvement resource.

This document reports the method and key findings of the scoping exercise.

> "[after the session] we then had a look at our system to improve the reliability of our reported data. Now we proactively follow-up 2222 calls within 24 hours of the event taking place ... Following this change we have seen a drastic change in the reliability in the data we are now providing."
>
> Resuscitation Officer

The approach

Who we spoke to

We spoke to 43 colleagues in 10 health boards, including 2 remote and rural boards including:

- Quality Improvement teams
- Resuscitation Officers
- Medical staff
- Data analysts and eHealth colleagues
- Excellence in Care colleagues
- Senior Nurses
- Clinical Effectiveness teams
- Clinical Quality Coordinators
- SPSP board leads

What we did

We adapted a Walk Through Talk Through Template to provide structure to exploring current cardiac data collection processes. The Walk Through Talk Through approach helps identify steps in the task which are more prone to error. It then explores what makes a step more difficult or confusing and where there are existing workarounds in use.

For cardiac arrest data collection it supported boards to identify:

1. The current process
2. What factors lead to error
3. What can be improved

What we found

- Six Boards demonstrated a reliable process for identifying cardiac arrests defined as being able to verify ≥90% cardiac arrests.
- Key learning and the elements of a reliable process were identified. These are outlined within the key findings section and the improvement resource.

What difference that's made

Each board received a completed copy of their own template. This allowed boards to reflect further on their current process and where to focus improvement work.

> "It was certainly a good exercise to undertake and to take the time out to review the process again. We think it would be beneficial for the tool to be used periodically for other processes too."
>
> Improvement Advisor

For one participating board, the learning from their session has resulted in them being able to successfully collate their cardiac arrest data:

> "The discussions we had around the cardiac arrest data had a very positive impact on local conversations for data review and collection."
>
> QI Facilitator

Key findings

Review of 2222 calls

Most boards (n=7) receive 2222 log by email (automated email: n=1, shared drive: n=1, manual collection: n=1)

The 2222 call log is shared with Resuscitation teams and/or Quality Improvement teams.

Teams then review the 2222 call log.

Review of 2222 call log

- **Daily** (n=6)
- **Weekly** (n=1)
- **Monthly** (n=3)

Key learning

All 6 boards who review and follow up 2222 calls daily (Monday to Friday) had confidence that they are reliably identifying ≥90% cardiac arrests.

Identifying cardiac arrests: documentation

Unreliable completion of Datix and post-arrest audit forms is a challenge for multiple boards.

2222 calls which are verified as true cardiac arrests are identified by documentation review.

N.B. Additional teams use Datix to study quality of care but not to identify the number of arrests.

Primary source of documentation

- **Audit form** (n=5)
- **Datix** (n=2)
- **Combination including local intelligence** (n=2)
- **Audit form & Datix** (n=3)
- **Electronic Record** (n=2)

Key learning

Boards with a reliable process described a culture which prioritised completion of post-arrest documentation.

Determining total number of cardiac arrests

As reliable completion of post-arrest documentation is challenging, there were three main approaches to determining the total number of cardiac arrests:

Approach to determining No. arrests

1. **Resuscitation officer follow up**
Reviewing notes, visiting area +/- speaking with attending arrest team (n=7)

2. **No. 2222 calls with arrest documented on audit form** (n=2)

3. **All 2222 calls containing the word 'arrest' extracted** (n=1)

Key learning

Boards with a reliable process had dedicated resuscitation officer support.

Minimising the time between 2222 call and verifying the arrest increased % of 2222 calls successfully followed up.

Learning from cardiac arrests

Cardiac arrest reviews

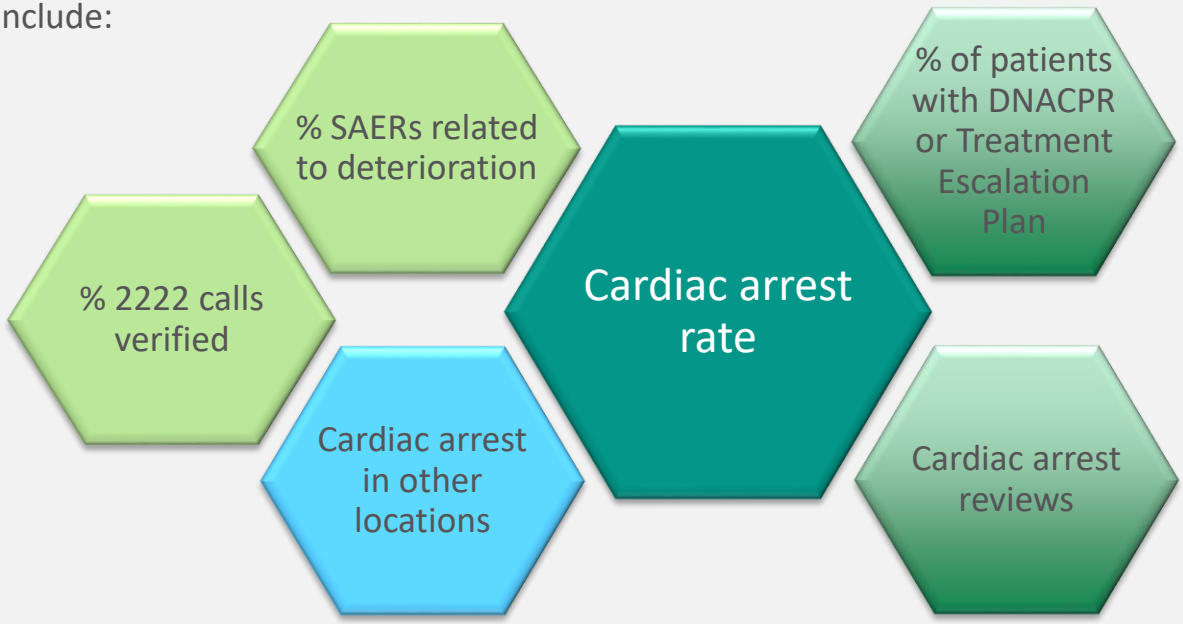
Cardiac arrest reviews vary in approach across Scotland. Learning from cardiac arrest reviews was linked by several boards to a culture where teams feel safe to share and reflect openly.

Productive review processes included those which were:

- multidisciplinary and completed in collaboration with the direct care team
- standardised, embedded as part of usual practice, and
- focussed on learning and improvement.

Measurement

Some boards use additional measures beyond cardiac arrest rate to understand their deteriorating patient improvement work. These include:



For more information on measures: SPSP Acute Adult Deteriorating Patient Measurement Framework

Sharing learning

Sharing learning within the health board was valued for developing situational awareness and driving improvement.

Opportunities taken to share learning included at the following levels:

- Team and unit
- Discipline or profession
- Directorate
- Site
- Board

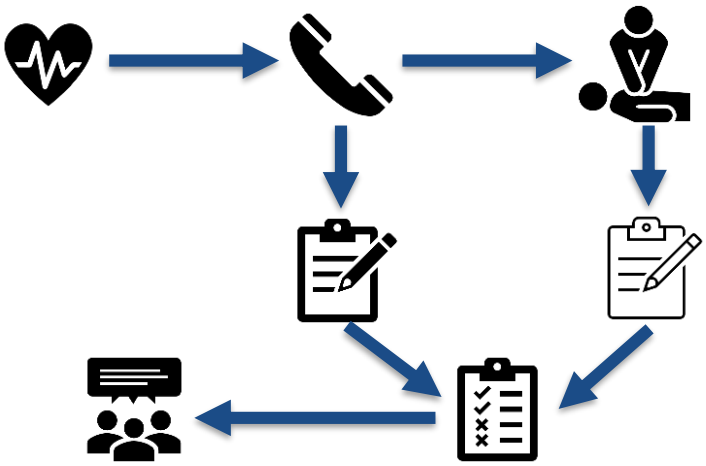
Key learning

Some boards had governance structures that included internal consideration of cardiac arrest data and the themes from cardiac arrest reviews. These boards were more likely to have a robust process for the identification of, and learning from cardiac arrests.

Key learning and resources

This scoping exercise has used an adapted Walk Through Talk Through approach to map current approaches and challenges in the identification and understanding of cardiac arrests in 10 boards across Scotland.
Boards shared a range of successful change ideas which have been collated into a resource to support improvement in cardiac arrest data collection and learning:

Identifying and Learning from Cardiac Arrests improvement resource



The SPSP Acute Adult Collaborative has a number of resources which can support teams to improve the safety and reliability of care for patients who experience a physiological deterioration during their hospital stay. These are free to access from the links below:

SPSP Acute Adult Programme Deteriorating Patient Change Package

SPSP Principles of Structured Response to Deterioration

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