

Reducing cardiac arrests: How we're improving care for people at risk of deterioration

Author: Wendy Nimmo, Associate Improvement Advisor, Acute Care portfolio

Introduction

The Scottish Patient Safety Programme (SPSP) is a unique national initiative that aims to improve the safety and reliability of health and social care and reduce harm, wherever care is delivered. The SPSP Acute Adult programme includes the deteriorating patient workstream, which aims to reduce mortality and harm for people in acute hospitals by reliable recognition and response to acutely unwell patients.

SPSP supports this by focusing on:

- early recognition of acute physiological deterioration through the National Early Warning Score (NEWS) (see Figure 1)
- the implementation of a process for structured response and treatment for sepsis
- person-centred care planning based on an individual's clinical condition and goals of care, and
- effective communication of people at risk and their treatment plan.

Method

A driver diagram, change package and measurement plan were developed. Figure 2 describes the range of interventions covered in the change package.

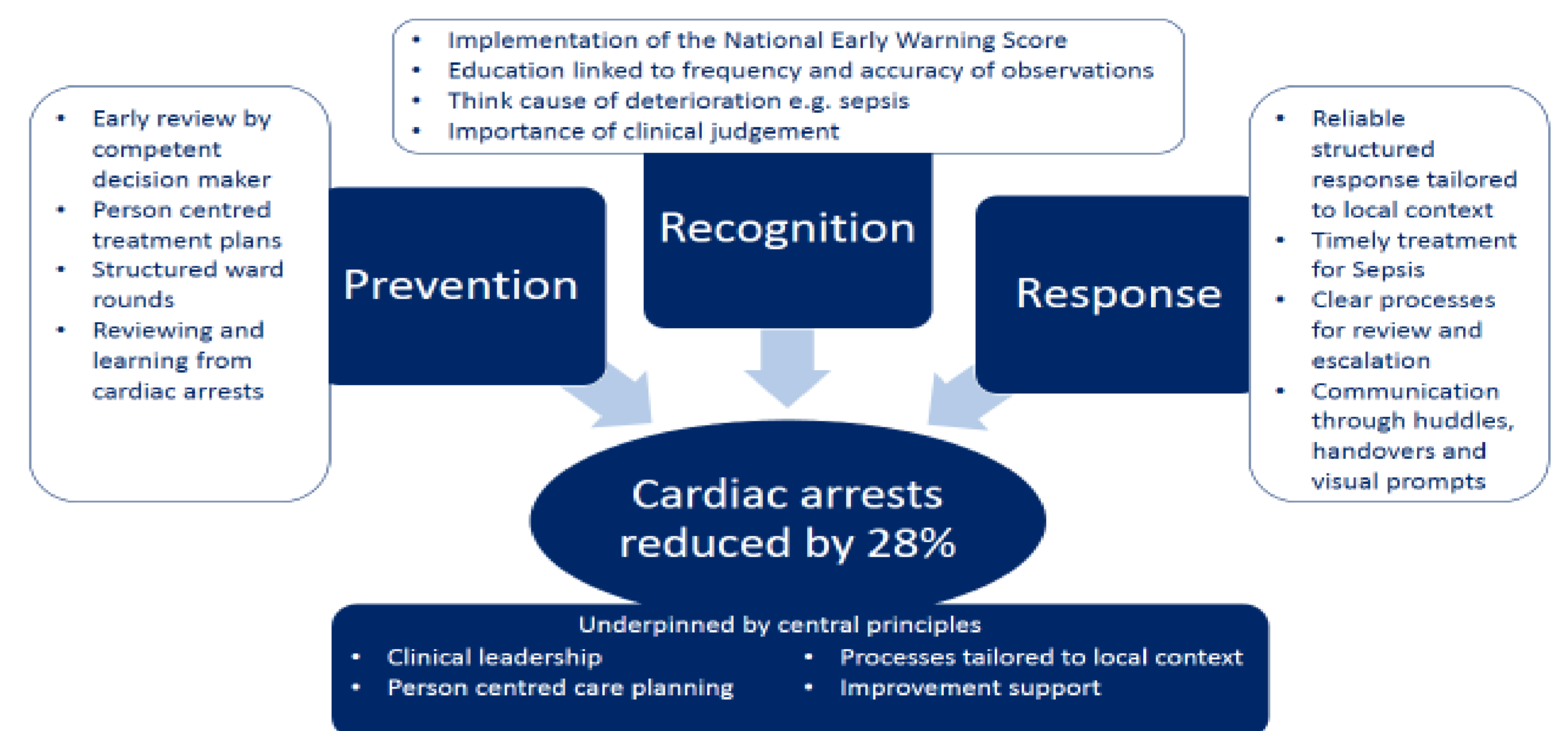


Figure 2

SPSP collaborated with NHS Education for Scotland to develop an online module to increase awareness and understanding of NEWS/NEWS 2 which has received positive feedback (Figure 3). This was published in May 2019 and has been accessed over 2,000 times to date.

Have I got NEWS2 for you

National Early Warning Score

In order to support a national approach to the care of deteriorating patients in acute hospitals, The Scottish Patient Safety Programme is encouraging the implementation of the updated National Early Warning Score (NEWS) 2 across Scotland.

This is an evidence based tool to support recognition and responses of acute physiological deterioration which is recommended by Royal College of Physicians.

For more information, visit: www.ihub.scot/spssp

NEWS2	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Respiratory rate	10-20	21-24	25-30	31-34	35-40	41-44	45-50	51-54	55-60	61-64	65-69	70-74	75-79	80-84	85-89	90-94	95-99	100-104	105-109	110-114	115-119	120-124
Oxygen saturation	96-100	94-95	92-93	90-91	88-89	86-87	84-85	82-83	80-81	78-79	76-77	74-75	72-73	70-71	68-69	66-67	64-65	62-63	60-61	58-59	56-57	54-55
Heart rate	50-100	101-109	110-119	120-129	130-139	140-149	150-159	160-169	170-179	180-189	190-199	200-209	210-219	220-229	230-239	240-249	250-259	260-269	270-279	280-289	290-299	300-309
Blood pressure	109/59	108/58	107/57	106/56	105/55	104/54	103/53	102/52	101/51	100/50	99/49	98/48	97/47	96/46	95/45	94/44	93/43	92/42	91/41	90/40	89/39	88/38
Urea	2.5-6.4	6.5-7.9	8.0-9.4	9.5-10.9	11.0-12.4	12.5-13.9	14.0-15.4	15.5-16.9	17.0-18.4	18.5-19.9	20.0-21.4	21.5-22.9	23.0-24.4	24.5-25.9	26.0-27.4	27.5-28.9	29.0-30.4	30.5-31.9	32.0-33.4	33.5-34.9	35.0-36.4	36.5-37.9
Consciousness	Alert	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Temperature	36.1-38.0	35.0-36.0	34.0-35.0	33.0-34.0	32.0-33.0	31.0-32.0	30.0-31.0	29.0-30.0	28.0-29.0	27.0-28.0	26.0-27.0	25.0-26.0	24.0-25.0	23.0-24.0	22.0-23.0	21.0-22.0	20.0-21.0	19.0-20.0	18.0-19.0	17.0-18.0	16.0-17.0	15.0-16.0

NEWS scores	Clinical risk
0	Low
Aggregate 1 - 4	Low
RED score* (Individual parameter scoring 3)	Medium
Aggregate 5 - 6	Medium
Aggregate 7 or more	High

Figure 1

"Excellent layout, easy to use and understand"

"Very informative, especially in relation to sepsis"

"Very useful, I learnt a lot"

"Gave good understanding to the changes in the NEWS scoring system"

Figure 3

Results

An improved approach to identifying and treating deteriorating patients quickly and effectively is contributing to a reduction in cardiac arrest rate by 28%. This means that, on average, there are 25 fewer people per month who are suffering this harmful experience in acute hospitals in Scotland.

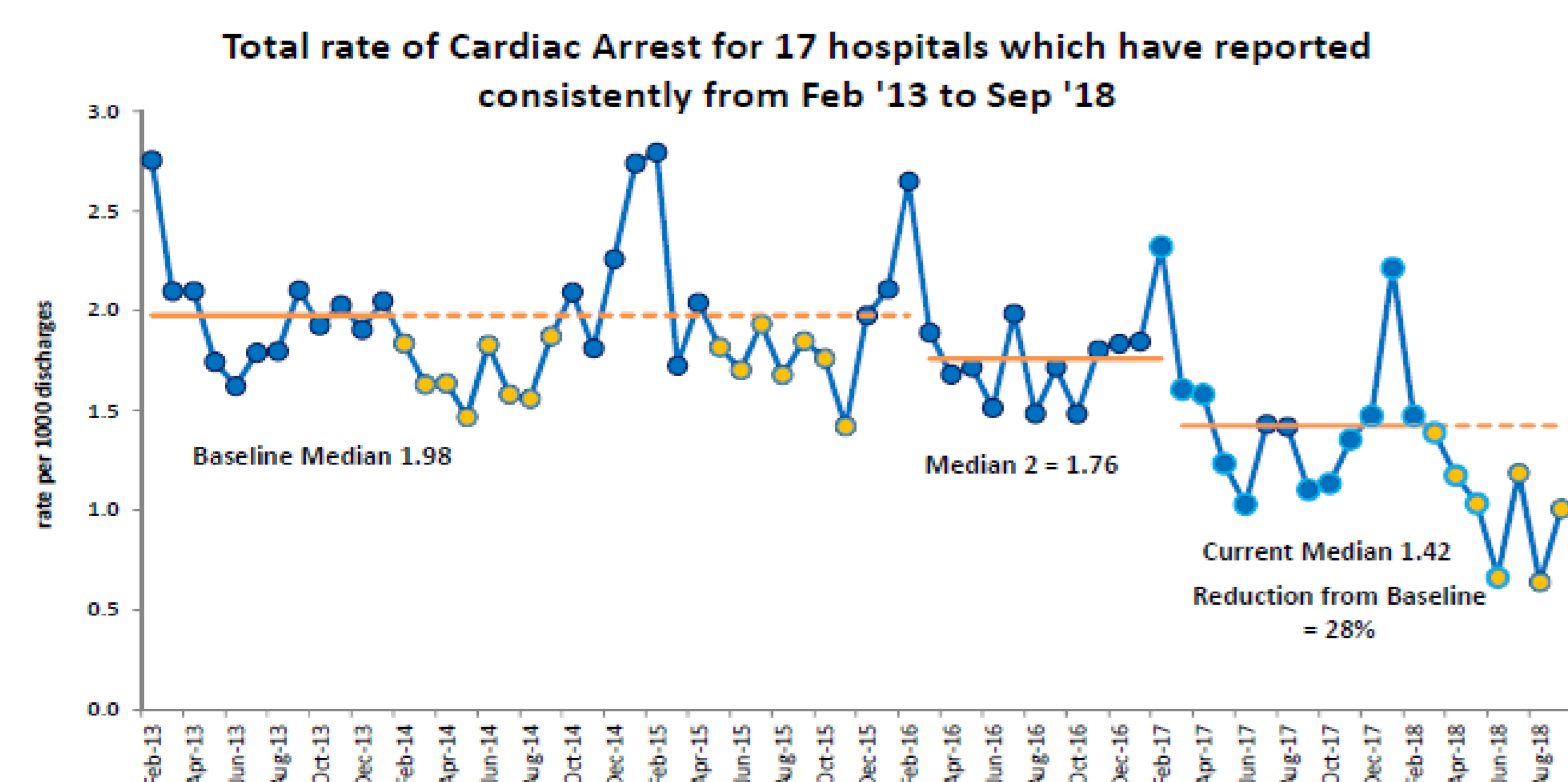


Figure 5

SPSP has hosted networking events to share successes and challenges and support staff to learn from each other (Figure 4).



Figure 4

"NEWS and cardiac arrest statistics, great to see vast improvements to patient care and overall reduction in deterioration, cardiac arrest and mortality as a whole 😊"

Conclusion

The changing culture and understanding of staff within NHSScotland have all been key to achieving better outcomes for people, through improved processes to identify and respond to deteriorating patients.