

Interventions to reduce mortality from in-hospital cardiac arrest: a mixed-methods study

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Plain English summary

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A substantial proportion of patients who experience a cardiac arrest in hospital have shown signs of deterioration for up to 8 hours before the event, which includes signs that have not been identified or acted on by staff. Only around 15% of patients who experience a cardiac arrest will leave the hospital alive. To tackle these avoidable deaths, the NHS has introduced a number of services to improve the means of identifying and caring for acutely ill patients on hospital wards. These include track-and-trigger systems (TTSs) (charts that help nurses to track a patient's condition and trigger a call for help when needed), outreach teams comprising staff with critical care skills who visit the wards and provide extra support, tools to ensure good communication between the wards and response teams, and education. This study explored which of these services were having the most impact. By looking at trends of in-hospital cardiac arrests and survival after arrest over a 5-year period in 106 hospitals, we found that the introduction of a national standard track-and-trigger tool for the NHS (the National Early Warning Score) and electronic, rather than paper, versions of the tool were associated with reductions in cardiac arrest rates of 7.5% per year in the hospitals where they were introduced, but not with differences in survival from cardiac arrests. The presence of outreach teams did not appear to confer any additional benefit across time, but increasing intensity, as reported in 2015, was associated with improvements in cardiac arrest survival. More research is required to identify whether or not such teams contribute to the benefits of TTSs, for example by helping educate ward staff.

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