

## Improving the quality of cardiovascular care by ambulance services: learning from the project

### Key findings

- Statistically significant improvements were achieved in eight out of twelve trusts for the stroke care bundle and seven trusts for the AMI care bundle.
- Overall performance for the AMI care bundle has increased in England from 43% to 79% and for stroke from 83% to 96%
- Patient experience was enhanced when physical, emotional and social needs were all attended to. Technical knowledge and relational skills together contributed to a perception of professionalism in ambulance personnel by patients.

### Successes

- Ten out of twelve trusts showed significant improvement in either the stroke or AMI care bundle and six out of twelve showed significant improvements in both AMI and stroke.
- There was also improvement in pain management for patients with AMI. This was achieved through modification of the standard numerical verbal pain assessment scale (1-10) by combining it with a descriptive scale (mild, moderate, severe) and a visual (Wong-Baker Faces) scale which means the tool caters for a wider range of patients, for instance overcoming language barriers.
- Better pain scoring has also led to wider use of Entonox and therefore increased patient comfort.
- The QI skills and knowledge acquired through participation in the project has led to 'spill-over' effects having been applied to improve care in other areas, such as asthma, where delivery of the care bundle increased from 49% to 72% nationally since 2010.
- The project was shortlisted in the 'Enhancing Care with Data and Information Management' category at the annual Health Service Journal Awards, which took place on 20th November 2012.

### Challenges

- The main challenges have been pressures of time (ie local QI leads found one day per week insufficient to manage their work effectively) and conflicting

demands and connectivity between different staff groups eg front-line and management.

- Some QI innovations, eg prefilled morphine syringes, could not be adopted due to budgetary constraints.
- Nationally, the greatest challenge was to achieve and then sustain engagement of all ambulance trusts. Some of the chief executive officers and medical directors who had signed up to the project in 2008 left as part of organisational restructuring. This led to delays and slower progress within some trusts. However, only one trust dropped out of the programme.
- The stroke care bundle was easier to deliver than the AMI bundle since it had fewer elements.

### **Advice to others doing similar projects**

- Different techniques are needed to obtain support from front-line staff who were more willing to try new methods and middle/senior management who proved more difficult to convince. To overcome this, two different communication strategies are needed to address the different needs and concerns of these two groups.
- Feedback to chief executives and senior managers, in the form of annotated statistical process control charts clearly showing the outcome of changes implemented, together with funnel plots showing how different services compare with each other, have been powerful tools to overcome barriers and obtain wider support for interventions.
- Using staff from early adopter sites to attend and facilitate QI workshops in late adopter trusts proved effective. The national collaborative enabled participants to see what had and had not worked in each trust which they could use to formulate actions that had a high chance of success.

### **More information about this project**

To find out more about the project, visit the [Lincoln University website](#).

The Ambulance Services Cardiovascular Quality Initiative (ASCQI) study results were published in January 2014. The [article](#) is available as a PDF to download at Implementation Science. An [abstract](#) is also available.

The ASCQI Quality Improvement Collaborative showed statistically significant improvements in all 11 Ambulance Trusts who completed the project. The study examined the period between January 2010 and February 2012. Across England overall, the percentage of emergency cases where care bundles were delivered in full increased from 43% to 79% for heart attack and from 83% to 96% for stroke.