

# Clinical audit does not work, is quality improvement any better?

## ABSTRACT

This article reviews the history of clinical audit and appraises its effectiveness. It discusses why audit can be ineffective in improving care and makes proposals to remove these barriers. The article describes how quality improvement and improvement science may offer a better alternative to traditional audit. It describes how the Royal College of Emergency Medicine is the first specialty society to attempt a national quality improvement programme.

Clinical audit has been part of the fabric of British hospital medical practice for the last 20 years. In 1989 a Department of Health White Paper, 'Working for Patients', introduced medical audit. It was heavily promoted as part of clinical governance in 1998 by the then Chief Medical Officer, Professor Liam Donaldson (Scally and Donaldson, 1998), and enthusiastically adopted across the NHS. Audits were designed to implement the best available evidence by creating standards that clinicians would measure themselves against and improve on. Almost every hospital has a clinical audit department, designed to assist clinical staff conducting audits. Specialty societies all offer some form of audit and conducting audits is essential for career progression in almost all specialties. Most clinical guidelines offer audit standards as an aid to implementation. Regulators, such as the Care Quality Commission in England, use audit performance to inform their inspections. The inquiry by Robert Francis into failings of clinical care at Mid Staffordshire NHS Foundation Trust further mandated participation in clinical audit (Francis, 2013).

## Audits in emergency medicine

The Royal College of Emergency Medicine has run national audits annually for the last 12 years. Each year, three different presentations or conditions are selected, covering children, adults and older people. The audits are specifically

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aimed at common, important presentations and emphasize timelessness of care. Audit standards measure process (how quickly or efficiently do you give care?), structure (is the place you give care in good enough?) or outcome (does the care you give do what it is supposed to do?) (Donabedian, 1966). The Royal College of Emergency Medicine audits benchmark participating centres. The clinical audits are designed to mainly identify process problems, but they also identify a small number of outcome and structural problems.

Participation is encouraged by regulators and supported by the Healthcare Quality Improvement Partnership, which means that hospitals have to submit audit results into their quality accounts each year. Almost all emergency departments in England, and most departments in the devolved nations, participate in this audit, usually submitting around 50 consecutive cases. This means that each audit comprises between 8000 and 12000 cases.

## What has audit achieved?

So what has clinical audit achieved? Do audits lead to improvements in clinical care, and if not, why not? Are there more effective ways to improve care? Other developed countries outside the UK have very variable approaches to audit and few countries have the profusion of national audits that is seen in the UK (Avidan and Myles, 2018).

Repeated Royal College of Emergency Medicine audits have shown mixed results in the effectiveness of clinical audit to improve care. *Figure 1* shows that there has been little change, and recently a decline in the proportion of patients with fractured hips who are in severe pain receiving analgesia within 20 minutes of arrival. This is a fundamental standard for a common and predictable problem. Similar findings have been found in the provision of analgesia for children with severe pain (*Figure 2*). Conversely, repeated audits of adult sepsis care have demonstrated a welcome increase in the proportion of patients that receive antibiotics in 1 hour from 27% in 2011 to 44% in 2017. The findings from these large-scale audits, repeated over several years, imply that audit can be an expensive, ineffective and effortful way to improve clinical care. Audit has become an effective measurement tool to benchmark care against other units and provide detailed quality assurance information for regulators, although this was never the intention.

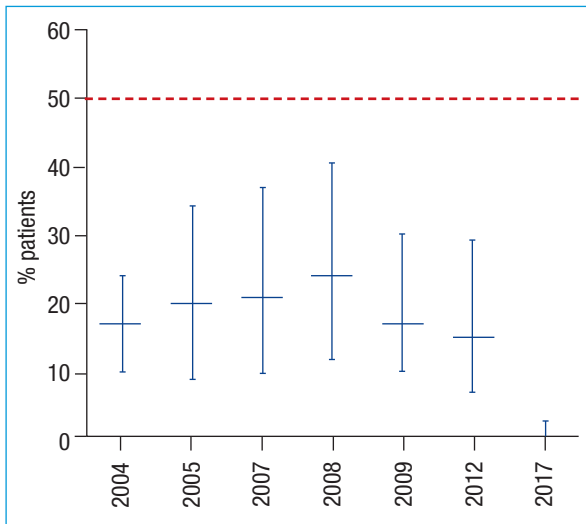


Figure 1. Proportion and interquartile range of people with a fractured neck of femur in severe pain who receive analgesia within 20 minutes of arrival against the Royal College of Emergency Medicine standard of 50%. From Royal College of Emergency Medicine (2018a).

### Why might audits not lead to improvement?

The reasons for audit failing to be an effective improvement tool are multiple (Johnston et al, 2000a, b). Frequently participation in audit is delegated to temporary staff, such as doctors in training, whose ability to implement meaningful change is limited and time bound. The completion of an audit can become more important for career advancement than care advancement. A single individual in a team is often made responsible for all audit, limiting his/her chance to drive improvements. Conducting an audit is a time-consuming and demanding activity, and a lot of effort will be put into the initial data collection leaving

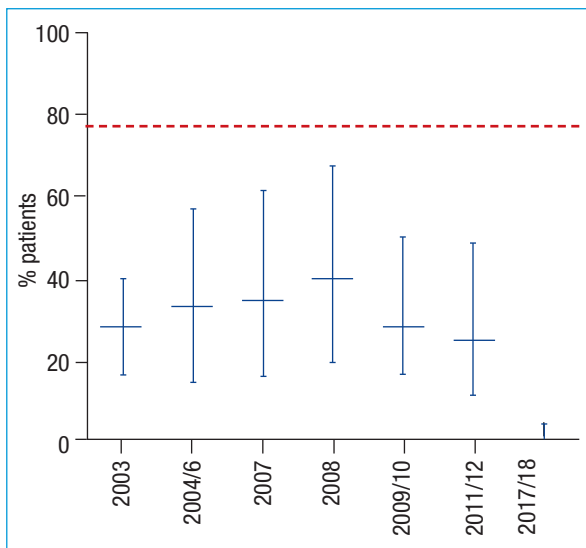


Figure 2. Proportion and interquartile range of children in severe pain who receive analgesia within 30 minutes of arrival against the Royal College of Emergency Medicine standard of 75%. From Royal College of Emergency Medicine (2018b).

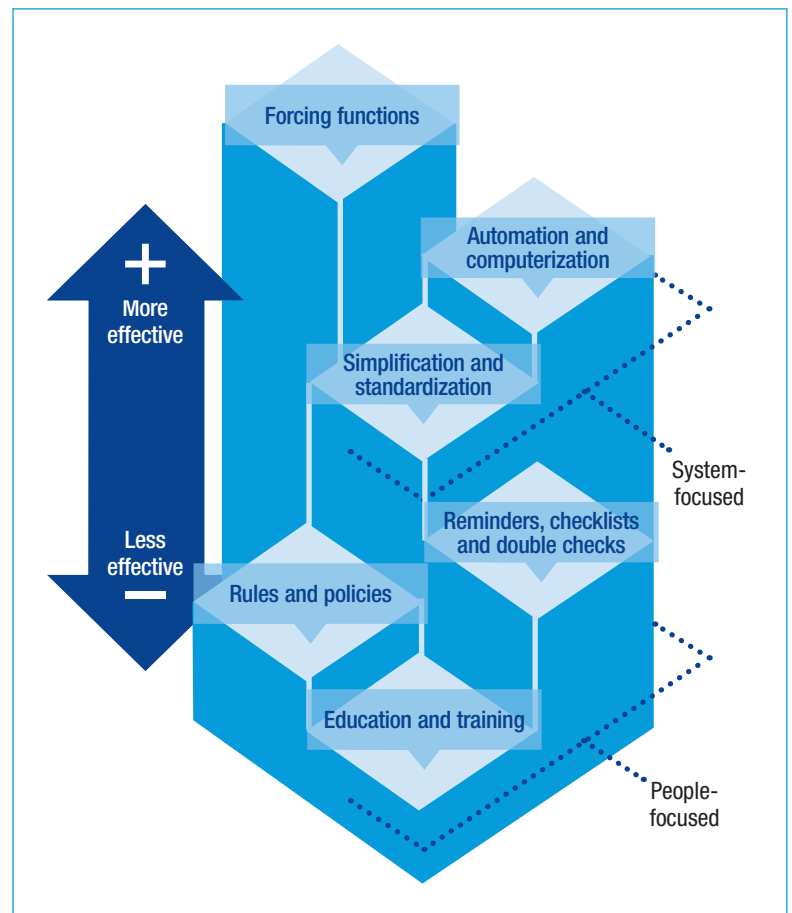
little time to develop, carry out and re-audit an action plan. A national audit may struggle to get results back quickly, lessening the potential impact and enthusiasm for intervention. Hospitals are expected to carry out far too many audits, and this leads to most audits being entirely focused on the initial data collection phase. Senior doctors may have negative attitudes towards audit and feel that the time required for an audit may be better spent on other aspects of care.

Fundamentally, far too much effort is put into the initial data collection and not enough into intervening. Frequently interventions are confined to teaching sessions of limited impact, or other easy to do but ineffective activities (Cafazzo and St-Cyr, 2012). Figure 3 shows the hierarchy of effectiveness of interventions used in health care; it can be seen that the most effective interventions are system based, while aiming for behaviour change, although safe, is less effective.

### Quality improvement is the way forward

Quality improvement and improvement science tries to tackle some of the difficulties of clinical audit. There is a welcome focus on a collective approach, emphasis on targeted data collection and rapid intervention, testing of interventions and clinical staff engagement. There is also a pragmatic recognition of the benefit of starting with

Figure 3. The hierarchy of intervention effectiveness.



## KEY POINTS

- Clinical audit can be an ineffective way to improve care.
- Quality improvement may offer a better way to improve care.
- The Royal College of Emergency Medicine has established a national quality improvement programme.

small projects and adapting solutions for local context. It is important to appreciate that quality improvement should not be seen as a ‘magic bullet’ – Dixon-Woods and Martin (2016) provided a pragmatic assessment of the potential problems and offered proposals to make quality improvement more effective. These proposals encourage structural reform, emphasize coordination of effort and resources, and objectivity about what interventions are effective.

The Royal College of Emergency Medicine, along with other Royal colleges, has recognized that understanding quality improvement techniques is an important skill for consultant emergency physicians. Higher specialist trainees are expected to conduct a quality improvement project as part of the requirements of their exit exam. Introducing this has been disruptive both for trainees and trainers but should equip trainees to be more effective consultants in the future.

Separate to this, the Royal College of Emergency Medicine audit programme is evolving into a national quality improvement programme. While the standards remain similar to previous national audits, there is less data entry, real-time national benchmarking and an increased emphasis on testing interventions, following the widely accepted Model for Improvement (NHS Improvement, 2018). The Royal College of Emergency Medicine is the first specialty body to transform a national audit programme into a national quality improvement programme (Boyle et al, 2016). Although this change is likely to be disruptive, it would be unethical to continue with the audit programme in its current form.

## Conclusions

It is time to critically consider whether the effort and expense expended on clinical audit is justified – experience over the last 10 years has shown that clinical audit does not automatically lead to better care. Quality improvement probably offers a better way to improve care. **BJHM**

*Conflict of interest: none.*

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