Using high-impact interventions to reduce infection risk by standardising good practice

Standardising care by implementing, monitoring and evaluating high-impact interventions can improve practice and reduce the risk of infection in hospital

The Newcastle upon Tyne Hospitals NHS Foundation Trust has six hospital sites with nearly 2,000 beds and over 11,000 employees, of whom 6,500 are clinical staff. In 2008, the trust implemented its local version of the national Saving Lives campaign.

Saving Lives: Reducing Infection, Delivering Clean Safe Care (DH, 2007) states that the risk of infection to patients can be reduced if healthcare staff consistently comply with evidence-based practice and guidelines every time they undertake a clinical procedure.

Seven high-impact interventions (HIIs), also named care bundles (Box 1, p16), form part of the Saving Lives programme. The interventions relate to specific aspects of care in which clinical procedures can increase the risk of infection if they are not performed correctly. They highlight the essential elements of carrying out a particular procedure that must be applied every time to reduce risk to the patient.

The purpose is to minimise variation in practice and help to provide ways of identifying where compliance needs to be increased and how often all elements are performed for a given procedure.

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ABSTRACT Coghill, E. (2009) Using high-impact interventions to reduce infection risk by standardising good practice. Nursing Times; 105: 28, 14–16. This paper describes the implementation of three high-impact interventions across an NHS trust with the aim of reducing the number of healthcare-associated infections. The initiative was phase 1 of the trust’s implementation of seven interventions identified in the Department of Health’s Saving Lives programme as reducing infections in patients at increased risk. E-learning, reviews of documentation and policies and procedures were used to support the implementation process.

The effects of healthcare-associated infections (HCAIs) vary from discomfort for the patient to prolonged or permanent disability or death. A small proportion of deaths each year are primarily attributable to hospital-acquired infections. In 2007, around 9,000 people died with MRSA bloodstream infections or had Clostridium difficile identified as the underlying cause or as a contributory factor (Office for National Statistics, 2008).

On average, an infection adds 3–10 days to a patient’s length of stay in hospital. It can cost £4,000–£10,000 more to treat a patient with an infection than one without an infection (DH, 2003). In 2008, the trust implemented its local version of the national Saving Lives campaign.

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BACKGROUND
- Healthcare-associated infection (HCAIs) are those acquired while in hospital or as a result of healthcare interventions.
- Hospital-acquired infections develop at least 48 hours after a patient has been admitted to hospital, or up to 48 hours after discharge (Jamieson, 2008). Outside this period, infections are considered to be community-acquired.
- In 2004, there were an estimated 300,000 HCAIs each year (House of Commons Committee of Public Accounts, 2005).
- The Saving Lives programme (DH, 2007) was introduced to support healthcare providers in reducing HCAIs. It identified seven high-impact interventions relating to areas of clinical practice where patients are at increased risk of infection, with the aim of reducing variations in care.
We introduced Saving Lives in two phases—phase 1 in June 2008 and phase 2 in September 2008. Phase 1 focused on three HIIs:
- Intravenous line care (peripheral and central);
- Urinary catheter care;
- Asepsis.

Phase 2 focused on the remaining HIIs. This article describes the implementation of phase 1.

DEVELOPING THE PROGRAMME

The director of nursing and patient services had overall responsibility to deliver the Saving Lives programme. A multiprofessional trust steering group was formed to take the lead on the overall progress and implementation of phase 1. Members included:
- Director of infection prevention and control;
- Members of the senior nursing team;
- Senior members of the infection control team;
- Assistant director of quality;
- Antimicrobial pharmacist;
- Practice improvement facilitators;
- Hotel services.

Funding was secured from the strategic health authority to appoint a dedicated clinical practice team in April 2008 for a period of 12 months. This consisted of five practice improvement facilitators to assist with the implementation of the programme. All were nurses from various clinical backgrounds covering both paediatric and adult areas.

Subgroups of the steering group were formed for each HII. They undertook an initial analysis to determine existing standards and policies, education and training, and clinical practice. The subgroups were led by a senior nurse and a medical consultant from different clinical areas.

The nursing and patient services department and the clinical governance and audit department developed an audit pro forma that included an accreditation scheme that would measure compliance with the Saving Lives programme. This was known as the ward accreditation scheme.

INITIATIVES LAUNCHED IN PHASE I

Phase 1 of Saving Lives has resulted in a number of new initiatives across the trust.

Standards and policies

New standardised insertion and ongoing care documentation in the form of stickers were developed for peripheral, central line cannulas and urinary catheters. These were designed with assistance from our supplies department. The stickers are peeled off a roll and stuck onto patient documentation. The nursing and patient services department and the clinical governance and audit

![FIG 1. PERIPHERAL CANNULA STICKER](image)

![FIG 2. WARD ACCREDITATION COMPLIANCE](image)

![Catherine Hick](image)

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E-learning packages about the care bundles and asepsis were developed for clinical staff, with questions asked at the end of the training to reinforce learning. These highlighted the critical elements required for asepsis, and peripheral cannula, urinary catheter and central venous catheter care HIIs. All clinical staff are expected to undertake the learning packages if they care for patients with any of these medical devices.

One facilitator managed the development and publication of the packages, which take approximately 5–10 minutes to complete. To date, nearly 5,000 clinical staff have completed them.

Competency assessment documents were also developed to complement the e-learning packages. The ward sisters and/or clinical educators are responsible for monitoring their clinical staff.

Laminated posters were designed to reinforce the critical elements required every time clinical care was undertaken. These were strategically placed in treatment rooms where the majority of procedures are carried out.

One key element of the Saving Lives Programme is to prevent unnecessarily peripheral cannulation. This is highlighted in the e-learning package, in which healthcare staff are asked to question the need for a cannula to be inserted.

Trust peripheral cannula audits have shown a continued reduction in the number of patients undergoing this procedure. In June 2008, the total number of patients with cannulas in place on one day was 469, compared with 322 in January 2009 (Fig 3).

A DH team visited the trust in December 2008 and found 100% compliance with Saving Lives documentation. They felt that incorporating the inspection of peripheral cannula sites with the drugs round was extremely effective and have recommended this practice and intend to share the examples of our documentation with other NHS organisations.

**SUMMARY**
To date, the implementation of the Saving Lives programme across our organisation has been successful. In particular, we have reduced the number of cannulas inserted. We continue to work hard to maintain the momentum and provide the highest quality clinical care in our hospitals.

**REFERENCES**