

New guidelines for prevention of hcais in acute care

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BACKGROUND

Over the past two decades healthcare-associated infections (HCAIs) have become a significant threat to patient safety. Technological advances in healthcare are often undermined by the transmission of infections, particularly those caused by antimicrobial-resistant strains of disease-causing micro-organisms that are now endemic in many healthcare environments.

The original epic guidelines (Pratt et al, 2001) were systematically developed principles of good practice for preventing HCAIs in NHS hospitals and other acute care services. They were commissioned by the Department of Health and developed by a nurse-led multiprofessional team at the Richard Wells Research Centre, Thames Valley University in consultation with key stakeholders, including colleges and professional and patient organisations.

The guidelines were part of the 'epic initiative' (evidence-based practice in infection control), intended to provide reliable evidence for the development of local infection prevention and control guidelines to facilitate clinically effective practice. Complementary epic guidelines focused on preventing HCAIs in primary and community care (Pellowe et al, 2003).

Evidence reviews in 2004 and 2005 (Pellowe et al, 2004; 2005) indicated that some original epic recommendations should be updated to ensure they:

- Continued to reflect new evidence;
- Remained relevant to infection control and prevention practice;
- Enjoyed the confidence of practitioners and patients.

As a result, epic2 guidelines were developed to replace the original guidelines.

THE NEW GUIDELINES

The epic2 guidelines consist of:

- Standard infection control principles, including hospital environmental hygiene, hand hygiene, use of personal protective equipment, and use and disposal of sharps;
- Preventing infections associated with short-term indwelling urethral catheter use;
 - Preventing infections associated with the use of central venous access devices.

Evidence for the guidelines was identified by systematic reviews of experimental and non-experimental research. Evidence from expert opinion was considered following formal assessment using a validated appraisal process (Agree Collaboration, 2001; SIGN, 2001). Best available evidence then influenced guideline recommendations.

These guidelines will inform the development of detailed local protocols and ensure that important standard principles for infection prevention are incorporated. They are aimed at hospital managers, hospital infection control teams and healthcare practitioners. At an individual level, the guidelines are intended to influence the quality and effectiveness of infection prevention decision-making. Their dissemination will also help patients to understand infection prevention precautions.

Each set of guidelines consists of:

- A summary of the review process;
- A synthesis of the related evidence;
- An economic opinion, where appropriate;
- Guideline recommendations;
- A bibliography listing the cited evidence;
 - Areas for further research and suggested audit criteria.
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The evidence base will be reviewed in 2009 and the guidelines updated in 2011.

In addition to informing local protocols, epic2 can be used as a benchmark for determining appropriate infection prevention decisions and, as part of reflective practice, to assess clinical effectiveness. They also provide a baseline for clinical audit, evaluation and education, and facilitate ongoing quality improvements.

It is not anticipated that implementing the guidelines will result in significant additional cost, unless additional equipment or resources are needed or where adherence to current guidance is poor.

EVIDENCE FOR APPRAISAL

The guidelines were developed using systematic reviews. Electronic databases were searched for national and international guidelines and research studies published between 1 January 1999 and 31 August 2005. A two-stage search process was used.

Stage 1: Identification of systematic reviews and guidelines

For each set of guidelines an electronic search was conducted for systematic reviews of randomised controlled trials and current national and international guidelines in English. Databases searched included:

- Cochrane Library;
- National Guideline Clearinghouse;
- National electronic Library for Health;
- NICE.

Guidelines were then appraised using the Agree Instrument (Agree Collaboration, 2001), an evaluation method for assessing the methodological quality of clinical practice guidelines. Accepted guidelines were included as part of the evidence base supporting the development of the epic guidelines. They were also used to verify professional consensus and in some instances, as the primary source of evidence.

Stage 2: Systematic search for additional evidence

Review questions for the systematic reviews of the literature were then developed for each set of epic guidelines following recommendations from expert advisers. On completion of the main search, an economic filter was applied. The following databases were searched:

- Medline;
- Cumulative Index of Nursing and Allied Health Literature;
- Embase;
- The Cochrane Library.

Titles and abstracts were printed for preliminary review, and the full text of those where the title or abstract:

- Addressed one or more review question;
- Identified primary research or systematically conducted secondary research;

- Indicated a theoretical, clinical or in-use study. Wherever possible, in-use rather than in vitro studies were retrieved.

All full-text studies were independently assessed by two experienced reviewers, who identified those meeting the inclusion criteria for critical appraisal.

ASSESSMENT AND DATA EXTRACTION

Studies were appraised using a process adapted from the study quality assessment system developed by the Scottish Intercollegiate Guideline Network (SIGN, 2001). All were appraised and data extracted by one reviewer and checked by a second.

Evidence tables were constructed from the quality assessments and the studies summarised in the evidence reports. The evidence was graded using methods adapted from SIGN (2001) by NICE (NICE, 2004; Harbour and Miller, 2001).

The evidence tables and reports were presented to the advisers. Seminal works and national and international guidelines were also considered. Following extensive discussion the guidelines were drafted. Influential factors included:

- Nature and applicability of the evidence;
- Costs and knowledge of healthcare systems.

The grading scheme was used to define the strength of recommendation.

CONSULTATION PROCESS

The draft guidelines were circulated to a range of professional and public stakeholders for comment. Comments were collated for consideration by the guideline developers and advisers who agreed any changes to the draft recommendations.

The new Infection Control section of nursingtimes.net launches on 3 July.

LEARNING OBJECTIVES

- Be aware of the background to the epic2 guidelines
- Understand the development process
- Be aware of the subjects covered in the guidelines
- Understand why national guidelines on infection control are necessary

FULL COVERAGE OF EPIC2

The remaining articles in this series, giving the full epic2 guidelines, will appear in the new Infection Control section of nursingtimes.net as follows:

- Environmental and hand hygiene: 3 July;
- Use and disposal of sharps: 10 July;
- Indwelling urethral catheters: 17 July;
- Central venous access devices: 24 July;
- Patient guidelines: 21 July;
- Implementing the guidelines: 28 July

A longer version of this article will also be available on the website from 3 July, including tables setting out levels of evidence and classification of recommendations used in developing the guidelines, and a full list of authors.

GUIDED LEARNING

- Outline why the original epic guidelines were updated
- Explain the development process
- List the subjects covered in epic2
- Explain how the guidelines can be used, and by whom

This article has been double-blind peer-reviewed.

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