

Saving Lives: reducing infection, delivering clean and safe care

High Impact Intervention No 6

Urinary catheter care bundle



Aim

To reduce the incidence of urinary tract infections related to indwelling urethral catheters

Context

The Health Act 2006 Code of Practice¹ states that NHS organisations must audit key policies and procedures for infection prevention. This high impact intervention helps trusts achieve this aim by providing a focus on elements of the care process and a method for measuring the implementation of policies and procedures.

Urinary tract infections are the second largest single group of healthcare-associated infections in the UK, amounting to 19.7% of all hospital acquired infections.²

The presence of a urinary catheter, and the duration of its insertion, are contributory factors to the development of a urinary tract infection. Some 60% of healthcare-associated urinary tract infections are related to catheter insertion.² In 2000, a National Audit Office (NAO) report³ indicated that revised urinary catheter management policies could lead to a decrease in the number of urinary tract infections. However, a later review carried out by the NAO⁴ found that 40% of the infection control teams who responded felt that urinary catheter guidelines had been adopted only by parts of their trusts, with a further 10% of trusts not having adopted guidelines at all. The extra financial cost of urinary infection has been estimated at £1,122 per patient.³

The Department of Health commissioned the EPIC team at Thames Valley University to produce a set of guidelines for preventing healthcare-associated infection, which includes the insertion and management of short term indwelling urinary catheters in acute care.⁵ The Infection Control Nurses Association audit tool has a section on urinary catheters,⁶ and NHS Quality Improvement Scotland has produced a catheter care guideline.⁷

Why use the care bundle?

This care bundle is based on EPIC guidelines, expert advice and other national infection prevention and control guidance. It should support implementation of local and national policy. The purpose is to act as a way of improving and measuring the implementation of key elements of care.

The risk of infection reduces when all elements within the clinical process are performed every time and for every patient. The risk of infection increases when one or more elements of a procedure are excluded or not performed.

Elements of the care process

There are two sets of actions outlined below as good practice; these are concerned with:

- a** insertion
- b** ongoing care.

Insertion actions

Catheter needed?

Avoid if possible.

Clean the urethral meatus

Prior to insertion of catheter.
With sterile normal saline.
Use sterile lubricant.

Sterile, closed drainage system

Choice of urinary catheters should be based on individual patient assessment and local policy.

Hand hygiene

Decontaminate hands before and after each patient contact.
Use correct hand hygiene procedure.

Aseptic technique

Gown, gloves and drapes as indicated should be used for the insertion of invasive devices.

Personal protective equipment

Gloves are single-use items and should be removed and discarded immediately after the care activity.
Eye/face protection is indicated if there is a risk of splashing with blood or body fluids.

Ongoing care

Hand hygiene

Decontaminate hands before and after each patient contact.
Use correct hand hygiene procedure.

Catheter hygiene

Clean catheter site regularly as per local policy.

Sampling

Perform aseptically via the catheter port.

Drainage bag position

Above floor but below bladder level to prevent reflux or contamination.

Catheter manipulation

Examination gloves should be worn to manipulate a catheter, and manipulation should be preceded and followed by hand decontamination.

Catheter needed?

Remove as soon as possible.

Using the bundle to ensure all elements of care are performed

Checking compliance with the elements in the care process will show the elements which were or were not performed. The tools on the CD will help you to:

- 1 identify when all elements have been performed
- 2 see where individual elements of care have not been performed
- 3 enable you to focus your improvement effort on those elements which are not being consistently performed

Using the compliance tool

- 1 Each time a care element is performed, insert a tick in the relevant column. If the action is not performed leave it blank.
- 2 Do this for each action, ensuring you tick it only when an element of care is performed correctly.
- 3 Calculate the totals and compliance levels by totalling the columns and using the tools provided (on the CD or at www.clean-safe-care.nhs.uk).
- 4 Your goal is to perform every element of care every time it is needed. The "All elements performed" column should be ticked when every care element is given correctly. This should total to 100% compliance when all care elements have been given correctly on every occasion.
- 5 Where elements have not been performed overall compliance will be less than 100%. This provides immediate feedback for users of the tool on those elements missed, and actions can then be taken to improve on compliance levels.
- 6 The percentage compliance figures for individual care elements show you where you need to focus effort to improve overall compliance.
- 7 The number of times when all elements are performed should be the same as the number of observations you perform. For example if you monitor the care process 10 times, then there should be 10 occasions when all elements were performed.

When the calculation is completed, the calculator tools on the CD (or at www.clean-safe-care.nhs.uk) will automatically show compliance graphs and run-charts for each element of care and for overall compliance with each high impact intervention. This will show you visually where to focus your improvement efforts to achieve full compliance.

Example

Care elements Observation	Care element 1	Care element 2	Care element 3	Care element 4	All elements performed
1	✓		✓	✓	
2	✓	✓		✓	
3	✓	✓	✓	✓	
4	✓	✓	✓	✓	
5	✓	✓	✓	✓	✓
Total number of times an individual element was performed	5	4	4	4	1
% when element of care was given	100%	80%	80%	80%	20%

This example shows that while most care elements were performed on only one occasion were ALL elements performed correctly. Overall compliance with all elements was only 20% and as a result the risk of infection was significantly increased.

Best practice guides

EPIC guidelines for urinary catheter management⁵

The ICNA audit tool section on managing urethral catheters⁶

NHS Quality Improvement Scotland urinary catheterisation and catheter care guidelines⁷

Recommended resources

Many guidelines and papers are available in the National Resource for Infection Control at www.nric.org.uk

The NHS infection control e-learning package is available at www.infectioncontrol.nhs.uk

References

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3. National Audit Office. The management and control of hospital acquired infection in Acute NHS Trusts in England. London: The Stationery Office. 2000. Available at www.nao.org.uk/publications/nao_reports/9900230.pdf (accessed 28 February 2007)
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5. Pratt RJ, Pellowe CM, Wilson JA, Loveday HP et al. epic2: National evidence-based guidelines for preventing healthcare-associated infections in NHS hospitals in England. *Journal of Hospital Infection* 2007, 65:S1–S64. Available at www.epic.tvu.ac.uk/PDF%20Files/epic2/epic2-final.pdf (accessed 28 February 2007)
6. Infection Control Nurses Association. Audit tools for monitoring infection control standards. London: Infection Control Nurses Association. 2004. Available at www.icna.co.uk/public/downloads/documents/audit_tools_acute.pdf (accessed 28 February 2007)
7. NHS Quality Improvement Scotland. Urinary catheterisation and catheter care. Best practice statement – June 2004. Edinburgh: NHS Quality Improvement Scotland. 2004. Available at www.nhshealthquality.org/nhsqis/files/Urinary_Cath_COMPLETE.pdf (accessed 28 February 2007)

To download further copies of all high impact interventions and calculator tools or to print/order extra hard copies, go to www.clean-safe-care.nhs.uk