The high impact actions for nursing and midwifery 3: protection from infection

Most urinary tract infections are linked to indwelling catheters. Best practice and limiting catheterisation to patients who really need it can help reduce them.

**Authors**

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**Abstract**


Four out of every five urinary tract infections can be traced to indwelling catheters. If the number of these infections is to be reduced significantly, nurses need to implement best practice for catheter care, and only catheterise patients when absolutely necessary.

**Introduction**

Patients with indwelling urinary catheters, those undergoing urological manipulations, long stay older male patients and those with debilitating diseases are at high risk of healthcare associated infections such as catheter-associated urinary tract infections (CAUTIs) (Kali et al., 2003).

Those at greatest risk are patients with indwelling urinary catheters, in particular, 80% of UTIs can be traced to indwelling urinary catheters (NHS National Audit Office, 2003).

There are few up to date statistics on UTI. However, in the mid 1990s, it was estimated it cost the NHS around £121 a year to treat patients with catheter associated infections (Kali et al., 2003).

In many trusts, the number of catheter acquired UTIs (CAUTIs) is not routinely measured. However, where audits have taken place, the rate has been shown to be as high as 32%. There is also wide variation in the type of catheters used, systems for stock management and clinical identification of patients who need to be catheterised.

**WHAT CAN NURSES DO?**

Catheterisation carries many risks, including tissue damage, bladder damage, infection, encrustation and catheter blockage. The number of all these increases the longer the catheter remains in situ.

Nurses who perform catheterisations therefore not only need to ensure ongoing catheter care is of the highest standard, but also have a responsibility to check that there is a clear clinical need for catheterisation.

A number of approaches have been shown to be successful in reducing the use of catheters, and associated infection levels:

- Programmes to reduce the number of catheters used, standardisation of equipment, insertion protocols and optimal catheter care;
- Continuous programmes of education and training to improve catheter care;
- A policy of early removal.

Healthcare assistants are a vital group who can contribute to improvements in high dependency units and theatres.

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Stringent stock control was introduced, so wards could only stock a maximum of 10 catheters in two sizes, if there was a high dependency area, and should be given the support and permission to challenge the nurse for a patient to have a catheter inserted.

**Case Study 1: Bringing Infection Control Services in House**

Birmingham’s Royal Orthopaedic Hospital has 150 beds and carries out more than 16,500 procedures a year, mostly elective hip and knee replacements. Low rates of MRSA and C. difficile had led to a general perception that the hospital had no infection problem. However, a 2008 audit revealed a 32% rate of CAUTIs. This compared with a national average of 7.3%. In addition, a catheter stock audit discovered that many different types were being used, with no standardisation across the hospital, and that 137 of the 660 catheters in stock were out of date.

The hospital needed to address the misplaced belief that there was no infection problem and tackle the problem head on. It began by selecting one type of catheter to be used throughout the organisation. Staff were trained in aseptic technique, and a policy of early removal was introduced to ensure everyone was competent in aseptic, non-touch technique (ANTT). The basis of the ANTT is that the only way to truly reduce infection risk is not to touch key areas, even if wearing sterile gloves.

The work was carried out as part of the Think Link programme, which brings together the five elements of good infection prevention. These are: cleaning universal precautions; hand hygiene; communication; and patient power.

**Impact of the initiative**

Within six months, the CAUTI rate had fallen to 5% and, in the past year, it has remained at zero. As a consequence, patients are no longer forced to remain in hospital for treatment. Because the catheterisation rate has come down, fewer patients experience the discomfort and inconvenience of a catheter.

The ANTT training programme is now used for all training procedures, such as cannulation. A new catheter tray is being introduced, which will save around eight minutes per catheter insertion. Reducing the need to treat CAUTIs is estimated to have saved the hospital around £185,000.

**Case Study 2: a Giant Ladder**

The Antimicrobial Nursing Service at Brighton and Sussex University Hospitals Trust came up with a novel way of educating busy ward staff in best practice approaches to catheter care.

They designed a giant floor game called Ladders and Bladders. Teams of staff compete to see who has the most knowledge about good catheter care.

The game was piloted with healthcare assistants in 2009 as part of a comprehensive programme to reduce catheter use and, consequently, to cut CAUTIs.

It involves answering questions that do not have “yes” or “no” answers, but which are designed to stimulate discussion. Players can challenge an answer and, if it turns out to be wrong, the question is up for discussion.

With the help of NHS Innovations South East, Ladders and Bladders is in commercial production and will be on sale in 2010 for use in other hospitals and healthcare settings.

An electronic version is scheduled for 2011.

The trust’s work to reduce catheter use and infections began three years ago, when it began considering new catheter products that claimed lower infection rates. Before investing in these products, the trust carried out an audit to look at catheter use. It found catheters were being used too often and for too long, sometimes without clinical need, with the result that infection rates had remained at zero.

The trust developed a comprehensive catheter action plan, with education and training as key. Catheterisation is now used throughout the trust and a protocol has been developed for the management of male patients with acute retention of urine. Patients who are discharged with a catheter receive a referral form and a catheter diary.

**Impact of the initiative**

The work has helped to reduce catheter use by 24% from 2007 to 16.7% in January 2010. The incidence of CAUTIs has fallen over the same period from 18% to 13.3%, and there are fewer A&E attendances and admissions with catheter related problems.

The interface between primary and acute care has improved since the discharge pro forms and patient diaries were introduced.

The trust has seen an improvement in care and in adherence to policies on catheter storage, antibiotic use and discarding of disconnected bags. A catheter champions’ programme was launched in May 2010 and an e-learning modular programme is being designed. The trust is estimated to have saved £50,000 in reduced admissions and £60,000 in reduced attendances to A&E.

**Case Study 3: Urinary Catheter Assessment and Monitoring Forms**

As Winchester and Eastleigh Healthcare Trust, urinary catheter assessment and monitoring (UCAM) forms were introduced in October 2009, following an audit for other urinary catheter use. The care plan for all patients with urinary catheter problems.

With the help of NHS Innovations South East, Ladders and Bladders was launched in May 2010 and an e-learning modular programme is being designed. The trust is estimated to have saved £50,000 in reduced admissions and £60,000 in reduced attendances to A&E.

**Impact of the initiative**

The initiative has helped to prevent unnecessary catheterisation and is prompting a daily review of catheter use in every patient with a catheter, thereby encouraging early removal. The form provides evidence of the quality of patient care and, by reducing catheterisation, it has reduced workload so nurses can deliver better care.

By contributing to the prevention of CAUTIs, it is estimated that the form has helped to save around £130,000. There are also other savings, resulting from patients not being catheterised and the reduced demand on urology nurses.

References


**What are the best sources of information?**

- **National Institute for Health and Clinical Excellence Guidance for Healthcare Associated Infections in women.** www.nice.org.uk/crd40
- **NHS Quality Improvement Scotland. Urinary catheterisation, tinyurl.com/catheter-trends