

Evidence table: Indwelling Urinary Catheter Insertion and Ongoing Care

Reference	Evidence level (I-VII)	Key findings, outcomes or recommendations
<p>Association of Continence Advice, Notes on Good Practice (2006) Urethral Catheterisation NO.6</p>	<p>VII</p>	<ul style="list-style-type: none"> • Documentation/legal record and point of reference for further interventions if required • Record for investigation of complaints and/or litigation • What needs to be documented • Indications for catheterisation
<p>Australian Guidelines for the Prevention and Control of Infection in Healthcare (2010) pages 137-140 https://www.nhmrc.gov.au/guidelines-publications/cd33</p>	<p>V</p>	<ul style="list-style-type: none"> • Assess the need for insertion of an indwelling urinary catheter prior to insertion. • Urinary catheters should be inserted using sterilised equipment (including a sterile drape) & an aseptic technique, using the smallest bore catheter possible that will not be associated with leakage. Staff performing the procedure must be trained and competent in the technique. • No advantage in using antiseptic preparations over sterile saline for cleansing the urethral meatus prior to catheter insertion. The use of lubricant or anaesthetic gel minimises urethral trauma & discomfort. • Maintaining an aseptic, continuously closed urinary drainage system to minimise infection. • No reduction in bacteriuria has been demonstrated when antiseptic/antimicrobial agents are used for meatal care compared with

		<p>routine bathing or showering.</p> <ul style="list-style-type: none"> • Intermittent bladder irrigation should may be indicated during urological surgery or to manage catheter obstruction.
Australia and New Zealand Urological Nurses Society, (2014). Catheterisation Clinical Guidelines		<ul style="list-style-type: none"> • Only trained Health Care Professionals trained who have knowledge & understanding of the urinary tract, the catheterisation process & the principles of asepsis should insert urethral catheters. • Outlines procedure to insert & care for urinary catheter. • A closed drainage system must be maintained for best practice in preventing CAUTI. • Urine samples should only be taken if the patient is symptomatic of UTI.
Gould, C; Umscheid,C; Agarwal,R; Kuntz,G; Pegues, D; and the Healthcare Infection Control Practices Advisory Committee (HICPAC).(2009). Guideline For Prevention Of Catheter-Associated Urinary Tract Infections. Centre for Disease Control. Downloaded from: https://www.cdc.gov/infectioncontrol/guidelines/CAUTI/index.html	V	<ul style="list-style-type: none"> • Evidence based guidelines for insertion & ongoing management of urinary catheters to prevent UTIs. • Proper technique for insertion in aseptic manner. • Proper technique for ongoing urinary catheter management including hygiene, sampling, closed drainage systems and preventing obstruction. • Provision of guidelines, education auditing and feedback.
Government of Western Australia Department of Health (2015). Indwelling Catheter: Blockage. Clinical Guideline, Women's and Newborn Health Service, King Edward Memorial Hospital.	V	<ul style="list-style-type: none"> • Health care workers need to be trained in how to insert urinary catheters • Evidence based guideline which outlines procedures for unblocking urinary catheters, both in closed system and open catheter situations.

<p>Lee, N., Marchalik, D., Lipsky, A., Rushton, G., Pohl, H., & Song, X. (2016). Risk Factors for Catheter Associated Urinary Tract Infections in a Pediatric Institution. <i>The Journal of Urology</i>.</p>	<p>IV</p>	<ul style="list-style-type: none"> • Equipment required. • In hospitalised paediatric patients, longer duration of urinary catheter drainage, positive contact precautions status & a history of catheterization appear to be associated with a higher risk of catheter associated urinary tract infection.
<p>Loveday, H.P. et al. (2014) epic3: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England: Guidelines for preventing infections associated with the use of short-term indwelling urethral catheters, <i>Journal of Hospital Infection</i>, Volume 86.</p>	<p>V</p>	<ul style="list-style-type: none"> • Only use indwelling urethral catheters when clinically indicated. Daily reassessment of the reasons for catheterisation, to ensure removal of the catheter when no longer clinically indicated. • Select a catheter that minimises urethral trauma, irritation and patient discomfort & is appropriate for the anticipated duration & needs of catheterisation. • Catheterisation is an aseptic procedure & should only be undertaken by healthcare workers trained and competent in this procedure. • Clean the urethral meatus with sterile, normal saline prior to the insertion of the catheter. • Connect a sterile closed urinary drainage system with a sampling port. Do not break the connection between the catheter & the urinary drainage system unless clinically indicated. • Change indwelling urethral catheters &/or drainage bags when clinically indicated & in line with the manufacturer's recommendations. • Use the sampling port & the aseptic technique to obtain a catheter sample of urine.

		<ul style="list-style-type: none"> • Routine daily personal hygiene is all that is required for meatal cleansing.
Meddings J, et al. (2013). Reducing unnecessary urinary catheter use and other strategies to prevent catheter-associated urinary tract infection: an integrative review. <i>BMJ Quality Safety</i> , 23 :277-289.	V	<ul style="list-style-type: none"> • Health care workers must be aware of the appropriate indications for indwelling urethral catheter use. • Early removal of the catheter & frequent reassessment of the need for an indwelling urethral catheter is vital to minimise risk to patient.
NSW Government Health, (2015) Adult Urethral Catheterisation for Acute Care Settings, Guideline.	V	<ul style="list-style-type: none"> • Routine urine culture screening is not indicated every patient with a catheter. Urine specimen for culture should only be collected if the patient has signs and symptoms of a urinary tract infection (UTI) or requires a septic work-up.
Panknin, T & Althaus, P. (2001). Guidelines for preventing Infections associated with the Insertion and Maintenance of Short Term Catheters in Acute Care. <i>Journal of Hospital Infection</i> , 47(Suppl), S39 – S46	V	<ul style="list-style-type: none"> • Guideline for prevention of infection • Limit catheter use-review need for catheter daily • Develop care plans • Surveillance & feedback on urinary infection rates • Implementation of written guidelines for catheter use, insertion & maintenance
Royal College of Nursing Catheter Care RCN Guidance for Nurses (2007)	VII	<ul style="list-style-type: none"> • Indications for catheterisation • Catheter care

The Hierarchy of Evidence

The Hierarchy of evidence is based on summaries from the National Health and Medical Research Council (2009), the Oxford Centre for Evidence-based Medicine Levels of Evidence (2011) and Melynyk and Fineout-Overholt (2011).

- I** Evidence obtained from a systematic review of all relevant randomised control trials.
- II** Evidence obtained from at least one well designed randomised control trial.
- III** Evidence obtained from well-designed controlled trials without randomisation.
- IV** Evidence obtained from well designed cohort studies, case control studies, interrupted time series with a control group, historically controlled studies, interrupted time series without a control group or with case- series
- V** Evidence obtained from systematic reviews of descriptive and qualitative studies
- VI** Evidence obtained from single descriptive and qualitative studies
- VII** Expert opinion from clinicians, authorities and/or reports of expert committees or based on physiology

Melynyk, B. & Fineout-Overholt, E. (2011). *Evidence-based practice in nursing & healthcare: A guide to best practice (2nd ed.)*. Philadelphia: Wolters Kluwer, Lippincott Williams & Wilkins.

National Health and Medical Research Council (2009). *NHMRC levels of evidence and grades for recommendations for developers of guidelines (2009)*. Australian Government: NHMRC.

http://www.nhmrc.gov.au/files/nhmrc/file/guidelines/evidence_statement_form.pdf

OCEBM Levels of Evidence Working Group Oxford (2011). *The Oxford 2011 Levels of Evidence*. Oxford Centre for Evidence-Based Medicine. <http://www.cebm.net/index.aspx?o=1025>