

Urinary Drainage - Trial Removal of Urethral Catheter in the Inpatient Setting

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• Directorate(s)	All Directorates
• Department(s)	Any inpatient clinical area where an adult requires a trial removal of urethral catheter
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• Used by which staff?	All nursing and midwifery staff employed at Auckland DHB
• Excluded	Child Health
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1. Purpose of guideline

To ensure the safe removal of a urethral catheter in high-risk adult patients, in the inpatient setting, by all nursing and midwifery staff employed at Auckland DHB.

2. High-risk patients

High-risk patients include but are not limited to, patients with:

- Voiding difficulties prior to catheter insertion and/or known prostatic enlargement
- History of chronic urinary retention
- Recent AP resection or spinal surgery
- Multiple sclerosis
- History of previous difficult catheterisation
- Diabetic neuropathy
- Dementia
- Parkinson's
- History of cerebrovascular accident

For these patients, a trial removal of catheter should be considered, as opposed to a simple catheter removal and void.

3. Risk factors which can interfere with a successful trial removal of catheter in high-risk patients

- Epidural in situ
- Antihistamine within last 10 hours
- Anticholinergic within last 10 hours
- Constipation
- Ongoing haematuria and clots
- Analgesia poly-pharmacy and unresolved pain

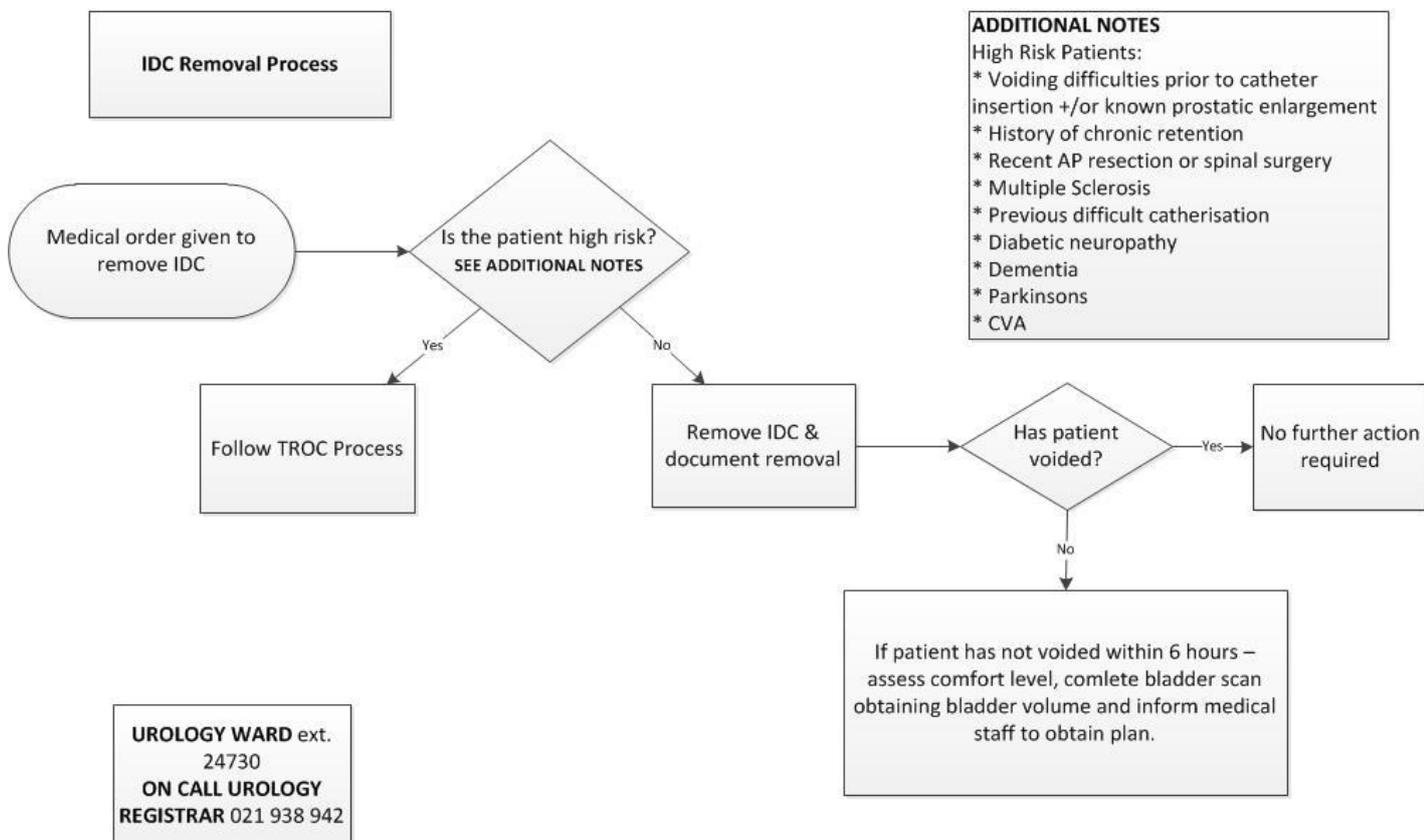
Do not remove urethral catheter until issues are resolved. Consider elevation to appropriate services.

4. Abbreviations

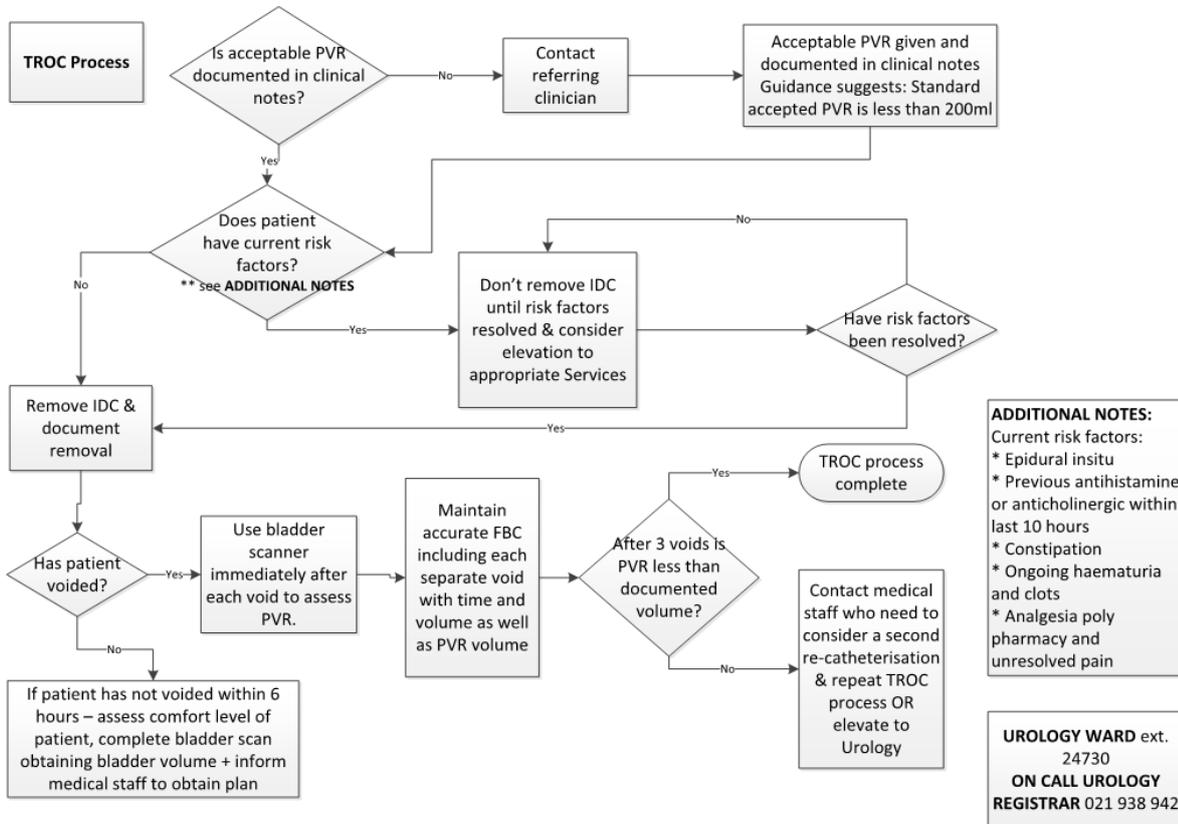
Term	Definition
AP resection	Abdomino perineal resection
BPH	Benign prostatic hyperplasia
FBC	Fluid balance chart
IDC	Indwelling catheter
PVR	Post-void residual
RBP	Recommended best practice
TROC	Trial removal of catheter

5. IDC removal and TROC flowcharts

5.1 IDC removal process



5.2 TROC process



6. Removal of urethral catheter

- The removal of a catheter is a medical order. For a trial removal of catheter **an acceptable post-void residual (PVR) volume must be documented at the time of order**. Acceptable volumes vary for individuals.
- A safe standard acceptable PVR is less than 200mL.
- Catheters are often removed early in the morning (midnight to midday is preferable), so that any retention problems can be dealt with during the day.
- Pain is frequently encountered during the removal of a urethral catheter and is often a consequence of ridge formation on the catheter balloon. This can be minimised by allowing passive deflation of the balloon rather than applying active suction to the deflating channel (Geng et al., 2012).

6.1 Equipment required

- Non-sterile gloves (one pair)
- 30mL syringe for deflating balloon
- Incontinence sheet (to protect bed)
- Gauze swabs

6.2 Procedure

Step	Action
1.	Explain procedure to patient and inform them of potential symptoms that may occur following removal, i.e. incontinence, urgency, frequency, dysuria. Symptoms should resolve over the following 24-48 hours. If not, further investigation may be needed, e.g. mid-stream urine specimen taken for culture.
2.	Position patient in semi-recumbent position with legs parted. Place incontinence sheet under patient.
3.	Perform hand hygiene and put on non-sterile gloves.
4.	Attach syringe to catheter valve to deflate the balloon. Do not use suction on the syringe but allow the fluid to come back spontaneously.
5.	Ask the patient to breathe in and then out, and to relax pelvic floor muscles. As the patient exhales, gently remove the catheter, holding it near the urethral meatus. Male patients should be warned of discomfort as the deflated balloon passes through the prostatic urethra.
6.	Wrap removed catheter in incontinence sheet and discard.
7.	Clean meatus using gauze, clear away equipment, and make the patient comfortable.
8.	Perform hand hygiene.
9.	Document time of removal in patient's clinical notes and on FBC.

7. Following removal of urethral catheter

7.1 Education

- Ensure patient has a copy of the information sheet *Now that your catheter has been removed*, obtained from the Urology website on the Intranet or from Ward 73.
- Discuss the need for adequate oral fluid intake of approximately 2-3 litres of fluid per day, for adequate flushing of the bladder, unless contraindicated.
- Advise the patient that frequency and dysuria is common, but will usually resolve once micturition has occurred at least three times. Inform medical staff if the problem persists.
- Advise the patient that urinary urgency may take 24-48 hours to resolve. If it doesn't, consider a urinary culture to exclude infection.
- Ural sachets may help with stinging or burning on voiding.
- If patient is anxious and unable to void, offer them a warm bath or shower to promote relaxation.

7.2 Assessment

- Maintain accurate FBC. Include all input and output. The FBC should be maintained until the risk of high residual urine volumes and/or urinary retention has been fully assessed.
- Ideally the patient should void three times to be deemed voiding satisfactorily before the FBC is discontinued, unless the FBC is needed for other assessment purposes.

- Following each void a bladder scan must be used to assess the PVR accurately. A PVR needs to be measured immediately after the patient has voided, preferably after the second and third void where possible.
- Each void should be recorded separately with time, volume and colour of urine documented on FBC, along with PVR volume.
- If the patient is incontinent following removal of urethral catheter always consider urinary retention with overflow incontinence, and assess with a bladder scan.
- In general, a patient should void within six hours of IDC being removed. If the patient has not voided within six hours of the urethral catheter being removed, the patient **must** be assessed with a bladder scan.

8. Failed trial removal of catheter

- Contact medical staff if:
 - PVR is greater than documented PVR, after three voids
 - Patient has urinary retention with overflow incontinence, confirmed with bladder scan
 - Patient has not voided within six hours, patient's comfort level has been assessed and bladder volume has been assessed with bladder scan.
- Medical staff to advise:
 - A second reinsertion of catheter and repeat TROC whilst an inpatient or in the community.
 - Elevation to Urology Service
 - Urology Ward 73 ext. [REDACTED]
 - Urology Registrar on call [REDACTED]
- For a trial removal of catheter in the community
 - TROC Referral Forms can be accessed from Urology website
 - TROC referral must be accompanied by a District Nursing referral
 - The medical team could consider the use of an alpha blocker (unless contraindicated) in male patients with untreated benign prostatic hyperplasia (BPH). The TROC to be arranged once the patient is on optimal dose.
 - GP to refer patient to the Urology Service if patient fails TROC in the community.

9. Supporting evidence

- Geng, V., Cobussen-Boekhorst, H., Farrell, J., Gea-Sánchez, M., Pearce, I., Schwennesen, T., Vahr, S., & Vandewinkel, C. (2012). *Evidence-based guidelines for best practice in urological health care. Catheterisation: Indwelling catheters in adults. Urethral and suprapubic*. Arnhem, Netherlands: European Association of Urology Nurses (EAUN).

10. Associated documents

- Latex Safety
- Infection Prevention and Control
- Hand Hygiene - Infection Prevention
- Standard Precautions - Infection Control
- Now that your catheter has been removed
- Trial Removal of Catheter (TROC) Referral Form
- Urethral Catheter Management

11. Disclaimer

No guideline can cover all variations required for specific circumstances. It is the responsibility of the health care practitioners using this Auckland DHB guideline to adapt it for safe use within their own institution, recognise the need for specialist help, and call for it without delay, when an individual patient falls outside of the boundaries of this guideline.

12. Corrections and amendments

The next scheduled review of this document is as per the document classification table (page 1). However, if the reader notices any errors or believes that the document should be reviewed **before** the scheduled date, they should contact the owner or [Document Control](#) without delay.