Algorithm for Voiding Trials: Adult Inpatient*

Assure patient is appropriate for voiding trials†: patient was voiding without a catheter prior to hospitalization, no diagnosis* requiring a catheter, and there is an expectation that the patient will void on their own again

Intermittent Straight Catheterization (ISC) was performed

Indwelling Urinary Catheterization (Foley) was performed

Remove Foley to perform next trial of void in DAY TIME (consider "fill and pull"‡ technique if staff trained). Removal timing determined by bladder scan volume: §

- If Foley placed for bladder scan volume <1000 mL, remove catheter the next morning
- If Foley placed for bladder scan ≥1000 mL, keep the catheter in place for at least 48 hrs

VOIDING TRIAL:
Ambulate, then toilet patient for voiding trial w/in 4 hrs, & check PVR by bladder scanner (be sure to measure voided volume as well)

Bladder Scan

< 300 mL with symptoms
Consider other causes of symptoms & rescan after 1-2 hrs

< 500 mL with no symptoms

Repeat voiding trials w/ PVR checks until 2 consecutive PVRs < 300 mL.

- NOTE: Voiding trials should include measurement of voided volume as well as PVR. If voided volume is less than PVR volume for at least 2 voiding trials, retention may be a concern even if the PVR is less than 300 mL. Contact primary service.

END

> 300 mL with symptoms or ≥ 500 mL with no symptoms

Perform ISC

Continue to ambulate, void and then bladder scan q4

After 4 ISCs and PVR >300 mL, contact primary service

> 800 mL

STOP

Contact primary service for guidance on whether next catheter trial should be Foley or ISC

- If >1000 mL, place Foley for 48 hrs
- If 2 bladder scans >800 mL when ISC 4 hrs apart, place Foley for at least 24-48 hrs unless reason for large volume resolves

STOP

This is a FAILURE of INITIAL trial of void. Contact primary service & ask about 3 options:

1. Continue ISC every 4-6 hours. Start patient education⁋. Primary team and Case Manager evaluate discharge plan.
2. Insert foley; perform next trial of void in ~24 hrs in day time. Consider using "fill and pull ‡" technique (if staff trained) for next trial of void if needing to confirm if patient needs to go home with urinary catheter.
3. Consider reversible causes of retention & conduct med eval: Consider adding Flomax for men >55 if no contraindications, review/stop medications that increase risk of urinary retention such as anticholinergics (e.g., oxybutynin) and opioids.

If **still unable to void**, schedule a clinic visit with Urology Provider in 1-2 weeks for persistent retention

*Does not replace providers' orders to change this flow in patients with urologic surgery. Algorithm updated April 23, 2024.
†If voiding trials inappropriate due to chronic ISC or Foley prior to hospitalization, consider conducting refresher education on catheterizing at home.
‡"Fill and pull" also referred to as "backfill." If staff not trained on fill and pull consider consulting Urology. Fill and pull reference: Dong, et al. Methods of postoperative void trial management after urogynecologic surgery: a systematic review and meta-analysis. Syst Rev 12, 115 (2023).
§If actual output when Foley was placed was different than bladder scan amount, base timing on actual output.
⁋Nurse team will start teaching patient who is managed by ISCs how to use them at home (and discharge with ISC supply in hand, and know how to fill Rx), and if using indwelling catheter, how to care for at home. Consider home care visit to reinforce catheter use if patient's insurance covers. Clarify plan for urinary retention follow-up after discharge: outpatient Urology appointment? Timing of this appointment?

References

- Jackson, J. et al. *BJS Open*, 2019.
- Kelley, K. et al. *The American Surgeon*, 2017.
- Lajiness, M.J. *Urologic Nursing*, 2022.

SUCCESS Surgical Urinary Catheter Care Enhancement Safety Study

Scan the QR code with a smartphone camera to view more SUCCESS toolkit resources.

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