

CAUTI Prevention

Section Editor: seat open

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Disclaimer: This protocol is an educational reference intended to support — not replace — institutional policy, pharmacy and therapeutics review, and individual clinical judgment. Verify current dosing, contraindications, and local formulary/practice constraints before adopting into an EMR or using in patient care.

Overview

Indwelling urinary catheters (IUCs) are placed in up to 16% of hospitalized patients, and risk of CAUTI rises with every day the catheter stays in. CAUTI adds an estimated \$13,793 in cost per event and measurable excess mortality, and is a CMS-reportable, non-reimbursed complication. The prevention bundle has three pillars that matter more than any single technique detail: **don't insert unless indicated, maintain a closed unobstructed system while it's in, and remove it the moment it's no longer indicated** — ideally via a nurse-driven removal protocol so removal doesn't wait on a physician order.

Steps

01 Avoid Unnecessary Insertion

- Before ordering, assess whether a lower-risk alternative meets the need: external (condom/female external) catheter, intermittent catheterization, bedside commode, or incontinence management.
- Insert an IUC only for a defined indication, e.g.: perioperative use in selected surgeries, acute urinary retention or obstruction, hospice/comfort/palliative care, accurate urine output measurement in a critically ill patient, or required strict immobilization (trauma/ surgery).
- The EMR should require the physician/APP to select the indication at order time — this is what makes Step 6's daily reassessment possible.

02 Insert with Aseptic Technique

- Hand hygiene, sterile technique, sterile supplies, and a documented insertion procedure.
- Use the smallest appropriate catheter size; involve urology for an anticipated difficult insertion rather than attempting repeated insertions.
- Use an insertion kit whose packaging order matches your facility's insertion protocol steps — stopping mid-insertion to retrieve a missing item is a common aseptic-technique break point.

03 Secure the Catheter After Insertion

- Apply a securement device — this reduces urethral trauma and inadvertent traction, both of which increase infection risk.

04 Maintain a Closed, Unobstructed System

- Maintain a sterile, continuously closed drainage system — do not routinely flush the catheter or leave it open into a diaper/chux.
- Keep the drainage bag below the level of the bladder **at all times**, including during ambulation, wheelchair transport, and transport between departments.
- Avoid dependent loops or kinks in the tubing; empty the drainage bag regularly.
- If a break in aseptic technique, disconnection, or leakage occurs, replace the affected component — but routine scheduled replacement of a functioning IUC is **not** recommended.

05 Collect Urine Cultures Correctly — and Only When Indicated

- Collect the specimen from the drainage tubing/port, **not** from the drainage bag — bag urine is likely contaminated from prior drainage and doesn't reflect current status.
- Apply diagnostic stewardship: order a urine culture only with a clear clinical indication, not reflexively — reflex culturing drives overtreatment of asymptomatic bacteriuria, not better outcomes.
- In select high-colonization scenarios, consider replacing the IUC before collecting the culture to reduce false-positive results from catheter biofilm colonization rather than active infection.

06 Reassess the Indication Every Day

- Build daily indication reassessment into rounds and the EMR — if the original indication (Step 1) no longer applies, the catheter should come out that day, not at end of shift or next rounds.
- Where a **nurse-driven removal protocol** is in place, use it — this removes the physician-order bottleneck as the rate-limiting step for timely removal, which is the single highest-leverage intervention in this bundle.

07 Advanced Practices — Consider Only If Rates Stay Elevated

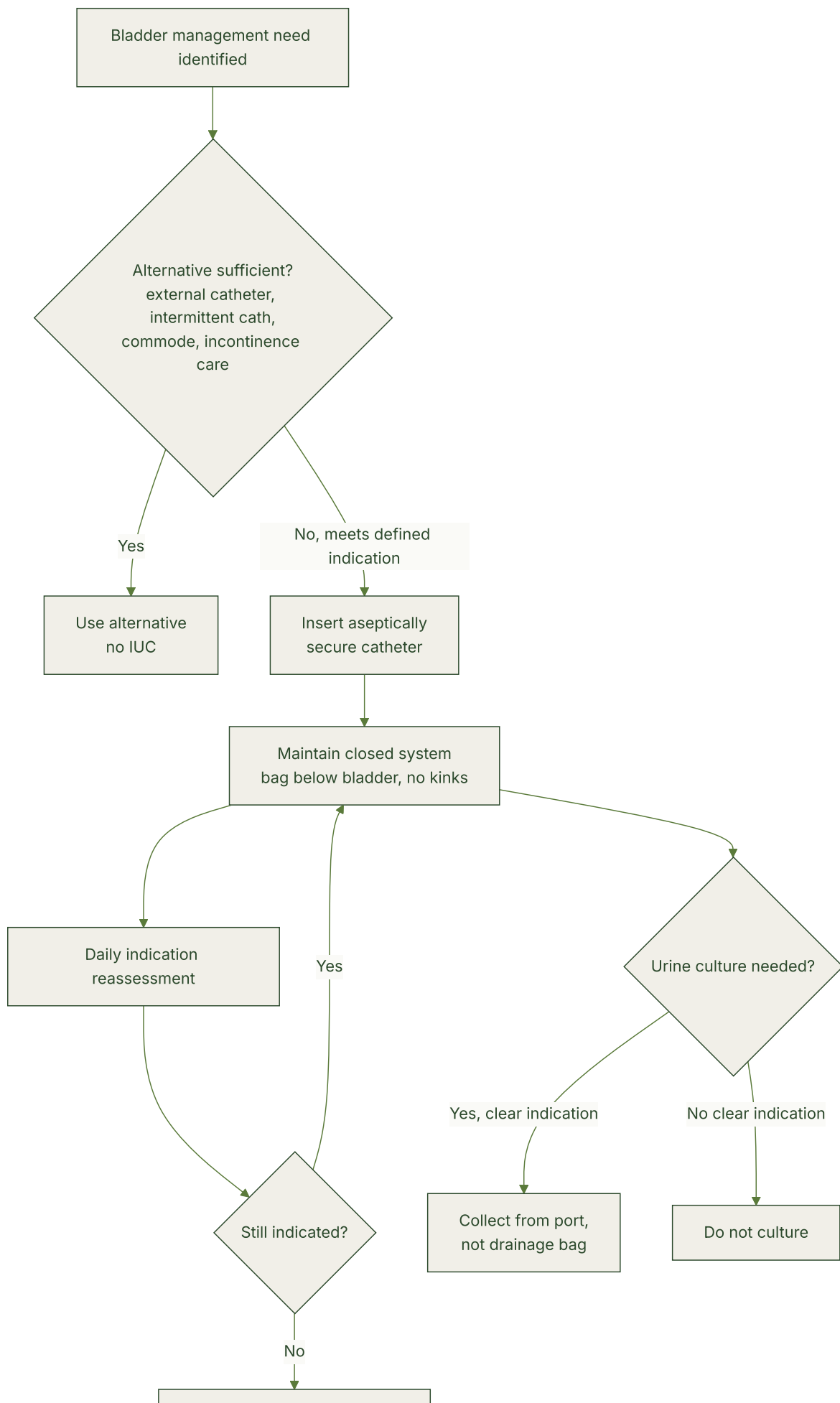
These have more limited evidence and should be a deliberate facility decision, not a default:

- Bladder-scanning algorithms for post-void residual, to guide insertion/reinsertion decisions in urinary retention.
- "Foley-free" emergency department protocols limiting IUC insertion at the point of first contact.
- Chlorhexidine-impregnated cloth cleansing of catheter tubing.
- Structured monitoring of catheter-related adverse events beyond CAUTI itself (obstruction, unintended removal, reinsertion within 24 hours).

08 Know the Surveillance Definition (for Reporting, Not for Clinical Decisions)

- Per NHSN, a CAUTI requires the IUC to have been in place for **more than 2 consecutive days** in an inpatient location on the date of event or the day before (day of catheter placement = Day 1).
- If a catheter is removed and the patient goes without one for at least 1 full calendar day, the device-day count resets; if reinserted before a full calendar day has passed, the count continues uninterrupted.
- This surveillance definition exists for standardized reporting — it should **not** be used to guide clinical diagnosis or treatment decisions, which follow separate clinical criteria.

Algorithm



Remove
via nurse-driven protocol if
available

EMR Order Set

PHYSICIAN/APP ORDERS

- IUC order requiring structured indication selection at order time (no free-text/no-indication order permitted).
- Daily re-justification prompt tied to the original indication.

NURSING ORDERS

- Insertion checklist/aseptic-technique documentation.
- Securement documentation at insertion.
- Daily indication reassessment, structured field, feeding the nurse-driven removal protocol trigger where adopted.
- Bag position/pericare documentation each shift.
- Urine culture collection protocol reminder (port, not bag) embedded in the culture order workflow.

Build notes — indication and daily-reassessment fields should be structured/discrete so process metrics (Step "Success Metrics" below) can be pulled automatically rather than via manual chart review.

Adoption Notes

- Requires a multidisciplinary CAUTI prevention team — infection prevention, nursing, and physician/APP as primary/possible leads, with clinical education, lab, IT, and environmental services as participants.
- Do a facility-specific risk assessment first (current CAUTI rate/SIR, catheter utilization ratio/SUR, prior root-cause findings, unit-level patterns) to target

where this rollout matters most rather than applying it uniformly.

- A nurse-driven removal protocol requires explicit physician/APP buy-in and a defined scope-of-practice policy before it can be built as an EMR-triggered workflow — this is usually the actual adoption bottleneck, not the clinical concept.
- Training/competency validation at hire and at least annually, covering indications, insertion technique, and the removal protocol.

Success Metrics & Monitoring

CAUTI rate (events per 1,000 catheter days) and Standardized Infection Ratio (SIR) per NHSN; catheter utilization ratio (SUR); cumulative attributable difference (CAD); and process measures — percentage of IUCs with a documented indication, percentage with securement documented, and percentage of cultures collected from the port rather than the bag. Track via NHSN reporting and unit-level dashboards; review at least monthly, more often where rates exceed target.

Suggested Reading

- 1 Association for Professionals in Infection Control and Epidemiology (APIC). Guide to Preventing Catheter-Associated Urinary Tract Infections (CAUTI). March 2025. Primary current implementation guide this protocol's insertion/maintenance/removal bundle and metrics are built from.
- 2 Centers for Disease Control and Prevention / HICPAC. Guideline for Prevention of Catheter-Associated Urinary Tract Infections. Issued May 2024 (expanded update of the original guideline). Underlying evidence-based guideline the APIC implementation guide operationalizes.

3 Centers for Disease Control and Prevention, National Healthcare Safety Network. Urinary Tract Infection (UTI) Event, Patient Safety Component Manual, Chapter 7. Current version January 2026. Source of the surveillance definition in Step 8 — note the local source folder held the January 2022 version, superseded by the current version.

Revision History

VERSION	DATE	EDITOR	SUMMARY
0.1	2026-07-19	FunctionalHealth editorial team	Initial version grounded in the local NHSN surveillance manual excerpt plus the current APIC/CDC-HICPAC prevention guidance

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