Making Urinary Catheters Disappear: A Nurse-Driven Approach Using the HOUDINI Protocol

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Background

Catheter associated urinary tract infections (CAUTIs) are a major source of preventable harm, increasing morbidity, length of stay, and healthcare costs. Prolonged urinary catheter use is a key risk factor, yet removal is often delayed in clinical practice. Evidence supports nurse-driven protocols to promote timely urinary catheter discontinuation and reduce infection risk. Duration of catheterization remains the strongest predictor of CAUTI development, making consistent daily assessment essential.

The HOUDINI nurse-driven urinary catheter removal protocol standardizes the evaluation of catheter necessity and empowers nurses to remove the urinary catheter without a provider order when no longer indicated. HOUDINI is an evidence-based acronym used to guide clinical decision-making. (See image a.)

Method

The project was piloted in the ICU, where nurses received targeted education on the HOUDINI acronym and the associated nurse-driven removal protocol. A new EMR task was implemented, requiring nurses to assess the urinary catheter twice daily. If patients no longer met HOUDINI criteria, nurses were empowered to remove the catheter without obtaining an additional provider order. Urinary catheter utilization rates were measured during a two-week pre-intervention period and a two-week post-intervention period. Cardiovascular OR patients were excluded per hospital protocol. Utilization was calculated as the total number of urinary catheter days divided by total patient days.

ICU Pilot results:

Pre-Implementation (8/11–8/24):

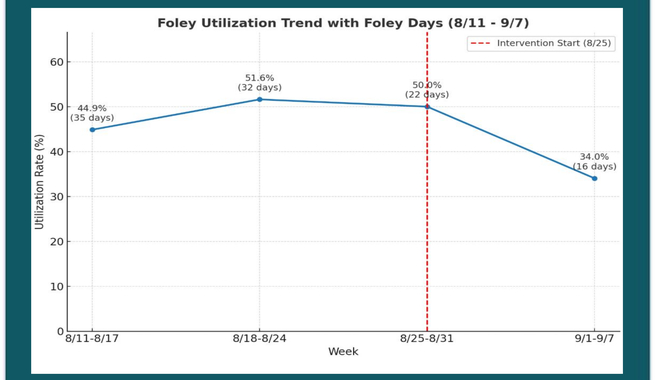
- 48.3% utilization
- 33.5 urinary catheter days

Post-Implementation (8/25–9/7):

- 42.0% utilization
- 19 urinary catheter days

Impact:

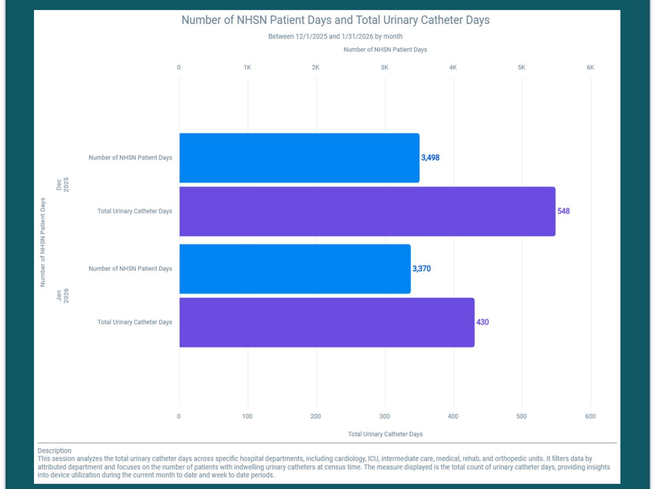
- 6.3% reduction in utilization
- 14.5 fewer urinary catheter days



Early Impact: Post Go-Live results:

In the first partial month of implementation (January 2026):

- 21.5% reduction in urinary catheter days (118 fewer catheter days in the first month)
- Utilization decreased from **15.6% to 12.7%** despite stable patient volume



Conclusions

Following house-wide implementation of the HOUDINI nurse-driven protocol on January 12, 2026, total urinary catheter days decreased from 548 in December 2025 to 430 January 2026, representing 118 fewer catheter days and a 21.5% reduction in the first partial month of implementation despite stable patient volume (3,498 vs. 3,370 patient days). Embedding a twice-daily Epic task empowered nurses to independently assess catheter necessity and remove unnecessary devices in real time, rather than relying on individual reminders. Oversight now occurs at the unit leadership level, promoting shared governance and sustainable catheter stewardship. Continued monitoring through the Professional Practice Council and Infection Control will support ongoing CAUTI reduction and long-term patient safety improvement.

Images

a) EMR task for nurses and reasons to keep an urinary catheter per the HOUDINI Protocol.

- a task titled **"HOUDINI (Foley Removal) Protocol Assessment"** will automatically appear on the Brain. This task is scheduled to be due at **0800 and 1800** daily.
- Each reason to continue the Foley will be listed with a letter in parentheses, spelling **H.O.U.D.I.N.I.**
  - H – Hospice care / comfort at end of life
  - O – Obstruction or urinary retention
  - U – Urological surgery, urology consult, or Foley placed by urologist
  - D – Documented Stage 3 (or greater) coccyx/perineal injury
  - I – ICU patient- hemodynamically unstable, requiring one or more vasopressors
  - N – Neurogenic bladder or chronic indwelling Foley present on admission
  - I – Injury due to acute trauma requiring bedrest per provider order