

# **Postoperative Urinary Retention and Discharge Readiness Following Minimally Invasive Hysterectomy: A Quality Improvement Study**

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## **Background:**

Postoperative urinary retention (POUR), defined as the inability to adequately void spontaneously after surgery, is a frequent and clinically significant postoperative complication that can delay discharge and increase urinary tract infection (UTI) risk. Following minimally invasive hysterectomy (MIH), voiding management protocols vary widely between institutions and providers, with little consensus on the safest or most efficient approach. This quality improvement (QI) project aimed to characterize postoperative voiding practices, assess POUR incidence, and identify opportunities for standardization at a safety-net academic hospital.

## **Methods:**

The study included two complementary components. First, an anonymous electronic survey was distributed to gynecology surgeons and advanced practice providers at Denver Health to assess current postoperative voiding management after MIH, including Foley removal timing, trial of void (TOV) methods, and management of failed voids. Second, a retrospective chart review was conducted for patients who underwent MIH between April 1 and May 14, 2025, excluding those with concomitant urogynecologic procedures. Data extracted included procedure type, voiding protocol, TOV method, discharge catheter status, and documented POUR.

## **Results:**

Eleven providers completed the survey. The majority (64%) reported routinely removing the Foley catheter at the end of the MIH case, and 73% required a TOV before discharge. Practices varied substantially: 45% preferred a backfill-assisted (fill-and-pull) TOV, while 55% favored spontaneous voiding. Management of failed TOVs was inconsistent. 36% discharged patients with a catheter for a home trial, 36% reattempted voiding in recovery, and 27% arranged an outpatient voiding trial. Among 20 MIH cases reviewed, most were total laparoscopic hysterectomies with bilateral salpingectomy or salpingo-oophorectomy. Passive voiding trials were most common (65%), followed by active (20%), with only two patients (10%) discharged with an indwelling catheter. Only one case (5%) of symptomatic POUR was documented, and no patients required readmission or prolonged catheterization.

## **Conclusion:**

Although postoperative voiding practices after MIH at Denver Health were highly variable, POUR incidence was low. These findings align with recent literature suggesting that liberal, patient-centered voiding protocols are safe and may support same-day discharge. However, the lack of a clear institutional guideline contributes to inconsistent provider practice and potential inefficiencies in care. Development of a standardized yet flexible protocol, grounded in current evidence and provider input, may improve consistency, reduce unnecessary catheter use, and enhance patient experience and discharge readiness.