

# Comparing Infection Outcomes and Antibiotic Use in Administrative Claims Following Cystourethroscopy with Single Use Versus Reusable Scopes

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## Background and Objectives

**Background**  
Cystourethroscopy is a procedure to diagnose and treat urinary problems including hematuria, infections and cancer. In the procedure a small camera is introduced into the urethra for diagnosis followed by treatments including stone removal, stenting and lithotripsy.

Concerns about post-operative infections, including sepsis, have supported increased adoption of single use devices to reduce reprocessing-related exposure. CMS has included a transitional pass through (TPT) payment for single use scopes from January 2023 to December 2025.

### Objectives

- Using administrative claims data, characterize single use scope usage and assess short-term infection outcomes within 0-10 and 0-30 days post-index and post-procedure antibiotic utilization within 30 days, stratified by care setting, procedure type and presence of pre-existing UTI
- Using hospital Charge Data Master (CDM) data, quantify product-level cystourethroscopy utilization and linkage to claims data to support product level analysis of outcomes.

## Methods

**Study Design:** Retrospective observational cohort study using U.S. administrative claims from Hospital Outpatient (OP) and Ambulatory Surgery Center (ASC) and hospital charge data (January 2024–March 2025)

**Study Population and Exposures:** Cystourethroscopy-based stone management procedures were identified using CPT/HCPCS codes, with index defined as the qualifying procedure date. Device modality was defined by concurrent HCPCS C1747 (single use) versus absence of C1747 (reusable), where observable; device-level analyses were limited to CDM, where product information is available.

**Outcomes & Analysis:** Cohorts were stratified by baseline UTI status (7-day pre-index). Outcomes included UTI and sepsis within 0–10 and 0–30 days post-procedure, and antibiotic use within 30 days. Claims results are reported as counts and rates by care setting and procedure type; CDM analyses summarize product-level procedure volume and market share.

## Data Sources

**IQVIA's Open-Sourced Medical Claims** include anonymized, adjudicated U.S. institutional and professional claims covering ~191M patients since 2006, sourced from office management systems and clearinghouse feeds, including diagnoses, procedures, demographics, site of service, and prescriptions.

**Medicare Fee-for-Service Institutional Claims** include post-adjudicated, de-identified Medicare Parts A and B institutional claims with 100% coverage of inpatient and outpatient hospital services, capturing detailed diagnoses, procedures, demographics, and site-of-care information.

**IQVIA's Hospital Charge Data Master (CDM)** uses accounting data from ~350 U.S. acute care hospitals (~60M outpatient and 4M inpatient visits annually), with anonymized patient-level procedural, drug, and device detail enabling product-level analyses and market share estimation.

## Study Overview

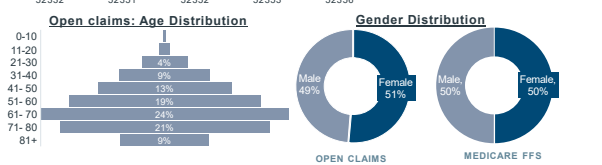
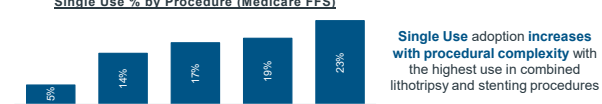
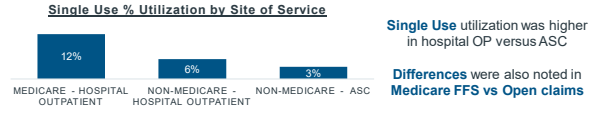


**Total Procedure counts by Index Procedure Code**

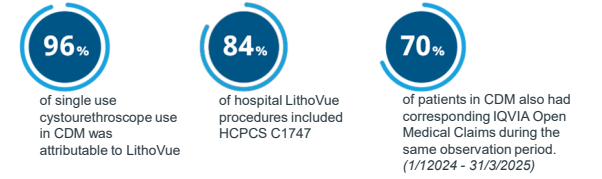
Code	Description	Open Claims	Medicare FFS
52332	Stent Insertion	153,176	111,932
52351	Diagnostic Ureterscopy	30,344	19,012
52352	Stone Removal	26,461	17,557
52353	Stone Lithotripsy	22,779	10,615
52356	Stone Lithotripsy and Stenting	216,835	113,650
<b>+C1747</b>	<b>Single Use Scope</b>	<b>22,199</b>	<b>34,021</b>
<b>-C1747</b>	<b>Reusable Scope</b>	<b>427,396</b>	<b>238,745</b>

Open Claims capture all billed procedures across payers  
Medicare counts reflect Medicare-paid claims only. Counts may overlap and are not additive.

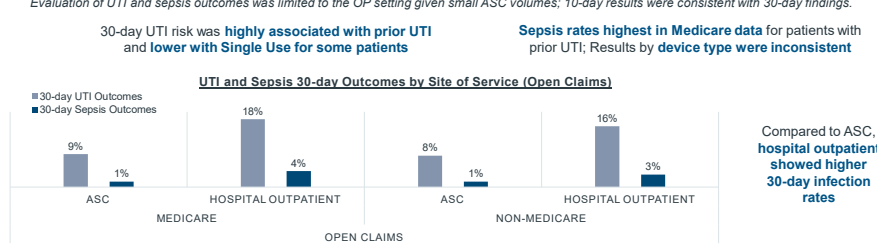
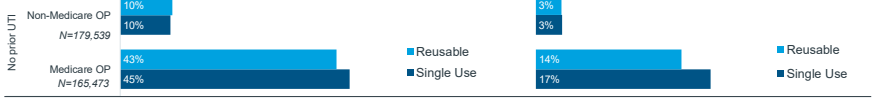
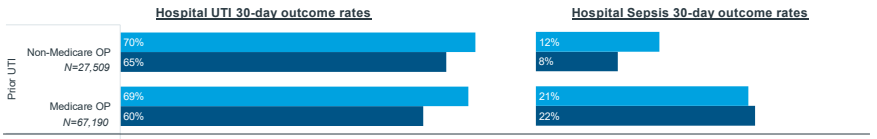
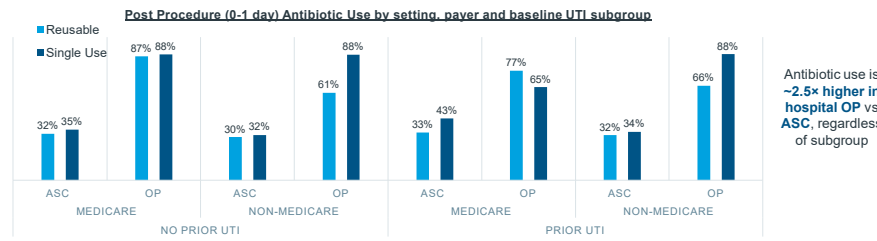
## Administrative Claims: Patient, Procedural and Device Usage Results



## CDM: Single Use Scope Identification and Claims Linkage



## Administrative Claims: Antibiotic Use and Infection Outcomes by Setting and Payer



## Limitations

- Data coverage and generalizability:** Subset of U.S. acute care hospitals represented in CDM data; Medicare fee-for-service does not include non-hospital procedures.
- Coding limitations:** Potential under capture of single use devices due to coding variability and incomplete reporting of HCPCS C1747
- Sample Size:** Limited use of single use scopes in certain settings, constraining meaningful comparisons.
- Scope of outcomes assessed:** Facility workflow, efficiency and other benefits associated with single use scopes cannot be evaluated in claims data

## Discussion and Conclusions

- Utilization patterns:** Single use scopes remain in limited use particularly in the ASC and simpler procedures
- Clinical risk and outcomes:** Across analyses, baseline UTI status prior to the procedure emerged as the strongest predictor of post-procedural infection risk with site of service and procedure type also impacting infection rates
- Single Use outcomes:** The data suggests that single use scopes may reduce infection events in certain patient populations, but the outcomes are confounded by site of service and differences in baseline patient characteristics
- Future analyses:** Multivariable methods with matched cohorts are needed to better control for baseline UTI status, procedural complexity, and site-of-care differences; future studies should also evaluate the economic benefit of single use scopes and use CDM to more accurately identify devices used