

Choose Wisely: Lower Healthcare Resource Utilization and Costs with Intermittent Catheters

Estimating the Burden of Illness and Healthcare Costs Among Incident Catheter Users: A Comparison of Intermittent and Indwelling Catheter Cohorts Across Spinal Cord Injury, Multiple Sclerosis, Spina Bifida, and Benign Prostatic Hyperplasia in the US

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Background

When assessing the effectiveness of different catheterization methods, it is essential to look beyond just the clinical outcomes and direct costs of the devices. While clinical effectiveness and device costs are important factors, the true value of a catheter use goes much further.^{1,2} Healthcare resource utilization (HCRU) plays a critical role in understanding the broader impact on both patients and healthcare systems.

Objectives

This study evaluated healthcare resource utilization (HCRU) and costs among incident intermittent catheter (IC) and indwelling catheter (IDC) users residing in the United States.


We focused on the following HCRU outcomes and conditions:

HCRU outcomes

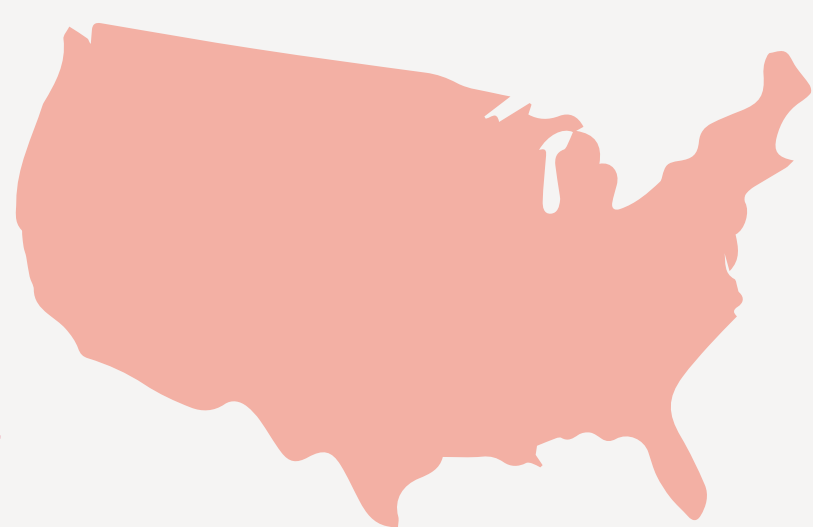
- All-cause HCRU
- Urinary Tract Infection-related HCRU
- Urinary Retention-related HCRU

Conditions

- Spinal Cord Injury (SCI)
- Spina Bifida (SB)
- Multiple Sclerosis (MS)
- Benign Prostatic Hyperplasia (BPH)

 **9,362 IC users**

 **2,477 IDC users**



Methods

Retrospective analysis conducted using Optum's de-identified Clinformatics® Data Mart Database (2016–2023).³

Patient Population: Incident IC or IDC patients with 12 month continuous enrollment in a commercial or Medicare Advantage health plan.

HCRU and Cost Outcomes Assessed: Hospitalizations and ER-Visits stratified by event-type and condition; annual standardized costs were calculated.

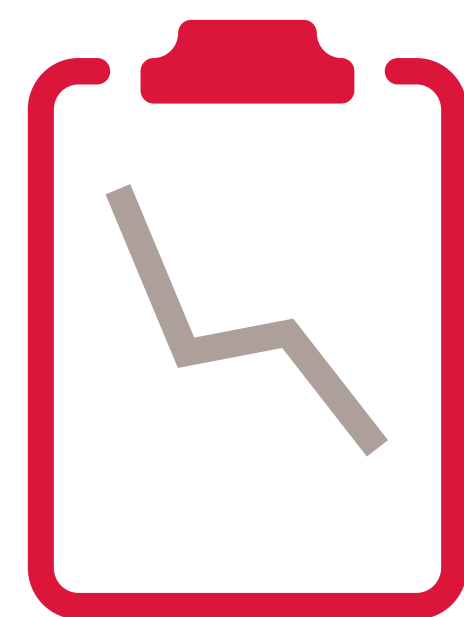
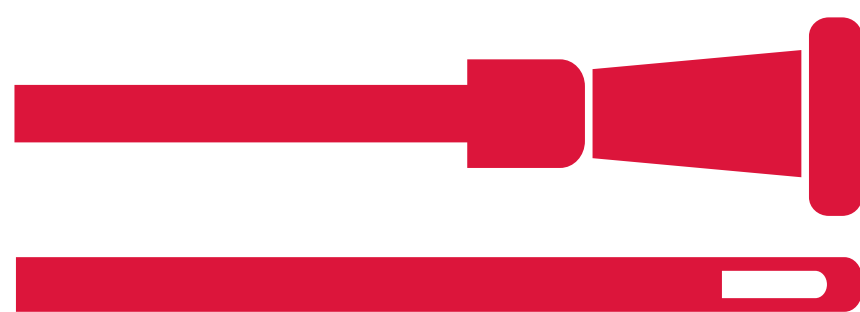
Outcomes were analyzed via propensity score-based methods and multivariate Cox modeling.

Results

Among ~12,000 total incident catheter users, IC users had significantly lower rates of all-cause hospitalizations compared to IDC users during the follow-up period. IC use was associated with a decreased risk of hospitalizations across the SCI, MS, SB, and BPH cohorts, ranging from 10-72% reduction.

Similarly, IC users incurred significantly lower annual healthcare costs compared to IDC users across all conditions with cost savings ranging from \$2,288 to \$67,386.

Among **~12,000** total incident catheter users



Intermittent catheter users had significantly lower rates of all-cause hospitalization and ER encounters compared to IDC users during the follow-up period

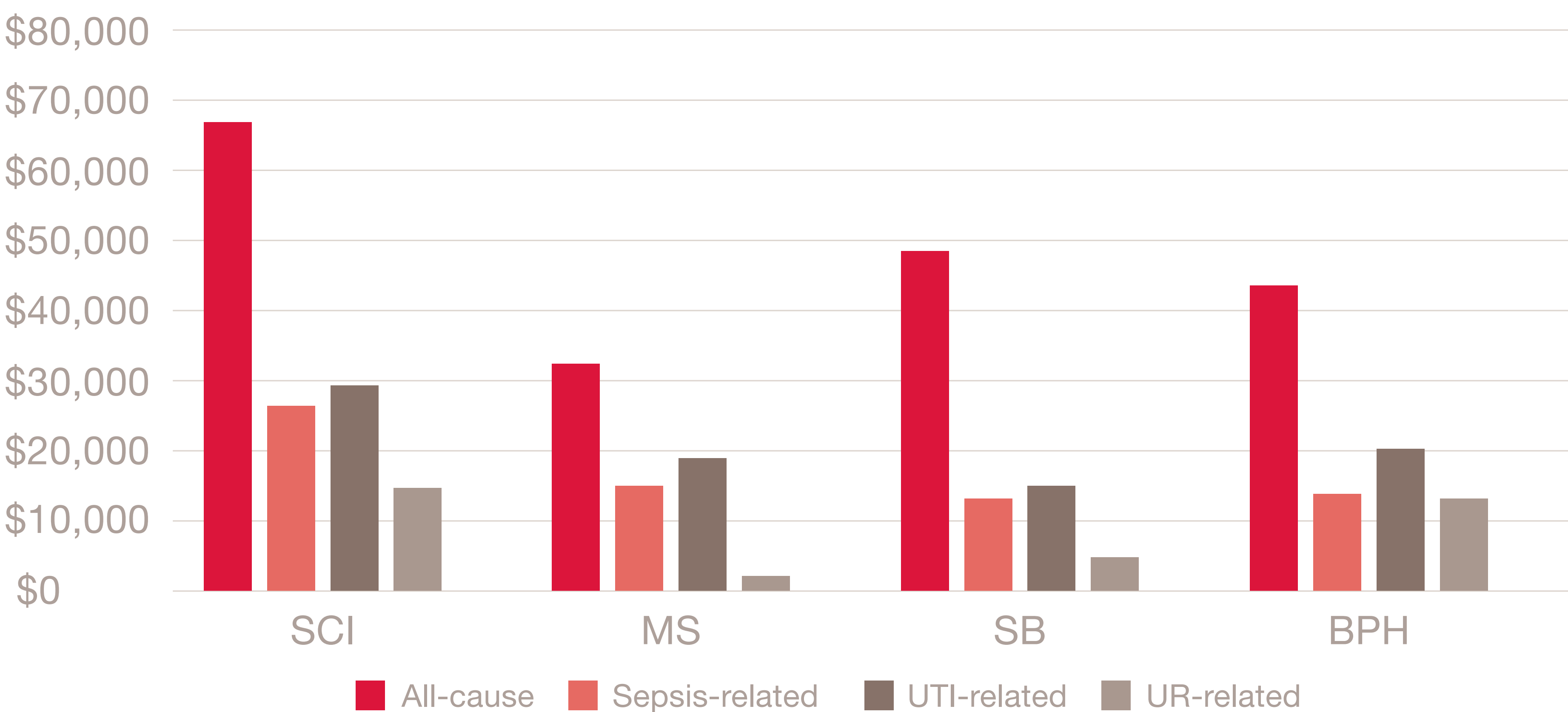


Intermittent catheter users experienced approximately

\$2,200 to \$67,000 in cost savings

across the SCI, MS, SB, and BPH cohorts

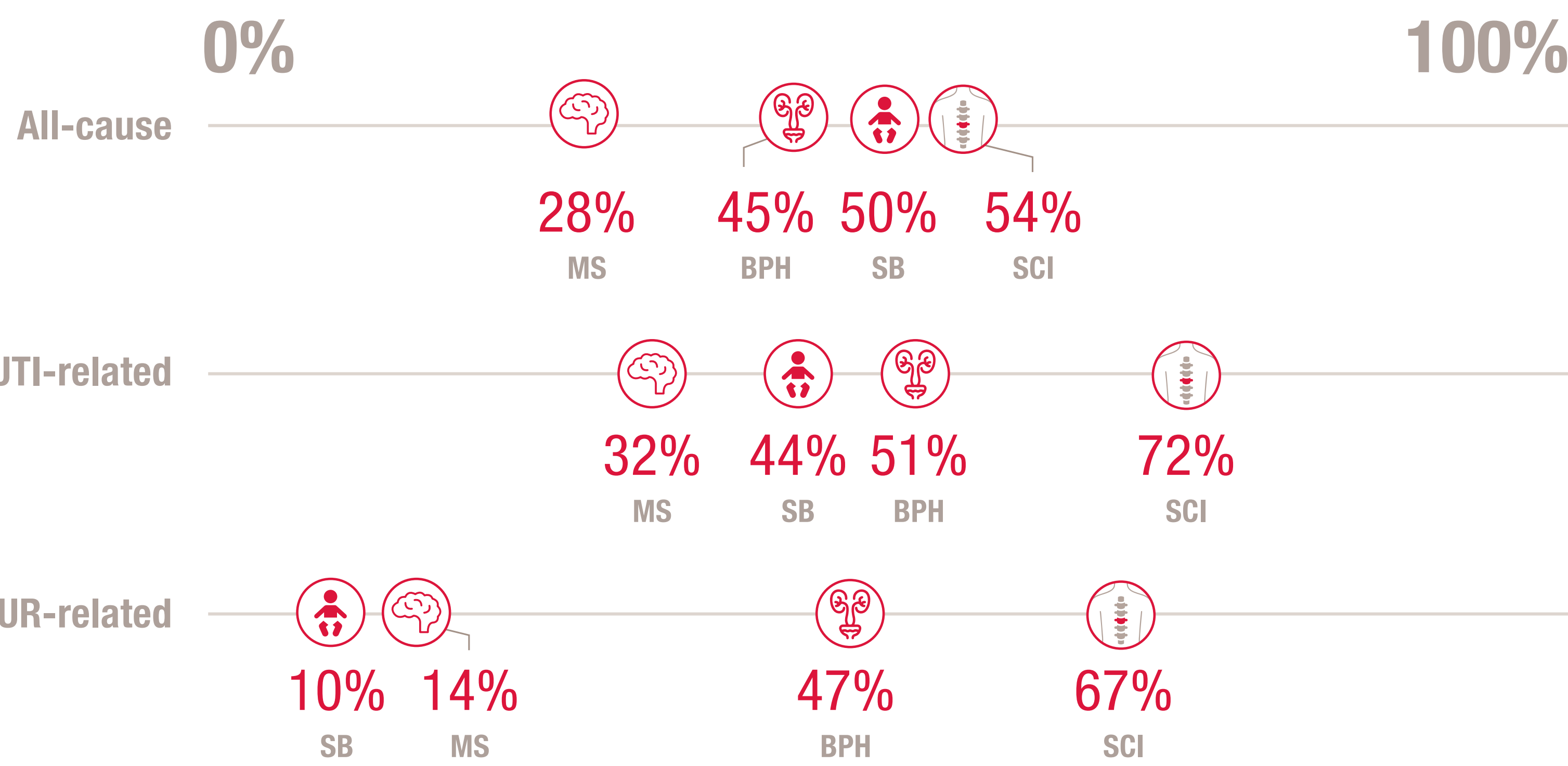
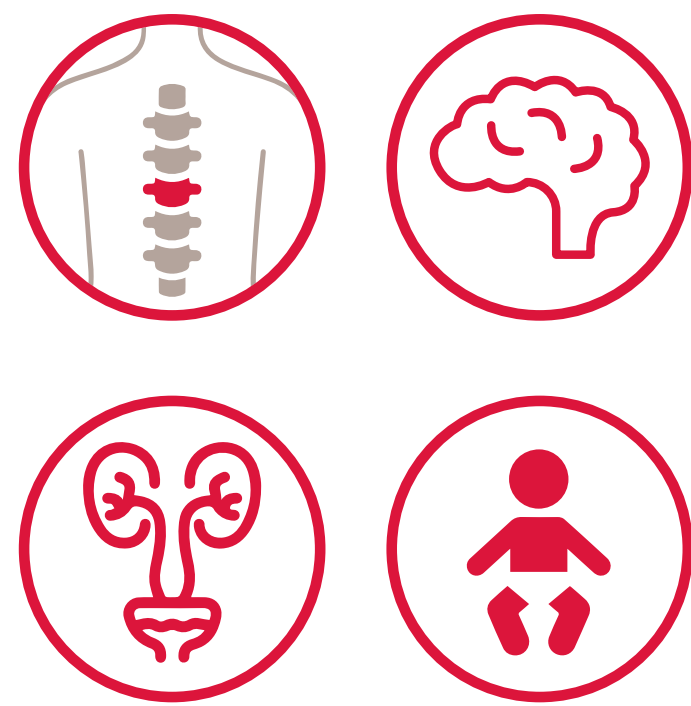
Healthcare Cost Savings for Intermittent Catheter Users



Intermittent catheter users had a

10-72% reduction

in risk of hospitalizations across the SCI, MS, SB, and BPH cohorts



Conclusions

Intermittent catheter (IC) use is associated with significantly lower HCRU and healthcare costs compared to IDC use across diverse bladder dysfunction conditions. These findings suggest IC may be a more cost-effective catheterization approach, particularly for high-risk patient groups.



References:
1. Al Hasan S, Neal-Herman L, Norman HS, Zhao JZ, Carlson A. Patient Support Program and Healthcare Resource Utilization in Patients Using Clean Intermittent Catheterization for Bladder Management. J Wound Ostomy Continence Nurs. 2022;49(5):470-480.
2. Ling R, Giles M, Searles A. Budget impact analysis of a multifaceted nurse-led intervention to reduce indwelling urinary catheter use in New South Wales Hospitals. BMC Health Serv Res. 2022;22:1000.
3. Optum's Clinformatics® Data Mart Database is derived from a database of administrative health claims for members of large commercial and Medicare Advantage health plans.