

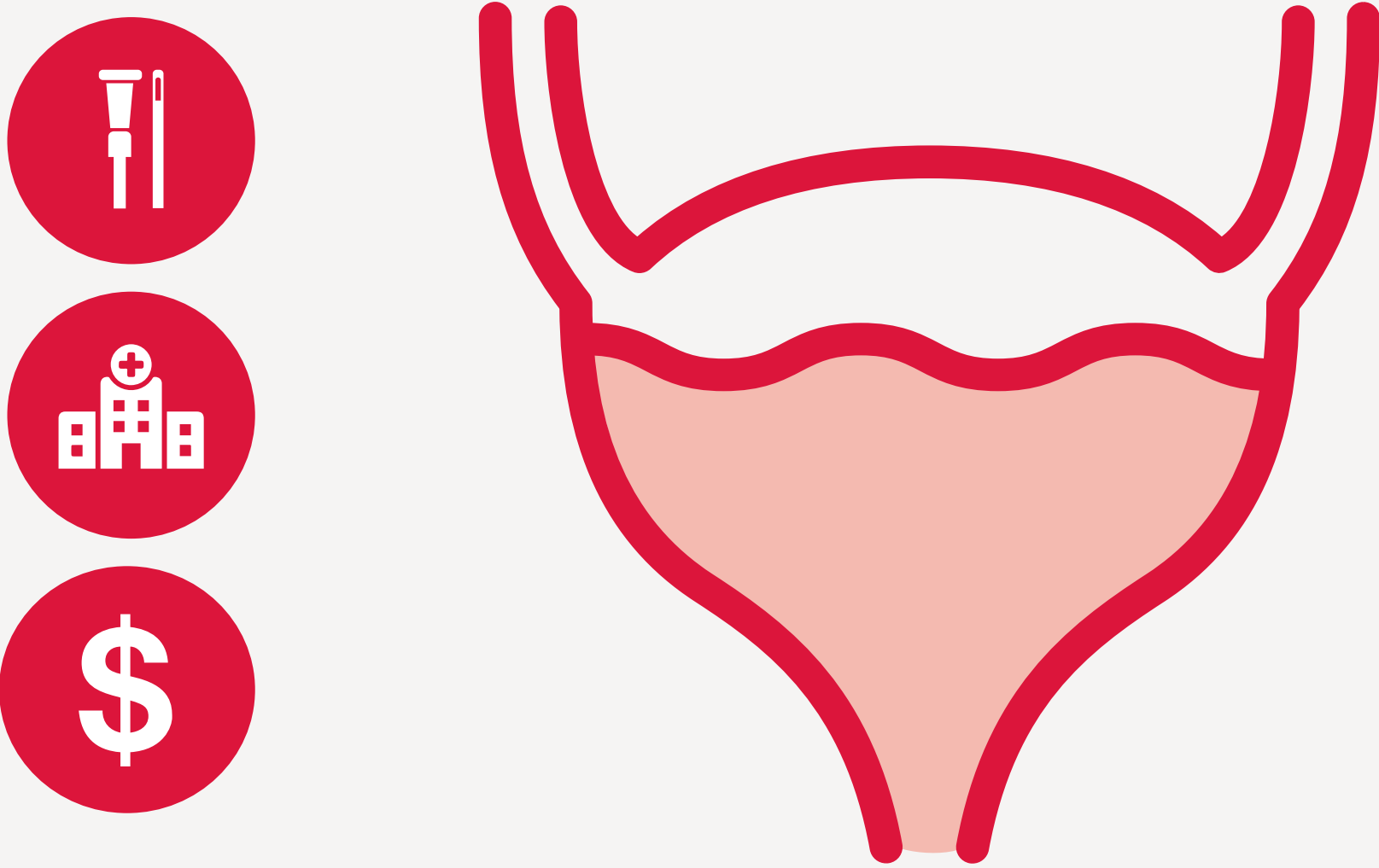
The Price of a Neurogenic Bladder: Surprising Cost Differences in Intermittent Catheter Users

Estimating the Burden of Illness and Healthcare Costs Among Incident Intermittent Catheter Users: A Comparison of Neurogenic and Non-Neurogenic Bladder Cohorts in the US

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Background/Objectives

Neurogenic bladder (NGB) is a common complication of neurological conditions that affects bladder control, often leading to the use of intermittent catheters (ICs). Although IC use is prevalent among both neurogenic and non-neurogenic bladder (non-NGB) patients, individuals with NGB face a unique set of challenges that often result in higher healthcare utilization and associated costs.^{1,2,3} This study examines the differences in healthcare resource utilization (HCRU) and costs between NGB and non-NGB IC users, highlighting the economic burden of NGB in comparison to non-NGB conditions.



Methods

Retrospective analysis conducted using Optum's de-identified Clinformatics® Data Mart Database (2016–2023).⁴

Patient Population:

Incident IC patients with 12 month continuous enrollment in a commercial or Medicare Advantage health plan. Bladder dysfunction conditions were identified based on ICD-10 diagnostic codes present within the year preceding IC initiation.

HCRU and Cost Outcomes Assessed:

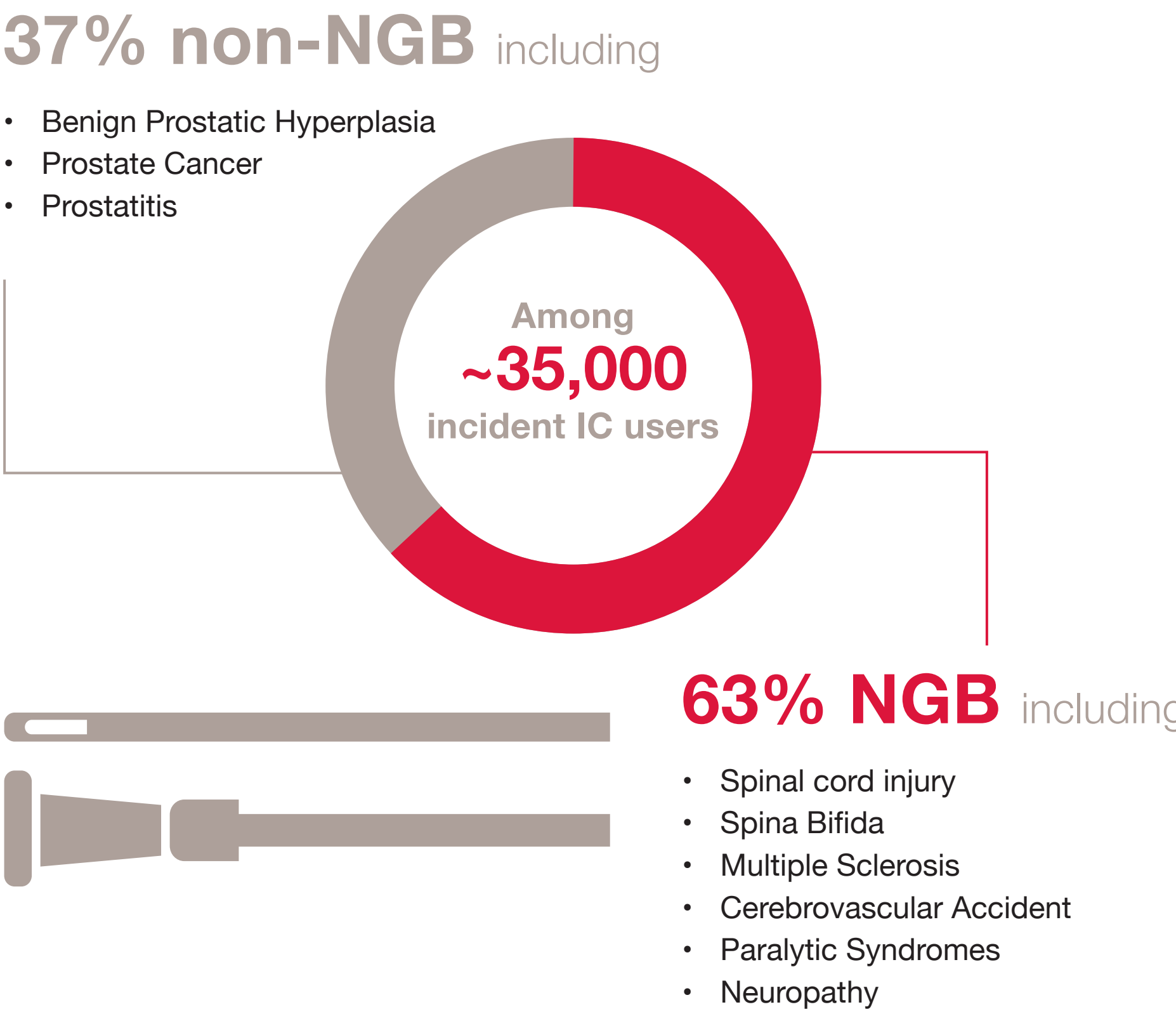
Hospitalizations and ER-Visits stratified by condition and event-type (all-cause and urinary tract infection related); annual standardized costs were calculated.

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

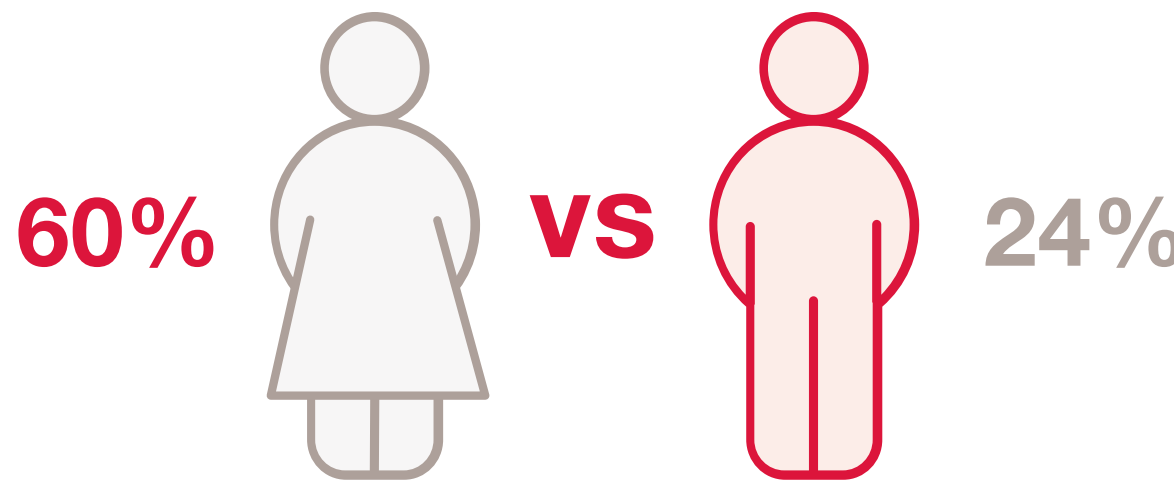


Patient Demographics

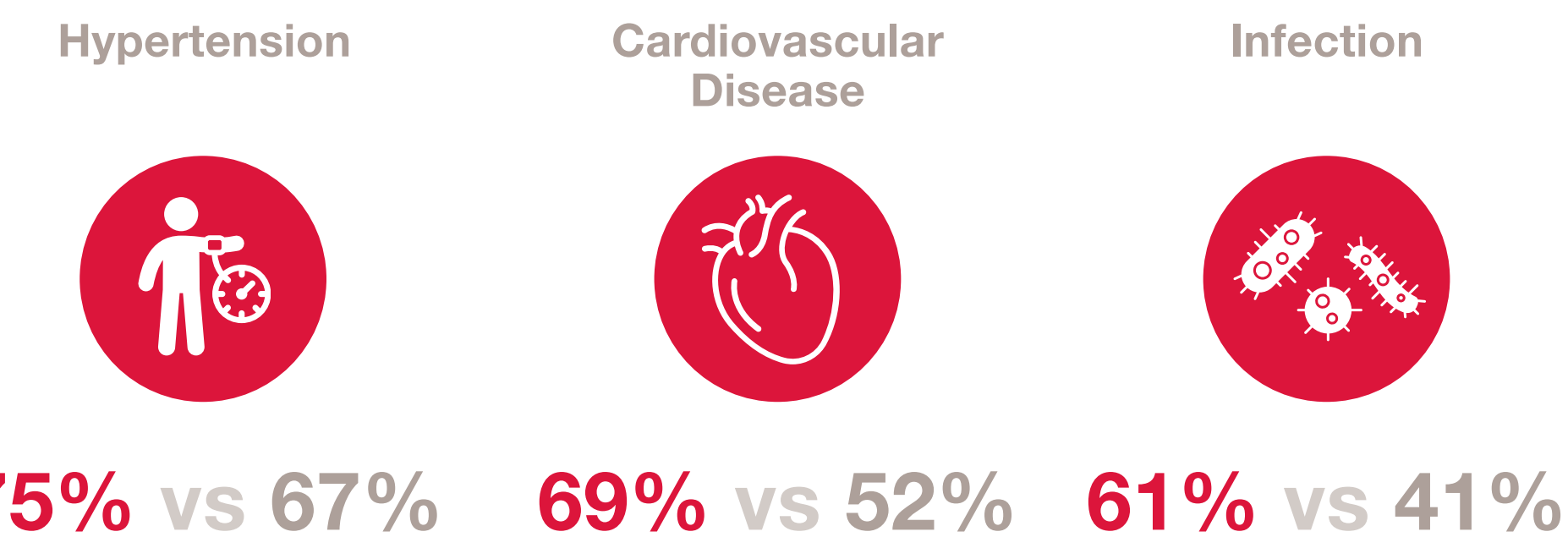
Among 35,348 incident IC users, 63% were classified as NGB and 37% as non-NGB. NGB conditions varied across a range of etiologies; non-NGB conditions were primarily benign prostatic hyperplasia. Furthermore, NGB patients were more often female, more often immunosuppressed, and had higher prevalence of comorbidities.



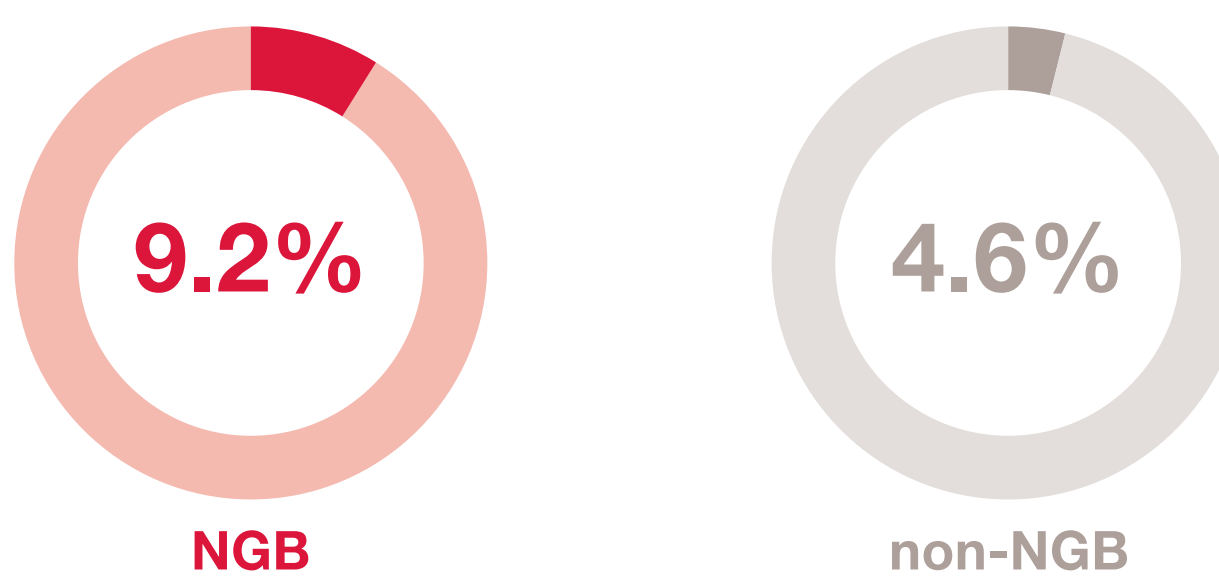
NGB patients were more often female



Had higher prevalence of comorbidities



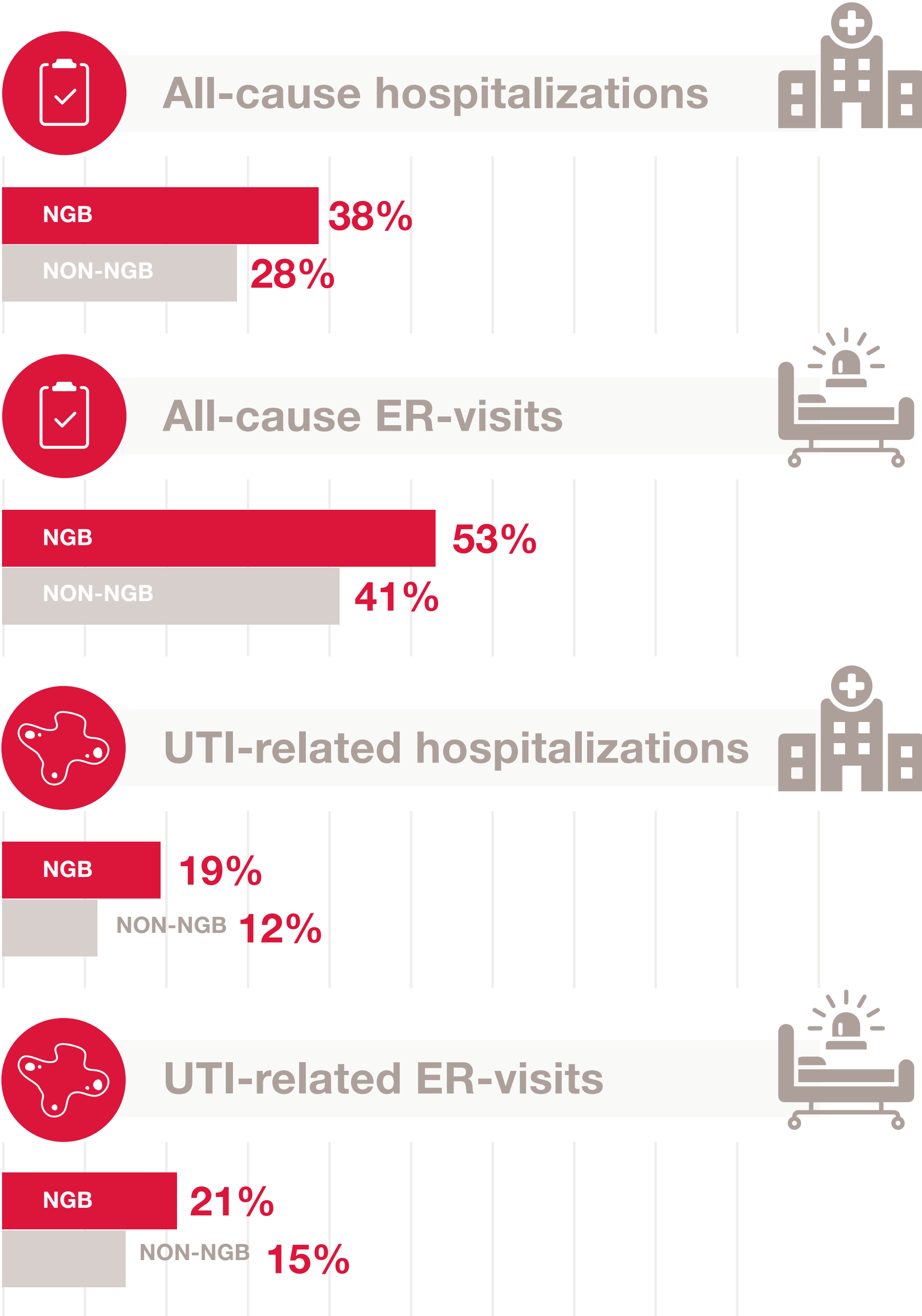
More often immunosuppressed



Healthcare Utilization

During the follow-up period, NGB patients have significantly higher rates of HCRU and annual healthcare costs compared to non-NGB patients.

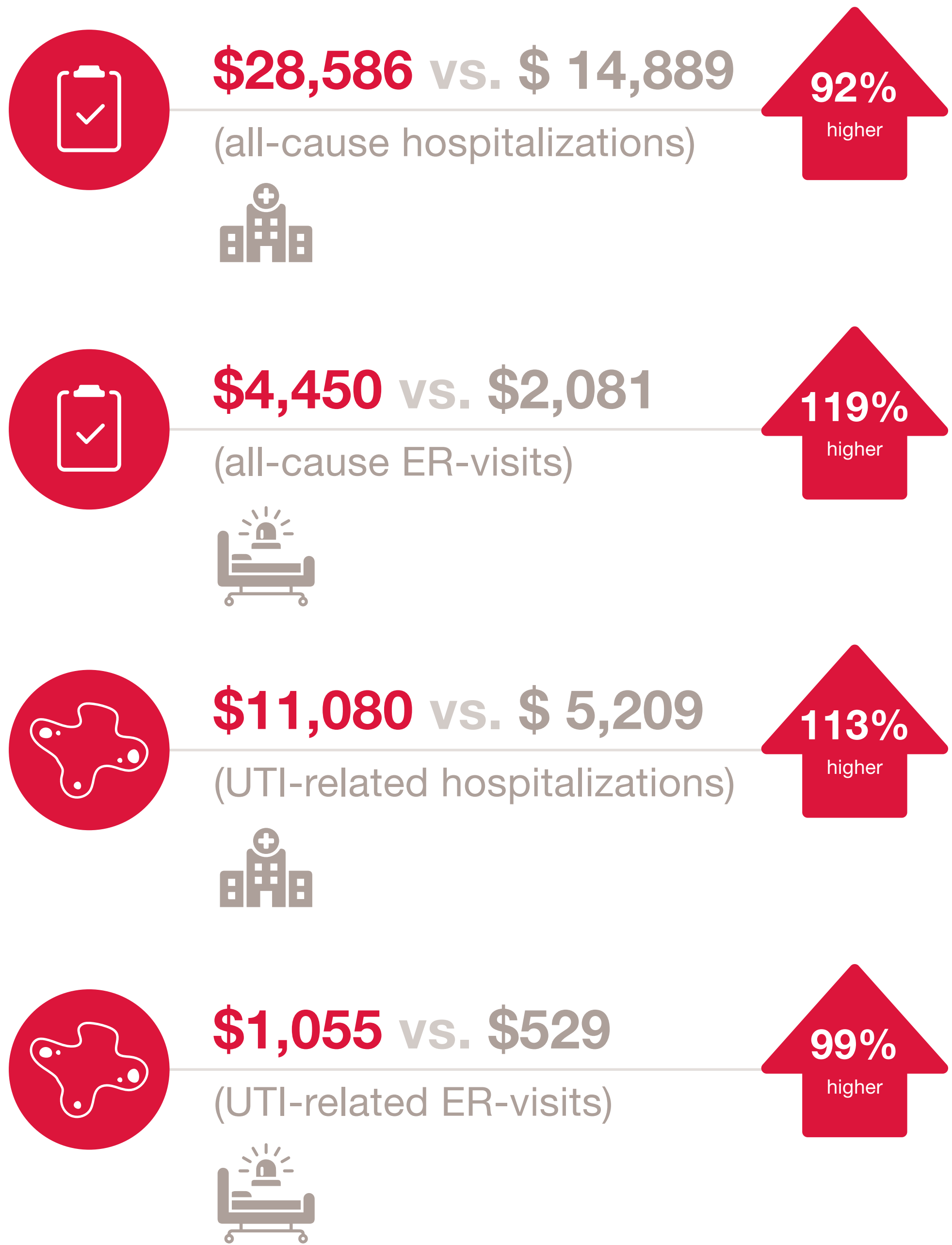
Higher Healthcare Utilization for NGB patients



During patient follow-up, NGB patients had **significantly higher** hospitalization and ER encounters

Healthcare Costs

Higher Healthcare Costs for NGB patients



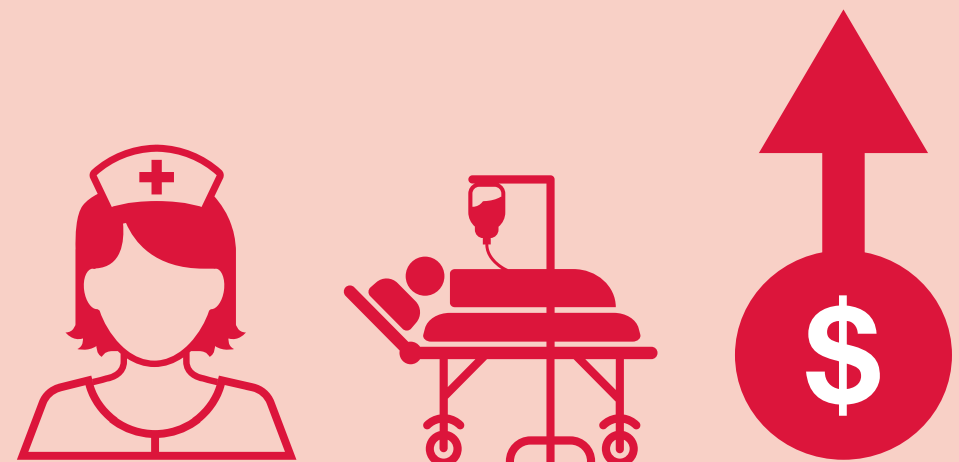
Annual healthcare costs were **significantly higher** for NGB patients



Conclusions

Incident intermittent catheter (IC) users with NGB incur significantly greater HCRU and healthcare costs compared to non-NGB users.

These findings highlight the **substantial increased** economic burden of NGB in the IC population. Understanding these cost disparities is crucial for improving patient care and developing targeted interventions for this high-risk group.



References:
1. Manack A, Mostko SP, Haag-Molkenteller C, et al. Epidemiology and healthcare utilization of neurogenic bladder patients in a US claims database. *Neurologi Urologi*. 2011;30(3):395–401.
2. Patel DN, Alabastro CG, Anger JT. Prevalence and cost of catheters to manage neurogenic bladder. *Curr Bladder Dysfunct Rep*. 2018;13(4):215–223.
3. Palma-Zamora ID, Atieno HO. Understanding the economic impact of neurogenic lower urinary tract dysfunction. *Urol Clin North Am*. 2017;44(3):333–343.
4. 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.