

Characterization of Economic Burden in Individuals With Narcolepsy or Idiopathic Hypersomnia at Higher Risk of Sodium-Associated Negative Clinical Outcomes in the United States

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Introduction

- Narcolepsy and idiopathic hypersomnia are rare neurological sleep disorders, characterized by excessive daytime sleepiness¹
- Individuals with narcolepsy or idiopathic hypersomnia frequently have comorbidities that may confer a higher risk for sodium-associated negative clinical outcomes (NCOs)^{2,3}

Objective

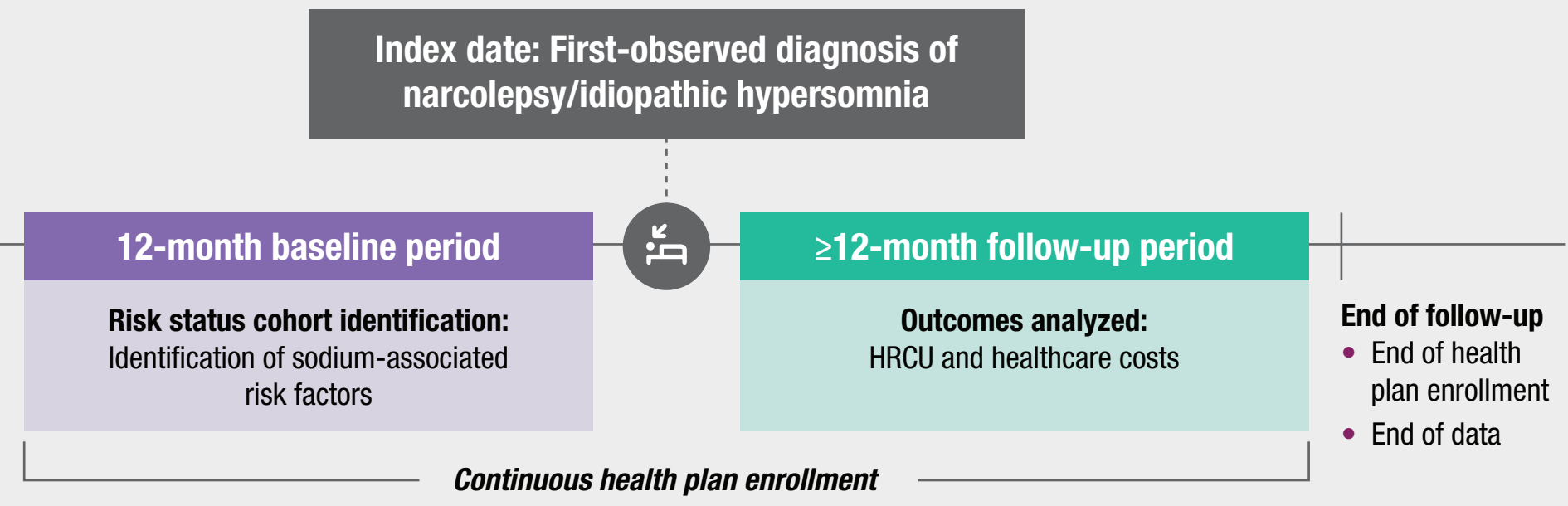
- To quantify healthcare resource utilization (HCRU) and healthcare costs for individuals with narcolepsy or idiopathic hypersomnia at higher risk of sodium-associated NCOs

Methods

Study design and data source

- Retrospective cohort study using Komodo Research Data (01/01/2016–01/31/2024), an administrative US claims database (Figure 1)

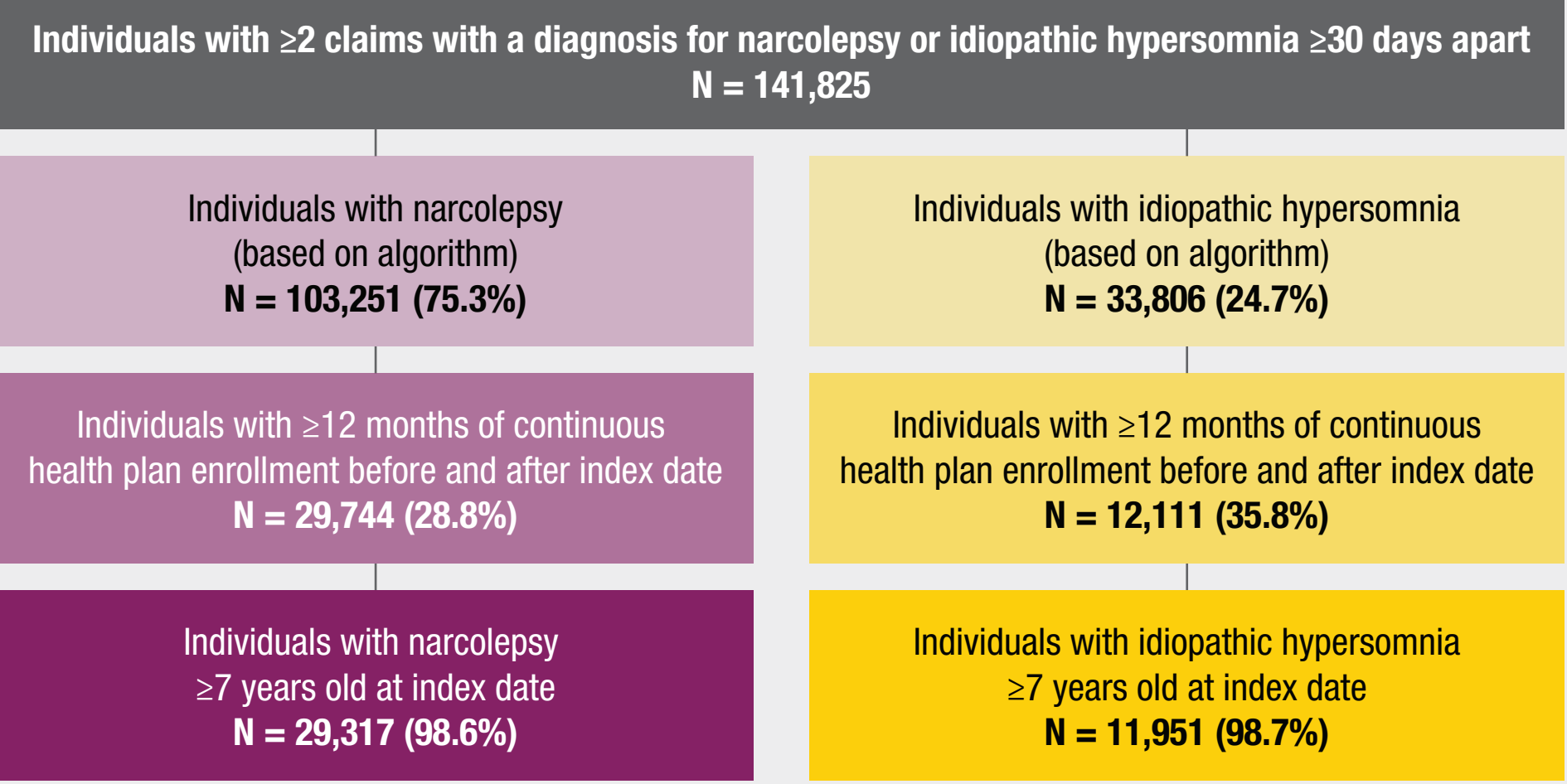
Figure 1. Study Design



Study population

- Individuals aged ≥7 years with narcolepsy or idiopathic hypersomnia were identified separately using a mutually exclusive algorithm based on real-world coding practices (Figure 2)

Figure 2. Sample Selection



Measures, outcomes, and statistical analyses

- Sodium-associated risk factors were defined through literature review/clinical expert discussion, and included cardiovascular, cardiometabolic, and renal conditions; liver cirrhosis; and sleep apnea
 - Higher-risk:** Individuals with ≥1 risk factor in the 12-month baseline period
 - Lower-risk:** Individuals with no risk factors in the 12-month baseline period
- Sodium-associated NCOs were the cardiovascular, cardiometabolic, and renal conditions occurring following risk factor identification
- Annualized all-cause HCRU and costs (2024 USD) over the ≥12-month post-index period (including the index date) were reported per-patient-per-year and compared between risk groups using log link generalized linear models with negative binomial and gamma distributions, respectively
- Analyses were also stratified by NCO-related and risk factor-related HCRU and costs
- P* values have not been adjusted for multiple comparisons
- Supplemental materials are available through the QR code on the bottom right corner of this poster

Results

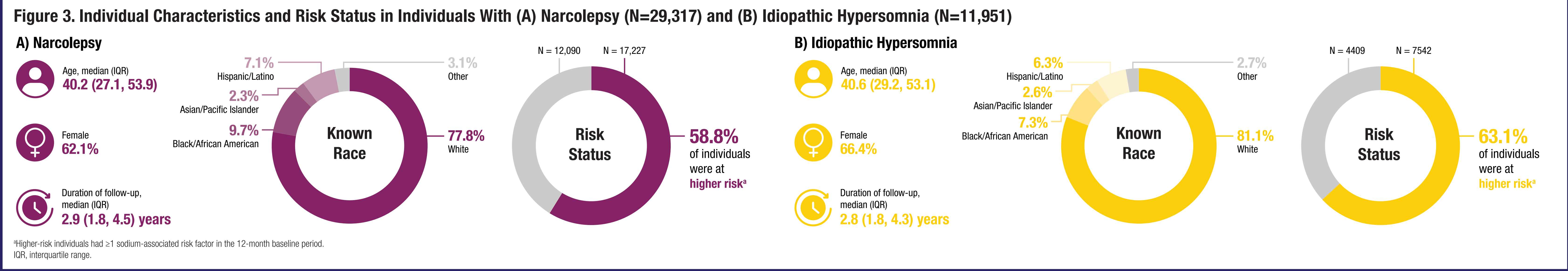


Figure 4. Healthcare Resource Utilization in Individuals With (A) Narcolepsy and (B) Idiopathic Hypersomnia

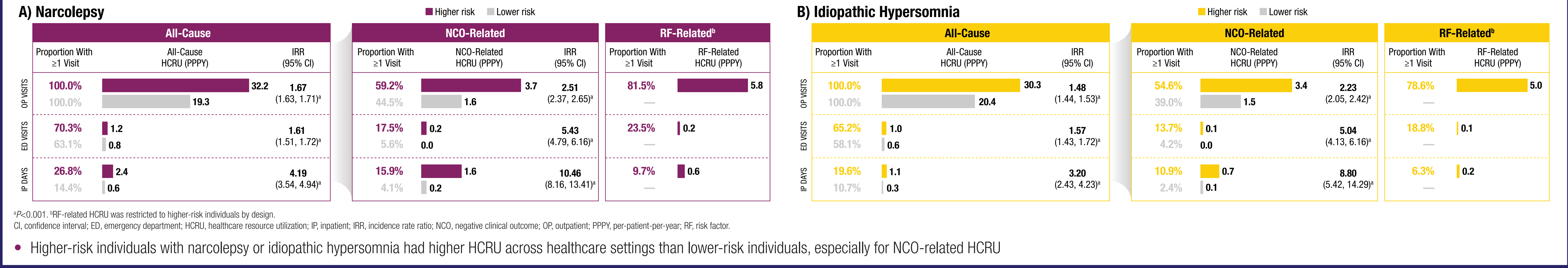
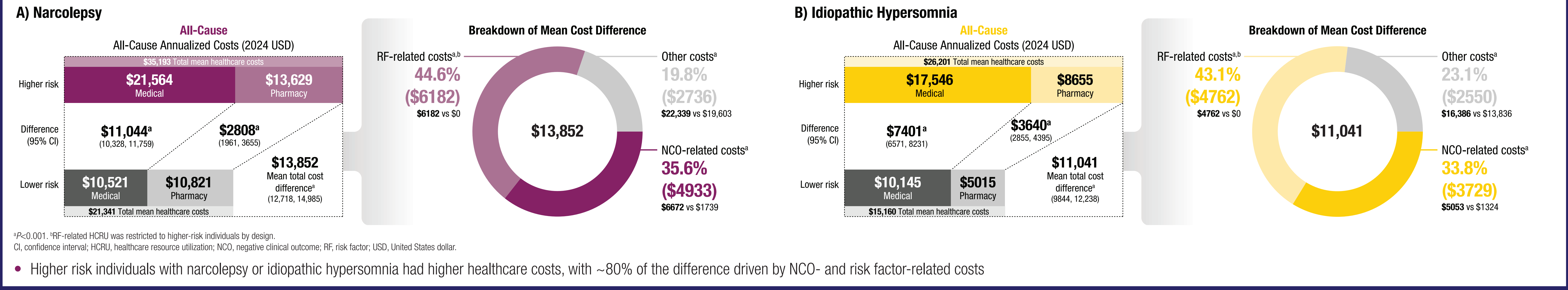


Figure 5. Annualized Healthcare Costs in Individuals With (A) Narcolepsy and (B) Idiopathic Hypersomnia



Conclusions

- HCRU and healthcare costs are markedly higher among higher-risk versus lower-risk individuals with narcolepsy or idiopathic hypersomnia, across all components, predominantly driven by sodium-associated negative clinical outcomes and risk factors
- This study is subject to common limitations of claims data, including missing data and misclassification due to billing inaccuracies
- Findings emphasize the need for careful risk management to mitigate avoidable HCRU and costs among all individuals with narcolepsy or idiopathic hypersomnia, particularly those at higher risk of negative clinical outcomes