

Healthcare utilization and costs in beneficiaries with Huntington's disease in the US Medicare population



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What does this mean for the HD community?

Currently, little is known about the economic and humanistic burden of Huntington's disease (HD). This study demonstrates that there are higher real-world costs and healthcare utilisation (HCU) associated with HD among US Medicare beneficiaries with the disease compared with HD-free beneficiaries. The cost difference observed in this study may not be generalised to other patient populations not included in the study.

Conclusions

- Medicare beneficiaries with Huntington's disease (HD) had significantly higher use of prescription drugs such as antidepressants and anxiolytics and acute healthcare utilisation (HCU) compared with HD-free beneficiaries.
- In addition, beneficiaries with HD had a significantly higher cost burden compared with HD-free beneficiaries.
- The results of this study demonstrate the significant economic and humanistic burden associated with HD.

BACKGROUND

- HD is a rare, genetic, neurodegenerative and ultimately fatal disease that typically manifests at 30–50 years of age; however, later onset can occur among older individuals.^{1,2}
- HD results in increasing disability, loss of independence and death, with a median survival of 15 years after the onset of unequivocal motor symptoms.^{2,3}
- In the US, Medicare provides coverage to individuals with HD who are ≥65 years of age, or <65 years of age with disability for 24 months.
- Little is known about HCU and cost burden among Medicare beneficiaries with HD.



Objective: To examine HCU and costs among US Medicare beneficiaries with HD

METHODS

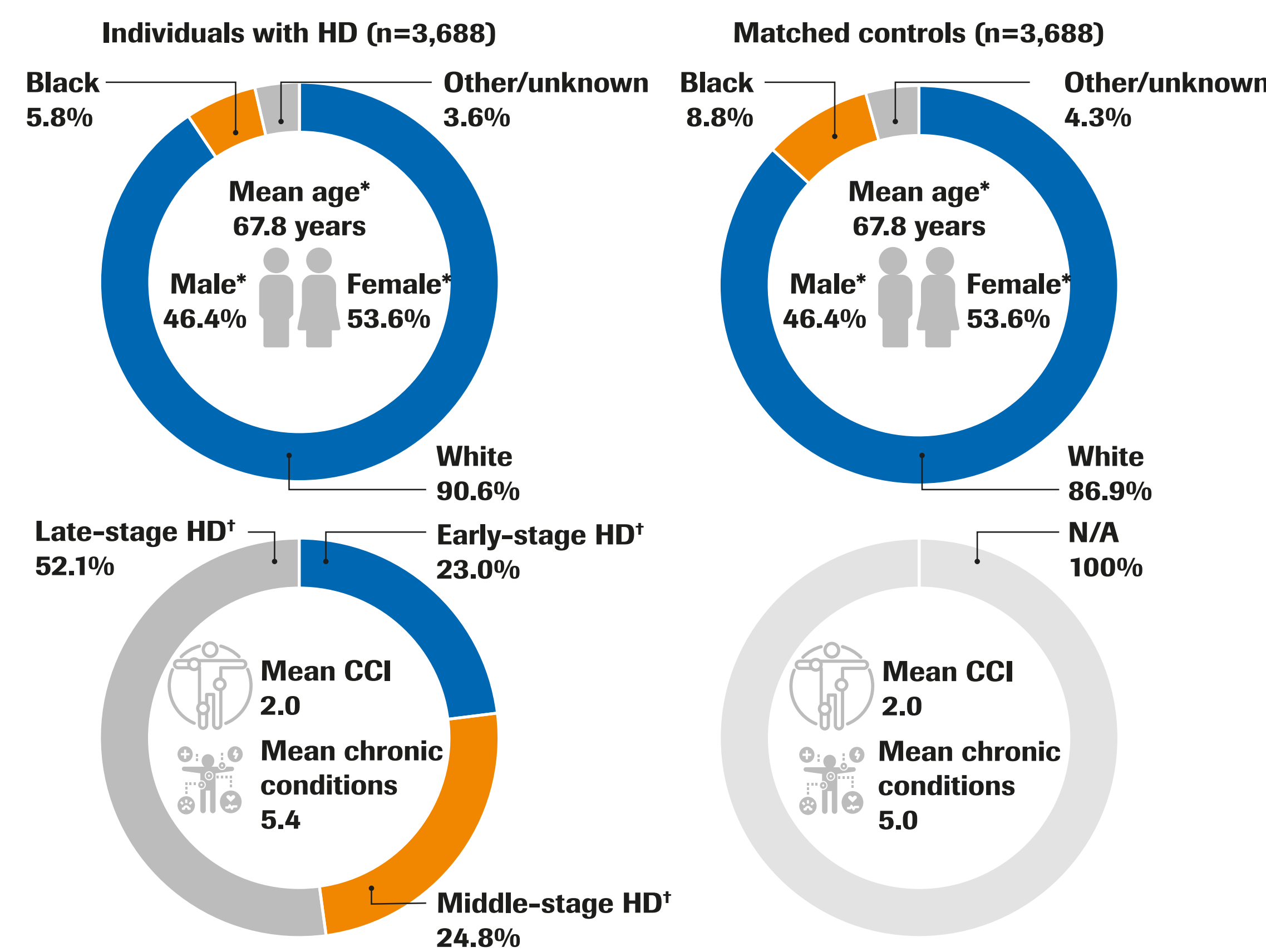
- A retrospective study was conducted using the 2013–2017 Medicare Research Identifiable Files (100%).
- Beneficiaries diagnosed with HD were identified based on having ≥1 medical claim with a diagnosis code for HD (International Classification of Diseases [ICD]-9-Clinical Modification [CM]: 333.4; ICD-10-CM: G10) during the identification period (2014–2016); date of HD claim was defined as the index date.
 - If multiple HD claims were present, 1 claim was randomly assigned as the index date to balance new and existing HD diagnoses.
- Continuous enrolment in fee-for-service Medicare 1 year prior to (baseline) and 1 year after (follow-up) index was required.
- Beneficiaries without HD (controls) were identified using 5% sample and matched 1:1 to individuals with HD based on calendar year, age, sex and US geographic region; same index and enrolment requirement as match.
- Comorbidities were measured during baseline; HCU, costs, and disease stage were measured during follow-up.
 - Stage of disease (early, middle, late) was determined by the presence of disease markers (diagnoses or services) in claims during follow-up.

RESULTS



Demographics and disease characteristics of study population

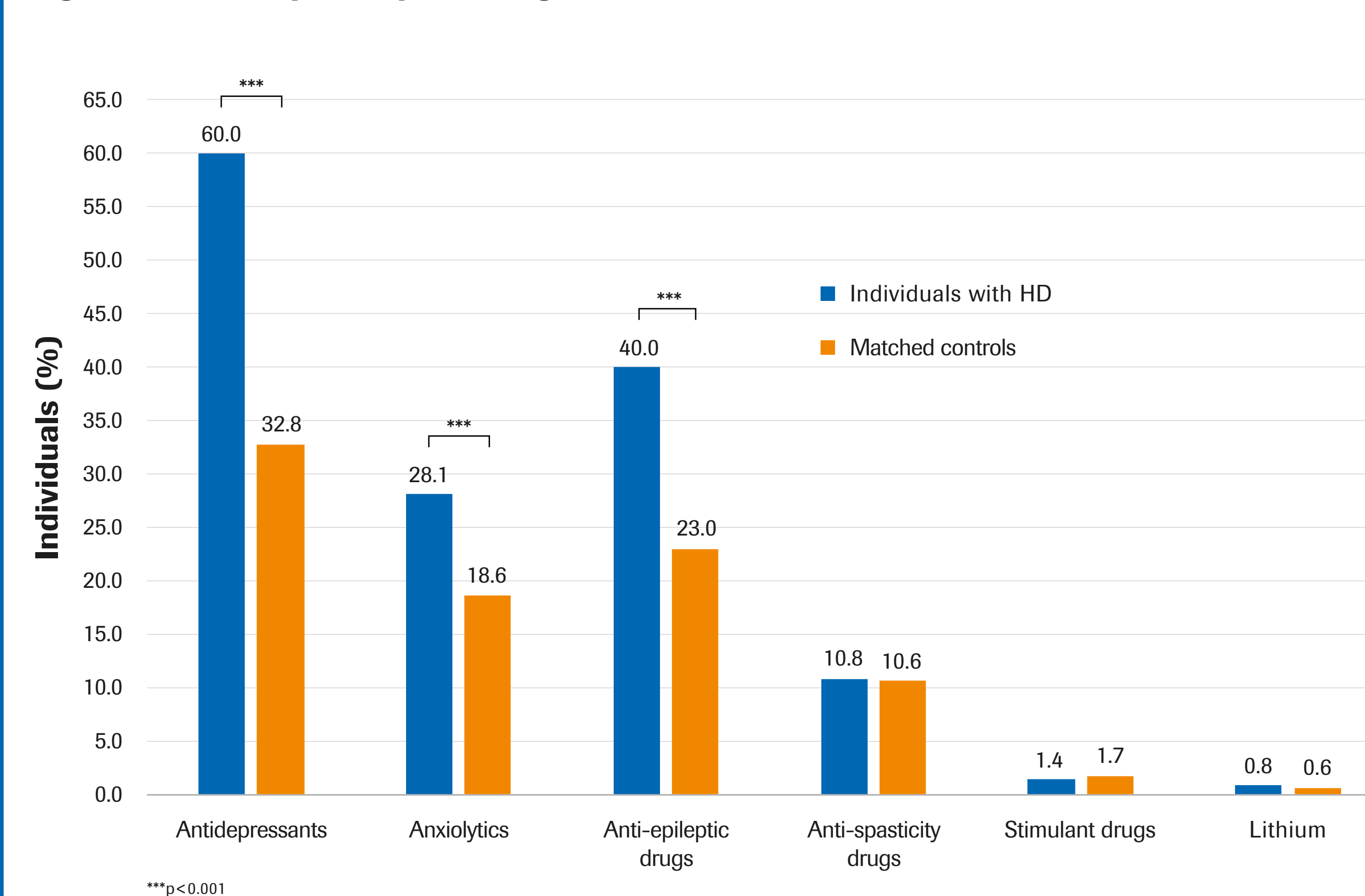
- Most individuals with HD had late-stage disease.
- Individuals with HD versus controls had similar mean Charlson comorbidity index (CCI) yet slightly more chronic conditions ($p < 0.001$) at baseline.



Individuals with HD had increased prescription drug use compared with matched controls

- Individuals with HD had a higher use of antidepressants, anxiolytics and antiepileptics compared with controls (**Figure 1**).

Figure 1. Annual prescription drug use



Individuals with HD had greater HCU and higher cost burden compared with matched controls (Figures 2 and 3)

- Mean number of office visits was lower for individuals with HD than controls (10.9 vs 12.8, respectively; $p < 0.001$).

Figure 2. Annual HCU

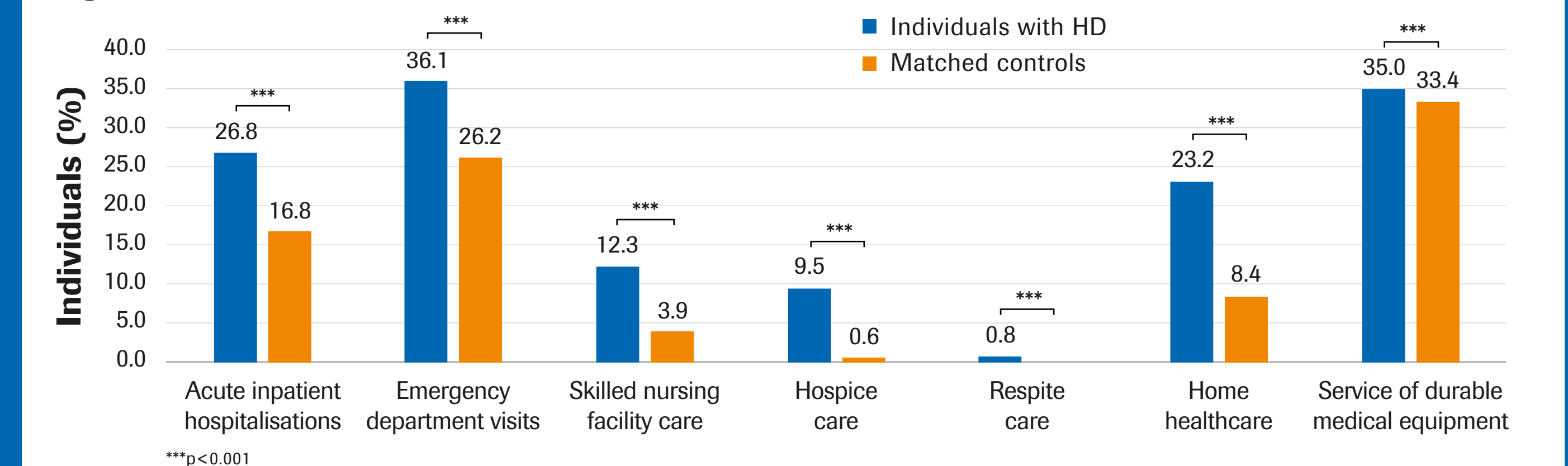
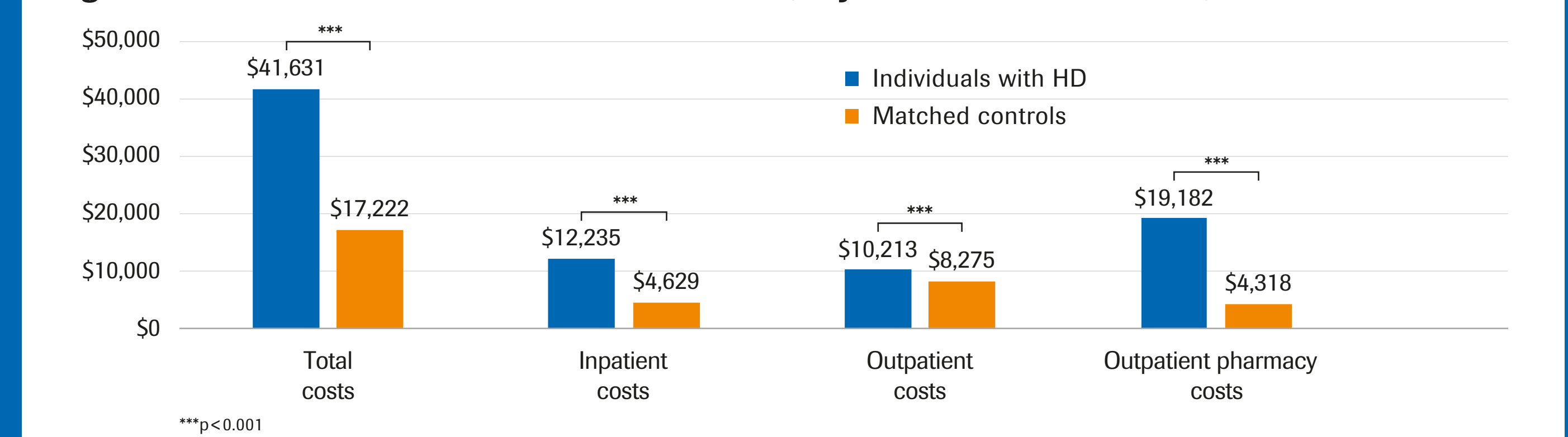


Figure 3. Annual all-cause healthcare costs (Adjusted to 2017 Dollars)



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Abbreviations

CCI, Charlson comorbidity index; HCU, healthcare utilisation; HD, Huntington's disease; ICD-9/10-CM, International Classification of Diseases, Ninth/Tenth Revision, Clinical Modification; N/A, not applicable.

References

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