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## **Association of Sociodemographic Characteristics on Costs of Care in Patients with Obstructive Hypertrophic Cardiomyopathy**

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# Introduction and Methods

## Introduction

- HCM is a chronic, progressive myocardial disorder with substantial costs, especially when patients are symptomatic.
- No evidence exists on the impact of sociodemographic characteristics on costs of care for obstructive hypertrophic cardiomyopathy (oHCM).
- Therefore, we evaluated 5-year cumulative costs by age, sex, and race/ethnicity.

## Methods

- **Study design:**
  - Retrospective
  - Cohort study
  - Adult patients with oHCM in Optum’s Market Clarity database
  - From January 1, 2013, through December 31, 2021
  - Index date = first oHCM diagnosis.

## Inclusion criteria

- 1. Evidence of oHCM:** Patients with oHCM met the following selection criteria:
  - $\geq 2$  medical claims with a diagnosis code for HCM (ICD-9: 425.1, 425.11 or 425.18; ICD-10: I42.1 or I42.2) in any care setting on different dates of service  $\geq 30$  days apart during the patient identification period
    - $\geq 1$  medical or pharmacy claim with beta-blockers, calcium channel blockers, or disopyramide anytime during the follow-up period, *or*
    - $\geq 1$  medical claim for septal reduction therapy (alcohol septal ablation and septal myectomy) during the study period.
- 2.** At least 18 years of age as of the index date.
- 3. Baseline enrollment:** Continuous enrollment (CE) with medical and pharmacy benefits for 6 months prior to the index date.
- 4. Follow-up enrollment:** CE with medical and pharmacy benefits for  $\geq 5$  years after (and including) the index date.

## Exclusion criteria

- 1.** Patients with evidence of Fabry disease or amyloidosis during the study period.
- 2.** Patients with missing age, sex, and unknown or “other” geographical region.

## Outcomes

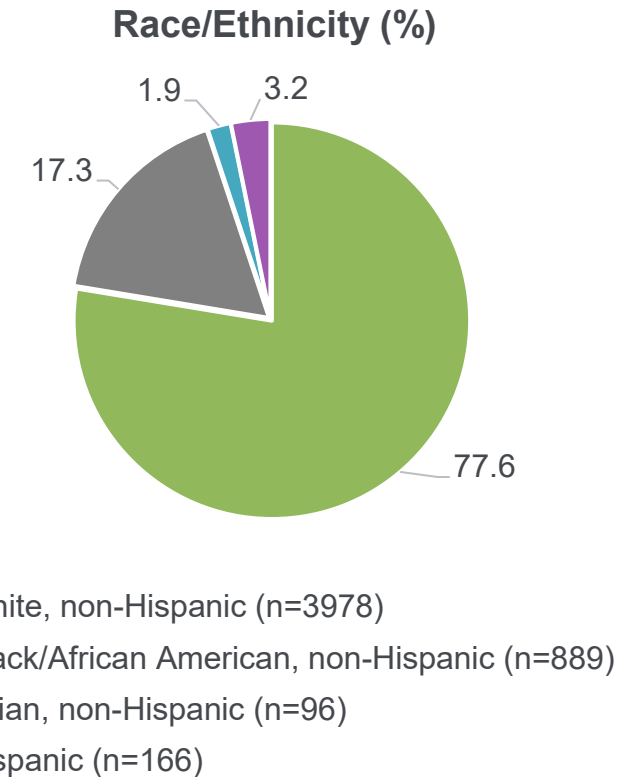
- HCM-related costs (Consumer Price Index [CPI] adjusted to 2022) were reported as mean (SD), including medical (ambulatory: office visit, outpatient [OP] visits; emergency room [ER] visit; inpatient admissions (IA); length of stay [LOS]; other medical costs) and pharmacy.
- Outcomes were assessed at 5-year follow-up (N=5129).

# Results: Patient Demographics

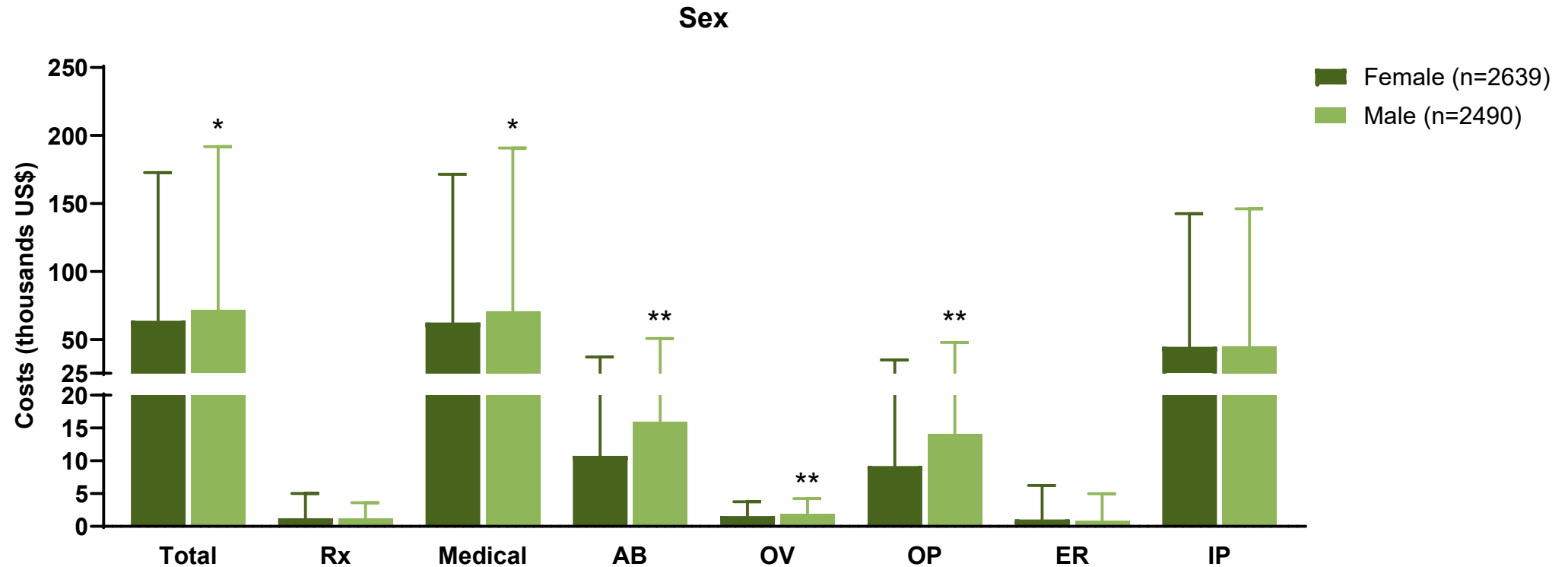
Demographics, n (%)	oHCM N=5129
Age, mean (SD) y	63.9 (14.3)
Age group, y	
18–39	296 (5.8)
40–54	959 (18.7)
55–64	1230 (24)
65–74	1193 (23.3)
75+	1451 (28.3)
Female	2639 (51.5)
US geographical region	
Northeast	1524 (29.7)
Midwest	2084 (40.6)
South	1107 (21.6)
West	414 (8.1)
Insurance type, (%)	
Medicare	(40)
Commercial	(37)
Medicaid	(6)
Unknown	(16)
Other	(1)

Data are n (%) unless otherwise indicated.

- Among 5129 patients with oHCM, 51% were female; mean (SD) age was 63.9 ± 14.3 years, 77.6% were non-Hispanic White, and 40% were Medicare recipients.



# Results: Healthcare Costs by Sociodemographic Characteristics in oHCM



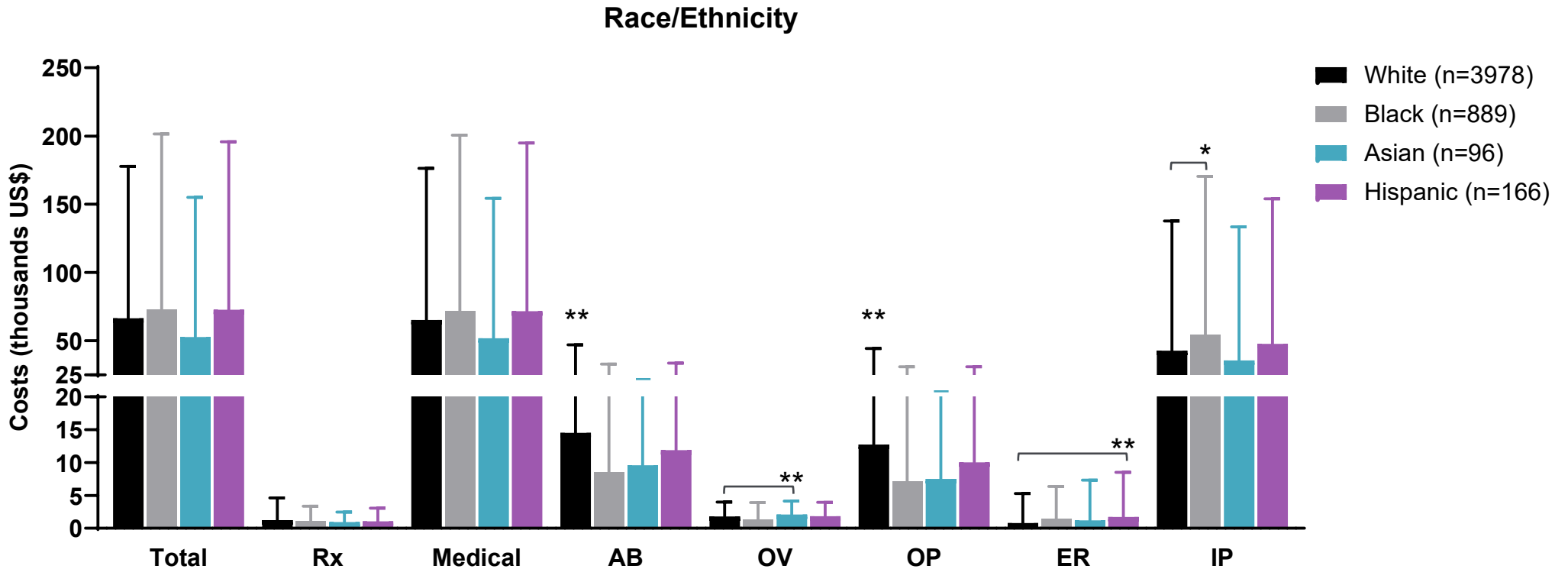
- Compared with females, male patients had higher costs including total (\$71,581 vs \$63,710;  $P=0.014$ ), medical (\$70,395 vs \$62,455;  $P=0.013$ ), ambulatory (\$16,024 vs \$10,776;  $P<0.001$ ), OV (\$1,906 vs \$1,573;  $P<0.001$ ), and OP (\$14,118 vs \$9,202;  $P<0.001$ ).

Data are presented as mean (SD) for healthcare costs (US\$ 2,022). Total includes medical and pharmacy costs. Medical includes ambulatory total, and office and outpatient.

\*  $P<0.015$ . \*\*  $P<0.001$ .

AB, ambulatory; ER, emergency room visits; IP, inpatient admissions; OV, office visits; OP, outpatient visits; Rx, pharmacy.

# Results: Healthcare Costs by Sociodemographic Characteristics in oHCM



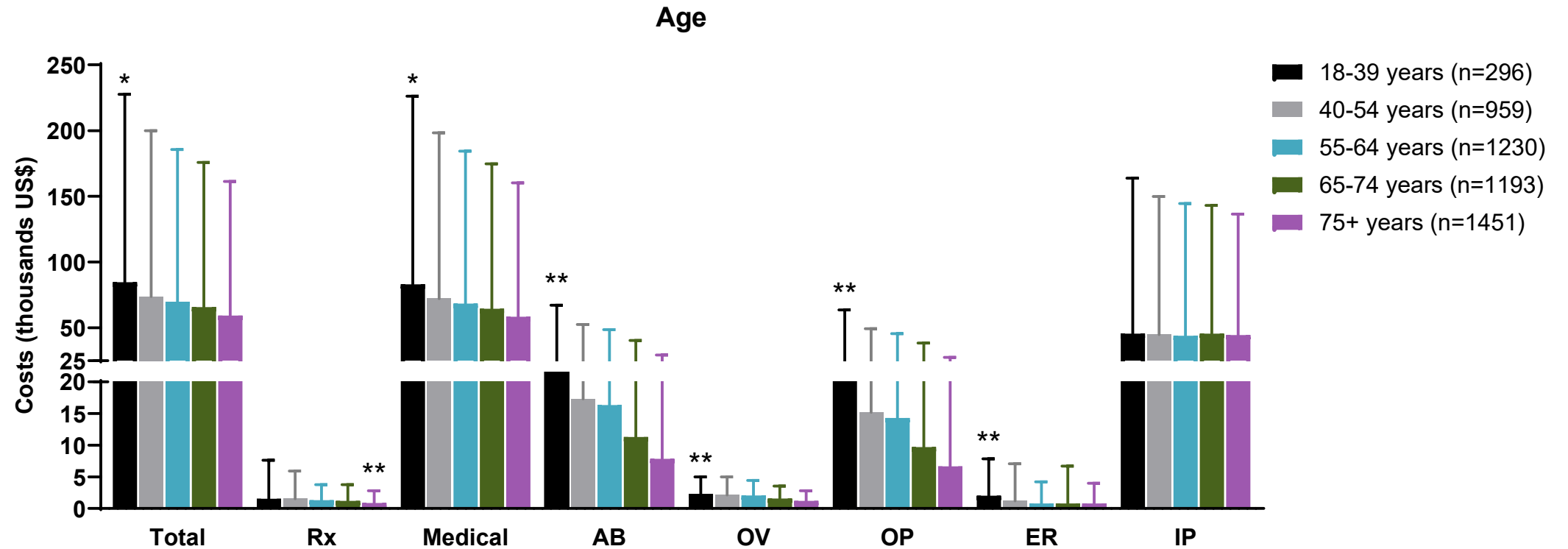
- Compared with White patients, Black patients had significantly higher IP costs (\$54,572 vs \$42,686;  $P=0.015$ ), Hispanic patients had greater ER costs (\$1,724 vs \$791;  $P<0.001$ ), and Asian patients had greater OV costs (\$2,094 vs \$1,800;  $P<0.001$ ).
- White patients also had significantly more costs for AB (\$14,536) and OP (\$12,736) vs all other races/ethnicities (both  $P<0.001$ ).

Data are presented as mean (SD) for healthcare costs (US \$2,022). Total includes medical and pharmacy costs. Medical includes ambulatory total, and office and outpatient.

\*  $P<0.015$ . \*\*  $P<0.001$ .

AB, ambulatory; ER, emergency room visits; IP, inpatient admissions; OV, office visits; OP, outpatient visits; Rx, pharmacy.

# Results: Healthcare Costs by Sociodemographic Characteristics in oHCM



- Patients aged 18–39 years had higher costs across all categories ( $P < 0.001$ ; except IP=not significant), except prescriptions.
- Patients aged 40–54 years had the highest prescription costs (\$1,557;  $P < 0.001$ ), followed by 18–39, 55–64, 65–74, and 75+ years (\$1,528, \$1,329, \$1,197, and \$867, respectively).

Data are presented as mean (SD) for healthcare costs (US \$2,022). Total includes medical and pharmacy costs. Medical includes ambulatory total, and office and outpatient.

\*  $P < 0.015$ . \*\*  $P < 0.001$ .

AB, ambulatory; ER, emergency room visits; IP, inpatient admissions; OV, office visits; OP, outpatient visits; Rx, pharmacy.

# Conclusions

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## Limitations

- Real-world data in this study utilized ICD-9 and ICD-10 coding for disease identification, patient demographics and outcomes, and may be subject to inconsistencies without patient-level genetic and anatomical confirmation.

## Conclusions

- For patients with oHCM, being male and aged 18–39 years was associated with increased oHCM-related healthcare costs.
- Differences in cost across race/ethnicity exist, including greater IP and ER costs for Black and Hispanic patients, respectively.
- Future research is required to understand the source of these differences among patients with oHCM.