

Logistic and Economic Burden of Non-obstructive Hypertrophic Cardiomyopathy – Results from Medical and Pharmacy Claims Data

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BACKGROUND

- About one-third of patients with hypertrophic cardiomyopathy (HCM) have non-obstructive HCM (nHCM).¹
- There is limited evidence on the impact of symptoms and complications on the logistic and economic burden of patients with nHCM.

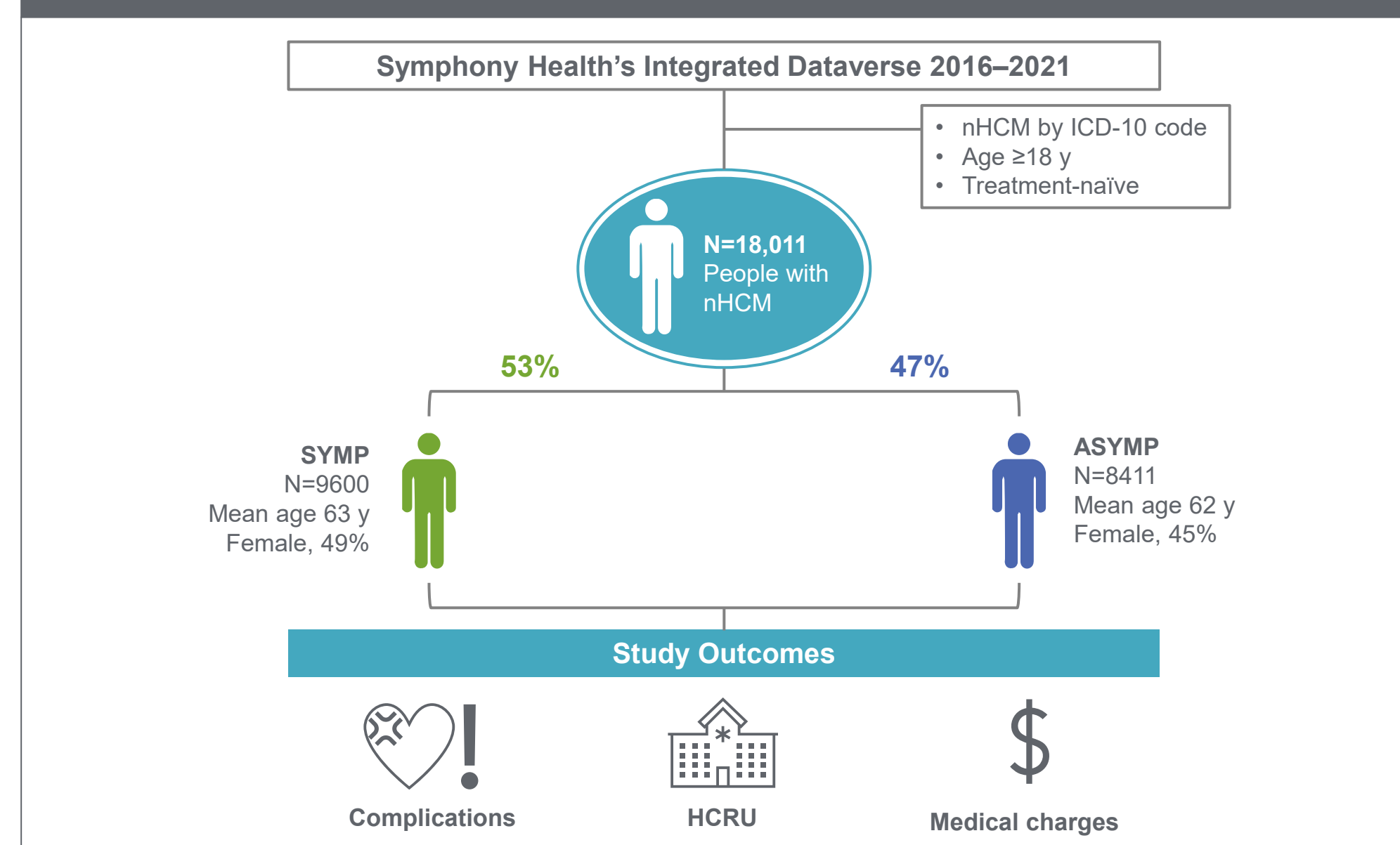
HYPOTHESIS

- The presence of symptoms and complications increases the logistic and economic burden of nHCM.

METHODS

- We used Symphony medical and pharmacy claims data from 2016 to 2021 to identify (by ICD-10 code) adult patients in the USA with symptomatic (SYMP) or asymptomatic (ASYMP) nHCM (Figure 1).
- SYMP was defined as fatigue, chest pain, syncope, dyspnea, heart failure (HF), or palpitations within 3 months of index date.
- Complications included atrial fibrillation (AF)/flutter, ventricular fibrillation/ventricular tachycardia (VT), supraventricular tachycardia, stress cardiomyopathy, HF, or heart transplant.
- We assessed pre- vs post-complication resource use and charges (per-person per-year [PPPY], in US\$) for 18,011 patients with nHCM.

Figure 1. Study design



HCRU, healthcare resource utilization.

Table 1. Baseline characteristics of nHCM cohort

	SYMP N=9600 (53.3%)	ASYMP N=8411 (46.7%)	P value
Age, mean (SD)	62.7 (14.3)	61.5 (15.6)	<0.001
Female, n (%)	4746 (49.4)	3807 (45.3)	<0.001
Baseline comorbidities, n (%)			
Atrial fibrillation	1117 (11.6)	504 (6.0)	<0.001
Atrial flutter	220 (2.3)	85 (1.0)	<0.001
Ventricular fibrillation	24 (0.3)	15 (0.2)	0.302
Ventricular tachycardia	283 (2.9)	106 (1.3)	<0.001
Supraventricular tachycardia	218 (2.3)	86 (1.0)	<0.001
Stress cardiomyopathy	31 (0.3)	7 (0.1)	<0.001
Stroke	334 (3.5)	171 (2.0)	<0.001
Dyslipidemia	4404 (45.9)	3082 (36.6)	<0.001
Coronary artery disease	1961 (20.4)	827 (9.8)	<0.001
Hypertension	3230 (33.6)	1725 (20.5)	<0.001
Heart failure	2113 (22.0)	207 (2.5)	<0.001

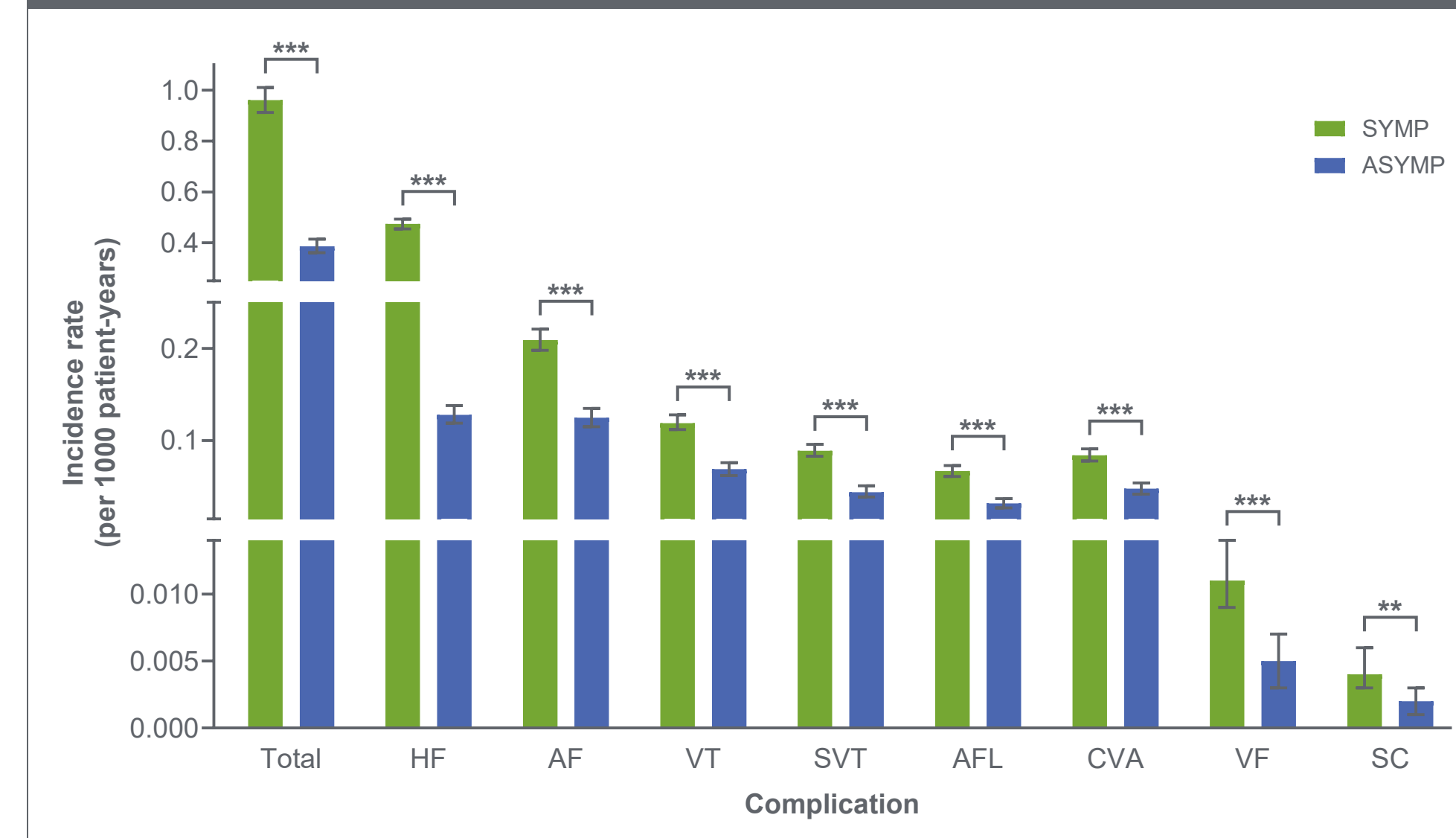
RESULTS

- In SYMP vs ASYMP nHCM (N=9600 vs 8411), mean age was 63 ± 14 vs 62 ± 16 years ($P<0.001$) and 49% vs 45% were female ($P<0.001$) (Table 1).
- The incidence of complications was 0.96 vs 0.39 per 1000 patient-years ($P<0.001$; HR 0.44, 95% CI 0.40–0.48). For SYMP and ASYMP, the most frequent complications were HF, AF, and VT (Figure 2).
- In SYMP nHCM, complications increased inpatient (IP) admissions and charges ($P<0.001$, $P<0.01$, respectively) and all-cause charges (\$59,070 to \$73,630 PPPY; $P=0.006$), without altering outpatient (OP) visits or charges ($P=0.438$, $P=0.071$, respectively) (Figure 3A–B, Figure 4).
- In ASYMP nHCM, complications increased IP admissions and charges (all $P<0.001$), and all-cause charges (\$22,711 to \$66,053 PPPY; $P<0.001$) (Figure 3A–B, Figure 4).
- For patients with SYMP vs ASYMP nHCM, incremental post-complication charges were \$14,560 vs \$43,343 PPPY, $P=0.007$ (Figure 4).

Limitations

- The findings presented in this poster are derived from various unadjusted analyses. Adjusting for variables such as sex, age, and comorbidities could potentially impact these results.

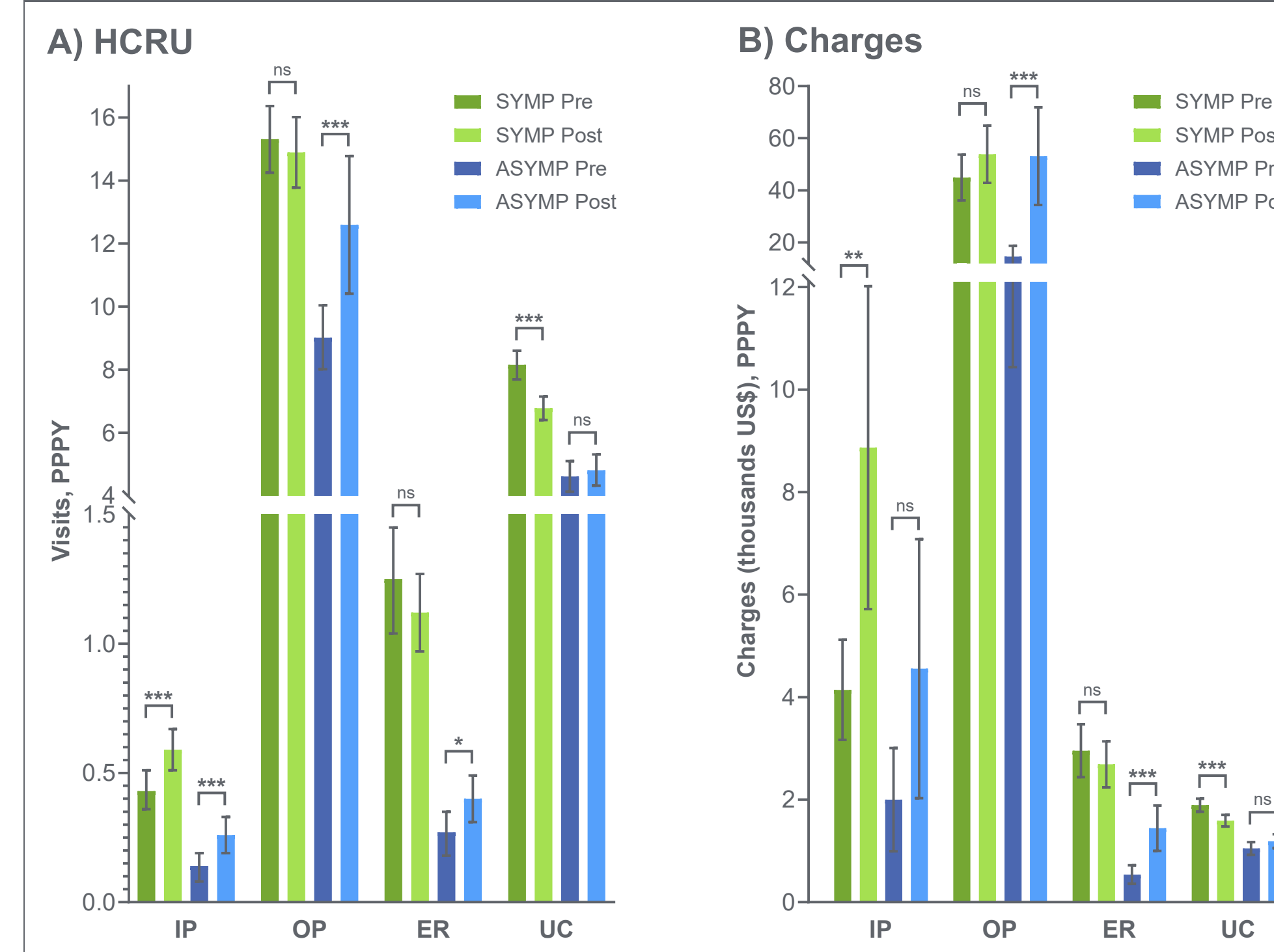
Figure 2. Incidence rate of complications for SYMP vs ASYMP nHCM cohorts



** $P<0.01$; *** $P<0.001$.

AFL, atrial flutter; CVA, cerebrovascular accident; SC, stress cardiomyopathy; SVT, supraventricular tachycardia; VF, ventricular fibrillation.

Figure 3. HCRU and medical charges before and after complications in SYMP and ASYMP nHCM cohorts

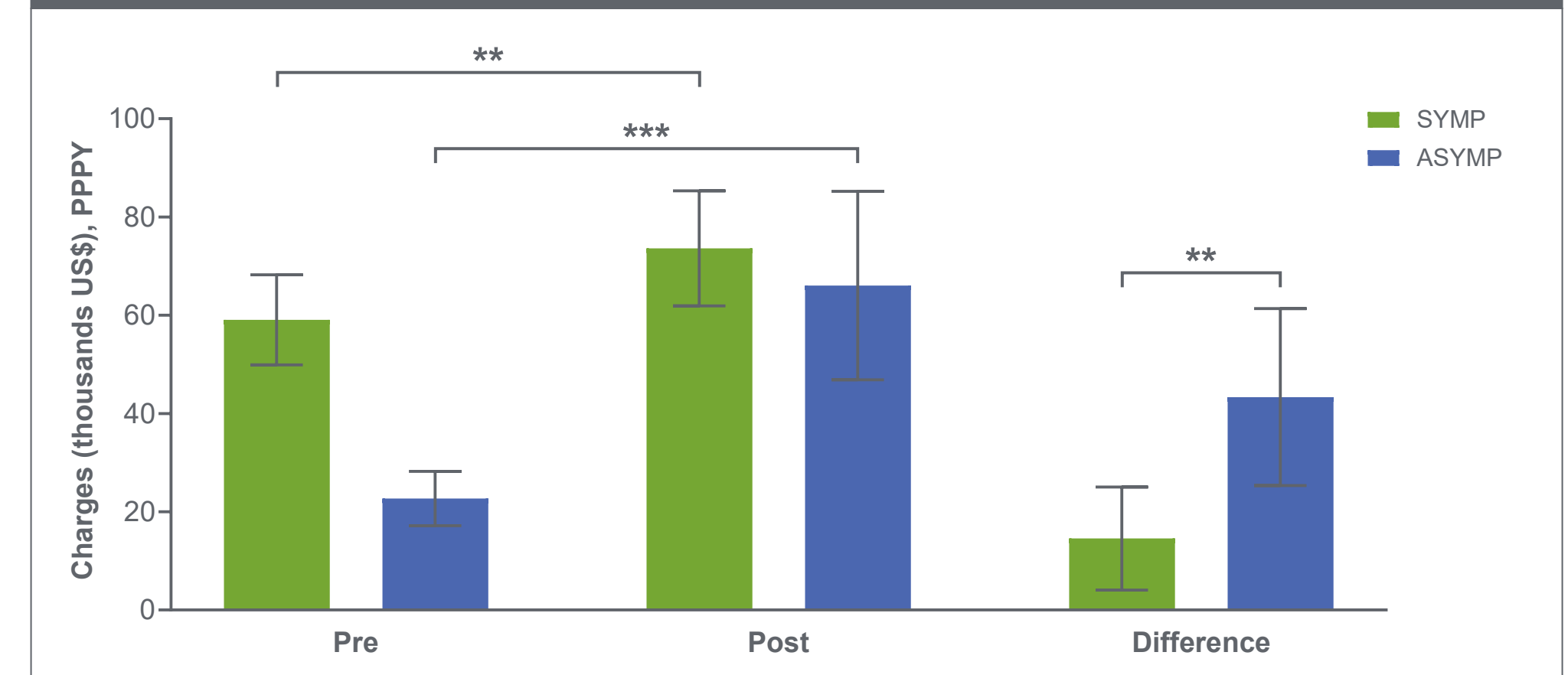


Data from Symphony medical and pharmacy claims 2016–2021. Error bars show 95% CI. P values are pre- vs post-complication for SYMP and ASYMP.

* $P<0.05$; ** $P<0.01$; *** $P<0.001$.

ER, emergency room; HCRU, healthcare resource utilization; ns, not significant; Post, post-complication; Pre, pre-complication; UC, urgent care.

Figure 4. Total medical charges in SYMP and ASYMP nHCM cohorts



** $P<0.01$; *** $P<0.001$.

Difference, difference in total medical charges before and after the first complication; Post, after first complication; Pre, before first complication.

CONCLUSIONS

- In this study, patients with SYMP vs ASYMP nHCM were older, predominantly female, and had higher rates of complications.
- Complications were associated with increased IP admissions and charges for SYMP nHCM, and increased OP admissions and charges for ASYMP nHCM.
- Our data highlight the value of complication prevention, especially for patients with ASYMP nHCM, for whom complications may steeply increase charges.

Reference

- Lu DY, et al. *J Am Heart Assoc.* 2018;7(5):e006657.

Disclosures

This study was funded by Cytokinetics, Incorporated. MB: Employee of and owns stock in Cytokinetics, Incorporated. SA, MC, EP, RP, DR, and TA: No conflicts of interest to declare.

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Abbreviations

AF, atrial fibrillation; ASYMP, asymptomatic; HCM, hypertrophic cardiomyopathy; HF, heart failure; IP, inpatient; nHCM, non-obstructive hypertrophic cardiomyopathy; OP, outpatient; PPPY, per-person per-year; SYMP, symptomatic; VT, ventricular tachycardia.



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