Impact of Hypertrophic Cardiomyopathy on Work Productivity and Activity Impairment in Patients with HCM: Analysis of a Real-World Cross-Sectional Survey

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BACKGROUND

- Hypertrophic cardiomyopathy (HCM) is a chronic, progressive disease characterized by left ventricular hypertrophy.[1,2]
- Several studies have reported that HCM is associated with substantial medical costs and decline in quality of life.[3-6]
- However, studies examining the impact of HCM on work productivity and activity impairment (WPAI) in patients with HCM remain limited.

OBJECTIVE

- This study evaluated the impact of HCM on WPAI in patients with HCM.

METHODS

Study Design

- Between July 2022 and October 2024, data were drawn from the Adelphi Real World HCM Disease Specific Programme™ (DSP™), a multinational, cross-sectional survey conducted in Italy, Spain, and the United States (US).
- The DSP methodology details were previously described, validated, and demonstrated to be representative and consistent over time.[7-9]
- Briefly, cardiologists completed questionnaires on demographics and clinical characteristics of their patients with HCM and patients completed the WPAI questionnaire.
- Patients' productivity and impairment due to HCM was collected using the WPAI questionnaire and reported as mean (%) impairment per domain. Higher mean (%) indicated less productivity and greater impairment.
  - Results were stratified by HCM type (obstructive HCM [oHCM] and non-obstructive HCM [nHCM]) and compared using t-tests (P<0.05 considered significant).

RESULTS

Patient Population

- Demographics and clinical characteristics for patients with HCM (N=273) and of the oHCM and nHCM cohorts are shown in **Table 1**.
- Among the 273 patients, mean age was 55.27 years and 41.76% were male.
- Overall, 76.56% of patients were classified as New York Heart Association functional class II.
- 43.94% of patients worked full-time, 6.82% worked part-time, and 33.71% were retired.
- 32.23% of patients had hypertension, 19.05% had hyperlipidemia, 16.12% had atrial fibrillation, and 6.96% had heart failure.

Table 1: Patient demographics and clinical characteristics

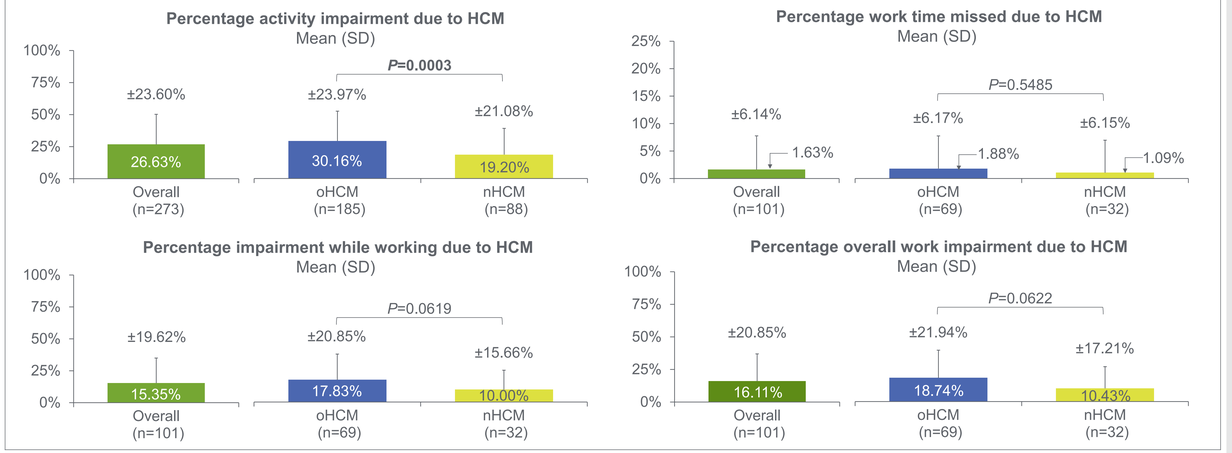
	All patients N=273	Patients with oHCM n=185	Patients with nHCM n=88
Patient age	**n=273**	**n=185**	**n=88**
Age, mean (SD), years	55.27 (14.73)	57.01 (14.35)	51.62 (14.94)
Biological sex, n (%)	**n=273**	**n=185**	**n=88**
Male	114 (41.76)	69 (37.30)	45 (51.14)
Female	159 (58.24)	116 (62.70)	43 (48.86)
Region, n (%)	**n=273**	**n=185**	**n=88**
Italy	58 (21.25)	15 (17.05)	43 (23.24)
Spain	102 (37.36)	45 (51.14)	57 (30.81)
US	113 (41.39)	28 (31.82)	85 (45.95)
Employment status, n (%)	**n=264**	**n=180**	**n=84**
Full-time	116 (43.94)	68 (37.78)	48 (57.14)
Retired	89 (33.71)	73 (40.56)	16 (19.05)
Part-time	18 (6.82)	14 (7.78)	4 (4.76)
Homemaker	16 (6.06)	7 (3.89)	9 (10.71)
Unemployed	15 (5.68)	10 (5.56)	5 (5.95)
Long-term sick leave	6 (2.27)	5 (2.78)	1 (1.19)
Student	4 (1.52)	3 (1.67)	1 (1.19)
Comorbidities, n (%)	**n=273**	**n=185**	**n=88**
Hypertension	88 (32.23)	68 (36.76)	20 (22.73)
Hyperlipidemia	52 (19.05)	45 (24.32)	7 (7.95)
Atrial fibrillation / atrial flutter	44 (16.12)	31 (16.76)	13 (14.77)
Left atrial dilation	22 (8.06)	17 (9.19)	5 (5.68)
Heart failure	19 (6.96)	10 (5.41)	9 (10.23)
Non-sustained ventricular tachycardia	15 (5.49)	13 (7.03)	2 (2.27)
Current NYHA classification, n (%)	**n=273**	**n=185**	**n=88**
I	30 (10.99)	18 (9.73)	12 (13.64)
II	209 (76.56)	139 (75.14)	70 (79.55)
III / IV	34 (12.45)	28 (15.14)	6 (6.82)

HCM, hypertrophic cardiomyopathy; nHCM, non-obstructive hypertrophic cardiomyopathy; NYHA, New York Heart Association; oHCM, obstructive hypertrophic cardiomyopathy.

Impact of HCM on Work Productivity and Activity Impairment

- Full-time and part-time employed patients with HCM reported that 15.35% of their time at work was impaired due to HCM in the past 7 days and, on average, they missed 1.63% of work time (**Table 2**).
- Additionally, employed patients reported experiencing 16.11% overall work impairment due to HCM.
- All patients with HCM reported, on average, 26.63% of activity impairment due to HCM.
- Work impairment did not differ significantly by oHCM and nHCM, respectively.
  - 17.83% vs 10.00% reported impairment while working (P=0.0619).
  - 1.88% vs 1.09% work time was missed (P=0.5485).
  - 18.74% vs 10.43% patients reported overall work impairment (P=0.0622).
- Patients with oHCM reported greater activity impairment vs patients with nHCM (30.16% vs 19.20%; P=0.0003) (**Figure 1**).

Figure 1: Impact of HCM on work productivity and activity impairment



HCM, hypertrophic cardiomyopathy; nHCM, non-obstructive hypertrophic cardiomyopathy; oHCM, obstructive hypertrophic cardiomyopathy.

Table 2: Impact of HCM on WPAI

	All patients N=273	Patients with oHCM n=185	Patients with nHCM n=88	*P* value
Mean percentage activity impairment due to HCM, mean (SD)	n=273 26.63% (23.60)	n=185 30.16% (23.97)	n=88 19.20% (21.08)	**0.0003**
Mean percentage impairment while working due to HCM, mean (SD)	n=101 15.35% (19.62)	n=69 17.83% (20.85)	n=32 10.00% (15.66)	0.0619
Mean percentage work time missed due to HCM, mean (SD)	n=101 1.63% (6.14)	n=69 1.88% (6.17)	n=32 1.09% (6.15)	0.5485
Mean percentage overall work impairment due to HCM, mean (SD)	n=101 16.11% (20.85)	n=69 18.74% (21.94)	n=32 10.43% (17.21)	0.0622

HCM, hypertrophic cardiomyopathy; nHCM, non-obstructive hypertrophic cardiomyopathy; oHCM, obstructive hypertrophic cardiomyopathy; WPAI, work productivity and activity impairment.

Limitations

- Data from the survey are cross-sectional, with limited information about individual patient journeys or disease trajectory.
- Participation is affected by the willingness to complete the survey and may not reflect a random sample of cardiologists or patients with HCM.

CONCLUSIONS

- HCM imposes a significant burden on work productivity and daily activities, with over a quarter of regular daily activity of patients impaired due to HCM.
- This burden is consistent across HCM subtypes, though activity limitations are more pronounced in patients with oHCM. The study results were not adjusted for patient characteristics, including age, gender, and disease severity.
- There is a clear need for effective treatments that improve functional capacity and productivity. Future research should assess how these impairments contribute to healthcare and societal costs, and how improved management can help reduce the broader economic impact of HCM.

References

1. Maron BJ, et al. *Circulation* 1995;92(4):785-9. 2. Argirò A, et al. *Nat Rev Dis Primers* 2025;11(1):58. 3. Butzner M, et al. *Am Heart J Plus* 2022;13:100089. 4. Wang Y, et al. *Circulation* 2023;148(suppl 1):A12315. 5. Schoonvelde SAC, et al. *Eur Heart J-Qual Care Clin Outcomes* 2025;11(2):174-5. 6. Reza N, et al. *Value Health* 2025;28(6):S7. 7. Anderson P., et al. *Curr Med Res Opin* 2008;24(11):3063-72. 8. Anderson P, et al. *Curr Med Res Opin* 2023;39(12):1707-15. 9. Babineaux SM, et al. *BMJ Open* 20016;6(8):e010352.

Disclosures

PG, MB and SS are employees of and hold stock in Cytokinetics, Incorporated; JJ, LH, SB, LL and EG are employees of Adelphi Real World.

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