# Modified Delphi expert elicitation of the clinical and economic burden of obstructive hypertrophic cardiomyopathy in England and Northern Ireland

Michael Hurst, <sup>1</sup> Carla Zema, <sup>2</sup> Taryn Krause, <sup>1</sup> Belinda Sandler, <sup>1</sup> Teresa Lemmer, <sup>1</sup> Kathleen Noon, <sup>1</sup> Deepak Alexander, <sup>3</sup> Faizel Osman <sup>4</sup>

#### **Author affiliations**

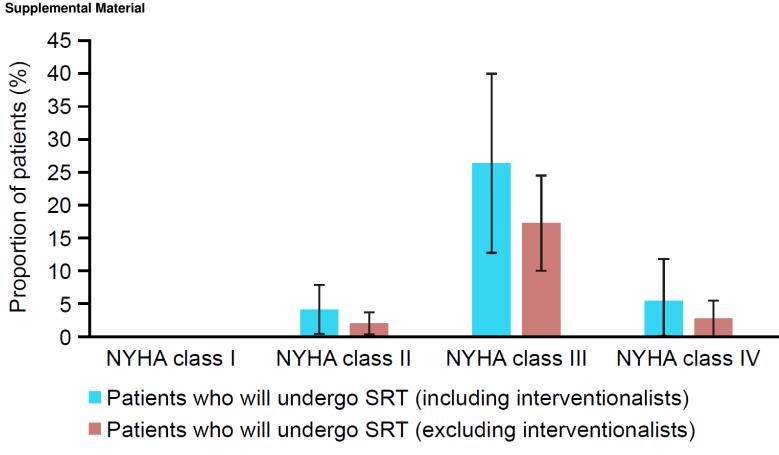
<sup>1</sup>Bristol Myers Squibb, Uxbridge, UK

<sup>2</sup>Bristol Myers Squibb, Lawrenceville, New Jersey, USA

<sup>3</sup>Accession Healthcare Consulting Ltd, Henley-on-Thames, UK

<sup>4</sup>Institute of Cardio-Metabolic Medicine, University Hospital Coventry & Warwickshire NHS
Trust, University of Warwick (Warwick Medical School), Coventry, UK

Corresponding Author: Professor Faizel Osman, Cardio-Metabolic Research Institute,
University Hospital Coventry & Warwickshire NHS Trust, CV2 2DX; Division of Life
Sciences, Warwick Medical School, University of Warwick, Coventry, UK, CV4 7HL;
<a href="mailto:faizel.osman@uhcw.nhs.uk">faizel.osman@uhcw.nhs.uk</a>



Supplemental Figure 1 Estimated proportion of patients who will undergo SRT stratified by NYHA class.\*

Data are presented as mean ± 95% CI. \*SRT includes both alcohol septal ablation and/or myectomy. CI, confidence interval; NYHA, New York Heart Association; SRT, septal reduction therapy.

#### Supplemental Table 1 Demographics of experts who participated in the study

Centre	Region, country	Cardiovascular subspecialty of expert
Queen Elizabeth Hospital, University Hospitals Birmingham NHS Foundation Trust	West Midlands, England	Cardiomyopathy and cardiac imaging
University Hospital Southampton NHS Foundation Trust	South East, England	Complex coronary and trans catheter valve intervention/cardiomyopathy*
Oxford University Hospitals	South East, England	Heart failure, multimodality imaging, acquired and inherited cardiac conditions
The University of Manchester	North West, England	Inherited cardiac conditions
Liverpool Heart and Chest Hospital NHS Foundation Trust	North West, England	Cardiomyopathy and cardiac imaging*
Norfolk and Norwich University Hospitals NHS Foundation Trust	East, England	Cardiomyopathy and cardiac imaging
Belfast City Hospital	Belfast, Northern Ireland	Cardiomyopathy and cardiac imaging
Wansbeck General Hospital, Northumbria Healthcare NHS Foundation Trust	North East, England	Heart failure and advanced rhythm management/complex device implantation
Royal Brompton and Harefield Clinical Group, London	London, England	Inherited cardiac conditions, valvular disorders and advanced echocardiography
The Leeds Teaching Hospitals NHS Trust	North, England	Heart failure, complex device implantation, inherited cardiovascular conditions

Table presents participating centres only. Invites were sent to the following specialist secondary care centres that declined to participate: St Bartholomew's Hospital (London, England); St George's Hospital (London, England); Royal Free Hospital (London, England); Guy's and St Thomas' NHS Foundation Trust (London, England); Newcastle Freeman Hospital (North East, England); Royal Papworth Hospital (East, England); University Hospital Coventry & Warwickshire (West Midlands; England); Essex Cardiothoracic Centre (South East, England); Northern General Hospital (North, England); Royal Stoke University Hospital (West Midlands, England); Royal Bournemouth Hospital (South, England); Great Western Hospital (South West, England); Glasgow Royal Infirmary (Glasgow, Scotland); University Hospital of Wales (Cardiff, Wales).

HCM, hypertrophic cardiomyopathy; NHS, National Health Service.

<sup>\*</sup>Experts who specialize in the use of interventions in the treatment of obstructive HCM.

#### Supplemental Table 2 Primary care consultations by NYHA class per annum (excluding interventionalists)

Topic	NYHA class I	NYHA class II	NYHA class III	NYHA class IV
Number of consultations (all), n	7	7	7	7
Mean±95% CI	0.64±0.35	1.07±0.33	3.29±1.02	6.00±2.46
Median (min./max.)	1.00 (0/1.00)	1.00 (0.50/2.00)	3.00 (2.00/5.00)	5.00 (2.00/10.00)
Number of consultations (nurse-led), n	7	7	7	7
Mean±95% CI	0.32±0.35	0.50±0.37	1.71±1.02	3.57±2.38
Median (min./max.)	0 (0/1.00)	0.50 (0/1.00)	1.00 (0/4.00)	3.00 (0/10.00)
Number of consultations (GP-led), n	7	7	7	7
Mean±95% CI	0.46±0.38	0.89±0.21	1.57±0.40	3.14±1.31
Median (min./max.)	0.25 (0/1.00)	1.00 (0.25/1.00)	2.00 (1.00/2.00)	4.00 (1.00/5.00)
Number of consultations (telephone only), n	7	7	7	7
Mean±95% CI	0.71±0.36	1.00±N/A*	1.71±0.82	1.86±0.90
Median (min./max.)	1.00 (0/1.00)	1.00 (1.00/1.00)	2.00 (0/3.00)	2.00 (0/3.00)
Number of consultations (out of hours only), n	7	7	7	7
Mean±95% CI	0±N/A*	0±N/A*	0.71±0.36	1.71±0.70
Median (min./max.)	0 (0/0)	0 (0/0)	1.00 (0/1.00)	2.00 (0/3.00)

Each question refers to the number of consultations the experts estimated each patient with obstructive HCM has on average per annum. Seven experts responded to each question in this section.

CI, confidence interval; GP, general practitioner; HCM, hypertrophic cardiomyopathy; max., maximum; min., minimum; N/A, not available; NYHA, New York Heart Association.

<sup>\*</sup>CI was not relevant because the variance was 0.

#### Supplemental Table 3 Primary care consultations by NYHA class per annum (including interventionalists)

Topic	NYHA class I	NYHA class II	NYHA class III	NYHA class IV
Number of consultations (all), n	7	9	9	8
Mean±95% CI	0.64±0.35	1.39±0.69	3.56±0.87	6.00±2.13
Median (min./max.)	1.00 (0/1.00)	1.00 (0.50/4.00)	4.00 (2.00/5.00)	5.50 (2.00/10.00)
Number of consultations (nurse-led), n	9	9	9	9
Mean±95% CI	0.36±0.32	0.61±0.46	1.78±1.02	3.44±2.07
Median (min./max.)	0 (0/1.00)	0.50 (0/2.00)	1.00 (0/4.00)	3.00 (0/10.00)
Number of consultations (GP-led), n	9	9	9	8
Mean±95% CI	0.58±0.33	1.03±0.29	2.00±0.65	3.50±1.34
Median (min./max.)	1.00 (0/1.00)	1.00 (0.25/2.00)	2.00 (1.00/4.00)	4.00 (1.00/6.00)
Number of consultations (telephone only), n	9	9	9	9
Mean±95% CI	0.56±0.34	0.89±0.22	1.78±0.63	1.89±0.95
Median (min./max.)	1.00 (0/1.00)	1.00 (0/1.00)	2.00 (0/3.00)	2.00 (0/4.00)
Number of consultations (out of hours only), n	9	9	9	8
Mean±95% CI	0±N/A*	0.11±0.22	0.78±0.44	1.75±0.61
Median (min./max.)	0 (0/0)	0 (0/1.00)	1.00 (0/2.00)	2.00 (0/3.00)

Each question refers to the number of consultations the experts estimated each patient with obstructive HCM has on average per annum. Unless otherwise specified, nine experts responded to each question in this section.

CI, confidence interval; GP, general practitioner; HCM, hypertrophic cardiomyopathy; max., maximum; min., minimum; N/A, not available; NYHA, New York Heart Association.

<sup>\*</sup>CI was not relevant because the variance was 0.

## Supplementary Table 4 Median (min./max.) secondary care consultations by NYHA class per annum (excluding interventionalists)

Topic	NYHA class I	NYHA class II	NYHA class III	NYHA class IV
Number of day case admissions, n	8	8	8	8
Median (min./max.)	0 (0/1.00)	0 (0/1.00)	0.65 (0/2.00)	0.65 (0/4.00)
Number of outpatient visits, n	8	8	8	8
Median (min./max.)	1.00 (0/2.00)	1.00 (0/2.00)	2.00 (1.00/5.00)	3.50 (2.00/10.00)
Number of non-CV-related outpatient visits, n	8	8	8	8
Median (min./max.)	0 (0/1.00)	0 (0/3.00)	1.00 (0/3.00)	2.00 (0/5.00)
Number of CV-related outpatient visits, n	8	8	8	8
Median (min./max.)	0.75 (0/1.00)	1.00 (0/1.00)	2.00 (1.00/4.00)	2.50 (2.00/8.00)
Number of inpatient admissions, n	8	8	8	8
Median (min./max.)	0 (0/0.05)	0 (0/0.30)	1.00 (0.01/2.00)	2.00 (0.20/3.00)
LoS per inpatient admission, days	4	4	8	8
Median (min./max.)	1.00 (0/5.00)	1.00 (0/2.00)	4.00 (2.00/5.00)	6.00 (5.00/15.00)
Number of pre-planned inpatient admissions, n	8	8	8	8
Median (min./max.)	0 (0/0)	0 (0/0.30)	0.53 (0/2.00)	1.00 (0/2.00)
LoS per pre-planned inpatient admission, days	4	4	6	7
Median (min./max.)	0 (0/0)	0 (0/2.00)	1.50 (0/4.00)	5.00 (1.00/7.00)
Number of inpatient emergency admissions, n	8	8	8	8
Median (min./max.)	0 (0/0.01)	0 (0/0.02)	1.00 (0.01/2.00)	1.50 (0.10/3.00)
LoS per inpatient emergency admission, days	4	4	7	7
Median (min./max.)	0 (0/10.00)	1.00 (0/2.00)	4.00 (2.00/8.00)	7.00 (4.00/15.00)
Number of CCU admissions, n*	6	7	8	8
Median (min./max.)	0 (0/0.01)	0 (0/1.00)	1.00 (0/2.00)	1.00 (0.10/2.00)

LoS per CCU admission, days	4	5	7	7
Median (min./max.)	0 (0/1.00)	0 (0/2.00)	3.00 (0/7.00)	6.00 (1.00/10.00)
Number of HDU admissions, n*	8	8	8	8
Median (min./max.)	0 (0/0)	0 (0/1.00)	0 (0/1.00)	1.00 (0.10/2.00)
LoS per HDU admission, days	4	4	5	5
Median (min./max.)	0 (0/0)	0 (0/0)	0 (0/4.00)	4.00 (0/10.00)
Number of ICU admissions, n	8	8	8	8
Median (min./max.)	0 (0/0.01)	0 (0/0.01)	0.01 (0/1.00)	0 (0/1.00)
LoS per ICU admission, days	4	4	5	5
Median (min./max.)	0 (0/2.00)	0 (0/2.00)	3.00 (0/7.00)	1.00 (0/10.00)
Number of A&E visits, n	8	8	8	8
Median (min./max.)	0.01 (0/1.00)	0.13 (0/1.00)	1.00 (0.50/4.00)	2.50 (0.50/4.00)

Each question refers to either the number of consultations the experts estimated each patient with obstructive HCM has on average per annum, or the average LoS (in days) per admission. Unless otherwise specified, eight experts responded to each question in this section.

A&E, accident and emergency department; CCU, coronary care unit; CV, cardiovascular; HCM, hypertrophic cardiomyopathy; HDU, high dependency unit; ICU, intensive care unit; LoS, length of stay; max., maximum; min., minimum; NYHA, New York Heart Association.

<sup>\*</sup>Excluding day cases.

## Supplemental Table 5 Secondary care consultations by NYHA class per annum (including interventionalists)

Topic	NYHA class I	NYHA class II	NYHA class III	NYHA class IV
Number of day case admissions, n	10	10	10	10
Mean±95% CI	0.20±0.26	0.24±0.26	0.78±0.47	0.96±0.77
Median (min./max.)	0 (0/1.00)	0 (0/1.00)	0.65 (0/2.00)	0.65 (0/4.00)
Number of outpatient visits, n	10	10	10	10
Mean±95% CI	0.85±0.33	1.05±0.37	2.50±0.73	3.90±1.64
Median (min./max.)	1.00 (0/2.00)	1.00 (0/2.00)	2.00 (1.00/5.00)	3.50 (0/10.00)
Number of non-CV-related outpatient visits, n	9	9	9	9
Mean±95% CI	0.50±0.43	0.89±0.77	1.56±0.83	2.33±1.07
Median (min./max.)	0 (0/2.00)	0 (0/3.00)	1.00 (0/4.00)	2.00 (0/5.00)
Number of CV-related outpatient visits, n	10	10	10	10
Mean±95% CI	0.70±0.22	0.95±0.31	2.15±0.65	3.03±1.28
Median (min./max.)	0.75 (0/1.00)	1.00 (0/2.00)	2.00 (1.00/4.00)	2.50 (0.25/8.00)
Number of inpatient admissions, n	10	10	10	10
Mean±95% CI	0.01±0.01	0.04±0.06	0.90±0.32	1.92±0.51
Median (min./max.)	0 (0/0.05)	0 (0/0.30)	1.00 (0.01/2.00)	2.00 (0.20/3.00)
LoS per inpatient admission, days	5	5	10	10
Mean±95% CI	1.40±1.92	0.80±0.96	3.70±0.72	7.20±1.98
Median (min./max.)	0 (0/5.00)	0 (0/2.00)	4.00 (2.00/5.00)	6.00 (5.00/15.00)
Number of pre-planned inpatient admissions, n	9	9	9	10
Mean±95% CI	0±N/A*	0.03±0.07	0.56±0.47	0.91±0.47
Median (min./max.)	0 (0/0)	0 (0/0.30)	0.05 (0/2.00)	1.00 (0/2.00)
LoS per pre-planned inpatient admission, days	4	4	6	8

Mean±95% CI	0±N/A*	0.50±0.98	2.00±1.34	5.13±1.75
Median (min./max.)	0 (0/0)	0 (0/2.00)	1.50 (0/4.00)	5.00 (1.00/9.00)
Number of inpatient emergency admissions, n	10	10	9	10
Mean±95% CI	0±0	0±0	0.86±0.37	1.51±0.57
Median (min./max.)	0 (0/0.01)	0 (0/0.02)	1.00 (0.01/2.00)	2.00 (0.10/3.00)
LoS per inpatient emergency admission, days	4	4	9	9
Mean±95% CI	2.50±4.90	1.00±1.13	4.78±1.72	8.11±2.18
Median (min./max.)	0 (0/10.00)	1.00 (0/2.00)	4.00 (2.00/9.00)	7.00 (4.00/15.00)
Number of CCU admissions, n†	8	9	9	10
Mean±95% CI	0±0	0.11±0.22	0.78±0.43	1.08±0.44
Median (min./max.)	0 (0/0.01)	0 (0/1.00)	1.00 (0/2.00)	1.00 (0.10/2.00)
LoS per CCU admission, days	4	5	8	9
Mean±95% CI	0.25±0.49	0.60±0.78	3.13±1.55	5.28±2.15
Median (min./max.)	0 (0/1.00)	0 (0/2.00)	3.00 (0/7.00)	5.00 (1.00/10.00)
Number of HDU admissions, n†	10	10	10	9
Mean±95% CI	0±N/A*	0.10±0.20	0.12±0.20	0.98±0.44
Median (min./max.)	0 (0/0)	0 (0/1.00)	0 (0/1.00)	1.00 (0.10/2.00)
LoS per HDU admission, days	4	4	5	6
Mean±95% CI	0±N/A*	0±N/A*	0.80±1.57	4.00±3.16
Median (min./max.)	0 (0/0)	0 (0/0)	0 (0/4.00)	3.50 (0/10.00)
Number of ICU admissions, n	10	10	10	10
Mean±95% CI	0±0	0±0	0.13±0.19	0.10±0.20
Median (min./max.)	0 (0/0.01)	0 (0/0.01)	0 (0/1.00)	0 (0/1.00)
LoS per ICU admission, days	4	4	5	5
Mean±95% CI	0.50±0.98	0.50±0.98	3.40±2.20	3.20±3.79

Median (min./max.)	0 (0/2.00)	0 (0/2.00)	3.00 (0/7.00)	1.00 (0/10.00)
Number of A&E visits, n	10	10	10	10
Mean±95% CI	0.21±0.26	0.33±0.29	1.45±0.63	2.45±0.78
Median (min./max.)	0 (0/1.00)	0.04 (0/1.00)	1.00 (0.50/4.00)	2.00 (0.50/4.00)

Each question refers to either the number of consultations the experts estimated each patient with obstructive HCM has on average per annum or the average LoS (in days) per admission. Unless otherwise specified, 10 experts responded to each question in this section.

#### †Excluding day cases.

A&E, accident and emergency department; CCU, coronary care unit; CI, confidence interval; CV, cardiovascular; HCM, hypertrophic cardiomyopathy; HDU, high dependency unit; ICU, intensive care unit; LoS, length of stay; max., maximum; min., minimum; N/A, not available; NYHA, New York Heart Association.

<sup>\*</sup>CI was not relevant because the variance was 0.

## Supplementary Table 6 Median (min./max.) tests and procedures by NYHA class (excluding interventionalists)

Topic	NYHA class I	NYHA class II	NYHA class III	NYHA class IV
Number of Echos performed per annum, n	8	8	8	8
Median (min./max.)	0.65 (0/1.00)	1.00 (0/1.40)	1.25 (1.00/4.00)	1.25 (0.50/2.00)
Number of stress-induced Echos performed per annum, n	8	8	8	7
Median (min./max.)	0 (0/0.10)	0.25 (0/1.00)	0.75 (0.10/1.00)	0 (0/0.50)
Number of resting Echos performed per annum, n	8	8	8	8
Median (min./max.)	0.50 (0/0.10)	0.75 (0/1.00)	1.00 (1.00/3.00)	1.00 (0.50/2.00)
Number of 12-lead ECGs performed per annum, n	8	8	8	8
Median (min./max.)	0.90 (0/1.00)	1.00 (0/2.00)	1.50 (1.00/5.00)	2.00 (1.00/10.00)
Number of cardiac MRI tests performed per annum, n	8	8	8	8
Median (min./max.)	0.06 (0/0.50)	0.08 (0/0.50)	0.20 (0/1.00)	0.05 (0/1.00)
Number of ambulatory 24–48-hour ECG (Holter) tests performed per annum, n	8	8	8	8
Median (min./max.)	0.50 (0/2.00)	0.75 (0/2.00)	1.00 (0.30/2.00)	0.75 (0/2.00)
Number of CPETs performed per annum, n	8	8	8	8
Median (min./max.)	0 (0/1.00)	0.05 (0/1.00)	0.13 (0/1.00)	0 (0/1.00)
Number of BNP or NT-proBNP tests performed per annum, n	8	8	8	8
Median (min./max.)	0 (0/1.00)	0.18 (0/1.00)	1.00 (0/2.00)	1.25 (0/5.00)
Number of troponin T/I tests performed per annum, n	8	8	8	8
Median (min./max.)	0 (0/1.00)	0.01 (0/1.00)	0.38 (0/2.00)	1.00 (0/5.00)
Proportion of patients in the obstructive HCM population who are in receipt of a cardiac implantable defibrillator device, %*	8	8	8	7

Median (min./max.)	6.5 (1.00/15.00)	10.00 (2.00/30.00)	11.50 (4.00/30.00)	20.00 (0/30.00)
Proportion of patients in the obstructive HCM population who are in receipt of a cardiac implantable pacemaker device, %†	8	8	8	8
Median (min./max.)	0.50 (0/2.00)	1.50 (1.00/5.00)	4.00 (1.00/25.00)	5.00 (2.00/30.00)
Proportion of patients in the obstructive HCM population who will undergo SRT, %‡	7	8	8	7
Median (min./max.)	0 (0/0)	0.51 (0/5.00)	15.00 (3.00/30.00)	1.00 (0/10.00)
Proportion of patients in the obstructive HCM population who will undergo alcohol septal ablation, %	7	8	8	7
Median (min./max.)	0 (0/0)	0.51 (0/5.00)	7.00 (1.00/15.00)	1.00 (0/10.00)
Proportion of patients in the obstructive HCM population who will undergo a septal myectomy, %	7	8	8	7
Median (min./max.)	0 (0/0)	0 (0/4.00)	9.00 (0/25.00)	0 (0/2.00)
Proportion of patients in the obstructive HCM population who underwent SRT who are likely to have a complication because of the procedure, %	7	7	7	8
Median (min./max.)	0 (0/5.00)	0 (0/15.00)	6.50 (0/30.00)	14.00 (0/50.00)
Proportion of patients in the obstructive HCM population who are likely to have cardiac rehabilitation procedures, %	6	8	8	6
Median (min./max.)	0 (0/0)	0 (0/50.00)	2.50 (0/100)	0 (0/10.00)
Length of cardiac rehabilitation procedure, weeks	0	3	3	1
Median (min./max.)	_	2.00 (0/6.00)	4.00 (0/6.00)	4.00 (4.00/4.00)

Each question refers to the number of tests/procedures the experts estimated each patient with obstructive HCM undergoes on average per annum, the proportion of patients who will receive a device or undergo therapy, or the average length of a cardiac rehabilitation procedure in weeks. Unless otherwise specified, eight experts responded to each question in this section.

†Includes pacemakers and CRT-Ps only.

<sup>\*</sup>Includes ICDs and CRT-Ds only.

‡Includes alcohol septal ablation and/or myectomy.

BNP, B-type natriuretic peptide; CPET, cardiopulmonary exercise test; CRT-D, cardiac resynchronization therapy-defibrillator; CRT-P, cardiac resynchronization therapy-pacemaker; ECG, electrocardiogram; Echo, echocardiogram; HCM, hypertrophic cardiomyopathy; ICD, implantable cardioverter-defibrillator; max., maximum; min., minimum; MRI, magnetic resonance imaging; NT-proBNP, N-terminal pro B-type natriuretic peptide; NYHA, New York Heart Association; SRT, septal reduction therapy.

## Supplemental Table 7 Tests and procedures by NYHA class (including interventionalists)

Topic	NYHA class I	NYHA class II	NYHA class III	NYHA class IV
Number of Echos performed per annum, n	10	10	10	10
Mean±95% CI	0.66±0.22	0.77±0.26	1.75±0.57	1.40±0.38
Median (min./max.)	0.65 (0/1.00)	1.00 (0/1.40)	1.75 (1.00/4.00)	1.50 (0.50/2.00)
Number of stress-induced Echos performed per annum, n	10	10	10	9
Mean±95% CI	0.01±0.02	0.36±0.24	0.57±0.25	0.06±0.11
Median (min./max.)	0 (0/0.10)	0.25 (0/1.00)	0.50 (0/1.00)	0 (0/0.50)
Number of resting Echos performed per annum, n	10	10	10	10
Mean±95% CI	0.61±0.21	0.68±0.23	1.60±0.43	1.25±0.37
Median (min./max.)	0.50 (0/1.00)	0.75 (0/1.00)	1.50 (1.00/3.00)	1.00 (0.50/2.00)
Number of 12-lead ECGs performed per annum, n	10	10	10	10
Mean±95% CI	0.73±0.21	0.90±0.32	2.10±0.80	3.10±1.61
Median (min./max.)	0.90 (0/1.00)	1.00 (0/2.00)	2.00 (1.00/5.00)	2.00 (1.00/10.00)
Number of cardiac MRI tests performed per annum, n	10	10	10	10
Mean±95% CI	0.18±0.20	0.20±0.20	0.43±0.26	0.24±0.25
Median (min./max.)	0.06 (0/1.00)	0.08 (0/1.00)	0.23 (0/1.00)	0 (0/1.00)
Number of ambulatory 24–48-hour ECG (Holter) tests performed per annum, n	10	10	10	10
Mean±95% CI	0.71±0.36	0.76±0.36	1.06±0.34	0.78±0.47
Median (min./max.)	0.50 (0/2.00)	0.75 (0/2.00)	1.00 (0.30/2.00)	0.75 (0/2.00)
Number of CPETs performed per annum, n	10	10	10	10
Mean±95% CI	0.25±0.26	0.27±0.26	0.35±0.24	0.11±0.19
Median (min./max.)	0 (0/1.00)	0.05 (0/1.00)	0.25 (0/1.00)	0 (0/1.00)
Number of BNP or NT-proBNP tests performed per annum, n	10	10	10	10

Mean±95% CI	0.21±0.26	0.39±0.28	0.93±0.44	1.60±0.85
Median (min./max.)	0 (0/1.00)	0.18 (0/1.00)	1.00 (0/2.00)	1.25 (0/5.00)
Number of troponin T/I tests performed per annum, n	10	10	10	10
Mean±95% CI	0.10±0.20	0.20±0.26	0.49±0.41	1.11±0.94
Median (min./max.)	0 (0/1.00)	0 (0/1.00)	0.18 (0/2.00)	1.00 (0/5.00)
Proportion of patients in the obstructive HCM population who are in receipt of a cardiac implantable defibrillator device, %*	9	9	10	9
Mean±95% CI	6.72±3.50	11.89±6.51	14.60±6.74	17.00±7.60
Median (min./max.)	10.00 (1.00/15.00)	10.00 (2.00/30.00)	11.50 (4.00/30.00)	20.00 (0/30.00)
Proportion of patients in the obstructive HCM population who are in receipt of a cardiac implantable pacemaker device, %†	9	9	10	10
Mean±95% CI	2.78±4.24	5.28±6.16	7.35±5.28	9.00±5.72
Median (min./max.)	1.00 (0/20.00)	2.00 (1.00/30.00)	4.00 (1.00/25.00)	5.00 (2.00/30.00)
Proportion of patients in the obstructive HCM population who will undergo SRT, %‡	9	10	10	9
Mean±95% CI	0±N/A <sup>d</sup>	4.10±3.77	26.30±13.61	5.44±6.40
Median (min./max.)	0 (0/0)	3.00 (0/20.00)	22.50 (3.00/75.00)	1.00 (0/30.00)
Proportion of patients in the obstructive HCM population who will undergo alcohol septal ablation, %	9	10	10	9
Mean±95% CI	0±N/A§	9.60±15.39	17.50±15.30	7.56±10.63
Median (min./max.)	0 (0/0)	1.00 (0/80.00)	9.50 (1.00/80.00)	1.00 (0/50.00)
Proportion of patients in the obstructive HCM population who will undergo a septal myectomy, %	9	10	10	9
Mean±95% CI	0±N/A§	2.50±3.89	13.80±7.23	1.33±2.17
Median (min./max.)	0 (0/0)	0 (0/20.00)	12.50 (0/35.00)	0 (0/10.00)
Proportion of patients in the obstructive HCM population who underwent SRT who are likely to have a complication because	9	9	9	10

of the procedure, %				
Mean±95% CI	0.78±1.12	3.56±3.58	10.63±7.45	17.50±12.15
Median (min./max.)	0 (0/5.00)	0 (0/15.00)	6.50 (0/30.00)	11.50 (0/50.00)
Proportion of patients in the obstructive HCM population who are likely to have cardiac rehabilitation procedures, %	8	10	10	8
Mean±95% CI	0±N/A§	15.50±20.79	24.00±25.13	14.13±24.17
Median (min./max.)	0 (0/0)	0 (0/100.00)	5.00 (0/100.00)	0 (0/100.00)
Length of cardiac rehabilitation procedure, weeks	0	4	5	2
Mean±95% CI	_	2.75±2.45	5.20±3.84	4.00±N/A
Median (min./max.)	_	2.50 (0/6.00)	4.00 (0/12.00)	4.00 (4.00/4.00)

Each question refers to the number of tests/procedures the experts estimated each patient with obstructive HCM undergoes on average per annum, the proportion of patients who will receive a device or undergo therapy, or the average length of a cardiac rehabilitation procedure in weeks. Unless otherwise specified, 10 experts responded to each question in this section.

\*Includes ICDs and CRT-Ds only.

†Includes pacemakers and CRT-Ps only.

‡Includes alcohol septal ablation and/or myectomy.

§CI was not relevant because the variance was 0.

BNP, B-type natriuretic peptide; CI, confidence interval; CPET, cardiopulmonary exercise test; CRT-D, cardiac resynchronization therapy-defibrillator; CRT-P, cardiac resynchronization therapy-pacemaker; ECG, electrocardiogram; Echo, echocardiogram; HCM, hypertrophic cardiomyopathy; ICD, implantable cardioverter-defibrillator; max., maximum; min., minimum; MRI, magnetic resonance imaging; N/A, not available; NT-proBNP, N-terminal pro B-type natriuretic peptide; NYHA, New York Heart Association; SRT, septal reduction therapy.

Supplemental Table 8 HCM monotherapy use by NYHA class (excluding interventionalists)

Topic	NYHA class I	NYHA class II	NYHA class III	NYHA class IV
Proportion of patients with diagnosed obstructive HCM who receive beta-blocker monotherapy, %	8	8	8	8
Mean±95% CI	37.50±19.95	59.38±15.43	35.00±25.99	36.88±27.34
Median (min./max.)	0.30 (5.00/80.00)	60.00 (25.00/95.00)	20.00 (0/95.00)	20.00 (0/95.00)
Proportion of patients with diagnosed obstructive HCM who receive calcium channel blocker monotherapy, %	8	8	8	7
Mean±95% CI	6.88±4.51	14.13±6.64	11.25±9.21	3.86±2.62
Median (min./max.)	0.05 (0/20.00)	10.00 (5.00/30.00)	7.50 (0/40.00)	5.00 (0/10.00)

Unless otherwise specified, eight experts responded to each question in this section.

Supplemental Table 9 HCM monotherapy use by NYHA class (including interventionalists)

CI, confidence interval; HCM, hypertrophic cardiomyopathy; max., maximum; min., minimum; NYHA, New York Heart Association.

Topic	NYHA class I	NYHA class II	NYHA class III	NYHA class IV
Proportion of patients with diagnosed obstructive HCM who receive beta-blocker monotherapy, %	10	10	10	10
Mean±95% CI	40.00±16.07	57.50±13.72	35.00±20.56	34.50±22.22
Median (min./max.)	45.00 (5.00/80.00)	60.00 (25.00/95.00)	25.00 (0/95.00)	20.00 (0/95.00)
Proportion of patients with diagnosed obstructive HCM who receive calcium channel blocker monotherapy, %	10	10	10	9
Mean±95% CI	8.00±4.43	14.80±6.45	10.00±7.59	3.56±2.19
Median (min./max.)	5.00 (0/20.00)	10.00 (5.00/30.00)	7.50 (0/40.00)	5.00 (0/10.00)

Unless otherwise specified, 10 experts responded to each question in this section.

CI, confidence interval; HCM, hypertrophic cardiomyopathy; max., maximum; min., minimum; NYHA, New York Heart Association.