

Supplementary Material

1 Supplementary Data

1.1 Unit valuation description

1.1.1 Daily inpatient

Daily inpatient costs account for hospitality costs and healthcare professional salary costs, physicians and nurses, and were derived from real-world published data and from the 2022 official salary tables for each healthcare professional, respectively. For daily hospitality, the standardized occupancy cost was calculated by the mean standardized bed occupancy cost per episode divided by the mean overall ward of hospitalisation length. For physicians, the salary amounted to one hour's worth of work for each daily round, whereas for nurses, it corresponded to an hour per eight-hour shift, equalling three hours per day¹⁻³.

1.1.2 Operating room

The operating room unit costs contain the fixed costs of the operating room (linen, sterilisation, external services, equipment amortisation and other costs), which correspond to 20% of the national total average cost per room hour, based on the official report of the Ministry of Health "Evaluation of the National Situation of Operating Rooms", and the salary costs of the healthcare professionals, equivalent to one hour's work for two senior haemodynamic laboratory physicians, one specialist nurse and two diagnostic and therapeutic superior technicians (one radiology technician and one cardio pneumology technician), obtained from the official salary tables 2022 for each healthcare professional. The costs of consumables, such as pharmaceuticals and medical devices, are allocated in other parcels^{1,2,4,5}.

1.1.3 Medical transport

Unit cost applied for medical transport were the average cost per medical transport activation of National Institute of Medical Emergency (INEM), derived for ambulances without a doctor, directly from Audit Report No. 47/2010 "Results Audit of the National Institute of Medical Emergency", and for the Vehicle for Medical Emergency and Resuscitation (VMER), by indirect calculation using the INEM "Emergency Medical Services Activity Report 2022" and Government Orders published in Journal of the Republic. The cost of the hospital admission location was derived from Government Order n.º 207/2017, of July 11th⁶⁻¹¹.

1.1.4 Laboratory Parameters

Data to Laboratory Parameters were obtained from morbidity database including all inpatient stays at all public hospitals of Government Order n.º 254/2018, of September 7th, specifying the price lists to be practiced by the Portuguese NHS, as well as the respective Regulations¹².

1.1.5 Diagnostic Procedures

For Diagnostic Procedure, the allocated costs were derived from Government Order n.º 254/2018, of September 7th¹².

1.1.6 Interventional Cardiology Procedures costs: Coronary Angiography, Reperfusion Strategy, Coronary Angioplasty and Coronary Artery Bypass Graft (CABG)

1.1.7 Coronary Angiography

For Coronary Angiography, the allocated costs were derived from Government Order n.º 254/2018, of September 7th¹².

1.1.8 Reperfusion Strategy

For Reperfusion Strategy, the allocated costs were derived, in addition to the ones previously cited in the Daily inpatient and Operating Room cost categories, from Government Order n.º 254/2018, of September 7th, from the different Framework Agreements established by Portugal's Shared Services of the Ministry of Health (SPMS) and official contracts established by NHS institutions and their suppliers^{12,13}.

1.1.9 Coronary Angioplasty

For Coronary Angioplasty, the allocated costs were derived, in addition to the ones previously cited in the Daily Inpatient and Operating Room cost categories, from Government Order n.º 254/2018, of September 7th, from the different Framework Agreements established by SPMS and from real-world published data¹²⁻¹⁴.

1.1.10 Coronary Artery Bypass Graft (CABG)

For CABG, the allocated costs were derived from real-world published data¹⁵.

1.1.11 Other Interventions

For Other Interventions, the allocated costs were derived from Government Order n.º 254/2018, of September 7th, from the different Framework Agreements established by SPMS, from real-world published data and official contracts established by NHS institutions and their suppliers^{12,16-18}.

Pharmacological treatment

All the various drugs and respect posology's, considered for each drug group, were established based on ProACS registries and scientific consultations. These included amiodarone, mineralocorticoid receptor antagonist (spironolactone), calcium channel blockers, anticoagulants (vitamin K antagonists and noval oral anticoagulants), oral antidiabetic agents, angiotensin converting enzyme inhibitors, aspirin, beta-adrenergic blockers, bivalirudin, angiotensin receptor blockers, clopidogrel, digoxin, diuretics, enoxaparin, fondaparinux, hypolipidemic agents, unfractionated heparin, angiotensin converting enzyme inhibitors, glycoprotein IIb/IIIa inhibitors, sodium-glucose co-transporter inhibitors, inotropic agents, insulin, ivabradine, levosimendan, nitrate/nitrite-like medications, prasugrel, and ticagrelor. Data on the unit costs of pharmaceuticals administered during hospitalisation were obtained from different Framework Agreements established by Shared Services of the Ministry of Health, EPE (SPMS)¹⁹⁻²².

1.1.12 Complications

For Complications, values were estimated by the mean price of DRG hospitalisation (by severity level), from Government Order n.º 254/2018, of September 7th¹².

1.1.13 Rehabilitation

The costs for Individual Rehabilitation were obtained from Government Order n.º 254/2018, of September 7th¹².

1.1.14 Death

The death costs were calculated by using the total number of cases coded in DRGs (from 2013 to 2018) as AMI of each severity level, which were multiplied by the respective price of hospitalisation, according to Government Order n.º 254/2018, of September 7th, and finally calculated by the average of the sum of the total costs for all severities¹².

1.2 Calculation formulas

Total Individual Cost

= daily inpatient + operating room + medical transport
+ pharmaceuticals + laboratory parameters
+ diagnostic procedure + coronary angiography
+ reperfusion strategy + coronary angioplasty + CABG
+ other interventions + complications + rehabilitation + death

Total Annual ACS Cost

= [average annual AMI cost × total AMI hospitalisations (NHS)]
+ [average annual UA cost × total UA hospitalisations (NHS)]

Annual percentage burden of the total cost of ACS on the current health expenditure of the Portuguese National and Regional Health Service

$$= \frac{\text{Total annual ACS cost}}{\text{Annual current health expenditure on the Portuguese National and Regional Health Service}}$$

2 Supplementary Figures and Tables

Supplementary Table 1 Resources used and unit costs (in euros, €)

Cost category (and components)

Daily inpatient	Unit cost (€)
Total cost (per day)	146.238 €
Hospitality costs	86.098 €
Nurses' salary costs (per hour)	14.200 €
Physicians' salary costs (per hour)	17.540 €
Operating room	Unit cost (€)
Total cost (per operation)	245.101 €
Standardized occupancy cost	144.911 €
Senior haemodynamic laboratory physicians' salary costs (per hour)	26.560 €
Nurses' salary costs (per hour)	15.230 €
Diagnostic and therapeutic superior technicians' salary costs (per hour)	15.920 €
Medical transport	Unit cost (€)
Ambulance without a doctor	83.520 €
VMER	49.800 €
Other	66.660 €

Hospital admission location: emergency department	89.106 €
Hospital admission location: intensive care/cardiac intermediate unit	116.240 €
Hospital admission location: haemodynamic laboratory	116.240 €
Hospital admission location: cardiology ward	52.898 €
Hospital admission location: other	52.898 €

Laboratory Parameters	Unit cost (€)
Biomarkers of myocardial injury measurement	11.388 €
Isolated troponin elevation measurement	9.644 €
Creatinine measurement	1.231 €
Glucose measurement	4.104 €
Haemoglobin measurement	2.667 €
Lipid profile measurement	7.489 €
Troponin assay	9.644 €
HbA1c measurement	7.489 €
Platelet count measurement	2.565 €
BNP measurement	30.367 €
NT-proBNP measurement	30.367 €
Total cholesterol measurement	1.334 €
HDL cholesterol measurement	1.949 €
LDL cholesterol measurement	2.462 €
Triglycerides measurement	1.744 €
Apolipoprotein A measurement	3.078 €
Apolipoprotein B measurement	3.078 €

Drug group	Drugs and respect posology's	Source	Unit price	Drug daily price	Average daily cost of drug group
Amiodarone	amiodarone 200mg once daily	20	0.078 €	0.078 €	0.078 €
Aldosterone antagonists	spironolactone 50mg once daily	20	0.137 €	0.137 €	0.137 €
	amlodipine 5mg once daily	20	0.085 €	0.085 €	
	amlodipine 10mg once daily	20	0.128 €	0.128 €	
Calcium channel blockers	lercanidipine 10mg twice daily	20	0.104 €	0.207 €	
	lercanidipine 20mg twice daily	20	0.143 €	0.286 €	0.177 €
	apixaban 5mg twice daily	19	0.946 €	1.892 €	
	edoxaban 60mg once daily	19	2.114 €	2.114 €	
	rivaroxaban 60mg once daily	19	4.957 €	4.957 €	2.988 €
Direct Oral Anticoagulants	dabigatran 110mg twice daily	19	0.888 €	1.776 €	
	dabigatran 150mg twice daily	19	0.979 €	1.957 €	1.867 €
Vitamin K antagonists	acenocumarol 4mg once daily	19	0.175 €	0.175 €	
	warfarin 5mg once daily	19	0.093 €	0.093 €	0.134 €
	glucagon-like peptide-1 (GLP-1) analogue liraglutide 0.6mg once daily	21	4.211 €	4.211 €	
	alphaglycosidase inhibitor (acarbose) 50mg thrice daily	21	0.075 €	0.226 €	
	dipeptidyl peptidyl peptidase-4 (DPP-4) inhibitor alogliptin 25mg once daily	21	0.953 €	0.953 €	
	metformin 850mg twice daily	21	0.035 €	0.070 €	
	sulphonylurea (gliclazide) 30mg once daily	21	0.066 €	0.066 €	
Oral antidiabetic agents	thiazolidinedione (pioglitazone) 15mg once daily	21	0.244 €	0.244 €	0.962 €
Angiotensin receptor antagonists	losartan 50mg once daily	20	0.160 €	0.160 €	
	valsartan 80mg once daily	20	0.181 €	0.181 €	0.171 €
Aspirin	aspirin 100mg once daily	20	0.089 €	0.089 €	0.089 €
Beta-adrenergic blockers	bisoprolol 5mg once daily	20	0.047 €	0.047 €	
	carvedilol 25mg twice daily	20	0.135 €	0.270 €	0.159 €
	bivalirudin (250mg) unique dose (STEMI: initial bolus dosage of 0.75mg/kg followed by an infusion rate of 1.75mg/kg/h during coronary angioplasty, with subsequent infusion of 0.25mg/kg/h over 8 hours; NSTEMI/UA: initial bolus dosage of 0.1mg/kg followed	19	279.346 €	964.060€ (STEMI) 1514.370€ (NSTEMI/UA)	1239.215 €

	by an infusion rate of 0.25mg/kg/h over 72 hours)				
	clopidogrel 75mg once daily	¹⁹	0.252 €	0.252 €	0.252 €
Clopidogrel	clopidogrel 600mg unique load dose	¹⁹	2.019 €	2.019 €	2.019 €
Digoxin	digoxin 0.125mg once daily	²⁰	0.028 €	0.028 €	0.028 €
Diuretics	furosemide 40mg once daily	²⁰	0.042 €	0.042 €	0.042 €
	exoparin (40mg/0.4ml) 140mg once daily	¹⁹	2.724 €	9.540 €	
	exoparin (60mg/0.6ml) 140mg once daily	¹⁹	3.751 €	8.750 €	
	exoparin (80mg/0.8ml) 140mg once daily	¹⁹	4.669 €	8.170 €	
Exoparin	exoparin (100mg/1ml) 140mg once daily	¹⁹	5.693 €	7.950 €	8.603 €
Fondaparinux	fondaparinux 2.5mg once daily	¹⁹	4.084 €	4.084 €	4.084 €
Unfractionated heparin	unfractionated heparin 5000 units unique dose	¹⁹	0.924 €	0.924 €	0.924 €
Angiotensin converting enzyme inhibitors	enalapril 20mg twice daily	²⁰	0.103 €	0.206 €	
	lisinopril 20mg twice daily	²⁰	0.185 €	0.370 €	0.288 €
	eptifibatide (75mg/100ml) initial dose of 180 mcg/kg followed by a continuous infusion of 2.0 mcg/kg/min over 24 hours	¹⁹	61.320 €	11.221 €	11.221 €
	tirofiban (0.05 mg/mL) initial dose of 25 mcg/kg IV over 5 min followed by a continuous infusion of 0.15 mcg/kg/min over 18 hours	¹⁹	248.199 €	258.427 €	258.427 €
Glycoprotein iib/iiia inhibitors	abciximab (10ml/5ml) initial dose of 0.25 mg/kg followed by a continuous infusion of 0.125mcg/kg/min over 12 hours.	²²	249.260€	484.295 €	484.295 €
	dobutamine 2 infusion ampoules (250mg each) unique dose	²⁰	2.128 €	4.257 €	
Inotropic agents	dopamine 2 infusion ampoules (250mg each) unique dose	²⁰	1.068 €	2.136 €	3.196 €
Insulin	15 units (each a 3ml cartridge i.e., with 300 IU) once daily	Provided by hospital	4.760 €	71.400 €	71.400 €
	5mg twice daily	²⁰	0.293 €	0.585 €	
Ivabradine	7.5mg twice daily	²⁰	0.226 €	0.451 €	0.518 €
			699.665 €		
Levosimendan	1 ampoule infusion unique dose	²⁰	€	699.665 €	699.665 €
	isosorbide dinitrate 20mg twice daily	²⁰	0.049 €	0.098 €	
	Isoxorbide mononitrate 50mg once daily	²⁰	0.133 €	0.133 €	
Nitrate/nitrite-like medications	transdermal nitrate (nitroglycerin) 5mg once daily	²⁰	0.266 €	0.266 €	0.166 €
			200.023 €		
	PCSK9 inhibitors (evolocumab)	²⁰	€	200.023 €	
	atorvastatin 40mg once daily	²⁰	0.296 €	0.296 €	
	ezetimibe 10mg once daily	²⁰	0.815 €	0.815 €	
Lipid-lowering agents	rosuvastatin 20mg once daily	²⁰	0.380 €	0.380 €	50.379 €
	10mg once daily	¹⁹	1.412 €	1.412 €	1.412 €
Prasugrel	60mg unique load dose	¹⁹	8.473 €	8.473 €	8.473 €
	90mg twice daily	¹⁹	1.046 €	2.092 €	2.092 €
Ticagrelor	180mg unique load dose	¹⁹	2.092 €	2.092 €	2.092 €

Diagnostic Procedures Unit costs (€)

12-lead electrocardiogram	6.668 €
Doppler echocardiogram	54.579 €
Exercise stress test	32.932 €
Myocardial perfusion scintigraphy (under physical/pharmacological stress and at rest)	366.203 €
Cardiac computed tomography angiography	216.162 €
Cardiac magnetic resonance imaging (including both morphological and functional assessments)	262.431 €

Coronary Angiography Unit cost (€)

Coronary angiography	546.264 €
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Reperfusion Strategy Unit cost (€)

Fibrinolysis	91.204 €
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Primary angioplasty (includes daily inpatient and operating room costs)	2,759.779 €
Coronary Angioplasty	Unit cost (€)
Coronary Angioplasty (bare metal stent)	3,313.467 €
Coronary Angioplasty (drug-eluting stent)	3,514.809 €
Coronary Angioplasty (balloon catheter)	3,254.779 €
Coronary Angioplasty (other)	3,361.018 €
Thrombectomy	377.026 €
Coronary Artery Bypass Graft (CABG)	Unit cost (€)
Coronary artery bypass graft (CABG)	6,719.026 €
Other Interventions	Unit cost (€)
Cardiac Resynchronization Therapy (CRT) device	19,609.176 €
Implantable cardioverter defibrillator (ICD)	14,679.176 €
ICD+CRT	19,609.176 €
Swan-Ganz	610.524 €
Intra-aortic balloon	2,177.191 €
Invasive mechanical ventilation	38,667.462 €
Non-invasive mechanical ventilation	3,148.011 €
Permanent pacemaker	1,368.176 €
Temporary pacemaker	1,254.853 €
Ventricular assistance	108,138.388 €
Complications	Unit cost (€)
Reinfarction	3,505.216 €
Heart failure	2,923.139 €
Mechanical complications	3,721.645 €
Sustained ventricular tachycardia	117.058 €
Resuscitated cardiac arrest	117.058 €
Stroke	4,363.318 €
Major bleeding	6,150.618 €
Cardiac rehabilitation	Unit cost (€)
Cardiac rehabilitation	32.727 €
Death	Unit cost (€)
Death	4,001.637 €

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106 Supplementary Table 2 Model Comparison for AIC and Residual Deviance

Model	AIC	Residual Deviance
Gaussian (Identity Link)	1,208,546	2.763×10^{12}
Gaussian (Log Link)	1,208,102	2.7423×10^{12}
Gamma (Identity Link)	-	-
Gamma (Log Link)	1,132,250	39,255

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109 **Supplementary Table 3** Annual relative frequencies (in %) of ProACS patient characteristics by admission diagnosis, sex, vital status upon
110 hospital discharge, age group and region

Year	Admission Diagnosis				Sex		Vital Status		Age group			Regions				
	STEMI	NSTEMI	UA	Undetermined AMI	Female	Male	Alive	Dead	< 55	55-74	> 75	North region	Center region	Lisbon and Tagus Valley region	Alentejo region and Algarve region	Autonomous region of the Azores and Autonomous region of Madeira
2002	42.79%	38.07%	15.85%	3.29%	30.66%	69.34%	93.21%	6.79%	21.74%	50.82%	27.44%	35.51%	20.51%	28.83%	6.36%	8.80%
2003	43.95%	39.91%	12.85%	3.30%	31.26%	68.74%	95.10%	4.90%	22.04%	50.05%	27.90%	31.65%	23.06%	27.03%	9.14%	9.12%
2004	40.62%	42.95%	12.58%	3.84%	29.49%	70.51%	94.82%	5.18%	21.00%	49.86%	29.14%	29.18%	25.64%	24.46%	8.82%	11.90%
2005	41.74%	43.08%	11.31%	3.88%	30.34%	69.66%	95.04%	4.96%	19.52%	51.99%	28.48%	29.01%	23.72%	21.70%	9.59%	15.98%
2006	43.09%	42.27%	10.94%	3.70%	30.45%	69.55%	94.77%	5.23%	20.84%	48.50%	30.65%	29.02%	18.43%	25.99%	8.46%	18.10%
2007	41.71%	44.23%	10.64%	3.42%	29.53%	70.47%	95.21%	4.79%	21.05%	48.61%	30.34%	34.79%	13.29%	24.74%	4.57%	22.61%
2008	46.23%	42.20%	6.79%	4.78%	27.75%	72.25%	95.68%	4.32%	21.76%	46.63%	31.61%	31.32%	17.27%	13.64%	5.47%	32.30%
2009	45.84%	43.40%	7.56%	3.20%	30.11%	69.89%	94.63%	5.37%	21.59%	48.56%	29.85%	28.16%	26.27%	14.75%	2.49%	28.33%
2010	44.38%	44.95%	8.07%	2.60%	28.36%	71.64%	96.15%	3.85%	21.83%	47.90%	30.26%	29.08%	33.36%	12.11%	1.59%	23.86%
2011	45.68%	40.48%	10.71%	3.13%	29.48%	70.52%	95.63%	4.37%	21.90%	47.95%	30.15%	25.27%	42.84%	12.93%	4.41%	14.56%
2012	40.29%	45.22%	11.48%	3.01%	29.52%	70.48%	95.41%	4.59%	20.10%	48.42%	31.48%	16.53%	43.25%	19.77%	4.72%	15.73%
2013	38.58%	46.75%	11.79%	2.87%	29.37%	70.63%	96.23%	3.77%	21.37%	47.95%	30.68%	17.64%	43.27%	18.56%	4.26%	16.27%
2014	39.53%	46.74%	11.11%	2.62%	27.26%	72.74%	96.38%	3.62%	19.74%	49.16%	31.10%	18.26%	47.32%	14.03%	3.67%	16.72%
2015	45.18%	44.81%	7.61%	2.40%	25.95%	74.05%	97.17%	2.83%	20.57%	49.45%	29.98%	20.65%	41.46%	18.79%	2.65%	16.45%
2016	44.15%	47.60%	5.92%	2.33%	25.75%	74.25%	96.32%	3.68%	21.26%	49.51%	29.23%	20.68%	38.41%	21.46%	1.49%	17.97%
2017	47.06%	46.18%	4.22%	2.53%	27.54%	72.46%	96.39%	3.62%	20.73%	50.80%	28.47%	8.27%	30.97%	34.22%	2.53%	24.01%
2018	49.77%	42.84%	5.08%	2.31%	26.44%	73.56%	95.67%	4.33%	19.28%	52.62%	28.10%	6.79%	40.92%	19.02%	2.72%	30.55%
2019	44.64%	45.76%	5.91%	3.68%	27.53%	72.47%	96.98%	3.02%	20.14%	52.09%	27.77%	3.03%	46.59%	19.21%	4.13%	27.04%
2020	48.53%	43.78%	4.41%	3.28%	26.95%	73.05%	96.39%	3.61%	23.74%	48.59%	27.67%	8.49%	32.05%	24.55%	0.86%	34.04%
2021	48.17%	45.25%	4.23%	2.35%	26.35%	73.65%	98.05%	1.95%	22.88%	48.56%	28.56%	11.72%	22.14%	57.30%	0.09%	8.74%
2022	54.51%	38.18%	6.75%	0.55%	28.56%	71.44%	97.14%	2.86%	20.00%	50.75%	29.25%	17.95%	22.56%	59.28%	0.00%	0.21%

112 **Supplementary Table 4** Relative frequency (in %) of each cost category by overall, year, admission diagnosis, sex, vital status upon hospital
113 discharge and age group

	Daily inpatient	Medical transport	Laboratory Parameters	Diagnostic Procedures	Coronary angiography	Reperfusion Strategy	Coronary Angioplasty	CABG	Other Interventions	Pharmacological treatment	Complications	Rehabilitation	Death
Overall	16.69	0.51	5.33	0.52	6.75	8.85	31.47	0.97	13.85	2.07	10.08	0.05	2.87
Year													
2002	22.28	0.00	4.11	0.00	4.72	3.91	20.16	2.54	22.46	0.91	14.18	0.00	4.72
2003	23.84	0.00	4.72	0.00	5.55	4.07	26.10	1.59	14.21	1.09	15.02	0.00	3.82
2004	22.80	0.00	4.68	0.00	6.19	4.49	30.85	1.19	12.05	1.15	12.71	0.00	3.89
2005	18.41	0.00	4.05	0.00	6.12	4.96	33.77	1.75	13.84	1.08	12.85	0.00	3.18
2006	16.86	0.00	3.76	0.00	6.03	5.78	37.52	0.85	14.09	0.99	11.04	0.00	3.08
2007	15.67	0.00	3.79	0.00	6.64	7.09	38.65	1.26	11.36	0.92	11.79	0.00	2.83
2008	12.86	0.00	3.61	0.00	6.16	9.92	42.37	0.62	10.04	0.72	11.38	0.00	2.33
2009	12.73	0.00	3.41	0.01	5.98	9.82	40.64	0.52	13.03	0.67	10.43	0.00	2.75
2010	12.50	0.46	4.88	0.46	6.41	10.38	39.30	0.54	10.65	1.73	10.58	0.03	2.07
2011	11.15	0.76	5.51	0.80	6.09	9.55	36.15	1.21	15.48	2.83	8.22	0.07	2.18
2012	11.68	0.77	5.86	0.82	6.35	10.35	37.54	0.26	12.92	2.82	8.15	0.06	2.43
2013	11.83	0.87	6.29	0.94	6.92	11.12	39.25	0.29	9.54	2.89	7.84	0.07	2.15
2014	12.04	0.81	5.98	0.91	6.48	10.29	38.98	0.11	11.65	3.17	7.52	0.06	1.99
2015	12.38	0.79	6.08	0.90	6.96	10.84	41.11	0.20	8.98	2.94	7.18	0.06	1.58
2016	13.07	0.80	6.02	0.89	6.77	10.07	39.61	0.09	10.18	3.06	7.35	0.08	2.01
2017	13.41	0.83	5.71	0.85	6.81	11.15	38.63	0.53	11.66	2.56	5.80	0.09	1.96
2018	16.17	1.02	4.95	0.86	7.82	10.34	37.05	0.62	10.70	2.12	5.72	0.14	2.49
2019	17.00	1.14	4.69	0.86	6.94	9.39	41.26	0.76	9.17	2.25	4.55	0.09	1.91
2020	12.88	0.87	4.38	0.74	6.75	9.34	42.77	0.27	13.52	2.11	4.46	0.12	1.80
2021	17.54	0.92	5.55	0.75	8.39	8.55	46.11	0.30	4.65	2.19	3.73	0.04	1.27
2022	21.56	0.51	6.07	0.69	7.80	7.45	34.55	1.47	13.70	1.08	2.73	0.10	2.30
Admission Diagnosis													
STEMI	12.80	0.38	4.43	0.40	5.59	15.57	30.60	0.44	16.09	1.42	9.02	0.04	3.24
NSTEMI	21.01	0.69	7.17	0.68	7.99	0.44	32.83	1.38	10.87	2.87	11.58	0.06	2.43
UA	26.15	0.58	2.58	0.75	11.27	0.63	39.98	3.55	4.47	3.20	6.09	0.03	0.73
Undetermined AMI	18.49	0.49	5.32	0.45	4.97	1.25	18.11	1.07	24.52	2.58	18.43	0.04	4.28
Sex													
Female	17.67	0.49	5.29	0.50	6.13	7.15	26.30	0.83	15.34	2.26	13.79	0.04	4.20
Male	16.27	0.52	5.35	0.53	7.00	9.54	33.57	1.02	13.26	1.99	8.59	0.05	2.33
Vital Status													
Alive	18.44	0.56	5.85	0.58	7.57	9.75	35.29	1.09	9.33	2.26	9.23	0.05	0.00
Dead	4.91	0.13	1.85	0.10	1.21	2.79	5.73	0.11	44.37	0.77	15.84	0.00	22.19
Age Group													
< 55	14.48	0.52	5.51	0.54	7.83	12.63	39.10	0.78	12.06	1.47	4.35	0.06	0.68
55-75	16.54	0.51	5.23	0.52	7.09	8.94	33.17	1.22	14.19	2.08	8.52	0.05	1.95
> 75	18.45	0.50	5.40	0.51	5.44	6.11	23.45	0.66	14.39	2.47	16.66	0.04	5.91

114 **Supplementary Table 5** Relative frequency (in %) of each component in the other interventions category cost between 2002 and 2022

Year	CRT	ICD	ICD+CRT	Swan-Ganz	Intra-aortic balloon	Invasive mechanical ventilation	Non-invasive mechanical ventilation	Permanent pacemaker	Temporary pacemaker	Ventricular assistance
2002	-	-	-	0.04	0.44	22.60	-	-	-	-
2003	-	-	-	0.00	0.06	14.90	-	-	-	-
2004	-	-	-	0.02	0.13	12.66	-	-	-	-
2005	-	-	-	0.02	0.13	14.62	-	-	-	-
2006	-	-	-	-	0.20	14.97	-	-	-	-
2007	-	-	-	0.01	0.15	12.16	-	-	-	-
2008	-	-	-	0.01	0.15	10.93	-	-	-	-
2009	-	-	-	-	0.25	13.92	-	-	-	-
2010	-	0.18	-	0.00	0.29	10.42	0.37	0.05	0.16	-
2011	-	0.14	0.06	0.02	0.36	13.12	0.84	0.10	0.39	1.03
2012	-	0.21	0.07	0.02	0.22	11.61	0.92	0.12	0.32	-
2013	0.08	0.12	0.24	0.05	0.14	8.34	0.64	0.10	0.27	-
2014	-	0.20	-	0.05	0.10	10.48	0.64	0.08	0.25	0.48
2015	-	0.20	-	0.01	0.08	8.13	0.78	0.08	0.19	-
2016	-	0.43	-	0.01	0.08	9.43	0.60	0.04	0.18	-
2017	-	0.45	-	0.00	0.08	11.12	0.64	0.09	0.15	-
2018	-	0.34	0.31	-	0.10	9.98	0.79	0.04	0.15	-
2019	-	0.49	-	-	0.02	8.41	1.00	0.08	0.10	-
2020	0.18	0.13	0.36	-	0.04	13.03	1.00	0.12	0.17	-
2021	0.73	1.09	1.10	0.01	-	2.16	0.29	0.20	0.14	-
2022	0.32	1.22	0.97	-	0.11	5.77	0.42	0.39	0.21	7.17

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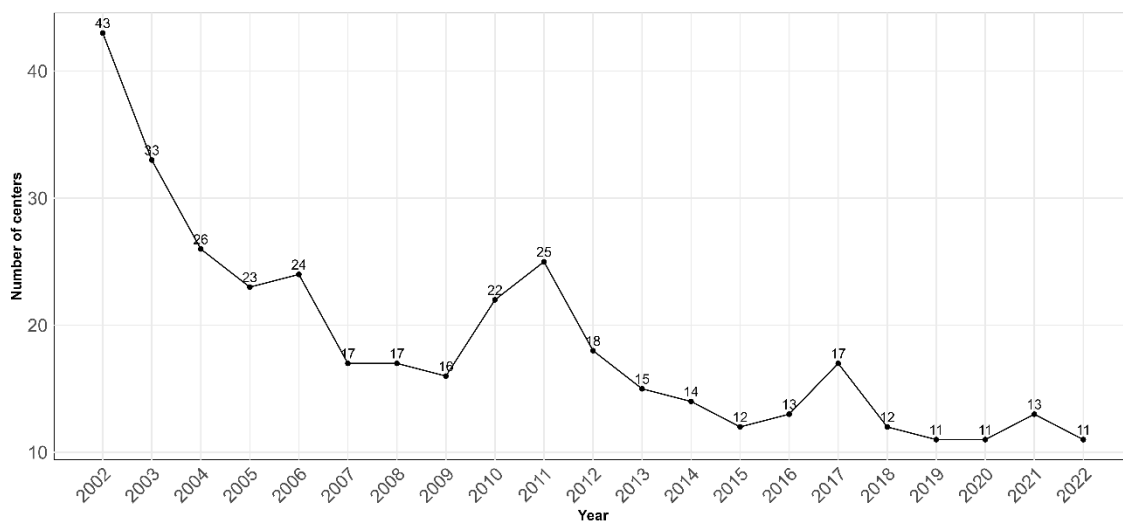
118 **Supplementary Table 6** Results of sensitivity analyses

Resource parameter	Interval in mean cost for the decrease and increase simulation (in euros)	Percentage change interval in mean cost for the increase and decrease scenarios (in %)
Daily inpatient	[6068.74; 6284.79]	[-3.38; 0.06]
Medical transport	[6274.45; 6291]	[-0.1; 0.16]
Biomarkers of myocardial injury measurement	[6233.67; 6289.22]	[-0.75; 0.13]
Isolated troponin elevation measurement	[6279.66; 6287.38]	[-0.02; 0.1]
Creatinine measurement	[6278.97; 6282.69]	[-0.03; 0.03]
Glucose measurement	[6275.04; 6287.35]	[-0.09; 0.1]
Haemoglobin measurement	[6276.75; 6284.75]	[-0.06; 0.06]
Lipid profile measurement	[6280.3; 6281.8]	[-0.01; 0.02]
Troponin assay	[6280.74; 6282.67]	[0; 0.03]
HbA1c measurement	[6280.38; 6281.88]	[-0.01; 0.02]
Platelet count measurement	[6280.54; 6281.06]	[0; 0]
BNP measurement	[6278.15; 6290.3]	[-0.04; 0.15]
NT-proBNP measurement	[6278.36; 6290.51]	[-0.04; 0.15]
Total cholesterol measurement	[6280.67; 6280.94]	[0; 0]
HDL cholesterol measurement	[6280.62; 6281.01]	[0; 0]
LDL cholesterol measurement	[6280.58; 6281.08]	[0; 0]
Triglycerides measurement	[6280.64; 6280.99]	[0; 0]
Apolipoprotein A measurement	[6280.67; 6281.29]	[0; 0.01]
Apolipoprotein B measurement	[6280.67; 6281.28]	[0; 0.01]
Total medication	[6254.64; 6283.12]	[-0.42; 0.04]
Reperfusion strategy	[6171.03; 6555.14]	[-1.75; 4.37]
Coronary Angioplasty	[6199.94; 6309.2]	[-1.29; 0.45]
Coronary Angioplasty (additional procedure)	[6276.84; 6386.09]	[-0.06; 1.68]
coronary angioplasty (left main artery)	[6274.82; 6966.16]	[-0.09; 10.91]
coronary angioplasty (left anterior descending artery)	[6111.54; 6797.59]	[-2.69; 8.23]
coronary angioplasty (circumflex artery)	[6191.17; 6874.78]	[-1.43; 9.46]
coronary angioplasty (right coronary artery)	[6157.71; 6840.12]	[-1.96; 8.91]
coronary angioplasty (bypass as an additional procedure)	[6276.64; 6956.14]	[-0.07; 10.75]
Thrombectomy	[6277.37; 6352.78]	[-0.05; 1.15]
Coronary artery bypass graft (CABG)	[6268.6; 7605.54]	[-0.19; 21.09]
12-lead electrocardiogram + Doppler echocardiogram	[6274.59; 6288.17]	[-0.1; 0.12]
Exercise stress test	[6280.77; 6287.36]	[0; 0.1]
Myocardial perfusion scintigraphy (under physical/pharmacological stress and at rest)	[6280.58; 6353.82]	[0; 1.16]
Cardiac computed tomography angiography	[6280.75; 6323.98]	[0; 0.69]
Cardiac magnetic resonance imaging (including both morphological and functional assessments)	[6280.74; 6333.22]	[0; 0.83]
Cardiac Resynchronization Therapy (CRT) device	[6280.47; 10202.31]	[-0.01; 62.44]
Implantable cardioverter defibrillator (ICD)	[6278.64; 9214.47]	[-0.03; 46.71]
ICD+CRT	[6279.83; 10201.67]	[-0.02; 62.43]
Swan-Ganz	[6280.57; 6402.68]	[0; 1.94]
Intra-aortic balloon	[6278.52; 6713.96]	[-0.04; 6.9]
Invasive mechanical ventilation	[6123.45; 13856.94]	[-2.51; 120.62]

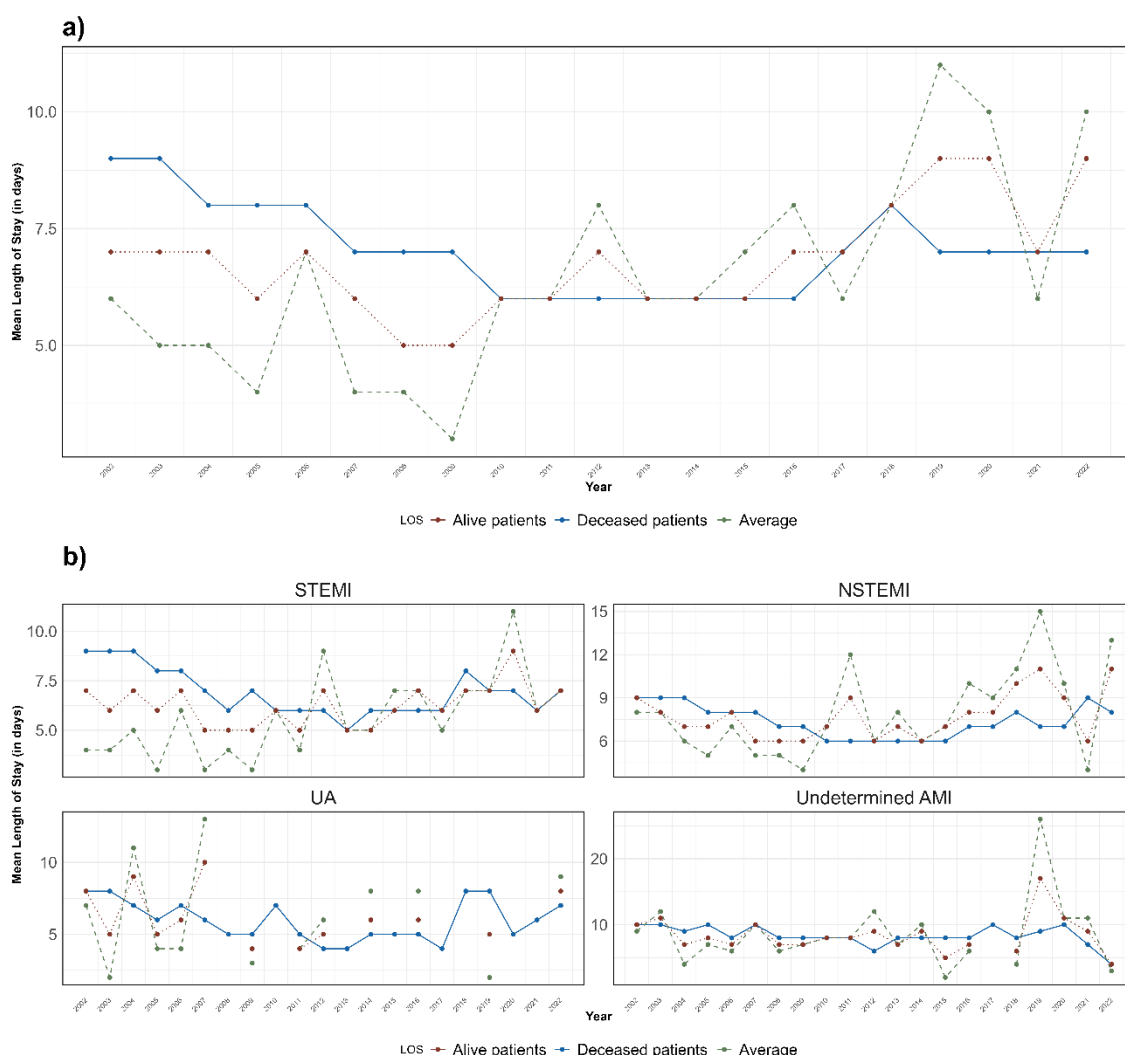
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Non-invasive mechanical ventilation	[6275.46; 6905.06]	[-0.08; 9.94]
Permanent pacemaker	[6280.08; 6553.71]	[-0.01; 4.35]
Temporary pacemaker	[6279.05; 6530.02]	[-0.03; 3.97]
Ventricular assistance	[6277.27; 27904.95]	[-0.06; 344.29]
Reinfarction	[6272.97; 6974.02]	[-0.12; 11.04]
Heart failure	[6178.74; 6763.36]	[-1.62; 7.68]
Mechanical complications	[6274.31; 7018.64]	[-0.1; 11.75]
Sustained ventricular tachycardia	[6280.63; 6304.04]	[0; 0.37]
Resuscitated cardiac arrest	[6280.21; 6303.62]	[-0.01; 0.36]
Stroke	[6274.68; 7147.35]	[-0.1; 13.8]
Major bleeding	[6277.39; 7507.51]	[-0.05; 19.53]
Cardiac rehabilitation	[6280.19; 6286.74]	[-0.01; 0.09]
Death	[6244.77; 7045.1]	[-0.57; 12.17]

3 Supplementary Figures



Supplementary Figure 1 Evolution of the annual number of centers in ProACS



Supplementary Figure 1 Average annual LOS in the hospital by admission year (a) and by admission year and diagnosis (b), for alive and deceased patients (and their average)

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