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INTRODUCTION

- Heterozygous familial hypercholesterolemia (HeFH) is an autosomal dominant disease characterized by elevated plasma concentrations of low-density lipoprotein cholesterol (LDL-C), tendon xanthomas and increased risk of early cardiovascular disease (CVD) but easily treatable with LDL-C lowering strategies¹.
- HeFH causes morbidity and mortality worldwide^{2,3}.
- Approximately 85% of males and 50% of females with FH will suffer a coronary event before 65 years old if appropriate preventive efforts are not implemented³.
- Early identification of persons with FH and an early start of treatment can prevent premature cardiovascular events and death in this population^{2,3}.

OBJECTIVE

The aim of this study was to estimate the average annual cost per patient with heterozygous familial hypercholesterolemia in Spain

METHODS

- A retrospective observational study of the electronic medical records of patients from the BIG-PAC® database (patients from 7 integrated areas of 7 Spanish Regions; n=1.8 million) was carried out.
- Patients with HeFH between 1/1/2017 and 12/31/2018 were included.
- Direct healthcare costs (DHCC) were calculated from the consumption of resources during follow-up (two years from diagnosis) and the mean of the Regions official published tariff.
- The indirect non-health costs (INHCC) associated with the loss of productivity were determined.
- All costs were updated to €2021.

RESULTS

- The following figures and tables show: demographics features and follow-up events (table 1); the resource consumption: hospital admissions and visits (figures 1 & 2) and diagnostic tests (figures 3 & 4); direct healthcare costs (table 2) and non-healthcare costs (table 3); and a cost summary (table 4).

Table 1. Demographics features and follow-up events	
n	572
Age (years) (mean [SD])	60.1(12.0)
Gender (Male %)	278 (48.6%)
Follow-up events	
New ASCVD event	32 (5.6%)
Deaths - n (%)	22 (3.8%)

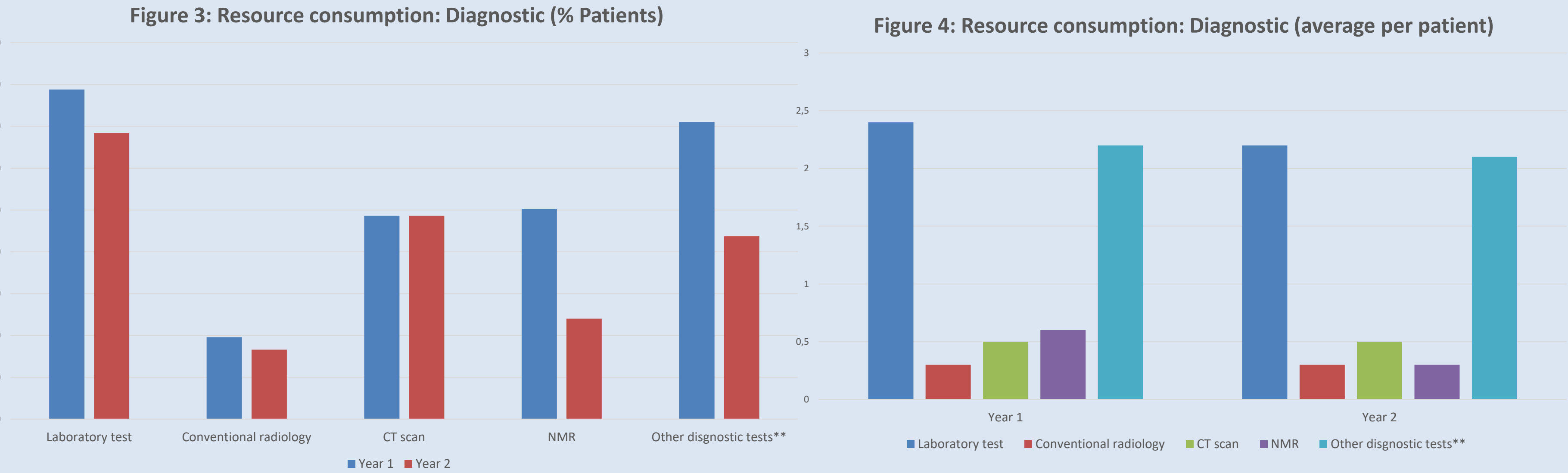
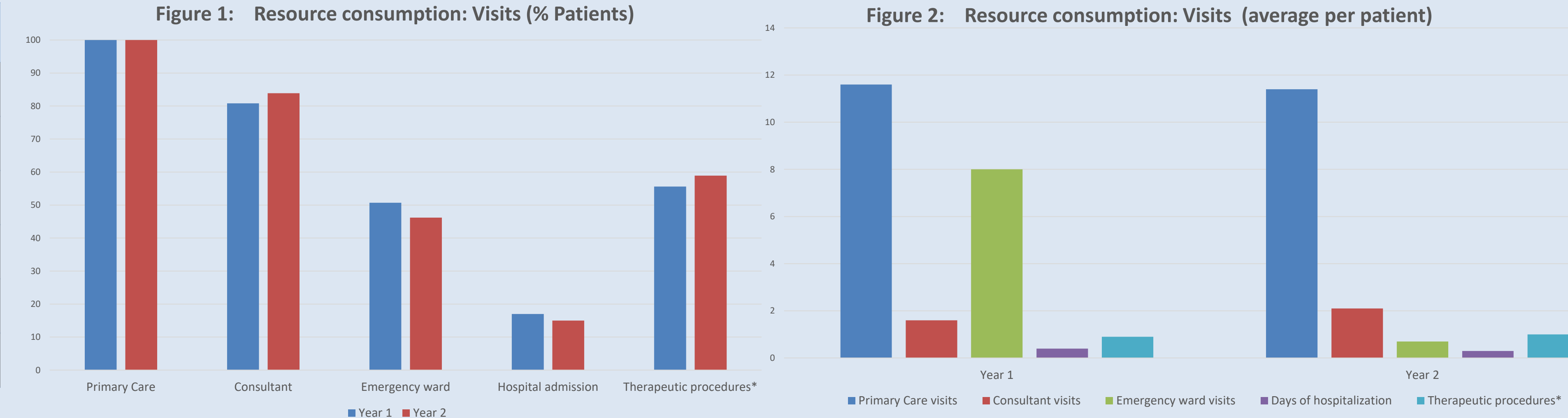


Table 4. Direct healthcare costs (average cost per patient)		
	Year 1	Year 2
Average cost per patient	7,548€	7,130€
Main drivers of cost		
Therapeutic procedures	4,091€	4,319€
Medication	1,481€	1,317€
Other diagnostic tests**	467€	327€

Table 5. Non-healthcare costs (average cost per patient)		
	Year 1	Year 2
Sick leave ***	1,584 €	1,981 €
Permanent disability****	-	-
Premature deaths *****	-	-
Non-healthcare costs	1,584 €	1,981 €

Table 6. Summary of Costs (average cost per patient)		
	Year 1	Year 2
Direct Healthcare cost	7,548€	7,130€
Non-Healthcare cost	1,584€	1,981€
Average cost per patient	9,132€	9,111€

• Includes coronary artery bypass(percutaneous), angioplasty and endarterectomy/thrombectomy; ** Includes echocardiogram, stress test and cardiac holter; *** Sick leave due to temporally disability in the working population (under 65 y.o.); **** Permanent disability in the working population (under 65 y.o.); ***** Difference between the age of death and the retirement age in Spain.

CONCLUSION

Patients with HeFH have a high morbidity and mortality and represent a considerable social and healthcare cost if LDL-c lowering adequate treatment is not started early. Developing preventive programs and controlling cardiovascular risk factors could help reduce mortality and cost for the Spanish National Health System.

REFERENCES

1.Nordestgaard BG, et al. Familial hypercholesterolaemia is underdiagnosed and undertreated in the general population: guidance for clinicians to prevent coronary heart disease: consensus statement of the European Atherosclerosis Society. Eur Heart J. 2013 Dec;34(45):3478-90a. 2. Raal FJ, et al. Familial hypercholesterolemia treatments: Guidelines and new therapies. Atherosclerosis. 2018 Oct;277:483-492. 3. Civeira F; International Panel on Management of Familial Hypercholesterolemia. Guidelines for the diagnosis and management of heterozygous familial hypercholesterolemia. Atherosclerosis. 2004 Mar;173(1):55-68.