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Burden of Hospitalization Related to Adult Herpes Zoster Infection in Portugal

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Conclusions

This study characterized **HZ hospitalizations in Portugal**, evidencing longer hospital stay for older patients and for patients who developed HZ complications.

The **annual economic burden** related to HZ hospitalizations exceeded **half a million euros**, translating into an average cost per patient of almost €3,000.

Background

Herpes zoster (HZ) is a viral disease characterized by a **painful or pruritic vesicular rash**, which is caused by the reactivation of the latent **varicella zoster virus**.[1–4]

In **Europe**, the **HZ incidence** is estimated to be between **2.0 and 4.6 cases per 1,000 person-years**, and sharply increases among patients aged ≥50 years.[5,6]

Immunocompromised (IC) patients are at **higher risk of HZ**, due to reduced T cell-mediated immunity.[3,4,6,7]

HZ and its complications cause an important clinical and economic burden in older adults and immunocompromised patients because of their impact on quality of life and associated costs, including hospitalization costs.

Aims

This study aimed to **characterize the inpatient burden associated with HZ in mainland Portugal, as well as the associated costs**.

Methods

We conducted a retrospective study based on secondary healthcare data collected from the 2017 Portuguese Hospital Morbidity Database.

This study characterized hospitalized adult patients (≥18 years) with a primary diagnosis of HZ and their inpatient episodes.

Each hospitalization episode cost was calculated considering the diagnosis-related group funding values for 2018 defined by order No. 254/2018.

Subgroup analyses were performed for patients aged ≥50 years and for IC patients aged ≥18 years.

Additional methods information available in supplementary material (QR-code).

Results

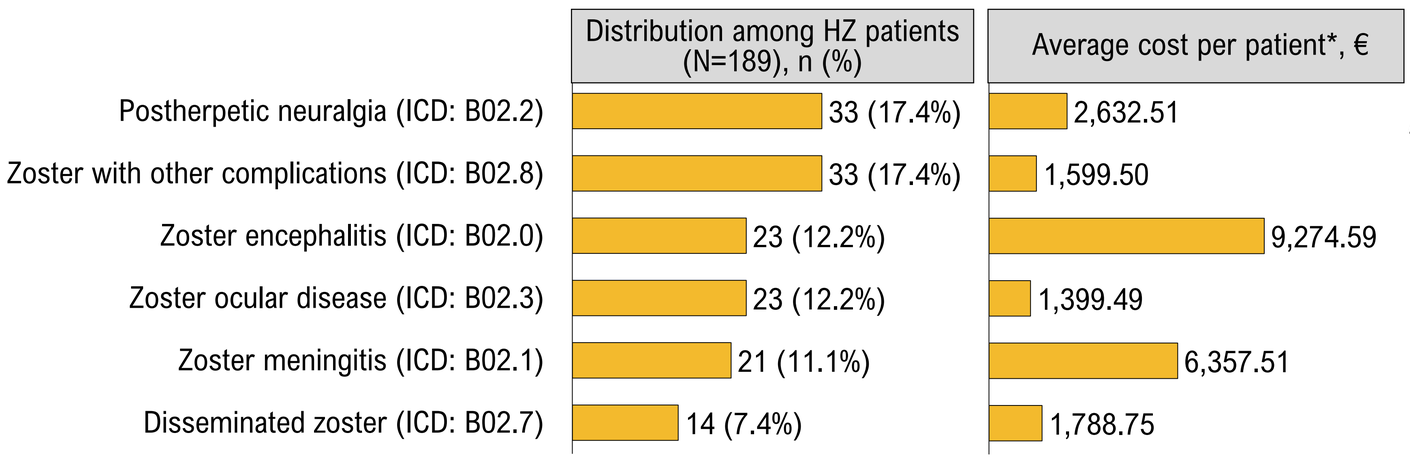
- There were 813 patients identified with at least one episode of HZ or HZ complication, out of 804,451 patients in the database (see HZ patient's flowchart, QR-code).
- 189 patients (23%) had an HZ episode as primary diagnosis (191 hospitalization episodes in total).

Demographic characteristics of HZ patients (see additional information available in supplementary material (QR-code))

	HZ with complications			HZ without complications		
	All patients*	≥50 yo	IC ≥18 yo	All patients*	≥50 yo	IC ≥18 yo
Number of patients, n	134	92	22	55	39	15
Men, n (%)	69 (51.5)	41 (44.6)	16 (72.7)	20 (36.4)	14 (35.9)	5 (33.3)
Mean age (SD), years	68.1 (18.5)	76.1 (11.1)	64.4 (15.6)	71.7 (14.3)	77.1 (10.1)	60.7 (12.2)
Age group, n (%)						
18-49 yo	24 (17.9)	-	4 (18.2)	4 (7.3)	-	3 (20.0)
50-59 yo	17 (12.7)	14 (15.2)	3 (13.6)	5 (9.1)	3 (7.7)	2 (13.3)
60-69 yo	14 (10.4)	8 (8.7)	6 (27.3)	11 (20.0)	5 (12.8)	6 (40.0)
70-79 yo	35 (26.1)	29 (31.5)	6 (27.3)	15 (27.3)	11 (28.2)	4 (26.7)
≥80 yo	44 (32.8)	41 (44.6)	3 (13.6)	20 (36.4)	20 (51.3)	0 (0.0)
Inpatient deaths for all-cause mortality, n (%)	8 (6.0)	5 (5.4)	2 (9.1)	2 (3.6)	2 (5.1)	0 (0.0)

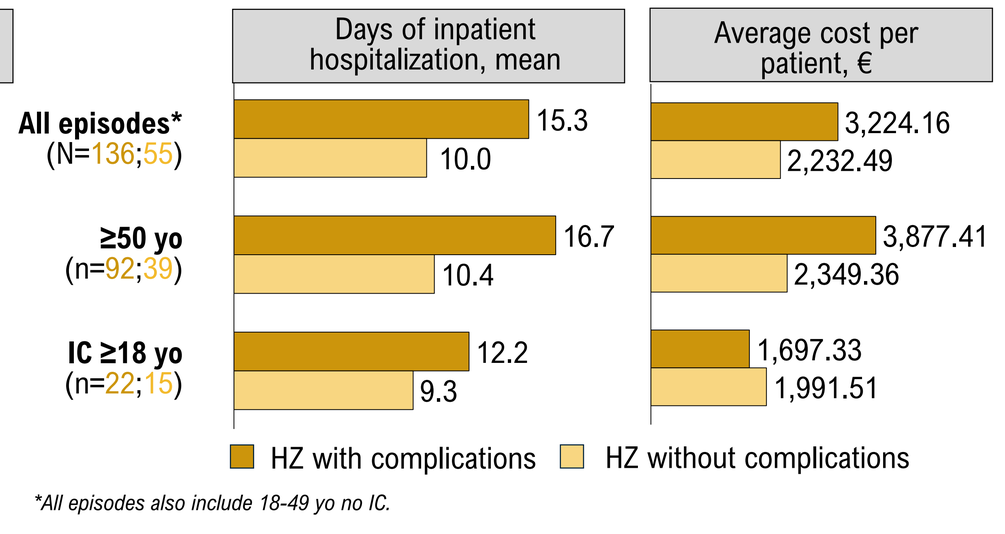
**All patients also include 18-49 yo no IC.*

Distribution of HZ complications among HZ patients and costs associated with hospitalization episodes per HZ complication



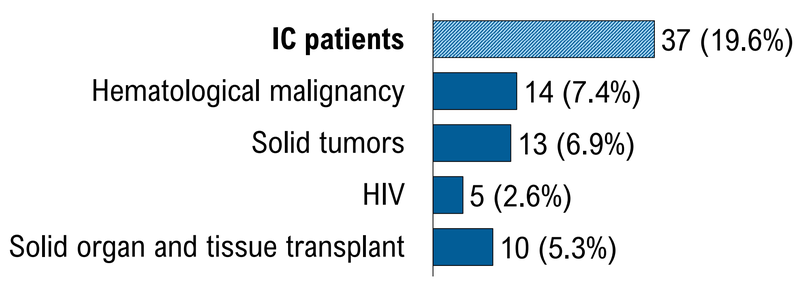
**Among patients ≥50 yo.*

Characteristics and costs associated with hospitalization episodes due to HZ with and without complications by subgroup



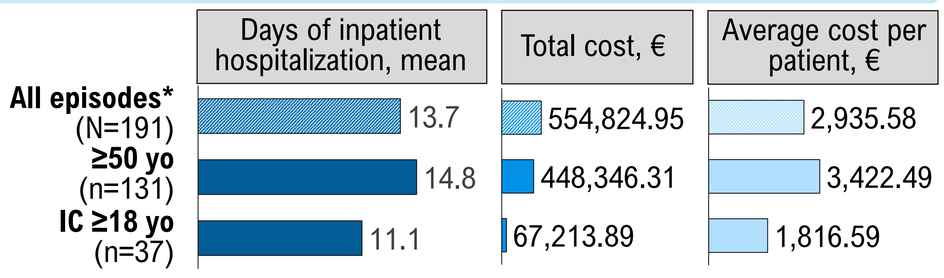
**All episodes also include 18-49 yo no IC.*

Distribution of IC conditions among HZ patients (N=189), n (%)



IC ≥18-year-old patients represented ~20% of patients at primary diagnosis

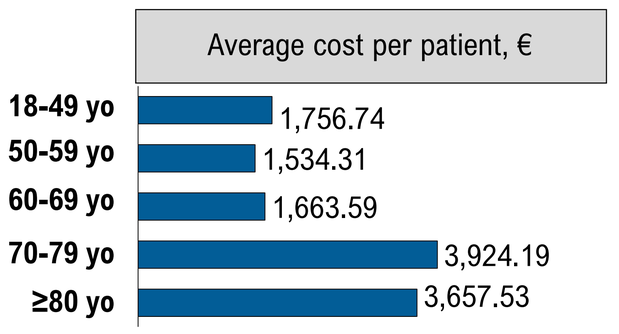
Characteristics and costs associated with hospitalization episodes due to HZ by subgroup



Hospitalization costs for the ≥50-year-old patients represented 81% of the total cost

**All episodes also include 18-49 yo no IC.*

Costs associated with hospitalization episodes due to HZ by age group



Abbreviations

HIV, human immunodeficiency virus; HZ, herpes zoster; IC, immunocompromised; ICD, International Classification of Diseases; n, number of patients/hospitalizations; N, total number of patients/hospitalizations; SD, standard deviation; yo, year-olds.

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Full **conflict of interest declaration** available in supplementary material (QR-code).

Digital poster
Supplemental data
Narrated summary
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Audio File

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