

Healthcare Resource Use and Costs Associated with Herpes Zoster/Post-herpetic Neuralgia Episodes in Italy: A Retrospective Observational Study

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Supplementary material

Definitions: immunocompromised (IC) and chronic conditions (CC)

- IC included:** Hematopoietic Stem Cell Transplantation, Organ Transplantation, Tumors, Rheumatoid Arthritis, Systemic Lupus Erythematosus, Inflammatory Bowel Disease, Psoriasis, End-stage renal disease and those on Immunosuppressive therapy, Human immunodeficiency virus (HIV)
- Chronic conditions included:** Chronic obstructive pulmonary disease (COPD), Diabetes, Dyslipidemia, Hypertension, Cardiovascular Events (e.g. Stroke, Heart Failure, Acute Myocardial Infarction, Atrial Fibrillation) and Cardiovascular Procedures

Treatments during follow-up periods of HZ/PHN patients ≥50 years (N=145,923)

Presence of treatment (at least one) N(%)	144,282 (98.9)
Brivudine, n (%)	142,428 (97.6)
Acyclovir, n (%)	6,116 (4.2)
Valacyclovir, n (%)	1,677 (1.1)
Famciclovir, n (%)	827 (0.6)
Immunosuppressant medications, n (%)	2,165 (1.5)
Systemic glucocorticoids, n (%)	37,170 (25.5)

Clinical characteristics of HZ patients ≥50 years (N=145,923) evaluated during the characterization periods

IC patients - presence of treatment (at least one), N(%)	43,607 (29.9)	CC patients - presence of conditions (at least one), N(%)	110,978 (76.1)
Hematopoietic Stem Cell Transplantation, n (%)	23 (0.0)	Diabetes, n (%)	24,274 (16.6)
Organ Transplantation, n (%)	126 (0.1)	Dyslipidemia, n (%)	48,768 (33.4)
Tumors*, n (%)	10,570 (7.2)	Hypertension, n (%)	95,026 (65.1)
Rheumatoid Arthritis*, n (%)	783 (0.5)	COPD, n (%)	35,033 (24.0)
Systemic Lupus Erythematosus*, n (%)	51 (0.0)	Cardiovascular Events, n (%)	6,516 (4.5)
Inflammatory Bowel Disease*, n (%)	243 (0.2)	Stroke, n (%)	2,059 (1.4)
Psoriasis*, n (%)	87 (0.1)	Heart Failure, n (%)	1,586 (1.1)
HIV, n (%)	25 (0.0)	Acute Myocardial Infarction, n (%)	2,263 (1.6)
End-stage renal disease, n (%)	321 (0.2)	Atrial Fibrillation, n (%)	1,750 (1.2)
Immunosuppressive Therapy, n (%)	36,588 (25.1)	Cardiovascular Procedures, n (%)	2,176 (1.5)

*=Exemption code reserched during all available period before index date

Average and total direct healthcare costs (€) of overall hospital stays for HZ patients without PHN and per type of HZ hospitalization during follow-up period

Diagnosis at Hospitalization discharge (ICD-9-CM code)	Patients with at least one Hospitalization	Mean Per Hospitalized Patient (€)	Total Hospitalizations (€)
HZ without PHN	778	3,704.43	2,882,044.19
HZ with meningitis (053.0)	11	4,796.16	52,757.81
HZ with nervous system complications not specified (053.10)	29	3,583.02	103,907.70
HZ del ganglio geniculate (053.11)	5	2,812.65	14,063.27
HZ myelitis (053.14)	5	4,926.17	24,630.86
HZ with other complications of the nervous system (053.19)	56	3,572.36	200,052.40
Dermatitis of the eyelves from HZ (053.20)	20	3,731.54	74,630.78
Keratoconjunctivitis from HZ (053.21)	46	3,667.28	168,695.09
Iridocyclite by HZ (053.22)	<4	NI	NI
HZ with other ophthalmic complications (053.29)	26	3,524.45	91,635.82
External otite from HZ (053.71)	13	3,320.55	43,167.20
HZ with other specified complications (053.79)	64	3,671.36	234,967.01
HZ with not specified complications (053.8)	38	4,037.77	153,435.33
HZ without mention of complications (053.9)	483	3,630.53	1,753,543.59

NI (sample size <4; data not reported for privacy reasons)
ICD-9-CM = internation classification of diseases, ninth revision, clinical modification

Average Healthcare Resource Consumption During the First Year of Follow up Period, Post PSM

	Overall		IC		CC		Oncology	
	No HZ N=193,259	HZ N=193,259	No HZ N=51,687	HZ N=51,687	No HZ N=121,984	HZ N=121,984	No HZ N=11,619	HZ N=11,619
Drugs	10.1	14.2	16.3	19.7	16.0	19.3	17.0	20.0
Hospitalization	0.1	0.2	0.3	0.3	0.2	0.3	0.4	0.5
Outpatient Service	2.6	3.4	4.7	5.1	3.9	4.3	7.3	7.5
Total	12.8	17.8	21.3	25.1	20.1	23.9	24.7	28.0

Abbreviations

CC, chronic condition; COPD, chronic obstructive pulmonary disease; HIV, human immunodeficiency virus; HZ, herpes zoster; IC, immunocompromised; NI, not implemented; PHN, postherpetic neuralgia; PSM, propensity score matching