

COMPARISON OF DIRECT HEALTHCARE COSTS ASSOCIATED WITH CHRONIC SPONTANEOUS/IDIOPATHIC URTICARIA IN 7 COUNTRIES - RESULTS FROM THE ASSURE-CSU STUDY

PSS22



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BACKGROUND

- Chronic spontaneous/idiopathic urticaria (CSU/CIU) is the most common type of chronic urticaria, and is characterized by occurrence of hives, angioedema or both lasting ≥ 6 weeks due to known or unknown causes¹
- Patients with CIU/CSU experience significant impact on their quality of life.² Additionally, CIU/CSU has an impact on society in terms of direct healthcare costs (i.e., costs incurred by patients), indirect healthcare costs (i.e., loss of wages) and reduced performance at work or absence from work³
- Few studies have evaluated the economic burden of CSU,³⁻⁶ and comparative data on the economic impact of CSU across countries are limited
- The ASSURE-CSU (ASsessment of the Economic and Humanistic Burden of Chronic Spontaneous/Idiopathic Urticaria PatiEnts) study is the first international study to quantify the economic and humanistic burden of patients with inadequately controlled CSU in Canada, France, Germany, Italy, Netherlands, Spain, and the United Kingdom (UK)

OBJECTIVE

- To present a comparative analysis of the direct costs associated with CSU across 7 countries based on the ASSURE-CSU study

METHODS

Study Design, Data and Sample

- The ASSURE-CSU study is an observational, non-interventional, multinational, and multicenter study of patients with inadequately-controlled CSU
- The study enrolled patients with diagnosed CSU, aged ≥ 18 years, with disease persisting for more than 12 months and symptomatic despite current treatment
- The study included a 12-month retrospective medical record abstraction, a cross-sectional patient reported outcomes survey, and a 7-day prospective patient diary to evaluate symptoms and productivity

Data Sources

- Medical resource utilization data associated with CSU were collected from retrospective medical records (previous 12 months before inclusion) and patient surveys (previous 3 months)
- Medical charts data included therapies for CSU health care professional visits (e.g., routine general dermatologist, primary care general practitioner), hospital visits, emergency room (ER) visits and laboratory tests (e.g., full blood count with differential, sedimentation rate)
- Health-related resource use from the patient survey included patient-reported alternative medicine visits (e.g., acupuncture, naturopath), transportation (e.g., ambulance transportation), and other out-of-pocket expenses from the past 3 months
- Country-level unit costs were obtained from national sources for 2014 and reported in the respective local currencies

Statistical Analysis

- For each country, direct costs were calculated by applying unit costs to each resource
- Total Direct Costs from the chart data from the previous 12 months were reported as mean (SD)
- Total Other Direct Costs from the patient survey from the previous 3 months were annualised to generate other direct costs during a 12-month period and reported as mean (SD)
- To enable comparison across countries, the purchasing power parity (PPP) approach was used. The PPP approach allows the exchange rate be equal to the purchasing power of each country's currency^{7,8}
- PPP exchange rates help to minimize misleading international comparisons that can arise with the use of market exchange rates
- Each month, the Organisation for Economic Cooperation and Development (OECD) measures the difference in price levels between its member countries by calculating the ratios of PPPs for private final consumption expenditure to exchange rates⁷
- Mean (SD) country costs were divided by the corresponding PPP exchange rate published by the OECD for 2014 (Table 1)

Table 1. PPP Exchange Rates⁷

	Country Currency	PPP Exchange Rate (2014)
Canada	Canadian Dollar	1.232879
France	Euro	0.818852
Germany	Euro	0.776039
Italy	Euro	0.748629
Netherlands	Euro	0.814421
Spain	Euro	0.666155
UK	Pound Sterling	0.699324

RESULTS

Total Direct Costs, by Country, in Country Currency, in PPP\$ (Table 2, Figure 1)

- The mean (SD) annual total direct costs for each country in the respective country currencies are presented in Table 2

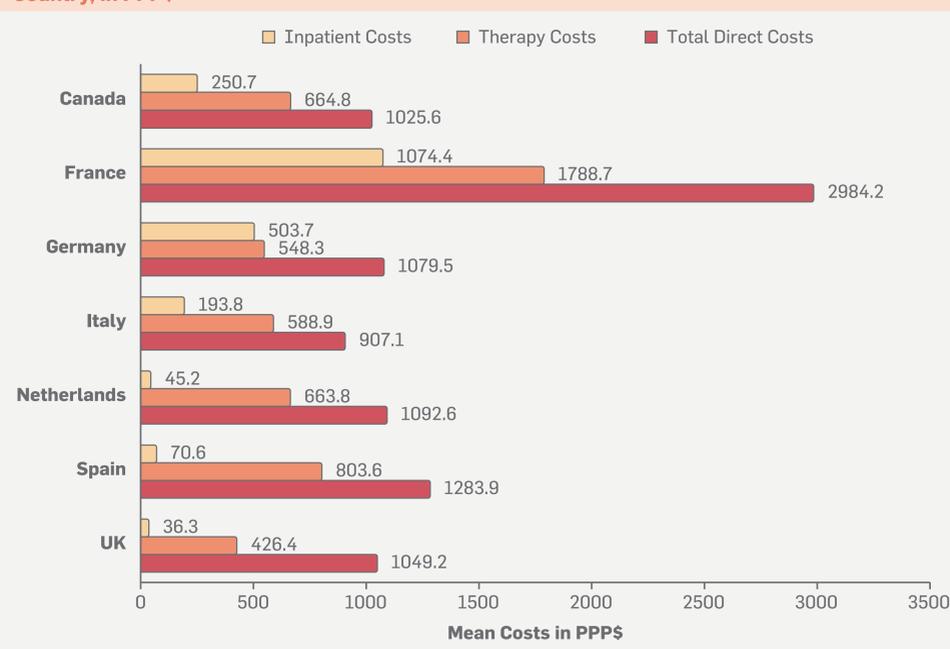
Table 2. Mean Annual Total Direct Costs from Medical Record Abstraction, by Country, in Country Currency

	Country Currency	Total Direct Costs	Therapy Costs	Inpatient Costs	Routine Visit Costs	ER Costs	Laboratory Costs
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Canada	Canadian Dollar	1264.4 (4529.5)	819.6 (3289.2)	309.1 (3075.4)	99.7 (98.4)	7.5 (37.8)	28.5 (60.9)
France	Euro	2443.6 (7344.7)	1464.7 (5812.2)	879.8 (2337.7)	46.8 (60.2)	36.0 (100.8)	16.3 (34.9)
Germany	Euro	837.7 (1795.5)	425.5 (1353.8)	390.9 (1113.2)	3.2 (5.6)	11.7 (27.2)	6.5 (14.9)
Italy	Euro	679.1 (1820.0)	440.9 (1094.5)	145.1 (886.91)	18.3 (28.0)	68.9 (147.2)	5.9 (12.7)
Netherlands	Euro	889.8 (1409.9)	540.6 (1245.7)	36.8 (250.8)	256.7 (305.7)	42.2 (132.8)	13.5 (17.9)
Spain	Euro	855.3 (1596.5)	535.3 (1514.7)	47.0 (349.7)	126.0 (164.6)	113.5 (217.5)	33.5 (54.4)
UK	Pound Sterling	733.7 (791.3)	298.2 (585.2)	25.4 (231.7)	321.8 (245.8)	15.9 (46.2)	72.4 (75.4)

ER: Emergency Room

- Mean (SD) annual total direct costs from the medical record abstraction for each country were: Italy (PPP\$907.1 [2431.1]), Canada (PPP\$1025.6 [3673.9]), UK (PPP\$1049.2 [1131.6]), Germany (PPP\$1079.5 [2313.6]), Netherlands (PPP\$1092.6 [1731.3]), Spain (PPP\$1283.9 [2396.6]), and France (PPP\$2984.2 [8969.5]) (Figure 1)
- Overall, annual total direct costs were notably higher in France, due to therapy cost of intravenous immunoglobulin use and higher inpatient costs

Figure 1. Mean Inpatient, Therapy and Total Direct Costs from Medical Record Abstraction, by Country, in PPP\$



Total Other Direct Costs, by Country, in Country Currency, in PPP\$ (Table 3, Figure 2)

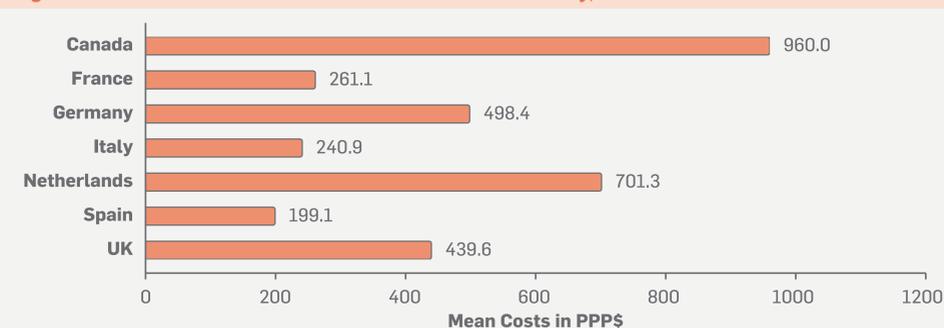
- The mean (SD) total other direct costs for each country are presented in Table 3

Table 3. Mean Annual Total Other Direct Costs from Patient Survey, by Country, in Country Currency

	Currency	Total Other Direct Costs Mean (SD)
Canada	Canadian Dollar	1183.6 (1780.5)
France	Euro	213.8 (459.2)
Germany	Euro	386.8 (892.1)
Italy	Euro	525.0 (1297.7)
Netherlands	Euro	196.2 (432.8)
Spain	Euro	132.6 (279.5)
UK	Pound Sterling	307.4 (422.0)

- Mean (SD) annual total other direct costs from the patient survey ranged from PPP\$199.1 (419.6) in Spain to PPP\$960.0 (1444.2) in Canada (Figure 2)
- Alternative medicine visits contributed to higher other direct costs in Canada; where 16% of patients reported alternative medicine visits, with one patient reporting 15 alternative medicine visits during the previous 3 months

Figure 2. Mean Total Other Direct Costs from Patient Survey, in PPP\$



CONCLUSIONS

- The current study found that CSU is associated with substantial direct healthcare costs across countries
- The higher than expected costs associated with CSU suggest the need for effective treatment among the inadequately-controlled CSU patient population

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