

Treatment Patterns in Patients With Chronic Spontaneous Urticaria: Results From a US Claims Database Study

Marc A. Riedl,¹ Dhaval Patil,² Jonathan Rodrigues,² Merin Kuruvilla,² Jason Doran,³ Irina Pivneva,⁴ Frédéric Kinkead,⁴ Panagiotis Orfanos,⁵ Tara Raftery,⁶ Gil Yosipovitch⁷

¹Division of Allergy & Immunology, Department of Medicine, University of California, San Diego, La Jolla, CA, USA; ²Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA; ³Analysis Group, Inc., Washington, D.C., USA; ⁴Analysis Group, Inc., Montréal, QC, Canada; ⁵Novartis Pharma AG, Basel, Switzerland; ⁶Novartis Ireland Ltd., Dublin, Ireland; ⁷Dr. Phillip Frost Department of Dermatology and Cutaneous Surgery, University of Miami Miller School of Medicine, Miami, FL, USA

KEY FINDINGS & CONCLUSIONS

- Disparities were observed in the management of CSU across different physician specialties in treatment patterns and in subsequent patient outcomes
- In general, patients with allergist and dermatologist visits had higher proportions of biologic use than those with PCP visits only, which may also be associated with relatively lower proportions of ED and urgent care visits
- Patients with allergist visits only had higher proportions of biologic use and shorter time to biologic initiation relative to those with dermatologist or PCP visits only
- The overall high proportion of patients with CSU-related corticosteroid use, inpatient admissions, ED visits, and urgent care visits suggests a high level of uncontrolled disease across all groups
- Despite poorly controlled disease, only a small proportion of patients were escalated to advanced therapies (biologics), suggesting an unmet need for more effective CSU treatment options

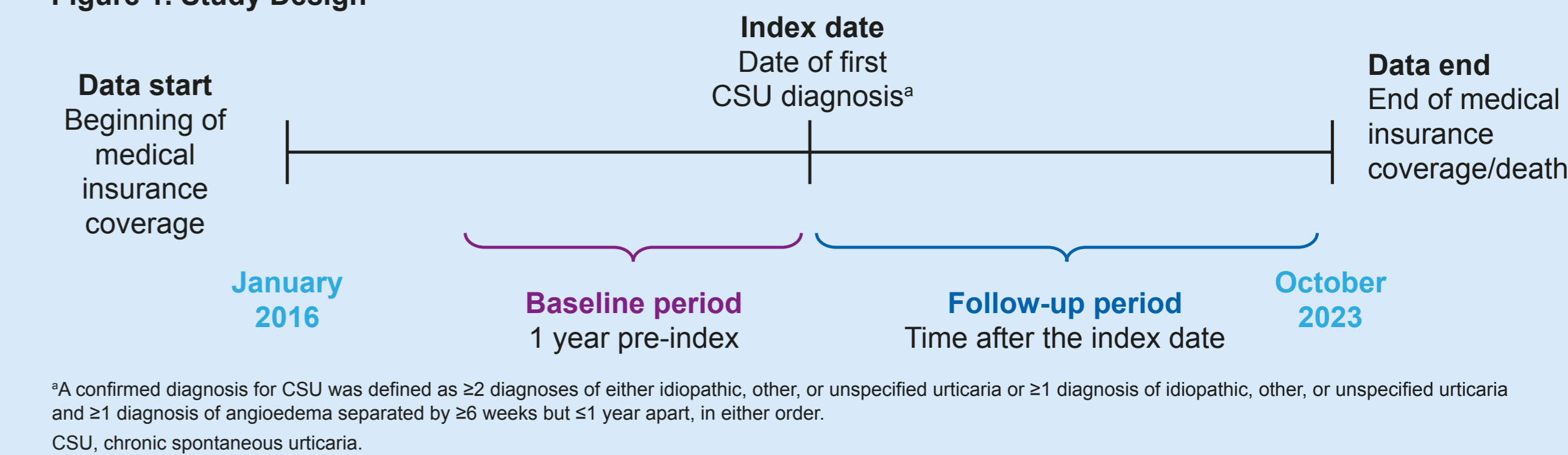
INTRODUCTION

- CSU is characterized by the occurrence of itch, wheals, and/or angioedema lasting >6 weeks without an identifiable trigger,¹ and is prevalent in 0.23% to 0.78% of the US population^{2,3}
- The recommended 1st-line treatment for CSU is second-generation H₁-AHs¹
 - Subsequent lines of treatment include up-dosed H₁-AHs and biologics¹
 - Short-term oral corticosteroids are reserved for acute exacerbations¹
- A large proportion of patients with CSU have uncontrolled disease despite H₁-AH treatment,^{4,5} and patients often experience a prolonged disease journey⁶
- A quantitative survey reported that patients with CSU from the US switched their main treating physician an average of 2.8 times after diagnosis⁶
- Here, we investigate disparities in the management of CSU between patients treated by different specialists

METHODS

- This retrospective cohort study used data from the US HealthVerity health insurance claims database between January 2016 and October 2023 (Figure 1), and electronic medical record data
- HealthVerity data are HIPAA compliant; therefore, no IRB approval was necessary
- Patients ≥18 years of age, with a confirmed diagnosis of CSU, and at least 1 year of continuous enrollment prior to the index date (allowing gaps in continuous enrollment of less than 30 days), were included
- Treatment patterns and CSU-related HCRU were assessed according to specialist physician visits in the following groups of patients with:
 - Dermatologist visits and no allergist visits (dermatologist only)
 - Allergist visits and no dermatologist visits (allergist only)
 - Both dermatologist and allergist visits (dermatologist and allergist)
 - PCP visits but not dermatologist or allergist visits (PCP only)
- Results from all available follow-up, including the index date, are presented here and summarized using descriptive statistics

Figure 1. Study Design



RESULTS

Patient Selection and Baseline Characteristics

- Of 224,958 patients with CSU, 120,283 were included in this analysis and assessed according to the selected specialist physician visits
- The mean age was 44.3 years and the majority of patients (76.3%) were female (Table 1)

Table 1. Patient Characteristics

Patient characteristics	All patients (N = 224,958)	Dermatologist only (n = 22,625)	Allergist only (n = 48,703)	Dermatologist and allergist (n = 24,537)	PCP only (n = 24,418)
Age at index date, ^a years, mean (SD)	44.3 (15.5)	46.8 (15.3)	41.8 (13.9)	44.1 (13.6)	44.5 (15.7)
Female sex, n (%)	171,733 (76.3)	16,927 (74.8)	37,338 (76.7)	19,356 (78.9)	18,654 (76.4)
Payer type, ^b n (%)					
Commercial	146,734 (65.2)	18,186 (80.4)	37,459 (76.9)	23,333 (95.1)	14,197 (58.1)
Medicaid	62,986 (28.0)	3250 (14.4)	9489 (19.5)	937 (3.8)	8345 (34.2)
Medicare advantage	13,137 (5.8)	1090 (4.8)	1326 (2.7)	247 (1.0)	1626 (6.7)
Unknown	2101 (0.9)	99 (0.4)	429 (0.9)	20 (0.1)	250 (1.0)
CCI, mean (SD)	0.6 (1.2)	0.6 (1.2)	0.5 (1.0)	0.5 (1.0)	0.8 (1.4)
Duration of follow-up period, ^c years, mean (SD)	2.4 (1.6)	2.7 (1.7)	2.3 (1.6)	2.9 (1.7)	2.7 (1.7)

^aThe index date was specified as the earliest of the two diagnosis dates used to confirm CSU. ^bWhen multiple payer types were reported, commercial insurance was prioritized, followed by Medicaid, and then Medicare Advantage. ^cEvaluated during all available follow-up (including the index date).

CCI, Charlson Comorbidity Index; CSU, chronic spontaneous urticaria; PCP, primary care physician; SD, standard deviation.

Treatment Patterns and CSU-Related HCRU

- During follow-up, systemic corticosteroids, antihistamines, and biologics were prescribed in 68.3%, 59.7%, and 11.2% of patients, respectively (Table 2)
- A higher proportion of patients with PCP visits only received systemic corticosteroids, relative to patients with allergist or dermatologist visits only
- Relative to patients who saw other specialists, the PCP only group had the highest proportion of patients with antihistamine use (62.6%) and the lowest proportion with biologic use (7.2%)
- A greater proportion of patients with allergist visits only received biologics relative to those with dermatologist visits only (17.0% and 9.3%, respectively)
- The mean time from diagnosis to biologic prescription was lower among patients with allergist visits only relative to those with dermatologist visits only (202.7 and 260.9 days, respectively)
- Although the PCP only group had a relatively low proportion of patients with inpatient visits (17.1%), they had the highest proportion with ED (15.4%) and urgent care (7.0%) visits relative to patients who saw other specialists (Figure 2)

LIMITATIONS

- The US HealthVerity health insurance claims database may present missing or incomplete follow-up data for the study population. Moreover, health care claims data are subject to residual confounding
- No statistical comparative analyses were performed, and differences reported are numerical only

References

- Zuberbier T, et al. *Allergy*. 2022;77(3):734–766.
- Soong W, et al. *World Allergy Organ J*. 2025;18(8):101081.
- Wertenteil S, et al. *J Am Acad Dermatol*. 2019;81(1):152–156.
- Riedl MA, et al. *Ann Allergy Asthma Immunol*. 2025;134(3):324–332.e4.
- Soong W, et al. *World Allergy Organ J*. 2023;16(12):100843.
- Bernstein JA, et al. Poster presented at: AAAAI/WAO Joint Congress, February 28–March 3, 2025, San Diego, CA.

Abbreviations

CCI, Charlson Comorbidity Index; CSU, chronic spontaneous urticaria; ED, emergency department; H₁-AH, H₁-antihistamine; HCPCS, Healthcare Common Procedure Coding System; HCRU, health care resource utilization; HIPAA, Health Insurance Portability and Accountability Act; IRB, institutional review board; LTRA, leukotriene receptor antagonist; PCP, primary care physician; SD, standard deviation; US, United States.

Acknowledgments

Writing support was provided by Holly Oates, PhD (BOLDSCIENCE Ltd., UK), and was funded by Novartis Pharmaceuticals Corporation. This poster was developed in accordance with Good Publication Practice (GPP) guidelines. The authors had full control of the content and made the final decision on all aspects of this publication.

Disclosures

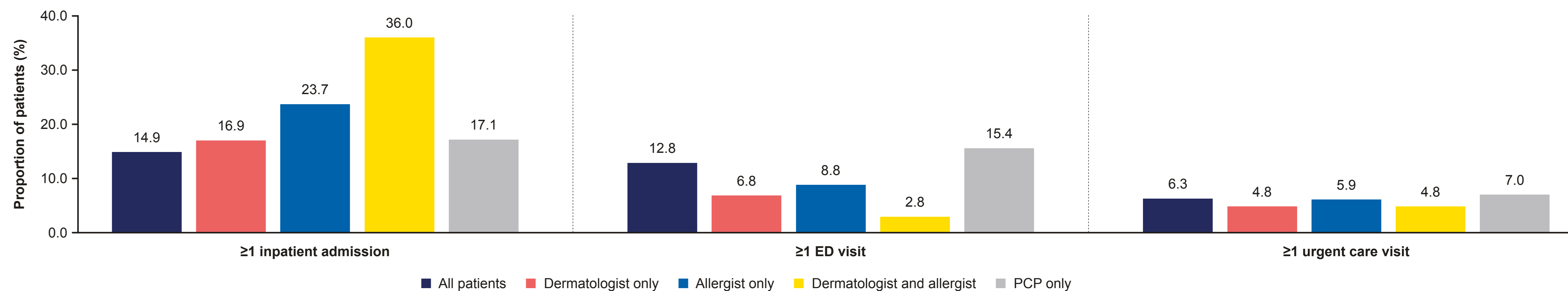
MAR has received research and/or consulting support from Astria Therapeutics, BioCryst, BioMarin, Celdex, CSL Behring, Cycle Pharmaceuticals, Grifols, Intellia Therapeutics, Ionis Pharmaceuticals, KalVista Pharmaceuticals, Novartis, Pfizer, Pharming, Pharvaris, Sanofi-Regeneron, and Takeda Pharmaceuticals. DP, JR, MK, PO, and TR are full-time employees of Novartis and may own stock or stock options. JD, IP, and FK are full-time employees of Analysis Group, Inc., a consulting company that has provided paid consulting services to Novartis Pharma AG. GY has received honoraria as a consultant and/or advisory board member for AbbVie, Amgen, Arcutis Biotherapeutics, Celdex, CSL Vifor, Eli Lilly, Escent Pharmaceuticals, Galderma, GSK, Kamari Pharma, Kiniksa Pharmaceuticals, LEO Pharma, Maruho, Novartis, Pfizer, Pierre Fabre, Regeneron Pharmaceuticals, Inc., Sanofi, and Trevi Therapeutics; has received research funding from Celdex, Eli Lilly, Escent Health, Kiniksa Pharmaceuticals, Novartis, Pfizer, Regeneron Pharmaceuticals, Inc., and Sanofi.

Table 2. Treatments During Follow-Up

Treatments, ^a mean (SD)	All patients (N = 224,958)	Dermatologist only (n = 22,625)	Allergist only (n = 48,703)	Dermatologist and allergist (n = 24,537)	PCP only (n = 24,418)
Corticosteroids (systemic), n (%)	153,679 (68.3)	15,471 (68.4)	33,694 (69.2)	18,576 (75.7)	17,718 (72.6)
Episodes of corticosteroid use per patient	2.1 (1.6)	2.3 (1.7)	2.1 (1.6)	2.5 (1.8)	2.4 (1.8)
Time (days) from index date to corticosteroid use	142.7 (277.5)	189.8 (329.6)	138.9 (270.1)	176.5 (316.6)	154.9 (296.9)
Days of follow-up corticosteroid use	82.6 (143.2)	97.2 (171.3)	80.0 (137.0)	100.9 (163.7)	98.5 (169.6)
Antihistamines, ^b n (%)	134,379 (59.7)	12,222 (54.0)	28,182 (57.9)	13,673 (55.7)	15,289 (62.6)
Episodes of antihistamine use per patient	1.7 (1.2)	1.7 (1.2)	1.7 (1.1)	1.7 (1.2)	1.9 (1.4)
Time (days) from index date to antihistamine use ^b	99.8 (236.9)	131.2 (292.1)	98.0 (231.8)	150.5 (307.5)	115.3 (264.3)
Days of follow-up antihistamine use	249.9 (327.1)	243.7 (333.9)	263.0 (337.2)	257.4 (349.4)	303.7 (383.6)
LTRAs, n (%)	60,676 (27.0)	4893 (21.6)	16,366 (33.6)	8718 (35.5)	5997 (24.6)
Episodes of LTRA use per patient	1.4 (0.8)	1.4 (0.8)	1.4 (0.8)	1.4 (0.8)	1.5 (0.9)
Time (days) from index date to LTRA use	159.8 (286.2)	207.1 (351.1)	139.7 (264.0)	179.9 (313.7)	195.0 (329.4)
Days of follow-up LTRA use	309.0 (383.3)	323.0 (415.3)	315.5 (387.0)	363.5 (450.3)	354.6 (425.9)
Biologics, n (%)	25,282 (11.2)	2098 (9.3)	8263 (17.0)	5214 (21.2)	1757 (7.2)
Episodes of biologic use per patient	1.3 (0.8)	1.4 (0.8)	1.3 (0.8)	1.4 (0.9)	1.4 (0.7)
Time (days) from index date to biologic use	220.9 (306.2)	260.9 (354.9)	202.7 (283.9)	260.4 (344.4)	255.9 (355.3)
Days of follow-up biologic use	413.9 (416.8)	452.2 (453.6)	415.3 (410.2)	512.8 (478.2)	410.2 (417.4)

^aEvaluated during the follow-up period, including the index date (date of first CSU diagnosis). Episodes of continuous use of each individual agent class were assessed, considering a 60-day gap in treatment as discontinuation. Resuming treatment after >60 days would trigger a new treatment episode. The initiation of a different agent class concurrently with the agent class of interest was not considered as discontinuation. ^bAntihistamine n (%) and time from index date to use data included claims and electronic medical record data. All other treatment patterns included claims data only. CSU, chronic spontaneous urticaria; LTRA, leukotriene receptor antagonist; PCP, primary care physician; SD, standard deviation.

Figure 2. CSU-Related HCRU During Follow-Up



The proportion of patients with outpatient visits across all groups was 94.3 to 98.7%. Visit classification leverages bill type, revenue codes, and HCPCS procedure codes. In cases where a visit cannot be identified as an inpatient admission, outpatient visit, ED visit, or urgent care visit, through these means, it is labeled "other". Patients with "other visits" (all patients: 0.8%; dermatologist only: 0.8%; allergist only: 0.8%; dermatologist and allergist: 0.9%; PCP only: 0.9%) are not displayed on the graph. CSU, chronic spontaneous urticaria; ED, emergency department; HCPCS, Healthcare Common Procedure Coding System; HCRU, health care resource utilization; PCP, primary care physician.



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