Poster R396

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Racial, Ethnic, And Socioeconomic Disparities in Chronic Spontaneous Urticaria: A United States Claims Database Study

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KEY FINDINGS & CONCLUSIONS

- This analysis characterized racial, ethnic, and socioeconomic disparities in the management of CSU
- Across groups, the highest proportions of corticosteroid use and ED visits were among Black patients with Medicaid, suggesting more uncontrolled disease in this population. Despite this, only 10% of Black patients with Medicaid received biologic (advanced) treatment
- Patients with Medicaid were observed to rely on emergency care rather than specialist treatment relative to those with commercial insurance
- Ensuring access to guidelines-based treatment may improve outcomes in patients with CSU[1]

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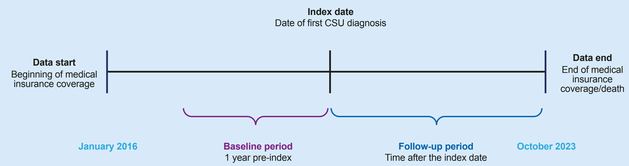
INTRODUCTION

- 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 H_1-AHs[1]
  - Subsequent lines of treatment include up-dosed H_1-AHs and biologics[1]
  - Short-term oral corticosteroids are reserved for acute exacerbations[1]
- A large proportion of patients with CSU have uncontrolled disease despite H_1-AH treatment[4,5]
- Patients with CSU often experience a prolonged disease journey, although health inequities in the management of CSU are not fully understood[6,7]
- A UK-based study reported racial, ethnic, and socioeconomic disparities in the management of CSU, with White patients more likely to receive a referral for specialist treatment relative to ethnic minority groups[8]
- Here, we investigate disparities in the management of CSU by race and ethnicity and by type of insurance coverage in a large US cohort

METHODS

- This retrospective cohort study used data from the US HealthVerity health insurance claims database between January 2016 and October 2023 (**Figure 1**)
- 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 (excluding OTC medication), specialist physician visits, and HCRU were assessed according to race and ethnicity and by commercial or Medicaid insurance coverage
  - Patients with multiple conflicting records of race or ethnicity were categorized as unknown and not included in this analysis
  - When multiple payer types were reported, commercial insurance was prioritized, followed by Medicaid, and then Medicare Advantage (patients with Medicaid Advantage were excluded from this analysis)
- Results from all available follow-up including the index date are presented here and summarized using descriptive statistics
- HealthVerity race and ethnicity data were supplemented by partially modeled data from Acxiom, a global data analytics company

Figure 1. Study Design



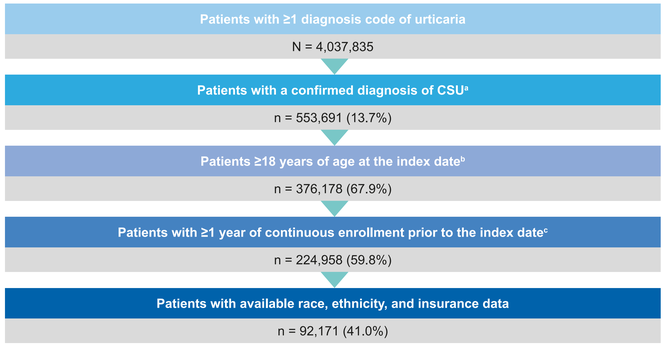
CSU, chronic spontaneous urticaria.

RESULTS

Patient Selection and Baseline Characteristics

- Of 224,958 patients meeting the inclusion criteria, 92,171 had available race, ethnicity, and insurance coverage data (**Figure 2**)
- The mean age was 42.0 and the majority of patients were female (**Table 1**)

Figure 2. Patient Selection



[a]A confirmed diagnosis for CSU was defined as ≥2 diagnoses of either idiopathic, other, or unspecified urticaria or ≥1 diagnosis of idiopathic, other, or unspecified urticaria and ≥1 diagnosis of angioedema separated by ≥6 weeks but ≤1 year apart, in either order. [b]The index date was specified as the earliest of the two diagnosis dates used to confirm CSU. [c]Continuous enrollment (both medical and drug coverage) was assessed, allowing for gaps in continuous enrollment of <30 days.
CSU, chronic spontaneous urticaria.

Table 1. Patient Characteristics

Race/ethnicity	White		Black		Asian		Hispanic	
Insurance coverage	Commercial (n = 32,489)	Medicaid (n = 24,371)	Commercial (n = 6169)	Medicaid (n = 11,513)	Commercial (n = 6498)	Medicaid (n = 5748)	Commercial (n = 3220)	Medicaid (n = 2163)
Age at index date,[a] years, mean (SD)	43.3 (14.0)	40.0 (14.4)	43.2 (13.5)	39.0 (13.4)	43.4 (13.3)	46.5 (17.7)	43.0 (13.7)	38.6 (14.7)
Female sex, n (%)	24,809 (76.4)	19,846 (81.4)	5,123 (83.0)	9,924 (86.2)	4,550 (70.0)	4,107 (71.5)	2,422 (75.2)	1,871 (86.5)
CCI, mean (SD)	0.5 (1.0)	0.7 (1.3)	0.5 (1.1)	0.8 (1.4)	0.4 (1.0)	0.7 (1.3)	0.5 (1.1)	0.8 (1.3)
Duration of follow-up period, years, mean (SD)	2.5 (1.7)	2.3 (1.6)	2.4 (1.6)	2.4 (1.6)	2.4 (1.6)	2.4 (1.6)	2.6 (1.6)	2.8 (1.7)

[a]The index date was specified as the earliest of the two diagnosis dates used to confirm CSU.
CCI, Charlson Comorbidity Index; CSU, chronic spontaneous urticaria; SD, standard deviation.

Treatment Patterns and Specialist Visits

- The proportion of patients who received systemic corticosteroids was highest among Black patients with Medicaid (74.5%) and lowest among Asian patients with Medicaid (52.7%) (**Table 2**)
- The proportion of patients who received biologics was highest among White patients with commercial insurance (13.7%) and lowest among Asian patients with Medicaid (5.7%)
- The proportion of patients who received antihistamines was higher among patients with Medicaid (79.9% to 88.4%) than those with commercial insurance (49.5% to 57.9%)
- Relative to those with Medicaid, a higher proportion of patients with commercial insurance had allergist/immunologist, or dermatologist specialist visits
  - Across groups, the lowest proportion of allergist/immunologist visits was among Asian patients with Medicaid (14.0%), and the lowest proportion of dermatologist visits was among Black patients with Medicaid (5.5%)

Table 2. Treatments and Specialist Physician Visits During Follow-Up

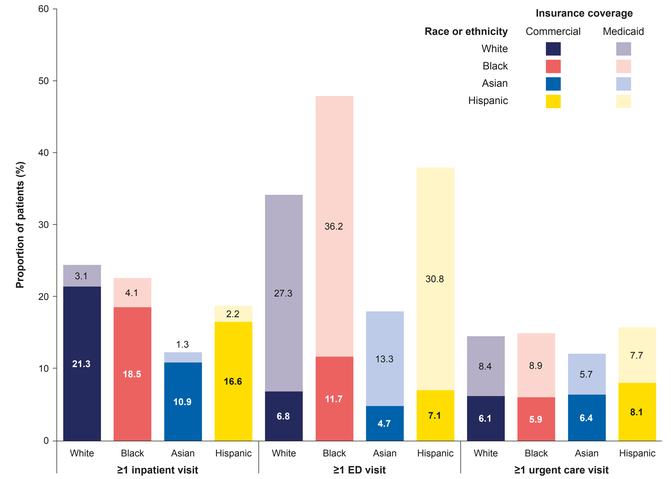
Race/ethnicity	White		Black		Asian		Hispanic	
Insurance coverage	Commercial (n = 32,489)	Medicaid (n = 24,371)	Commercial (n = 6169)	Medicaid (n = 11,513)	Commercial (n = 6498)	Medicaid (n = 5748)	Commercial (n = 3220)	Medicaid (n = 2163)
Treatment patterns,[a,b] n (%)								
Systemic corticosteroids	22,872 (70.4)	17,954 (73.7)	4491 (72.8)	**8582 (74.5)**	3708 (57.1)	3031 (52.7)	2279 (70.8)	1499 (69.3)
Antihistamines	16,233 (50.0)	19,466 (79.9)	3570 (57.9)	9844 (85.5)	3218 (49.5)	4854 (84.4)	1703 (52.9)	**1913 (88.4)**
Leukotriene receptor antagonists	9217 (28.4)	7168 (29.4)	1770 (28.7)	3421 (29.7)	1497 (23.0)	1191 (20.7)	960 (29.8)	**660 (30.5)**
Biologics	**4453 (13.7)**	2614 (10.7)	731 (11.8)	1149 (10.0)	514 (7.9)	328 (5.7)	355 (11.0)	174 (8.0)
Immunosuppressive agents[c]	2148 (6.6)	1278 (5.2)	389 (6.3)	613 (5.3)	406 (6.2)	375 (6.5)	203 (6.3)	**173 (8.0)**
Immunomodulator agents[d]	1746 (5.4)	982 (4.0)	321 (5.2)	466 (4.0)	207 (3.2)	129 (2.2)	**193 (6.0)**	95 (4.4)
JAK-STAT inhibitors	194 (0.60)	105 (0.43)	24 (0.39)	48 (0.42)	26 (0.40)	36 (0.63)	19 (0.59)	**14 (0.65)**
Specialist physician visits,[a,b] n (%)								
Allergist/immunologist	**13,923 (42.9)**	3888 (16.0)	2427 (39.3)	1849 (16.1)	2062 (31.7)	803 (14.0)	1344 (41.7)	455 (21.0)
Dermatologist	**9834 (30.3)**	1685 (6.9)	1312 (21.3)	636 (5.5)	1442 (22.2)	426 (7.4)	901 (28.0)	183 (8.5)

Patients with Medicare Advantage were excluded from this analysis. Highest n (%) values among groups are shown in **bold**.
[a]All-cause and not specific to CSU. [b]Evaluated during the follow-up period, including the index date. [c]Immunosuppressive agents included azathioprine, mycophenolate, methotrexate, tacrolimus and cyclosporine. [d]Immunomodulator agents included dapsone, hydroxychloroquine and sulfasalazine.
CSU, chronic spontaneous urticaria; JAK-STAT, Janus kinase/signal transducer and activator of transcription.

CSU-Related HCRU

- Relative to those with commercial insurance, a higher proportion of patients with Medicaid had CSU-related ED visits (**Figure 3**)
- Across groups, the highest proportion of CSU-related ED visits was among Black patients with Medicaid (36.2%)
- Overall, the lowest proportion of urgent care visits was among Asian patients (6.4% with commercial insurance; 5.7% with Medicaid)

Figure 3. CSU-Related HCRU PPPY During Follow-Up



The proportion of patients with outpatient visits across all groups was >90%. Patients with Medicare Advantage were excluded from this analysis.
Evaluated during the follow-up period, including the index date.
CSU, chronic spontaneous urticaria; ED, emergency department; HCRU, health care resource utilization; PPPY, per patient per year.

Limitations

- Race and ethnicity proportions may not be representative, as the claims dataset contained a substantial portion of patients categorized as "unknown" ethnicity who were not included in this analysis
- For some patients whose self-reported race and ethnicity information was not available in claims, this information was supplemented using modeled data; therefore, certain patients could have been misclassified
- 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

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Abbreviations

CCI, Charlson Comorbidity Index; CSU, chronic spontaneous urticaria; ED, emergency department; H_1-AH, H_1-antihistamine; HCRU, health care resource utilization; HIPAA, Health Insurance Portability and Accountability Act; IRB, institutional review board; JAK-STAT, Janus kinase/signal transducer and activator of transcription; OTC, over-the-counter; PPPY, per patient per year; SD, standard deviation; UK, United Kingdom; US, United States.

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