Healthcare Resource Utilization, Including Dental Care, Before and After Sjögren's Disease Diagnosis in the VA Health Care System

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Key Takeaways

- **SjD is a multisystemic disease, with patients utilizing care, inclusive of dental care, from multiple specialists**
- **This study offers comprehensive insight into the total HRU for patients with SjD**
- **Following an SjD diagnosis, HRU increased across most visit types, including a marked rise in inpatient admissions, underscoring the complexity of the disease**

Background

- Sjögren's disease (SjD) is a systemic, chronic autoimmune disorder affecting exocrine glands with lymphocytic infiltration[1,2]
- SjD often presents with ocular or oral dryness, but symptoms and complications can range from joint pain and cognitive impairment to life-threatening organ involvement[1,2]
- Real-world evidence describing the comprehensive healthcare burden associated with SjD is limited because of several factors
  - United States (US) prevalence of primary SjD is low (<1%)[3-5]
  - US healthcare system is fragmented[6]
  - Traditional medical claims databases do not include dental records[7]

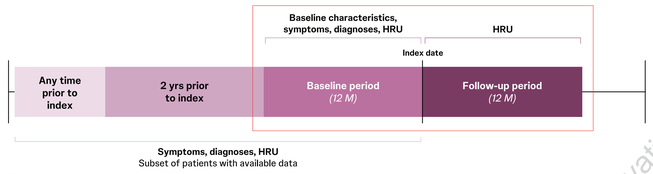
Objective

To assess clinical characteristics, comorbidities, and healthcare resource utilization (HRU)—including dental care utilization—among patients with SjD in the US

Methods

- Retrospective observational cohort study
- Data from National Veterans Affairs (VA) Health Care Network (January 1, 2015, to August 15, 2025)
- Index date: first diagnosis of SjD on or after October 1, 2021
  - A second confirmatory diagnosis was required ≥30 days later
  - Patients were required to be continuously enrolled in VA benefits for ≥12 months (M) prior to and following the index date
- Patient characteristics, comorbidities, and HRU were assessed in the 12 M before index (baseline); HRU was assessed in the 12 M after index (follow-up)

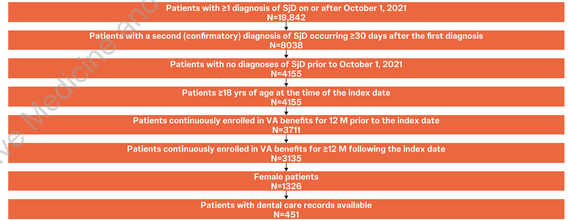
Study Design



- Given that females make up ~90% of patients with SjD,[2] this analysis focused on the female subgroup

Of 1326 female patients identified, 451 had dental care records available

Patient Selection



*Patients with SjD were identified using ICD codes. **ICD**=International Classification of Diseases.*

Results

Patient demographics and clinical characteristics in the 12 M before index

- Mean age at index date: 54.6 yrs
- 44% were White
- 63% had primary SjD
- Mean CCI: 0.9

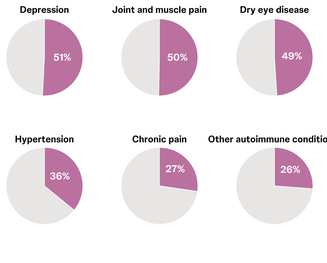
Baseline Characteristics	Female patients with SjD and dental records (N=451)
Demographics	
Age at index date, yrs	54.6 (11.2)
Race/ethnicity	
White	44%
Black or African American	34%
Hispanic or Latino	10%
Asian or Pacific Islander	2%
Other	3%
Unknown	7%
Disease Characteristics	
Type of SjD[a]	
Primary SjD	63%
Associated SjD	37%
CCI[b]	0.9 (1.3)
CCI subcomponents[b,c]	
Rheumatologic disease[c]	23%
Chronic pulmonary disease	23%
Mild to moderate diabetes	16%

Data shown are mean (SD) unless otherwise noted. [a]Secondary SjD was defined as SjD with diagnosis codes for any of the autoimmune conditions of interest (ie, autoimmune hepatitis, autoimmune thyroid disease, inflammatory bowel disease, rheumatoid arthritis, scleroderma/systemic sclerosis, systemic lupus erythematosus, systemic vasculitis, cryoglobulinemia, psoriatic arthritis, Graves' disease, Hashimoto's thyroiditis, or myasthenia gravis) at any time prior to the first diagnosis (index date) of SjD. Primary SjD was defined as SjD without a diagnosis for any of the autoimmune conditions of interest pre-index. [b]The CCI is a method of predicting mortality by classifying or weighting comorbid conditions. The CCI score is calculated among 17 conditions with a maximum score of 24 points and was assessed in the 12 M before index.[8] [c]Most frequent subcomponents ≥5%. [d]The rheumatologic disease component of the CCI includes rheumatoid arthritis, systemic lupus erythematosus, polymyositis or dermatomyositis, mixed connective tissue disease, polymyalgia rheumatica, sarcoidosis, and systemic vasculitis (eg, SjD).
CCI=*Charlson Comorbidity Index;* ***SD***=*standard deviation.*

In the 12 M before index, there was a mean of 3.7 (SD, 2.2) comorbid diagnoses or symptoms per patient

- The most frequent autoimmune conditions other than SjD were rheumatoid arthritis and systemic lupus erythematosus (12% each)

Most Frequent Comorbid Diagnoses and Symptoms

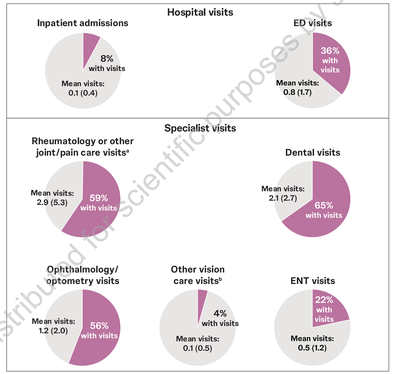


[a]Other autoimmune conditions included rheumatoid arthritis, systemic lupus erythematosus, autoimmune thyroid disease (Hashimoto's thyroiditis and Graves' disease), scleroderma/systemic sclerosis, systemic vasculitis, psoriatic arthritis, inflammatory bowel syndrome, autoimmune hepatitis, myasthenia gravis, and cryoglobulinemia. [b]Ocular conditions other than dry eye disease included corneal findings (sterile corneal ulcer/infiltration, corneal haze/scarring, and keratitis, filiat perforation), uveitis, optic neuropathy/neuritis, episcleritis/scleritis, orbital inflammation, retinal vasculitis, and conjunctival findings (bulbar conjunctivitis/conjunctival chemosis and tarsal conjunctivitis [cicatrizing conjunctivitis, follicular conjunctivitis, and papillary conjunctivitis]).

In the 12 M before index, patients experienced substantial HRU

- Among all patients, the mean number of dental visits was 2.1; among the 65% of patients with ≥1 dental visit, the mean number of visits was 3.2 (SD, 2.7)

Proportion of Patients With HRU and Mean (SD) Visits PPPY Among All Patients

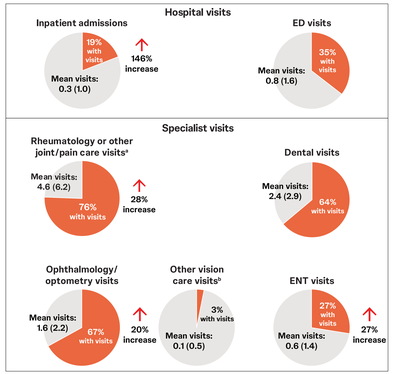


[a]Other joint/pain care visits include chiropractic care, hand surgery, kinesiotherapy, orthopedic/joint surgery, orthopedics, pain clinic, and physical therapy. [b]Includes specialist visits related to low vision care, blind care, and vision screenings. ***ED***=*emergency department,* ***ENT***=*ear, nose, and throat;* ***PPPY***=*per person per year.*

In the 12 M after index, greater proportions of patients had rheumatology or other joint/pain care, ophthalmology/ optometry, ENT, and inpatient visits

- Although the proportion of patients with ≥1 dental visit decreased slightly, the mean number of dental visits among all patients increased to 2.4; the mean number of visits among those with ≥1 dental visit increased to 3.7 (SD, 2.9)

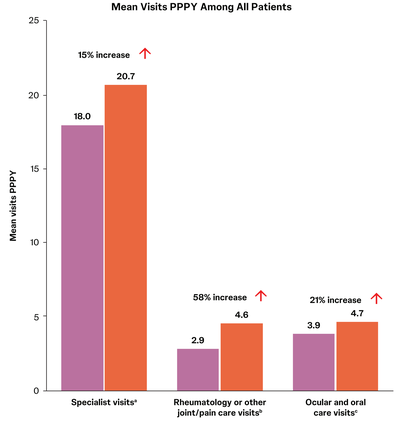
Proportion of Patients With HRU and Mean (SD) Visits PPPY Among All Patients



[a]Other joint/pain care visits include chiropractic care, hand surgery, kinesiotherapy, orthopedic/joint surgery, orthopedics, pain clinic, and physical therapy. [b]Includes specialist visits related to low vision care, blind care, and vision screenings.

In the 12 M after index, patients had increased specialist, rheumatology or other joint/pain care, and ocular/oral care visits

Mean Visits PPPY Among All Patients



[a]Includes all types of outpatient care, excluding primary care and ED visits. [b]Other joint/pain care visits include chiropractic care, hand surgery, kinesiotherapy, orthopedic/joint surgery, orthopedics, pain clinic, and physical therapy. [c]Includes dental, ENT, ophthalmology/optometry, and specialist visits related to low vision care, blind care, and vision screenings.

Strengths

- Data from the National VA Health Care Network, the largest integrated healthcare system in the US with dental records available,[9] allowed for a more complete assessment of burden
  - Most analyses exclude dental claims as they are not routinely captured in traditional databases

Limitations

- Results are descriptive only; no formal statistical comparisons were performed
- Results may not be generalizable to all patients with SjD
  - Only female patients treated in the VA system were included
  - Access to specialty, dental, and integrated healthcare services within the VA may differ from other settings
- Dental care eligibility was not directly observable within VA data
  - Any documented dental care prior to index was used as a proxy for eligibility
- Limitations related to use of ICD diagnosis and/or procedure codes to identify clinical characteristics
  - Certain diagnoses and symptoms may be underestimated if not properly coded or included in the database
  - May result in misclassification of disease status, patient characteristics, and study outcomes

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REFERENCES: 1. Ramos-Casals M. *Ann Rheum Dis.* 2020;79:3-18. **2.** Negrini S. *Clin Exp Med.* 2022;22:9-25. **3.** Maciel G. *Arthritis Care Res (Hoboken).* 2017;69:1612-6. **4.** Perera S. *J Health Econ Outcomes Res.* 2018;5:150-61. **5.** Izmirly PM. *Arthritis Care Res (Hoboken).* 2019;71:949-60. **6.** Kodner DL. *Int J Integr Care.* 2000;1:e08. **7.** Harnagea H. *BMJ Open.* 2017;7:e016078. **8.** Quan H. *Am J Epidemiol.* 2011;173:676-82. **9.** Veterans Health Administration. About Us. Updated June 2, 2026. Accessed July 13, 2026. https://department.va.gov/vha/about-us/.

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