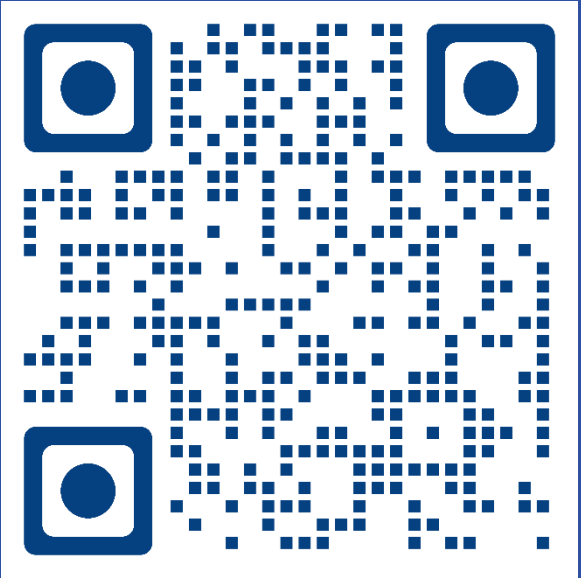


# State-Level Differences in Incidence of Transthyretin Amyloid Cardiomyopathy in United States Veterans Persist After Introduction of Disease-Modifying Therapy

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HYPOTHESIS

- Despite improved awareness of ATTR-CM following the introduction of disease-modifying therapies (DMT), state-level differences in the diagnosis of ATTR-CM in the US VA population have not been reported and, if present, may offer opportunities to improve access to therapy.

KEY TAKEAWAYS

- The documented incidence of ATTR-CM in the VA population increased nationally after the approval of DMT, possibly due to improved awareness<sup>7</sup>
- Geographic disparities exist in the incidence of ATTR-CM at the state level, with some high-incidence states continuing to improve disease recognition and diagnosis, and lower-incidence states with an opportunity for improved identification
- Further investigation is needed around factors such as access to cardiovascular care and disease awareness to understand the reasons for state-level differences in ATTR-CM diagnosis and how to improve care across VA facilities

BACKGROUND

- ATTR-CM is a rare, underdiagnosed, life-threatening progressive disease of the heart<sup>1</sup>
- Disease awareness has improved since the approval of DMTs for ATTR-CM, namely tafamidis (2019), acoramidis (2024), and vutrisiran (2025)<sup>2-7</sup>
- The Veterans Health Administration is the largest integrated US healthcare system, providing care at 172 medical centers and 1138 outpatient sites of care, and serving 9 million enrolled veterans each year<sup>8</sup>
- State-level differences in the diagnosis of ATTR-CM in the VA population have not been reported and, if present, may offer opportunities to improve access and clinical outcomes through earlier intervention

RESULTS

Demographics

- A total of 2136 patients with ATTR-CM from the VA were included in this analysis (**Table 1**)
- Mean (SD) age was 76.3 years (9.8), 99% were male, 52% were White, and 43% were Black
- Regional representation was highest from the South (35%), followed by the Midwest (23%)

Table 1. Baseline Patient Demographics

Characteristic	N=2136	Characteristic	N=2136
Age at index, years		Race, %	
Mean (SD)	76.3 (9.8)	White	52
Median (IQR)	76.0 (69.8-84.0)	Black	43
Age group, years, %		Other	5
≤65	12	Region, %	
65-74	33	Northeast	21
75-84	31	Midwest	23
≥85	23	West	21
Male sex, %	99	South	35

METHODS

- Study design/setting:** This was a retrospective cohort study using data from routine clinical care of veterans across all VA facilities in the US from January 2012 to December 2021, accessed from electronic health records (VA Arches/MDClone)
- Eligibility criteria:** ATTR-CM was defined using a combination of ICD codes for systemic amyloidosis and heart failure
  - Patients were included if they had 2 diagnoses of heart failure (inpatient or outpatient) or 1 principal discharge diagnosis of heart failure, and 2 diagnoses of ATTR-CM (inpatient or outpatient) (ICD-9-CM 277.3 codes and ICD-10-CM E85 codes with some exclusions)
  - Patients who had diagnoses, medications, or procedures associated with light-chain amyloidosis or multiple myeloma were excluded
- Outcomes:** The primary outcomes were estimated ATTR-CM incidence rate, defined as diagnosed cases per 100,000 person-years (PY), which were analyzed by state/territory for the time periods before (2016-2018) and after (2019-2021) the availability of approved DMT (i.e., tafamidis)
  - Incidence rates were standardized by age, sex, and race
  - Change in incidence (Δ incidence) in ATTR-CM from pre- to post-DMT availability was also assessed as a measure of improved diagnosis

Figure 1. ATTR-CM Incidence per 100,000 PY Post-DMT Availability (2019-2021) by State/Territory

(A)

The light blue section denotes the IQR and the blue line is the median incidence.

(B)

Figure 2. Post-DMT ATTR-CM Diagnosis Improvement and Relative Incidence Pre-DMT Availability

<sup>a</sup>States with a positive change in ATTR-CM incidence demonstrated an increase in ATTR-CM diagnosis post-DMT availability. “Baseline” refers to the incidence of ATTR-CM pre-DMT availability.