HFSTATS SHEET

Geographical and Regional Variations of Heart Failure in the United States

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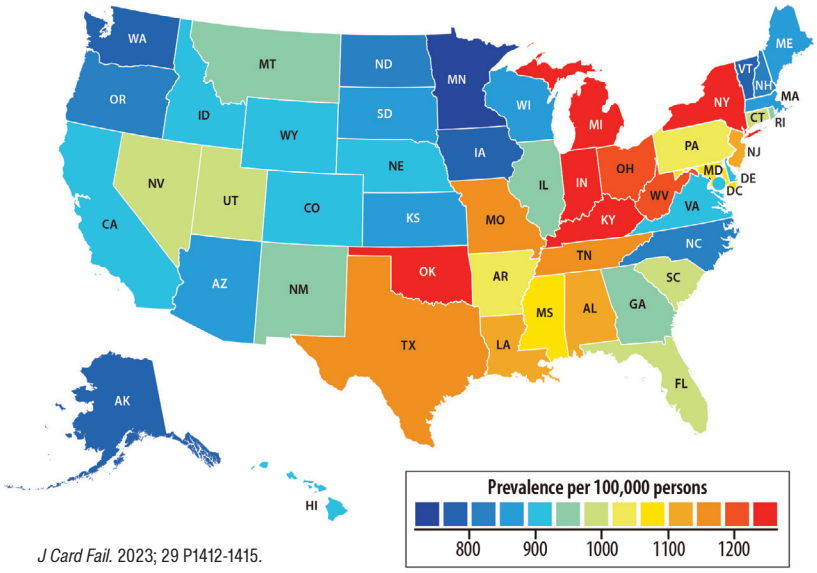
HEART FAILURE SOCIETY OF AMERICA
ANNUAL REPORT

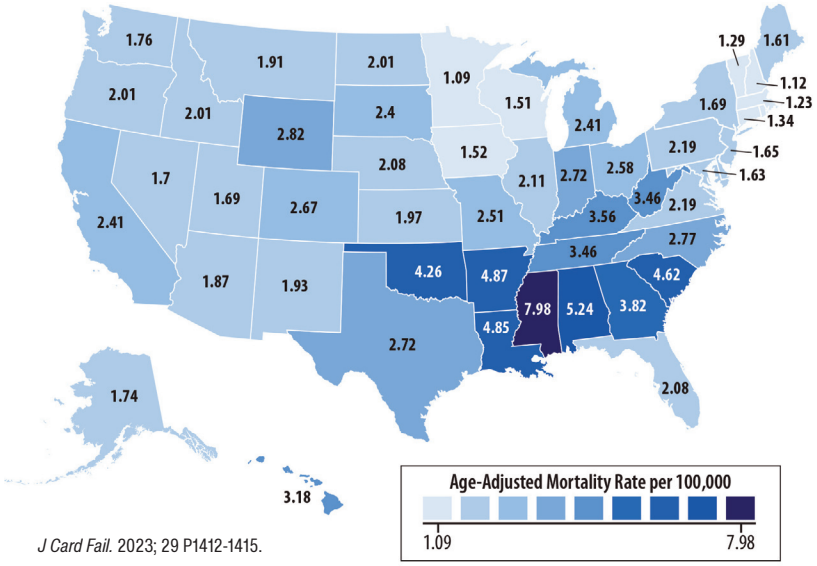
- Within the US there are geographic variations in the prevalence of HF. A low HF prevalence has been reported in the northern Great Plains and Western states, and the highest prevalence of HF has been reported in Midwestern and Eastern states (Fig.1).[1]

Figure 1: Age-Adjusted Prevalence of Heart Failure Per 100,000 Persons



J Card Fail. 2023; 29 P1412-1415.

Figure 2: Age-Adjusted Heart Failure Mortality Per 100,000 Persons



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- HF age-standardized prevalence rates range from 760 cases per 100,000 persons in Minnesota to as high as 1319 cases per 100,000 persons in New York.[1]
- There is also significant geographic variation across the US in HF death rates, with the lowest rate of HF deaths reported in some Western, Northwestern, and Northeastern states and the highest death rates reported in some states in the Midwest and the Southeast (Fig. 2).[2-4]
- HF age-standardized death rates range from as low as 1.09 deaths per 100,000 persons in Minnesota to as high as 7.98 deaths per 100,000 persons in Mississippi.106 The annual age-adjusted HF mortality rate has been increasing in the United States since 2011, and this trend has been consistent across all 4 US regions.[3]
- The greatest number of HF deaths are observed in the Midwest, followed by the South, West and Northeast.[3]
- Across all geographic regions, Black women and men experience higher AAMRs compared with White women and men.[3]
- Since it is projected that, after 2025, there will be reduction of cardio-vascular risk in White individuals compared with individuals of minoritized racial and ethnic groups, it is likely that the geographic variation in HF prevalence and mortality described above will further increase.[5,6]

- HF prevalence and HF mortality rates are not fully aligned geographically, which suggests a role of contributing factors such as underdiagnosis and access to treatment. Further, significant variation in HF mortality is seen within individual states by county (Fig. 3)[7] and by the level or urbanization (Fig. 4),[2] highlighting the impact of social determinants of health disparities on HF mortality.

Figure 3: Heart Failure Death Rates in Adults Aged ≥35 Years by County

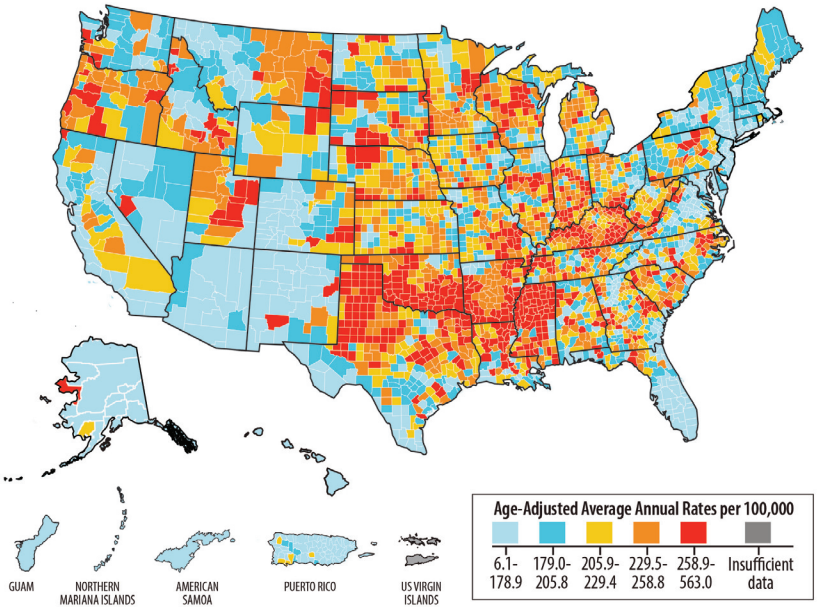

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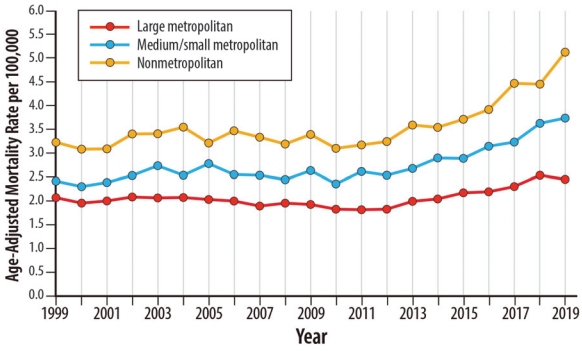
Figure 4: Trends in Heart Failure Age-Adjusted Mortality Stratified by Type of Urban Area



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- In addition, there are regional differences in the pro-portion of patients diagnosed with HFrEF and HFpEF, which likely relates to varied population demographics across the US, including age, racial and ethnic background, and comorbidity prevalence. Data on hospital discharges across the 4 US regions stratified by HFrEF and HFpEF are shown in Table 1.[8]

Table 1: Hospital Discharges for HFrEF and HFpEF Stratified by Region

Region	All HF (6,403,626)	HFrEF (n= 3,858,341)	HFpEF (n= 2,545,286)	*p*-value
Northeast	21.3%	20.2%	22.9%	<0.001
Midwest	24.2%	24.1%	24.3%	<0.001
South	39.2%	40.1%	37.8%	<0.001
West	15.3%	15.6%	14.9%	<0.001

HF = heart failure; HFpEF = heart failure with preserved ejection fraction; HFrEF = heart failure with reduced ejection fraction (HFpEF). *J Card Fail.* 2023; 29 P1412-1415.

For more information visit https://hfsa.org/hf-stats

References:

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All information, including graphics, tables, and text in this fact sheet are from the report published in the *Journal of Cardiac Failure*, and should be referenced as follows: *J Card Fail*. 2023; 29 P1412-1451

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