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## Chagas Heart Disease: A United States National Study

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## Background

- Chagas disease is a chronic, systemic condition endemic in Central and South America.
- One common manifestation of this parasitic infection, Chagas heart disease (ChD), is an underdiagnosed entity with serious clinical implications.
- Data are limited regarding the demographics and clinical aspects of this disease in the United States.

## Methods

- Using the U.S. Nationwide Inpatient Sample databases 2003 through 2012 and appropriate ICD-9 codes, we identified hospitalizations in patients  $\geq 18$  years of age with a primary or secondary diagnosis of Chagas disease and ChD.
- Cases with missing data and other cardiomyopathies were excluded for analysis purposes.
- Demographics and various cardiac conditions were then analyzed using appropriate ICD-9 codes.

## Results

- Of the 1,577 hospitalizations with a diagnosis of Chagas disease, **1050 (66.6%) had diagnosed CHD** (mean age  $57 \pm 15$  years, 50.0% women, 74.1% Hispanic).
- The largest numbers CHD cases were seen in California (33%), followed by Florida (14%) and New York (10%).
- **Congestive heart failure (CHF) (28%) was the most common primary discharge diagnosis, followed by dysrhythmias (9.4%).**

<b>Myocardial/Pump abnormalities</b>	
1) Congestive heart failure	62.5%
2) Dilated cardiomyopathy	43.9%
3) Ventricular aneurysm	3.8%
<b>Arrhythmias/ Conduction abnormality</b>	<b>58.5%/ 12.2%</b>
1) Atrial fibrillation	28.3%
2) Ventricular tachycardia	22.1%
3) Sinus node dysfunction	5.4%
4) Bundle branch Block	6.2%
5) Complete heart Block	4.4%
<b>Cardiac Devices</b>	<b>41.2%</b>
1) Pacemaker	16.8%
2) Implanted cardioverter defibrillator	28.7%

## Results

- In patients with CHD, **CHF was present in 63%, arrhythmias in 58.5%, conduction abnormalities in 12.2%, and cardiac devices in 41.2%** (Figure).
- Median length of stay was 5 days, median hospitalization charges were US\$ 33,591, and all-cause inpatient mortality was 3.3%.

## Conclusion

- Hospitalization with a recognized diagnosis of CHD is **uncommon in the US**.
- Patients hospitalized with CHD are generally **young and demonstrate severe cardiac disease, including a very high burden of CHF and arrhythmias** from underlying chronic myocarditis.
- The rates of **device implantation are high** in CHD population.
- CHD is associated with substantial hospitalization costs.

## Disclosures

- None of the authors have any relevant disclosures.

