

# Rate of 30-Day Readmission and Economic Burden in Patients with Underlying Metabolic Syndrome Admitted for Atrial Fibrillation

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## BACKGROUND

- Studies have demonstrated an increased risk of atrial fibrillation (AF) in patients with underlying metabolic syndrome (MetS)
- No studies examining readmission rates in this population exists to date
- Furthermore, impact on mortality and healthcare utilization in this group after readmission remains unknown

## OBJECTIVE

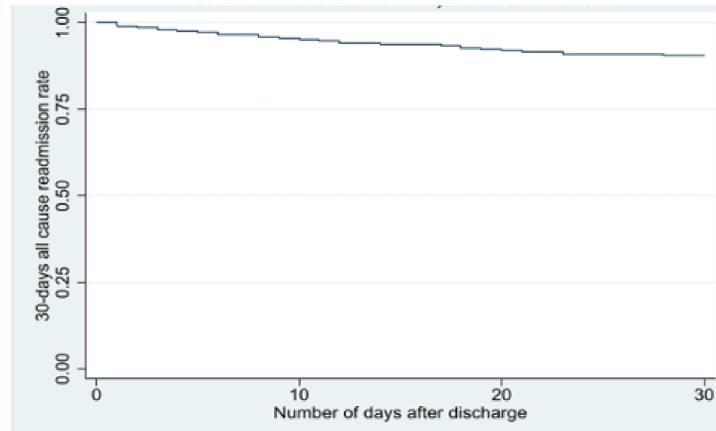
- We sought to determine the 30-day readmission rate of patients with AF and MetS and its impact on mortality and healthcare utilization in the United States using the largest national readmission database

## METHODS

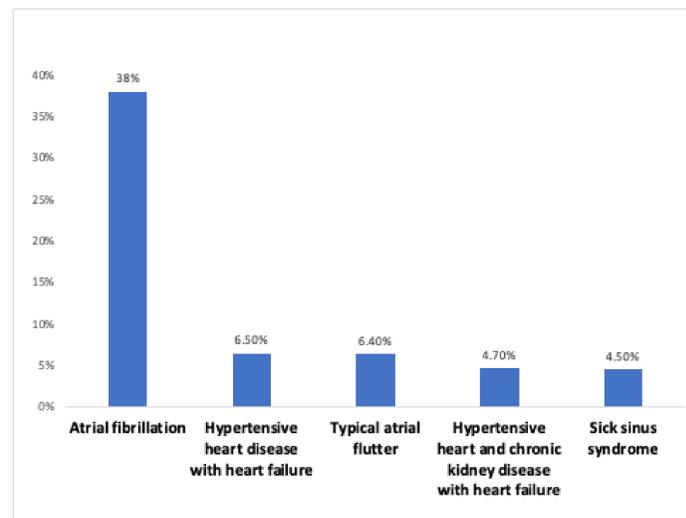
- Using the 2017 National Readmission Database, we conducted a retrospective analysis of patient discharges with AF as principal diagnosis, and MetS as secondary diagnosis
- Readmission was defined as the first admission to any hospital for any non-trauma diagnosis within 30-days of index admission
- Same-day admissions and discharges were excluded
- The primary outcome was 30-day readmission
- Secondary outcomes were readmission mortality rate, most common diagnoses for readmission, length of stay (LOS), patient charge, and total hospital cost (THC)
- Independent risk factors for readmission were identified using multivariate regression analysis

## RESULTS

**Figure 1. 30-Day All Cause Readmission Rate in Patients with Metabolic Syndrome and AF**



**Figure 2. Top Diagnoses For Readmission Among Patients with Metabolic Syndrome Admitted for AF**



## RESULTS

- During the study period, there were 862 patients with underlying MetS admitted for AF
- Mean age was 65.2 years [63.9-66.4], and 44% of patients were females
- Among this group of readmitted patients, all-cause readmission rate was 9.3% (Figure 1) and in-hospital mortality rate for readmitted patients was 2.5% (p=0.0012) (Table 1)
- Total hospital days associated with readmission were 410 days, with a total healthcare in-hospital economic burden of \$1.4 million
- Top diagnoses for readmission included AF (38%), hypertensive heart disease with heart failure (6.5%), typical atrial flutter (6.4%), hypertensive heart and chronic kidney disease with heart failure (4.7%), and sick sinus syndrome (4.5%) (Figure 2)

**Table 1. Clinical Outcomes and Healthcare Burden Comparing Readmission to Index Admission**

OUTCOMES	INDEX ADMISSION	READMISSION	P-VALUE
Mortality Rate	0%	2.49%	0.0012
LOS	3.8 days	5.1 days	0.09
Patient Charge	\$42,121	\$78,784	0.001
THC	\$10,150	\$17,098	0.001

## DISCUSSION & CONCLUSIONS

- We observed increased readmission rates and in-hospital mortality in patients readmitted with AF and underlying MetS
- This population was also associated with significant healthcare economic burden
- Early identification of MetS and disease modification may help improve clinical outcomes and further mitigate healthcare burden