

Henry Ford Health

## Henry Ford Health Scholarly Commons

---

Cardiology Meeting Abstracts

Cardiology/Cardiovascular Research

---

2-27-2023

### **CRT-700.66 Principal Diagnosis and Independent Predictors for 30-Day Readmissions in Primary Cardiac Tumor Patients**

Bilal Hussain

Mir B. Basir

Ahmed Mahmood

Agastya Belur

Thomas Alexander

Follow this and additional works at: [https://scholarlycommons.henryford.com/cardiology\\_mtgabstracts](https://scholarlycommons.henryford.com/cardiology_mtgabstracts)

---

**CRT-700.66**

**Principal Diagnosis and Independent Predictors for 30-Day Readmissions in Primary Cardiac Tumor Patients**



Bilal Hussain,<sup>1</sup> Mir Babar Basir,<sup>2</sup> Ahmed Mahmood,<sup>3</sup> Agastya Belur,<sup>4</sup> Thomas Alexander<sup>3</sup>

<sup>1</sup>The Brooklyn Hospital Center, Brooklyn, NY; <sup>2</sup>Henry Ford Hospital, Detroit, MI; <sup>3</sup>Corpus Christi Medical Center, Corpus Christi, TX; <sup>4</sup>University of Louisville, Kentucky, Kentucky, KY

**BACKGROUND** Primary cardiac tumors (PCT) are rare with an incidence of 0.3-0.7%. We aimed to study the rate, causes and independent predictors for 30-day readmissions in patients diagnosed with PCT using a national level database.

**METHODS** We conducted a retrospective cohort analysis using the National Readmissions Database between 2016-2018. ICD-10 codes were used to identify patients with benign and malignant PCT. Patients <18 years and December admissions were excluded. Primary outcomes were the readmission rate and principal diagnosis for 30-day readmissions in patients hospitalized with primary diagnosis of PCT. Multivariate logistic regression was used for analysis.

**RESULTS** 4451 patients were admitted with the primary diagnosis of PCT, out of which 4348 patients were discharged alive. Among those discharged alive, 13.8% (599 patients) were readmitted within 30 days. The most common principal diagnosis for 30-day readmissions were subsequent admission for benign PCT (17.12%), atrial fibrillation (8.1%), sepsis (5.3%), pneumonia (4.04%), hypertensive heart disease with heart failure (2.6%), supraventricular tachycardia (2.54%), non-inflammatory pericardial effusion (2.31%), and pleural effusion (2.22). For the index admissions, 65.7% were females, and mean age was 60.8 years. The in-hospital mortality rate for index admissions was 2.28% while it was 2.36% for the readmission. For the index admission, mean length of stay was 8 days while mean total charges were \$163,636. For all the readmissions combined, the total length of stay was 3598 days and combined total charges were \$54.7 million. The independent predictors for readmission were atrial fibrillation (OR 0.71, p=0.02), myocardial infarction (OR 2.89, p=0.006), acute liver failure/hepatic cirrhosis (OR 2.34, p=0.02), and diabetes mellitus (OR 1.75, p=0.002).

**CONCLUSION** In patients with a principal diagnosis of PCT, the 30-day readmission rate is 13.8% and the most common principal diagnosis for readmissions are PCT complications, atrial fibrillation, supraventricular tachycardia, pneumonia, sepsis, hypertensive heart disease with heart failure, pericardial effusion, and pleural effusion.

**CRT-700.7**

**Trends and Disparities in Patients With Acute Pulmonary Embolism With Morbid Obesity: Analysis of National Inpatient Sample**



Sadichhya Karki, Vaishali Deenadayalan, Anoj Shahi, Hafeez Shaka, Aviral Vij  
John H. Stroger Jr Hospital of Cook County, Chicago, IL

**BACKGROUND** Pulmonary embolism is the third most common cause of cardiovascular death. The aim of this study was to assess the national trends in incidence and clinical outcomes of Acute Pulmonary Embolism(APE) among Morbidly Obese (MO) individuals over the last decade.

**METHODS** This was a longitudinal trend study of the National Inpatient database from 2010 to 2019. Adult patients (age >18) with a principal diagnosis of APE were identified using the International Classification of Diseases code, ninth and tenth revision (ICD-9 and 10), and were divided into two groups based on a secondary diagnosis of Morbid Obesity. We estimated trends, inpatient mortality, mean length of hospital stays (LOS) and mean total hospital charges (THC) over the period. We performed a stratified analysis in categories: sex (male and female), race (Caucasians, Blacks, Hispanics), and median household income for patient's zip code (low-income quartile [LIQ] vs high-income quartile [HIQ]) to assess disparities in outcomes. Multivariable regression analysis adjusted for age and sex was used to obtain trend statistics on outcomes.

**RESULTS** The total number of principal admissions for APE has gradually increased from 1,64,521 in 2010 to 1,88,355 in 2019. The proportion of morbidly obese individuals admitted for APE had significantly increased from 2010 to 2016 (p<0.001) and followed a similar upward trend from 2016 to 2019 (p=0.006). Women were admitted at a higher proportion than men in all years, though it did

not reach statistical significance (p=0.25). The average mortality from 2010 to 2019 among morbidly obese patient with APE was 2.07% and there was no statistically significant difference across years (p=0.06). LOS has been gradually declining from 6.28 in 2010 to 4.85 days in 2019 (p<0.001), however, THC has increased from 46,338.73\$ in 2010 to 58,666.42\$ in 2019 (increased by \$886.79; p<0.001)

**CONCLUSION** Our study shows a significant increase in hospitalizations for APE in morbidly obese patients with a trend toward decreased LOS over the years and no change in mortality rate. Further studies to understand if increasing obesity is linked to increased incidence of APE is needed.

**CRT-700.71**

**Clinical Characteristics of Patients With Heart Valve Replacements in the United States of America Emergency Departments**



Gregory Mack, Mehel Patnam, Siddharth Bhayani, Mladen I. Vidovich  
University of Illinois College of Medicine at Chicago, Chicago, IL

**BACKGROUND** Existing medical literature has described common patterns in patients with heart valve replacements (HVR) across age, gender, and multiple cardiac comorbidities, however, no studies currently investigate how HVR patient demographics, disposition, and clinical characteristics present in emergent settings. Knowledge of these key variables is crucial to the timely administration of appropriate care. Thus, we aimed to identify the clinical characteristics of HVR patients presenting to American emergency departments (ED) using the Nationwide Emergency Department Sample (NEDS) database (2018).

**METHODS** The NEDS 2018 database was used to collect characteristics of patients with ICD-10-CM codes corresponding to prosthetic, xenogeneic, or other types of HVR who visited the ED. Patient variables are depicted in Table 1. Descriptive statistics and confidence intervals were calculated. Data were collected and analyzed using Stata.

**RESULTS**

Characteristic	Prosthetic HV n=114,502		Xenogeneic HV n= 24,105		Other HV n=5,433	
	N	Mean +/- 95% CI	N	Mean +/- 95% CI	N	Mean +/- 95% CI
Age (Years)	114,502	70.94 (70.85-71.04)	24,105	75.29 (75.13-75.45)	5,433	71.18 (70.75-71.60)
ICD-10-CM diagnoses on discharge	-	15.58 (15.54-15.62)	-	19.13 (19.05-19.20)	-	15.38 (15.20-15.56)
	N	Percentage (%)	N	Percentage (%)	N	Percentage (%)
Male	62,232	54.4	13,721	56.9	2,966	54.6
Disposition from ED						
Routine	44,977	39.3	3,282	13.6	2,023	37.2
Admitted as an inpatient to this hospital	62,830	54.9	20,147	83.6	3,055	56.2
Other	6,472	5.8	660	2.8	347	6.4
Died in Visit						
Died in ED	223	0.2	16	0.1	8	0.2
Died in the hospital	2,016	1.8	607	2.5	114	2.1
Mechanism of injury						
Fall	8,271	72.7	1,546	79.0	397	72.2
Struck by or against	862	7.6	91	4.7	37	6.7
Motor vehicle	489	4.3	53	2.7	25	4.5
Poisoning, including drugs and nondrugs	690	6.1	122	6.2	38	6.9
Other	1,071	9.3	144	7.4	53	9.7
Primary expected payer						
Medicare	83,930	73.3	19,695	81.7	4,025	74.1
Other	30,507	26.4	4,402	18.3	1,405	25.9
Most Frequent ICD-10-CM Diagnoses						
Long-term current use of anticoagulants	53,564	3.2	8,794	2.0	2,349	3.0
Atherosclerotic heart disease of native coronary artery w/o angina	49,246	2.9	13,311	3.0	2,301	2.9
Hyperlipidemia	45,038	2.7	12,246	2.8	2,075	2.7
1 <sup>st</sup> Hypertension/Long-term current use of aspirin (Xenogeneic HV)	35,185	2.1	8,848	2.0	1,743	2.2
Personal history of nicotine dependence/Long-term current use of aspirin (Other HV)	34,455	2.1	8,918	2.0	1,449	1.9
Other	1,452,081	87.0	384,789	88.1	68,219	87.3
Total charge for ED Services	Cost (\$)		Cost (\$)		Cost (\$)	
25th Percentile	1,959	-	1,914	-	2,007	-
50th Percentile	3,054	-	2,748	-	3,047	-
75th Percentile	5,711	-	4,334.75	-	5,796	-
99th Percentile	36,656	-	35,522	-	39,532	-