## **UC Davis**

### **Cardiovascular Medicine**

### **Title**

Patients with Acute Myocardial Infarction Type 2 were Less Likely to get Referred to Cardiac Rehabilitation than Patients with Acute Myocardial Infarction Type 1

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# Patients with Acute Myocardial Infarction Type 2 were Less Likely to get Referred to Cardiac Rehabilitation than Patients with Acute Myocardial Infarction Type 1

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## Introduction

Cardiovascular disease remains the leading cause of death in the United States. Amongst a myriad of treatments, cardiac rehabilitation (CR) is one of the noninvasive interventions implemented to reduce re-hospitalizations and mortality related to cardiovascular disease. CR is largely underutilized, however, with only 20-30% participation<sup>1</sup> Current ACC guidelines recommend patients who have experienced an Acute myocardial infarction (AMI) to participate in CR within the year of the cardiovascular event.<sup>2</sup> However, further specification for AMI type 2 participation compared to type 1 is not as clear.

# Objective

To assess if there is any difference in cardiac rehabilitation referrals at UC Davis Medical Center for AMI type 1 and type 2 patients.

## Methodology

Retrospective study and chart review of hospitalized patients at UC Davis from 6/1/2017 to 2/29/2020 determining AMI type and referral status. SAS was used for P-value

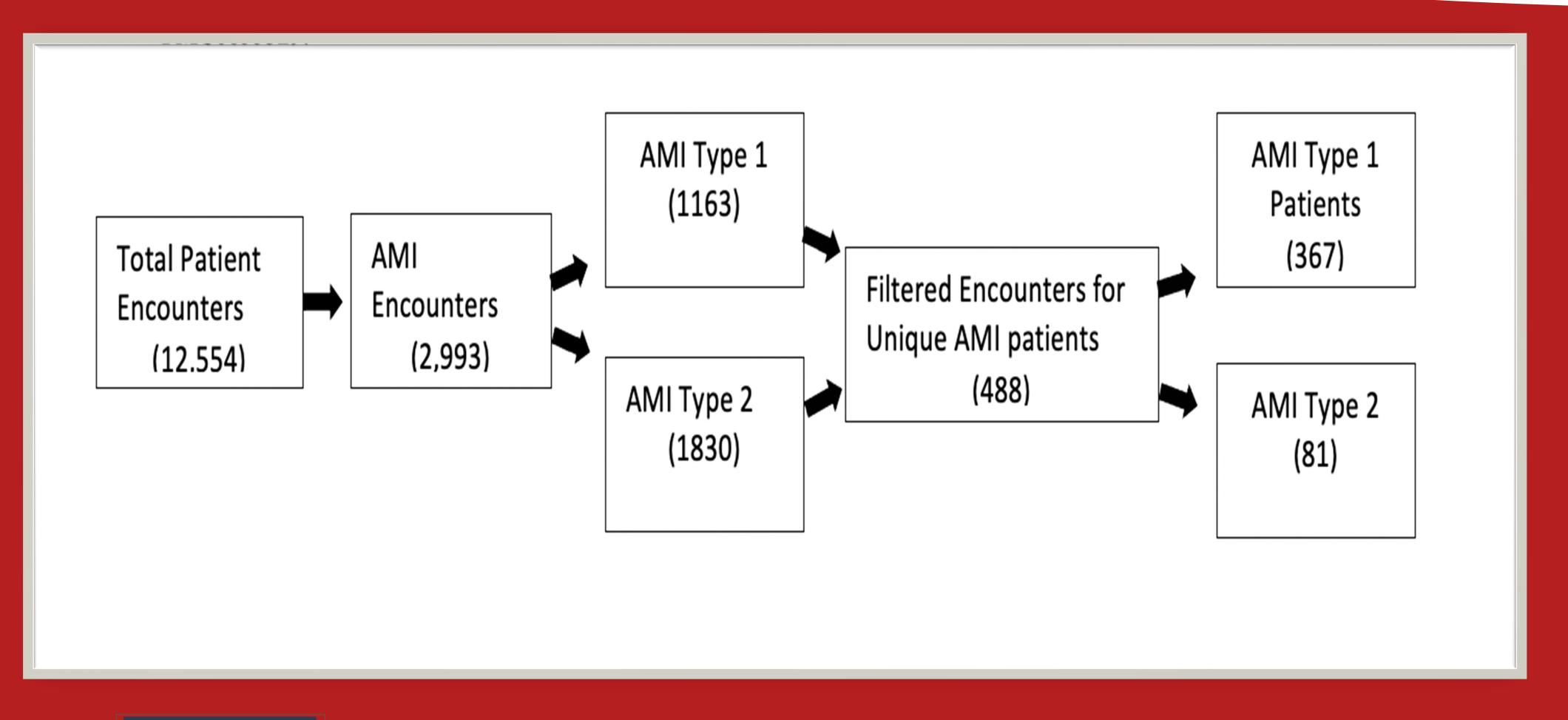


Figure 1 Flow chart of hospitalized patient encounters to unique AMI type 1 and type 2 patients from 6/2017-2/29/2020

## Results

AMI Patients, Cardiac referrals, and UC Davis Cardiac Rehab enrollments for AMI Type 1 and Type 2 Patients

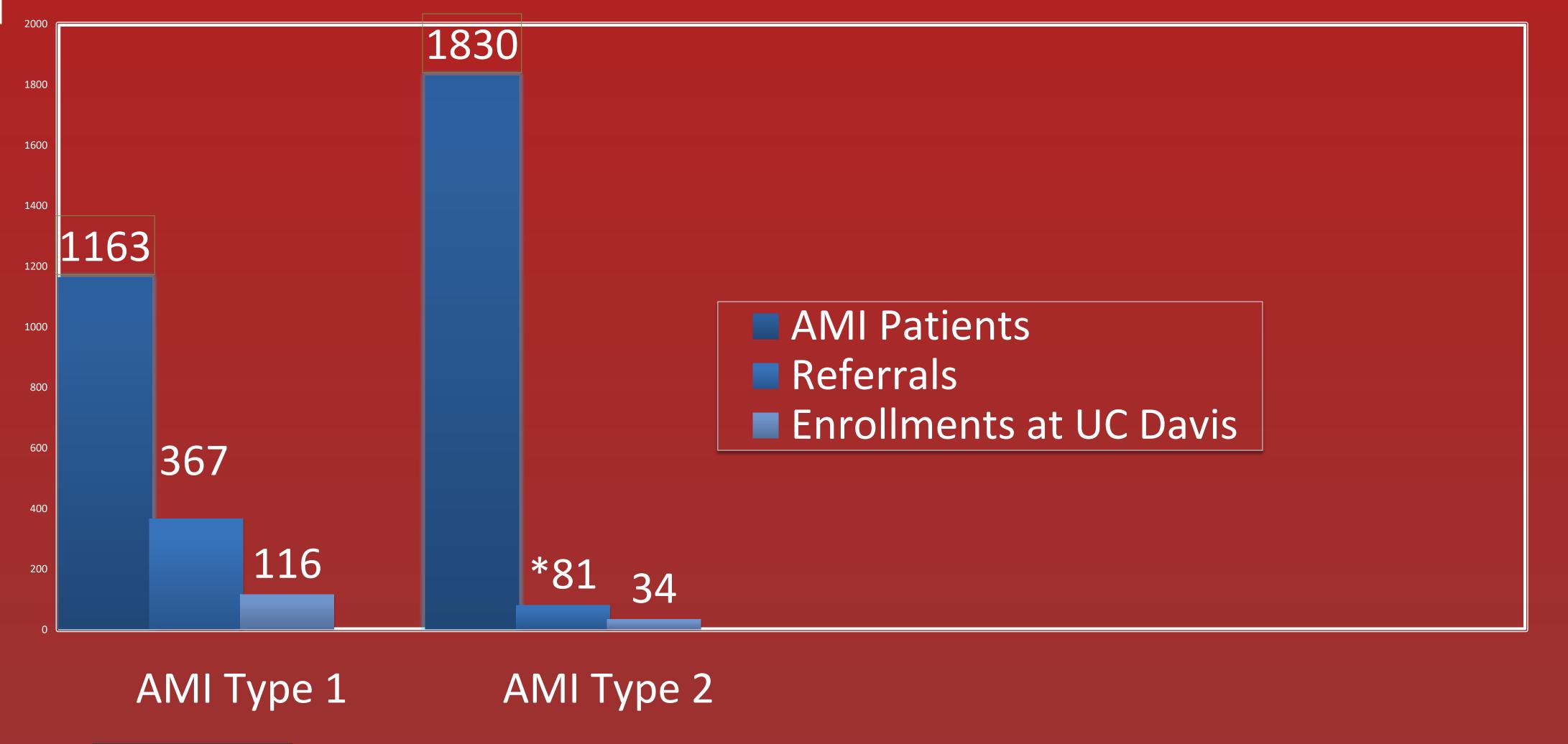


Figure 2 Of this cohort, 2,993 patients had acute myocardial infarction (AMI) (1163 Type 1 and 1830 Type 2). Among AMI patients, 15.74% were referred to CR (24.80% Type 1

## Discussion

There is a significant difference between AMI type 1 and type 2 cardiac referrals when examining the UC Davis Medical center. AMI type 2 were referred less than AMI type 1. When cross referencing this data with enrollments at the UC Davis cardiac rehabilitation center, there is a similar trend with 3x the amount of AMI type 1 patients enrolled compared to type 2 patients (Figure 2). Previous clinical evidence show, however patients with AMI type 2 has higher cardiac comorbidities as well as short and long term mortality<sup>3</sup>. Considering this difference, and the benefits of cardiac rehabilitation, more AMI type 2 patients should be referred and enrolled in cardiac rehabilitation.

## References

1 Ades PA, Keteyian SJ, Wright JS, Hamm LF, Lui K, Newlin K, Shepard DS, Thomas RJ. Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative. Mayo Clin Proc. 2017 Feb;92(2):234-242. doi: 10.1016/j.mayocp.2016.10.014. Epub 2016 Nov 15. PMID: 27855953; PMCID: PMC5292280.

2 Leon AS, Franklin BA, Costa F, Balady GJ, Berra KA, Stewart KJ, Thompson PD, Williams MA, Lauer MS; American Heart Association; Council on Clinical Cardiology (Subcommittee on Exercise, Cardiac Rehabilitation, and Prevention); Council on Nutrition, Physical Activity, and Metabolism (Subcommittee on Physical Activity); American association of Cardiovascular and Pulmonary Rehabilitation. Cardiac rehabilitation and secondary prevention of coronary heart disease: an American Heart Association scientific statement from the Council on Clinical Cardiology (Subcommittee on Exercise, Cardiac Rehabilitation, and Prevention) and the Council on Nutrition, Physical Activity, and Metabolism (Subcommittee on Physical Activity), in collaboration with the American association of Cardiovascular and Pulmonary Rehabilitation. Circulation. 2005 Jan 25;111(3):369-76. doi: 10.1161/01.CIR.0000151788.08740.5C. Erratum in: Circulation. 2005 Apr 5;111(13):1717. PMID: 15668354.

3 DeFilippis AP, Chapman AR, Mills NL, de Lemos JA, Arbab-Zadeh A, Newby LK, Morrow DA. Assessment and Treatment of Patients With Type 2 Myocardial Infarction and Acute Nonischemic Myocardial Injury. Circulation. 2019 Nov