

# Impact of guideline-directed medical therapy in patients with acute coronary syndrome post-percutaneous coronary intervention



National Heart  
Centre Singapore  
SingHealth

Fong Ru Ying<sup>1</sup>, Annie Lee<sup>2</sup>, Huang Weiting<sup>2</sup>, Yeo Khung Keong<sup>2</sup> on behalf of the SingCLOUD Governance Committee

<sup>1</sup>Duke-NUS Medical School, <sup>2</sup>National Heart Centre Singapore

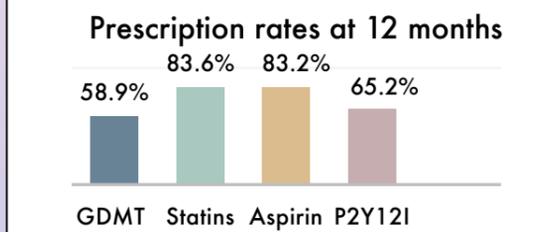
## INTRODUCTION

- Current guidelines from the European Society of Cardiology (ESC) recommend the use of guideline-directed medical therapy (GDMT) in acute coronary syndrome (ACS) patients who underwent percutaneous coronary interventions (PCI).
- We aim to characterize the association between physician prescriptive adherence to GDMT and 1-year major adverse cardiovascular events (MACE) in an Asian cohort.

## METHODOLOGY

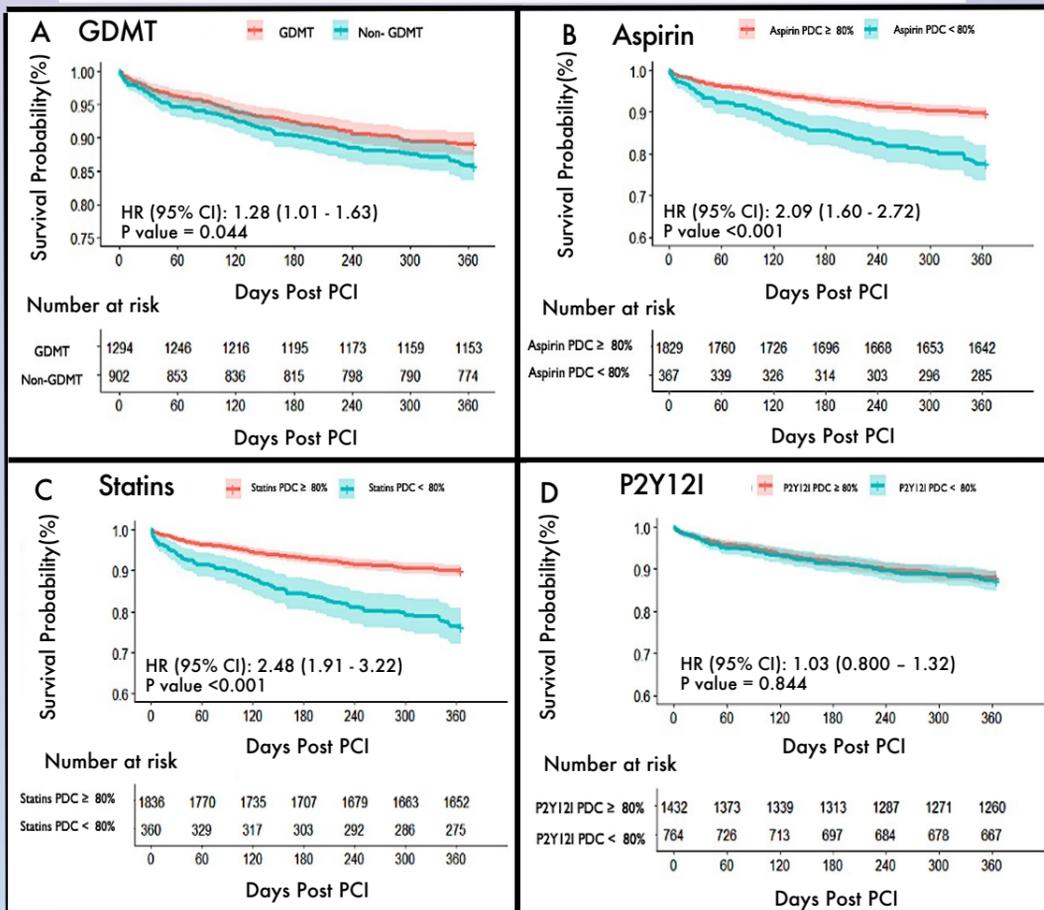
- This is a retrospective, multicenter, nationwide registry study, with patients identified from 2012 to 2014 from the Singapore Cardiac Longitudinal Outcomes Database (SingCLOUD).
- We define GDMT as the use of dual antiplatelet therapy (DAPT), comprising of both aspirin and a P2Y12 inhibitor, and statins.
- MACE was a composite of all-cause deaths, stroke and recurrent myocardial infarction.
- Adherence to GDMT was measured using the proportion of days covered (PDC) method over a 1-year period after PCI, with a PDC of 80% or more considered adherent.

**Figure 1. Prescription rates of GDMT and individual drugs at 12 months**



GDMT, guideline-directed medical therapy, composed of dual antiplatelet therapy and statins; P2Y12I, P2Y12 inhibitor

**Figure 2. Kaplan-Meier survivor curves of 1-year outcomes of MACE between GDMT and non-GDMT groups**



GDMT, guideline-directed medical therapy, composed of dual antiplatelet therapy and statins; PCI, percutaneous coronary intervention; PDC, proportion of days covered; P2Y12I, P2Y12 inhibitor

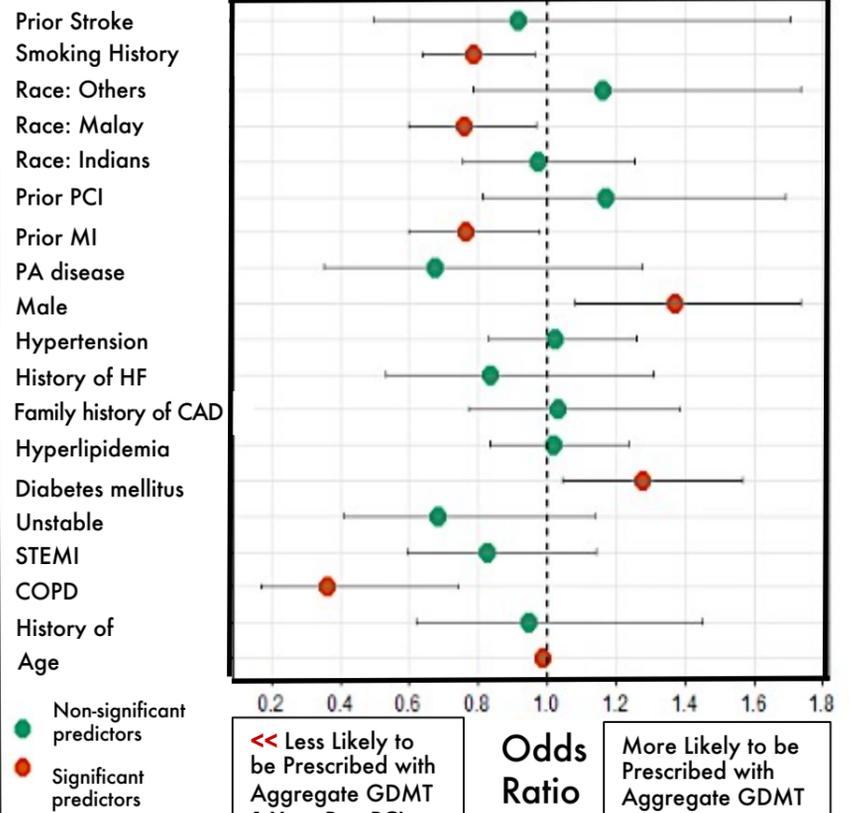
## RESULTS

- A total of 2196 consecutive ACS patients (80.4% males) with a mean age of 60.2±11.4 from SingCLOUD were examined.
- 2102 patients (95.7%) were prescribed GDMT at baseline.
- At 12 months, statins had the highest prescription rates (83.6%), followed by aspirin (83.2%), and P2Y12I (65.2%) (Figure 1).
- Physician prescriptive adherence to GDMT, statins and aspirin were significantly associated with a lower MACE but not for P2Y12I (Figure 2).
- In multivariate analysis, being male and having a history of diabetes mellitus were positive predictors of GDMT prescription at 1 year. Whereas being of an older age (>65 years old), Malay ethnicity, having a history of smoking, prior MI, heart failure, and COPD were negative predictors of GDMT prescription (Figure 3).

## CONCLUSION

- Full adherence to GDMT, aspirin and statin therapy over 1 year was associated with a lower MACE in ACS patients post-PCI, but not for P2Y12I.

**Figure 3. Multivariate analysis for predictors of physician prescription adherence to GDMT over 1 year**



GDMT, guideline-directed medical therapy, composed of dual antiplatelet therapy and statins; MI, myocardial infarction; PA, peripheral artery; STEMI, ST-elevation myocardial infarction; PCI, percutaneous coronary intervention;