clinical practice. Smartphone technology has the potential to revolutionise the landscape of secondary prevention.

**Aim:** To describe the trial design of the Cardiac Mate study - a smartphone-based model of care for secondary prevention of coronary heart disease as an adjunct to current standard of care. 210 patients will be recruited and randomised in 1:1 allocation.

**Eligibility:** Patients admitted with a diagnosis of acute coronary syndrome and own a smartphone will be eligible.

Primary Endpoint: Change in six-minute walk test distance at two-months compared to baseline (at randomisation).

Secondary Endpoint: Time to return to work, hospitalisation/ED presentations, number of risk factors at target, change in blood pressure, change in resting heart rate, change in HbA1c, change in lipid profile, medical adherence, participation in traditional cardiac rehabilitation; quality of life (SF-36, MIDAS), depressive symptoms (5 item DS-DF), anxiety (hospital anxiety scale), health utility (EQ-5D).

**Conclusion:** The Cardiac Mate study will assess the effect of smartphone technology on secondary prevention, particularly focusing on early mobilisation. It has the potential to close the current treatment gap in secondary prevention.

**Methods:** ACC/AHA lesion classification is still relevant and predictive of in-hospital and long-term outcomes required to better evaluate this intervention.
Clinical features associated with referral to cardiac rehabilitation following acute myocardial infarction

R. Tavella 1, 2, *, M. Arstall 2-3, M. Worthley 1, 2, D. Chew 4, 5, C. Zeitz 1, 2, J. Beltrame 1, 2
1 Central Adelaide Local Health Network, SA Health, SA, Australia
2 Discipline of Medicine, The University of Adelaide, SA, Australia
3 Northern Adelaide Local Health Network, SA Health, SA, Australia
4 Southern Adelaide Local Health Network, SA Health, SA, Australia
5 Flinders University, Adelaide, SA, Australia

Background: Despite the known benefits of cardiac rehabilitation (CR), CR is vastly underutilised. This study assesses the clinical profile of patients referred to CR following acute myocardial infarction (AMI).

Methods: All consecutive patients undergoing coronary angiography for AMI attending South Australian public hospitals from 2012-13 were included. Data was maintained by the Coronary Angiogram Database of South Australia (CADOSA), a comprehensive registry compatible with the NCDR® CathPCI® Registry.

Results: Among 3,582 patients undergoing angiography for AMI, CR referral occurred in 1,533 patients (43%). Compared to patients without CR referral, these patients were younger (62±13 vs. 64±14, p<0.01) and less likely to be female (26% vs. 34%, p<0.01). Following age-adjusted analysis, risk factors were similar between the groups including; diabetes (28% vs. 30%, p<0.01), hypertension (61% vs. 64%, p<0.01), and dyslipidaemia (9% vs. 60%, p<0.01), but CR referral patients were more likely to be active smokers (38% vs. 33%, p<0.01). Factors independently associated with increased CR referral were (c statistic 0.68): presentation with ST-elevation MI (STE M) (3.5, 1.3-1.9, p<0.01), undergoing percutaneous coronary intervention (PCI) following angiography (2.1, 1.7-2.5, p<0.01), referral for CABG (2.3, 1.8-3.0, p<0.01) and younger age (1.0, 0.98-1.0, p<0.01). Lastly, recommended discharge therapies were higher in patients with CR referral: aspirin (93% vs. 82%, p<0.01), beta-blockers (64% vs. 61%, p<0.05), statin (92% vs. 76%, p<0.01), and ACE inhibitor/angiotensin receptor blocker (84% vs. 74%, p<0.01).

Conclusion: In young patients, smoking, family history and obesity were the strongest risk factors for premature CAD, whereas diabetes, hypertension and hyperlipidaemia were less prominent. Despite more frequently presenting with STEMI, the young group had fewer adverse events during follow up.

http://dx.doi.org/10.1016/j.hlc.2015.06.787

Classification of risk factors for coronary artery disease (CAD) in young patients (<45 years) with angiographically-proven CAD

S. Moloi 1, A. Doost Hosseiny, S. Atique, A. Farshid
The Canberra Hospital, ACT, Australia

Topic: Identifying the strongest risk factors for angiographically-proven coronary artery disease in young patients (<45 years).

Purpose: Encountering young people with symptomatic Coronary Artery Disease (CAD) is not rare. It is important to identify specific risk factors for this age group in order to improve primary prevention.

Methods: Consecutive patients requiring hospital admission and treatment for angiographically proven CAD during 2006-2013 were prospectively evaluated for cardiovascular risk factors, procedures and adverse outcomes including death, re-infarction and repeat revascularisation.

Results: Amongst 3,148 patients treated (mean age 65.2 years), 188 patients (6.0%) were young (age range 24.4 to 45.9 years, 18.9% female, 81.1% male). Compared with the older cohort, young patients were more likely to be smokers (45.0% vs. 20.0%, P<0.0001), and to have a family history of CAD (45.5% vs. 27.4%, P<0.0001). Young patients with CAD were significantly more likely to have a BMI ≥ 30 compared to older patients (42.7% vs 31.0%, p=0.0014). Diabetes, hypertension, hyperlipidaemia, and ex-smoker status were significantly less prevalent in young patients (p<0.01 for all).

STEMI was the most common mode of presentation in the young group, occurring in 46.0%, compared with 32.3% in older patients (P<0.0006). Young patients had fewer adverse events during 1 year follow up, compared with older patients, 9.2% vs. 19.5% respectively (p=0.0025).

Conclusion: In young patients, smoking, family history and obesity were the strongest risk factors for premature CAD, whereas diabetes, hypertension and hyperlipidaemia were less prominent. Despite more frequently presenting with STEMI, the young group had fewer adverse events during follow up.