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 secondary prevention model.

Design: The Cardiac Mate Study is an 8-week, two-arm multicentre randomised controlled study assessing the efficacy of 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 fashion.

Eligibility: Patients admitted with a diagnosis of acute coronary syndrome and own a smartphone will be eligible. Exclusion criteria include: untreated ventricular tachycardia, severe heart failure, life expectancy < 1 year and/or significant exercise limitation for non-cardiac reasons.

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 is 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.

Conclusion: ACC/AHA lesion classification is still relevant and predictive of in-hospital and long-term outcomes although, as expected, the magnitude is less pronounced.

http://dx.doi.org/10.1016/j.hlc.2015.06.784

782

Can mobile phone text messaging improve medication adherence to long term therapies?

J. Thakkar[1,2,3,*], A. Thiagalingam[2,3], C. Chow[1,2,3]

[1] *The George Institute for Global Health, Sydney, NSW, Australia*
[2] *Westmead Hospital, NSW, Australia*
[3] *The University of Sydney, NSW, Australia*

Background: Poor medical adherence is a major barrier to effective prevention care. Use of mobile phone text messaging(SMS) as a reminder is a relatively new technique.

Objective: To assess the impact of mobile phone text messaging on medication adherence in patients with chronic disease.

Methods: We conducted a systematic review and meta-analysis. We searched MEDLINE-OvidSP, EMBASE, CINAHL, PsycINFO, Cochrane Central Registry of Controlled Trials and Trial registers for randomised controlled trials in adults, employing SMS to promote medication adherence in chronic diseases. We excluded studies with less than 4 weeks follow-up, chronic psychiatric illness, and non-English language.

Results: Our initial search identified 1987 potential papers from which 15 met our study criteria (Atherosclerotic vascular disease(4), Asthma(2), Diabetes(1), Epilepsy(1), HIV(7)). The total sample was 2675 (median size 104), median follow up 12 weeks, median age 39 years (31-64) and 50% were women. The studies varied in interactivity and frequency: personalised send(5), two-way communication(8), daily SMS(8) and non-medical content(4). Meta-analysis showed SMS intervention improved adherence outcomes (OR-2.17, 95%CI 1.53-3.08, p <0.001). The weighted mean effect size was small to moderate (Cohen's d = 0.43). Subgroup analysis showed greater effects for interventions that were personalised, contained daily reminders and reminders timed with medication dose.

Conclusions: Our findings support the effectiveness of mobile phone text message reminders in improving medical adherence in chronic disease. As studies were generally small and limited to short-term follow-up, larger studies are required to better evaluate this intervention.

http://dx.doi.org/10.1016/j.hlc.2015.06.785

783

Cardiac rehabilitation referral and completion: results from the South Australian minimum dataset for cardiac rehabilitation programs

R. Tavella[1,2,*], K. O'Toole[3], R. Tirimacco[4], A. Lloyd[4], K. Pennington[3], S. Drilling[5], V. Poulsen[5], N. Berry[6,7], R. Clark[6,7], C. Astley[3,6], W. Keech[8]

[1] *Central Adelaide Local Health Network, SA Health, SA, Australia*
[2] *Discipline of Medicine, The University of Adelaide, SA, Australia*
[3] *SA Cardiac Clinical Network, SA, Australia*
[4] *Country Health SA Local Health Network, SA Health, SA, Australia*
[5] *SA Heart Foundation, SA, Australia*
[6] *Flinders University, Adelaide, SA, Australia*
[7] *University of South Australia, SA, Australia*
[8] *South Australian Health & Medical Research Institute, Adelaide, SA, Australia*

Background: An audit of South Australian (SA) cardiac rehabilitation (CR) services in 2012 reported a completion rate of 13% and led to the establishment of a minimum dataset (MDS). Using the MDS, this study describes referral and completion rates in metropolitan (metro) and country CR services in 2013 and secondly, validates the MDS by assessing potential referrals for CR using hospital separation data.

Methods: The SA Cardiac Clinical Network in collaboration with the SA Heart Foundation formulated a working group of key stakeholders. CR elements for the MDS were agreed upon according to domains in international guidelines. Data collection began in 2013 across 6 metro and 8 country services. Hospital separation data for 2013 admissions for acute coronary syndrome and/or cardiac intervention/surgery was used to validate the MDS collection.

Results: In 2013, 5329 (28% female, 4.5% Aboriginal, mean age 65±13 years) patients were assessed for CR referral. Hospital separation data from participating services showed 5321 admissions, verifying the MDS collection. Referrals, program participation and completion are shown in table.

	SA	Metro	Country
Total Referrals	5329	4477	852
Referrals Suitable	5031 (94%)	4148 (93%)	847
Starting CR	1134 (23%)	747 (18%)	387 (46%)
Completing CR	945 (19% suitable) (83% if started)	580 (14% suitable) (78% if started)	365 (43% suitable) (94% if started)

Conclusion: The establishment of a CR MDS in South Australia has provided unique insight into service gaps. Country referrals are managed via a centralised system and suggest that a central referral service may improve uptake into programs.

http://dx.doi.org/10.1016/j.hlc.2015.06.786

784

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

S. Moloi*, 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 3148 patients treated (mean age 65.2 years), 180 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% v 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.

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

785

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>0.5), hypertension (61% vs. 64%, p>0.5), and dyslipidaemia (59% vs. 60%, p>0.5), but CR referral patients were more likely to be active smokers (39% vs. 33%, p<0.01). Factors independently associated with increased CR referral were (*c* statistic 0.68): presentation with ST-elevation MI (STEMI) (1.5, 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. 78%, p<0.01), and ACE inhibitor/angiotensin receptor blocker (84% vs. 74%, p<0.01).