TEXTME Study

WSLHD Human Research Ethics Committee
APPROVED
Note: 06.10.11

TEXTME
Tobacco, EXercise and dieT MEssages

A single centre randomised control trial evaluating whether lifestyle advice sent by text messages to patients mobile phones to high risk cardiovascular patients can reduce their risk factors of future cardiovascular disease

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TEXT ME - Tobacco, EXercise and dieT MESSAGES
This study aims to prompt lifestyle change in individuals at high risk of cardiovascular (CV) disease. The planned 800 patient randomised controlled trial (RCT) will evaluate the feasibility, acceptability, effect on risk factors and overall potential of a strategy that utilises cheap and widely accessible means of communication to prompt action to modify lifestyle risk factors among a patient population at high CV risk presenting to hospital for a coronary angiogram.

Primary Objective:
To establish the feasibility, patient acceptability, effect on risk factors and thereby overall potential of repeated semi-personalized lifestyle reminders sent via mobile phone text messages in a population at high risk of CV events.
The main hypothesis that will be tested is that a program of brief and repeated lifestyle messages will improve CV risk factor levels compared to usual care.

Specific Aims:
To determine in a population of patients who are at high risk of coronary heart disease (CHD):
1. The impact of brief and repeated personal lifestyle reminders sent via mobile phone text messages on smoking, exercise, diet, psychosocial factors, body weight, lipids and blood pressure.
2. The level of competence with text messaging in this population
3. The acceptability and tolerance to receiving repeat text messages regarding lifestyle
4. The cost-effectiveness of this intervention

BACKGROUND
Burden of CV disease:
Globally, CV disease - which includes CHD and stroke - is the leading cause of death and disease burden. In Australia CV disease remain the biggest cause of death, accounting for 45,670 deaths (34% of all deaths) in 2006. There are many treatments and treatment strategies that are proven to prevent CV disease. Amongst the most effective are those that target individuals at highest risk of CV events. However despite the abundance of evidence-based treatments surveys indicate poor-utilisation of secondary preventative treatments, in particular lack of adherence to lifestyle recommendations.

In a recent examination of 18,809 patients post acute coronary syndrome (ACS) from 41 countries only about 30% of patients reported adhering to diet and exercise recommendations and only about two thirds of patients reported quitting smoking in the 6 months after their event. It is of great concern that for Australians in this study only 56% reported exercise adherence, 61% diet adherence and 41% quit smoking at 30 days after hospitalisation. In contrast, 96.1% of subjects reported antiplatelet use, 78.9% reported statin use, and 72.4% reported angiotensin-converting enzyme/angiotensin receptor blocker use.

Benefits of lifestyle modification through secondary prevention programs:
Meta-analyses of a wide variety of secondary prevention programs show that these programmes are effective. In meta-regression analysis of 63 randomised trials of 21,295 patients, secondary prevention programs reduced mortality (0.85, 95% CI 0.77 – 0.94) and recurrent MI (0.83, 95% CI 0.74 – 0.94). Effects were similar for programs that included risk factor education or counselling with or without a structured exercise component. Effects were also similar in shorter versus longer programs, programs based in general practice versus hospital-based programs and in programs staffed by generalists versus specialists.

Despite the known efficacy of these programs there is substantial under-utilisation of existing programs internationally. In the UK, surveys of 195 centres (80% response from 330 centres identified) in 2004 found 28.5% of all those eligible for cardiac rehabilitation (CR) were enrolled in a program. Information from Australia (Queensland) indicates about a half of those eligible for CR programs are referred and only about a third attending these programs completes them.
Furthermore non-attendees are at higher baseline risk and have poorer risk factor knowledge than those accessing rehabilitation. These challenges have resulted in the development and testing of a wide range of alternative models over the past 10 years. Contemporary programs involve, in isolation or combination, in-person visits, community services, and home manuals with phone/electronic support for flexible and individualised management of CHD. Telehealth programs have been suggested as having potential to improve participation in secondary prevention programs. A recent systematic review found telehealth secondary prevention interventions (including programs delivered via telephone, Internet, or videoconferencing) provide effective CV risk factor reduction.

In the Australian setting two secondary prevention programs, COACH and CHOICE have been shown to be effective in reducing CV risk factors amongst patients post ACS. Both programs involve individualised risk factor counselling, involvement of physicians and ongoing telephone support. The CHOICE program allows patients to choose from a range of locally available risk factor modification interventions that included medically directed strategies and self-management options according to their personal preference and circumstances. However current literature remains limited with respect to success in translation of programs from setting to setting and on program cost-effectiveness. The complexity of a number of these programs also raises concerns that they may be difficult to replicate cheaply in different settings. There is unlikely to be one perfect program and perhaps more exploration is required regarding simple methods to enhance programs currently in place.

Overall, there is good evidence that secondary prevention programs which modify health behaviours including smoking, exercise and diet are effective but they are consistently under-utilised. Development of simple methods to enhance utilisation and adherence to lifestyle recommendations in these programs are needed. Methods that are simple and low-cost and utilise flexible and dynamic delivery systems suitable to a changing society could enhance the uptake of existing prevention programs and may have potential for delivery of CV disease prevention programs to greater numbers of patients in resource poor settings and in geographically isolated communities.

Potential of mobile phone based - text message interventions:
Mobile phones are a valuable and widely accessible form of communication. They are, therefore, an ideal means to provide reinforcement messages for ongoing lifestyle change. Increasing numbers of people across all income, age and ethnic groups own a mobile phone. Mobile phones are portable and convenient and information can be delivered quickly and cheaply. In 2008, there were over 4 billion active mobile phone subscribers globally compared with about 1 billion in 2002 according to a survey by the International Telecommunications Union (ITU), an agency of the UN. Subscriptions are rapidly increasing in developing countries and the ratio of mobile to fixed phone subscriptions is approximately 3 to 1. Studies indicate mobile phone use is greater among disadvantaged populations. More frequent mobile phone use is associated with lower education, socioeconomic status (SES) and poorer health unlike internet use in which more frequent use is associated with higher education and SES.

In Australia, mobile phone coverage by the 4 GSM networks is approximately 96%. In 2007, the Australian Communications and Media Authority (ACMA) reported 21.26 million active mobile phones compared with 10.92 million fixed-line phones in 2007 (which had fallen from 11.26 million in the previous financial year). 81% of consumers in 2006-2007 reported owning a mobile phone (up from 79.4% the previous year). While mobile phone ownership is the highest among 18-24 year olds, trends show increasing ownership for all age groups and the largest annual increase in mobile phone ownership among the 65+ year olds in Australia. (Figure 1)

The delivery of short text messages (up to 160 characters) to mobile phones using SMS (Short Message Service) is a common, convenient, rapid and cheap method of communication globally. The international technology consulting firm Ovum estimates approximately 1.25 trillion SMS

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messages were sent globally in 2005. In consumer surveys summarized in the ACMA document, 88% of 18 to 24 year olds sent a text message in the last 4 weeks compared to 20% of 65+ year olds. However, there are no data on how many people receive and read the text messages that are increasingly used by private and government agencies as reminders or advertisements.

Figure 1 Mobile phone ownership trend 2004 – 05 to 2006 – 07: Adapted from ACMA report Source Roy Morgan Single Source, July 2004 – March 2007 14+ years old, sample = 64,479

A few recent studies have evaluated the effectiveness of mobile phone text messaging to change individual health behaviours of smoking, weight loss and physical activity or improve medical management of diabetes or adherence to medication. However no trial addresses multiple risk factors. Reducing multiple risk factors concurrently, rather than targeting single factors is likely to deliver greater reduction in events.

A recent systematic review of behaviour change interventions delivered by mobile phone text messages identified 14 relevant studies from peer-review journals in English. The authors reported that SMS-delivered interventions had positive short-term behavioural outcomes. However, a number of studies were of poor quality: many had limited statistical power and process outcomes. With respect to effect size of SMS-delivered interventions, few studies are sufficiently large or powered to examine this, however a recent Cochrane review summarizes results for smoking. It found 2 studies of SMS only-delivered interventions and 2 studies that evaluated SMS and internet-delivered smoking cessation interventions. The 2 SMS-only studies included a total of 1905 smokers and found that those receiving interventions were approximately twice (relative risk [RR] 2.18, 95%CI 1.80 – 2.65) as likely to quit smoking in the short term (4-6 wks). The 2 mobile phone plus internet studies of 348 smokers found that those receiving intervention were approximately twice (RR 2.03, 95%CI 1.40 – 2.94) as likely to quit smoking at 12 months. The largest of the 4 studies were of 1705 smokers (median age 22 yrs) from New Zealand and reported at 6 weeks increased quitting in the intervention (28%) versus the control (13%), RR 2.20 (95% CI 1.79 – 2.70).

The RCT evidence examining effects on weight or physical activity are considerably smaller. A small RCT of 75 healthy adults compared the effects of a 16 week intervention of personalised SMS and MMS (Multimedia Message Services that can send photo, video and voice) messages sent two to five times daily to printed materials and brief monthly phone calls from a health counsellor on weight change. At the end of 4 months the intervention group lost more weight compared to the control group (-1.97 kg difference, 95% CI (-0.34 - 3.60 kg, p=0.02). In another small RCT of 77 healthy adults mean age 40.4 years (range 30 to 55) from the UK, the effects of internet and mobile phone-based physical activity intervention that included reminders for exercise sessions sent via SMS was compared against no exposure to the program. Over the 9 week study period the
intervention group engaged in 2 hours more physical activity per week as evaluated by a physical activity monitor, though interestingly there was no difference in self-reported physical activity between the groups.\textsuperscript{23}

**Types of text messages**

*Personalised versus general messages* - The content, level of personalisation, frequency of text messages sent and level of interaction between message sender and receiver varies greatly between studies and it is unclear from the current research what characteristics of text messages or text message based intervention programs are optimal. The types of SMS-delivered interventions evaluated can be broadly categorised into 3 types: 1) Feedback – relies on data sent by participant; 2) Prompts - automatically sent at certain times e.g. ‘Remember to eat fruit at breakfast’; or 3) Tips – Generalized advice e.g. ‘Try eating more vegetables’.

*Feedback or prompt type messages* - can be personalised to a greater or lesser extent. Some studies use texts messages as a method for direct communication with the participant and therefore messages are highly personalised. For example, text messages are used to give specific advice in response to receiving a patient’s blood sugar.\textsuperscript{24} Programs that utilize the more personalized messages usually require trained personnel or a very detailed computer program to manage this system as well as more detailed patient data collection.\textsuperscript{21,25,23} In other studies prompt type messages are tailored by the participant to give more meaning or address an area of weakness identified by the participant. For example this includes goal or plan statements e.g. ‘I don’t want coronary heart disease – exercise more’. Or participants choose the message and time sent, somewhat like a personal alarm e.g. “Get out of bed” or “Don’t snack after dinner”.\textsuperscript{26} Intervention programs that require interactive texting are less likely to be suitable to older groups.

*Personal reminders* - that can be read but don’t require a response are the simplest form of SMS-based intervention. In these programs non-personalized general information applicable to all participants at all situations are used e.g. “control your portions by setting aside a large snack package into smaller bags”. We identified 2 studies that sent general health messages to participants without expecting a reply.\textsuperscript{27,28} The study with the largest number of participants was conducted in Korea. This group enrolled 927 participants into a weight loss program that included sending weekly generic text messages and weekly information brochures. The study measured BMI and waist circumference at baseline and then after 12 weeks of the program. The group reported only 534 had complete data at the end of the study and 411 of the 534 had completed the weight loss program. They reported significant reductions in weight, waist circumference and BMI between baseline and follow-up. However the study was non- randomised, 89% of participants were women, and most were young (30 to 60 years old).

Studies of mobile phone text message, while small and few, indicate promising results in terms of changing levels of individual CV risk factors and improved medical management. However most studies have evaluated interactive SMS-delivered interventions, target single risk factors and have been conducted in young and predominantly female population groups. In addition many existing studies are limited due to lack of use of objective and blinded measures of outcome. Thus, a number of questions remain about the feasibility and efficacy of general text message based intervention programs, particularly in males or older age groups that have greater CV risk. The area is in need of a rigorous study to evaluate the potential of this intervention with blinded objective measures of outcomes. While intervention on lifestyle risk factors is challenging and the expected effect, if any, of mobile phone text message reminders may therefore be small, the potential of this intervention could be great in that SMS text messages can be sent quickly at low cost, can be easily automated and many people across all income groups own mobile phones. Therefore, even if the individual effect is small it has potential to have a substantial population impact.

**RESEARCH PLAN**

Experimental design: (Figure 2)
The proposed study is a randomised controlled trial of 800 patients who have diagnosed coronary artery disease. All participants will be followed to 6 months and the trial will be registered on the Australia and New Zealand Clinical Trials Registry. Controls will participate in standard care and the TEXT ME intervention group will receive semi-personalized reminders via SMS text message.

**Study population:**
The study population will be patients presenting to either Westmead or Concord Hospital, Sydney Australia, that have diagnosed coronary artery disease or have a diagnosis of coronary artery disease made while in hospital. These patients are at high risk of CV events and likely to be motivated to change their lifestyle. These patients will be identified through screening daily admissions, coronary angiogram case lists and cardiology outpatient clinic lists.

**Eligibility criteria:**
Patients will be eligible if they are over the age of 18 years, have documented coronary artery disease, provide informed consent and have an active mobile telephone. Patients referred for evaluation of congenital heart disease or coronary anomalies will be excluded.

**Randomisation:**
Randomisation will occur via a computerized randomisation program that will be accessible by study staff with username and password through a web interface. The random allocation sequence will be in a uniform 1:1 allocation ratio and will be concealed from study personnel until after collection of baseline data. Study personnel taking follow-up measures will also be blinded to parallel group assignments.

**Trial interventions:**
The intervention will run for 6 months. The TEXTME intervention group will receive regular semi-personalized text messages via SMS providing advice, motivation, information and support to quit smoking (if relevant) and engage in healthy diets and exercise. In addition, both intervention and control groups will be sent at least 3 text messages through the intervention period providing them with study contact details, a reminder of the follow-up appointment and general information on improving lifestyle which will be based on and refer to the Heart Foundation Healthy living guidelines. A hard paper copy of the lifestyle information will also be sent to all participants. All participants will also be contacted at least once by telephone during the intervention period to facilitate follow-up.

**Text message content** - Weekly topics will be assigned and core content of text messages will be built around and drawn from established secondary prevention programs such as CHOICE initially developed by CID Redfern. The bank of messages to be used in this study will be drawn from 1) the existing literature, 2) focus group discussion with small groups of interested individuals with CV disease from our population of interest regarding what topics or types of messages they think may be useful, 3) the research team and 4) specific advice from researchers in this area – this will include particular experience from CIE Whittaker with her extensive work and experience in this area. Once the bank of messages is collated we will schedule a meeting of all investigators and invite community representatives to review all messages in the bank. Examples of text messages may include: ‘Did you exercise today?’, ‘The Heart Foundation recommends at least 30 minutes of moderate-intensity physical activity on most (preferably all days) of the week’, ‘Remember to eat fruit at breakfast’, ‘Is there a low fat option? Most products have a low-fat version; check the markings on the pack.’

Messages are aimed to be general tips but there will be some personalisation of content based on the participant age and smoking status that will be done by using information provided in baseline questionnaires. For example only smokers will receive advice regarding smoking cessation. Diet and physical activity advice will be tailored to age and sex and reports of physical disability. This is to avoid patients that have limited mobility being sent information about jogging or other inappropriate activities.
**Timing and frequency** - Messages will be sent at different times during working hours and this will be influenced by the topic of the message. For example, certain messages about diet will be sent at the start of the day near breakfast time and certain messages about physical activity may be sent after lunch e.g. to encourage an afternoon walk. Maximal frequency of messages will be one daily and minimal frequency 1 per week, but frequency will vary depending on the behaviour targeted and the topic of the week. It will be aimed that a week of heavy text messaging (5-7 messages in a week) will be followed by lighter week (1 to 2 messages/week). Participants will not be expected or asked to respond to text messages they receive. All participants will be provided contact details (for text, emailing, telephone calling or writing) of the research staff if they want to ask questions.

**Message delivery** - At study entry all participants will be given brief training, as is necessary, of how to read a text message and how to delete or save messages. Sending of messages will be managed through a computerised messaging engine. This will enable us to program the start date, time, frequency and type of message to be sent. The engine will be developed by programmers under the supervision of CIE Whittaker who has experience with developing similar programs. The messaging engine will send messages through a gateway interface to enable them to be sent to all participants on any Australian phone network at no cost to the participant and at a bulk-rate cost to the study.

**Assessment of outcomes:**
Participants will have outcomes (Table 2) assessed at 6 months. Outcome data will be collected by a research nurse blinded to treatment allocation.

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<th>Table 2: Outcomes to be assessed</th>
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<tr>
<td>Low density lipoprotein cholesterol - fasting blood sample</td>
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<td>BMI and waist circumference – measured by research nurse blinded to treatment allocation</td>
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<td>Systolic blood pressure – 3 resting, sitting digital recordings, mean of last 2 readings</td>
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<td>Physical activity – Global Physical Activity Questionnaire, subsample with accelerometry</td>
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<tr>
<td>Smoking rate, quitting attempts – self-report, carbon monoxide meter</td>
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<td>Fruit/vegetable intake – self-report of portions consumed in prior 7 days</td>
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<tr>
<td>Psychosocial factors and quality of life – SF-12</td>
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<td>Cardioprotective medication use – self-report of Aspirin, Statin &amp; blood pressure-lowering drug use in appropriate patients (i.e. in those with documented CV disease), validated through prescription data obtained via linkage with the Pharmaceutical Benefits Scheme (PBS)</td>
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<tr>
<td>MI/stroke/All-cause death – self-report, medical records and checked against linkage data from Birth, deaths and marriages database</td>
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<tr>
<td>Inpatient readmission for vascular disease – self-report, hospital records, and checked against linkage with NSW health hospital admission datasets</td>
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Self-reported smoking/quitting attempts will be confirmed with an Airmet Scientific Micro Plus Smokerlyzer (carbon monoxide meter breath test). Physical activity will be validated in one-fifth of the cohort at 6 months by using accelerometers. Accelerometry is now considered the preferred method of objectively measuring physical activity as it provides data that allows individual examination of ambulatory activity frequency, intensity and duration. The study will use the Actigraph GT1M. The matchbox size accelerometer will be attached to a belt that participants will be asked to wear for seven consecutive days. The Global Physical Activity Questionnaire records information from the seven-day period immediately prior to the survey, and therefore will be completed at the end of the week in which the accelerometer is worn.

**Assessment of acceptability & tolerability:** Intervention participants will also be administered a separate questionnaire over the telephone separate from assessment of the above outcomes (such that outcome assessors will not be unblinded to treatment allocation). Questions will address the tolerability of repeat text messages, asking which messages they remembered, liked or disliked,
what they did with messages (e.g. kept them or deleted them immediately), their perceived utility of the text message and their opinion regarding the intrusiveness, timing and content suitability of the text messages.

**Additional process assessment measures:** We will keep a log of the level of competence with text messaging of participants at study entry and thus the requirement for text message training (e.g. this will include have they ever read a text message, sent a text message). Logs will be kept to assess the time messages are sent and the proportion of text messages successfully delivered (e.g. if mobile phone mail boxes are full, messages may not be able to be successfully delivered). A log will be kept of how many participants contact the study team, the reason for contact and the method used for contact (e.g. by telephone, email or text message).

**ANALYSIS:**
We will follow the intention to treat principle and analyze patients in the treatment group to which they are allocated. Characteristics will be compared between the two groups using independent t-tests or chi-square tests as is appropriate. We will compare the mean level of each risk factor between intervention and control as well as compare the relative risks, 95% confidence intervals and two-sided p-values for achieving the guideline level of each risk factor. For example we will compare the proportion who achieved LDL≥2.5mmol/L in the intervention versus control and the RR of achieving this in the intervention versus control groups. We will investigate the possible effects of baseline effect modifiers or confounders using logistic regression analysis. In the sub-samples of participants with objective and self-reported measures of risk factors (smoking and physical activity) measures will be correlated and compared using Spearman rank correlation.

**Sample size considerations:** We focused our sample size calculation on difference in objective measures of outcomes between intervention and control groups. All calculations are for 90% power with a 2-sided alpha and assume a ratio of 1:1 for intervention to control subjects. Mean and SDs for the controls are based on that reported by the normal care arm of the Australian COACH study. To test for a difference of 0.25mmol/L in LDL cholesterol (assuming a mean in control arm of 2.94 mmol/L, SD 0.96 mmol/L) we would require a sample size of 634, rising to 704 accounting for a 10% loss to follow-up. To test for a difference of 5 mmHg in systolic blood pressure (assuming mean of 130mmHg in normal care group, SD 19.5mmHg) would require a sample size of 640 rising to 711 accounting for 10% loss to follow-up. To test for a difference of 1.2 kg/m² in BMI (assuming a mean of 28.4 kg/m² in normal care group, SD 4.7 kg/m²) would require a sample size of 646 rising to 717 accounting for 10% loss to follow-up. Therefore a target recruitment of 800 participants would have more than adequate power to detect these small differences in objective risk factors.

**Economic Analysis:**
The economic costs and health outcomes associated with the TEXT ME intervention will be compared in an incremental cost-effectiveness analysis. Health sector perspective will be adopted and values collected for variables that describe the participant’s use of acute and primary care health services. Patient based production losses will not be included on the cost side of the analysis but (implicitly) counted within the QALY estimation in line with current theory and recommendations.

The costs of delivering the intervention will be assessed by measuring and valuing the incremental resources used. Use of hospitalisation will be collected at each follow-up through the inclusion of a number of brief questions. Consent will also be sought for access to individual participant Medical Benefits Schedule and Pharmaceutical Benefits Scheme claims usage through Medicare Australia to ascertain use of medical services (GP, specialists and non-hospital diagnostic tests) and prescribed pharmaceuticals.

Changes to health benefits will be assessed using Quality Adjusted Life Years (QALYs). These will be assessed at each data collection point using the SF-12 Health Survey and converted to SF-6D utility values via an algorithm developed by Brazier and colleagues. Although we do not expect
significant differences in survival or quality of life between treatment groups within trial, these data are needed to provide an estimate of the baseline quality of life in this patient population. Given the likely small numbers of CV disease events occurring within the trial, the quality of life and costs data collected in-trial will need to be augmented by data on quality of life and cost associated with CV disease events and associated outcomes derived from literature review.\textsuperscript{41} Long term costs and QALYs will be modelled using a decision analytic Markov model. The advantage of using the Markov model is that we can extrapolate beyond the data collection period and describe longer term costs and benefits of the intervention – particularly costs and outcomes associated with different disease states on which the intervention is likely to impact - based on the data collected and other data sources including literature review. This method has been used in two previously funded NHMRC project grants about interventions that change health behaviour (#290519 and #455813), and is described in a recent publication.\textsuperscript{42} This modelling enables us to forecast longer term costs and outcomes of the intervention and also transform outcomes observed in the trial to health outcomes that are more meaningful for economic evaluation – namely Quality Adjusted Life Years. The transition probabilities that estimate the best (i.e. lowest) incremental cost effectiveness ratio will be identified by model simulation, and parameter uncertainty (i.e., second order uncertainty) will be described by probabilistic sensitivity analysis. Monte Carlo re-samples will be drawn from probability distributions specified for all model parameters. Cost-effectiveness acceptability curves will be plotted for each group and a cost-effectiveness acceptability frontier used to inform the adoption decision. The expected value of perfect and partial information will be estimated and used to inform the adoption decision and future data collection. Plausible values for discount rates will be tested in the cost-effectiveness model.

Figure 2 Study design summary and timeline

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<th>Participant eligibility (n=1800)</th>
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<tr>
<td>Referred for coronary angiogram for evaluation of CHD</td>
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<td>Have an active mobile telephone</td>
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<td>Written, informed consent</td>
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<th>Randomisation (n=800)</th>
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<tr>
<td>Collection of baseline data from patient and biomedical risk factors</td>
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<td>Computer-generated randomisation sequence, uniform 1:1 allocation</td>
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<tr>
<th>TEXTME Intervention (n=400)</th>
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<tr>
<td>Semi-personalized text messages providing lifestyle advice</td>
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<th>Usual care (n=400)</th>
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<td>Usual medical care for medications and lifestyle change</td>
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<th>Follow-up after 6 months</th>
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<td>Risk factors assessed in ALL by nurse blinded to treatment allocation</td>
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<td>Questionnaire sent to intervention participants usability &amp; tolerability</td>
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<th>Analysis</th>
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<td>CV risk factor modification, medication adherence, medical outcomes</td>
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<td>Intervention feasibility, tolerability, usability and Process analysis</td>
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<td>Health economic analysis</td>
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STUDY OUTCOMES AND SIGNIFICANCE

- This study will be the first to provide reliable data about the efficacy of a mobile phone text-message based intervention on multiple CV risk factors and the feasibility of the use of such technology in a population at high risk of CV disease.
- This study will evaluate an innovative means of improving adherence to secondary prevention recommendations by utilising cheap and widely used mobile phone text messaging technology.
- As mobile phones are widely available, health care programs delivered in this manner have potentially very wide applicability. The detailed evaluation of feasibility and process in this study are important as this research could provide a methodological platform for delivery of other programs of preventative health.
- Given the novelty of this study and the potential widespread applicability we would plan to submit this to a high-impact general medical journal.
- This study addresses an important gap in secondary preventative healthcare where there is documented substantial under-utilisation in Australia and internationally of known treatments and existing programs.
- The proposed research is directly consistent with the NHMRC Strategic Plan Initiative of ‘Obesity interventions’, National Research Priorities of ‘Promoting and Maintaining Good health’ and the goals of ‘preventive healthcare’ and ‘ageing well, ageing productively’ and is consistent with Australian government initiatives to promote E-health.

REFERENCES

11. Redfern J, Briffa T, Ellis E, Friedman SB. Choice of secondary prevention improves risk factors after acute coronary syndrome: 1-year follow-up of the CHOICE (Choice of Health


