Early Intervention to reduce Heart Disease risk factors for Rural/Remote Men and Women

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INTRODUCTION

Cardiovascular disease is the second leading cause of death in Australia based on 1997 to 2000 Australian Bureau of Statistics' Mortality Atlas Australia Report. The report also clearly highlighted that the rural Victorian areas of Central Highlands and Western District reported the highest death rates from heart disease and stroke. Epidemiological studies have identified higher death rates in rural Australia for most of our major diseases such as cancer, heart disease and stroke.

The Australian Bureau of Statistics (ABS) reports that the national average is 149.5 heart disease deaths per 100,000 people or 21.8 per cent of all deaths with cancer at 27.4 per cent of all deaths[1]. About 2.8 million Australians or 16% of the population had cardiovascular conditions in 1995[2]. A Zimmett and Welborn (2000) study reported that Australia faces an epidemic of diabetes, obesity and heart disease.

Our Nations goals, targets and strategies for better health outcomes for Australians include the reduction of "mortality from, and the impact of, coronary heart disease on the Australian population"[2].

The Centre for Regional & Rural Health Education (CRRHE) developed a Cardiovascular Early Intervention Program, to foster the development of coordinated health promotion between local Health Services and General Practitioners. Strategies that helped reduce heart disease risks within a remote rural area where access to GPs and Emergency Medical Intervention were limited.

The program developed a settings based approach in workplaces and remote based Community Health Centres. The Project sought to develop Community Health Partnerships within Rural and Remote Regions to develop a Best Practice approach to deal with cardiovascular disease. Health Promotion literature points out that the settings approach is beneficial and has the ability to spread the health message to the community through families, friends and colleagues.

The first program, "Heart of the Grampians" (the basis for the Cardiovascular Disease (CVD) Early Intervention model), was conducted in 1999 in partnership with the Hepburn Health Service (Hepburn Shire, Daylesford, Victoria) and other Health Services across the Grampians Region. At that time the Grampians Region in Victoria, based on 1994 and 1997 Measures of Health Status, had the highest rural rate per population of causes of death associated with heart disease. In the immediate area of the Hepburn Shire, Heart Disease was responsible for 43% of all deaths[3].

The second program, “On Track” Cardiovascular Early Intervention Program, was developed for the Mallee Track Health & Community Service (MTH&CS), Ouyen, based on the work and lessons learnt from the “Heart of the Grampians” and Man Model men’s health projects across Australia (since 1994 and in Canada in 2001). The MTH&CS, based in the Loddon Mallee Health Region of Victoria, experience similar rates as the Grampians region of early mortality from heart disease for both men and women.

Faced with high rates of morbidity and mortality associated with heart disease in the local region the Program concern was to:

- Increase the awareness of the risks of heart disease to groups within the community.
- Bring a better understanding of the level of risk within the community to the attention of health workers.
- Provision of a mechanism by which associated Health Services could better target their communities with a program that would reduce the risks of heart disease.
- Provide participants with a much clearer understanding of their level of personal risk.
- Linking of the Community Health Services with GPs in a process that would facilitate the reduction of pre-existing risk factors to heart disease.
- Develop a package of resources at the end of the Project based on Best Practice and Action Research that would provide other communities with a process of health promotion that could effectively target cardiovascular health.

The program sought to address these concerns through a partnership with Allied Health Workers and General Practitioners (GPs) in each program location.

Both programs are based on the successful programs run by the Centre for Advancement of Men’s Health (CAMH) that included extensive work in community men’s health across Australia and in Canada (known as the Man Model). The MTH&CS program provided the opportunity to develop a longer-term strategy and process to track health outcomes for a significant section of the community.

The Man Model of Men’s Health Information Nights – 10 Ways to a Healthy Heart screening session identified significantly high incidences of risk factors for heart disease. These incidences of risk factors supported the epidemiology research that heart disease was significantly higher for rural men. Without the recognition of the risks, the long-term outcome for the participant was significant symptoms of heart disease, possible heart attack, and stroke or at the worst, death from cardiac arrest.

The numbers of men attending Community Health Screening Sessions (an outcome from men’s health nights) ranged from 10 to 50% of the local male population. When sessions included women it was obvious from the sample results that not only were a percentage of the men at risk, that some women screened could also be considered at risk.

Heart disease in rural areas has no boundaries. It is not gender specific. Although, it is well documented that men suffer heart disease, at different ages with a rate of up to 400% higher than women. Heart Disease is also a significant health risk factor for women with latest research indicating three times higher than breast cancer. In rural areas, due to distance and lack of Emergency Medical Intervention a heart attack can mean death. This is added reason to provide greater levels of Primary Health Care Promotion Programs in rural people, compared to their urban counterparts, to overcome the “tyranny of distance”.

Within the community context it is difficult, by its very nature, to monitor the participants in order to encourage a behavioural change or to monitor their ongoing level of cholesterol, blood pressure or blood sugar. The CVD Early Intervention model was based on the findings of men's health programs, that to reduce their risks significantly, we needed to support men to implement a behavioural change. It is also important to demonstrate to men the benefits of implementing change and this takes time.

A sense of control and a feeling of worth are vital elements for personal growth and development[4]. These elements were priorities during the development of the Heart of the Heart of Grampians and On Track rural workplace and community screening programs.

The Workplace Setting was selected for its values to maintain this process and the benefits a workplace has in influencing the wider community through associations, such as family, friends and other workplaces. Indeed for men and women, the workplace in their community is an excellent venue for discussing their health needs.

The Workplace Settings approach value is that it provides an opportunity to:

- Build relationships
- Provide structure
- Provide continuity with individuals
- Create ownership
- Value all participants
- Offer an evaluation process
- Lead to Infrastructure/Environmental Change
- and is by invitation which creates participation

Workplace Health Promotion has huge potential given that approximately eight million Australians spend a third of their day at work[4]. This settings approach provides the opportunity to address not only those risk factors for heart disease but also other factors that affect a person's health such as environmental and social factors.

The benefits of Workplace Health Promotion programs, in the past, have been limited, concentrating on participant behaviour change without regard for the broader and more complex structures such as the environment, social context and cultural context[4]. This program however, sought to address these more complex issues by isolating needs identified by participants and then addressing those needs by providing pathways, information and resources through local health providers.

Recently, one-off public health screenings have come under scrutiny. Risks associated with this type of screening process include:

- Providing misleading information by falsely identifying individuals as high risk when they are later found to be low risk and visa versa.
- Causing needless anxiety, family disruption etc
- Causing the sick role behaviour effect.
- Lack of referral process
- Follow up limited with only annual visits

- Failure to support a client after identification of *at risk* signs.
- Failures to provide client with appropriate personal resource information, eg. *written information and record of results*

Evidence, within health literature, suggests that the process of the Health Promotion Screenings is vitally important. Factors associated with successful risk factor screening include counselling during the screening process, follow up education and a best practice referral process that supports the participant through to the GP appointment. It is also critical that the GP is also provided through the Referral Process with the latest guidelines and client medical and genetic health status based on the initial screening.

The 10 Ways to a Healthy Heart screening process with a combination of risk factors identification, healthy lifestyle education, creation of pathways to local health services and practitioners with a documented referral process and provision of resources **provides a Best Practice process**[5].

Our experience with men and working women indicates that they need a more informed reason to make changes to their lifestyle. Time, resources and funds to attempt other strategies have been limited, whilst some behaviour change programs are conducted, such as QUIT, they generally only attract those clients who actively seek out programs.

In the past, Community Health Nurses (CHN) have been limited in their ability to adequately address primary CVD prevention by relying on one-off screenings conducted once or twice per year or a simple education program and not based on an identified personal risk.

The On Track program currently being trailed in the remote Mallee Track area of Victoria (5 hours north west of Melbourne) in partnership with the MTH&CS, extended the sessions to their remote community health service centres. The MTH&CS adopted and developed a further new process by using the latest CVD Screening Technology, the Cholestech LDX machine, supplied by Pfizer Pharmaceuticals. The Cholestech LDX system provides the most accurate mobile screening process for a total cholesterol reading (HDL & TC) and additional Blood Sugar (BSL) reading from the same blood sample.

The MTH&CS health region has three remote Service Centres, one hour from the main Centre at Ouyen. They are located at Underbool, Patchewollock and Murrayville and have the services of one Community Health Nurse at each Centre. The "On Track" program provided these Centres with the latest mobile technology to test clients who otherwise would simply go undiagnosed with risk factors until they presented with a life threatening episode. Such isolation from the services of a GP or the larger Medical Centre at Ouyen combined with a response time of up to 30 minutes plus from a MICA ambulance … is life threatening.

Every three months the Centres have provided a screening session, using the latest mobile technology Cholestech LDX machine. Using this technology and the 10 Ways to a Healthy Heart Package, for a period of 2 weeks, allows the community full access to a screening service that includes support and referral follow up for those with unacceptable risk factors and allays the fears of others.

In addition screening sessions were provided for local schools at Ouyen and Murrayville and also extended to MTH&CS staff and partners. A local Secondary College had three sessions with some very worthwhile outcomes for participants including referrals for GP follows up.

The "On Track" project has found that the risk identification process, education and provision of referral pathways, has some influence in encouraging the client to address their risk factors.

Table 1 Results from a Workplace Screening Session – 2002[7]

- **85%** felt that the Health Screening provided them with a greater awareness of their health and risks for heart disease
- **64%** indicated that they more aware of their health
- **42%** indicated that they more aware of their lifestyle
- **50%** indicated that they more aware of their exercise levels
- **64%** indicated that they more aware of their eating habits
- **28%** indicated that they more aware of their stress levels
- **28%** have used their personal Health Record Card
- Since their last screening **28%** have noticed an improvement in feeling better about their general health

- **14%** received a referral for Blood Pressure
- **7%** received a referral for Cholesterol

- **7%** indicated that they had given up or reduced smoking
- **50%** indicated that they had given up or reduced their fat intake
- **28%** indicated that they had given up or reduced their fast food intake
- **64**% indicated that the program had an impact on their General Health
- **35%** indicated that the program had an impact on their Workplace Health
- **21**% indicated that the program had an impact on their Family
- **14%** indicated that the program had an impact on their Partner
- **64%** indicated that the program had an impact on their approach to their health
- **14%** indicated that the program had an impact on their approach to their GP

Our findings suggest people are, commonly, unaware of their risk factors for heart disease and stroke. Symptoms, such as chest pain, do not always encourage men to seek General Practitioner (GP) help. The screening programs educate men and women to recognise early symptoms and to act. Without such health education, men especially, are not (in many cases), likely to seek medical attention for a 'mere' chest pain.

This became evident by the number of participants at Men's Health Nights and screening sessions who had not visited their GP in a long time and who were found to have significant risk factors. The Pfizer Men's Health Tune-Up Program that screened thousands of men across Australia in 2002 further supported this. In addition, our evaluation process found that GPs are less likely to detect underlying risk factors unless their client either requests investigation or presents with recognisable symptoms, eg angina, or a referral from Community Health Services (CHS) based on a Screening Health Promotion Program.

The Man Model program also developed the Men's Health Information Night sessions in North Okanagan British Columbia Canada in 2001 with similar responses from rural Canadian men as has been demonstrated with rural Australian men since 1994.

A recently released report by the Australian Bureau of Statistics Mortality Atlas Australia suggests that Victorian men now have the lowest mortality rate from heart disease in the nation. Victoria is the only state to have a committed program of men's health information nights that mirror a similar education process that has been so successful in reducing the breast cancer mortality rate for women.

Evidence may suggest that the extensive Victorian Men's Health Night program, since 1995, based on the Man Model of Health Promotion, attracting tens of thousands of men to learn about risk factors to heart disease, cancer and a range of other health issues over the last ten years, cannot be 'understated'. When comparing state reduction rates of heart disease in Australia there is no one significant factor other than Men's Health Education that can be singled out as an impact on the Victorian reduction of the mortality rate to Cardiovascular Disease for males.

Table 2 As a Result of the Night[8]

- 45% indicated that they would *Increase their exercise*
- 38% indicated that they would *see a GP*
- 32% indicated that they would *Reduce their Weight*
- 32% indicated that they would *Relax More*
- 30% indicated that they would *attend Sessions in Men's Health Week*
- 28% indicated that they would *eat less fat*
- 25% indicated that they would *Work on Relationships*
- 24% indicated that they would *Change unhealthy habits*
- 15% indicated that they would *Change their Lifestyle*
- 7% indicated that they would *Reduce Smoking*
- 5% indicated that they would *visit a Health Service*

The development of the Preventative Health Promotion Process, using an early intervention strategic plan, that allows allocated time and resources, and utilizing a multi-disciplinary approach may also assist the general community to adequately address the very significant problems associated with cardiovascular disease.

If heart disease kills 43% of Australians each year, then a process based on collaboration between Health Practitioners in the delivery of Primary Health Care for cardiovascular preventive health is a good progression in the fight against this "killer". The CVD Early Intervention program is a settings approach that works and involves a process that creates collaboration within the workplace or community, with local GPs and Allied Health Workers.

Our research has identified that this process does work and will work in a variety of workplaces such as, a Coal Mine, Police Station, with Council Workers, Hospital Workers and very successfully with Teachers in secondary schools. Schools can also have an important impact on the broader community, as schools by their very nature are a place of

influence. “Anecdotal evidence suggests that the program has had some lasting impact on staff morale, if not on waistlines! [5]”

Rural people do not develop heart disease risk factors more than urban people do, but the mortality rate from heart disease is higher because “distance” kills. In urban areas the response time to a heart attack victim is estimated to be an average of 6 minutes. This response time saves lives and has a major impact on the life of the victim, who hopefully changes their lifestyle as a result of their heart attack. Rural people do not and cannot expect an Emergency Medical Intervention response time of this calibre. This means that rural people need a better application of and access to Preventative Health Promotion Programs, based on a rural Policy and Strategy to reduce their risk. Providing rural people with a greater knowledge of their health status, not only in regard to heart disease, but also cancer and depression will help reduce their risk.

The Man Model of Health Promotion “10 Ways to a Healthy Heart” screening program offers the opportunity of acquiring greater knowledge and information about personal health risks through a collaborative community health process for men and women.

Government Policies should provide the Health sector with more support and documented policy and procedure to develop Early Intervention Screening programs that provide an ‘early warning’ of risk factors especially for rural people who are disadvantaged by distance, response times to cardiac arrest and access to GPs and health services.

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