

**Reviews of Health Promotion Practice
in Aotearoa New Zealand
2007–2008**

Editors: Louise Signal, Richard Egan, Lynley Cook

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Citation: Signal, L., Egan, R., and Cook, L. (Eds.). (2009). *Reviews of Health Promotion Practice in Aotearoa New Zealand 2007–2008*. Auckland: Health Promotion Forum of New Zealand and Health Promotion and Policy Research Unit, University of Otago

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Health Promotion Forum of New Zealand
PO Box 99064, Newmarket, Auckland
Health Promotion and Policy Research Unit, University of Otago
ISBN 978-0-473-14620-7 (website)
This document is available on the Health Promotion Forum website:
www.hpforum.org.nz

Acknowledgements

The editors would like to thank all of the authors for their hard work in putting this book together. We thank all those University of Otago health promotion students we have worked with for their contribution to our own learning about health promotion. We are grateful to the Health Promotion Forum for sharing our vision about the value of this book and in publishing it with us. Lastly, we would like to thank Peter Scott for the lovely cover design based on the Health Promotion Forum logo and Nancy Fithian for copy editing this publication with such enthusiasm, insight and care.

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1 Introducing Reviews of Health Promotion Practice

Louise Signal, Lynley Cook & Richard Egan

Health promotion is defined as “a process of enabling people to increase control over, and to improve, their health” (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986, p. 1). Health promotion has become an established public health approach in Aotearoa New Zealand and internationally in the past two decades. However, literature on New Zealand health promotion initiatives continues to be sparse. This book contributes to redressing this balance by providing eleven critical reviews of New Zealand health promotion programmes.

The reviews were undertaken by students in the University of Otago, Diploma in Public Health, Health Promotion Course. They are the result of a class assignment that required a review of an existing health promotion programme according to health promotion best practice. The chapters presented here represent the best of the students’ work as judged by the editors, the lecturers responsible for the Health Promotion Course in 2008.

Overall, each programme has been reviewed for its consistency with the *New Zealand Health Strategy* (Minister of Health, 2000), the Treaty of Waitangi and the Ministry of Health’s publication *Reducing Inequalities in Health* (Ministry of Health, 2002). *The New Zealand Health Strategy* identifies priorities for public health action and key approaches to successfully undertaking health promotion. The Treaty of Waitangi is the founding document of New Zealand and key to effective health promotion with Māori (Martin, 2002). *Reducing Inequalities in Health* (Ministry of Health, 2002) highlights the inequalities in health that exist in New Zealand by ethnicity, socioeconomic status, gender and geography. It also provides advice about how to effectively address these inequalities.

Each chapter has a similar format that addresses the effectiveness of the health promotion programme under review in relation to the following factors:

- its priority group
- the importance for health promotion of the issue addressed
- to what degree is the programme based on an assessment of public health needs
- how does the programme link to other services that influence health status

- who are the project partners and how well do they work together
- how the priority group has been involved in the planning, development, implementation, and evaluation of the programme
- the specific health promotion actions implemented
- what health promotion theory underpins this programme, and
- programme evaluation.

The chapters were written by the authors in consultation with key contacts in the organisations responsible for the programmes under review. All chapters have been checked for accuracy by the organisation running the programme prior to them agreeing to publication of the findings of the review. The choice of programmes for review was largely that of the authors, although the editors provided advice and contacts on request. Therefore, the book does not provide an overview of the range of health promotion programmes operating in this country. It does, however, give insights into a number of initiatives.

The chapters are described as reviews as they are not formal programme evaluations. They are, nevertheless, based on documentary analysis and key informant interview, and at times on the experience of the author. They do not provide an entirely rounded view of the programmes; for example, the effectiveness of the programmes is not recorded when impact and outcome evaluation has yet to be undertaken. The reviews have directly informed the initiatives they studied as the findings were presented to the organisation running the programme. Through its focus on best practice, the editors believe this book will also inform similar initiatives and the health promotion enterprise in general, in New Zealand.

In most chapters the authors provided independent, external review of the programme. However, the authors of chapters 6, 7, 9 and 11 reviewed a programme they had worked on or a programme that their employing organisation had developed. While this latter situation does not provide an independent perspective, the reviews have been assessed and edited by the book editors. Further, these chapters have the additional benefit of the 'insider' knowledge of these authors.

The chapters are presented in two sections: national and regional programmes. Within each section they are presented alphabetically by the author's name. The national programmes begin with Chapter 2 in which Nicola Bray reviews the Green Prescription. This programme gives health professionals the option of prescribing physical activity where it may be beneficial in long-term health care. In Chapter 3 Carmen Chamberlain provides a critical analysis of the Active Schools Programme, which aims to improve physical activity opportunities and experiences in primary schools throughout New Zealand. In Chapter 4 Kirsty Craig examines the National Heart Foundation School Food

Programme. In Chapter 5 Kate Davidson evaluates the social marketing campaign, 'It's not the drinking. It's how we're drinking', run by the Alcohol Advisory Council of New Zealand. In Chapter 6 Mary Duignan reviews the Cancer Society's SunSmart Schools Accreditation Programme. Chapter 7 concludes this section with Rhiannon Newcombe's review of the Health Sponsorship Council's Smokefree Cars television commercial.

The reviews of regional programmes begin with Bronwyn Ferry's examination, in Chapter 8, of the iMove Nekeneke Hi! programme that promotes walking and biking to school for primary and intermediate school children in the Manawatu. This is followed by Chapter 9 in which Nicola Laurie reviews the Stay on Your Feet Canterbury falls prevention programme for older adults at risk of falls. In Chapter 10 Moira Smith presents a review of a voucher programme to promote physical activity in patients in a Wellington primary health care organisation. In Chapter 11 Philippa Stewart presents a critical analysis of the Vote Fluoride Oral Health Promotion Programme undertaken in Otago and Southland. This section is concluded by Chapter 12, which provides a review of the Otago Exercise Programme by Elizabeth Willms.

Chapter 13 concludes the book with reflections by two of the editors on best practice in health promotion in Aotearoa New Zealand. We hope you enjoy this book and that it makes a contribution to strengthening health promotion practice in this country.

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National programmes

2 Green Prescription (GRx): a critical analysis

Nicola Bray

Introduction

It is predicted that physical inactivity causes two million deaths worldwide each year, and approximately 10–16% of breast cancer, colon cancers, and diabetes, and about 22% of ischaemic heart disease (World Health Organization [WHO], 2008). At present 60% of the global population fails to achieve the minimum recommendation of 30 minutes of moderate intensity physical activity daily (WHO, 2008). The risk of developing cardiovascular disease increases by 1.5 times in people who do not follow the minimum physical activity recommendations (WHO, 2008).

Increasing physical activity is a societal, not just an individual problem, and demands multisectoral, multidisciplinary, and a culturally relevant approach (World Health Organization, 2008). For individuals, physical activity is a powerful means of preventing chronic diseases, and for nations, it can provide a cost-effective way of improving public health across the population (WHO, 2008).

It is for these reasons that regional sports trusts (RSTs) and primary health organisations (PHOs), through Sport and Recreation New Zealand (SPARC), are implementing initiatives that address this issue of physical inactivity. An example of one of the successful programmes is Green Prescription (GRx), which was established in 1997, and gives health professionals the option of prescribing physical activity where it may be considered beneficial in long-term health care (Ministry of Health [MoH], 2007a). General practitioners (GPs) and practice nurses can issue their patient with a GRx, given the patient's medical condition is stable. A written or electronic prescription is issued, and if the patient desires ongoing support the script is forwarded to the nearest GRx Patient Support Person. This person then encourages the patient to become more active through monthly phone calls, face-to-face meetings, or group support in a community setting. After three to six months, the patient's progress on their path to an active lifestyle is then reported back to the referring health professional (Sport and Recreation New Zealand [SPARC], 2007a).

Studies which support this type of intervention have shown that brief advice from a doctor, based in primary care, which is supported by written materials, is likely to be effective in producing a modest, short-term (6–12 weeks) effect on physical activity. The duration of effectiveness can be increased by referral and support from an exercise specialist, including support over the telephone (Hillsdon, Foster, Naidoo,

& Crombie, 2004). In this paper, I aim to critically analyse the GRx programme by discussing its strengths and weaknesses based on what is considered 'best practice'.

The priority group for Green Prescription (GRx) and why?

Green prescriptions (GRx's) are a way to improve the health of New Zealanders (SPARC, 2007a). They aim to increase levels of physical activity in a section of the population currently considered to be 'inactive'; i.e., less than 30 minutes of physical activity most days of the week (SPARC, 2008a). GPs and practice nurses can promote GRx's to patients who have stable medical conditions. Medical conditions of particular interest include hypertension, obesity, diabetes, osteoporosis, anxiety and depression (SPARC, 2008a). The reason why inactive individuals are the priority group for GRx is really quite simple and is supported by copious amounts of evidence suggesting that appropriate regular physical activity is a powerful means of preventing chronic disease (WHO, 2005). GRx prioritises inactive persons as they appear to be at greatest risk of disease and can benefit most from the promotion of physical activity.

Inequalities in health in New Zealand exist between socioeconomic groups, ethnic groups, different geographic areas, and males and females (MoH, 2002). It is hard to address health in New Zealand without addressing inequalities, particularly among different ethnic groups. When the GRx initiative was first developed there was little focus on tackling inequalities. However, expansion of the programme under the recent government-led 'Mission-On' project appears to be doing so. New goals include strengthening and enhancing the penetration of the GRx programme within high-needs communities; i.e., in Māori, Pacific and lower socioeconomic communities, have been outlined, adding a second priority group (MoH, 2007b).

The importance of the health topic for health promotion

Regular physical activity, fitness, and exercise are critically important for the health and wellbeing of people of all ages (US Department of Health and Human Services [USDHHS], 2002). Research has demonstrated that effectively all individuals can benefit from regular physical activity, whether it be vigorous or some type of moderate health-enhancing physical activity (USDHHS, 2002). Regular physical activity has been shown to improve health in numerous ways including reducing the risk of heart disease, diabetes, high blood pressure, depression and anxiety. It helps build and maintain healthy bones, muscles and joints, and can help older adults become stronger, consequently preventing falls (USDHHS, 1996).

Given the various health benefits of physical activity, the hazards of being inactive are clear. Physical inactivity is a serious, nationwide problem. Its scope poses a public health challenge for reducing the

national burden of unnecessary illness and premature death (USDHHS, 1996). It is for these reasons that physical inactivity is an important health promotion topic.

To what degree is GRx based on an assessment of public health needs?

The *New Zealand Health Strategy* (Minister of Health, 2000) provides an overall framework for the health sector, with the aim of directing health services at those areas that will ensure the greatest benefits for our population, focusing in particular on tackling inequalities in health. Of the 61 objectives the strategy outlines, 13 population health objectives have been prioritised. The GRx initiative is directly in line with one of the objectives and is connected to several others.

GRx is directly related to increasing physical activity. It has been recognised that lack of regular physical activity is a modifiable risk factor for conditions such as heart disease, stroke, hypertension and premature death (Minister of Health, 2000). At least one-third of New Zealand adults are insufficiently physically active, and lack of physical activity is estimated to account for over 2000 deaths per year (Ministry of Health, 1999; cited in Minister of Health, 2000). GRx is also indirectly related to four other prioritised objectives: reducing obesity, reducing the incidence and impact of cardiovascular disease, reducing the incidence and impact of diabetes, and improving the health status of people with severe mental illness. These precedent objectives have been chosen by the Ministry of Health as important, based on an assessment of the public health needs of New Zealanders. Therefore, we can infer that SPARC's GRx programme has done so as well.

Despite GRx being related to several of the priority objectives in the *New Zealand Health Strategy*, it is only recently (under the expansion of the programme) that inequalities in health have been recognised.

GRx's link to other services that influence health status?

Green Prescription is linked to a number of services which influence health status, including regional sports trusts (RSTs), Pharmac, primary health organisations (PHOs), and a number of health agencies.

There are 17 (RSTs) throughout New Zealand that are supported by SPARC and other national and regional agencies (Sport Southland, 2007). RSTs indirectly influence health status through the delivery of a wide range of sport-based programmes including GRx. Some of the 17 area managers who implement GRx are based in RSTs as well as in PHOs. Pharmac works to improve people's access to medicine, and to promote their optimal use, thus influencing health status (Pharmaceutical Management Agency, 2008). Pharmac is linked to GRx as it partially funds it. Links were made in between 2004–2008 with PHOs, to encourage the integration of GRx community-based physical activity

programmes and plans (Green Prescription Summary) (SPARC, 2008a). Links with health agencies developed through regular contact with area managers. These agencies include the Heart Foundation, Asthma and Respiratory Foundation, Diabetes New Zealand, Mental Health Foundation, Arthritis New Zealand and Cancer Society (SPARC, 2008a).

The linking of these services is crucial to the success of a programme such as Green Prescription. It is unrealistic for an agency to deliver a particular initiative on its own, especially when the issue being dealt with is so complex.

The project partners and how well they work together

Green Prescription puts forward a coordinated approach to increasing levels of physical activity (SPARC, 2008b). It is delivered by RSTs and PHOs under contract to SPARC and is partly funded by Pharmac (SPARC, 2007b).

The green prescription process is divided into two parts. The first part of the process relates to primary healthcare's role in the implementation of the programme, and the second is associated with the support role. When these two parts of the process are housed in different agencies there tends to be a greater need for ongoing communication (O'Neill, D., personal communication, April 10, 2008). General practitioners (primary healthcare) work in partnership with the 17 RSTs throughout New Zealand, as well as with Sport and Recreation New Zealand (the support role). Pharmac has a funding relationship with SPARC, which currently works very well (O'Neill, D., personal communication, April 10, 2008). These are the main project partners involved with Green Prescription in New Zealand and each of these appears to be successful.

One particular project partner that is absent is Māori. SPARC is a Crown entity and for this reason has an obligation to develop policies and services which contribute to and improve the health and wellbeing of all citizens (Martin, 2002). A partnership with Māori would have involved their participation in planning, development and more importantly in the implementation of the initiative; i.e., 'by Māori, for Māori' (Martin, 2002). When partners such as Māori are not recognised, the risk of increasing inequalities in health rises.

Involvement of the priority group in the planning, development, implementation, and evaluation of GRx

In the years leading up to the launch of GRx in New Zealand, research was conducted around the known benefits of physical activity (SPARC, 2008a). General practitioners (GPs) were involved in the development process of GRx in 1995 and 1996 as clinical trials were carried out, and GP focus groups were held to discuss the implementation of GRx (SPARC, 2008a). Despite the involvement of GPs, the priority group—inactive New Zealanders—was not involved in any of the planning or development.

This was not a huge problem judging by the success of the programme; however, consultation with those on the receiving end of the initiative could have helped strengthen the programme from the beginning.

Since the launch of GRx in 1997, ongoing evaluation and continuous improvements are being made. The patients undertaking the programme, as well as those prescribing the physical activity (i.e., the general practitioners), are constantly being surveyed. This is a strength of GRx in comparison with other initiatives, as often evaluation is omitted when in fact it is one of most important parts of the process. The high-quality evaluation of the GRx programme is evident in the establishment of Green Prescription Active Families. This initiative was developed in response to GPs' growing concern about rising levels in childhood obesity (SPARC, 2007b).

Specific health promotion actions being implemented in GRx

Several health promotion actions are being implemented in the Green Prescription initiative including reorienting health services, strengthening the community and the development of personal skills.

SPARC, and more specifically the GRx programme, is involved in the Ministry of Health's strategy *Healthy Eating – Healthy Action Oranga Kai – Oranga Pumau*. (MoH, 2004) This strategy aims to improve nutrition, increase physical activity and reduce obesity in New Zealand and requires multiple actions by multiple players to make it happen (MoH, 2004). One of the objectives is to reorient health services, which is where GRx comes in. The specific actions are to expand existing services to meet the needs of Māori and Pacific groups, consider a nutrition component to the GRx and establish a monitoring framework (MoH, 2004). These actions, particularly meeting the needs of different ethnic groups, strengthen an already successful initiative.

The development and growth of GRx has driven community development action within the programme. The support role in the GRx process provides human and material resources in the community to enhance the patients' self-help and social support system. Additionally, once the patient graduates from GRx support they have the option of becoming a support or buddy for the new GRx patients, which further strengthens community action (O'Neill, D., personal communication, April 10, 2008).

A further health promotion action being implemented in GRx is the development of personal skills. The programme supports personal and social development as it provides patients' with information, and education about making the right choices with regards to physical activity (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986).

What health promotion theory underpins this GRx?

SPARC is not a health agency; it is a Crown entity charged with encouraging and promoting sport and physical recreation in New Zealand under the Sport and Recreation Act 2002. SPARC works with and alongside health agencies; however, health does not underpin everything it does as an organisation (O'Neill, D., personal communication, April 10, 2008). Consequently, GRx is not underpinned by any health promotion theories. Nevertheless, there are behavioural theories that fortify the programme, including the Social Cognitive Theory and the transtheoretical model (O'Neill, D., personal communication, April 10, 2008). Studies have shown that physical activity interventions that are based on behavioural theory are more likely to be effective (Hillsdon et al., 2004).

The Social Cognitive Theory describes an ongoing process in which personal, environmental, and human behavioural factors exert influence upon each other (US National Institutes of Health & National Cancer Institute, 2005). Accordingly, there are three main factors—self efficacy, setting goals, and outcome expectancies—that affect the likelihood of a person changing a behaviour, in this case becoming physically active (US National Institutes of Health & National Cancer Institute, 2005). This theory has been suitably adopted in the 'support' fragment of GRx as the patient's support person helps set goals, and monitors and reinforces their progress leading to a change in behaviour.

The transtheoretical model has two basic dimensions that describe the different stages of change (Nutbeam & Harris, 2004). It is based on the assertion that behaviour change is a process, not an event, and that individuals have varying levels of motivation or readiness to change (Nutbeam & Harris, 2004). General practitioners involved with GRx can use this model to establish whether or not their patient wants to change, and moreover whether they believe that the individual would benefit from written physical activity advice (Nutbeam & Harris, 2004).

Evaluation undertaken or planned to measure the success of GRx

Evaluation demonstrates that the deliverers of a programme are committed to providing the best possible programme (Waa, Holibar, & Spinola, 2000). Evaluation can be defined as:

Getting information on the activities, characteristics, context, and impact of programmes that will help us know what the programme is doing and how well it is working. Carrying out an evaluation of a programme is a learning process, learning about what your programme can achieve, and what can be done to improve it (Waa et al., 2000, p. 7).

The evaluation of GRx that has been consistently undertaken and is planned to continue is one of the programme's strengths. According to Waa et al. (2000), programme evaluation will help improve your programme and its delivery. This is unquestionably evident in GRx with the development of Green Prescription Active Families. General practitioners are continuously surveyed. In 2003, it was discovered that GPs had a growing concern about the rising levels of childhood obesity; consequently Active Families was developed.

Evaluation of those on the receiving end of GRx—the patients—is carried out through surveys. This type of evaluation helps to ensure the programme is doing what it intends to; i.e., getting people physically active (Waa et al., 2000). A number of creditable randomised control trials have also been conducted in relation to green prescriptions. These include a cost-effectiveness trial, women's lifestyle study, and recently the investigation of time-based goals (i.e. walking 30 minutes, three times a week), versus goal-based goals (e.g., number of steps). This type of evaluation can tell you if what you are doing is the 'best' way of doing it (Waa et al., 2000).

GRx uses a wide range of evaluation methods, which is a credit to the ever-evolving programme.

Recommendations about ways to maintain and strengthen GRx

Green Prescription is a well-supported initiative aimed at increasing the levels of physical activity in a section of the population currently considered to be 'inactive' (SPARC, 2008a). Evaluation is one of the biggest strengths of this programme as it is conducted at all levels, and in a number of ways. Continuation of this standard of evaluation will ensure not only the maintenance of the programme, but will show (and has shown) it will strengthen the programme. A second way to strengthen GRx, which is already under way, is the addition of a nutritional component to the programme. This has been proposed as part of the Ministry of Health's *Healthy Eating – Healthy Action* strategy (MoH, 2004). It is well known that physical activity and nutrition go hand in hand with regards to improving health, so promoting them alongside each other through GRx could be beneficial in creating even greater health outcomes.

The support role of the GRx process has gradually been developed and to its credit is moving towards strengthening community action. Most of the patients who get 'prescribed green' are inactive for a reason and they often have an abundance of barriers to becoming physically active. The support provided to these individuals through GRx can help them overcome these. However, I believe that greater attention could be given to this part of the process. Once we have identified those who are inactive, and they themselves have decided to act, we need to take heed of it. Perhaps more accessible and affordable resources for patients of

GRx could be beneficial, for example, trained exercise consultants. This may not be logistically possible; however, it is worth considering. We need to find ways of making physical activity enjoyable for each of the patients: this way they will be more likely to change their behaviour permanently.

In the past, GRx has not focused on the needs of Māori or Pacific peoples. However, there has been a shift with the recent expansion proposal under the 'Mission-On' initiative. This recognition and targeting of the specific needs of Māori and Pacific peoples will most certainly strengthen the GRx programme. These proposed priority groups need to be acknowledged, especially in the context of New Zealand, as otherwise programme deliverers run the risk of increasing inequalities in health. A recommendation which could further strengthen GRx could be greater reflected with regards to the implementation of the programme to Māori; i.e., delivery by Māori, for Māori.

GRx is a soundly structured programme that has been very successful in increasing the level of physical activity in New Zealand. As with any programme, however, there are always ways to strengthen it. These include ongoing evaluation, adding a nutritional component to the programme, increasing the support systems, and reflecting on the needs of Māori and Pacific peoples.

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3 Active Schools as a health promotion programme: a critical analysis

Carmen Chamberlain

Introduction

The following chapter provides a critical analysis of Active Schools, a physical activity programme undertaken by regional sports trusts (RSTs) under contract by Sport and Recreation New Zealand (SPARC). SPARC is this country's lead government-funded agency in the sport and physical recreation sector. SPARC endeavours to increase participation and strengthen the physical recreation sector and provide policy advice to the government on sport and recreation (Sport and Recreation New Zealand [SPARC], 2007b). SPARC has a vision to foster an environment where New Zealanders are active in sport and recreation, participate in supporting and delivering sport and recreation, and more New Zealanders win on the world stage (SPARC, 2007b). SPARC and its underlying philosophies are strengths based but do not prioritise reducing health inequalities nor address te Tiriti o Waitangi obligations.

What is Active Schools?

Active Schools was SPARC's response to falling physical activity levels among New Zealand children (SPARC, 2004). Active Schools was based on international evidence and the findings from the Physical Activity Pilot Programme (PAPP) (SPARC, 2005) and School Community Physical Activity Programme (SCPAP) (Stewart, L., personal communication, April 2008). A primary school-based programme, Active Schools aims to improve physical activity opportunities and experiences by:

- supplying a quality teaching resource (Toolkit) promoting co-curricular physical activity opportunities throughout the school day
- working alongside schools to ensure the Active Schools teaching resource is being utilised effectively by teaching staff
- supporting collaborative school and community-wide physical activity planning (SPARC, 2007a).

Each Active Schools Facilitator works with 15 schools over a two-year period in order to support the development of a positive physical activity culture within each school community. Active Schools uses a 'whole school approach' to bring together the school, physical activity providers and the wider school community to ensure physical activity messages are consistent and integrated. Active Schools Facilitators assist schools to

identify physical activity targets within five key areas: school ethos and organisation, curriculum programmes, co-curricular physical activity opportunities, school community partnerships and the school environment and resources. Active Schools Facilitators are employed by regional sports trusts throughout New Zealand to deliver the programme.

To date approximately 600 schools have completed the programme (including the 64 SCPAP schools) and approximately 500 are currently on Active Schools contracts (Stewart, L., personal communication, December 2008). Therefore, approximately half of New Zealand's 2034 primary and intermediate schools have engaged with the Active Schools programme.

This paper provides a review of the Active Schools programme from a health promotion perspective. While the programme was not explicitly developed using a health promotion framework, it is consistent with the ethos of health promotion. It is anticipated that such a review will provide insight into the programme and enable lessons to be learnt for health promotion more widely. Potentially, it could also lead to recommendations about ways to strengthen the initiative in future.

The priority group

The priority group for Active Schools is primary age school children. There has been a decline in physical activity levels in children in New Zealand from 69% being active in 1997/98 to 66% in 2000/01 (SPARC, 2003). 'Being active' was defined as "taking part in at least 2.5 hours of sport or leisure time physical activity in the seven days prior to being interviewed" (SPARC, 2003). The reduction in the number of children engaging in physical activity over time was a catalyst for the development of the Active Schools Programme (SPARC, 2004).

Schools have a powerful influence on children's activity levels, with 67% of boys and 70% of girls being involved in some form of sport and active leisure during school hours (SPARC, 2003). Furthermore, 21% of boys and girls also take part in sports and activities organised by their school, either before or after the school day. Also, the amount of physical education being taught in New Zealand schools has declined according to the National Child Nutrition Survey (Ministry of Health [MoH], 2003).

Primary schools were seen as an ideal opportunity to influence the amount and quality of physical activity opportunities for children and their families. While primary school age children were the priority group, Active Schools was developed as a programme to bring sustainable change to the physical activity environment of schools and the communities they belong to.

Active Schools, physical activity and health promotion

New Zealand children and young people appear to be following the global trends of increasing overweight and obesity (MoH, 2003). Increasing numbers of children are insufficiently active to gain health benefits associated with moderate levels of physical activity, particularly among Māori and Pacific youth (SPARC, 2003). However, there are numerous studies to suggest that health promotion programmes to increase physical activity levels in children can be effective (Stewart-Brown, 2006).

The benefits of schools as a health promotion setting are widely recognised (St Leger, 1997; Stewart-Brown, 2006). Most primary age children in New Zealand attend school, enabling programmes to reach children and families that may be otherwise hard to reach. Schools have a prominent place in communities and support families to offer a range of opportunities for their children. Health promotion initiatives within a school setting allow for social support networks, the ability to influence policy and environment, and opportunities for monitoring and reinforcement of messages (St Leger, 1997).

Physical activity and public health need

Increasing the level of physical activity is one of the 13 population health objectives highlighted in the *New Zealand Health Strategy* (Minister of Health, 2000). Other objectives linked to physical activity include reducing obesity; and reducing the incidence and impact of cancer, cardiovascular disease and diabetes. These objectives have been highlighted in part due to the potential for improving the health status of the population and reducing health inequalities (Minister of Health, 2000). The *New Zealand Health Strategy* aims to reduce inequalities in health status for Māori, Pacific and lower socioeconomic peoples.

Links with other health services

Active Schools links to a number of other services that influence health status. It is a school-based programme and therefore is inextricably linked to education, a major determinant of health. Education is recognised as a determinant of health as it can influence our employment, income and ability to participate in society (MoH, 2002a).

The Active Schools Programme involves strengthening school links with local sports clubs and organisations and other members of the recreation sector (Stewart, L., personal communication, April 2008). The sport and recreation sector contributes to health by being available to encourage and support individuals to engage in active leisure. Active Schools Facilitators play a role in assisting positive relationships between schools and the sport and recreation organisations in their community to encourage more individuals to choose and enjoy being physically active.

It has been suggested that Active Schools is developing a closer association with other government-funded health promotion programmes such as Health Promoting Schools (MoH, 2007b) and Fruit in Schools (MoH, 2007a) (Stewart, L., personal communication, April 2008). For example, Active Schools can be built into Health Promoting Schools physical activity plans, while Health Promoting Schools may enhance the sustainability of Active Schools by supporting the whole school approach to health promotion and promoting child involvement.

Project partners

It appears that SPARC and the Ministry of Education have worked closely to assist the development of Active Schools in New Zealand. In 2004 the Ministry of Education indicated a change to the National Education Goals and National Administration Guidelines that would make the provision of physical activity to children mandatory (Ministry of Education [MoE], 2007) and contracted SPARC to deliver support to schools. A joint vision to build strong, confident learning communities that embrace a physical activity culture was developed. The strategic partnership that ensued allowed for workforce collaboration at an operational level, allowing physical education advisers and Active Schools Facilitators to engage in working relationships to simultaneously address physical activity within the curriculum, co-curricular and the wider school environment, though some regions display greater interagency collaboration than others (Stewart, L., personal communication, April 2008).

The partnership with Ministry of Education may have encouraged schools to engage with Active Schools emphasising the contribution physical activity could make to teaching and learning. Active Schools complements the Ministry of Education's Physical Activity Initiative in supporting schools in implementing National Administration Guideline 1(i)c and National Education Goal 5 (MoE, 2007). Integral to the success of Active Schools is an enhanced understanding of language and concepts from the education sector. While SPARC endeavours to influence participation in sport and recreation, in order to be effective in the education sector and promote ownership by the target population, Active Schools needed to build on the strengths of the education settings involved.

Evidence of the effectiveness of this relationship pertains to the consistency of messages. In 2007, the Ministry of Education released Physical Activity for Healthy, Confident Kids: Guidelines for Sustainable Physical Activity in School Communities (MoE, 2007). The collaboration with SPARC is reflected throughout this document with the inclusion of the five key components of a school's physical activity culture used by Active Schools: the school ethos and organisation, curriculum programmes, co-curricular physical activity opportunities, the school community and environment and school and community partnerships (MoE, 2007, p. 23). This publication also promotes the use of ActiveMark, SPARC's self-development tool that can be used to assist school

communities to monitor and reflect on their progress in developing a positive physical activity culture in their school community.

A tripartite agreement between Ministry of Education, Ministry of Health and SPARC reflects a commitment of all signatories to work together to improve student hauora/wellbeing. Fruit in Schools is a Ministry of Health initiative based in primary schools and SPARC has been a member of an external reference group for Fruit in Schools since its inception. While there is not an explicit agreement that Active Schools and Fruit in Schools work together, SPARC encourages Active Schools Facilitators to align and support Fruit in Schools where possible (Stewart, L., personal communication, April 2008).

Priority group involvement

The priority group, primary age school children, has had limited involvement in the planning, development, implementation and evaluation of Active Schools. School children were given opportunity to provide feedback during the pilot programmes. Teachers and school communities were also consulted during the pilot programmes and in regard to the development of the Active Schools Toolkit (Stewart, L., personal communication, April 2008). It would be good to include opportunity for children's comments and feedback in the future to inform the delivery and success of the programme. Professional development for Active Schools Facilitators reiterates the importance of a child-centred focus, although there do not appear to be any specific methods for achieving this. The Health Promoting Schools framework and principles also encourage student involvement (MoH, 2007a).

Health promotion action

The *New Zealand Health Strategy* (Minister of Health, 2000) states that tackling broader determinants of health requires action to build healthy public policy, create supportive environments for health, strengthen community action for health, develop personal skills and reorient health services. The above actions, collectively known as the Ottawa Charter for Health Promotion (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986), have been considered during the development of the Active Schools Plan 2004 (SPARC, 2004).

Active Schools is a comprehensive and multi-approach strategy that addresses awareness, skill development, education and capability building for sustainable results (SPARC, 2004). In doing so, SPARC argues that Active Schools "embraces and upholds principles of the Ottawa Charter and the Health Promoting Schools programme" (SPARC, 2004, p. 5). Certainly, Active Schools undertakes health promotion actions identified in the Ottawa Charter, such as strengthening community action and building personal skills, and works within the Health Promoting Schools framework covering areas of school

organisation and ethos, curriculum teaching and learning and community links and partnerships. Taking a comprehensive approach—targeting individuals, whānau, population groups and their environment—is recognised as a best practice principle for reducing inequalities in health (MoH, 2002a).

Health promotion theory

Working with and building the capacity of local organisations and community networks is another principle of best practice for reducing health inequalities (MoH, 2002a). SPARC's expertise is around improving school community links in order to increase physical activity levels and Active Schools is seen as the impetus for creating Active Communities. Although Active Schools does not appear to have been planned using a specific health promotion theory it can be linked to a four-stage model of organisational change (Nutbeam & Harris, 2004). Stage 1, Awareness-raising, involved the production of the Active Schools Toolkit and this was intended to stimulate interest and support for the Active Schools Programme. Stage 2, Adoption, refers to the planning for and the adoption of Active Schools by the individual school and includes preparation for what Active Schools is going to mean for that particular school. Stage 3, Implementation, regards programme delivery and may include aspects such as provision of professional development and the development of physical activity policies. Stage 4, Institutionalisation, is important in terms of monitoring success and ActiveMark, the self-review tool developed for Active Schools, is used to assess sustainability of school community partnerships and evaluate long-term maintenance of positive physical activity culture (SPARC, 2007a).

Te Whare Tapa Whā (Durie, 1999) is a Māori model of health that recognises four equally important influences on health; taha tinana (physical), taha hinengaro (mental), taha whānau (family) and taha wairua (spiritual). This would have been a useful planning model to ensure the Active Schools Programme addressed a wide range of influences on health and physical activity. SPARC has developed three Active Schools resources in te reo Māori to assist Māori Medium Schools (SPARC, 2008a; SPARC, 2008b; SPARC, 2008c). This resource could be strengthened by using Te Whare Tapa Whā as a theoretical basis. The inter-relationship between physical, emotional, social and spiritual well-being is significant for understanding health in a Māori context and ensuring Active Schools is culturally appropriate for Māori populations (Durie, 1999).

Evaluation

There has been a limited amount of evaluation completed or planned for Active Schools. However, Active Schools was developed from the experiences gained through two pilot programmes as discussed earlier. Sixty-four SCPAP Case Studies are available on the Ministry of Education

website (MoE, 2008). These provide insights to barriers and enablers for physical activity in schools. SPARC has a strong culture of sharing best practice. This is a staple component of the regular Active Schools hui for Active Schools Facilitators, as well as regular dissemination of relevant international research (Stewart, L., personal communication, April 2008).

There is extensive internal monitoring and reporting processes for Active Schools Facilitators which records individual school progress. ActiveMark, SPARC's self-development tool, can be used to assist school communities to monitor and reflect on their own progress in developing positive physical activity in the school community. When more schools are implementing the ActiveMark tool it is anticipated that there will be increasing amounts of information available for review and comparison (Stewart, L., personal communication, April 2008).

The next two years will see an independent evaluation conducted on the Active Schools Programme (Stewart, L., personal communication, April 2008). One key area of investigation will be surrounding sustainability and determining whether the two years of support from Active Schools Facilitators is sufficient for maintenance of change. Evaluation is important to guide development and measure success of health promotion programmes and justify future support and financial investment in the programme (Hawe, Degeling, & Hall, 1990).

Conclusions

Active Schools is a New Zealand school-based physical activity programme established by SPARC in 2006. While not developed specifically as a health promotion programme, Active Schools is consistent with health promotion principles. This chapter has examined Active Schools from a health promotion perspective in order to gain insights into the value of the programme and to see what lessons can be learnt for health promotion more widely.

This analysis has revealed the need for such a programme given the levels of physical activity amongst New Zealand children. Schools are well recognised as an effective place for health promotion (Stewart-Brown, 2006). Active Schools appears to link with similar programmes in the school environment such as Health Promoting Schools (Ministry of Health, 2007b) and Fruit in Schools (Ministry of Health, 2007a). This review was unable to identify whether more could be done to strengthen these relationships, but clearly this is an important consideration for the parties involved. Active Schools suggests the value of intersectoral collaboration given the progress that appears to have been made, particularly with SPARC and the Ministry of Education working together.

Health promotion principles suggest that participation by the target group in the development, implementation and evaluation of programmes increases their effectiveness (Hawe et al., 1990). Given the limited involvement of students in Active Schools programme planning and

evaluation to date, involving students in these activities might strengthen the programme. Active Schools employs a number of health promotion actions including developing healthy public policy, strengthening community action and building personal skills. Best practice suggests that programmes that use more than one strategy at once are more likely to be effective (World Health Organization, 1997). This is a definite strength of the current programme.

It appears that Active Schools was not based on health promotion theory. However, its development is consistent with a four-stage model of organisational change (Nutbeam & Harris, 2004). Specifically using this theory might assist with ensuring the maintenance of the programme, the phase that the model refers to as Institutionalisation. The programme may also benefit from application of Te Whare Tapa Whā, a holistic Māori model of health that may provide a broader approach to health that is more appropriate for Māori students and benefits all students because of its comprehensiveness.

Finally, while there has been limited evaluation of the programme to date, the programme was piloted and impact/outcome evaluation is planned. The results of the upcoming evaluation will provide an opportunity to strengthen the programme. It is hoped that this current review will give Active Schools programme leaders further assistance in strengthening Active Schools, a programme in a key area of public health. This review also reminds the reader of the importance of key aspects of health promotion, such as the value of participation by the target group throughout health promotion programmes, the value of basing programmes on theory, and the importance of programme evaluation throughout the programme.

Acknowledgements

The author expresses gratitude to Laurie Stewart, Senior Adviser-Education of SPARC, for his assistance in providing historical background information on the Active Schools programme.

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4 The National Heart Foundation School Food Programme: a critique

Kirsty Craig

Introduction

The School Food Programme (SFP) was developed by the National Heart Foundation (NHF) and first introduced to primary and secondary schools in 1989. The programme has changed over this time as a result of evaluations. This discussion of the School Food Programme (SFP) primarily focuses on the programme as it has been running in more recent years and includes reference to the redevelopment currently underway. The programme's planning, implementation and evaluation are critiqued against best practice and recommendations are made for ways to strengthen the programme.

Programme description

The SFP is a health promotion programme that seeks to support New Zealand schools to make positive changes to their nutrition environments. It was developed as a result of requests for advice and guidance from school canteen and food order staff concerned about the food being provided in their schools. Registration into the programme is free and allows schools access to the SFP website, resources and assistance from the NHF health promotion team (National Heart Foundation [NHF], 2008). Currently these resources are only available in English. The SFP framework sees a healthy eating environment as being dependent on four key areas of action. Firstly, the food and nutrition education part of the framework links into the school curriculum in the area of Health and Physical Education. Secondly, promotion of healthy foods occurs through a whole-school approach to staff and family as well as students. This is achieved through the third action area of community health promotion, which reflects role of the wider community around the school. The fourth framework area of food choice includes development of a school nutrition policy. Implementation of this policy includes the school canteen or food service in schools where one operates (NHF, 2008).

The programme operates a four-level awards system whereby schools can achieve either a Heartbeat, Bronze, Silver, or Gold award as they progress further with making healthy changes (NHF, 2008). Some schools work through the process relatively independently while others have ongoing input from their local Health Promotion Co-ordinator. Schools apply for awards as they judge that they have made progress.

The application document is assessed by the NHF, which determines the level of award (MacDonald, personal communication, April 2008).

Importance of the topic for health promotion

Improving nutrition and reducing obesity are two of the population health objectives within the *New Zealand Health Strategy* (Minister of Health, 2000, p. 7). This reflects the fact that the prevalence of overweight and obesity in New Zealand children and the whole population is very high. The results from the 2002 National Children's Nutrition Survey showed that the percentage of overweight children ranged from 18.4 for NZ European and others through to 33.9 for Pacific children. There are large disparities with Māori and Pacific children bearing a disproportionate burden, as illustrated in table 1 below.

Table 1. Rates of overweight and obesity in children 5–14 years by ethnicity (Ministry of Health [MoH], 2004)

	NZ European and others		Māori		Pacific peoples	
	Male	Female	Male	Female	Male	Female
Overweight	18.4	18.8	19.6	30.6	33.9	32.9
Obese	4.7	6.0	15.7	16.7	26.1	31.0

Poor nutrition is a major contributing factor to obesity and has a high cost to individuals, communities and the country as a whole as a result of obesity-related diseases and psychosocial impacts (MoH, 2003a).

Priority groups targeted by the School Food Programme

The SFP targets children and young people from five to 18 years who are attending primary and secondary schools. Prevention of obesity by targeting this age group is important given the difficulty of treating and managing obesity in later life (Carter & Swinburn, 2004). Over time the SFP has developed an increasing focus on low-decile schools and evaluation to date shows that the reach of the programme is greatest in these areas (Clinton, Robertson, Dobson, & Mahony, 2007). This focus is essential given the higher burden of poor nutrition and obesity within lower socioeconomic groups (MoH, 2004).

In terms of the Ministry of Health's Reducing Inequalities Framework (MoH, 2002), the SFP contributes to improving health status at the second level of intermediary pathways. The SFP takes a whole-school approach and includes at least three Ottawa Charter strategies: building healthy public policy, creating supportive environments and developing personal skills (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986). Taking such a comprehensive approach provides environmental change that has wider reach than one focused on individual change. Environmental change is, therefore, more likely to meet the needs of those who face significant barriers to change.

The high level of reach in low-decile schools not only meets the needs of lower socioeconomic groups but, given the overrepresentation of Māori and Pacific peoples in these groups, it is likely that the programme has good reach in these communities as well. This is a strength of the programme in terms of addressing inequalities for Māori, Pacific and low income communities. However, a recent evaluation of the SFP recommends providing resources in Māori, Pacific and Asian languages to increase uptake for key messages by these groups (Clinton, Robertson, Dobson, & Mahoney, 2007).

The focus on addressing inequalities in the SFP addresses the responsibility to do no harm and is consistent with best practice principles and ethical standards for health promotion (MoH, 2002; Health Promotion Forum of New Zealand, 2000). Equity, including in health, is the central focus of article three of the Treaty of Waitangi and for health promoters working within the TUHA-NZ (framework the goal for action is to improve outcomes for Māori to be at least equal to non-Māori (Martin, 2002).

Links with other services that influence health status

Since about 2000 the SFP appears to have successfully linked with Health Promoting Schools (Ministry of Health, 2003b). The current SFP also has strong links to the Fruit in Schools programme, whose focus on low-decile schools provided the SFP with the opportunity for greater participation in these schools than it previously had. Another strong area of linkage is with the programmes operated by Sport and Recreation New Zealand (SPARC) in schools including Active Schools and Push Play. There has been a high degree of collaboration between staff at the two organisations to develop mutually supportive policies (MacDonald, personal communication, April 2008).

These linkages are important, both for schools that get a more coherent, cohesive understanding of health-related issues, but also for the success of the programmes themselves. The SFP has developed in positive ways through aligning with other programmes. Such alignment is crucial because, as has been highlighted elsewhere, schools are a key setting and are continually asked to implement yet another health initiative (Tanahill, 1994, in Ministry of Health, 1997).

Project partners

One of the seven principles of the *New Zealand Health Strategy* is “acknowledging the special relationship between Māori and the Crown under the Treaty of Waitangi” (Minister of Health, 2000, p. 7). Partnership between Māori and the Crown is one of the three principles recommended by the 1988 Royal Commission on Social Policy to assist government agencies to implement a Treaty-based approach to policy and programme development (Durie, 1999).

Recognition of the Treaty of Waitangi as the founding document of New Zealand is fundamental to ethical health promotion practice in this country. Such recognition requires that all programmes be developed in ways that fulfil self-determination for Māori in determining Māori needs and aspirations (Health Promotion Forum of New Zealand, 2000). The goal for action within the TUHA-NZ framework is that Māori are active participants at all levels of health promotion (Martin, 2002).

The NHF has a partnership with Te Hotu Manawa Māori (THMM), an independent Māori organisation that operates nationally. THMM started as an internal programme within the NHF approximately 15 years ago before developing into an independent partner (Signal, Rochford, Martin, Dew, Grant, & Howden-Chapman, 2004). While the SFP was developed prior to its existence, THMM has provided support and advice to the SFP since its inception. Over the past three years this involvement has become more formal. The SFP is currently undergoing a process of redevelopment which will include a closer relationship with both THMM and Pacific Island Heartbeat (PIHB), the NHF's Pacific programme, with the aim of formalised collaboration throughout planning, delivery and evaluation rather than ad hoc advice (MacDonald, personal communication, April 2008). Such partnerships are essential in order that mainstream programmes meet Treaty obligations and the needs of all groups they are meant to serve. Collaboration with THMM, PIHB and Māori and Pacific communities is likely to result in better reach in these communities.

Involvement of the priority group in planning, development, implementation, and evaluation

One of the seven principles of the *New Zealand Health Strategy* is "active involvement of consumers and communities at all levels" (Minister of Health, 2000, p. 7). This applies equally to health promotion because from a planning perspective active involvement is crucial in order that the programme meets the community's needs and also provides a way of gaining the community's commitment to the programme (O'Connor-Fleming & Parker, 2001). As discussed above, active participation by Māori is central to a Treaty-based approach.

While the focus on the environment is a strength of the programme and this aspect is well evaluated, no evaluation appears to have been done to assess children and young people's response to the changes being made to their school environment. The current redevelopment has, however, taken an increased focus on the involvement of children and the community. Working groups of children and young people have been utilised in order to gain the views and ideas of the target audience. A particular area of focus has been on developing delivery mechanisms to engage children and young people. One of the tools being developed to do this is a 'Digital Village'. This digi-village will include information on all the programmes the NHF runs that target children and has been developed to give a view through the eyes of children and young people.

It has a theme of discovery and exploration that allows children to interact with activities in the village and learn by doing. It also provides an opportunity for schools to share and showcase their achievements in relation to healthy eating and healthy action (Broughton, personal communication, July 2008).

Other key plans include an increased focus on incorporating community-defined needs within the programme. The Health Equity Assessment Tool (HEAT) developed by the Ministry of Health (Signal, Martin, & Cram, 2008) will be utilised as part of prioritising school communities and a needs analysis will be undertaken for each school to inform an individual intervention plan. Priority will be shifted to getting to know communities and a focus on high need areas. This will be achieved through the reorientation to a whānau ora approach and application of the HEAT tool (Signal et al., 2008).

Key health promotion actions implemented as part of the SFP

The *Ottawa Charter for Health Promotion* (World Health Organization et al., 1986) describes five key areas of health promotion action. The SFP currently implements action within at least three of these areas. These are reflected in the four-part SFP framework. Healthy public policy is key with the requirement to develop a school nutrition policy. The centrality of environment is demonstrated in two of the programme's four framework areas, which are promoting healthy foods and making healthy food choices dominant. Thirdly, the SFP works to improve the personal skills of all within the school community through food and nutrition education, the third of the four framework areas. The SFP links in with the Health and Physical Education Curriculum and includes information resources (NHF, 2008).

There is also potential under the redevelopment for the SFP to contribute to a fourth Ottawa Charter area of community action. It is planned that the redeveloped programme will link far more closely with individual communities as the starting point for assessing needs, priorities and solutions (MacDonald, personal communication, April 2008). This has the potential to make the SFP a more flexible and empowering programme for its participants.

Theoretical underpinnings of the SFP

Although there appears to be no explicit theory of behaviour change underpinning the SFP, the structure of the SFP framework fits well with Social Cognitive Theory (SCT). This theory, with its multifaceted approach, fits well with the SFP's focus on addressing the school environment as well as increasing knowledge. There are five main concepts within SCT and each of these has associated strategies to create change. The primary concept within this theory that makes it highly applicable to the SFP is reciprocal determinism, which recognises that

there is an ongoing interaction between the individual, their behaviour and their social and physical environments (US National Institutes of Health & National Cancer Institute, 2005). The explicit use of theory can assist in the development of more effective health promotion programmes (Glanz, Lewis, & Rimer, 1997).

The National Heart Foundation is a mainstream organisation and the development of the SFP has, up until the redevelopment currently underway, been undertaken without strong reference to the range of models of health and health promotion that are appropriate for New Zealand populations. Given the need to reorientate the programme to better reach Māori and Pacific peoples, and the cultural value based on food, this redevelopment should, following appropriate consultation with those communities, make reference to models such as Whare Tapa Whā (Durie, 1999), Te Pae Mahutonga (Durie, 2004) and Fonua (Tu'itahi, 2007), which would provide more meaningful ways of presenting the programme's key material.

Evaluation of the SFP

The latest evaluation of the SFP was completed in 2007 and followed two phases. The first phase involved the development of the evaluation plan and programme logic in collaboration with the NHF. This programme logic sets out clearly the goals, strategies and objectives of the SFP and is employed on an ongoing basis to embed evaluation within the programme. The second phase focused on quantitative and qualitative data collection, including interviews with staff at participating schools and analysis of school food sales data (Clinton et al., 2007). The aims of the evaluation were to assess how effective and efficient the School Food Programme is, and identify areas where the programme could be improved through modification (Clinton et al., 2007).

It is appropriate that this evaluation was limited to a formative evaluation as, although the SFP has been running for some time, changes to the SFP mean that there remains a need to assess whether the programme is doing what it was set up to do. Formative or process evaluation is the first step in programme evaluation, which must be completed in sequence (Hawe, Degeling, & Hall, 1994).

Key findings from the evaluation were that 38% of schools were registered with the programme but there was a low degree of implementation with 63% reporting they were not active. The reach was highest in lower deciles but did not show a similar extended reach into schools with high Māori rolls (Clinton et al., 2007).

Key recommendations from the evaluation included incorporating monitoring of registrations and participation levels, developing a more flexible model, review of the awards system, development of resources in other languages, particularly Māori, increasing the support capacity, and

improving alignment with other programmes and the curriculum (Clinton et al., 2007).

Recommendations and concluding comments

The SFP is a long-standing school health promotion programme. The changes made over the period of its operation reflect the responsiveness of the programme to the needs of the population it serves and the changing environment within which it operates. The New Zealand Heart Foundation provides this programme free to all participating schools and it is an important and effective means of supporting schools to make positive changes. While the discussion above highlights changes that may strengthen the programme, many of these matters are being considered in the current redevelopment.

The current critique has also identified recommendations for change beyond those identified in the latest programme evaluation and those already discussed in relation to the programme redevelopment. They include: the need to follow the TUHA-NZ framework and adopt a Treaty-based approach; the need to involve children and young people in the future evaluation of any changes to the programme; and that the reorientation of the programme to reflect more holistic models of health should include development of a range of tools, resources and actions within the programme to meet the needs of the diverse communities within New Zealand.

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5 Evaluation of the social marketing campaign: “It’s not the drinking. It’s how we’re drinking”

Kate Davidson

Introduction

In 2005 the Alcohol Advisory Council of New Zealand (ALAC) launched a social marketing campaign to carry across messages about alcohol consumption in New Zealand to the New Zealand population. It is in response to research that shows that excessive consumption of alcohol is acceptable behaviour and a norm in many parts of New Zealand society. This report seeks to evaluate the campaign in the context of health promotion.

Background information

ALAC aims to encourage responsible use of alcohol and to minimise the misuse of alcoholic substances (Alcohol Advisory Council of New Zealand [ALAC]). Its vision is “to see a New Zealand drinking culture supporting moderate use of alcohol so that whānau and communities enjoy life free from alcohol harms” (ALAC, 2008, p. 3). As a crown entity ALAC is committed to the Treaty of Waitangi/te Tiriti o Waitangi, which is a fundamental building block of ALAC. They seek to uphold the principles of partnership, participation and active protection (ALAC, 2008, p. 14). With ALAC’s sole focus on alcohol consumption, it is in a strong position to be a leader in its field.

Alcohol consumption in New Zealand

Evidence shows that there is an accepted norm of binge drinking in New Zealand. From the *2004 New Zealand Health Behaviours Survey – Alcohol Use* we know that 81.2% of New Zealanders aged 12–65 have consumed alcohol in the last 12 months. Not that this in itself is a problem, but there is also evidence that 1.2 million New Zealanders are “okay” with bingeing, or accepting of bingeing, and regularly participate in binge drinking (Ministry of Health, 2007, pp. ix–xi; ALAC, 2005).

Internationally, New Zealand is ranked 24th in alcohol consumption per capita out of 50 countries (Ministry of Health, 2007, pp. ix–xi; ALAC, 2005). The total consumption of alcohol in New Zealand is within the World Health Organization guidelines, but there is an issue in New Zealand with how alcohol is consumed and the binge drinking culture that

continues to evolve (Ministry of Health [MoH], 2007, pp. ix–xi; ALAC, 2005).

Alcohol consumption as a public health/health promotion issue

Looking at the data that ALAC has available, it is clear that excessive alcohol consumption is a serious public health issue and it impacts on many other issues related to the health of the population. Under the health promotion definition of health, alcohol consumption cannot be separated from the widespread influences it has on health. When one examines the overall costs of alcohol consumption, it is apparent that it is also a serious issue for health promotion, as alcohol consumption directly impacts on physical, mental, and social wellbeing of individuals and thus fits within the broad definition of healthiness as outlined in the Ottawa Charter (World Health Organisation, Health and Welfare Canada, & Canadian Public Health Association, 1986).

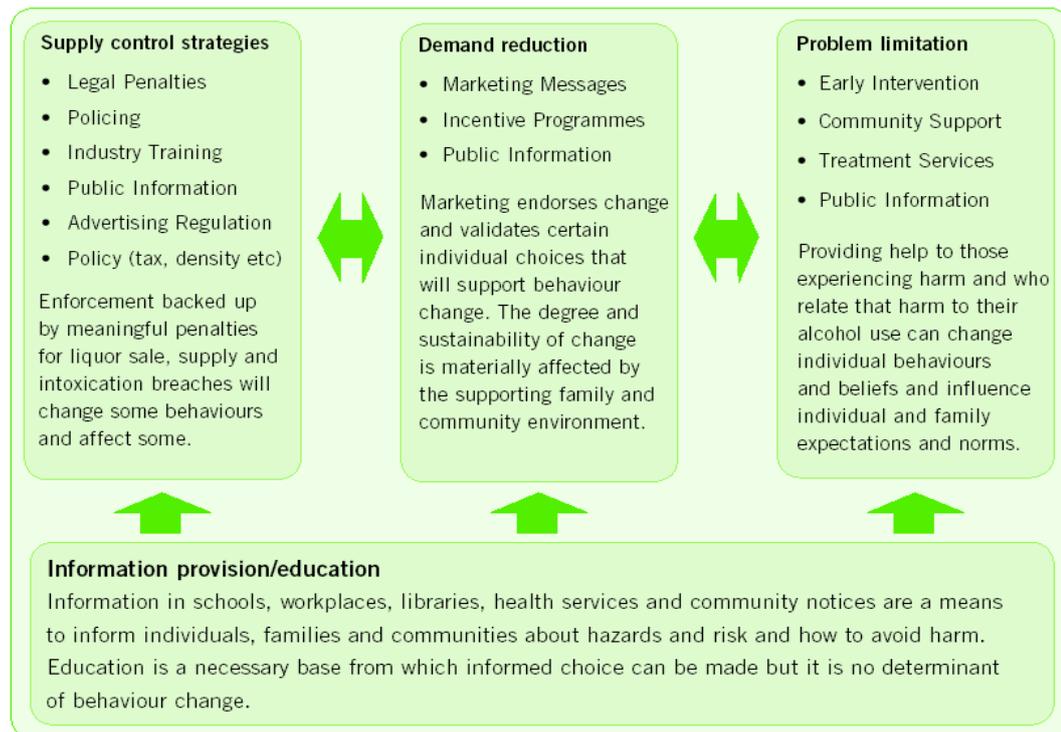
Alcohol related harm is listed as a priority population health objective in the *New Zealand Health Strategy*, which sets the platform for the Government's action in health (Minister of Health, 2000, p. 13). One of the goals in the *New Zealand Health Strategy* is to "minimise harm caused by alcohol and illicit and other drug use to individuals and the community" (Minister of Health, 2000).

"It's not the drinking. It's how we're drinking" campaign

The campaign was initiated in 2005 using social marketing tools to raise awareness among New Zealanders about the current drinking culture. ALAC has employed Andreasen's definition of social marketing for the campaign. This defines social marketing as "the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programmes designed to influence the voluntary or involuntary behaviour of target audiences in order to improve the welfare of individuals and society" (Andreasen, 1995, p. 7). Social marketing here utilises commercial marketing principles not for profit, but for positive social change.

The campaign costs approximately \$3 million per year and includes research and multimedia messages such as television and print advertisements, and billboards (ALAC, 2008a). There is a campaign website and a 0800 number available to those seeking more information. This creates avenues for viewers to choose to act on what they see and leads to empowering the viewer to have more control over their knowledge and behaviour. ALAC hopes that the campaign will bring the message home to viewers. The desired outcome is that people will reflect on the messages from their own perspectives and experiences, with the ultimate goal that people will use this information to change their current drinking behaviour (ALAC, 2008a).

The campaign is part of a broader programme designed to change New Zealand's current drinking culture (ALAC, 2008a). ALAC has a long-term and realistic vision for the changes they wish to see, and they realise that this will not be an overnight makeover. The broader programme, which the campaign is part, encompasses three crucial elements: "supply control", "problem limitation" and "demand reduction" (ALAC, 2008b, p. 5). Each of these feeds into the other, as demonstrated in the diagram below.



(Source: Alcohol Advisory Council of New Zealand. *New Zealand and its drinking culture: A programme of change*, p. 5, <http://www.alcohol.org.nz/Documents/Campaigns/CultureChangeNZDrinking.pdf>)

This structure gives strength to the campaign. It is a comprehensive approach to dealing with the issue. A social marketing campaign without the other areas of the programme would have been seriously weakened.

Another strength of the campaign is that ALAC has used the skills of a marketing company to create the advertisements. As Bloom and Novelli (1981, pp. 76, 86) state, using professionals in the marketing field is important, as professional marketers have specialised knowledge for creating effective marketing campaigns.

In addition, ALAC has effectively developed a refined simple message that raises the issue. It is to the point but carries the weight of the message. The language in the campaign is very effective, using plain

English to be suitable for a wide range of audiences, and creating an inclusive environment that allows the target audience to feel some ownership towards the issue. The use of personal pronouns reinforces the idea that this is a national issue as well as an individual matter.

Key priority groups

ALAC has outlined three key priority groups in their Strategic Direction: Māori, young people (aged 12 to 24) and Pacific peoples (ALAC, 2008b, p. 9). They use participatory approaches with these groups. There has been much public debate and finger pointing around young people's drinking habits. However, ALAC found young people were learning their habits from somewhere else and that key groups were frustrated at being targeted when binge drinking is behaviour employed across society. Therefore, the advertisements are aimed at New Zealand's adult population; however, ALAC is aware of the dangers in creating a 'one size fits all' approach. So, through research the Council identified three target groups: parents with children under 15 years, men up to 39, and women up to 39. ALAC then used market segmentation as suggested by academics, to use different representatives to carry the message to different groups (Bloom and Novelli, 1981, p. 81). This marketing segmentation is important, as it is more productive than treating the whole market homogeneously (Bloom & Novelli, 1981).

ALAC has been careful in ensuring they target the campaigns at a broad population without pointing the finger at any particular group. For example, the Council did not want this portrayed as a "youth problem" or a "Māori issue" and thereby reinforce negative stereotypes and isolate groups. This could allow others who do not fit into these groups to not have to reflect on their own habits. Also, this would have gone against the principles that underpin health promotion and the Treaty of Waitangi.

Key priority groups have been involved in the process of developing the campaign. This has included:

- focus groups for developing and testing the product
- input into the development of ALAC's strategic direction from 2008–2013
- involvement in project work such as community action projects and initiatives
- ALAC's Kaumatua Advisory Group and a Pacific Reference Group that both provide direct advice to the organisation, and
- specialist staff in the roles focused on the priority populations (Moore, W., personal communication, April 18, 2008 and May 5, 2008).

This demonstrates ALAC's commitment to working with priority groups to find appropriate solutions. It also shows ALAC is fulfilling its role as a Crown entity and upholding the principles of the Treaty of Waitangi.

Public health assessment

This programme is based on an assessment of public health needs. This is important for any health promotion activity as it allows health promoters to work out who the target groups are, and what needs should be addressed in the programme. For this programme ALAC has conducted a substantial and high-quality needs assessment, which has helped them find their target groups and isolate the needs that should be addressed.

Literature has been researched and qualitative and quantitative data have been used to assess public health needs. The programme uses data from the New Zealand research such as, the Ministry of Health's *Alcohol Use in New Zealand - Analysis of the 2004 New Zealand Health Behaviours Survey – Alcohol Use*, and information from Statistics New Zealand. They also used information from research carried out by ALAC including Dr Brian Easton's *Taxing Harm: Modernising Alcohol Excise Duties* and *The burden of death, disease and disability due to alcohol in New Zealand* (ALAC, 2007).

This data demonstrates that New Zealand, like many other countries, has moved towards a binge drinking society. ALAC has also used data that demonstrates the public health cost of excessive binge drinking and the current status of alcohol consumption within society (ALAC, 2005).

ALAC has used other processes to access public health needs such as conducting focus groups, participating with organisations including government agencies and non government organisations that represent Māori, Pacific peoples and youth. ALAC gathered information from people to target the campaign and make it relevant to viewers.

Project partners

Project partners are a vital component of the campaign and of broader strategies of ALAC. The Council states that it is committed to a programme of collaborative work with a range of organisations. Project partners are seen to be important to ensure the full delivery of services across programmes of supply control, demand reduction and problem limitation (ALAC, 2005).

ALAC has developed partnerships across government agencies such as the Ministry of Youth Development, the Crime Prevention Unit, the Ministry of Justice and the New Zealand Police (ALAC, 2005; ALAC, 2008b, p. 14). It has also endeavoured to build robust relationships with non-government organisations, as well as various local territorial

authorities, Māori Wardens, and industry organisations such as the Hospitality Association (ALAC, 2005; ALAC, 2008b).

Recognition for the importance of project partners and a healthy environment moulded around collaboration is crucial for the success of this campaign. The campaign is set in a wide and comprehensive framework and issues need to be addressed on a number of levels. The experiences and views of project partners need to be acknowledged and taken into account, as they may bring different perspectives to the programme. If there are issues in the environment it can often affect the planning and outcomes of the programme, so it is positive that ALAC recognises the different perspectives that project partners bring and is committed to these relationships. It is important they endeavour to continue in this current fashion.

Theoretical framework

The social marketing campaign is founded in two theories: the Stages of Change Model and the Theory of Planned Behaviour. The Stages of Change Model was developed by Prochaska & DiClemente and assumes that behaviour change is a non-linear, circular process, not a single event (US National Institutes of Health [NIH] & National Cancer Institute [NCI], 2005, p. 15). It outlines five crucial stages an individual will move through during the process. These include pre-contemplation, contemplation, preparation, action and maintenance (US National Institutes of Health & National Cancer Institute, 2005). In using this theory the programme recognises that people will respond differently in relation to the stage which they are at (US NIH & NCI, 2005). This can directly impact the marketing campaign to ensure it is inclusive of people along the different stages: the campaign can have a tailored message to apply across the board. It also allows the campaign to focus on the individual's role in changing behaviour. The theory creates a framework to change the attitudes and beliefs held by individuals as well as society in general.

The other theory used is the Theory of Planned Behaviour. This looks at the relationship between behaviour, attitudes and intentions. It follows the belief that behavioural intention is the most important factor determining behavioural outcomes (US NIH & NCI, 2005, 2005, p. 16). Behavioural intention is influenced by a person's attitude towards the behaviour, by subjective norms (consideration by the individual of the opinions of those that are important to them) (US NIH & NCI, 2005, p. 16). Other factors such as culture and the environment do not explain or predict an individual's behaviour (US NIH & NCI, 2005, p. 30). This theory also includes the perception suggested by Azjen and Driver that people might try harder to behave in promoted ways if they feel they have a high deal of control over their behaviour (US NIH & NCI, 2005, p. 17). This theory allows the campaign to give the audience knowledge of the issues and encourages them to use that knowledge to exercise

authority over their behaviour, ultimately showing them that it is their choice on how they consume alcohol.

These theories have been translated into a framework for the campaign where New Zealanders will:

- “SEE there is a problem between risky per occasion consumption and harm
- THINK that their behaviour is a contributor to these harms, and there is something they can do about it; and
- ACT to moderate their drinking behaviours in ways that reduce the risk of harms to themselves, their families and communities” (Kirby, 2006).

The use of definitive theories to underpin the campaign is another strength of this programme. It has given a clear structure to the campaign and can help with the measurement of the success of the campaign to achieve its goals.

Reducing inequalities

Reducing inequalities in New Zealand is a crucial element to health promotion. *Reducing Inequalities in Health* sets out a framework for the health sector (MoH, 2002, p. 18). There is a potential risk that the campaign could increase inequalities if Māori, Pacific peoples and people or groups from lower socio-economic backgrounds do not respond to the campaign or it is culturally inappropriate for them. However, ALAC continually works with representatives from these populations and has a number of complementary projects to deal with inequalities (ALAC, 2008b).

ALAC also states the campaign is “part of a comprehensive intersectoral approach to reduce the alcohol and other drug related harm in New Zealand and therefore ‘fits’ with the overall goal of reducing inequalities in health through intersectoral collaboration” (ALAC, 2008b).

Linkage to other services

ALAC has positioned itself as a leader in this arena and is connected with other health services. As part of the campaign there is a contact number for those affected by the social marketing campaign, as well as an interactive website. The toll-free number directs callers to the Alcohol Drug Helpline, while the campaign website provides easy-to-read information (Kirby, 2006).

Within the programme structure in which the campaign is placed, one of the key areas is problem limitation. This includes working with the treatment sector and public health agencies.

Evaluation employed for the campaign

A number of public health scholars have pointed out the importance of continuing evaluation as a fundamental principle of any campaign (Andreasen, 1995, p. 310–311; Bloom and Novelli, 1981, p. 87). ALAC is committed to evaluation and has mentioned this in one of the unpublished documents provided by the organisation. This involves monitoring the social marketing section of the boarder programme.

ALAC has had ongoing input from target groups and has continued communicating with these groups. After receiving feedback they decided to promote harder hitting, more realistic advertisements. These can be seen in the latest round of advertisements, and they touch on some more serious issues with alcohol.

ALAC outlined in its Statement of Intent that measurement for reducing alcohol related harm would be made in reference to:

- ALAC's ongoing population based monitoring of progress towards reducing per occasion consumption
- Police data on the extent and frequency of alcohol-related offending
- multi-agency monitoring of intoxication on licensed premises, including cases presented to the Liquor Licensing Authority
- controlled purchase operations to monitor illegal sales of alcohol to young people
- parental supply surveys to monitor attitudes and awareness of illegal and irresponsible supply of alcohol to young people
- access to brief and early interventions for hazardous and harmful drinkers, their family and whānau
- population based surveys of young people's access to alcohol and behaviours
- monitoring of partnership agencies and community sector's engagement with and participation in the Culture Change programme
- monitoring and evaluation of best practice tools to support agency practice; and
- monitoring of per capita consumption (ALAC, 2007, p. 15).

Some of the factors are potentially difficult to measure because other variables could influence a change. For example, New Zealand household incomes are currently facing rising costs, therefore this could contribute to sales and would need to be taken into consideration. Also, factors such as the introduction of legal herbal drugs could also have an impact on sales.

Progress has also been tracked through three-monthly market research. Key results of the campaign have shown positive steps towards raising awareness and discussion around New Zealand's drinking culture.

ALAC has stated in response to results that there has been a translation of this awareness to attitudinal changes (which must precede behavioural change).

- People acknowledge that drunkenness causes serious harm: 68% (June 2006).
- There is increased awareness of the range of harms caused by alcohol as a direct result of advertising or media.
- Approximately one in five drinkers (19%) have thought about cutting back the amount they drink.
- Binge drinkers (28%), Māori (22%) and Pacific (25%) are more likely to have thought about cutting back than other adult drinkers. (Kirby, 2006)

Weaknesses/potential issues with the campaign

As a number of other social marketing campaigns are currently running, viewers could feel overwhelmed with too much information that is often negative. There needs to be careful co-ordination between media outlets and health promoters. This is in the best interest of both the media and health promoters.

There are potential issues for parents who ensure that their children are not exposed to alcohol related incidents, and for individuals who also choose to avoid such incidences. There have been some complaints about the advertisements to the Broadcasting Standards Authority (stuff.co.nz, 2008). This raises questions about how ALAC can accommodate these sorts of concerns.

There needs to be a fine balance so that alcohol consumers who struggle to change their behaviour are not isolated or stigmatised. For some people alcohol consumption could be related to a number of other issues within their life, rather than just the drinking culture within New Zealand. While the campaign has crystallised the message of the campaign effectively, some of the more specific issues behind excessive alcohol consumption can be complex and difficult to unwind. ALAC has since advised that work is being done around mental health issues.

There are issues around pointing out negative behaviour in the campaign. However, ALAC has stated that it is aware of the "blame game" problem. There is potential that portraying negative behaviour could create a guilt factor and reinforce negative images of self. There are also issues with the advertisements reinforcing negative behaviour as people feel an

intrusion into their personal sphere of freedom of choice (Bloom & Novelli, 1981, p. 82).

Continuance with maintenance

Andreasen (1995, p. 313) and Bloom and Novelli (1981, p. 86) all point out that consistency in social marketing is crucial. The strategy needs to remain the same with continuing direction from the organisation. However, this can be difficult in organisations as there is often a change of personnel and "restructuring". These factors should not interfere with the strategic direction of the campaign.

ALAC is committed to research and evaluation to meet the needs of changing audiences to find what works effectively. From this ALAC will need to continue coming up with fresh ideas so that the product stays interesting and relevant, while creating a balance in remaining relevant but not becoming too shocking.

It may be an idea to include positive-orientated advertisements such as those used in the drink driving campaign and the "Like Minds" campaign. Another potential idea is to use respected leaders to carry the message. A brand name such as *Smokefree* could be created and used at different events to promote alcohol free events, especially for events for under 18-year-olds.

Conclusion

This campaign has a number of strengths. There are some potential issues and weaknesses with it. However, if it continues to carry out effective evaluation followed by necessary improvements, then it will likely make a positive change to New Zealand's drinking culture.

Acknowledgements

I would like to acknowledge and thank Wendy Moore for her contribution and advice about the ALAC campaign.

Appendix 1. Statistics

Listed below are some of the data that ALAC has gathered and presents to paint a picture of alcohol consumption in New Zealand.

- Nearly half of the New Zealand population thinks it is "okay" to get drunk. 125,000 teenagers under the age of 17 fall in the category of binge drinkers.
- 635,000 adults drink at least once a week and binge.
- 450,000 New Zealanders were binge drinking on their last occasion.

- Alcohol related crime is costly to New Zealand, costing somewhere around \$1 billion and \$4 billion a year. It costs the public health sector \$665 million a year. It costs \$240 million in crime and other related costs. It also costs social welfare \$200 million and other government spending \$330 million. In productivity, it costs about \$1.7 billion a year.
- 75 to 90% of weekend crime is related to alcohol (ALAC, 2005).

The *New Zealand Health Strategy* states that alcohol abuse is a risk factor for some cancers, stroke and heart disease. It is also known that alcohol consumption has a part to play in death or injuries on the road, suicide, assaults and domestic violence (Minister of Health, 2000, p. 5).

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6 The Cancer Society's SunSmart Schools Accreditation Programme: a critical analysis

Mary Duignan

Introduction

This chapter critically analyses the New Zealand Cancer Society's SunSmart Schools Accreditation Programme (SSAP). The paper outlines the SSAP and compares key aspects of the programme to best practice, identifying what could have improved programme development and what would strengthen the current programme. The paper particularly considers the SSAP in relation to the Treaty of Waitangi, the *New Zealand Health Strategy* (Minister of Health, 2000) and *Reducing Inequalities in Health* (Ministry of Health [MoH], 2002). The paper concludes with recommendations regarding future developments to maintain and strengthen the SSAP.

In writing this chapter I have drawn upon my current work as Cancer Society National Office Health Promotion Advisor (which involves national co-ordination of the SunSmart Schools Accreditation Programme) and discussions with Cancer Society staff involved in developing the programme. Writing this paper has been very useful as it has provided the opportunity to critically analyse the SSAP, reflect on the current strengths and weaknesses and develop recommendations as to the future direction of the programme.

Outline of the SSAP

The Cancer Society of New Zealand (CSNZ) SunSmart Schools Accreditation Programme (SSAP) provides an accreditation for primary and intermediate schools that implement comprehensive sun protection policies. The programme goal is to reduce children's future risk of skin cancer; the objective is to reduce student's exposure to excessive ultraviolet radiation (UVR) in the school setting, using a strategy of accreditation to promote "best practice" sun protection in schools. . The programme is delivered by Cancer Society health promoters supported by a comprehensive dedicated website.

The programme was launched as a National Cancer Society programme in November 2005, (having been implemented in some areas prior to this). The programme is a key initiative of the Cancer Society and is funded through donations to the Cancer Society. Current results show that 16.8% of schools are enrolled in the programme with 10.2% gaining accreditation. Thirty eight percent of schools involved in the SSAP are

decile 1–3 schools, showing the focus on low-decile schools is having an effect.

Who is the priority group and why?

The SSAP target group is New Zealand primary and intermediate students, with priority focus on low-decile schools. The target group was chosen because:

- excessive UVR during childhood increases the risk of skin cancer later in life (World Health Organization [WHO], 2003)
- UVR levels are particularly high in New Zealand from September to March inclusive, especially between 11 am and 4 pm, (Cancer Society of New Zealand [CSNZ], 2008). Therefore, children at school are at risk of excessive UVR exposure
- Children from low-decile schools are a particular priority to ensure that the SSAP works to reduce rather than increase inequalities. (The potential impact on inequalities is discussed in detail in the next section.)

Skin cancer prevention is likely to be most effective by focusing on the window of opportunity to decrease excessive UVR exposure in children. Schools are an ideal setting because they can moderate children's behaviour to reduce UVR exposure. The World Health Organization (2003) recommends prevention of skin cancer through health promotion in schools (p. 2):

"...four out of five cases of skin cancer are preventable by sensible behaviour especially during childhood ... schools provide highly cost-effective interventions that result in decreased costs in the health system".

Why is the health topic seen as important for health promotion?

Reducing the incidence of skin cancer is important because it is the most common cancer in New Zealand, estimated to cost NZ \$33 million in health care costs alone, causing around 300 deaths, 1800 new melanoma cases and 45,000 confirmed cases of non-melanoma skin cancer annually (O'Dea, 2000). Fortunately, UVR exposure is largely modifiable and much skin cancer could be prevented by decreasing excessive UVR exposure.

The SSAP fits clearly within the *New Zealand Health Strategy* objective of "Reducing the incidence and impact of cancer" (Minister of Health, 2000, p. 16), specifically Goal 4, Objective 18: "Reduce the adverse health effects of environmental hazards" (p. 10).

The SSAP also fits within *The New Zealand Cancer Control Strategy* (MoH, 2003, p. 27), Goal 1: Objective 4: "Reduce the number of people developing skin cancer due to UV radiation exposure, and *The New Zealand Cancer Control Strategy Action Plan 2005–2010* (MoH, 2005, p. 29), Goal 1, Objective 4: specific actions: "To encourage early childhood, primary and intermediate schools to adopt and implement the SunSmart Schools Accreditation programme".

However, a further emerging issue is the relationship between sun exposure, Vitamin D levels and health. The main source of Vitamin D is sunlight and recent research suggests a link between low Vitamin D levels and various illnesses (CSNZ, 2008). This could be seen to conflict with the sun protection message possibly leading to people reducing their sun protective behaviour in order to increase Vitamin D levels. However, expert opinion confirms that sensible sun protection behaviour should not put people at risk of Vitamin D deficiency (CSNZ, 2008). It is not clear what impact information about Vitamin D levels may have on public understanding and behaviour regarding sun protection, but there is potential for misconceptions about Vitamin D to undermine public understanding of the need for sun protective behaviour.

Inequalities impact

Assessment of the SSAP in regard to *Reducing Inequalities in Health* (MoH, 2002) and the Treaty of Waitangi is complex. Most cancer incidence and mortality occurs disproportionately in Māori and those of lower socioeconomic status (SES) (MoH, 2003). By contrast, melanoma incidence is disproportionately greater in non-Māori (New Zealand Health Information Service, 2007), and increases with increasing SES (Pearce, Barnett, & Kingham, 2006), possibly suggesting the SSAP could result in increased inequalities.

However, melanoma risk is related to skin colour (with lighter skin colour increasing risk), not ethnicity per se. Reeder's (2001) small study found that "self-defined Māori include a full range of skin types and a sizable proportion with a tendency to sunburn." Also, as Galtry (2004) highlights, the increased intermarriage between Māori or Pacific people and those with lighter skin has potential to increase the risk of skin cancer in some Māori and Pacific children. An additional factor is that excessive UVR exposure has other health effects such as eye damage and immunosuppression that are independent of skin colour (WHO, 2003).

The analysis of melanoma incidence and SES in New Zealand, (Pearce et al. 2006, p. 250), shows that increased incidence with increasing SES is very small and "the social gradient in melanoma is reducing to the advantage of the prosperous". They caution that melanoma incidence could become another area of inequality favouring higher SES groups.

Further, there is evidence in some countries that outcomes are worse for melanoma patients from lower SES groups. A Scottish study (MacKie &

Hole, 1996) found that those from lower SES groups were less likely to survive melanoma, and a U.S. study by Van Durme, Ferrante, Pal, Wathington, Roetzheim, & Gonzalez (2000), concluded that "...those who resided in communities with low median educational attainment were more likely to be diagnosed as having melanoma at a late stage" (Van Durme et al., p. 610).

With the focus on low-decile schools, the goals of the SSAP are consistent with the principles of *Reducing Inequalities in Health* (MoH, 2002) and the Treaty of Waitangi. Implementation of the SSAP and the Treaty of Waitangi will be discussed in the section entitled 'Involvement of priority group in planning, development, implementation and evaluation of the programme'.

To what extent is the SSAP based on an assessment of public health needs?

The dimensions of need tool developed by Hawe, Degeling, & Hall (1990) provide a useful means of assessing the SSAP, as outlined below.

Normative need (need identified according to set criteria)

The SSAP is largely based on assessment of normative need identified during the formative evaluation process (as discussed by Waa, Holibar, & Spinola, 1998, p. 12). The Cancer Society needs assessment included a comprehensive report on skin cancer prevention in New Zealand educational settings, including the history and sociopolitical context, which identified a clear normative need for intervention as a critical component of healthy public policy (Galtry, 2004). A baseline survey of 10% of primary schools provided further evidence identifying a significant lack of effective school sun protection (Reeder & Jopson, 2006).

Comparative need (need identified by comparison with those not in need)

Schools have a "duty of care" to protect children from foreseeable harm. Needs assessment revealed a comparative need to raise protection from excessive UVR to a level equal to schools' protection of students from other hazards such as drowning.

Felt need (need which people feel)

The Cancer Society is aware of felt need through parents who have contacted the Society concerned about the lack of sun protection for their children when at school.

Expressed need (need which the person says they have)

Schools expressed their inability to deal with the risk of excessive UVR exposure through the baseline survey of primary schools (Reeder &

Jopson, 2006), which established schools were experiencing obstacles to addressing sun protection such as lack of funding for shade.

Community involvement

The needs assessment phase of the SSAP did not focus on community involvement as discussed by Hawe et al. (1990). The involvement of the target group in the SSAP will be discussed in the section entitled 'Involvement of priority group in planning, development, implementation and evaluation of the programme'.

How does the programme link to other services that influence health status?

The SSAP operates independently and is funded by the CSNZ, with schools funding themselves for time/resources they spend implementing the programme. There is no requirement for schools to be involved in other health activities. The SSAP clearly links to the primary education services through its focus on the school setting. CSNZ has had to ensure that the SSAP does not promote inactivity (e.g., requiring children to stay indoors at lunchtime), as it does not want to conflict with programmes designed to reduce obesity.

The SSAP has a key link to the Ministry of Health's Fruit in Schools (FIS) programme (<http://www.moh.govt.nz/fruitinschools>). FIS provides free fruit for several years to very low-decile schools on condition they make a commitment to sun protection, smokefree, physical activity and nutrition. This link has helped put sun protection on the agenda of low-decile schools and therefore enabled Cancer Society health promoters to work with them on sun protection. These schools may not necessarily be formally involved in the SSAP at this stage and therefore may not show up in SSAP statistics.

Project partners

Prior to development of the SSAP, CSNZ held a workshop with key stakeholders. However, Ministry of Education support for the SSAP was limited because in the deregulated education environment the Ministry advised they could not direct schools to participate, advising that each school would have to individually commit to SSAP. The staff from the Ministry of Health did not attend the initial workshop despite being invited, and have shown little convincing interest in the SSAP despite CSNZ efforts to raise their awareness of the issue. Following discussions with CSNZ the Education Review Office has included a reference to protection from excessive UVR exposure in their checklists (Education Review Office, 2006).

Developing partnerships to advance the SSAP has been difficult and Cancer Society staff have found the lack of intersectoral support is a major challenge to the SSAP particularly as the CSNZ has limited

resources. More involvement by the Ministry of Education in the issue of sun protection in schools could give schools an added motivation to become involved the SSAP. Given the toll from melanoma the Ministry of Health's lack of action in this area is concerning.

Involvement of priority group in planning, development, implementation and evaluation of the programme

The SSAP was modelled on a programme recommended by the World Health Organization (2003), successfully operating in Victoria, Australia. Prior to the launch of the SSAP, CSNZ undertook considerable consultation with Australia and several CSNZ divisions successfully trialled a similar programme.

In development of the SSAP, CSNZ held a focus group of principals from low-decile schools to gain information regarding delivery aspects of the SSAP, which resulted in modifications to the delivery of the programme (e.g., having resources online instead of in hard copy).

Unfortunately, due to time constraints greater involvement of the overall target group and the priority group (low-decile schools) in the planning, development and implementation was not possible. This is largely because CSNZ wanted to start delivery of the programme in the summer of 2005 and limited resources restricted the opportunities for consultation.

In implementing the programme health promoters have established a close relationship with schools in their areas. This involvement and consultation with schools provides ongoing feedback (an informal process evaluation) and helps to identify any concerns, which are then addressed. As discussed earlier, Fruit in Schools has raised the interest in sun protection and facilitated health promoters' involvement in low-decile schools.

Martin (2002) identifies the key principles of the Treaty of Waitangi highlighting the importance of partnership, and participation of Māori in planning and delivery. Māori were included in the focus group and health promoters work with Māori teachers and kura in their local areas, helping them to implement the SSAP in their schools.

As Waa et al. (1998), Minkler and Pies (1997) and *Reducing Inequalities in Health* (MoH, 2002) emphasise, consultation is vital. Wider use of focus groups, more consultation with Māori and involvement of schools implementing effective sun protection would have been enormously helpful, in identifying potential barriers (such as the cost of sunhats) and tailoring the programme to take account of these barriers.

Specific health promotion actions

The SSAP focuses on policy and practice, rather than an individualised campaign, addresses several areas of health promotion action identified in the *Ottawa Charter for Health Promotion* (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986), and fits within the “population health” approach of the Ministry of Health (2002, p. 1).

- i. **Promoting healthy public policy:** the SSAP focuses on comprehensive sun protection policy. However, as discussed, attempts to get broader level public policy through the Ministry of Education have been unsuccessful, so the policy intervention focus is at the individual school level.
- ii. **Creating supportive environments:** by creating a behavioural and physical environment which supports sun protection, the SSAP aims to make sun protection the easy choice (expected behaviour and not up to the individual child).
- iii. **Strengthening community action:** the SSAP has a strong aspect of empowerment as it supports a community action approach, encouraging schools to consult with the whole community in the development and implementation of the policy. However, as discussed by Minkler and Pies (1997), the degree of community consultation and involvement may be limited, as the SSAP focuses on putting sun protection on the agenda and has specific criteria that need to be met.
- iv. **Developing personal skills:** the SSAP addresses individual knowledge and skills by requiring sun protection education for students. This promotes understanding of the need for sun protection that may flow over into the wider aspects of the child’s life.

A major strength of the SSAP is the comprehensive approach that enhances the likelihood of success and gives it potential to have an impact wider than the initial school setting. This is in line with the *Jakarta Declaration on Leading Health Promotion into the 21st Century* (World Health Organization, 1997, p. 2), which highlights the need for a comprehensive approach to health promotion.

What health promotion theory underpins the SSAP?

As the CSNZ documentation does not identify a theoretical basis for the SSAP, consideration is now given in this chapter to how using *Diffusions of Innovation Theory* (Nutbeam & Harris, 2004) could have influenced the SSAP and also how it could be used currently to inform the direction of the programme. *Diffusions of Innovation Theory* is appropriate because it focuses on factors affecting the speed of adoption of innovations and is

particularly applicable in promoting best practice (the key strategy of the SSAP).

Utilising the theory in the initial development of the SSAP would have identified the need to carefully address the following key factors identified by Nutbeam & Harris (2004, p. 28):

- **compatibility** (with the socioeconomic and cultural values of schools)
- **relative advantage** (to schools to be involved in the SSAP compared with continuing their current practices)
- **simplicity** (how simple it is for schools to implement the SSAP)
- **perceived risk of adoption** (whether schools perceive that implementing the SSAP may have negative consequences)
- **observability** (ability to observe the effects of involvement in the SSAP).

In particular, this theory (which emphasises research and planning to maximise success) would have provided a guide, identifying the critical need for research with the target group across these factors to identify how to structure/deliver the programme to maximise uptake.

However, as motivating schools to make an application to become accredited is an ongoing challenge for the SSAP, the theory can be used at this stage, as it can identify key areas needing to be addressed if uptake is slow. Using the theory to address the need to boost uptake indicates research is needed to understand how these key factors are operating, particularly schools' perceived cost effectiveness. Understanding what schools perceive as the benefits of the SSAP is crucial, as there may need to be a greater emphasis on incentives to encourage schools to apply (such as funding for sunhats for low-decile schools).

Evaluation

The SSAP has a detailed evaluation plan developed with advice from evaluation experts. A strength of the evaluation plan is that it was built into the SSAP at the development stage and has been used to improve the programme as recommended by Waa et al. (1998, p. 8).

Formative evaluation (Waa et al., 1998) has been extensive, including comprehensive needs assessment, extensive literature review, and development of clear goals, objectives and strategies for the SSAP (Galtry, 2004). The baseline survey formed part of the needs assessment and provides an important benchmark for future evaluation. Process evaluation is ongoing and includes analysis of application information, website usage analysis, teacher evaluation of curriculum resources, and feedback to health promoters. To evaluate what was hindering and

helping the SSAP, key informant interviews with school staff were conducted recently and *Diffusion of Innovation Theory* was used to guide these interviews. The interview results were very positive and identified the need to promote the SSAP more widely, which CSNZ is currently considering. Process evaluation has identified a major issue regarding a lack of capacity of health promoters to work with schools, which is limiting the reach of the SSAP.

Outcome evaluation includes statistics of accredited schools and a planned repeat of the baseline survey after four years to identify changes in the levels of sun protection and differences in accredited versus non-accredited schools (Reeder & Jopson, 2006). As outlined above, current results show that 16.8% of schools are enrolled in the programme with 10.2% gaining accreditation. Over a third of enrolled schools are decile 1–3 schools, showing that the focus on low-decile schools is having an effect.

However, the evaluation is not addressing several questions. Firstly, are accredited schools actually implementing the sun protection methods they state in their policy? Some method of evaluating the actual implementation of policy would enhance the evaluation, as at present it relies on the assumption that schools are carrying out their policies. This would require observational research in schools to compare the actual behaviour and environment with the policy. CSNZ is aware of that an observational component would be valuable and is considering including this with the repeat survey of schools planned for 2009.

Secondly, it would be very useful to know if the sun protection education is having an impact on student knowledge, beliefs or behaviour outside the school setting. This is not part of the planned evaluation as CSNZ has limited resources; however, it would be a very useful to understand the impact of this school-based education as it may reveal information relevant to other health issues.

Conclusion

This paper has critically reviewed the CSNZ SSAP. The paper shows the strengths of the SSAP are:

- the population health focus
- the multiple levels of intervention
- the focus on low-decile schools
- the potential to work with other issue-based health promotion initiatives (e.g., Fruit in Schools).

The paper identifies concerns regarding the SSAP in relation to:

- the limited opportunity for involvement of the priority group in development and implementation
- a lack of capacity of health promoters to work with schools
- the difficulty of working in a deregulated education environment where the Ministry of Education can not direct schools regarding sun protection policy
- the possibility that misconceptions about Vitamin D will influence uptake of the programme.

Recommendations

1. Continue to advocate with Ministry of Education and Education Review Office for higher priority on schools sun protection.
2. Continue to advocate with Ministry of Health for support for SSAP through district health boards (DHBs); for example, to explore possible DHB funding of CSNZ health promotion staff to work with schools.
3. More focus on reducing inequalities for Māori applying the key principles of the Treaty of Waitangi of partnership, participation and protection. This would include the involvement of Māori in the further development of the programme, specifically staff from kura and low-decile schools with a large Māori population.
4. Greater consultation with schools (particularly low decile) to understand what incentives would encourage schools to join the programme.
5. Evaluate successes with case studies of successfully accredited low-decile schools to identify specifics of what has been effective and could be transferred to other schools.

Acknowledgements

I would like to thank my colleague Dr. Judith Galtry, as well as Cancer Society Health promoters who deliver the programme, Dr Tony Reeder and Jan Jopson from the University of Otago (who carried out the baseline survey) and colleagues in Australia working on similar programmes.

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7 The Smokefree Cars television commercial

A well-developed, implemented and evaluated campaign, but where is the involvement of the priority group?

Rhiannon Newcombe

Introduction

This report presents a critical analysis of the Smokefree Cars campaign launched by the Health Sponsorship Council (HSC) in 2006. The goal of the campaign was to reduce children's (13 years and under) exposure to second-hand smoke (SHS) in cars by increasing the proportion of parents and caregivers who do not allow smoking in private cars. A television commercial was the key component of this campaign, and will be the focus of this report. In this report, the campaign will be reviewed in relation to te Tiriti o Waitangi (the Treaty of Waitangi, New Zealand's founding document between Māori and the Crown, first signed in 1840) and three key health promotion documents, the *New Zealand Health Strategy* (Minister of Health, 2000), *Reducing Inequalities in Health* (Ministry of Health [MoH], 2002b) and *TUHA-NZ* (Martin, 2002).

In this report, I argue that the Smokefree Cars television commercial is a strong national health promotion campaign operating in line with many best practice principles, although there is room for improvement. The strength of the campaign lies in its development, identification of priority groups, implementation, and evaluation, whereas relative weaknesses include lack of consultation, partnership, and involvement of the priority group.

Defining the health issue

Smoking and second-hand smoke

Smoking is the chief cause of preventable death in New Zealand and is responsible for an estimated 4,700 deaths per annum (MoH, 1999). Reducing smoking has international and national mandates (Minister of Health, 2000; World Health Organization, 2003). It is one of the 13 priority population health objectives of the *New Zealand Health Strategy*, and is related to nine other priorities, including nutrition, obesity, and cancer (Minister of Health, 2000; MoH, 2004).

SHS is the combination of side-stream smoke and exhaled smoke (Health Sponsorship Council, 2006). Exposure to SHS is also a health concern, as it contributes to both mortality and morbidity. It is estimated to be responsible for 350–400 deaths per annum, and implicated in other

health conditions, including lung disease, meningococcal disease and acute stroke (Health Sponsorship Council [HSC], 2006). Inequalities exist with respect to SHS exposure and its effects—Māori, Pacific and low-income New Zealanders bear the greater burden (HSC, 2006; HSC, 2002). Preventing harm from SHS is one of the five objectives of the national five-year tobacco control plan (MoH, 2004).

Second-hand smoke exposure in cars

Research into the effects of exposure to SHS in cars is in its infancy; however, initial evidence suggests it is an important health concern. SHS exposure in cars is 23 times more toxic than in homes (Ontario Medical Association, 2004), and causes damage long after smoking has stopped (Matt, Quintana, Hovell, Bernert, Song, Novianti et al., 2004).

Smoking in cars is common. In New Zealand, three-quarters of smokers report that they 'sometimes' or 'always' smoke in their car (Milne & Gough, 2006), compared with approximately half who smoke inside their home (Milne & Gough, 2006). Furthermore, 40% of Year 10 children report exposure to SHS in cars (Darling & Reeder, 2003) and children are particularly vulnerable to SHS (Ontario Medical Association, 2004). Taken together, the findings suggest that targeting cars is a good setting to reduce exposure to SHS.

The Smokefree Cars programme

The Ministry of Health contracted the HSC to deliver a programme to reduce New Zealanders' exposure to SHS in private settings (homes and cars). This followed Ministry initiatives to reduce exposure to SHS in public settings, which included legislative changes. Private settings were identified as a critical next step. The aim of the Smokefree Cars campaign was to increase the number of parents and caregivers who adopted strategies which reduced children's exposure to SHS in cars.

The television commercial

The television commercial was the main component of the campaign, but the campaign also included resources, and magazine and radio advertisements. The television commercial began in September 2006 and ran intermittently for three months, and then again in early 2007. The three objectives of the television commercial were:

1. increase parents' and caregivers' perception of the threat posed to children by second-hand smoke
2. increase parents' and caregivers' knowledge of how to address the threat posed to children by second-hand smoke in cars
3. increase parents' and caregivers' confidence in their ability to make their cars smokefree.

Consistent with Waa, Holibar, and Spinola (1998), the objectives were clear, measurable, and attainable (Waa, Holibar, & Spinola, 1998).

The television ad shows a mother pulling up in a car outside a school to pick up her two older children from soccer practice. She has a young child in a car seat in the back. The mother lights up a cigarette and the smoke from the cigarette can be seen wafting through to the back of the car and around the child in the car seat. The television commercial depicts second-hand smoke and encourages smokers to not smoke in their car, even when they are alone. The commercial also shows smoking around children but introduces a change of behaviour due to social pressure.

Needs assessment

The directive from the Ministry of Health to focus on reducing exposure to SHS reflects a normative or comparative need (Hawe, Degeling, & Hall, 1994). Formative research formed the basis of the needs assessment for the campaign. It showed a high prevalence of smoking in cars, and this, combined with evidence of detrimental health effects of exposure to SHS in cars, provided evidence of normative need. Research also identified a comparative need, as Māori, Pacific and those with lower income bear the greater burden of harm from tobacco (HSC, 2006).

A weakness of the campaign was that there was no investigation of the felt or expressed needs of the community. Investigation of felt or expressed needs may have revealed an alternative priority or need (Hawe et al., 1994). Potential alternatives are that 1) the same priority issue was identified (reducing exposure to SHS), but the avenue to address it was different (e.g., increasing cessation services); or 2) a different priority issue was identified (e.g., poverty).

Waa et al. (1998) argue that even national campaigns can address local issues through regional canvassing, and that identification of needs at multiple levels is desirable (Waa et al., 1998). Similarly, I argue that it is critical that campaigns operating at a national level, with direction from the Ministry of Health, conduct felt needs assessments in order to determine the health issue for the priority group. This also endorses the position of the *TUHA-NZ* framework that best practice should include priority group participation at every stage (Martin, 2002).

Theoretical framework

Health promotion programmes that have a theoretical basis are more likely to result in success, because they are more evidence-based (US National Institutes of Health [NIH] & National Cancer Institute [NCI], 2005). The theoretical framework of the campaign was Social Cognitive Theory. A behaviour change theory was chosen as the campaign aimed to bring about change in the behaviour of parents and caregivers (Milne, K,

personal communication, 2007). A strength was tailoring the theory to fit with the desired outcome (behaviour change) (US NIH & NCI, 2005).

The campaign aimed to address and apply the central tenants of Social Cognitive Theory. For example, observational learning is a key construct (US NIH & NCI, 2005), so the television commercial included the modelling of the desired behaviour (a smokefree car) in a relevant and believable context. Alternatively, the television commercial did not encompass other tenants of Social Cognitive Theory: it did not allow for the reinforcement behaviour change, which is a key component of the theory (US NIH & NCI, 2005).

There are some criticisms of using Social Cognitive Theory as the theoretical basis. It does not address the broader determinants of health—the focus is on individual behaviour change, rather than systemic/structural change (US NIH & NCI, 2005). The broader determinants of health are guiding principles and focus for the *New Zealand Health Strategy* (Minister of Health, 2000), and some argue, the best level to intervene to reduce inequalities (MoH, 2002b). Internationally, for example, some states and countries have adopted legislative bans to smoking in cars (e.g., South Africa; South Australia, Tasmania).

At the same time, however, it is difficult for the health sector to intervene at this level (MoH, 2002b). There is also support for intervening at the individual/ interpersonal levels to enact change (US NIH & NCI, 2005), and a mandate that work on reducing inequalities should occur at all levels (MoH, 2002b).

The actions of the campaign

As described in the Ottawa Charter, there are a number of different health promotion actions (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986). The television commercial encompassed the Ottawa Charter actions of creating a supportive environment, developing personal skills and enabling (World Health Organization et al., 1986).

The main activity was a social marketing programme involving a mass media campaign. Social marketing uses the principles and techniques of marketing with regard to “helping to achieve and maintain desirable social change” (Donovan & Henley, 2003, p. 1). Mass media campaigns have some evidence of increasing awareness and behaviour change in relation to public health issues (Donovan & Henley, 2003), including tobacco control (White, Tan, Wakefield, & Hill, 2003). Importantly, the mass media campaign was supported by community action initiatives at a local level (through Public Health Unit and iwi providers). Community action included presentations at regional and community health workers meetings, funding, and resource dissemination. The HSC also supported local initiatives with resources and funding, and health workers informed

the development of campaign resources/materials. Health promotion initiatives that operate at different levels are preferable and more successful (US NIH & NCI, 2005; Glanz, 1996).

However, I argue that *more* emphasis on community action could have improved campaign effectiveness in the longer term, as it could enhance sustainability and ownership of the Smokefree Cars message. In fact, there is concern that health promotion initiatives utilising only mass communications have only modest impact (McGuire, 1984).

The priority group and their involvement

The target group for the television commercial was children aged 13 years and under. This reflects that children are particularly vulnerable to the effects of SHS (HSC, 2002). However, the intervention group differed. The primary audience for the Smokefree Cars strategy were parents of children aged 13 years and under who smoke, and the secondary audience was identified as caregivers and other adults, particularly smokers, who regularly travel in cars with children aged 13 years and under. The intervention group was chosen because they were most able to effect change for children's level of exposure to SHS in cars (Milne, K., personal communication, 2007).

Within this audience, Māori, Pacific and low-income parents and caregivers were identified as a *priority* audience. This was because of higher rates of smoking amongst these groups, heightened SHS exposure, and that they bear the burden of tobacco-related disease (MoH, 2004; Whitlock, MacMahon, Vander Hoorn, Davis, Jackson, & Norton, 1998). Furthermore, the prioritising of these groups was consistent with the approach to reduce inequalities outlined in ministerial guidelines, such as the *New Zealand Health Strategy* (Minister of Health, 2000) and *Reducing Inequalities in Health* (MoH, 2002b).

In New Zealand, there is also a mandate for the health care needs of Māori to be prioritised by mainstream health promotion providers. One aim is to reduce health inequalities, consistent with the crown's obligations as a partner in te Tiriti o Waitangi (Minister of Health, 2000; MoH, 2002b; & MoH, 2002a). Te Tiriti o Waitangi, as New Zealand's founding document, signifies the relationship between the Crown and Māori as tangata whenua of New Zealand. The three articles include many references to the health of Māori. The prioritisation of Māori health needs in the Smokefree Cars campaign is also consistent with *TUHA-NZ*, which is a framework for delivering health promotion within a treaty-based perspective (Martin, 2002). Prioritising the needs of Māori and the other priority groups, was a strength of the current campaign.

A relative weakness, however, was the level of *participation* of the priority groups throughout the different stages of the campaign. In fact, I argue that this was the main weakness of the campaign. It did not have an external reference group, which limited consultation with, and

participation of, members of the priority groups. The lack of participation of Māori, in particular, is in contrast to the proposed goal of achieving Māori participation outlined in the *New Zealand Health Strategy* (Minister of Health, 2000), *Reducing Inequalities in Health* (MoH, 2002b), and *TUHA-NZ* (Martin, 2002). It is clearly stated in these documents that Māori should be active partners at all levels. Enhancing participation of priority groups may have also contributed to reducing inequalities (MoH, 2002b), and reduce unintended consequences (Minkler & Pies, 1997).

One reason given for the lack of consultation and participation of the priority group was that the campaign was an extension of the Smokefree Homes campaign (Milne, K., personal communication, 2007). The Smokefree Homes campaign had an external reference group, comprising representatives from the tobacco control community (including NGOs, Māori and Pacific providers). However, best practice contends that consultation and participation should have also been conducted specifically for the development, implementation, and evaluation of the Smokefree Cars campaign (Minister of Health, 2000; Martin, 2002, & Hearn, Martin, Signal, & Wise, 2005).

Although involvement of the priority groups was limited, there were some instances where involvement occurred. The television commercial was concept tested with the priority groups and the concept chosen was one that resonated more with Māori and Pacific peoples. Bilingual resources and merchandise were also developed to address the target audience needs (Vidovich, M., personal communication, 2007).

Project partners

The issue of partnership is paramount to te Tiriti o Waitangi, and is outlined as important in the *TUHA-NZ* framework, the *New Zealand Health Strategy* (Minister of Health, 2000), and other ministerial and health promotion guidelines (MoH, 2002b; Martin, 2002). In fact, I argue that partnership is crucial to best health promotion practice.

In the Smokefree Cars campaign, there were a number of key external Stakeholders, including the Smokefree/Auahi Kore working group, The Quit Group, smokefree regional co-ordinators, grassroots health promoters (Public Health Unit and iwi providers), Plunket and the Ministry of Health. The breadth of partnerships involved in the campaign reflects both a top-down and bottom-up representation, which is important to determine the needs of each perspective (MacKinlay, 1993). However, as argued previously, involvement of the priority group as a partner in the campaign could have been improved and strengthened.

Informal discussion suggested the Smokefree Cars partnerships made worked well (Vidovich, M., personal communication, 2007). A potential factor for this success was that the Smokefree Cars campaign was an extension of the Smokefree Homes campaign, so partnerships had already been established. An objective measure of the partnerships (an

annual stakeholder survey) also suggested successful partnerships. Thirty-five health promoters reported on the campaign communication, and 83% of those involved with the campaign said they were “very happy” with the communication (Kia Maia Bicultural Communications, 2006).

Although the partnerships appear to work well, one issue of concern is that the Ministry of Health is not following up on the Smokefree Cars initiative. Whilst district health boards are required to report on Smokefree Homes, they are not required to do so for the Smokefree Cars programme. This is in contrast with best practice, which would suggest that initiatives with multiple levels of involvement are preferable (Minister of Health, 2000; US NIH & NCI, 2005). The long-term success of the campaign, therefore, depends on local providers continuing to promote the issue.

Campaign links to other services

As argued above, health promotion services that operate at multiple levels and provide consistent messages are preferable (Minister of Health, 2000; US NIH & NCI, 2005). The campaign is an extension of the Smokefree Homes campaign and part of the Smokefree Community programme of the HSC, which forms part of the wider tobacco control community in New Zealand. Critically, the campaign links with both upstream and downstream activities and initiatives.

The campaign links with upstream initiatives, such as legislative changes to make workplaces smokefree (e.g., Smoke-free Environments Act 1990). It also links with downstream initiatives (e.g., Plunket car-seat scheme). The Quit Group is another key service. Although the Smokefree Cars was not a cessation initiative, it was envisaged that a by-product of the campaign could be an increase in demand for cessation services, so links were developed with The Quit Group. Quitline workers were trained to encourage callers to make their cars smokefree, thereby reinforcing the message of the television commercial.

Evaluation

The evaluation of the Smokefree Cars television commercial is a strength of the campaign. It involved formative, process and impact evaluation phases.

Formative

The formative evaluation phase included four projects that contributed to the needs assessment and determined the strategies, approaches, and direction of the campaign (Donovan & Henley, 2003). First, the HSC completed a literature review on SHS in cars, which identified the harmful health effects of exposure to SHS in cars. Second, a qualitative study was undertaken with the intervention groups (Gravitas Research and Strategy

Limited, 2005). Donovan and Henley (2003) argue that qualitative research is vital to the formative stage, as it is critical to idea generation (Donovan & Henley, 2003). Third, the television commercial was concept tested, which is important in getting the right message to the priority audience (Donovan & Henley, 2003). Here, the television commercial selected resonated most with the priority audience, which I argue ultimately should render the campaign more effective. Finally, a population survey established a baseline measurement of current knowledge, attitudes and behaviour.

Process

Another strength of the campaign was that it involved process evaluation. Hawe, Degeling, and Hall (1994) argue that process evaluation is crucial to determine the quality and reach of a campaign, and in fact, they state that moving from formative to impact evaluation would be unsound practice, as "it would be silly to go looking for effects when the programme itself is not functioning optimally" (Hawe et al., 1994, p. 60). Most importantly, the process evaluation determined if the television commercial showed any unintended consequences. A number of theorists have argued from an ethical standpoint that it is vital to address potential unintended consequences for health promotion, in order to avoid inadvertent reproduction and transmission of the standards of the dominant culture (Minkler & Pies, 1997; Guttman & Salmon, 2004). Unintended consequences can also label, increase stigma, social gaps, and inequalities (Guttman & Salmon, 2004). Guttman and Salmon (2004) argue this could be especially problematic for public communication campaigns delivered at a national level (Guttman & Salmon, 2004). For example, empirical research has found differences in the responses to health advertising on the basis of the audience's experiences (Shoebridge, O'Ferrall, Howat, & Mitchell, 2003). Using process evaluation is one way to combat unintended consequences, as it means that campaigns will be thoroughly evaluated, rather than just "well-meaning" (Minkler & Pies, 1997).

The process evaluation assessed the initial response, recall and behavioural change to the Smokefree Cars campaign following the first two flights of the television commercial in September 2006 (Gravitas Research and Strategy Limited, 2007). There was high prompted recall of the television commercial (90%), and prompted and unprompted recall was strongest for Māori (Gravitas Research and Strategy Limited, 2007). Importantly, no unintended consequences were identified (Gravitas Research and Strategy Limited, 2007).

Impact

The impact evaluation phase of the television commercial has been planned and the results are due in June 2007. The nationwide Smokefree/Auahi Kore Monitor will be used. The monitor is a cross-sectional telephone survey of 2,500 individuals and includes an over-

sample of Māori, which is in line with proposals to increase the precision of information on New Zealand's indigenous population (Martin, 2002).

As Waa et al. (1998) assert is best practice, monitor questions were linked with the campaign objectives (Waa et al., 1998). Questions assessed the awareness, knowledge, and impact of the television commercial as well as behaviour (smoking in cars and SHS exposure). I argue that subsequent annual monitors (e.g., 2008) should continue to monitor these issues to provide continuous data on the impact of the television commercial. An improvement could be further probing of unintended consequences of the television commercial to refine the campaign (Waa et al., 1998).

Finally, the data around SHS exposure in cars collected in the Smokefree/Auahi Kore Monitor has been included in the WAKA project, run by researchers at the Wellington School of Medicine. This project investigates the developing strategies to reduce smoking uptake and SHS exposure of New Zealand children.

Outcome

To date, no outcome evaluation has been specifically planned, and this would be necessary to determine the long-term effects of the campaign (Waa et al., 1998; Hawe et al., 1994). However, population monitors, such as the New Zealand Tobacco Use Survey, could be used to inform the long-term outcome of the campaign. Outcome evaluation could involve assessing the percentage of people exposed to SHS over the next few decades, and monitor mortality and morbidity rates associated with SHS exposure.

Collectively, I argue that the evaluation of the television commercial is a strength of the campaign. This is due to of the breadth of work and that best practice standards were typically followed (Waa et al., 1998). Although evaluation was a strength, improvements could be made. For example, as outlined by Hawe et al. (1994), impact evaluation using a 'non-equivalent groups' design, with control and exposed groups (to the television commercial) would provide a stronger test of impact and rule out other potential explanations for the observed findings (Hawe et al., 1994). Another alternative is for participants to be followed up longitudinally to reduce error (Anastasi & Urbina, 1997).

Conclusion

As outlined, the Smokefree Cars television commercial was a strong health promotion campaign, reflecting many elements of good health promotion practice. It addressed an important health issue, had a needs assessment and theoretical basis, involved evidence-based actions, had good links with tobacco control services and partners, and strong evaluation. It also clearly defined the priority group, and there was a strong focus on reducing inequalities relating to SHS exposure.

Ultimately, the good process that was used should render the impact and outcome of the campaign more successful than if a less robust process had been followed.

However, although the campaign was strong, a number of improvements could have been made. Primarily, I argue that better consultation with priority groups should have occurred throughout all phases of the campaign, to identify their priority health issues and needs (the felt need), and moreover to determine that the campaign was in partnership. This could also potentially increase the sustainability of the campaign in the long term, as the community would feel greater ownership of the campaign and its messages. This is of particular importance, as the Ministry of Health is not following up on this initiative, and so long-term success appears to rest with the work of local providers continuing to promote the issue. A further criticism of the present campaign is that the broader determinants of health were not a focus of this campaign, although it should be noted that the campaign represents one strategy in a broader comprehensive tobacco control programme.

The challenge is for the tobacco control sector to continue to identify pathways to improve New Zealanders' SHS exposure that encompass all levels of health promotion. I argue that involvement of the priority group at all levels will be crucial to addressing this, and in particular, to reduce inequalities in SHS exposure and subsequent morbidity and mortality.

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Regional programmes

8 iMove Nekeneke Hi!: a critical analysis

Bronwyn Ferry

Introduction

This chapter provides a critical analysis of the health promotion programme iMove Nekeneke hi! (iMove) in relation to health promotion best practice in a New Zealand context, particularly considering the Treaty of Waitangi, *Reducing Inequalities in Health* (Ministry of Health [MoH], 2002) and the Ottawa Charter (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986). iMove is a physical activity initiative working within an education setting, across the MidCentral District (i.e., Tararua, Horowhenua, Manawatu and Palmerston North regions). iMove, previously Walking Wednesday and Biking Thursdays, was first developed by Roadsafe Central Coordinator Mary Mitchell. Roadsafe Central receives funding from Land Transport New Zealand and iMove began as a response to the need to develop safe cycling practice in schools. Mitchell opted to build on existing programmes, developing a broader concept that could encompass the complete message of active transportation, supported by road safety themes. A pilot began in March 2006, involving two schools. The programme grew rapidly and in March 2008 30 schools participated (Mitchell, M., personal communication, 2008).

Students voluntarily sign up to walk and ride to school on a given day for a month. They receive high-visibility vests and a trip card, which goes into a draw for a selection of spot prizes and a top prize of a new bike. The programme runs in the first and fourth school terms.

Priority groups

iMove aims to increase the use of safe walking or cycling as a transport option for primary and intermediate school students, staff, families and whānau.

Māori, Pacific and lower socioeconomic communities have been identified as high-priority populations for health intervention in the MidCentral District (MidCentral District Health Board, 2005). iMove developers, whilst conscious of these priority population groups and the need to focus on health inequalities, chose to run the pilot with schools that were interested in being involved, rather than based on health need. This opens the programme to potentially increasing existing disparities if high-needs schools do not access the programme in at least equal numbers as low-needs schools, an issue that programme evaluators need to be aware of.

Importance of health topic for health promotion

Obesity is now a significant public health issue. Excess body weight can have serious health consequences and is a priority area for action in New Zealand (Minister of Health, 2000). The best chance to reduce the prevalence of type 2 diabetes and the co-morbidities linked to obesity and excess body weight in adults is by reducing the risk of obesity in childhood (Taylor et al., 2006).

Adequate physical activity levels, alongside a healthy balanced diet, are recommended for maintenance of desirable body weight (Ministry of Health, [MoH] 2003a). Factors impacting on an individual's ability to be physically active and eat well are wide ranging and involve many organisations and agencies. Wider social determinants may impact on an individual's health, by limiting options and opportunity to make the healthy choice the easy choice (MoH, 2004).

Indications are that New Zealand's children and young people are following the global trend toward increased overweight and obesity (MoH, 2003b). This may be due, at least in part, to significant changes in social and physical environments that impact on levels of physical activity (Lopez & Hynes, 2006). Urban planning, for example, has become weighted in favour of the motorcar, to the detriment of active transport modes such as walking and cycling, historically the method of getting to and from schools in New Zealand (Palmerston North City Council, 2007).

Adopting active transport methods to and from schools has the potential to increase levels of physical activity and support the maintenance of healthy body weight. Basing iMove in a school setting focuses on starting with the young to promote and foster healthy long-term habits. Active transport methods are inexpensive and healthier modes of travel to and from education settings than the conventional motorcar (Palmerston North City Council, 2007).

Obesity has been highlighted as a pressing health issue but with effective use of health promotion programmes that promote physical activity in key settings such as schools, there is the potential to impact on the growing size of New Zealand's young people.

Assessment of public health need

In 2004 work began on developing a Manawatu Active Transport Strategy (MATS). This was a joint venture between Palmerston North District Council and Manawatu District Council (MDC), and involved other key agencies that went on to develop iMove. The development of MATS was based on needs assessment and review of current data and trends. Promotion of active transport in an education setting was identified as a priority area for action, especially in primary and secondary schools (Palmerston North City Council, 2007).

Cycling to school in the Manawatu district continues to decline, with the private motorcar increasing as the main form of transport (Palmerston North City Council, 2007). In addition to the health benefits of active forms of transport, there is potential to address congestion issues on some of the key arterial routes, especially around schools. Improving the uptake of alternative modes of transport also aligns to objectives in the *National Energy Efficiency and Conservation Strategy* (New Zealand Government, 2007).

There is the potential to do a needs assessment within each school prior to uptake of iMove. A strength based needs analysis, as used within the local Health Promoting Schools process, provides an opportunity for schools to prioritise their own issues. This type of assessment would allow iMove to be implemented into schools that have active transport as one of their top priorities based on need, rather than being sold a concept that may not address their most pressing health issues.

Link to other services influencing health status

iMove was developed by Road Safe Central–Manawatu. The original concept was worked up with Police, Palmerston North City Council and the education sector. Due to the scope of the project, other agency involvement has been necessary. Public health services, non-government organisations, local iwi providers, primary health organisations, media, local authorities and the regional sports trust are involved in programme delivery to varying degrees.

Partner agency representatives are the 'face' of iMove. Each school has an agency representative present at the school gate, responsible for stamping reward cards, issuing spot prizes, encouraging and recognising students' participation and effort. This type of involvement provides opportunities for partner agencies to develop relationships with schools and to promote their own programmes, which link well to iMove's outcomes; i.e., Active Schools (SPARC), Health Promoting Schools (MoH, 2003c).

While other services have been willing to assist in delivery of iMove, discussions held during this review of this project revealed there is potential to form stronger connections between iMove and partner agency programmes. There are natural links to many existing programmes from which iMove could benefit such as Health Promoting Schools. Adopting Health Promoting Schools' 'whole school' methodology, as has been done by some schools, and allowing schools to prioritise their health needs could benefit both programme providers and participants. This is but one example of how synergies could be created to both expand and enhance not only iMove, but the effective delivery of health promotion concepts in a co-ordinated and cohesive way into an education setting.

Project partnerships

There is strong evidence of good intersectoral support and participation with iMove. In each district multi-agency involvement appears to be a key to success, providing the human resources for the programme to run effectively. The use of local expertise and knowledge is evident in the regular programme reporting reviewed by the author. Local identities, such as district mayors, provide media and promotional opportunities and demonstrate united cross-sector involvement.

With the significant growth of iMove facilitation has recently been contracted to one of the partner organisations, Sport Manawatu. This is a natural progression with Sport Manawatu staff already involved in assisting programme delivery. This is an example of organisational cooperation developing into collaboration (VicHealth, 2003).

Priority group involvement in planning, development, implementation and evaluation

There is no evidence of any involvement from the main priority group, school children, in the planning and development of iMove. This is acknowledged by the programme developers and they have reflected that it would have been ideal to have consulted with students from the initial development stages. Some issues identified, such as what were appropriate rewards and how to use reward cards, could have been avoided if pretesting had been undertaken and students had led development.

Schools have delivered iMove in differing ways and there is evidence that some schools have developed student-led activities and a whole-of-school approach. The whole-of-school approach enables everyone to participate in activities, at all levels (MoH, 2006). Programmes do not work in isolation but are related to the curriculum, school ethos and involve participation from students, staff, management and the wider school communities. Appropriate consultation may indicate that children and/or parents want to be more involved in the development and delivery of iMove. This would begin to develop iMove as an integral part of school practise, much more than a one-month activity undertaken twice a year.

The use of Treaty of Waitangi-based practise, utilising tools such as TUHA-NZ (Martin, 2002), would assist in enabling Māori participation at all levels of the programme, ensuring optimal gains for tangata whenua. The Treaty article of Kawanatanga would see Māori participation in all aspects of iMove from development, to implementation and evaluation.

Māori health aspirations should be advanced by iMove, as a contribution to the reduction of existing health inequalities (MoH, 2002). This requires an understanding of current realities for Māori and what their health aspirations are. Consultation with communities and then adaptation of iMove to best realise these aspirations is achievable with the

programme's proven flexibility. This action should directly benefit oritetanga, the right of Māori to enjoy societal benefits equitably with other citizens (Martin, 2002), with improvement of Māori health outcomes becoming a focus of iMove. It appears timely to review the overall programme goal of iMove to reflect these priorities.

Specific health promotion actions

Healthy public policy

iMove does not have public policy development as a requirement. There is an optional recommendation that schools develop an active transport policy. This development could be a compulsory requirement for iMove participation, though this is potentially a barrier for some schools. As schools self-identify policy and active transport plans as a priority then support is available for development. iMove participation is then the catalyst for this action rather than the dictator.

Community development/action

iMove was designed to place no burden on schools with all person power supplied. Community development was not an intended iMove outcome, yet in some instances this has evolved. Whilst a generic programme, iMove has proven flexible and schools can develop the programme to suit their needs. Some have utilised students, staff and wider communities to contribute to programme running. If iMove is going to be sustainable, community development should be a programme consideration. Progressive handover of programme control appears achievable and thought has been given to having several tiers of iMove, progressing from dependence, to interdependence then independence, according to programme staff and regular reporting reviewed by the author.

Social marketing

iMove requires support from staff, students and parents. Promotion of the programme uses multiple mediums. Several levels of both intrinsic and extrinsic motivation factors are employed. The use of competition and rewards are marketed to the students, while health and cost benefits are promoted to parents. Brand development has just begun and has potential to enhance participation through wider community knowledge of concepts.

Developing personal skills

Links are made to safety programmes already running, ensuring students' welfare is central to iMove. Students are educated on safe and appropriate behaviour for active transport. iMove has links to classroom-based learning and in some schools this has already been developed. With wider school participation in programme development and implementation there is potential to develop a wide range of skills for others, such as parents and whānau.

iMove fits well within accepted health promotion frameworks such as the Ottawa Charter (World Health Organization et al., 1986), working across the multiple strands. The programme has developed a wider community and population focus, looking beyond the individual students to the environments in which they live.

Health promotion theory underpinning the programme

New Zealanders have historically used active transport to get to school. Before the advent of school buses, children primarily walked or rode horses and bicycles. With New Zealand's transition to a motorcar-dependent society there has been a significant alteration in behaviour. Also societal factors, including the entry of both parents into the workforce and the 1980s Americanised concept of 'stranger danger', have impacted on use of active transport modes by today's children (Centers for Disease Control and Prevention, 2008).

The Theory of Planned Behaviour is an explanatory theory, assuming that behaviour intention is the prime determinant of a given behaviour (US National Institutes of Health & National Cancer Institute, 2005). iMove was developed to promote safe use of active transport in an education setting and could have benefited from the exploration of why this was not a current practice using theory of planned behaviour change. This would involve reviewing the relationship between parental behaviours, beliefs and attitudes and their intentions. An understanding of basic beliefs influencing parents' decision to drive their children to school could strengthen the effectiveness of the programme.

Evaluation

iMove's facilitators have used effective formative and process evaluation techniques since commencement of the programme. There is evidence of literature reviews, needs assessment and use of programme planning templates (formative) and adequate and timely recording of meeting minutes, comment sought and analysed, in an ongoing way, regarding the delivery of the programme (process). This is consistent with best practice in health promotion evaluation (Waa, Holibar, & Spinola, 1998).

Current evaluation of iMove is based on outputs, essentially the number of pupils participating in the programme. In reporting there are comments on the programme's success but no real indicators of the measures used to determine success. Participation appears to be the main success indicator, and to this end there are clear increases in participant numbers, with low attrition rates during the programme.

Pre- and post-data measurements were introduced after identifying a need for wider analysis of the programme achievements. Baseline data collected from every new school joining iMove allows for analysis of parental and staff participation in active movement. There is potential to measure use of vehicles on given days, to contrast figures from active

programme periods to inactive times and measure progressions throughout the year and the seasons.

Baseline data could also be collected about attitudes, beliefs and practices of potential participants.

Conclusion and recommendations

iMove appears to be a successful physical activity and safety initiative developed for and delivered in the school setting. The success of the programme is evident in the growth in participation by schools and students. The ongoing support and involvement of partner organisations is also a measure of success and shows commitment to working supportively. As evidenced by growth and development of the programme to date, iMove has the potential to continue evolving.

iMove could be strengthened by integration with partner organisations programmes, especially Health Promoting Schools. Partnerships could be developed into more collaborative models, with health promotion programmes leading into and complementing each other. This discourages duplication of services and needless saturation of the education sector, prioritising schools' needs over health organisations' objectives.

iMove branding is another potential area for growth. Social marketing of iMove has reach beyond its original education setting and could possibly link into other settings and district-wide active transport programmes. Incorporation of health promotion theory and Treaty of Waitangi-based practise has the potential to further enhance iMove and ensure it has the greatest impact on positive health outcomes for Māori and other high-priority groups. Use of theory of planned behaviour in iMove in future could assist in addressing the underpinning attitudes, knowledge and behaviour of parents and whānau.

It appears from this review that iMove has achieved its aim of increasing the use of safe walking or cycling as a transport option for primary and intermediate school students, staff, families and whānau. This review suggests a number of initiatives that could be considered to strengthen iMove in the future.

Acknowledgements

The following people kindly provided information upon which this chapter is based:

Mary Mitchell, RoadSafe Central Coordinator: interviewed and supplied all documentation on the development and initial implementation of the Walking Wednesday, Biking Thursdays (later iMove).

Kelly Johnson, Sport Manawatu Active Living Manager: interviewed as current manager of iMove. Kelly provided an overview of planned expansion of funding and content for programme.

Mark Leishman, programme coordinator: interviewed and provided latest information on the programme implementation.

Dan Gardiner, Chairperson of Parent Teacher Association of participant school: interviewed to discuss a parent's perspective in one of the original pilot schools.

Jasmine Gardiner, eight-year-old pupil: interviewed to provide a student perspective on the programme and their involvement, as a participant, during implementation and evaluation.

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9 Stay On Your Feet Canterbury: a critical analysis

Nicola Laurie

Introduction

Stay On Your Feet Canterbury (SOYF Canterbury) is primarily a home-based falls prevention programme offered free of charge to older adults at risk of falls in the Canterbury District Health Board (CDHB) region. This chapter provides a critical analysis of the programme. It draws on a review of key documents and interviews with five key informants closely involved with SOYF Canterbury who were well placed to comment on its achievements. SOYF Canterbury consists of a set of leg muscle strengthening and balance retraining exercises which progress in difficulty, together with a walking plan. A trained volunteer instructor tailors and progresses the programme through five scheduled home visits, over a six-month period, and weekly phone contact. Participants must be living independently in the community and are eligible for the programme if they fear falling, exhibit decreased leg strength, decreased balance or have had a fall in the previous twelve months. SOYF Canterbury is offered to clients of primary and secondary health services aged 65 years or older, or aged 55 years or older for Māori and Pacific peoples. Following the six-month training and support programme, clients are routinely offered Green Prescription (GRx) as ongoing support.

Rationale

The development of SOYF Canterbury is the direct result of an identified need to continue a fracture prevention programme for older persons. It follows on from the Broken Hip Project that ran in Christchurch during 1998. The Broken Hip Project was one of three initial projects identified by The Elder Care Canterbury Project, a project dedicated to further integrating and improving health services for Cantabrians over the age of sixty-five years, or those younger with health issues that were associated with or complicated by the process of aging. The collaborative programme, SOYF Canterbury, was developed through a series of working parties. A Steering Group governs the project and a SOYF Canterbury Coordinator, based at Community and Public Health, Public Health Division, CDHB, ensures effective delivery of the programme. Falls prevention is a priority for older people as falls are a substantial contributor to the high rates of unintentional deaths for those 80 years or older: 64% for females and 53% for males. In addition, 86% of females and 79% of males aged 80 or over are hospitalised as a result of falls (Injury Prevention Research Unit, 2001). Falls are the leading cause of injury, resulting in hospitalisation, for all age groups but for those aged

75 years or older falls are also ranked as the number one cause of injury resulting in death (Injury Prevention Research Unit, 2007).

Consequently, the reduction in the incidence and impact of falls on older people is listed as an objective under Goal 9: Injury Prevention, in the *New Zealand Health Strategy* (Minister of Health, 2000). The *Health of Older People Strategy* (Ministry of Health [MoH], 2002a) also recognises the importance of preventing falls in older adults. Falls are one of six national priority areas for *The New Zealand Injury Prevention Strategy* (Accident Compensation Commission, 2003). *Preventing Injury from Falls: The National Strategy 2005–2015* is led by the Accident Compensation Corporation (Accident Compensation Corporation, 2005). The Canterbury District Health Board's *Healthy Ageing Integrated Support Strategy* incorporates falls prevention, through the continued support and development of SOYF Canterbury, as an ongoing priority (CDHB, 2008).

Research has shown that the most effective falls prevention interventions are multifactorial falls risk assessment and management programmes. Exercise programmes are also effective in reducing the risk of falling and interventions to prevent falls in older adults are effective in reducing both the risk of falling and the monthly rate of falling (Chang et al., 2004).

Project development

SOYF Canterbury drew largely upon two falls prevention programmes to provide Cantabrians with a comprehensive falls prevention strategy: the Northern Rivers Area Health Service (New South Wales) programme entitled Stay On Your Feet and the Otago Exercise Programme¹ designed by the Falls Prevention Research Group at the University of Otago Medical School. These programmes were shown to be effective in reducing falls as discussed below.

Stay On Your Feet (SOYF) (Northern Rivers) involved a multi-strategy approach to falls prevention in those aged 60 years and over. The approach was based on epidemiological evidence and a range of strategies identified in the *Ottawa Charter for Health Promotion* (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986) and encompassed five integrated areas for activity: raising awareness of the problem of falls and dissemination of information on falls, providing community education and skills development, reducing home hazards, developing partnerships with health professionals and developing falls prevention policies in local government. An important component of the programme was a coalition of community partners and the involvement of seniors in planning, risk reduction strategies and educating other older people.

¹ <http://www.acc.co.nz/injury-prevention/home-safety/older-adults/otago-exercise-programme/index.htm>

SOYF (Northern Rivers) was extensively evaluated using a cohort study comparing randomly selected samples from intervention and control area target populations. It was established that the intervention had resulted in a 22% lower incidence of self-reported falls and 20% lower falls-related hospitalisations in the intervention area compared to the control area (Kempton et al., 2000).

The Otago Exercise Programme (OEP) was created to enable health professionals to deliver an individually tailored exercise programme in the homes of older people. An extensive literature review considered risk factors for falls and concluded that of the modifiable risk factors associated with falls, impaired gait and balance, reduced muscle strength and the use of psychotropic medication, appeared to be the most promising for intervention in older New Zealand people. In addition, it was concluded that the exercise programme should be individually tailored and should target those most at risk (New Zealand Falls Prevention Research Group, 2001). The OEP has been extensively trialled and evaluated with four trials and a meta-analysis. The research has established that participation in the OEP reduces falls and falls-related injuries by 35% in older persons living independently in their own homes. The largest effect was seen in people aged 80 and over or in people with a history of falling. The meta-analysis also concluded that the programme was equally effective in men and women (Robertson, Campbell, Gardner, & Devlin, 2002).

The SOYF Canterbury project adapted the programme from SOYF Northern Rivers and the Otago Exercise Programme. SOYF Canterbury is a home exercise programme that is delivered by trained volunteers, unlike the OEP, which was delivered by health professionals. It was decided to use volunteers in SOYF Canterbury in part because volunteers were an integral part of the Northern Rivers SOYF model. Although the Northern Rivers volunteers did not deliver home exercise programmes they helped to organise and disseminate educational material, helped with displays, acted as walks leaders and talked to small groups of peers and others in the community about falls prevention issues and positive ageing. A number of resources used and adapted by SOYF Canterbury are used with the permission of SOYF Western Australia (the SOYF programme was rolled out in Western Australia following the successful Northern Rivers trial).

The Ottawa Charter (World Health Organization et al., 1986) was used as a planning tool for the project and the Treaty of Waitangi was seen as a guiding document to ensure the reflection of a Māori health understanding, the promotion of services to Māori and the participation of Māori in both the planning and implementation of the project. Initial planning also viewed the project through the "Equity Lens" (Signal, Martin, & Cram, 2008) and planners, aware that socioeconomic status is associated with increased risk of injury (Stokes, Ashby, & Clapperton, 2001), sought to focus on those older people who were socially and economically disadvantaged.

Annual project plans continue to view and adapt the programme using both the Treaty and the "Equity Lens" in an effort to address inequalities through the project (Community and Public Health, CDHB, 2007). Additionally there has been an on-going commitment to evaluation, as evident in the annual project plans, since the project's inception (Community and Public Health, CDHB, 2003).

Steering Group

From its inception the SOYF project has benefited from the collaboration of dedicated professionals, agencies and older people who form the Steering Group. They are committed to improving the health outcomes of older Cantabrians. The key informants were positive about the effectiveness of the collaboration and the ability of the Steering Group to continue to address the aim of reducing falls among older people in Canterbury. The inclusion of older people within the Steering Group is seen as a strength by key informants, as it enables the project to be constantly considered through the eyes and experience of the priority group itself. The Steering Group and the SOYF Canterbury Coordinator report that they are committed to further research, the implementation of current best practice and ongoing evaluation (SOYF Canterbury Coordinator, personal communication, 2 April, 2008).

Priority group involvement

Throughout the planning and development of SOYF resources in Western Australia older people, the priority group, were involved in focus groups to discuss seniors' needs and preferences in relation to falls prevention messages. It appeared that there was little understanding of falls and, although threats and fear appeals seemed to be the most motivating for older people, the messages needed to be framed positively to support current positive ageing messages (Government of Western Australia, Dept of Health, 2004).

With the adaptation of SOYF and the OEP to Canterbury, older people were involved with programme development through The Elder Care Canterbury Project. Key informants reported that the formation of the SOYF Canterbury Steering Group brought renewed community involvement. This was by active engagement in the Steering Group of older people, including Māori and Pacific people. Programme evaluations have ensured that both participants and peer trainers have had a voice in the evaluative process (Hull, 2004).

Project links

SOYF Canterbury links with a range of health services to ensure that the original aims of the Elder Care Canterbury Project are expressed through working collaboratively and inclusively with the community to design and develop the best possible services for the older people of Canterbury. To

this end, SOYF Canterbury receives referrals from general practitioners and allied health professionals. Medical practices are regularly updated with information about the falls prevention pathway and referrals process in Canterbury. Patients are often referred to SOYF Canterbury upon discharge from Princess Margaret Hospital.² In addition, those older patients hospitalised as the result of a fall are routinely referred to the programme on discharge. All geriatric assessments routinely assess the appropriateness of the SOYF programme for the older person concerned. The SOYF initial assessment is also used as a screening tool for orthopaedic surgery and referrals are made to the programme to assist the patient pathway for Burwood Hospital,³ particularly when proposed surgery is significantly delayed.

The SOYF Canterbury Coordinator at Community and Public Health (CDHB) works with the Arthritis New Zealand Client and Volunteer Coordinator to recruit volunteers as trainers in the SOYF Canterbury programme. A physiotherapist from Therapy Professionals trains and supports the volunteers as well as reviewing the participants' homes to ensure they have any necessary mobility aids, that there are no home-based factors compromising their health and that they have supportive relationships to enable them to successfully undertake the programme. At the conclusion of the SOYF Canterbury six-month training and support period participants are referred to Sport Canterbury where they are able to have continued support via a Green Prescription (GRx) over four months. At the conclusion of the participant's involvement with SOYF and Green Prescription their original referrer receives a discharge report. SOYF Canterbury also has close links with other falls prevention programmes within the region, and maintains links with SOYF Western Australia and with injury prevention networks to enable the steering group to remain up to date with falls prevention evidence and best practice in successful interventions (SOYF Canterbury Coordinator, personal communication, April 2, 2008).

Health promotion actions

SOYF Canterbury focuses its health promotion activity on empowering older people to take personal action to reduce their risk of falling. SOYF seeks to allow "older people to develop the physical skills and a sense of self-efficacy over circumstances which may have seemed out of the individual's control previously" (Community and Public Health, CDHB, 2003). SOYF Canterbury primarily runs a home-based falls prevention programme. The need for sustainability for individuals was identified early in the project by the Steering Group and is an important issue for the programme. It is one of the reasons for establishing a relationship

² The Princess Margaret Hospital provides specialty services in older person's health and mental health services.

³ Burwood Hospital provides rehabilitation services and elective orthopaedic surgery.

with Green Prescription and for the involvement of Sport Canterbury in the Steering Group.

SOYF Canterbury also works to influence public policy in relation to falls prevention. To this end, in the initial stages of the project, Christchurch City Council staff were trained in the area of falls prevention by SOYF Canterbury. This was done to advance local body policy in the areas of transport, building codes, the planning and development of public areas and urban planning generally.

Creating supportive environments has clear links to this work, considering home environments as well as public spaces. SOYF Canterbury advocates for the use of handrails and other aids in homes, as necessary, and in the reduction of wider environmental hazards such as slippery floor surfaces in shopping malls. This extends to hospital services where those working with older people are informed by the SOYF Canterbury programme and work collaboratively with the programme to reduce falls incidence. Education of the wider community is considered essential and various providers and Steering Group members such as Arthritis New Zealand, Community and Public Health, Presbyterian Support Services and ACC work to inform the wider community about the issues of falls among older persons.

It appears that strengthening community action is achieved through the collaborative efforts of the agencies that work together to provide the SOYF programme. The combined efforts of these agencies utilises the expertise of each, yet provides a more comprehensive programme than each is capable of under its own auspices. The involvement of peer volunteers, clearly pivotal to the success of the programme, is an example of the benefits of community action as the participants, their peer volunteers, wider families and communities are positively influenced by the programme and their efforts.

The SOYF programme in Western Australia used social marketing as an integrated marketing communications approach. To this end many of these resources have been used as is, or adapted for use, by the Canterbury programme. They are used as tools within the programme and to raise the profile of the programme and of falls prevention generally.

Theory

Whilst the planning for SOYF Canterbury has been, and continues to be, clearly defined and informed by the *Ottawa Charter for Health Promotion* (World Health Organization et al., 1986), various theories appear to underpin or are consistent with the programme. Social marketing strategies were openly employed by SOYF Western Australia and these, as applied to the Canterbury programme, seek to influence the behaviour of the priority group and create a climate for both social and behavioural

change (US National Institutes of Health [NIH] & National Cancer Institute [NCI], 2005).

Social Learning Theory (SLT) maintains that modelling is an important component of the learning process that sits comfortably with a SOYF peer volunteer/educator modelling the home exercise programme. In addition, the importance of self-efficacy within SLT is clearly expressed within the SOYF programme, where the programme aims to build the participant's confidence as they progress through the programme and are empowered by their developing skill level (US NIH & NCI, 2005).

The introduction of peer volunteers and the employment of well-known older Cantabrians as patrons can be seen to be consistent with the Diffusion of Innovations Theory, where patrons are seen as champions and peer volunteers can be seen as "early adopters" of an "innovation" and able to reinforce the adoption of the new innovation from one adopter level to the next (US NIH & NCI, 2005).

Evaluation

The SOYF Canterbury programme has been well informed by evaluation since the project launch in April 2002. The involvement and support of ACC from early in 2003 resulted in an initial evaluation of the twenty original home exercise participants who had followed the programme over twelve months. The results of the evaluation showed that 75% of clients said they had increased in confidence since beginning the programme and 95% were intending to continue the exercises (Earle as cited by Cooper, 2005).

A programme evaluation found that SOYF Canterbury was achieving similar outcomes to the trials conducted for the OEP, with a 34% reduction in falls (Lloyd, 2006). This indicated that the volunteer programme was providing similar benefit to the OEP delivered by health professionals. However, it should be noted that the number of subjects recruited for the SOYF Canterbury evaluation was low and the study's timeframe did not allow for a more direct comparison with the OEP or a potential control group.

The most recent evaluation of the programme was a qualitative study, commissioned by the Steering Group and completed in December 2004 (Hull, 2004). The objective was to provide a qualitative evaluation of the programme by interviewing the individuals involved in the programme: administrators, volunteers and participants. The report concluded that the programme was a success in that it was operating successfully and smoothly and delivering the services as intended. Participants were able to identify a range of benefits from the programme including an improvement in their ability to complete the exercises, fewer falls, a general improvement in physical strength, improved motivation for other physical activities, a more positive outlook on life and an awareness that their physical deterioration had slowed. In addition, the home-based

nature of the programme was seen by the clients as overcoming a barrier in accessing central services together with cost, transport and mobility issues associated with leaving the home. The rapport developed between the peer volunteer and the client was seen as a real strength of the programme (Hull, 2004).

Very few participants involved in the qualitative study were able to identify any drawbacks. Areas of concern that were raised included volunteer concerns about the effectiveness of the referral system to ensure client suitability; issues about the drop-off rate of volunteers and the need for a more structured support system for volunteers noted by the Coordinator; and the effectiveness of the transfer to Sport Canterbury and Green Prescriptions (Hull, 2004).

The SOYF Steering Group remains committed to further evaluation of all aspects of the programme's implementation and outcomes (SOYF Canterbury Co-ordinator, personal communication, April 2, 2008).

Conclusion and recommendations

SOYF Canterbury utilised two falls prevention programmes, shown to be effective in reducing falls, and developed them into a well-planned collaborative project. From its inception SOYF Canterbury has been dedicated to reducing inequities for older people in relation to falls statistics. Evaluation indicates that the project has largely been successful in achieving this aim. The commitment of the Steering Group to evaluation is a strength that has been utilised throughout the project to inform decision-making.

The effective relationships within the Steering Group collaboration and the collective commitment to falls prevention can be seen as pivotal to the success of SOYF Canterbury. The project maintains positive working relationships with other agencies and has raised the profile of falls prevention in the wider community. A commitment to planning, utilising the principles of the Ottawa Charter (World Health Organization et al., 1986), has enabled the project to engage in a range of health promotion activities in relation to falls prevention.

A key area of concern is the need to reach Māori and Pacific participants. Within the priority group, Māori and Pacific people have become a target as the disparities that exist for these groups have been acknowledged, in addition to the inequities resulting from ageing (MOH, 2002b). Working to find an appropriate means to reduce falls for these target groups is a priority for SOYF Canterbury (Community and Public Health, CDHB, 2007).

Only recently has ethnicity information been sought upon referral to the programme; however, it is generally agreed that the service is not reaching Māori and Pacific people. The programme does seek to address inequalities by ensuring SOYF is available to Māori and Pacific clients at

an earlier age but currently there are no volunteers from these communities, despite efforts to recruit in the past. It is also noted by key informants that support structures for older Māori and Pacific people are very strong and that the concept of bringing a stranger into the home does not sit well with these communities (Māori Health Promoter, personal communication, April 22, 2008) (Pacific Health Promoter, personal communication, April 24, 2008).

It appears from consultation that adapting the SOYF principles and placing them within a programme that is marae or community-based could be more appropriate for groups of older people within Māori and Pacific communities. Additionally, the programme could incorporate the use of music and dance or traditional movement to facilitate the SOYF objectives. One such programme running in Christchurch with a developing falls prevention focus is a physical activity programme for older Pacific people run by the Tagata Atumotu Trust (Pacific Health Promoter, personal communication, April 24, 2008). Further research and consultation with Māori and Pacific communities, informed by the TUHA-NZ document in relation to programmes for Māori (Martin, 2002), is necessary to ensure the efficacy of the SOYF programme for these groups. SOYF in Australian settings did use community-based group exercise programmes as part of its multi-faceted programme so a precedent has been set for such development.

A re-evaluation of the transition to Green Prescriptions, consideration of the effectiveness of this phase for clients, as well as an assessment of the benefits on discharge, would provide useful information for the SOYF Co-ordinator and the SOYF Steering Group. In addition, planning to follow up participants to establish sustainability and the long-term effects of falls prevention training (both exercise programme and risk factor awareness) will provide useful information to inform future planning.

Any changes in personnel or governance can impact on the collective knowledge of projects despite good intentions. Much information was readily available from a range of Steering Group sources but the difficulty in locating some early information does underscore the importance of record keeping. Developing a central database for all documentation relating to the programme both historically and currently (including decision making and process around the adaptation of SOYF and OEP to Canterbury) will ensure the narrative for SOYF is accessible.

The SOYF Canterbury Steering Group is to be congratulated on its commitment to health promotion principles, its focus on reducing inequalities, together with its willingness to utilise evaluation to inform planning and decision-making. The collaborative strength of the Steering Group and members' commitment to falls prevention in Canterbury are key to the ongoing success of the SOYF Canterbury project.

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10 Increasing Physical Activity Voucher Programme

A Karori Primary Health Organisation and Wellington City Council health promotion initiative

Moira B. Smith

Introduction

Primary health care “combines health care delivery with principles of participation, community development and health promotion” (O’Connor-Fleming & Parker, 2001, p. 263); the key features of which are “equity, participation and intersectoral action” (O’Connor-Fleming & Parker, 2001, p. 264). Primary health care, restructured in 2000, is a key service priority area for the *New Zealand Health Strategy* (Minister of Health, 2000). *The Primary Health Care Strategy* (Ministry of Health, 2001) describes the new direction for primary health care as focusing “on population health and the role of the community, health promotion and preventive care...” (p. vii). By doing so, health care is approached in a broad framework attending to the structural determinants of health, identifying and reducing inequalities (Minister of Health, 2000).

A fundamental principle of the *New Zealand Health Strategy* and integral to *The Primary Health Care Strategy* is collaborative health promotion (Minister of Health, 2000; Ministry of Health [MoH], 2001). Primary health organisations (PHOs) were established as vehicles to implement *The Primary Health Care Strategy*; they receive specific funding for health promotion and are required to work with organisations and the community (MoH, 2002a), to action the *New Zealand Health Strategy* population health goals and objectives (Minister of Health, 2000).

This report describes and critically analyses one of the first health promotion initiatives of Karori Primary Health Organisation (Karori PHO). Established in 2004, Karori PHO is a single-practice—Karori Medical Centre, with approximately 12,500 enrolled patients (Karori PHO, personal communication).

The programme

In May 2006, Karori PHO, together with Wellington City Council (WCC), implemented the ‘Increasing Physical Activity Voucher Scheme’ (the programme), with the intent “to promote increased activity within the enrolled population by offering a voucher which is presented as payment for an activity” (Appendix 1). Following consultation, patients considered by Karori Medical Centre health professionals as needing or benefiting from increasing physical activity are given a voucher containing four tickets (which are charged back to Karori PHO at a reduced rate, through

WCC's 'Passport to Leisure' scheme) for free entry to the Karori Swimming Pool and the Karori Recreation Centre. The voucher enables patients to attend organised fitness classes at both facilities, such as 'aqua-fitness' and aerobics, or independently lap-swim or aqua-jog at the swimming pool. The programme introduces patients to a form of activity that they may not have previously considered, with the hope of their continued attendance (Appendix 2). Participants must make their own arrangements for attendance and though specific support at either of the facilities has not been arranged for voucher holders, participants are able to ask WCC recreation staff for assistance and advice. Currently, there is no process for following up usage of the vouchers. Ultimately, the programme aims to overcome two barriers to increasing physical activity: cost and lack of motivation.

Project partners

Karori PHO (including Karori Medical Centre general practitioners and practice nurses) and WCC are the main project partners. Karori is a geographically well-contained suburban community where professional and social connections are often intertwined. Karori PHO and WCC collaborated with Regional Public Health in the initial planning stages. However, only Karori PHO and WCC representatives were directly involved in programme design and administration. They found collaboration "very easy" (Karori PHO & WCC, personal communications), illustrating the advantage of working within a smaller community (O'Connor-Fleming & Parker, 2001). Additionally, having a common objective, promoting physical activity, further enhanced the relationship.

Health care centres are an appropriate setting for health promotion and provide opportunity for interventions and improvement in health outcomes (Hearn, Martin, Signal, & Wise, 2005); MoH, 1997; MoH, 2003a; O'Connor-Fleming & Parker, 2001). People with chronic health problems, for example, will most likely come into contact with health professionals on a regular basis.

WCC acknowledges that it has a role to play in health promotion. Through its *Long Term Council Community Plan* (LTCCP) (Wellington City Council [WCC], 2006) and *Recreation Strategy* (WCC, 2003), WCC recognises the relevance of physical activity to the prevention and management of chronic disease by making a strong commitment to promoting recreation as part of a healthy lifestyle. One clear objective of the *Recreation Strategy* is that WCC becomes more involved in public health and targets people with lifestyle-related chronic diseases. It is prepared to consider new initiatives, develop relationships and work in partnership with other groups to achieve its objectives.

Relationship to health promotion and public health needs

In 2000, the Ministry of Health prioritised national health objectives based on an assessment of the national population (Minister of Health,

2000). Of these objectives, Karori PHO chose 'increasing physical activity' as the health priority they would address. It is generally acknowledged that one-third of New Zealanders are not active enough for appreciable health benefits. Of those who are active, only 39% are active on a regular basis (Sport & Recreation New Zealand [SPARC], 2007a). The health benefits of physical activity in the prevention and management of chronic disease are well documented (MoH, 2003b, p. 30).

Physical activity is associated with many health risk factors (MoH, 2003b) and by selecting it as a programme focus, several key *New Zealand Health Strategy* objectives are simultaneously addressed, enabling Karori PHO to attend to a broader range of needs and disparities. Equally, this choice aligned with the Karori Medical Centre general practitioners' aim for an improvement in clinical indicators of chronic disease, particularly diabetes and ischaemic heart disease (Karori PHO, personal communication).

At the time of writing this paper, Karori PHO had yet to conduct a needs assessment of their enrolled population. However, a regional assessment conducted by Capital and Coast District Health Board (Capital & Coast District Health Board, 2004) recommended that those groups where population health disparities exist (Māori, Pacific Island and NZDep5 or greater) or people who have conditions with the greatest burden of disease and other issues affecting health and wellbeing should be given primary consideration when prioritising health issues; in particular, cardiovascular and respiratory disease, diabetes and cancer. These recommendations reflect national guidelines (Minister of Health, 2000). Additionally, WCC's *Long Term Council Community Plan* and its *Recreation Strategy* are based on an assessment of recreational and physical activity needs, both nationally and regionally. The programme thus tackles the intermediary factors and the health and disability services levels in addressing inequalities in health (MoH, 2002b).

Often national or regional trends are a good indication of priority groups and where health promotion should be directed (Hawe, Degeling, & Hall, 1990; Waa, Holibar, & Spinola, 1998). Nevertheless, it would have been useful for Karori PHO to conduct a needs assessment of its enrolled population, especially as the distribution of population by ethnicity is considerably different to national figures (Appendix 3). Needs assessments of specific populations establish local variations and priorities so that appropriate programmes are implemented (Hawe et al., 1990; Waa et al., 1998).

Additionally, smaller, well-defined populations, such as Karori, have the advantage of community focus and penetration when compared to larger more diverse groups (O'Connor-Fleming & Parker, 2001). Therefore, people with the highest need and who are at greater risk of health disparities are likely to be better served; opportunity exists for interventions to be more effective and truly make a difference. The existing programme may be appropriate for the enrolled population, but

a population-specific needs assessment would give Karori PHO greater focus for future interventions.

Priority groups

Patients of Karori Medical Centre enrolled in the Care Plus initiative, Get Checked Diabetes Programme (a free programme of annual checks to improve the health of people diagnosed with diabetes, including the monitoring of physical health, medication, lifestyle and management of the disease) and Accident Compensation Corporation injury recovery were identified as potential programme priority groups. Care Plus is a primary health care initiative, integral to PHO contracts, specifically catering for people with high health needs due to chronic conditions, acute medical or mental health needs or terminal illness. It aims to reduce inequalities and improve chronic care management. Patients have to fulfil a number of criteria including "two or more chronic conditions... that is [*sic*] a significant disability or has a significant burden of morbidity." (MoH, 2007). Programme developers thought that the programme would capture patients from the identified priority groups as they are more likely to be enrolled in Care Plus (CBG Health Research, 2006).

With any health issue in New Zealand, Māori must be given consideration under the Treaty of Waitangi (Minister of Health, 2000). Though they are at greater risk of health disparities, Māori appear to have good levels of physical activity (SPARC, 2007a). Still, focusing on physical activity presents an opportunity to address health issues where there are disparities. However, given the relatively small proportion of Karori PHO enrolled patients in any of these groups (Karori PHO, personal communication), and the wish not to disadvantage other patients, no exclusion criteria were placed on patient allocation; those who identified themselves in need of increasing physical activity were also included. Thus, a specific priority group was not clearly defined.

Programme design

The programme was developed in an evolutionary manner (Karori PHO, personal communication) following informal discussions and minimal consultation with programme participants. It was suggested to Karori PHO that cost and lack of motivation were barriers to increasing physical activity. As part of the consultation process with the Karori PHO Board, WCC pool and recreation centre managers were asked to give a presentation to medical staff and the Karori PHO Board outlining the facilities/activities they could offer. These actions culminated in a decision to implement a programme to increase physical activity. An 'Activity Survey' (involving the general enrolled population) conducted in December 2005 did not enhance the planner's knowledge and thus, did not influence programme development. Essentially, the programme has been predominantly led by health professionals; decisions regarding

priority areas, participants' needs, potential barriers and thus strategies, were made by the programme partners based on what they thought was appropriate.

PHOs are required to involve the community in their governance as well as be responsive to the needs and priorities of the community, including honouring the Treaty of Waitangi (MoH, 2002a). The Karori PHO board has representation from Māori, Pacific Island groups and the wider community, reflecting the composition of the enrolled population. This appears to be the extent of the involvement of the community in the programme (see Minkler & Pies, 1997 for further discussion of community representation and participation in health promotion).

Since implementing the programme, Karori PHO has developed a Māori health plan, completed workshops in Māori health for staff and is now investigating effective links to Māori health providers and groups such as Kohanga Reo (Karori PHO, personal communication). These actions are a starting point for Karori PHO to achieve TUHA-NZ goals (Martin, 2002). However, rather than relying on Board consultation, it is essential that Karori PHO discovers the health aspirations of Māori in the enrolled population by discussing relevant issues with them, maintain and advance networks once established and ensure, through appropriate planning and evaluation, that health promotion projects will improve Māori health outcomes.

A number of health promotion planning models exist and are summarised elsewhere (O'Connor-Fleming & Parker, 2001, pp. 85–97). Two models that would have been appropriate for Karori PHO to use are Ewles and Simnett's 'Seven Stage Model' (Ewles & Simnett, 2003) and Green and Krueter's 'PRECEDE/PROCEED' model (Gielen & McDonald, 2002). Either would have guided Karori PHO programme developers through the planning process according to best practice.

Links to other health-related services

Care Plus and diabetic reviews are two initiatives administered within Karori PHO addressing chronic disease management. The physical activity voucher programme is a valuable adjunct to these services, facilitating the setting and achievement of health goals in Care Plus and allowing accident rehabilitation patients to remain active at a time when they may not be either physically or financially capable. Linking the services and initiatives of both partners becomes mutually beneficial; it provides an opportunity for WCC managers to access a group of people that allows them to meet WCC objectives and Karori PHO is better able to offer a wider ranging, more comprehensive level of healthcare.

Health promotion actions and theories

Health promotion should be based on the actions prescribed by the Ottawa Charter (World Health Organization, Health and Welfare Canada,

& Canadian Public Health Association, 1986). Though not intentionally considered, the programme does exhibit a number of these actions:

- Personal skills are developed; facilitating patients to institute changes for themselves and enhancing life skills so as to cope with chronic disease or injury.
- Community action is strengthened; intersectoral action has created beneficial links within the community. Karori PHO has provided support and advocacy by facilitating the connection between the participants and existing community resources.
- At a broader level, the programme exists because of the reorientation of primary health care services, changing the focus from being predominantly ill health/medical to one of contributing to the pursuit of health and wellbeing. The same focus has driven WCC to form healthy public policies.

Nutbeam (1998, p. 30) identified “education, facilitation and advocacy” as the health promotion actions required to achieve health outcomes. Health promotion ‘best practice’ involves deciding how to combine and incorporate these actions into health promotion programmes (Nutbeam, 1998). Though the programme exhibits these actions, the processes required to realise favourable outcomes do not appear to have been followed. For example, WCC’s involvement has been one of enhancing access to their facilities. While this is highly appropriate for this programme, it would be interesting to see what could be achieved through more active and contributory collaboration between WCC and Karori PHO (Gillies, 1998).

Theoretical models can be used in the planning process to guide the development of comprehensive programmes and improve the chances of behaviour change (Hodges, 2005; Nutbeam & Harris, 2004; US National Institutes of Health [NIH] & National Cancer Institute [NCI], 2005). With respect to physical activity specifically, interventions based on behaviour change theories have been shown to be associated with greater long-term success (Hillsdon, Foster, Naidoo, & Crombie, 2005). Though theory has not been considered (a common omission in health promotion programmes), the programme focuses on the behavioural approach to health promotion rather than a socioenvironmental approach, and thus intrapersonal and interpersonal theories are the most appropriate (US NIH & NCI, 2005). Any of the following theories could have been used (Nutbeam & Harris, 2004; US NIH & NCI, 2005):

- **Health Belief Model**—to identify potential barriers and provide strategies to improve patient self-efficacy. Follow-up appointments and calls could be used as cues to action.
- **Stages of Change Model**—to establish the readiness for change and use in the assessment, planning and implementation stages to link

into the 'determination' and 'action' stages. A change in activity for those in the 'maintenance' stage to prevent relapse.

- **Theory of Planned Behaviour**—to understand the underlying beliefs of the behaviour, possible barriers and how other people may affect their behaviour.
- **Social Cognitive Theory**—to address the determinants of the behaviour and action to promote change.

Evaluation

At the time this chapter was written in 2007, an evaluation of the programme was yet to be conducted. At programme inception, the evaluative information was predominantly anecdotal, concerning voucher usage and uptake (Karori PHO, personal communication).

Ideally, evaluation should be planned in the early stages of programme development (O'Connor-Fleming & Parker, 2001; Waa et al., 1998). Formative evaluation (Waa et al., 1998) for this programme has been minimal; that is, there has been no real description of the health issue to tackle, identification of an absolute target group, barriers to address, evidence of effectiveness of interventions, and the definition of clear objectives (other than a statement of intent).

To illustrate the importance and value of formative evaluation for this programme specifically, Hillsdon et al. (2005), in a review of reports and meta-analyses of interventions to increase physical activity, confirms that primary health care practitioners are effective in changing behaviour (at least in the short term) with regard to physical activity. However, they report that greater results could be achieved by creating and referring patients to an intervention where patients have regular contact with an exercise specialist. Further, the authors also report that interventions which include telephone support and follow-ups are associated with long-term changes in behaviour. Consideration of this information in the initial planning stages of the Karori PHO programmes may have resulted in an intervention that had a measurable chance of success. Failing to conduct adequate formative evaluation makes it difficult to ascertain the appropriate processes and intended outcomes of the programme (Nutbeam, 1998; O'Connor-Fleming & Parker, 2001). This lack of control may not set the programme up for success (Nutbeam, 1998), and could result in deficient performance measures and possibly an inability to demonstrate any intervention effect (Nutbeam, 1998).

Based on the anecdotal outcomes of the programme, the Karori Pool manager is contemplating changes to their facet of the programme involving a more active contribution from WCC and engagement of the participants (WCC, personal communication). If WCC input were 'stepped up' in this manner it would strengthen the programme, reinforcing the health professional's actions and creating a more comprehensive

programme. However, without a benchmark measure with which to compare, it may eventuate that these changes are not the most appropriate.

The purpose of pilot programmes is to test strategies, monitor programme quality and identify modifications (O'Connor-Fleming & Parker, 2001; Waa et al, 1998). Though Karori PHO used this programme as a pilot programme, the opportunity to gain a comprehensive understanding of the programme, the intensity of its success and the most efficient use of funding may have been missed due to insufficient planning. Additionally, other pool managers in Wellington are awaiting programme results so that it may be implemented at other facilities (WCC, personal communication). 'Assessing outcomes' and 'understanding the process' of programmes are both important for a programme to be reproduced with successful outcomes (Hawe et al., 1990; Nutbeam, 1998).

Suggestions for evaluation include (Hawe et al., 1990; Waa et al., 1998):

Process:

- improve documentation protocols, particularly data-keeping
- document development meetings and resources
- questionnaires/interviews/focus groups with participants and partners regarding the characteristics of the programme; and
- establish from clinical records and interviews whether the programme was used by those who needed it most.

Impact:

- questionnaires/interviews/focus groups with participants to assess whether there has been an increase in activity levels, change in behaviour and/or changes in clinical indicators
- look for unintended consequences, for example, 'serial voucher users'; and
- compare the results of the process evaluation to find correlations with impact results.

Comment

New Zealand policy-makers have recognised the role of health promotion in a primary health care setting (MoH, 2003a). However, implementing their policies has implications for PHOs, especially those which have not previously planned programmes in their pre-PHO structure; even more relevant for those with high-need enrollees (Hefford, Crampton, & Foley, 2005). There is also concern that smaller PHOs, though they have the

advantage of community focus (O'Connor-Fleming & Parker, 2001), will plan programmes with short-term outcomes rather than taking a longer-term approach (Hefford et al., 2005). These issues are reflected in the Karori PHO programme. A fundamental difficulty encountered by Karori PHO and WCC has been the lack of human and skills resources in, and an understanding of, health promotion programme planning and implementation. In terms of best practice, Karori PHO was unsure as to how to proceed in planning a health promotion programme.

This raises the issue of the constraints faced by Karori PHO (and possibly others) when attempting to comply with contract obligations; there is pressure to 'get the contract running'. Policy-makers often do not recognise the practical implications and difficulties their policies impose at the 'coalface'. PHOs certainly present capacity for health promotion (MoH, 1997; MoH, 2003a; O'Connor-Fleming & Parker, 2001); however, there is a need for improved education at this level, consideration of intermediary links in terms of workforce and crucially, improved communication and knowledge-sharing within the wider health community (Glanz, 1996; Hearn et al., 2005).

Optimal health promotion planning comes as a result of logical process (Waa et al., 1998). The combination of contractual demands, short time frames and a paucity of knowledge and resources appears to have resulted in a programme that is neither logically planned nor necessarily representative of best practice.

Furthermore, though chronic care management initiatives are useful for addressing health behaviours and determinants (Hung, Rundall, Tallia, Cohen, Halpin, & Crabtree, 2007), aligning the programme with Care Plus may hinder its implementation. Similar issues of time, resources and 'teething problems' with Care Plus administration have been encountered by PHOs (CBG Health Research, 2006). Such an uncertain framework is likely to compound and confuse the programme's processes and impact.

This is not to say that the programme has failed. Nor has the development been undertaken in an authoritarian manner; all partners are extremely sincere and enthusiastic, are aiming for success and are looking forward to enhancing the features so as to deliver a better programme. In my opinion, the programme has merit. However, "good intentions and received wisdom are not enough" (Macintyre & Pettigrew, 2000); evidence-based planning must be employed to maximise success. The existing programme simply illustrates the result of a lack of understanding of the principles of best practice in health promotion.

Both partners face a steep 'learning-curve' with regard to health promotion programme planning; one that will be reduced with greater knowledge, guidance and time. The key now is for the partners to use this as a valuable learning experience, critically examine the whole of the programme and, taking advantage of their excellent working relationship, use the information gained to guide them in future projects; following

best practice in health promotion for the well-being and health of the population.

Recommendations

For the benefit of the programme I recommend that Karori PHO:

- conduct a needs assessment of the enrolled Karori PHO population
- collect programme data
- conduct process and impact evaluations (as outlined previously) as best as possible to obtain measures and standards for future comparison
- research similar projects for comparison
- redevelop the programme plan according to best practice, having completed a more comprehensive formative evaluation. This includes consultation with priority groups
- implement changes (including those currently proposed) to the programme only after evaluation and consultation
- upskill staff (WCC/Karori PHO) in health promotion programme planning and
- Consult Ministry of Health and other guides for health promotion planning and evaluation (MoH, 2003c; Waa et al., 1998).

They may also need to:

- reconsider their administration and implementation of Care Plus; and
- consider aligning the programme with the Green Prescription (SPARC, 2007b).

The Karori Pool manager is considering the following changes:

- forming an alliance with an exercise specialist to provide advice on activity structure
- providing dedicated pool time and staff for poolside assistance
- reduced pool entry rates for programme participants; and
- including Karori PHO patient group activities and 'post-exercise' social gatherings.

Appendix 1. KARORI PHO Programme Voucher

Front

ACTIVITY FOR HEALTH

'Activity for health' is a Karori PHO health promotion initiative in conjunction with Karori Pool and Karori Recreation Centre.

Wellington City Council has built a relationship with the Karori Primary Health Organisation (Karori PHO) to encourage injury rehabilitation patients and people with health issues into our programmes. These include aqua jogging, swimming, and low impact exercise classes.

Karori PHO
Our Community, Our Health

Absolutely POSITIVELY
We think it's possible
WELLINGTON CITY COUNCIL Wellington

1 This coupon entitles the bearer to: _____

2 This coupon entitles the bearer to: _____

3 This coupon entitles the bearer to: _____

4 This coupon entitles the bearer to: _____

Back

Karori Pool Information:

Ezy Movers Class
10am–11am every Monday
A fun, easy paced, low impact exercise class incorporating cardiovascular/fat burning exercise, muscle conditioning and stretching. Great for muscle tone and stretching.
45mins long

Aqua Fit Class
Wednesday 6.30pm and Saturday 9am
A shallow water class suitable for all levels and abilities incorporating cardiovascular fitness, muscle strengthening and toning.
45mins long

Aqua Jogging
Time: Casual
Great as a social or cardiovascular exercise, excellent for injury recovery.

Lane Swimming
Time: Casual
Great as a social or cardiovascular exercise, excellent for injury recovery.

Spa Pool
Time: Casual
Great for injury recovery, rest or relax. Temperature of the spa is 38°.

Karori Recreation Centre Information:

Ezy Movers
Tuesday 10.15am
A fun, easy paced, low impact exercise class incorporating cardiovascular/fat burning exercise, muscle conditioning and stretching.
45mins long

Ezy Movers Active
Tuesday 9.30am and Thursday 9.30am
A step up from Ezy Movers, providing a slightly more intensive workout.
45mins long

Karori Recreation Centre
251 Karori Rd, phone 476 8090

Karori Pool
22 Donald Street, phone 476 5400

For more information phone 499 4444 or check out www.feelinggreat.co.nz

(reproduced with permission – KARORI PHO)

Appendix 2. KARORI PHO Programme Proposal

Karori PHO Voucher Programme Proposal

The purpose of this paper is to:

1. Outline work to date on developing and implementing a Voucher Programme for our enrolled population.
2. Discuss the intent of developing this programme and the expected outcomes.
3. Outline the proposed implementation

Work to Date

The Health Promotion Plan has been submitted to CCDHB and approval obtained.

A budget of \$5,250 ex GST has been allocated.

Two meetings with Royce Williams, Facility Manager, at Karori Pool.

Intent

To promote increased activity within the enrolled population by offering a voucher which is presented as payment for an activity e.g. aqua aerobics at Karori Pool or Pilates at the Karori Community Centre.

Development and Implementation

The initial idea for developing a voucher programme came from a meeting with Monica Carter, Regional Public Health, who is contracted by the DHB to support PHOs in developing a Health Promotion Plan. It was suggested that there are two main barriers to attending exercise classes: cost and lack of motivation.

A voucher will be offered that enables the person to attend 3 sessions of the chosen activity free of charge. It is hoped that after attending three sessions the person will be able to decide to either continue or perhaps change to another more suitable activity.

Referrals will come from the GP's and nurses at Karori Medical Centre. Patients enrolled in CarePlus, those having Diabetes checks and those identified as benefiting from increased exercise will be targeted.

Those referred will be followed up with phone contact to monitor progress and ascertain if further support is needed e.g. referral to Green Rx.

(reproduced with permission – KARORI PHO)

Appendix 3. Population by ethnicity (percentage)

	National ¹	Wellington ¹	Karori ¹	KARORI PHO ²
European	80	80.9	83.8	92.5
Māori	14.7	12.5	4.9	7.5
Pacific Island	6.5	7.9	3.7	
Asian	6.6	6.8	11.6	(approx.11%)*
Other	0.7	0.9	1.6	n/a*

* included in 'European' percentage above

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11 Vote Fluoride Oral Health Promotion Programme: a critical analysis

Philippa Stewart

Introduction

The following chapter provides a critical analysis of the Vote Fluoride project, a health promotion social marketing project undertaken by the Otago and Southland District Health Boards (DHBs) in 2007. There is good evidence that water fluoridation is an effective and safe public health measure to promote oral health (Lee & Dennison, 2004, p. 10; McDonagh et al., 2000). However, only some of the Otago and Southland regions' water supplies are fluoridated. The Dunedin city water supply was fluoridated in 1967, followed soon after by Invercargill and Balclutha. Forty years on, these remain the only water supplies fluoridated in the region (Stewart, 2008) covering approximately 170,000 out of possible 290,000 people.

Decision making about water fluoridation currently sits with city and district councils, which are responsible for community water supplies. Despite the evidence of health benefits, DHBs can advocate for fluoridation, but cannot compel city and district councils to fluoridate water (Penny, 2006).

The Vote Fluoride project sought to promote healthy public policy regarding water fluoridation. As city and district councils' fluoridation policy is strongly influenced by community opinion, the project sought to inform the public about fluoridation. Vote Fluoride was initiated by the Otago DHB chief executive officer in March 2007. A multidisciplinary project team composed initially of Otago DHB staff was convened and a project plan developed utilising PRINCE2 (**PR**ojects **IN** Controlled **E**nvironments) project management methodology (Office of Government Commerce, 2002). The scope of the project was quickly extended to include the Southland DHB. This reflects the close working relationships between the two DHBs. An expert panel was formed to advise the project team. It included leading Māori health, oral health, child health and chemistry experts.

There were two phases of the project. As detailed later, phase one involved seeking agreement from city and district councils with water supplies that were not fluoridated to hold a referendum on fluoridation. Phase two utilised a social marketing campaign to provide voters with sufficient information so as to be able to make an informed choice on fluoridation. The project ran for seven months through to the end of October 2007.

This chapter begins by outlining the public health needs assessment and identified priority groups targeted by the project. The importance of water fluoridation as a health promotion subject is then discussed. An overview of the project plan is provided. This includes the identification of the project partners and how well they worked together, discussion regarding the involvement of the priority group in the planning, development and implementation of the programme, a description of the two phases of the project (advocacy and marketing) including the underpinning theories. Next, there is a review of the three evaluations undertaken. Finally, recommendations are made about ways to maintain and strengthen the programme.

This review is based on information gained by the author, who was a leader of the Vote Fluoride project. This chapter has also been informed by reviewing documentation regarding the project, the post-project debriefing with the project team, a telephone survey and qualitative research undertaken as part of the author's dissertation for the Master of Public Health on the topic (Stewart, 2008).

The relevance and importance of oral health for health promotion

Improving oral health is of strategic importance. It is one of the goals included within the *New Zealand Health Strategy* (Minister of Health, 2000) and is the principal objective of the Oral Health Strategy *Good Oral Health for All for Life* (Ministry of Health [MoH], 2006). Oral health was further prioritised by the Minister of Health's requirement of DHBs in 2007 to focus on ten health targets, one of which included making improvements in oral health.

Oral health is integral to good general health and wellbeing. Poor oral health is largely preventable. People suffer unnecessarily from the pain and discomfort associated with oral health diseases. Costs of dental treatment are high for both the health system and individuals. Furthermore, oral health inequalities are evident. Lower income and socially disadvantaged groups experience disproportionately higher levels of oral health disease (Watt, 2005).

Recognised as "one of the ten great public health achievements in the United States during the 20th Century by the Centres for Disease Control", water fluoridation is a proven and effective public health measure (Lee & Dennison, 2004). Current evidence suggests that the addition of fluoride to drinking water supplies of up to 1.5 mg/l, provides good dental protection against caries with adverse outcomes being limited to dose-related fluorosis (mottled teeth) (Griffin et al., 2007; McDonagh et al., 2000; Medical Research Council, 2002; National Health and Medical Research Council, 2007). In New Zealand, the Ministry of Health recommends adjusting water fluoride levels to between 0.7 mg/l and 1.0 mg/l to optimise the therapeutic benefits whilst minimising any potential harm (MoH, 2009).

Promoting improvements in oral health is important from a Treaty of Waitangi perspective. The articles of the Treaty include *kawanatanga* (governance), *tino rangatiratanga* (Māori control and self determination) and *oritetanga* (equity). The related principles include partnership, participation and protection (Minister of Health, 2000). Māori have poorer levels of oral health compared to non-Māori (MoH, 2006). Developing a health promotion programme to improve oral health under a Treaty framework requires Māori to be equal partners in the programme from the outset, participation in the planning by Māori, delivery and monitoring of programmes relevant to Māori and active protection, ensuring that programmes deliver equitable oral health status for Māori (Martin, 2002).

Reducing ethnic and other inequalities also has a strategic imperative. It is a key theme of the Ottawa Charter (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986). It also underpins the *New Zealand Health Strategy* (Minister of Health, 2000) and its importance was further emphasised by the Ministry of Health in 2002 with the release of the strategy *Reducing Inequalities in Health* (MoH, 2002). Water fluoridation is a universal public health measure providing benefit for all (Watt & Sheiham, 1999). Therefore, it has the potential to reduce inequalities by meeting the needs of those who need it most, thereby closing the gap with those with less need.

Public health needs assessment

Needs assessment underpins the development of health promotion programmes. It gives a baseline understanding of the health issue in the community, its contributing factors, the resources available to address it, and identifies effective interventions to address the issue (Hawe et al., 1994).

A specific needs assessment was not undertaken for the Vote Fluoride project. A strategic mandate was already present with respect to advocating for water fluoridation in the form of recommendations from the Ministry of Health and inclusion within the DHB strategic plans (MoH, 2006; Southland District Health Board [Southland DHB], 2005). Additionally, work had previously been undertaken by the two DHBs regarding the oral health status of children in their districts. The epidemiological data presented in Figure 1 shows poorer dental health for children living in Southland compared to Otago. Within districts, children living in non-fluoridated and more deprived areas have poorer levels of oral health. These inequities are worse for Māori children (Otago DHB, 2007; Southland DHB, 2007).

The project team identified priority groups as being children and young people from communities with higher levels of deprivation and Māori. However, because water fluoridation is a near-universal programme and water supplies tend to span many communities (inclusive of less and more deprived communities, Māori and non-Māori), the health promotion programme was not targeted to high-needs communities. The project

team examined the results and experiences from other fluoridation projects and undertook a literature review that informed the development of the project's strategies (Penny, 2006; Williams, 2007).

Figure 1. Oral health of children living in Otago and Southland, 2006

Dental Health Status	% Caries Free Southland	% Caries Free Otago	Mean dmft* Southland	Mean dmft* Otago
5-Year-Old	55.0%	62.5%	1.82	1.54
All Fluoridated 5-Year-Old	54.0%	67.2%	1.46	1.22
All Non-Fluoridated 5-Year-Old	55.5%	57.7%	2.03	1.88
Māori Fluoridated 5-Year-Old	30.7%	48.5%	2.67	2.37
Māori Non-fluoridated 5-Year-Old	30.6%	49.5%	3.6	2.57
Year 8	29.2%	39.6%	1.98	1.68
All Fluoridated Year 8	31.7%	43.8%	1.7	1.41
All Non-Fluoridated Year 8 Children	27.3%	35.5%	2.2	1.93
Māori Fluoridated Year 8 Children	30.8%	33.3%	2.1	1.94
Māori Non-Fluoridated Year 8 Children	19.8%	31.9%	3.24	2.86

Source: Southland and Otago DHBs' Oral Health Business Cases, 2006.

*dmft—decayed, missing and filled teeth.

Note: the inclusion of Māori in the 'All' figures reduces the difference between Māori and 'All'; therefore, the 'All' figures underestimate the non- Māori dental health status.

Programme linkages

Given the responsibility of city and district councils for providing community water supplies and, therefore, the associated decision-making about water fluoridation, the project initially linked with six Otago and Southland councils. It did so to seek agreement for a referendum on the topic of water fluoridation to be held at the same time as local territorial authority elections. Thereafter, in the second phase of the project, the social marketing campaign included five interrelated strategies that involved a range of services that influence health status. These included health and social service professionals and organisations, politicians, Māori, local iwi, community groups and leaders, the news media and the general public.

Project partners

The Vote Fluoride project partnered with a wide array of people and organisations. Partners included Ministry of Health oral health team

members, district council chief executive officers (CEOs), mayors, and voting officers, DHB CEOs, dentists and dental therapists, Māori health providers, public health practitioners and other government and non-governmental providers. The project also worked closely with education providers, community organisations, the media and the public. The project received support from the then Minister of Health, the Hon. Pete Hodgson, who reinforced the important role councils can play in oral health at meetings with Otago and Southland mayors. This coincided with the project's implementation so the Minister also participated in the project launch.

Process evaluation undertaken following the project suggests the project team worked very well together (Stewart, 2008). A comprehensive project plan was developed using PRINCE2 project management methodology, which enabled the project to deliver against its objectives largely as planned, on time and within budget (ODHB, 2007; SDHB, 2007). The project team felt the project went exceptionally well (Stewart, 2008) and the mayors and CEOs of the councils involved expressed satisfaction with the way the project was conducted (Stewart, 2008).

Opportunities for improvement identified from the evaluation included the potential benefit of earlier engagement with the wider health professional network. Involving Māori in the planning and development phases would have better enabled Māori participation. Additionally, some members of the project team felt greater involvement in the project by District Health Board member candidates¹ may have been helpful. Ongoing relationship building and management with city and district councils also presented opportunities for further development.

Involvement of the priority group in planning, development, implementation and evaluation of the programme

Being a universal strategy, the target group for this project was Southland and Otago people living in areas without fluoridated water supplies. Further prioritisation on the basis of need identified the high priority groups as being children, particularly Māori children and those children from more deprived areas.

Therefore, there were two broad target groups for this project: city and district councils who do not have fluoridated water, and the public in these areas. The councils were not actively involved in the initial planning of the project but were involved in aspects of the development as it pertained to the conducting of the referenda. Additionally, mayors and CEOs of the participating councils were interviewed as part of the evaluation of the project (Stewart, 2008).

¹ The referenda were held in conjunction with the local body elections, which occurred at the same time as district health board elections.

The public were not actively involved in the planning and development of the project. However, the grassroots-based social marketing campaign sought to engage the public during the implementation phase. First, opinion leaders were engaged in an effort to secure their assistance in spreading the key project messages. Second, the public was provided with information regarding water fluoridation via a variety of means, including word-of-mouth information from health professionals, pamphlets, posters, and newspaper and radio advertising in order for them to make an informed decision about water fluoridation. Additionally, members of the public were involved in the evaluation of the project through a telephone survey undertaken at the conclusion of the project (Stewart, 2008).

The project team regarded a weakness of the project as being the level of engagement the project had with Māori, particularly in the planning and development phases. The contributing factors to this were availability of time and mechanisms to enable appropriate engagement with runanga. Notwithstanding this, the social marketing campaign included a Māori consultation strategy that included engagement with Māori. Whilst overall there were some gaps in the implementation of this strategy, feedback obtained in the project evaluation suggested engagement with a large Māori provider in Southland went well (Stewart, 2008).

Health promotion programme

Under the Ottawa Charter framework (World Health Organization et al., 1986), the Vote Fluoride Project sought to build healthy public policy (by advocating for city and district councils to adopt water fluoridation), create supportive environments (by promoting improved community knowledge of, and support for, water fluoridation), strengthen community action (by encouraging people to vote for fluoridation at the referenda) and reorientate the health service (through providing health professionals with education regarding the benefits of water fluoridation).

Phase one

The Otago DHB chief executive officer contacted council mayors and CEOs seeking an opportunity to discuss the prospect of holding referenda on water fluoridation. Subsequently, presentations were given to five of the six councils, as one council indicated that it did not wish to participate. In the presentations the oral health status pertaining to the council region was outlined, including the ethnic and socioeconomic differences in dental decay evident between fluoridated and non-fluoridated areas. Information was also provided regarding the technical water supply subsidy² available to support fluoridation. The pros and cons of fluoridation were not presented per se; the emphasis was on seeking

² The technical water supply subsidy is available from the Ministry of Health. The subsidy provides financial assistance to support the implementation of fluoridation of council drinking water supplies.

council agreement to hold a referendum to enable people to exercise their choice. About the same time, the Minister of Health reinforced the importance of water fluoridation as a public health measure during a meeting held between the Minister and mayors. Four of the five councils agreed to hold referenda.

Phase two

An external marketing and communications company, Convergence Marketing and Communications Ltd (Convergence), was contracted to work with the project team to develop and implement the social marketing campaign. Market research was not undertaken prior to the commencement of the campaign due to time constraints. However, Convergence and project team members reviewed the literature and previous fluoridation campaigns to inform the plan. Project strategies included:

- providing grassroots public education about the benefits of fluoridating water supplies to a level whereby people feel they have sufficient information to make an informed choice
- countering scare tactics respectfully and publicly
- mobilising communities to vote
- providing key community leaders and professionals with information to ensure they are well informed (Convergence Marketing and Communications Ltd, 2007).

Market segmentation was undertaken using a stakeholder matrix developed on the basis of likely support and intensity levels. This segmented the market into adversarial (actively opposed to fluoridation), advocate (actively supportive of fluoridation), apathetic (either opposed or disinterested in fluoridation and unlikely to vote) and dormant (supportive of fluoridation but less likely to vote). More effort was focused on mobilising the advocate and dormant stakeholders, as it was felt by the project team they were most likely to vote and to carry their support through with a "yes vote". No special effort was planned for the apathetic voter as it was felt they were unlikely to vote. A respectful strategy was adopted for the adversarial voter.

The marketing campaign ran for 12 weeks in the lead up to local authority elections in 2007. The marketing plan identified five key communication strategies. These included:

- public education: dissemination of information to provide a base level awareness about the benefits of fluoride to "advocate stakeholders", those people identified as being likely to be active and supportive of fluoridation; e.g., health professionals, DHB spokespeople, preschool and primary teachers, politicians (local body and central government) and key influential groups and opinion leaders.

- community relations: identification of key groups and organisations that were thought to have the ability to influence the priority communities. These groups were contacted for a range of engagement opportunities including meetings, one-on-one contact, speaking platforms and the inclusion of information in key community publications and school newsletters.
- marketing, communications and advertising: development of a brand, print media (e.g., pamphlet, posters, advertisements), website, 0800 information number, radio advertising, editorials, and feature stories.
- media relations: identification of the key media with the ability to influence the priority communities. Establishing positive relationships early on and maintaining regular contact with key media during the campaign was projected to be pivotal to the campaign's success.
- Māori consultation: the project plan outlined the need to engage Māori in the development of the marketing campaign in order to best meet the needs of Māori (Convergence, 2007).

Outcome

Postal voting results returned a "yes" vote in Clutha and Central Otago and a "no" vote in Southland and Waitaki regions, as outlined in Table 1.

Table 1. Fluoridation referenda results

Council	% For	% Against
Clutha District Council	60	40
Central Otago District Council	52	48
Waitaki District Council	31	69
Southland District Council	42	58

Underpinning health promotion theories

Health promotion theories seek to predict and explain behaviour at the individual, community and societal levels (Nutbeam & Harris, 2004). Whilst specific theories were not identified in the development of the project, assessment of models provides useful constructs to explain the results and reach conclusions about the efficacy of the project.

Social marketing

The Vote Fluoride project utilised a social marketing framework, which is more of a planning tool than a theory. Like generic marketing, social marketing is not a theory in itself. "Theoretically it draws from other bodies of knowledge such as psychology, sociology, anthropology and communications theory for insight in how to influence people's behaviour. It is a program planning process that incorporates programme design, implementation and control processes aimed at increasing the acceptability of a social idea or practice within a target audience". (Kotler

& Roberto, 1989; cited in Stewart, 2008). It includes marketing concepts of market segmentation, target market orientation, exchange (intangible exchange of beliefs) and the marketing mix (product, price, promotion and place) (Nutbeam & Harris, 2004).

The marketing plan included market segmentation as previously described and target market orientation. The plan also incorporated the concept of exchange. In commercial marketing this refers to tangible exchange; for example, the exchange of money for a washing machine. In social marketing the notion of exchange may include elements of tangible exchange (e.g., access to free nicotine replacement therapy during a smoking cessation campaign), but may also include the notion of intangible exchange where the exchange includes beliefs and attitudes towards a certain health or social issue (e.g., exchanging a new idea for an old idea) (Stewart, 2008). The Vote Fluoride project sought to foster the voluntary exchange of an intangible belief, namely the replacement of previous negative beliefs about fluoridation with favourable beliefs being that fluoridation will reduce dental decay and improve oral health status. "Potential voters in the referenda would have needed to weigh up the relative costs of fluoridation (including cost of councils undertaking water fluoridation and flow on impact on council rates, the costs associated with potential known and potential unknown harm from fluoridation, the impact on individual rights, and the costs associated with voting) with the benefits (including potential improved oral health and reduction and dental decay for self and others)" (Stewart, 2008).

The plan also included the marketing mix (product, price, promotion and place) (Nutbeam & Harris, 2004). According to Kotler and Roberto (1989), product refers to the idea, behaviour or belief being promoted and the benefits that go alongside it. Price is an exchange of benefits and costs and refers to barriers or costs involved in adopting the behaviour (e.g., money, time, effort). Place is about making new behaviours easy to do, making the product accessible and convenient and delivering benefits at the right place at the right time. And promotion, the delivery of the message to the audience, is how the practitioner notifies the target market of the product, as well as its benefits, cost and convenience.

In terms of marketing mix, the primary 'product' identified was the belief that water fluoridation will have a positive impact on oral health. The secondary product was identified as the behavioural action of voting for fluoridation at the referendum. Considerations for 'price' included making available information on the government subsidy available for water fluoridation, as well as the long-term costs of dental decay and associated poorer oral health both for the individual and the community. Under 'place', the grassroots strategy of face-to-face contact with opinion leaders and community organisations, as well as the provision of information packs and the tactics utilised in the marketing communications and advertising strategy (mixed media advertising, posters, brochures, website, 0800 number), sought to make it relatively easy for people to access information about fluoridation. Additionally,

holding the referenda at the same time that people were casting their postal votes in the council elections was thought to make it easier for people to express their preferences with respect to water fluoridation. 'Promotion' of the product was undertaken using both the grassroots public education programme and the multi-channel marketing communications strategy previously described. The Vote Fluoride brand was selected and used throughout the campaign. The key messages were repeated in radio and print advertising, in the brochures, information packs and on the website.

Analysis of the project identified the need for informative and process market research to better inform market segmentation and associated targeted product development and promotion. This may have improved the programme by having greater knowledge of potential voters' underlying beliefs and attitudes, which may have then enabled more targeted messages and ways of promoting the messages.

Other specific health promotion theories were not specifically named or identified; however, the following are applicable.

- **Health Belief Model:** the likelihood of someone taking action with respect to a health problem is based upon the interaction of beliefs, including an individual's perceptions regarding their susceptibility to the condition and their beliefs about the seriousness of the consequences, whether their taking action would reduce their susceptibility or the severity experienced and that the benefits of taking action outweigh the costs or barriers (Nutbeam & Harris, 2004).
- The **Theory of Reasoned Action** and associated **Theory of Planned Behaviour** are predicated on the basis that "people are usually rational and will make predictable decisions in well defined circumstances" and "intention to act is the most immediate determinant of behaviour" (Nutbeam & Harris, 2004). In turn, behaviour is influenced by an individual's belief about the behaviour and whether individuals (significant others) who are important to the person approve or disapprove of the behaviour (US National Institutes of Health [NIH] & National Cancer Institute [NCI], 2005). Significant others may include family, valued peers, media celebrities and sports stars who act as role models (Nutbeam & Harris, 2004). Further, "in situations where people's behaviours are influenced by factors beyond their control, people may try harder to perform a behaviour if they feel they have a high degree of control over it" (US NIH & NCI, 2005).
- **Diffusion of Innovation** describes "how ideas, products and social practices that are perceived as 'new' spread from one society to another" (US NIH & NCI, 2005).
- The **Communication-Behaviour Change** model describes communication elements designed to influence attitudes and

behaviours including source (credibility of messenger, clarity and relevance of the message), message (relationship between what is said/how it is said and the response), channel (relationship between medium used to transmit the message; e.g., television, radio, newspaper and the resultant reach and uptake), receiver (match of target audience characteristics; e.g., age, gender, ethnicity, income, attitudes, beliefs, behaviours and media preferences), and destination (desired result of the communication e.g. change of attitudes, beliefs, behaviours) (Nutbeam & Harris, 2004).

- **Chaos Theory** and **Complex Dynamic Systems Theory** suggest that behaviour is not always linear and rational. Occasionally a tipping point occurs where an individual or community suddenly changes their belief, attitude or behaviour (Resnicow & Vaughan, 2006).

The Vote Fluoride project attempted to influence people's beliefs about oral health and water fluoridation and mobilise them to express that belief to councils by voting in the referenda. All of the theories discussed above underpin actions undertaken within the planning and delivery of the project and the beliefs and attitudes observed in the referenda results. Specific consideration of some or all of these theories may have strengthened the programme by enabling more focused attention on factors likely to effect positive change.

Evaluation

Limited evaluation mechanisms (formative, process, impact, outcome) were identified at the outset of the project, with the exception of an end-of-project (process) evaluation and the impact results of the referenda. The short timeframes of the project resulted in limited formative evaluation being undertaken during the planning phase of the social marketing campaign. In particular, formative opinion research was not undertaken prior to and during the development and implementation phases of the campaign. However, the project team built on learning from other recent campaigns conducted in Ashburton, West Coast, Waikato and Southland by talking to those involved and reading their project documents, including evaluations.

During the campaign, an impact evaluation of the project was planned. At the end of the project, faced with variable results across the four regions, the project team sought approval from the Ministry of Health to undertake a telephone survey to ascertain the effectiveness of the social marketing campaign. A telephone survey of 800 people was undertaken (Stewart, 2008). Survey respondents expressed similar levels of support for fluoridation compared to the referenda results. However, as the survey was conducted two to three months after voting in the referenda closed, recall bias was a significant issue in the survey (many respondents were unable to recall whether or how they voted during the referenda). This limited the ability to draw conclusions about the effectiveness of the social marketing campaign in influencing voters'

attitudes, beliefs and voting behaviour. The survey results suggested there were differences across the regions regarding people's beliefs and opinions on water fluoridation, the knowledge of which would have assisted in the development of the project; for example, in undertaking more focused effort to get advocates or 'dormant' voters to vote in areas with a high number of people identified as apathetic.

Furthermore, baseline opinion data would have provided a useful comparison on whether people's beliefs had changed significantly as a result of the campaign, which would have in turn enabled conclusions to be drawn on the effectiveness of the project in influencing attitudes and beliefs. One of the key learning points identified by the project team was the need to formally include evaluation in the planning, development and implementation stages of the project as well as at the end of the project.

Conclusion and recommendations

Overall, the Vote Fluoride project resulted in two of the four councils who held referenda receiving majority community support, giving these councils a mandate to proceed with water supply fluoridation. However, because no baseline data was collected it is difficult to definitively attribute this result to the project. However, councils may not have held referenda if it had not been for the advocacy undertaken as a result of this project.

Unfortunately, the referenda are not binding, so ultimately the decision to proceed with implementation still rests with councils. Subsequently one council has decided to proceed to implementation subject to securing funding from the Ministry of Health. The second council referred the decision making to their respective council community boards, with one out of the three recommending council proceeds with fluoridation in their area (subject also to securing funding from the Ministry of Health).

There is a need for oral health to remain high on council and district health board agendas, and there is an obvious need to continue advocating for water fluoridation in Otago and Southland communities as outlined in this chapter, particularly those where inequities are most apparent.

A number of recommendations for future Vote Fluoride programmes, and health promotion programmes more generally, have emerged from this review. These include that:

1. Vote Fluoride project leaders engage with Māori as equal partners and participants in the leadership, development and delivery of further oral health promotion programmes. This would better fulfil the Crown's obligations under the Treaty of Waitangi and is likely to result in improved programme design and delivery for Māori
2. district health boards further develop relationships with council mayors, councillors, chief executive officers and council staff. That they seek ways to ensure improving oral health remains on council agendas and work plans by, for example, making oral health statistics available to councils and communities on a regular basis and making submissions to annual and three year strategic plans
3. district health boards work with the Ministry of Health to identify options for resourcing of ongoing and long-term oral health promotion, including social marketing of the benefits of good oral health and the role of water fluoridation in this
4. the grassroots approach offers an effective mechanism to influence attitudes, beliefs and behaviours; however, it takes time. This strategy should be enacted in the early stages of any future programme
5. health promotion messages regarding fluoridation accurately reflect the available evidence around efficacy. This needs to include the benefits plus the costs, including the costs of dose-related fluorosis
6. evaluation mechanisms are built into health promotion programmes at the design phase.
7. a robust project management framework is used in health promotion programmes: this was a key strength of this project.

Acknowledgements

I would like to thank the Vote Fluoride project team, including Convergence, for their enthusiasm, commitment, dedication and hard work undertaken during this project. I would also like to thank the wider group of stakeholders, who, without their help, the project would not have been possible. I would also like to thank Professor Brendan Gray and Associate Professor John Broughton who supervised my Masters in Public Health dissertation on this subject.

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12 Otago Exercise Programme: analysis of an existing health promotion initiative

Elizabeth Willms

Introduction

Health promotion is based on a number of key principles which provide direction for health strategy and promote action on individual, community and national levels. One of these tenets, "Health for All" provides incentive for programmes to focus on improving health and wellbeing for all people, regardless of gender, age or ethnicity. Despite this notion, elderly people seem often to be overlooked. In addition to mental health issues like loneliness and depression, addressing the physical issues associated with aging is of increasing importance, both in terms of social justice and economic viability. Evidence of this can be seen in Figure 1, where economic data from the Ministry of Health show a steady increase in the "estimated per capita expenditure on health and disability support services" with age (Ministry of Health [MoH], 2002a):

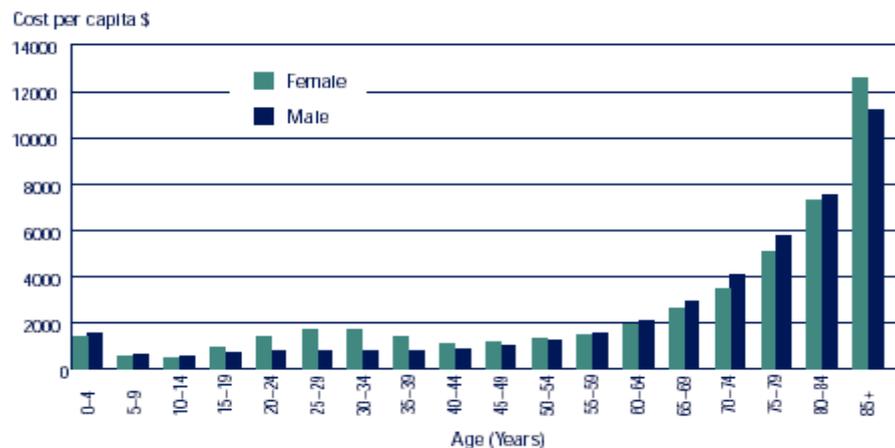


Figure 1. Increase in projected per capita cost of health and disability services with age (Ministry of Health unpublished data, 2001)

That is not to say, however, that there is a total lack of health promotion initiatives for aged populations. A prime example is the Otago Exercise Programme (OEP), a falls prevention programme for older people developed and trialled by the University of Otago, Department of Medical and Surgical Sciences in Dunedin. The OEP programme involves one-on-one home-based training which is provided by health workers who are either physiotherapists or trained and supervised nurses with physiotherapist support. The health workers work with the participants to improve strength and balance through a series of exercises.

The OEP has been studied using randomized controlled trials and shown to be effective at preventing falls (Robertson, Campbell, Gardner, & Devlin, 2002). The programme reduced the number of falls and the number of fall-related injuries by 35%.

The OEP programme has been picked up by the Accident Compensation Corporation (ACC) following the trials and is currently available in a comprehensive manual with instructions for health professionals wishing to deliver the programme (ACC, 2003). In addition to the home-based programme, ACC funds a community-based course through Age Concern that uses several of the OEP exercises in a group setting (Robertson C., personal communication, 2007).

In New Zealand, several important documents provide guidance and direction for health promotion, particularly in relation to the Treaty of Waitangi. The *Treaty Understanding of Hauora in Aotearoa-New Zealand (TUHA-NZ)* provides a way to take a Treaty-based approach to health promotion (Martin, 2002). Similarly, the 2002b Ministry of Health (MoH) document *Reducing Inequalities in Health* outlines the widespread factors associated with poor health and addresses the need for compensatory action at all levels of the health sector. The *New Zealand Health Strategy* also identifies this need and provides a strategic framework for New Zealand's health care system (Minister of Health, 2000). All three documents stress the need for interventions to address disparities, an issue made relevant by the significant projected increase in the number older Māori (kaumatua) and Pacific people over the next 30 years (MoH, 1997).

This paper will provide a critical analysis of the OEP, examining the ways it has been implemented and evaluated. Recommendations will be made for improvement and sustainability to ensure that this successful and effective programme continues. Finally, a discussion will address the programme's relation to the aforementioned documents aimed at reducing disparities in health.

Priority group

The target audience for this health promotion programme is older people of both sexes, classified as those over the age of 65. In the trials, the OEP was found to be equally effective for men and women and was most effective in reducing fall-related injuries in those aged 80 and older (Robertson et al., 2002). The ACC-published manual and the Age Concern classes are also intended for those over the age of 65, while the personal home-delivered course from ACC is provided to those over 80 years who have fallen in the past year (Accident Compensation Corporation [ACC], 2003; Robertson C., personal communication, 2007).

Little action has been taken to specifically target groups who may suffer from lower health status, such as Māori and Pacific populations. Despite some proactive effort, very few Māori have been recruited for the trials

and improvements in Māori health have not been specifically addressed (Robertson, C., personal communication, 2007). This concern will be considered in a later section of this report.

Relevance and importance to health promotion

Falls are the foremost cause of injury in elderly people over the age of 65 and can have serious impacts, both on individual health (pain, weakness, decreased self-assurance) and the wider health sector (ACC, 2003). The predisposition of elderly people to falls is often related to reduced physical functioning; two of the most significant risk factors are muscle weakness and a history of falls (American Geriatrics Society et al., 2001). This is particularly relevant in New Zealand where the percentage of the population over 65 years of age is expected to reach 22% by 2031 (MoH, 2002a). Thus it seems intuitively important to design health promotion programmes aimed at preventing injury and improving the health and wellbeing of this increasing elderly population.

In terms of financial feasibility, research supports the economic benefit of the widespread implementation of such an initiative (Robertson et al., 2001). Furthermore, the intentions of the programme are directly in line with sections of the *New Zealand Health Strategy* (Minister of Health, 2000), which identifies 'age' as a key determinant of health, and the *Health of Older People Strategy* (MoH, 2002a), which focuses entirely on improving the health of elderly populations.

Response to public health needs

The elderly population appears to be under-represented in programmes aimed at improving health. It is possible that such projects get overlooked because they lack the public appeal of anti-smoking campaigns or drug and alcohol abuse awareness. However, it is likely that a lack of knowledge regarding the challenges and concerns associated with aging is the major factor. Even those involved in research for this programme cite the lack of perceived need for a health promotion programme targeting falls in elderly people at the time of the trials.

However, analysis of the OEP indicates that these perceptions are changing at all levels. On a national level, ACC has recognised the value of an effective falls prevention strategy and has adopted the programme, essentially converting a 'bottom-up' approach into a 'top-down' policy (Robertson, C., personal communication, 2007). On a community level, the popularity and longevity of the Age Concern 'Steady As You Go' classes suggests that a public health need is being satisfied (Dando, M., personal communication, 2007). Finally, the one-on-one delivery of the ACC-adopted programme by trained health professionals, the provision of appropriate resource material, and the subsequent follow-up all empower elderly individuals to take control of their own health (Williams, M., personal communication, 2007).

Links to other health services

In the Age Concern community setting, strength and balance exercises are offered in conjunction with a more demanding Tai Chi programme as part of the 'Steady As You Go' series. The Tai Chi offers a more difficult option for people of higher fitness, and requires sustained strength and memory of movements. Furthermore, in keeping with the notion of a holistic health definition, Age Concern offers a visiting and telephone service promoting social wellbeing by matching volunteers with lonely older people and encouraging interaction and social stimulation (Age Concern New Zealand Incorporated, 2007). Age Concern also has links with Sport Otago, in particular the granting of 'green prescriptions' for improving physical activity levels (Dando, M., personal communication, 2007).

The majority of long-running Age Concern classes are voluntarily peer-taught by a member of the elderly community, a system that helps to keep the programme costs down, promotes community development and fosters social well-being throughout the group (Dando, M., personal communication, 2007).

From a wider perspective, the OEP is directly linked with the primary health care sector as initial participation in the programme is prescribed by a general practitioner or clinic nurse with practitioner approval. Furthermore, participants in the programme are often directed towards secondary health care resources, such as occupational therapists and opticians, following completion of the OEP (Williams, M., personal communication, 2007).

Project partners and collaboration

The OEP is a prime example of interagency collaboration in a health promotion context. The basic programme design and supportive evidence was provided by a University of Otago research team headed by John Campbell and Clare Robertson. The original programme was administered by trained physiotherapists and was later expanded to include practice and community nurses (Gardner et al., 2002). Adoption by ACC took the programme to the national, or governmental level. ACC has regular contact with district health boards, health professionals trained to deliver the programme and Age Concern branches that either offer strength and balance classes or act as a referral service (Williams, M., personal communication, 2007).

Training for physiotherapists is done online through the Auckland University of Technology (AUT). Participants complete ten hours of tutorial followed by a final test, after which they are qualified to both provide the programme and train nurses (Binns, L., personal communication, 2007).

The project partners appear to collaborate effectively, with regular feedback, evaluation and communication encouraged. The members of the research team are considered experts on falls prevention and have ongoing contact with ACC through systematic reviews and the evaluation of contracts (Robertson, C., personal communication, 2007).

Involvement of priority group

The programme was originally developed by an experienced physiotherapist and the elderly target population was not consulted in this process. They did, however, contribute to the process evaluation through focus groups and feedback sessions (Robertson, C., personal communication, 2007). ACC has also collected some valuable qualitative commentary from the programme participants and used this to make improvements to the programme. For example, the leg weights used to increase the difficulty of the exercises were made more user-friendly after critical feedback from elderly clients indicated that they were difficult to use (Williams, M., personal communication, 2007).

On a community level, Age Concern also encourages evaluation from those who partake in the programmes. Questionnaires are filled out and an annual feedback session is held to discuss concerns (Dando, M., personal communication, 2007).

Health promotion in action

The predominant health promotion action underpinning this programme is health education, focused on informing elderly people about the risks surrounding falls and the prevention methods available. In the research trials and the current ACC home programme, participants are given one-on-one training sessions with a qualified instructor and left with a comprehensive manual outlining the important exercises (ACC, 2003). The Age Concern course has a presentation component at the outset as well, designed to alert elderly clients to the documented risk factors of falls and benefits of regular strength and balance training (Dando, M., personal communication, 2007)

In addition to health education, Age Concern should be commended for promoting capacity-building and community involvement, two other significant health promotion actions. Long-running 'Steady As You Go' classes are taught by former participants at various locations throughout the area, fostering social links within the community and enhancing the capabilities of elderly people to take control of their own health (Dando, M., personal communication, 2007).

Finally, implementation of the programme by ACC at the governmental level can be viewed as a form of policy development as it provides a strategic, national framework for taking action to prevent falls in elderly people.

Thus, in all its forms, the OEP empowers the elderly population to improve their own health by providing them with essential skills and support networks.

Health promotion in theory

There is no explicit theory underlying this programme and no documentation of health promotion models being utilised in its development. However, the manner in which health education is used to raise awareness and initiate behavioural change exhibits similarities to several models of individual behaviour modification. For example, the Stages of Change Model includes such strategies as “personaliz[ing] information about risks and benefits” and providing motivation for change (US National Institutes of Health [NIH] & National Cancer Institute [NCI], 2005). Correspondingly, the individually tailored OEP is based on personal contact and assessment with a qualified provider and ongoing motivation through calendars, phone calls and check-ups (ACC, 2003).

Interpersonal health promotion theory is also relevant to this programme. The Social Cognitive Theory, for example, focuses on influencing behavioural capability, expectations and self-efficacy (“confidence in one’s ability to take action and overcome obstacles”) and also stresses the importance of reinforcing behaviour change (US NIH & NCI, 2005).

In this particular programme, the idea of self-efficacy was monitored on a falls efficacy scale via a questionnaire which determined if the fear of falling had increased in elderly participants (Campbell et al., 1997). Evidence indicated that the confidence of those carrying out the exercise routine was preserved, an important factor in motivating elderly people to continue being physically active (ACC, 2003).

Evaluation of the health promotion initiative

The OEP was evaluated at many levels during the trials. Process evaluation, concerned with the provision of the programme, was undertaken through feedback sessions and focus groups with elderly participants (Robertson, C., personal communication, 2007). When the programme was tested in a primary health care practice setting, process evaluation considered programme reach, compliance of participants and the effectiveness of physiotherapist-trained nurses in delivering the programme.

Impact evaluation addresses the short-term, immediate effects of a programme. In this case, researchers were interested in intermediate variables like strength and balance measurements after a year of exercise compared with pre-programme baseline capabilities. Finally, the documented 30% reduction in incidence of falls is an example of an outcome evaluation measure. Outcome evaluation is a type of

assessment that looks at the long-term effects of health promotion initiatives and whether initial goals were achieved (Gardner et al., 2002).

The ACC-delivered home exercise programme replicates the evidence-based OEP and thus, logically, should have the same impacts and outcomes. Quantitative assessment through evaluation forms is carried out at the onset of the programme, and then at six months (halfway through) and upon completion of the programme at 12 months. This data is analysed by AUT University who then provides a biannual report on the programme, relating the number of participants in the programme and the number of falls recorded (Williams, M., personal communication, 2007).

Process evaluation for the Age Concern classes is provided through an annual meeting with all involved parties (including peer instructors) and impact evaluation is done through strength and balance testing pre- and post-programme (Dando, M., personal communication, 2007). Concern has been raised, however, regarding the lack of outcome evaluation for this community-based method of implementation. Despite a strong social component to the classes, no trials have been conducted to determine whether this programme actually reduces falls in elderly people (Robertson, C., personal communication, 2007).

Recommendations

In its research-based form, the OEP is successful in improving strength and balance variables and reducing falls in elderly people. Programmes that modify this original structure, however, lack the same evidence base and recommendations may not be as effective. For example, there is no formal evidence indicating that the community Age Concern classes reduce the incidence of falls in older people. A programme that differs substantively from the original programme that was trialled may not replicate results. Additional concerns include the lack of health professional involvement, one-on-one interactions and teaching technique evaluations in these community classes. It has been further suggested that ACC is often pressured to fund such unproven programmes, raising questions about justification from a health promotion perspective: if an initiative is popular amongst its target group and fosters a strong sense of community but there is no evidence that the major objective is being achieved (i.e., reduction in falls), is it worthwhile? (Robertson, C., personal communication, 2007)

A second major issue that should be addressed in this health promotion programme is the disparity in health between ethnicities. This topic is discussed in the next section.

Addressing disparities in health

There is an unmistakable public health need to tackle gaps in health status between different ethnic groups, as reflected in the *TUHA-NZ* (Martin, 2002), *New Zealand Health Strategy* (Minister of Health, 2000) and *Reducing Inequalities in Health* (MoH, 2002b) documents. Despite acknowledgement of this issue by contributors at all levels of the programme, moves taken to integrate possible solutions and relevant health promotion actions were lacking. Furthermore, even when proactive efforts were made, initiatives were unsuccessful.

Rationalisation for this lack of focus on reducing ethnic disparities in health has several sources. First of all, little previous study has been undertaken on the subject and it is not actually known whether older Māori fall more frequently than elderly non-Māori. In fact, research has indicated that hip fractures are less common in older Māori than non-Māori groups, perhaps suggesting that ethnic disparity may not be a major issue. Secondly, the majority of research supporting the OEP was conducted in the South Island of New Zealand (where the Māori population is significantly less) and thus it was challenging to find Māori participants, particularly in the target age range. Even when a concerted effort was made to include Māori, such as when the Māori Health Cooperative was approached for the West Auckland trial, there was little success (Robertson et al., 2001). In addition, anecdotal observation suggests that many elderly Māori felt the need to consult with their *whānau* family) before making a decision to participate, a cultural practice that would be of importance if targeting Māori populations in the future. The Māori participation rate is unknown at present as accurate ethnicity data of participants has yet to be properly collected and analysed (Williams, M., personal communication, 2007).

Despite criticisms, sound health promotion practices were displayed at several stages. For example, Māori consultation on the research aspect of the programme was sought through the Ngai Tahu Research Consultation Committee, a process relevant to the Partnership focus of Article Two of the Treaty of Waitangi (Robertson, C., personal communication, 2007). In addition, Age Concern has run 'Steady As You Go' classes aimed at Māori and Pacific people in the past and the Otago Pacific People's Health Trust has since adapted these exercises into programmes featuring Pacific music and aerobic movement (Taungapeau, F., personal communication, 2007).

Optimistically, it has been indicated that the ACC will soon implement a strategy in which providers of the OEP will have to illustrate explicitly how they are going to meet the needs of Māori/Pacific populations in addition to non-Māori populations (Williams, M., personal communication, 2007). Also, the age of study participants has been reduced to 55 years in recent research trials to address earlier Māori mortality and hopefully encourage higher participation from the Māori community (Robertson, C., personal communication, 2007).

Further consultation and partnership with Māori and Pacific populations should be encouraged. The *TUHA-NZ* document provides a comprehensive framework for health promotion staff to incorporate the three principles of the Treaty (Participation, Partnership and Protection) into their work. Needs must be assessed, participation at all levels must be encouraged and positive action must be taken to improve Māori health, not just from a physical perspective (*te taha tinana*) but also acknowledging mental (*te taha hinengaro*), spiritual (*te taha wairua*) and family health (*te taha whānau*) (Martin, 2002).

Conclusion

The Otago Exercise Programme is an evidence-based health promotion initiative designed to decrease the incidence of falls in elderly people. Its success has been supported in randomised controlled trials and the programme has since been adopted by ACC to be implemented at a national level. Exercises from the programme have also been modified for a group setting and are offered under the 'Steady As You Go' umbrella by Age Concern.

From a health promotion perspective, this programme has been well researched and developed, effectively implemented and successfully evaluated at several levels. However, more outcome evaluation is needed for the community-based classes to determine if goals are being achieved.

The major criticism of this programme arises from its lack of attention to inequalities in health, particularly between different ethnic groups. It is encouraging to see positive changes being enacted, but major alteration is needed in order to ensure that a whole subset of the elderly population is not neglected and shares the benefits of this successful initiative.

Acknowledgements

The interagency nature of this programme meant that many different parties were consulted during the composition of this report. Clare Robertson, a Research Fellow at the University of Otago, provided invaluable information regarding the development of the programme and the research process undertaken. Margaret Dando from Age Concern was consulted on the community classes and Mooch Williams, the Programme Manager from ACC, was very helpful via email during my assessment of the ACC-provided scheme. Finally, Liz Binns and Finau Taungapeau both contributed beneficial information regarding the physiotherapist training through AUT and the Pacific People's Health Trust use of the programme, respectively.

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13 Reflections on best practice in health promotion in Aotearoa New Zealand

Louise Signal & Richard Egan

The reviews presented in this book provide considerable insight into the quality of a number of health promotion initiatives undertaken in Aotearoa New Zealand. In this final chapter we reflect on best practice in health promotion, both in relation to the initiatives reviewed here and more broadly in relation to health promotion in this country. We do so based on our knowledge as practitioners, researchers and teachers of health promotion.

The reviews in this book illustrate efforts to promote health in the areas of physical activity, healthy nutrition, alcohol consumption, sun safety, smoking prevention, falls prevention and oral health. The programmes, at both national and regional levels, demonstrate the work of a range of health promotion providers including Sport and Recreation New Zealand, district health board public health units, the National Heart Foundation, the Alcohol Advisory Council (ALAC), the Cancer Society, the Health Sponsorship Council and a primary health care organisation.

All the programmes are mainstream initiatives. That is, they are targeted at the general population—or a segment of it. None of the programmes highlight the significant work being undertaken by Māori for Māori or by Pacific for Pacific throughout the country. It is hoped in future publications that this work will feature prominently, because it may well be that in this domain some of the greatest health promotion successes will be found.

The work reflected here is in line with national health priorities as outlined in the *New Zealand Health Strategy* (Minister of Health, 2000). The range of programmes largely reflects the choice of the authors about programmes of interest to them. However, it is interesting to note that five of the programmes promote physical activity. This may be in part because of the focus on promoting healthy action (Ministry of Health, 2003) by the Labour-led Government at the time. Focusing health promotion action on identified priorities is important. These priorities are largely determined in relation to public health significance and have political and financial support. However, there may be times when community priorities differ and health promotion must be flexible enough to accommodate this, particularly for less privileged populations whose needs may vary from the mainstream population.

Despite evidence of the importance of Treaty-based health promotion practice in this country (Martin, 2002), and ongoing inequalities in health status endured by Māori (Blakely, Tobias, Atkinson, Yeh, & Huang, 2007),

there is very little evidence of Treaty-based practice in the programmes reviewed here. A number of the reviews discuss the importance of this approach and the value of the *TUHA-NZ* tool (Martin, 2002) in assisting organisations to address the Treaty in practice; for example, Rhiannon Newcombe and Bronwyn Ferry in Chapters 7 and 8. Lack of Treaty-based mainstream health promotion practice appears to us to be a significant weakness throughout New Zealand. This urgently needs addressing if health promotion is to successfully contribute to closing the seven-and-a-half-year life expectancy gap between Māori and non-Māori in this country (Blakely et al., 2007).

The reviews highlight the importance of tackling inequalities in health in order to achieve health equity. However, the programmes presented here demonstrate a range of success in this arena. Kirsty Craig highlights in Chapter 4 the environmental approach of the National Heart Foundation's School Food Programme and its good reach in low-decile (high-needs) schools. Mary Duignan notes a similar experience with the Cancer Society's SunSmart Schools Accreditation Programme in Chapter 6. Bronwyn Ferry, on the other hand, discusses in Chapter 8 the possible risk of increasing inequalities as a result of offering the iMove Nekenekē Hi! Programme only to schools that are interested, and not on the basis of need. She notes this as an issue to assess in evaluation of the programme.

Health promotion is well placed to address inequalities in health. First, it recognises the importance of equity as a key value (World Health Organization, Health and Welfare Canada, & Canadian Public Health Association, 1986). Second, it has planning and evaluation processes that enable a systematic approach to be taken to addressing inequalities in programme development. Third, it has tools available to assist it with taking an equity approach such as the *TUHA-NZ* tool (Martin, 2002) and the *HEAT* tool developed in New Zealand to assess the equity of proposed interventions in health (Signal, Martin, & Cram, 2008).

The identification of priority groups appears to be a strength of the programmes reviewed, although more detailed analysis of priority groups by the organisations involved might have improved effectiveness. For example, Elizabeth Willms in Chapter 12 discusses the failure of the Otago Exercise Programme to meet the needs of Māori and Pacific communities despite some effort by the programme developers. Perhaps better knowledge of these priority communities by the programme developers would have enabled more success. Hawe et al. (1992, p. 30) stress the importance of understanding the target group in order to "direct your intervention precisely where it is most needed". They also note that clarity about the target group makes evaluation easier and that it allows health workers in other areas to replicate interventions in similar populations.

All the programmes reviewed in this book appear to have addressed an important health promotion issue. As discussed above, the programmes

align well with established public health priorities. They also appear to be based on assessment of public health needs, although the extent of this assessment varies considerably among the programmes. This may well be because the reviews include national programmes with substantial budgets, such as ALAC's social marketing campaign discussed in Chapter 5, and regional programmes with much more modest budgets, such as Vote Fluoride Oral Health Programme, discussed in Chapter 11. Mary Duignan, in Chapter 6, provides a valuable discussion of the range of needs assessment that can be undertaken, based on the dimensions of need identified by Hawe et al. (1992).

Partnership is another strength of the programmes. Many demonstrate productive interagency collaboration, such as the Otago Exercise Programme discussed in Chapter 12. In contrast, Mary Duignan reports in Chapter 6 on the difficulty the Cancer Society has experienced in engaging key government agencies in supporting efforts to promote sun safety, a public health issue that continues to gain in urgency. The overall exception to successful partnership appears to be the frequent failure of mainstream programmes to successfully partner with Māori. Again, this situation must be addressed if health promotion is to develop programmes that meet the needs of Māori and thus close the gaps in health outcomes between Māori and non-Māori. Signal et al. (2004) identify a number of ways to strengthen mainstream health promotion organisations to work with Māori which agencies could consider adopting or strengthening. These include staff training in Treaty-based practice, use of tools such as *TUHA-NZ* (Martin, 2002) and the *HEAT* tool (Signal et al., 2008) and ensuring that organisations have an appropriate process for working with Māori as Treaty partners.

Programmes varied in the extent to which the priority group was involved in the programme. Nicola Laurie reports in Chapter 9 that there was active involvement by the elderly in the planning, implementation and evaluation of the Stay On Your Feet project, and that this included participation by Māori and Pacific people. Bronwyn Ferry, on the other hand, reports in Chapter 8 a complete absence of priority group (school children) involvement in the iMove Nekenekē Hi! Programme and notes how the programme could have been strengthened if this had occurred. The *Jakarta Declaration on Leading Health Promotion into the 21st Century* (World Health Organization, 1997) identifies that "participation is essential to sustain efforts. People have to be at the centre of health promotion action and decision-making processes for them to be effective". Ensuring participation by the priority group is clearly another way to strengthen health promotion in this country.

Often the programmes reviewed here form part of a larger comprehensive approach. This is certainly true of the Smokefree Cars television commercial reviewed in Chapter 7 by Rhiannon Newcombe. The commercial is part of a much wider programme to reduce exposure to second-hand smoke that includes legislative changes, as Rhiannon reports. Some programmes, such as the Active Schools initiative

discussed in Chapter 3 by Carmen Chamberlain, take a comprehensive approach themselves. Carmen notes that the Active Schools programme includes Ottawa Charter (World Health Organization et al., 1986) strategies of strengthening community action and building personal skills. It also works within the Health Promotion Schools Framework covering school organisation and ethos, curriculum development and learning, and community links. There is clear evidence that taking a comprehensive approach to health promotion action yields better results than utilising one strategy at a time (World Health Organization, 1997). This means using some, or all, of the five strategies identified in the Ottawa Charter simultaneously (World Health Organization et al., 1986). That is: building healthy public policy, creating supportive environments, strengthening community actions, developing personal skills, and reorienting health services.

Theory of change is critical to effectively understanding how to promote health. As the US National Institutes of Health & National Cancer Institute (2005, p. xi) remind us, theory provides “tools for moving beyond intuition” to understand change. In this current book we see theory well used to understand how best to intervene, such as in the Green Prescription reviewed in Chapter 2 by Nicola Bray. We also see a complete absence of theory of change in other programmes, such as the Increasing Physical Activity Voucher Programme outlined in Chapter 10 by Moira Smith. Our experience is that theory of change is poorly used in health promotion in Aotearoa New Zealand.

Health promotion has been described by Seedhouse (1997) as a “magpie profession” because of its enthusiasm for taking theory from other disciplines and utilising it. We see this as a real strength of health promotion as it draws on well established theory at a range of levels from disciplines such as political science, sociology, theory of organisations, and psychology to understand how to address the complex social and health problems that health promotion is concerned with. There are good resources that capture the range of theory available, such as the US National Institutes of Health & National Cancer Institute’s book *Theory at a Glance* (2005) and Nutbeam and Harris (1999). Mason Durie has also developed leading health promotion theory in New Zealand with Te Pae Mahutonga (Durie, 2004). This theory uses a combination of Māori world views and health perspectives to articulate an indigenous model of health promotion incorporating the symbolism of the constellation of stars the Southern Cross.

Finally, the reviews in this book explore the quality of evaluation in health promotion. Some level of thoughtful and planned evaluation is evident in all the programmes reviewed here. For example, we see comprehensive formative, process and impact evaluation of well-funded national programmes such as the Smokefree Cars television commercial, reviewed in Chapter 7 by Rhiannon Newcombe. We also see good quality evaluation in regional programmes such as the Stay On Your Feet campaign, outlined in Chapter 9 by Nicola Laurie. Evaluation is critical to

effective health promotion programme planning, implementation and maintenance. It ensures the planned programme meets the needs of the priority group in the most effective way, that the programme is implemented as planned, and that programme goals and objectives are met. It also ensures that information is gathered about how to improve the programme (Hawe, Degeling, & Hall, 1992). A New Zealand evaluation resource developed by Waa et al. (1998) provides valuable advice about health promotion evaluation in this country.

Overall, these reviews demonstrate the considerable potential of health promotion to improve health and reduce demands on health care services. In the physical activity arena there are highly successful and well-evaluated programmes such as the Green Prescription and the Otago Exercise Programme. There are new programmes that show considerable promise such as the Active Schools Programme, which demonstrates many elements of best practice but is awaiting evaluation results. The iMove Nekeneke Hi! Programme appears to have achieved its aim of increasing physical activity and safety in the school setting, at least in relation to student participation. The Increasing Physical Activity Voucher Programme demonstrates some of the challenges primary health care organisations (PHOs) face in embarking on new health promotion initiatives. This PHO is to be commended for its efforts to take a new approach to promoting physical activity and to its willingness to 'learn by doing'.

In other areas of public health, the National Heart Foundation's School Food Programme is a long-standing programme effective in positively influencing the nutrition environment in schools. ALAC's social marketing campaign promoting safe drinking has resulted in positive attitudinal change. Kate Davidson concludes that the campaign will likely make a positive change to New Zealand's drinking culture if ALAC continues its process of evaluation and programme improvement. The Cancer Society's SunSmart Schools Accreditation Programme has been adopted by 16.8% of primary and intermediate schools, over a third of which are low-decile schools. This programme appears likely to make a significant contribution to reducing the future risk of skin cancer among children in these schools.

Process evaluation of the Smokefree Cars television commercial found high recall by the target audience, particularly for Māori, suggesting the message that smoking in cars is a health threat that parents and caregivers can address was communicated. The Stay on Your Feet campaign reduced falls amongst its older adult participants by approximately a third and increased the confidence of three-quarters of participants. The Vote Fluoride campaign influenced four councils to hold referenda on fluoridation. The campaign appears to have played a role in promoting the value of fluoridation for oral health to the public in Otago and Southland.

There are many elements to best practice in health promotion. This chapter reflects on the factors that are essential in Aotearoa New Zealand. First, it is important to focus on priority health issues, both nationally recognised priorities but also the priorities of particular populations, especially those less privileged populations whose needs may differ from the mainstream community. Second, mainstream health promotion needs to take a Treaty-based approach to its practice. This is urgently required in order to ensure that mainstream health promotion programmes meet the needs of Māori and effectively contribute to reducing the significant life expectancy gap between Māori and non-Māori. Third, health promotion should focus on reducing inequalities in health outcomes, which it is well placed to do. Fourth, it is important to identify and understand the priority groups programmes are aimed at, and to work with them throughout the programme. Fifth, programmes should be based on robust assessment of public health needs. Sixth, partnership is essential to effective health promotion action. The key area for improvement in Aotearoa New Zealand is with mainstream programmes effectively partnering with Māori. Seventh, effectiveness is more likely if a comprehensive approach is taken that involves strategies at multiple levels. Eighth, using theory of change moves health promotion programmes beyond intuition to systematic, reliable and measurable improvements in health. Finally, evaluation throughout health promotion programmes ensures effective programme planning, implementation, and maintenance and provides the best value for money of scarce health resources.

The health promotion programmes reviewed in this book illustrate the multiplicity of the mainstream health promotion endeavours in this country. Health promotion is undertaken by many different organisations, both government and non-government. It occurs both nationally and regionally. It addresses a wide range of public health issues. The critical reviews of these programmes demonstrate both the strengths and weaknesses of health promotion in this country and provide valuable advice about health promotion best practice.

Health promotion is an effective public health strategy (World Health Organization, 2005). This book demonstrates that health promotion is effective in Aotearoa New Zealand when best practice is followed. There is much that could be done to strengthen and extend health promotion in this country. This requires leadership, funding, and determination. Health promotion makes a significant contribution to health in this country, and has considerable potential to improve health and reduce demands on the health care system. Health promotion endeavour, based on best practice, is urgently needed in Aotearoa New Zealand.

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Biographies

Authors

Nicola Bray was born in Hastings, but grew up in Waipukurau, Central Hawke's Bay. She is a 2007 graduate of the University of Otago with a Bachelor of Physical Education and in 2008 earned a Postgraduate Diploma in Public Health. Nicola plans to get a job in the health promotion arena in 2009 after embarking on an overseas adventure.

Carmen Chamberlain is studying towards a Postgraduate Diploma in Public Health. Carmen has a Bachelor of Physical Education and a Postgraduate Diploma in Sports Medicine from the University of Otago. She is currently working as a health promoter for Community and Public Health, a division of the Canterbury District Health Board. Carmen has a passion for encouraging children and young people to enjoy being physically active.

Kirsty Craig completed an honours degree in psychology five years ago and has since held analyst and relationship management roles at the Canterbury District Health Board and Ministry of Health. She currently works in the Healthy Eating – Healthy Action team at the Ministry of Health and has just completed her final paper for a postgraduate diploma in public health.

Mary Duignan is the Cancer Society National Office Health Promotion Advisor SunSmart Schools and Pre-schools (which involves national co-ordination of the SunSmart Schools Accreditation Programme). She is a Registered Nurse with a background in Public Health Nursing and Occupational Health Nursing. She has a Diploma of Public Health from the University of Otago and has previously worked at the Wellington School of Medicine and Health Sciences, researching the development of asthma and allergies in children.

Kate Davidson comes from a political science background and began studying public health part time in 2008. She intends to finish her Postgraduate Diploma in Public Health in 2009 and plans to work in International Public Health.

Bronwyn Ferry was born and raised beneath the Tararua ranges in the 40-mile bush region and has a strong background in sport, fitness and health promotion. She is a founding member of the regional Nutrition and Physical Activity Group who work to support and nurture practitioners of health promotion, physical activity and nutrition across the MidCentral district. She currently works for MidCentral District Health Board's Funding Division developing health promotion and population health initiatives. Bronwyn is now expanding her knowledge base through studying a Postgraduate Diploma in Public Health with the University of Otago.

Nicola Laurie BA, Dip Tchg, is a health promoter with the Education Team at Community and Public Health, Canterbury District Health Board working with Health Promoting Schools in the Canterbury region. A former teacher, Nicola is currently studying towards a Postgraduate Diploma in Public Health through the University of Otago.

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Elizabeth Willms is a biology undergraduate from Canada who completed the Postgraduate Certificate in Public Health through the University of Otago in 2007. Through courses in Health Promotion and Society, Health and Public Policy, she chose to focus heavily on the health of New Zealand's elderly population. She is currently in the first year of her medicine degree at the University of British Columbia in Vancouver, Canada and is finding the public health knowledge gleaned from her studies to be invaluable to her medical career.

Editors

Lynley Cook MBChB, MPH, FNZCPHM, is a public health physician and a member of the New Zealand College of Public Health Medicine. She is currently National Director of Training for the public health medicine training programme. Her interests are diverse and include reproductive health, public health workforce education and settings approaches to health promotion. She was instrumental in the establishment of the Healthy City initiative "Healthy Christchurch". Lynley is based in Christchurch.

Richard Egan teaches undergraduate and postgraduate health promotion in Dunedin at the University of Otago. He is currently finishing his PhD and developing further research. His background includes five

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Louise Signal is a Director of the Health Promotion and Policy Research Unit at the University of Otago, Wellington. Louise is a social scientist with a PhD in Community Health from the University of Toronto. She has worked and done research in the field of health promotion for over 20 years in a range of roles, including Senior Advisor (Health Promotion) for the New Zealand Ministry of Health. Her research interests include tackling inequalities in health, promoting healthy eating and healthy action, and health impact assessment.



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Health Promotion Forum of New Zealand

ISBN 978-0-473-14620-7