

The Heartbeat Challenge programme: promoting healthy changes in New Zealand workplaces

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SUMMARY

The Heartbeat Challenge programme of the National Heart Foundation of New Zealand develops the commitment of workplaces to creating an environment that reduces barriers and increases opportunities to improve and maintain health. Workplaces choose to make healthy lifestyle changes from a broad range of strategies encompassing elements of healthy food choices, promoting regular physical activity and being smoke free. An award is achieved on meeting the necessary criteria. Results of programme monitoring from 159 workplaces indicate that Heartbeat Challenge has created a supportive health environment in workplaces. Changes were made by 99% of workplaces to

meet the award criteria. In the areas of healthy food, physical activity and smoke free, 92, 86 and 94% of workplaces met more than the required five criteria, respectively, and met an average of 3.5, 3.5 and 3.0 more criteria, respectively, when achieving a Heartbeat Challenge compared to initial participation. Heartbeat Challenge has been successful in a wide variety of types and sizes of workplaces with the added benefit of improving staffs' attitudes about the workplace, the company and themselves. Structural changes have occurred which are sustainable, and have created an environment which has the potential to improve the health of a large segment of the working population.

Key words: benefits; challenges; changes; choices

INTRODUCTION

Workplaces are an excellent site for health promotion as time spent at the workplace exceeds that spent in other locations, and it is possible to group people by interests, socioeconomic variables and peer groups (Capra and Williams, 1993). In addition, the workplace is convenient for participants, a large percentage of the population can be reached, environmental support can reinforce health education messages, social networks support behavioural change and opportunities exist for follow-up, monitoring and reinforcing messages (Glanz and Seewald-Klein, 1986; Berkowitz 1988). Workplace programmes also have the potential for reducing health costs as well as boosting employee morale, productivity and the company image (Glanz and Seewald-Klein, 1986).

In 1992 the National Heart Foundation of New Zealand developed the Heartbeat Challenge

programme for workplaces. The design of Heartbeat Challenge followed current trends of moving away from singular intervention workplace programmes to the more comprehensive approach, using both individual behaviour strategies and the broader organizational and environmental strategies. The aim of Heartbeat Challenge is to develop the commitment of workplaces to creating an environment that supports and improves health and empowers individuals to make healthy choices. The objective is to increase opportunities and reduce barriers to making healthy choices easy choices in workplaces.

Workplaces registering for the programme choose from a broad range of criteria which promote healthy lifestyle choices. Senior management, human resources, occupational health and safety representatives, and employees are all involved to change the workplace environment

to a health-promoting setting. Support is available from Heart Foundation staff. To gain a Heartbeat Challenge Award, workplaces must achieve a minimum of five criteria in each of three areas of promoting healthy food choices, physical activity and being smoke free. Self-assessment audits are conducted at the time of initial registration and again upon achievement of the award.

The flexibility of the programme in addressing both the structural determinants of health and the healthy lifestyle behaviours (Eakin and Weir, 1995) has enabled a diversity of workplaces to register for the programme. From late 1993 to the end of 1997 more than 1200 workplaces had registered, and 423 had achieved their Heartbeat Challenge Award.

An independent evaluation of the Heartbeat Challenge programme in 1995 (MRL Research Group, 1995) recommended that it be continued but with some modifications and improvements. A monitoring system was established to assess the changes made by workplaces during their participation, and in this paper we report on 2 years of auditing the modified programme.

METHODS

A baseline audit was conducted by telephone with workplaces when a Heartbeat Challenge kit was ordered, but before the kit was sent, to ensure that information was collected prior to participation. When workplaces achieved a Heartbeat Challenge Award the final audit was self-completed, and this included the same set of questions on the criteria which had been asked in the baseline audit. This system of conducting baseline audits began when the new Heartbeat Challenge kit was launched in January 1996.

One hundred and fifty-nine workplaces completed baseline audits and achieved a Heartbeat Challenge Award between January 1996 and December 1997. The baseline audits of the workplaces achieving an award were compared to all baseline audits conducted in 1996 till June 1997 allowing time for workplaces to achieve an award. This allowed a comparison of the characteristics of those workplaces who had, and who had not, achieved an award.

The number of criteria achieved is expressed as a percentage because some criteria are not applicable to a particular workplace. For example, if a workplace has no smokers then some of

the criteria encouraging smokers to become smoke free are not applicable.

RESULTS

Participating workplaces

A wide range of types of workplaces registered with Heartbeat Challenge and achieved an award (Table 1). Most participating workplaces came from the industrial and commercial sectors (54%). The remainder were classified as schools, government agencies (central and local) and institutions (e.g. hospital, university, fire-service), retail (e.g. shop, hotel, restaurant, service station), and health/recreation centres (e.g. fitness centre, medical centre). The distribution of workplaces completing a Heartbeat Challenge was similar to the overall distribution except that fewer industrial workplaces had achieved an award within this audit period.

Eighty-one percent of the registered workplaces had 20 staff or more. A similar proportion of small and large workplaces achieved their Heartbeat Challenge Award and met a similar number of criteria in each category initially and when achieving an award. It took workplaces an average of 7 months to achieve an award with a range of 1–16 months.

Changes made to meet the criteria

Figure 1 shows the percentage of criteria met at the baseline and final audits in workplaces where an award was achieved. On the initial audit more of the smoke-free criteria were met (57% of criteria) and less of the physical activity criteria (40%), with 47% of the food criteria met. On achieving the award 73% of the healthy food criteria, 70% of the smoke-free and 60% of the

Table 1: Type of workplaces registering and achieving a Heartbeat Challenge Award

	Workplaces registered (<i>n</i> = 343)%	Workplaces achieving award (<i>n</i> = 156)%
Industrial	35	25
Commercial	19	22
Schools	14	16
Government	12	12
Institutions	9	13
Retail	4	3
Health/recreation	7	7

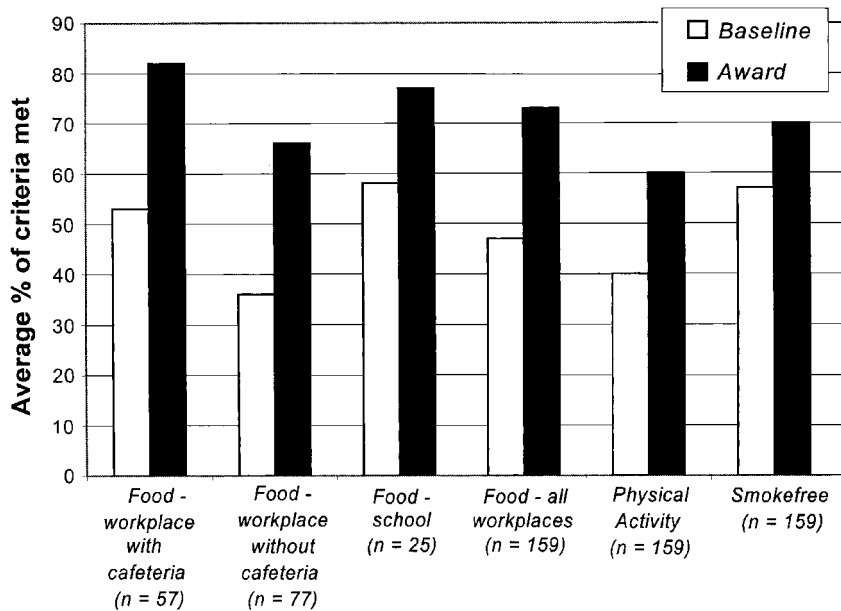


Fig. 1: Changes in average percent criteria from baseline to achieving an Award.

physical activity criteria were met. The largest change was made in the healthy food criteria with the smallest change made in the smoke-free criteria, probably because a higher percentage of the smoke-free criteria were already met. Fewer changes were made to the physical activity criteria than the healthy food criteria.

There were 11 criteria in each of the areas of healthy food, physical activity and smoke free. Workplaces met an average of 3.5, 3.5 and 3.0 more criteria, respectively, when achieving a Heartbeat Challenge Award compared to initial participation. Most workplaces met more than the required five criteria for healthy food (92%), physical activity (86%) and smoke free (94%).

All but two workplaces made some changes to meet the criteria with 96% making changes in healthy food, 90% in physical activity criteria and 82% in smoke-free criteria. Most made two or three changes in each area with some making up to nine changes. Most workplaces which already met the criteria at baseline continued to make changes (Figure 2).

Type of criteria met

Table 2 contains the percentage of workplaces achieving each individual criterion in the baseline and final audits. The change in the number of

workplaces meeting each criterion at the baseline audit compared to the final audit is indicated.

Some of the individual criteria were met by a higher proportion of workplaces compared to other criteria. Some criteria were met by most workplaces initially, therefore little change was expected. A large proportion of workplaces initiated some criteria that could not be met before registering for Heartbeat Challenge, as the criteria were dependent on the resources provided by Heartbeat Challenge, e.g. the stress kit. There was little change in the number of workplaces meeting some criteria indicating that they may be unpopular or more difficult to meet. More change is required to achieve a Smoke-free Award than providing information about quitting smoking, or is of little relevance to the workplace with few smokers, as they are less likely to achieve criteria relating to supporting employees giving up smoking.

It took workplaces an average of 7 months to achieve an award with a range of 1–16 months.

Attitudes to the changes

Heartbeat Challenge improved the staff's feelings about the workplace environment, the company and themselves. Eighty-nine percent of workplaces agreed that staff had a better feeling

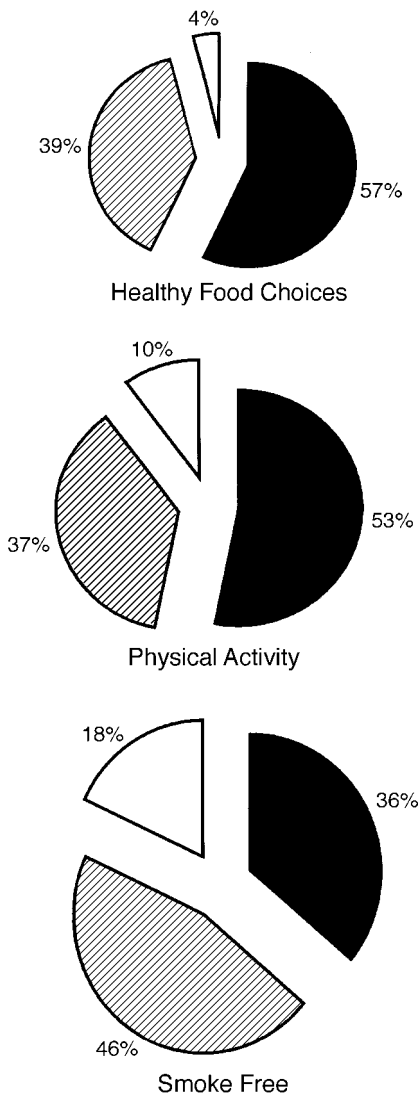


Fig. 2: Extent of changes by workplaces in each section. Filled sections—made changes, criteria not met at baseline. Grey sections—made additional changes, criteria already met at baseline. White sections—made no changes, criteria already met at baseline.

about the workplace environment with a quarter of these strongly agreeing with the statement. Seventy-three percent agreed that staff had a better feeling about the company itself with 16% of these in strong agreement. Eighty-two percent of the workplaces agreed with the statement that staff had a better feeling about themselves with 19% in strong agreement. All would recommend

Heartbeat Challenge to other workplaces with 60% strongly recommending the programme.

DISCUSSION

In New Zealand, the major organizations involved in workplace health are the Accident Compensation Commission and Occupational Safety and Health (both government agencies focussed on accidents and injuries) and the National Heart Foundation. The Foundation's Heartbeat Challenge programme is the only one with a focus on promoting healthy lifestyles.

Heartbeat Challenge aims to create a supportive health environment in the workplace and empower individuals to make healthy choices. The programme monitoring data presented here indicates that the objectives of Heartbeat Challenge have been met, with almost all workplaces which achieved an award making changes to meet the criteria.

The assumption is that a healthy workplace environment results in healthier behaviours which in turn influence health. What these data from the monitoring of Heartbeat Challenge do not directly measure is behaviour, risk factors or disease. There are indications that changes in behaviour are being made.

For example, the audit includes some proxy measures of behaviour, e.g. increased sales of healthy food items and the use of low-fat milk for tea and coffee. In the area of physical activity, organized event activities, e.g. Stroll, Strut, Stride, the programme's annual walking activity for workplace teams, has doubled its entry numbers from 90 to 181 teams over the past 2 years.

Although the audit did not measure individual smokers' behaviour, other studies have shown that introducing smoke-free environments has a powerful influence on smoking behaviour.

Even before changes in behaviour are evident, changes in attitude may be required as the first step in the stages of behaviour change (Hanlon *et al.*, 1998). A major benefit of achieving an award was the improved staff feelings about the workplace environment, the company and themselves. This occurred despite a background of major economic and legislative changes which had adversely affected workplaces in New Zealand over this time period.

Workplaces saw Heartbeat Challenge as positive and affordable, and welcomed a programme which had a low time-cost for employees. Programme

Table 2: Percentage of workplaces achieving each criterion at baseline and final audits

Workplaces achieving criteria	Healthy food criteria (% baseline, % final)	Physical activity criteria (% baseline, % final)	Smoke-free criteria (% baseline, % final)
75–100%	<ul style="list-style-type: none"> • Water and low-fat milk (89, 100) • Healthy food in cafeteria (56, 100)* • Promotion healthy food in cafeteria (58, 100)* • Nutrition information (39, 99) • Moderation of alcohol (84, 97) • Microwave oven (90, 96) • Healthy food lunch-order system (92, 92) • Healthy food at workplace functions (58, 91) • Minimum nutrition standards in catering contract (0, 88) 	<ul style="list-style-type: none"> • Bike racks (77, 91) • Showers (82, 85) • Stress kit (0, 85) 	<ul style="list-style-type: none"> • Cigarettes not sold in cafeteria (89, 100) • Smoke-free policy (89, 98)* • Involve staff in policy (84, 97) • Information on benefits smoke free (42, 92) • Cigarettes not sold in workplace (82, 91) • No smoking-allowance time (89, 89) • Information on cessation courses (36, 87)
50–74%	<ul style="list-style-type: none"> • Healthy food policy (25, 60) 	<ul style="list-style-type: none"> • Activity space (60, 71) • Sponsored sports teams (55, 70) • Other activities (22, 68) • Resource person (24, 55) • Exercise frequency records (0, 48) • Subsidized sports club/gym membership (22, 41) • Stretching (39, 40) • Guests for physical activity sessions (19, 35) • Acknowledgement involvement physical activity (23, 28) 	<ul style="list-style-type: none"> • Smoking cessation support group (35, 62) • Regular health check-ups (32, 54)
25–49%	<ul style="list-style-type: none"> • Other activities (6, 49) • Fruit platter (17, 43) • Healthy shared lunches (7, 38) • Healthy food in lunch room (12, 36) • Fruit and vegetable co-op (12, 26) 		<ul style="list-style-type: none"> • Subsidy cessation courses (29, 35)
0–24%			<ul style="list-style-type: none"> • Other smoke-free activities (3, 24) • Smoke-free Award (7, 19)

*Compulsory criteria.

Overall ($n = 156$) but denominator for each criteria is the number of workplaces that the criterion would apply to.

criteria were realistic and relevant for workplaces to achieve, and the award provided an incentive and recognition for the changes implemented.

A broad range of sizes and types of workplaces achieved a Heartbeat Challenge Award. Industrial workplaces appeared less able to achieve a Heartbeat Challenge Award in this monitoring period but this may have been due to local health promotion co-ordinators putting more efforts into schools and other types of workplaces. The programme appears to cater well for both small and large workplaces. Included in the workplaces achieving awards were some which might be considered more resistant to change, e.g. freezing works, construction and aggregate sites.

Overall more changes were made in the healthy food section compared to the others. Workplaces needed to make more changes in the physical activity section, indicating that these criteria may not be as easy to achieve compared to the others. Barriers to advancing these criteria included the physical environment of the workplace and location, easy access to lifts but not stairs, and the need for employees to drive rather than walk or cycle to work. This raises the question of the need for more lateral criteria options, e.g. signs on lifts and more workplace activities like walking groups or physical activity challenges or corporate sports teams.

In the smoke-free criteria, workplaces met a higher percentage on initial participation and

made fewer changes in this area. The 1990 Smoke-free Environments Act required every workplace to have a smoke-free policy and smoke-free areas. Therefore, many workplaces had already made considerable changes to meet this legislation prior to the existence of Heartbeat Challenge.

Programme participation encouraged workplaces to go beyond the minimum five criteria with most workplaces having met more of the required five criteria in each section when achieving an award, and most of the workplaces who already met the required five criteria at baseline made additional changes. This discounts the concerns that participating in Heartbeat Challenge would simply act as recognition for achievements already made rather than as a change-agent.

Informal feedback suggested that a key to success was the commitment of management to the programme, including the ability of workplace staff to be in charge of implementing Heartbeat Challenge. The direct ongoing costs to the Heart Foundation to run this programme over this monitoring period has been about NZD 175 000 per year for a full-time national co-ordinator, part-time regional support staff and programme expenses. On average, each participating workplace received three telephone calls and two visits.

This report is of the first 2 years of the monitoring system, therefore the workplaces who have achieved an award have made changes in less than this time. Many other workplaces will have made changes in this time but because they had not yet achieved an award their changes are not recorded here. Workplaces who take longer to meet the criteria may be the ones that need to make more changes and therefore future programme monitoring may reflect an even greater impact on creating a supportive environment in workplaces.

A variety of strategies were used to overcome the specific barriers in the implementation of the programme. For example, when working with a large national company with multiple sites and a wide diversity of occupations we achieved the best results by working closely with their management in the first instance and encouraging them to appoint an on-site 'champion' to lead the programme and work with our staff. Meeting the needs of shift workers and helping workplaces with heavy production targets were other challenges for the programme. In these situations we used strategies like promoting our 'Just Ask' healthy lunch programme to local lunch bars to provide shift workers with the availability of healthy food options, and encouraging the

introduction of minor changes when production targets were highest and major changes during less busy periods when staff had more time to devote to the programme.

A limitation of the monitoring system is its reliance on self-assessment, so there will be some subjectivity including if criteria are met or not. In addition, the contact person may have changed between baseline and final audits, and therefore have a different perception of involvement in the programme. However, the Heart Foundation did conduct post-award audits on 13 workplaces 16–24 months after they achieved an award. The audits showed that all were maintaining the criteria or meeting more criteria, thus reinforcing the sustainability of the Heartbeat Challenge programme. In future we will be maintaining contact with all workplaces which have achieved a Heartbeat Challenge Award, so that post-award monitoring can continue and further health-related programmes and activities can be offered to them.

There are a wide variety of workplace programmes reported in the literature, however, it is difficult to compare the results with Heartbeat Challenge because those with the most robust evaluations are programmes with an individualized approach and which use health assessments to measure change.

Reviews by Fielding (Fielding, 1990) and Hanlon *et al.* (Hanlon *et al.*, 1998) found that workplace interventions are associated with clinically significant changes in behaviour or risk indicators and reductions in absenteeism. Several large workplace interventions in the USA have found improvement in risk factors (Johnson & Johnson, IBM, Blue Cross) and absenteeism (Canada Life).

Heartbeat Challenge was developed using the principles of the Ottawa Charter within a settings approach providing stakeholders access to resources and the ability to participate (St Leger, 1997). Heartbeat Challenge builds public policy by reinforcing the 1990 Smoke-free Environments Act. A healthy environment is created in the workplace through structures and strategies which make it easier to make the healthy choice. Personal skills are developed in a variety of ways including smoking cessation courses, visiting speakers and information brochures. Workplaces are encouraged to set up a committee to implement Heartbeat Challenge, which consists of both employee and management systems empowering workplaces to own and control health collectively. Community action can encourage healthy lifestyles in the workplace as a social norm.

Heartbeat Challenge has been successful in bringing about changes in the environment of a wide variety of types and sizes of workplaces with the added benefit of improving staff attitudes about the workplace, the company and themselves. Workplaces made changes to create a supportive health environment with most going beyond the criteria required for an award. Heartbeat Challenge is a valuable tool to improve health throughout the workplace setting.

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