



Workshop Paper - Prevention and Wellness

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Development of a Proposal for a National Roll-out of Leading Edge Innovations on Prevention and Wellness.

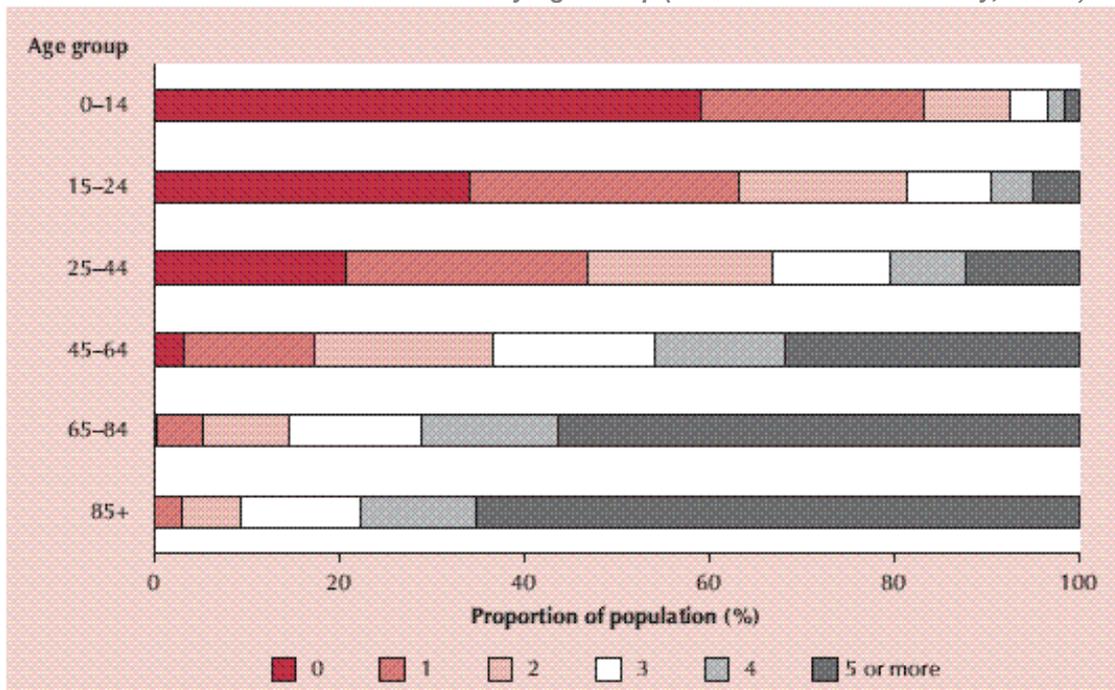
Introduction

The NHHRC have commissioned Dr John Lang to develop a proposal for the roll out of a national preventative health and wellness strategy to Australian employees. The program is to focus on prevention and early identification of risk factors for chronic disease, as well as intervention options which can be deployed to mitigate risk. This process will entail a review of currently available programs both within Australia and internationally, with subsequent recommendations for a preferred “best practice” model and how it may be implemented and funded.

The Link between Chronic Disease and Lifestyle

As the graph below clearly demonstrates, the prevalence of chronic health conditions is very high in the working age population in Australia.

Table 1. Number of Chronic Conditions by Age Group (ABS National Health Survey, 2004/5)



The lifestyle factors which are the precipitating factors for chronic disease are the “bread and butter” issues for Workplace Health Providers in terms of their assessment protocols and interventions. The table below shows that all major chronic diseases/conditions are amenable to interventions which target nutrition, inactivity, smoking, alcohol, weight, BP and cholesterol control.

Table 2. Relationship between selected chronic conditions and modifiable Risk Factors (AIHW, 2002)

Chronic disease/ condition	Behavioural risk factors				Biomedical risk factors		
	Poor diet	Physical inactivity	Tobacco smoking	Excess alcohol use	Excess weight	High blood pressure	High blood cholesterol
Coronary heart disease	✓	✓	✓	✓	✓	✓	✓
Cerebrovascular disease	✓	✓	✓	✓	✓	✓	✓
Lung cancer			✓				
Colorectal cancer	✓	✓		✓	✓		
Depression				✓	✓		
Diabetes	✓	✓			✓		
Asthma			✓		✓		
COPD ^(a)			✓				
Chronic kidney disease	✓		✓		✓	✓	
Oral diseases	✓		✓	✓			
Osteoarthritis		✓			✓		
Osteoporosis	✓	✓	✓	✓			

(a) Chronic obstructive pulmonary disease
Source: AIHW 2002a.

There is little doubt that the workplace, and providers of workplace health services, have a significant role to play in prevention of Chronic Disease and in the early detection and management of Chronic Disease, particularly in relation to the of lifestyle related (behavioural) interventions.

The Financial Imperative for Prevention

The numbers are reasonably simple (figures rounded for ease of interpretation);

- Federal Budget – One trillion dollars annually
- Health Budget – 10% of Federal Budget (\$100 Billion)
- % of Health Budget spent on chronic conditions – 70% (\$70 Billion)
- % of chronic conditions caused by lifestyle/behaviour – 70% (\$50 Billion)
- % of health care budget spent on prevention – 1.8%

So 1.8% of the budget is allocated to address a problem which costs 50% of the budget.

The health system currently has no mechanism to deliver preventative services on the scale required to impact significantly on the cost of chronic diseases. However, extending primary prevention to the worksite will allow access to 10 million working Australians who average four lifestyle related risk factors per person.

The workplace provides a unique setting in which to deliver preventive services, mainly due to;

- A captive audience of 10 million people
- Existing infrastructure (no new hospitals/medical centres required)
- It's already happening (companies are investing in health because of absence & productivity issues)
- Utilises health professionals (EP's and dieticians) who are one half to one quarter of the cost of GP's, and who are conceivably better trained to deliver lifestyle related advice/interventions.

- Urban design is a costly and difficult area with which to influence behaviour – workplace design (through tools such as the “Checklist of Health Promoting Environments at Work”) is far simpler and possibly more impactful due the amount of time people spend at work.
- Working Australians average 4 risk factors per person with one in three having 5 or more risk factors. The current system and methodology are clearly failing to access these people.
- 600 peer reviewed publications show that the strategy works
- ROI is already good when only absence and productivity are considered. If we add medical costs/claims into the mix the ROI increases further.

Current health status of Australians

Currently in Australia, approximately 70% of the Federal Health budget is spent on diagnosing and managing chronic conditions. Of these conditions, approximately 70% are caused by lifestyle/behaviour and are therefore amenable to preventative strategies. This means approximately half of all health care costs in Australia are potentially avoidable. The overwhelming drivers – the big four – are poor nutrition, inactivity, smoking and stress (emotional wellbeing). Alcohol could be added to this, but it is interesting to note the proportion of the total disease burden of alcohol consumption is almost identical to that attributed to low fruit and vegetable consumption (2.1%, Begg et al, 2007).

If half of all health care costs are potentially avoidable through lifestyle/health related behaviour change, it seems incongruent that only 1.8% of the health care budget is allocated to prevention, and most of this is not used to target the “Big 4”, but rather vaccinations.

Health status of the 10 million working Australians

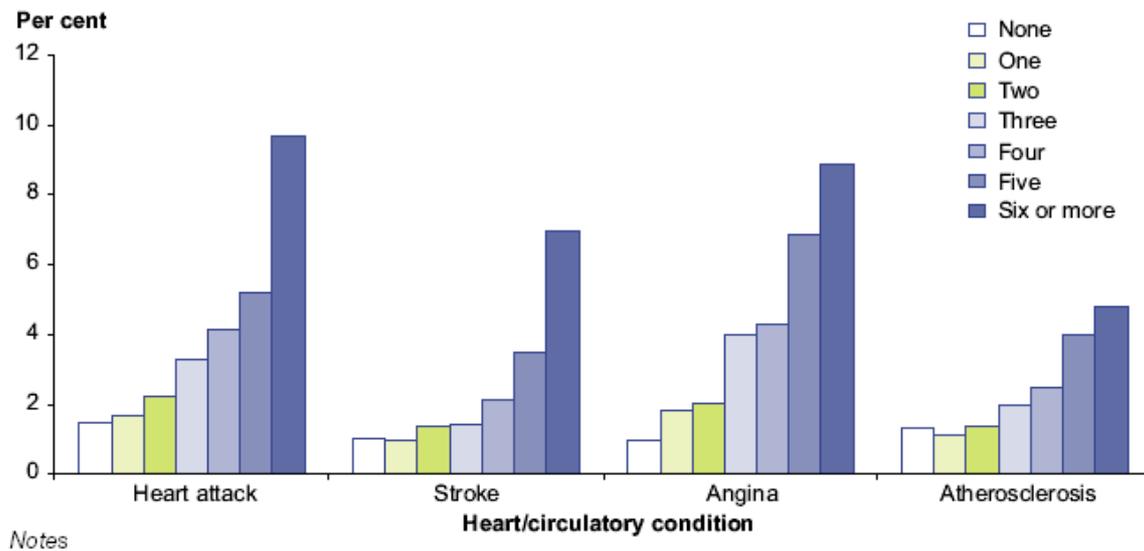
With regard to the working population, Australian employees average 4 risk factors per person with 1 in 3 having 5 or more risks and 1 in 6 having 6 or more risk factors (GHS Health, Absence and Productivity Survey, 2007).

Although the health consequences of this risk factor profile are devastating in terms of health care costs, the impact of lifestyle related risks on the productivity of the Australian workforce is estimated to be in the vicinity of 2.5% – 3.0% of GDP. For this reason, Australian employers have a vested interest in supporting workplace based early detection and early intervention programs.

Due to a phenomenon known as “risk factor synergy”, multiple risks result in worse health outcomes than the sum of their parts would dictate.

Consider the graph below which shows the relative risk of suffering 4 of the major cardiovascular diseases/conditions (heart attack, stroke, angina and atherosclerosis). Moving from 1 to 3 risk factors results in an overall increase in risk of less than 1%, however, moving from 4 to 6 risk factors increases risk by approximately 5%. The implication is that identifying and managing those with multiple risks will have a far greater impact on health outcomes than targeting those with 1 or 2 risk factors.

Figure 3: Prevalence of selected heart/circulatory conditions by number of risk factors reported among Australians aged 18 years and over, 2001



The role of corporate wellness – prevention, early detection and intervention

The 35 corporate wellness providers in Australia currently service about 500,000 employees or 5% of the workforce. The current capacity of these providers is approximately double this.

Workplace Health and Wellness is about early identification of chronic disease and lifestyle related (preventable) risks. It also encompasses manageable population-wide intervention strategies deployed to mitigate these risks (weight management, smoking cessation, alcohol awareness, exercise prescription/adherence, stress management etc.).

Obviously there are many situations where direct referral to a LMO is appropriate (ie. high blood pressure/cholesterol/FBG), in other cases (ie. stress, weight, exercise, smoking etc.), interventions delivered at the worksite are most appropriate (cost effective, behaviourally/ evidence based, outcome focused with high participation).

The scalable nature of corporate health and wellness services ensures that meeting the needs of millions of workers can occur relatively rapidly (1-2 years) - a far shorter timeframe than a similar escalation in a normal clinical care environment which would involve major infrastructure planning and investment (hospitals and medical centres), as well as recruitment, training and deployment (GP's, nurses and other allied health professionals).

Highly trained Exercise Physiologists and Nutritionists are used to deliver services at a cost that is one half to one quarter of the cost of a doctor.

Given that a large majority of Workplace Health and Wellness services are delivered onsite, the subsequent lack of infrastructure investment required to outreach to a large proportion of the Australian working population means quick, efficient and cheap delivery of services, with high uptake to a "captured" audience, many of whom will never grace their doctors office for such services.

There has been significant debate in relation to the lack of support/funding for preventative strategies throughout most of the industrialised world – Australia included. The fact that the funding allocation for “prevention” needs to be scaled up from its current 1.8% of the health budget is not being publicly challenged, the magnitude of the increase is the main issue, and of course how this funding is spent. I believe strongly that a significant proportion of the increase should be used to target employees at their worksite. It is conceivably the only viable point of access to the 50% of 10 million workers who carry 4 or more risk factors for CVD, and the millions more who will, if not identified and supported early.

Funding Model

In relation to the funding model, we favour a grant based system with an annual funding cap for both the gross amount, and the amount per employee. Employers wishing to implement a workplace wellness program could apply for a grant through this system and in doing so commit to an equivalent contribution. In practical terms this would mean setting up a fund of say \$500M (\$50/employee) which employers may apply to for funding a wellness initiative. The maximum annual contribution from the fund might be \$100 per employee with a co- contribution of \$100 per employee from the employer (figures used for demonstration purposes only). This figure of \$200 per employee per annum is considered an appropriate level of funding required to deliver of comprehensive multidisciplinary corporate wellness program.

Victoria and Tasmania have already made allocations of \$218 and \$3.3 million respectively (the Tasmanian funding only covers their public servants and the Victorian funding spans 3 years). Full details of these programs are yet to be determined, however Federal funding should work synergistically with state funding in this arena.

The requirement for an employee contribution may derail the primary driver of ROI based outcomes – participation (see graph 3, p23 of the Health and Productivity Institute of Australia’s submission to the Commission). There is always the option to offer more costly interventions on a user pays basis (ie. enrolment in a weight management program), but we believe this should be outside the government funding model for equity reasons. Co-funding by the employer, and possibly the PHI provider, means that those who stand to gain financially from improved health are providing a certain level of support for the detection/intervention that will deliver the outcomes they desire. This model halves the cost to the government for the same outcome and is far ahead of the current GP based system in terms of anticipated Cost:Benefit Ratio.

Tax Treatment of Corporate Wellness Services

Clarity around the tax treatment of services delivered by corporate wellness providers is required. If the Federal Government considers the early detection/prevention model viable in a workplace setting, they should amend legislation to ensure “no barriers” from a taxation perspective. We believe this is actually the government’s intent, but it is not reflected adequately in the wording of the legislation, to the point where many different private tax rulings exist amongst providers of corporate wellness services.

The evidence base for the economic outcomes for investment in workplace health is provided in the Health and Productivity Institute of Australia's submission to the Commission. A brief overview is provided here.

Can corporate wellness programs identify and intervene to impact outcomes in relation to preventative health?

International Experience

Data from over 600 studies published over the past 2 decades demonstrates unequivocally that wellness programs do deliver outcomes in terms of;

- Risk reduction
- Behaviour change
- Health Costs
- Health Insurance claims
- Productivity
- Absenteeism
- Workcover claims

Over the past decade a number of top experts in the field of corporate health have published nine meta-analyses of corporate health and wellness programs. Dee Edington, Kenneth Pelletier, Larry Chapman, Stephen Aldana and Roy Shephard cite almost 700 studies which provide unequivocal demonstration as to the efficacy of corporate wellness initiatives.

Australian Experience

Although the number of published studies demonstrating the efficacy of corporate wellness programs in Australian workplace settings is low, the results do support the international findings.

If we go to the "soft" data – namely conference presentations of the past 5 years – many providers have presented data which continues to support the assertion that workplace wellness is a good investment from both a health and a business perspective. Companies such as GHS, Wesley Corporate Health, Springboard, Corporate Health Group, Health by Design, Fitness2Live, Ford Health, AHM and others have repeatedly presented data on program outcomes which are impressive. Although these have not passed the test of scientific scrutiny from a peer reviewed perspective, the consistency of the results, the continuing support for these programs, and the growth in the field of corporate health cannot be discounted.

Identification of Risk

HRA

Most, if not all corporate wellness program providers use different HRA's (both online and paper based). These have become part of the "Intellectual Capital" of each organisation. Unfortunately this makes standardisation difficult. At a recent HAPIA members meeting (HPM Congress – August 11/12th), all 19 member organisations agreed to standardise the "core questions" from their HRA's to facilitate the cross company comparisons. There was also strong support for the development of an Australian Wellbeing Index (AWI) which could be benchmarked by demographic, job function etc. The AWI could also be used to track the overall health of the nation and provide a regular headline data in support of preventative practices.

The establishment of a central agency (National Workplace Prevention Office?) could act as a repository for such information.

The standardisation of question sets and risk rating algorithms in relation to lifestyle related risk factors is something that DOHA, AIHW, ABS, NHMRC or some other body needs to look at. Some confusion exists around a number of national guidelines which makes definitive recommendations difficult. As an example, the National Physical Activity Guidelines for Australians (DHAC 1999) suggest 150 minutes per week (30 minutes most days of the week), but vigorous activity counts as double time (ie. 15 minutes most days of the week), but the 2004/5 National Health Survey focused on whether people exercised at all over the past two weeks and, to quote the NHS "Results from the NHS cannot be assessed directly in terms of these recommendations". It is a concern when the National Health Survey itself does not gather data that matches the federal governments own recommendations. Confusion also exists in relation to the health impact of alcohol consumption and the dose:response nature of smoking.

For a central agency on Workplace Prevention to be effective, accurate data is imperative. Good data will drive good decisions and allow appropriate allocation of resources.

Health Check

A face to face health and lifestyle assessment (Health Check) is useful to gain additional data, particularly biometric data (SBP/DBP, cholesterol, blood glucose, BMI/WHR) that may not otherwise be available.

This becomes important when one compares self reported prevalence of high BP/Cholesterol amongst employees (2-3%) to the actual prevalence of these risks by direct measurement (20-30%). Clearly this under-reporting undermines the potential for behavioural intervention, or indeed clinical follow up with a GP.

The corporate wellness providers currently use different variations of the basic health check, but fortunately most providers include common core elements. The Standards and Accreditation Committee at HAPIA will ensure standardisation around this issue.

Intervention Options

Once lifestyle/preventable/behavioural risks are identified, appropriate support must be provided to mitigate risk. These interventions take many forms which include but are not limited to;

- Referral (GP, psych/EAP, nutritionist etc.)
- Self managed programs (online/workbook based)
- Facilitated Programs
- Health Coaching
- Activities (exercise classes, relaxation classes, walking challenges etc.)
- Seminars & Workshops
- Smoking Cessation Programs
- Onsite Skin Checks
- Health Resource Centre
- CHEW (Checklist of Health Promoting Environments at Work)
- Online Health Support
 - Health Portal (information based)
 - Dynamic Health Support Program
- Newsletter(s)
- Fact Sheets
- Influenza Vaccinations
- Work/Life Balance Programs

Program Design

The way these services are structured to provide an “end to end solution” for an employee or organisation is part of the art of providing corporate wellness services. HAPIA will oversee standards and accreditation within the industry to ensure government funding is not used to support assessments and interventions which lack scientific rigor and are not evidence based.

With centralisation of data, outcomes can be monitored and programs compared for efficacy.

Premium Considerations for PHI

Community rating (now lifetime community rating) has been a pivotal ingredient of the governments PHI agenda for decades. The problem with this system is that it provides no incentive whatsoever to embrace good health. Consideration should be given to relaxing the system in a staged manner, beginning with a small premium adjustment for participation in a program/HRA. Incentivising participation may avoid the accusation that the system works against the most needy from a health perspective. A review of the application of the Medicare Levy may also be considered.

Program Content – Options

Ideally, a wellness program can be broken down into three types of service – Core Components which are available to all employees, Discretionary Elements which require participants to meet certain eligibility requirements and Local Programs which cater for the special needs and/or interests of smaller groups, usually in relation to their site or job function.

Core Components

There are certain elements of a health promotion program which should be considered “core components” That is, regardless of who you are and where you work within the organisation, you have access to these. The decision as to what is “core” is driven by the underlying philosophy of the program, it’s objectives, and obviously the budgetary constraints.

The most common Core Components are the HRA or F2F assessment, Influenza Vaccinations and educational Seminars/Workshops.

A variation of the funding option suggested earlier would be for the Federal funding to support the Core Components with companies supporting the Discretionary Elements. This will at least ensure a minimum level of controlled data gathering occurs.

Discretionary Elements

Surrounding the core components are the discretionary elements which may target special groups such as high risk or obese employees, smokers or those in physically demanding jobs. “Targeted interventions” which follow from the initial data gathering and assessments allow the appropriate allocation of resources.

Local Programs

These often take the form of targeted workshops on specific issues (ie. Stress, Back Care, Sleep for Shift Workers etc.) or group activities such as boot camp or a walking challenge.

Delivery Mechanisms

A variety of delivery mechanisms will ensure that key information arrives at its intended target. Delivery mechanisms include;

- Online
- F2F individual (Assessments, Counseling/Coaching)
- F2F group (Seminars/Workshops)
- Self Managed Programs

Choosing a Provider

The best predictor of future performance is past performance.

The provider should;

- Have a track record in the provision of the services they intend to deploy
- Provide testimonials/references in support of this
- Be a member of the Industry Body (The Health and Productivity Institute of Australia – HAPIA)
- Have the required level of professional indemnity/liability cover and other relevant insurances
- Use only degree qualified people in certain positions, especially those requiring the delivery of health information in a testing, counseling or coaching context
- Use equipment that is certified for use in the appropriate setting. This relates particularly to the use of battery operated hand held devices for point of care testing of blood (cholesterol and glucose particularly). These units have unacceptably high levels of error (over 50% in some cases), and should not be used as a basis for diagnosis or referral.

Characteristics of “Best Practice” Worksite Health Program (WHP)

Shepherd’s Program Attributable Benefits (PAB) Model

This model allows the client to address the pivotal factors which underpin the success of the program. Essentially, program benefits are function of 4 variables;

1. Prevalence of need (prevalence of risk factors, physical/psychological health issues)
2. Likelihood that those in need will participate (do those in need turn up?)
3. Likelihood that participants have their needs met (if they have needs, and they turn up, do they get what they require to mitigate their health risks?)
4. Likelihood that participants make lasting behavioural change (if 1, 2 & 3 happen, is there ongoing support to maximise the likelihood that the participants’ lifestyle improvements are maintained?)

If half the employees have a need, half of them attend, half of those have their needs met and half make lasting change, the PAB is 1/16th ($\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$). In a program that might cost \$100 per employee per annum, this essentially means \$3,200 per unit of lifestyle change – a poor outcome.

1. Prevalence of Need - Because the lifestyle and health related behaviour of Australians is poor (almost two thirds of the population is overweight, most don’t get enough exercise, more than half have high cholesterol, 1 in 4 have high blood pressure etc.), prevalence of need is generally high. To maximise program effectiveness however, companies need to deploy an appropriate tool such as a HRA, onsite assessment or a Health, Absence and Productivity Survey. This not only helps to identify need and therefore facilitate program design and allow targeting of information, it also provides the benchmark by which the program outcomes will be judged.

2. Participation – The following ideas are offered for consideration in a company wide promotional strategy to gain high levels of awareness, commitment and ultimately participation;

Endorsement from the Boss – the higher the level of endorsement the better. Many of our most successful programs began with a heart felt call to action from the CEO. In one case we got 100% participation in a program where the CEO personally rang all those who declined to participate to encourage them – it worked (and he only had to make the first few calls because word spread quickly!).

Participation by leaders. – ringing endorsement by managers may appear hollow if they don't actually front up themselves.

Internal communications

- Staff Newsletters – a good place to have case studies or photo opportunities
- Email prompts
- Desk Drops
- Intranet Site
- Posters in Common areas, canteens or even on the back of toilet doors!
- Manuals outlining program rationale and content to managers/supervisors

Team Level Support – Managers/supervisors who meet with their staff regularly have an ideal forum in which to promote employee well being. Inviting a representative from the service provider to outline the details of the program can be helpful.

Write it into KPI's – employee wellbeing impacts on illness, absence, injury, workcover claims, productivity and staff retention. These are all excellent reasons to move employee well being into the KPI space for managers and supervisors. Company wide KPI's around one or more of these key business outcomes will get traction that is often unattainable through simply suggesting that employee health is “a good thing to do” It sends a message to all employees that the company is serious about (poor) health and its effects.

Overcoming barriers – In some of our programs we have surveyed and sometimes interviewed non-participants with a view to understanding why they declined such a positive offer. We then shortlisted the “Top 10 Reasons for not Attending” with a short spiel on why we believe it to be an unacceptable reason based on invalid assumptions or flawed logic. This approach targets the hard to get at “pre-contemplators” and we know from various studies what their issues are and how best to address them.

Offer Incentives – There are a whole range of options, from cash to prizes to weekends away etc. Obviously needs to be a budget conscious decision.

Publish Results – aggregated data on the prevalence of certain risk factors and conditions can provide a vicarious learning experience to others. In subsequent years of the program, trends in improving health underpin ongoing commitment of both the company and its employees.

Program Branding – If all initiatives within the program have the same branding it creates an impression of continuity and completeness. Fragmentation of effort –

having HR and OH&S doing different things in different divisions at different times – undermines the potential for measurable company wide outcomes.

3. Meeting of Needs – This component is all about program content and delivery, which is in turn dependent upon the quality of the provider. Good content, delivered by engaging, well informed providers, will help to achieve individual and therefore company goals that wont happen when poor content is delivered in a lackluster supplier.
4. Making lasting changes – this can be facilitated by use of an appropriate behavioural model, as well as offering follow-up and support programs to assist participants along the often difficult path of lifestyle change.

How to Avoid FAILURE

The FAILURE acronym provides insight into common problems which can undermine the effectiveness of a program. GHS recommends that due consideration be given to these issues.

Fragmentation of Effort
Activities Focus
Illness Orientation
Lack of Employee Involvement
Underemphasis on skills
Regard only for the Individual
Emphasis on short term results

Briefly, this entails the following;

Fragmentation of Effort – HR, OH&S, L&D and other groups fail to coordinate their efforts and recognize synergies. This is the antithesis of an “integrated” program where all parties share in the goal/vision and support it on all levels. Strong leadership and top down support is required for this to occur.

Activities Focus – Yoga, Tai Chi and Boxercise may have a role to play, but the goal should be to assist employees to succeed in managing their fitness with or without company support (see **U**). When the company ceases to provide and pay for classes, do individuals revert to their previously sedentary behaviour? If so, the skills relating to self management of physical were not learned and the program has failed.

Illness Orientation – The program should be preventative. Focusing on Chronic Disease Management undermines this goal.

Lack of Employee Involvement – Buy in from employees, Unions, Management and Supervisors is important. They should be represented early in the consultative phase of program design.

Underemphasis on skills – As mentioned in Activities Focus (**A**), the goal of a best practice program is to teach self sufficiency. This means educating employees in relation to the skills and techniques which underpin long term success in any of the areas covered (Smoking, exercise, stress etc.)

Regard only for the Individual – Activities such as group walking challenges tap into the powerful behavior modifiers of peer support and peer pressure. A best practice program should have both individual and group/team based components.

Emphasis on short term results – Health and lifestyle habits, both good and bad, are developed over decades. It is unrealistic to expect them to be reversed in weeks or months. A long term commitment by the organisation to the well-being of its employees lowers the likelihood that participants who lose weight or stop smoking and then relapse.

Program Management

In a program of this magnitude, program management is critical to overall success. Having a program managed internally, part time, by an employee without experience in corporate health can severely undermine the credibility and success of the program.

Marketing & Promotion

In the PAB Model outlined earlier, the impact of participation was highlighted. A best practice program should incorporate a comprehensive promotional/marketing plan. Components of a “top down” promotional program could include the following;

- Email from CEO directly to all Employees
- Letter of support from all divisional HR Managers
- Program outline and timetable on dedicated section of the company Intranet site
- Program Manager meeting with all site based managers/supervisors to outline program rationale and content
- Wellness Program branded posters in high traffic and common areas at all sites
- Regular briefings/correspondence regarding program outcomes, including highlights such as early detection of life threatening illness
- Inclusion of program content and results in internal publications
- Awards/Door prizes incentives for participation
- Direct contact via phone or email regarding various program initiatives
- Other activities/strategies as devised in conjunction with client company

Branding

Most of the successful wellness programs in Australia, and indeed around the world, over the past few decades have involved some creative branding. Brand recognition plays an import role in the employees’ perception of the company’s commitment to the well being of their staff. Without the continuity associated with the brand, many initiatives can be viewed as part of an uncoordinated series of events, lacking in strategic intent and adding little in the way of value to the affiliation of the individual with the organisation.

Some examples of branding are provided here with the ANZ “My Health” Program, the Boral “BWell” program, the Lend Lease “Zest for Life” program and the Colgate “Blueprint for Health Living” program (this US based program spent over US\$100K on the branding exercise associated with this program.



Ongoing Development

Good programs offer new, interesting and often exciting options as part of an “annual upgrade” This keeps the program fresh and uptake high. This also means that you don’t offer everything good upfront. In the BWell program at Boral the product/service development team continues to develop new material for the participants. This innovation has ensured take-up rates continue to exceed 80% after 5 years of program delivery which is an exceptional result. This is only possible with the support of management for such processes.

Outcomes – Reporting

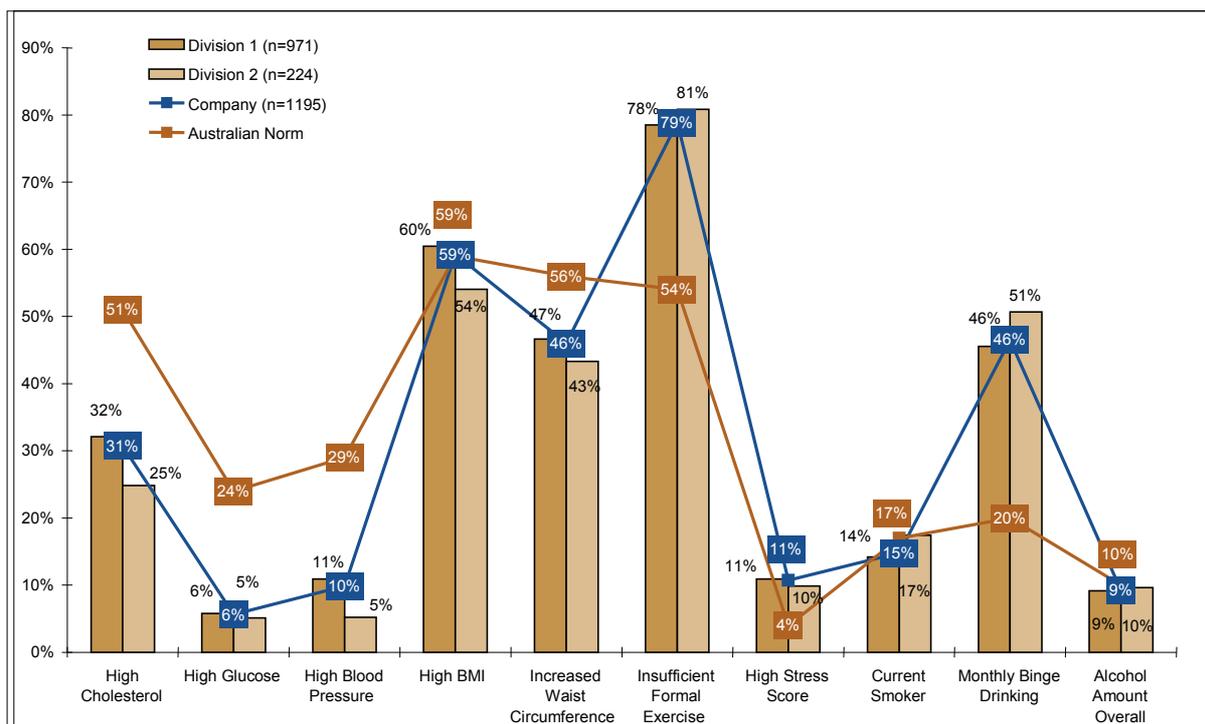
Upon completion of various program components, and at designated times (ie. quarterly), the provider should present a Company Report highlighting;

- results from any testing or surveys conducted,
- feedback (both formal and informal),
- attendance rates, uptake and traffic for online health programs,
- likely impact on key business metrics (absence, productivity etc.),
- participation in ancillary options.

These should, where possible, be benchmarked against appropriate normative data, preferably on an age and gender matched basis.

Reports should be produced by division if divisional heads request, especially if divisions have some autonomy to make decisions regarding the delivery of various service options. Data driven decision made at a local level provides the flexibility to tailor the program to the needs of certain groups within the organisation. This fits with the discretionary and local program components alluded to earlier.

A good example of the way in which data can be represented graphically is shown below. This allows one to compare different divisions (1 vs 2 in this case) with each other, as well as with “whole company” data (a central data set which includes all participants from the organization) and with national norms.



Best Practice – Literature review

The leading corporate health and wellbeing programs are continuously monitored against their own pre-determined aims and objectives (Trifit website, 2004; McGillivray, 2002; Health Canada, 2004; and Goetzel and Ozminkowski, 2002). Consistent recording, analysis and integrated reporting of all program data are the ‘cornerstones’ to best practice measuring (McGillivray, 2002).

Goetzel and Ozminkowski (2002) best critique the ‘nuts and bolts’ of how this can be conducted using the following eight process framework:

1. Awareness of the Health Promotion Programs

Evaluators need to ask ‘to what extent are potential consumers aware of the program and its benefits?’ And importantly, do they know how to enrol in the program, participate in its activities and benefit from it? Asking non-participants why they have not participated, and determining how many did not know about the program, is the best approach to understand awareness.

2. Participation in Health Promotion Programs

It is necessary to determine how good the program is at attracting and retaining participants. To do this, the evaluator must:

- Define what is participation; and
- Assess the intensity of program participation, i.e. number of visits to gym if the health initiative involves a gym.

The definition of participation is important. Many programs in the past have claimed “80% participation” in seminars because, in a company of 1,000 employees, they had 800 attendees to 10 different seminars run over the course of an annual program. Often the reality is that 60 -100 people attended most of the seminars, so it could be easily argued that participation is 6-10%, not 80%.

3. Satisfaction with the Program

Determine how satisfied participants are with the program content, administrators, instructions, materials, and other program components. Feedback can continuously improve the program.

4. Attitudes towards management

Use an employee survey to test how the program affects employee attitudes, morale and their perception of their own productivity. Management must know if the program is perceived as positive.

5. Behaviour change and health improvement

Assess the program’s ability to assess and monitor unhealthy behaviour. To test how effective the program is at reducing people’s health risk and achieving health improvement, a baseline test and follow-up screening must be conducted using similar techniques.

It is important to distinguish here between processes (behaviours) and outcomes (risk reduction). A participant can begin a diet and exercise program in an attempt to lose weight. The process goal is achieved immediately (diet and exercise), the outcome goal (weight loss) might last 6-12 months or more. There can then be a “reconciliation” between process and outcome later in the program. Being successful in the process goal and not the outcome goal usually means the wrong process.

6. Financial measures

Evaluators often must prove the program is providing the organisation a cost benefit. Costs generally analysed include absenteeism, staff turnover, workers’ compensation, staff disability (short and long term), and employee productivity.

There are generally three ways to determine cost benefit; a) the “soft” option being by inference in relation to observed health and behaviour change, b) the “medium” option to survey participants with a validated survey tool (such as the Harvard Health and Productivity Questionnaire, the Stanford Presenteeism Scale or the Work Limitation Questionnaire) or c) the “hard option” which involves objective data, usually from payroll absence records and/or output measures in relation to job tasks (this works for production line workers, but is virtually impossible in most office jobs and even many physically demanding occupations).

Measuring outcomes often entails more time measuring/analysing than actually doing – usually to the overall detriment of the program itself. Sometimes it’s easier (and justified) to infer changes (ie. if employees improve their mental and physical health, one could assume that their productivity will increase and they’ll be less absent), which is akin to the soft option a).

7. Financial outcomes of interest

Absenteeism must take into account only those factors attributable to health or lifestyle factors. It must exclude absenteeism that is due to factors such as Jury duty, military service, long service/study leave etc. Turnover should include costs involved in the process of recruitment, training and drop in productivity. A general estimate is 40% of a first year salary (Goetzel and Ozminkowski, 2002). Workcover claims and injury data should be analysed across time to see if the program may be having any influence. Linking the program to a reduction in occupational disability or less safety incidents helps prove its worth.

What measures should be used in any evaluation process will rely on the organisation itself and the availability of the data.

Elements of the implementation plan need to be flexible from the outset to allow for variations in take-up rate. The following plan is predicated on the assumption that take-up rates will be in the order of 60-70%, however the goal is to exceed 80% take-up. This level has been shown to be readily achievable with the support of management for the various promotional strategies.

The Stages of Readiness for Change Model

As discussed earlier, program outcomes are facilitated through the use of an appropriate behavioural model.

Historically, it has been assumed that lifestyle change is a matter of applying a simple mixture of motivation, facts, education, action and will power. It was assumed that once motivated, the facts would logically lead a person to change behaviour. The change could then be sustained by periodically re-visiting the facts and “digging-in” when confronted with urges to relapse.

Dr James Prochaska has led a revolution in behaviour change strategy by clearly demonstrating that individuals’ progress through 5 distinct Stages of Readiness to Change any behaviour. They are:

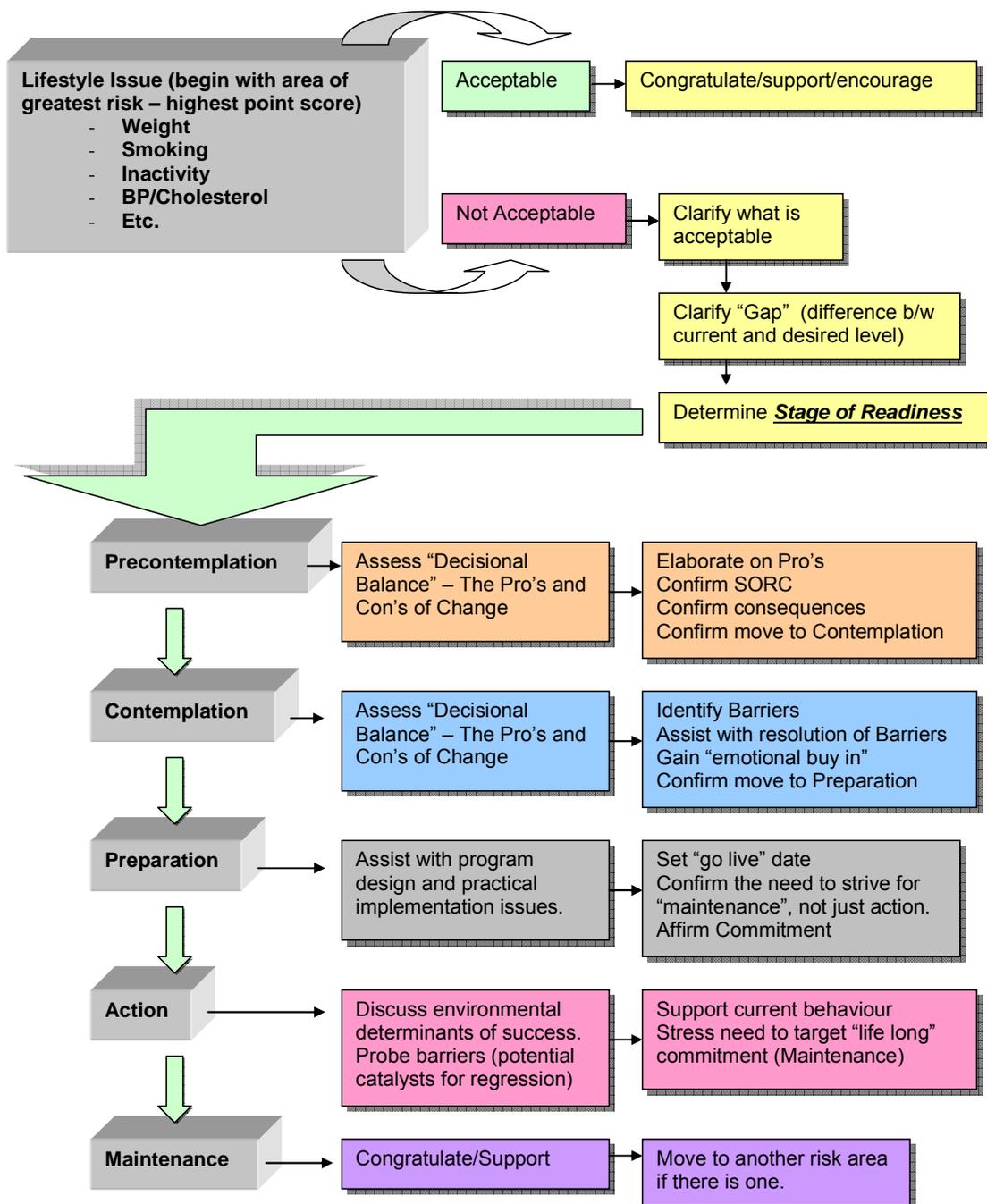
Pre-Contemplator	Has no intention to take action within the next 6 months	or	“Never”
Contemplator	Intends to take action within the next 6 months	or	“Someday”
Preparation	Intends to action within 30 days	or	“Soon”
Action	Has changed overt behaviour for less than 6 months	or	“Now”
Maintenance	Has changed overt behaviour for more than 6 months	or	“Forever”

Generally those individuals ready for “now” or “forever” represent no more than 15% of an available population needing to make a change. The significant majority (40%) is not ready to change their behaviour in the foreseeable future.

Historically, health educators and programs delivered to the corporate sector have focused all of their energy and resources at the 15% actually ready to take action. This often resulted in low participation, few behaviour changes and a perceived failure of the Program.

A “Best Practice” Program should provide participants with “stage matched interventions”, meaning information and services which are relevant to that persons stage of readiness. In doing so, the likelihood of achieving long term success in risk reduction is increased 3-5 fold.

As the flow chart below demonstrates, unacceptable health outcomes are dealt with differently according to the stage of readiness of the individual. A pre-contemplating smoker will have a very different experience to a smoke who is contemplating quitting.



Exercise Physiologists, Dietitians, Nurses and other health professionals should be well versed and trained in identifying common barriers to change in relation to lifestyle factors such as inactivity (see Preventive Medicine, 26(1):131-137 – Perceived barriers to increased activity among physically inactive Australians). Health professionals involved in testing, counseling, coaching – indeed any

advisory role - should also be well versed in other behavioural principles including the Health Belief Model, the Theory of Reasoned Action and Motivational Interviewing.

Amongst the common barriers to exercise,

- “no time” tops the list with 39% of inactive Australians citing this as the primary reason for not exercising.
- Laziness/lack of motivation is next (28%) followed by
- injury/disability (23%),
- not sporty (21%),
- need to rest (17%) and
- no one to do it with (16%).

Information justifying selected health & fitness assessment components

A health assessment is a common inclusion in most health promotion programs. They are important because they;

- Provide an accurate and up to date assessment of risk
- Inform participants in relation to “silent risk factors” (BP, Cholesterol and Blood Glucose)
- Increase the receptiveness of employees to health related information about risk reduction
- Have high test:retest reliability and therefore;
- Provide a reliable method of tracking health related outcomes

The following items are the main inclusions in an Employee Health Assessment

Body Mass Index

Although the BMI index test does not distinguish between fat mass and muscle mass the vast majority of Australians are correctly classified overweight or obese due to their poor lifestyle and dietary habits rather than an incorrect classification due to high muscle mass.

Put simply Australia is in the middle of an epidemic. Over 60% of all Australians over the age of 25 are overweight or obese. Over the last 20 years the proportion of obese men and women has doubled. Increased body fat has been associated with an increased incidence of disease. The ‘metabolic syndrome’ is a medical term used to describe a collection of symptoms which frequently co-occur: obesity, high blood pressure, high blood triglyceride levels, glucose intolerance, high cholesterol levels, and type II (non-insulin-dependent) diabetes mellitus. Excessive body fat (obesity) has been associated with an increased incidence of these other health-related disorders.

Waist measurement/Waist to Hip Ratio (WHR)

55% of Australian men have a waist measurement over 94cm and 56% of women have a waist measurement over 80cm. 27% of men’s waist circumference was above 102cm and 34% of women had a waist circumference above 88cm. Greater deposits of fat around the abdominal area can indicate a greater risk of developing diseases such as heart disease and diabetes. Although waist measurement is a good field test for “android” fat distribution (high risk, metabolically active fat which reduces insulin sensitivity), the WHR is a better predictor of future mortality/morbidity and is therefore preferred.

Blood Pressure

3.69 million Australians aged over 25 have high blood pressure (30% of this population).

High blood pressure is a major risk factor for diseases such as,

- Coronary heart disease
- Stroke
- Heart Failure
- Peripheral vascular disease
- Kidney Failure

Total Cholesterol

Cholesterol causes fatty plaques to build up in the body's blood vessels constricting the flow of blood. Overtime as the blood vessels narrow they become susceptible to blockages which can result in heart attacks or stroke.

Causes of high cholesterol include:

- Family history
- Eating too much saturated fat
- Being overweight
- Being inactive
- Medical conditions such as thyroid diseases and diabetes

Blood Glucose

Type II diabetes accounts for 85-90% of cases and occurs when the pancreas does not make enough insulin or when the insulin is not working effectively. Both genetic and lifestyle factors (e.g. obesity) predispose people to this disease. Diabetes is the fastest growing chronic disease in Australia with well over 1 million Australians living with the disease yet only half of these people are aware of it. The complications from diabetes are serious (e.g. death, amputation, blindness and kidney failure) and the earlier it is detected and managed the better the outcome for the patient.

Lower Back/Hamstring Flexibility (Sit & Reach Test)

Poor flexibility and poor core strength/stability have been identified as predisposing factors in the development of back injury. Muscle weakness, especially in the abdominal region, and poor joint flexibility in the lower back and legs are prime factors related to lower back pain syndrome. A combination of weak abdominals, tight hip flexors, tight back musculature and abdominal obesity contributes to postural change and increases the stress placed on the spine.

Extended periods of low level vibration are experienced as a result of travelling in a motor vehicle. The resonant frequency of the human spine is about 4Hz which corresponds with the frequency of vibration associates with vehicles. The consequences of whole body vibration include increased muscle activity which leads to muscular fatigue. These effects are increased by prolonged flexion of the lumbar region (ie. sitting in a vehicle). Individuals who have poor abdominal strength/endurance may therefore have an increased risk to the development of lower back injury.

Staff that have poor abdominal strength combined with tight lower back musculature may have an increased disposition to the development of lower back injury, especially when performing manual handling type duties. Early identification of these predisposing factors can allow for a remedial intervention program to be implemented therefore reducing the risk of injury.

Flexibility refers to the range of motion that can be performed at a specific joint and reflects the ability of the musculo-tendon units to elongate without physical restrictions of the joint. The sit and reach

test, although requiring a combined joint action movement, gives an overall approximation of flexibility around the hip joint.

Abdominal Strength

The 7-stage abdominal strength test is a progressive one-repetition maximum test of abdominal strength. Each consecutive stage increases in the resistance provided. The major abdominal muscles involved are the Rectus Abdominis muscle group, with the assistance of the External Oblique, Internal Oblique, Transverse Abdominis and Quadratus Lumborum muscle groups.

The abdominal muscle group performs a vital function in both work duties and tasks performed in everyday life. It plays an essential role in a variety of activities including

1. Lifting objects/persons
2. Maintaining good posture
3. Maintaining torso stability during physical exertion
4. Trunk flexion during tasks
5. Activities such as breathing, urination, defecation and childbirth
6. Reducing the risk of back injury

Individuals who have weak abdominals combined with tight lower back and hamstring musculature are predisposed to the development of back injury.

Upper body strength/endurance

The push-up test assesses general upper body strength/endurance. The major muscles involved in the push-up test include the Pectorals, anterior and medial Deltoids, Triceps, Rhomboids and Teres muscle groups. This test is a valid measure of general upper body strength/endurance and practical to implement within the workplace.

Cardiovascular Fitness test – Step Test

The step test is an indirect measure of a person's aerobic capacity (cardiorespiratory fitness). The theory behind the test is that a person with a higher cardiorespiratory fitness will have a lower heart rate for any given work rate than an unfit person. A trained heart is able to expel more blood per beat (stroke volume) and so does not have to beat as often to meet the body's required cardiac output. In addition the heart rate of a fit person will recover quicker than that of an unfit person.

Cardiorespiratory fitness is the capacity of the heart, lungs, and blood vessels to supply oxygen and nutrients to the muscles for a sustained period. The Step Test is a sub-maximal test which has the capacity to estimate fitness. VO_2 peak is expressed as ml/kg/min. This is the maximum amount of oxygen in millimetres that can be consumed per kilogram of body weight per minute of exercise. To attain a true VO_2 peak score, it takes an exhaustive effort on the client's part which also can expose the client to unnecessary risk of a cardiac event. The Step Test has been shown to be a valid and reliable predictor of fitness and can give an accurate determination of changes in cardiorespiratory fitness over time.

Benefits of Cardiorespiratory Fitness:

- Reduced blood pressure
- Increased muscle tone and strength
- Greater physical endurance
- Increased lean mass and weight loss
- Reduced blood glucose level
- Decreased low-density blood lipids
- Improved physical appearance
- Increased bone density
- Regularity of bowel elimination
- Promotion of sleep
- Reduced tension and depression

Frameworks for workplace health & wellbeing initiatives

Health and wellbeing initiatives have been implemented using two distinct theoretical frameworks; (i) a socio-behavioural approach, and (ii) creating a supportive environment within the workplace.

Socio-behavioural approach

Some of the classic theories underpinning programs for corporate health and wellbeing initiatives include Social Cognitive Theory, the Health Belief Model and the Trans-theoretical model. Each of these theories has been shown to be useful, but have their limitations (Wallston and Armstrong, 2002). Strategies for implementing these theories include awareness raising programs and lifestyle change programs, both of which focus primarily on the individual.

An awareness program increases an employees' level of awareness or interest in a program topic, and commonly uses methods such as newsletters, posters, flyers and educational seminars (amongst others). Lifestyle change programs go beyond awareness programs by setting lifestyle behavior change as the key outcome. Methods used include health education, behavior modification, experimental practice, and feedback opportunities (Chapman, 2002). North American studies have placed primary emphasis on the delivery of behavior change strategies aimed at altering lifestyle related risk factors of employees using a worksite as a venue (Harris et al. 1999).

(ii) Creating a supportive environment

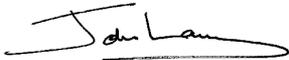
Within a workplace setting, creation of a supportive environment can facilitate or encourage planned behavioural change of an individual (the employee) (Heaney et al. 1997 cited in Simpson et al. 2000). Strategies to achieve this may include changing either the:

- Physical environment – corporate gyms, showers and lockers, secure bike storage for commuters, smoke-free buildings.
- Policy environment – flexible work time, working from home, reducing overtime hours worked.

Such action is generally aimed at challenging the existing corporate culture, with the overriding goal to alter the underlying forces that encourage unhealthy practices. The five factors engendered in corporate culture, which shape long-term behavior change, include the values, norms, organizational support, peer support and climate of the organization (O'Donnell, 2002).

Programs that recognize the cultural dynamics of the workplace are more likely to achieve higher participation and more positive health outcomes, opposed to those that do not reflect the unique aspects of culture (Harris et al. 1999). The Australian NWHP study showed that different kinds of industries responded in different ways to the same health program, suggesting that 'off-the-shelf' programs are limited in their effectiveness without carefully tailoring these initiatives to the specific industry and workplace (AHRI, 2000).

The combination of "core" and "discretionary" components with the addition of "local content" strike a balance between the "off-the-shelf" approach and the need to gather common health risk and behavioural data to inform program content.

A handwritten signature in black ink, appearing to read 'John Lang', with a horizontal line underneath.

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References available on request

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