Health and Innovation: Promoting Active Transport Through WalkSmart and CycleSmart

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1.   Introduction

Australia, like many westernised countries has become less physically active, relies on labour saving technology and has increased consumption of energy dense foods. Consequently, Australia is now the second most obese country in the world (International Union of Nutritional Science 2002)

The National Health and Activity Guidelines emphasise that at least 30 minutes of physical activity is needed by adults everyday, yet we are not achieving this as a population.

Health promotion is vital to educate people about their health choices, and the World Health Organization recognises the workplace as a priority setting to do this.

Programs which target workplaces to help ease localised congestion such as TravelSmart, also serve as a powerful tool to promote employee health through active transport.

This paper will explore the background and idea behind developing WalkSmart and CycleSmart a corporate health program that promotes Active Transport. WalkSmart and CycleSmart attempts to address congestion in workplace based peak traffic and also attempts to curb physical inactivity. Workplaces have been identified as a priority setting for health promotion, hence WalkSmart and CycleSmart would potentially act as a valuable tool addressing workplace health and peak congestion. The purpose of this paper is to inform of the program functionality also inform of future evaluation. The paper also touches briefly on the TravelSmart Workplaces program   in   Victoria.

2.   Obesity Crisis

Australia is experiencing an obesity epidemic. The increased use of technology combined with greater consumption of energy dense foods has seen obesity more than double in the past 20 years – over seven million Australian adults are overweight or obese (AIHW 2001).

> "*Declining levels of physical activity associated with technological developments are perhaps the strongest environmental determinant of increasing levels of total body fat and central abdominal fat mass in the past several decades*" (National Health and Medical Research Council 2004).

The annual direct healthcare costs attributable to physical inactivity are approximately $400 million, and 8,000 deaths are associated with physical inactivity each year (National Heart Foundation Australia 2004). The obesity epidemic is not discriminate and is common in all ages, in all parts of Australia and throughout all population groups (Australian Government Department of Health and Ageing 2003) although it is more prevalent in low socio-economic groups, indigenous groups and migrants.

For health benefits, the National Physical Activity Guidelines for Australians recommend that people of all ages accumulate at least 30 minutes of moderate intensity physical activity on most, preferably all, days of the week (Department of Health and Ageing 2006). Despite this recommendation, about one-half of Australian adults are insufficiently active for health gain (Bauman et al. 2002) and levels of physical inactivity have increased in recent years (AIHW 2002). Physical inactivity is a state in which "bodily activity is minimal" (Tudor-Locke CE, et al 2001) and behaviours include sleeping, eating, standing still (e.g. waiting in line), sitting, watching television, reading, working on a computer, talking on a phone, and passive commuting (e.g. riding in a car) (Dietz WH 1996).

The Australian government is attempting to tackle the rising levels of obesity in the Australian population and on the 19 July 2006 the Commonwealth Government of Australia announced a new ministerial taskforce to tackle rising obesity rates. The taskforce sets out four steps, two of which relate specifically to reducing physical inactivity:

- *Step 2- Be active every day in as many ways as you can*
  Make a habit of walking or cycling instead of using the car, or do things yourself instead of using labour-saving machines.

- *Step 3 – Put together at least 30 minutes of moderate-intensity physical activity on most, preferably all, days.*
  You can accumulate your 30 minutes (or more) throughout the day by combining a few shorter sessions of activity of around 10 to 15 minutes each.

The Victorian State Government has been conducting various campaigns to encourage activity such as '*Go For Your Life'*, which aims to increase levels of physical activity and healthy eating and promote stronger communities (www.goforyourlife.vic.gov.au).

3.   Workplaces as settings for health promotion

The World Health Organisation (WHO) recognises the workplace as one of the priority settings for health promotion, stating that "the workplace directly influences the physical, mental, economic and social well-being of workers and in turn the health of their families, communities and society…offer[ing] an ideal setting and infrastructure to support the promotion of health of a large audience" (WHO 2006).

The WHO recognises that the concept of the health promoting workplace (HPW) is becoming increasingly relevant as "more private and public organisations recognize that future success in a globalizing marketplace can only be achieved with a healthy, qualified and motivated workforce" (WHO 2006). Research has found that:

- Employees that participate in workplace fitness programs report improvements in anxiety, stress and psychological well-being; (Harma 1996); and
- Employees who don't utilise programs and benefits are still more likely to be loyal and satisfied with the organisation for being offered the program in the first place (Rothausen, et al.1998)

4.   TravelSmart

TravelSmart, a program run by the Victorian Government, aims to reduce private car use and increase walking, cycling, public transport patronage, smarter car use and travel substitution. TravelSmart has three main settings for travel behaviour change: workplaces, educational institutions (schools and universities) and communities. TravelSmart Workplaces has facilitated development of over 50 Green Transport Plans in workplaces in the CBD, St Kilda Road and other dispersed locations in inner and middle Melbourne. TravelSmart advises on transport solutions such as public transport, parking, travel for work (such as car pooling), and working from home. As well as this it also promotes walking and cycling to work as a transport solution.

In an effort to combine solutions to the obesity epidemic and congestion problem, TravelSmart has developed a tool which supports active transport called "WalkSmart" and "CycleSmart" for use in a workplace setting. The tool could also be used in other settings eg schools. This program aims to increase active transport by encouraging staff to walk or cycle to work.

4.1   TravelSmart Workplaces

TravelSmart Workplaces operates mainly within the metropolitan Melbourne area with workplaces that show an interest in developing a Green Transport Plan.

The first step in the development of a Green Transport Plans is a survey of staff travel patterns. The survey collects information on staff travel modes, influence on their travel choices, travel times, and general demographic information such as age, postcode of residence, gender and job classification. The survey data is weighted to reflect real staff travel modes within the workplace. The survey report is then analysed to identify opportunities and barriers for more sustainable travel behaviour by staff, and a Green Transport Plan is developed in consultation with the workplace.

Green Transport Plans consist of hard and soft measures and policy change. Hard measures are infrastructure related, such as, construction of showers and bicycle racks. Soft measures include social programs such as walking groups, breakfasts and ride to work days. Policy change may include salary sacrificing the cost of sustainable transport modes (in some cases the workplace may be obliged to pay Fringe Benefit Tax), interest free loans for bike purchase, and employment of staff to support the TravelSmart Program. WalkSmart and CycleSmart are soft measures and are easy to roll out in a workplace, and can be incorporated into existing Environment or Health and Well Being Programs.

Analysis of the travel survey that staff in participating workplaces complete, revealed that on average 20 percent of staff live within easy walking distance (2km) or cycling distance (5km) from their CBD workplaces. The survey data is used to map (see fig 1), the home locations of staff who do not currently walk or cycle to work, (ie they drive or take public transport). The map is a powerful tool for workplaces to see the potential for implementing programs and infrastructure to encourage walking and cycling.
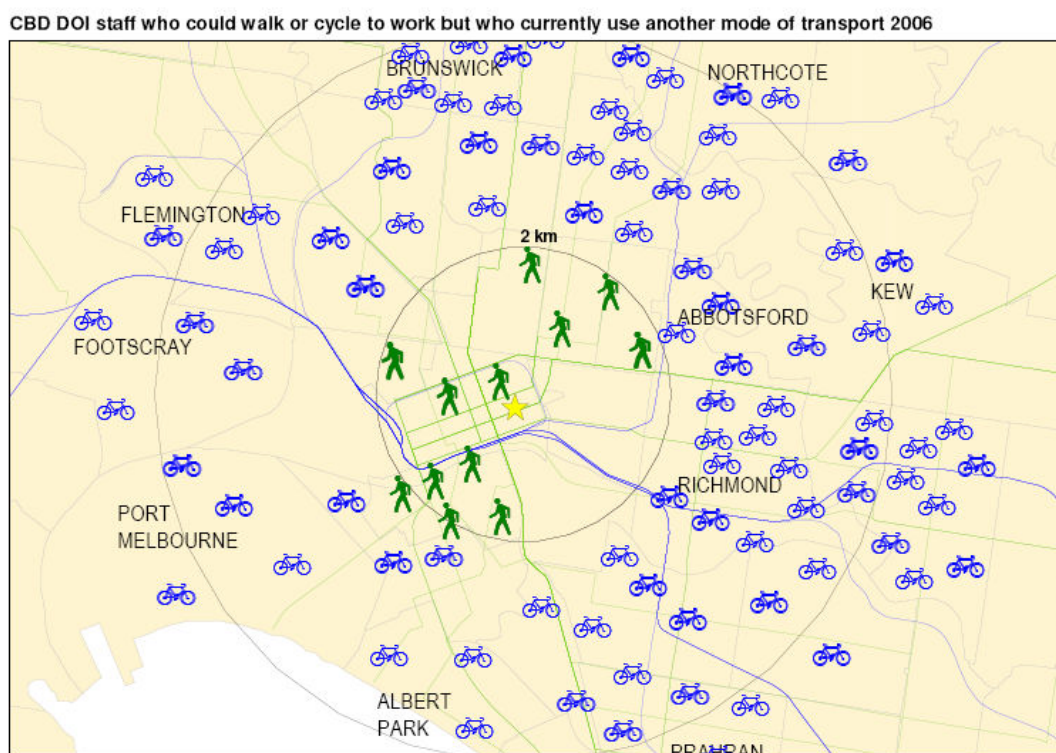

Fig 1.   An example of the visual tool provided by TravelSmart.
**   Each icon represents an employee.**

Walking is a form of exercise that most people can do. Walking can be measured in a variety of ways through heart rate intensity, distance, and steps taken. Measuring daily steps is the simplest and most effective way of increasing activity as it measures daily behaviour. A pedometer is a device that counts steps taken. It is worn on the hip on the waist band of pants or skirts and needs to be reset each day. The pedometer is a universally recognised device that motivates people to do extra activity, being both incidental (walking to shops instead of using the car) and organised (walking around the park for exercise). The minimum daily steps

recommended for basic health is 10,000 steps (Tudor-Locke 2004). Walking all or part of the way to work is an effective way to increase steps taken on a regular basis.

Cycling is a very low impact exercise that can be participated in by people of all ages. Cycling improves cardiovascular fitness while being low impact on the hips, knees and other joints therefore making it suitable for all levels of ability (BV 2006). Regular cycling can help manage or prevent many disorders, including obesity, coronary heart disease and arthritis (Better Health Channel 2005). Cycling distance can be measured through a cycle computer or odometer. Cycling to work is a very efficient form of transport whilst still being beneficial for health, even if taken at a leisurely pace. As a rule of thumb, walking uses 2.5 times the energy than cycling per kilometres. Therefore, a 2 kilometre walk and a 5 kilometre bike ride would use approximately the same amount of energy.

5.   WalkSmart and CycleSmart – Background and history

The WalkSmart and CycleSmart program was developed as part of TravelSmart Workplaces after initial success with a cycling program in Western Australia called 'Cycling 100', and then a small research and development pedometer program in Victoria.

5.1   Cycling 100

Cycling 100 was a program in Western Australia designed to test methods of encouraging commuting by bicycle and measure the associated benefits. Participants who agreed to switch from car to bicycle for at least four commute trips per week (i.e. two return trips) received a fully-equipped bicycle which was theirs to keep if they participated in the program for one year.

At the end of the first year of the Cycling 100 Project, health tests indicated significant improvements in key health parameters for participants, when compared with identical tests done before the start of the project. It should be noted that there was no control group in this research so it was based only on the subjects outcomes.

5.2   Pedometer Pilot Program

The WalkSmart approach for Victoria first commenced with a pilot in 2003/04, working with staff from the City of Moreland and City of Frankston, in which 400 participants recorded daily steps from pedometers they had been provided with.

A survey of the participants, found that the average daily number of steps per participant in December 2003 was 12,870, compared to 9,241 three months earlier, an increase of 28 percent. Participants said they felt better, had more energy, could walk further, did not get as puffed and that their clothes fitted better, as a result of walking more. A follow-up survey conducted in March 2004, six months after the start of the pilot, showed that decreased driving to work from 79.6 percent to 51.6 percent. This figure could be correlated to the pedometer program.

6.   WalkSmart and CycleSmart - current

The WalkSmart and CycleSmart program has evolved to become a corporate health program that encourages people to walk more than 10 000 steps or cycle approximately 10kms (each equalling over ½ hour of exercise) to work, replacing both private car travel and in some cases public transport travel, both of which experience significant congestion in peak times in and around Melbourne CBD. Pedometers and cycle computers are distributed through TravelSmart by participating TravelSmart workplaces.

The web site helps motivate participants as daily reminder emails remind them to log their steps or kilometres travelled (either by return email or on the website). Participants can choose to receive a weekly email summary of their progress, as well as seeing their daily progress on their web site at any time. The benefit of the web tool is that it is individual and participants can set their own goals, as the 10 000 step and 10 kilometre recommendation is only a guide, therefore including everyone. The aim of WalkSmart and CycleSmart is for participants to walk or cycle all or part of the way to work at least two days a week initially. Participants can increase their active transport as they feel comfortable.

The registration process is simple and participants can nominate either a daily email reminder or to log on each day. The registration process collects the basic requirements such as user name and email for a user to log on. However, there are options for a more sophisticated tool to be utilised and includes Body Mass Index calculator and Melway reference of work and home to calculate distance walked or cycled. The website collects basic personal details from participants, which is used in the provision of personalised feedback, and also will be used in the evaluation of the website (and the active transport program). A privacy statement is included on the website in accordance with privacy guidelines and personal details are kept confidential.

A benefit of WalkSmart and CycleSmart is that the site can be skinned and incorporated into the workplaces corporate look (see fig 2). A skinned site has exactly the same functionality as the parent WalkSmart and CycleSmart site it simply looks different, is classed as a sub site and its have a domain name that include that workplace (eg www.workplace.walksmart.net). A sub site supports a nominated sub editor who can send out news items and newsletters to the participating employees who have registered in that particular domain. The sub site has the same functionality as the parent site but only has access to data collected by its own users. The parent site can have access to statistics to all data, which is useful in program evaluation of all participating workplaces.

Fig 2. a) WalkSmart Parent Site
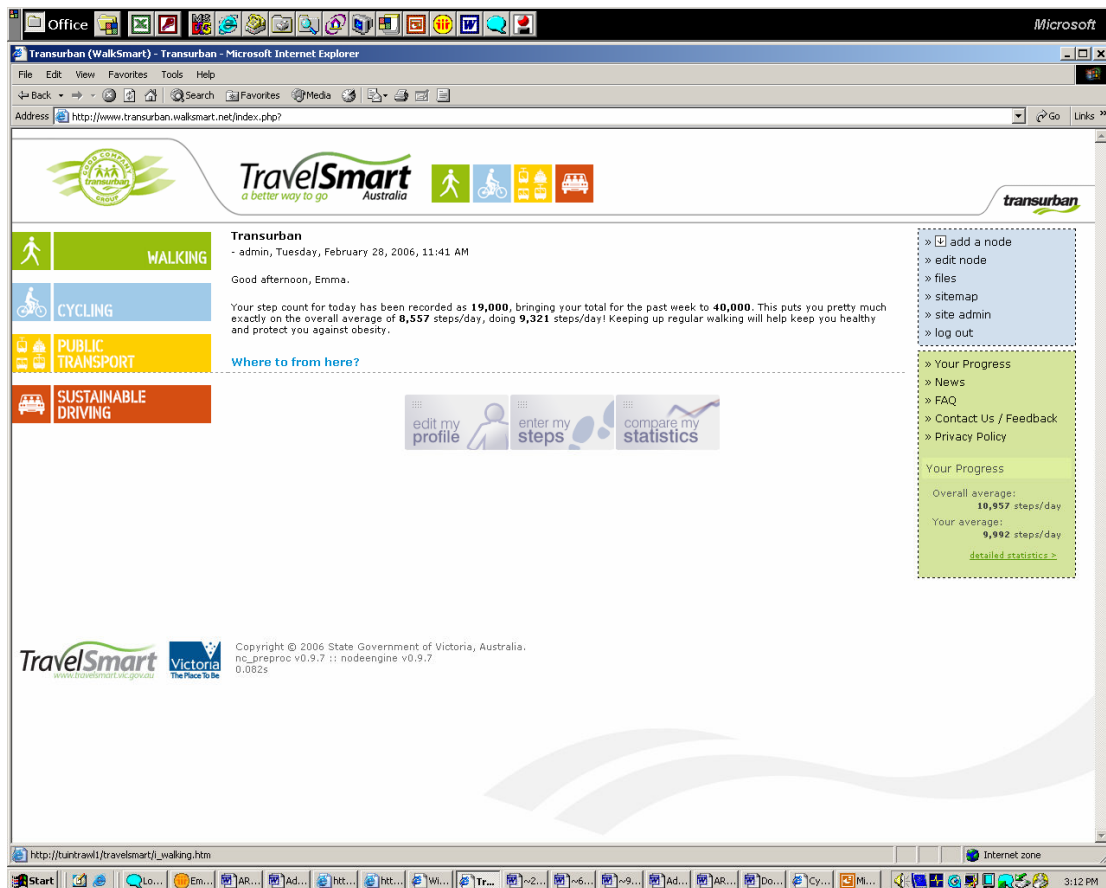
2. b) sub site for Transurban

Benefits of participation of WalkSmart and CycleSmart to the Department of Infrastructure also include:

1. Increased recruitment of workplaces in the TravelSmart program; and

2. Longer participation by workplaces in the TravelSmart program.

Thereby resulting in increased take up of and/or increase in walking and cycling to / from work, resulting in:

- reduction of private car travel to and from the workplace.

- financial savings for participants through reduced car costs (parking, fuel).

- health benefits for participants through increased physical activity.

7.   Evaluation of WalkSmart and CycleSmart

One of the strengths in WalkSmart and Cycle Smart is that participants can set their own goals with the aim of exceeding the minimum target for health (10 000 steps of 10 kilometres of cycling ~ ½ hour of exercise). Moreover, data can be extracted from the site that give the administrator graphed statistic to see how many people are netering their data on a daily basis. This then allows the administrator to see peaks and troughs in the data and act on it appropriately. Reward and recognition acts as a motivator in behaviour change and program administrators can identify obvious troughs and then motivate staff to continue to use their pedometers or bicycles through reward.

Insufficient take-up of the WalkSmart and CycleSmart program by targeted workplaces was an initial risk. However discussions with workplaces participating in the St Kilda Rd Congestion Precinct pilot project indicated strong interest in the corporate health program, and interest in the website supporting it. Moreover, as part of the evaluation, TravelSmart has found the WalkSmart and CycleSmart program to be more effective if there is a nominated administrator who can motivate staff, provide incentives and the web tool is skinned to adhere to the workplaces corporate look.

At the time of writing this paper a thorough evaluation of the WS CS program is yet to commence. Theis will include includes an automated survey and evaluation process which is emailed to all people registered. An in-depth evaluation of the program is scheduled to commence in September 2006 and will include evaluation of data entry, qualitative user evaluation, promotional materials and discussion with other government agencies and how they could potentially add to the product.

8.   Analysis to date

TravelSmart has found that it is important to skin the WalkSmart and CycleSmart site and this allows for a sub editor to motivate staff to continue with the program. By extracting data from the site, it is evident that participants are motivated to use their pedometer and cycle computer and to also enter their data. Moreover, it is evident that if a program is run over a month or a period of months the staff motivation is high and when the program ends, motivation wanes. Other externalities such as sub-editor change over (staff movements) may also cause a break in momentum.

Without a sub editor, initial motivation is high of over 50 percent of participants regularly using the site. However with little of no workplace motivation this drops to

12 to 13 percent. Currently there are 580 active users and over eight workplaces with skinned sites.

More in depth analysis will be able to be conducted after the evaluation process scheduled for September 2006.

9.   Conclusion, findings and/or recommendations

Population health is a big issue and is high on Government agenda. There are various taskforces and National Health and Activity Guidelines to prove this. Health promotion can act as a useful tool in the context of Green Transport Plans, although the initial plan was devised to ease traffic congestion. By taking on programs such as WalkSmart and CycleSmart workplaces are able to assist in the promulgation of both health and transport policy.

Although uptake in the program has been promising, more needs to be done in the areas to assist workplace co-ordinators to build capacity in health promotion.

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