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Evaluation of the implementation of Get Healthy at Work, a workplace health promotion program in New South Wales, Australia

***Santosh Khanal*[A,D], *Beverley Lloyd*[A], *Chris Rissel*[A], *Claire Portors*[A], *Anne Grunseit*[B], *Devon Indig*[B], *Ismail Ibrahim*[C] *and Sinead McElduff*[A]**

[A]NSW Office of Preventive Health, Don Everett Building, Level 1, Liverpool Hospital, Liverpool, NSW 2170, Australia.
[B]The Australian Prevention Partnership Centre, University of Sydney, NSW 2006, Australia.
[C]SafeWork NSW, 92–100 Donnison Street, Gosford, NSW 2250, Australia.
[D]Corresponding author. Email: santosh.khanal@sswahs.nsw.gov.au

Abstract

Issue addressed: Get Healthy at Work (GHaW) is a statewide program to reduce chronic disease risk among NSW workers by helping them make small changes to modifiable lifestyle chronic disease risk factors and create workplace environments that support healthy lifestyles. It has two primary components: a workplace health program (WHP) for businesses and online or face-to-face Brief Health Checks (BHCs) for workers. In this paper, we discuss our evaluation to identify areas for improvement in the implementation of WHP and to assess the uptake of BHCs by workers.

Methods: Routinely collected WHP and BHC program data between July 2014 and February 2016 were analysed. A baseline online survey regarding workplace health promotion was conducted with 247 key contacts at registered GHaW worksites and a control group of 400 key contacts from a range of businesses. Seven telephone interviews were conducted with service provider key contacts.

Results: As at February 2016, 3133 worksites (from 1199 businesses) across NSW had registered for GHaW, of which 36.8% started the program. Similar proportions of GHaW (34.0%) and control (31.7%) businesses had existing WHPs. BHCs were completed by 12 740 workers, and of those whose risks were assessed, 78.9% had moderate or high risk of diabetes and 33.6% had increased or high risk of cardiovascular disease. Approximately half (50.6%) of eligible BHC participants were referred to Get Healthy Information and Coaching Service (GHS) and 37.7% to Quitline. The uptake of face-to-face BHCs compared with online was significantly higher for males, people aged over 35 years, those undertaking less physical activity and those less likely to undertake active travel to work. Service providers suggested that the program's structured five-step pathway did not offer adequate flexibility to support worksites' progress through the program.

Conclusions: During the evaluation period, a substantial number of NSW worksites registered for GHaW but their progress was slow because of the limited flexibility offered by the program model.

So what? Workplace-based health promotion programs have potential to reach people at risk of chronic disease, but the implementation of such programs need to be more flexible than traditional health promotion programs in terms of delivery modes and timeframes.

Key word: chronic disease.

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Introduction

Worksites can provide access to health promotion initiatives for working adults.[1,2] Workplace health programs (WHPs) are a coordinated and comprehensive set of health promotion and protection strategies implemented at the worksite that include activities, policies, benefits, environmental supports, and links to the surrounding community to encourage the health, safety and wellbeing of all employees.[3] To support healthy behaviour change, WHPs hinge on a complex set of criteria for success, including ownership of the program by management, a strong champion, worker consultation, and strategies that address personal risk factors

as well as environmental changes.[2] To improve population health, WHPs should be designed to be implemented at scale, have sufficient intensity to improve individual risk behaviours and be flexible for businesses to implement.[4]

Get Healthy at Work (GHaW),[5] a program launched in 2014 for NSW workplaces, incorporated the criteria described above to ensure that the program could be implemented successfully at a statewide level. The program has two components, WHPs for workplaces and the Brief Health Check (BHC) for workers. The WHP supports workplaces to select and prioritise one health issue, develop and implement an action plan, and monitor and review plans to address and evaluate the health issue. The BHC is a free, voluntary and confidential assessment of a worker's health and risk of type 2 diabetes and cardiovascular disease. GHaW offers referral pathways to other NSW statewide services, such as the Get Healthy Information and Coaching Service (GHS)[6] for healthy lifestyle advice, and Quitline for smoking cessation.[7] Workers at high risk of chronic disease are also referred to their GP. When the referral pathways were developed, it was ascertained that these services had adequate capacity to manage GHaW referrals. The links on the program website[5] provide a detailed description of the program.

Evaluation of GHaW, as for other large-scale WHPs, requires a phased and multipronged approach to understand processes, assess effectiveness and measure outcomes.[8] In addition to determining the effectiveness of certain indicators such as program reach and impact, the evaluation needs to identify areas that may need revising. However, it is not always possible to use a phased approach to evaluate all these aspects in a fast-moving and multidimensional policy environment. Program development and delivery cannot always follow a pre-defined structured pathway because of changes to policy imperatives and input from stakeholders.[9] Further, it has been suggested that traditional controlled research designs may not be suitable for evaluation of multi-component preventive strategies.[10] In such cases, evaluation of programs would need to be responsive rather than planned and focus on continuous development and adaptation of the program using routinely collected program data in combination with available formal evaluation data.

The aims of this paper are to identify areas for improvement in the implementation of WHP and to assess the uptake of BHCs by workers. The proportions of BHC participants at risk of chronic disease or smokers who agreed to be referred to telephone-based lifestyle or smoking-cessation services were also determined.

Methods

Get Healthy at Work program

GHaW is available to all employers (termed 'businesses') who have worksites in NSW. A business can register any number of their NSW worksites for the program. The program adopts a five-step health promotion planning cycle (Fig. 1), with the two main components available from either a GHaW service provider or the self-directed online do-it-yourself (DIY) portal (see www.gethealthyatwork.com.au). Health and wellbeing companies are contracted by the NSW government to deliver GHaW. Previously, self-directed web-based approaches have been demonstrated as successful in workplace health promotion.[11,12]

Consistent with identified components of effective workplace health programs, the GHaW WHP supports businesses to identify and prioritise a health issue, develop and implement an action plan, and monitor and review the action plan.[3] Worksites select one health area to focus on for the GHaW program cycle, and once the program is complete, worksites are encouraged to recommence the cycle focusing on a new health area. Fig. 1 summarises the activities within each step.

For the BHC, workers self-complete a questionnaire about nutrition, physical activity, alcohol consumption and travel modes to work. The questionnaire also includes the Australian type 2 diabetes risk assessment tool (AUSDRISK) questionnaire, which provides a score indicating a 5-year risk of diabetes,[13] and the Fagerström Test for Nicotine Dependence.[14] Workers at high and moderate risk of chronic disease are referred to their GP and the GHS, which is a free, telephone-based lifestyle coaching program.[15] Workers who smoke are referred to the NSW Quitline for smoking cessation advice.[16] Businesses that have more than 50 workers who complete a BHC receive a de-identified summary report to incorporate into their needs assessment.

The evaluation approach for this paper employed a mixed-methods triangulation of concurrently collected data using a convergence model[17] to integrate the findings from the different data sources.

The data sources used in the evaluation were: routine program data such as business and worksite registration, program delivery data and BHC data; baseline data from a longitudinal key contact survey; and semistructured interviews with service providers. Data were combined at the analysis phase for WHP and BHC datasets and at the interpretation phase for key contact survey and interview data. The data collection timeline and the analysis approach are provided in Fig. 2. Each of the datasets is further described below.

Get Healthy at Work business profile

GHaW program data routinely collected between July 2014 and February 2016 as part of the registration and program delivery was used to evaluate the profile of participating businesses and worksites. At registration, a business representative enters the location of every NSW worksite to be registered, the number of workers at each worksite and the overall number of workers they employ in NSW. Businesses also select the program delivery options (DIY or assisted by service provider) for the two components of the program (i.e. WHP and BHC). The database also records the progression of a worksite through the program steps (Fig. 1). A program step is recorded as completed by a worksite when a key

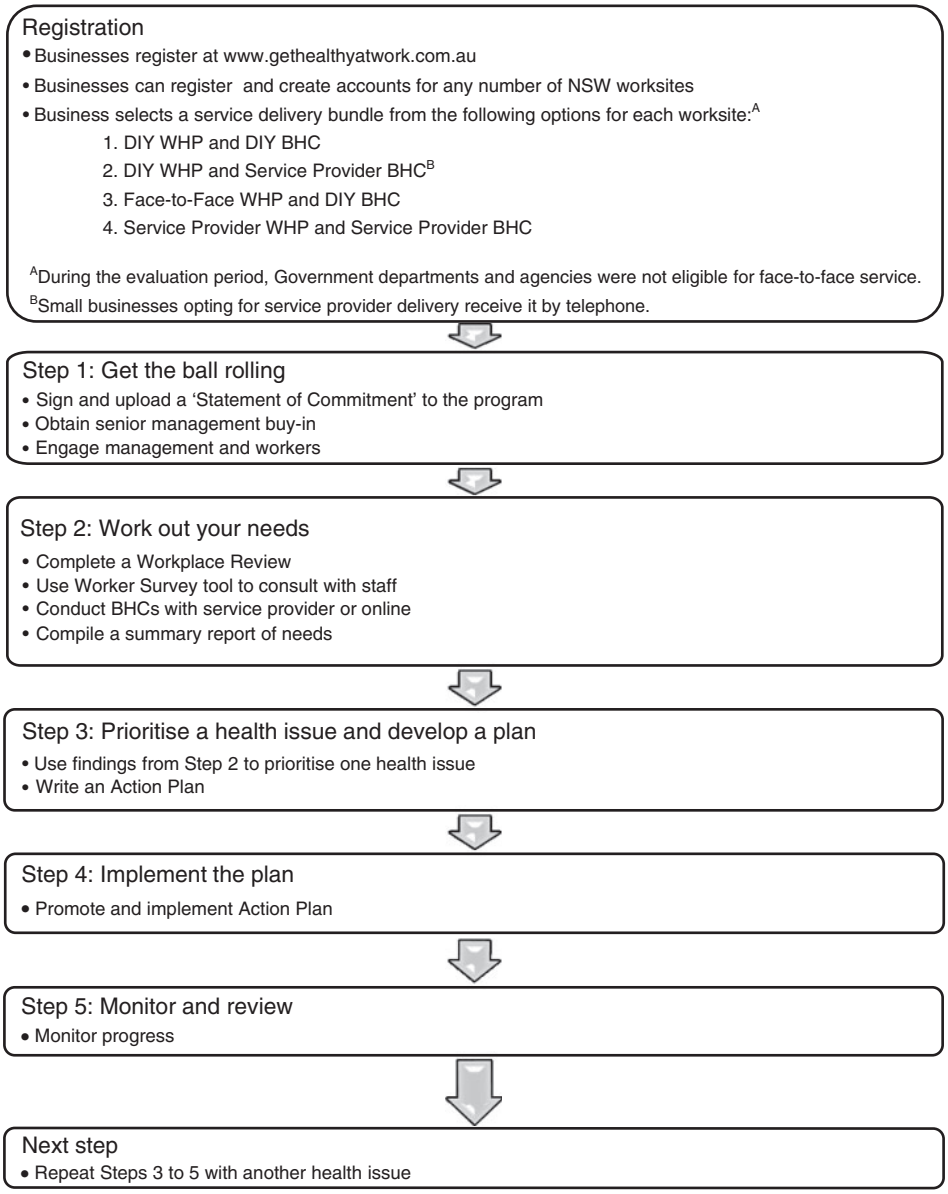

Fig. 1. Get Healthy at Work program steps and the activities under each of the program steps. DIY, do-it-yourself; WHP, workplace health program; BHC, Brief Health Check.

program document relevant to that particular step is uploaded on their account on the GHaW website. For example, worksites were considered to have completed Step 3 of GHaW when their action plan was uploaded.

Key contact survey

The key contact survey was conducted with GHaW and control businesses. All businesses that registered for GHaW from March–September 2015 and provided consent were recruited as the intervention (GHaW) group. Control businesses were recruited from a separate panel of businesses obtained via a market research agency. The key contacts at all businesses, the GHaW and the control group were invited to participate in a baseline online survey.

The online questionnaire included a basic description of the business (e.g. size, industry), existing health promotion programs, cost of existing WHP and awareness of WHP among staff. A series of questions from a national US workplace survey[18] about components of readiness for workplace health promotion including perceived employee health and productivity improvements, perceived management support and perceived benefits from workplace health promotion were also included. Responses were measured on a 5-point Likert scale from strongly disagree to strongly agree,

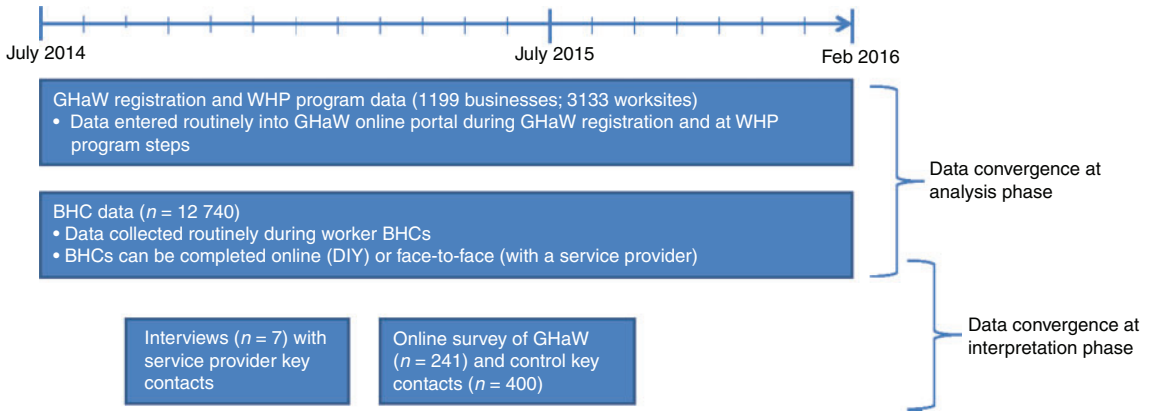

Fig. 2. Data collection timeframe and the triangulation approach for the data sources used in the evaluation.

which were dichotomised into strongly agree/agree vs neutral/disagree/strongly disagree for analysis.

The distribution of various sized businesses (small, medium, large) and cost of existing workplace health promotion programs between GHaW and comparison groups were compared using the Chi-square test. Businesses were categorised into small, medium and large based on the number of workers (small <20 workers, medium 20–199, large >199) using the Australian Bureau of Statistics classification. Comparisons between GHaW and control businesses on each health topic selected for existing WHP, awareness of WHP, and the workplace health culture and senior leadership support measures (all dichotomous) were made using generalised linear models with a log link. This was adjusted for business size as the two groups had different distributions of small, medium and large business in their samples.

Brief Health Check data

Anonymous BHC data collected routinely between July 2014 and February 2016 for the BHC component of GHaW was used to assess the demographic characteristics, health behaviours and diabetes risk profiles of individual workers participating in the online (self-directed) and the face-to-face (facilitated by a service provider) BHC. Diabetes risk profile was determined based on the score calculated from the responses to the AUSDRISK questions[13] on the BHC questionnaire for all Aboriginal participants and non-Aboriginal participants aged 35 years or over. The AUSDRISK questions used to assess the level of diabetes risk were: demographic (age, gender, ethnicity and country of birth), health-related behaviours (fruit and vegetable intake, physical activity and smoking), medical history (family history of diabetes and medication for high blood pressure) and waist circumference.

The referral patterns to GHS and NSW Quitline was also assessed. Face-to-face BHC participants could be referred by the service provider or choose to contact the service themselves (self-referral). All referrals via online BHCs were considered to be self-referrals. Service providers could also refer BHC participants to other local relevant programs or to their GP.

Service provider interviews

Semistructured telephone interviews with seven of the eleven GHaW approved service providers were conducted between three and six months from the start of program implementation. The key areas addressed in the interviews were the expectations of service providers to deliver GHaW and their experience in doing so, usefulness of program resources such as fact sheets and templates and online training modules, and suggestions for program improvement. All interviews were conducted by one of the coauthors (CP) and an external interviewer. Notes were taken during the interviews and analysed by two coauthors (CP and BL) using the open coding method. Given the exploratory nature of the interviews, this method allowed adequate flexibility to identify themes and explore the individual views of each of the service providers.[19]

Ethics

Ethical approval for the analysis of routine program data was obtained from South Western Sydney Local Health District Human Research Ethics Committee (Ref: LNR/16/LPOOL/63) and the key contact survey (for GHaW participants and a control group) was approved by the University of Sydney Human Research Ethics Committee (Ref: 2014/1014).

Results

Business and worksite profile

During the first 20 months of the program (July 2014–February 2016), 1199 businesses registered for GHaW (small businesses, n = 302, 25.2%; medium, n = 490, 40.9%; large, n = 407, 33.0%). The businesses registered 3133 worksites with a potential reach of 372 010 workers. Less than half of the registered worksites (1513, 48.3%) progressed from registration to Program Step 1 and only 257 (8.2%) completed Program Step 3. Worksites completing the action planning phase mostly focused on healthy eating (135, 43.5%) and physical activity (80, 25.8%) as their priority areas for action. Other priority areas selected for action were healthy weight incorporating both healthy eating and physical activity (18.0%) and smoking (6.4%).

There were no differences between the businesses by size in program progression and their area for priority action.

Characteristics of participating and comparison businesses

Descriptive statistics and comparisons between the responses from the GHaW key contacts and the control respondents are presented in Table 1. Small businesses were proportionately more prevalent in the control group (almost 50.0%) compared with GHaW (31.0%), and there were more medium-sized businesses in the GHaW group (31.0% vs 51.0%).

A similar proportion of businesses participating in GHaW (34.0%) and in the control group (30.3%) had an existing workplace health program. Of the businesses that had a program, the most commonly addressed topic was physical activity for both GHaW (67.7%) and the comparison (70.5%) groups. There was a significant difference between the GHaW and comparison businesses in the overall budget allocated to WHP because more control than GHaW businesses were unsure about their WHP costs.

A significantly higher proportion of GHaW businesses believed that WHP improved staff health, productivity and retention, and reduced workplace injury. Senior management in GHaW businesses was perceived as being more willing to dedicate financial resources ($P < 0.001$) and staff time ($P < 0.001$) towards workplace health promotion programs than in the comparison workplaces. There were higher levels of agreement among the GHaW businesses than the comparison businesses that senior management was proactive about making changes in the workplace and supported change with staff time and financial resources (Table 1).

Brief Health Check participation, results and referrals

The BHC results are presented in Tables 2 and 3. About half of eligible worksites from medium (47.1%) and large (54.3%) businesses

Table 1. Comparison of the characteristics of Get Healthy at Work (GHaW) and comparison businesses
WHP, workplace health program; ns, not significant

	Comparison businesses $n = 400$ (%)	GHaW businesses $n = 241$ (%)	*P*-value
Size of workplace			<0.001
Small (<20 workers)	201 (49.9)	76 (31.0)	
Medium (20–199 workers)	124 (30.8)	125 (51.0)	
Large (>199 workers)	78 (19.4)	44 (18.0)	
Existing WHP[A]	122 (31.7)	84 (34.0)	ns
WHP topic (for those with WHP)[A]			
Active travel	15 (12.3)	9 (10.7)	ns
Healthy eating	58 (47.5)	43 (51.2)	ns
Healthy weight	40 (32.8)	29 (34.5)	ns
Mental Health	55 (45.1)	43 (51.9)	ns
Physical activity	86 (70.5)	57 (67.9)	ns
Smoking cessation	26 (21.3)	20 (23.8)	ns
WHP – other	13 (10.7)	15 (17.9)	ns
Cost per year of existing WHP			<0.001
None	21 (17.2)	17 (20.7)	
< $10 000	32 (26.2)	42 (51.2)	
$10 000 < $100 000	18 (14.8)	13 (15.9)	
> $100 000	1 (0.8)	1 (1.2)	
Not sure	50 (41.0)	9 (11.0)	
All or most workers at workplace know about WHP programs[A]	92 (75.4)	62 (75.6)	ns
Agree or strongly agree that workplace health promotion. . .[A]			
Improves employee health	301 (74.7)	215 (88.5)	0.006
Improves employee productivity	278 (69.0)	216 (88.9)	<0.001
Improves staff retention	210 (52.1)	180 (74.1)	<0.001
Reduces incidence of workplace injuries	247 (61.3)	187 (77.0)	<0.001
Reduces sick leave	249 (61.8)	200 (82.3)	<0.001
Agree or strongly agree that senior leadership at the workplace is. . .[A]			
Willing to dedicate financial resources	162 (40.2)	140 (57.6)	<0.001
Willing to dedicate staff time	176 (43.7)	168 (69.1)	<0.001
Proactive about making changes	285 (70.1)	189 (78.4)	0.019
Agree or strongly agree that in general, when there is agreement that changes are required in the workplace. . .[A]			
Financial support is available	215 (53.4)	155 (63.8)	0.006
Staff support is available	214 (53.1)	148 (60.9)	0.024

[A]Comparisons adjusted for business size.

Table 2. Brief Health Checks (BHCs) by business size

Brief Health Checks	Business size				*P*-value
	Small	Medium	Large	Total	
No. worksites undertaking BHC (% of registered worksites)	142 (29.0)	226 (22.1)	328 (20.4)	539 (45.0)	0.032
No. workers in the worksites	736	9442	75 965	86 143	
No. BHCs undertaken (% of workers)	390 (53.0)	3360 (35.6)	8990 (11.8)	12 740 (14.8)	<0.001

Table 3. Brief Health Check (BHC) results of workers and comparison across delivery mode

AUSDRISK, Australian type 2 diabetes risk assessment tool; GHS, Get Healthy Information and Coaching Service; ns, not significant

		Online *n* (% of BHCs)	Face-to-face N (% of BHCs)	Total *N* (% of BHCs)	*P*-value
Number of BHCs		6935 (54.4)	5805 (45.6)	12 740	
Demographics					
Age >35 years		5059 (71.3)	3733 (64.3)	8792 (69.0)	<0.001
Male		2350 (33.1)	3335 (57.5)	5685 (44.6)	<0.001
Aboriginal descent		109 (1.5)	114 (2.0)	223 (17.5)	ns
Born in Australia		4842 (69.8)	4586 (79.0)	9428 (74.0)	ns
Health behaviours					
Fruit intake ≥2 serves/day		6297 (90.8)	4964 (85.5)	11 261 (88.4)	ns
Vegetable intake ≥5 serves/day		960 (13.5)	843 (14.5)	1803 (14.2)	ns
Water intake ≥5 cups/day		3365 (47.4)	2844 (49.0)	6209 (48.7)	ns
Physical activity ≥2.5 h/week		4788 (67.4)	4047 (57.0)	8835 (69.3)	<0.001
Mainly sitting at work		2380 (33.5)	2108 (36.3)	4488 (35.2)	ns
Active travel to work		1583 (22.3)	964 (16.7)	2547 (20.0)	<0.001
Diabetes risk[A]	BHCs with risk score	2975	3657	6632	<0.001
(derived from	High risk	491 (16.5)	2113 (57.8)	2604 (39.2)	
AUSDRISK scores)	Med risk	1574 (52.9)	1053 (28.8)	2627 (39.6)	
	Low risk	910 (30.6)	491 (13.4)	1401 (21.1)	
Cardiovascular disease risk	BHC profile	6352	5570	11 922	<0.001
	High risk	1231 (19.4)	969 (17.4)	2200 (18.5)	
	Increased risk	1169 (18.4)	637 (11.4)	1806 (15.1)	
	Average risk	3952 (62.2)	3964 (71.7)	7916 (66.4)	
Referrals to GHS	Eligible for referral	(*n* = 1544)	(*n* = 3258)	(*n* = 4802)	[A]
	Referral status unavailable	1518 (98.3)	1319 (40.5)	2837 (59.0)	
	Declined	18 (1.2)	958 (29.4)	976 (20.3)	
	Referred by health professional	–	328 (10.1)	328 (6.8)	
	Self-referrals[B]	8 (0.5)	653 (20.0)	661 (13.8)	
Referrals to Quitline	Eligible for referral	610	908	1518	[A]
	Referral status unavailable	582 (95.4)	200 (22.0)	782 (51.5)	
	Declined	28 (4.6)	407 (4.8)	435 (28.7)	
	Health professional	–	103 (11.3)	103 (6.8)	
	Self-referrals[B]	0 (0.0)	198 (21.8)	198 (13.0)	

[A]Statistical analysis was not conducted because of the small sample size for referrals.

[B]All referrals via online BHCs were considered to be self-referrals. The face-to-face BHC referrals were considered self-referrals if the participants indicated that they would contact the services themselves.

opted to make BHC available to their workers compared with 87 (28.9%) worksites from small businesses ($P = 0.03$). The overall BHC participation rate was 14.8% with the participation rate higher for small (53.0%) and medium (35.5%) businesses compared with large businesses (11.8%, $P = 0.03$) (Table 2).

More BHCs were completed online (54.4%) compared with face-to-face (45.6%) (Table 3). Higher proportions of online BHC participants were female ($P < 0.01$) and under 35 years of age compared with face-to-face ($P < 0.01$). Out of the 6632 BHC participants (52.1% of total) for whom AUSDRISK scores could be calculated, (78.9%) were at high or moderate risk of diabetes, with a significantly higher proportion of face-to-face (57.8%) than online (16.5%) participants at high risk ($P < 0.01$). The proportion of BHC participants with increased or high risk of cardiovascular disease was 33.6%, which was similar to those undertaking the online and face-to-face BHCs.

Of the BHC participants eligible for referrals to GHS and Quitline, 30.3% and 19.8% respectively agreed to take up the service, with a majority opting for self-referral (GHS 70.5%; Quitline 65.8%). Referral uptake to both GHS and Quitline was higher for the face-to-face BHC participants than online. A large proportion of data on referrals to GHS and Quitline were missing and there were no records of referrals to other local services.

There were no differences in the diabetes and cardiovascular disease risk scores of workers by business size (small, medium or large) or by the health priority action area chosen by the worksite after adjusting for online and face-to-face BHC.

Service providers' views

Service providers reported that before implementing the GHaW program they expected it would be a practical and easy-to-implement program to address health issues in workplaces. However, in delivering the program they discovered that worksites needed much more time and support from them than anticipated by the program designers. Service providers were generally satisfied with the program steps and thought the program was worthwhile and valuable. They also suggested that the program cycle helped them explain the process of developing a WHP to key contacts and other relevant people at worksites. However, they found the website complicated to navigate, particularly when trying to support workplaces through the program cycle. Program resources were considered useful but contained duplicated information, and certain elements, such as the training modules, were too lengthy. Feedback from the service providers (SP) included:

> SP4: I love the program steps as it gives us great framework.

> SP7: Resources are the biggest seller. Human Resources and Work Health and Safety like new ideas. But I think the resources are repetitive.

The service providers suggested that it would be useful for the program model to be more flexible than it currently is, by allowing the program to be tailored for workplaces over a longer period of time although specific timeframes were not recommended. They also suggested that additional support, such as text reminders and email support, might be useful in assisting workplaces with maintaining motivation in the program. Simplifying the program resources including the training modules to avoid duplication and streamlining the reporting systems were other suggestions for improvement. Suggestions included:

> SP3: Businesses like the GHaW but the program steps put them off. GHaW isn't a complex program in comparison to some of our programs – but it needs to be simplified to make it easier for businesses to complete.

> SP1: Barriers we had were the website and the back and forth of emails with the businesses to get them started. It got to the point we didn't want to be a part of the program.

Discussion

Our evaluation shows that GHaW had a wide reach, but a substantial proportion of registered worksites had not yet commenced the program. This may be due to the limited flexibility offered in program delivery and the difficulties in navigating through the website. The high reporting of people at risk of diabetes indicates that the BHCs are reaching people who could benefit from GHaW's referral to the GHS and Quitline. Our findings also show that people at risk of chronic disease were more likely to undertake a face-to-face BHC than online.

The progress of worksites participating in GHaW was slower than we and the service providers had anticipated. This slow progress occurred despite those worksites participating in GHaW being more motivated to promote health and having higher levels of senior managerial support compared with a non-GHaW comparison group. It seems that the resources and time commitment required to schedule activities for GHaW were underestimated by the service providers and the worksites. It has been suggested previously that workplaces delay health promotion programs when there are difficulties in the scheduling of activities.[20] Furthermore, the program model of GHaW would not have offered a great deal of flexibility to the worksites that commenced the program.

Uptake of BHCs by eligible workers in the GHaW program was, as expected, lower than that reported for experimental studies,[21] but slightly higher than that reported in routine programs.[22] The BHC uptake rate by large businesses was markedly lower than that for small and medium businesses, which may be due to the higher levels of interdependencies between workers in smaller workplaces.[23] Nevertheless, similar to the outcomes of a health check program in Victoria, Australia,[24] our evaluation has shown that GHaW workplace health checks provided a unique opportunity to reach an adult population at risk of type 2 diabetes.[25] Future work should explore how participation in BHCs and referrals to lifestyle programs can be improved. Referrals to other local relevant services also need to be encouraged; however, these services will need to have the capacity to adequately handle the referrals.

The limitations of the evaluation were mostly due to the slow progression of workplaces through the program cycle and the large proportions of missing data for risk score of chronic diseases and referrals to the GHS and Quitline. It is not possible to establish from this evaluation whether the missing data was random or a result of program-related problems, such as difficulties in navigating through the GHaW website, making it difficult to ascertain the precision of the results. It is also possible that worksites progressed through the program but did not document this on the website. Furthermore, the lack of rigour during data collection made it difficult to ascertain the validity of the findings and program outcomes could not be assessed because of the limitations in the data collected for administrative purposes. Another limitation of our evaluation approach was that the type of worksites that may have needed additional support to progress through the program could not be determined.

Despite these limitations, our evaluation has helped to make data-driven decisions about how to enhance the GHaW program to achieve its goals.

Conclusions

As an outcome of our evaluation, the GHaW program model is currently being simplified and mechanisms are being developed to

support worksites progress through the program. The new program model will be more flexibile, allowing businesses and service providers delivering the program to tailor their program activities over a longer timeframe. Service providers will be encouraged to conduct more face-to-face BHCs and to give more support to businesses through the program cycle.

Our study provides a real-world example of an evaluation of a routinely delivered large-scale workplace-based program using data from multiple sources that are collected for different purposes. We have also demonstrated how findings from such evaluations can be utilised to enhance the reach and uptake of the different program components in order to achieve program goals.

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