

Research Summary: Follow up study of people who had a WorkHealth check
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FOLLOW UP STUDY OF PEOPLE WHO HAD A WORKHEALTH CHECK

Purpose of research

The overall aim of this follow up study was to investigate the change in lifestyle and health factors since the WorkHealth check (WHC), motivating factors for change, participants' follow up with their doctor since their WHC and the corresponding time period, and other outcomes resulting from referral of WHC participants considered to be at increased risk of type 2 diabetes or cardiovascular disease (CVD). The other outcomes include pathology testing, referral to medical specialists or to the WorkHealth Coach program or other lifestyle programs as appropriate. The study also aimed to investigate the influence of diabetes and CVD related health conditions on work factors. The study was designed to investigate these aims at two different follow up periods after the WHC, about 11-12 months and about 24-27 months.

Implications for WorkSafe

Behavioural change and reduction in risk factors in individuals, the workplace and community requires a multifactorial approach, addressing barriers and responsibilities at an individual and organisational level. The study and this report provides WorkSafe with information on follow up for participants since the WHC and on impacts of the WorkHealth program on lifestyle risk factors for type 2 diabetes and CVD and workplace factors relevant to the program logic. The following for consideration by WorkSafe stem from the study aims:

- Enhancing messages to build on impact and effectiveness with respect to smoking cessation.
- Reconsidering/developing more effective messages with respect to taking action to increase daily vegetable intake, physical activity levels, weight loss, reduced waist circumference and reduced alcohol consumption.
- A clearer integrated, individualised, standardised WHC record for the participant to retain regarding referral and other aspects of advice may further increase the program's impact. A computerised printout at the WHC could be considered.
- Ascertaining doctors' responses to people attending for follow up from their WHC and any issues around communication and presentation of material that might further enhance communication between the worker and their doctor.
- Undertaking a follow up study of WorkHealth Coach participants to investigate the impact on lifestyle and health risk factors of that program
- Consider follow up of this established cohort with a survey in the future to ascertain longer term outcomes, and consider linkage with the Victorian Compensation Research Database.

Issues addressed

The study aimed to evaluate the WHC component of the WorkHealth program and to answer the following research questions:

1. What proportion of referred WHC participants took action/s in relation to risk factors during the WHC, e.g. visiting a doctor within the time period, participating in lifestyle programs?
2. What proportion who were identified as being at medium or high risk of type 2 diabetes or CVD underwent improvements in lifestyle risk factors or waist circumference from baseline?
3. What proportion of referred WHC participants at medium or high risk of type 2 diabetes or CVD who sought a doctor's advice received testing, referral, treatment and diagnosis; and did this differ by risk level?
4. Do health services utilisation, pathology testing, and use of medications for type 2 diabetes and CVD differ in participants at medium or high risk of type 2 diabetes or medium or high risk of CVD or with elevated individual risk factor levels?
5. Do work-related factors and factors that impact on the workplace including self-reported absence, self-reported claims, work ability, and perception of workplace culture differ in participants at medium or high risk of type 2 diabetes or CVD or with diabetes or CVD?
6. Are the actions and impacts measured in the above research questions influenced by the length of follow-up?

The current report includes the study methodology and results of the questionnaire survey. Findings from linkage with pathology services and with Medicare Australia and any further analyses will be reported as an addendum when those findings are available.

Research findings

- A total of 1306 people consented to be in the study, which was a participation rate of 24.0%.
- Study participants were more likely to be older, white collar workers, female, from rural regions, Australian born, or to have had their WHC in the 2011 sample period compared with non-participants, although the differences (apart from the time period) were not substantial.
- Almost half (48.0%) of the participants in the follow up study reported visiting their doctor after their WHC for further advice and/or tests about their WHC results. This increased to 60.0% when workers reported being advised to visit a doctor after their WHC.
- The urgency of the referral or risk factor affected the likelihood of a worker visiting their doctor after their WHC. All urgent 24 hour referrals attended within one month. Around 20% of one-month referrals attended within one month and 50% within six months, while about 45% did not attend at all. The reasons for not attending indicate that the messages given by the Service Providers (SPs) at the time of their WHC to visit their doctor for follow up of their WHC results within certain periods of time were not strong enough in more than 80% of cases.

- Possible outcomes of a visit to their doctor of pathology testing, referral to a medical specialist, treatment or a new diagnosis were about 20-50% more common in people assessed to be at higher risk of type 2 diabetes or CVD at their WHC, than participants without medium or high risk of type 2 diabetes or CVD, but the numbers not at risk were small and the results need to be interpreted with some caution.
- The WorkHealth Coach program started after most of the follow up study participants had already had their WHC, so only 61 people were offered that program and only about a third of them participated. The small numbers meant that subgroup analysis could not be undertaken.
- Overall, the proportion in the follow up survey who had inadequate daily fruit intake had decreased by about 17%, or who smoked had decreased by about 25%. The proportion who had inadequate daily vegetable intake or inadequate physical activity levels had remained similar, and the proportion who had high waist circumference had increased by about 10%, or had risky alcohol intake had increased by about 22%.
- The increase in fruit intake was greater in the 24-27 months than the 11-12 months group. Although these are different groups of people this finding suggests there is some maintenance over time. In contrast the lesser increase in smoking cessation in the 11-12 month compared with the 24-27 month group indicates that smoking cessation takes longer to implement.
- In those who reported being given advice at their WHC and taking corresponding relevant actions, we found consistent improvement across several lifestyle risk factors overall at follow up, e.g. 27.8% reducing alcohol intake, 43.3% increasing physical activity and 71.1% stopping/reducing smoking. In both high and medium AUSDRISK and CVD risk groups, a greater proportion tried to stop smoking or to lose weight by themselves than use a program.
- 38.0% of participants who drank alcohol reported drinking more than the recommended 2 standard drinks per day. With respect to the other NHMRC alcohol guideline of drinking no more than four drinks on any occasion, 30.0% reported they did this less than once a month, whilst 11.8% and 2.2% reported that they did on a weekly and daily basis respectively. These findings indicate that almost one half of the participants were outside the NHMRC Guidelines.
- There was a small improvement in self-reported health between the WHC and the follow up for the participants in the study. This may be due to a wide range of factors, including the documented improvements in lifestyle risk factors examined in this study.
- The great majority, 95% or more, of people reported that they did not have any difficulties with employment because of their diabetes, heart condition, stroke, or high blood pressure.
- 2.4% of participants reported that they had lodged a worker's compensation claim in the past 2 years. All claims were reported to be accepted. The numbers of claims lodged in people with health conditions were small, but the proportions were similar across health condition groups. No claims were reported to be due to diabetes, heart condition, stroke or high blood pressure.
- A wide variety of programs/activities occurred at workplaces since the WHCs. The most reported ones were medical checks, e.g. flu vaccinations, skin checks (65.1%), exercise promotion at work (49.4%), information/posters on healthy lifestyle behaviours (38.7%), greater emphasis on safety (35.5%), fruit baskets (34.4%), increased availability of

healthy food (29.8%), wellbeing activities, e.g. massage, yoga, (25.3%), participation in health promotion programs (23.2%), banned smoking at extended areas in/around the workplace (21.4%).

- Overall, nearly 90% of participants strongly agreed/agreed that WHCs had made workers more aware of their health, the majority strongly agreed/agreed that their workplace supports health promotion (77.5%), that their workplace supports injured workers (72.0%), and that their workplace supports OHS (85.8%). Participant responses to these statements were more positive where they had reported that they had a Workplace OHS Committee, and this was particularly important in relation to the workplace support for OHS statement.
- The measures of general physical and mental health and wellbeing, and physical role limitation and vitality were above the US general population average which the SF-12 instrument is normalised to, in participants with diabetes, the CVD group and the AUSDRISK and CVD risk groups, except for vitality score in the high CVD risk group, which suggests a healthy worker effect in that workers tend to be healthier than the general population.

Research conclusions

About half of participants reported visiting their doctor for follow up since the WHC, but about half did not. Follow up testing, referral to medical specialists, new diagnoses, and treatment were more common in those assessed as having increased risk of type 2 diabetes or of CVD.

Gains were seen only in some lifestyle factors across the whole study group, but improvements in all lifestyle factors were seen in those who reported being advised to take action and took action after their WHC. This suggests that targeted, standardised, and appropriate communication in a large scale work based program like the WHC is important to consider in overcoming the potential for variations in advice between providers and to assist individuals clearly understand the messages. Similarly an appropriate reading level record of the WHC assessment and individualised advice may further assist communication between the WHC program and the participant and their doctor. In addition, it may be important to consider the cut off levels for referral, given the scale of the WHC program.

The participants at higher risk were more likely to follow up with their doctor or with a lifestyle program (except for high risk CVD group with lifestyle programs, although the CVD numbers were small) and greater efficiency may be achieved through targeting high risk motivated people for specific follow up and aiming for a broader population shift in lowering risk factors in the medium to low risk groups.

The finding of reduction in smoking as a major public health risk factor is an important outcome for WorkHealth, as smoking is a major contributor to sickness absence. The improvement in fruit intake compared with no improvement in vegetable intake, may reflect an impact from the strong emphasis on 'fruit boxes' within the WorkHealth program and the fact that fruit consumption, rather than vegetable consumption, occurs at workplaces. These findings indicate WorkHealth impacts at both individual and workplace levels, achieving impacts as described in the Program Logic.

There is no obvious explanation for the finding of increased alcohol consumption at follow-up, but the fact that the WHC has not resulted in improvements in this risk factor may reflect that this risk factor is not as prominent as a target for interventions in the WHC program. The findings in relation to type 2 diabetes and CVD and the workplace suggest that these chronic conditions are not playing a major role in the workplace factors examined in the

short period of follow up, although these chronic conditions tend to deteriorate and develop complications over time, so that the impact is likely to be greater in the future.

Gains through the program have been recognised through this research, areas for improvement identified, as well as future research possibilities that will build on this research and assist in further developing the program and in achieving comprehensive lifestyle risk factor reduction, reduction in type 2 diabetes and CVD, and improved overall health and productivity in the workforce.

Methods

A total of 5396 eligible WHC participants who had given their consent at the time of their WHC to be followed up for future research were mailed a package comprising a self-administered questionnaire, plain language information sheet, consent form and tape measure to measure their waist circumference. The study population comprised people who had risk factors at their WHC for which the SP would have referred them to a doctor for further advice, or for which they were eligible for a health intervention program. The risk factors were a medium or high AUSDRISK score (Australian Diabetes Risk Assessment score) or CVD risk score based on several risk factors, or high isolated blood pressure, cholesterol or blood glucose. Those who participated were eligible to take part in a lottery for 50 department store vouchers.

In addition to self-reported information, participants who provided consent are being linked with the four main pathology providers in Victoria to obtain the results of any diabetes and CVD related tests they may have had done since their WHC, and will be linked with Medicare Australia to obtain objective health service and pharmaceutical use data.

Descriptive statistics were used to summarise data, and presented as proportions (%), means (SD, standard deviations), medians (IQR, interquartile ranges). Data was analysed using Stata. It is proposed that further analysis be undertaken, such as multiple regression analysis, to assess the relative contribution of factors, such as age, gender, occupation, city/rural, risk factor level and the likelihood of taking action/s in relation to their WHC. This analysis could also investigate what sociodemographic, behavioural, occupational and health intervention factors were associated with improvements in lifestyle risk factor levels since their WHC, adjusting for possible confounding factors. This analysis can help identify the more important predictors of these outcomes

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Where can I get further information?

For a copy of the full report, contact:

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Accompanying documents to this report

Title: *Follow up study of people who had a WorkHealth check*

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