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Targeted health checks by nurses in general practice: Are they feasible?

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A report on health check screening in Wanganui; September 2003 to December 2004

ABSTRACT

Aims

To test the feasibility of providing health check screening and the impact of targeted funding in different general practice settings in Wanganui.

Methods

All 20 city practices in Wanganui were invited to access funding to provide health checks. From September 2003 to June 2004 a subsidy was available from the Wanganui IPA for registered adult patients. From July 2004 to December 2004, a subsidy was provided by the newly formed PHO targeted to patients meeting one of these criteria: community services card (CSC) holder, Maori or Pacific ethnicity, or patient overdue for cervical smear. Practice nurses provided the subsidised health checks and follow-up consultations either during half-day clinics or as protected-time appointments. The health check consisted of a self-administered screening questionnaire, an interview with the practice nurse and selective examination items. Positive findings were managed either at follow-up nurse consultations, referred to the general practitioner or to other services.

The screening coordinator assisted with implementation, organised in-service training and peer support meetings, collated the monthly data and identified issues for nurses by interview and focus group discussions. Data were collected by the same format used for collecting the Annual Diabetes Check information from the practices.

Results

Practice nurses provided 900 consultations over the 16-month period. During the initial IPA funded phase (10 months), 495 health checks and 103 follow-up visits were provided, 50% to CSC cardholders. Maori comprised 14% of the patients seen and 18% of cervical smears were provided for Maori women. During the subsequent PHO funded phase (six months), 257 health checks and 45 follow-up visits were provided, 60% to CSC cardholders. Maori comprised 27% of those seen and 28% of the cervical smears provided were for Maori women. Practice nurses reported a positive response from participating patients and perceived the checks as worthwhile. The main concerns expressed by nurses were the lack of protected time, a need for increased health screening knowledge, skills, and training, and for increased availability of health promotion resources. The data collection worked smoothly using a paper-based system. Administrative staff identified electronic data transfer as a desirable improvement.

Conclusions

Nurse health checks are a feasible method of providing screening and health promotion in a practice setting and are acceptable to both providers and participants. Offering funding for specific groups increased the proportion of checks provided to targeted patients.

Keywords

Screening, health check, general practice

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Introduction

The New Zealand Health Strategy is placing a greater emphasis on population health promotion and preventive care[1] with the Primary Health Care Strategy encouraging Primary Health Organisations to work with providers and agencies to maximise opportunities for prevention and early intervention for health problems.[2] Preventive care activities including screening and health promotion have been provided in NZ general practice either on an opportunistic basis while patients attend for other reasons[3] or by planned health checks.[4]

Opportunistic care has long been promoted as a means of maximising the value of contact with patients[5] and may be the only means of providing preventive care services to patients who do not attend planned appointments. However, in general, opportunistic care is difficult to practise systematically and, as the number and complexity of preventive items increase, the more difficult it becomes to provide these services within GP consultations.[6,7,8] Relatively few preventive interventions appeared to be offered to patients in a systematic way in a survey of 375 NZ GPs published in 1999, though practitioners were well-informed about, and interested in carrying out, more preventive care, and the authors concluded that preventive care delivery could be enhanced in many practices by the adoption of a more systematic approach.[9] Health checks where patients are invited to attend a planned consultation which addresses age/sex relevant screening and preventive care items are an alternative approach. The periodic medical examination has had an established place in North American practice for many years[10,11] and health checks have been included in the UK primary health strategy since the early 1990s.[12] New Zealand guidelines recommend alcohol screening questions are included within the context of a general health review to make them more acceptable to patients,[13] and this was the preferred option for the majority of general practitioners who participated in the evaluation study of the WHO 'Drink-less' brief intervention package.[14] The health check as an opportunity for lifestyle screening has the advantage that patients are attending an appointment which has a preventive focus and alcohol assessment, for example, has been shown to be acceptable within this context.[15] The health check also provides an opportunity for a systematic approach, resolving organisational difficulties that have been identified as inhibiting the practice of preventive medicine.[16]

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Although there are few published NZ reports on general practice health checks, it is common practice for general practitioners to provide health checks either in response to patient requests or as a regular practice service.[4] There are international evidence-based recommendations on what should be included in a health check,[10,11] but recommendations for New Zealand practice have to be derived from a variety of national guidelines.

Cardiovascular guidelines for New Zealand recommend risk assessment for most asymptomatic men from the age of 45 (age 35 if they have risk factors) and for most asymptomatic women from age 55 (age 45 if they have risk factors) and advise that Maori should be assessed for cardiovascular risk 10 years earlier than non-Maori.[17]

A consensus statement on diabetes screening advises periodic testing of fasting glucose in high risk groups (family history of diabetes, past history of gestational diabetes, obesity).[18] The New Zealand Guidelines Group recommends fasting glucose assessment as part of the assessment of cardiovascular risk[17] and also recommends regular screening for renal, retinal and foot complications in patients with type 2 diabetes, and annual cardiovascular risk assessment for all people with diabetes.[19] New Zealand has cancer screening guidelines for cervical and breast cancer,[20] and for identifying persons at increased risk for colorectal cancer.[21] Prostate cancer screening advice remains under active review with current recommendations against offering screening, but evidence-based information available to men requesting screening.[22] Alcohol and other drug use guidelines recommend screening for all patients over the age of 14 years.[13] Chlamydia screening is currently under review by the National Screening Unit. A national chlamydia screening programme has been gradually introduced in the UK since 2002[23] and the US Preventive Services Task Force recommends screening for sexually transmitted infection and unintended pregnancy risk.[10] Prevention of osteoporosis in older populations has been addressed by the National Health Committee, which recommends most patients receive dietary and lifestyle advice with individual assessment of the need for bone density measurements as appropriate.[24] As well as screening and assessment of risk status, health checks provide an opportunity to be alert to other problems including depression and suicide risk,[25,26] gambling,[27] and partner and family violence.[28] While these problems do not meet formal criteria for inclusion as screening items,[29] they may be detected nevertheless as part of a comprehensive health check. Health checks also provide an opportunity to update or enrol patients

Table 1. Lifestyle screening questions

HEALTH SCREEN *(Please tick the bracket which indicates the most appropriate answer.)*

Weight

1. Are you currently overweight?
   ( ) Definitely yes ( ) A little ( ) No
2. Have you ever followed a diet to help you lose weight?
   ( ) Regularly ( ) Occasionally ( ) Never

Exercise

1. How often do you undertake exercise to improve your fitness?
   ( ) Most days ( ) 3–4 days/week ( ) 1–2 days/week ( ) only occasionally
2. Which bracket best describes your current exercise?
   ( ) Fitness training e.g. gym ( ) Jogging, brisk walking or swimming ( ) Walking, gardening or other light activities ( ) No routine activities
3. Have you ever felt a need to improve your fitness?
   ( ) Definitely yes ( ) Sometimes ( ) Not really

Smoking

1. Have you ever smoked tobacco on a regular basis?
   ( ) Yes ( ) No – skip to next section
2. If Yes, are you currently smoking?
   ( ) Yes _____ Number per day ( ) No – skip to next section
3. Have you ever attempted to cut down or quit smoking?
   ( ) Yes _____ Number of times ( ) No

Alcohol

1. Do you sometimes drink alcohol?
   ( ) Yes ( ) No – skip to next section
2. How often do you usually have a drink containing alcohol?
   ( ) Most days ( ) 3–4 days/week ( ) 1–2 days/week ( ) 1–2 days/month ( ) Less often
3. Estimate below the number of drinks you have on a typical day when you are drinking:

Beer	**Wine**	**Spirits**
_____ glasses	_____ glasses	_____ nips
_____ cans/stubbies	_____ bottles	_____ bottles
_____ bottles	**Sherry**	**Mixers**
_____ jugs	_____ glasses	_____ glasses

4. How often do you engage in bouts of heavy drinking?
   ( ) Most days ( ) 3–4 days/week ( ) 1–2 days/week ( ) 1–2 days/month ( ) Never
5. Have you ever felt the need to cut down on your drinking?
   ( ) Yes ( ) A little ( ) No
6. Do close relatives ever worry or complain about your drinking?
   ( ) Yes ( ) Occasionally ( ) No

Other drug use

These questions are confidential; please answer them if they are relevant to you:

1. Do you sometimes use marijuana? or other drug, please specify _____
   ( ) Regularly ( ) Occasionally ( ) Never – no further questions
2. Have you ever felt the need to cut down on your use?
   ( ) Yes ( ) Occasionally ( ) No
3. Do close relatives or friends ever worry or complain about your use?
   ( ) Yes ( ) Occasionally ( ) No

AIDS, hepatitis and sexually transmitted disease risk

1. Would information or testing related to these conditions be of interest? ( ) Yes

for vaccinations including tetanus, influenza, pneumococcal and hepatitis B vaccinations.

Health checks and follow-up appointments offer opportunities for health promotion or intervention in health risk behaviours. Research into the effectiveness of health checks has focused mainly on the impact on cardiovascular risk factors. In 1994, two UK studies reported modest benefits on cardiovascular disease risk status from nurse-led screening. The randomised controlled OXCHECK trial reported small differences between the intervention and control groups in cholesterol, blood pressure and diet though no differences in smoking or body mass index.[30] The Family Heart Study Group reported concurrently that a similar randomised intervention aimed at families led to a 16% difference at one year in the total coronary risk score.[31] Modest gains in coronary risk status were reported in a randomised controlled trial of health checks for workers in Scotland, this study also showing a significant benefit for self-reported alcohol consumption and diet.[32] In 1997 a systematic review of the effectiveness of lifestyle advice provided by GPs on smoking, alcohol consumption, diet, and exercise suggested that whilst many of the general practice-based lifestyle interventions show promise in effecting small changes in behaviour, none appears to produce substantial changes.[33]

Although there have been no published studies on the effectiveness of health checks in New Zealand general practice, reported cardiovascular risk factor interventions that have shown benefit include a smoking cessation programme[34] and counselling patients on exercise.[35] The use of motivational techniques in modifying risk behaviour has increasingly become part of clinical practice with, for example, New Zealand research verifying the effectiveness of this approach in alcohol counselling for patients with mild to moderate alcohol dependence seen at a specialist clinic.[36]

Health checks offer an opportunity both to deliver evidence-based screening and health promotion interventions to a practice population and to identify individuals at increased health risk for personalised management. Although to date the evidence that they are an effective means of achieving long-term health outcomes is limited, the case for organised health check screening is made stronger if the items included meet approved screening criteria, carry nationally recognised endorsement, and are provided in a manner which meets the criteria for an organised screening; that is, they are part of a planned, co-ordinated, monitored and evaluated programme.[29]

To test the feasibility of providing health checks as a means of screening in general practice, 20 Wanganui city practices were invited to access funding for subsidised nurse-provided health checks for registered patients. Funding was initially provided through the Independent Practitioner Association (IPA) representing Wanganui city practices, then subsequently by the newly formed Primary Health Organisation (PHO). During the initial IPA funded phase from September 2003 to June 2004, the uptake of health check subsidies was monitored, the data collection and reporting systems tested and the practice requirements for screening and health promotion resources identified. The PHO funded phase from July to December 2004 tested the impact of a targeted subsidy on groups meeting one of these criteria: community services cardholder, Maori or Pacific ethnicity, or women overdue for cervical smear.

The case for organised health check screening is made stronger if the items included meet approved screening criteria, carry nationally recognised endorsement, and are provided in a manner which meets the criteria for an organised screening

A number of criteria should be met before a screening programme is introduced:

- the benefits and disadvantages need to be assessed;
- efficiency and feasibility evaluated, and
- quality assurance, monitoring and evaluation processes developed.[29]

This report addresses the feasibility of providing health checks, and any subsequent development of health check screening in Wanganui would need to address quality assurance, monitoring and evaluation.

Methods

All Wanganui city general practices with current practice nurse availability (20 out of 22 practices) were invited to access funding for nurse-provided health checks. The screening coordinator advised practices on the funding process, the data collection requirements, the organisation of health check screening within the practice and the target patient groups, and arranged individual and peer group support. Practices had the option of providing a half-day screening clinic or ensuring protected time within the existing daily schedule.

While attending the practice for other reasons, patients were recruited by opportunistic invitation to return for a health check, or the check was provided as part of a new patient or planned medical review. Some health checks were provided opportunistically provided the nurse had sufficient protected time available. Patients completed a self-administered questionnaire which was reviewed by the nurse along with health measurements (e.g. BP, BMI) and the results of pre-ordered blood tests (e.g. glucose and lipids).

The questionnaire updated personal information including ethnicity and occupation, personal and family cardiovascular, cancer and alco-

Figure 1

hol history, and included a brief cardiovascular and cancer symptoms health checklist to ensure current or active illness was not overlooked. Lifestyle questions on exercise, smoking, alcohol and other drug use were included. These questions (Table 1) were based on lifestyle screening questionnaires developed for UK general practice studies over some years, particularly the Health Screening Instrument.[37]

During the review with the nurse, health and lifestyle strengths and risks were identified and explored. Strengths were reinforced and the patient's readiness to address risk interventions was discussed. In the event of any urgent issues identified, the nurses had access to the usual practice clinical systems. Outcomes were personalised and specific interventions planned. These included, for example, referral for smoking cessation, Green Prescription or clinical assessment with the GP. Alternatively a follow-up visit was scheduled with the practice nurse to discuss health issues such as diet, weight management, or sexual health. Anonymised data were then forwarded for collation by the screening coordinator and subsidy payment arranged.

The pilot showed that it is feasible for practice nurses to provide health checks, but there were barriers limiting the uptake within practices

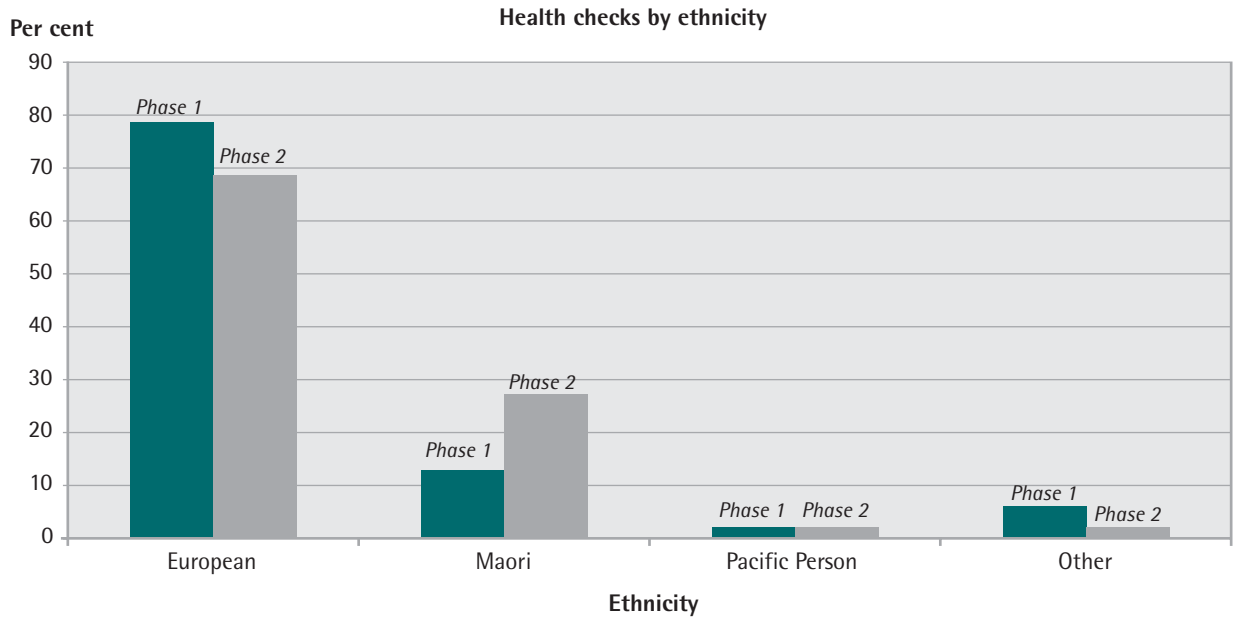
Results

All 20 eligible practices completed health checks though uptake varied considerably among practices (Figure 1). Five practices (25%) each provided over 50 health checks during the pilot. Three of these practices had previously provided practice-based health checks. Another practice continued to provide unsubsidised practice-based health checks. The reason given for this was that the claiming process was too complicated. Two other practices not previously providing health checks completed over 50 during the pilot and a further four practices provided over 25 checks.

In total there were 900 consultations over the pilot period. During the initial IPA funded phase (10 months), 495 health checks and 103 follow-up visits were provided, 50% to Community Service Cardholders. Maori comprised 14% of the patients seen and 18% of cervical smears were provided for Maori women. During the subsequent PHO funded phase (six months), 257 health checks and 45 follow-up visits were provided, 60% to Community Services Card holders. Maori comprised 27% of those seen and 28% of the cervical smears provided were for Maori women. Figure 2 shows the effect of the subsidy changes on the proportion of health checks provided to the target groups.

Nurses reported a generally positive response from participating patients and benefit to the patient and practice from obtaining screening profiles. The main concerns expressed by practice nurses were the lack of protected time, and a need for increased health screening knowledge, skills, and training, as well as a need for increased availability of health promotion resources. The data collection worked

Figure 2



smoothly using the paper-based system previously set up for annual diabetes checks. The administrative staff identified electronic data transfer as a desirable improvement.

Discussion

The pilot showed that it is feasible for practice nurses to provide health checks, but there were barriers limiting the uptake within practices. Although all eligible practices participated to some degree, only some continued to actively promote health checks. Reasons cited for this in the practices less involved included problems with patient recruitment, difficulty ensuring uninterrupted nurse time allocation, and difficulty for nurses completing the task in the set time. The expected duration of the health check appointment was 30 minutes. In some practices this time was regularly exceeded resulting in peer review discussion about the nature of the health check as a screen and the acceptability of claiming the targeted subsidy for follow-up appointments. Uptake of health checks was highest in practices that had systems ensuring nurses had access to protected time. This was best achieved by additional nursing time being available, extra to that required for clinical management duties. Patient recruitment was highest in practices where the pilot was actively supported by the GP and other protected time nurse services were already being offered. The nurses also indicated that they were confident offering interventions related to weight management, lipid and diet advice, exercise and hypertension but were less comfortable dealing with some issues raised in the health check discussions including drug and alcohol, gambling, depression and sexual health issues. The need for training to address these concerns was widely accepted among the practice nurses providing the health checks. One solution provided to address this issue has been the development of a graduate level Primary Health Care Nursing paper focusing on the issues relevant to screening and health promotion. This paper includes screening principles and practice, patient-centred health counselling and motivational skills in the provision of health check interventions, knowledge of and access to resources in the areas of lifestyle and disease risk management. Even with further education, the success of nurse provided health checks will require changes in practice systems. The provision of funding does increase the delivery of services to target groups. If additional nursing time is required to sustain screening as a practice service, then either the increased nursing time must be provided within the PHO structure or the service funding needs to be sufficient to encourage practices to change their systems to provide more protected nursing time.

While it is feasible for nurses to provide health check screening and health promotion in Wanganui, increasing the practice uptake will require continuing practice marketing, problem solving and provision of support. Additional education to advance practice is identified as important by participating nurses. Quality assurance, monitoring and evaluation need to be developed as part of any ongoing health check screening programme.

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'Formerly, when religion was strong and science weak, men mistook magic for medicine; now, when science is strong and religion weak, men mistake medicine for magic.'

Thomas Szasz, The Second Sin (1973) 'Science and Scientism'