

Cardiovascular risk screening and management

– a targeted systematic population approach

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PART 2: Implementation of clinical guidelines in primary care – lessons learnt and advice for funders

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ABSTRACT

Aim

To highlight issues around the implementation of clinical guidelines in primary care, with reference to the cardiovascular screening guideline.¹

Method

Implementation rates and the efforts to increase implementation, and practice performance, were analysed with a brief resume of the literature.

Results

A wide practice variation in implementation rates against each practice's target was found. Four main

groups of barriers were identified to which PHO interventions were directed.

Conclusions

Implementing guidelines in primary care as a population-wide approach requires considerable PHO resources; factors such as financial return, facilities in the practice and the clinical importance of the guideline, together with the user-friendliness of the guideline, influence GPs' readiness to implement.

Keywords

Implementation, dissemination, clinical guideline, primary care

Introduction: Dissemination of the HealthWEST CVD guideline and PHO support

The 'Guideline Implementation Project' (GIP) began in October 2004 with raising professional awareness, developing training manuals, commissioning software and preparing practices. Major publications were consulted to reveal insights relevant to implementations.²⁻¹⁵

Considerable work went into informing and seeking cooperation from all members of the practice: GPs, practice nurses, reception staff and managers. Feedback regarding progress was regularly given to each practice.

CVD screening occurred both opportunistically and systematically in practices. Practice nurses (PNs) may

call in eligible patients for special clinics (in the 'quiet times') or offer the risk assessment opportunistically. In some smaller practices, where workforce issues inhibit screening, HealthWEST PHO provided a nurse to work with the practice calling up patients and conducting the actual screening. The PHO, by looking at patients not screened and with practice support and outreach activities, ensures that in time, a full systematic population approach occurs. Regular revision of the information manual was considered important.

A patient laminated flow chart, individualised to each practice with their access password, assisted GPs and practice nurses initially, but now all practice computers are configured for easy access to either the web-based

programme or they have the embedded form of Predict.

Dissemination and implementation rates

Dissemination to 90% of practices took six months, and to the final 10%, who were reluctant to engage in guideline work, in the following six months.

Looking at the implementation rates, we find variation in the rate of increase. This is related to other (seasonal) activities in the practices, the initiation of vaccinations in March 2006 for example.

Enlisting the support of GPs and practices

Several meetings were held with expert and respected national leaders and local cardiology specialists, con-

tributing to GPs' and practice nurses' understanding of the value of the project. GIP has been seen as the most important project to reduce the burden of CVD in the community. CVD/diabetes screening is considered to be of very high clinical value. The 2006 business case for CVD screening in Waitemata states:

'The introduction of systematic cardiovascular and diabetes risk assessment and management will enable early detection and long term evidence-based management of those at high risk and thus reduce the burden of these diseases in Waitemata. In addition, development of a district-wide programme will enable collection of population data for analysis by primary care and the DHB and reporting back to practitioners.'

'This initiative aligns with Waitemata DHB's strategic objectives to reduce inequalities, reduce cardiovascular disease and diabetes, and enhance integration with primary care. The 2002–2007 Waitemata District Strategic Plan identified "im-

proving health and reducing inequalities" as a strategic priority. This priority focuses on cardiovascular disease, diabetes, Maori health and Pacific health. Cardiovascular risk assessment and management was proposed as one of the ways of reducing the impact and incidence of cardiovascular disease.'

Rewards and incentives

Practices achieving 75% of their SIA target were recognised with a certificate and all are given feedback as to their achievement to target. The target of 75% of SIA patients was accepted by the HealthWEST board as an overall achievable target by end 2008.

Practices are paid \$25 for screening of the SIA group, but no payments as yet for non-SIA patients. It is anticipated that WDHB will commence funding the project to all eligible patients in the Waitemata population (approximately 150 000) in 2008. Patients identified with high risk (>15% risk of a CVD event in the next five years) are managed by

their GP, and the practice is paid a further \$45 for recording their management in the EDS Predict™.

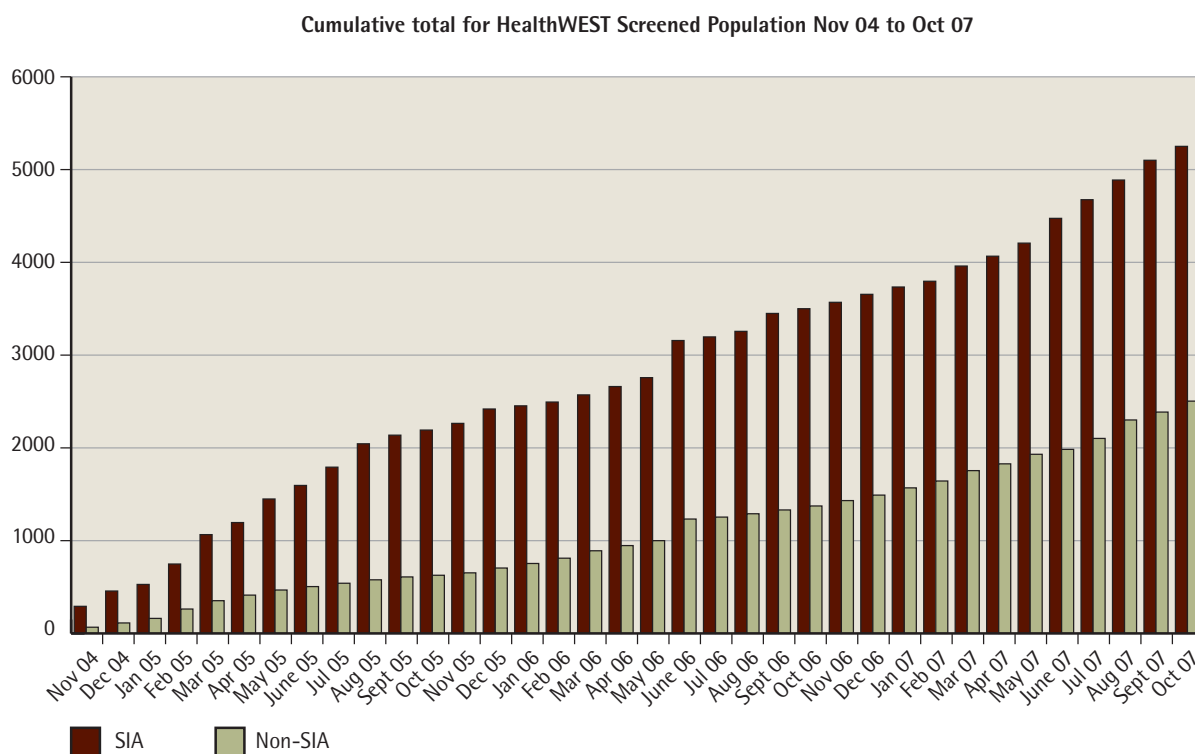
Payments are made automatically from PHO data and practices receive payments monthly, no invoicing is necessary.

Discussion on the financial incentive

In comparison with other practice payments, \$25 is relatively low for the time and resources involved. Time to run the assessment varies from 10 minutes to 20 minutes depending on discussion with the patient, although actual keyboard time is less than five minutes. A similar in-time requirement by the computer-based diabetes national recording programme, ('Get Checked') pays practices \$45. The average fee for a 15-minute appointment is \$55–60, made up from the patient co-payment (\$25–30) and DHB capitation equivalent (\$30).

It is interesting that in 30% of risk assessments there is no payment

Figure 1. Cumulative total screened Nov 2004 to Oct 2007. SIA patients (green flagged) and non-SIA numbers (from HealthWEST GIP report 2007)



made to the practice (no funding from the WDHB has been available, although this is anticipated in 2007–2008). This may represent ‘clinical altruism’ and suggests that the practices value the project for clinical reasons; the Predict™ module is seen as a useful tool to help change patient behaviour and there is a perceived value in quantifying CVD risk, as well as an academic appreciation. Lowering risk in high needs populations is also perceived as assisting in reducing health inequalities.

Barriers and difficulties – practice variation

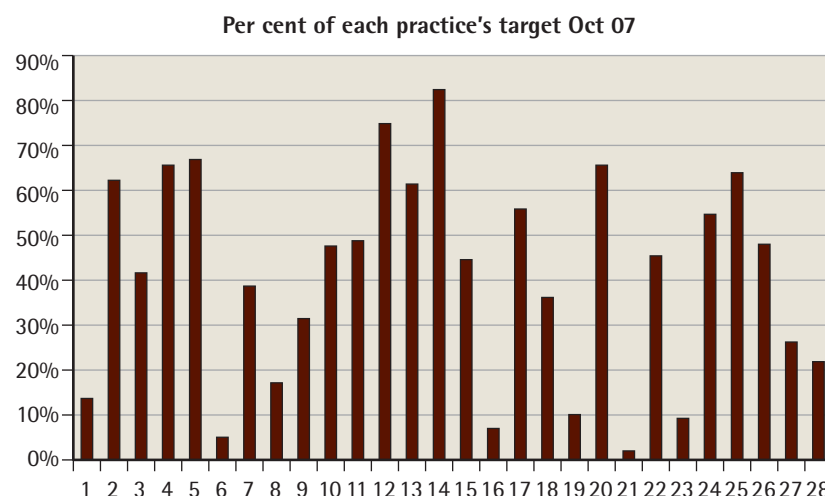
Although dissemination across all practices was rapid, the up-take or implementation of the guideline has not been even or consistent. Some practices have struggled to screen their target SIA patients, whilst the early adopters have achieved over 75% in the first year. As of October 2007, 16 practices have screened less than 50% of target, 12 practices over 50%. Six practices have screened less than 10% of target. Overall 35% of the target SIA group have been screened and this is consistent with the HealthWEST target being met by the end of 2008, considering that practices are ‘speeding up’; for example, monthly total patients screened has risen from an average 125 in last six months of 2006, to an average of 255 per month in first quarter of 2007.

Progress in each practice

The HealthWEST GIP manager regularly checks practice performance and provides support as needed, often training, initiation and setting up clinics. An examination of poorly performing practices (less than 25% target achieved as of March 2006) shows four main barriers to implementation:

- Practitioner attitudes (negative to guidelines, too busy, financial issues with payments too low)
- Inadequate work space for nurse clinics (geography of the practice)
- Issues with the information technology or the practice manage-

Figure 2. Shows SIA green flagged (SIA) patients screened as a per cent of each practice (1 to 28) as a % SIA target (from HealthWEST progress report October 2007)



NOTE: Many practices have experienced an increase in the number of green flagged (SIA) patients enrolled from 2004 numbers (an increase of 2474). This has artificially lowered their percentage rate of patients screened.

ment system (more difficult with Macintosh) and practitioners not comfortable using computers

- Workforce issues, GP and practice nurse (staff shortages, GPs close to retirement).

Role of the practice nurse

Many of the practices developed a teamwork approach in which the practice nurse managed the screening (calling patients in from the target list supplied to each practice) and identifying medium and high risk for referral to the GP. Practice nurses offer lifestyle advice and can arrange referral to Green prescriptions. As practices learned to embrace the project, changed clinical behaviour occurred; staff proactively seeking patients to have a risk assessment, referral to the GP of the high risk identified, and more exact clinical management following the guideline EDSS. The example (truncated) report, Figure 3, demonstrates how each practice has idiosyncratic issues.

Overcoming the barriers

A major factor in the success of the project has been the ongoing PHO support and management, both in information technology and clinical support assisting and enrolling all

staff in the practice. Feedback on progress is confined to the individual providers. The practices that are actively screening (in addition to all their other activities) see the Predict™ guideline project as ‘part of their job’; the activity then becomes integrated into the practice workflow.

However, payment is considered by some as inadequate for the time involved; other barriers include workforce issues and inadequate space in the practice. Often practice nurses have no dedicated space to see patients. Practitioners value the project independent of payments, as shown by nearly one-third of assessments being unpaid. Clinical behaviour change has been observed with the Predict™ CVD risk assessment and the use of EDSS.

The comments in Figure 3 are indicative of the level of PHO understanding of each practice’s issues or problems they are experiencing with implementation. From this analysis the PHO is able to design interventions configured to each practice.

There were no relevant international comparisons as PHOs are unique to New Zealand. We did conduct an exhaustive literature review, and although agreeing with the question raised by Eccles, ‘Are there any magic bullets?’¹⁶ we think we may

Figure 3. HealthWEST administrator report on the lowest performing practices (from progress report November 2007)

Practice	Target SIA reached	Comments from project coordinator
1	13%	36/271 SIA screened. An increase from 3% in August 07. An increase in enrolled SIA pts from 257 to 271. Started with 495 NZGG criteria pts now have 674. Only one nurse doing the screening and only started in August this year. Earlier had computer problems. Doing very well for a small practice.
2	63%	95/152 SIA screened. An increase from 53% in August 07. An increase in enrolled SIA pts from 143 to 152. Steadily screening both SIA and non-SIA pts. NZ Maori audited and screened first. Championed by one nurse who has worked hard at several post graduate studies to increase her skill and knowledge for the GIP project.
3	41%	120/291 SIA screened. An increase in enrolled SIA pts from 268 to 291. Have put systems in place to measure all pts over 35 years. Have tried to run nurse led clinic after hours and have a designated nurse for GIP, pts did not attend appts and practice became very busy over winter using up the nursing hours for GIP. Further discussions to restart up GIP clinic.
4	66%	388/591 SIA screened. An increased in enrolled SIA pts from 584 to 591. An increase from 58% screened. A great push forward championed by one nurse. All nursing staff screening and managing pts with two half hour appts for high risk pts. Great feedback from staff, making a difference with pts and job satisfaction.
5	67%	68/102 SIA screened. A decrease of two enrolled SIA pts. Screening and management undertaken by one doctor. Screening both SIA and non-SIA pts. Reports PREDICT™ is a useful tool for managing CVD.
6	4%	26/626 SIA screened. A decrease of 144 enrolled SIA pts. Had a change in PMS system and ownership of practice. Just started GIP project championed by one nurse.
7	38%	98/256 SIA screened. A decrease of 37 enrolled SIA pts. Now has another nurse working at the practice that has been trained and has commenced running nurse led clinics. Clinic is frequently interrupted by GPs with requests to do other jobs for them and phone calls also put through while interviewing pt.
8	17%	62/366 SIA screened. All pts screened by HealthWEST GIP leader. New enrolled nurse started and has started training in Predict™ and nurse-led clinic to take over running of GIP clinic. Very supportive teamwork from GPs, nursing and reception staff.
9	31%	34/110 SIA screened. Needed an upgrade in Firefox to use update in Predict. Doctors not wanting to screen or manage pts with Predict. Discussions with nurse for update on last drs meeting.
10	47%	89/188 SIA screened. A decrease of 83 enrolled SIA pts. Screening by both the doctor and nurse.
11	48%	283/585 SIA screened. An increase of 72 enrolled SIA pts. Screening by GP, both SIA and non-SIA. Not happy for nurses to be involved.
12	75%	174/232 SIA screened. An increase of 31 enrolled SIA pts. Not using management as they feel the screening has been a good audit tool and state their pts are being managed well. Screening done by a nurse.
13	62%	24/39 SIA screened. Do not visit this clinic.
14	82%	412/500 SIA screened. Screening and management by doctors. Report the EDSS tool is fantastic. All pts are sent a letter with their CVD risk factor and advised that their CVD risk is not static and that there is always room for prevention and improvement.
15	49% 19th Nov 07	999/2048 SIA screened. An increase of 349 SIA enrolled pts. Both doctors and nurses screening and managing. With a nurse champion for the diabetic pts and a nurse to manage those with a CVD risk >15%. Diabetic nurse has done a lot of work to upskill herself this year undertaking a post grad certificate in chronic care. 463/1168 (40%) of those screened are diabetic. 425/1168 (36%) are greater than 15% CVD risk. 93% have a BMI greater than 25, with 74% greater than 30. Of those managed 80% are on aspirin and/or clopidogrel. The number of pts on green Rx is low at 7%.
16	7%	29/420 SIA screened. Worked with a nurse to identify those at risk to screen and to put processes in place. No further progress due to lack of room and doctors state that the remuneration is too low to be worthwhile for them to screen using the Predict™ tool.
17	56%	328/583 SIA screened. Screening undertaken mostly by GPs. Continually have IT problems with coding issues not allowing them to use the embedded version of Predict™ well.

have found a 'magic formula' to assist with implementation of guidelines in primary care.

Conclusions

The NZGG CVD guideline, published in 2003 in hardcopy was subsequently converted to an electronic format with prompts and electronic decision support by Enigma Publishing. It is considered user-friendly, evidence-based and with the Predict™ database capable of providing ongoing monitoring and reporting to assist the PHO with dissemination and

implementation. The clinical value of the guideline has never been in dispute; the validated clinical benefit of substantial risk reduction in such a major disease allows both patient and practitioner to see the benefits in this guideline adherence.

It is difficult to see how a non-electronic paper-based guideline could be implemented to any degree and perhaps the future of guideline development in New Zealand will embrace 'electronic from initiation'. Major factors supporting practitioner use of the CVD guideline were the

perceived clinical value, ease of use, payment incentives and, especially, PHO support. The value of this support with information technology issues, training and motivating staff, and assisting in overcoming inadequate staffing or space in the practice, should not be underestimated. New Zealand research investigating the potential for nurse-led guideline implementation, especially population screening guidelines, would be helpful.

Competing interests

None declared.

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Management of non-specific low back pain

'Because radiography and magnetic resonance imaging findings do not correlate with clinical symptoms of nonspecific low back pain or ability to work, these studies should be reserved for patients with radicular symptoms who do not respond to conservative care and for those with worsening neurologic findings, objective weakness, uncontrolled pain, or suspected cauda equina syndrome.'

There is no clear evidence supporting the use of acupuncture, epidural steroid injections, muscle relaxants, spinal manipulation, transcutaneous electrical nerve stimulation, trigger point injections, heat therapy, and therapeutic ultrasound. Although antidepressants decrease the intensity of pain, they do not improve the ability to perform activities of daily living.

Electromyography biofeedback, shortwave diathermy, botulinum toxin type A injections, facet injections, prolotherapy, tractions, and lumbar braces and supports are not recommended. Bed rest should not exceed two days, and patients should be encouraged to be as active as possible.

"Exercise conducted under the supervision of a therapist three to five times per week is highly recommended as first-line therapy in the treatment of low back pain," the study authors conclude. "However, there is conflicting evidence as to which type of exercise therapy is most effective."

Nguyen TH, Randolph DC. Nonspecific low back pain and return to work. Am Fam Physician. 2007; 76:1497-1502, 1504.