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Preventing vascular disease

Effective strategies for implementing guidelines in general practice

Background

Prevention of vascular disease is an important and challenging role for general practice. Various professional bodies in Australia have published best practice guidelines that address the major behavioural and physiological risk factors for vascular disease. Although these guidelines provide consistent advice and have been widely disseminated, they have not been systematically implemented.

Objective

This article presents findings from a literature review that identified effective strategies for implementing guidelines.

Discussion

Interventions that support guideline implementation are informed by theory, are multifaceted, tailored to barriers (at the patient, provider and practice levels) and the local context, and involve the entire primary healthcare team. Effective strategies include small group education, clinician prompts and decision aids, audit and feedback and external facilitation. The effectiveness of these strategies in different contexts varies. New systems or tools must fit well within the usual work routines if they are to be successful.

Keywords: practice guidelines as a topic; vascular diseases/prevention; general practice

The guidelines provide consistent advice, are well regarded by the general practice community and have been widely disseminated. However, they appear to not have been systematically and widely implemented in primary healthcare. For example, while 34.4% of general practice encounters were with overweight patients, an additional 25.9% were with obese patients and 15.1% with daily smokers,⁵ less than one-fifth of smokers were advised about their smoking, and only about one-third of overweight patients were advised about their physical activity or diet.⁶ Further, there is evidence that wider evidence practice gaps – relative to need – exist for women,⁷ people from low socioeconomic locations,⁸ and people from Aboriginal and Torres Strait Islander backgrounds.⁹

This article presents the findings from a literature review that identified effective strategies for implementing best practice guidelines, and to support general practices in providing targeted preventive care to their patients.

Review methods

Electronic databases were the primary source of literature. Searches were performed using MEDLINE and Cochrane library databases. Search terms included 'guideline implementation and adherence', 'knowledge translation', and 'theoretical frameworks of implementation research'. The literature was limited to review articles published between 2004 and 2011 which focused on the effectiveness of strategies to improve guideline implementation. Primary research studies that were identified through snowballing from relevant articles or recommended by the investigators as particularly relevant to Australian general practice setting,

In Australia, The Royal Australian College of General Practitioners (RACGP), the National Heart Foundation and the National Health and Medical Research Council have published best practice guidelines for the prevention of vascular diseases (cardiovascular disease [CVD], diabetes, renal disease). These guidelines include advice on a mix of behavioural risk factors (smoking, nutrition, alcohol, physical activity and overweight and obesity), and physiological risk factors (blood pressure, dislipidaemia and impaired glucose metabolism).¹⁻⁴

were also included. The search was not limited to preventive guidelines or primary healthcare settings. The included systematic reviews comprised studies from different settings and countries, and thus the presented evidence is not specific to Australian general practice.

Findings

The findings from this review are grouped into three categories that emerged from the literature:

- barriers and enablers to guideline implementation
- the role of theory in informing intervention design, and
- the relative effectiveness of interventions to support guideline implementation.

Barriers and enablers to guideline implementation

Guideline implementation

Less complex guidelines, which require less changes to practice organisation, have been found to be more likely to be adhered to by clinicians.¹⁰ This highlights the need to examine, from the outset, how guideline recommendations can be translated into practical strategies that can be included in day-to-day general practice routines.¹¹ Involving practitioners (who will be required to implement guidelines) in identifying potential barriers and designing solutions was identified as a key step in effective implementation.^{12,13} The format in which guideline recommendations are presented was also important; attributes such as adaptability for different user groups and general usability has been found to influence guideline implementation.¹⁴

Practitioner factors

Knowledge and positive attitudes toward prevention strategies, skills in assessment of risk, motivational interviewing and facilitating patient self management are all essential for the implementation of behavioural change. Not surprisingly, general practitioner workload and time constraints were described as common barriers to implementation.¹⁵ The practice culture and its openness to change, along with the age, level of experience and gender of the GP all influenced provider behaviour. Female GPs tended to provide more preventive care,^{15,16} which may

relate to the communication style and a more patient centred approach and longer duration of consultations.¹⁶ More experienced GPs were less likely to adhere to guidelines.¹⁷

Patient factors

Patient understanding of prevention has been found to be variable. For example, only one in 4 patients were aware of the link between high cholesterol and heart attack¹⁸ and two-thirds believed that hypertension usually had identifiable symptoms or signs.¹⁹ Patients with low educational attainment and poor health literacy were less likely to ask questions and seek preventive care. The wish to preserve the patient-doctor relationship has been cited by GPs as a barrier to implementing prevention strategies.²⁰ The quality of the patient-doctor relationship, especially when it is patient centred, improved preventive care.²¹ It is important for GPs to ask patients what they know about vascular disease and what they think about prevention, and tailor information accordingly. Addressing the barriers and enablers to implementation has been found to be an important part of improving the receptivity of preventive care.^{15,22}

The role of theory

Interventions that are informed by behavioural and social science theories are more effective than interventions that lack a theoretical base.²³ Both process and impact theories are important. Process theories refer to how the preferred implementation activities should be organised and planned. Impact theories describe how a specific intervention will facilitate a desired change. These change interventions can occur at the individual, social, organisational and political level.²⁴ Most studies that used theories to guide their implementation process did not provide clear justifications for their choice of theory and lacked a systematic approach to the use of theory.¹² Nevertheless, it is reasonable to consider common principles that have been espoused by the various theories, especially when there has been some attempt to provide empirical evidence for these components.^{24,25}

Common principles for the successful implementation of change included:

- taking into account the complexity of the practice

- adopting both a coordinated and collaborative approach and gaining the commitment of the entire target group
- considering the specific characteristics of the innovations to be implemented and potential barriers to adoption
- undertaking a sequential approach that resolves different problems at each step
- basing strategies for change on available evidence (a cost effective mix of measures such as education, feedback, rewards or organisational changes)
- using an iterative approach to monitor progress and determining whether the intended changes are being achieved
- assessing capacity, and
- incorporating the implementation into the established structures for professional development and quality management.²⁴

Descriptions of predominant impact theories are available elsewhere.²³

Effectiveness of interventions

Numerous types of interventions have been used to facilitate guideline implementation, including education, media campaigns and financial incentives. In the following section we present the evidence for each type of intervention. It is important to note that effective interventions need to be tailored to barriers and the local context,^{13,26–28} be multifaceted,²⁹ and involve the entire primary healthcare team.²⁶

Educational interventions that were interactive,^{30,31} provided feedback to participants,³² included an objective assessment of educational needs,³³ and involved small groups were more likely to be effective.³³ Small group learning was effective because it combined evidence based material with peer influence. Dissemination of printed education material produced only small improvements^{34,35} but may have achieved wide coverage at low cost.³⁴

The use of opinion leaders was most effective when used in combination with audit and feedback or education strategies or community outreach³⁶ and when opinion leaders were chosen by the target group, rather than appointed, and possessed change management skills.²⁶

Provider prompts and reminders have been shown to be modestly effective in improving GP performance across a range of prevention

activities.^{37–39} Prompts were more effective when delivered automatically at clinically critical times and could not be ignored by the clinician.^{40,41} Decision aids (eg. CVD risk calculators) have been found to be effective in improving physician performance and patient outcomes,⁴¹ although improvements in patient outcomes have been contested.⁴¹ Decision aids that were provided automatically as part of clinician workflow at the time and location of decision making, and with actionable recommendations and in a computer program integrated into the medical record, have been found to be more effective.⁴²

Audit and feedback was effective for providing more preventive care, and variably effective for other aspect of clinical practice.^{35,40} The variation in effect can be explained by the difference in how audits were conducted and feedback was provided. Positive effects can be moderated by the source, format and type and intensity of feedback.⁴³ Audit was more effective if baseline adherence to guidelines was low⁴⁴ and if feedback was enhanced by benchmarking, educational material and support for audit.⁴⁰ Feedback also tended to be more effective if it was complemented with a behavioural target and action plan.³²

Financial incentives such as payments for preventive activities have been found to positively influence provider behaviour,⁴⁵ but it could also adversely influence continuity of care.⁴⁶

Facilitation and academic detailing that employed a mix of different strategies such as audit, feedback, training and facilitation at the practice site has been shown to improve preventive care.⁴⁷ Workload and the number of preventive manoeuvres targeted influenced the effectiveness of this intervention.

Discussion

In addition to developing guidelines, the RACGP plays an important role in endorsing guidelines and facilitating implementation through the publication of guidelines and vocational and continuing education. However, there is a need for additional and more direct measures to support practices to implement guidelines more fully.

Our findings suggest that educational interventions, clinician prompts, decision aids and audit, feedback and facilitation can improve adherence to guidelines. However, the

effectiveness of these strategies in different contexts varies and new systems or tools must be tailored to the needs and characteristics of practices and providers to ensure that they fit well within the usual work routines if they are to be successful.^{42,47} This finding is consistent with 'normalisation' theory which emphasises the importance of routinely embedding change in the organisational and social context of a practice.⁴³

Guidelines that provide unambiguous advice, include recommendations about processes for implementation and suggest ways to evaluate their effectiveness, will be easier to implement. Involving those who will be required to implement guidelines in identifying potential barriers and designing solutions and key components of effective implementation strategies is another important enabler for guideline adherence.

Identifying which patients are disadvantaged and examining the extent to which they receive preventive care can be achieved through audit and feedback. If guidelines are inequitably implemented it is likely that this will lead to an increase of the existing gap between the least and most advantaged members of society.⁴⁸ While guideline implementation needs to be universal, disadvantaged groups may require a targeted effort and a modified approach, such as GPs allowing extra time and using methods and resources suitable for lower literacy groups.⁴⁹ This was not a systematic review of primary research studies, instead it was a review of reviews. One of the limitations of this approach was that although we identified the importance of practice context, it has not been possible to identify which interventions and strategies were most suited to specific contexts.

Implications for general practice

- Implementing preventive guideline recommendations is a core business of general practice. However, it is challenging with barriers at the practice, provider and patient levels needing to be addressed.
- The approach to implementation can be informed by theory, research evidence and an assessment of current practice (such as by clinical audit).
- Effective strategies for implementation include small group education, clinician prompts,

decision aids, facilitator visits and monitoring progress. These are appropriate roles for primary care organisations such as Medicare Locals.

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