Practice guidelines for preventive care: the Canadian experience

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SUMMARY. The work of the Canadian Task Force on the Periodic Health Examination is described in the historical context of its creation and of its evolution. The initial mandate of the task force is presented and the methodology it created to examine scientific information and formulate practice recommendations is reviewed. The complexity of the implementation of practice guidelines in preventive care is examined by reviewing the several determinants of implementation: cognitive, sociodemographic and organizational factors. The actions taken in Canada to implement the guidelines since the publication of the first task force report are described. The importance of better coordinated clinical and population-based approaches to prevention is emphasized.

Keywords: preventive medicine; periodic health examination; recommendations and guidelines.

Introduction

THE idea of integrating prevention in clinical care is not new; it can be traced back to Hippocrates, who wrote: 'Whoever wishes to investigate medicine properly should consider the mode in which the inhabitants live... Whether they are fond of drinking and eating to excess... Or are fond of exercise and labour.'[1] However, the popularity of this idea has waxed and waned over the centuries, reflecting an underlying tension between prevention and cure, health and disease.

In 1974 the Department of National Health and Welfare published *A new perspective on the health of Canadians*,[2] which proposed an innovative conceptual framework for approaching health problems by viewing the 'health field' as being composed of human biology, environmental factors, lifestyle factors and health care organization. At the same time, governments, national and provincial, became increasingly concerned about the cost of health care. Clinical preventive care came to be perceived as a possible solution to the emerging need for a wider perspective on health while looking for ways to control the costs of medical care. It is in this context that the Canadian Task Force on the Periodic Health Examination was created in 1976 at the request of the conference of deputy ministers of health of Canada.

Canadian Task Force on the Periodic Health Examination

The task force included 10 members from the Canadian health care community and five from the Department of National Health and Welfare. The task force members did not represent specific professional organizations but were chosen on the basis of their recognized competence and diverse skills. A national and international group of consultants was also formed to assist the task force. The mandate of this working group was to make recommendations on the procedures, content, frequency and appropriate providers of the periodic health examination. Appropriate preventive interventions were to be defined for specific age and population groups. Hence, the focus of the work was disease prevention.[3]

The most important and lasting contribution of the Canadian task force has been to develop an innovative methodology for the formulation of practice recommendations based on scientific evidence. The task force considered 128 conditions, from which 90 were identified as potentially preventable and/or detectable. Following a review of the literature and discussions among task force members, 78 conditions were included in the final study.[3] The following factors were considered in making recommendations: the current burden of mortality and morbidity attributable to a condition; the performance characteristics of early detection procedures; the sensitivity and specificity of these procedures; other related features of the procedures, including their safety, simplicity, cost, acceptability, and possible psychological labelling effects associated with their use; and most importantly the efficacy and effectiveness of primary and secondary preventive interventions.

The task force devised a simple method for grading the evidence pertaining to the effectiveness of interventions, based on the methodological strengths of the designs and approaches used. The highest level of evidence would be associated with randomized controlled trials while the opinions of experts would be considered as the lowest level (Appendix 1).[3] Task force members prepared background papers using this methodology and presented their results to the other members at working meetings of the task force — four or five meetings were held each year. Through several iterations spread over one to two years, the task force reached consensus on recommendations which were graded for inclusion or exclusion as follows: A, good evidence for inclusion; B, fair evidence for inclusion; C, evidence for inclusion or exclusion poor, therefore delineating a set of research priorities; D, fair evidence for exclusion; and E, good evidence for exclusion.

Of the 78 conditions reviewed, the task force formulated nine type A recommendations; an example is breast cancer screening with mammography and physical examination in women aged 50–59 years. Sixteen recommendations were type B, one example being early detection of cervical cancer. Sixteen recommendations were type D; the use of urinalysis in asymptomatic individuals was given a D rating. Four recommendations were type E, for example, bacille Calmette-Guérin (BCG) immunization for the general population. The remaining 33 recommendations were labelled C because of uncertainties concerning the benefits of intervention; an example was early detection of primary open angle glaucoma.

The task force approach can be contrasted to another approach, the consensus development conference, first used by the National Institutes of Health in the United States of America.[4–7] Consensus conferences usually last only two and a half days and involve expert speakers, a consensus panel of members, and a leader. Background documents are circulated before the conference and, through a brainstorming process, the panel produces a

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consensus statement to be released to the scientific and lay press. At the conference different pieces of evidence emerging from basic, epidemiological, clinical epidemiological and health services research are intuitively integrated and weighted according to an implicit algorithm. However, efforts at integrating a more explicit approach to the reviewing of the evidence in consensus conferences are progressing.[8]

Early dissemination of recommendations

The initial mandate of the Canadian task force was to synthesize scientific information and formulate recommendations. However, the intended impact of the task force recommendations was not only to enhance provider knowledge but also to change clinical practice. The first report of the task force was published in 1979 in the *Canadian Medical Association Journal*.[3] A French version of the report was published in *l'Union Médicale du Canada*.[9] It was anticipated that these two widely distributed journals would reach the majority of physicians in Canada and therefore would be the appropriate vehicles for the recommendations. The success of the dissemination efforts of the 1979 report can be measured by the more than 40 000 requests for reprints of the report received from people worldwide. The College of Family Physicians of Canada has supported the work of the task force since its inception. In 1983, the college produced *The health maintenance guide*, a looseleaf binder containing the preventive care recommendations of the task force.[10] Since the publication of the 1979 report, recommendations for 31 conditions have been revised, 18 new conditions have been examined for which recommendations have been issued, seven updated reports have been published, and 43 topics are under review. In addition, a fruitful and rewarding collaboration with colleagues from the US Preventive Services Task Force began in 1984, leading to the sharing of methodology and documents, co-sponsored activities such as the publication of several of the Canadian and American background reports,[11] and in some cases, common recommendations.

Determinants of implementation

The real challenge in enhancing preventive care in clinical practice rests with the development of effective implementation strategies. The difficulties associated with the implementation of practice guidelines arise from the fact that guidelines attempt to bridge health science and clinical practice, two universes functioning according to different paradigms. Health science, in the main, is rooted in a positivist paradigm.[12] Medical scientific inquiry assumes the existence of truth and seeks to uncover it by the application of methods which underscore internal and external validity and reliability. Hence, observers attempt to distance themselves from the object of inquiry. In contrast, clinical practice can be viewed as a hermeneutical exercise in which the clinician interprets the 'patient as text'.[13] In a clinical encounter the clinician and the patient are linked through their therapeutic relationship and the problem solving approach is dialectical and iterative, requiring the clinician to be more than an objective observer.

The implementation of practice guidelines is a complex exercise to which a variety of factors contribute. These determinants have been classified into cognitive, sociodemographic and organizational factors.[14] The existence of widely accepted information on preventive services is certainly a necessary but not a sufficient condition for implementation. A major barrier to the incorporation of prevention in primary care is the lack of agreement among organizations making recommendations about which services are appropriate. A good example is the different recommendations concerning cholesterol screening issued by task forces, consensus conferences and technology assessment organizations. In addition, the common diffusion pathways used to convey recommendations, such as colleagues, continuing medical education activities, journals and professional meetings, might not be sufficient to shape the beliefs and attitudes of clinicians and affect their behaviour. Moreover, the lack of emphasis on prevention in medical education has been blamed for the deficiencies in physicians' knowledge, attitudes, and skills in this area.[15] Other cognitive factors are perceived to be essential in bringing preventive medicine recommendations into practice. The beliefs and attitudes of clinicians with respect to activities with which they would personally comply or that they would offer to their family members are important determinants of their practice behaviour.[16] A perception that one can administer such services effectively also seems to be associated with patterns of preventive practice.[17]

Despite major differences in the Canadian and American health care systems, the levels of integration of preventive services into primary care are quite comparable.[18,19] Several studies have shown that younger physicians are more likely to comply with recommendations on preventive care.[20,21] Also, women physicians are more likely to include preventive activities in their clinical practice.[22] Other factors that could influence practice behaviour include past medical studies and specialty training. However, the literature is controversial on these issues. Evidence from a Canadian study supports the hypothesis that practitioners with specialty training in family medicine are more likely to include preventive services in their clinical practice.[23]

Empirical evidence shows that the environment in which clinicians practise is the most important determinant of behaviour.[24,25] The translation of practice recommendations into practical instruments that will make them more accessible to the clinicians is an idea that has already been tested and has definite merit.[26–28] Instruments such as flow sheets or health charts, and specific reminders could be used. The use of computer software in regular health examinations is a further refinement, making accessibility more efficient. Patient-oriented instruments such as health passports or magnetic health cards would allow patients to have the same information as health professionals and create a common base of knowledge in all consultations with primary care clinicians.[29,30] The structural features of practice settings affect patterns of practice.[24] Peer pressure in a group practice is a powerful determinant of practice behaviour. Settings, such as the community health centres in Quebec or the health maintenance organizations in the USA, should have a more preventive orientation although the empirical evidence to that effect is inconsistent.[29,31,32] Time is certainly an important limiting factor in the integration of preventive services into primary care in that they compete with curative services.

The impact of the practice setting on practice behaviour cannot be disentangled from a consideration of the financial arrangements under which clinicians practise.[33,34] Although some evidence exists that fee-for-service systems are less conducive to the offering of preventive services than are systems in which physicians are paid on a salaried, sessional or capitation basis, the absence of specific incentives for preventive services in most fee-for-service schedules makes it difficult to conclude that a given mode of payment carries an inherent advantage in this respect.[22,35–38] Linking monetary incentives to target health objectives is a promising avenue, now being explored in the United Kingdom.[39]

Further implementation efforts in Canada

In 1987 the Canadian Task Force on the Periodic Health Examination and the US Preventive Services Task Force co-sponsored a symposium to explore the issues related to the inte-

gration of preventive activities in primary care and the strategies required to promote their adoption and enhance their effectiveness. The symposium did this in a theoretical and conceptual way, describing the contextual barriers to the provision of preventive services by physicians. The papers presented at the symposium were published as a supplement of the *American Journal of Preventive Medicine.*[40]

In 1986 the Department of National Health and Welfare published its 'achieving health for all' framework which provided a basis for action in prevention and health promotion and also identified 'enhancing prevention' as a major policy goal.[41] Following the publication of the 'achieving health for all' framework, many national professional associations responded positively to the challenge of enhancing preventive care. Informal discussion between the Department of National Health and Welfare and national professional associations, in particular the Canadian Medical Association and the Canadian Nurses Association, led to the conclusion that it would be useful to explore joint activities to enhance preventive services in Canada and strengthen collaborative efforts among health professionals and governments. As a result of these discussions, a steering committee of representatives from the Canadian Medical Association, the Canadian Nurses Association, the Canadian Dietetic Association, the Canadian Public Health Association and the Department of National Health and Welfare was created to become a catalyst for the process and two workshops were organized in 1990.

The first workshop focused on the role of physicians and examined issues related to the delivery of preventive care in everyday practice (Department of National Health and Welfare, national workshop, Ottawa, Canada, 20–23 March 1990). The second workshop built on the first but adopted a broader perspective. Its objective was to develop coordinated strategies for different types of health professionals working collaboratively on the inclusion of disease prevention and health promotion activities in their practices (Department of National Health and Welfare, national workshop, Ottawa, Canada, 28–31 October 1990). A document that synthesized the suggestions made in the reports of the two workshops was finalized recently.[42] Through this collaborative process, four areas have been targeted for change in enhancing the preventive practices of health professionals: policy and planning, programme and service delivery, education of health professionals, and research and evaluation. The document describes these priority areas for change and suggests options for action that emerged in the two workshops and throughout other aspects of the process.[42] The guiding principle of this important national effort was to create ownership for the delivery of preventive care among the important stakeholders.

Conclusion

Clinical practice guidelines in preventive care can be a powerful instrument for enhancing preventive services. As a crucial link between health science and clinical practice, guidelines should not replace clinical judgement but support it and make clinical practice an even more dynamic hermeneutical exercise. Successful implementation of preventive services should result from a balanced and artful orchestration of the factors discussed here.

Physicians are in the midst of a Copernican revolution; in effect, the centre of the health care galaxy is progressively changing from the physician to the patient. Physicians will have to share responsibility for decision-making with other health professionals and with patients. This process will be slow but it should be remembered that it took Copernicus 10 years to convince the world that the sun and not planet earth was the centre of our galaxy. The achievable health benefits through clinical preventive care might be unavoidably limited, and a more broadly based approach to preventive care combining clinical and population strategies needs to be considered.

Surely this is what Hippocrates had in mind when he said on the Island of Cos 'It is the duty of the physician not only to do that which immediately belongs to him, but likewise to secure the cooperation of the sick, of those who are in attendance, and of all the external agents.[43]

Appendix 1. Grading system for evidence used to evaluate the effectiveness of interventions.

I: Evidence from at least one properly randomized controlled trial.
II-1: Evidence from cohort and case control studies.
II-2: Evidence from quasi-experimental studies or from exceptionally convincing uncontrolled experiments.
III: Opinions of respected experts.

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