

Preventive Care Checklist Form[©]

Evidence-based tool to improve preventive health care during complete health assessment of adults

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ABSTRACT

PROBLEM ADDRESSED Preventive care is a cornerstone in the practice of family medicine, but is often difficult to provide because of a lack of time and logistic difficulties.

OBJECTIVE OF PROGRAM To develop an evidence-based practice-relevant preventive care checklist form to be used by family physicians during complete health assessment of adults.

PROGRAM DESCRIPTION Guidelines for preventive health care of adults at average risk from the Canadian Task Force on Preventive Health Care and from other Canadian sources where the Task Force guidelines were not up-to-date were reviewed. Checklist forms covering recommended preventive health care maneuvers were created. The forms incorporate evidence-based preventive care guidelines as well as non-evidence-based components that are a part of routine practice. The forms require few resources to implement, are cost-effective, and are easy to use. The forms list items needed to meet provincial billing requirements for complete health assessments and have space for physicians to make notes. The forms can be used electronically or printed off and photocopied for use in paper-based charts.

CONCLUSION The Preventive Care Checklist Form[©] is a low-cost, easy-to-use tool that merges practice maneuvers with evidence-based recommendations. It could help improve preventive care practices in Canada.

RÉSUMÉ

QUESTION À L'ÉTUDE La prévention fait partie intégrante de la pratique familiale, mais le manque de temps et les obstacles logistiques rendent souvent son application difficile.

OBJECTIF DU PROGRAMME Développer, à l'intention du médecin de famille et à partir de données probantes, une fiche de contrôle sur les soins de santé préventifs devant faire partie du bilan de santé chez l'adulte.

DESCRIPTION DU PROGRAMME On a recensé les directives concernant les soins de santé préventifs des adultes à risque moyen formulées par le Groupe de travail canadien sur les soins de santé préventifs ou par d'autres sources canadiennes lorsque les directives du Groupe de travail n'étaient pas à jour. Des fiches de contrôle couvrant l'ensemble des soins de santé préventifs recommandés ont ensuite été créées. Ces fiches incluent, outre des directives de santé préventive fondées sur des preuves, des composantes de l'examen de routine non appuyées par des preuves. Les fiches sont rentables et faciles à utiliser, et leur mise en œuvre exige peu de ressources. Elles énumèrent aussi les éléments requis pour satisfaire aux exigences provinciales de facturation pour des bilans de santé et réservent de l'espace pour les observations du médecin. Elles peuvent être utilisées en mode électronique ou encore imprimées et photocopiées pour incorporation au dossier-papier.

CONCLUSION La Fiche de contrôle des soins de santé préventifs est un outil peu coûteux et facile d'utilisation qui associe des gestes cliniques et des recommandations fondées sur des preuves. Elle est susceptible d'améliorer la façon de prodiquer les soins de santé préventifs au Canada.

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reventive medicine is an integral component of primary care. Unlike most specialists, family physicians have an opportunity for primary prevention of many diseases through addressing risk factors in asymptomatic adults. During complete health assessment of adults, many family physicians focus on prevention and keep patients up-to-date on their health status.1-3

The Canadian Task Force on the Periodic Health Examination, established in 1976 by the deputy health ministers of the 10 Canadian provinces, set out "to determine how the periodic health examination might enhance the health of Canadians and recommend a plan for a lifetime program for periodic health assessments of persons living in Canada."4 The Task Force which was renamed the Canadian Task Force on Preventive Health Care (CTFPHC) in 1984, grades existing published medical evidence for preventive maneuvers and gives greatest weight to study designs and analyses that minimize bias. In addition to the CTFPHC guidelines, there are numerous other evidence-based guidelines with recommendations for clinical preventive care.

Despite the existence of these evidence-based guidelines, not all physicians apply them in clinical practice.^{5,6} Reasons cited as obstacles to providing preventive care include physicians forgetting about preventive care, patients refusing to follow preventive measures, and logistic difficulties in practice.^{7,8}

Efforts to narrow the gap between evidence and practice have had mixed results. Continuing medical education and continuing professional development have been the traditional way of encouraging changes in clinical practice, but their effectiveness has been disappointing.9-11 Knowledge translation is a new method of putting knowledge into practice; it incorporates tools, such as prompts, reminders, and patient-mediated methods, to overcome barriers to change.12

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We developed the Preventive Care Checklist Form,[©] a flow chart and checklist, to help implement evidence-based preventive guidelines in primary care and to incorporate the principles of knowledge translation.

Objective of program

To develop a simple form that could be used by family physicians during complete health assessment of adults to enhance and facilitate preventive care within existing patterns of care.

Description of program

The Preventive Care Checklist Form was developed in 2002 and updated in June 2004. Its format was inspired by the Rourke Baby Record that facilitates evidence-based well-baby care. 13-16 Separate forms were created for male and female patients along with an explanation sheet detailing the evidence for the recommendations (many recommendations and maneuvers differ for men and women). The Preventive Care Checklist Form for averagerisk, routine, female health assessments is shown in Figure 1; all the forms are available on the College of Family Physicians of Canada's website (www.cfpc.ca) under Health Policy, Family Practice Resources, Preventive care checklists.

The primary goal of the forms was to enhance delivery of preventive care. Another goal was to incorporate non-evidence-based, but practice-relevant, components into the form to ensure it would meet both family physicians' needs during complete health assessments and Ontario provincial billing requirements for general assessments. The forms had to be user-friendly, not take too much time to fill out, and make it easy to document findings. Checklists for recommended or completed maneuvers were included, and there was adequate space for additional notes.

Recommendations for preventive health care for asymptomatic adults at average risk were adopted from the CTFPHC guidelines. Grade A recommendations (good evidence to include) and grade B recommendations (fair evidence to include) were added to the form in bold and italics, respectively. Recommendations from other Canadian sources were reviewed where the CTFPHC

Figure 1. Preventive Care Checklist Form®: Form shown is for female patients at average risk; forms for male patients, explanation sheets, and Frenchlanguage versions of all forms are available on the College of Family Physicians of Canada's website at **www.cfpc.ca** under Health Policy, Family Practice

Preven	tive Care Checklist Form ⁰	Name:	Sex:
For average-risk, routine, female health assessments		DOB:	Age:
		Health Card:	Tel:
Please note:		Address:	
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	explanations)	Date:	
Current Co	ncems	<u>Lifestyle/Habits</u>	
		DIET: Fat / Cholesterol	SMOKING:
		Fiber	ALCOHOL:
		Calcium	Drugs:
		Sodium	DRUGS.
		Exercise:	Sexual History:
		Work:	FAMILY PLANNING/ CONTRACEPTION:
		FAMILY:	
		RELATIONSHIPS:	SLEEP:
		Update Cumulative Patient Prof	
		O Family History O Hospitalizations/ Surgeries	O Medications O Allergies
Functional			
	RMAL REMARKS	SEXUAL C	
HEENT:	0	FUNCTION: O	
Cvs:	O	MSK: O	
RESP:	O	NEURO: O	
BREASTS:	0	DERM: O	
GI:	0	MENTAL HEALTH: O	
Gu/ Menses:	0	CONSTITU- TIONAL SX:	
Education/ Counseling	Behavioural O folic acid (0.4-0.8 mg OD, for childboaring women) O adverse maritional habits O adequate vitamin D good a social social activity O regular, moderate physical activity O avoid an exponent, are protective clothing O specific of IRT (permenopausal/meropausal) Smoking OYes ONo O smoking constition O nicotine replacement therapy O detay activity or control of the cont	Alcohol O Yes O No O cogn O cogn O fall a series of sales O fall a seri	rns) s) Production Control O No Control On Con Control On Control On Control On Control On Control On Control
Bufice = Fair evid	for average-risk adults,	O4. The recommendations are	ndorsed by



Name:			
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Nose:		ABDO:	
Ears:	whispered voice test: R L	Ано-Rестим:	
Мочтн/Т	HROAT:	PELVIC: O Pap	
NECK/TH	YROID:	NEURO:	
Cvs:		DERM:	
RESP:		MSK/JOINTS/ EXTREMITIES:	
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Date:	nent and Plans:	Signature:	
		eventive Health Care: The Canadian Guide to Clinical Preventive Health Care. Ottawn:	
2. 3. 4.	 Scientific Advisory Board, Osteoporosis Society of Canada. Clinical practice guidelines for the diagnosis and management of osteoporosis. CMAJ 2002;167(10 suppl) S1-2. Working Group on Hypercholecterolemia and Other Dystipidemias. Recommendations for the management and treatment of dystipidemia and the prevention of cardiovascular disease: 2003 update. CMAJ online 2003;169(9) 1-10. Canadan Diabetes Association Circulal Practice Quidelines Expert Committee. Canadam Diabetes Association Circulal Practice Guidelines for the Prevention and Management of Diabetes in Canada. Can J Diabetes 2003;27 (Suppl 2). National Advisory Committee on Immunication. Canadian Immunication Guide. 6° addion. Ottawa: Minister of Public Works and Government Services Canada; 2002. 		
Italica = Fa	od ovidence must be brake from the must be must be substituted and for exercising the substitute of th	une 2004. The recommendations The Cology of Le Collige des Family Physicians middette de familie of Canada de Canada	

recommendations were not up-to-date. These recommendations were presented in plain text.

We had considerable debate over which recommendations to include in the forms. Some argued that American recommendations, particularly from the United States Preventive Services Task Force (USPSTF), should be included because their methodology is also evidence based. The USPSTF and the CTFPHC, however, occasionally differ on recommendations. Since the form was designed to represent a standard of preventive care among Canadian family physicians, we decided to use the CTFPHC recommendations even though we knew some recommendations were not current. We reviewed other Canadian sources, particularly the Canadian Medical Association Journal, to ensure that most major disease and burden-of-illness recommendations were included.

Using the forms

Family physicians are encouraged to use the forms in the way they find most useful. Not all components need to be completed for all patients. At our centre, some family physicians completed the forms in two visits; after initial assessment of history and physical examination, necessary tests were ordered and a second visit was booked to discuss the results of investigations. Other physicians completed the whole assessment in one visit; completion took between 20 and 40 minutes. If a nurse was available, he or she could complete parts of the form, including the lifestyle section and parts of the physical examination. Forms photocopied on coloured paper were easily visible in charts and could be referred back to during subsequent assessments.

The Preventive Care Checklist Form requires only minor office system changes to incorporate into practice. At our centre, clerical staff attached the forms to charts of patients booked for complete health assessments. Nothing else is required. Forms can also be incorporated into electronic medical records. The forms and an explanation sheet were endorsed by the College of Family Physicians of Canada in July 2004 and are available in English and French on the College's website at www.cfpc.ca under Health Policy, Family Practice Resources. The forms will be updated periodically to incorporate changes in evidence-based practice.

Evaluation

In April 2003, a questionnaire was distributed to all 34 resident and staff physicians who used the Preventive Care Checklist Form for a 5-month period between November 2002 and March 2003 as part of a separate trial. That trial aimed to determine whether the forms helped improve performance and documentation of preventive health maneuvers. The survey was approved by the Research Ethics Board at St Michael's Hospital in Toronto, Ont, in September 2002.

Participating staff physicians worked in two teaching practices in Toronto and were paid on a fee-for-service basis. Table 117 shows the characteristics of the population surveyed. Residents were involved in complete health assessment of adults 7% of the time.

Thirty-one of the 34 physicians returned completed questionnaires for a response rate of 91%. Nineteen respondents (63%) were female; 21 (68%) were staff physicians; and 10 (32%) were family medicine residents. Staff physicians had been in practice from 2 to 30 years (mean of 14.5 years).

When asked how often the form was used during complete health assessments, 97% said often

Table 1. Characteristics of patients and physicians **surveyed:** Mean age of patients was 47 (\pm 16) years; mean age of physicians was 46 (\pm 10) years. Physicians had been in practice a mean of 16

(±9) yeurs.	
CHARACTERISTICS	% WITH CHARACTERISTIC
PATIENTS	
Female sex	65
Married or common-law	40
Score on Charleson Comorbidity Index*	
• 0-2	97
• 3-8	3
Had mental health diagnoses	10
Number of visits to clinic	
•≤3	25
• 4-9	16
•≥10	59
Resident involved in health assessment	7
PHYSICIANS	
Female sex	55
*Described in Albertsen. ¹⁷	

(n = 14) or always (n = 16) (**Table 2**). The most common reasons for not using the form consistently were because it was not attached to the chart when the health assessment was being done (n = 8), it was considered too time-consuming (n = 3), or physicians forgot about it (n = 3).

Preventive care forms are meant to improve delivery and documentation of preventive maneuvers. While delivery of services is most important, if it is not documented, by medicolegal standards it is considered not done. Most of the physicians surveyed thought the forms helped improve delivery (65%) and documentation (71%) of preventive health care at most assessments (Table 2).

The most-liked aspects of the Preventive Care Checklist Form included the evidence-based recommendations, the checklist format, and the helpful reminders (Table 3). Suggested improvements included changing the layout (n = 11, 35%) and leaving more room for documentation (n = 7, 23%).

Most physicians (94%) said they conducted most of their preventive health care during complete health assessments. The most common reasons for this included being thorough, finding it easier to remember preventive health maneuvers during complete health assessments, providing continuity of care, fulfilling patients' expectations, and finding it difficult to provide preventive care at other visits (**Table 4**).

Overall, 77% of physicians stated they would continue to use the Preventive Care Checklist Form in

Table 2. Responses regarding the usefulness of the Preventive Care Checklist **Form**[©]

QUESTION	ALWAYS N (%)	OFTEN N (%)	SOMETIMES* N (%)	RARELY [†] N (%)	NEVER N (%)
How often did you use the form at adult health assessments?	16 (52)	14 (45)	0	0	0
Do you think the form helped improve delivery of preventive health maneuvers?	7 (23)	13 (42)	7 (23)	3 (10)	1 (3)
Do you think the form helped improve documentation of preventive health maneuvers?	10 (32)	12 (39)	5 (16)	3 (10)	1 (3)

†At less than half of all assessments.

Table 3. Positive attributes of the Preventive Care Checklist **Form**©: Physicians could mention more than one attribute.

ATTRIBUTES	NO. WHO MENTIONED THE ATTRIBUTE (%)
Evidence-based recommendations	25 (81)
Helpful reminders	23 (74)
Checklist format	23 (74)
Easy to use	10 (32)
Plenty of room for documentation	10 (32)
Layout	6 (19)
Other	2 (7)

Table 4. Reasons for providing most preventive health care during complete health assessments: Physicians could mention more than one reason.

REASONS	NO. WHO MENTIONED THE REASON (%)
To be thorough	24 (83)
Easier to remember	13 (45)
To provide continuity of care	13 (45)
To fulfill patient expectations	8 (28)
Difficult to do at other visits	7 (24)
To build trust	1 (3)
For billing purposes	0
Other	2 (7)

practice. The most common reasons for not using the forms during routine care were that the layout was thought not to flow easily and to be cluttered

> (3/7), that there was too much repetition (2/7), that the forms took too much time to fill out (1/7), or that they did not like using standardized forms (1/7).

Discussion

Before the Preventive Care Checklist Form. there were no standardized or endorsed evidence-based forms that family physicians could use during complete health assessment of adults. In 1987 and 1992, two American studies evaluated the effectiveness of a checklist reminder form to improve preventive health care in primary care practice. 18,19 Since then, use of paperbased checklist forms has rarely been reported in the literature, and despite

being proven effective, checklist forms are underused.20 No other trials have focused exclusively on checklist reminder forms. Some have studied similar concepts in computer-based reminder systems. They too have been successful, but require the appropriate technology and software to incorporate. Other studies have looked at a multifaceted approach where a variety of aids, including checklist reminders, nurse facilitators, and patient-mediated tools were incorporated.¹⁹ While some of these interventions were effective, they required many resources and were harder for average family physicians to incorporate.

Results of our trial showed that physicians thought using the Preventive Care Checklist Form helped improve preventive care during complete health assessment of adults. We compared rates of 13 preselected preventive health maneuvers performed by a control group during periods before and after the trial. Eight of the 13 maneuvers (counseling on brushing and flossing teeth [RR 9.2], counseling on folic acid [RR 7.5], fecal occult blood testing [RR 6.7], counseling on smoking cessation [RR 3.9], tetanus immunization [RR 1.33], history of smoking [RR 1.28], and blood-pressure measurement [RR 1.05]) were performed statistically significantly more often using the Preventive Care Checklist Form after controlling for potentially confounding variables. In the control group, 49% of patients received recommended preventive health maneuvers based on age and sex; in the intervention group who used the Preventive Care Checklist Forms, 72% of patients received them. This represented a 23% absolute increase and a 47% relative increase in delivery of preventive services. In most prevention trials, a 10% improvement is considered excellent.

Our form is unique because it incorporates evidence-based preventive care guidelines and maneuvers that are not evidence-based but are relevant to practice, such as functional inquiry. More than 90% of physicians surveyed said they did most of their preventive health care at complete health assessments. This supports use of the Preventive Care Checklist Form exclusively during complete health assessments. Time constraints and forgetfulness were the most commonly cited reasons for not providing preventive care.21

EDITOR'S KEY POINTS

- · This article describes forms that help guide annual physical examinations and focus on preventive health guidelines based on Canadian evidence.
- The forms incorporate evidence from the Canadian Task Force on Preventive Health Care and from other sources. They list items that meet provincial billing requirements for complete assessments and have separate versions for men and women.
- Levels of evidence behind recommendations are indicated; the forms are available on the College of Family Physicians of Canada's website at www.cfpc.ca under Health Policy, Family Practice Resources.
- · Evaluation in several academic teaching units indicated that using the forms was associated with increased recording of preventive maneuvers and that most family physicians intended to continue to use the forms in practice.

POINTS DE REPÈRE DU RÉDACTEUR

- Cet article décrit des formulaires destinés à guider l'examen physique annuel qui s'inspirent des directives de santé préventives fondées sur des données probantes canadiennes.
- Les formulaires renferment des preuves provenant du Groupe de travail canadien sur les soins de santé préventifs et d'autres sources. Ils énumèrent les éléments qui permettent de satisfaire aux exigences de facturation provinciales pour les bilans de santé; il en existe deux formes, une pour les hommes et une pour les femmes.
- · Les niveaux des preuves supportant les recommandations sont indiqués; les fiches sont disponibles sur le site WEB du Collège des médecins de famille du Canada au www.cfpc.ca sous l'option Politiques, Ressources en pratique familiale.
- · Une évaluation dans plusieurs unités d'enseignement universitaires a montré que les médecins qui utilisaient ces fiches notaient davantage leurs gestes préventifs et qu'ils avaient l'intention de continuer à utiliser ces formulaires.

Limitations

The form was designed for documenting assessment of adults at average risk. Recommendations for patients at high risk of disease are not included. While recommendations for elderly patients are included in the form, physicians might want to supplement it with geriatric-specific inquiries. The recommendations are based only upon the references consulted; other evidence-based recommendations were not considered. Although the form is comprehensive and has many sections, physicians do not necessarily have to complete all the steps. Physicians should use their discretion and knowledge of their patients to determine what is required.

Conclusion

The Preventive Care Checklist Form is a user-friendly

evidence-based tool for family physicians to use at complete health assessment of adults to enhance delivery and documentation of preventive health care. The form incorporates existing practice patterns, and the items listed meet Ontario provincial billing requirements for complete health assessments. The forms have been endorsed by the College of Family Physicians of Canada and are easily accessible at www.cfpc.ca. They will be updated periodically to ensure they are current. They can be used in hard copy or as part of electronic medical records.

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