Cardiovascular risk assessment in family practice

A practice-based tool

Natalie Kennie PharmD **Bill Watson** MD **Karl Iglar** MD

Cardiovascular disease (CVD) is the number 1 killer of Canadians and a substantial contributor to the economic burden of illness as a long-term disability.[1] This is expected to intensify as the population ages and with the increasing prevalence of obesity and diabetes mellitus.[2] Other medical conditions, such as hypertension and hyperlipidemia, are also associated with an increased risk of CVD.[3,4]

Clear guidelines exist for the prevention and management of CVD, as well as the attendant risk factors.[2-5] Identifying and monitoring for CVD risk factors is recommended for men after age 40 and for women after age 50.[2-5] Once identified, the CVD risk factors can be plugged into standardized tools to calculate estimates of the 10-year risk for developing coronary artery disease (CAD) or CVD; then an individualized primary care management strategy can be created.

Tool description

The Department of Family and Community Medicine at St Michael's Hospital, an institution affiliated with the University of Toronto in Ontario, consists of 4 distinct geographic sites within downtown Toronto, with annual visits of 125 000 patients. As part of a Continuous Quality Improvement initiative, a subcommittee was created to raise awareness of the importance of CVD risk assessment, and to develop tools that would provide support in identifying and documenting CVD risk factors. Based on clinical practice guidelines for CVD risk screening and management, a clinical documentation tool called the CVD Risk Factor Assessment and Tracking (RFAT) sheet was developed and piloted within the department. Different versions were designed for men and women. This tool (available on-line from **www.cfp.ca**) serves as a consolidated method to estimate a patient's individual 10-year CAD risk. It identifies and tracks modifiable cardiovascular risk factors, thereby creating a framework for treatment for physicians and patients.

Implementation

A small-scale quality-assurance project was conducted to assess the effects of the tool on patterns of care for CVD risk-factor screening and to determine health care provider satisfaction with the tool. The study was approved by the St Michael's Hospital Research Ethics Board. The retrospective chart audit randomly sampled a small number of men, aged 40 years and older, and women, aged 50 years and older, in all 4 health centres during a 3-year baseline period (December 2001-December 2004) and a 19-month evaluation period (February 2005-November 2006). The audit examined documentation of screening practices for CVD risk factors, 10-year CAD risk estimates, and routine laboratory testing, including fasting lipid profiles, blood pressure, and fasting blood glucose.

The results of the baseline evaluation were disseminated to the department via a grand rounds presentation as part of the CVD awareness strategy. The CVD RFAT sheet was then developed, piloted, and implemented for a 6-month period. During the implementation phase, the tool was placed on the charts of age-appropriate patients (men, 40 years and older; women, 50 years and older) who were scheduled for an annual health assessment and was also made available with other standard medical forms in each of the 4 clinics. The use of the tool by clinicians was voluntary. A short satisfaction survey was distributed in the mail to staff physicians and residents to determine the usefulness of the tool.

To assess the effects of the awareness strategy, a total of 57 patients (30 male, 27 female) and 51 patients (23 male, 28 female) were sampled during the baseline and evaluation periods, respectively. Ten-year CAD risk-factor estimates were identified in the medical chart in 5% (3/57) of patients in the baseline phase and 16% (8/51) in the evaluation phase (odds ratio 3.35; 95% confidence interval 0.74 to 17.09). Screening practices were similar for blood pressure monitoring at the baseline and evaluation periods: 84% of patients for each group. Meanwhile, the screening rates for lipids (63% at baseline vs 70% in the evaluation period) and blood glucose (63% at baseline vs 68% in the evaluation period) improved slightly.

The response rate for the physician satisfaction survey was 30% (24/79). (The literature reports that the response rate of physicians to mailed surveys is approximately 27% to 61%.[6,7]) More than 90% of survey respondents indicated that the tool was useful for estimating

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10-year CAD risk, initiating discussion of CVD risk factors and management with patients, and identifying patient-specific modifiable risk factors. Eighty-six percent of respondents indicated that they would like to have the tool as a formal documentation form in the medical chart. Respondents indicated that finding time to complete the form was the biggest challenge in implementing the tool in practice. Some felt, however, that the documents could be completed at a follow-up visit focusing only on CVD risk assessment. In our experience, we have also received positive, informal feedback on the usefulness of the tool from practising physicians. The effects of using the final CVD RFAT sheet on clinical outcomes (eg, lipid control) over the long-term needs to be further evaluated.

Conclusion

In this small-scale quality-assurance study, the introduction of the CVD RFAT sheet in a busy family practice resulted in a modest increase in awareness of CVD risk-factor assessment practices. The effects of this tool on clinical outcomes has yet to be established. Although the survey response rate was only 30%, the tool was well-received both by survey respondents and by others providing informal feedback, and has become a formal documentation form in the department. This tool can be strategically used to identify, discuss, and document CVD risk issues with patients, and provides direction for both the patient and physician about the need for lifestyle changes or medication to decrease the risk of CVD. In practice, the tool could be implemented as part of a routine primary prevention strategy or in select patients with multiple CVD risk factors.

Drs Kennie *(at the time of writing this publication),* **Watson,** *and* **Iglar** *are members of the Cardiovascular Risk Working Group, a subcommittee of the Quality Steering Committee at St Michael's Hospital Department of Family and Community Medicine in Toronto, Ont.*

Competing interests

None declared

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