

SCREENING FOR TYPE 2  
D I A B E T E S  
IN THE ADULT POPULATION  
—2012—

FREQUENTLY ASKED QUESTIONS  
FOR CLINICIANS

## How were the type 2 diabetes screening recommendations created?

The guidelines for type 2 diabetes were led by six members of the Canadian Task Force on Preventive Health Care (CTFPHC), who established the key research questions and data analysis plan for a systematic review on diabetes screening.

The Evidence Review and Synthesis Centre gathered a team of methodologists and clinical experts to independently perform a systematic review to answer these key questions. The team created the analytical framework and summarized evidence using a systematic review and quantitative summary of relevant, available evidence; narrative summaries were developed when quantitative synthesis was not feasible. Contextual questions were addressed by targeted literature searches. Where possible, literature searches were updates of previously published reviews from the U.S. Preventative Services Task Force. Randomized controlled trials, observational studies with comparison groups, and modeling studies were used to determine harms and benefits of screening.

After reviewing the evidence, the Diabetes Screening Working Group independently developed recommendations by consensus. The Grades of Recommendation Assessment, Development and Evaluation (GRADE) system was used to assess the quality of evidence available and to rate the strength of recommendations. The strength of the recommendations in the grade system is based on the following criteria:

- Quality of supporting evidence
- Degree of uncertainty about the balance between desirable and undesirable effects associated with screening
- Degree of uncertainty or variability in patient values and preferences
- Degree of uncertainty about whether the intervention represents a wise use of resource.

Recommendations were then revised and approved by the entire Task Force. In addition to Task Force workgroup members, a content expert was part of the evidence review team.

The research questions, systematic review, and recommendations underwent internal and external peer review by experts in the field and by stakeholders and partners.

## What is the Finnish Diabetes Risk Score (FINDRISC) questionnaire and why did the CTFPHC select it as the preferred risk questionnaire?

The CTFPHC's Type 2 Diabetes Risk Calculator is adapted from the FINDRISC questionnaire and contains the same eight questions related to age, BMI, waist circumference, physical activity, diet (fruits and vegetables), use of antihypertensive medications, history of having elevated blood glucose, and family history of diabetes.

A recent systematic review of high methodological quality identified seven validated diabetes risk calculators, including FINDRISC, to be the most promising for adaptation and use in routine clinical practice.

The CTFPHC selected FINDRISC as the preferred risk questionnaire because:

- It has been validated internally and externally in the most countries: Finland, Holland, Denmark, Sweden, UK, and Australia.
- Preliminary results of a study using FINDRISC to identify people at high risk for type 2 diabetes combined with an educational intervention showed a reduced incidence in type 2 diabetes after 12 months.

## **What is the Canadian Diabetes Risk Assessment Questionnaire (CANRISK)?**

CANRISK includes the eight original questions in the validated FINDRISC calculator, but also adds questions about the patient's ethnicity, sex, level of education, and history of macrosomia. CANRISK predicts the likelihood that a person will be found to have either prediabetes or diabetes today, based on the Oral Glucose Tolerance Test and the World Health Organization's diagnostic standards.

To date, the CANRISK has only been validated in a cross sectional convenience sample of patients, it has not been tested in randomized clinical trials. For this reason, the FINDRISC was selected over the CANRISK. Although not fully validated to date, CANRISK is an acceptable alternative to FINDRISC.

## **Why is A1C selected as the preferred screening test?**

A recent high quality systematic review examined how A1C performed in diagnosing type 2 diabetes compared to other measures of plasma glucose. Recommendations are based on the quality of evidence assessed by GRADE. Analysis of the evidence indicated a range of A1C levels between 5.8-7.3% associated with retinopathy. The papers reported equal or almost equal sensitivity and specificity for A1C compared to glucose measurement as a predictor of prevalent retinopathy.

### **The Canadian Task Force on Preventive Health Care (CTFPHC): Putting Prevention into Practice**

The CTFPHC is an independent panel of fourteen clinicians and methodologists with expertise in prevention, primary care, literature synthesis, critical appraisal, and the application of evidence to practice and policy. The CTFPHC makes recommendations about clinical maneuvers aimed at primary and secondary prevention.