

Laboratory Medicine PO Box 6600 Charlottetown Prince Edward Island Canada C1A 8T5



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MEMORANDUM

TO: All Physicians, Nurse Practitioners, Directors of Nursing

Clinical Instructors/Educators, Laboratory and Nurse Managers

Diabetes Management Program

FROM: Dr. A. Ruth Sellers, Medical Lead

Ms. Louise Farrar, Technical Lead Health PEI Clinical Chemistry Services

RE: Oral Glucose Tolerance Test

Type 2 Diabetes and Impaired Glucose Tolerance

DATE: November 26, 2012

Guidelines for laboratory testing to identify type 2 Diabetes and impaired Glucose tolerance are evolving. Available tests include fasting plasma glucose (FPG), HgbA1C or 2 hr oral glucose tolerance test.

According to the Canadian Diabetes Association Clinical Practice Guidelines (2008) ORAL GLUCOSE TOLERANCE TESTING (OGTT) - 2 hour plasma glucose level is of value in individuals with a FPG of 5.6 – 6.9 mmol/L

Requests for OGTT Testing

- Oral glucose tolerance tests should be prebooked at QEH and PCH
- As performance of the test is dependent on the fasting plasma glucose level, the fasting plasma glucose should be available when the test is booked. Point of Care Glucose test results are not acceptable
- Instructions to patients should indicate that the time required for test is variable and may range from approximately 1 3 hours
- Oral glucose tolerance testing for patients not meeting the above criteria require consultation with the Chemistry Clinical Leads (see above)

Testing and Reporting Results

The test begins with fasting plasma glucose

If the FPG is = or > 7.0 mmol/L the test will not be performed and the results will be reported with the following comment:

"Fasting Plasma Glucose ≥ 7.0 mmol/L is consistent with a diagnosis of diabetes. OGTT is not required as per the Canadian Diabetes Association 2008 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada."

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- If the FPG glucose is < or = to 5.6 mmol/L the test will not be performed and the results will be reported with the following comment

"Fasting Plasma Glucose ≤ 5.6 mmol/L is within the Reference Interval and Oral Glucose Tolerance Testing is not indicated. Rescreen as recommended by the Canadian Diabetes Association 2008 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada."

See attached Appendices: A: Screening for Type 2 Diabetes in Adults

B: Risk Factors for Type 2 Diabetes

References:

Screening for Type 1 and Type 2 Diabetes, 2008 Canadian Diabetes Association Clinical Practice Guidelines Recommendations on Screening for Type 2 Diabetes in Adults, CMAJ October 16, 2012, 184 (15)

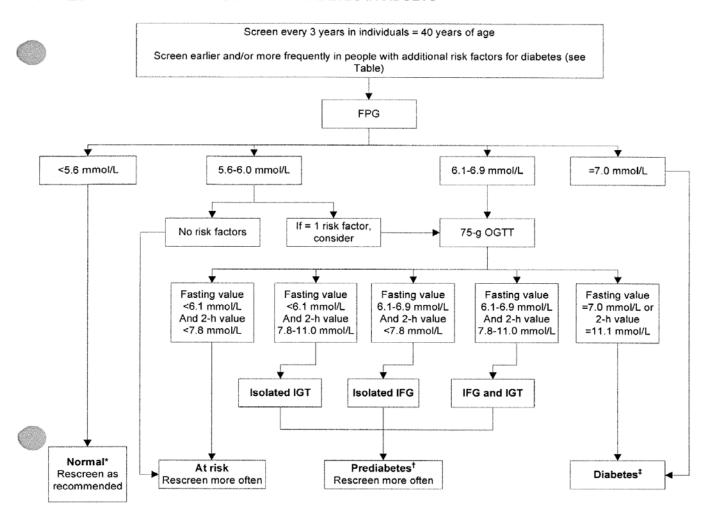
Please note that new guidelines from the Canadian Diabetes Association are expected spring 2013.

Questions may be directed to R. Sellers 894-2303 Louise Farrar 894-2317

cc: Jamie MacDonald Bill Bylhouwer Richard Wedge

g:/sellers 2012/OGTT memo.doc3

APPENDIX A: SCREENING FOR TYPE 2 DIABETES IN ADULTS



*If, despite a normal fasting value, an OGTT is subsequently performed and the 2hPG value is 7.8-11.0 mmol/L, a diagnosis of isolated IGT is made.

2hPG = 2-hour plasma glucose

IGT = impaired glucose tolerance

FPG = fasting plasma glucose

OGTT = oral glucose tolerance test

IFG = impaired fasting glucose

PG = plasma glucose

APPENDIX B: RISK FACTORS FOR TYPE 2 DIABETES

- Age ≥40 years
- First-degree relative with type 2 diabetes
- Member of high-risk population (e.g. people of Aboriginal, Hispanic, South Asian, Asian or African descent)
- History of IGT or IFG*
- Presence of complications associated with diabetes
- Vascular disease (coronary, cerebrovascular or peripheral)*
- History of gestational diabetes mellitus

- · History of delivery of a macrosomic infant
- Hypertension*
- Dyslipidemia*
- Overweight*
- Abdominal obesity*
- Polycystic ovary syndrome*
- Acanthosis nigricans*
- Schizophrenia
- · Other (see Appendix 1)

Adapted from:

Canadian Diabetes Association 2008 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada OGTT Memo November 2012

[†]Prediabetes = isolated IFG, isolated IGT, IFG and IGT

^{*}A confirmatory laboratory glucose test (either an FPG, a casual PG, or a 2Hpg