



Reporting and Interpretation of Haemoglobin A1c

From **October 3rd 2011** Haemoglobin A1c will be reported only in units of
mmol/mol

This completes the process begun over two years ago, when dual reporting in both percent and mmol/mol units was introduced to allow everyone to become familiar with the new mmol/mol units.

The comments that accompany results for HbA1c have been standardised nationally and refer to significance of the results, clearly stated in intervals of mmol/mol. Target HbA1c measurements, however, should be individualised to minimise risk of complications to a patient while also minimising risk of harm.

Coincident with the change of units, the New Zealand Society for the Study of Diabetes (NZSSD) has published a position statement announcing that:

HbA1c is now the recommended test for screening and diagnosis of type 2 diabetes.
A major benefit is that fasting is not required.

The position statement does not apply to suspected type 1 diabetes, gestational diabetes and diabetes other than type 2 diabetes. Existing guidelines remain unchanged in these patients (e.g. glucose challenge test and follow-up OGTT in suspected gestational diabetes).

The full position statement, an executive summary, guidance on screening and HbA1c conversion tables can be accessed at <http://www.nzssd.org.nz/>

In brief, levels of HbA1c 50mmol/mol or more on two occasions confirm diabetes while levels of 41-49 are considered borderline, requiring advice on diet and lifestyle modification. Results of 40 or less should be repeated only at the interval suggested in cardiovascular guidelines for that individual.

The important message is that this diagnostic process and clinical guideline for follow up mean that the oral glucose tolerance test is virtually obsolete for the diagnosis of diabetes in the majority of patients.

HbA1c is now the preferred screening test for type 2 (non gestational) diabetes and glucose-based criteria for diagnosis will be necessary only in patients who have conditions which interfere with accurate assessment of HbA1c. These include conditions in which red cell survival is shortened, some thalassaemias and following blood transfusion.

In such circumstances fasting or random glucose should be used as the screening test, but even then follow up OGTT should very rarely be necessary. In asymptomatic patients, two fasting glucose levels greater than or equal to 7.0mmol/L or two random glucose levels greater than or equal to 11.1mmol/L are sufficient for diagnosis and it is no longer necessary to follow up impaired fasting glucose or intermediate levels of HbA1c with an OGTT.

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