The Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Excellence in Women's Health

Diagnosis of Gestational Diabetes Mellitus (GDM)

This statement has been developed and reviewed by the Women's Health Committee and approved by the RANZCOG Board and Council.

A list of Women's Health Committee Members can be found in Appendix A.

Disclosure statements have been received from all members of this committee.

Disclaimer This information is intended to provide general advice to practitioners. This information should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient. This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. The document has been prepared having regard to general circumstances.

First endorsed by RANZCOG: November 1991
Current: July 2017
Review due: July 2020

Objectives: To provide advice on the diagnosis of Gestational Diabetes Mellitus (GDM).

Target audience: All health practitioners providing maternity care and patients.

Background: This statement was first developed by Women's Health Committee in November 1991and most recently reviewed in July 2017.

Values: The evidence was reviewed by the Women's Health Committee (RANZCOG), and applied to local factors relating to Australia and New Zealand.

Funding: The development and review of this statement was funded by RANZCOG.

1. Discussion and recommendations

Current evidence suggests that there is a benefit of reduced perinatal morbidity, with the use of screening programs for GDM, and treating women who are diagnosed with it. For over 20 years, the diagnosis of GDM has been derived from an *ad hoc* consensus, based on very limited data available at that time.[1] When screening for GDM, there should be uniformity in the testing used and the subsequent follow-up management. The landmark observation trial HAPO, 2008[2] and other important randomised trials (Crowther *et al.* 2005[3] Langdon *et al.* 2009[4]) have led to recommendations for new criteria for the diagnosis of GDM[2], which have been endorsed by the World Health Organisation (WHO)[5].

The following is recommended:

Biochemical screening for Gestational Diabetes should be performed at 26-28 weeks of gestation. Earlier testing performed in women at particularly high risk should be repeated at 24-28 weeks gestation to test for GDM, if a negative result is obtained at the earlier testing time point.

RANZCOG recommended screening regimen is a 75gram two-hour Pregnancy Oral Glucose Tolerance Test (POGTT). A two-step procedure involving an initial one-hour non-fasting oral Glucose Challenge Test (GCT) is no longer recommended.

The full set of criteria can be viewed at the following link:
ADIPS Consensus Guidelines for the Testing and Diagnosis of Gestational Diabetes Mellitus in Australia
http://adips.org/downloads/adipsconsensusguidelinesgdm-03.05.13versionacceptedfinal.pdf

Table 1. Criteria for Diagnosis of GDM with a 2-hour Pregnancy Oral GTT

Diagnosis	Fasting plasma glucose (mmol/l)	1-hour glucose (mmol/l) following 75g oral glucose load	2-hour glucose (mmol/l) following 75g oral glucose load
GDM	≥5.1	≥ 10.0	≥8.5

The diagnosis of GDM provides an opportunity to counsel women regarding weight management and lifestyle modification to attenuate the risks associated with glucose intolerance in later life.

2. References

1. Martin FL. The diagnosis of gestational diabetes, Ad Hoc Working Party. The Medical journal of Australia. 1991;155(2):112.

2. Metzger BE LL, Dyer AR, Trimble ER, Chaovarindr U, Coustan DR, et al. . Hyperglycemia and adverse pregnancy outcomes. . The New England journal of medicine. 2008;358(19):1991-2002.

3. Crowther CA HJ, Moss, JR, McPhee AJ, Jeffries WS and Robinson JS. . Australian Carbohydrate Intolerance Study in Pregnant Women (ACHOIS) Trial Group. Effect of Treatment of Gestational Diabetes Mellitus on Pregnancy Outcomes. . The New England journal of medicine. 2005;352(24):2477-86.

4. Landon MB SC, Thom E, Carpenter MW, Ramin SM, Casey B, et al. A multicenter, randomized trial of treatment for mild gestational diabetes. The New England journal of medicine. 2009;361(14):1339-48.

5. World Health Organization. Diagnostic Criteria and Classification of Hyperglycaemia First Detected in Pregnancy. 2013. Available at http://apps.who.int/iris/bitstream/10665/85975/1/WHO_NMH_MND_13.2_eng.pdf

3. Other Suggested Reading

Agarwal MM, Boulvain M, Coetzee E, et al. Diagnostic criteria and classification of hyperglycaemia first detected in pregnancy: a World Health Organization Guideline. Diabetes Res Clin Pract 2014;103:341-63.

Hughes RC, Moore MP, Gullam JE, et al. An early pregnancy HbA1c >/=5.9% (41 mmol/mol) is optimal for detecting diabetes and identifies women at increased risk of adverse pregnancy outcomes. Diabetes Care 2014;37:2953-9.

Metzger BE, Gabbe SG, Persson B, Buchanan TA, Catalano PA, Damm P, et al. International association of diabetes and pregnancy study groups recommendations on the diagnosis and classification of hyperglycemia in pregnancy. Diabetes Care. 2010;33(3):676-82.

4. Links to other related College Statements

Evidence-based Medicine, Obstetrics and Gynaecology (C-Gen 15)
https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical%20-%20General/Evidence-based-medicine,-Obstetrics-and-Gynaecology-(C-Gen-15)-Review-March-2016.pdf?ext=.pdf

College Communiqué: Diagnosis of Gestational Diabetes Mellitus (GDM) in Australia
https://www.ranzcog.edu.au/news/Diagnosis-GDM-Australia

5. Patient information

A range of RANZCOG Patient Information Pamphlets can be ordered via: https://www.ranzcog.edu.au/Womens-Health/Patient-Information-Guides/Patient-Information-Pamphlets

Appendices

Appendix A Women's Health Committee Membership

Name	Position on Committee
Professor Yee Leung	Chair
Dr Joseph Sgroi	Deputy Chair, Gynaecology
Associate Professor Janet Vaughan	Deputy Chair, Obstetrics
Professor Susan Walker	Member
Associate Professor Lisa Hui	Member
Associate Professor Ian Pettigrew	EAC Representative
Dr Tal Jacobson	Member
Dr Ian Page	Member
Dr John Regan	Member
Dr Craig Skidmore	Member
Dr Bernadette White	Member
Dr Scott White	Member
Associate Professor Kirsten Black	Member
Dr Greg Fox	College Medical Officer
Dr Marilyn Clarke	Chair of the ATSI WHC
Dr Martin Byrne	GPOAC Representative
Ms Catherine Whitby	Community Representative
Ms Sherryn Elworthy	Midwifery Representative
Dr Amelia Ryan	Trainee Representative

Appendix B Overview of the development and review process for this statement

i. Steps in developing and updating this statement

This statement was originally developed in November 1991and was most recently reviewed in July 2017. The Women's Health Committee carried out the following steps in reviewing this statement:

- Declarations of interest were sought from all members prior to reviewing this statement.
- Structured clinical questions were developed and agreed upon.

ii. At the July 2017 face-to-face committee meeting, the existing recommendations were reviewed and updated (where appropriate) based on the available body of evidence and clinical expertise. Recommendations were graded as set out below in Appendix A part iii) *Declaration of interest process and management*

Declaring interests is essential in order to prevent any potential conflict between the private interests of members, and their duties as part of the Women's Health Committee.

A declaration of interest form specific to guidelines and statements was developed by RANZCOG and approved by the RANZCOG Board in September 2012. The Women's Health Committee members were required to declare their relevant interests in writing on this form prior to participating in the review of this statement.

Members were required to update their information as soon as they become aware of any changes to their interests and there was also a standing agenda item at each meeting where declarations of interest were called for and recorded as part of the meeting minutes.

There were no significant real or perceived conflicts of interest that required management during the process of updating this statement.

iii. Grading of recommendations

Each recommendation in this College statement is given an overall grade as per the table below, based on the National Health and Medical Research Council (NHMRC) Levels of Evidence and Grades of Recommendations for Developers of Guidelines. Where no robust evidence was available but there was sufficient consensus within the Women's Health Committee, consensus-based recommendations were developed or existing ones updated and are identifiable as such. Consensus-based recommendations were agreed to by the entire committee. Good Practice Notes are highlighted throughout and provide practical guidance to facilitate implementation. These were also developed through consensus of the entire committee.

Recommendation category		Description
Evidence-based	A	Body of evidence can be trusted to guide practice
	B	Body of evidence can be trusted to guide practice in most situations
	C	Body of evidence provides some support for recommendation(s) but care should be taken in its application
	D	The body of evidence is weak and the recommendation must be applied with caution
Consensus-based		Recommendation based on clinical opinion and expertise as insufficient evidence available
Good Practice Note		Practical advice and information based on clinical opinion and expertise

Appendix B Full Disclaimer

This information is intended to provide general advice to practitioners, and should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient.

This information has been prepared having regard to general circumstances. It is the responsibility of each practitioner to have regard to the particular circumstances of each case. Clinical management should be responsive to the needs of the individual patient and the particular circumstances of each case.

This information has been prepared having regard to the information available at the time of its preparation, and each practitioner should have regard to relevant information, research or material which may have been published or become available subsequently.

Whilst the College endeavours to ensure that information is accurate and current at the time of preparation, it takes no responsibility for matters arising from changed circumstances or information or material that may have become subsequently available.