



**Issue: Glucose Testing Protocols**

*Raised by:* Sharon Overend (Ti Tree HCM)

*Background:* Clarification is sought over Glucose testing protocols, which at present lack clarity between the various guiding documents.

Additionally, Health Centre staff have found some reports returned from the Pathology provider, advising that the test could not be completed due to incorrect test procedure.

*Discussion:* It is acknowledged that there is a degree of unclear direction regarding these tests, particularly in relation to antenatal screening, and may lead to confusion for clinical staff. Examples include:

- the WBM instructs a '75g GTT' at 28 weeks of pregnancy (p60), with further distinction between this being performed as either fasting (preferred) or non fasting (p93 and Appendix 2, pp 297-8)
- CRANA Clinical Procedures Manual indicates either a 50g or 75g load maybe used for a GTT, with 50g being suggested in pregnancy, but with x3 blood samples utilised.
- The Pregnancy Health Record form (HM 424) prompts for a '**50g glucose**' at 28 weeks implying a *Glucose Challenge Test*
- CARPA STM refers to GTTs when describing interpretation of results in diagnosis of diabetes and notes 75g is used.

While technically, different glucose loads and testing intervals may be utilised, there are two basic test procedures utilised:

The less definitive (screening) test is appropriately called the **Glucose Challenge Test** (GCT) and is conducted utilising a 50g glucose load.

The more diagnostic test is appropriately called the **Glucose Tolerance Test** (GTT) and is generally best conducted utilising a 75g glucose load. (see attached table)

In general, tests will be ordered by a medical officer and therefore the request form will determine what is required. However the test that is to be used routinely in antenatal care does require clarification.

For routine antenatal screening at 28 weeks gestation, Remote Health Branch supports the use of the Glucose Challenge Test using one blood sample taken one hour post a 50gm glucose load. This is supported by the SA Perinatal Practice Guidelines, which in turn supports the stance to be adopted in the next edition of the Women's Business Manual.

- References:*
- CARPA STM (4<sup>th</sup> Edition)
  - Women's Business Manual (3<sup>rd</sup> Edition)
  - CRANA Clinical Procedures Manual
  - Specimen Collection Manual *Section 3, pg 32* - Western Diagnostic Pathology
  - [Glucose Testing in Pregnancy](#) (SA Perinatal Practice Guidelines)

*Outcome:* **Clarification: The Glucose Challenge Test** (using one blood sample taken one hour post a 50gm glucose load) **is the default glucose screening test to be used for antenates at 28 weeks gestation.**

This communiqué should be noted and used to support practice.

(The usual process of placing stickers in the relevant manual will not be used on this occasion as the next edition of the Women's Business Manual is due for release shortly. Note, some Top End copies of the 3<sup>rd</sup> Edition WBM have a sticker that was released several years ago.)

<b>Oral Glucose Challenge Test (OGCT)</b>	<b>Oral Glucose Tolerance Test (OGTT)</b>
Non-Fasting	Fasting for 8-16 hours
50g glucose drink ( <i>can do a 75g test if DMO specifies to do so</i> ) Consume within <b>5-10 mins</b>	75g glucose drink Consume within <b>5 mins</b>
Begin timing halfway through the glucose load	Begin timing halfway through the glucose load
1 x venous blood sample required at 1 hour post-glucose ingestion	3 x venous blood samples required: <i>1: Fasting blood sample (pre-glucose drink)</i> <i>2: sample at 1 hour post-glucose ingestion</i> <i>3: sample at 2 hours post-glucose ingestion</i>
Label specimen tube appropriately	Label all 3 specimen tubes appropriately identifying which tube is the 'Fasting', '1 hour' or '2 hour' sample
State on Pathology request form: "50 gram Oral Glucose Challenge Test" <b>OR</b> "50 gram Glucose Screen"	State on Pathology request form: "75 gram Oral Glucose Tolerance Test"