



Checking for Diabetes in Pregnancy in rural communities

About the Project

- Gestational diabetes mellitus (GDM) means high blood sugar in pregnancy. High blood sugar levels can make both the woman and their baby sick. The baby can grow too big and have problems during the birth. Mums with GDM and their babies are more likely to have diabetes later in life.
- An oral glucose tolerance test (OGTT), also known as the *sugar drink test*, is used to check for GDM. You cannot have food or drinks other than water for 8 hours before taking the test, this test is done first thing in the morning. Blood tests are taken before the sugar drink, one hour later and finally 2 hours after the drink. Many women do not like doing this test.
- In the ORCHID Study (Optimisation of Rural Clinical and Haematological Indicators of Diabetes in pregnancy) we wanted to see if we could make it easier to check for GDM.

What did we do?

- We wanted to look at sugar drink testing and see if other tests were used to check for GDM before the ORCHID Study started. We looked at the antenatal records of 551 pregnant women, 16 years and older, without pre-existing diabetes, who delivered in 2013. This was from across WA including many sites from the southern regions, the Goldfields and the northern Kimberley region.
- Clinic staff from partner health services then recruited women into the ORCHID Study. They asked the women some questions about their pregnancy (age, number of pregnancies, history of diabetes, etc.) and took a little extra blood at the same time as normal blood tests in the woman's first antenatal visit and when the sugar drink tests were done.
- We used the extra blood to test different ways of checking for GDM: glycated haemoglobin (HbA1c; measures sugar levels over 2-3 months) and glycated albumin (GA; measures sugar levels over 2-3 weeks).
- 694 (39% Aboriginal) women from 27 clinics across regional, rural and remote WA, from Kununurra to Albany, took part in the study from 2015-2018.
- 600 (39% Aboriginal) women completed ORCHID and delivered their baby after 30 weeks gestation.
- ORCHID Study findings are available on the KAMS Website: <http://kams.org.au/research/current-projects/>.

Current ORCHID research

- During the ORCHID Study we identified problems with the collection tubes used to measure blood sugar.
- We are using new collection tubes (FC Mix tubes) in Aboriginal Health Service clinics in the Kimberley that give more accurate sugar results, even if the blood sample takes a long time to reach the laboratory. We are monitoring the results of this change.
- We are continuing to compare the sugar results from the new FC Mix tubes with other tests (HbA1c, GA) that are easier for pregnant women to do, so that less women need to do the sugar drink test.

We would like to thank all women who took part in this study, health service staff and students who assisted with ORCHID, and the health services that agreed to participate.



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