

Adherence to the Recommended Diabetic Retinopathy Screening Guidelines in Pregnant Women with Pre-existing Diabetes

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AIM

- Diabetic Retinopathy (DR) is a leading cause of blindness among working-age population, which also coincides with the reproductive years.¹
- Pregnancy is an independent risk factor for DR worsening, with nearly 2.5 fold higher risk compared to non-pregnant women.²
- Current guidelines recommend at least one eye screening examination during pregnancy, and ideally one every trimester.^{3,4}

Here we present the rates of and barriers to adherence to the recommended eye screening guidelines in pregnancy with pre-existing diabetes as observed in a prospective study.

METHODS

Study Population

Pregnant women with type 1 (T1DM) or type 2 (T2DM) diabetes attending obstetric clinics at Royal Women's Hospital and Mercy Hospital for Women from January 2018 to March 2019.

Study Protocol

- Barriers and enablers to attending eye screening were assessed with the Compliance with Annual Diabetic Eye Exams Survey (which primarily comprises 5-point Likert scale items).⁵
- An eye screening examination was scheduled once in each trimester for participating women at no cost.

Data Analysis

Two guideline adherence outcomes were assessed and defined as:

- Having at least one eye examination during pregnancy (NHMRC guidelines)
- Having one eye examination in each trimester (Study protocol)

Survey items with 5-point Likert responses were compared between those women who did and did not adhere to screening guidelines using Kendall's tau test. All statistical analyses utilised Stata IC 14.2 for Windows (College Station, TX, USA).

RESULTS

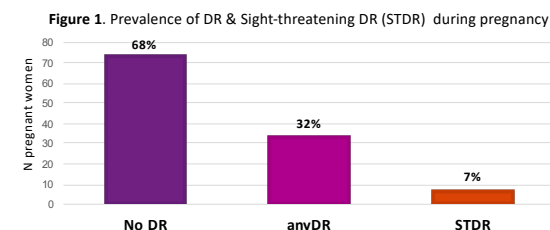
Participant Characteristics

Of the 163 patients approached, 136 (83.4%) women participated. Mean age was 33.8 years (range 19-47 years). Slightly more women (56%, N=76) had T2DM with a median duration of 3 years, compared with median 16.5 years duration in the 60 women with T1DM.

RESULTS (cont.)

Diabetic Retinopathy

DR was present in 34 (32%) women at anytime during their pregnancy (Figure 1).



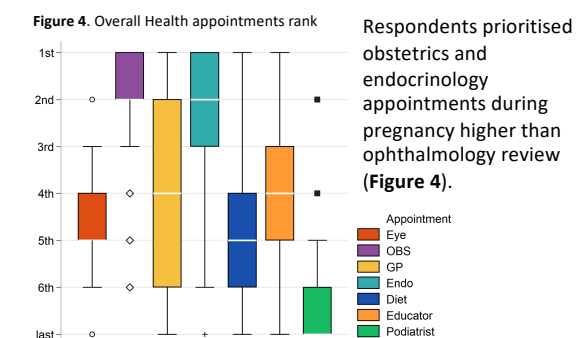
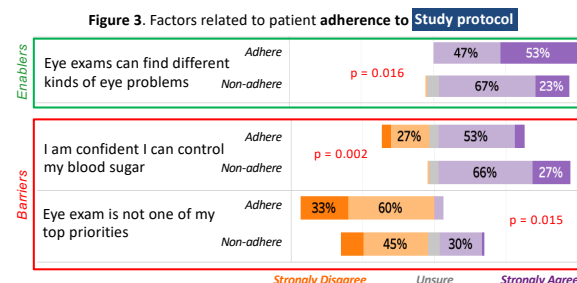
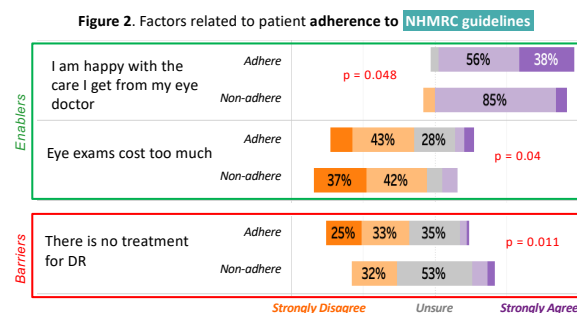
Adherence Rate

NHMRC guidelines : 108 women (79.4%)

Study protocol : 15 women (11%)

Barriers and Enablers to Attending Eye Screening

Among 79 participants who have completed the survey, women who failed to attend eye-screening responded differently to women who attended.



Respondents prioritised obstetrics and endocrinology appointments during pregnancy higher than ophthalmology review (Figure 4).

CONCLUSION

Proactive efforts are required to educate women with pre-existing diabetes about DR and the importance of routine eye screening during pregnancy.

There is an urgent need to integrate eye screening examinations into antenatal care programs to prevent vision loss in this growing demographic.

DISCUSSION

Despite the risk of DR during pregnancy, only 15 of 136 pregnant women with diabetes adhered to recommended screening guidelines. Amongst all other health appointments that were required during pregnancy, women ranked eye health as a low priority.

Enablers of adherence:

- Women who attended at least one eye-screening during their pregnancy reported that they had good experience with the care provided by the eye service, but interestingly, were more likely to feel that eye exams cost too much (Figure 2)
- All women who were screened in each trimester believed screening exams could find eye problems as well as DR (Figure 3)

Barriers to adherence:

- Of women who failed to attend any eye-screening during their pregnancy, only a third of them disagreed that there is no treatment for diabetic eye diseases (Figure 2)
- Those who were not screened in each trimester felt confident controlling their blood glucose and agreed that yearly eye exams were not a top priority (Figure 3)

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COLLABORATORS

