

Identifying modifiable barriers to low dose aspirin adherence in pregnant women at risk of pre-eclampsia

Anna Davies¹, Sadie Mullin¹, Sarah Chapman², Christy Burden¹
¹University of Bristol & North Bristol NHS Trust; ²Kings College London
Contact: anna.davies@bristol.ac.uk



AIM: To establish the barriers and facilitators to low-dose aspirin to women with risk factors for placental dysfunction in pregnancy using a theory-based approach

Why is low dose aspirin important in pregnancy?

- Pre-eclampsia confers risk to the mother and baby – stillbirth, pre-term birth
- 75-150mg of low dose aspirin is recommended by NICE¹ due to its effectiveness in reducing risk of pre-eclampsia in women with risk factors²
- It is most effective for reducing pre-term pre-eclampsia if ≥90% of doses are taken²
- Recent studies have identified adherence ranges between 40-60%^{3,4}
- Previous studies exploring barriers have interviewed women in an aspirin RCT who may be more informed.
- Behaviour change models (e.g.COM-B) indicate that understanding of the barriers to adherence can inform development of behaviour change interventions.^{5,6}

METHOD

Participants:

- Pregnant women ≥12 weeks gestation or ≤3 months postpartum, aged 18-55
- Recommended low dose aspirin for risk of placental dysfunction
- Women who report:
 - ✓ Adherence (7 doses per week)
 - ✓ Sub-optimal adherence (≤5 doses per week)
 - ✓ Non-adherence (0 doses per week)
- Able to consent to and complete an interview in English.

Interviews:

One-to-one semi-structured interviews by an experienced researcher; topic guide developed using the Theoretical Domains Framework⁵. Audio recorded and transcribed verbatim.

Analyses:

Thematic analysis using the COM-B framework
Inductive and deductive thematic analysis.

Double coding by two health psychologists familiar with the model into three COM-B⁶ domains: capability, opportunity, motivation.

RESULTS

15 women participated:

- Age 24-36 (median 31)
- 11/15 University educated
- 8 Primiparous
- All antenatal

Adherence:

- 4 non-adherent (0 doses/week),
- 7 sub-optimally adherent (≤5doses/week)
- 4 were adherent (0 missed doses)

“I think it’s because of some risk of eclampsia or high blood pressure. I am not sure, because she measured my pressure one day just, and it was fine, so to be honest I don’t know why she recommended the aspirin.”

Capability

- Limited understanding of reason for recommendation.
- Poor knowledge of pre-eclampsia and sequelae
- Minimal information
- Varied understanding of dosing

Motivation

- Previous pregnancy and family experiences
- Beliefs about limited benefit
- Unnecessary medication

“Just because I don’t feel like I’ve had a good enough explanation as to why I really need to take them, and other people that I have spoken to that I know have recently been pregnant and stuff hasn’t really had to take them.”

Opportunity

- Varied prescribing/ recommendation
- Limited follow-up by HCPs
- Difficulties with habit formation

“The reason that I took it the first pregnancy, which is what I suppose spurred me to really take it, definitely take it this pregnancy, is that I was in my first pregnancy and when I was born my mum had severe pre-eclampsia so I was tiny, about three pounds or something, and so I knew that there was risk of pre-eclampsia for me and birth problems in my children.”

CONCLUSIONS AND RECOMMENDATIONS

Multiple modifiable cognitive and practical barriers to optimal adherence have been identified. Theory-informed approaches to tackling barriers to adherence are needed.

Clinical recommendations:

- ✓ Improved consultations at initiation are needed, supported by written/ signposted information to enhance understanding how to take it and why it is recommended
- ✓ Monitoring of adherence throughout pregnancy may benefit women and identify modifiable barriers
- ✓ Increased training for healthcare professionals may be effective

Research recommendations:

- ✓ Further exploration in underserved women is needed to determine if findings are replicated in women with greater risk of placental disorder
- ✓ Exploration of healthcare professionals’ experiences of delivering care relating to low dose aspirin are needed

References:

¹NICE (2019) Hypertension in pregnancy: diagnosis and management (NG133). <https://www.nice.org.uk/guidance/ng1333>. Accessed Jan 2022. ²Wright D, Poon LC, Rolnik DL, et al. Aspirin for Evidence-Based Preeclampsia Prevention trial: influence of compliance on beneficial effect of aspirin in prevention of preterm preeclampsia. *American Journal of Obstetrics & Gynecology*. 2017;217(6):e685.e681-685.e685. ³Abheiden CN, van Reuler AV, Fuijkschot WW, de Vries JJ, Thijs A, de Boer MA. Aspirin adherence during high risk pregnancies, a questionnaire study. *Pregnancy Hypertens*. 2016;6(4):350-355. ⁴Shanmugalingam R, Mengesha Z, Notaras S, et al. Factors that influence adherence to aspirin therapy in the prevention of preeclampsia amongst high-risk pregnant women: A mixed method analysis. *PLoS One*. 2020;15(2):e0229622. ⁵Michie S, Johnston M, Abraham C, Lawton R, Parker D, Walker A, on behalf of the ‘Psychological Theory’ Group: Making psychological theory useful for implementing evidence based practice: a consensus approach. *Qual Saf Health Care*. 2005, 14: 26-33. 10.1136/qshc.2004.011155. ⁶Michie S, Atkins L, West R. The behaviour change wheel: a guide to designing interventions. UK: Silverback Publishing; 2014