**The clinical performance and cost effectiveness of two psychosocial assessment models in a maternity setting: the PIPA study**

**Nicole Reilly1,** Georgina M Chambers2, William Botha2, Emma Black3, Dawn Kingston4, Marie-Paule Austin3,5,6,7

1. Research Centre for Generational Health and Ageing and School of Nursing and Midwifery, University of Newcastle, Callaghan, NSW, Australia
2. National Perinatal Epidemiology and Statistics Unit (NPESU), Centre for Big Data Research in Health and School of Women’s and Children’s Health, University of New South Wales, Sydney, NSW, Australia
3. Perinatal and Women’s Mental Health Unit, St John of God Health Care, Burwood Hospital, Sydney, Australia
4. Faculty of Nursing, University of Calgary, Alberta, Canada
5. School of Psychiatry, University of New South Wales, Sydney, NSW, Australia
6. Royal Hospital for Women, Sydney, Australia
7. Black Dog Institute, Sydney, Australia

[nicole.reilly@newcastle.edu.au](mailto:nicole.reilly@newcastle.edu.au)

**Objectives:** To evaluate the clinical performance and cost-effectiveness of two models of integrated psychosocial assessment and depression screening in pregnant women.

**Methods:** This retrospective cohort study consecutively recruited women attending their first antenatal visit at a large urban maternity hospital in Sydney, Australia in 2015 and 2017. There were 3,673 women assessed under the care as usual (CAU) model and 3,132 under the perinatal integrated psychosocial assessment (PIPA) model. Two cost-effectiveness analyses – assessing True Positives and False Positives – were performed based the indication of the psychosocial ‘at risk’ flag in each model. Bottom up costing methods were used to quantify hospital staffing resources and expressed in 2017AUD.

**Results:** The CAU and PIPA models performed well in terms of appropriately identifying ‘at risk’ women (sensitivity: 82% and 78%, respectively). However, the PIPA model was twice as effective at eliminating False Positives compared to CAU (False Positive Ratios: 26% and 11%, respectively). The CAU model was also less effective at correctly identifying ‘at risk’ women than PIPA (positive predictive values: 41% and 69% respectively). The PIPA model was more costly in terms of True Positives detected, with an incremental cost per True Positive detected of $23.53. In terms of False Positives, the PIPA model cost less and was therefore cost saving ($26 saved per False Positive case averted).

**Conclusions:** The PIPA model is a clinically and cost-effective approach to integrated psychosocial assessment by primary care clinicians in hospital maternity settings. Studies that examine the applicability of this model of care in less clinically-resourced settings are warranted.