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Title: Antenatal penetration and participation rates of women at risk of gestational diabetes in a mHealth coaching weight management trial in Australia, Ireland, Spain, UK: The Bump2Baby and Me Study

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Background: Antenatal lifestyle interventions are successful in managing excess gestational weight gain, however, implementation into routine healthcare is rarely considered. Bump2Baby and Me (B2B&Me) is a multicentre, randomised controlled trial of mHealth coaching for women at high risk of developing gestational diabetes.

Objective: To examine penetration and participation rates in B2B&Me in antenatal care settings.

Methods: Women attending first antenatal appointments at maternity hospitals in Dublin, Bristol, Granada, and Melbourne were screened using the Monash gestational diabetes screening tool. Eligible women received information about the trial and were invited to participate. Penetration was calculated as the number of women eligible within the general maternity service population. Participation was calculated as the number of eligible women who took part and provided consent. Trial registration: ACTRN12620001240932.

Results: The overall total number of women screened was 4,393 with a penetration rate of 38% (n=1,674), ranging from 32% (Spain), 33% (Australia), 39% (UK), to 57% (Ireland). Overall participation was 51%, which varied considerably from 28% (Australia), 56% (UK), 55% (Ireland), to 93% (Spain). Participants will be involved up to 1 year postpartum with engagement rates and drop out reasons recorded.

Conclusion: Local variability in penetration and participation rates are important to understand for implementation into routine care. B2B&Me proposes to bridge the large research translation gap that exists around delivering an implementable intervention with good population penetration and participation.