

Antidepressants in pregnancy: applying causal epidemiological methods to understand service-use outcomes in women and long-term neurodevelopmental outcomes in exposed children

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Primary conflicts of interest: David Gunnell reports grants/contracts from Bristol BRC, is a member of Policy and Research Committee, Global Advisory Committee and National Suicide Prevention Strategy Advisory Group. Rupert Payne is a member of the MHRA Pharmacovigilance Expert Advisory Group and was a member of HTA Efficient Study Designs-2 panel. Dheeraj Rai is PI on grant – maternal epilepsy, antiepileptic drugs during pregnancy and autism (1R01NS107607), main supervisor for PhD studentship on risk and benefits of antidepressants during pregnancy (building upon the results of the present study), main supervisor for NIHR predoctoral fellowship on methods to study risk benefit of medication use during pregnancy.

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Plain language summary

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Plain language summary

About one in seven women experience depression during pregnancy. Left untreated, this may harm them and their unborn babies. However, the decision to take antidepressants during pregnancy is difficult because women often worry about the risks to their unborn baby. Research findings have been inconsistent, so women often do not have clear information to enable them to make informed decisions.

We studied women's and children's outcomes after starting (compared with not starting) or continuing (compared with stopping) antidepressants in pregnancy. We used a large UK primary care database and several novel methods of analysis.

We tracked 80,103 pregnancies of women with depression for up to 2 years after pregnancy. We also tracked 34,274 children from these pregnancies for at least 4 years to check for developmental outcomes.

Women prescribed antidepressants were more likely than women not prescribed antidepressants to use general practice and mental health services during and after pregnancy, and to be prescribed antidepressants 2 years after pregnancy. This suggests that antidepressants were being prescribed to women with greater clinical need.

Women who continued antidepressants in pregnancy had no higher likelihood than those who discontinued antidepressants of autism, attention deficit hyperactivity disorder or intellectual disability in their children. This should reassure women making the decision to continue taking their medications in pregnancy.

Women who started antidepressants in pregnancy may possibly have had a slightly higher likelihood of autism in their children than those who did not start them. These findings were not seen in all analyses and were based on smaller numbers; therefore, they should be viewed with caution. Importantly, over 98 in every 100 children of women who initiated or continued antidepressants in pregnancy did not receive an autism diagnosis.

The findings may help women and clinicians make informed decisions on treatment with antidepressants in pregnancy.

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