

Postnatal depression and completion of infant immunisations: a UK cohort study

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Context

- Postnatal depression affects up to one in five mothers.
- Postnatal depression could affect quality of care and support mothers give their infant, including healthcare accessed.
- Handful of studies have examined the link between postnatal depression and infant vaccine uptake, but the results are mixed

Objective

To examine the relationship between maternal postnatal depression and completion of infant vaccinations.

Design

- Cohort study using The Health Improvement Network (THIN), a large UK primary care electronic health record database.
- 196,329 mother-infant pairs, where infant was born between 2006-2015.
- Postnatal depression identified through antidepressant prescriptions, diagnoses or symptoms of depression in first year after childbirth.
- Primary outcome was completion of three 5-in-1 vaccination doses before one year of age. Protects against Diphtheria, Tetanus, Whooping Cough, Polio and Haemophilus influenzae type b.

Analysis

- Poisson regression models compared likelihood of infant vaccine uptake among children of mothers with postnatal depression to those without.



Among mothers who engage with primary care services, postnatal depression is not associated with lower rates of infant vaccination

Results

- Of the 196,329 women, 20,802 (10.6%) had a record of postnatal depression and/or antidepressant prescription.
- There was no difference in infant's 5-in-1 vaccination completion between mothers with a record and those without (adjusted IRR: 1.01, 95% CI: 0.99-1.02).
- Those from more socially deprived areas were less likely to complete compared to those from least deprived areas (IRR: 0.92, 95% CI: 0.90-0.93).
- Likelihood of completing infant vaccination decreased over time, comparing 2014-2015 to 2006-07 (IRR: 0.90, 95% CI: 0.89-0.92).

Table 1: Completion of all three doses of infant 5-in-1 vaccination; by maternal postnatal depression, maternal age, Townsend score and year; unadjusted and age-deprivation adjusted

Characteristic	Unadjusted: IRR (95% CI)	Age & deprivation adjusted: IRR (95% CI)
Postnatal depression		
No	1	1
Yes	1.00 (0.99-1.02)	1.01 (0.99-1.02)
Maternal age (years)		
15-19	0.96 (0.93-0.98)	0.97 (0.95-1.00)
20-24	0.96 (0.94-0.97)	0.97 (0.95-0.98)
25-29	0.98 (0.97-0.99)	0.98 (0.97-1.00)
30-34	1	1
35-39	1.00 (0.99-1.01)	1.00 (0.98-1.01)
40-44	0.99 (0.96-1.01)	0.98 (0.96-1.00)
45-49	1.01 (0.93-1.09)	1.01 (0.93-1.09)
Townsend Score quintile		
1-least deprived	1	1
2	0.99 (0.97-1.00)	0.99 (0.97-1.00)
3	0.97 (0.95-0.98)	0.97 (0.96-0.98)
4	0.94 (0.93-0.96)	0.95 (0.94-0.96)
5-most deprived	0.92 (0.90-0.93)	0.92 (0.91-0.94)
Year group		
2006-2007	1	-
2008-2009	1.00 (0.99-1.01)	-
2010-2011	1.01 (0.99-1.02)	-
2012-2013	0.99 (0.97-1.00)	-
2014-2015	0.90 (0.89-0.92)	-

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