Perinatal depression & child development:
Exploring the economic consequences from a South London cohort

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The research I am presenting was done in partnership with Martin Knapp, Derek King, Susan Pawlby, Dominic Plant and Carmine Pariante
Understanding cost-effectiveness of interventions that reduce perinatal mental illness

Initial work

• Simple modelling of health visiting intervention (based on PONDER trial); part of larger DH project*;
• Intervention likely to be cost-effective;
• Long-term effects on mother and offspring not considered;
• Only looked at postnatal depression;
• ... and at a narrow set of costs.

* Bauer, A et al (2010), Health visiting and reducing postnatal depression, In: Knapp M, McDaid D, Parsonage M (eds.) ‘Mental Health Promotion and Prevention: the Economic Case’
**Background:** Economic impact on child is likely to be substantial but currently unknown

**Aim:** To measure the long-term impact of perinatal depression on children

**Method:** Economic modelling based on primary data (South London Development Study) and secondary data (evidence reviews); some assumptions
To establish **additional risk (AR) of adverse child outcomes** due to perinatal depression

- Mothers recruited from antenatal clinics in 1986; data on follow up at age 11 and 16; n=120 (Hay et al 2002; 2003)

- Clinical diagnosis of mothers’ depression during perinatal period

- Selected child outcomes

- AR after controlling for wide range of characteristics including previous maternal depression
To identify studies concerned with the **persistence** and **economic implications** of adverse child outcomes

- Review areas included: Epidemiology; health-related quality of life; public sector costs (or service use); earnings and productivity
- Pragmatic searches
- Selection criteria: UK, longitudinal, covariates

(2) Evidence reviews
To project life-time costs by linking additional risk data (1) with data on from literature search (2)

- Assigning monetary values to units (i.e. unit costs to service use; willingness-to-pay value to health-related quality of life; earnings to productivity losses)
- Applying values to relevant time periods and discounting to time of birth (‘present value’)
Mothers’ perinatal depression

Risk differences for depression in offspring

<table>
<thead>
<tr>
<th>Age</th>
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<tbody>
<tr>
<td>1 ... 5</td>
<td>0.05pp</td>
</tr>
<tr>
<td>10 ... 16</td>
<td>0.009pp</td>
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<td>... 50</td>
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3) Modelling (example)

Const. £, p.a., childhood

Const. £, p.a., adulthood, based on mean duration of condition and costs distributed over life time
Results

- Additional risks of child emotional, conduct and intellectual problems ranged from 5-21%;
- High risk of 24% that children would have special educational needs;
- Present value of life-time costs were £3,030 for public sector; £1,400 for reduced earnings; £3,760 for health-related quality of life loss.

Outlook

Limitations included subset of economic consequences and small sample size

Since then...

Research on costs of perinatal mental health problems; includes perinatal anxiety, depression & psychosis; life-time; impact on mothers + offspring;

Costs per year’s cohort in the UK £8.1billion; 72% relate to offspring; a fifth are those to public sector
Thank you!
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