Perinatal depression & child development:

Exploring the economic consequences from a South London cohort

Annette Bauer

PSSRU, Soc. Policy Dep., London School of Economics and Political Science

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'***

Research outline

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

(2) Evidence reviews

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
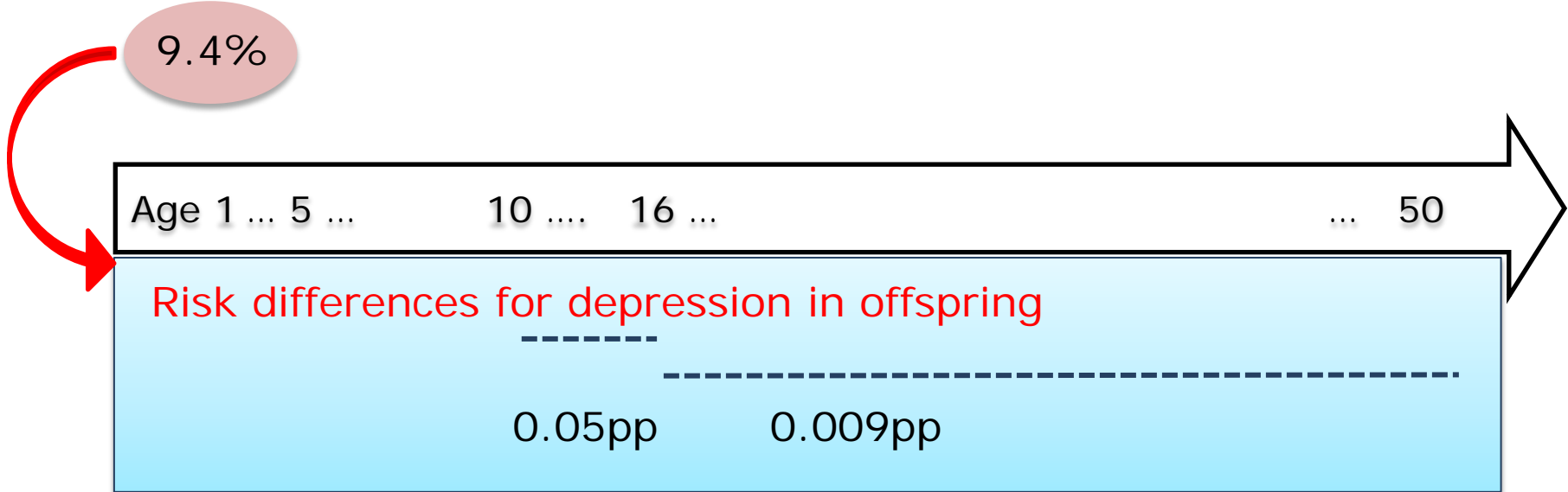
(3) Modelling

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')

3) Modelling (example)

Mothers' perinatal depression

9.4%

Age 1 ... 5 ...   10 ....   16   50

Risk differences for depression in offspring

0.05pp   0.009pp
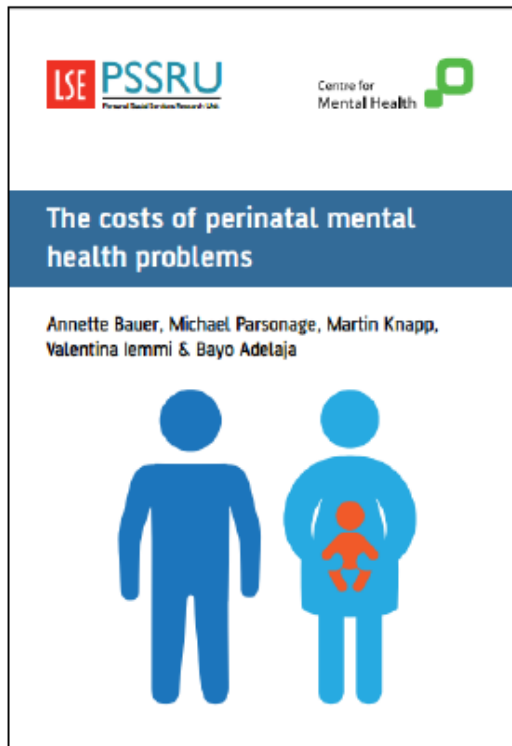
Const. £, p.a., childhood

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.

Bauer A, Pawlby S, Dominic TP, King D, Pariante CM, Knapp M (2015), Perinatal depression and child development: exploring the economic consequences from a South London cohort, *Psychological Medicine*, 45(1):51-61.

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!

Please get in touch

a.bauer@lse.ac.uk