Obesity in Pregnancy: Health Usage and Costs on the NHS

In a two part study, researchers at The Farr Institute CIPHER looked at the health service use of obese mothers during their pregnancy and later at the health service use of the child during their first year.

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The Challenge:
Affecting around 1 in 20 women in Wales, obesity in pregnancy is a rising public health problem that has an impact on both mum and baby’s health and cost to the NHS. It is associated with heavier infants, more birth interventions, poorer health of the baby and greater likelihood that the infant will grow up to be overweight or obese.

The Research:
Researchers at Farr Institute CIPHER carried out a two part study which looked at the health service use of obese mothers during their pregnancy and later at the health service use of the child during their first year.

Study 1 – Obesity in pregnancy and the effect on maternal health service use:
The first study examined the healthcare cost of obesity in pregnancy with an aim to inform the amount that could be spent on public health intervention and still be cost saving.

Working with SAIL Databank, which is totally anonymised to comply with all data protection rules, data was extracted and linked from GP records, hospital admissions, questionnaires, maternal pregnancy notes and the child health record (red book).

During 2011 – 2012, 484 women took part in the study and were categorised into two groups: normal body mass index (BMI) and overweight/obese.

Costs were calculated as costs of the mother (not the infant) and were related to health service usage throughout the pregnancy and two months following the birth.

The research showed that there is a strong association between healthcare usage cost and BMI, with costs being higher both among obese women and overweight/obese compared to those mothers of normal weight. The study also showed an increase in caesarean section deliveries and poor health of both mother and baby.

Study 2 – Obesity in pregnancy and the effect on child health service use in their first year:
A follow up study looked to estimate the direct healthcare cost of infants born to overweight or obese mothers to the NHS in the UK. The study examined the direct healthcare cost with an aim to inform the amount that could be spent on public health intervention and still be cost saving.

Participants were made up of 609 pregnancies with available health service records and antenatal maternal body mass index (BMI). Infants were categorised as healthy, overweight or obese according to the mothers early pregnancy weight (BMI).

Costs were calculated in the year 2012-2013 as cost of the infant (not the mother) for health service usage from birth to age 1 year. The results of the research showed that there is a strong link between healthcare usage cost and BMI. The findings showed a significant increase in health service use and associated costs for infants born to obese mothers.

The Results:
The research found that both obese mothers and their children had a significant increase in health service use than mothers of a healthy weight and their children.

The average cost to the NHS was 23% higher for overweight women and 37% higher for those classed as obese. When applied to the NHS across the UK, the additional cost of overweight and obese women added up to between £105m and £286m.

The average cost of care for children born to an obese mother for their first year of life is 72% higher than children born to mothers of healthy weight.

When calculating the combined cost of increased health service use by both the mother and child, the research showed that interventions costing less than £2,310 per obese mother could be cost effective if they reduce healthcare usage among these women to levels equivalent to that of a woman of healthy weight.

The Impact:
Both the studies add an economic dimension to the importance of promoting healthy weights among women of child bearing age. The findings can help to inform policy makers and stimulate cost effective interventions to prevent maternal obesity.

For more information visit:
http://bmjopen.bmj.com/content/4/2/e003983

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