

Opinion Article

Title: Tackling Maternal Obesity: The Challenge for Public Health

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Tackling Maternal Obesity: The Challenge for Public Health

The increase in obesity in the UK population has significant implications for women of childbearing age, and has recently been described as the biggest challenge for maternity services today (1). There are no pregnancy-specific BMI criteria to define maternal obesity. The BMI criteria for the general population (2) are used to define obesity in early pregnancy, as there is usually minimal weight gain in the first trimester. In addition to the World Health Organisation (WHO) BMI categories of moderate (BMI 30-34.9kg/m²), severe (BMI 35-39.9kg/m²), and morbid (BMI ≥40kg/m²) obesity (2), there is also an additional category used in the UK for pregnancy. The terms 'extreme obesity', or 'super morbid obesity' have been used to describe a BMI ≥50kg/m² in early pregnancy.

The number of women with first trimester obesity (BMI≥30kg/m²) in England has increased two-fold over the past two decades; this equates to approximately 92,500 pregnant women per year (3). The rest of the UK shows similar trends to England (1). A major public health concern is the association with health inequalities, as obese mothers are more likely to live in areas of high deprivation, be of black ethnic group, unemployed, and older than women with an ideal BMI (1, 3). Most of these associations become stronger with increasing maternal BMI. For example, there is a two-fold increase in moderately obese women living in areas of high deprivation compared with those residing in areas of low deprivation; this increases to almost five-fold for extreme obesity (3).

The increased risks associated with a raised BMI include stillbirth, maternal and infant mortality (4, 5), and congenital anomalies which are a major contributor to childhood morbidity (6, 7). Obese women are also more likely to require caesarean sections and to experience serious obstetric complications (8, 9). Gestational diabetes is more prevalent among obese women, which has long term health implications due to an increased risk of developing type 2 diabetes for women and their children (10). It has also been suggested that fetal exposure to maternal obesity during pregnancy

may influence the development of obesity in the infant (via 'fetal programming'); however, current evidence is inconclusive (11). Pregnancy also contributes towards the development of obesity through excessive gestational weight gain and postnatal weight retention.

The antenatal period is an opportune time to engage women with behaviour change interventions as the health of the baby provides a powerful motivator. However, there is limited evidence on the effectiveness of interventions to change pregnant women's weight related behaviours, as well as a lack of UK evidence-based guidelines for appropriate gestational weight gain. It is paramount that pregnant women are not encouraged to lose weight during pregnancy, due to the potential risks to the fetus which may be associated with maternal weight loss (such as growth restriction and the development of congenital anomalies). Obese pregnant women should be advised to follow a healthy diet, and to be physically active (12). Further evidence from randomised controlled trials is needed to determine the safety and effectiveness of interventions to limit gestational weight gain.

Discussing the implications of obesity with pregnant women is also a challenging area, with health care professionals feeling apprehensive about doing so. Midwives are very aware of the stigma associated with obesity, and the sensitive and emotive nature makes it an uncomfortable discussion to initiate without jeopardising their relationships with women (13, 14). The psychosocial relationship with weight for many women makes the message that 'obesity may increase pregnancy risks' a largely unwelcome one. How this issue is approached and managed by health care professionals is critical. Communication should be sensitively delivered to encourage continued engagement with antenatal services and to promote engagement with appropriate public health services. Midwives have identified that this aspect of maternal obesity care is of great importance and requires specific training similar to other important public health issues, such as domestic violence and smoking cessation (13).

The ideal public health solution to maternal obesity would be to intervene and support women to achieve an optimal weight pre-conception, as reflected in the recent National Institute for Health and Clinical Excellence (NICE) guidelines for weight management before, during, and after pregnancy (12). However, women are often hard to reach for targeted interventions pre-conceptually, and many pregnancies are unplanned. It is essential that broader preventive and public health strategies for young women are developed.

Interventions targeted towards supporting postnatal weight loss present an opportunity to initiate pre-conceptual care for subsequent pregnancies, and to support the adoption of healthy eating and physical activity for the whole family. Major challenges to doing this effectively include competing public health and health care priorities; resource limitations including practitioners time and financial constraints; and limited partnership working between maternity and public health services (13). The importance of improved partnership working is also identified in the recent NICE guidelines (12), which recommends that a range of services are required to address obesity. Research suggests that maternity, public health, primary care, and other community services are not working together effectively, despite staff within all agencies considering maternal obesity to be within their role in managing the health and well being of mothers and their families (13, 15). This lack of partnership working results in disjointed care during women's transition between pregnancy and postnatal periods, and a lack of knowledge among health care professionals about the potential services available to support women.

Despite the numerous challenges, pregnancy provides a unique opportunity for the development of public health strategies to prevent obesity development among women and their children, and for engaging women with lifestyle services for their long term health. Further research is required in the UK to identify how to optimise women's engagement with services pre-conception, antenatally and postnatally, and to determine the effectiveness of interventions in improving pregnancy and longer

term outcomes for women and their families. A more joined up approach to addressing this major public health issue is required, involving a range of agencies to effectively manage diet, physical activity, and weight throughout the reproduction 'cycle', and to achieve long term benefits of obesity prevention for women and their families.

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