PRIORITY BRIEFING

The purpose of this briefing paper is to aid Stakeholders in prioritising topics to be taken further by PenCLAHRC as the basis for a specific evaluation or implementation research project. They were complied in 2-3 days.

What are the facilitators and barriers to enabling Midwives to address the issue of obesity and weight gain in pregnancy, such that that there will be improved maternal understanding of the impact of excessive weight gain in pregnancy?

Question ID: 9
Question type: Intervention
Question: What are the facilitators and barriers to enabling midwives to address the issue of obesity and weight gain in pregnancy, such that that there will be improved maternal understanding of the impact of excessive weight gain in pregnancy?

Population: Midwives.

Intervention: An educational intervention aimed at Midwives to enable them to identify and address obesity in pregnancy in both the short term (pregnancy) and in the longer term (early childhood).

Control: Midwives' knowledge, attitude and beliefs will be assessed before and after the study.

Outcome: Post intervention, Midwives will routinely document discussions and ongoing support provided to the overweight and obese mothers in their caseload. Healthy lifestyle conversations may become a routine aspect of a midwife's care for all pregnancies.

BMI:

The Body Mass Index (BMI) is a widely used to indicate how healthy an individuals' weight is for their height. It is calculated by dividing weight (kgs) by height (m) and then dividing the answer by height again (kg/m_2). The Index has four main areas that indicate where an individual is on the spectrum of weight for their height: below 18.5 on the index indicates the person is underweight; between 18.5 and 24.9 indicates a healthy/ideal weight for height; between 25 and 29.9 indicates the person is over their ideal weight; and between 30 and 39.9 indicates the person is obese (over 40 indicates very obese). Index scores towards the higher end of the BMI normally indicate a need to make rapid lifestyle changes to avoid any further or future health complications. BMI is not an accurate measure for children, the elderly, or individuals who are particularly muscular or who have a long term health condition. Overweight and obesity in pregnant mothers has health implications for the mothers and their child's immediate and future health.

The Health Problem

In the UK it is estimated that 24% of the female population over the age of 16 are obese (defined by the WHO as BMI over 30 kg/m^2) and if current trends continue the related healthcare costs to the economy could be £3.6b per year by 2010 (DOH 2007). In the period 2003-2005 the prevalence of obesity in the general maternity population was 16-19%. Higher rates of babies who are small for gestational age (19% of births) and of those who are large for gestational age (13%) are born to overweight and obese pregnant mothers. Both small and large for gestational age babies are more likely to be overweight and obese children. The Centre for Maternal and Child Enquiries (CMACE) states that obesity in pregnancy contributes to increased morbidity and mortality in mother and baby. Their Perinatal Mortality Report 2005 found that 30% of mothers who had a still birth or neonatal death were obese. CMACE also report that the costs of antenatal care for obese mothers is increased five fold and for children born to obese mothers there is a 3.5 fold increased likelihood of being admitted to a Neonatal Intensive Care Unit

There are currently no *clear* data on the prevalence of over-weight/obesity in pregnancy although CMACE are conducting an audit due to be published 2010/11. In Devon more than 52,000 adults on the GP registers are clinically obese (Devon PCT). A study conducted in the North West of England found that 17.7% of women who had given birth in a hospital in 2006 were clinically obese.[1] Adult and child obesity are reported to be at similar levels in Devon to the national average, the Government's Office for Science's Foresight programme suggests that, without clear action, obesity levels will rise to almost nine in ten adults and two-thirds of children by 2050. The UK-wide Obstetric Surveillance System (UKOSS) carried out a surveillance study of extreme obesity during pregnancy between March 2007 and August 2008 which identified that nearly one in every thousand women delivering in the UK has a BMI of at least 50kg/m^2 or weighs more than 140kg. The Office for National Statistics recorded 708,711 births in England and Wales in 2008. Locally the number of births at the RD&E in 2008-2009 was 3425, details from 3039 of these births recorded that 40% of the mothers had a BMI of 25 or more (16% BMI >30kg/m^2). The estimated extra cost for obesity in pregnancy based on 16% of pregnant mothers being obese is £594,572 per year (only accounting for costs during pregnancy and not after child birth) – this is on top of the standard costs of care during pregnancy.

Guidelines:

NICE are in the process of developing guidelines regarding the treatment or support of obesity in pregnancy due to be published in July 2010. The draft guidelines suggest there will be recommendations for health professionals: to explain to women with a BMI over 30kg/m^2 how this poses a risk, both to their health and the health of the unborn baby, not recommend weight-loss during pregnancy and offer a referral to a dietitian for assessment and personalised advice on healthy eating and how to be physically active; to mothers to lose weight after pregnancy; to have the skills to advise on the health risks of being

overweight or obese during pregnancy, after childbirth or after successive pregnancies; can broach the subject of weight management in a sensitive manner and can give practical advice on how to make positive changes to improve their diet and become more physically active.

NICE guidelines (2006) on *Obesity* recommend that health practitioners should talk to people about the health implications of their weight at times where individuals are particularly likely to gain weight such as during and after pregnancy and whilst giving up smoking but they do not discuss the barriers or potential solutions to barriers that may prevent this from happening. They do, however, recommend that further research needs to be undertaken to determine how the effectiveness of interventions vary by population, setting and source of delivery, and what elements make an intervention effective and sustainable and what training staff need.

The Institute of Medicine (US) formed guidance on weight gain during pregnancy in 1990 which was recently revised in 2009. The current guidelines recommend that overweight and obese pregnant women should gain no more than between 11 and 25 pounds (5-11.5kgs) during their pregnancy. However, in terms of services to inform /support women in this situation, they are mainly educational and leave responsibility to any agencies involved with pregnant women and women of child bearing age.

The Royal College of Obstetricians and Gynaecologists along with CMACE have developed guidelines for the management of women with obesity in pregnancy. These mainly comprise giving obese mothers as much information as possible (a leaflet) regarding the potential impacts of their obesity on themselves and their child.

NHS Priorities

Regional

SW SHA Priorities framework 2008-11

- have agreed plans in each local authority to reduce adult obesity
- reverse the trend in childhood obesity towards a downward trend by 2013

Local

Local perspective

- The NHS in Cornwall and the Isles of Scilly and Devon both have priorities focusing on the delivery of flexible services that work to the needs of the individual, especially women who have complex health or social care needs. They are also both aiming towards a clear downward trend in childhood obesity.
- Cornwall health weight strategy will be working specifically on the following: raising awareness amongst women of the benefits of being a healthy weight at pregnancy and preconception; having a pathway in place for women identified as overweight or obese at ante-natal check to

receive advice/support/ intervention; and developing a clear pathway into services for women identified as having a high BMI at first book in appointment with the midwife.

Existing Research

Published research

No research was retrieved that deals with the specific issues that might enable a programme of intervention to be run for midwives to help them deal with weight gain in pregnancy issues with overweight and obese mothers. A number of studies (including case studies) were found that investigate the issues raised in the current question.[2-6,9,10-13] One study that was identified highlighted the ways in which practitioners in the US were not providing care for obese pregnant mothers in concordance with the guidelines created by the Institute of Medicine (IOM). Factors affecting compliance with these guidelines included the confidence and body satisfaction of the provider[7] which suggests an intervention with the provider (midwife) that works on these (as well as other aspects) may be appropriate. A further study identified a number of areas that need to be further researched to improve maternity services for obese mothers which include developing services that will engage pregnant women to address their obesity[8]. However, the study did not make any suggestions regarding what such interventions might look like.

Many studies consider service implications for obese pregnant women (BMI>29.9kg/m^2) but few if any consider the implications for overweight pregnant women (BMI >24.9kg/m^2). Most agree that the midwife is in the best position to deliver weight management education and support to mothers but fail to acknowledge the barriers in initiating support without offending or isolating overweight mothers. In one study investigating the experiences of obese and overweight pregnant women[10] mothers reported having experienced a range of negative care from the midwives treating them (although there were some positives) – this is a common theme in a number of studies[11] and opinion pieces[6,12,13]. This particular study seemed to highlight that many of the mothers considered their weight only as a problem for themselves and not for their child and indicated that ‘respectful and dignified treatment is of the utmost importance for their wellbeing and quality of life’. They also noted that it is necessary to individualise care for obese pregnant women, which involves taking time to give the women an opportunity to tell their own story, that caregivers might have to search for help from other professions in and outside the health-care boundaries, and that midwives and physicians need to be conscious about, reflect upon and verbalise their own attitudes.

In some studies[11] looking at the clinicians view of the problem there is a concern that obesity has been ‘normalised’ in society and that obese patients (BMI>30kg/m^2) are now not receiving the services they once were unless they have an additional health problem such as diabetes or hypertension. The study

also highlighted communication difficulties between clinicians and overweight mothers and common concerns regarding broaching the topic of weight management without victimizing the mothers and jeopardizing their relationship especially if the clinicians considered themselves to be unsuitable role models if they were also overweight or obese. Clinicians in the study also raised concerns about the motivation of mothers to take action towards weight management[5,11] and the availability of appropriate equipment and facilities in caring for overweight/obese pregnant women.

Ongoing Research:
There are a number of ongoing research projects in this area looking at specific interventions to help maintain appropriate weight gain/loss during pregnancy for overweight and obese mothers. However, no studies could be found on looking at the barriers to midwives of discussing weight gain issues with overweight and obese mothers, or on interventions specifically run by midwives.

Feasibility:
This proposed work has developed from a feasibility study looking at a specific dietary intervention project for women with raised BMI in early pregnancy. This study identified the reluctance on the part of midwives to discuss the issue of excess weight and weight gain in pregnancy, a reluctance which the research went on to show, was mostly due to them feeling that this information was highly emotive and could be perceived as professionals making a 'value judgment'. Additional qualitative research with midwives and sonographers has shown that additional support is required in order for them to feel able to raise and discuss the issue of weight and weight gain in pregnancy. A similar support need was identified to allow midwives to inquire about domestic violence and training was given such that this is now a routine part of the booking process. Focus groups with obese pregnant mums showed a reluctance to consider the issue to be 'their problem' which could be because it is never raised during appointments. This research was carried out by a local research team comprising a research midwife, clinical obesity lead for the RD&E NHS Foundation Trust and a senior research fellow in child health at the PCMD. It is hoped there will be support for developing a funding proposal. The team also has the support of the local maternity services and the lead midwife for community midwives has given her undertaking that study time would be found for such an intervention.

References

1) Kerrigan, A. M. and C. Kingdon "Maternal obesity and pregnancy: a retrospective study." Midwifery **26**(1): 138-46.
OBJECTIVES: to establish the incidence of obesity in the pregnant population in a large city in the North West of England, identify links between obesity and social deprivation, and compare outcomes of pregnancy in obese and non-obese women. DESIGN: retrospective cohort study using maternal records. SETTING: largest maternity hospital in Europe. PARTICIPANTS: 8176 women who gave birth at the study hospital in 2006. FINDINGS: data showed that 17.7% of women were clinically obese. Obesity rates increased with advancing age. The incidence of pre-eclampsia, gestational diabetes, induction of labour, caesarean section and fetal macrosomia was significantly higher amongst the obese population. No relationship was found between obesity and social deprivation. CONCLUSIONS: this study ascertained the exact incidence of maternal obesity in the local area and showed the increased risks associated with obesity and pregnancy. IMPLICATIONS FOR PRACTICE: this study supports the need for a shared-care approach to antenatal care and that obese women should give birth in consultant-led units. The support of a named midwife should be available to these women throughout the childbearing experience, and preconception care advocated.

2) Barger, M. K., M. Bidgood-Wilson, et al. (2006). "Caring for a woman at high risk for type 2 diabetes." Journal of Midwifery & Women's Health **51**(3): 222-6.
Women who are obese with a history of gestational diabetes are at risk for developing type 2 diabetes and metabolic syndrome. A weight loss of as little as 15 pounds can decrease these long-term risks. This case presentation reviews practical issues related to encouraging women to make important lifestyle changes and to adhere to taking cholesterol-lowering medications.

3) Bick, D. (2009). "Addressing the obesity epidemic: time for the maternity services to act now but what strategies should we use?" Midwifery **25**(4): 337-8.

4) Castro, L. C., R. L. Avina, et al. (2002). "Maternal obesity and pregnancy outcomes." Current Opinion in Obstetrics & Gynecology **14**(6): 601-6.
PURPOSE OF REVIEW: The rates of obesity are increasing rapidly in the United States and other countries. Because obesity is a major factor in the development of many chronic diseases, it is an important individual and public health issue. This review focuses on the pregnancy complications associated with maternal obesity. RECENT FINDINGS: Maternal obesity adversely impacts pregnancy outcome primarily through increased rates of hypertensive disease (chronic hypertension and pre-eclampsia), diabetes (pregestational and gestational), cesarean section and infections. It is associated with a higher rate of venous thromboembolic disease and respiratory complications, and may be an independent risk factor for neural tube defects, fetal mortality and preterm delivery. Maternal obesity also increases the risk of delivering a large for

gestational age or macrosomic neonate, who is in turn at an increased risk of subsequent childhood obesity and its associated morbidity. SUMMARY: Recommendations regarding the counselling of obese pregnant women and specific guidelines for the obstetrician, family physician, or midwife managing the pregnancy are presented. Cultural and political changes with the potential to decrease the epidemic of obesity in our society are discussed.

5) Claesson, I. M., A. Josefsson, et al. (2008). "Consumer satisfaction with a weight-gain intervention programme for obese pregnant women." Midwifery **24**(2): 163-7.
OBJECTIVE: to investigate women's attitudes and satisfaction with a weight-gain intervention programme during pregnancy. DESIGN: exploratory, descriptive study. Data were collected via interviews. SETTING: University hospital. PARTICIPANTS: 56 obese pregnant women who attended antenatal care at the University Hospital of Linkoping's obstetrical department and took part in an intervention programme aimed at reducing weight gain during pregnancy, between November 2003 and August 2004. FINDINGS: the interviews comprised several questions concerning attitudes and opinions of the programme. Most of the women expressed positive experiences with the treatment and would attend the programme if they became pregnant again. Most of the women stated that they had changed their eating and exercise habits during pregnancy, and almost all of them had continued with these new habits. Even though the weight gain goal of a maximum 6.9 kg was reached by less than half of the participants, most of the women were satisfied with their weight gain. A total of 71.4% of the women participated in aqua aerobics classes. They stated that they were most satisfied with this form of exercise, and that it also was a good social experience. KEY CONCLUSIONS AND IMPLICATIONS FOR PRACTICE: a pregnant woman herself must be actively involved in setting her own goals to prevent excessive weight gain during pregnancy. Considerable effort and support must be placed on discussing strategies, pitfalls and risks. In order for the woman to maintain the change in attitude and habits, she must probably be given continuous feedback and reinforcement over the long term.

6) Deery, R., S. Wray, et al. (2009). "'The hardest leap': acceptance of diverse body size in midwifery." Practising Midwife **12**(10): 14-6.

7) Herring, S. J., D. N. Platek, et al. "Addressing obesity in pregnancy: what do obstetric providers recommend?" J Womens Health (Larchmt) **19**(1): 65-70.
OBJECTIVE: Maternal obesity is associated with adverse pregnancy outcomes. To improve outcomes, obstetric providers must effectively evaluate and manage their obese pregnant patients. We sought to determine the knowledge, attitudes, and practice patterns of obstetric providers regarding obesity in pregnancy. METHODS: In 2007-2008, we surveyed 58 practicing obstetricians, nurse practitioners, and certified nurse-midwives at a multispecialty practice in Massachusetts. We administered a 26-item questionnaire that included provider self-reported weight, sociodemographic characteristics, knowledge, attitudes,

and management practices. We created an 8-point score for adherence to 8 practices recommended by the American College of Obstetricians and Gynecologists (ACOG) for the management of obese pregnant women. RESULTS: Among the respondents, 37% did not correctly report the minimum body mass index (BMI) for diagnosing obesity, and most reported advising gestational weight gains that were discordant with 1990 Institute of Medicine (IOM) guidelines, especially for obese women (71%). The majority of respondents almost always recommended a range of weight gain (74%), advised regular physical activity (74%), or discussed diet (64%) with obese mothers, but few routinely ordered glucose tolerance testing during the first trimester (26%), planned anesthesia referrals (3%), or referred patients to a nutritionist (14%). Mean guideline adherence score was 3.4 (SD 1.9, range 0-8). Provider confidence (beta = 1.0, p = 0.05) and body satisfaction (beta = 1.5, p = 0.02) were independent predictors of higher guideline adherence scores. CONCLUSIONS: Few obstetric providers were fully compliant with clinical practice recommendations, defined obesity correctly, or recommended weight gains concordant with IOM guidelines. Provider personal factors were the strongest correlates of self-reported management practices. Our findings suggest a need for more education around BMI definitions and weight gain guidelines, along with strategies to address provider personal factors, such as confidence and body satisfaction, that may be important predictors of adherence to recommendations for managing obese pregnant women.

8) Heslehurst, N., H. Moore, et al. "How can maternity services be developed to effectively address maternal obesity? A qualitative study." Midwifery. OBJECTIVE: to identify developments in maternal obesity services and health-care practitioners' views on how maternity services need to be further developed to be more effective in the care of obese pregnant women. DESIGN: follow-up qualitative study using purposive sampling, interviews and focus groups. SETTING: 10 maternity units in the North East Government Office Region of England, UK. PARTICIPANTS: 30 maternity unit health-care practitioners with personal experience of maternal obesity services. MEASUREMENTS AND FINDINGS: semi-structured interviews and focus groups were carried out with health-care practitioners representing each National Health Service trust in the region that provides maternity services to identify views on the barriers, facilitators, advantages and disadvantages of developing maternal obesity services, and how maternity services can be more effective in managing maternal obesity. Transcripts were analysed using thematic content analysis. Three dominant themes emerged: questioning maternal obesity service development; psychosocial issues and maternal obesity service development; and the way forward. KEY CONCLUSIONS: there has been a substantial improvement in the management of the health and safety aspects of maternal obesity over the last three years. However, more work is needed around the psychosocial issues, weight management and public health aspects of maternal obesity. IMPLICATIONS FOR PRACTICE: to meet the needs of obese pregnant women, maternity services should consider the transition of care between

pregnancy and the postnatal period, improve communication between hospital and public health services, and develop services that will engage pregnant women to address their obesity.

9) Jevitt, C. (2009). "Pregnancy complicated by obesity: midwifery management." J Midwifery Womens Health **54**(6): 445-51.
Obesity-related comorbidities such as gestational diabetes and hypertension have the potential to affect at least 25% of women in the United States. Midwives have been caring for and collaboratively managing these conditions in non-obese women for decades. Prenatal weight gain advice should be based on pregravid body mass index and aim for the lower end of the 1990 Institute of Medicine prenatal weight gain ranges. Obese women may require extra ultrasound and blood glucose testing during pregnancy. Pregnancy complicated by obesity may limit the place and style of birth. Midwives can integrate management techniques into the perinatal care of women whose body mass indices exceed 29 to reduce risk and future disease for mothers and newborns.

10) Nyman, V. M., A. K. Prebensen, et al. (2008). "Obese women's experiences of encounters with midwives and physicians during pregnancy and childbirth." Midwifery.
OBJECTIVE: to describe obese women's experiences of encounters with midwives and physicians during pregnancy and childbirth. DESIGN: a qualitative study using a phenomenological approach. Data were collected by means of interviews that were tape-recorded. SETTING: the women's homes or at a hospital in western Sweden. PARTICIPANTS: 10 women with body mass index >30, three primiparous and seven multiparous, who had given birth at a hospital in western Sweden in the period between October 2006 and September 2007 were interviewed four to six weeks after childbirth. FINDINGS: the meaning of being both obese and pregnant is living with a constant awareness of the body, and its constant exposure to the close observation and scrutiny of others. It involves negative emotions and experiences of discomfort. Feelings of discomfort increase as a result of humiliating treatment, whilst affirmative encounters alleviate discomfort and provide a sense of wellbeing. CONCLUSION AND IMPLICATIONS FOR PRACTICE: obese pregnant women are a vulnerable group because obesity is highly visible. Caregivers tend to focus on providing care to obese patients somatically, but are additionally in need of knowledge about care from the woman's point of view. Many obese women have negative experiences of health care that they have to overcome. It is necessary to individualise care for obese pregnant women, which involves taking time to give the women an opportunity to tell their own story. Caregivers have to promote health but it has to be done honestly and respectfully. In order to avoid judgemental attitudes and causing increased suffering for obese pregnant women, midwives and physicians need to be conscious of, reflect upon and verbalise their own attitudes and power.

11) Schmied, V. A., M. Duff, et al. "'Not waving but drowning': a study of the experiences and concerns of midwives and other health professionals caring for obese childbearing women." Midwifery.
OBJECTIVE: to explore the experiences and concerns of health professionals who care for childbearing women who are obese. BACKGROUND: obesity is increasing nationally and internationally and has been described as an epidemic. A number of studies have highlighted the risks associated with obesity during childbirth, yet few studies have investigated the experiences and concerns of midwives and other health professionals in providing care to these women. DESIGN: a descriptive qualitative study using focus groups and face-to-face interviews to collect data. Interviews were audio recorded and transcribed verbatim. Data were analysed using thematic analysis. SETTING: three maternity units in New South Wales, Australia. PARTICIPANTS: participants included 34 midwives and three other health professionals. FINDINGS: three major themes emerged from the data analysis: 'a creeping normality', 'feeling in the dark' and 'the runaway train'. The findings highlight a number of tensions or contradictions experienced by health professionals when caring for childbearing women who are obese. These include, on the one hand, an increasing acceptance of obesity ('a creeping normality'), and on the other, the continuing stigma associated with obesity; the challenges of how to communicate effectively with pregnant women about their weight and the lack of resources, equipment and facilities ('feeling in the dark') to adequately care for obese childbearing women. Participants expressed concerns about how quickly the obesity epidemic appears to have impacted on maternity services ('the runaway train') and how services to meet the needs of these women are limited or generally not available. CONCLUSION AND IMPLICATIONS FOR PRACTICE: it was clear in this study that participants felt that they were 'not waving but drowning'. There was concern over the fact that the issue of obesity had moved faster than the health response to it. There were also concerns about how to communicate with obese women without altering the relationship. Continuity of care, training and skills development for health professionals, and expansion of limited services and facilities for these women are urgently needed.

12) Vireday, P. and P. Vireday (2002). "Are you a size-friendly midwife?" Midwifery Today with International Midwife(61): 28-32.

13) Wickham, S. (2009). "Obesity: naming, blaming and shaming." Pract Midwife **12**(10): 20-1.