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**The views of pre-and post-natal women and health professionals regarding gestational weight gain: an exploratory study**

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## Abstract

### Objectives

To explore the views of pre- and post-natal women and health professionals regarding gestational weight gain. These views may inform the design of future interventions targeting gestational weight gain.

### Study Design

In total, five focus groups were conducted with pregnant women (n=9), post-natal women (n=14) and health professionals (including midwives, n=7). The focus groups were transcribed verbatim and analysed thematically.

### Main Outcome Measures

The women's views regarding weight gain in pregnancy and what the health professionals' thoughts were concerning the current provision of care they provide to their patients regarding gestational weight gain.

### Results

The women expressed a lack of concern regarding their weight in pregnancy, and reported not receiving any information regarding what constitutes healthy gestational weight gain. The pregnant women reported not monitoring their weight and assumed they would lose weight post-natally through breastfeeding. The health professionals reported being aware of the women's beliefs, however lacked information to give to the women relating to healthy weight gain.

### Conclusions

It is likely that the women lacked concern and knowledge regarding gestational weight gain due to not receiving information from their midwives and other health professionals regarding this issue. The health professionals were in turn unsure of what to advise women regarding appropriate gestational weight gain. By ensuring midwives and other health professionals have the knowledge and skills to discuss weight with pregnant women, the women in turn may be more motivated and confident in maintaining a healthy weight at this time.

## Keywords

Women, Health Professional, Prenatal Care, Gestation, Weight Gain, Focus Group, Postnatal Care

## Introduction

Pregnant women are increasingly overweight (body mass index [BMI] 25-29.9) or obese (BMI >30) in England, with approximately 25% of women overweight and over 15% of women obese during their first trimester [1]. Maternal obesity is therefore one of the greatest future challenges for maternity services in both England [2] and elsewhere [3]. Ironically, it is the weight that women gain during pregnancy but fail to lose after pregnancy that could lead to the onset of obesity [4], or to women starting further pregnancies in an unhealthy weight state [5]. The more weight women gain during pregnancy, the more weight they are likely to retain post-natally [6] and crucially, gestational weight gain has been found to be the most consistent predictor of post-natal weight retention [7]. In addition, excessive weight gain (that is more weight gained than recommended based on the woman's pre-pregnancy weight status as stated by the American Institute of Medicine, [8]) can increase the mother's risk of preeclampsia, risk of delivering by caesarean section and of giving birth to a large-for-gestational age baby [9, 10]. Importantly, these risks are similar for women in all pre-pregnancy weight categories [9].

Recent findings from intervention studies show that gestational weight gain can be kept at a healthy level in both healthy-weight women (BMI 18.5-24.9) [6] and overweight women [11]. In other words, excess gestational weight gain is preventable [12]. However, the factors that influence gestational weight gain are currently poorly understood [13] and more information is needed on women's views and knowledge regarding weight gain in pregnancy [4].

Past research conducted in England has found that the main sources of information the majority of women encounter with during pregnancy is their midwife [14] and the Pregnancy Book published by the Department of Health [15]. Health

professionals, including midwives, have previously reported mixed feelings regarding assessing and discussing gestational weight gain with pregnant women [16]. The Pregnancy Book is free to all expectant mothers and, although almost 200 pages long, provides limited information on gestational weight gain. Essentially the book merely informs women that ‘If we eat more than we need, this can lead to weight gain.’ (p 25) and ‘Putting on too much weight can affect your health and increase your blood pressure.’ (p 26). Importantly, there is no mention of the risks to the baby regarding excessive weight gain [15], such as infant macrosomia. If the woman is concerned regarding her gestational weight gain, it is suggested she speaks to her midwife or doctor (p 26) [15]. In sum, the information for women regarding gestational weight gain to date has been very limited.

In terms of intervention targets, gestational weight gain may be an easier and more practical target than pre-conception weight as most women do not come into contact with health professionals until they are pregnant. Additionally, all women, irrespective of pre-pregnancy weight, must be careful to not gain excessive weight in pregnancy [9], thus many women may benefit from an intervention targeting gestational weight gain [17]. It is important to take pregnant women’s views regarding weight into account to be able to develop effective interventions [18] and to increase the chance of intervention success, women need to be positive towards healthy weight management in pregnancy [17, 19]. Consequently, before designing an intervention targeting gestational weight gain we wanted to explore women’s views towards this issue. Although there is emerging evidence that English women are not very concerned about their weight gain in pregnancy [20], most of the research to date has been conducted in USA [21-23]. Thus, more exploration of English pregnant women’s views of weight gain in pregnancy is necessary [24] as well as the

views of health professionals. Health professionals, especially midwives, have an ideal opportunity to provide women with information about how their pregnancy is affected by their weight [2, 18]. Consequently, the aim of this study was to explore what English pre- and postnatal women know and think about appropriate weight gain in pregnancy and what health professionals' thoughts are about the current provision of care they provide to pregnant women regarding weight gain. The current study was commissioned and funded by a local council with the goal of informing future interventions targeting excessive weight gain (i.e. gain more weight than recommended by the Institute of Medicine, see [8] for more details) in pregnancy.

## Methods

### Setting

All participants were recruited from the same moderately deprived borough in the Midlands, England, where the participants either lived (women) or worked (health professionals). Due to the funders of this project insisting on complete anonymity for the participants, no data was formally collected regarding the women's parity or socioeconomic status or the participants' age and weight. The available demographic data are based on the researchers' observations and field notes and include; the women differed in parity and weight status (healthy weight to obese), and were mostly white British and varied between 18 and approximately 30 years of age. Moreover, the health professionals were all white British and varied in age between approximately 25 to 55 years of age as well as different in weight status (healthy weight to overweight).



## Participants

Five focus groups were conducted with a total of nine pre-natal women (two groups), fourteen post-natal women (two groups) and six health professionals (all women; two children's centre managers, two midwives and two social workers). One children's centre manager was unable to attend the focus group and was interviewed separately and one midwife attended a focus group with pre-natal women. Thus, in total, eight health professionals attended an interview or focus group. The women were recruited by their midwives from three children's centres (located in the same moderately deprived borough) where they attended pre- or post-natal classes respectively. This method of recruitment was used as the focus groups also included questions on planned services in these particular children's centres [see 25]. The health professionals were recruited through their workplace.

## Data collection and analysis

Focus groups were chosen for this study as they provide direct evidence regarding the similarities and differences of participants views and experiences [26] and were thus a suitable method to answer our research questions. The focus groups for pre-and post-natal women were conducted separately. An experienced researcher moderated all focus groups (and conducted the interview), with another researcher taking notes and operating the digital recorder. Open-ended questions were used to stimulate discussion and probes were employed to address specific issues regarding weight gain during pregnancy. A literature review and discussions with the stakeholders funding this work informed the questions asked (see appendix A). The pregnant women were asked about their knowledge and experience of weight gain during pregnancy. The

post-natal women were queried regarding their experience of gaining weight during pregnancy and what made them lose/retain this weight after giving birth. The questions for the health professionals focused on their views of and information they provided the women regarding gestational weight gain.

The focus groups lasted between 30 and 60 minutes, whilst the interview lasted for 30 minutes. All sessions were transcribed verbatim. Thematic analysis was used to find repeated patterns of meaning across all data sets (see 27). An inductive approach was adopted where the identified themes were linked to the data rather than the questions asked. The data was analysed using the following steps; firstly all transcripts were read once to enable the first author to become familiar with the data. Secondly, the transcripts were read again and initial themes were identified. Thirdly, these themes were refined by comparing the text included and excluded in each theme, before the essence of each theme was identified [27]. The lead author analysed all transcripts with the second author reading the transcripts and reviewing all themes. This study was approved by the University Ethics Committee and all participants gave consent to participate in the study and to have the focus groups/interview tape-recorded.

## Results

The participants' responses were clustered into four broad themes: (i) lack of concern regarding gestational weight gain, (ii) lack of advice and information regarding gestational weight gain, (iii) reluctance to monitor gestational weight gain, and (iv) difficulty in losing weight post-natally.

### (i) Lack of concern regarding gestational weight gain

The pregnant women generally stated that they were not very worried about gaining weight during pregnancy. All women reported knowing that gaining weight would be inevitable and found pregnancy a good excuse to eat unhealthy food as shown in the quote below from one of the focus groups.

*Don't worry about your weight, you can lose it afterwards, that's my motto. (P22, pregnant woman)*

*I don't think anyone can actually say that they don't eat junk food while they're pregnant. I think at some point during their pregnancy all women do eat junk food, even if they try not to. (P20, pregnant woman)*

*I do for nine months. It's a good excuse. (P21, pregnant woman)*

*Yeah that's it, sometimes you think it's just a good excuse. (P18, pregnant woman)*

*It is. I'll worry about Weightwatchers after. (P21, pregnant woman)*

Additionally, some of the women reported that having morning sickness made them eat those foods that would not make them feel ill.

*I think at the beginning as well it depends how your sickness is, because with me I just had to eat loads of toast, to make sure that I didn't feel sick, so I probably did put a load of weight on that I shouldn't have done at the beginning. But you just do what you need to do to make yourself feel a bit better don't you, at the beginning? (P17, pregnant woman)*

By contrast, one pregnant woman who already had a child described the difficulty of trying to lose weight after pregnancy.

*I didn't worry about it [weight gain] last time, I've worried about it more this time.*

*Because it's harder, to get off afterwards. (P19, pregnant woman)*

Despite the general relaxed view towards weight gain, the pregnant women realised there may be some health complications with gaining too much weight. In response to being asked if there was anything that would make the women change their weight-related behaviour, the women reported being worried about their baby's health.

*If it [weight gain] was affecting my baby's health, yeah. By the amount of weight that I was putting on. (P21, pregnant woman)*

When the health professionals were asked about the women's thoughts towards keeping a healthy weight, they showed awareness of the women's lack of concern for gaining too much weight in pregnancy. Further, the health professionals reported that some women were not concerned with their weight post-natally as they planned to have another baby before trying to lose weight.

*They're just saying, "I can't do it at the moment, I know I'm overweight." (P6, health professional)*

*We have mums say to us, "I put loads of weight on while I'm pregnant, but I'm not going to worry about it because I'm going to have another one." (P4, health professional)*

(ii) Lack of advice and information regarding gestational weight gain

All women were asked if they had received any information on how much weight a woman should gain in pregnancy. Whilst the post-natal women reported not receiving any information, the pregnant women reported relying on the internet to tell them what they needed to know.

*But they say on those websites that anything between one to three stone is fine, depends on your build... (P9, pregnant woman)*

*The average is about 26 pound or something, it says on the BabyCentre. (P15, pregnant women)*

Whilst the women acknowledged that they should be aware of their weight gain, they reported assuming that the midwives would discuss and inform them of appropriate weight gain if it was an important issue. In addition, the women also reported that receiving help from their midwife regarding their gestational weight gain would be helpful.

*It's 'cos my midwife wasn't concerned, she said it wasn't something she was going to check, so in my opinion it's not something that is that important if my midwife doesn't need to check it, 'cos she checks the important things. (P12, pregnant woman)*

*Yeah, 'cos, it's like, I know I should be keeping an eye on it myself, but it's nice to have someone who kind of knows a bit more, to be kind of helping you along. It's having to remember to eat whilst feeling really tired and having something kicking around inside, it's a lot to remember. (P11, pregnant woman)*

Regarding information given to women about gestational weight gain, the health professionals reported a lack of knowledge concerning how much weight women should gain. In addition, the health professionals also reported a lack of opportunity to discuss weight gain with the women as there was a lot of information to be communicated, however not every important issue could be discussed at the initial meeting between midwife and pregnant woman.

*They used to state in the pregnancy books how much you should put on, it doesn't anymore. It's like we stopped weighing. (P23, midwife)*

*But we're advising them on so much, we even have to get them to blow into a carbon monoxide monitor now for their smoking levels. It used to be like a 45 minutes appointment, it's going to be an hour and a half, and none of it's midwifery. It's all these other little factors, the alcohol, the drugs, that, it's completely different. (P2, health professional)*

The women also acknowledged that there was a lot of information dissemination at this first appointment and that it was difficult to digest it all whilst still coming to terms with the fact that they are pregnant.

*Other than your initial appointment where they just give you everything you possibly need to know and you go, "woah!" and try and digest it all. (P12, pregnant woman)*

*You're trying to get your head round the fact that you're pregnant anyway. Let alone hitting you with everything you should and shouldn't do. (P13, pregnant woman)*

The health professionals also reported that discussing the women's and their baby's weight can be a difficult and sensitive issue for some women.

*I think it has to be a continual process, because, people are incredibly sensitive about their weight. And you can really push people away if you don't, if your approach is totally insensitive. Because they can feel very, very criticised, and they do in terms of, if their baby is putting on too much weight and depending on how you actually manage that and talk to people about that, they can go away in tears. (P1, children centre manager)*

### (iii) Reluctance to monitor gestational weight gain

In addition to reporting a lack of concern and lack of advice and information regarding gestational weight gain, the women also reported not monitoring their weight. The reason for not monitoring their weight was explained by not wanting to know how much weight they had gained when pregnant.

*I've not weighed myself (P19, pregnant woman)*

*I haven't been on the scales. (P12, pregnant woman)*

*Unless you get on the scales, you don't [know what you weight]... (P21, pregnant woman)*

Other pregnant women mentioned that even if they knew how much weight they had gained, they would still not know whether it was due to the pregnancy or simply excess fat.

*I thought I had last time [gained too much weight] but then I had a nine pound baby, so it was all baby... (P21, pregnant woman)*

*I gained a lot of weight last time, but that was mainly water, I carried an awful lot of fluid when I was pregnant last time. (P20, pregnant woman)*

The health professionals reported being well aware that the pregnant women do not want to be weighed.

*...the girls know we're not going to weigh them. I do sometimes say, "do you want to be weighed?" They go, "oh no," they have a fear of the scales. (P23, midwife)*

*Oh yes, they say that in our surgery, they don't like to be weighed. (P5, health professional)*

The health professionals reported that they used to weigh the pregnant women but no longer did so due to a change in guidelines, indicating that if they still weighed the pregnant women they could monitor their weight. The pregnant women acknowledged that if they were weighed regularly, it would be easier to ensure they did not gain too much weight.



*...because we used to weigh them every time so we kept an eye on it [the women's weight]. Now we don't, now that's our guidelines telling us not to do that, now I think that ought to come back in, because then if the girls do start to put a lot on I can say, look you're actually over the quota you should be, and then even if they reduce down for a week or so, which they would do. (P23, midwife)*

*I think if you did get weighed on a regular basis you'd think, "oh my God, have I put that much on, I'd better cut down a bit now." (P18, pregnant woman)*

#### (iv) Difficulty in losing weight post-natally

During the discussions regarding the pregnant women's views towards weight gain, some of the women reported assuming that they would lose weight after giving birth. Losing weight through breastfeeding was mentioned by several of the participants, although it was acknowledged that not all women lost weight this way and that this weight loss would end when breastfeeding ended. Some of the post-natal women reported losing weight when breastfeeding.

*Then you stop [breastfeeding] and put half a stone on in a week, it's wicked. (P19, pregnant woman)*

*[Breastfeeding] It's like doing the Atkins diet! (P20, pregnant woman)*

*I hate to differ with that one, but I breastfed her and I never lost nothing. (P22, pregnant woman)*

*The first two weeks, I lost, by the second week I was back in the jeans I was in before I was pregnant. But as soon as I stopped breastfeeding, because he wasn't feeding properly and getting enough, I haven't seemed to lose any weight at all and it's just kind of stuck and I've plateaued a little bit out. (P32, post-natal woman)*

Further, the health professionals stressed that the women would inevitably lose weight when breastfeeding their baby and could therefore eat more. This is not necessarily correct, as whilst breastfeeding can contribute to reducing post-natal weight, it is unlikely to be sufficient to counter the effects of high gestational weight gain [see 28].

*You can eat more pies if you breastfeed (P23, midwife)*

*Well, if they're breastfeeding they're allowed to eat 500 more calories than they would normally because their bodies will lose the weight because they're breastfeeding (P2, health professional)*

The post-natal women reported difficulty in losing their excess weight after giving birth. These women mentioned that they struggled with motivation and eating healthily as their new baby took all their time, again resulting in them not being able to lose weight.

*I think you initially lose some [weight], because that's them that you're losing, and then you just think, ah forget it. (P31, post-natal woman)*

*Yeah, 'cos you don't get the time to eat healthy, like we're going back to the timescales, it's a matter of just grabbing what's in the fridge. If you've got a sausage*

*roll in the fridge, you think well that's quicker than putting a little salad together, I'll just take that out with me. If he's screaming and you're thinking I'm starving, you haven't got the time to sit there and think, right well, this is healthy, I'll make this, he can wait. It doesn't work like that. You have to attend to them and sort yourself out later. (P27, post-natal woman)*

## Discussion

The pregnant women in this study reported a lack of concern about gaining weight during pregnancy and received no advice from their midwife regarding this issue. Most women also reported not monitoring their weight and thus did not know how much weight they had gained during pregnancy, whilst some women acknowledged that being regularly weighed may help them manage their gestational weight gain better. Further, the women reported believing that if gestational weight was an important issue; their midwife would discuss it with them. Moreover, whilst some pregnant women assumed they would lose weight post-natally with the help of breastfeeding, the post-natal women reported difficulties in losing weight after giving birth. The health professionals were aware that pregnant women do not want to be weighed and indicated that not weighing them makes it difficult to monitor their weight. The health professionals also reported that their knowledge and opportunity to give the women information about gestational weight gain was limited. Additionally, it was acknowledged that weight needs to be discussed sensitively.

This is the first qualitative study conducted with English women and health professionals that focuses on gestational weight gain. Previous literature derives mostly from USA where guidelines regarding gestational weight gain have been in place since 1990 [8], hence it is important to assess the views of women in England

where there are no national guidelines regarding what constitutes appropriate gestational weight gain [29]. In addition to eliciting the views of pre- and post-natal women, this study also elicited the views of a group of health professionals. This adds to the literature as commonly only women and not their health providers are interviewed [for example 20, 21] or alternatively only health professionals are interviewed [for example 16, 30]. Including health professionals as participants allowed a comparison of views regarding gestational weight gain and whether they were aware of the women's views regarding gestational weight gain. An additional strength of the sample used was that post-natal women provided retrospective accounts of their views regarding gestational weight gain during pregnancy and their current views after giving birth whilst pregnant women shared their current views.

The present study recruited pregnant and postnatal women from three children's centres, thus the views presented in this study are those of women who attend these centres. It is acknowledged that not all pregnant or postnatal women attend children's centres, hence caution is needed when interpreting findings. Despite this, the participating women varied in parity, age and weight status and provided different points of view regarding weight management during and after pregnancy. One of the focus groups with prenatal women also included a midwife and it is possible that this may have influenced the women's reports. However, a close examination of the transcript of this focus group indicates that this is unlikely as the women reported not understanding the advice they had received regarding eating peanuts although the midwife in the focus group had provided them with this advice. Additionally, the transcript indicated how well informed a midwife can be of women's views of weight gain during pregnancy. The children's centre manager was

also well informed about pregnant women's views regarding gestational weight gain and that discussing weight can be a very sensitive issue.

Women have consistently been found to report that their weight does not matter so much when pregnant [20-22] and that they are more motivated to address their weight post-natally [20]. The current findings support these previous reports as well as showing that some women may not be concerned with their weight post-natally if they plan to have another baby. The women's lack of concern for their gestational weight gain is likely to be influenced by their lack of information from their midwife of why it is important to maintain a healthy weight in pregnancy. Whilst the Pregnancy Book briefly mentions gestational weight gain, it fails to provide any reasons for why keeping a healthy weight is important [15]. Findings from the current study, as well as past research [20-23, 31], clearly show that pregnant women need for more information regarding what constitutes a healthy gestational weight gain, the importance of it and how to maintain this weight.

Researchers have argued that health professionals play a vital role in providing women with pregnancy related information [2, 16, 18], such as the importance of keeping a healthy weight in pregnancy, and the health professionals in this study agreed with this. Due to the set-up of the current maternity services however, the health professionals did not have enough time to discuss this information. This has previously been reported by English health professionals and is partly due to all the pregnancy related information midwives have to provide to women [30]. In this study, this lack of gestational weight gain information was interpreted by the pregnant women as gestational weight gain being unimportant.

In addition to lack of time, the health professionals also reported a lack of knowledge regarding gestational weight gain. Importantly, the health professionals

reported that not knowing how much weight a woman should gain in pregnancy as well as not weighing the woman was a limitation of their care. In addition, some of the knowledge the health professionals passed onto the women were incorrect. For example, the health professionals argued that breastfeeding would aid weight loss. Whilst breastfeeding can contribute to reducing post-natal weight, it is unlikely to be sufficient to counter the effects of high gestational weight gain [28].

In addition to being given an opportunity to communicate gestational weight advice, health professionals must also feel confident that they can discuss weight with all women. This may be a difficult issue as women do not like to be told about the risks associated with excessive weight and pregnancy [16, 30]. It is thus reassuring that the health professionals in this study, in line with past research [16], were aware that weight issues may need to be discussed with great care. This may be especially important if the woman does not feel that she has any influence over her own weight or that weight is a temporary state [32]. Importantly, these findings support previous results from research conducted with health professionals in England [16] and Australia [33] concluding that training should be provided for health professionals regarding discussing weight gain and obesity in pregnancy.

Furthermore, it is important that health professionals can provide continuous weight management support and feedback throughout pregnancy and that the woman feels she is a part of the process by evaluating the advantages and disadvantages of changing her behaviour [19]. This tailoring of care and information may be especially important in regards to gestational weight gain, as both the Pregnancy Book, and the internet websites the participants reported visiting, only provide general advice. Moreover, it has recently been suggested that women's gestational weight gain should be monitored throughout pregnancy [2], and the health professionals in this study

agreed with this. Although this is against current practices and guidelines [29], the health professionals reported that it would be easier to discuss the women's weight if it was continuously monitored. This is in line with recent UK research which found that health professionals thought they should help women manage their weight during pregnancy [16]. Importantly, the women in this study agreed that being regularly weighed would help them monitor their weight in pregnancy.

### Clinical implications

The possibilities for midwives to advise on a healthy lifestyle for pregnant women should not be underestimated [18] and women have reported that their midwife was the most appropriate person to provide support [20] and that they are very satisfied with receiving this support regarding gestational weight gain from their health care provider [19]. Our findings show that health professionals need to be supported, in terms of being given knowledge and opportunity, to provide women with the information and tools to achieve a healthy gestational weight gain. Further, these findings support current national UK guidelines which state that health professionals need to have the skills to advise on the health benefits of weight management and risk of being overweight or obese during pregnancy [29]. Thus training for midwives and other health professionals is needed regarding gestational weight gain to ensure that they are aware of the factors that may influence a woman's weight gain and that they can identify which women should receive what advice and additional care. This training should also include giving health professionals the skills to provide women with realistic and health-promoting advice regarding weight change when breastfeeding and weight loss post-natally and inform women that breastfeeding should not be relied on as a way of losing weight after pregnancy [34].

When lacking information, women have been found to independently decide what weight gain is appropriate for them [24], often leading to excessive gestational weight gain [35]. Consequently women also need, in addition to information, consistent support regarding how to prevent unhealthy weight gain [36]. Furthermore, and crucially, there are currently no national guidelines for healthy gestational weight gain in the UK [29] and these are urgently needed [16, 37] to ensure health professionals know what information to discuss with women.

Crucially, midwives need to be able to tailor their care for the woman based on her needs [32]. Considering midwives do not have much time to do this; advice must be kept concise. Pregnant women have previously reported wanting individualised advice regarding weight [21] and not only does this seem better from a quality of care point of view, but a recent study found that women found individualised weight goals very motivating [19]. Thus, to conclude, future interventions targeting pregnant women's weight gain may in the first instance need to target midwives and other health professionals to ensure they have the knowledge, skills and opportunity to help women maintain a healthy weight in pregnancy. Furthermore, it is important for intervention success that pregnant women are motivated to keep a healthy weight in pregnancy [17, 19], and findings from this and other research [20] indicates that to increase women's motivation regarding keeping a healthy weight in pregnancy, the information given to women should include the benefits to their baby if they avoid excessive weight gain. It is important that health professionals realise how essential information on gestational weight gain is, and manage to integrate it into their discussion with women to avoid the 'information overload' women and health professionals mention both in this study and previous research [20]. This will make it difficult to motivate women to be healthy during pregnancy.



## Implications for intervention

### Conclusion

In sum we found that women lacked concern regarding their gestational weight gain. This is likely to be due to receiving inadequate information from their health professional regarding this issue. The health professionals in turn lack knowledge and opportunity regarding what to advise women regarding excessive gestational weight gain. By ensuring midwives and other health professionals have the knowledge, skills and opportunity to discuss weight with the women in their care, the women in turn may be more aware of the risks of inappropriate weight gain in pregnancy and be more motivated to maintain a healthy weight in pregnancy.

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## Appendix A

### Sample of focus group questions for the pregnant participants

1. Do you know how much weight gain you should have during pregnancy?
  - a. Has anyone discussed this with you?
2. Do you think that you have gained excess weight during your pregnancy?
  - a. If yes, why do you think that you have gained excess weight and could anything have been done to help you prevent this?
  - b. If no, what has helped you to not put on excess weight?

### Sample of focus group questions for the post-natal participants

1. If you gained excess weight during your pregnancy, what do you think contributed to your weight gain during pregnancy?
2. If you did not gain excess weight during your pregnancy, what helped you to not put on excess weight?
3. If you gained excess weight during your pregnancy, what has stopped you losing weight since giving birth?
4. If you gained excess weight during your pregnancy, what has helped you to lose weight since giving birth?

### Sample of focus group questions for the health professional participants

1. Do you encourage women to maintain a healthy weight in pregnancy? How?
2. What information do you provide regarding how much weight to gain during pregnancy?
3. What do you think this group knows about how much weight to gain in pregnancy?