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# Perinatal Weight Management: A Qualitative Stakeholder Investigation of Healthcare Professionals and Service Users

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## ABSTRACT

**Aim:** Maternal obesity is a public health challenge, increasing the risk of maternal and perinatal complications, and is a significant predictor of long-term maternal and child weight. Despite guidelines around weight management and antenatal care, efforts to promote perinatal weight management have encountered limited success, with more evidence needed to understand how best to design and target interventions. This paper reports the experiences and potential approaches for perinatal weight management, from the perspectives of postpartum women and healthcare providers.

**Design:** Qualitative.

**Methods:** One-to-one interviews and focus groups were held with postpartum women and a broad range of healthcare providers involved in perinatal care, including midwives, health visitors, dieticians, general practitioners, and obstetricians.

**Results:** Fourteen individual interviews and three focus groups were conducted. Three interconnected themes were identified across all stakeholder groups. First, recognition of an unmet collective need to address perinatal weight, complicated by the sensitivity of the topic. Second, challenges to addressing weight management across the perinatal period, including confusing and often conflicting messages. Third, opportunities for a multi-stakeholder approach to weight management were suggested. Stakeholder recommendations included a local level approach, consistent messaging, positive narratives, and improved training to enhance multi-agency collaboration on providing perinatal weight management support to address the needs of local communities.

**Conclusions:** Our findings highlight opportunities for a multi-stakeholder approach to weight management which include shifting the narrative from punitive weight loss messages to proactive adoption of healthy lifestyle behaviours across the family unit, the timing of advice, and targeted training of those who deliver it.

## 1 | Introduction

Obesity is classified by the World Health Organisation (WHO) as a chronic, relapsing disease arising from complex interactions between genetics, biology, behaviour, and wider environmental and societal factors, and is widely recognised as a significant global public health challenge (World Health Organization 2024). In public health and clinical practice, body mass index (BMI) is commonly used as a pragmatic, population-level indicator, despite recognised limitations in its ability to accurately reflect body composition, fat distribution, and metabolic

health at the individual level. BMI is calculated as weight in kilograms divided by height in metres squared ( $\text{kg}/\text{m}^2$ ) and is used to categorise individuals as underweight, normal weight, overweight, or obese (World Health Organization 2024).

Rates of maternal obesity have risen alongside that of the general population, and it is estimated that up to 30% of pregnant women in the UK are living with obesity (Kankowski et al. 2022). In the UK, BMI is typically calculated at the first face-to-face antenatal appointment, where height and weight measurements are offered to inform clinical assessment

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and care planning (National Institute for Health and Care Excellence 2021). Maternal overweight and obesity are associated with increased risks of complications during pregnancy and represent a significant predictor of longer term maternal and child health outcomes (Kim and Ayabe 2023). Compared with women with a BMI within the recommended range, women living with obesity are more likely to experience postpartum weight retention and subsequent weight gains, increasing the risk of obesity in the long term (Kim and Ayabe 2023; Makama et al. 2021). Lifestyle behaviours, including dietary intake and physical activity, contribute to both gestational weight gain and postpartum weight trajectories, and the importance of postpartum support and intervention is well documented (Makama et al. 2021; McKinley et al. 2018). In the UK, women with a BMI of  $\geq 30$  kg/m<sup>2</sup> are recommended to receive early or additional testing for gestational diabetes, alongside routine screening offered to all pregnant women; those with a BMI of  $\geq 40$  kg/m<sup>2</sup> may be referred to specialist services during pregnancy (National Institute for Health and Care Excellence 2021).

The United States has published gestational weight gain guidelines that use pre-pregnancy BMI to determine recommended weight gain during pregnancy, and these are widely used in many developed countries as a framework for reporting gestational weight gain (Institute of Medicine and National Research Council 2009). However, such guidance has not been formally adopted in the UK, where clinical guidelines highlight ongoing uncertainty regarding optimal weight change during pregnancy. As a result, regular weighing and intentional weight loss are not routinely recommended in UK perinatal care, with greater emphasis placed on supporting healthy dietary intake and physical activity before and during pregnancy (National Institute for Health and Care Excellence 2025). Nevertheless, when the US guidelines are applied as an indicator of gestational weight gain, UK-based research suggests that nearly half of pregnant women gain weight in excess of recommended ranges (Hollis et al. 2017), indicating a need for clearer guidance. In response to this international variation and uncertainty, the World Health Organisation has called for the generation of global data on gestational weight gain to inform the development of internationally relevant recommendations (World Health Organization 2023).

Also of importance is the fact that 3%–4% of women in the UK enter pregnancy underweight, having a body mass index of  $< 18.5$  kg/m<sup>2</sup> at the start of pregnancy (Burnie et al. 2022). Whilst being underweight can provide protection against several antenatal and intrapartum complications, low BMI can also be related to underlying organic disease and/or eating disorders and may also indicate the need for support in adopting a healthy or healthier lifestyle (Burnie et al. 2022). Physical issues, including tiredness and recovery from pregnancy and delivery, must be reflected in professional decisions about initiating conversations about weight management.

## 2 | Background

Efforts to promote perinatal weight management have encountered limited success, and more evidence is needed to understand how best to design and target interventions (Dodd

et al. 2018; Kim and Ayabe 2023; McKinley et al. 2018). In this paper, perinatal weight management is used as an umbrella term encompassing approaches to supporting healthy weight trajectories and related lifestyle behaviours before pregnancy, during pregnancy, and following childbirth, including the prevention of excessive gestational weight gain and the management of postpartum weight retention. Although these phases are distinct in their physiological demands and clinical goals, they are closely interrelated in terms of longer-term maternal and child health outcomes. A substantial body of research has examined interventions aimed at preventing excessive gestational weight gain, most commonly through dietary modification, physical activity promotion, or combined lifestyle approaches. Evidence from systematic reviews suggests that such interventions can achieve modest reductions in excessive gestational weight gain, although findings are inconsistent and effects do not reliably extend into the postpartum period (Dodd et al. 2018). Postpartum interventions targeting diet and physical activity have similarly demonstrated small to moderate short-term reductions in weight retention, with limited evidence of sustained impact beyond the intervention period (Dodd et al. 2018; Kim and Ayabe 2023; McKinley et al. 2018). Considerable heterogeneity in intervention content, intensity, and timing contributes to ongoing uncertainty regarding optimal approaches to perinatal weight management and their longer-term effectiveness.

Despite national and international guidance emphasising the importance of a healthy diet and physical activity across the perinatal period, there remains a lack of consensus regarding when weight management support should be initiated, particularly following childbirth, and what constitutes an appropriate and sustainable rate of weight change in the postpartum period (Dodd et al. 2018). In the UK, routine weighing and intentional weight loss during pregnancy are not recommended, with guidance instead focusing on supporting healthy behaviours rather than weight targets (National Institute for Health and Care Excellence 2021, 2025). However, evidence indicates that a substantial proportion of postpartum women experience excessive gestational weight gain and retain weight postpartum, highlighting a need for clearer and more consistent approaches across the perinatal pathway (Hollis et al. 2017).

Efforts to address perinatal weight management are further complicated by the sensitivity of weight-related discussions and the presence of weight stigma within healthcare settings. Weight stigma refers to negative attitudes, assumptions, or discriminatory behaviours directed towards individuals based on body weight and has been widely reported by women living with overweight and obesity during pregnancy and the postpartum period (Goddard et al. 2023; Keyworth et al. 2018). Experiences of judgement or blame can undermine trust, reduce engagement with services, and negatively impact psychological wellbeing. National guidance therefore emphasises the use of person-first, non-stigmatising language, seeking permission before initiating discussions about weight, and framing conversations around overall health and wellbeing rather than weight alone (National Institute for Health and Care Excellence 2021, 2025).

The postpartum period has been identified as a potentially opportune time for lifestyle intervention, due to heightened awareness of health and wellbeing and increased motivation to adopt

healthier behaviours for the benefit of the wider family (McKinley et al. 2018). However, women have reported receiving limited, unclear, or conflicting advice regarding diet, physical activity, and weight management after childbirth, particularly in relation to breastfeeding and recovery following pregnancy and delivery (Nolan et al. 2024; Tyldesley-Marshall et al. 2021). Evidence remains inconclusive regarding the optimal timing, content, and delivery of postpartum weight management support, and which approaches are most acceptable and effective for women with differing needs and circumstances (Tyldesley-Marshall et al. 2021). Perinatal weight management is delivered within a complex, multi-professional healthcare system involving hospital-based and community-based midwives, health visitors, general practitioners, obstetricians, dietitians, and other allied health professionals. Each professional group has contact with women at different stages of the perinatal journey, creating multiple opportunities to promote healthy behaviours and provide appropriate support. However, research suggests that weight management is often deprioritised relative to other aspects of care, and that healthcare professionals may lack confidence, training, or clarity regarding their role in initiating and supporting weight-related conversations (Keyworth et al. 2018; Nolan et al. 2024).

Variation in local service provision and referral pathways further contributes to inconsistent messaging and fragmented care. A recent synthesis of practice across 28 NHS Trusts in England (Goddard et al. 2023) examined how national NICE guidance influences local approaches to postpartum weight management. The authors found that practice was frequently shaped by a medically oriented, practitioner-led approach, with emphasis placed on surveillance, BMI measurement, and risk communication. Such approaches have been reported as misaligned with the partnership-based, sensitive communication advocated in national policy and may contribute to women feeling judged or disengaged from services (Goddard et al. 2023). Recent UK Government policy has similarly prioritised pharmacological and surgical responses to obesity, with comparatively limited emphasis on behavioural, social, and contextual drivers of weight gain (UK Government 2024). This highlights the need for greater attention to non-medical approaches to perinatal weight management and improved understanding of how national recommendations are interpreted and enacted in routine practice.

Initiatives such as Making Every Contact Count (MECC) aim to support opportunistic, preventative health conversations across healthcare encounters by embedding health promotion within routine care (NHS England 2025). MECC is a UK public health approach that encourages healthcare professionals to use routine interactions to initiate brief, non-judgemental conversations about health behaviours, focusing on asking, advising, and signposting to support. The approach aims to promote positive behaviour change by embedding preventative health discussions into everyday practice rather than relying solely on specialist services. However, there is limited evidence on how such initiatives are operationalised in the context of perinatal weight management, particularly given the sensitivity of the topic, competing clinical priorities, and the involvement of multiple professional groups across the care pathway.

While research has considered perinatal weight management interventions, there is limited focus on how healthcare

professionals understand, experience, and enact weight management approaches across pregnancy and the postpartum period (Goddard et al. 2023; Keyworth et al. 2018; Tyldesley-Marshall et al. 2021). Understanding healthcare providers' perspectives is therefore essential to informing the development of coherent, acceptable, and non-stigmatising ways of delivering care that reflect both policy aspirations and the realities of clinical practice. This study was therefore designed to provide an in-depth understanding of healthcare providers' and postpartum women's perspectives on perinatal weight management approaches.

## 2.1 | Aims

The aim of this study was to investigate the experiences of healthcare professionals and postpartum women towards perinatal weight management, healthy lifestyle support, and service delivery.

## 3 | Methods

### 3.1 | Study Design

This was a qualitative interview and focus group study. The research question asked: "What are the experiences of healthcare professionals and postpartum women towards perinatal weight management, healthy lifestyle support, and service delivery?"

### 3.2 | Setting and Participants

Six key stakeholder groups relevant to best practice for perinatal weight advice were identified by the research team comprising health researchers and a general practitioner (GP) with a special interest in maternal care. These stakeholders comprised 6 postpartum women (3 in each focus group, up to 12 months postpartum), and five healthcare provider groups involved in pre- and postpartum care (obstetricians, GPs, midwives, health visitors, and dietitians). To both reduce location bias in the type and range of perinatal services these groups offered or accessed, and to also compare perspectives across service providers inputting into a shared population, all stakeholder participants were recruited from one healthcare locality in the North of England. To enable a broad discussion of perinatal weight issues, there were no additional eligibility criteria, beyond belonging to one of the above six stakeholder groups and having an interest in perinatal weight loss.

Recruitment was primarily via letter, which included a participant information sheet and consent form. GPs were contacted via practice managers, and midwives and health visitors were identified and contacted via service leads and managers. Postpartum women were identified by a maternity group coordinator, involved with an online forum and community-based group for women up to 12 months postpartum. Dietitians were initially approached directly by telephone contact by the researcher. Written informed consent for all stakeholder groups was obtained prior to the interviews and focus groups. Ethics approval for the study was granted by the University of Sheffield Ethics Committee and R&D Governance approval was granted by Sheffield NHS Foundation Trust R&D Board (Reference Number 005376).

### 3.3 | Data Collection

The qualitative study design involved a pragmatic use of interviews (in-person or via telephone) and focus groups, in response to the differing time and travel constraints of the six key stakeholder groups (Table 1). Interviews and focus groups were conducted by an experienced qualitative research associate, either face to face (interviews, focus groups) or via telephone (interviews). Data collection took place at public locations (village hall for the GP and maternity user focus groups) and university premises for some of the interviews with professionals, to accommodate the requirements of interviewees. We convened focus groups with GPs as we sought a collective discussion. This was convened at a pre-scheduled meeting with this GP group who meet several times a year representing local practices, to discuss key issues in primary care. We sought permission to use part of this meeting to conduct a focus group. We were not able to identify other professional groups for which they could attend a focus group due to the time commitments of the professionals.

We also convened focus groups with postpartum women to capture collective discussions about weight management during postpartum; the option of an interview was declined in favour of a focus group. This turned out to be a hard-to-reach population, as we were limited in recruiting additional service users other than through our maternity user group, so could only recruit 6 participants. Each focus group included three service users. Although the small number was a limitation to the depth and diversity of the data collected, the discussion offered important insights into the lived experiences of weight management and service support at postpartum.

The researcher ontology was critical realist. This assumes that an objective reality exists but there are different ways to understand it. We stopped data collection for the healthcare provider interviews when data saturation was reached. The aim of the service user focus groups (postpartum women), however, was to provide additional end user perspectives. We cannot conclude that data saturation was reached in these focus groups, as the aim was to explicitly use the women's data as service-user perspectives that complemented the provider data, rather than aiming to achieve equal saturation across all stakeholder groups.

Interview and focus group discussions were guided by semi-structured topic guides. Core questions were consistent across data collection methods and reworded in line with each stakeholder group (Table 2). Interviews were audio recorded with permission and supplemented with field notes taken by the researcher post-interview to provide descriptive contextual information. Audio recordings were independently transcribed by a transcription company. We used the SRQR reporting checklist (O'Brien et al. 2025), included in the [Supporting Information](#).

### 3.4 | Data Analysis

Interview and focus group audio recordings were transcribed verbatim. Data were analysed using thematic analysis, informed

by constant comparative methodology (Braun and Clarke 2006). The transcripts were coded in N-Vivo and subjected to interpretation by the research team. Initial iterative analysis was conducted concurrently with ongoing data collection by the research associate and the Principal Investigator, and findings discussed regularly with the core research team (including a GP and Maternity User representative). The postpartum women participated as research participants in the focus groups only and were not involved in the analysis or thematic development. The maternity user representative was involved in discussion of the interview and focus group transcripts during team meetings. Her input into the analysis did provide an end user perspective of the findings, providing insights based on experience of facilitating the maternity user group for many years. Her contribution into the analysis of the transcripts and theme development included knowledge of local services, and the 'everyday' challenges facing service users around weight management during postpartum, such as work pressures, time commitments and access to community healthy lifestyle and exercise classes. This ensured the analysis was methodologically robust and enabled emergent findings to inform subsequent interviews and focus groups.

To minimise researcher bias, further independent thematic analysis was undertaken by independent health researchers (LW, LS, TC) following completion of data collection, and themes finalised in agreement with the wider research team. We identified key codes relating to specific views and experiences and grouped them together. The research team then examined these codes in data clinics to compare interpretations. The research team also met several times to compare notes on selected transcripts to refine our interpretations. The constant comparative technique involved comparing coded text linked to a theme across different participants. We examined differences and similarities between them and discussed their significance in team meetings.

### 3.5 | Rigour and Reflexivity

The research team met at regular weekly 'data clinics' to review the data collected and discuss the emergent themes to review interpretations and overall focus of the study question and topic guide. The topic guide was amended several times in view of emergent themes from ongoing data collection. This allowed topics to reflect findings from the interviews and focus groups. The findings were also presented to the maternity user group facilitator and a small sample of maternity user group participants and health professionals to assess if they reflected their experiences.

## 4 | Findings

Fourteen individual interviews were conducted with representatives across five stakeholder groups (6 midwives [3 hospital-based; 3 community-based], 3 health visitors, 2 dietitians, 1 GP, and 2 obstetricians); interviews lasted 30–60 min. Additionally, one GP focus group ( $N = 7$ , 90 min) and two postpartum women focus groups ( $N = 3$  per group, 120 min each) were conducted.

**TABLE 1** | Semi-structured topic guide with core interview and focus group questions.

Core questions	Suggested prompts
Has weight management been a challenge prior to, during or after pregnancy?	What have been the key challenges in advice and support in this regard?
How have you/your clients attempted to manage weight in the context of pregnancy?	How successful has this been? Which resources have you/they sought?
What have been the key barriers to managing weight prior to, during and after pregnancy?	What type of information would you/they find helpful?
What are the key challenges for postpartum weight management?	How did you/they try to resolve them? How do these compare to the challenges prior to, and during, pregnancy?
What types of services, advice, or support have you provided/received to manage postpartum weight effectively?	Have they been helpful? Who should provide these (e.g., Dietician, GP, health visitor, etc.) Should separate services be created to provide support to women at various stages of pregnancy with weight management? What else would be helpful?
How likely are you/they to act on the key public health messages relating to exercise, diet, healthy lifestyles?	
When do you think weight management or weight 'issues' should be raised with women? For example, Prior to, during or after pregnancy?	Why at this time? What is the most sensitive and effective way of achieving this? In an ideal world what types of healthcare approaches are most appropriate and effective in relation to postpartum weight management?

*Note:* Order, content, and wording of questions are responsive to different stakeholder groups and data collection formats.

**TABLE 2** | Interview and focus group participants.

Participant job description	Interview or focus group
Health visitor	3 Interviews
Community midwife	3 interviews
Dieticians	2 interviews
GP	1 interview
Midwife (Hospital)	3 interviews
Obstetricians	2 interviews
GP	1 focus group
Maternal Group Women during post-partum	2 focus groups
Total	14 interviews 3 focus groups

Three interconnected themes dominated the interview and focus group data: (a) recognising an unmet collective need to address perinatal weight, (b) challenges to addressing weight management across the perinatal period, and (c) opportunities for a multi-stakeholder approach to weight management. These themes are discussed below, with illustrative quotes.

#### 4.1 | Theme 1: Recognising an Unmet Collective Need to Address Perinatal Weight

All stakeholder groups recognised the issue and increasing prevalence of perinatal obesity within their community:

■ The numbers are too high. We have about 400-500 women delivering here with BMIs over 40. OK, so, about 40% of our population.

(Obstetrician 1)

However, while there was agreement that advice should be given throughout the perinatal period, not just after delivery, several participants from the health professional stakeholder groups noted it was not something they always focused on:

■ I have to say, I don't always ask, but maybe I should ask.

(GP1)

While one GP acknowledged that advice could be easily incorporated into routine postnatal contacts, others from the obstetrician and midwife stakeholder groups felt they did not always have the right level of knowledge to deliver this advice. Additionally, there was a lack of clarity among the health practitioner groups as to what knowledge and role they each held regarding perinatal weight management. While community-based midwives noted that perinatal weight management was not a priority focus for their profession, the obstetricians conversely viewed them as better placed than other health practitioners to provide this support:

■ Whereas a midwife could give that support then they could deliver that. And that's why I said earlier, I think, midwives should, and they may come back and say but we already do, I don't know, but you would imagine that as a public health issue they're the ones that have got contact with most patients.

(Obstetrician 2)

Further supporting this lack of clarity regarding stakeholder knowledge and roles, there was an assumption of an existing stakeholder referral pattern. However, this supposed pattern was not always confirmed by those identified as being responsible. For example, although community midwives were often noted by other stakeholders as having an integrated referral system, this was not something they identified as existing themselves:

■ ...you know, when if they present with a high BMI the midwives would automatically refer them into the consultants who are consultant-led so it's sort of like a protocol then isn't it.

(Health Visitor 1)

Stakeholders were in agreement that raising the issue of weight and obesity was one which required sensitivity. Additionally, they noted the issue was further complicated in relation to whether women accepted their weight as a health risk factor or not. Community midwives and health visitors expressed concern that addressing maternal weight may negatively impact their relationship with their client and potentially lead to their nonattendance at appointments. As such, the health visitors had adopted an approach of relying on the mother to mention weight as an issue, rather than raising it themselves:

■ And, you know, if we went in and sort of started saying about their weight, I would feel like that I was not being supportive, I suppose. I would want them to say it to me first rather than me saying it to them.

(Health Visitor 1)

Other stakeholders referred to approaching the issue more broadly and proactively. Directly targeting maternal overweight or obesity issues could come across as punitive. However, presenting weight management within the wider context of the general health and wellbeing of the family unit made it easier to talk about:

■ Self-care can be a low priority for women, but issues around weight-loss may be more likely to be addressed if it is put within the context of improving family health.

(Community Midwife 1)

Given the above views around the importance of maternal weight, and a current lack of knowledge and/or agreement around who, and how, best to address it, all stakeholders agreed that a uniform approach to referral and advice should be adopted:

I think it would help to have everybody giving the same advice because I have heard midwives say to people, eat whatever you like if you breastfeed, because you know, I think if they say, you don't need to worry too much about trying to lose weight, you don't want to starve yourself.

(R7 GP FG)

## 4.2 | Theme 2: Challenges to Addressing Perinatal Weight Management

All six stakeholder groups noted perceived challenges to perinatal weight management. These included minimal and/or confusing information, a lack of accessible services, and competing priorities. These challenges were put into context by several of the postpartum stakeholders, who noted their early life course experiences did not always align with healthy lifestyle behaviours:

I wish I'd grown up in a household where fitness and just going out and doing activities was more common. But it wasn't, and I think it would have actually greatly impacted my later life if I'd had that.

(Mother 2, Focus Group 2)

All stakeholders agreed that information and resources about weight management could be challenging for women to access. Information was often delivered passively, such as leaflet stands in waiting rooms, and often the health practitioners were not aware of what materials were available at their premises. To improve access, the postpartum stakeholders suggested providing wider advertising in the areas where new mothers meet and engage, which in turn may lead to greater uptake of information and resource use:

But then word of mouth as well...Toilet doors or baby changing rooms in supermarkets if there's a little poster where you're sitting changing your baby's nappy and there's a poster in front of you oh that sounds quite nice. And it's just a Facebook page, so you can go oh I can remember that name and type it in later.

(Mother 2, Focus Group 1)

Information around weight management was also noted as confusing and often conflicting. Different messages were given both within and between stakeholder groups, and several health practitioners noted their own lack of specialist knowledge around postpartum care. This made them hesitant to address issues such as postpartum nutrition, with some feeling they needed more support and guidance around addressing sensitive weight issues and providing nutritional advice to clients:

I think probably just a bit of guidance about how, because it's such a sensitive subject, you know, how to sort of, opening questions that would be good, you

know things that we can, ways that we can get in to talk about that.

(Community midwife 1)

For postpartum women who had not come from a background where healthy lifestyle behaviours were encouraged or reinforced, and those who were first time mothers, there was a need for clarity and consistency in both the type of weight management information and where they could access it:

I think it needs to be signposted, like where you get this information from as well. I think it needs to be much clearer. Particularly as a breastfeeding mum, it's hard to know, because I'm hungry all the time at the moment. And I'm guessing that's because I'm breastfeeding, and it's getting that balance isn't it, between not eating too much but eating enough to maintain your body.

(Mother 1, Focus Group 1)

A second challenge to perinatal weight management was the level of access to services supporting health and wellbeing. Community midwives cited the recent closure of council-run swimming facilities that had provided perinatal aquacise classes; together with the mothers they noted the corresponding financial barrier to travel outside the area to access similar services:

I have women that sometimes struggle even to get to their appointments because they can't afford the bus fare, even in pregnancy. So I think to actually to go into groups and things like that, they'd struggle with.

(Community Midwife 2)

Additional to financial challenges, several of the postpartum women cited psychological factors such as confidence as a barrier to accessing services:

I think one of the biggest things is confidence as well. And as a new mum going out and meeting new mums it's important. But when I've asked about what groups are, particularly when he's tiny, I've just been told well there's breastfeeding groups. But actually if there was something like an exercise group that you could go to, that would be really nice.

(Mother 2, Focus Group 1)

Mothers with more than one child also talked about having to manage and prioritise the needs of multiple children, often in the context of services aimed at first time mothers:

Because what is there for women who have got a newborn and a three or four-year-old? It's all, bring your baby in your pram, put it in front of you so you can do your exercise, buggy push, all the rest of it... And it's very often the second baby that finishes off your body...I think with having the two it's definitely

harder. Because with my first I just, he would like to sleep in his pushchair anyway, and I would just walk miles and miles... and I did probably get fitter and healthier from doing that. But with him being there he doesn't like the buggy board.

(Mother 2, Focus Group 2)

However, examples of inclusive practice were also highlighted by some health professionals, addressing the pragmatic needs of new mothers with multiple children:

We had them bring along, erm, cos a lot of the women have a baby and toddler. So, we do encourage them to bring everyone. A part of the Children's Centre policy is to always ask for every group, try to involve their partner as well or even the main male in the household.

(Dietician 3)

### 4.3 | Theme 3: Opportunities for a Multi-Stakeholder Approach to Weight Management

Following on from recognition of the need to address perinatal weight management, and acknowledgement of the challenges that entails, stakeholders suggested ways forward. A multi-stakeholder approach was favoured, centred around two key aspects of changing the narrative around weight management and the timing of giving advice.

Several stakeholder groups were clear that the narrative around weight had changed. A punitive focus on individual weight loss was no longer appropriate, with dieticians also noting that having a BMI in the 'normal' zone did not by default mean a person had healthy eating habits. Instead, a new narrative was needed, with the focus now shifted to the adoption of healthy lifestyle behaviours across the family unit:

I think it should be advice on how to be healthy, not how to lose weight. I think a lot of people focus on losing weight, and if that's your main goal you see people joining Weight Watchers, Slimming World, where they're told to eat all this processed low fat stuff. And that will make you lose weight, but you're not actually changing and making a healthy lifestyle. And then you stop and you put it all back on. You need to emphasise that people should want to be healthy, and that's the most important thing. Because you're being healthy, you're bringing your baby into a healthy environment; they're going to grow up seeing good habits.

(Mother 1, Focus Group 1)

Delivering this narrative was viewed as a multi-stakeholder approach, aligned with the rotation of healthcare providers along the perinatal journey. However, providers often worked in silos, and this discontinuity of care meant some women

were left without onward referral for weight management support:

I mean it's about continuing or giving them a pack or something. You know, informing them of what to do. Or you know, yeah, it's like, it sounds like when they have the babies, they're just dropped and that's it.

(Dietician 2)

Addressing this, key stakeholders were identified at different stages of the perinatal journey. In the antenatal and acute postpartum period, GPs and midwives were key to weight management support. In the longer term, this role shifted to GPs, health visitors, and dieticians, with the former seen as a good point of referral into dietician and exercise-based programmes. However, concerns were noted around capacity of these health providers to integrate weight management advice into their visits, due to lack of time and capacity:

It wouldn't be something that midwives could do because we haven't got the capacity and probably the health visitors haven't either.

(Community midwife 5)

The perinatal stakeholders further supported this multiagency approach; however, they highlighted the need for a sensitive approach as part of a broader health conversation, rather than a clinical focus on weight loss:

Yeah, it shouldn't be a referral, because that makes it aggressive...If there's something in the maternity notes. Maternity notes and the red book. So maternity notes during pregnancy, red book for after pregnancy, but they have to be signposted. Oh have you seen page 64?

(Mother 2, Focus Group 2)

Integral to the changing narrative around weight management, and the key stakeholders to deliver it, was the timing of the messages. Recognising the sensitivity of the issue among some women, it was mostly agreed that targeted conversations around postpartum weight issues may be easier to address if they have already been raised in the antenatal phase of care, as part of the general perinatal healthcare discussion:

What I'd do is probably, I'd start at that booking visit, I think, it needs to be mentioned, brought up there. So, we've got like a box about depression, we've got a box about mental health issues, a box about smoking cessation, drugs and that kind of thing, but I think they probably could do with something being included in that booking visit all about that.

(Community midwife 1)

However, dieticians suggested that weight management was inappropriate to address with pregnant women as this could imply

trying to keep the same weight, which was not applicable during pregnancy:

The thing is, with pregnancy we would never, there's no point in encouraging weight loss, weight management is basically trying to keep the same weight.

(Dietician 2)

Furthermore, the acute postpartum period was viewed as an inappropriate time to address weight management, as women may be emotionally vulnerable following birth and overloaded with information and time priorities. Dieticians and community midwives advised that during this period the focus should be on maternal and baby health, and you don't want to be providing conflicting messages of weight loss when mothers are trying to establish good nutrition for breastfeeding:

It's probably a bit inappropriate and they're trying to get breastfeeding going, so we're trying not to, we're talking about eating well to keep the breastfeeding going, so you've got to be very careful. You know, you want them to eat for breastfeeding but if you're then talking about losing weight.

(Community midwife 5)

What appeared as an appropriate time to actively address and engage postpartum women in weight management initiatives was the period around transfer of care from the community midwives to the health visitors, and the first GP visit for the 6–8-week postnatal check. By this time, the acute hormonal phase impacting a mother's emotional state has generally settled down, and routines around the new baby have been established, giving the new mothers the time and cognitive capacity to look more broadly at issues such as their weight:

Probably when they're having their postnatal check at six weeks, that's probably a time when pregnancy, the hormones have settled down, they're getting back to normal, when they're at the point where they're thinking about I need to lose my baby weight or whatever you want to, however you want to call it, you know.

(Community midwife 5)

This time-period was also seen as appropriate for women to engage in postpartum-targeted exercise programmes, and incorporate their own positive dietary changes into baby's milestones such as weaning:

From a nutritional point of view we don't really have any limits. But I know for the exercise they want ladies to have had their 6 or 8 weeks check with the health visitor to make sure that everything's knitted itself back together after delivery. And obviously if they had a complicated birth or a caesarean section, that delays when they should be starting exercise.

(Dietician 3)

## 5 | Discussion

This study is based on a multi-stakeholder, locality-based qualitative investigation of service providers and service users about the challenges of supporting postpartum women with weight management and healthy lifestyle advice. Perinatal obesity is an increasing health issue, carrying the risk of maternal and foetal complications during pregnancy, labour, and birth and representing a significant predictor of longer-term weight of both mother and child. This qualitative study engaged stakeholder perspectives of postpartum mothers and six healthcare provider groups to investigate the experiences and potential approaches to perinatal weight management. All participant stakeholders recognised a collective need to address perinatal weight, and highlighted challenges to addressing perinatal weight management including siloed health care, confusing information, a lack of accessible services, inadequate or inconsistent advice, and competing priorities. A multi-stakeholder approach centred around a family-inclusive narrative to weight management, and optimal timing of advice was suggested by participants as an important way forward.

Given the growing prevalence of perinatal obesity, it was not surprising the healthcare practitioners in this study were regularly seeing mothers living with obesity or overweight in their day-to-day practice. However, some of the rates cited, for example, over 40% of the caseload of one practitioner, were significantly higher than previous estimates of 30% of pregnant women (Kankowski et al. 2022). This is perhaps partly explained by the location of the study in an area with high levels of socio-economic deprivation. Here, the combination of lower levels of educational attainment and limited access to healthcare, healthy food options and neighbourhood resources to support good health are likely to increase the risk of overweight and obesity (Candio et al. 2023).

UK national guidelines suggest women should be weighed and measured early in their pregnancy (National Institute for Health and Care Excellence 2021), aligning with interview feedback from healthcare stakeholders regarding antenatal referrals into consultant-led care for those presenting with high BMI antenatally. However, feedback also suggested this practice was varied in the postpartum period, and some of the approaches employed by healthcare practitioners were inconsistent with policy recommendations.

The interview questions did not explicitly use the term *Making Every Contact Count* (MECC) (NHS England 2025), instead focusing on broader questions about approaches to perinatal weight management. None of the participant stakeholders made specific reference to MECC during their interviews; however, it was clear they recognised the importance of engaging in asking, advising, and supporting health-related behaviour change. Importantly, some stakeholders acknowledged missing opportunities to initiate such conversations, with one GP conceding: “*maybe I should ask.*” MECC has the potential to deliver significant improvements in public health at relatively low cost, with staff initiating brief interventions by offering appropriate advice, raising awareness of risks, providing support for change, and signposting to further sources of information and support in the local area (Turner et al. 2023). However, the MECC approach relies on practitioner knowledge and confidence, and several healthcare stakeholders in this study mentioned feeling

ill-equipped to deliver the right advice, and/or felt that other practitioners would be better placed than themselves to initiate these interventions. These findings reflect some of the challenges in embedding this approach widely across health services. Indeed, Keyworth et al. (2018) found that despite MECC being well cited by policy makers, only about 31% of healthcare professionals have heard of MECC, and in cases where professionals knew about it and identified a need or opportunity to deliver it, it was only delivered on half of these occasions. The widespread variation in knowing about and using MECC was attributed to a range of factors, including variable access to MECC training, resource issues, and the need to focus on delivering what was essential, with MECC considered a non-essential add-on (Keyworth et al. 2018).

The healthcare stakeholders in this qualitative study noted a hesitance to broach the topic of weight management due to the potential implications and outcomes of these conversations. While reflecting the need for care and sensitivity outlined in NICE guidance (National Institute for Health and Care Excellence 2021, 2025), stakeholders were concerned these sensitive conversations may impact on their relationship with the mother. As such, different healthcare stakeholders noted they relied on the women themselves to introduce the subject of their weight management before providing advice or support was given. While this is positive in that the subject is timely for the mother, some practitioners noted the problem that not all women knew, or were willing to acknowledge, they were overweight or obese, nor the associated health consequences of this. Equally, those women who were not obese prior to or in the early stages of pregnancy may be even less likely to consider weight loss to be important (Nolan et al. 2024).

Several of the postpartum women in this study recognised they were unclear about what to eat during the postpartum period, and together with the midwives and dieticians they noted a tension between eating more while breastfeeding and not eating too much. A study by Snyder et al. (2020) found that misinformation around healthy eating is problematic, particularly for breastfeeding women. This issue originates from the varied range of information, often incorrect, provided by social media, family and friends, and healthcare providers. This suggests a need for healthcare providers to initiate conversations about weight management and also to improve their knowledge. Accurate and consistent approaches need to be adopted, particularly as the participants in Snyder et al.'s (2020) research specifically wanted their support to be from healthcare providers. There is also strong evidence that knowledge is an important part of belief formation and therefore can be the impetus for better weight management (Hill et al. 2019).

The findings from this qualitative study are consistent with those of Nolan et al. (2024), where a range of factors made it more challenging for some participants to manage postpartum weight. These included a lack of knowledge already mentioned and a lack of peer support or role models for those from a background where healthy lifestyles were uncommon. Social norms are influential, and the mass media produce a culture of comparison and what Nagl et al. (2021) describe as thin-ideal internalisation during what is a particularly vulnerable stage. These unrealistic expectations and added pressure can lead to body

dissatisfaction and, for some, disordered eating (Nagl et al. 2021; Nolan et al. 2024).

Equally, practical issues, such as time and finances and juggling more than one child can be a barrier to accessing support, together with a lack of confidence to act or engage in activities and groups. There is, therefore, a need for any intervention to consider individual circumstances and to work in partnership with the mother to develop an approach which takes these into account (Nolan et al. 2024). The need for personalised approaches and a menu of options was important to the women in this study and greater communication locally about what is on offer and how to access it. Alongside this, several participants felt social media could support healthy lifestyles and offer a way of sharing information and accessing peer support. A randomised controlled trial conducted by Waring et al. (2023) comparing in-person and Facebook postpartum weight loss groups found that those using Facebook found it more convenient and were likely to engage more but lost less weight than the in-person group. While they suggested more research is needed to develop approaches that balance accessibility with efficacy, their study focused only on weight loss, and it would be worth understanding the extent to which the interventions led to overall health gains. What is clear from this study and wider literature (Nagl et al. 2021; Nolan et al. 2024) is that during and after pregnancy there is often heightened awareness about health and well-being, with mothers wanting to ensure their children are given the best possible start in life. As such, intervention and support at this time is important and potentially impactful, particularly when framed around family health, sustainable lifestyle behaviours and non-stigmatising support rather than weight outcomes alone.

## 5.1 | Conclusions

Maternal obesity is a public health challenge, linked to increased risks of maternal and foetal complications during pregnancy and delivery, and longer-term maternal and child weight issues. This paper draws on the opinions of postpartum women and a broad range of healthcare providers involved in their perinatal care to investigate the experiences and potential approaches for perinatal weight management. Interviews and focus group data presented universal agreement regarding an unmet collective need to address perinatal weight, challenges to addressing weight management across the perinatal period, and opportunities for a multi-stakeholder approach to weight management. Suggestions moving forward include a local level approach, with consistent messaging provided across health professional stakeholders. Positive narratives should emphasise perinatal health and well-being, and be responsive to the financial, emotional, and time demands of perinatal women. Staff involved in supporting perinatal care require sufficient training to enable them to engage in meaningful contact, with an emphasis on timely, opportunistic conversations focused on general weight management and well-being, and knowledge of specialist referral services.

## 5.2 | Strengths and Limitations

The strength of this study lies in the breadth of views obtained. By gaining the opinions and experiences of clinicians and

community health providers, together with postpartum women, this study provides a fuller picture of perinatal weight management beyond the medical approach. The flexibility of using both interviews and focus group formats enabled data collection to pragmatically fit around stakeholder time constraints, with anonymised interviews enabling participants to speak freely and removing any potential perceptions of hierarchy among the stakeholder groups. Care was taken during analysis to integrate the interview and focus group data, with multiple researchers synthesising the data from both methods by identifying and agreeing overlapping themes. Overall, this has provided a picture of existing stakeholder relationships within the context of a healthcare locality. The breadth of participant representation minimises bias of opinion by ensuring maximum variation in the range of the key stakeholders involved in this study. Although the two postpartum focus groups only included three participants per group, they provided interactive discussions and opinions were generally consistent across the different groups. However, a wider sample and targeted recruitment representing the ethnic and socio-economic diversity of the healthcare locality would have provided more depth of opinion and is a suggested focus for further research. Although training and confidence are central findings in the study, information about specialist training in maternal/perinatal weight management was not collected and therefore is a limitation.

### 5.3 | Implications for Policy and Practice

While BMI remains a widely used and accepted tool for weight management within clinical practice, the findings of this study emphasise a shift away from a sole focus on BMI towards a broader emphasis on supporting healthy living across the perinatal period. Conversations with women should acknowledge BMI where relevant and outline the associated health risks of obesity, in line with national policy; however, these discussions should be framed within a positive, strengths-based narrative that prioritises overall health and wellbeing rather than weight alone. This approach requires awareness of, and responsiveness to, the financial, emotional, and time demands experienced by women during and after pregnancy. Focusing on sustainable lifestyle behaviours, including balanced nutrition and physical activity, supports a more inclusive and less stigmatising approach to perinatal weight management and recognises that, regardless of body size, healthy behaviours are beneficial for everyone.

In view of our findings and the wider body of research concerning perinatal weight management we suggest it is key to develop multi-agency interventions, underpinned by strategic planning at local level. This would help determine who the key service providers are and the extent of their role and should pave the way for a tiered approach to training to address the knowledge, skill and confidence gap outlined in this paper. Our findings suggest that healthcare providers involved in supporting perinatal care should receive sufficient training to enable them to engage in MECC, where timely, opportunistic conversations can be initiated, focused on weight management and health and well-being. Targeted, more in-depth training should be provided for those who have regular contact to offer tailored advice and support before referring to specialist services. The benefit of this

approach is that clear roles and responsibilities would be identified at local level, meaning clarity and consistency of messaging and continuity of support, as well as reduced duplication and increased use of opportunities to promote health and wellbeing. It would be important that local strategic planning mapped local service availability, including face to face and digital, and considered the development of inclusive local approaches that would offer a menu of options for mothers.

We used the SRQR reporting checklist (O'Brien et al. 2025) when editing, included in the [Supporting Information](#).

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#### Conflicts of Interest

The authors declare no conflicts of interest.

#### Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

#### References

- Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3, no. 2: 77–101. <https://doi.org/10.1191/1478088706qp0630a>.
- Burnie, R., E. Golob, and S. Clarke. 2022. "Pregnancy in Underweight Women: Implications, Management and Outcomes." *Obstetrician & Gynaecologist* 24, no. 1: 50–57. <https://doi.org/10.1111/tog.12792>.
- Candio, P., F. P. Mujica, and E. Frew. 2023. "Socio-Economic Accounting of Inequalities in Excess Weight: A Population-Based Analysis." *BMC Public Health* 23, no. 1: 721. <https://doi.org/10.1186/s12889-023-15592-0>.
- Dodd, J. M., A. R. Deussen, C. M. O'Brien, et al. 2018. "Targeting the Postpartum Period to Promote Weight Loss: A Systematic Review and Meta-Analysis." *Nutrition Reviews* 76, no. 8: 639–654. <https://doi.org/10.1093/nutrit/nuy024>.
- Goddard, L., N. M. Astbury, R. J. McManus, K. Tucker, and J. MacLellan. 2023. "Clinical Guidelines for the Management of Weight During Pregnancy: A Qualitative Evidence Synthesis of Practice Recommendations Across NHS Trusts in England." *BMC Pregnancy and Childbirth* 23, no. 1: 164. <https://doi.org/10.1186/s12884-023-05343-9>.
- Hill, B., M. Hayden, S. McPhie, C. Bailey, and H. Skouteris. 2019. "Preconception and Antenatal Knowledge and Beliefs About Gestational Weight Gain." *Australian and New Zealand Journal of Obstetrics and Gynaecology* 59, no. 5: 634–640. <https://doi.org/10.1111/ajo.12942>.
- Hollis, J. L., S. R. Crozier, H. M. Inskip, et al. 2017. "Modifiable Risk Factors of Maternal Postpartum Weight Retention: An Analysis of Their Combined Impact and Potential Opportunities for Prevention." *International Journal of Obesity* 41, no. 7: 1091–1098. <https://doi.org/10.1038/ijo.2017.78>.
- Institute of Medicine and National Research Council. 2009. *Weight Gain During Pregnancy: Reexamining the Guidelines*. National Academies Press. <https://doi.org/10.17226/12584>.

- Kankowski, L., M. Ardissino, C. McCracken, et al. 2022. "The Impact of Maternal Obesity on Offspring Cardiovascular Health: A Systematic Literature Review." *Frontiers in Endocrinology* 13: 868441. <https://doi.org/10.3389/fendo.2022.868441>.
- Keyworth, C., T. Epton, J. Goldthorpe, R. Calam, and C. J. Armitage. 2018. "Are Healthcare Professionals Delivering Opportunistic Behaviour Change Interventions? A Multi-Professional Survey of Engagement With Public Health Policy." *Implementation Science* 13, no. 122: 1–9. <https://doi.org/10.1186/s13012-018-0814-x>.
- Kim, J., and A. Ayabe. 2023. "Obesity in Pregnancy." In *StatPearls*. StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK572113/>.
- Makama, M., H. Skouteris, L. J. Moran, and S. Lim. 2021. "Reducing Postpartum Weight Retention: A Review of the Implementation Challenges of Postpartum Lifestyle Interventions." *Journal of Clinical Medicine* 10, no. 9: 1891. <https://doi.org/10.3390/jcm10091891>.
- McKinley, M. C., V. Allen-Walker, C. McGirr, C. Rooney, and J. V. Woodside. 2018. "Weight Loss After Pregnancy: Challenges and Opportunities." *Nutrition Research Reviews* 31, no. 2: 225–238. <https://doi.org/10.1017/S0954422418000070>.
- Nagl, M., L. Jepsen, K. Linde, and A. Kersting. 2021. "Social Media Use and Postpartum Body Image Dissatisfaction: The Role of Appearance-Related Social Comparisons and Thin-Ideal Internalization." *Midwifery* 100: 103038. <https://doi.org/10.1016/j.midw.2021.103038>.
- National Institute for Health and Care Excellence. 2021. "Antenatal Care, NICE Guideline Reference Number NG201." <https://www.nice.org.uk/guidance/ng201>.
- National Institute for Health and Care Excellence. 2025. "Overweight and Obesity Management. NICE Guideline [NG246]." <https://www.nice.org.uk/guidance/ng246/chapter/General-principles-of-care>.
- NHS England. 2025. "Making Every Contact Count." <https://www.hee.nhs.uk/our-work/population-health/our-resources-hub/making-every-contact-count-mecc>.
- Nolan, R., A. M. Gallagher, and A. J. Hill. 2024. "Women's Experience of Body Weight Management During and Post-Pregnancy: A Mixed Methods Approach." *BMC Pregnancy and Childbirth* 24, no. 1: 823. <https://doi.org/10.1186/s12884-024-07033-6>.
- O'Brien, B. C., I. B. Harris, T. J. Beckman, D. A. Reed, and D. A. Cook. 2025. "The SRQR Reporting Checklist." In *The EQUATOR Network Reporting Guideline Platform [Internet]*, edited by J. Harwood, C. Albury, J. d. Beyer, M. Schlüssel, and G. Collins. UK EQUATOR Centre. <https://resources.equator-network.org/guidelines/srqr/srqr-checklist.docx>.
- Snyder, K., A. K. Pelster, and D. Dinkel. 2020. "Healthy Eating and Physical Activity Among Breastfeeding Women: The Role of Misinformation." *BMC Pregnancy and Childbirth* 20, no. 470: 470. <https://doi.org/10.1186/s12884-020-03153-x>.
- Turner, R., L. Byrne-Davis, M. Panayiotis, et al. 2023. "Experiences of Implementing the 'Making Every Contact Count' Initiative Into a UK Integrated Care System: An Interview Study." *Journal of Public Health* 45, no. 4: 894–903. <https://doi.org/10.1093/pubmed/fdad173>.
- Tyldesley-Marshall, N., S. M. Greenfield, H. M. Parretti, K. Jolly, S. Jebb, and A. J. Daley. 2021. "The Experiences of Postnatal Women and Healthcare Professionals of a Brief Weight Management Intervention Embedded Within the National Child Immunisation Programme." *BMC Pregnancy and Childbirth* 21, no. 1: 462. <https://doi.org/10.1186/s12884-021-03905-3>.
- UK Government. 2024. "Obesity Healthcare Goals." <https://www.gov.uk/government/publications/life-sciences-healthcare-goals/obesity-healthcare-goals>.
- Waring, M. E., S. L. Pagoto, T. A. Moore Simas, et al. 2023. "Delivering a Postpartum Weight Loss Intervention via Facebook or In-Person Groups: Results From a Randomized Pilot Feasibility Trial." *JMIR mHealth and uHealth* 11: e41545. <https://doi.org/10.2196/41545>.
- World Health Organization. 2023. "First Global Call for Data on Gestational Weight Gain." <https://www.who.int/news-room/articles-detail/first-global-call-for-data-on-gestational-weight-gain>.
- World Health Organization. 2024. "Obesity and Overweight." <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>.

### Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Data S1:** The SRQR reporting checklist.