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Life course approach to gestational weight gain

Recognising the value of preconception and interpregnancy care

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Gestational weight gain (GWG) remains one of the most closely monitored yet misunderstood aspects of prenatal care. For decades, healthcare systems relied on numerical targets to guide women's GWG, even with growing evidence suggesting that these thresholds may not serve all populations equally well.[1-3] The dilemma between standardisation and personalisation underscores the urgent need to move beyond pregnancy-only models of care towards prevention strategies that begin before conception and continue throughout the interpregnancy period (that is, the interpregnancy interval—the time between the end of one pregnancy and the beginning of the next).[4]

A linked systematic review (doi:10.1136/bmj-2025-085710) reopens this debate, synthesising findings from more than a hundred studies linking GWG to maternal and perinatal outcomes.[3] The authors, like many before them, show that both insufficient and excessive GWG are associated with increased risks, including preterm birth and small for gestational age infants at one end and macrosomia and postpartum weight retention at the other.[1-3 5-8] However, observational studies suggest that higher pre-pregnancy body mass index has a greater impact on pregnancy complications and childhood weight than GWG, showing that many of the apparent risks of excessive GWG are attenuated once pre-pregnancy body mass index is considered.[1 9-11] Although this underscores the significant impact of preconception health, maintaining healthy weight, especially before but also during pregnancy, remains important to reduce obesity related risks for both mother and the baby.[1 9-11]

Although the review largely confirms longstanding knowledge, its most striking insight is the considerable variation across categories of body mass index and regions, challenging the black and white logic that underpins many clinical guidelines.[2 3] Rather than a fixed weight gain threshold existing, the relation between GWG and outcomes seems to be continuous, context dependent, and shaped by preconception factors such as pre-pregnancy body mass index and the wider psychosocial environment.[1 2 12] Therefore, a more nuanced approach is urgently needed, one that recognises diversity, not as noise to be adjusted for but as the basis for more integrated care.[13]

Beyond pregnancy and across the life course

Pregnancy is not an isolated episode but part of a wider health trajectory that spans the preconception, antenatal, postpartum, and interpregnancy periods. Women's preconception weight and their postpartum weight retention profoundly influence the health of both mothers and their offspring.[4 6 10] Moreover, high preconception or interpregnancy weight gain increases the likelihood of delivering a large for gestational age infant, who in turn faces a greater risk of obesity.[9 14 15] Sibling studies further show that maternal obesity at the onset of pregnancy, excessive GWG, and short interpregnancy intervals are all independently associated with overweight and obesity in the offspring.[10 15] These patterns confirm that maternal and child health are deeply intertwined across the life course.

Nevertheless, preconception and interpregnancy periods, often overlooked in both research and practice, represent critical yet underutilised opportunities for intervention.[6 15] With nearly 40% of pregnancies being unplanned,[16] many women first seek antenatal care well into the first trimester, when the most sensitive developmental window has passed. Supporting healthy weight before conception and between pregnancies could therefore be more effective than focusing solely on weight management during pregnancy.[4]

Data gaps and (un)coordinated policies

Despite its centrality to maternal and child health, monitoring of weight and related outcomes remains fragmented. A recent comparison by the EuroPeristat Group showed major inconsistencies in how countries collect and link data on mothers and children.[17] Few routinely capture pre-pregnancy body mass index, and most rely on self-reported measures or first visit weights. Linkages between pregnancy, birth, and child growth registries are rare, hindering the ability to track trends or evaluate interventions.

Investment in integrated maternal health surveillance systems is urgently needed. Harmonised indicators of preconception body mass index, GWG, and postpartum weight retention should be incorporated into national datasets and routinely linked with child growth records. Ideally, these systems would also connect with patient reported outcome and experience measures, offering a more holistic understanding of women's health, ensuring that guidelines reflect both lived experience and epidemiological evidence.

Need for systemic change

Advising women to adhere to numerical targets overlooks the biosocial diversity that shapes pregnancy. Rather than warning all women against exceeding fixed cut-offs, clinicians may instead focus on patterns of weight gain, its underlying determinants, and personalised, non-punitive counselling.[18]

Supporting healthy GWG requires more than perinatal advice; it depends on continuity of care. Too often,

healthcare engagement begins only once pregnancy is confirmed and ends soon after delivery, missing critical prevention windows. Integrating preconception counselling into routine care and ensuring extended postpartum follow-up would allow clinicians to act earlier and sustain support for longer.

At the policy level, (inter)national health authorities must move beyond narrow biomedical frameworks. Just as child growth charts are adapted to reflect biological and regional diversity, GWG recommendations should also be context specific rather than universally prescribed. This context sensitive approach calls for integrated interventions that combine weight management, nutrition counselling, and psychosocial support such as interpregnancy coaching for a healthy future,[6] the Healthy Life Trajectories Initiative,[19] and Healthy Adaptation to Pregnancy, Postpartum and Parenthood.[20] These models have the potential to not only achieve more meaningful outcomes than antenatal weight monitoring alone but also strengthen data systems, generating evidence for future policy and practice.

Maternal obesity is not merely an individual problem; it is a systemic challenge. Without comprehensive, life course strategies, the obesity epidemic will continue across generations. Governments and (inter)national agencies must act now to support women's health before, during, and after pregnancy, ensuring that the next generation inherits the opportunity not the risk.

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