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## **Abstract**

The journey from pregnancy to caring for a new infant is a significant experience for many women and crucial period for obesity prevention. During this time, a large portion of care is allocated to midwives and maternal and child health nurses (MCHN). These professions have the potential to play a crucial role in supporting women with weight management across pregnancy and postpartum; however, both midwives and MCHNs report barriers to doing this. Upskilling achieved through midwifery and MCHN education that equips midwives and MCHNs with the skills and knowledge to provide evidence-based advice for weight management could assist in addressing some of these barriers. Interprofessional collaboration should be fostered so healthy lifestyle messages and support are reinforced consistently by midwives and MCHNs throughout pregnancy and postpartum.

**Keywords:** midwifery, maternal and child health, weight, education.

## **Highlights**

- Pregnancy and postpartum are crucial periods for obesity prevention in women.
- Women want interprofessional collaboration across pregnancy and postpartum.
- Midwifery and MCHN curricula should enable consistent lifestyle messages.

## **1. Introduction**

The prevalence of obesity has increased globally, with the greatest rate of increase being in women during their reproductive years (Global Burden of Disease 2015 Obesity Collaborators, 2017). Approximately 50% of women gain weight in excess of the Institute of Medicine's (2009) recommendations for weight gain during pregnancy (Goldstein et al., 2017), elevating their risk of postpartum weight retention and entering subsequent pregnancies in a higher weight category (Van der Pligt et al., 2013). Women themselves identify pregnancy and postpartum as critical periods when weight management became a concern for them (Olander et al., 2011).

The journey from pregnancy to caring for a new infant is a significant experience for many women, when they experience considerable changes in physical, social, and emotional health (Behringer et al., 2011). During this time, women generally have access to a range of health professionals, with seven to ten encounters with a midwife or obstetrician during pregnancy followed by additional encounters with a maternal and child health nurse (MCHN; also known as a child health nurse, family and child health nurse, health visitor) for postnatal support within 12 months postpartum. As the involvement of midwives and MCHNs is generally a constant element of care across pregnancy and postpartum, there is potential for these inextricably linked professions to collaborate and play a crucial role in supporting women with weight management (Kothe et al., 2018).

There is clear evidence that lifestyle interventions based on diet and physical activity promote weight management during pregnancy (Walker et al., 2018) and postpartum (Dodd et al. 2018). Internationally, clinical practice guidelines advocate for models of pregnancy care that support women to achieve a healthy weight (National Institute of

Health and Care Excellence 2010; Australian Government Department of Health 2018).

These guidelines differ regarding gestational weight-monitoring but all promote practitioner-led and women-centred conversations about healthy lifestyles. Midwives have reported barriers to the implementation of pregnancy care guidelines relating to gestational weight gain including limited time and inadequate training (Schmied et al., 2011). The role of MCHNs in supporting postpartum weight-loss remains unclear. These unresolved issues highlight the need for a coordinated approach by midwives and MCHNs so that women benefit from continuity in weight management support throughout pregnancy and postpartum. The aim of this Issues for Debate discussion is to describe two foundational elements to achieving this: i) education that develops midwives' and MCHNs' professional identities within this important area and equips them to provide evidence-based support for weight management, and ii) interprofessional collaboration so that healthy lifestyle messages are reinforced consistently throughout pregnancy and postpartum.

## **2. Discussion**

### *2.1 Education that equips midwives and MCHNs to provide evidence-based support*

Women report wanting consistent messages for weight management and healthy lifestyles across pregnancy and postpartum (Aquino et al., 2018). However, current midwifery curricula contains inadequate content related to the provision of weight management advice (Arrish et al., 2017). A recent qualitative study of Australian midwifery curricula found that student midwives are taught the importance of maternal weight management but receive minimal guidance on evidence-based behavioural change techniques that support women to implement lifestyle change (Kothe et al., 2019). Midwives already in the workforce have also identified that their nutrition

education and training was inadequate (Arrish et al., 2017). Therefore, it is important that midwifery and MCHN education including undergraduate curricula, 'on-the-job' training and continuing professional development contains content to develop skills, knowledge and self-efficacy to deliver lifestyle support that promotes weight management. Postgraduate education required for midwifery and MCHN registration should build on the knowledge and skills acquired in undergraduate degrees. At this stage, little is known about what MCHNs have been taught about maternal obesity and weight management. Therefore, further research is required in this area.

Equipping midwives and MCHNs to provide consistent messages across pregnancy and postpartum begins at an undergraduate level, but practice is consolidated with experiences in a clinical setting. Clinical educators who are site 'champions' may be of benefit as they mentor new graduates, provide ongoing professional development to all staff and quality improvement activities that enhance the provision lifestyle advice across pregnancy and postpartum. Fostering champion roles within workplaces requires planning and additional resources however, benefits include the development of professional identity and an increased awareness of the roles of other health professionals (Chen et al., 2016). While this approach may not be applicable in all settings, it may be a cost-effective alternative to funding specialist consultants.

In addition to skills and knowledge, midwives' and MCHNs' social and professional role and identity, motivation, and beliefs are crucial for guideline implementation (Cane et al., 2012). This is reinforced in Miller's Pyramid (Cruess et al., 2016), used in the assessment of medical competence, where the formation of professional identity (moving from a practitioner who 'does' to a practitioner who 'is') via assessment of affective constructs such as attitudes and values has become a central aspect of medical education. Affective aspects of education shown to positively impact on midwifery

students' intentions in practice include attitudes towards the importance of a healthy weight across pregnancy and postpartum, their own personal sense of the value of maintaining healthy lifestyles, and positive reinforcement from peers (Kothe et al., 2018). Importantly, education should identify obesity as a medical problem with complex aetiology. Midwives and MCHNs should be equipped to consider the epidemiological features associated with obesity such as food-insecurity and inequitable access to health services to ensure that the support they provide is appropriate and without stigma or the use of negative language (Olander and Scamell, 2016).

## *2.2 Interprofessional collaboration for consistent messages across pregnancy and postpartum.*

Consistent health messages and follow-up across pregnancy and postpartum are important to women but this is yet to be achieved with maternal surveillance more heavily weighted to the antenatal period (Aquino et al., 2018). In terms of weight management, women who are supported to achieve optimal weight gain during pregnancy, and then with weight management postpartum tend to retain less weight than women who are not (Ferrara et al., 2011). Translating this evidence into existing models of care by facilitating interprofessional collaboration between midwives and MCHNs across pregnancy and postpartum could be a low-cost, acceptable and effective strategy to address obesity in mothers and their children. The World Health Organisation (2010) encourages interprofessional collaboration across health professions to strengthen health services and improve patient outcomes. Although midwives and MCHNs share the same professional background, they work in different environments resulting in barriers to achieve true collaboration across pregnancy and postpartum care. These barriers include midwives and MCHNs being employed within different models of care, limited access to shared medical records and, in some instances, poor knowledge and

appreciation of each other's roles (Aquino et al., 2016). Interprofessional education where undergraduate students from different health professions learn about and from each other is a key step towards facilitating interprofessional collaboration (World Health Organisation 2010). Furthermore, women themselves have suggested achievable additions to existing models of pregnancy and postpartum care that would integrate the two care pathways and facilitate the provision of consistent messages throughout. These include a single group session co-led by a midwife and MCHN towards the end of pregnancy, centralised patient information, and enhanced communication between the two professions (Aquino et al., 2018). A systemic review (Aquino et al., 2016) of interprofessional collaboration between midwives and MCHNs supports these views promoting enhanced avenues of communication, mutual respect and support for colleagues, co-location and liaison staff roles. Mechanisms to support this include revision of existing curricula, supportive management and systems and legislation that promote collaborative practice (World Health Organisation 2010).

Despite pregnancy being labelled a 'teachable moment' for obesity prevention (Phelan, 2010), many women find the physical burden of pregnancy and day-to-day pressures of life so overwhelming that making lifestyle change is too difficult, and the timeframe too short (Hill et al., 2017). The transition to the postpartum period brings with it an additional set of challenges to maintain healthy behaviours due to the demands of caring for a newborn and the role adjustment experienced by new mothers (Behringer et al., 2011). Postpartum women are particularly vulnerable to weight gain and are in need of support to maintain or improve a healthy lifestyle while navigating postpartum challenges (Van der Pligt et al., 2013).

The role of MCHNs in providing advice related to breastfeeding and transition to solid foods for obesity prevention in children is well-recognised (Laws et al., 2015). This could be extended to obesity prevention in mothers with MCHNs starting healthy behaviour change

conversations, providing basic advice related to healthy food environments at home, identifying women who would benefit from more specialised advice and reinforcing health messages from other health professionals. Midwives and MCHNs have both identified their hesitance to provide lifestyle advice for fear of offending mothers (Laws et al., 2015). This highlights an additional need to equip midwives and MCHNs with evidence-based behaviour-change strategies and to work alongside women as they identify barriers and facilitators to change and set goals to achieve desired outcomes.

Pregnancy care guidelines (National Institute of Health and Care Excellence 2010; Australian Government Department of Health 2018) acknowledge that midwives and MCHNs are not expected to be sole providers of weight management advice, listing a range of health professions that should be involved in this aspect of care, including dietitians, general practitioners, physiotherapists and psychologists. Therefore, midwives and MCHNs should know when, how, and to whom they should refer as they identify women who require additional support. Interprofessional education involving shared teaching, team-work and case-based learning has the potential to foster more effective functioning between professions and higher quality clinical care (Begley, 2009). Streamlining training needs of individual professions and strengthening referral pathways will allow midwives and MCHNs to be better equipped to provide basic lifestyle information for women not requiring specialist referral, women who have seen a specialist and would benefit from having messages reinforced, and women with limited healthcare access.

### **3. Conclusion**

Pregnancy and postpartum are crucial periods for obesity prevention in women. Weight management advice during pregnancy alone is often insufficient to elicit sustained change in health behaviours and women have asked for interprofessional collaboration between midwives and MCHN so healthy lifestyle support during pregnancy continues

postpartum. Undergraduate and postgraduate curricula should equip midwives and MCHNs via interprofessional education and training that incorporates affective aspects that impact on professional identity formation. This will equip midwives and MCHNs to provide lifestyle advice that supports weight management in women throughout their journey to parenthood.

## References

- Aquino, M.R.J.V., Olander, E.K., Needle, J.J., Bryar, R.M., 2016. Midwives' and health visitors' collaborative relationships: A systematic review of qualitative and quantitative studies. *Int. J. Nurs. Stud.* 62, 193-206.
- Aquino, M., Olander, E., & Bryar, R. 2018. A focus group study of women's views and experiences of maternity care as delivered collaboratively by midwives and health visitors in England. *BMC Pregnancy Childbirth*, 18, 1-12.
- Arrish, J., Yeatman, H., Williamson, M., 2017. Self-Reported Nutrition Education Received by Australian Midwives before and after Registration. *J Pregnancy*. <https://doi.org/10.1155/2017/5289592>.
- Australian Government Department of Health, 2018. Clinical practice guidelines: pregnancy care 2018 edition. Retrieved April 18 2019, from: <https://beta.health.gov.au/resources/pregnancy-care-guidelines>.
- Behringer, J., Reiner, I., Spangler, G., 2011. Maternal Representations of Past and Current Attachment Relationships, and Emotional Experience Across the Transition to Motherhood: A Longitudinal Study. *J. Fam. Psychol.* 25, 210-219.
- Cane, J., O'Connor, D., Michie, S., 2012. Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implement. Sci.* <https://doi.org/10.1186/1748-5908-7-37b>.
- Chen, A.K., Rivera, J., Rotter, N., Green, E., Kools, S., 2016. Interprofessional education in the clinical setting: A qualitative look at the preceptor's perspective in training advanced practice nursing students. *Nurs. Educ. Pract.* 21, 29-36.

Cruess, L.R., Cruess, R.S., Steinert, R.Y., 2016. Amending Miller's Pyramid to Include Professional Identity Formation. *Acad. Med.* 91, 180-185.

Dodd, J., Deussen, A., O'Brien, C., Schoenaker, D., Poprzeczny, A., Gordon, A., Phelan, S. 2018. Targeting the postpartum period to promote weight loss: A systematic review and meta-analysis. *Nutr. Rev.* 76, 639-654.

Ferrara, A., Hedderson, M.M., Albright, C.L., Ehrlich, S.F., Quesenberry, C.P., Peng, T., Feng, J., Ching, J., Crites, Y., 2011. A pregnancy and postpartum lifestyle intervention in women with gestational diabetes mellitus reduces diabetes risk factors: a feasibility randomized control trial. *Diabetes Care.* 34, 1519-1525.

Global Burden of Disease 2015 Obesity Collaborators, 2017. Health effects of overweight and obesity in 195 countries over 25 years. *N. Engl. J. Med.* 377,13-27.

Goldstein, R.F., Abell, S.K., Ranasinha, S., Misso, M., Boyle, J.A., Black, M.H., Li, N., Hu, G., Corrado, F., Rode, L., 2017. Association of gestational weight gain with maternal and infant outcomes: a systematic review and meta-analysis. *JAMA.* 317, 2207-2225.

Hill, B., McPhie, S., Moran, L.J., Harrison, P., Huang, T.T.-K., Teede, H., Skouteris, H., 2017. Lifestyle intervention to prevent obesity during pregnancy: implications and recommendations for research and implementation. *Midwifery.* 49, 13-18.

Institute of Medicine. *Weight gain during pregnancy: Reexamining the guidelines.*

Rasmussen KM, Yaktine AL, editors. Washington DC: National Academies Press. 2009.

Kothe, E., Bailey, C., Weiner, C., Nagle, C., Nowson, C., Hill, B., McPhie, S., Savaglio, M., Skouteris, H., 2019. An investigation of Australian midwifery curricula for obesity management and health behaviour change training. *Nurs. Educ. Pract.* 36, 54-57.

Kothe, E., Lamb, M., Bruce, L., McPhie, S., Klas, A., Hill, B., Skouteris, H., 2018. Student midwives' intention to deliver weight management interventions: A theory of planned behaviour & self-determination theory approach. *Nurs. Educ. Today.* 71, 10-16.

Laws, R., Campbell, K.J., Pligt, P., Ball, K., Lynch, J., Russell, G., Taylor, R., Denney-Wilson, E., 2015. Obesity prevention in early life: An opportunity to better support the role of Maternal and Child Health Nurses in Australia. *BMC Nurs.* <https://doi.org/10.1186/s12912-015-0077-7>.

National Institute for Health and Care Excellence (NICE), 2010. Weight management before, during and after pregnancy. Retrieved May 21 2019, from: <https://www.nice.org.uk/guidance/ph27/chapter/1-Recommendations#recommendation-6-professional-skills>.

Olander, E.K., Atkinson, L., Edmunds, J.K., French, D.P., 2011. The views of pre- and post-natal women and health professionals regarding gestational weight gain: An exploratory study. *Sexual Reprod. Healthcare* 2, 43-48.

Olander, E.K., Scamell, M., 2016. Teaching students about maternal obesity without creating obesity stigma. *Nurs. Educ. Today.* 42, 59-61.

Phelan, S., 2010. Pregnancy: a “teachable moment” for weight control and obesity prevention. *Am. J. Obstet. Gynecol.* 202, e131-135.

Schmied, V.A., Duff, M., Dahlen, H.G., Mills, A.E., Kolt, G.S., 2011. ‘Not waving but drowning’: a study of the experiences and concerns of midwives and other health professionals caring for obese childbearing women. *Midwifery* 27, 424-430.

Van der Pligt, P., Willcox, J., Hesketh, K., Ball, K., Wilkinson, S., Crawford, D., Campbell, K., 2013. Systematic review of lifestyle interventions to limit postpartum weight retention:

implications for future opportunities to prevent maternal overweight and obesity following childbirth. *Obes. Rev.* 14, 792-805.

Walker, R., Bennett, C., Blumfield, M., Gwini, S., Ma, J., Wang, F., Wan, Y., Truby, H., 2018. Attenuating Pregnancy Weight Gain-What Works and Why: A Systematic Review and Meta-Analysis. *Nutrients*. <https://doi.org/10.3390/nu10070944>.

World Health Organisation (WHO), 2010. Framework for action on interprofessional education and collaborative practice. Retrieved Oct 7 2019, from:

[https://apps.who.int/iris/bitstream/handle/10665/70185/WHO\\_HRH\\_HP\\_N\\_10.3\\_eng.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/70185/WHO_HRH_HP_N_10.3_eng.pdf?sequence=1).