



Introduction/Background

- Maternal obesity is an emergent public health problem, which together with maternal under-nutrition has been recently highlighted as a 'double burden especially in African countries undergoing social and economic transition (Onubi et al, 2015).
- Post-partum weight retention (PPWR) occurs in 60-80% of women with some retaining close to 10kg with predisposing factors reported as pre-pregnancy Body Mass Index (BMI), Gestational Weight Gain (GWG) and breastfeeding (Onubi et al, 2015).
- Cheng et al, (2018) unpinned an estimated prevalence of 38.9 million overweight and 14.6 million obese pregnant women globally through a systematic review study. Although statistical data are absent to draw an estimate for Africa, Onubi et al, 2015 opens that it ranged from 6.5 to 50.7%, and stood out at 10.7% in south-eastern Nigeria with majority (85.9%) unaware of their pre-pregnancy weights (Chigbu & Aja, 2011).
- Studies on obesity in pregnancy are scarce in most African countries as such there exist no specific guidelines for the management of gestational obesity, highlighting the inadequate attention (Chigbu and Aja, 2011). This scarcity is confirmed for Cameroon in the work of Fouelifack et al, (2015) which unpins that there are no guidelines regarding maternal BMI and GWG in Cameroon where maternal mortality rate still remains very high at 782 maternal death per 100,000 live birth and 74.8 infant death per 1000 live birth (Cameroon Health, 2019).
- Considering the effects of post-pregnancy overweight with subsequent obesity on mothers and infants, there is need to understand the burden it poses on individuals, families, communities, nations and the globe at large.
- Thus this seminar seeks to create awareness among midwives through establishment of scientific information on the concept of obesity and postpartum weight gain, predisposing factors, preventive managements, its complications and to provide some literature review-inspired recommendations for the 21st century midwifery practice.

Empirical Evidence

- Overweight and Obesity:** According to American College of Obstetricians and Gynaecologist (ACOG, 2019) overweight is BMI of 25–29.9kg/m² while obesity is a BMI of 30kg/m² or greater. Within the general category of obesity, there are three levels that reflect the increasing health risks that go along with increasing BMI: Lowest risk is a BMI of 30–34.9kg/m², Medium risk is a BMI of 35.0–39.9kg/m², and Highest risk is a BMI of 40kg/m² or greater. Where BMI is weight in kilograms divided by the square of the height in metres (kg/m²). (The Agency for Health Information (AHI), 2020)
- Predisposing Factors Of Postpartum Obesity in Discuss:** A couple of factors have been isolated by most scholars to be associated with postpartum obesity. For substantial postpartum weight retention, correlates based on epidemiologic surveys are, prepregnancy overweight, high GWG, primiparity, black race, low socioeconomic status, age, smoking cessation, and less than 5 hours of sleep a day (Gunderson, 2010).
- Preventive Management Of Weight Gain In And After Pregnancy:** It is important to plan ahead of time on how to return to the pre-pregnancy weight by 6 to 12 months after delivery. Most women lose half of their body weight by 6 weeks after childbirth (postpartum). The rest most often comes off over the next several months. Preventive management boils down to: Weight gain during pregnancy, Breast-feeding, Diet and physical activity (Berger et al, 2014).
- Complication Of Unattended Gestational Obesity:** Extra weight is an accelerative problem and a known danger for a figure of chronic conditions, such as cardiovascular diseases, type2 diabetes, dyslipidemia, preeclampsia, macrosomic baby and anaemia and its existence increases morbidity and mortality exponentially (Catalano, 2019).

PICTURES ON POSTPARTUM OBESITY

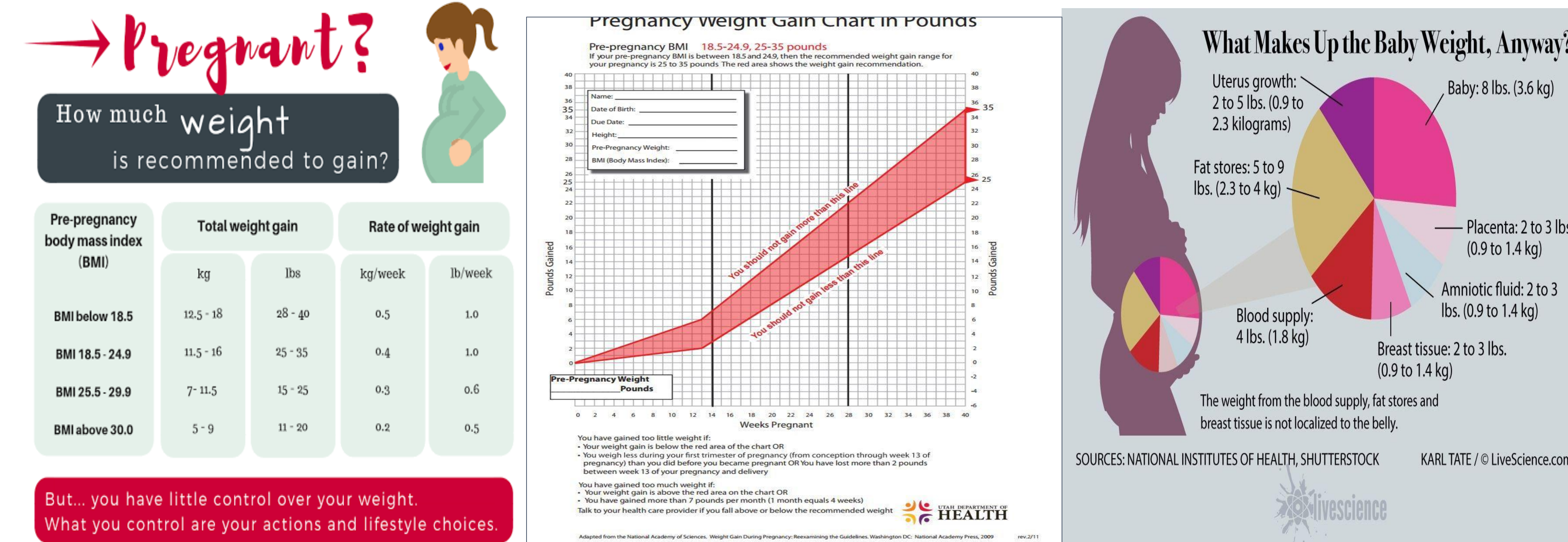


Diagram illustrating the recommended weight gain at various trimester

GWG Chart

Sources of weight

increment in pregnancy



Literature Guided Discussion

Maternal obesity, excessive gestational weight gain (GWG) and post-partum weight retention (PPWR) constitute new public health challenges due to its association with negative short- and long-term maternal and neonatal outcomes. However, attention appears to be concentrated on developed countries with little/none to developing countries as most developing countries are still scarred by the after-mark of undernutrition and believe obesity is for the affluent. The burden of PPWR on developing countries is unrealistic due to absence of statistical data. There is a popular understanding that pregnancy is a period of rapid weight gain and change in body composition as maternal metabolism adapt to meet the demands of the developing fetus. But how much weight gain is recommended is still arguable among majority of the midwives and among women of child bearing age. PPWR can induce a vicious cycle of gestational obesity through out the reproductive life of a woman predisposing her to all sorts of obstetric complications. As a modifiable risk factor, body weight during the prepregnancy, intranatal, and postpartum periods may present critical windows to apply interventions to prevent weight retention and the development of overweight and obesity in women of childbearing age.

Key messages

Safe and effective exercise in pregnancy

When to start	First trimester <12 weeks gestation	1= Usually not exceeding 140 beats per minute. 2= Borg scale is a 15-category scale (from 6-20) to measure the level of perceived exertion: light exercise is approximately 6-11; 13 is somewhat hard; 15 is hard; 19 is extremely hard.
Duration of a session	30–60 minutes	
Times per week	At least 3–4 (up to daily)	
Intensity of exercise	<60–80% of age-predicted maximum maternal heart rate=1	
Self-reported intensity of exercise	Moderate intensity (12–14 on Borg scale2)	
Supervision of exercise	Preferred, if available	
When to end	Until delivery (as tolerated)	

Some beneficial exercises in pregnancy

- Walking
- Aerobic exercises
- Stationary cycling
- Stretching exercises
- Dancing
- Hydrotherapy, water aerobics
- Resistance exercises (e.g. weights, elastic bands)

CONCLUSION/RECOMMENDATIONS

CONCLUSION.

Issues surrounding PPWR have received undesired attention in resource poor settings with known higher prevalence of under-nutrition. Prevalence consciousness and knowledge of the pattern of obesity in women of reproductive age would stimulate interest in this contemporary global issue especially in resource-poor settings. There is need for studies with erogenous measures to determine the micro-nutrient status of the undue weight gain or obesity in peri, pregnant or postpartum woman. Evidence point out on the benefits of life-style modification and breastfeeding encouraged at various level of care with a strong referral system. Reliable data established on the burden and magnitude of the problem stands as a stimulant for institutional adoption of appropriate intervention guidelines. So, a multi-disiplinary approach seems credible.

RECOMMENDATIONS

- Setting up community-based midwifery services at the level of the primary health care centers (PHC) with additional obligation to create awareness about obesity and pregnancy, predisposing factors, preventive measures and its consequences among women of reproductive age.
- Establish a forum for continuous education of midwives on how to establish a weight gain chart for each woman at first ANC visit and link-up this service with Infant Welfare Clinic (IWC) for continuous follow-up to 6 months postpartum.
- Institution of a "Know Your Number" (KYN) unit at the levels of the ANC and IWC charge primarily with monitoring of BMI, health education on matters concerning GWG and remedies and referral to other specialist care if needed.
- Encourage policy markers of maternal and child health to adopt appropriate GWG guidelines and make them available to all PHC especially at poor resource settings.

REFERENCE

- ACOG. (2019). Obesity and Pregnancy. Health Stories. Retrieved from www.health-stories.com/adults-adults/8060-eng.htm.
- Agency for Health Information. (2020). Obesity during pregnancy, birth and postpartum. *Better Safer Care*.
- Berger, A., Peragallo-Urrutia, R., & Nicholson, W. (2014). Systematic review of the effect of individual and combined nutrition and exercise interventions on weight, adiposity and metabolic outcomes after delivery: evidence for developing behavioral guidelines for post-partum weight control. *BMC Pregnancy and Childbirth*, 14, 139. Retrieved from www.ncbi.nlm.nih.gov/pubmed/25208549.
- Catalano, P. M. (2019). The impact of gestational diabetes and maternal obesity on the mother and her offspring. *Journal of developmental origins of health and disease*, 1(4), 208-215. doi:10.1017/s204174410000115
- Chigbu, CO., & Aja, LO. (2011). Obesity in Pregnancy in Southeast Nigeria. *Ann Med Health Sci Res PMC*, 1(2), 135-140.
- Chiolero, A., Faeh, D., Paccaud, F., & Cornuz, J. (2008). Consequences of smoking for body weight, body fat distribution, and insulin resistance. *The American Journal of Clinical Nutrition*, 87(4), 801-809. doi:10.1093/ajcn/87.4.801.
- Fouelifack, F. Y., Fouedjio, J. H., Fouogue, J. T., Sando, Z., Fouelifa, L. D., & Mbu, R. E. (2015). Association of body mass index and gestational weight gain with term pregnancy outcomes in urban Cameroon: A retrospective cohort study in a tertiary hospital. *BMC Research Notes*, 8(806), 01. doi:10.1186/s13104-015-0765-9.
- Gunderson, E. P. (2010). Childbearing and Obesity in Women: Weight Before, During, and After Pregnancy. *Obstet Gynecol Clin North Am.*, 17(PMC2930888, 36, 2).
- Onubi, O. J., Marais, D., Aucott, L., Okonofua, F., & Poobalan, A. S. (2015). Maternal obesity in Africa: a systematic review and meta-analysis. *Journal of Public Health*, 38(3), e18-e31. doi:10.1093/pubmed/fdv138