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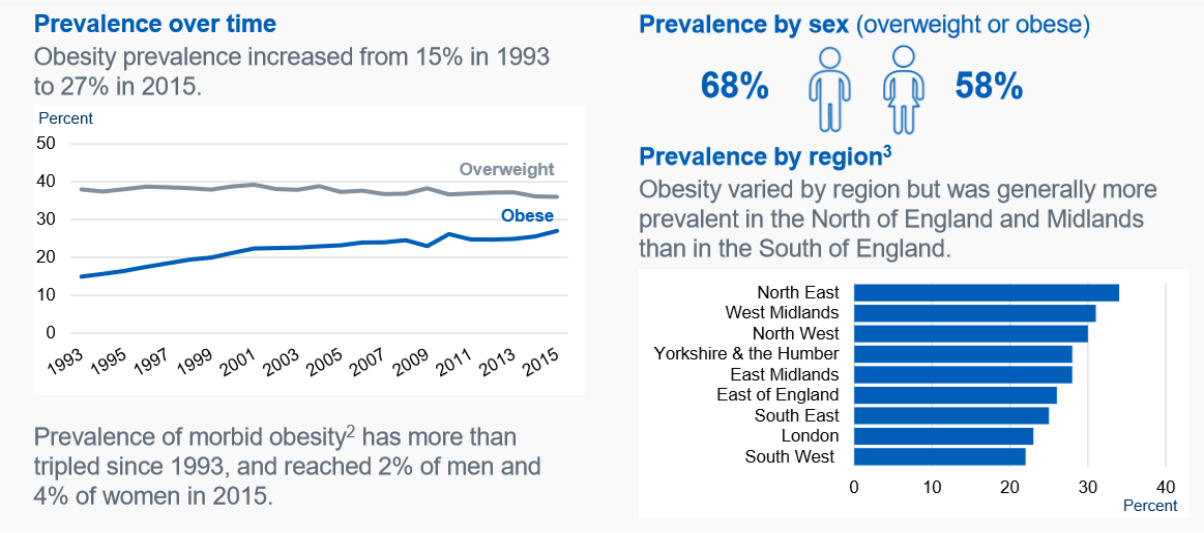
Local Maternity Systems Healthy Weight in Pregnancy and the Early Postnatal Period Audit Report

Context & Evidence

Obesity is a global public health issue of epic proportions. Defined as a BMI greater than or equal to 30, worldwide levels of obesity have tripled since 1975 and in 2016 40% of women were overweight, 15% were obese: a health state which is preventable (WHO 2018). In the UK, the percentage of adult females classified as overweight or obese is 58% with 4% of women classed as morbidly obese (HSCIC 2016).



(NHS Digital, 2017)

Within the UK, obesity is now one of the most common risk factors in obstetrics (CMACE & RCOG 2010). The latest MBRACE report (2017) shows that a quarter of the women who died in pregnancy and within a year following the birth of their infant had a weight issue. Given that now at least one in five maternities are to women who are obese, this presents specific risks, real challenges and increasing costs. Recognised clinical risks faced by this group of women and targeted within healthcare include:

- Gestational diabetes
- Venous thromboembolism
- Hypertension
- Miscarriage, stillbirth and neonatal death
- Congenital abnormality
- Dysfunctional labour
- Anaesthetic risk
- Postpartum haemorrhage
- Wound infection
- Difficulty with breastfeeding
- Increased risk of Caesarean section

In addition, maternal obesity is the single biggest risk factor for childhood obesity. The longer term impact on the obese child will result in more illnesses, absences from school with greater health related limitations requiring medical care (Carey et al, 2015; Whittiker, 1997). There is the potential to develop diabetes cardiovascular disease, breathing and musculoskeletal problems as well as the psychological damage affecting these children (WHO, 2018).

Obesity in pregnancy is driven by a complex range of factors such as poverty, unemployment, education and environmental and societal influences (Heslehurst et al. 2007). Data compiled by Green (2013) demonstrates that maternal obesity is nearly twice as high in the most deprived quintile of lower super output areas (LSOA) in comparison to other population groups, with areas across the region being significantly worse than the national average. Adopting a whole systems approach (Tedstone, 2018) is key in tackling inequalities and reducing obesity by developing local narrative to build the case for support.

National Institute for health and Care Excellence (NICE) guidance for weight management before, during and after pregnancy (2010) and the Centre for Maternal and Child Enquires (CMACE)/Royal College of Obstetricians and Gynaecologists

(RCOG) (2010) set out guidance for best practice in relation to obesity in pregnancy which should guide best national practice.

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Local context

The North East of England has one of the highest adult and childhood obesity levels in the UK (PHE, 2018). Although BMI is recorded when women first book in with maternity services and this data is reported into national maternity data system there is no information that is subsequently shared. However, using the national and regional data that can be accessed there is a regional obesity crisis. Women and their families come into contact with many different parts of the health and social care system before, during and after a pregnancy. Each part of that system has varying potential to impact on reducing obesity rates and offer support, advice and guidance to maximise opportunities for health gain.

Indicator	Period	England	East Midlands region	East of England region	London region	North East region	North West region	South East region	South West region	West Midlands region	Yorkshire and the Humber
2.12 - Percentage of adults (aged 18+) classified as overweight or obese	2016/17	61.3	63.3	61.9	55.2	66.1	63.3	59.7	60.3	63.6	65.3
Percentage of physically active adults - current method	2016/17	66.0	65.0	66.8	64.6	64.0	65.1	68.9	70.4	62.6	64.6
Percentage of physically inactive adults - current method	2016/17	22.2	23.1	21.7	22.9	24.6	23.4	19.3	18.7	25.0	24.1
2.17 - Estimated diabetes diagnosis rate	2017	77.1	83.8	75.5	71.2	81.4	81.0	74.1	73.8	85.6	80.6
Reception: Prevalence of healthy weight	2016/17	76.4	76.3	78.1	76.2	74.9	75.3	77.9	76.5	74.8	76.7
Reception: Prevalence of overweight	2016/17	13.0	13.3	12.5	12.1	13.8	13.6	12.9	14.2	13.4	12.5
Reception: Prevalence of obesity (including severe obesity)	2016/17	9.6	9.5	8.6	10.3	10.7	10.3	8.5	8.8	10.7	9.7
Reception: Prevalence of severe obesity	2016/17	2.35	2.29	1.97	2.87	2.83	2.43	1.87	1.78	2.90	2.37
Year 6: Prevalence of healthy weight	2016/17	64.4	65.2	67.1	59.9	61.6	63.5	68.2	68.9	61.4	63.9
Year 6: Prevalence of overweight	2016/17	14.3	14.2	13.6	14.9	14.8	14.4	13.7	13.9	14.8	14.2
Year 6: Prevalence of obesity (including severe obesity)	2016/17	20.0	19.2	17.9	23.6	22.5	20.8	16.9	16.2	22.4	20.4
Year 6: Prevalence of severe obesity	2016/17	4.07	3.75	3.32	5.28	4.92	4.24	3.18	2.80	4.86	4.28

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(PHE, 2018)

Regional LMS Obesity Audit

The North East Local Maternity System (LMS) boards have identified seven priorities for improving maternal and infant health at a population level. Obesity in pregnancy is one of these priorities and this audit is being undertaken to support and develop a greater understanding of the current position of clinical practice in relation to obesity during pregnancy and the post-natal period. The findings from the audit have informed a series of recommendations for enhancing maternal and child outcomes. This approach is designed to support areas to examine their impact upon reducing obesity rates across the whole systems.

This audit tool was developed in conjunction with key members of the local LMS boards. The brief recommended that this activity was undertaken as a face to face exercise in small focus groups, with all hospital Trusts/localities in the North East. Groups to include: Heads of Midwifery (HOM), members of the Local Authority (LA) 0-19 team, Trust obesity nurse/Midwife and a Public Health representative for the obesity strategy. This occurred throughout April/May 2018 and included the following Trusts:

- County Durham and Darlington NHS Foundation Trust
- Newcastle upon Tyne Hospitals NHS Foundation Trust
- South Tees Hospitals NHS Foundation Trust
- North Tees and Hartlepool Hospitals NHS Foundation Trust
- Gateshead Health NHS Foundation Trust
- South Tyneside NHS Foundation Trust
- Northumbria Healthcare NHS Foundation Trust
- City Hospitals Sunderland NHS Foundation Trust

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Key Findings

Data and Reporting, Leadership and Coordination

At booking Trusts collect data on BMI groups for the purpose of claiming the appropriate maternity payment plan and for enabling an appropriate pathway of care to meet NICE/RCOG guidance. The majority of Trusts do not currently use BMI data for the development of obesity services with the exception of Sunderland, South Tees & North Tees. There is no standardised national data set in relation to obesity in pregnancy in which to benchmark Trusts.

The audits found that local multi agency partnership meetings addressing obesity in pregnancy and the post-natal period were the exception rather than the norm with only South Tees having a specific collaborative multi stakeholder working group in relation to obesity in pregnancy until the child is age five. The Maternal and Infant Child Health Strategic Partnership (MICH) is a collaboration of Professionals across South Tees which focus on 6 high impact areas for maternity, health visiting and preconception to five years old. This includes a working group which aims to address the issues and reduce the risks associated with obesity in pregnancy in relation to infant mortality and pregnancy related complications. The MICH partnership meets on a quarterly basis and has developed a strategic, overarching vision and action plan for the delivery of services ensuring a co-ordinated, joined up approach. North Tees (Stockton LA) is in the process of establishing a group led by the health visiting 0-19 service. Most localities had a multi-stakeholder group in relation to child health or general adult obesity. Newcastle and Gateshead have a 'child be healthy' strategic partnership with key stakeholders with a focus on children which could easily be adapted to incorporate obesity in pregnancy.

The majority of localities do not have obesity in pregnancy within any of the key strategic documents, with some localities having a general population obesity section within their Health & Wellbeing (H&W) strategy. North Tees & South Tees localities

have specific obesity in pregnancy within their CCG service specification and/or service delivery improvement plans.

Three out of Eight localities (South Tees, Sunderland and North Tees) have a specialist role consisting of a Midwife delivering a clinic to women of specific BMI groups. A further 2 localities (Newcastle, Northumbria) have a specialist Midwife delivering high dependency clinics not specific to obesity (however women with an increased BMI would be included if they had a co-morbidity such as diabetes). The remaining 3 Trusts did not have a specialist role in place. South Tyneside is in consultation with Sunderland to commence a role in line with Sunderland's obesity in pregnancy clinic. Gateshead specialist Midwife role was decommissioned in 2017 due to funding and capacity issues for other priorities.

The majority of localities have Health Visiting services that offer child healthy weight programmes as a universal offer. In some localities this is achieved through a family lifestyle approach, such as the Healthy Families 'Right from the Start' programme, 'HENRY' programme or 'Life Activity and food' programme (LAF) which provides parents with a healthy eating and activity programme

Weight management services were varied across the eight localities with only four Trusts (North Tees, South Tees, Sunderland & Northumbria) having access to a Dietitian for the increased BMI pregnant population. However, dietetic services were available for those women who had diabetes in all localities. All dietetic services were Trust based (Tier 3 CCG funded). Only one Trust (South Tees) provided a Dietitian, working alongside the specialist role to provide a one stop service to women with and increased BMI in the pregnancy obesity clinic. The three other Trusts referred women from the healthy lifestyle clinic or community to the Hospital Dietitian based in dietetics. Attendance at the dietetic service is not currently monitored for compliance by any of the three Trusts.

Tier 2 community based weight management services were lacking in the majority of localities with a number being decommissioned when the funding streams changed within public health between local authorities and CCG's (2015) (Durham & Darlington, Gateshead, South Tyneside). Those that still have some services (Newcastle, Durham only, Sunderland South Tees) are general population based and exclude pregnancy (include post-natal if not breast feeding). The exception is North Tees locality where pregnancy is not exempt from Hartlepool adult services, however Midwives were not aware that they could refer into this service. Stockton are developing a new service which aims to offer specialist nurse led health assessments, working with lifestyle coaches to develop individualised programmes of activity and healthy eating advice to families, antenatal women and children and young people aged 0-19 (0-25 SEND). The service is in schools, community venues and clients homes and also provides a digital offer to increase ease of access. The team are working in close partnership with Tees Active to improve the physical activity element of the programme

Workforce Development

Training in physical activity, nutrition and healthy eating was only offered in two Trusts, Sunderland being included on the quarterly directorate training programme and South Tees as part of an annual public health half day for community Midwives. Midwives across the region had been trained in all Trusts 2014-15 in delivering 'very brief advice (VBA)' but in relation to smoking cessation for BabyClear implementation. Training and information across the region was varied in both availability and, type of resource used. No Trust included specific training in their induction programme or on the mandatory obstetric training agenda. Gateshead suggested that Midwives could utilise the RCM e-learning tool, however this wasn't mandated. The region would benefit from a standardised approach to training and information in all localities.

The majority of Trusts recognised that they could not be assured that health professionals were able to provide accurate high quality information and advice for women in the higher BMI groups. This was recognised as a gap in training, in referral pathways to appropriate services and in the availability of services.

Health Visiting services appeared to have higher intensity training in relation to healthy weight programmes with the majority of HV having received a level of training. Although these were focussed primarily on early years and school age children many had a family education approach to healthy lifestyle built into them. These principles would be applicable to pregnant women and their families.

Pathways & Service Delivery

Patient pathways across the region vary considerably depending on the services available but all endeavour to provide individualised care to pregnant women with the resources available.

All Trusts had an obesity/BMI guideline which outlined the care pathway for women. These usually started with a BMI ≥ 30. However care varied greatly dependant on what services were available. In addition to the guidelines both Sunderland and South Tees had pathways to support women through pregnancy with a BMI ≥ 30 as an integral part of their hand held records.

Half of the Trusts (Sunderland, South Tees Northumbria, and North Tees) held a specific clinic for increased BMI with the remaining Trusts referring directly into a high dependency clinic with the consultant to discuss pregnancy risk only. The thresholds for referral varied with some referring at BMI ≥30, ≥35 or ≥40. Those that operated a specific clinic, with the exception of South Tees, had to refer to a Dietitian in a different department on a different day within the hospital.

Trusts that did not have a combined Dietitian and raised BMI in pregnancy clinic felt that there is a degree of crossover in terms of discussion regarding the effects of obesity to the woman and her unborn child as well as supporting the woman maintain a healthy weight. Most pathways to the Dietitian were locality specific with most being tier three services based within Trusts. There was little information available to monitor the attendance at these clinics.

A few Trusts offered an 'early bird' information appointment to women pre-booking (Northumbria, South Tees, and North Tees) in which physical activity and healthy eating and nutrition advice was inclusive. Additional resources offered to women ranged from general maternity booklets the Baby Buddy App, the Pregnancy book and RCOG 'Why weight matters'. All Trusts provided some information on BMI at the booking appointment. Weight was addressed again in pregnancy, on an individual basis, at varying levels from recording weight to setting healthy goals.

All Trusts referred to an anaesthetist for women with a BMI ≥40 as per RCOG guidance. In addition all Trusts were compliant with NICE for referral and undertaking of oral glucose tolerance testing (OGTT) for BMI ≥30. It wasn't clear whether Trusts monitored attendance and uptake of the OGTT or anaesthetist appointments.

In line with NICE intrapartum guidance (2014) the majority of Trusts referred women with a BMI of ≥35 into a high dependency labour ward for delivery. With one Trust (Gateshead) assessing women an individual basis depending on other factors and comorbidities.

The documentation of weight/BMI was a combination of paper and electronic formats and is entered at booking at all Trusts then it becomes varied for the rest of pregnancy. This data feeds into the Maternity Dashboard and Trust performance report. Most Trusts re-weigh women at 36 weeks/in labour. Some recalculate the BMI and use this information to assess safety for place of birth, medication in labour and post-natal thromboprophylaxis. Some Trusts weigh at every appointment as part of providing obesity related advice.

There is evidence to suggest lack of signposting and collaborative working between all stakeholders into to physical activity programmes. The majority of localities do not offer specific programmes for pregnant women, with women having to access physical activity sessions privately. Three localities offer pregnant women exercise in water sessions delivered by either Midwives or leisure centre staff. A minority of localities offer pregnancy specific classes such as Pilates, Yoga and Pram pushes for post-natal women.

Evidenced Based Planning and Commissioning

The majority of localities had not undertaken a Joint Strategic Needs Assessment (JSNA) in relation to obesity in pregnancy and the post-natal period, with the exception of Gateshead LA which does include an element of pregnancy and early year's information; from this a healthy weight strategy will be developed. Maternity services to date have not had any involvement in this work stream although this will be addressed for future activities. North Tees locality have obesity in pregnancy included within the JSNA in relation to pregnancy and Middlesbrough undertook a piece of research in conjunction with Teesside University in regard to women's requirements and needs from a healthy lifestyle service.

A few Trusts audited their obesity guideline on an annual to three yearly basis as per governance arrangements, with Sunderland and South Tees specifically auditing the

raised BMI groups attending a specific pregnancy clinic with actions to support service development. In addition South Tees annually monitors outcomes of all women attending the clinic including weight gain and mode of delivery.

Most localities felt that they did not fully understand the needs of all women in relation to obesity in pregnancy as there were limited targeted approaches to assessing these needs, however most felt that they were aware of their women on an individual basis. Gateshead felt that the results of the health needs assessment should assist with this understanding and enable them to plan future services. South Tees monitor obesity in pregnancy as part of the maternity service and MICH work stream.

None of the localities felt that services were commissioned to fit seamlessly across the whole pathway. This appeared to be due to lack of collaboration between services, lack of knowledge of need, capacity in Trusts and weight management services, either being available to pregnant women, or due to lack of funding.

RECOMMENDATIONS

Data and Reporting, Leadership and Coordination Recommendations

- Unify and utilise existing datasets in localities such as the Maternity Data set and Trust Performance Reports to provide health informatics that can be reliably compared and monitored.
- All Trusts to consider utilising expertise of dietician in relation to supporting women who are obese in pregnancy.
- Each locality to consider how identified gaps in provision of services can be addressed in order to meet NICE guidance, using a multi-stakeholder approach.

Workforce Recommendations

- Develop and provide standardised training for maternity and health visiting staff in relation to obesity, physical activity and healthy eating and nutrition across the region.
- Regional universities to ensure obesity, physical activity and nutrition are included within training programmes for Midwives and Health Visitors.
- Encourage health visiting services to provide evidence based additional support to families where one or more parent is obese.

Pathways & Service Delivery Recommendations

- Utilise existing local multi-disciplinary stakeholder working groups that focus on pregnancy and early childhood to increase a whole system approach to tackling obesity.
- Explore potential development/adoption of a single evidence based regional pathway for maternity services.
- Encourage health visiting services to promote and refer post-natal women BMI ≥30 into local weight management services at the 6-8 week universal review.
- Encourage local public health departments to work in conjunction with partners to review access and provision of physical activities to pregnant women.
- In line with best evidence ensure all Trusts, as a minimum standard provide information to pregnant women (regardless of BMI) in regard to physical activity, nutrition, healthy eating and information on support services available within their locality.
- Trusts should promote nationally recommended resources including maternity booklets and websites: Examples; the Baby Buddy App, the Pregnancy book, NHS Choices leaflets, PHE start for life/fit for life.

Evidence Based Planning & Commissioning Recommendations

- Commissioners and Local Authority public health teams should work in collaboration with maternity and health visiting services to consider the wider

determinants of health in relation to obesity in pregnancy and develop local strategies to mitigate impact.

- Commissioners and Local Authority public health teams should work in collaboration with maternity and health visiting services to increase access to weight management services for women in the postnatal period.
- Local Authorities should include maternal obesity within their Joint Strategic Needs Assessments.

References

Carey F, Singh GK, Shelton Brown H and Wilkinson AV (2015), *International Journal of Behavioral Nutrition and Physical Activity*, *12 (Suppl 1)* :S3 https://doi.org/10.1186/1479-5868-12-S1-S3

CMACE (2010) *Maternal obesity in the UK: findings from a national project,* http://docplayer.net/14517860-Maternal-obesity-in-the-uk-findings-from-a-national-project.html

Centre for Maternal and Child Enquires (CEMACE)/Royal College of Obstetricians and Gynaecologists (RCOG) (2010) Management of Women with Obesity in Pregnancy, https://www.rcog.org.uk/globalassets/documents/guidelines/cmacercogjointguidelinemanagementwomenobesitypregnancya.pdf

Dinsdale S, Branch K, Cook L, and Shucksmith J (2016) *"As soon as you've had the baby that's it…" a qualitative study of 24 postnatal women on their experience of maternal obesity care pathways* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4957370/

Heslehurst N, Rankin J, McParlin C, Falko F Sniehotta, Howel D, Rice S & McColl E (2018) *Gestational Obesity Weight Management: Implementation of National Guidelines (GLOWING): a pilot cluster randomised controlled trial of a guidance implementation intervention for the management of maternal obesity by Midwives,* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5807844/

Muktabhant B, Lawrie TA, Lumbiganon P, Laopaiboon M (2015) Diet or exercise, or both, for preventing excessive weight gain in pregnancy. https://www.ncbi.nlm.nih.gov/pubmed/26068707

NHS Digital (2017) *Statistics on Obesity, Physical Activity and Diet,* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/613532/obes-phys-acti-diet-eng-2017-rep.pdf

NICE (2010) *Public health guideline nice.org.uk/guidance/ph27: Weight management before during and after pregnancy* https://www.nice.org.uk/guidance/ph27/resources/weight-management-before-during-and-after-pregnancy-pdf-1996242046405

NICE (2014) *Intrapartum care for healthy women and babies: Clinical guideline,* https://www.nice.org.uk/guidance/cg190

Public Health England, (2018) *Fingertips statistics,* https://fingertips.phe.org.uk/search/obesity#page/0/gid/1/pat/15/par/E92000001/ati/6/are/E12000001

RCOG (2010) CMACE/RCOG *Joint Guideline; Management of Women with Obesity in Pregnancy* https://www.rcog.org.uk/globalassets/documents/guidelines/cmacercogjointguidelinemanagementwomenobesitypregnancya.pdf

Tedstone A, (2018) *Implementing the Whole Systems Approach,* https://publichealthmatters.blog.gov.uk/2018/07/11/implementing-the-whole-systems-approach-to-obesity

Whittaker R C et al (1997) predicting obesity in young adulthood form childhood and parental obesity ***N Engl J Med 337 (13):869-873***

WHO (2018) *Why does childhood overweight ab obesity matter?: consequences of an unhealthy lifestyle during childhood*, www.who.int/dietphysicalactivity/childhood_consequences/en/

WHO (2018) *Obesity and Overweight*, http://www.who.int/en/news-room/fact-sheets/detail/obesity-and-overweight