Obesity in Pregnancy – Is Audit Across A Health Board Possible?

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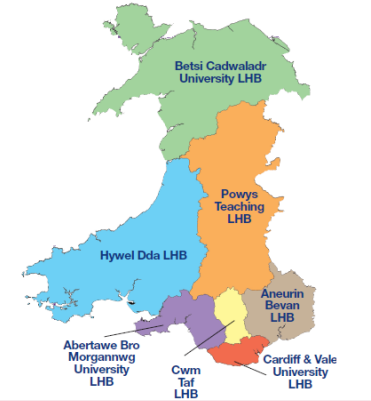
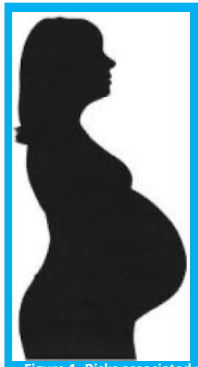
Background

The NHS services across Wales are served by seven health boards. Betsi Cadwaladr University Health Board (BCUHB) is the largest, providing care through three main sites across North Wales; Ysbyty Gwynedd (YG), Ysbyty Glan Clwyd (YGC) and Wrexham Maleor Hospital (WMH).



Maternity and birth statistics in Wales are updated annually with the data collected from the Maternity Indicators dataset for each health board [(1)]. Following the 2019 BCUHB annual maternity statistic review, we anticipated that the same principle could be rolled out to other areas of O&G.

Obesity is on the rise within women of child bearing age, with local data showing similarities with national trends with a steady rise of 5% over a 6-year period. This is a particular concern for Wales, as in 2019 28% of pregnant women in Wales were obese[(1)] compared to the lower rate of 22% in England. Risk associated with obesity are shown in Figure 1. The most recent MBRRACE report highlighted that 29% of women who died were obese. It was for this reason we felt that auditing the adherence of care of women with obesity in pregnancy against the current RCOG Green-top and NICE guidance was an important and relevant topic for this project.



Antenatal Risks
Pre-eclampsia, Gestational diabetes, Venous thromboembolism, Difficulties with fetal assessment

Intrapartum Risks
Induction of labour, Labour dystocia, Caesarean Birth, Postpartum Haemorrhage, Anaesthetic complications

Postnatal Risks
Wound infection, Breast feeding
Maternal morbidity & Mortality

Fetal Risks
Congenital anomalies, Stillbirth, Prematurity, Macrosomia, Neonatal death, Childhood obesity & metabolic disorders

Figure 1. Risks associated with obesity in pregnancy

Method

A retrospective audit was carried out using 10 standards identified from the RCOG Care of Women with Obesity in Pregnancy (Green-Top Guideline No. 27) and Hypertension in Pregnancy: Diagnosis and Management (NICE Guideline NG133). Individual team members were recruited to assist in the project from each site and contact maintained through email.

The patient sample was compiled from the birth register at each unit. 30 patients from each class of obesity who delivered between January and March 2019 were included in the audit. A total of 270 case notes were reviewed and data collected on a paper proforma designed by the leading team, respecting all information governance requirements.

Results

Standards Expected compliance 100%	BCU Compliance
1. Proportion of pregnant women who have a record of maternal height, weight and BMI in their maternity records	**100%**
2. Proportion of women with class III obesity who had pharmacological thromboprophylaxis prescribed postnatally	**98%**
3. Proportion of women with class I obesity or greater at booking who had a glucose tolerance test during pregnancy	**98.5%**
4. Proportion of operative vaginal births and caesarean sections in women with class III obesity at booking, which were attended by an obstetrician at ST6 or above	**90%** WMH – 100% YGC – 79% YG – 100%
5. Proportion of women with class III obesity who had an antenatal anaesthetic review	**80%** WMH – 90% YGC – 100% YG – 50%
6. Proportion of maternity healthcare professionals who have had training in moving and handling techniques	**73%** WMH – 73% YGC 91% YG – 55%
7. Proportion of women with obesity booking who commenced 5mg folic acid supplementation daily prior to conception	Incomplete data
8. Proportion of women correctly prescribed pharmacological thromboprophylaxis antenatally	Incomplete data
9. Proportion of women with class II obesity and one additional risk factor who had the correct dose of Aspirin prescribed	Incomplete data
10. Proportion of women with obesity who had active management of the third stage of labour	Incomplete data

Discussion & Conclusion

Unfortunately due to miscommunication, YGC used a different proforma for data collection. This meant that only 6 of the 10 standards were measured. In the future this will be avoided through pilot testing data collection, and regular meetings either virtually or in person allowing for more efficiency and clarity.

YGC currently does not have any senior trainees, for this reason only consultant presence was acknowledged at the time of data collection. There are however experienced SAS doctors, and therefore feel that if this experience was accounted for, compliance with standard number 4 would have been higher. This will be taken into account for the next cycle of the audit.

Both WMH & YGC use a proforma to refer patients for an anaesthetic review. This is most often done by the community team at the time of booking. In YG a letter is sent following review in the consultant led antenatal clinic. The audit highlights the process used is WMH & YGC allows a significantly larger proportion of women undergo an anaesthetic review. Following this finding YG are looking to implement the use of a proforma.

YGC had the highest compliance with manual handling training, it was noted that staff are allocated specific time on the rota to complete the training in comparison to the other units. We are in discussions to allow rostered time for all mandatory E-learning in all 3 sites.

The audit is planned to be repeated in 6 months following the rollout of the new BCUHB Obesity in Pregnancy pathway.

This project shows that audit across multiple sites within a health board is possible. The benefits of comparing data allow for a better understanding of different processes and their impact on patient care as well as an insight into possible results following changes. This type of project requires planning, teamwork and regular virtual meetings. Ideally an online platform to collate the information helps with data collection. Following on from the success of this, BCUHB Womens Unit is currently carrying out 4 projects using these same principles.

Tips for Health Board wide audit

1. One lead team member to oversee whole project
2. Communication is the key to success and avoid errors
3. Where possible use nationally recognised standards
4. Keep it simple, concentrate on a few standards.
5. Pilot test data collection
6. Where possible use a secure online platform to collect data
7. Share data with the lead through the project not at the end

References

1. Welsh Government, 2020, Maternity & Birth Statistics 2019, February 2021, <https://gov.wales/sites/default/files/statistics-and-research/2020-08/maternity-and-birth-statistics-2019-updated.pdf>