Barnsley Hospital NHS
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Preconception management in diabetes

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Why is preconception management important?

- Good glycaemic control before conception and throughout pregnancy reduces risk of:
  - Miscarriage
  - Congenital malformation (mainly neural tube defect and congenital heart disease)
  - Stillbirth
  - Neonatal death
- Empowers women with diabetes to have a positive experience of pregnancy and childbirth
- Reduces risk of baby developing obesity and/or diabetes in later life

Perinatal mortality and congenital anomalies in babies of women with type 1 or type 2 diabetes in England, Wales and Northern Ireland

Mary Mackintosh et al (BMJ 22nd July 2006)

- 2359 participants over 1 year period 2002-2003
  - 1707 T1DM (9% ethnic minorities/ 23% social deprivation)
  - 652 T2DM (49% ethnic minorities/ 46% social deprivation)

- Perinatal mortality comparable in both T1DM and T2DM
  - T1DM 37.1/1000 births
  - T2DM 32.3/1000 births
  - **4x HIGHER** than general maternity population

- Major congenital anomaly
  - T1DM 48/1000 births
  - T2DM 43/1000 births
  - **MORE THAN DOUBLE** that of general maternity population

Perinatal mortality and congenital anomalies in babies of women with type 1 or type 2 diabetes in England, Wales and Northern Ireland

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- Median HbA1c in participants:
  - Normal birth 57mmol/l (7.4%)
  - Congenital anomaly 63mmol/mol (7.9%)
  - Stillbirth/neonatal death 64mmol/mol (8.0%)

NICE Clinical Guideline 63 (2012) and Clinical Guideline 3 (2015)

- Advise women with diabetes who are planning to become pregnant to aim to keep their HbA1c level below 48 mmol/mol (6.5%), if this is achievable without causing problematic hypoglycaemia (Target was 43mmol/mol (6.1%) until 2015 update)
- Reassure women that any reduction in HbA1c level towards the target of 48 mmol/mol (6.5%) is likely to reduce the risk of congenital malformations in the baby
- Strongly advise women with diabetes whose HbA1c level is above 86 mmol/mol (10%) not to get pregnant because of the associated risks

National Pregnancy in Diabetes Audit 2014
Yorkshire & Humber Region

- Key questions
  - Were women adequately prepared for pregnancy?
  - Were adverse maternal outcomes minimised?
  - Were adverse fetal/infant outcomes minimised?

- Population
  - 53.3% Type 1 diabetes
  - 37.1% Type 2 diabetes
  - 9.6% Other (MODY or unrecorded)

National Pregnancy in Diabetes Audit 2014
Yorkshire & Humber Region

- HbA1c at first appointment (known diabetes diagnosis)
  - Below 43mmol/mol (6.1%) 15.5% (national 14.6%)
  - Below 48mmol/mol (6.5%) 26.4% (national 25.9%)
  - Above 48mmol/mol (6.5%) 73.6% (national 74.1%)
  - Above 86mmol/mol (10%) 14.9% (national 9.7%)

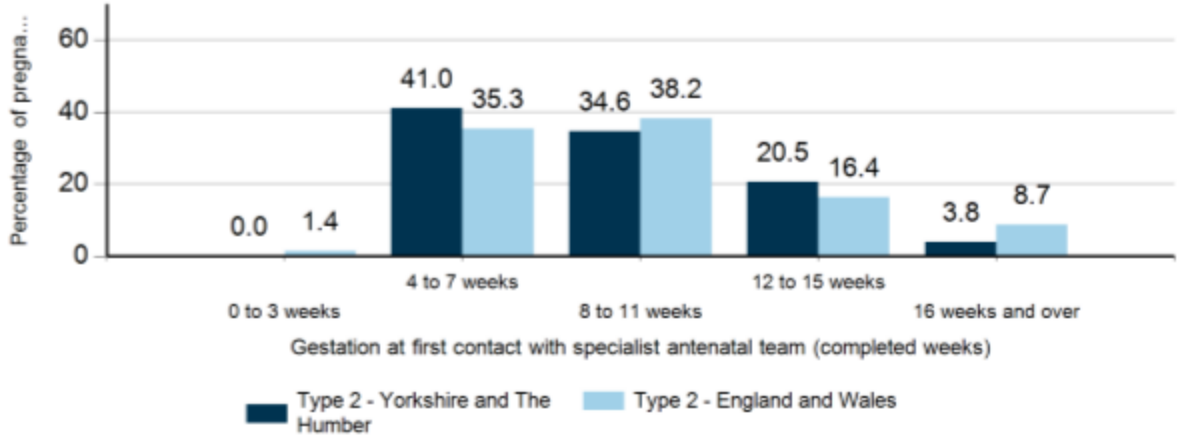
- Taking Folic acid 5mg at first appointment
  - T1DM 51.8% (national 44.9%)
  - T2DM 34.6% (national 23.7%)

National Pregnancy in Diabetes Audit 2014

Yorkshire & Humber Region

Gestation (completed weeks) at first contact with the specialist antenatal team for women with Type 1 diabetes in the audit for 2014 in the Yorkshire and The Humber region and in England and Wales

Gestation (completed weeks) at first contact with the specialist antenatal team for women with Type 2 diabetes in the audit for 2014 in the Yorkshire and The Humber region and in England and Wales



▪ Very early appointments are likely to be preconception care appointments already in place before the woman knew she was pregnant.

Preconception management

- Refer to Diabetes Specialist Nursing service (dedicated clinic every Friday at Apollo Court Medical Centre)
  - Review diabetes medications, insulin management, CGM, insulin pump therapy
  - Accurate blood glucose monitoring
- Review other medications
  - Stop statin
  - ACE inhibitor/B-blocker/diuretic – consider labetalol/methyldopa/Nifedipine MR
  - Antidepressant – avoid if possible. If required consider Citalopram, Fluoxetine or Sertraline
- Smoking/alcohol cessation
- Retinal screening/renal function

References

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