

Preconception and Pregnancy

Why is this important to Bradford?

Preconception should consider both those who may conceive at some point in the future, as well as those who are actively considering a pregnancy. Ensuring that women and men across Bradford District achieve and maintain good health in their reproductive years is a challenge that impacts on future health for themselves, their children and future generations. Every interaction with a health professional is an opportunity to improve outcomes and change life chances. Preconception interventions should not be restricted to maternal and child health services, as they often require engagement from individuals who are not thinking about becoming pregnant in the near future. Risk groups with multiple vulnerabilities are likely to be less well-served by mainstream services and have worse outcomes due to the magnification of intergenerational effects. As such, a more intensive and multidisciplinary approach is needed. This JSNA section builds on the [JSNA 4.1.4 'Pregnancy, Breastfeeding, Birth Weight and Stillbirths'](#) (published in September 2016) and considers the needs of the population prior to and during pregnancy.

Strategic context

National Context: NICE published a [Clinical Knowledge Summary for Preconception](#) (2017) which included sections on mental health, chronic medical conditions and genetic risk. [Planning for Pregnancy](#) was launched in 2018; it is a digital tool to give women the information they need to know before pregnancy. The national review of maternity services [Better Births](#) (2016) outlined priorities to drive improvement and ensure women and babies receive excellent care wherever they live.

Local Context: Good health and wellbeing in preconception and during pregnancy will contribute to the [Joint Health and Wellbeing Strategy for Bradford and Airedale \(2018-2023\)](#), specifically aspirations for our children to have a great start in life, people in Bradford District have good mental wellbeing, and people are living well and ageing well.

The [Bradford District Infant Mortality Commission](#) recommendation 4 noted: “to ensure equal access to all aspects of preconceptional, maternal and infant health care”. Recommendations from the commission are embedded in the [Every Baby Matters](#) programme of work. The [Maternity, Children and Young People Partnership](#) provides leadership, oversees progress and holds leaders to account on agreed strategic objectives, across Bradford District.

What do we know?

Reproductive Age Population: Table 1 shows the variation in the size of the female population of reproductive age (aged 15-44) across the three Bradford CCGs. The proportion of females of reproductive age is higher in NHS Bradford City CCG (23.8%) compared to NHS Bradford Districts CCG (19.5%, similar to the regional and national percentage), and NHS Airedale, Wharfedale and Craven CCG (16.7%).

Table 1: Total population and female population aged 15-44, CCG registered population

2017/18 Boundaries	Total registered population (2017)	Total females aged 15-44, registered population (2017)	% females aged 15-44, registered population (2017)
England	58,437,363	11,525,729	19.7%
West Yorkshire	2,688,918	536,797	19.9%
NHS Airedale Wharfedale and Craven CCG	158,713	26,539	16.7%
NHS Bradford Districts CCG	331,415	64,761	19.5%
NHS Bradford City CCG	137,940	32,849	23.8%

Source data: NHS Digital, 2017 and ONS births, 2015

Pregnancy Planning: A planned pregnancy is likely to be a healthier one, as unplanned pregnancies represent a missed opportunity to optimise pre-pregnancy health. Currently, 45% of pregnancies and **one third of births in England are unplanned** or associated with feelings of ambivalence. There are **multiple risk factors for unplanned pregnancy**, including lower educational attainment, younger



age, smoking and substance misuse. Unplanned pregnancy is also an issue for women who are over the age of 35, right through to menopause. This group are the least likely to be using adequate contraception, despite being sexually active and not wanting to conceive. Rising rates of abortion in this age group support this finding.

Smoking: In the general population, smoking rates for Bradford (18.9%) continue to be significantly worse than the regional (17.0%) and England average (14.9%).

Smoking status at time of delivery in Bradford has fallen from 16.3% (2012/13) to **13.8%** (2016/17). This continues to be higher than the national average (10.7%). Furthermore, smoking rates at time of delivery in Bradford continue to be **highest in areas of deprivation**.

Smoking increases the risk of complications in pregnancy and of the child developing a number of conditions later on in life.



Obesity: Links between both maternal and paternal diet and weight (BMI >30) have been associated with fertility issues, pregnancy complications, poor foetal development and poorer health for children. Achieving weight loss requires a longer period of time to address adequately before pregnancy, and is therefore an area where changes could be made earlier than the traditional preconception period of 3 months. **Rates of obesity are increasing** among women of reproductive age and there has been an increase in obesity in pregnancy.

Data from [Born in Bradford](#) (a cohort study representative of Bradford District) reported the **BMI of pregnant women** ranged from around 13 to 57 (**mean of 30.4**) (Figure 1). 50.2% of the cohort were overweight (BMI of 25 or more) and 21.2% of the cohort were obese (BMI of 30 or more).

A **balanced diet** and **good nutritional status** for men and women prior to conception and (for women) throughout pregnancy will ensure the nutritional demands of pregnancy are met and improve the chances of a successful pregnancy, and healthy mum and baby. It's advisable that men and women undertaking regular moderate intensity **physical activity** throughout life. Paternal obesity has been linked to impaired fertility by affecting sperm quality and quantity, as well as an increased risk of chronic disease in future generations.

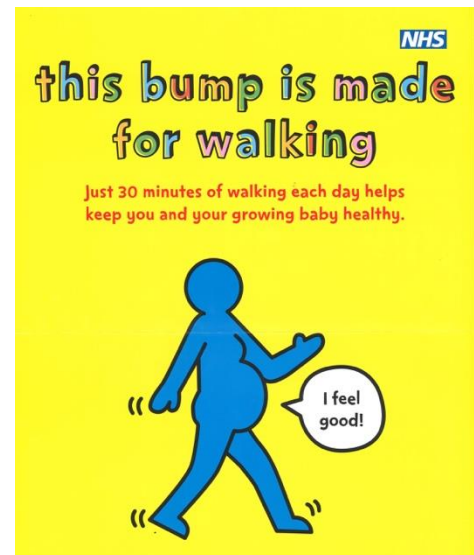
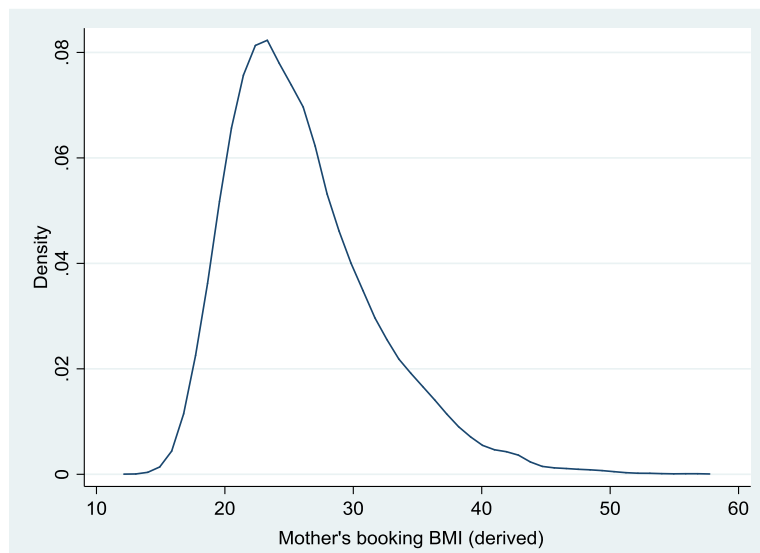
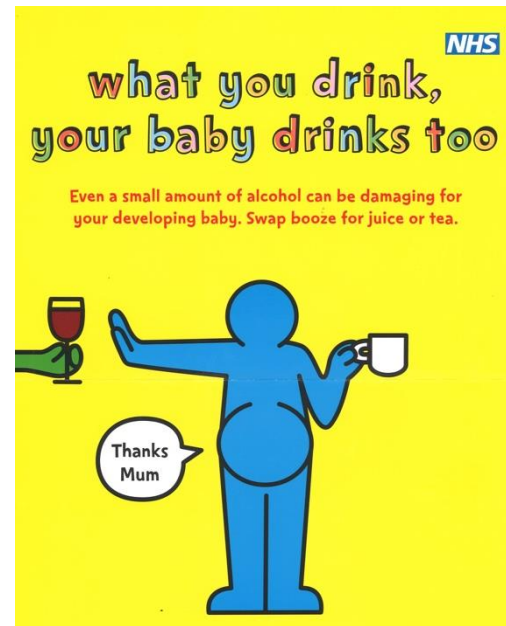


Figure 1: BMI of pregnant women in Bradford District



Source: *Born in Bradford*



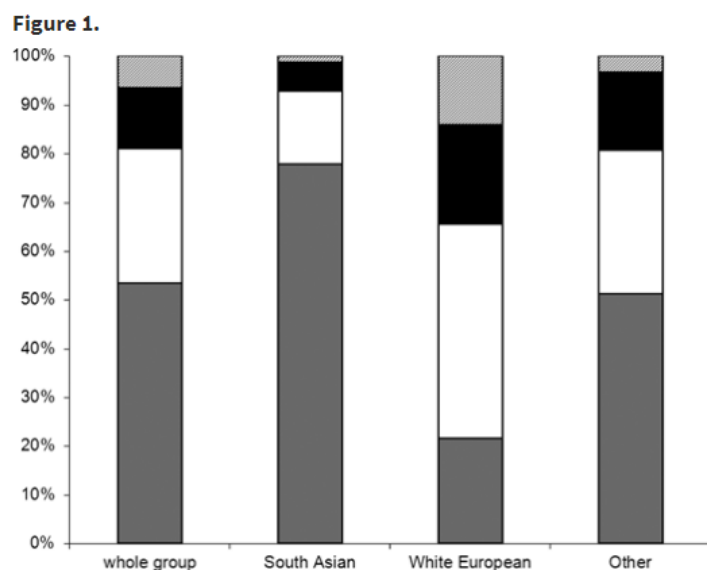
Alcohol: Data from [Born in Bradford](#) reported that 3,403 (30.0%) drank alcohol in the three months prior to the pregnancy, 1,731 (15.2%) drank alcohol in the first three months of pregnancy, and 1,300 (11.4%) drank since the 4th month of pregnancy. In addition, **large ethnic differences in alcohol consumption** were reported. For example, pregnant women of South Asian origin reported very low levels of alcohol consumption, whereas white British mothers reported much higher levels of alcohol consumption (72% consumed alcohol in the 3 months prior to pregnancy and 40% during pregnancy). For more information on this research, [click here](#).

The UK Chief Medical Officers recommends that the safest approach - for those who are pregnant or planning to become pregnant - is not to drink alcohol at all to keep risks to your baby to a minimum. Drinking alcohol during pregnancy can increase the risk of miscarriage and low birth weight, as well as the risk of developing Foetal Alcohol Syndrome. In men, drinking too much alcohol can also cause fertility problems, including: reduced testosterone levels, low sperm quality and quantity, loss of interest in sex.

Vitamins (Folic Acid and vitamin D): Women who are trying to conceive should be advised to take 400 micrograms of folic acid each day to help to prevent birth defects (known as neural tube defects, including spina bifida). Only **one fifth of women report taking folic acid before pregnancy**; this rises to three fifths of women once their pregnancy is confirmed. Not taking folic acid before pregnancy is associated with being under 25 years old, being from a Black Asian and Minority ethnic group, and deprivation.

Local evidence suggests that a significant proportion of women of childbearing age and infants born in Bradford & Airedale are likely to be at **risk of vitamin D deficiency**. The Bradford and Airedale population is at particular risk from vitamin D deficiency because of higher than average levels of deprivation, a large South Asian population and the lack of useable sunlight in winter months.

Figure 2: Vitamin D levels in the Born in Bradford Cohort



Source: *Born in Bradford*

[Figure 2 shows the distribution of vitamin D levels in the Born in Bradford cohort, by ethnic group.](#) The dark grey and white sections of each bar represent vitamin D deficiency. It shows that **81% of the cohort had a high frequency of vitamin D deficiency**, and this was particularly prominent among women from south Asian origins.

40.6% of women from the Born in Bradford cohort reported that they took multivitamins or iron tablets in the last 4 weeks of pregnancy; most of these women stated that they were taking multivitamins which included vitamin D.

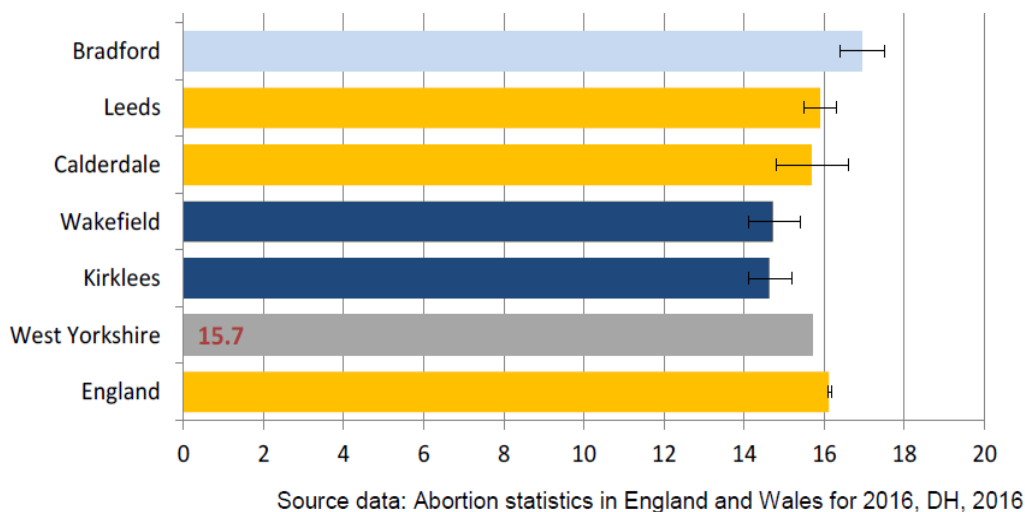
Vaccinations: As part of preconception care, it's important that women are up-to-date with vaccinations. In addition, during pregnancy women will be encouraged to obtain the flu and pertussis vaccine from their GP. Pregnant women are at risk of severe illness from flu at any stage of pregnancy. In 2017/18 **uptake of the flu vaccine** in pregnancy was **48.3%** across the three CCGs, with uptake variation in GP practices ranging between 25.8% and 81.1%.

A temporary pertussis vaccine programme was introduced for pregnant women in England in 2012 in response to a national outbreak. Its purpose is to offer protection to newborn babies until they are two months old, and eligible to receive their own vaccine. From October 2017 to March 2018, uptake of the pertussis vaccine in pregnancy was 70.0% for Bradford City CCG, 76.2% for Bradford

Districts CCG and 77.4% for Airedale, Wharfedale and Craven CCG (the England average for the same time period was 72.9%).

Abortion: Figure 3 shows that Bradford District had the highest rate of abortion across West Yorkshire in 2016. The [Maternity Health Needs Assessment, 2017](#) reported that across the Local Maternity System **37.3%** of abortions were **repeat abortions**, where the woman has had one or more previous abortions (DH 2016). There was little variation across the CCGs in this indicator.

Figure 3: Legal abortions (age standardized rate per 1000 resident women aged 15-44), 2016



Infertility: Within a year, 75% of women aged 30 and 66% of women aged 35 will conceive naturally and have a baby. However **1 in 7 couples experience difficulty in conceiving**, and this can have a significant impact on mental health and wellbeing. Since 1991 the number of IVF cycles performed nationally each year has increased steadily, alongside an increase in the live birth rate following IVF. In 2017/18, the three CCGs in Bradford District funded 234 assisted conception treatments.

Maternal Mental Health: Perinatal **mental illness affects up to 20% of women**, and covers a wide range of conditions. If left untreated, it can have significant and long-lasting effects on the woman and her family (NHS England 2017). Perinatal mental health problems can also have long-standing effects on children's emotional, social and cognitive development.

What Assets do we have?

- School nurses, family nurses, midwives, health visitors and other professionals deliver important **health and wellbeing messages**. Topics addressed include obesity, smoking, mental health and other factors that can impact on current and future pregnancies.
- **Communities Genetics Awareness** training for health professionals, leaflets and a video on genetic inheritance have been developed to raise awareness across the community.
- Local data from Better Start Bradford and Born in Bradford is being used by the Women's Health Network to identify the preconception needs of diverse communities across Bradford.
- All women are offered a **Glucose Tolerance Test** at BTHFT antenatal appointments to identify gestational diabetes.

- All women are offered **CO monitoring** to identify smoking in pregnancy at BTHFT and AGH.
- Pregnant women and infants are offered **Healthy Start vitamins** to reduce vitamin D deficiency.
- The Maternity, Children and Young People's Partnership as well as the Transformation and Integration Group provide leadership to enable improvements across the system.

Gaps / challenges / opportunities

- The Public Health 0-19 Service (to include **Health Visiting, School Nursing and Oral Health** services) is being recommissioned, and will be integrated and co-located as part of the wider Prevention and Early Help model, across the four locality footprint.
- Implementation of **Better Births** may strengthen the delivery and adoption of health messages throughout pregnancy to influence current and any subsequent pregnancies.
- On-going reductions in budget for council funded services (e.g. sexual health, smoking cessation, children's, education) may result in service redesign and different ways of working.
- BTHFT is leading the development of the **Support of Next Infant** (SONI) pathway.
- CNET community engagement research highlighted challenges to smoking cessation in pregnancy, including cultural barriers, individual stress and fear of judgement.
- From 2020, schools will be mandated to teach **Relationships and Sex Education**.
- National driver for better understanding of preconception and reproductive health needs, and anticipated national strategy and campaign to improve preconception health (planned for 2019) is an opportunity.
- Local preconception Health Summit planned for 2019, will aim to further explore the risks, barriers and opportunities across the health and social care system.
- Economic challenges across the District will disproportionately affect those living in deprived areas; their health, wellbeing and future pregnancies.

What are we doing about it and what does the information presented mean for commissioners?

- There is a need for commissioners to align towards a focus on contraception and preconception health, for example, by including pregnancy prevention and planning in all relevant policies and embed it into existing services.
- Developing policies that recognise the role of wider determinants in providing optimal circumstances in which to choose if and when to have a child, should also be prioritised.
- Support health and other professionals to deliver consistent, evidence-based messages through a 'Making Every Contact Count' approach to preconception and pregnancy. The challenge is to ensure messaging is integrated as routine practice.
- Joint commissioning across organisations ought to take a system-wide and population-based approach to the provision of contraception and preconception care, maximising the proportions of the population reached across Bradford District.
- Social prescribing pathways would support the Local Maternity System and enable better signposting to relevant health and wellbeing enabling services.

- Ensure the location of targeted prevention services to engage vulnerable women at risk are safe spaces and sensitive to cultural needs.
- Further analysis to better understand abortion data and reasons for comparatively high rates.