

## 2.3 Health in pregnancy

The lifestyle and actions of the mother can either improve or be detrimental to the outcomes for mothers and babies during pregnancy. There is clear evidence to demonstrate that smoking, drinking alcohol, and substance misuse can have serious and long term effects on children born to mothers who used these products during their pregnancy. There is also evidence of the significant negative impact of domestic violence, mental ill health, and obesity on outcomes for both mother and child.

There are a series of national screening programmes during pregnancy that help protect both mother and child during the pregnancy, and give parents the information and opportunity to make choices about their actions during pregnancy.

### 2.3.1 Smoking in pregnancy

Smoking during pregnancy can lead to serious health problems. These include complications during labour, an increased risk of miscarriage, premature birth, still birth, and low birth weight. Smoking in pregnancy increases the risk of infant mortality by an estimated 40%<sup>1</sup>, and babies born to mothers who smoke are up to three times more likely to die from a sudden unexpected death in infancy (SUDI). Environmental tobacco smoke (passive smoking) in children is associated with respiratory infections including bronchitis, pneumonia, asthma, and other ear, nose and throat problems.

Smoking prevalence in Barking and Dagenham is amongst the highest in London and England, with prevalence in the adult population at 21.7% (2014/15)<sup>2</sup>. This value decreased by 1.4 percent from 2013/14 and remains higher than the London and England average of 17% and 18% respectively<sup>2</sup>. More information about smoking in the general population is covered in section 7.

Significant work has been done to improve the recording of smoking in pregnancy to ensure there is accurate information to enable targeting of services. Since 2007, information has been collected nationally about smoking at the time of delivery. Services need to use this data to ensure that women access services before conception and during pregnancy to support them to stop smoking.

Effective support to mothers who smoke during their pregnancy needs good engagement between maternity services and the Stop Smoking Service. Currently, every woman from Barking and Dagenham who says they are a smoker at the time they book their pregnancy care is notified to the Stop Smoking Service, which then makes contact with them to offer advice and support. Midwives have also been offered the opportunity to undertake Level 1 smoking cessation training; all of the public health midwife team have done this training and 50% of the community midwives have also completed Level 1 training, which helps them know how best to talk to mothers, and support their motivation to stop smoking.

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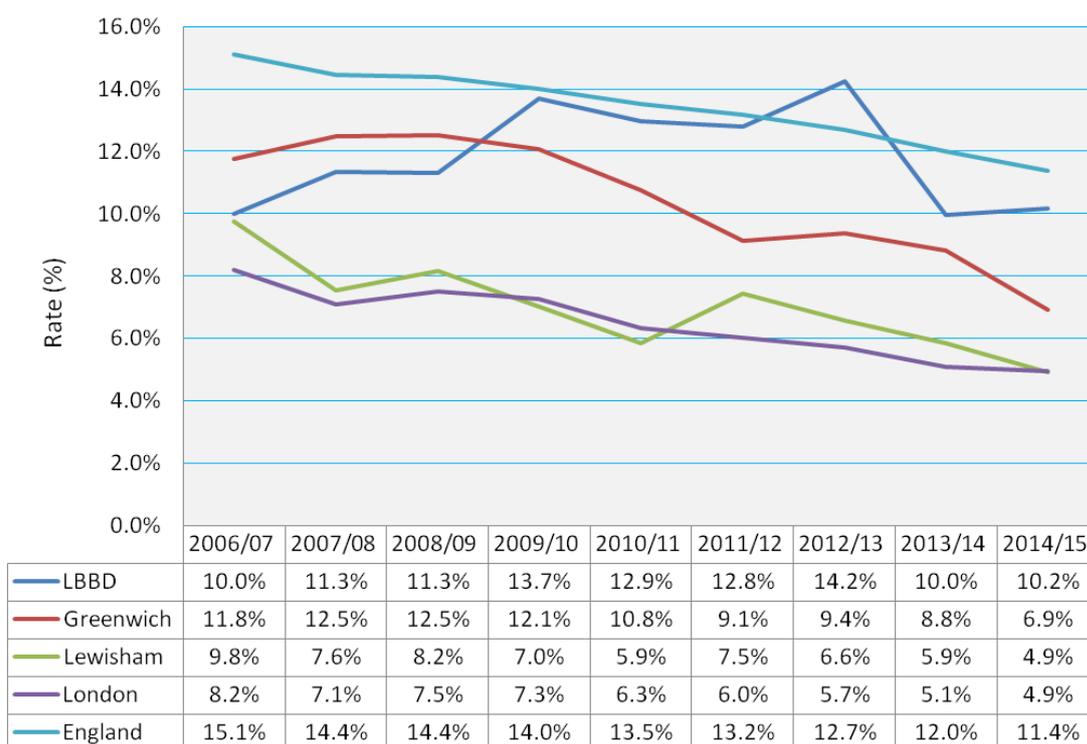
<sup>1</sup> Department of Health. (2007). *Review of the Health Inequalities Infant Mortality PSA Target*. Available: <http://www.bipsolutions.com/docstore/pdf/15829.pdf>. Last accessed 30th September 2014.

<sup>2</sup> Public Health England. (2012). *Public Health Outcomes Framework*. [Online] Available from: <http://www.phoutcomes.info/> [Last accessed 27 May 2016]

Information on smoking status is collected at the time of delivery in line with national data collection. The disadvantage of the timing of data collection is that little is known about how many women quit during their pregnancy or in preparation for pregnancy. If more accurate information about smoking at the time of booking as well as at delivery could be gathered and collated then a more accurate picture could be built up of the success of any initiatives aimed at reducing smoking during the pregnancy.

The trends in maternal smoking rate over the last nine years show a constant reduction for two of Barking and Dagenham’s statistical neighbours (Greenwich and Lewisham), as well as London and England. However Barking and Dagenham, experienced an increase from 2006/07 to 2012/13 followed by a sharp decline between 2012/13 to 2013/14 (Figure 2.3.1). Barking and Dagenham has always been higher than the London average and, historically, has generally been below the England average, however the rate increased in 2012/13 and the value overtook the England average value<sup>3</sup> but it declined again from 2013/14 to 2015/16 (2015/16 quarterly data is presented in Table 2.3.1 and Figure 2.3.2).

**Figure 2.3.1: Trends in the percentage of deliveries where the mother is a smoker, Barking and Dagenham, Statistical neighbouring boroughs, regional and national averages, 2006/7-2014/15**



Source: HSCIC

At the time of refreshing this section, 2015/16 prevalence data for ‘Smoking status at time of delivery’ is not available but the data for Quarter-1 to 3, 2015/16 (April to December 2015) are available and presented in Table 2.3.1.

<sup>3</sup> HSCIC 2014, Statistics on women’s smoking status at Time of Delivery, England, available at: <http://www.hscic.gov.uk/article/2021/WebsiteSearch?q=delivery+AND+smoker+&area=both&size=10&sort=Relevance> – Last accessed: 27 May 2016

**Table 2.3.1 Statistics on Women's Smoking Status at Time of Delivery: B&D, Greenwich, Lewisham, London and England, Q1-3 2015/16**

Area	Q-1, 2015/16				Q-2, 2015/16				Q-3, 2015/16			
	WSATD		Un-known		WSATD		Un-known		WSATD		Un-known	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
<b>B &amp; D</b>	86	9.6	1	0.1	82	8.9	13	1.4	83	8.7	2	0.2
<b>Greenwich</b>	77	7.0	61	5.6	101	9.2	21	1.9	91	9.2	31	3.1
<b>Lewisham</b>	55	5.0	62	5.6	55	4.8	98	8.5	47	4.0	61	5.3
<b>London</b>	1,492	5.0	847	2.9	1,531	4.9	965	3.1	1,472	4.8	796	2.6
<b>England</b>	16,663	10.7	7,001	4.5	17,117	10.5	5,210	3.2	16,937	10.6	4,137	2.6

Source: hscic, Statistics on Women's Smoking Status at Time of Delivery

WSATD: Women Smoking At Time of Delivery

Un-Known: Women whose smoking status at time of delivery was not known

The above table shows that the number of 'women whose smoking status at time of delivery was Un-known, Barking and Dagenham is very low which gives a more precise estimate of prevalence. The data also are presented in the following graph (Figure 2.3.2). The data shows the smoking rate of women at time of delivery in Barking and Dagenham is significantly higher than London and Lewisham but not significantly different to England and Greenwich. However, the good news is that there has been a consistent drop in the observed levels of women that smoke at point of delivery in Barking and Dagenham since 2014/15, with prevalence dropping from 10.2% to 9.6%, 8.9% and finally 8.7% by the third quarter of 2015/16.

**Figure 2.3.2 Statistics on Women's Smoking Status at Time of Delivery: B&D, Greenwich, Lewisham, London and England, Q1-3 2015/16**



Source: hscic, Statistics on Women's Smoking Status at Time of Delivery

There is some evidence that women from lower socioeconomic groups are less likely to actively travel to services, hence the benefit of co-locating smoking services and antenatal services to engage these women more effectively, this could be achieved through service delivery in children's centres. This was highlighted by an OfSTED

inspection of children's centres which positively supported the integration of antenatal support, highlighting that more could be done in these settings in relation to smoking cessation.

In order to address health inequalities, commissioning plans for maternity, health visiting, and the Stop Smoking Service need to emphasise the importance of targeting support towards women with poorer socioeconomic status, so those in families on low income or unemployed are proactively encouraged to engage with services. Access to services for women smokers with a history of poor mental health is also important.

### **2.3.1.1 BabyClear© - smoking in pregnancy**

Nice Guidance PH26<sup>4</sup> published October 2010 made a host of recommendations. The babyclear programme is designed to ensure the recommendations are followed. Barking and Dagenham are working in partnership with local stakeholders, to implement babyclear© within Barking, Havering, and Redbridge University Hospitals NHS Trust (BHRUT). babyClear© is an evidenced-based programme that aims to reduce the prevalence of smoking in pregnancy, and increase smoking cessation referrals. babyClear© aims to reduce smoking in pregnancy through a systematic approach that identifies pregnant smokers, and supports the process of smoking cessation referrals. All pregnant women are offered a carbon monoxide (CO) screening, and specialist training is provided to both clinical and non-clinical staffs that engage with pregnant smokers, across maternity and stop smoking services. The babyClear© programme is being implemented in partnership with NHS Barking and Dagenham Clinical Commissioning Group, BHRUT Maternity Services, Public Health with the London Boroughs' of Havering, and Redbridge, North East London NHS Foundation Trust Stop Smoking Services and Barking and Dagenham Specialist Stop Smoking Service. The babyClear© programme was co-funded by Public Health England, and is being delivered by the Tobacco Control Collaborating Centre.

The Babyclear programme went live in September 2015, to be implemented in two phases:

#### **Phase 1**

- 95% of all midwives have received training
- 100% of stop smoking services have received training
- 95% of all midwives have been provided with a CO monitor and leaflets that support the stop smoking message and identify stop smoking support.
- Midwives have achieved CO Screening of 92% of all pregnant women at booking, which is between 8 and 12 weeks in the pregnancy.
- Babyclear training is now delivered by stop smoking advisors and a trained midwife.
- In order to get data for women screened at 36 weeks, women need to have delivered their babies. Data for CO screening at 36 weeks is currently being processed. The first cohort of women screened in October will have delivered

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<sup>4</sup> Nice, June 2010, "Smoking: stopping in pregnancy and after childbirth" [Online] Available from: <https://www.nice.org.uk/guidance/ph26> [Last accessed: 23rd June 2016]

their babies in May with the number of observations available being relatively limited. Data collection is ongoing, with three months data being available at the end of July 2016.

## **Recommendations**

Smoking is the single most important modifiable risk factor in pregnancy. All women are CO screened at booking and 36 weeks.

- All women who CO screening is higher than 4ppm are offered opt out referral support to stop smoking services
- Women are given clear factual information in a non-judgemental way, they are encouraged to engage with the stop smoking service
- The referral method is currently in paper form.
- The referral's are collected weekly by the stop smoking service, however 99 CO screenings of over 4% were identified with only 19 referrals were received for Quarter 4

The paper based referral process is currently taking too long and additional software has been purchased for the maternity information system to ensure midwife referrals come directly to the stop smoking service to avoid any duplication of work for busy midwives .

## **Phase 2 Risk Perception**

- Feedback is given to midwives: Who engages, who quits, who states that they have stopped as well as which mothers decline or drop out.
- Phase 2 is currently at the stage of negotiation, with the intention for women who do not engage or continue to smoke to be targeted at the risk perception phase.
- Hard hitting messages will be given to women in their scan by a trained midwife.
- NRT available at appointment.
- Access to stop smoking services will be available immediately

### **2.3.2 Alcohol and substance misuse in pregnancy**

Pregnancy is a crucial time for women who are misusing alcohol, drugs or other substances. Substance misuse may harm the foetus, and being pregnant can act as a strong incentive to make a positive change to abandon substance-misusing behaviour.

Substance misuse is often associated with poverty and other social problems, so women who misuse drugs during their pregnancy may also be in poor general health and have physical and mental health problems related to drug use. Substance misuse during pregnancy increases the risk of:

- Having a premature or low weight baby;
- The baby suffering symptoms of withdrawal from drugs used by the mother during pregnancy;
- The death of the baby before or shortly after birth; still birth or neonatal death.
- Sudden unexplained death in infancy (SUDI, commonly known as cot death);
- Physical and neurological damage to the baby before birth, particularly if violence accompanies parental use of drugs or alcohol;
- Excess alcohol during pregnancy leads to a risk of having a baby with Foetal Alcohol Syndrome.

In May 2006 the Scottish government published a report to address issues related to children and young people affected by parental substance misuse. The report identified that some pregnant women involved in substances misuse do not seek antenatal services until the later stage of pregnancy or during labour. This is because they are less likely to realise they are pregnant because of the effects of some substances on the menstrual cycle. Their substance misuse and associated lifestyle may make other more urgent demands on their time<sup>5</sup>. Many of these problems can be overcome by provision of accessible antenatal services including nurses and midwives specially trained to tackle these worries honestly and sympathetically and signpost to relevant services<sup>6</sup>.

Data on alcohol or substance misuse in pregnancy is not routinely collected in an easily accessible format by local maternity providers.

### 2.3.2.1 Guideline on Pregnancy and drinking

For alcohol consumption in pregnancy, a recent systematic review evidence concluded that the risks of low birth weight, preterm birth, and being small for gestational age may increase above consumption of 1-2 units/day. Overall consideration of the evidence published since the NICE review in 2008 supports precautionary guidance that it is safest to avoid drinking in pregnancy. In January 2016 Department of Health published the 'Alcohol Guidelines Review – Report from the Guidelines development group to the UK Chief Medical Officers'<sup>7</sup>. The Chief Medical Officers' guideline includes:

#### Guideline on Pregnancy and drinking:

- If you are pregnant or planning a pregnancy, the safest approach is not to drink alcohol at all, to keep risks to your baby to a minimum.
- Drinking in pregnancy can lead to long-term harm to the baby, with the more you

<sup>5</sup> The Scottish Government. (2006). *Hidden Harm - Next Steps: Supporting Children Work*. Available: <http://www.scotland.gov.uk/Publications/2006/05/05144237/0>. Last accessed 30th September 2014.

<sup>6</sup> The Scottish Government. (2003). *Good Practice Guidance for working with Children and Families affected by Substance Misuse*. Available: <http://www.scotland.gov.uk/Publications/2003/02/16469/18705>. Last accessed 30th September 2014.

<sup>7</sup> DoH, 2016, "Alcohol Guidelines Review – Report from the Guidelines development group to the UK Chief Medical Officers [Online] available from: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/489797/CMO\\_Alcohol\\_Report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/489797/CMO_Alcohol_Report.pdf) [Last accessed: 27 May 2016]

drink the greater the risk.

Most women either do not drink alcohol (19%) or stop drinking during pregnancy (40%).<sup>8</sup> The risk of harm to the baby is likely to be low if a woman has drunk only small amounts of alcohol before she knew she was pregnant or during pregnancy.

Women who find out they are pregnant after already having drunk during early pregnancy, should avoid further drinking, but should be aware that it is unlikely in most cases that their baby has been affected. If you are worried about how much you have been drinking when pregnant, talk to your doctor or midwife.

### 2.3.3 Domestic violence in pregnancy

Reliable national data and local data regarding domestic violence is not available in the UK, however it is estimated that one in four women will experience domestic violence during their lifetime. 30% of domestic violence starts in pregnancy and domestic violence is a prime cause of miscarriage and stillbirth. Between four and nine women in every 100 are abused during their pregnancies or after birth<sup>9</sup>. This means that anywhere between 150 and 360 women may experience domestic violence during their pregnancy each year in Barking and Dagenham.

Pregnancy and recent birth are heightened risk factors for domestic violence. Domestic violence is more likely to begin or get worse during pregnancy with more than 30% of domestic violence episodes starting during pregnancy.

Domestic violence is the leading cause of ill health for women aged 19-44 years; exceeding cancer or motor vehicle accidents<sup>10</sup>. The level of domestic violence in the population exceeds that of diabetes multiple times.

Large numbers of women experiencing domestic violence are not being identified by accident and emergency services, maternity services, or by community services such as health visiting and general practice. The British Crime Survey<sup>11</sup> reported that 47% of violent injuries to women are caused by domestic violence.

The Confidential Enquiry into Maternal Mortality (2006-08) found that during the years 2006-08, 39 (12%) of all women known to the enquiry who died of any cause, had features of domestic violence. For eight of these women the abuse was fatal. The majority accessed services late and or had poor attendance<sup>12</sup>.

It provides an overview of the cases responded to via the Safeguarding Children and Adult Teams in Barking Havering and Redbridge University Hospital Trust (BHRUT). Child Protection Referrals and Adults at-risk referrals are completed from all areas in the Trust, in particular from Maternity, Emergency Departments and Paediatrics.

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<sup>8</sup> UK figures from Infant Feeding Survey, 2010. A recent study (*Prevalence and predictors of alcohol use during pregnancy: findings from international multicentre cohort studies; BMJ Open, 11 August 2015*) shows that, 84% of mothers in the UK drank any alcohol in the first trimester of pregnancy. In the second trimester, 39% of mothers drank any alcohol. In the second trimester, 37% of mothers drank no more than 1 to 2 units weekly, 2% drank more than that, with median consumption at 0.8 units weekly. That compares with the first trimester - 28% of mothers drank no more than 1 to 2 units weekly, 56% drank more than that, with median consumption at 4 units weekly.

<sup>9</sup> WomensAID.org (2013) [www.womensaid.org/core/core\\_picker/download.asp?id=1602](http://www.womensaid.org/core/core_picker/download.asp?id=1602)

<sup>10</sup> Domestic Violence: A National Report 2005 Home Office

<sup>11</sup> <http://www.esds.ac.uk/government/bcs/>

<sup>12</sup> Saving Mothers' Lives: Reviewing Maternal Deaths to Make Motherhood Safer 2006 -2008, The Centre for Maternal and Child Enquiries 2011. <http://www.rcog.org.uk/catalog/book/saving-mothers-lives-2006-2008>

Table 2.3.2 shows Barking and Dagenham has much higher number of maternity related domestic violence than other ONEL boroughs. The figure also shows there has been a large increase in the number of maternity domestic violence cases in Barking and Dagenham and Havering compared with the 2014/15 reported data with data being available for the first 5 months of 2015/16.

**Table 2.3.2 Safeguarding (Maternity) Children Referrals raised because of Domestic Violence/Abuse, 1<sup>st</sup> April 2014 to 31<sup>st</sup> August 2015**

1/4/2014 – 31/3/2015					
B&D	Havering	Redbridge	Newham	Other	Total
35	19	30	1	0	<b>85</b>
1/4/2015 – 31/8/2015					
26	19	17	0	3	<b>65</b>

Source: NHS-BHRUT<sup>13</sup>

### 2.3.4 Maternal mental health

Women are at increased risk of suffering from a psychiatric disorders (particularly the more severe conditions), in particular following childbirth. Women with pre-existing psychiatric disorders may also face a relapse or recurrence of their condition following childbirth. Psychiatric illness occurring at this stage may have an adverse impact on the woman herself, on her relationships with others, as well as the future development of her infant<sup>14</sup>.

NICE guidance on antenatal and postnatal mental health was updated in 2014<sup>15</sup>. Assessment of the extent of implementation of the NICE guidance should be part of the regular audit of the commissioning process. NICE estimates that approximately 20% of women will have some level of mental health need during the perinatal period, which would have equated to 759 pregnant women in Barking and Dagenham in 2013. Approximately 8% of pregnant woman (304 women in Barking and Dagenham) required referral to psychological therapies and around 4% (152 women) required referral to specialist perinatal mental health services. For around 0.4% (15) of women, their condition is sufficiently serious to require admission to a mother and baby unit<sup>16</sup>. An outpatient service is provided by Goodmayes with an inpatient service at Homerton University Hospital.

In order to effectively plan services for pregnant women and new mothers, it is important to understand the likely number of women who are affected by particular mental health conditions.

<sup>13</sup> Personal communication between 'Michael Sinclair & Anne Clark via Stephen Hynes (BHRUT)

<sup>14</sup> Royal College of Psychiatrists (2012). Guidance for Commissioners of Perinatal Maternal Mental Health Services. [https://www.rcpsych.ac.uk/pdf/perinatal\\_web.pdf](https://www.rcpsych.ac.uk/pdf/perinatal_web.pdf)

<sup>15</sup> NICE Clinical Guideline CG192, 2014, Antenatal and postnatal mental health: clinical management and service guidance, Available at: <http://www.nice.org.uk/guidance/cg192> - Last accessed: 20 April 2015

<sup>16</sup> Available at: <http://www.nice.org.uk/guidance/cg192> - Last accessed: 20 April 2015

Based on the number of women giving birth in Barking and Dagenham, Table 2.3.3 below shows how many women are expected to have certain mental health problems in pregnancy and in the postnatal period<sup>17</sup>. These estimates are based on national estimates of the prenatal mental health conditions (including: adjustment disorders, Mild-moderate depression and anxiety, Postpartum psychosis, Post-traumatic stress disorder, Serious/severe mental illness and Severe depressive illness) and local delivery figures only, (these figures have been rounded up to the nearest five). They do not take into account socioeconomic factors or potential causes of local variation. We are not aware of any data or research that explains variations in maternal mental health by socioeconomic status, that could enable us to account for these impacts in our estimates, with the appreciation that this would be useful to account for in future<sup>17</sup>.

The sum of estimates will not give an overall estimate of the frequency of women with antenatal or postnatal mental health conditions within a specific area, as some women may experience multiple conditions. It is believed that overall between 10% and 20% of women are affected by mental health problems at some point during pregnancy or the first year after childbirth<sup>17</sup>.

**Table 2.3.3 Estimates of numbers of women with mental health problems during pregnancy and after childbirth, Barking and Dagenham CCG, 2013/14**

Estimated number of women with postpartum psychosis	10
Estimated number of women with chronic SMI	10
Estimated number of women with severe depressive illness	120
Estimated number of women with mild-moderate depressive illness and anxiety (lower estimate)	390
Estimated number of women with mild-moderate depressive illness and anxiety (upper estimate)	585
Estimated number of women with PTSD	120
Estimated number of women with adjustment disorders and distress (lower estimate)	585
Estimated number of women with adjustment disorders and distress (upper estimate)	1165

<sup>17</sup> PHE, ChiMat, 2016, "Mental health in pregnancy, the postnatal period and babies and toddlers B&D-CCG, [Online] available from: <http://atlas.chimat.org.uk/IAS/profiles/profile?profileId=66&geoTypeId=> [Last accessed: 27 May 2016

### **2.3.5 Obesity in pregnancy**

Maternal obesity (defined as Body Mass Index greater than 30 before pregnancy) increases the risks to health for the mother and child both during and after pregnancy. Statistics for the prevalence of maternal obesity are not routinely collected in the UK but the NHS estimates approximately 15-20% of women have a BMI greater than 30 and are therefore classed as obese<sup>18</sup>. This would have equated to 535-714 pregnant women.

### **2.3.6 Chronic disease in pregnancy**

Some mothers become pregnant while living with a chronic condition such as diabetes, asthma, sickle cell disease or liver disease. Some conditions are exacerbated during pregnancy due to the additional stress pregnancy places on the mother's physical condition, some of these cause specific risks to the foetus or mother during pregnancy and labour. Although the numbers are often small, many of these women need additional support during pregnancy from a range of services, it is therefore important that they are identified early with support pathways in place to ensure a safe and healthy pregnancy.

Routine data collection and reporting from multiple providers of maternity services is essential to enabling a better understanding of patterns of chronic disease in pregnancy.

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<sup>18</sup> NHS choices 2015, available at: <http://www.nhs.uk/Conditions/pregnancy-and-baby/pages/overweight-pregnant.aspx> [Last accessed: 14 April 2015]