**Section:** Health Strategy (JSNA) **Chapter:** Warrington JSNA Pregnancy Chapter

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Please read this chapter in conjunction with -

**JSNA Chapters:**

Warrington JSNA Smoking Chapter

Warrington JSNA General Demographic Profile Chapter

Warrington JSNA Sexual Health Chapter

Warrington Joint Strategic Needs Assessment Index

Warrington JSNA Children and Young People - Demographic Profile Chapter

Warrington JSNA Infectious Diseases Chapter

Warrington JSNA Teenage Conceptions Chapter

Warrington JSNA Children and Young People - 0-5 Years Chapter

Warrington JSNA Early Help and Targeted Services for Children and Families Chapter

**JSNA Data Baskets:**

Warrington Lifestyle Survey 2006

Smoking (Warrington)

Sexual Health (Warrington)

Under 18 Teenage Conceptions (Warrington)

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# Warrington Joint Strategic Needs Assessment (JSNA) 2011 - **Pregnancy Chapter**

The Joint Strategic Needs Assessment (JSNA) considers a wide range of factors that affect the health and wellbeing of the people of Warrington. The objective of the JSNA is to involve partner organisations, such as the local NHS, local authorities, Police, Fire and third sector organisations in order to provide a top level, holistic view of current and future need within the borough. The JSNA is used to agree key priorities to improve the health and wellbeing of all our communities at the same time as reducing health inequalities.

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# Executive Summary

## Scope of the Chapter

The information contained in this chapter is based on the structure contained in the *Healthy Child Programme - Pregnancy and the First Five Years* (Department of Health, 2009), which looks at pregnancy, the child, parenting and family. The information contained in this chapter compares Warrington to regional and national data. The data for Warrington has also been analysed at geographical and GP level.

It is acknowledged that this chapter may not include all the information available about pregnancy. However, it does contain all information that is held by Public Health and Information that is available to the public from the internet.

## Introduction

Applying a life course approach to the health and wellbeing of children and young people takes into account the impact of disadvantage, which starts before birth and accumulates throughout life. Research has shown that the formative years can influence health in later life. Giving every child the best start in life lays the foundation for better health outcomes. This requires multi-agency and partnership working.

There is a complex interaction between biological, genetic, social and behavioural factors across the life course. There is evidence to support a health promoting environment as early as pre-conception (early support for a healthy pregnancy). Families at higher risk and with lower protective factors need to be identified to improve health outcomes.

Maternal and infant outcomes will be improved if support is provided for women of childbearing age to ensure a healthy lifestyle in pregnancy. This will include guidance on alcohol consumption, avoidance of exposure to tobacco smoke and the benefits of a healthy weight. Approaches need to be tailored and accessible for preparation for parenting and parenting support.

Screening for Down's Syndrome, sickle cell diseases, thalassaemias and infections allow for choices regarding preparation (for any treatment/disability/palliative care), a managed birth in a specialist centre, termination or intrauterine therapy (NICE, 2008a).

Women from socially excluded groups, who do not access antenatal care, are more likely to experience poor outcomes. National Institute for Health and Clinical Excellence (NICE, 2010a) guidelines address the service provision for those who may have additional needs.

## Key Issues and Gaps

In 2011/12, Warrington failed to achieve the nationally set target of 95% of women being booked into antenatal services by 12 weeks.

The percentage of mothers smoking during pregnancy is low in Warrington. However, high rates of smoking during pregnancy have been observed in the more deprived areas of the borough.

Warrington had a slightly higher percentage of caesarean births when compared to England and the North West.

In 2009, Warrington had a significantly higher abortion rate when compared to England for the gestational age of ten to twelve weeks and abortion rates in Warrington are increasing, whilst the rate in England stays fairly constant.

There has been a rising trend in the number of births in Warrington, although there was a slight reduction in 2009 compared to 2008. Increased migration since 2005 has contributed to a rise in fertility rates.

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## Recommendations for Commissioning

- Reduce the health inequalities and achieve health outcomes using an agreed, co-ordinated, universal and targeted prevention, as well as early intervention, approach.
- Ensure service providers of maternity services (support workers and midwives) develop integrated services through children's centres and other community settings.
- Improve maternal and infant health by reducing pregnancy in under-18s, reducing smoking in pregnancy and reducing prevalence of maternal obesity.
- Target the hard to reach and vulnerable groups to attend the 'Healthy Mum Healthy Baby Programme' to address health issues (e.g. breastfeeding initiation, maternal obesity and substance misuse).
- Improve the percentage of assessment by 12 completed weeks of pregnancy to the North West level.
- Ensure robust data collection and reporting for: the number of pregnant women by BMI category, the percentage of elective and emergency deliveries and associated costs, and the number of women smoking and drinking alcohol during pregnancy.
- Ensure women with a BMI of greater than 30, at the time of booking in (the first antenatal appointment), receive nutritional advice following childbirth from an appropriately trained professional, with a view to weight reduction.

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# 1) Who's At Risk and Why

There is variation across the North West in the uptake of antenatal care provision by 12 weeks. This has potential implications for higher risk groups, for example, women with alcohol or substance use problems, women with learning disabilities, women from migrant populations, and women with mild and moderate mental health problems. These higher risk groups of women need to be identified as early as possible to ensure improved health outcomes.

There is an increased risk of pregnant women and infants in Warrington being exposed to second-hand smoke, as one in four adults in the North West smoke (smoking data, charts and maps available here). A reduction of 2 percentage points in the rate of smoking in pregnancy would, in turn, reduce the 2002-04 infant mortality gap by 2 percentage points. Integrating smoking cessation services into service delivery for the whole family, before and after pregnancy, is an important part of achieving this goal (Department of Health, 2007a).

Parental obesity is another risk factor associated with infant mortality. The Department of Health (DH, 2007a) suggest that reducing the prevalence of parental obesity in the 'routine and manual' group by 23% will reduce the 2002-04 gap in infant mortality by 2.8 percentage points. Recommended actions include implementing NICE guidance, with a focus on disadvantaged groups, and developing a structured programme of support for pregnant women with a BMI over 30 $kg/m^2$. More information on infant mortality is available in the 0-5 Years Chapter of the JSNA.

The numbers of women reaching maternity services with a high Body Mass Index (BMI) are increasing. Trend data from the Health Survey for England (HSE) has shown an increase in the prevalence of obesity (BMI at least 30 $kg/m^2$) in women of childbearing age (16 to 44 years) and this prevalence of obesity increases with age. High maternal BMI is a risk factor for worse health outcomes for mothers and their babies, and increases pressure and cost for services. The Centre for Maternal and Child Enquiries (CMACH, 2007) found that more than half the maternal deaths between 2003 and 2005 occurred in overweight or obese patients.The demographic characteristics of women who are obese during pregnancy mirror those of obese women in the general UK population, with higher a prevalence of obesity in more deprived areas. These women are significantly more likely to be older in pregnancy, to have had more pregnancies parity[1], and are more than twice as likely to live in areas of high deprivation, compared with women who are not obese. Pregnant women with a BMI of at least 50$kg/m^2$ have been found to be white, older than average, have had two or more children, and are from routine and manual social groups (National Obesity Observatory, 2010).

*Footnotes*

[1] *Parity is defined as the number of times that a woman has given birth to a foetus with a gestational age of 24 weeks or more, regardless of whether the child was born alive or was stillborn.*

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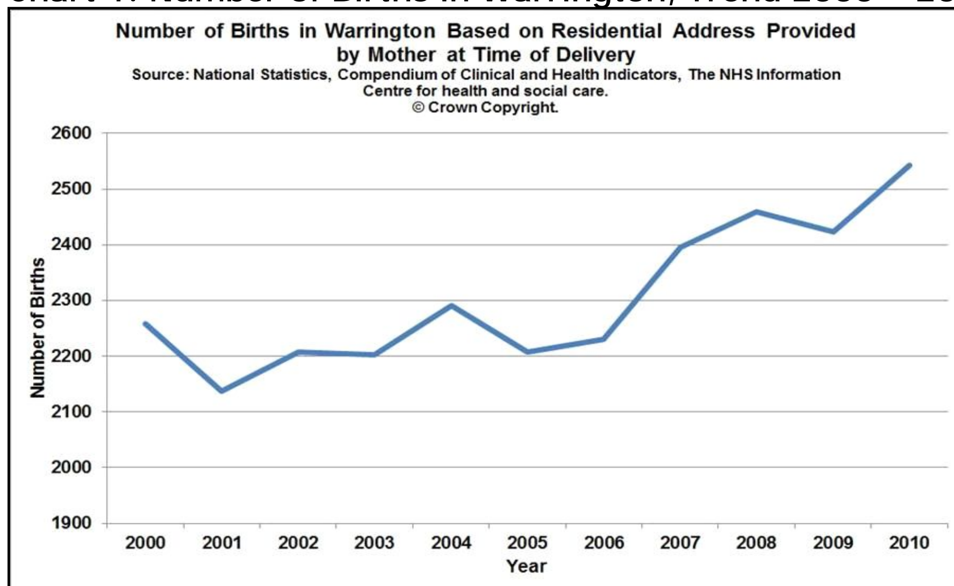
# 2) The Level of Need in the Population

**2.1) Fertility:** There are approximately 2,500 births to Warrington women each year. Overall, there has been a rising trend in the number of births in Warrington, as shown in Chart 1. This pattern has also been seen nationally and regionally. The number of births in 2010 in Warrington increased quite sharply compared to 2009.

The fertility rate in Warrington in 2010 was slightly higher than North West and England averages. The rise in fertility rates in the UK experienced over recent years has, in part, been due to increased migration to the UK. Ten countries joined the European Union in 2004, and another two in 2007. From 2005 onwards, this substantially increased migration to the UK from these countries (see the JSNA chapter on General Demography). The rise in fertility rates up to 2008 has been partially due to this increased number of migrants, with 12% of births in Warrington in 2009 born to non-UK-born mothers.

**Chart 1: Number of Births in Warrington, Trend 2000 – 2010**




*(Source: National Statistics, Compendium of Clinical and Health Indicators, the NHS Information Centre for Health and Social Care. © Crown Copyright)*

For more information on birth and population trends, please see the Children and Young People's Demography Chapter.

## 2.2) Health Messages in Pregnancy

**2.2.1) Early Access to Maternity Services:** There is a Public Health indicator designed to measure how quickly women with health and social care needs can be supported by maternity services to improve outcomes. Warrington and Halton Hospitals Foundation Trust consistently fails the Department of Health target for access into service by 12 weeks, which was increased from 90% to 95% in 2011-12. Performance improved in 2011-12, where booking rates were increased to over 90%, but they failed to reach 95%. Further work needs to be done with WHHFT in order to promote booking with midwives within communities in Warrington and ensure seamless processes are in place for carrying out the booking appointment to avoid delays.

For financial quarter 1 of 2010/11, the percentage of women who have seen a midwife or maternity healthcare professional for assessment by 12 completed weeks of pregnancy was 79.1% for Warrington, compared to 84.5% for the North West and 85.6% for England (Cheshire and Merseyside Public Health Indicator Performance Overview, 2011). In quarter 4 2010/11, the percentage for Warrington increased to 83.5%. This percentage was lower than England (84.2%) but not significantly so (Child and Maternal Health Observatory (ChiMat), 2011a).

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**2.2.2) Screening During Pregnancy:** Most women are offered at least two ultrasound scans during their pregnancy. The dating scan is usually at about 8-14 weeks of pregnancy and helps to determine when the baby is due. The second scan is usually before the 21st week of pregnancy (NICE, 2008a). This scan checks for structural abnormalities in the baby.

In 2008, NICE guidelines recommended that first trimester combined screening for Down's Syndrome should be implemented in all maternity services and the National Screening Committee supported this with guidelines and a deadline of April 2010 for implementation. Warrington Hospital implemented the screening in November 2011.

NICE (2008a) suggest that screening for sickle cell diseases and thalassaemias should be offered to all women as early as possible in pregnancy (ideally by 10 weeks). It is also recommended that pregnant women are screened for infections, such as hepatitis B, hepatitis C, rubella and HIV. More information about these infections can be found in the Infectious Diseases Chapter of the JSNA.

**2.2.3) Maternal Smoking:** Parental smoking represents a real threat to the health and wellbeing of children. Passive smoking is linked to many childhood problems, such as respiratory conditions and ear infections. Smoking in pregnancy can have an adverse effect on the foetus and has been linked to low birth weight.

Rates of smoking during pregnancy are relatively low in Warrington compared to the North West average (smoking data, charts and maps available here). The percentage of women known to be smoking at the time of delivery for quarter 3 2010-2011 was 12.6%, compared to 17.6% for the North West and 13.5% for England (Cheshire and Merseyside Public Health Indicator Performance Overview, 2011).

Recent trend data has shown that Warrington has seen a decrease in the percentage of women smoking in pregnancy. The rate for Warrington has been consistently lower than the North West and, in recent years, Warrington has been lower than England (ChiMat, 2011b). However this masks the considerable variation across the borough and, in particular, in Warrington's most deprived areas. The highest proportion of women smoking at delivery are found in the lower super output areas (LSOAs[1]) of highest deprivation. 80% of the variation in the rates of women smoking at delivery is associated with deprivation in Warrington at a LSOA level (Data: April 2008 to March 2010). The proportion of mothers who smoked throughout their pregnancy is much higher in mothers under 20 years of age (Department of Health, 2010b).

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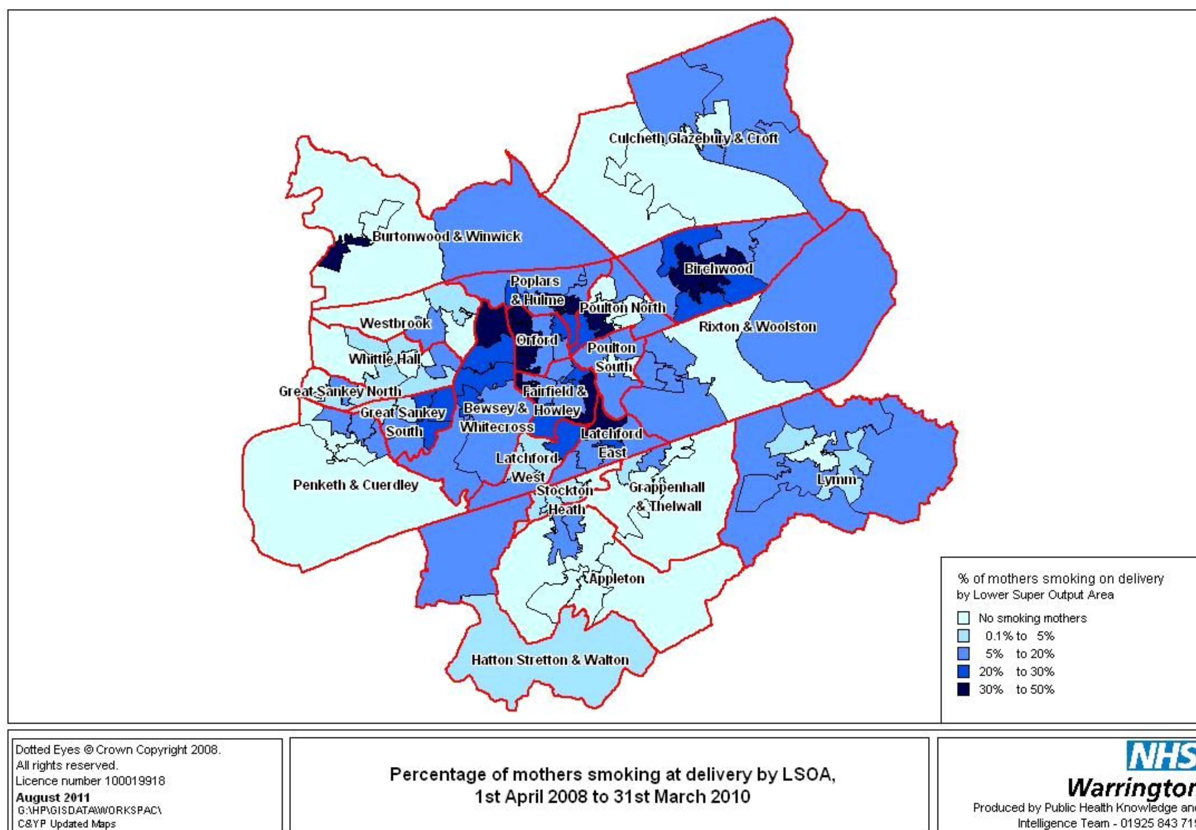
### Map 1: Percentage of Mothers Smoking on Delivery 2008-10




**2.2.3) Maternal Alcohol Use:** Alcohol abuse in a parent may directly affect pregnancy and the social wellbeing of children. Alcohol passes from the mother's blood through the placenta and to the baby. Drinking heavily during pregnancy can lead to the baby developing a group of problems known as foetal alcohol syndrome (FAS). Children with this syndrome have restricted growth, facial abnormalities, and learning and behavioural disorders.

13.1% of women aged 18-39 in Warrington drink unsafe amounts of alcohol (defined as over 14 units per week). Rates are considerably high in Central Warrington, with 18.5% of women drinking more than the recommended 'safe' levels compared with 10.8%, 10.0% and 9.4% in East, South and West, respectively.

**2.2.4) Maternal Weight:** Obesity in women of childbearing age can have an adverse effect on pregnancy outcomes. Results from Warrington's last lifestyle survey suggested that 13.9% of Warrington women aged 18-39 are obese. Central Warrington has the highest rate of obese women at childbearing age, as well as having the highest sedentary lifestyle and reporting eating less than the recommended 5 portions of fruit or vegetables a day (Warrington Lifestyle Survey 2006 data, charts and maps available here**).**

In Warrington, during the first nine months of 2011 (January to September), there were 2261 births at Warrington hospital. Pregnant women had their height and weight recorded to establish their BMI. Table 1 illustrates the proportion of women classed as obese.

### Table 1: Obese, Pregnant Women in Warrington, January to September 2011

| BMI Range | Number of Women | Percentage |
|---|---|---|
| Less than 30 | 1831 | 81.0 |
| 30 to 34.9 | 256 | 11.3 |
| 35 to 39.9 | 104 | 4.6 |
| 40 to 44.5 | 39 | 1.7 |
| 45+ | 18 | 0.8 |
| BMI not recorded | 13 | 0.6 |
| Total | 2261 | 100 |

*(Source: Warrington Maternity Obesity Trust Specific Report, 2011)*

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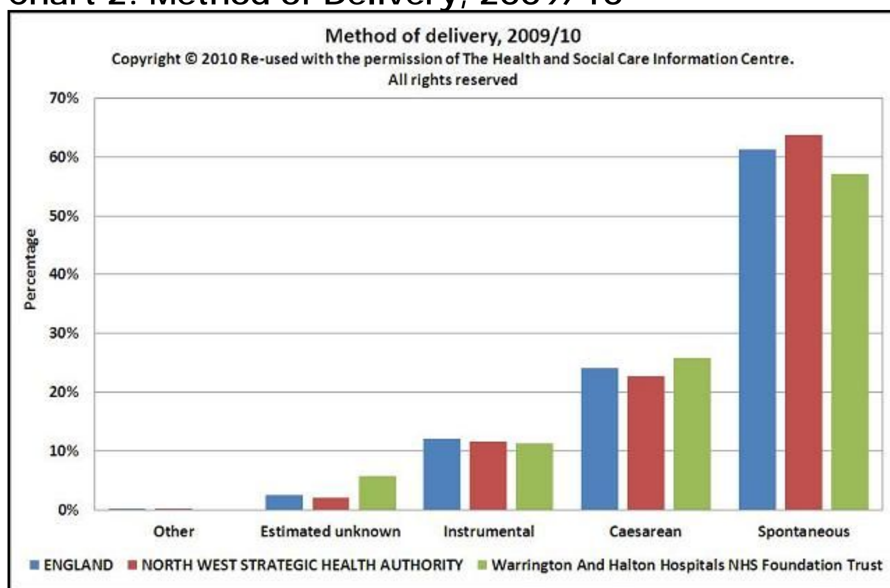
Between January and September 2011, 417 pregnant women were classed as obese (a BMI above 30) and this accounted for 18.4% of all pregnant women in Warrington. 14.6% of women who were having their first pregnancy were classed as obese, whilst 21.0% of women who had previous children were classed as obese.

**2.2.5) Method and Location of Delivery:** In Warrington (Warrington and Halton Hospitals NHS Foundation Trust) during 2009/10, the most common method of delivery was a spontaneous birth (57.1% of births). This percentage was slightly lower than England (61.2%) and the North West Strategic Health Authority (63.7%). Caesarean rates in Warrington (25.8%) were slightly higher than England (24.1%) and the North West Strategic Health Authority (22.7%), as Chart 2 illustrates. The split between elective and non-elective caesarean rates in Warrington vary slightly when compared to England and the North West. Warrington and Halton Hospitals NHS Foundation Trust had a slightly higher percentage of emergency caesareans (61.3% of all caesareans) when compared to England (59.7%) and the North West (58.5%) during 2009/10.

**Chart 2: Method of Delivery, 2009/10**




*(Source: Health and Social Care Information Centre)*

During 2010, 98.9% of all births in Warrington occurred in the hospital setting. This percentage has remained fairly constant over recent years.

**2.2.6) High Risk Pregnancies:** At a national level, it is estimated that approximately 14 in every 100 pregnant women develop gestational diabetes (NHS Choices, 2011). During 2010 in Warrington, there were approximately 2,500 births to women living in Warrington. If national estimates were applied to Warrington data, approximately 350 women from Warrington will have developed this condition. Pre-eclampsia can affect up to 10% of first time pregnancies and is likely to reoccur if the condition was present in previous pregnancies (NHS Choices, 2011). When applying national data to the number of births in Warrington, it can be estimated that up to approximately 250 women will have developed this condition.

**2.2.7) Post Natal Depression (PND)** is a form of clinical depression and can occur up to six months after giving birth. The Edinburgh Postnatal Depression Scale is used by health visitors to detect PND. If a new mother scores 13 or more they are likely to develop PND. Nationally, it is estimated that for every 1,000 live births, 100-150 women will suffer a depressive illness and one or two women will develop a puerperal psychosis (a severe mental disorder that occurs after giving birth) (Scottish Intercollegiate Guidelines Network, 2002). There are approximately 2,000 births every year in Warrington and application of national PND prevalence suggests that 200-300 mothers a year may develop PND in Warrington.

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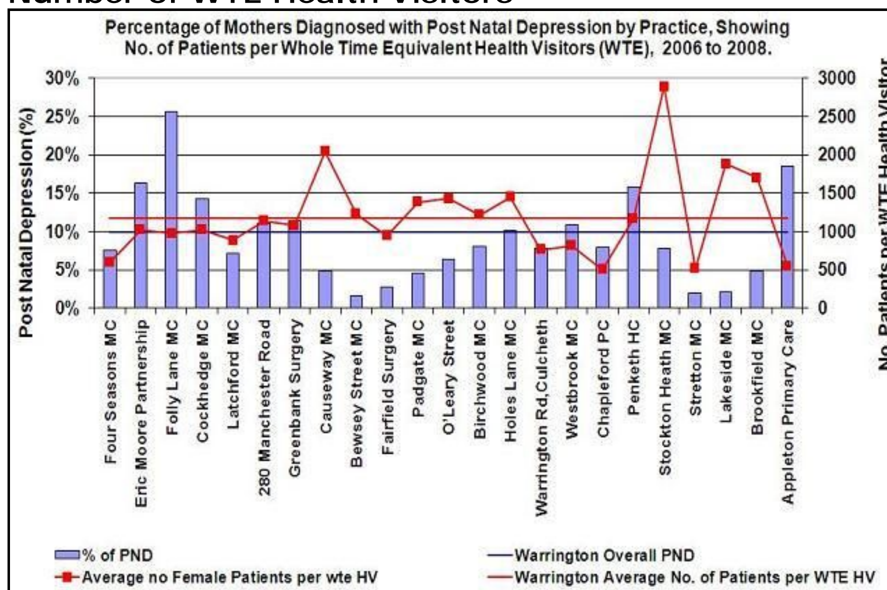
Data has been gathered from Warrington GP practices for three years (2006 to 2008). All practices provided the number of patients diagnosed with PND over the three years and this equated to a total of 619 mothers. 23 out of the 29 practices provided yearly data for both the number of patients with PND and the number of births for the year. Where both sets of data were available, a percentage was calculated. Over the three years, 514 patients were identified with PND in the 23 practices. This equates to 1 in 10 women, which is comparable with the national estimated prevalence. There does not appear to be a correlation with deprivation.

In 2004, a Practice Staff Equity Audit was undertaken. Information relating to health visitors was obtained in this year from health visitor teams. It has not been possible to obtain an up-to-date dataset and therefore this data was used. As health visitors work in teams that cover more than one practice, the total number of hours worked by each particular team was totalled, along with the total female 15 to 44 year population of all practices managed by the team. The provision of health visitors has been expressed as a rate per 1,000 population.

Chart 3 presents PND data for 23 Warrington practices, with the number of female patients per whole time equivalent (WTE[2]) health visitor (HV).

**Chart 3: Post Natal Depression, by Practice, 2006 to 2008 aggregated data, with the Number of WTE Health Visitors**




*(Source: NHS Warrington Mental Health Needs Assessment of the Adult Population)*

The chart suggests there is not an association with the number of health visitors and the number of patients diagnosed with PND over the three years. Appleton Primary Care and Folly Lane appear to have a higher percentage of patients with PND, and health visitors at both practices have lower caseloads than the Warrington overall average. Reasons for the higher PND prevalence would need to be investigated further to see if some practices are more effective at diagnosing PND, as opposed to the area actually having a higher number of PND patients.

Data suggests that PND prevalence in Warrington is decreasing from 14% of mothers diagnosed with PND in 2006 to 10% in 2008. However, a complete set of data and on-going monitoring are required to robustly assess whether this trend continues and truly reflects PND prevalence (NHS Warrington, 2009).

**2.2.8) Miscarriage**: Overall, approximately 12% of recognised pregnancies end in miscarriage (Everett, 1997). However, it is very difficult to obtain accurate statistics on the incidence of all miscarriages, as many pregnancies end in miscarriage before pregnancy is recognised. If these unrecognised miscarriages are included, it is estimated that around 30% of pregnancies ends in miscarriage (Wilcox et al., 1988).

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Data collected from Hospital Episode Statistics (HES) on maternities estimated that, in 2010–11, there were approximately 722,300 pregnancies. Of these, it is estimated that between 20–30% experience some vaginal bleeding in early pregnancy. The total number of miscarriages in England in 2010–11 was 43,005, which equates to 6.4 miscarriages per 100 deliveries (NHS Information Centre 2012). Applying this figure to Warrington suggests that there may be around 160 miscarriages per year.

**2.3) Under-18 Conception Rates:** In 2010, the under-18 conception rate for Warrington was 34 conceptions per 1,000 girls aged 15-17. This compares with a rate of 35.4 conceptions per 1,000 across England as a whole, and a rate of 40.7 per 1,000 for the North West. For more information, please see the Teenage Conceptions Chapter of the JSNA (teenage conceptions data, charts and maps available here).

**2.4) Abortion:** In 2009, 691 abortions were performed on women from Warrington, with the majority (72.8%) occurring at three to nine weeks gestation, although slightly less than England and the North West. Warrington had a significantly higher abortion rate when compared to England for the gestational age of ten to twelve weeks and Table 2 illustrates the stage of gestation when abortions were performed for 2009. More recent data may be available here, along with charts and maps, although the overall abortion rate is an ASR (Age-Standardised Rate), whereas the analysis in this chapter is based on a crude rate.

**Table 2: Percentage of Abortions Performed, by Gestational Age, 2009**

| | 3 to 9 weeks | 10 to 12 weeks | 13+ weeks |
|---|---|---|---|
| | % | % | % |
| England | 75.1 | 15.5 | 9.4 |
| North West | 74.9 | 16.1 | 9.0 |
| Warrington | 72.8 | 18.7 | 8.5 |

There is further information on abortion in the JSNA Chapter on Sexual Health.

*Footnotes*

[1] *LSOAs are small geographical areas. In Warrington, these 'nest' within electoral wards. All LSOAs in England are given a deprivation score and a national ranking.*

[2] *1 WTE is one full time post, but could be, for example, two part time posts of 0.5 WTE.*

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## 3) Current Services in Relation to Need

**3.1) Access to Maternity Services (Booking by 12 Weeks):** The Department of Health measure the *percentage of women who have seen a midwife or a maternity healthcare professional, for health and social care assessment of needs, risks and choices by 12 completed weeks of pregnancy (VSB06_05)* as a vital sign for maternity services. The booking visit is seen as an important opportunity to get pregnant women into service provision as soon as possible. This is in order to put packages of care in place for vulnerable women and ensure their health and social care needs are met.

Work has taken place in order to improve midwifery's management of bookings in order to prioritise getting bookings in on time, to increase the speed of referral from GPs into maternity services, and to do some promotion of access to maternity services. This work has increased performance compared to previous years, however, the target has still not been reached and further work is required to improve performance.

All maternity work is coordinated by the Commissioning Development Manager (Children's Services), except for weight management in pregnancy, which is managed by Public Health.

**3.2) Maternal Smoking:** There is a Smoking Cessation Midwife and a Substance Misuse Midwife at the hospital. The 'Healthy Mum, Healthy Baby Programme' covers healthy lifestyles and starts from 26 weeks. There is some work to be done to monitor the effectiveness of these roles.

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**3.3) Maternal Weight:** At Warrington Hospital there is an existing pathway for clinical management of pregnant women with high BMI. However, there is very limited capacity for this through the Dietetics Services and there is only one small pre-conception medical conditions clinic per month. Health professionals are not all skilled enough in nutrition and exercise to ensure that, at every opportunity, they provide women with a BMI of 30 or more with information about the health benefits of losing weight before, during and after pregnancy. Unfortunately, a bid submitted to the Local Strategic Partnership for a Healthy Weight Management Programme Co-ordinator for overweight and obese pregnant mothers was unsuccessful.

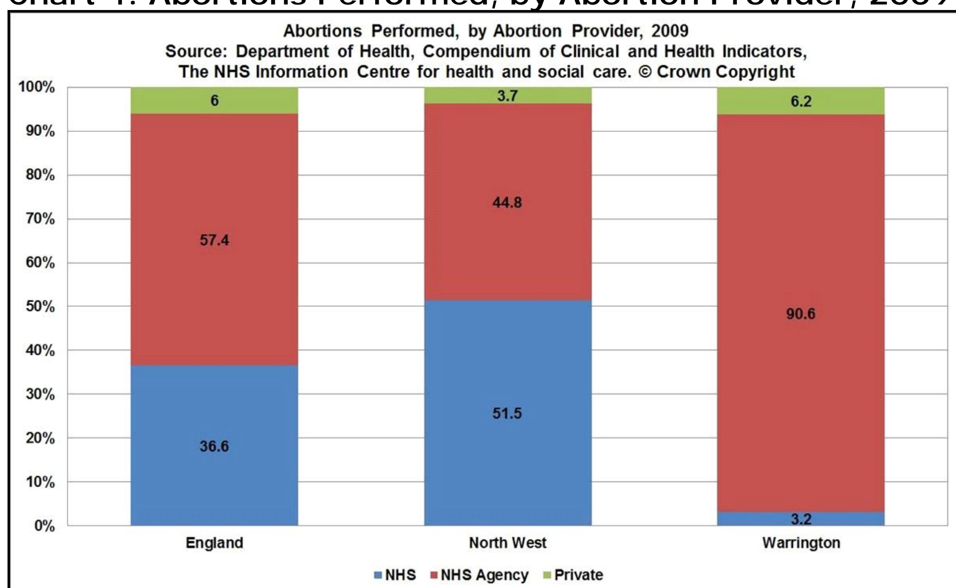
An obesity in pregnancy audit looked at whether the hospital was compliant with the guidelines for management of obese, pregnant women. The report highlighted that there was no evidence that patients with a BMI over 35 were referred to a dietician. One of the conclusions also stated that more could be done to document dietary advice for patients with a BMI over 30 (Warrington PCT, 2010).

Warrington and Halton Hospitals produced a policy for the management of pregnant women with a raised BMI. It stated that BMI should be recorded for all patients at booking, with those with a BMI over 30 referred to consultant care and an anaesthetist for a BMI over 40.

A pregnancy care pathway for overweight/obese mothers based on CMACE/RCOG[1] Joint Guidelines has been developed. Also, the 4-week 'Healthy Mum, Healthy Baby Programme' includes breastfeeding, healthy lifestyles and signposting to dietary and physical activity interventions.

**3.4) Abortion:** Chart 4 shows the proportion of abortions performed by abortion provider in 2009. The chart shows that the vast majority of abortions performed for women from Warrington were conducted by an NHS agency. More recent data may be available here, along with charts and maps, although the overall abortion rate is an ASR (Age-Standardised Rate), whereas the analysis in this chapter is based on a crude rate.

**Chart 4: Abortions Performed, by Abortion Provider, 2009**




*(Source: National Statistics, Compendium of Clinical and Health Indicators, the NHS Information Centre for Health and Social Care. © Crown Copyright)*

*Footnotes*

[1] *CMACE/RCOG - Centre for Maternal and Child Enquiries and the Royal College of Obstetricians and Gynaecologists.*

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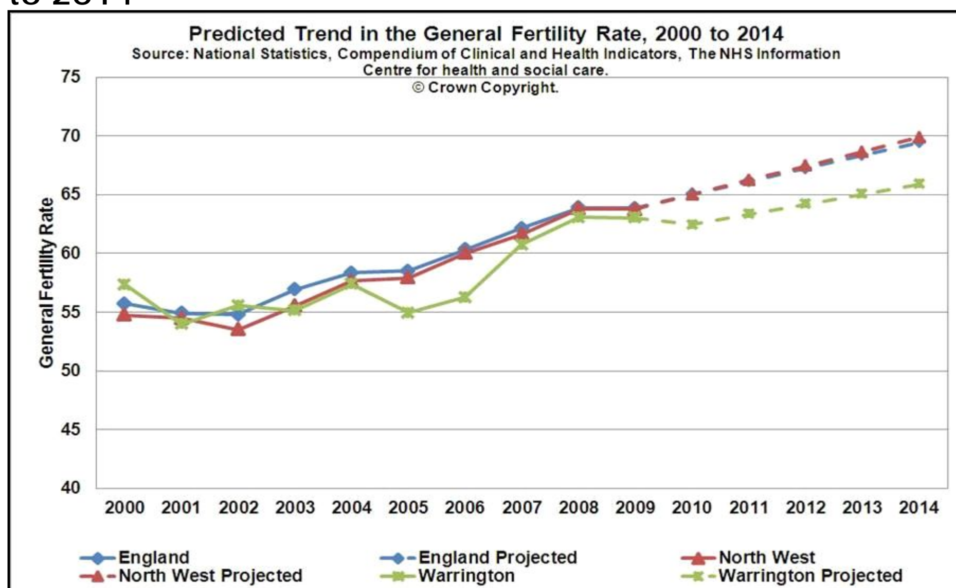
# 4) Projected Service Use and Outcomes in 3-5 Years and 5-10 Years

**4.1) Fertility:** Historical trends suggest that, although the general fertility rate is increasing overall, the predicted increase in the Warrington rate is lower than for North West and England.

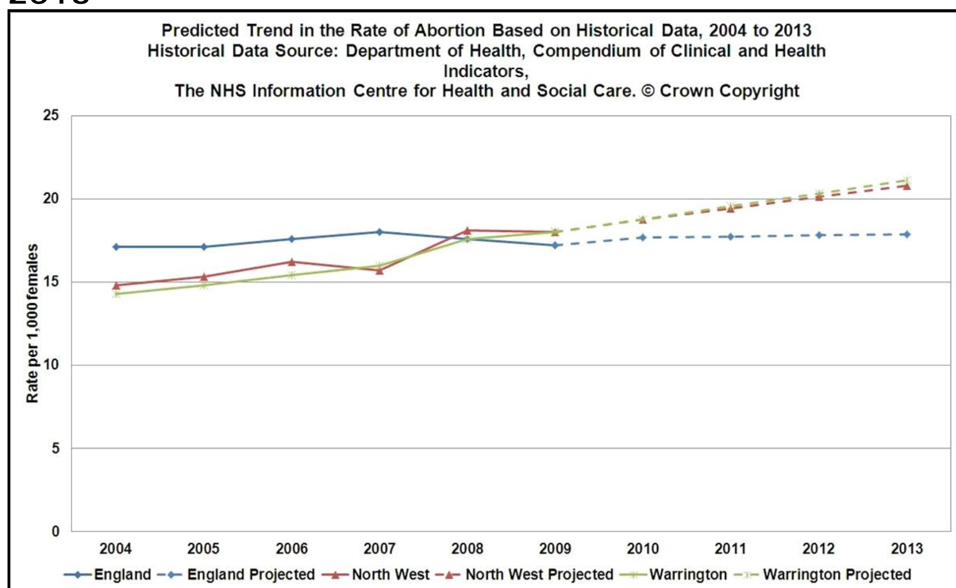
**Chart 5: Predicted Trend in the General Fertility Rate, Based on Historical Data, 2000 to 2014**




*(Source: National Statistics, Compendium of Clinical and Health Indicators, the NHS Information Centre for Health and Social Care. © Crown Copyright)*

**4.2) Abortion:** Historical data showing the rate of abortion has shown that the North West and Warrington have seen an overall increase in the rate of abortions, whilst the rate for England seems to have remained stable. More recent data may be available here, along with charts and maps, although the overall abortion rate is an ASR (Age-Standardised Rate), whereas the analysis in this chapter is based on a crude rate.

**Chart 6: Predicted Trend in the Rate of Abortion, Based on Historical Data, 2004 to 2013**

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## 5) Evidence of What Works

Within the Public Health Strategy (Department of Health, 2010a), there is key support for health and wellbeing throughout life. The Government recognises the importance of 'Developing Well' (encouraging healthy habits and avoiding harmful behaviours) and 'Growing Well' (identifying, treating and preventing mental health problems and creating resilience and self-esteem). Local Authorities will receive a 'health premium' based on the progress they make in improving the health of the local population and reducing health inequalities (Department of Health, 2010b).

**5.1) Maternal Weight:** There is a lack of published evidence on the management of maternal obesity and the safety of weight loss during pregnancy. Whilst caution is required to avoid compromising foetal growth, there is a range of evidence that identifies pregnancy as a critical period to address obesity in a woman's life course and to initiate behaviour change. The guidance available considers obese women to be among the high risk groups that require additional screening, intervention and monitoring.

Partnership work and community public health services are essential in the development of interventions for maternal obesity. More evidence is needed on how maternity services can best work with external agencies and with obese pregnant women to improve their experience and health outcomes.

Guidance and recommendations of relevance to maternal obesity include NICE's (2010a) guidance on dietary interventions and physical activity interventions for *weight management before, during and after pregnancy*. This includes recommendations that are based on approaches that have been proven to be effective for the whole population. They include advice on how to help women with a BMI of 30 or more to lose weight before and after pregnancy (NICE, 2010b).

**5.2) Quitting Smoking:** NICE (2010b) guidance on *quitting smoking in pregnancy and following childbirth* suggest that CBT, motivational interviewing and self-help support from NHS Stop Smoking Services are all effective in helping women who are pregnant to quit smoking. Also, other countries have shown that the provision of incentives to quit can be effective with this group, although research would be required to see if this would work in the UK. Research into interventions using the 'cycle of change' approach is inconclusive, as some studies showed the approach to be effective, whereas others found it to be no better than the control.

The evidence regarding Nicotine Replacement Therapy (NRT) is mixed. NICE (2010b) report that the most robust trial to date has found no evidence to suggest that NRT is effective amongst pregnant women. It also found no evidence of an effect on the child's health, such as low birth weight, special care or stillbirth.

**5.3) Post Natal Depression:** For mild or moderate depression, therapies such as self-help strategies, home listening visits and brief CBT interventions are recommended (NICE, 2007). The guidance regarding *antenatal and postnatal mental health* warns that the risks involved when prescribing antidepressants to women who are pregnant or breastfeeding are not well known.

NICE (2007) state that clinical networks, managed by a coordinating board of healthcare professionals, commissioners, managers, service users and carers, should be established for perinatal mental health services. These networks should provide a clear referral system, a pathway of care for service users, specialist advice regarding the use of antidepressants during maternity, and effective transfer of information and continuity of mental health care.

**5.4) Vulnerable Groups:** NICE (2010c) identify the following groups of women as having complex social factors: women who misuse substances, women who are recent migrants or who have difficulty reading or speaking English, young women aged under 20, and women who experience domestic abuse. The guidance includes a number of additional recommendations for these groups to ensure that care plans are jointly developed across agencies, the attitudes of

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staff do not prevent women from using services, the women's fears of children's services are addressed, and the healthcare staff receive training regarding relevant issues, such as communication, safeguarding and education.

In addition, there are the following publications:

- *PH11 Maternal and child nutrition* (NICE, 2008b)
- *National Service Framework for Children, Young People and Maternity Services: Maternity services* (Department of Health and Department for Education and Skills, 2004)
- *Making it better: For mother and baby* (Department of Health, 2007b)
- *Maternity Matters* (Department of Health, 2007c)
- *Standards for maternity care* (RCOG, 2008)
- *A Growing Problem: Does weight matter in pregnancy?* (Royal College of Midwives and Netmums, 2010)
- *Maternal obesity in the UK: findings from a national project* (CMACE, 2010)

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## 6) (Target) Population/Service User Views

During 2010, a national survey was conducted asking women who had recently given birth about their experience of maternity services (Care Quality Commission, 2010). The survey included questions about screening and tests during pregnancy and whether the reasons as to why they were offered were clearly explained.

Women who had given birth at Warrington and Halton Hospitals NHS Foundation Trust gave a score which placed the NHS Trust in the 60% intermediate trusts (a hospital trust could fall into one of three groups; 20% best performing, 60% intermediate performing or 20% worst performing) nationally when responding to questions about clearly explained reasons for having a screening test for Down's syndrome (a score of 88 out of 100) and clearly explained reasons for having a dating scan (a score of 89 out of 100). Respondents to the survey placed Warrington and Halton Hospitals NHS Foundation Trust in the 20% best performing trusts nationally when responding to a question about the clarity of the reasons to have an abnormality scan (a score of 93 out of 100) (Care Quality Commission, 2010).

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## 7) Unmet Needs and Service Gaps

Smoking during pregnancy is highest in the more deprived areas of Warrington. The Smoking Cessation Midwife should focus their efforts, in conjunction with the smoking cessation service, to target pregnant women in these areas.

At Warrington Hospital there is an existing pathway for clinical management of pregnant women with high BMI. However, there is very limited capacity for this through the Dietetics Services and one small pre-conception medical conditions clinic per month. Health Professionals are not all skilled enough in nutrition and exercise to ensure that, at every opportunity, they provide information about the health benefits of losing weight before, during and after becoming pregnant to women with a BMI of over 30.

An obesity in pregnancy audit looked at whether the hospital was compliant with the guidelines for management of obese, pregnant women. The report highlighted that there was no evidence that patients with a BMI over 35 were referred to a dietician. One of the conclusions also stated that more could be done to document dietary advice for patients with a BMI over 30 (Warrington Hospital, May 2010).

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## 8) Recommendations for Commissioning

- Reduce the health inequalities and achieve health outcomes using an agreed, co-ordinated, universal and targeted prevention, as well as early intervention, approach.
- Ensure service providers of maternity services (support workers and midwives) develop integrated services through children's centres and other community settings.
- Improve maternal and infant health by reducing pregnancy in under-18s, reducing smoking in pregnancy and reducing prevalence of maternal obesity.
- Target the hard to reach and vulnerable groups to attend the 'Healthy Mum, Healthy Baby Programme' to address health issues (e.g. breastfeeding initiation, maternal obesity and substance misuse).
- Improve the percentage of assessment by 12 completed weeks of pregnancy to the North West level.
- Ensure robust data collection and reporting for: the number of pregnant women by BMI category, the percentage of elective and emergency deliveries and associated costs, and the number of women smoking and drinking alcohol during pregnancy.
- Ensure women with a BMI of greater than 30, at the time of booking in (the first antenatal appointment), receive nutritional advice following childbirth from an appropriately trained professional, with a view to weight reduction.

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## 9) Recommendations for Needs Assessment Work

- A complete set of data and on-going monitoring are required to robustly assess whether the apparent reduction in PND continues and truly reflects PND prevalence.
- More evidence is needed on how maternity services can best work with external agencies and with obese pregnant women to improve their experience and health outcomes.

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