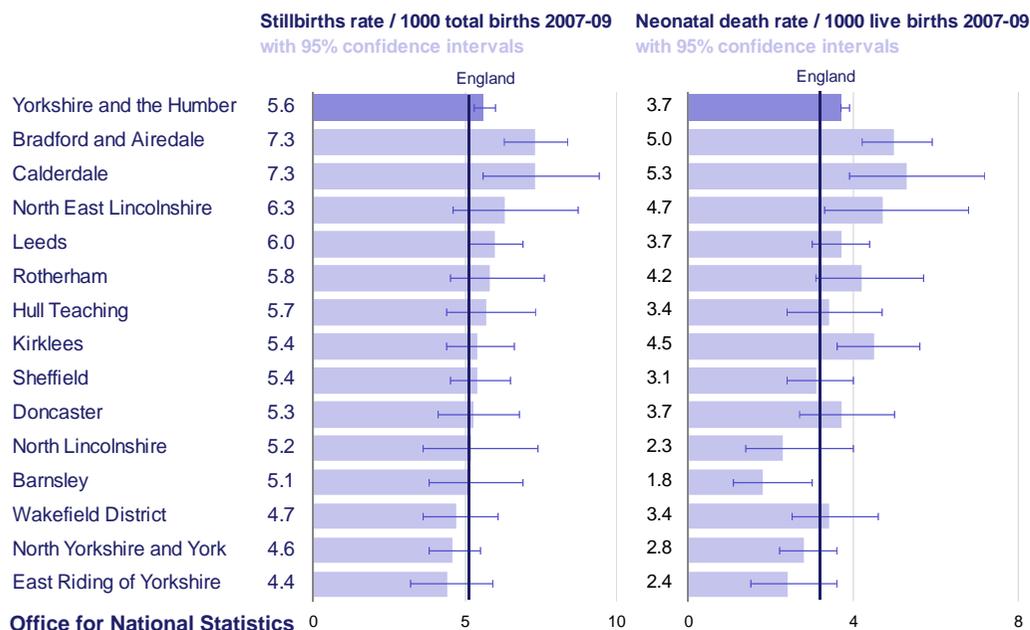


## Background

Stillbirth rates in Yorkshire and the Humber have shown little or no improvement between 2006 and 2010, however neonatal deaths have fallen by 7.5% over the same period (Office for National Statistics (ONS), 2011). Prevention strategies that target risk factors could be important in stillbirth rate reduction. Here, we look at the current data about stillbirths, gather together some of the evidence around the risk factors and highlight where further information can be accessed.

Figure 1 shows the rate of stillbirths and neonatal deaths across the region for 2007-2009.

**Figure 1: Stillbirths and neonatal deaths rate by Primary Care Organisation, 2007-2009**



Office for National Statistics

**Definitions**  
**Stillbirth rate** - stillbirths per 1,000 total births (live and still)  
**Neonatal death rate** - deaths <28 days per 1,000 live births  
**Early Neonatal death** - occurring during the first seven days of life.

## Key facts

- The average rate of stillbirth in Yorkshire and the Humber is 5.4 per 1000 total births (2010); which is higher than the average rate in England (5.2 per 1000 total births).
- The average rate of neonatal deaths is 3.7 per 1000 live births (2009); which is higher than the average rate in England (3.2 per 1000 live births).
- For the years 2007–2009
  - \* Bradford and Airedale have significantly higher stillbirths and neonatal death rates than the national and regional averages.
  - \* Calderdale, North East Lincolnshire and Kirklees also have significantly higher neonatal death rates than average.

## What do we know?

For the majority of stillbirths (over 60%) there is no clear cause, however the 2008-2009 West Midlands Perinatal Institute (WMPI) regional clinical outcome review findings linked avoidable perinatal deaths with increased levels of deprivation (WMPI 2011).

In 2009 nationally, 38% of women who experienced stillbirth had not booked for maternity care by 12 weeks gestation; 19% of stillbirths were associated with intrauterine growth restriction (IUGR). Of the stillbirths associated with IUGR, 27.4% of mothers smoked through pregnancy, 5.2% stopped smoking during pregnancy and 25% of women had a BMI greater than 30. Women aged 20-24 and 40+ were 'significantly over represented' in the group who had stillbirths associated with IUGR. 48% of mothers who had stillbirths and 47% of mothers whose babies died in the neonatal period were nulliparous (had no previous birth). (CMACE 2011).

The WMPI regional clinical outcome review identified that front line carers in the West Midlands, such as community midwives, were under-resourced to meet the complex social and medical needs of more vulnerable populations (WMPI 2011, p.4).

## Focus on risk factors: maternal obesity and stillbirths

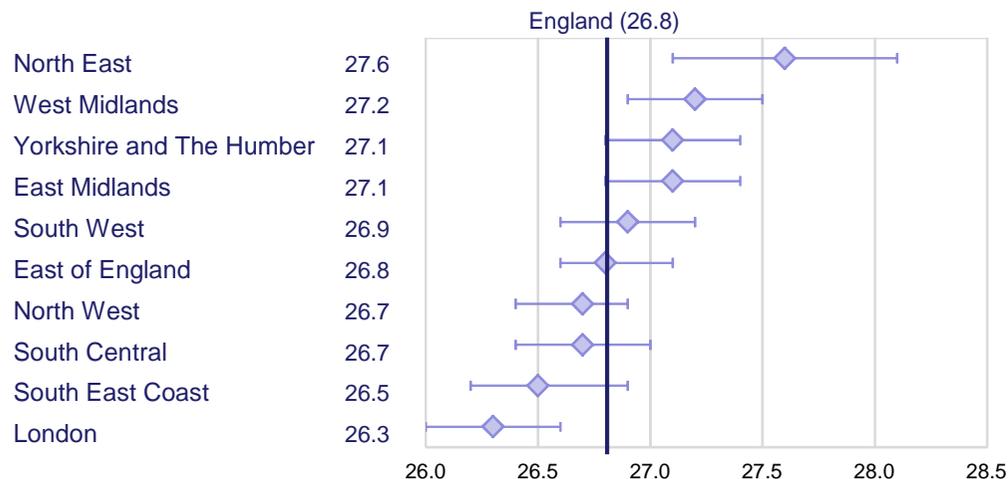
A key finding of the Centre for Maternal and Child Enquiries (CMACE) report (2011, p.3) found that in 2009, “10% of mothers who had a stillbirth or whose babies died in the neonatal period had a Body Mass Index (BMI) of 35 or more”.

Maternal overweight and obesity (BMI>25 kg/m<sup>2</sup>) is the highest ranking modifiable risk factor, contributing to around 8000 stillbirths (≥22 weeks gestation) annually across all high-income countries (Flenady, V. et al., 2011).

Women who are obese and their babies also face several health risks. Complications to babies include increasing levels of fetal abnormality, and to obese women include hypertensive disorders, gestational diabetes mellitus, induction of labour, caesarean section and postpartum haemorrhage (CMACE, 2010, p.7).

Figure 2 shows that the mean BMI for women in Yorkshire and the Humber, 2006-08, is 27.1 kg/m<sup>2</sup>, whereas the England average is 26.8 kg/m<sup>2</sup>.

**Figure 2: Body Mass Index (BMI) standardised mean, women aged 16+ years, by Strategic Health Authority, 2006-08 (with 95% confidence intervals)**



## What can be done?

There are initiatives such as the SANDS, BLISS and RCM conference, a stillbirth clinical studies group and SANDS audit tool (SANDS, 2012 p.30-31); and numerous tools on the ChiMat website: [www.chimat.org.uk](http://www.chimat.org.uk).

The Royal College of Obstetricians and Gynaecologists (2008) have produced a standard on supporting families who experience bereavement, pregnancy loss, stillbirth or early neonatal death.

Education strategies aimed at increasing front line midwives knowledge and skills of assessment of fundal height measurement are being implemented by Yorkshire and the Humber Local Supervising Authority in an attempt to improve neonatal outcomes by early identification of babies at increased risk of IUGR. Please see [www.yorksandhumber.nhs.uk](http://www.yorksandhumber.nhs.uk)

## References

- CMACE (2010) Maternal obesity in the UK: findings from a national project 2008-10. London: CMACE. Available at: [www.hqip.org.uk/cmace-reports](http://www.hqip.org.uk/cmace-reports)
- CMACE (2011) Perinatal mortality 2009: United Kingdom. London: CMACE. Available at: [www.hqip.org.uk/cmace-reports](http://www.hqip.org.uk/cmace-reports)
- Flenady, V. et al. (2011) Major risk factors for stillbirth in high-income countries: a systematic review and meta-analysis. *The Lancet*, 377(9774) 1331-40.
- ONS (2011) Infant and perinatal mortality in England and Wales by social and biological factors 2010. Available at: [www.ons.gov.uk](http://www.ons.gov.uk)
- Royal College of Obstetricians and Gynaecologists (2008) Standards for maternity care: report of a working party. Available at: [www.rcog.org.uk](http://www.rcog.org.uk)
- SANDS (2012) Preventing babies deaths what needs to be done? Available at: [www.uk-sands.org](http://www.uk-sands.org)
- West Midlands Perinatal Institute (2011) Perinatal mortality social deprivation and community midwifery 2008-9. Available at: [www.perinatal.nhs.uk/pnm/](http://www.perinatal.nhs.uk/pnm/)

For further information please contact [craig.baxter@chimat.org.uk](mailto:craig.baxter@chimat.org.uk)