Infant Mortality

Introduction

Infant mortality is the term that describes the deaths of all live births up to one year old. Infant mortality rate is defined as the death of a baby up to one year per 1,000 live births.

Perinatal deaths are the deaths of all births up to 7 days old, including stillbirths. The perinatal mortality rate is the number of perinatal deaths per 1,000 births.

A stillbirth is a baby delivered with no signs of life after 24 completed weeks of pregnancy. A stillbirth rate is the number of stillbirths per 1,000 live births and stillbirths.

Neonatal deaths are the death of a live birth up to 28 days old. The neonatal mortality rate is the number of neonatal deaths per 1,000 live births.

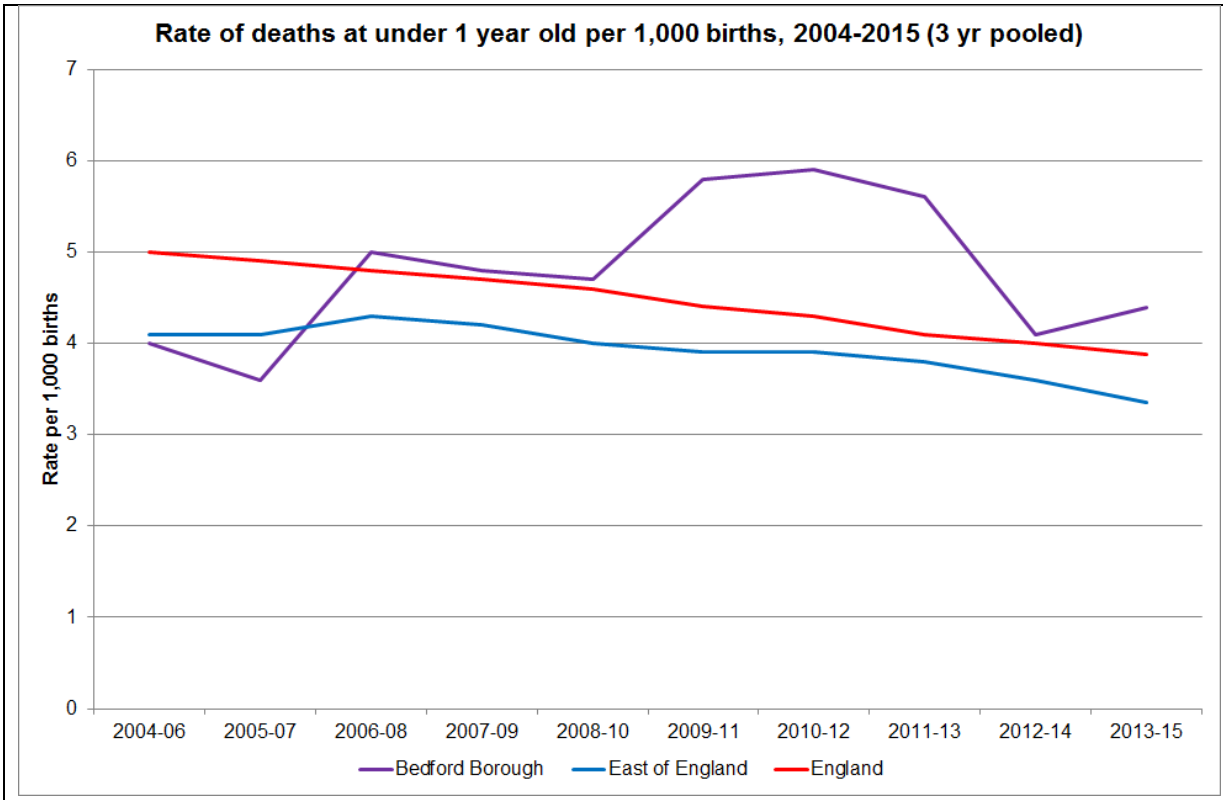
What do we know?

Table 1 shows the crude stillbirth, neonatal death and infant mortality for Bedford Borough in 2012-14 (pooled). For infant mortality, Bedford Borough has a higher rate than both East of England and England. This is significantly different from the East of England.

Table 1: Stillbirth, perinatal death, neonatal death & infant mortality rates for Bedford Borough, East of England and England, 2012-14 (pooled)

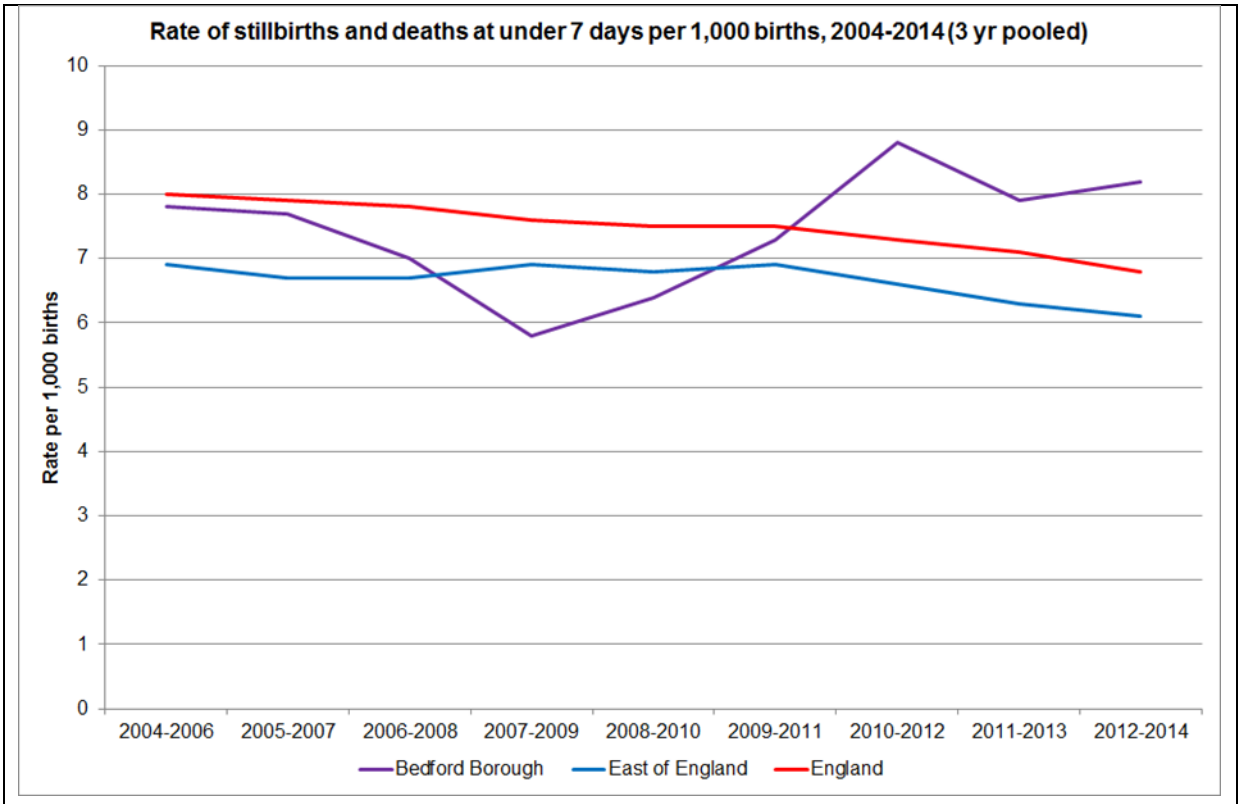
	Rate per 1,000 (95% CI)							
	Stillbirth		Perinatal		Neonatal		Infant mortality	
Bedford Borough	5.6	(4.1 7.8)	8.2	(6.2 10.7)	2.8	(1.8 4.5)	4.1	(2.8 6.0)
East of England	4.1	(3.8 4.3)	6.1	(5.8 6.4)	2.6	(2.4 2.8)	3.6	(3.4 3.8)
England	4.7	(4.6 4.8)	6.8	(6.7 6.9)	2.8	(2.7 2.8)	4.0	(3.9 4.1)

Source: Health & Social Care Information Centre



Source: Health & Social Care Information Centre

Bedford Borough had seen an increase in the rate of infant mortality in recent years, surpassing both the East of England and England. This was due to an elevated number of child deaths coupled with a drop in births in 2011. More recently, the rate of child deaths has dropped to be more in line with England. The small numbers of actual deaths in Bedford's relatively small population result in apparently large fluctuations even using averages over three years.



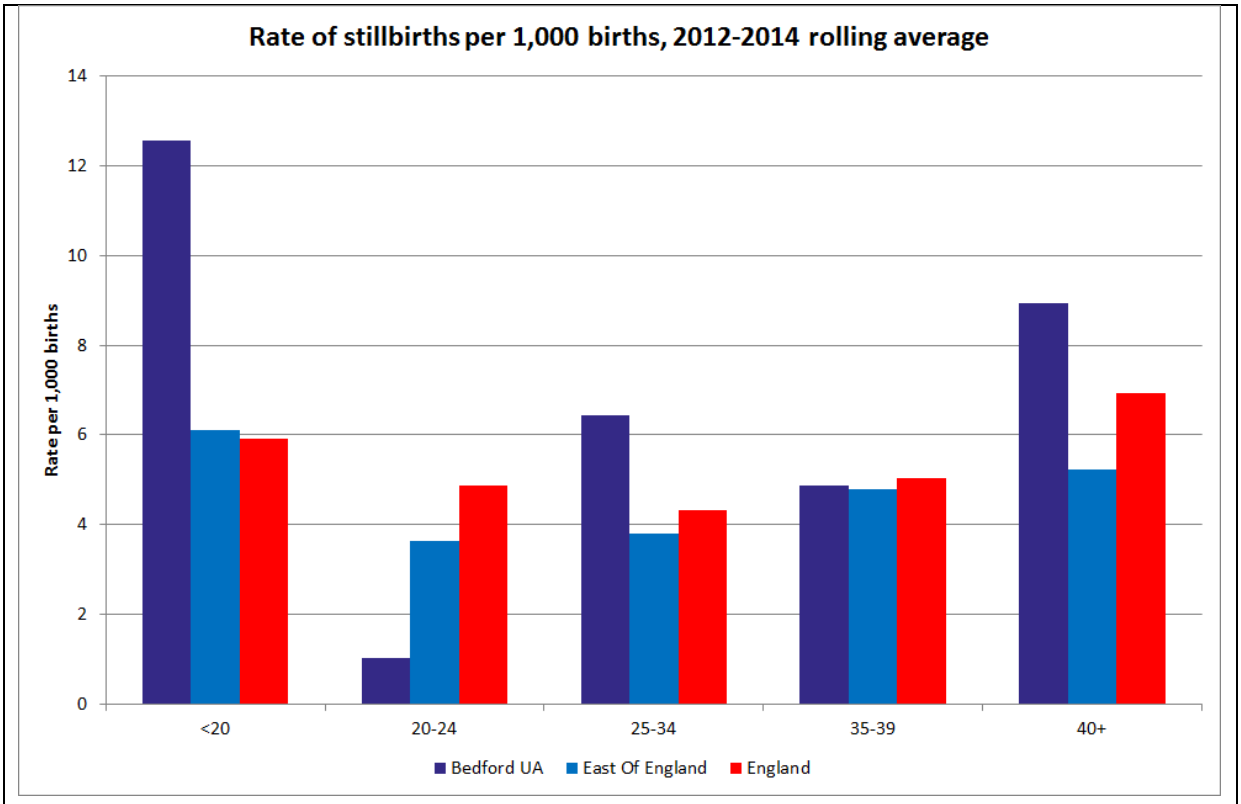
Source: Health & Social Care Information Centre

In recent years, Bedford Borough has seen an incline in perinatal mortality. An incline that has brought the rate higher than England and the East of England, but not significantly so.

Stillbirths

Younger mothers (aged less than 20 years at delivery) had the highest stillbirth rate of 12.6 per 1,000 live births compared to other maternal age groups. This is noticably higher than the East of England and England but there is a very large confidence interval due to such small numbers even over three years so this difference is not significant.

Older mothers (aged 40 years and over at delivery) had the second highest stillbirth mortality rate of 8.9 per 1,000 live births compared to other maternal age groups over a three-year period.
Mothers aged 25-34 had a stillbirth rate significantly higher than the East of England.
Mothers aged 20-24 were the only age group to have a lower rate of stillbirths than both the East of England and England, but not significantly so.



Source: Health & Social Care Information Centre

Risk factors for infant mortality

Prematurity and low birthweight are the biggest risk factors for infant mortality and are strongly interrelated, with prematurity leading to low birth weight. For babies of low birth weight, the risk of infant death is 20 times greater than babies with normal birth weight. For babies born before 32 weeks of gestation, the risk of infant death is 70 times greater than for babies born at full term.

Other groups at higher risk include babies born to:

- Mothers with multiple births (twins, triplets or more)
- Mothers from Black ethnic groups
- Mothers not born in the UK
- Single mothers and mothers who register their baby alone
- Families in routine and manual socio economic groups
- Mothers aged less than 20
- Mothers who smoke
- Mothers who are obese.

What is this telling us?

What should we be doing next?

- Effective delivery of the Healthy Child Programme will ensure early access

(before 12 weeks of pregnancy) to antenatal healthcare for all pregnant women. Early identification of need and risk will ensure appropriate monitoring, screening and support is put in place and higher risk parents who may need additional support are identified

- Smoking in pregnancy increases infant mortality by about 40%[5]. More than a quarter of the risk of sudden unexpected death in infancy is attributable to smoking – which can also cause complications in pregnancy and labour (Smoking and reproduction).

  (Department of Health (2007) Review of the health inequalities infant mortality PSA target. London: Department of Health)

- Reducing the incidence of low birth weights will contribute to the prevention of ill health and reduce infant mortality rates. Reasons for low birth weight are multi-factorial and evidence reviews suggest two key public health interventions to prevent low birth weight: smoking cessation during pregnancy and improved maternal nutrition. Locally we should continue work to tackle these causes to improve health in pregnancy through:

  - Continued monitoring of smoking in pregnancy rates to ensure effectiveness of the stop smoking interventions in place to reduce the number of women smoking in pregnancy.

  - Improved promotion of the Healthy Start scheme by health professionals, children's centre staff and others working with pregnant women to improve the low uptake of vouchers. Healthy Start is a UK-wide government scheme to improve the health of low-income pregnant women and families with young children on benefits and tax credits. Women who are at least 10 weeks pregnant and receive benefits or tax credits, or are under 18 years of age can benefit. Vouchers are sent out to eligible women weekly and can be spent on milk, plain fresh or frozen fruit and vegetables, or infant formula milk in a wide variety of local shops and supermarkets. Vouchers for vitamins for women during pregnancy are also provided.

- The NHS Public Health Outcomes Framework (January 2012) includes a measure for Infant Mortality and will ensure ongoing monitoring locally.

References:

- Bull J, Mulvihill C and Quigley R Health Development Agency (2003) Prevention of low birth weight: assessing the effectiveness of smoking cessation and

nutritional interventions, Evidence briefing

- Healthy Start programme http://healthystart.nhs.uk/