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2 December 2010

**Perinatal & Infant Mortality - 2009 Unit Report:  
BURTON HOSPITALS NHS FOUNDATION TRUST**

This report provides the latest update of stillbirth, perinatal and infant mortality rates for your Trust, as well as for the West Midlands and England & Wales. The report is delayed because of the late release by ONS of the 2009 births and deaths extracts which we cross check our cases with, and the Vital Statistics national reference data, which became available only in November this year.

The report includes

- yearly rates and three-year moving averages, summarised for stillbirths and infant deaths, as well as early neonatal, neonatal and perinatal death rates for comparison with other sources;
- 'corrected' mortality rates, after exclusion of congenital anomalies and pre-viable births;
- main categories / causes of stillbirths and infant deaths for your unit and the West Midlands

Additional information relevant to your PCT's maternity population has been presented in the respective Cluster reports which have been sent out earlier this year, and are available on [www.pi.nhs.uk/pnm/clusterreports](http://www.pi.nhs.uk/pnm/clusterreports)

As always, specific information relating to your unit is available on request ([www.pi.nhs.uk/data](http://www.pi.nhs.uk/data)). In addition, we are currently completing development of a web based interactive tool, and will be able to display mortality rates and trends on-line in the New Year.

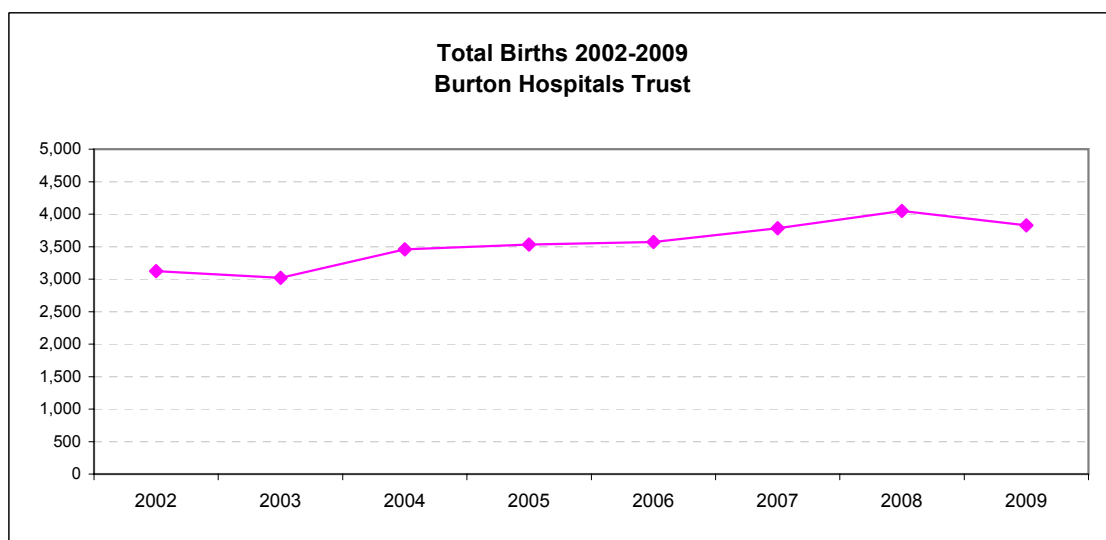
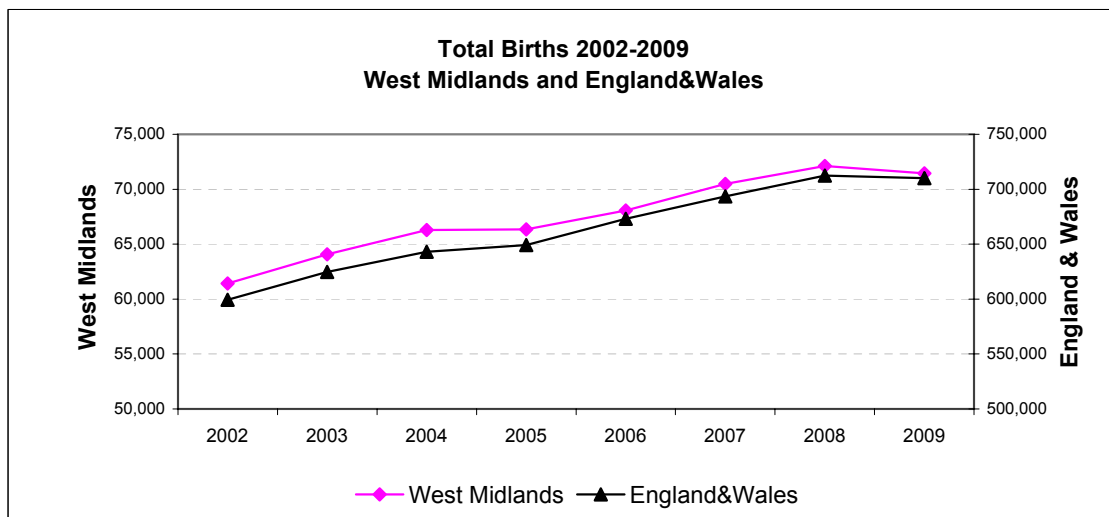
With sincere regards,

Professor Jason Gardosi  
Director, Perinatal Institute

# 1. Births: Burton Hospitals NHS Foundation Trust, WM and E & W 2002-2009

Source: ONS

	2002	2003	2004	2005	2006	2007	2008	2009
England&Wales	599,279	624,816	643,026	649,094	672,966	693,356	712,328	709,936
West Midlands	61,418	64,081	66,278	66,350	68,067	70,477	72,129	71,455
Burton Hospitals Trust	3,125	3,020	3,456	3,533	3,571	3,785	4,050	3,829



## 2 A: Stillbirths 2002-2009

### West Midlands

#### Numbers

	2002	2003	2004	2005	2006	2007	2008	2009
England and Wales*	3365	3565	3517	3473	3590	3585	3617	3688
West Midlands	391	395	383	403	392	398	416	414
Burton Hospitals Trust	13	17	14	18	19	11	21	26

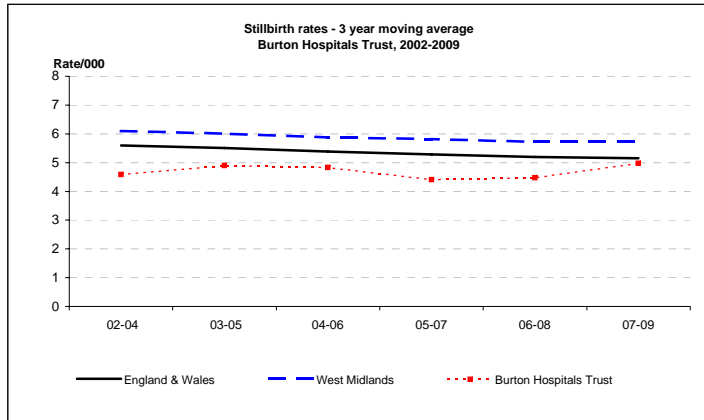
#### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
England and Wales*	5.6	5.7	5.5	5.4	5.3	5.2	5.1	5.2	5.0 - 5.4
West Midlands	6.4	6.2	5.8	6.1	5.8	5.6	5.8	5.8	5.3 - 6.4
Burton Hospitals Trust	4.2	5.6	4.1	5.1	5.3	2.9	5.2	6.8	4.6 - 9.9

#### Still birth rates - 3 year moving averages - PDN

	02-04	03-05	04-06	05-07	06-08	07-09
England & Wales	5.6	5.5	5.4	5.3	5.2	5.1
West Midlands	6.1	6.0	5.9	5.8	5.7	5.7
Burton Hospitals Trust	4.6	4.9	4.8	4.4	4.5	5.0

\*ONS



## 2 B: Stillbirths 2002-2009 - CORRECTED

(Excluding major congenital anomalies)

#### Numbers

	2002	2003	2004	2005	2006	2007	2008	2009
West Midlands	282	284	279	311	268	284	290	259
Burton Hospitals Trust	7	11	9	15	13	8	15	20

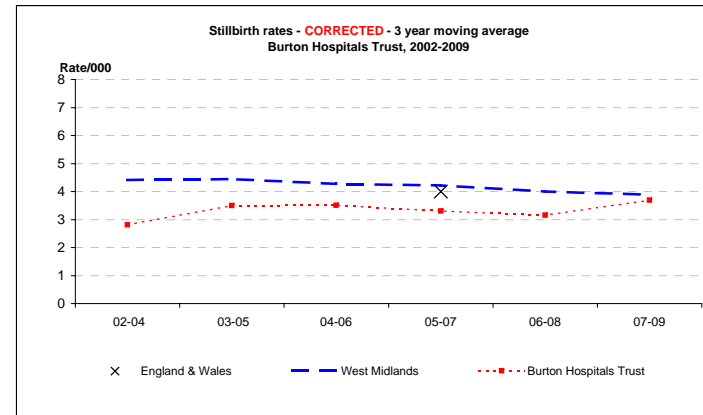
#### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
England and Wales**	4.1	4.1	4.1	4.1	4.1	3.9	4.0	3.6	3.2 - 4.1
West Midlands	4.6	4.4	4.2	4.7	3.9	4.0	4.0	3.6	3.2 - 4.1
Burton Hospitals Trust	2.2	3.6	2.6	4.2	3.6	2.1	3.7	5.2	3.4 - 8.1

#### 3 year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
England & Wales				4.0		
West Midlands	4.4	4.4	4.3	4.2	4.0	3.9
Burton Hospitals Trust	2.8	3.5	3.5	3.3	3.2	3.7

\*\*CEMACH



x = England & Wales 3 y adjusted average from CEMACH

### 3. Stillbirths, 2002 -2009: Classification in main categories

Categories based on ReCoDe classification

	2002	2003	2004	2005	2006	2007	2008	2009
Births	3125	3020	3456	3533	3571	3785	4050	3829

#### MAIN CATEGORIES

##### Numbers

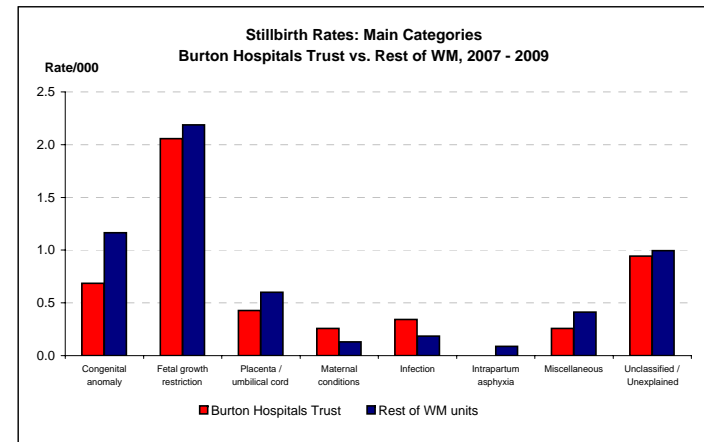
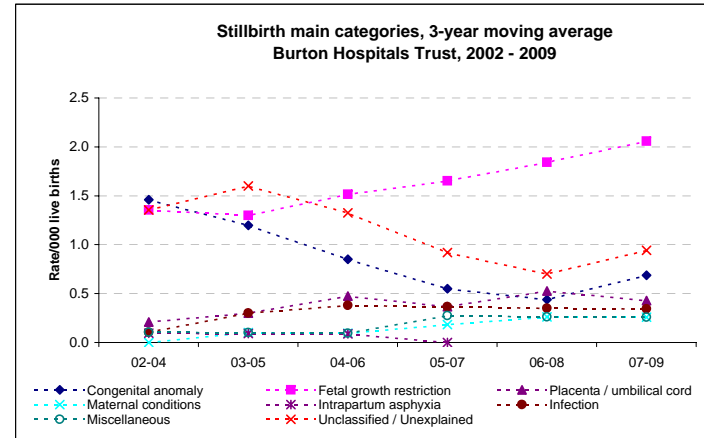
Congenital anomaly	5	4	5	3	1	2	2	4
Fetal growth restriction	5	7	1	5	10	3	8	13
Placenta/Umbilical cord	0	1	1	1	3	0	3	2
Maternal conditions	0	0	0	1	0	1	2	0
Infection	0	1	0	2	2	0	2	2
Intrapartum asphyxia	0	0	0	0	1	0	0	0
Miscellaneous	1	0	0	1	0	2	1	0
Unclassified / Unexplained	2	4	7	5	2	3	3	5

##### 3-year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
Congenital anomaly	1.5	1.2	0.9	0.6	0.4	0.7
Fetal growth restriction	1.4	1.3	1.5	1.7	1.8	2.1
Placenta / umbilical cord	0.2	0.3	0.5	0.4	0.5	0.4
Maternal conditions	0.0	0.1	0.1	0.2	0.3	0.3
Infection	0.1	0.3	0.4	0.4	0.4	0.3
Intrapartum asphyxia	0.0	0.0	0.1	0.1	0.1	0.0
Miscellaneous	0.1	0.1	0.1	0.3	0.3	0.3
Unclassified / Unexplained	1.4	1.6	1.3	0.9	0.7	0.9

Births 2007-9

	Burton Hospitals Trust 11,664		Rest of WM units 206,143	
MAIN CATEGORIES - 2007-9	No.	Rate	No.	Rate
Congenital anomaly	8	0.7	240	1.2
Fetal growth restriction	24	2.1	451	2.2
Placenta / umbilical cord	5	0.4	124	0.6
Maternal conditions	3	0.3	27	0.1
Infection	4	0.3	38	0.2
Intrapartum asphyxia	0	0.0	18	0.1
Miscellaneous	3	0.3	85	0.4
Unclassified / Unexplained	11	0.9	205	1.0



#### 4 A: Infant Deaths 2002-2009

##### Numbers

	2002	2003	2004	2005	2006	2007	2008	2009
England and Wales*	3144	3274	3234	3217	3329	3309	3369	3312
West Midlands	407	476	419	423	407	422	458	455
Burton Hospitals Trust	14	25	15	9	15	23	17	12

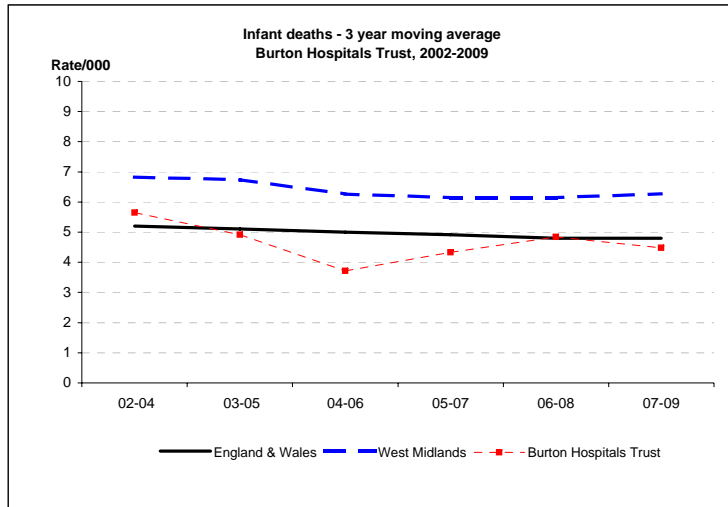
##### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
England and Wales*	5.3	5.3	5.1	5.0	5.0	4.8	4.8	4.7	4.5 - 4.9
West Midlands	6.7	7.5	6.4	6.4	6.0	6.0	6.4	6.4	5.8 - 7.0
Burton Hospitals Trust	4.5	8.3	4.4	2.6	4.2	6.1	4.2	3.2	1.8 - 5.5

##### Infant death rates - 3 year moving average - PDN

	02-04	03-05	04-06	05-07	06-08	07-09
England & Wales	5.2	5.1	5.0	4.9	4.8	4.8
West Midlands	6.8	6.7	6.3	6.1	6.1	6.3
Burton Hospitals Trust	5.7	4.9	3.7	4.3	4.8	4.5

\*ONS



#### 4 B: Infant deaths 2002-2009 - CORRECTED

Corrected = excluding major congenital anomalies, <22 weeks gestation and <500g birthweight

##### Numbers

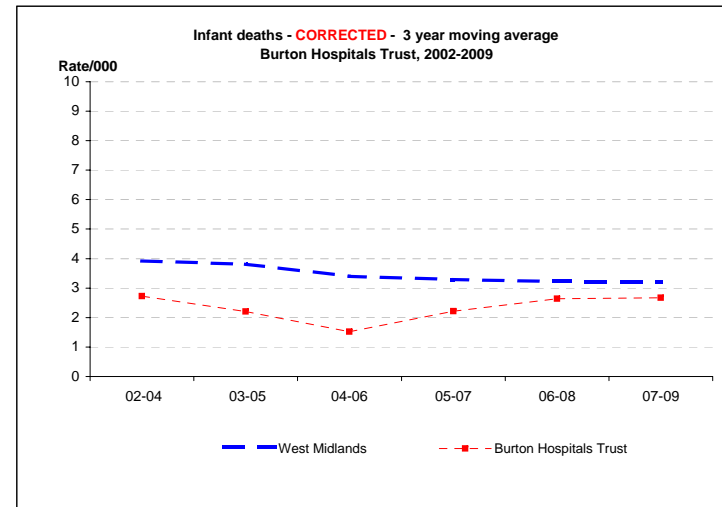
	2002	2003	2004	2005	2006	2007	2008	2009
West Midlands	238	274	236	235	208	228	240	211
Burton Hospitals Trust	7	12	7	3	6	15	9	7

##### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
West Midlands	3.9	4.3	3.6	3.6	3.1	3.3	3.3	3.0	2.6 - 3.4
Burton Hospitals Trust	2.2	4.0	2.0	0.9	1.7	4.0	2.2	1.8	0.9 - 3.8

##### 3 year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
West Midlands	3.9	3.8	3.4	3.3	3.2	3.2
Burton Hospitals Trust	2.7	2.2	1.5	2.2	2.6	2.7



## 5. Infant Deaths, 2002-2009: main categories

Categories based on Fetal/Neonatal/Infant classification

	2002	2003	2004	2005	2006	2007	2008	2009
Live Births	3112	3003	3442	3515	3552	3774	4029	3803

### MAIN CATEGORIES

#### Numbers

Congenital anomaly	5	7	7	1	6	4	5	2
Previabile	1	6	1	4	3	4	3	3
Pulmonary immaturity	2	11	4	4	5	7	6	6
Intrapartum asphyxia	1	1	0	2	0	2	2	0
Infection	2	1	1	0	2	4	2	1
SUDI	0	3	2	0	1	3	1	2
Miscellaneous	2	2	1	0	1	3	0	1
Unclassified	2	0	0	2	0	0	1	0

#### 3-year moving averages

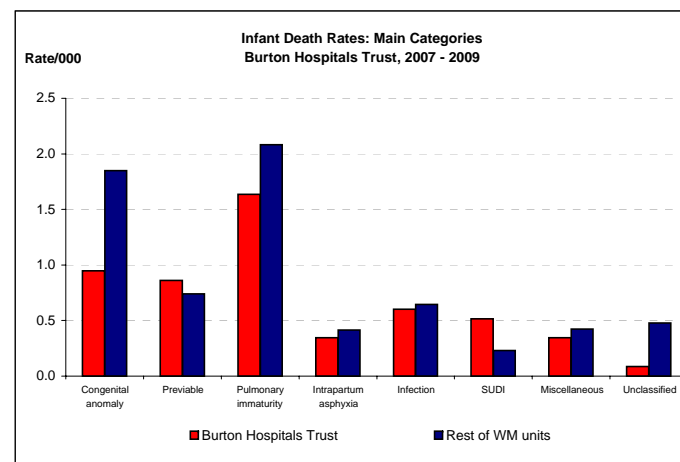
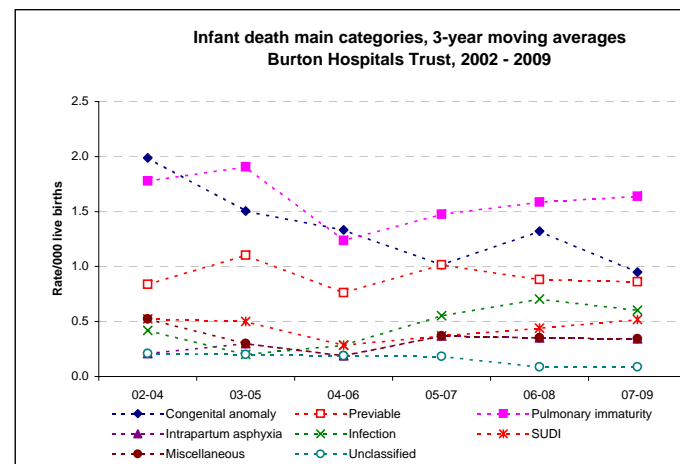
	02-04	03-05	04-06	05-07	06-08	07-09
Congenital anomaly	2.0	1.5	1.3	1.0	1.3	0.9
Previabile	0.8	1.1	0.8	1.0	0.9	0.9
Pulmonary immaturity	1.8	1.9	1.2	1.5	1.6	1.6
Intrapartum asphyxia	0.2	0.3	0.2	0.4	0.4	0.3
Infection	0.4	0.2	0.3	0.6	0.7	0.6
SUDI	0.5	0.5	0.3	0.4	0.4	0.5
Miscellaneous	0.5	0.3	0.2	0.4	0.4	0.3
Unclassified	0.2	0.2	0.2	0.2	0.1	0.1

Live Births 2007-9

### MAIN CATEGORIES - 2007-9

	Burton Hospitals Trust		Rest of WM units	
	No.	Rate	No.	Rate
Congenital anomaly	11	0.9	379	1.8
Previabile	10	0.9	152	0.7
Pulmonary immaturity	19	1.6	427	2.1
Intrapartum asphyxia	4	0.3	85	0.4
Infection	7	0.6	132	0.6
SUDI	6	0.5	47	0.2
Miscellaneous	4	0.3	87	0.4
Unclassified	1	0.1	98	0.5

urton Hospitals Tru: Rest of WM units  
11,606 204,997



## 6 A: Early Neonatal deaths 2002-2009

Early neonatal = birth to age 7 days

### Numbers

	2002	2003	2004	2005	2006	2007	2008	2009
England and Wales*	1628	1726	1714	1681	1750	1762	1763	1715
West Midlands	234	266	255	270	245	268	258	246
Burton Hospitals Trust	5	15	11	7	8	13	12	8

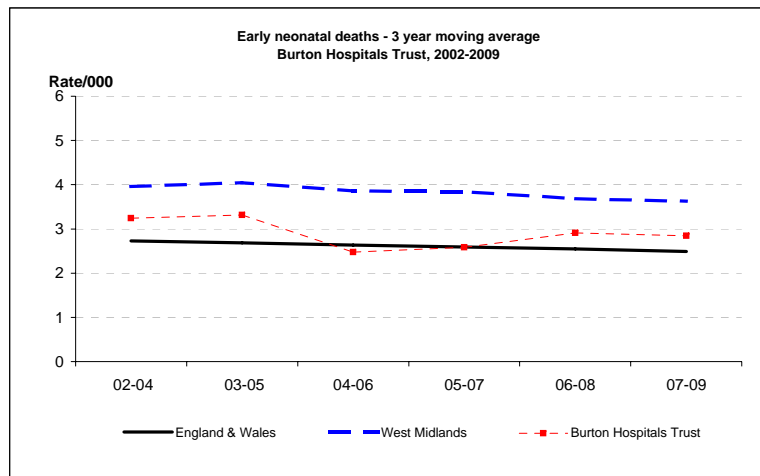
### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
England and Wales*	2.7	2.8	2.7	2.6	2.6	2.6	2.5	2.4	2.3 - 2.5
West Midlands	3.8	4.2	3.9	4.1	3.6	3.8	3.6	3.5	3.1 - 3.9
Burton Hospitals Trust	1.6	5.0	3.2	2.0	2.3	3.4	3.0	2.1	1.1 - 4.1

### 3 year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
England & Wales	2.7	2.7	2.6	2.6	2.6	2.5
West Midlands	4.0	4.0	3.9	3.8	3.7	3.6
Burton Hospitals Trust	3.2	3.3	2.5	2.6	2.9	2.8

\*ONS



## 6 B: Early Neonatal Deaths 2002-2009 - CORRECTED

Corrected = excluding major congenital anomalies, <22 weeks gestation and <500g birthweight

### Numbers

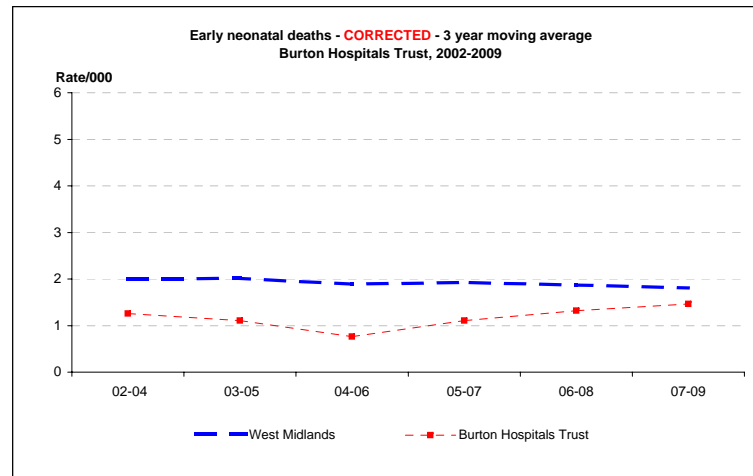
	2002	2003	2004	2005	2006	2007	2008	2009
West Midlands	118	134	129	131	117	144	130	110
Burton Hospitals Trust	3	5	4	2	2	8	5	4

### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
West Midlands	1.9	2.1	2.0	2.0	1.7	2.1	1.8	1.5	1.3 - 1.9
Burton Hospitals Trust	1.0	1.7	1.2	0.6	0.6	2.1	1.2	1.1	0.4 - 2.7

### 3 year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
West Midlands	2.0	2.0	1.9	1.9	1.9	1.8
Burton Hospitals Trust	1.3	1.1	0.8	1.1	1.3	1.5



## 7 A: Neonatal deaths 2002-2009

Neonatal = birth to age 28 days

### Numbers

	2002	2003	2004	2005	2006	2007	2008	2009
England and Wales*	2129	2234	2223	2205	2331	2269	2299	2251
West Midlands	294	329	314	327	316	316	321	321
Burton Hospitals Trust	6	16	12	7	11	17	14	9

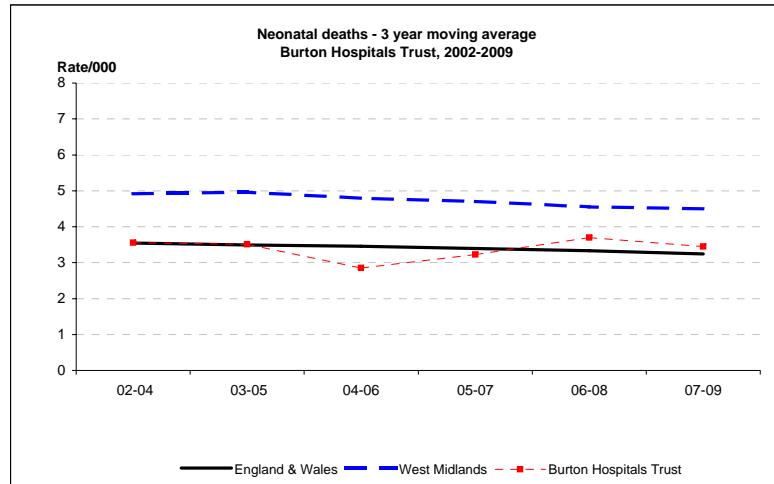
### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
England and Wales*	3.6	3.6	3.5	3.4	3.5	3.3	3.2	3.2	3.1 - 3.3
West Midlands	4.8	5.2	4.8	5.0	4.7	4.5	4.5	4.5	4.1 - 5.0
Burton Hospitals Trust	1.9	5.3	3.5	2.0	3.1	4.5	3.5	2.4	1.2 - 4.5

### 3 year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
England & Wales	3.5	3.5	3.5	3.4	3.3	3.2
West Midlands	4.9	5.0	4.8	4.7	4.5	4.5
Burton Hospitals Trust	3.6	3.5	2.9	3.2	3.7	3.4

\*ONS



## 7 B: Neonatal Deaths 2002-2009 - CORRECTED

Corrected = excluding major congenital anomalies, <22 weeks gestation and <500g birthweight

### Numbers

	2002	2003	2004	2005	2006	2007	2008	2009
West Midlands	157	176	166	172	168	172	168	149
Burton Hospitals Trust	3	6	5	2	4	10	6	4

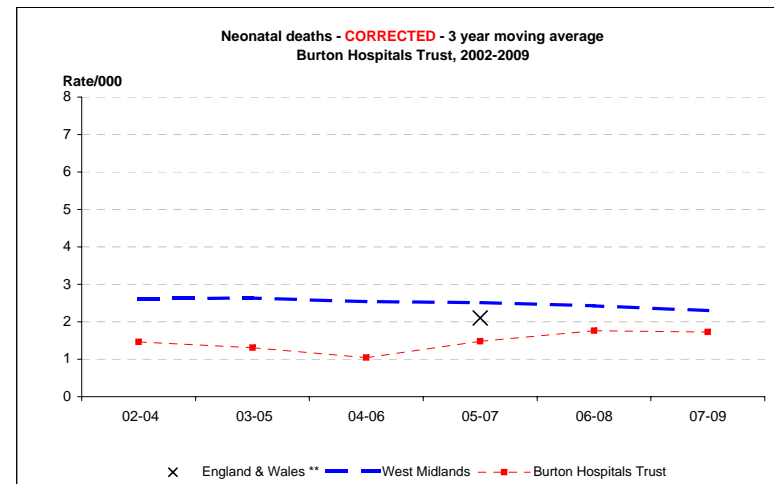
### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
England and Wales**				2.1	2.3	2.0			
West Midlands	2.6	2.8	2.5	2.6	2.5	2.5	2.3	2.1	1.8 - 2.5
Burton Hospitals Trust	1.0	2.0	1.5	0.6	1.1	2.6	1.5	1.1	0.4 - 2.7

### 3 year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
England & Wales **				2.1		
West Midlands	2.6	2.6	2.5	2.5	2.4	2.3
Burton Hospitals Trust	1.5	1.3	1.0	1.5	1.8	1.7

\*\*CEMACH



x = England & Wales 3 y adjusted average from CEMACH



## 8 A: Perinatal Deaths 2002-2009

Perinatal = stillbirths and early neonatal deaths

### Numbers

	2002	2003	2004	2005	2006	2007	2008	2009
England and Wales*	4993	5291	5231	5154	5340	5347	5380	5403
West Midlands	625	661	638	673	637	666	674	656
Burton Hospitals Trust	18	32	24	25	27	24	33	34

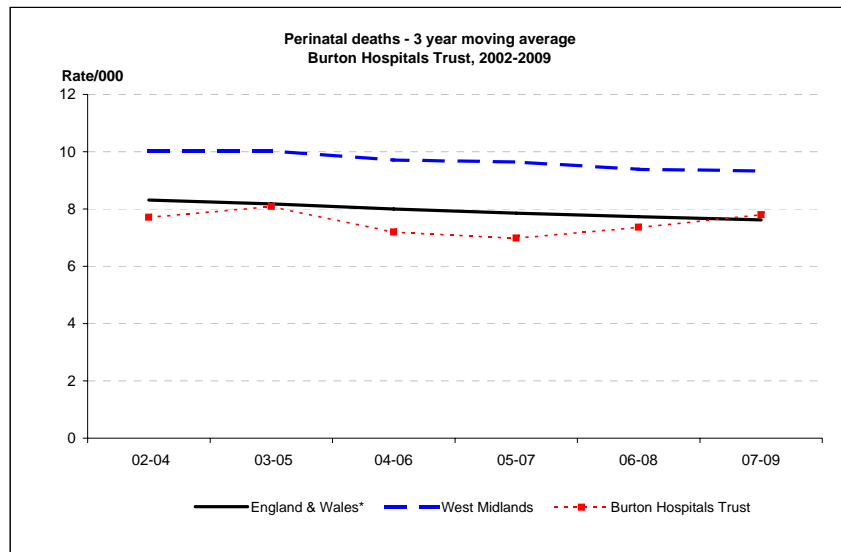
### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
England and Wales*	8.3	8.5	8.1	7.9	7.9	7.7	7.6	7.6	7.4 - 7.8
West Midlands	10.2	10.3	9.6	10.1	9.4	9.4	9.3	9.2	8.5 - 9.9
Burton Hospitals Trust	5.8	10.6	6.9	7.1	7.6	6.3	8.1	8.9	6.4 - 12.4

### 3 year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
England & Wales*	8.3	8.2	8.0	7.9	7.7	7.6
West Midlands	10.0	10.0	9.7	9.6	9.4	9.3
Burton Hospitals Trust	7.7	8.1	7.2	7.0	7.4	7.8

\*ONS



## 8 B: Perinatal Deaths 2002-2009 - CORRECTED

Corrected = excluding major congenital anomalies, <22 weeks gestation and <500g birthweight

### Numbers

	2002	2003	2004	2005	2006	2007	2008	2009
West Midlands	400	418	408	442	385	428	420	369
Burton Hospitals Trust	10	16	13	17	15	16	20	24

### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
West Midlands	6.5	6.5	6.2	6.7	5.7	6.1	5.8	5.2	4.7 - 5.7
Burton Hospitals Trust	3.2	5.3	3.8	4.8	4.2	4.2	4.9	6.3	4.2 - 9.3

### 3 year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
West Midlands	6.4	6.4	6.2	6.1	5.9	5.7
Burton Hospitals Trust	4.1	4.6	4.3	4.4	4.5	5.1

