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2 December 2010

**Perinatal & Infant Mortality - 2009 Unit Report:  
UNIVERSITY HOSPITAL OF NORTH STAFFORSHIRE NHS 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.

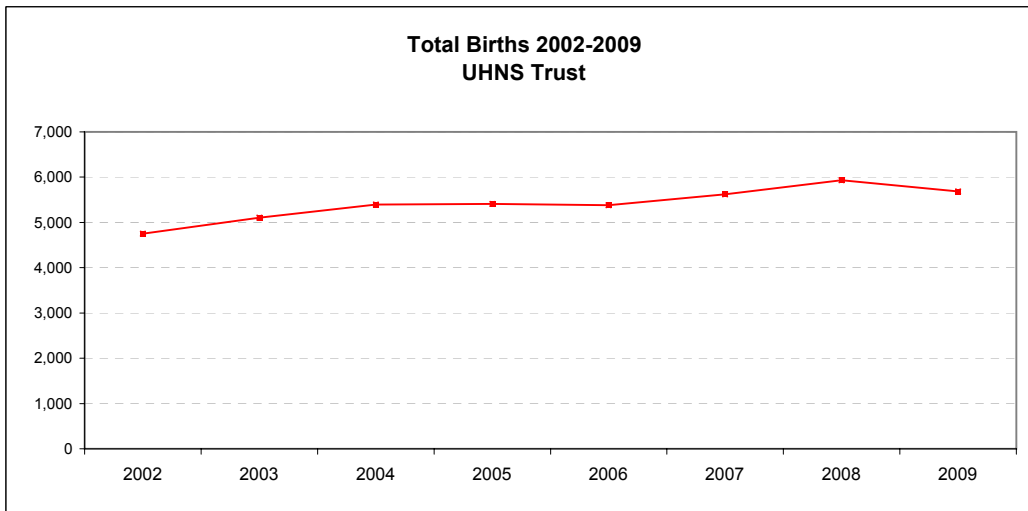
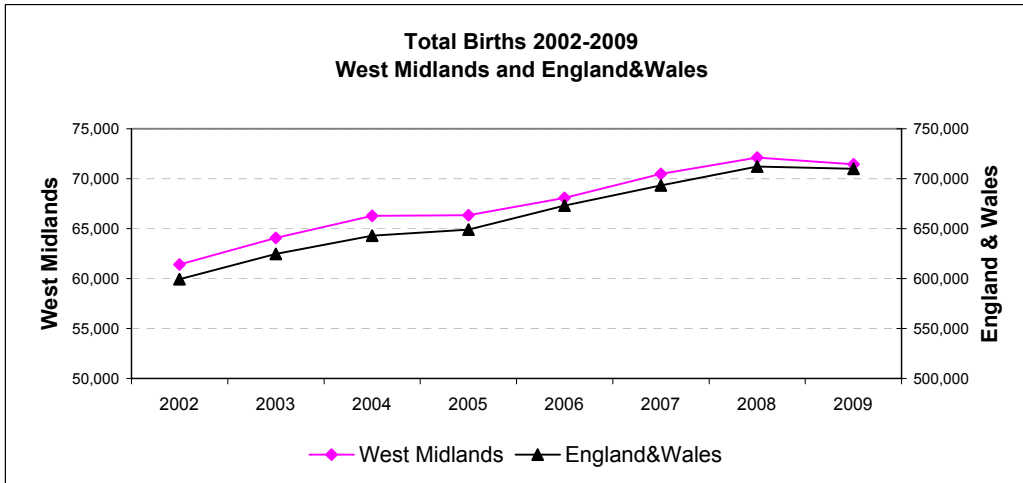
With sincere regards,

Professor Jason Gardosi  
Director, Perinatal Institute

# 1. Births: University Hospital of North Staffordshire NHS 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	61,417	64,079	66,285	66,351	68,063	70,476	72,110	71,455
UHNS Trust	4,750	5,103	5,396	5,406	5,382	5,621	5,933	5,688



## 2 A: Stillbirths 2002-2009

### 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
UHNS Trust	26	29	27	41	30	28	34	31

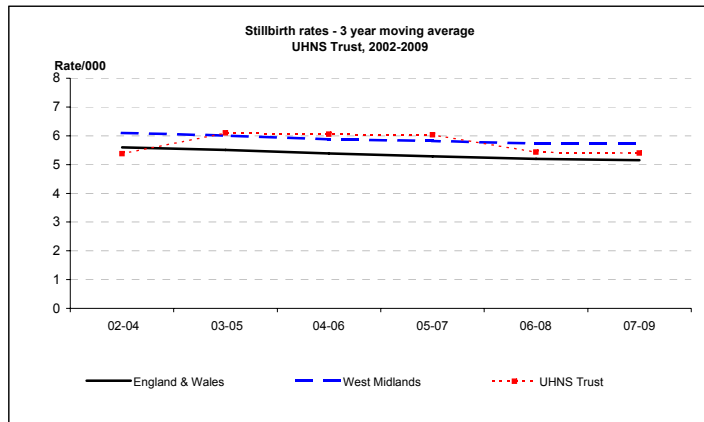
### Rate/1,000

	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
UHNS Trust	5.5	5.7	5.0	7.6	5.6	5.0	5.7	5.5	3.8 - 7.7

### 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
UHNS Trust	5.4	6.1	6.1	6.0	5.4	5.4

\*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
UHNS Trust	21	23	19	34	23	22	27	25

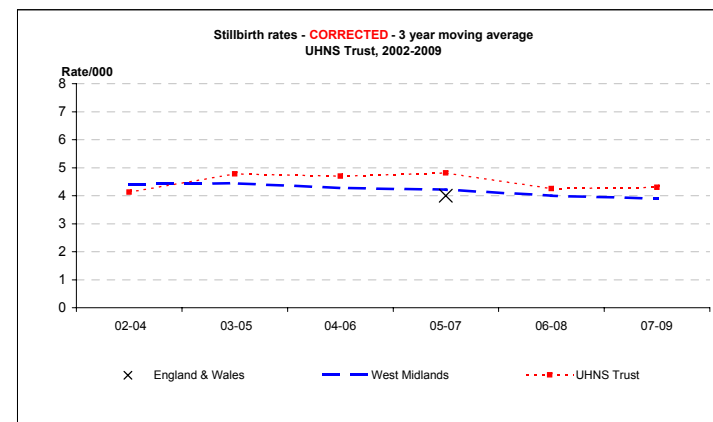
### Rate/1,000

	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
England and Wales**				4.1	4.1	3.9			
West Midlands	4.6	4.4	4.2	4.7	3.9	4.0	4.0	3.6	3.2 - 4.1
UHNS Trust	4.4	4.5	3.5	6.3	4.3	3.9	4.6	4.4	3.0 - 6.5

### 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
UHNS Trust	4.1	4.8	4.7	4.8	4.3	4.3

\*\*CEMACH



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

Categories based on ReCoDe classification

	2002	2003	2004	2005	2006	2007	2008	2009
Births	4750	5103	5396	5406	5382	5621	5933	5688

#### MAIN CATEGORIES

##### Numbers

Congenital anomaly	4	4	2	4	7	5	4	4
Fetal growth restriction	5	8	13	18	14	8	14	9
Placenta/Umbilical chord	10	4	2	3	4	2	5	5
Maternal conditions	0	0	3	1	0	2	1	0
Infection	2	1	0	0	0	1	1	2
Intrapartum asphyxia	0	1	0	0	0	0	1	1
Miscellaneous	2	4	3	2	0	4	5	3
Unclassified / Unexplained	3	7	4	13	5	6	3	7

##### 3-year moving averages

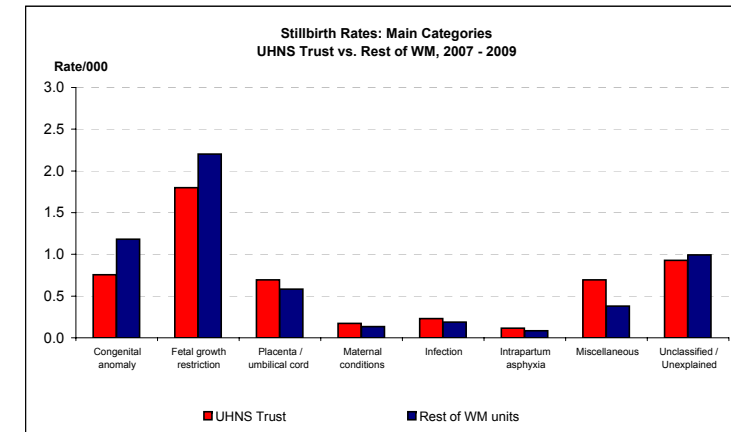
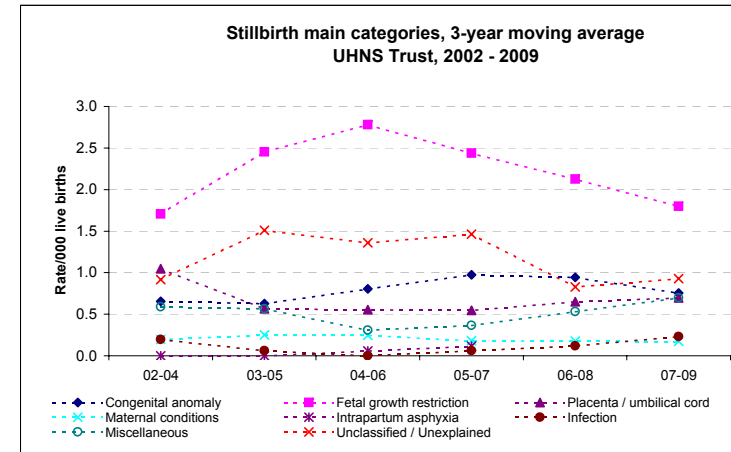
	02-04	03-05	04-06	05-07	06-08	07-09
Congenital anomaly	0.7	0.6	0.8	1.0	0.9	0.8
Fetal growth restriction	1.7	2.5	2.8	2.4	2.1	1.8
Placenta / umbilical cord	1.0	0.6	0.6	0.5	0.6	0.7
Maternal conditions	0.2	0.3	0.2	0.2	0.2	0.2
Infection	0.2	0.1	0.0	0.1	0.1	0.2
Intrapartum asphyxia	0.1	0.1	0.0	0.0	0.1	0.1
Miscellaneous	0.6	0.6	0.3	0.4	0.5	0.7
Unclassified / Unexplained	0.9	1.5	1.4	1.5	0.8	0.9

Births 2007-9

#### MAIN CATEGORIES - 2007-9

Congenital anomaly	13	0.8
Fetal growth restriction	31	1.8
Placenta / umbilical cord	12	0.7
Maternal conditions	3	0.2
Infection	4	0.2
Intrapartum asphyxia	2	0.1
Miscellaneous	12	0.7
Unclassified / Unexplained	16	0.9

UHNS Trust		Rest of WM units	
17,242		200,565	
No.	Rate	No.	Rate
13	0.8	237	1.2
31	1.8	442	2.2
12	0.7	117	0.6
3	0.2	27	0.1
4	0.2	38	0.2
2	0.1	17	0.1
12	0.7	76	0.4
16	0.9	199	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
UHNS Trust	42	41	33	33	33	37	38	44

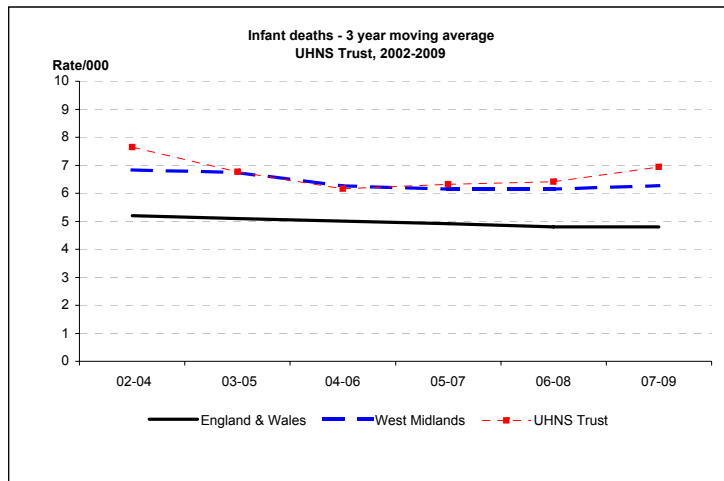
##### Rate/1,000

	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
UHNS Trust	8.9	8.1	6.1	6.2	6.2	6.6	6.4	7.8	5.8 - 10.4

##### 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
UHNS Trust	7.6	6.8	6.2	6.3	6.4	6.9

\*ONS



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

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

##### Numbers

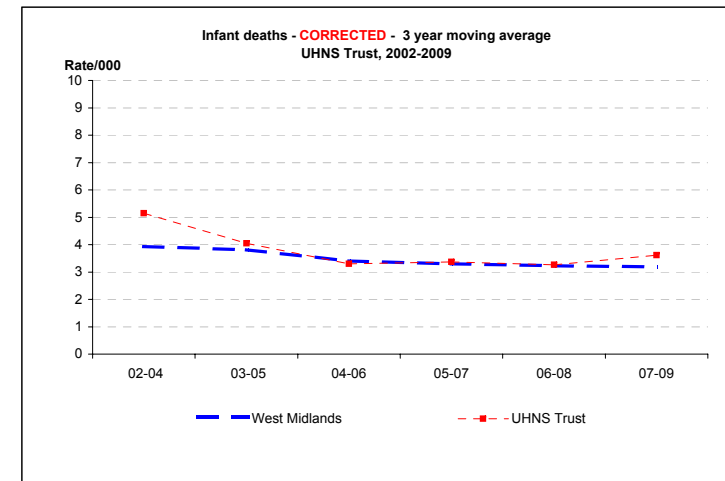
	2002	2003	2004	2005	2006	2007	2008	2009
West Midlands	238	274	236	235	208	228	240	211
UHNS Trust	31	28	19	17	17	21	17	24

##### 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
UHNS Trust	6.6	5.5	3.5	3.2	3.2	3.8	2.9	4.2	2.9 - 6.3

##### 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
UHNS Trust	5.1	4.0	3.3	3.4	3.3	3.6



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

Categories based on Fetal/Neonatal/Infant classification

Live Births	2002	2003	2004	2005	2006	2007	2008	2009
	4724	5074	5369	5365	5352	5593	5899	5657

### MAIN CATEGORIES

#### Numbers

Congenital anomaly	8	7	7	6	10	10	12	11
Previabile	2	4	5	10	5	6	8	3
Pulmonary immaturity	14	14	14	16	12	16	16	14
Intrapartum asphyxia	0	0	0	0	1	0	0	4
Infection	8	8	3	4	7	8	4	2
SUDI	6	6	4	3	1	0	2	1
Miscellaneous	4	6	5	4	2	3	2	5
Unclassified	2	0	0	0	0	0	2	7

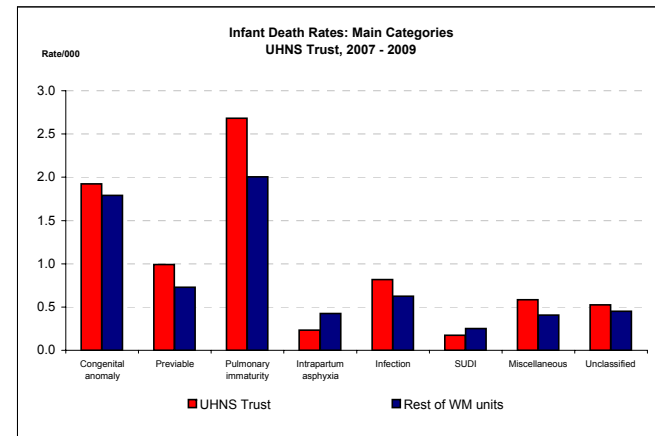
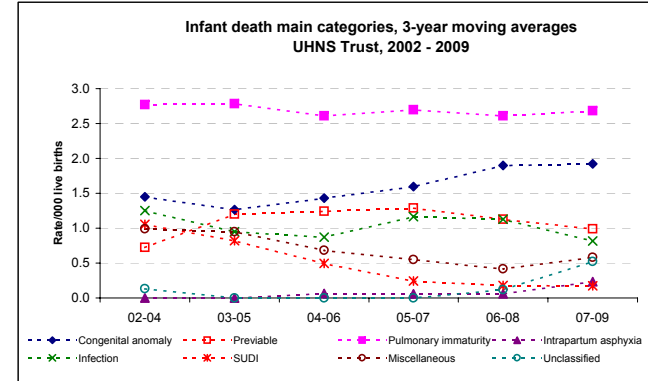
#### 3-year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
Congenital anomaly	1.5	1.3	1.4	1.6	1.9	1.9
Previabile	0.7	1.2	1.2	1.3	1.1	1.0
Pulmonary immaturity	2.8	2.8	2.6	2.7	2.6	2.7
Intrapartum asphyxia	0.0	0.0	0.1	0.1	0.1	0.2
Infection	1.3	0.9	0.9	1.2	1.1	0.8
SUDI	1.1	0.8	0.5	0.2	0.2	0.2
Miscellaneous	1.0	0.9	0.7	0.6	0.4	0.6
Unclassified	0.1	0.0	0.0	0.0	0.1	0.5

Live Births 2007-9	<b>UHNS Trust</b>	<b>Rest of WM units</b>
	17,149	199,454

#### MAIN CATEGORIES - 2006-8

	No.	Rate	No.	Rate
Congenital anomaly	33	1.9	357	1.8
Previabile	17	1.0	145	0.7
Pulmonary immaturity	46	2.7	400	2.0
Intrapartum asphyxia	4	0.2	85	0.4
Infection	14	0.8	125	0.6
SUDI	3	0.2	50	0.3
Miscellaneous	10	0.6	81	0.4
Unclassified	9	0.5	90	0.5



## 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
UHNS Trust	20	28	19	21	21	24	24	21

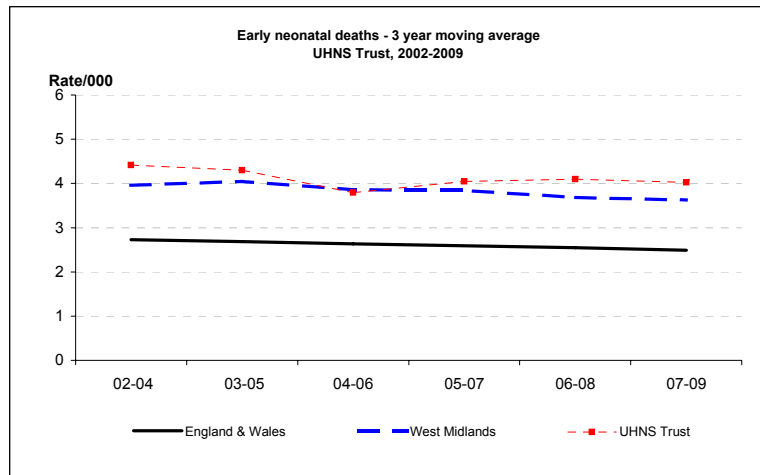
### Rate/1,000

	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
UHNS Trust	4.2	5.5	3.5	3.9	3.9	4.3	4.1	3.7	2.4 - 5.7

### 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
UHNS Trust	4.4	4.3	3.8	4.0	4.1	4.0

\*ONS



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

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

### Numbers

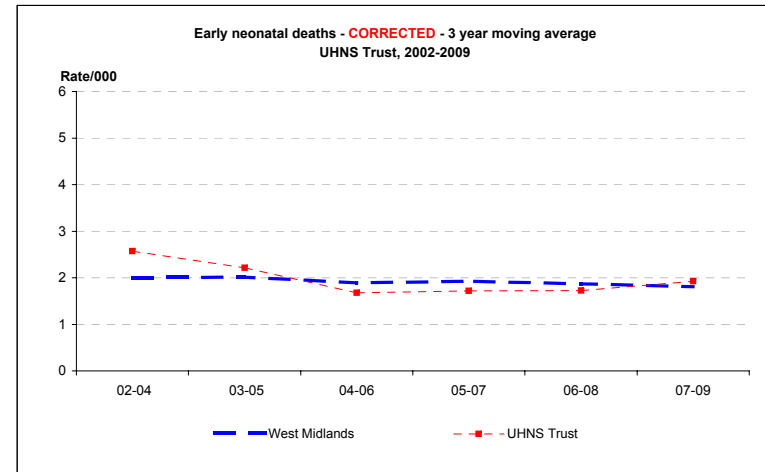
	2002	2003	2004	2005	2006	2007	2008	2009
West Midlands	118	134	129	131	117	144	130	110
UHNS Trust	12	17	10	8	9	11	9	13

### 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
UHNS Trust	2.5	3.4	1.9	1.5	1.7	2.0	1.5	2.3	1.3 - 3.9

### 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
UHNS Trust	2.6	2.2	1.7	1.7	1.7	1.9



## 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
UHNS Trust	29	32	26	25	27	31	27	31

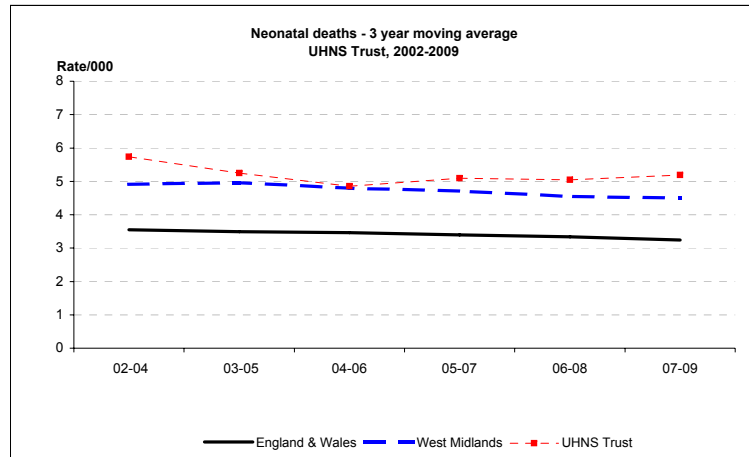
### Rate/1,000

	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
UHNS Trust	6.1	6.3	4.8	4.7	5.0	5.5	4.6	5.5	3.9 - 7.8

### 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	4.6	4.5
UHNS Trust	5.7	5.3	4.8	5.1	5.0	5.2

\*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
UHNS Trust	20	20	12	11	14	17	10	20

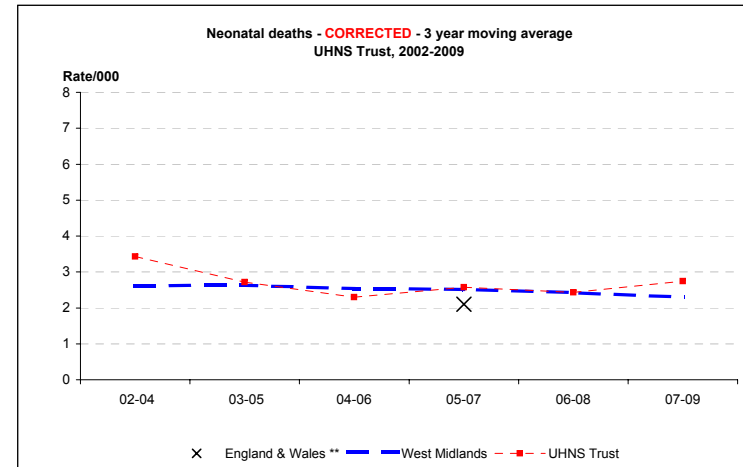
### Rate/1,000

	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
UHNS Trust	4.2	3.9	2.2	2.1	2.6	3.0	1.7	3.5	2.3 - 5.5

### 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
UHNS Trust	3.4	2.7	2.3	2.6	2.4	2.7

\*\*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
UHNS Trust	46	57	46	62	51	52	58	52

#### 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	9.5	9.3	9.2	8.5 - 9.9
UHNS Trust	9.7	11.2	8.5	11.5	9.5	9.3	9.8	9.1	7.0 - 12.0

#### 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
UHNS Trust	9.8	10.4	9.8	10.1	9.5	9.4

\*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
UHNS Trust	33	40	29	42	32	33	36	38

#### 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
UHNS Trust	6.9	7.8	5.4	7.8	5.9	5.9	6.1	6.7	4.9 - 9.2

#### 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
UHNS Trust	6.7	7.0	6.4	6.5	6.0	6.2

