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2 December 2010

**Perinatal & Infant Mortality - 2009 Unit Report:
BIRMINGHAM WOMEN'S 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

As always, specific information relating to your unit is available on request (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.

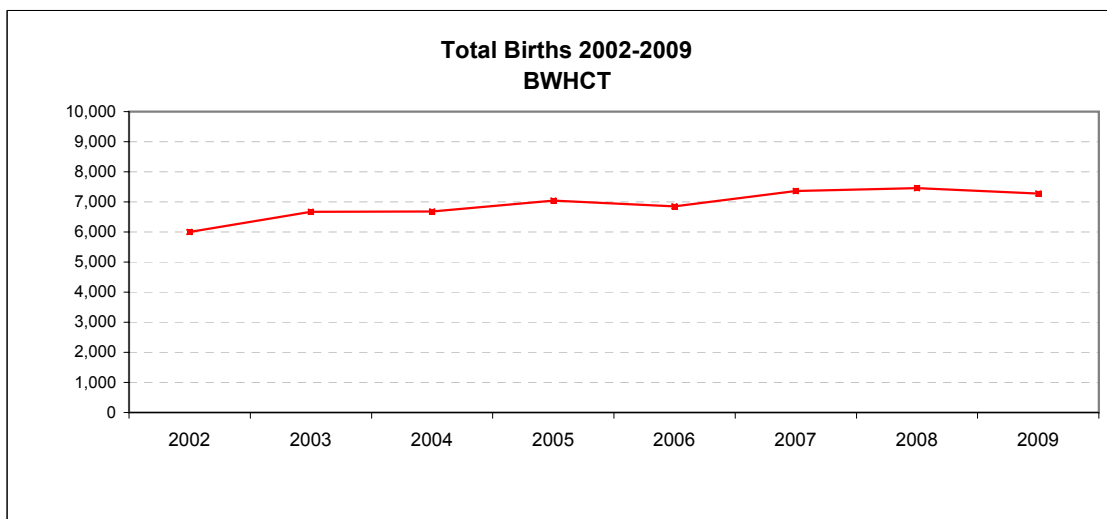
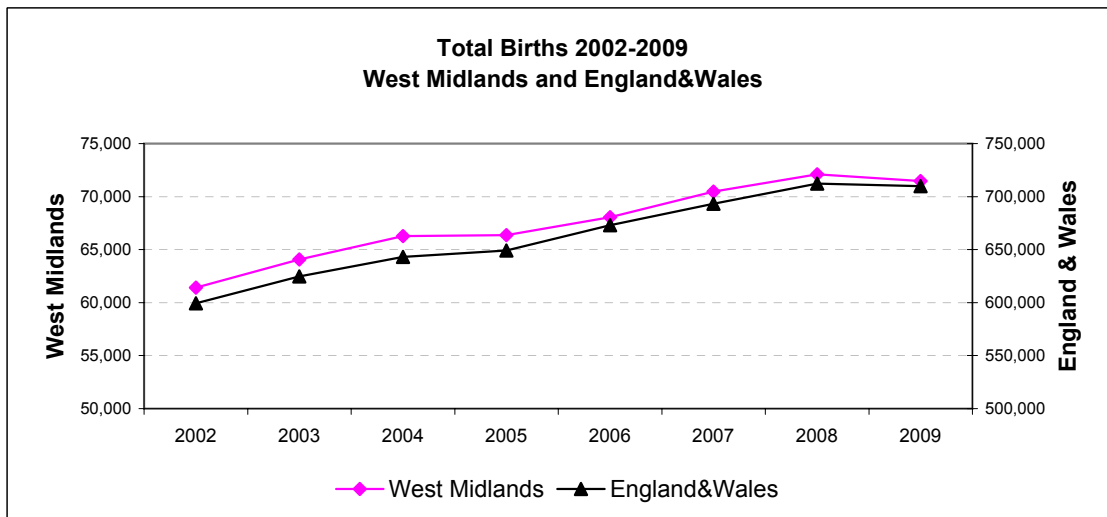
With sincere regards,

Professor Jason Gardosi
Director, Perinatal Institute

1. Births: Birmingham Women's 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	61,417	64,079	66,285	66,351	68,063	70,476	72,110	71,455
BWHCT	5,997	6,670	6,686	7,046	6,856	7,365	7,459	7,277



2 A: Stillbirths 2002-2009

Numbers

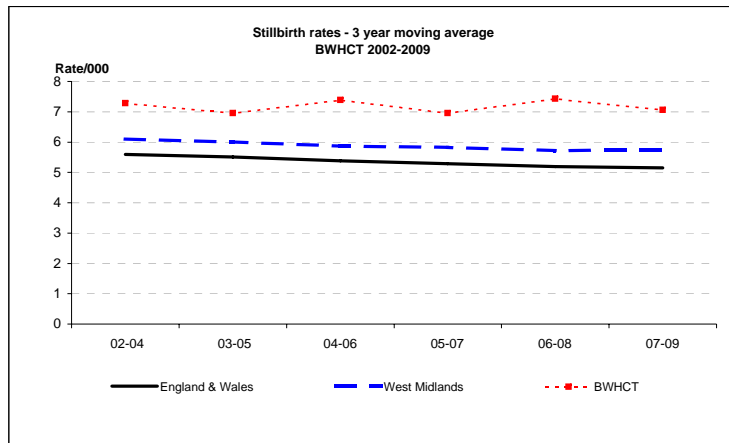
	2002	2003	2004	2005	2006	2007	2008	2009
England and Wales*	3365	3565	3517	3473	3590	3585	3617	3688
West Midlands	391	395	383	403	392	398	416	414
BWHCT	41	47	53	42	57	49	55	52

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
BWHCT	6.8	7.0	7.9	6.0	8.3	6.7	7.4	7.1	5.5 - 9.4

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
BWHCT	7.3	7.0	7.4	7.0	7.4	7.1

*ONS



2 B: Stillbirths 2002-2009 - CORRECTED

(Excluding major congenital anomalies)

Numbers

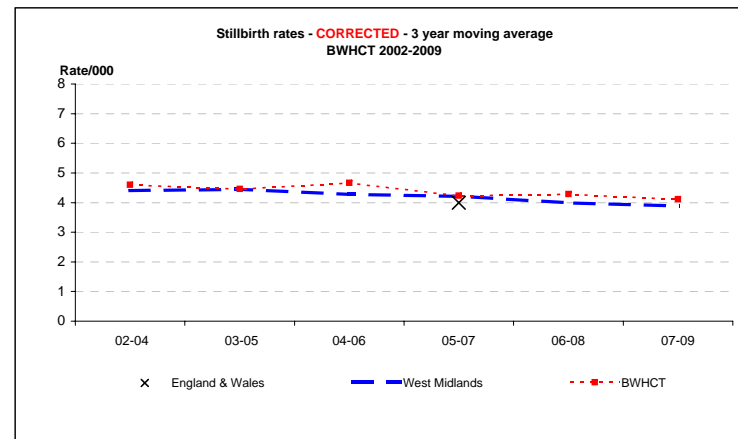
	2002	2003	2004	2005	2006	2007	2008	2009
West Midlands	282	284	279	311	268	284	290	259
BWHCT	26	28	35	28	33	29	31	31

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
BWHCT	4.3	4.2	5.2	4.0	4.8	3.9	4.2	4.3	3.0 - 6.0

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
BWHCT	4.6	4.5	4.7	4.2	4.3	4.1

**CEMACH



x = England & Wales 3 y adjusted average from CEMACH

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

Categories based on ReCoDe classification

Births	2002 5997	2003 6670	2004 6686	2005 7046	2006 6856	2007 7365	2008 7459	2009 7277
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MAIN CATEGORIES

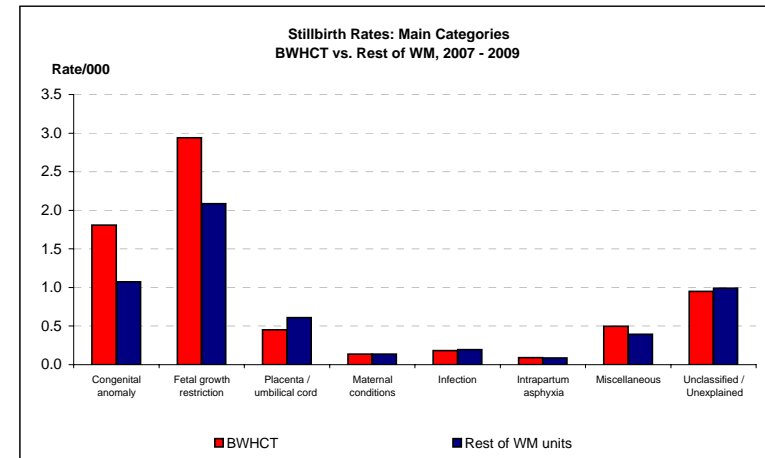
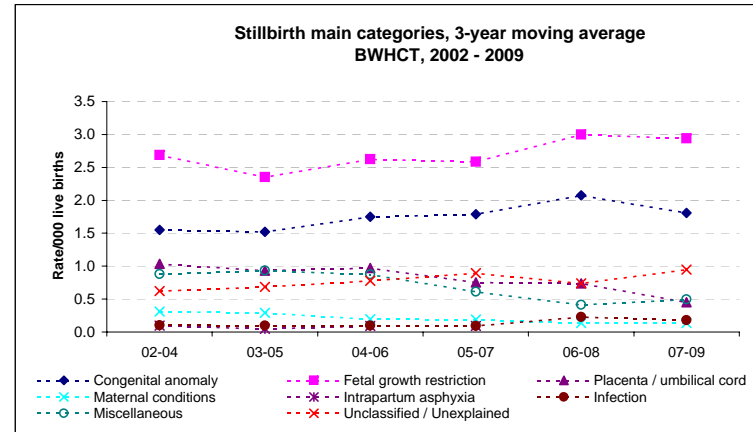
Numbers

Congenital anomaly	8	11	11	9	16	13	16	11
Fetal growth restriction	17	14	21	13	20	22	23	20
Placenta/Umbilical chord	5	8	7	4	9	3	4	3
Maternal conditions	1	3	2	1	1	2	0	1
Infection	0	1	1	0	1	1	3	0
Intrapartum asphyxia	0	1	1	1	0	0	2	0
Miscellaneous	6	5	6	8	4	1	4	6
Unclassified / Unexplained	4	4	4	6	6	7	3	11

3-year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
Congenital anomaly	1.6	1.5	1.7	1.8	2.1	1.8
Fetal growth restriction	2.7	2.4	2.6	2.6	3.0	2.9
Placenta / umbilical cord	1.0	0.9	1.0	0.8	0.7	0.5
Maternal conditions	0.3	0.3	0.2	0.2	0.1	0.1
Infection	0.1	0.1	0.1	0.1	0.2	0.2
Intrapartum asphyxia	0.1	0.1	0.1	0.0	0.1	0.1
Miscellaneous	0.9	0.9	0.9	0.6	0.4	0.5
Unclassified / Unexplained	0.6	0.7	0.8	0.9	0.7	1.0

Births 2007-9	BWHCT		Rest of WM units	
	No.	Rate	No.	Rate
Congenital anomaly	40	1.8	210	1.1
Fetal growth restriction	65	2.9	408	2.1
Placenta / umbilical cord	10	0.5	119	0.6
Maternal conditions	3	0.1	27	0.1
Infection	4	0.2	38	0.2
Intrapartum asphyxia	2	0.1	17	0.1
Miscellaneous	11	0.5	77	0.4
Unclassified / Unexplained	21	1.0	194	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
BWHCT	62	80	55	88	77	69	77	86

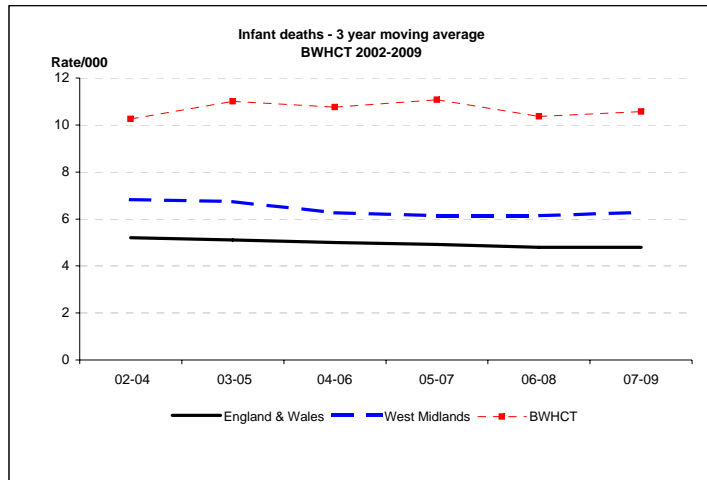
Rate/1,000

	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
BWHCT	10.4	12.1	8.3	12.6	11.3	9.4	10.4	11.9	9.6 - 14.7

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
BWHCT	10.3	11.0	10.8	11.1	10.4	10.6

*ONS



4 B: Infant deaths 2002-2009 - CORRECTED

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

Numbers

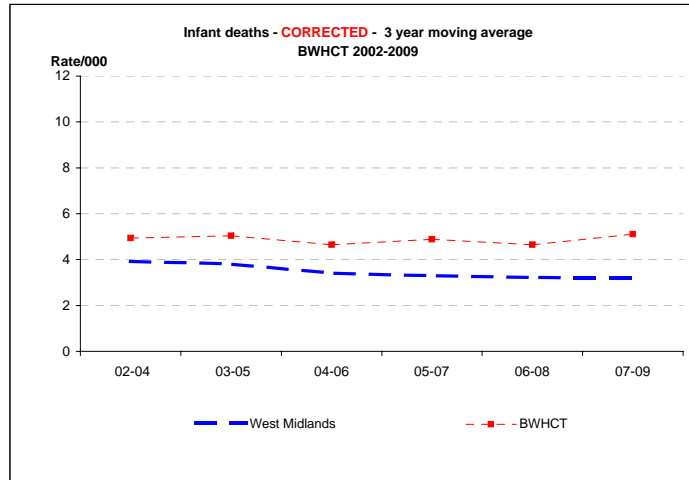
	2002	2003	2004	2005	2006	2007	2008	2009
West Midlands	238	274	236	235	208	228	240	211
BWHCT	34	35	26	41	28	34	38	40

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
BWHCT	5.7	5.3	3.9	5.9	4.1	4.6	5.1	5.5	4.1 - 7.5

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
BWHCT	4.9	5.0	4.6	4.9	4.6	5.1



5. Infant Deaths, 2002-2009: main categories

Categories based on Fetal/Neonatal/Infant classification

	2002	2003	2004	2005	2006	2007	2008	2009
Live Births	5956	6623	6633	7004	6799	7316	7404	7225

MAIN CATEGORIES

Numbers

Congenital anomaly	16	26	20	30	32	23	29	32
Previale	12	18	8	16	15	10	10	13
Pulmonary immaturity	22	25	19	28	20	20	22	34
Intrapartum asphyxia	4	3	1	3	2	5	3	6
Infection	7	8	5	8	10	8	12	5
SUDI	2	6	0	4	2	3	2	1
Miscellaneous	11	12	10	14	8	9	6	8
Unclassified	0	0	0	1	3	1	3	0

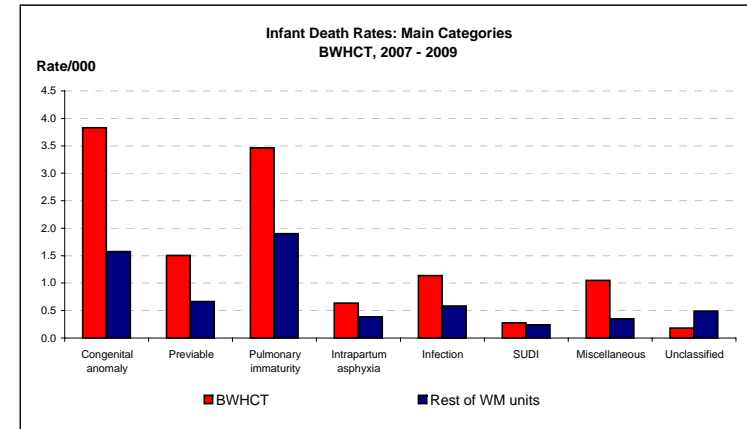
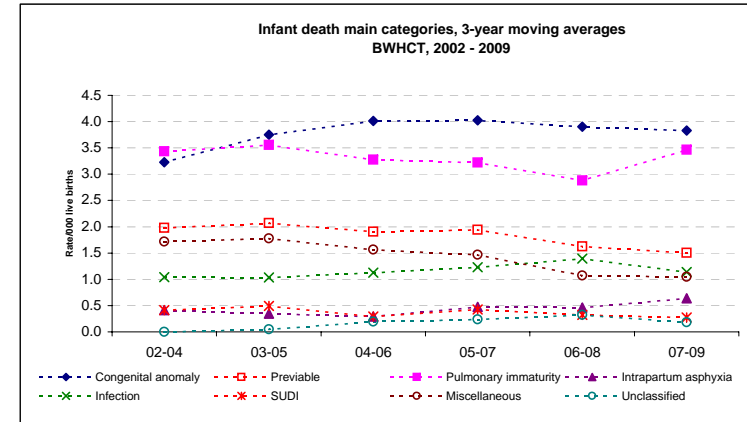
3-year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
Congenital anomaly	3.2	3.8	4.0	4.0	3.9	3.8
Previale	2.0	2.1	1.9	1.9	1.6	1.5
Pulmonary immaturity	3.4	3.6	3.3	3.2	2.9	3.5
Intrapartum asphyxia	0.4	0.3	0.3	0.5	0.5	0.6
Infection	1.0	1.0	1.1	1.2	1.4	1.1
SUDI	0.4	0.5	0.3	0.4	0.3	0.3
Miscellaneous	1.7	1.8	1.6	1.5	1.1	1.0
Unclassified	0.0	0.0	0.2	0.2	0.3	0.2

	BWHCT		Rest of WM units	
Live Births 2007-9	21,945		194,658	

MAIN CATEGORIES - 2006-8

	BWHCT		Rest of WM units	
	No.	Rate	No.	Rate
Congenital anomaly	84	3.8	306	1.6
Previale	33	1.5	129	0.7
Pulmonary immaturity	76	3.5	370	1.9
Intrapartum asphyxia	14	0.6	75	0.4
Infection	25	1.1	114	0.6
SUDI	6	0.3	47	0.2
Miscellaneous	23	1.0	68	0.3
Unclassified	4	0.2	95	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
BWHCT	39	46	34	64	46	53	40	49

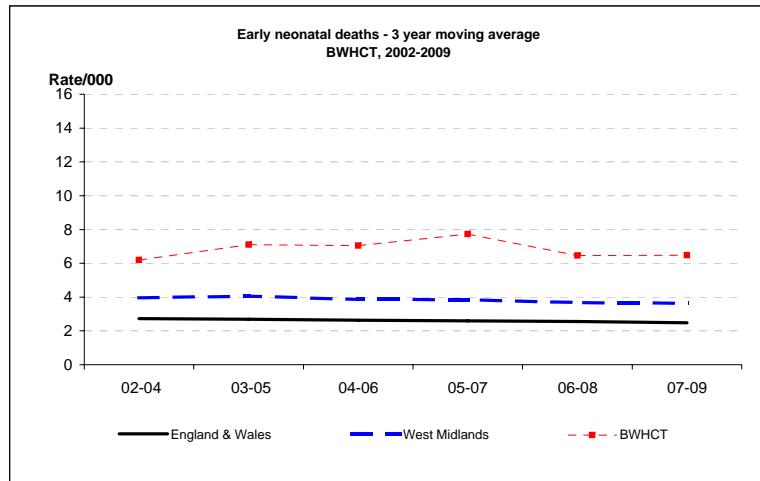
Rate/1,000

	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
BWHCT	6.5	6.9	5.1	9.1	6.8	7.2	5.4	6.8	5.1 - 9.0

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
BWHCT	6.2	7.1	7.0	7.7	6.5	6.5

*ONS



6 B: Early Neonatal Deaths 2002-2009 - CORRECTED

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

Numbers

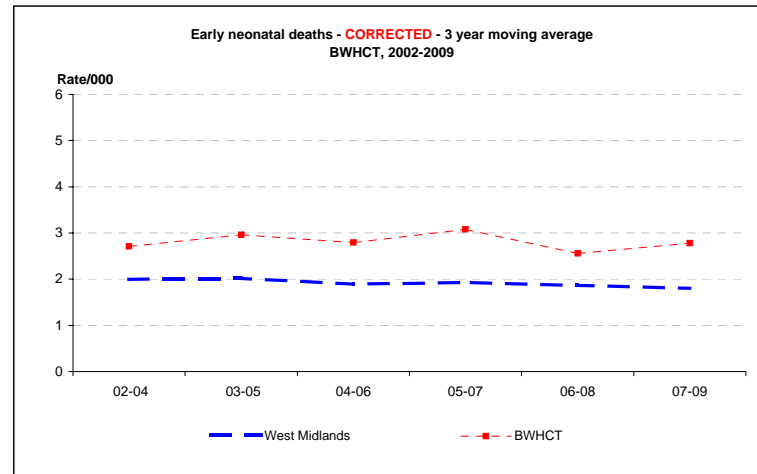
	2002	2003	2004	2005	2006	2007	2008	2009
West Midlands	118	134	129	131	117	144	130	110
BWHCT	18	17	17	26	14	25	16	20

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
BWHCT	3.0	2.6	2.6	3.7	2.1	3.4	2.2	2.8	1.8 - 4.3

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
BWHCT	2.7	3.0	2.8	3.1	2.6	2.8



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
BWHCT	47	57	39	74	61	58	54	66

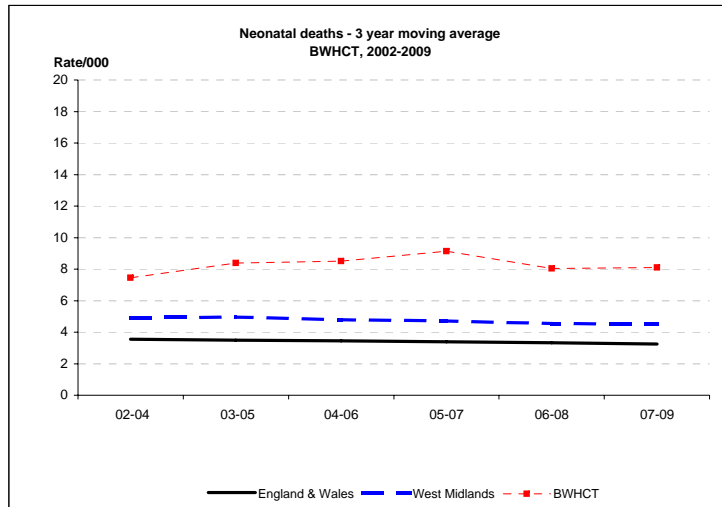
Rate/1,000

	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
BWHCT	7.9	8.6	5.9	10.6	9.0	7.9	7.3	9.1	7.2 - 11.6

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
BWHCT	7.4	8.4	8.5	9.1	8.0	8.1

*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
BWHCT	23	23	20	30	23	28	24	32

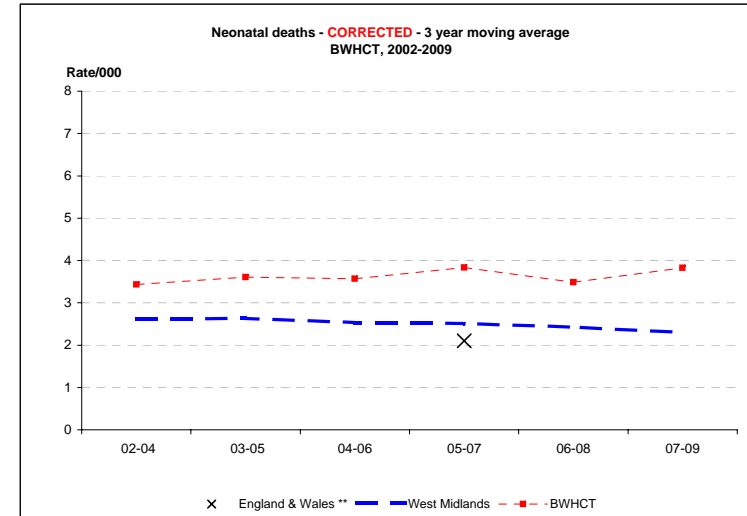
Rate/1,000

	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
BWHCT	3.9	3.5	3.0	4.3	3.4	3.8	3.2	4.4	3.1 - 6.2

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
BWHCT	3.4	3.6	3.6	3.8	3.5	3.8

**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
BWHCT	80	93	87	106	103	102	95	101

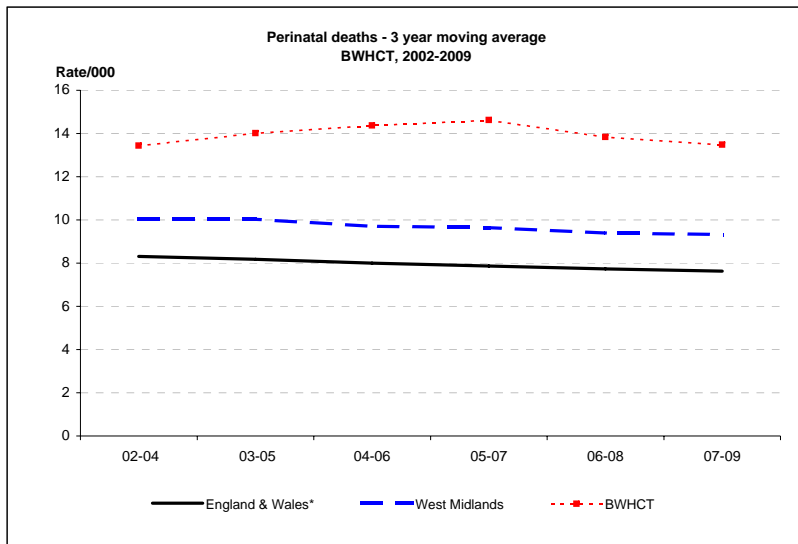
Rate/1,000

	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
BWHCT	13.3	13.9	13.0	15.0	15.0	13.8	12.7	13.9	11.4 - 16.8

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
BWHCT	13.4	14.0	14.4	14.6	13.8	13.5

*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
BWHCT	44	45	52	54	47	54	47	51

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
BWHCT	7.3	6.7	7.8	7.7	6.9	7.3	6.3	7.0	5.3 - 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
BWHCT	7.3	7.4	7.4	7.3	6.8	6.9

