

# West Midlands Perinatal & Infant Mortality 2008/9



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## West Midlands Key Health Data 2009/10

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In collaboration with:

Council of Disabled People  
Health Protection Agency  
Heart of England Primary Care Trust  
NHS West Midlands  
West Midlands Cancer Intelligence Unit  
West Midlands Perinatal Institute  
West Midlands Public Health Observatory

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# WEST MIDLANDS PERINATAL & INFANT MORTALITY 2008-9

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We present the annual update of the of the West Midlands mortality rates, up to 2009 for stillbirths and neonatal deaths, and to 2008 for infant deaths.

The information is based on the WM Perinatal Death Notifications (PDNs) which the Perinatal Institute receives from its network of co-ordinators in West Midlands units. PCT cohorts are defined by postcode at delivery.

The information may sometimes differ from the last ONS Vital Statistics, because our data include late ascertained cases which are notified to us on an ongoing basis. We have also implemented regular cross checks with the West Midlands Safeguarding Children's Boards.

This report includes

- birth rate trends for West Midlands and England & Wales (Section 1);
- a short description of West Midlands maternity demographics based on PEER 09/10 (Section 1);
- numbers, rates and 3-year moving averages for West Midlands, its five Clusters and 17 PCTs, for
  - stillbirths (from 24 weeks);
  - early neonatal deaths (birth to age 7 days);
  - perinatal deaths (stillbirths and early neonatal deaths);
  - neonatal deaths (birth to age 28 days); and
  - infant deaths (birth to 12 months).

Although some of these categories overlap, they are all presented for ease of reference and comparison with other reports. Unlike previous national reports, we continue presenting trends by 3- year moving average, as year-on-year variation often falsely identifies outliers.

As in previous years, we also present 'corrected' rates, where we exclude congenital anomalies and pre-viable births, to allow more useful comparisons between PCTs with different populations. Where available, we also include comparison with similarly adjusted or corrected rates in national reports.

For stillbirths and infant deaths, we have undertaken the following additional analyses:

1. major classification groups, to assess the main contributing causes (Sections 3 & 8); and
2. mortality rates plotted against deprivation index of the birth population; this shows each PCT's rate within the context of the level of deprivation within its own population (Sections 9 & 10).

The data presented here are a regional summary only. Specific Cluster, PCT and Trust specific reports have been sent to respective stakeholders. The data team at the West Midlands Perinatal Institute also provide an ongoing service of ad-hoc analyses in response to specific requests ([www.pi.nhs.uk/data/datarequests](http://www.pi.nhs.uk/data/datarequests)).

Currently, work is in progress to analyse denominator data including medical and social risk factors, collected through our new regional data collection system implemented in 2009 with support from NHS West Midlands' Investing for Health Programme. This will allow a more thorough assessment of underlying causes, and will be presented in next year's edition of Key Health Data for the West Midlands.

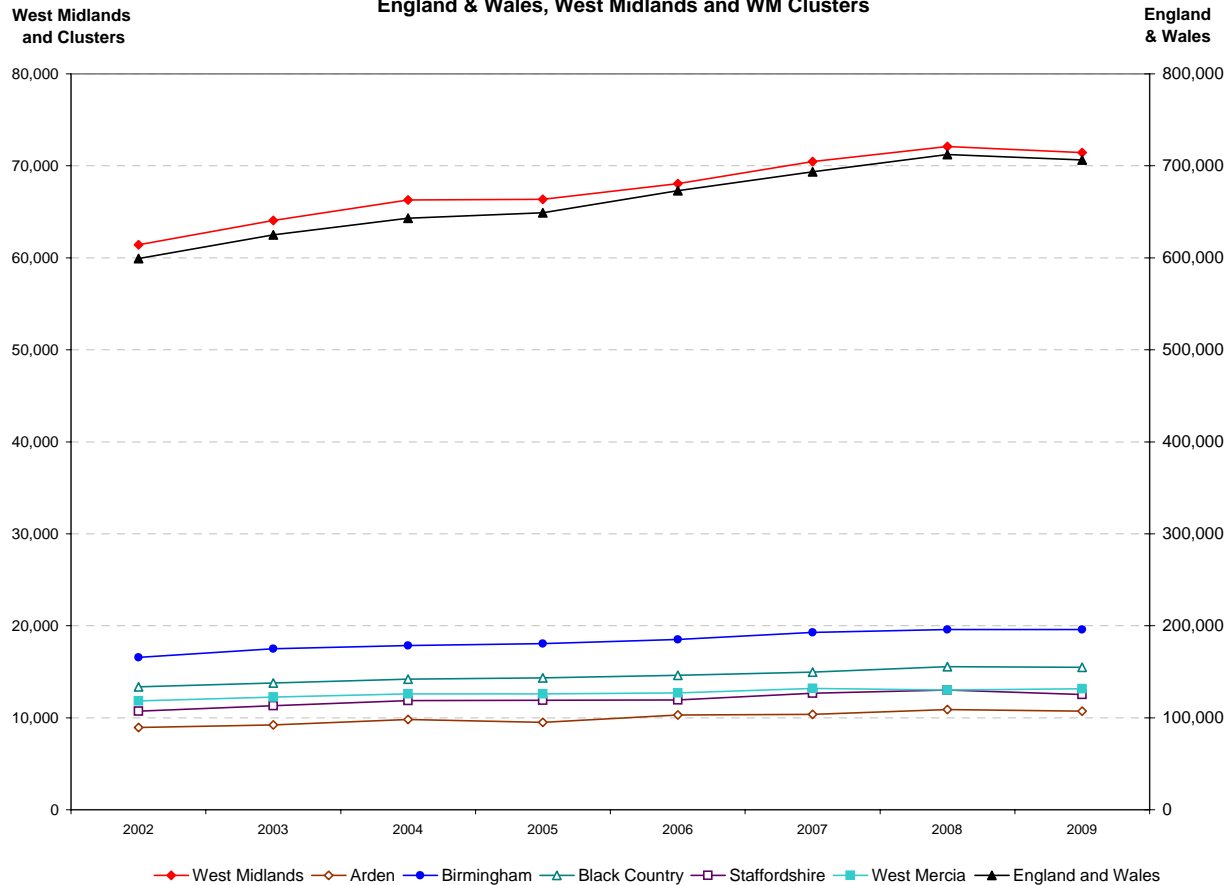
# 1. Births: West Midlands and England & Wales 2002-2009

Source: ONS

	2002	2003	2004	2005	2006	2007	2008	2009
England and Wales	599,279	624,816	643,026	649,094	672,966	693,356	712,328	706,248
West Midlands	61,417	64,079	66,285	66,351	68,063	70,476	72,110	71,452
Arden	8,953	9,230	9,799	9,498	10,301	10,382	10,903	10,705
Birmingham	16,573	17,517	17,852	18,047	18,508	19,261	19,606	19,584
Black Country	13,362	13,772	14,189	14,329	14,605	14,973	15,555	15,487
Staffordshire	10,704	11,314	11,864	11,894	11,934	12,656	13,023	12,519
West Mercia	11,824	12,246	12,580	12,582	12,715	13,204	13,023	13,157

\* Provisional, live births only

**Total Births 2002-2009**  
England & Wales, West Midlands and WM Clusters



Characteristics of Maternity Population (n=48,499)					
<b>Deprivation - IMD Quintile</b>		<b>Maternal Age</b>		<b>Body Mass Index</b>	
1 (least)	8.0%	< 16	0.2%	< 18.5	3.3%
2	11.5%	< 18	2.0%	18.5 - 24.9	48.0%
3	15.9%	< 20	7.4%	25 - 29.9	28.2%
4	20.4%	20 - 24	23.0%	30 - 34.9	12.8%
5 (most)	44.2%	25 - 29	29.2%	35 - 39.9	5.2%
<b>Ethnic Origin</b>		30 - 34	24.3%	30+	20.4%
African	3.5%	35 - 39	13.1%	35+	7.6%
African Caribbean	2.3%	35+	16.1%	40+	2.4%
British European	67.0%	<b>Smoking</b>		<b>Prematurity</b>	
Eastern European	2.9%	At booking	19.3%	< 37 weeks	6.7%
Middle Eastern	1.3%	Late in pregnancy	14.0%	< 34 weeks	2.1%
South Asian	17.6%	Cessation	25.9%	<b>IUGR</b>	
Bangladeshi	2.1%	(<10th customised centile)			
Indian	5.0%				
Pakistani	10.4%				
Other/Mixed	5.5%				

Source: West Midlands Perinatal Episode Electronic Record (PEER) 7/2009 - 6/2010. Ascertainment: 82.7%

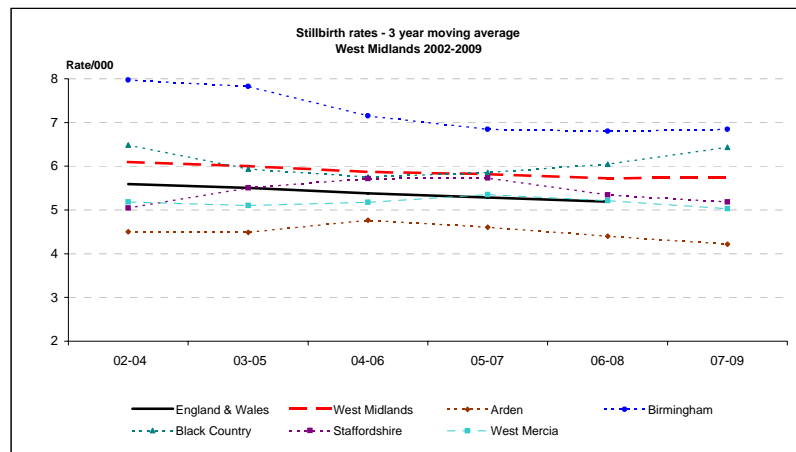
## 2 A: Stillbirths 2002-2009

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		
West Midlands	6.4	6.2	5.8	6.1	5.8	5.6	5.8	5.8	5.3 - 6.4
Arden Cluster	4.9	4.2	4.4	4.8	5.0	3.9	4.2	4.5	3.4 - 5.9
Coventry	6.1	4.7	4.2	4.1	5.0	3.9	6.0	3.8	2.4 - 6.1
Warwickshire	4.1	3.9	4.5	5.3	5.1	4.0	2.9	5.0	3.5 - 7.1
Birmingham Cluster	7.4	8.7	7.8	7.0	6.7	6.9	6.8	6.8	5.8 - 8.1
Birmingham East and North	7.6	10.8	8.1	7.3	8.0	7.7	7.4	7.2	5.5 - 9.5
Heart of Birmingham	9.0	9.4	10.1	8.7	6.2	8.1	6.3	8.3	6.3 - 11.0
South Birmingham	4.4	6.1	6.6	4.8	6.0	6.7	7.4	5.7	3.9 - 8.2
Solihull	8.0	6.3	3.0	5.9	5.2	1.4	5.5	4.2	2.2 - 8.0
Black Country Cluster	7.7	6.2	5.6	6.0	5.6	5.9	6.6	6.8	5.6 - 8.2
Dudley	7.6	6.2	5.1	7.8	5.6	5.3	7.2	5.5	3.6 - 8.5
Sandwell	9.4	6.0	5.8	6.7	6.2	5.9	6.6	8.0	5.8 - 10.9
Walsall	4.9	6.6	5.2	4.4	3.9	5.9	6.0	5.7	3.7 - 8.7
Wolverhampton	8.8	5.9	6.5	4.8	6.8	6.8	6.3	7.7	5.2 - 11.2
Staffordshire Cluster	5.1	5.2	4.8	6.5	5.9	4.9	5.3	5.4	4.2 - 6.8
North Staffordshire	5.5	4.5	4.3	6.8	6.2	2.9	8.5	2.9	1.3 - 6.2
South Staffordshire	4.6	4.1	4.2	5.6	5.6	4.8	4.7	5.6	4.1 - 7.7
Stoke on Trent	6.1	7.9	6.3	8.0	6.1	6.2	4.6	6.3	4.2 - 9.4
West Mercia Cluster	5.7	4.8	5.1	5.4	5.0	5.6	5.0	4.5	3.5 - 5.8
Herefordshire	7.0	3.0	2.9	4.2	7.0	6.6	1.7	3.3	1.5 - 7.1
Shropshire	2.9	6.0	4.3	2.5	4.3	5.2	6.2	4.1	2.3 - 7.1
Telford&Wrekin	8.3	5.2	9.4	5.8	5.1	7.1	6.4	5.7	3.4 - 9.8
Worcestershire	5.8	4.7	4.5	6.9	4.8	5.0	4.9	4.6	3.2 - 6.6

### 3 year moving averages

	02-04	03-05	04-06	05-07	06-08	07-09
England & Wales	5.6	5.5	5.4	5.3	5.2	
West Midlands	6.1	6.0	5.9	5.8	5.7	5.7
Arden	4.5	4.5	4.8	4.6	4.4	4.2
Birmingham	8.0	7.8	7.1	6.8	6.8	6.8
Black Country	6.5	5.9	5.8	5.9	6.0	6.4
Staffordshire	5.0	5.5	5.7	5.7	5.3	5.2
West Mercia	5.2	5.1	5.2	5.4	5.2	5.0

\*ONS



## 2 B: Stillbirths 2002-2009 - CORRECTED

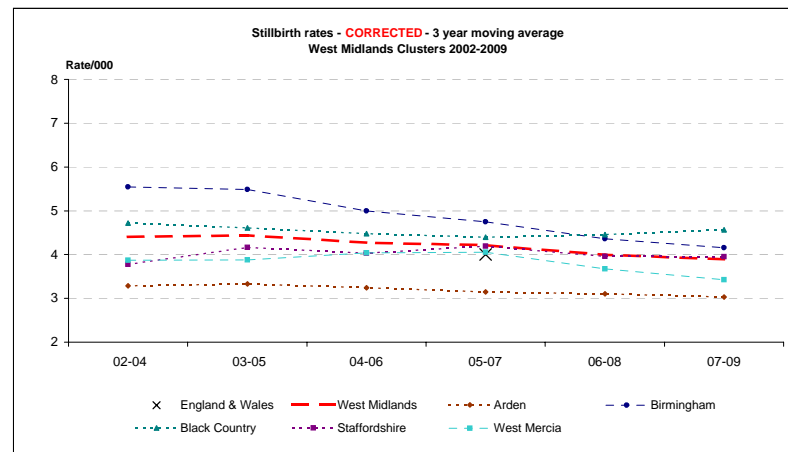
Excluding major congenital anomalies

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
Arden Cluster	3.4	3.3	3.3	3.5	3.0	3.0	3.3	2.8	2.0 - 4.0
Coventry	4.7	3.9	3.2	3.1	3.3	3.4	5.4	2.1	1.2 - 3.9
Warwickshire	2.4	2.8	3.3	3.7	2.8	2.7	1.8	3.3	2.7 - 5.1
Birmingham Cluster	5.5	5.9	5.3	5.3	4.4	4.5	4.1	3.8	3.1 - 4.8
Birmingham East and North	6.0	7.2	5.4	5.4	4.4	4.7	4.5	3.9	2.7 - 5.7
Heart of Birmingham	6.3	6.6	6.4	6.9	4.6	5.1	4.4	3.8	2.5 - 5.8
South Birmingham	3.5	3.2	4.9	3.5	4.6	5.0	4.0	4.2	2.7 - 6.5
Solihull	5.3	5.4	2.5	4.9	3.8	1.4	2.8	2.8	1.3 - 6.1
Black Country Cluster	5.2	4.6	4.3	4.9	4.2	4.1	5.0	4.6	3.6 - 5.8
Dudley	4.6	3.9	4.5	7.8	3.4	2.8	5.1	3.8	2.3 - 6.4
Sandwell	7.0	4.3	4.1	4.3	5.2	3.8	5.6	4.2	2.7 - 6.5
Walsall	4.3	5.1	3.8	3.8	3.0	4.8	4.7	3.8	2.3 - 6.4
Wolverhampton	4.6	5.5	4.9	3.5	5.3	5.0	4.5	6.8	4.5 - 10.2
Staffordshire Cluster	3.8	4.3	3.2	5.0	3.9	3.7	4.2	3.9	3.0 - 5.2
North Staffordshire	4.4	4.5	3.8	5.8	4.1	1.9	6.6	1.4	0.5 - 4.2
South Staffordshire	3.2	3.7	2.6	4.0	3.6	3.6	3.7	4.1	2.9 - 6.0
Stoke on Trent	4.8	5.6	3.9	6.2	4.4	4.9	3.8	4.9	3.1 - 7.8
West Mercia Cluster	4.2	3.1	4.3	4.2	3.6	4.3	3.1	2.9	2.1 - 4.0
Herefordshire	6.3	1.2	2.9	3.0	4.7	5.5	1.7	1.6	0.6 - 4.8
Shropshire	2.2	4.2	4.0	2.5	2.9	4.2	3.8	2.7	1.4 - 5.3
Telford&Wrekin	6.2	3.1	6.6	4.8	3.3	5.3	3.7	3.5	1.8 - 7.0
Worcestershire	4.0	3.1	4.0	5.1	3.8	3.7	2.9	3.1	2.0 - 4.9

### 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
Arden	3.3	3.3	3.2	3.1	3.1	3.0
Birmingham	5.5	5.5	5.0	4.7	4.4	4.2
Black Country	4.7	4.6	4.5	4.4	4.5	4.6
Staffordshire	3.8	4.2	4.0	4.2	4.0	4.0
West Mercia	3.9	3.9	4.0	4.1	3.7	3.4

\*\*CEMACH



x = England & Wales 3 y adjusted average from CEMACH

### 3. Stillbirths in the West Midlands, 2002 -2009: Classification in main groups

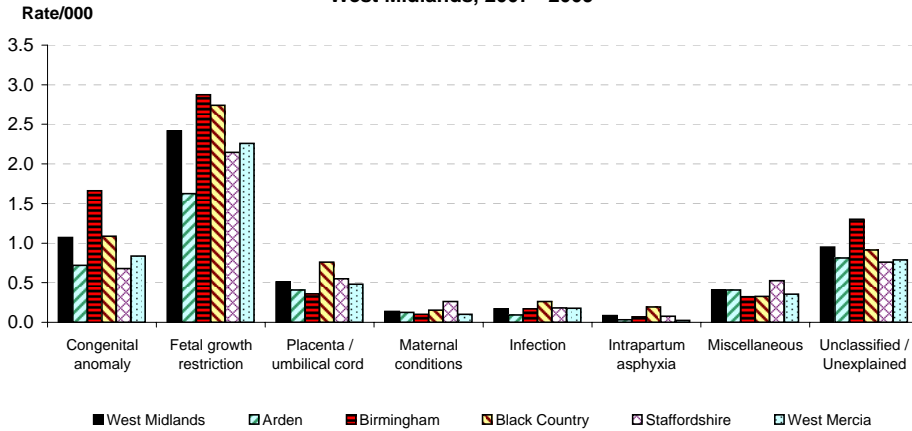
Groups based on ReCoDe classification (BMJ 2005)

	2002	2003	2004	2005	2006	2007	2008	2009
Births	61417	64079	66285	66351	68063	70476	72110	71452
<b>MAIN GROUPS</b>								
Congenital anomaly	64	62	54	55	75	73	86	71
Fetal growth restriction	149	141	153	169	157	156	162	173
Placenta / umbilical cord	59	69	54	39	43	29	50	41
Maternal conditions	12	13	7	9	7	12	9	9
Infection	14	10	7	4	11	14	14	8
Intrapartum asphyxia	12	17	6	9	11	8	6	4
Miscellaneous	16	20	23	29	24	30	35	23
Unclassified / Unexplained	65	63	79	89	64	76	54	87

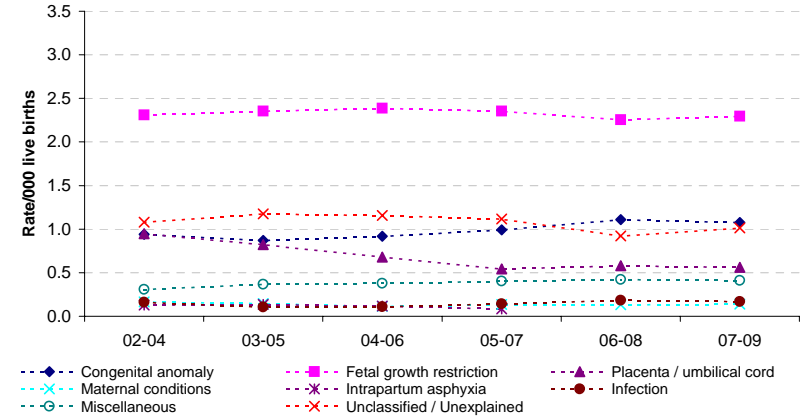
	3-year moving averages					
	02-04	03-05	04-06	05-07	06-08	07-09
<b>MAIN GROUPS</b>						
Congenital anomaly	0.9	0.9	0.9	1.0	1.1	1.1
Fetal growth restriction	2.3	2.4	2.4	2.4	2.3	2.3
Placenta / umbilical cord	0.9	0.8	0.7	0.5	0.6	0.6
Maternal conditions	0.2	0.1	0.1	0.1	0.1	0.1
Infection	0.2	0.1	0.1	0.1	0.2	0.2
Intrapartum asphyxia	0.2	0.2	0.1	0.1	0.1	0.1
Miscellaneous	0.3	0.4	0.4	0.4	0.4	0.4
Unclassified / Unexplained	1.1	1.2	1.2	1.1	0.9	1.0



Stillbirth Rates - Main Groups  
West Midlands, 2007 - 2009



Stillbirths - Main Groups, 3-year moving average  
West Midlands, 2002 - 2009



Births 2007-9

**MAIN GROUPS - 2007-9**

	West Midlands 214,038		Arden 31,990		Birmingham 58,451		Black Country 46,015		Staffordshire 38,198		West Mercia 39,384	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Congenital anomaly	229	1.1	23	0.7	97	1.7	50	1.1	26	0.7	33	0.8
Fetal growth restriction	517	2.4	52	1.6	168	2.9	126	2.7	82	2.1	89	2.3
Placenta / umbilical cord	109	0.5	13	0.4	21	0.4	35	0.8	21	0.5	19	0.5
Maternal conditions	29	0.1	4	0.1	6	0.1	5	0.2	10	0.3	4	0.1
Infection	36	0.2	3	0.1	10	0.2	9	0.3	7	0.2	7	0.2
Intrapartum asphyxia	18	0.1	1	0.0	4	0.1	9	0.2	3	0.1	1	0.0
Miscellaneous	87	0.4	13	0.4	19	0.3	21	0.3	20	0.5	14	0.4

#### 4 A: Early Neonatal deaths 2002-2009

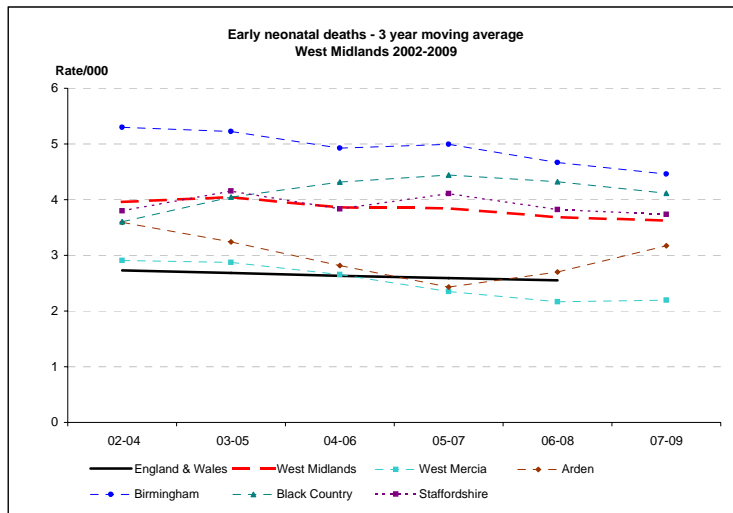
Early neonatal = birth to age 7 days

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		
West Midlands	3.8	4.2	3.9	4.1	3.6	3.8	3.6	3.5	3.1 - 3.9
Arden Cluster	3.8	3.3	3.7	2.8	2.0	2.5	3.5	3.5	2.5 - 4.8
Coventry	6.6	4.2	5.3	3.1	1.7	2.3	4.1	4.7	3.1 - 7.1
Warwickshire	1.9	2.6	2.6	2.5	2.3	2.7	3.0	2.5	1.5 - 4.1
Birmingham Cluster	5.5	5.8	4.6	5.3	4.9	4.8	4.3	4.3	3.4 - 5.3
Birmingham East and North	5.2	6.5	4.0	5.6	5.0	5.5	5.1	3.6	2.5 - 5.4
Heart of Birmingham	7.6	7.2	5.9	5.5	5.5	5.6	4.2	4.2	2.8 - 6.2
South Birmingham	4.1	4.9	4.9	5.3	4.9	3.9	2.8	6.3	4.4 - 9.0
Solihull	3.8	2.0	2.0	3.9	2.9	2.3	5.5	1.9	0.7 - 4.8
Black Country Cluster	3.2	3.5	4.0	4.6	4.3	4.4	4.2	3.7	2.9 - 4.8
Dudley	1.5	1.5	2.0	2.8	3.7	3.1	3.0	2.5	1.3 - 4.7
Sandwell	4.2	4.3	4.1	5.8	5.8	3.6	4.2	2.5	1.5 - 4.4
Walsall	3.1	3.0	3.8	6.4	3.6	6.8	4.4	4.9	3.1 - 7.7
Wolverhampton	4.3	5.2	6.5	2.9	4.1	4.5	5.4	5.4	3.4 - 8.5
Staffordshire Cluster	3.1	4.6	3.6	4.2	3.6	4.4	3.4	3.4	2.5 - 4.6
North Staffordshire	2.2	3.5	1.9	2.4	1.6	6.8	6.2	3.8	1.9 - 7.6
South Staffordshire	2.4	4.3	3.4	4.1	3.7	4.8	2.9	3.1	2.0 - 4.8
Stoke on Trent	5.1	6.0	5.2	5.7	4.7	2.5	2.8	3.6	2.1 - 6.1
West Mercia Cluster	2.8	2.9	3.0	2.7	2.2	2.1	2.2	2.3	1.6 - 3.3
Herefordshire	1.9	0.6	1.8	4.2	2.9	1.1	2.9	0.5	0.1 - 3.1
Shropshire	3.3	3.2	1.1	1.8	2.9	1.7	2.4	2.7	1.4 - 5.4
Telford&Wrekin	2.1	2.6	3.8	1.0	2.8	0.4	5.1	2.2	0.9 - 5.2
Worcestershire	3.1	3.5	4.0	3.3	1.5	3.2	0.8	2.6	1.6 - 4.3

#### 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	
West Midlands	4.0	4.0	3.9	3.8	3.7	3.6
Arden	3.6	3.2	2.8	2.4	2.7	3.2
Birmingham	5.3	5.2	4.9	5.0	4.7	4.5
Black Country	3.6	4.0	4.3	4.4	4.3	4.1
Staffordshire	3.8	4.2	3.8	4.1	3.8	3.7
West Mercia	2.9	2.9	2.7	2.4	2.2	2.2

\*ONS



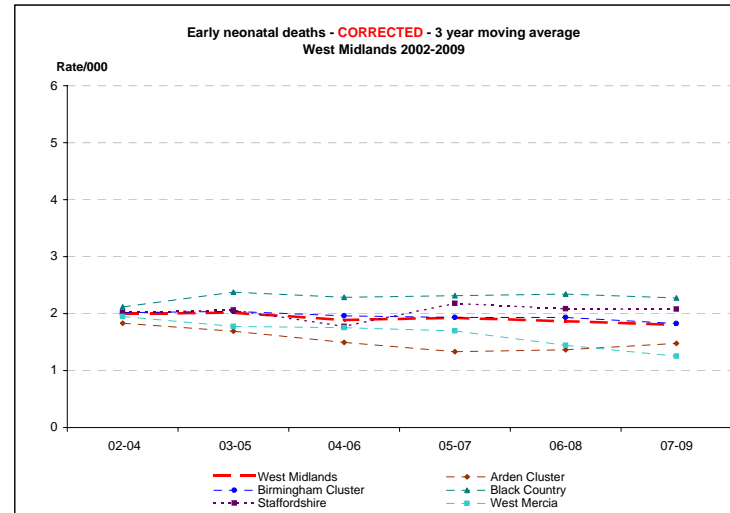
#### 4 B: Early Neonatal Deaths 2002-2009 - CORRECTED

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

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
West Mercia Cluster	2.4	1.8	1.7	1.8	1.7	1.5	1.1	1.1	0.7 - 1.9
Arden Cluster	1.8	2.0	1.7	1.4	1.4	1.3	1.5	1.7	1.1 - 2.7
Coventry	2.8	2.4	2.8	1.3	1.7	1.1	1.9	2.4	1.3 - 4.2
Warwickshire	1.1	1.7	1.0	1.4	1.2	1.3	1.1	1.2	0.6 - 2.4
Birmingham Cluster	2.2	2.0	1.9	2.2	1.8	1.8	2.2	1.5	1.0 - 2.1
Birmingham East and North	1.7	2.4	1.8	2.3	2.3	1.9	2.5	0.7	0.3 - 1.7
Heart of Birmingham	3.1	2.4	1.5	2.0	1.7	1.9	1.2	1.7	1.0 - 3.2
South Birmingham	1.9	1.5	3.0	2.8	1.4	2.2	1.9	2.3	1.3 - 4.2
Solihull	1.6	1.0	1.0	1.5	1.4	0.0	4.6	1.4	0.5 - 4.2
Black Country Cluster	1.6	2.1	2.6	2.4	1.9	2.7	2.5	1.7	1.2 - 2.5
Dudley	0.6	1.5	1.4	2.3	1.7	2.2	2.2	0.8	0.3 - 2.4
Sandwell	2.1	2.3	2.7	2.2	3.4	1.4	2.3	1.3	0.6 - 2.8
Walsall	1.2	1.5	2.0	3.8	0.3	5.1	2.2	2.2	1.1 - 4.3
Wolverhampton	2.5	3.3	4.6	1.3	1.9	2.4	3.3	2.7	1.4 - 5.1
Staffordshire Cluster	1.6	2.7	1.8	1.8	1.8	2.9	1.5	1.8	1.2 - 2.7
North Staffordshire	1.1	2.0	0.5	1.0	0.5	3.4	2.8	1.0	0.3 - 3.5
South Staffordshire	1.2	2.4	1.9	2.0	2.0	3.8	1.6	1.9	1.1 - 3.3
Stoke on Trent	2.7	3.7	2.4	1.8	2.1	1.1	0.8	1.9	0.9 - 4.0
West Mercia Cluster	2.4	1.8	1.7	1.8	1.7	1.5	1.1	1.1	0.7 - 1.9
Herefordshire	1.9	0.0	1.2	3.0	2.9	0.6	1.7	0.5	0.1 - 3.1
Shropshire	3.3	2.5	0.4	1.8	2.5	1.7	1.0	1.4	0.5 - 3.5
Telford&Wrekin	1.6	2.1	1.4	0.5	1.4	0.4	3.2	0.4	0.1 - 2.5
Worcestershire	2.3	1.9	2.5	2.0	1.2	2.1	0.2	1.5	0.8 - 2.8

#### 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
Arden Cluster	1.8	1.7	1.5	1.3	1.4	1.5
Birmingham Cluster	2.0	2.0	2.0	1.9	1.9	1.8
Black Country	2.1	2.4	2.3	2.3	2.3	2.3
Staffordshire	2.0	2.1	1.8	2.2	2.1	2.1
West Mercia	1.9	1.8	1.8	1.7	1.4	1.3



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

### 5 A: Perinatal Deaths 2002-2009

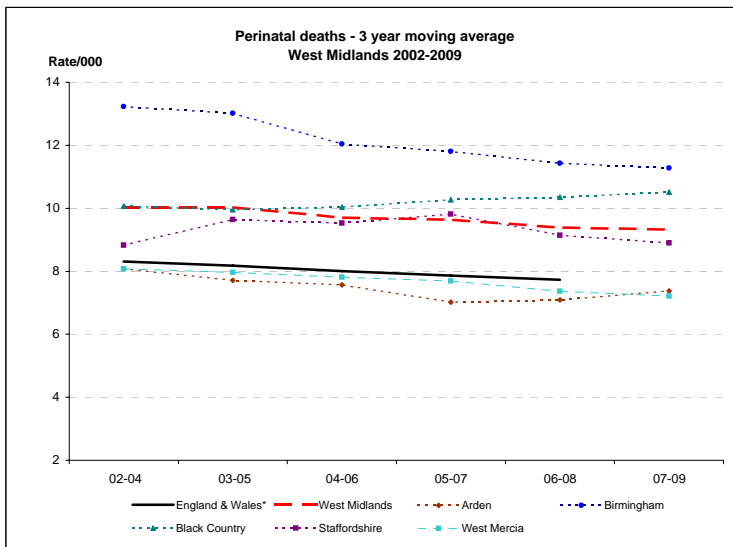
Perinatal = stillbirths and early neonatal deaths

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		
West Midlands	10.2	10.3	9.6	10.1	9.4	9.5	9.3	9.2	8.5 - 9.9
Arden Cluster	8.7	7.5	8.1	7.6	7.1	6.5	7.7	7.9	6.4 - 9.8
Coventry	12.7	8.9	9.5	7.2	6.6	6.2	10.1	8.6	6.3 - 11.6
Warwickshire	6.0	6.5	7.1	7.8	7.4	6.7	5.9	7.5	5.6 - 10.0
Birmingham Cluster	12.9	14.5	12.3	12.2	11.6	11.6	11.1	11.1	9.7 - 12.6
Birmingham East and North	12.7	17.2	12.0	12.8	13.0	13.1	12.4	11.0	8.8 - 13.7
Heart of Birmingham	16.5	16.6	16.0	14.2	11.7	13.7	10.4	12.3	9.8 - 15.5
South Birmingham	8.4	11.0	11.5	10.1	10.9	10.6	10.1	12.2	9.4 - 15.7
Solihull	11.7	8.3	5.0	9.8	8.0	3.7	11.0	6.1	3.6 - 10.4
Black Country Cluster	10.9	9.7	9.7	10.5	9.9	10.4	10.7	10.5	9.0 - 12.2
Dudley	9.0	7.7	7.1	10.6	9.2	8.3	10.2	8.0	5.5 - 11.4
Sandwell	13.6	10.3	9.9	12.4	11.9	9.5	10.8	10.5	8.0 - 13.8
Walsall	8.0	9.5	9.0	10.8	7.4	12.7	10.4	10.6	7.7 - 14.4
Wolverhampton	13.1	11.1	13.0	7.7	10.9	11.2	11.6	13.0	9.7 - 17.4
Staffordshire Cluster	8.2	9.8	8.4	10.7	9.5	9.3	8.7	8.7	7.2 - 10.5
North Staffordshire	7.7	8.0	6.2	9.2	7.7	9.7	14.6	6.7	4.0 - 11.2
South Staffordshire	6.9	8.4	7.6	9.6	9.3	9.5	7.6	8.7	6.8 - 11.2
Stoke on Trent	11.2	13.8	11.5	13.6	10.8	8.7	7.4	9.9	7.1 - 13.6
West Mercia Cluster	8.5	7.7	8.1	8.1	7.2	7.7	7.1	6.8	5.5 - 8.3
Herefordshire	8.9	3.6	4.7	8.4	9.9	7.7	4.6	3.8	1.9 - 7.9
Shropshire	6.2	9.1	5.4	4.3	7.2	6.9	8.6	6.8	4.4 - 10.4
Telford&Wrekin	10.3	7.8	13.2	6.8	7.9	7.6	11.5	7.9	5.0 - 12.5
Worcestershire	8.8	8.1	8.5	10.2	6.3	8.2	5.7	7.2	5.4 - 9.7

#### 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	
West Midlands	10.0	10.0	9.7	9.6	9.4	9.3
Arden	8.1	7.7	7.6	7.0	7.1	7.4
Birmingham	13.2	13.0	12.0	11.8	11.4	11.3
Black Country	10.1	10.0	10.0	10.3	10.3	10.5
Staffordshire	8.8	9.6	9.5	9.8	9.1	8.9
West Mercia	8.1	8.0	7.8	7.7	7.4	7.2

\*ONS



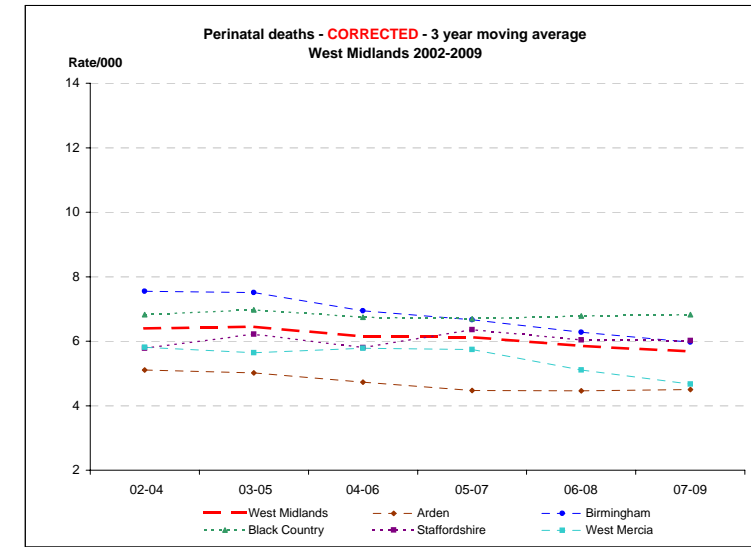
### 5 B: Perinatal Deaths 2002-2009 - CORRECTED

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

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
Arden Cluster	5.1	5.2	5.0	4.8	4.4	4.2	4.8	4.5	3.4 - 5.9
Coventry	7.4	6.3	6.0	4.4	5.0	4.6	7.3	4.5	2.9 - 6.9
Warwickshire	3.6	4.4	4.3	5.2	4.0	4.0	2.9	4.5	3.1 - 6.5
Birmingham Cluster	7.7	7.9	7.1	7.5	6.2	6.3	6.3	5.3	4.4 - 6.4
Birmingham East and North	7.7	9.6	7.1	7.6	6.7	6.6	6.9	4.6	3.3 - 6.5
Heart of Birmingham	9.4	9.0	7.9	8.9	6.2	7.0	5.6	5.7	4.1 - 8.0
South Birmingham	5.4	4.6	7.8	6.2	6.0	7.2	5.9	6.5	4.6 - 9.2
Solihull	6.9	6.3	3.5	6.4	5.2	1.4	7.3	4.2	2.2 - 8.0
Black Country Cluster	6.8	6.8	6.9	7.3	6.1	6.7	7.5	6.3	5.1 - 7.6
Dudley	5.2	5.4	5.9	10.1	5.0	5.0	7.2	4.7	2.9 - 7.5
Sandwell	9.1	6.5	6.8	6.4	8.6	5.2	7.9	5.5	3.7 - 8.0
Walsall	5.5	6.6	5.8	7.6	3.3	9.9	6.8	6.0	3.9 - 9.0
Wolverhampton	7.1	8.8	9.4	4.8	7.1	7.4	7.7	9.5	6.7 - 13.3
Staffordshire Cluster	5.4	7.0	5.0	6.7	5.7	6.6	5.8	5.7	4.5 - 7.1
North Staffordshire	5.5	6.5	4.3	6.8	4.6	5.3	9.4	2.4	1.0 - 5.6
South Staffordshire	4.4	6.1	4.5	6.1	5.6	7.4	5.3	6.0	4.5 - 8.2
Stoke on Trent	7.5	9.2	6.3	8.0	6.4	6.0	4.6	6.8	4.6 - 10.1
West Mercia Cluster	6.6	4.9	6.0	6.0	5.3	5.8	4.1	4.0	3.1 - 5.3
Herefordshire	8.2	1.2	4.1	6.0	7.6	6.0	3.4	2.2	0.9 - 5.6
Shropshire	5.5	6.7	4.3	4.3	5.4	5.9	4.8	4.1	2.3 - 7.1
Telford&Wrekin	7.8	5.2	8.0	5.3	4.7	5.8	6.9	4.0	2.1 - 7.5
Worcestershire	6.3	5.0	6.5	7.1	5.0	5.8	3.1	4.6	3.2 - 6.6

#### 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
Arden	5.1	5.0	4.7	4.5	4.5	4.5
Birmingham	7.5	7.5	6.9	6.7	6.3	6.0
Black Country	6.8	7.0	6.7	6.7	6.8	6.8
Staffordshire	5.8	6.2	5.8	6.4	6.0	6.0
West Mercia	5.8	5.6	5.8	5.7	5.1	4.7



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

### 6 A: Neonatal deaths 2002-2009

Neonatal = birth to age 28 days

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		
West Midlands	4.8	5.2	4.8	5.0	4.7	4.5	4.5	4.1	4.1 - 5.0
Arden Cluster	4.0	3.9	5.0	3.6	2.8	3.3	4.0	4.2	3.2 - 5.6
Coventry	7.2	4.5	6.8	4.1	2.8	3.7	4.8	5.4	3.6 - 7.9
Warwickshire	1.9	3.5	3.8	3.2	2.8	3.0	3.4	3.3	2.2 - 5.1
Birmingham Cluster	7.0	7.5	5.6	6.3	6.1	5.3	5.6	5.4	4.5 - 6.5
Birmingham East and North	7.1	8.2	5.3	5.9	6.3	5.9	6.5	4.8	3.4 - 6.7
Heart of Birmingham	8.9	9.5	7.2	7.9	7.3	6.4	5.8	5.9	4.3 - 8.3
South Birmingham	5.7	6.1	5.2	6.0	5.6	4.2	3.8	7.2	5.1 - 10.0
Solihull	3.8	2.9	3.0	3.9	3.3	3.2	6.5	1.9	0.7 - 4.8
Black Country Cluster	4.1	4.4	4.8	5.4	5.6	5.2	5.4	4.8	3.8 - 6.0
Dudley	2.0	2.7	2.0	3.7	5.6	3.1	4.6	3.3	1.9 - 5.8
Sandwell	5.5	5.1	4.9	6.0	7.4	5.0	5.0	3.2	1.9 - 5.2
Walsall	4.0	3.6	5.3	8.2	4.2	7.7	6.1	6.8	4.6 - 10.0
Wolverhampton	4.6	6.2	7.5	3.5	5.0	5.3	6.3	6.5	4.3 - 9.9
Staffordshire Cluster	4.5	5.3	4.5	5.1	4.6	5.2	3.8	4.7	3.6 - 6.0
North Staffordshire	3.3	4.0	2.4	3.4	1.6	8.3	6.6	5.8	3.3 - 10.0
South Staffordshire	3.4	4.8	4.0	5.0	4.9	5.2	3.3	4.2	2.9 - 6.0
Stoke on Trent	7.5	7.3	6.7	6.3	5.9	3.6	3.1	5.0	3.1 - 7.8
West Mercia Cluster	3.5	3.5	3.6	3.4	3.0	2.7	2.7	3.0	2.2 - 4.1
Herefordshire	1.9	0.6	3.0	5.4	3.5	1.1	2.9	1.1	0.3 - 4.0
Shropshire	4.0	4.6	1.8	1.8	4.0	2.4	3.1	3.7	2.1 - 6.7
Telford&Wrekin	2.6	3.1	4.3	2.9	3.3	1.8	5.5	2.7	1.2 - 5.8
Worcestershire	4.0	4.0	4.3	3.8	2.3	3.7	1.5	3.3	2.1 - 5.1

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	
West Midlands	4.9	5.0	4.8	4.7	4.6	4.5
Arden	4.3	4.2	3.8	3.2	3.4	3.8
Birmingham	6.6	6.4	6.0	5.9	5.6	5.4
Black Country	4.4	4.9	5.3	5.4	5.4	5.2
Staffordshire	4.8	5.0	4.7	5.0	4.5	4.6
West Mercia	3.5	3.5	3.3	3.1	2.8	2.8

\*ONS



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

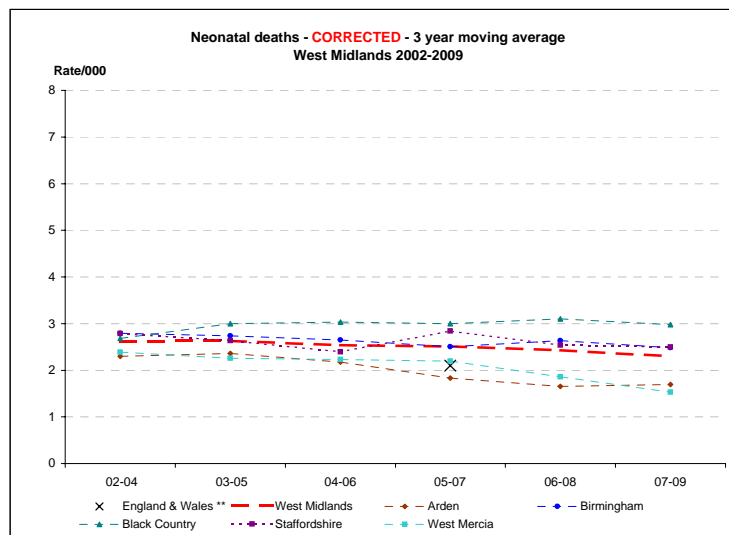
Corrected = excluding major congenital anomalies, <22 weeks gestation and/or <500g birthweight

Rate/1,000	2002	2003	2004	2005	2006	2007	2008	2009	2009 CI
England and Wales**	2.6	2.8	2.5	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
Arden Cluster	1.8	2.5	2.6	2.0	2.0	1.5	1.5	2.1	1.4 - 3.1
Coventry	2.8	2.6	3.3	2.1	2.4	1.8	1.9	2.6	1.5 - 4.5
Warwickshire	1.1	2.4	2.1	2.0	1.7	1.3	1.1	1.7	0.9 - 3.1
Birmingham Cluster	2.9	2.9	2.5	2.7	2.7	2.1	3.1	2.2	1.6 - 3.0
Birmingham East and North	2.6	2.9	2.9	2.6	3.1	2.1	3.2	1.3	0.7 - 2.5
Heart of Birmingham	3.7	3.9	2.2	3.1	3.1	2.5	2.6	3.0	1.9 - 4.8
South Birmingham	3.0	2.2	3.2	3.0	1.9	2.4	2.3	3.0	1.8 - 5.0
Solihull	1.6	2.0	1.0	1.5	1.9	0.9	5.5	1.4	0.5 - 4.2
Black Country Cluster	2.1	2.7	3.2	3.1	2.8	3.1	3.4	2.5	1.8 - 3.4
Dudley	1.2	2.1	1.4	2.8	3.1	2.2	3.5	1.4	0.6 - 3.2
Sandwell	2.9	2.8	3.2	2.4	4.3	1.8	2.7	1.5	0.7 - 3.1
Walsall	1.9	2.1	2.9	5.5	0.8	6.0	3.3	4.1	2.5 - 6.7
Wolverhampton	2.5	3.9	5.5	1.6	2.8	2.7	4.2	3.3	1.8 - 5.9
Staffordshire Cluster	2.9	3.3	2.2	2.5	2.5	3.5	1.6	2.4	1.7 - 3.4
North Staffordshire	2.2	2.5	0.5	1.5	0.5	3.9	2.8	2.4	1.0 - 5.6
South Staffordshire	2.2	2.9	2.5	2.8	3.1	4.1	1.7	2.2	1.3 - 3.7
Stoke on Trent	4.8	4.6	2.7	2.4	2.7	2.2	0.8	2.8	1.5 - 5.1
West Mercia Cluster	2.9	2.3	2.0	2.5	2.2	1.9	1.5	1.2	0.8 - 2.0
Herefordshire	1.9	0.0	1.8	4.2	3.5	0.6	1.7	0.5	0.1 - 3.1
Shropshire	3.6	3.9	0.7	1.8	3.6	2.1	1.4	1.7	0.7 - 4.0
Telford&Wrekin	2.1	2.1	1.9	1.9	1.4	0.9	3.2	0.4	0.1 - 2.5
Worcestershire	3.1	2.3	2.7	2.5	1.5	2.6	0.8	1.5	0.8 - 2.8

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
Arden	2.3	2.4	2.2	1.8	1.7	1.7
Birmingham	2.8	2.7	2.6	2.5	2.6	2.5
Black Country	2.7	3.0	3.0	3.0	3.1	3.0
Staffordshire	2.8	2.6	2.4	2.8	2.5	2.5
West Mercia	2.4	2.3	2.2	2.2	1.9	1.5

\*\*CEMACH



x = England & Wales 3 y adjusted average from CEMACH  
Corrected = excluding major congenital anomalies, <22 weeks gestation and/or <500g birthweight



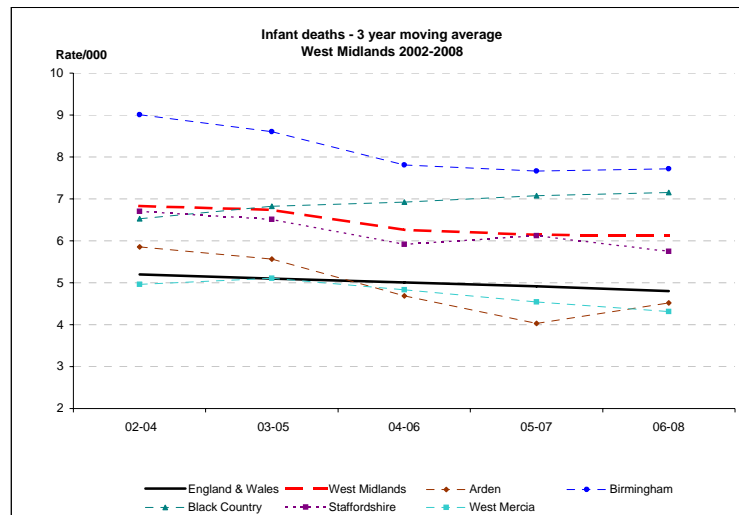
**7 A: Infant Deaths 2002-2008**

Rate/1,000	2002	2003	2004	2005	2006	2007	2008	2008 CI
England and Wales*	5.3	5.3	5.1	5.0	5.0	4.8	4.8	4.6 - 4.9
West Midlands	6.7	7.5	6.4	6.4	6.0	6.0	6.4	5.8 - 7.0
<b>Arden Cluster</b>	<b>5.1</b>	<b>5.8</b>	<b>6.7</b>	<b>4.2</b>	<b>3.2</b>	<b>4.6</b>	<b>5.6</b>	<b>4.4 - 7.2</b>
Coventry	8.6	6.6	8.5	4.9	3.3	5.5	7.6	5.5 - 10.5
Warwickshire	2.6	5.2	5.4	3.8	3.2	4.0	4.2	2.8 - 6.1
<b>Heart of Birmingham</b>	<b>9.2</b>	<b>10.4</b>	<b>7.5</b>	<b>8.0</b>	<b>7.9</b>	<b>7.1</b>	<b>8.1</b>	<b>6.9 - 9.5</b>
South Birmingham	9.2	11.6	7.3	7.7	7.9	8.0	9.3	7.3 - 11.9
Heart of Birmingham	12.2	12.8	9.8	9.9	9.6	8.7	8.4	6.4 - 11.1
South Birmingham	7.6	9.1	6.2	7.4	7.5	5.0	6.4	4.5 - 9.1
Solihull	3.8	2.9	4.5	4.9	4.8	4.6	7.4	4.5 - 11.9
<b>Black Country Cluster</b>	<b>6.1</b>	<b>6.9</b>	<b>6.5</b>	<b>7.0</b>	<b>7.2</b>	<b>7.0</b>	<b>7.2</b>	<b>6.0 - 8.7</b>
Dudley	3.2	4.5	3.4	5.9	7.0	4.2	5.7	3.7 - 8.7
Sandwell	7.9	7.8	6.8	7.0	8.6	7.5	8.4	6.1 - 11.4
Walsall	6.8	7.2	7.3	10.2	6.6	10.5	7.2	4.9 - 10.5
Wolverhampton	6.4	8.2	8.8	4.8	6.3	5.6	7.5	5.1 - 11.0
<b>Staffordshire Cluster</b>	<b>6.8</b>	<b>7.6</b>	<b>5.8</b>	<b>6.2</b>	<b>5.8</b>	<b>6.4</b>	<b>5.1</b>	<b>4.0 - 6.5</b>
North Staffordshire	4.9	5.5	4.3	3.4	2.6	8.3	7.1	4.3 - 11.7
South Staffordshire	5.4	7.5	5.1	5.9	6.1	6.4	4.2	2.9 - 6.0
Stoke on Trent	10.6	9.3	7.9	8.3	7.1	5.2	5.6	3.7 - 8.5
<b>West Mercia Cluster</b>	<b>4.9</b>	<b>5.1</b>	<b>4.9</b>	<b>5.4</b>	<b>4.3</b>	<b>4.0</b>	<b>4.6</b>	<b>3.6 - 6.0</b>
Herefordshire	4.5	3.0	4.7	7.8	4.1	1.7	5.7	3.1 - 10.5
Shropshire	5.5	6.3	2.5	4.0	5.4	4.2	5.5	3.4 - 9.0
Telford&Wrekin	5.2	3.7	5.7	5.4	3.7	2.7	7.9	4.9 - 12.6
Worcestershire	4.7	5.5	5.7	5.3	4.0	5.1	2.8	1.7 - 4.4

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

	02-04	03-05	04-06	05-07	06-08
England & Wales	5.2	5.1	5.0	4.9	4.8
West Midlands	6.8	6.7	6.3	6.1	6.1
Arden	5.9	5.6	4.7	4.0	4.5
Birmingham	9.0	8.6	7.8	7.7	7.7
Black Country	6.5	6.8	6.9	7.1	7.2
Staffordshire	6.7	6.5	5.9	6.1	5.7
West Mercia	5.0	5.1	4.8	4.5	4.3

\*ONS



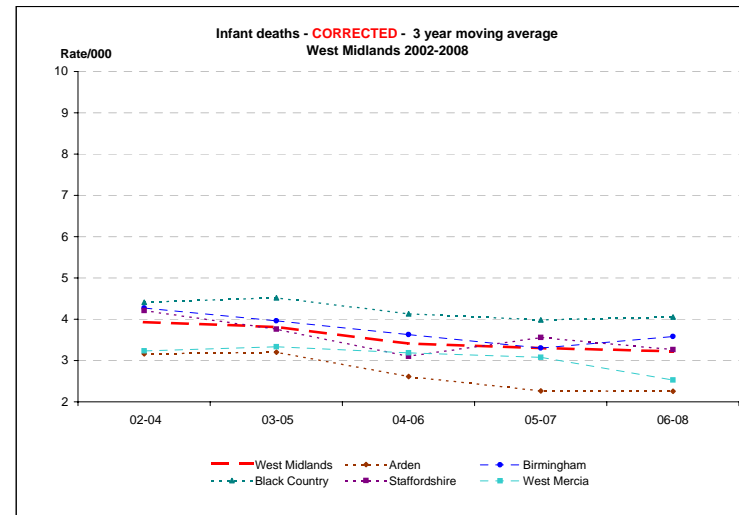
**7 B: Infant deaths 2002-2008 - CORRECTED**

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

Rate/1,000	2002	2003	2004	2005	2006	2007	2008	2008 CI
England and Wales	3.9	4.3	3.6	3.6	3.1	3.3	N/A	
West Midlands	3.9	4.3	3.6	3.6	3.1	3.3	3.3	2.9 - 3.8
<b>Arden Cluster</b>	<b>2.2</b>	<b>3.8</b>	<b>3.4</b>	<b>2.4</b>	<b>2.0</b>	<b>2.3</b>	<b>2.4</b>	<b>1.6 - 3.5</b>
Coventry	3.6	3.7	4.0	2.6	2.6	2.7	3.7	2.3 - 5.9
Warwickshire	1.3	3.9	2.9	2.3	1.7	2.0	1.4	0.8 - 2.7
<b>Birmingham Cluster</b>	<b>4.4</b>	<b>4.6</b>	<b>3.8</b>	<b>3.5</b>	<b>3.6</b>	<b>2.9</b>	<b>4.3</b>	<b>3.4 - 5.3</b>
Birmingham East and North	4.0	4.9	4.5	3.3	4.3	2.8	4.2	2.9 - 6.1
Heart of Birmingham	6.0	5.8	4.3	3.5	3.9	3.5	3.7	2.4 - 5.6
South Birmingham	4.1	3.9	3.4	4.4	2.6	3.1	4.0	2.6 - 6.3
Solihull	1.6	2.0	1.5	2.0	2.9	0.9	6.5	3.8 - 10.8
<b>Black Country Cluster</b>	<b>4.0</b>	<b>4.7</b>	<b>4.5</b>	<b>4.4</b>	<b>3.6</b>	<b>4.0</b>	<b>4.5</b>	<b>3.6 - 5.7</b>
Dudley	2.3	3.3	2.8	4.8	3.7	3.1	4.0	2.5 - 6.7
Sandwell	5.3	5.6	4.4	2.9	4.8	2.7	5.4	3.7 - 8.0
Walsall	4.3	4.8	4.4	7.0	2.5	7.7	3.9	2.3 - 6.5
Wolverhampton	3.9	5.2	6.5	2.9	3.1	3.0	4.5	2.7 - 7.4
<b>Staffordshire Cluster</b>	<b>4.6</b>	<b>5.1</b>	<b>3.0</b>	<b>3.2</b>	<b>3.0</b>	<b>4.4</b>	<b>2.4</b>	<b>1.7 - 3.4</b>
North Staffordshire	3.8	4.0	1.9	1.5	1.0	3.9	2.8	1.3 - 6.2
South Staffordshire	3.6	4.8	2.9	3.4	3.5	5.1	2.3	1.4 - 3.8
Stoke on Trent	7.2	6.3	4.0	3.9	3.2	3.3	2.3	1.2 - 4.4
<b>West Mercia Cluster</b>	<b>3.7</b>	<b>3.1</b>	<b>2.9</b>	<b>4.0</b>	<b>2.7</b>	<b>2.6</b>	<b>2.3</b>	<b>1.6 - 3.3</b>
Herefordshire	3.2	1.8	3.5	6.0	3.5	1.1	2.9	1.2 - 6.7
Shropshire	4.4	4.6	1.5	3.6	4.7	3.5	2.4	1.2 - 5.0
Telford&Wrekin	4.7	2.6	2.4	3.4	1.9	0.9	3.7	1.9 - 7.3
Worcestershire	3.3	2.9	3.5	3.8	1.8	3.2	1.6	0.9 - 3.0

**3 year moving averages**

	02-04	03-05	04-06	05-07	06-08
West Midlands	3.9	3.8	3.4	3.3	3.2
Arden	3.2	3.2	2.6	2.3	2.3
Birmingham	4.3	4.0	3.6	3.3	3.6
Black Country	4.4	4.5	4.1	4.0	4.1
Staffordshire	4.2	3.8	3.1	3.6	3.3
West Mercia	3.2	3.3	3.2	3.1	2.5



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

## 8. Infant Deaths in West Midlands, 2002-2008: main groups

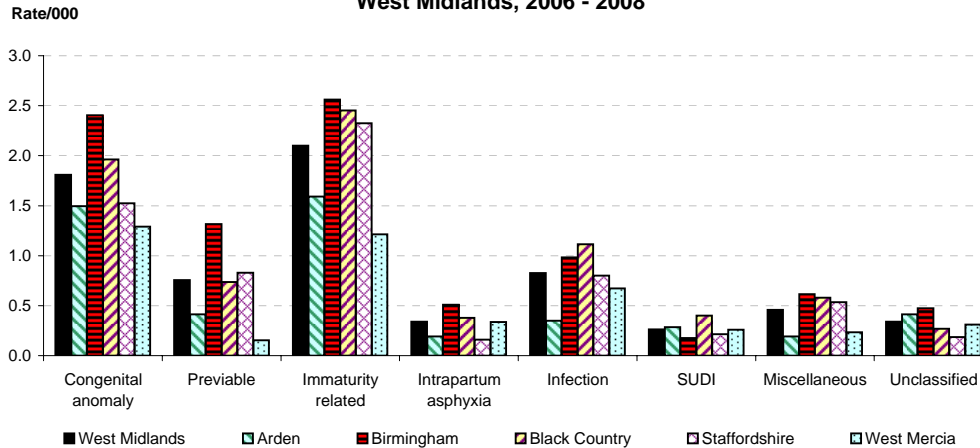
Groups based on Fetal/Neonatal/Infant classification after Hey (BJOG 1986)

	2002	2003	2004	2005	2006	2007	2008
Live Births	61026	63684	65902	65948	67671	70078	71694
<b>MAIN GROUPS</b>							
Congenital anomaly	106	111	110	113	126	117	136
Previae	53	79	61	67	53	49	56
Immaturity related	135	172	171	155	140	141	159
Intrapartum asphyxia	11	23	15	18	24	24	23
Infection	57	59	51	62	31	40	25
SUDI	67	62	39	40	59	47	67
Miscellaneous	20	36	30	28	14	23	18
Unclassified	11	13	3	7	13	29	30

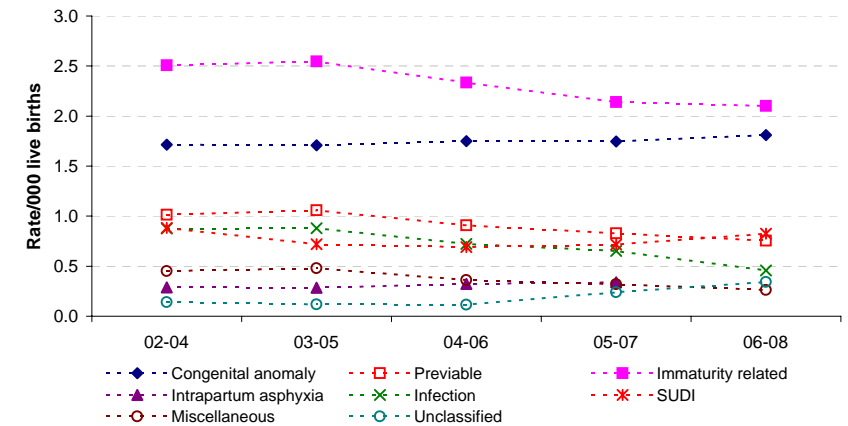
	3-year moving averages				
	02-04	03-05	04-06	05-07	06-08
<b>MAIN GROUPS</b>					
Congenital anomaly	1.7	1.7	1.7	1.7	1.8
Previae	1.0	1.1	0.9	0.8	0.8
Immaturity related	2.5	2.5	2.3	2.1	2.1
Intrapartum asphyxia	0.3	0.3	0.3	0.3	0.3
Infection	0.9	0.9	0.7	0.7	0.5
SUDI	0.9	0.7	0.7	0.7	0.8
Miscellaneous	0.5	0.5	0.4	0.3	0.3
Unclassified	0.1	0.1	0.1	0.2	0.3



**Infant Death Rates: Main Groups  
West Midlands, 2006 - 2008**



**Infant Deaths - Main Groups, 3-year moving average  
West Midlands, 2002 - 2008**



Live Births 2006-8

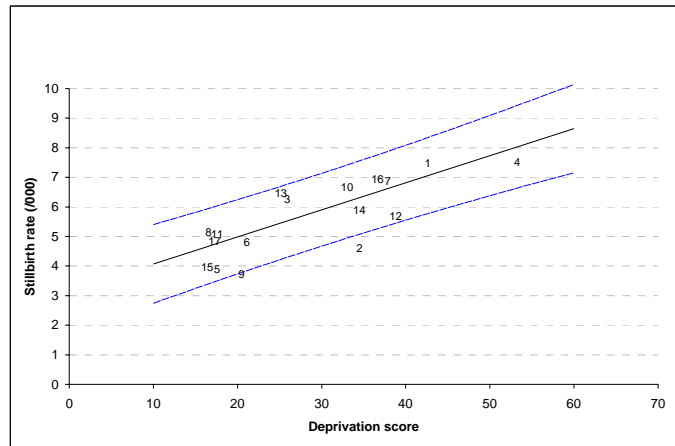
### MAIN GROUPS - 2006-8

	West Midlands 209,443		Arden 31,447		Birmingham 56,985		Black Country 44,860		Staffordshire 37,412		West Mercia 38,739	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Congenital anomaly	379	1.8	47	1.5	137	2.4	88	2.0	57	1.5	50	1.3
Previae	158	0.8	13	0.4	75	1.3	33	0.7	31	0.8	6	0.2
Immaturity related	440	2.1	50	1.6	146	2.6	110	2.5	87	2.3	47	1.2
Intrapartum asphyxia	71	0.3	6	0.2	29	0.5	17	0.4	6	0.2	13	0.3
Infection	173	0.8	11	0.3	56	1.0	50	1.1	30	0.8	26	0.7
SUDI	55	0.3	9	0.3	10	0.2	18	0.4	8	0.2	10	0.3
Miscellaneous	96	0.5	6	0.2	35	0.6	26	0.6	20	0.5	9	0.2
Unclassified	71	0.3	13	0.4	27	0.5	12	0.3	7	0.2	12	0.3

## 9. Stillbirths and Deprivation, West Midlands PCTs

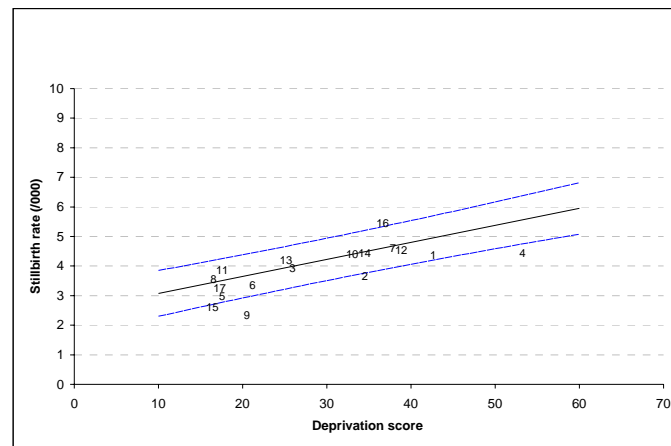
Graphs show stillbirth rates for the last triennium (2007-9) for West Midlands PCTs, plotted against each PCT's deprivation score (IMD 2007). Regression line with 90% prediction intervals (based on 2002-2009 data) are also shown

### A. Crude rates



PCT	Key	PCT	Key
Birmingham East and North	1	Sandwell	7
Coventry Teaching	2	Shropshire	8
Dudley	3	Solihull	9
Heart of Birmingham Teaching	4	South Birmingham	10
Herefordshire	5	South Staffordshire	11
North Staffordshire	6	Stoke on Trent Teaching	12

### B. Corrected rates - after excluding major congenital anomalies

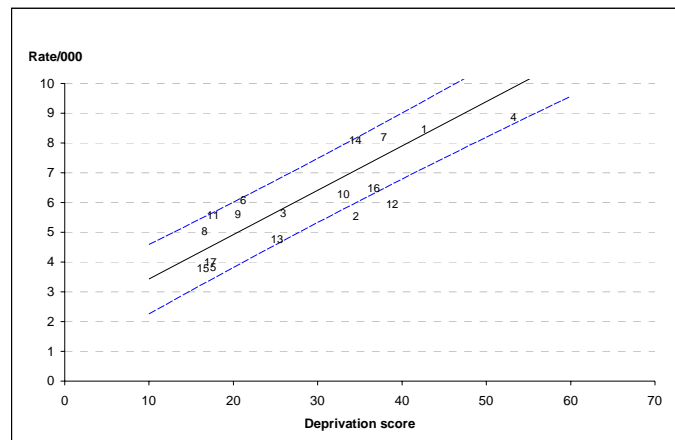


PCT	Key
Telford and Wrekin	13
Walsall Teaching	14
Warwickshire	15
Wolverhampton	16
Worcestershire	17

## 10. Infant Deaths and Deprivation, West Midlands PCTs

Graphs show infant deaths for the last available triennium (2006-8) for West Midlands PCTs, plotted against each PCT's respective deprivation score (IMD 2007). Regression line with 90% prediction intervals (based on 2002-2008 data) are also shown

### A. Crude rates



### B. Corrected rates (after excluding major congenital anomalies and neonatal deaths <22 weeks and/or <500g)

