Maternity Services in Oxfordshire – An Epidemiological Health Needs Assessment

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Introduction:
Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period[1]. Pregnancy for most women is a normal physiological process. However, for some women it can also result in ill health and death of the mother and child. The UK has seen a massive improvement in the maternal health of women from the 1950's when there was a one in 1500 chance of dying in childbirth to one in 20,000 now[2]. While the UK does not have the rates of maternal and child ill health that are seen in the developing world, there are unacceptably high variations in outcomes for women of socio-economically deprived and ethnic minority backgrounds. In England, in 2000-02 women from the poorest backgrounds were 20 times more likely to die of a pregnancy-related condition than a professional woman. The health experience during pregnancy and infancy has a direct bearing on outcomes in childhood and later life.

The aim of any maternity service should be the delivery of high quality health care to pregnant women and their babies. What is needed is the understanding that while most women will have a largely uneventful pregnancy which culminates in a delivery conducted without the need for any intervention; we must be in a position to identify potential hazards early during pregnancy and react in a timely and effective manner to the complications that can arise at any stage of labour. All of this must be delivered in an environment where women are guaranteed by the government, 'choice' in the type of care they receive and where they chose to deliver their babies.

We should aim to provide all women with the information and support to control their reproductive health and during pregnancy. Appropriate and skilled care delivered in a safe setting during pregnancy and childbirth alongside post natal care for both mother and child would be the cornerstones of this service.

In order to commission a high quality maternity service for the population, we need to understand the 'needs' of the population – the ability of the population to benefit from a particular service. Particular emphasis has to be placed on the needs of the population 'at risk' – the socio economically deprived, the ethnic minorities, teenage and elderly mothers. These needs then need to be matched to the service currently available in order that gaps when identified are prioritised and tackled in the future commissioning process.

Why undertake a needs assessment now?

- The key aim of this needs assessment is to inform future commissioning priorities through identifying those mothers/infants who currently experience the poorest outcomes and identify recommendations to enable the service to provide them with an equal chance of good maternal/infant health
- In light of recent Healthcare commission review findings – The ORH Trust scoring a below average rating (fair performing) for the provision of high quality 'value for money' maternity service.

[1] http://www.who.int/topics/maternal_health/en/

[2] Making It Better: For Mother and Baby. Clinical case for change - Report by Sheila Shribman, National Clinical Director for Children, Young People and Maternity Services. DOH. Feb 2007.

This needs assessment was led by the Public health team of Oxfordshire PCT with support from the Decision Support Unit and the Maternity services of the ORH NHS Trust. The assessment has predominantly used an Epidemiological approach[3].

Policy context:

1. Maternity services commitment outlined in 'Our Health, Our Care, Our Say'

Ensure that maternity services are **women-focused** and family-centred, offering **choice and information** for women and their partners over where and how they have their baby. It will mean women can **access a midwife directly**, without going to their GP first, if that is what they want.

Women will also be able to access antenatal and postnatal care in community-based settings provided by a midwife they know, and be individually supported throughout the birth. **This will be in place by 2009**.

Midwives and other health professionals identify and give appropriate support to women who are being abused.

2. The National Service Framework for Children, Young People and Maternity Services - the maternity standard (Standard 11):

'Women have easy access to supportive, high quality maternity services, designed around their individual needs and those of their babies.'

Woman-centred care - services meet the needs of each mother and her baby, and ensure that parents are involved in the planning and evaluation of services.

Easy access to information and support

Care pathways and managed care networks link maternity and neonatal services with a range of services and professionals.

Improved pre-conception care includes local health promotion highlighting the importance of the health of women and their partners before conception.

High quality **ante-natal and newborn screening** is offered to all women.

Health care professionals are competent in identifying and addressing mental health problems for women during or after pregnancy and **local perinatal psychiatric services** are available for women who need them.

Women are able to **choose the most appropriate place to give birth** from a range of local options including **home birth** and **delivery in midwife-led units**, with the facility for women delivering in the community to be transferred to hospital rapidly if complications arise. A consultant obstetrician is involved in any decision to offer a caesarean section which will also depend on there being evidence of clinical benefit to either mother or baby.

A professional skilled in neonatal resuscitation is present at every delivery, and newborn infants receive a physical examination soon after birth. Mothers receive **post-birth care based on a structured assessment** provided by a multidisciplinary team.

Up-to-date information on breastfeeding and **breastfeeding support for mothers** is provided in line with the government's commitment to improving the health of the population.

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[3] Stevens and Raftery describe three approaches to needs assessment:

• ***Epidemiological:*** Establishing what services are effective and for whom, and defining local availability.

• ***Comparative:*** Comparing services available to the target population with those available to other populations.

• ***Corporate:*** Exploring the knowledge, views, demands, and wishes of informants on healthcare services; a qualitative approach.

3. Maternity Matters: choice, access and continuity of care in a safe service

By the end of 2009, **all women will have choice** around the type of antenatal and postnatal care they receive, together with choice in how they access maternity services and continuity of midwifery care and support if they chose a provider outside their local area.

i. Choice of how to access maternity care – When they first learn that they are pregnant, women and their partners will be able to go straight to a midwife if they wish, or to their General Practitioner. Self-referral into the local midwifery service is a choice that will speed up and enable earlier access to maternity services

ii. Choice of type of antenatal care – Depending on their circumstances, women and their partners will be able to choose between midwifery care or care provided by a team of maternity health professionals including midwives and obstetricians. For some women, team care will be the safest option

iii. Choice of place of birth – Depending on their circumstances, women and their partners will be able to choose where they wish to give birth. In making their decision, women will need to understand that their choice of place of birth will affect the choice of pain relief available to them. For example, epidural anaesthesia will only be available in hospitals where there is a 24hour obstetric anaesthetic service.

The options for place of birth are:

• birth supported by a midwife at home

• birth supported by a midwife in a local midwifery facility such as a designated local midwifery unit or birth centre. The unit might be based in the community, or in a hospital; patterns of care vary across the country to reflect different local needs. These units promote a philosophy of normal and natural labour and childbirth. Women will be able to choose any other available midwifery unit in England.

• birth supported by a maternity team in a hospital. The team may include midwives, obstetricians, paediatricians and anaesthetists. For some women, this type of care will be the safest option but they too should have a choice of hospital. All women will be able to choose any available hospital in England

iv. Choice of postnatal care – After going home, women and their partners will have a choice of how and where to access postnatal care. This will be provided either at home or in a community setting, such as a Sure Start Children's Centre.

Related Targets

1. Reduce health inequalities by 10% by 2010 as measured by infant mortality and life expectancy at birth.
2. Deliver a 1% point reduction per year in the proportion of women who smoke throughout pregnancy, especially from disadvantaged groups
3. Deliver an increase of 2% per year in breast feeding initiation rate especially among mothers from disadvantaged groups.

Current services:
Maternity services in Oxfordshire are commissioned in the main from the Oxford Radcliffe Hospitals NHS Trust. Locally services are delivered via:

Two consultant-led units:

- John Radcliffe Women's Centre – A large teaching hospital, with over 8000 deliveries a year drawing referrals from outside Oxfordshire as well.
- Horton Maternity Unit - being reviewed currently

Three community midwifery-led units:

- Chipping Norton Community Hospital (midwifery-led unit)
- Wantage Community Hospital (midwifery-led unit)
- Wallingford Community Hospital (midwifery-led unit)

A Community Midwifery Service operates via Community teams based at Abingdon, Bicester, Chipping Norton, Didcot, Oxford City, Wallingford, Wantage, Witney, Carterton and at Thame.

(Map here)

Epidemiology

Section 1. The population

Resident Population – The population served currently

The ONS mid year population estimates for 2006 shows that the resident population in the South Central Strategic Health authority was nearly four million, with 50% women. The population in the child bearing age group (15-44yrs women) accounts for 41% of the total population of women in England and the South Central region.

Table 1. ONS midyear estimates (in thousands) 2006 for population in England and South Central SHA[4].

Women in Age group	England	South Central	Oxfordshire
00-04	1442.3	113.5	17.4
05-09	1428.4	114.7	16.6
10-14	1523.3	120.6	17.5
15-19	**1614.8**	**126.5**	**19.6**
20-24	**1648.9**	**129.3**	**23.9**
25-29	**1634.6**	**125.4**	**19.9**
30-34	**1720.9**	**136.6**	**21.3**
35-39	**1946.8**	**155.3**	**23.6**
40-44	**1970.7**	**158.6**	**23.7**
45-49	1738.7	140.4	20.9
50-54	1547	123	17.9
55-59	1652.2	129.3	19.0
60-64	1376.6	106.4	15.6
65-69	1155.8	84.7	12.5
70-74	1034.7	75.8	10.8
75-79	923.7	67.5	10.0
80-84	746	55.3	8.2
85+	731.2	56.8	8.7
Total	25836.6	2019.7	307.1

Table 2. Population of women (in thousands) in the 15-44yr age group, 2006 mid year estimates[1]

	15-44yrs	Percent of total population of women
England	10536.7	40.7%
South Central	831.7	41.1%
Oxfordshire PCT	132.0	43.1%

The estimated population registered with General practices in Oxfordshire PCT in January 2008 was 673,459. Women in the child bearing age group (15-44yrs) are estimated to make up 44% of the total population of women in Oxfordshire PCT. This figure however hides a variation, in that women in this age group make up 55% of all women in Oxford City council area while only 36% in West Oxfordshire.

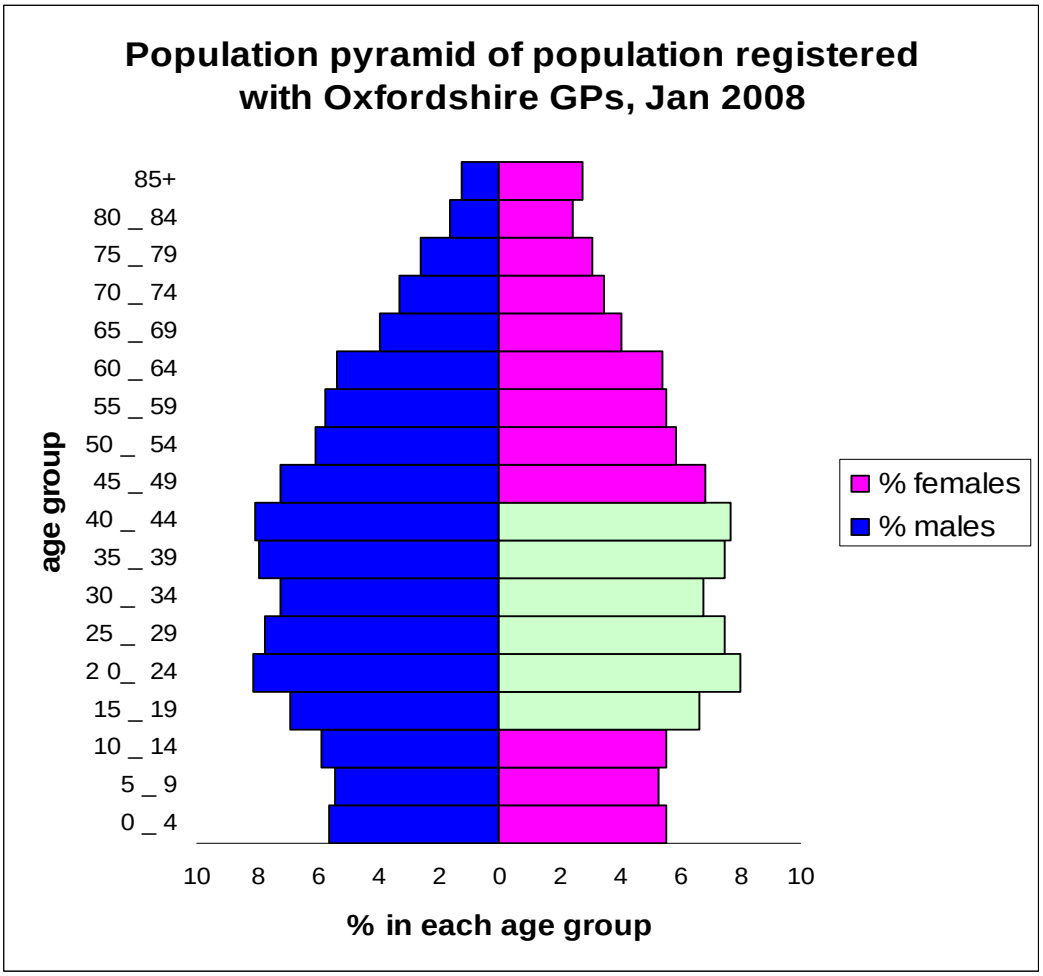
[4] http://www.statistics.gov.uk/statbase/Expodata/Spreadsheets/D9739.xls (accessed 18th Feb 2008)

Table 3. Population registered with Oxfordshire GPs, Jan 2008

	15-44yrs age group	All ages
Males	156,750	340,572 (46%)
Females	146,693	332,887 (44%)
Total	303,443	673,459 (45%)

Source: Decision Support Unit, Ox PCT

Fig 1. Population pyramid, Oxfordshire GP registered population, Jan 2008



In the main, the population that could potentially come in contact with maternity services in Oxfordshire is roughly 146,693 or 22% of the total population that the PCT is responsible for.

Projected population – The population we could expect to serve in the future

2006 based population projections for England indicate that the 15-44 yrs age group of women will see a 6% increase over the next 20 years.

Table 4. Projected population of women, England, based on 2006 midyear estimates[5]

Ages(in thousands)	2008	2010	2015	2020	2025	2030	Growth 2007 to 2030
15-44yrs	10,582	10,583	10,538	10,608	10,972	11,185	627 (6%)
All ages	26,161	26,525	27,454	28,417	29,366	30,247	4,261(16%)

The South Central SHA region is projected to see a fall of 2.4% from 2004 estimates in the population of women in the 15-44yrs age group[6]. However, Oxfordshire is expected to continue to see a growth in this population. This is seen in further detail below.

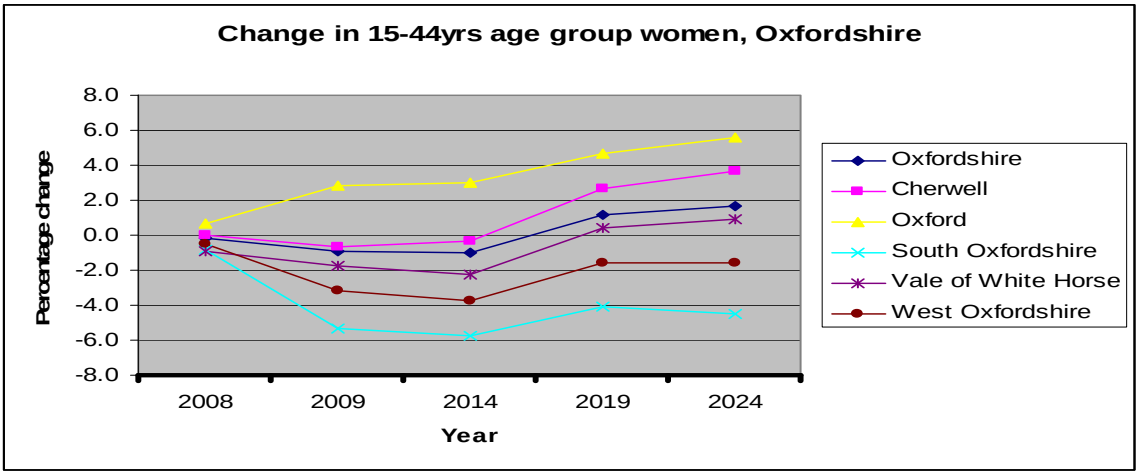
Population projections for women in the 15-44yr age group resident in Oxfordshire indicate that the county will see roughly a 2% increase (about 2300 women) in this age group over the next 20 years. The largest increase will be seen in the Oxford city and Cherwell local authority areas which will be offset by decreases in South and West Oxfordshire.

Table 5. Population projections in the 15-44yrs group of women based on 2004 estimates[7]

Council		2008	2009	2014	2019	2024	2029
Oxfordshire	Thousands	138.1	137.9	136.8	136.7	139.7	140.4
	% growth since 2004		-0.1	-0.9	-1.0	1.2	1.7
Cherwell	Thousands	29.7	29.7	29.5	29.6	30.5	30.8
	% growth since 2004		0.0	-0.7	-0.3	2.7	3.7
Oxford	Thousands	42.8	43.1	44.0	44.1	44.8	45.2
	% growth since 2004		0.7	2.8	3.0	4.7	5.6
South Oxon	Thousands	24.4	24.2	23.1	23.0	23.4	23.3
	% growth since 2004		-0.8	-5.3	-5.7	-4.1	-4.5
Vale of White Horse	Thousands	22.4	22.2	22.0	21.9	22.5	22.6
	% growth since 2004		-0.9	-1.8	-2.2	0.4	0.9
West Oxon	Thousands	18.8	18.7	18.2	18.1	18.5	18.5
	% growth since 2004		-0.5	-3.2	-3.7	-1.6	-1.6

[5] http://www.statistics.gov.uk/downloads/theme_population/NPP-2006/weng065y.xls
[6] Review of Aspects of Maternity Services in NHS South Central, PHRU, 2007
[7] http://www.statistics.gov.uk/downloads/theme_population/2004_BasedProj_Revised/08_Non-metro_districts_counties_O-Z.xls

Fig 2. Poppulation growth trends, Oxfordshire District councils.



Source: Decision Support Unit

Readers will note that the 15-45 aged population of women registered with GPs in Oxfordshire exceeds the projected population for 2008 (based on 2004 estimates). The variance is to the tune of 8500 women (146,693 vs. 138100).

A number of factors can account for this discrepancy. Population projections are an indication of future trends in the population based on observed levels of birth, death and migration in the previous five years. Hence, the numbers depicted above are likely to change. In the presence of planned housing development earmarked for the South Oxfordshire region, it would be not be an error to view the above figures as an underestimate. Practice based populations are prone to delays in registration and deregistration (therefore double counting). In addition the population of interest tends to be a relatively mobile population. However, Oxfordshire County includes 137 wards while Oxfordshire PCT covers 132 wards.

Ward level population projections up to 2016 based on mid 2001 estimates, provided by the Decision support team at the PCT have been used below to list the wards with the highest current populations and expected population growth.

Table 6. Wards with the highest estimated/ projected change in population of women 15-44yrs

Women in the 15-44yrs age group				
Wards with the highest population of women in 2008			Wards projected to see the highest percentage growth by 2016	
Ward	Population		Ward	% change
Carfax and Holywell	3,544		**Didcot All Saints**	93.41
Banbury Grimsbury & Castle	2,199		**Hagbourne**	83.52
St. Clement's	2,137		**Harwell**	54.46
St. Mary's	2,130		**Grove**	53.15
Northfield Brook	2,044		**Ambrosden & Chesterton**	46.79
Didcot Ladygrove	2,008		**Bloxham & Bodicote**	41.37
Churchill	1,958		**Bicester Town**	36.29
North	1,863		**Wolvercote**	28.72

Source: Decision Support Unit

Across Oxfordshire, General practices have lists ranging from 413 to 6796 women in the 15-45 yr age group. General Practices with the highest population of women in the 15-45 yrs age group are depicted below.

Table 7. Oxfordshire GP practices with the highest number of women aged 15-45yrs

Practices and PBC groups with the highest population of women in the 15-44yr age group					**PBC groups (excluding Luther street and 1 independent)**	
K84 code	**PBC consortia code**	**PBC consortia name**	**15-44 yr women population**		PBC group	15-44yr women Population
K84013	**OXPBC95**	**Oxford City**	6796		**Oxford City**	51458
K84016	**OXPBC95**	**Oxford City**	4408		**North Oxfordshire**	20175
K84027	**OXPBC99**	**Yet to coalesce**	3813		**Vale Locality Group**	19151
K84028	**OXPBC41**	**North Oxfordshire**	3618		**North East Oxfordshire PBC**	16543
K84002	**OXPBC21**	**Vale Locality Group**	3254		**West Oxon Locality Group**	14899
K84011	**OXPBC95**	**Oxford City**	3156		**South East Locality Group**	13016
K84040	**OXPBC41**	**North Oxfordshire**	3046		**Yet to coalesce**	10067
K84044	**OXPBC95**	**Oxford City**	3017			

Ethnicity

Table 8. Ethnic profile, Oxfordshire councils

	2006 estimates	***2001 data***					
Ethnic group	**Oxfordshire**	**E&W**	**Cherwell DC**	**Oxford DC**	**South Oxon DC**	**Vale of White Horse DC**	**West Oxon DC**
British White	89.21	87.5	92.5	**76.8**	93.8	93.3	95.6
Other White	5.44	3.8	3.6	10.4	4.1	4.3	2.8
Mixed	1.39	1.4	1.1	2.4	0.8	0.8	0.7
Caribbean Black	0.40	2.0	0.6	1.7	0.3	0.4	0.2
Other Black	0.47	1.4	0.8	2.0	0.1	0.1	0.1
Indian	0.70	1.0	0.2	1.2	0.2	0.2	0.2
Pakistani	0.67	1.1	0.3	1.2	0.2	0.1	0.1
Other Asian	0.41	1.1	0.3	1.2	0.1	0.1	0.2
Chinese	0.75	0.4	0.3	1.8	0.2	0.4	0.2
Other	0.56	0.4	0.3	1.3	0.2	0.3	0.2

The data above suggests that Oxford city council has a higher non White ethnic population compared to the other local authorities. However, even within individual councils there can be large variation in the distribution of ethnic groups with some wards having a high proportion of non White ethnic population. These wards are usually the more deprived wards as well.

Findings:

- The population of women registered with GPs in Oxfordshire in the 15-45 yrs age group is 146,693.
- Over the next 20 years this population is projected to grow by 2% in Oxfordshire overall. Oxford city council has the highest number of women in this age group and is likely to see the highest growth in this population. However the wards that are projected to see high levels of growth are located in the other council areas.
- GP practices with the highest population of 15-45yrs aged women are situated in Oxford city.
- The ethnicity profile depicted above is based on 2001 census estimates. We however know that there has been recent immigration into Oxfordshire particularly from countries of the expanded EU which hasn't been adequately captured yet. Oxford city has the largest non British white population but there are wards in Cherwell DC which have a high proportion of ethnic minority groups.

Section 2. Deprivation

The Index of Multiple Deprivation 2007 combines a number of indicators, chosen to cover a range of economic, social and housing issues, into a single deprivation score for each small area in England. This allows each area to be ranked relative to one another according to their level of deprivation. The level of deprivation of an area is a determinant of health status. Infant mortality, maternal mortality and teenage pregnancy rates are directly related to deprivation. Risk factors for infant mortality like maternal smoking and obesity are more prevalent in areas of higher deprivation.

Oxfordshire is ranked 137 out of 149 county council areas in England (where rank 1 is the worst deprived). This means that the county is relatively affluent compared to the rest of the country. However, within Oxfordshire pockets of deprivation exist. This is demonstrated by the below table where we see that out of 354 local authorities in the England, we have 3 in the high 300's and Oxford city which is ranked 155.

Table 9. IMD scores

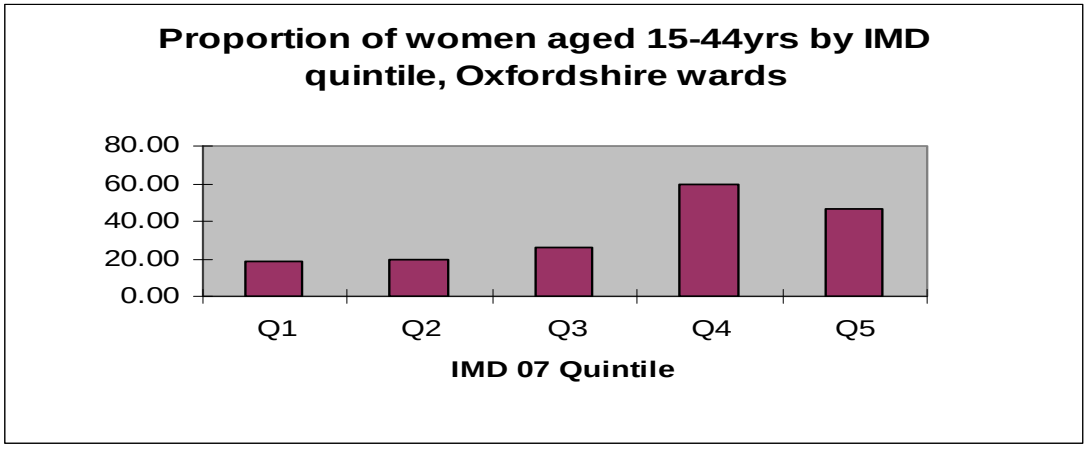
LA NAME	Average IMD 2007 Score	Rank – England LA's
Oxford	18.80	155
Cherwell	11.30	276
South Oxfordshire	7.75	333
Vale of White Horse	7.23	341
West Oxfordshire	6.67	349

Deprivation among wards in Oxfordshire PCT

There are 28 wards in Cherwell council, 24 in Oxford city council, 25 in South Oxfordshire council, 28 in the Vale of White Horse council and 27 in West Oxfordshire council.

Blackbird Leys is the most deprived ward in Oxfordshire PCT while Abingdon Dunmore is the least deprived. 89% of women in Carfax and Holywell ward fall in the 15-44 yr age group. Carfax in itself gets listed as the third most deprived ward in Oxfordshire*[8]. A combined IMD score for the two wards however, places it outside the most deprived quintile.

Fig 3.



*[8] Carfax and Holywell are reported as a single ward in population estimates. Both wards are composed predominantly of a young, mobile student population living in the colleges in the heart of Oxford city centre. There are homeless shelters situated in this ward as well.

Quintile 5 consists of the wards of Blackbird Leys, Northfield Brook, Barton and Sandhills, Banbury Ruscote and Littlemore. There are 8330 women in the 15-44yr age group resident in these five wards or roughly 6% of all Oxfordshire women in this age group. The graph above shows that the 15-45yrs age group of women make up a higher proportion of all women in the two most deprived quintiles of wards. Oxford and Cherwell DC have the highest proportion of women in the 15-44yr age group compared to the other 3 District Councils.

Deprivation among wards in Oxfordshire county

There are 28 wards in Cherwell DC, 24 in Oxford city, 29 in South Oxfordshire, 29 in the Vale of White Horse and 27 in West Oxfordshire. The five extra wards do not fall in the most deprived quintile.

In addition to the average IMD score, the Income deprivation associated with children index (IDACI)[9] is a useful proxy measure (0.99 is most deprived) of the status of women likely to bear children. It measures the proportion of the area's children under 16 years of age who were living in families in receipt of means tested benefits or in families in receipt of working families or disabled person's tax credits but whose income (before housing costs) was below 60% of the median IDACI scores are available at Super output area level (populations of 1000-1500). 2-4 SOA's are usually grouped together to form a ward.

There are 404 super output areas in Oxfordshire County. 5 SOA's appear in both the most deprived IMD scores and IDACI scores.

Table 10. Highest SOA IMD and IDACI scores

SOA	Council	IMD score		SOA	Council	IDACI score
Banbury Grimsbury and Castle 36	Cherwell	34.09		Blackbird Leys 20	Oxford	0.48
Banbury Ruscote 49	Cherwell	34.13		St. Clement's 79	Oxford	0.49
Blackbird Leys 19	Oxford	34.22		Banbury Grimsbury and Castle 36	Cherwell	0.49
Northfield Brook 67	Oxford	34.38		Churchill 25	Oxford	0.50
Blackbird Leys 17	Oxford	35.04		Rose Hill and Iffley 76	Oxford	0.50
Littlemore 52	Oxford	35.49		St. Mary's 87	Oxford	0.51
Rose Hill and Iffley 77	Oxford	36.53		Northfield Brook 69	Oxford	0.52
Rose Hill and Iffley 76	Oxford	36.85		Cowley Marsh 32	Oxford	0.52
Blackbird Leys 18	Oxford	36.98		Barton and Sandhills 13	Oxford	0.62
Banbury Ruscote 54	Cherwell	37.26		These SOAs fall within the 10% of most deprived SOAs in England based on IDACI scores		
Banbury Ruscote 50	Cherwell	37.39				
Northfield Brook 69	Oxford	40.11				
Blackbird Leys 20	Oxford	40.25				
Barton and Sandhills 14	Oxford	41.29				
Barton and Sandhills 13	Oxford	42.44				
Northfield Brook 68	Oxford	43.54				
These SOAs fall between 11 -20% of the most deprived SOAs in England based on IMD 07 scores						

9 http://neighbourhood.statistics.gov.uk/dissemination/MetadataDownloadPDF.do;jsessionid=ac1f930cce6c3a2271f6803486598c7fbd3b552d988.e38Qa3mPbh4Kai0LbNyRbh8Lc3eOe6fznA5Pp7ftolbGmkTy?downloadId=22580&bhcp=1 (accessed 21/02/08)

Section 3. Fertility statistics

Live birth rate

The number of live births in Oxfordshire has been increasing over the years as seen in the table below. The national statisticians report[10] highlighted Oxford as a region of increased population growth due to high levels of population turnover over the last five years.

Live births 2004 onwards

Sources: ONS VS1

Oxfordshire County	2004		2005		2006	
	E&W	Oxon County	E&W	Oxon County	E&W	Oxon County
Live births (observed)	639,509	7,609	645,621	7,575	669,376	7,992
Live birth rate (births per 1, 000 resident population)	*12.1*	*12.4*	*12.1*	*12.2*	*12.5*	*12.7*

However, the live birth rate is a crude measure of fertility as the denominator is the total population (including men). Hence General fertility rate is preferred (the denominator consists only of women in the child bearing age group i.e. 15-44yrs). General fertility rate is the number of live births per 1000 women in the 15-44yrs age group.

	2004		2005		2006	
	E&W	Oxon County	E&W	Oxon County	E&W	Oxon County
General fertility rate (number of live births per 1,000 females of child-bearing age)	58.4	57.2	58.4	56.8	60.4	59.4

The table below demonstrates that most deliveries take place in a hospital with an average home delivery rate of just under 3%. The rate of home deliveries was marginally lower among women resident in the 30 most deprived wards of Oxfordshire. 602 (7.5%) of all live births occurred among women living in the five most deprived wards of Oxfordshire in 2006

Table 11. Oxfordshire births in 2006 by deprivation and place of birth

Deprivation grouping	Hospital	Home	Elsewhere	Births in Hospital per 100 Births	Births at Home per 100 Births
30 least deprived	1711	51	4	96.89	2.89
Neither least nor most deprived	3715	120	5	96.74	3.13
30 most deprived	2316	63	6	97.11	2.64
Grand Total	7742	234	15	96.88	2.93

Sources: ADBE 2006 (Oxfordshire, Buckinghamshire, Wiltshire), 2007 Index of Multiple Deprivation (SOAs grouped to Ward)

[10] http://www.statistics.gov.uk/articles/population_trends/changing_demographic_picture.pdf

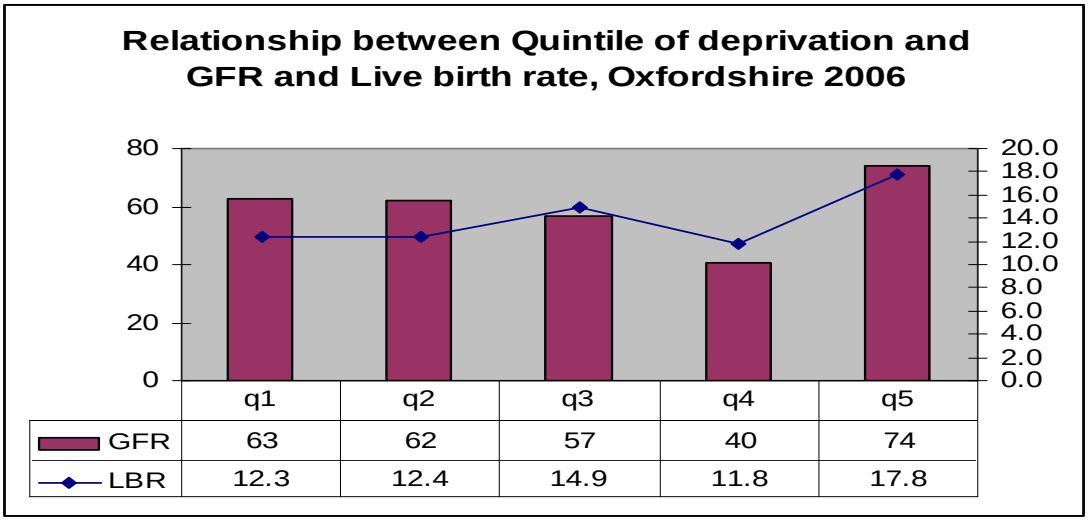
The five wards with the highest live birth rates and General fertility rates in 2006 were

Ward	Live birth rate		Ward	General Fertility Rate per 1000 population
Bicester North	**25.9**		Chadlington & Churchill	**98**
Bicester South	**25.3**		Bicester North	**97**
Carterton North East	**24.7**		Cholsey & Wallingford South	**96**
Didcot Ladygrove	**22.0**		Cowley	**95**
Cowley	**21.2**		Bicester South	**94**

Sources: ADBE 2006 (Oxfordshire, Buckinghamshire, Wiltshire), 2007 Index of Multiple Deprivation (SOAs grouped to Ward)

The table below shows that women resident in the most deprived quintile of wards have a higher general fertility rate and live birth rate than women in the least deprived wards, although there was no discernible trend with increasing deprivation.

Fig 4.



Ideally, one would like to compare data over the past few years to observe for trends.

Total Fertility rate (TFR)

This measure describes the average number of children a group of women would have if they experienced the age-specific fertility rates of the year throughout their childbearing lifespan.

In 2006, the UK had a TFR of 1.8. In England and Wales, the estimated total fertility rate for UK born women has risen from 1.5 to 1.7 since 2002, while for women born outside of the UK the estimated rate rose from 2.3 to 2.5 (22% of all births). The recent small rise in the fertility of women in their early twenties appears to have been driven by UK born women only.[11] The highest fertility rates are in the 30-34yr age group with increases seen in the 35-39 yr age group and decrease in the under 20yrs.

The table below depicts GFRs and TFRs for District councils in Oxfordshire in 2006.

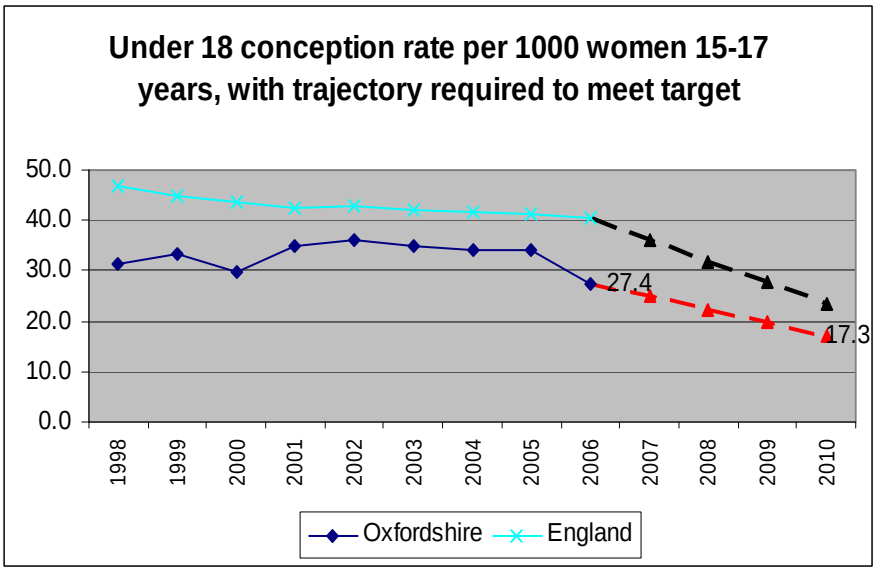
	Total no. of births	GFR	TFR
Oxfordshire	**7,992**	**58.4**	**1.78**
Cherwell	1,903	66.1	2.05
Vale of White Horse	1,449	64.7	2.07

[11] http://www.statistics.gov.uk/pdfdir/fertility1207.pdf (accessed 26th Feb 08)

South Oxfordshire	1,583	64.2	1.98
West Oxfordshire	1,194	63.3	2.07
Oxford	1,863	44.3	1.43

Section 4. Population profile

- Teenage pregnancy rates – The Oxfordshire target is to hit 17.3% by 2010. Current data indicates that while rates in Oxfordshire have fallen over the last few years there is a fair way to go to achieve the target. Cherwell and Oxford city drive the teenage pregnancy rate high. Nearly 50% of all teenage conceptions undergo abortions. 79% of all under 18 conceptions in 2006 were in the white British ethnic group, 9% in the mixed ethnic group, 3% were in Asians and 2% in the ethnicity group Black. (Oxfordshire Sexual health needs assessment, 2007)



- Lone parent households with dependant children - Based on the 2001 census, there were 394 lone parent households with dependent children in Oxfordshire, 264 of whom were under 29years of age.
  Among the district councils of Oxfordshire county, Oxford had the highest proportion of lone parent households with dependent children (2001 data) of 6% followed by Cherwell at 5%. The other LA's were at 4%. This compares well with England at 6.5%.

Section 5. Clinical activity

The Oxford Radcliffe Trust received an overall 'fair performing' rating for its maternity services in a review carried out by the HCC. Within the South Central SHA region, 50% of provider trusts were scored as 'fair performing' while 40% scored better.

The results reported in this section are based on data provided by the ORH on all Oxfordshire women who delivered there in the calendar year 2007. The ORH provided us with a list of 7359 Oxfordshire women who delivered at the ORH Trust during 2007. Of these women however, we were able to match only 7202 women to Oxfordshire wards.

Antenatal care

NICE recommends that

pregnant women should be offered current evidence based information which will help them take informed decisions.

- Provision of information

While the impact of the availability of 'choice' remains to be seen, there is a danger in that unequal access to information that helps a person exercise this choice could lead to greater inequalities in outcomes. The importance of accessible information in a language and format that is easily understood cannot be over emphasized.

60% of women surveyed as part of the HCC review of maternity services at the ORH Trust in 2007, reported that they were provided with a copy of the 'Pregnancy book' while just under 60% reported that they were given explanations and involved in decisions antenatally. Over 75% of women reported being involved in decision making during birth while just under 60% reported the same post natally. These indicators are either above or average for the South Central region.

With respect to written information provided to women before booking, 13 out of 17 conditions that the HCC looked at had written information[12] provided at the ORH.

While 'language line' services are available at 90% of the service locations, written information is rarely available in a language other than English. The staff ethnicity profile does not match the population profile. There is no representation of minority ethnic groups or faith communities on the MSLC.

No action has been taken to inform women that they can register directly with a midwife on recognition of a pregnancy.

- Workload - Number of Oxfordshire women **booked in** the last year at the ORH

As per the submission by the ORH to the HCC maternity services review, 9362 women in total across the five sites were booked for antenatal care in the year ending March 2007. This data cannot be obtained in real time as it is entered on the system only at the time of delivery or when a pregnant woman receives a medical intervention. In the absence of this, one can only use the total number of deliveries that occur in a year. Birthrate plus would give an indication of the shortage of staff for the estimated workload and CNST requirements.

Of the 7202 women who we were able to map to Oxfordshire wards, the most number of births occurred in the following wards:

Banbury Grimsbury and Castle	188
Banbury Hardwick	166
Didcot Ladygrove	149
Northfield Brook	142
Banbury Ruscote	147

[12] the indicator is calculated as the number of the 17 following items where written information is provided at or before booking, a guide to maternity services, risks and benefits of different birth settings, maternity rights and benefits, ultrasound scans, sickle cell and thalassaemia, screening for Down's syndrome, screening for rhesus negative, screening for rubella, screening for syphilis, screening for HIV, full blood count test, screening for Hep B, mental health, parent education, induction, pain management, caesarean section.

Ideally, in terms of workload it would be useful to ensure that staffing levels in these wards are higher than wards with lower number of births. Factors like the GFR and projected population growth of a ward should inform future staffing decisions.

- Number of antenatal visits* – in primis/ multis in 2007 conducted by the ORH

The minimum number of visits recommended by NICE for primiparas is 7 and 10 for multiparas.

Gestation length	NICE Minimum appts. for primiparas /% not received minimum appts at ORH	NICE Minimum appts. for multiparas / % not received minimum appts at ORH
37-38	7 / (8%)	5 / (18%)
39-40	8 / (15%)	6 / (13%)
41	9 / (12%)	6 / (6%)
42+	10 / (3%)	7 / (5%)

* Bookings after 16 weeks and deliveries before 37 weeks have been excluded.

- Time of booking – before 20th week

Of 7359 Oxfordshire women who were delivered by the ORH Trust, we were able to match postcodes to Oxfordshire wards for only 7202 women. The data below reflects that. 471 women were booked after the 20th week of pregnancy. However there were 798 records with no LMP recorded.

There does not appear to be any correlation between deprivation status and delayed booking. In fact, it appears that earlier booking is more consistent among the deprived population compared to the less deprived.

Ward IMD status	<10 weeks	11-20	>20	No LMP recorded	Grand Total	Proportion of late bookings
IMD 1	830	979	137	203	2149	6.38%
IMD 2	958	1527	201	336	3022	6.65%
IMD 3	274	428	73	106	881	8.29%
IMD 4	160	278	30	71	539	5.57%
IMD 5	190	309	30	82	611	4.91%
Grand Total	2412	3521	471	798	7202	6.54%

We attempted to examine if ethinicity played a role in women booking late in pregnancy. It appears that women of Black and Chinese ethnic groups tended to have a higher proportion of 'late bookers', although the numbers involved are small.

Ethnic Group Description	<10 weeks	11-20 weeks	>20 weeks	No LMP recorded	Grand Total	Proportion of late bookings
White - British	1793	2566	299	625	5283	5.66%
Any other White background	200	300	61	45	606	10.07%
White - Irish	26	36	2	8	72	2.78%
Indian	54	64	8	10	136	5.88%
Pakistani	51	102	16	22	191	8.38%
Bangladeshi	20	21	5	4	50	10.00%

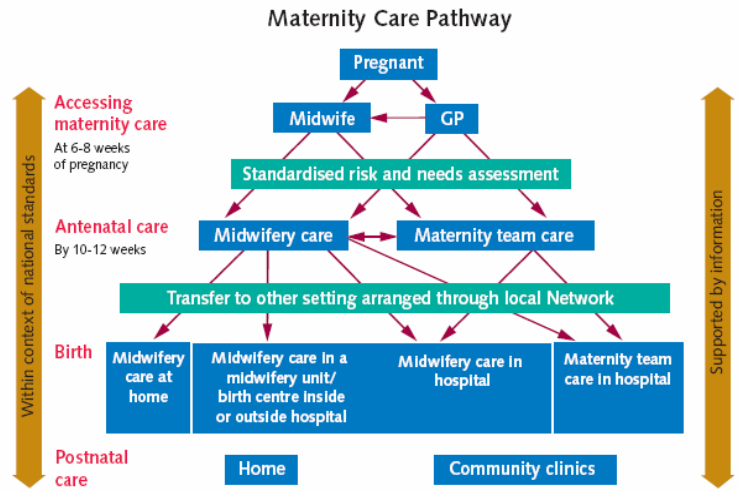
Any other Asian background	21	35	6	9	71	8.45%
Black - African	46	80	25	22	173	14.45%
Black - Caribbean	8	15	2	2	27	7.41%
Any other Black background	2	13	4	1	20	20.00%
Any other Ethnic Group	23	34	7	9	73	9.59%
Any other Mixed background	9	14	2	2	27	7.41%
Chinese	18	26	10	3	57	17.54%
Mixed - White and Asian	2	6		1	9	0.00%
Mixed - White and Black African		5	1	2	8	12.50%
Mixed - White and Black Caribbean	4	7		1	12	0.00%
Does not want to give Ethnic Group	135	197	23	32	387	5.94%
Grand Total	2412	3521	471	798	7202	6.54%

Wards with the highest proportion of women booking after 20 weeks are shown below. Small numbers make some of the highest proportions unreliable but the wards in the Didcot area may indicate areas for further investigation.

Ward	>20 weeks	Grand Total	Late bookings
Aston Rowant	6	17	35.29%
Blewbury and Upton	5	15	33.33%
Didcot Northbourne	25	91	27.47%
Didcot Park	18	72	25.00%
Chinnor	4	17	23.53%
Didcot Ladygrove	34	149	22.82%
Hagbourne	7	32	21.88%
Didcot All Saints	13	66	19.70%
Harwell	9	49	18.37%
North	9	50	18.00%
St. Margaret's	7	46	15.22%
Marcham and Shippon	10	69	14.49%
Chadlington and Churchill	4	29	13.79%
Benson	11	84	13.10%
Crowmarsh	3	23	13.04%
Kingston Bagpuize with Southmoor	3	24	12.50%
Thame South	6	49	12.24%
Watlington	6	50	12.00%
Ambrosden and Chesterton	8	71	11.27%

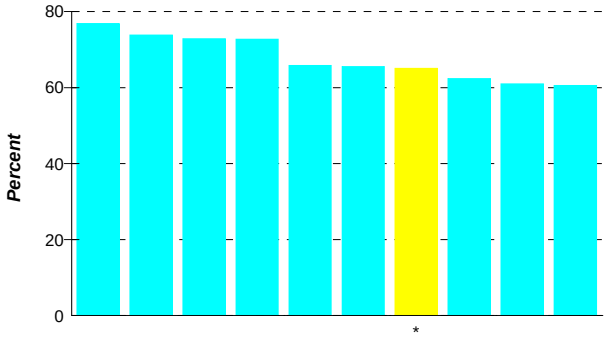
- Route of referral (via GP/ direct midwife or other) – not recorded

Current recommendations suggest that women should be able to refer themselves directly to a midwife or a GP at the earliest opportunity. The route of referral is not currently recorded.



Information obtained from the HCC survey of mothers delivering at the ORH (not restricted to Oxfordshire women) indicates that a midwife is the first point of contact in just over 10% of women. Continuity of care however appears to be good with over 60% of women surveyed reporting that they saw the same midwife for check ups.

Figure : % women reporting they mostly saw the same midwife for check-ups



Oxford Radcliffe Hospitals vs South Central within South Central

- Drugs/alcohol

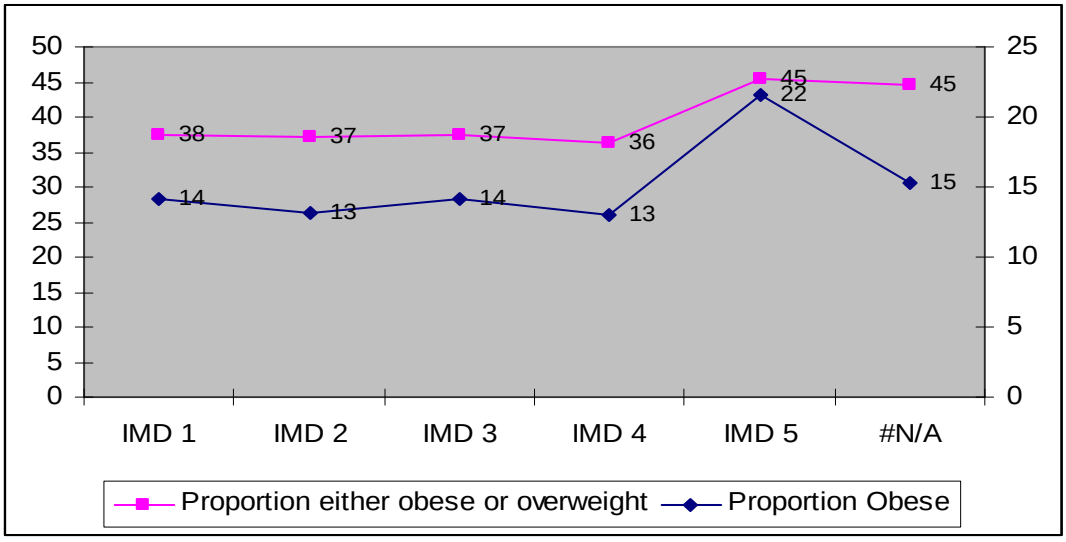
Data on drug use and alcohol intake was not robust enough for use. In light of new NICE antenatal care guidance recording of alcohol intake in 'units' would be a way forward.

- Obesity

Based on the data provided by the ORH for Oxfordshire women in 2007, nearly 35% of women who delivered were either overweight or obese at the time of booking.

Obesity	Total	Proportion
BMI <25	3758	51.07%
Overweight (BMI 25-30)	1753	23.82%
obese	1052	14.30%
n/a	796	10.82%
Grand Total	7359	

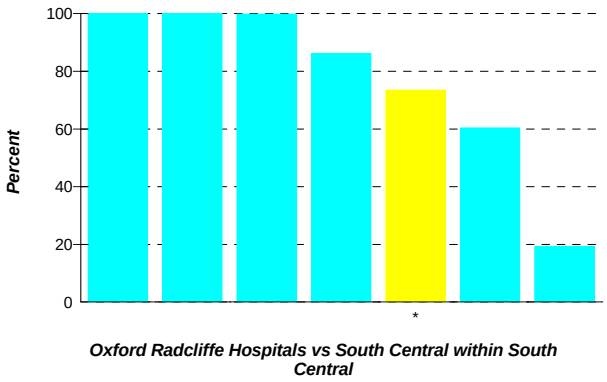
A higher proportion of women from the most deprived quintile of wards were either obese or overweight.



- Dating scan performed –

Over 70% of eligible women had a dating scan performed. NICE recommends a dating scan between 10 and 14weeks of gestation.

Fig. Percentage of eligible women having dating scan



- Congenital anomalies scan –

The HCC survey indicated that the ORH trust undertakes all the recommended number of checks (11) at the scan for congenital anomalies. Coverage of this scan is nearly universal.

- Screening –

Down's syndrome:

NICE recommends that all women should be offered screening for Down's syndrome with the choice to accept screening left in the hands of the pregnant woman.

Prior to 14 weeks of gestation, the triple test appears to be the main test for Down's syndrome at the ORH (HCC survey data, 2007). NICE recommends that the 'combined test' should be offered between 11 and 14weeks, with either the 'triple' or 'quadruple' test offered between 15 and 20 weeks of gestation.

4994 out of 8482 women offered a Down's screening test at the ORH refused the test.

Haemoglobinopathies:
NICE recommends that pre-conception counselling should be available for women identified at higher risk of haemoglobinopathies using the Family Origin Questionnaire (NHS Antenatal and Newborn screening programme). Information should also be provided on screening for these diseases at the time of booking with the test available to all women before 10 weeks of gestation.
Take up of sickle cell and thalassemia screening was 84% (678 refusals out of 4179 women eligible) at the ORH in the year ending March 2007. This number includes non Oxfordshire residents as well.

Infections:
Screening for HIV, Syphilis, Hepatitis B and Rubella are offered as an opt-out package for Oxfordshire women in the ORH.
Take up of these tests was over 90% at the ORH. Current antenatal HIV prevalence is at 2 per 1000 women tested.

- Mental health and social care issues like domestic violence

NICE recommends that women's mental health status is enquired upon at the time of booking as well as postnatally. Questions relating to personal current and previous mental health are asked during booking and postnatally. However, no data was submitted to the HCC survey on the number of women who were detected or referred to mental health teams.

Births

Data obtained from SUS indicates that there were 7519 live and still births among Oxfordshire PCT residents in 2006. This number is less than the number quoted earlier (7992) because the PCT population does not include the 5 additional wards in the county. 3326 (44%) of all births occurred among primiparas.

Deprivation grouping	Still Birth	Live Birth	Grand Total
30 Least Deprived	1	1482	1483
Neither Most Nor Least Deprived	14	3660	3674
30 Most Deprived	9	2353	2362
Grand Total	**24**	**7495**	**7519**

Source: SUS_UDS (28/03/2008), 2007 Index of Multiple Deprivation (SOAs grouped to Ward)

A higher still birth rate is noted at extremes of age.

Age of Mother	Still Birth	Live Birth	Grand Total	Still Births per 1000 births
<20	3	353	356	**8.43**
20-24	3	1118	1121	**2.68**
25-29	5	1737	1742	**2.87**
30-34	6	2399	2405	**2.49**
35-39	5	1520	1525	**3.28**
40+	2	368	370	**5.41**
Grand Total	**24**	**7495**	**7519**	**3.19**

Ethnicity of Mother	Still Birth	Live Birth	Grand Total	Still Births per 1000 births
White	16	5612	5628	**2.84**
Asian or Asian British	1	311	312	**3.21**
Black or Black British	1	103	104	**9.62**
Mixed		131	131	**0.00**
Other Ethnic Groups		115	115	**0.00**
Not stated	6	1223	1229	**4.88**
Grand Total	**24**	**7495**	**7519**	**3.19**

Data for 2007 obtained from the ORH Trust indicated that 7359 Oxfordshire women delivered 7472 babies in 2007 of which three women delivered twice in the same year. 3% of all deliveries occurred at home in the 2007 (Appendix 1). Most deliveries (74%) occurred at the John Radcliffe hospital.

Summary of outcomes of delivery at the ORH Trust, 2007

Outcome of Delivery	Total
Live Birth	7394
Antepartum Still Born	28
Termination	27
Fetal Death	17
Intrapartum Still Born	3
Other Still Born	3
Grand Total	7472

Ethnicity details were recorded in 95% of the 7359 women who delivered in the ORH Trust in 2007.

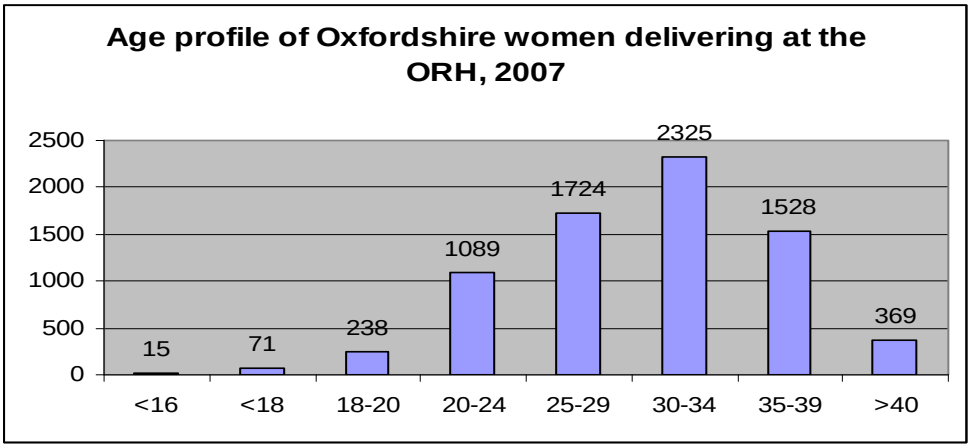
Ethnic Group	Total	%
White - British	5421	73.7
Any other White background	616	8.4
Pakistani	192	2.6
Black - African	175	2.4
Indian	137	1.9
Any other Ethnic Group	73	1.0
White - Irish	73	1.0
Any other Asian background	72	1.0
Chinese	57	0.8
Bangladeshi	51	0.7
Any other Mixed background	27	0.4
Black - Caribbean	27	0.4
Any other Black background	20	0.3
Mixed - White and Black Caribbean	12	0.2
Mixed - White and Asian	9	0.1
Mixed - White and Black African	8	0.1
Not recorded	389	5.3
Grand Total	**7359**	

The HCC survey revealed that the ORH had delivered 553 women of Eastern European origin. This number will need to be monitored in the forthcoming years as it is believed that the needs of this group of women may differ in terms of access (language support, knowledge of services) and health seeking behaviour (lifestyle factors like smoking and breast feeding).

Of the 7472 births that occurred among Oxfordshire women at the ORH in 2007, 7394 were live births with a still birth rate of 4.5 per 1000 births. This rate is lower than the England still birth rate of 5 per 1000 births. The numbers are too small to allow for analysis by ethnicity.

Age range of Oxfordshire women delivering at the ORH Trust, 2007

The median age of delivery among Oxfordshire women was 31 years of age.



Source: ORH, 2007

Site of delivery by ward deprivation status of women

611 women who were residents of the five most deprived wards in Oxfordshire delivered at the ORH during 2007. This represents the highest proportion of women in the 15-44yr age group undergoing deliveries during the year (7.2% compared to 5.6% in the least deprived quintile). The Horton maternity unit served a higher proportion of women from the most deprived quintile of wards compared to the other units.

Delivery Location	Q1	Q2	Q3	Q4	Q5	#N/A	Grand Total	Proportion of most deprived
John Radcliffe Maternity	1759	2132	644	437	449	42	5463	8.22
Horton Maternity	173	580	197	83	143	109	1285	11.13
Home	73	97	23	15	17	2	227	7.49
Wallingford	72	90	11	1	1	0	175	0.00
Chipping Norton	38	68	2	0	0	4	112	0.57
Wantage	30	50	2	0	0	0	82	0.00
In Transit	3	3	2	2	1	0	11	9.09
Other	1	2	0	1	0	0	4	0.00
Grand Total	2149	3022	881	539	611	157	7359	

*#N/A – wards not located in Oxfordshire. Note the Horton serves nearly 11% of women resident in the most deprived quintile of wards.

Caesarean section rates

Using 2006 SUS data for women resident in Oxfordshire PCT, we noted an overall C-section rate of 18.9 per 100 live births. We have not looked to differentiate between primary CSR and repeat CSR rates.

Women in the most deprived wards tend to have a lower rate of C-sections. This may be a reflection of the younger age of women in this group.

Deprivation grouping	Caesarean	No Caesarean	Grand Total	Caesarean sections per 100 live births
30 Least Deprived	298	1184	1482	**20.1**
Neither Most Nor Least Deprived	724	2936	3660	**19.8**
30 Most Deprived	392	1961	2353	**16.7**
Grand Total	**1414**	**6081**	**7495**	**18.9**

Sources: SUS_UDS (28/03/2008), 2007 Index of Multiple Deprivation (SOAs grouped to Ward)

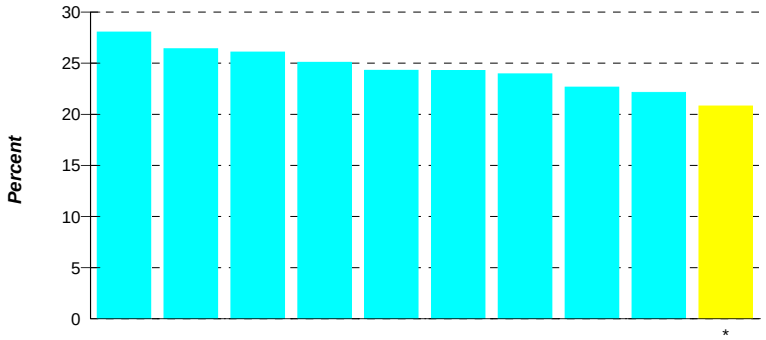
The National Sentinel Caesarean section audit report noted that women of Black African/ Caribbean ethnicity had higher CSR rates as did increasing maternal age. This is noted in the SUS data for 2006.

Age of Mother	Caesarean	No Caesarean	Grand Total	Caesarean sections per 100 live births
<20	34	319	353	**9.6**
20-24	158	960	1118	**14.1**
25-29	261	1476	1737	**15.0**
30-34	468	1931	2399	**19.5**
35-39	362	1158	1520	**23.8**
40+	131	237	368	**35.6**
Grand Total	**1414**	**6081**	**7495**	**18.9**

Ethnicity of Mother	Caesarean	No Caesarean	Grand Total	Caesarean sections per 100 live births
White	1079	4533	5612	**19.2**
Asian or Asian British	57	254	311	**18.3**
Black or Black British	22	81	103	**21.4**
Mixed	26	105	131	**19.8**
Other Ethnic Groups	19	96	115	**16.5**
Not stated	211	1012	1223	**17.3**
Grand Total	**1414**	**6081**	**7495**	**18.9**

The ORH Trust had the lowest C-section rates within the South Central SHA during 2005-06. (Review of Aspects of Maternity Services in NHS South Central, PHRU, 2007) The Healthcare Commission noted a rate of just over 20% for the ORH. The RBBH Trust on the other hand had the highest rates of all trust in South Central.

C-section rates among Trusts in South Central SHA



Oxford Radcliffe Hospitals vs South Central within South Central

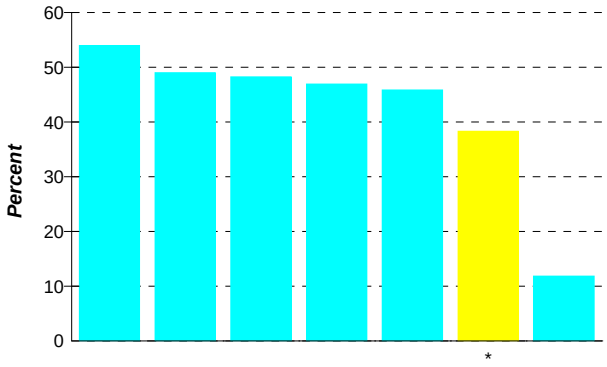
Instrumental delivery rate

Using SUS data for 2006, we noted an assisted delivery rate of 16.1 per 100 live births for women resident within Oxfordshire PCT. This figure is similar to that of the ORH for all women as reported in the HCC maternity services review.

Deprivation grouping	Assistance	No Assistance	Grand Total	Assisted Births per 100 Births
30 Least Deprived	216	1266	1482	**14.6**
Neither Most Nor Least Deprived	593	3067	3660	**16.2**
30 Most Deprived	399	1954	2353	**17.0**
Grand Total	**1208**	**6287**	**7495**	**16.1**

The Healthcare commission data indicates that the ORH Trust has the highest rates of vaginal delivery although the rates of epidural pain relief are the highest in the South Central region as well. Hence overall 'normal' delivery[13] rates are just under 40%[14].

Fig.1 % women with 'normal' vaginal birth (no induction or epidural)



Oxford Radcliffe Hospitals vs South Central within South Central

Rates of Assistance (including instrumental deliveries) for Live Births by Ethnicity of Mother, 2006

Ethnicity of Mother	Assistance	No Assistance	Grand Total	Assisted Births per 100 Births
White	905	4707	5612	**16.1**
Asian or Asian British	58	253	311	**18.6**
Black or Black British	13	90	103	**12.6**
Mixed	23	108	131	**17.6**
Other Ethnic Groups	21	94	115	**18.3**
Not stated	188	1035	1223	**15.4**
Grand Total	**1208**	**6287**	**7495**	**16.1**

Sources: SUS_UDS (28/03/2008), 2007 Index of Multiple Deprivation (SOAs grouped to Ward)

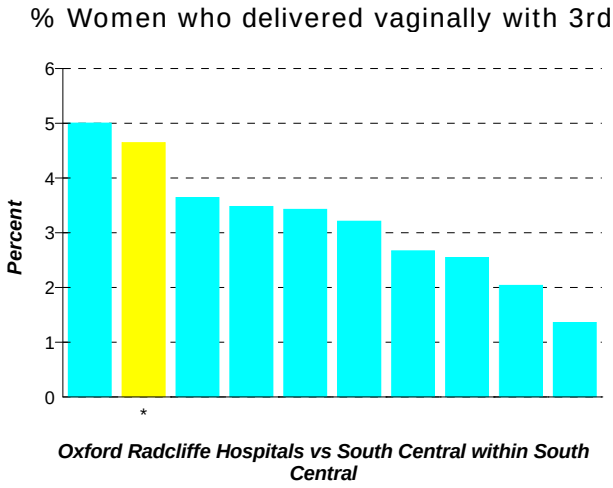
[13] Information Centre definition of a normal delivery as being one where a woman

- Starts labour without induction.
- Did not have any anaesthesia (general, spinal or epidural),
- Did not have a caesarean (planned or emergency)
- Did not have an instrumental delivery (forceps or ventouse/vacuum),
- Did not have an episiotomy.

[14] http://www.birthchoiceuk.com/Frame.htm

Maternal morbidity

The ORH has the second highest rate of vaginal 3rd and 4th degree tears as noted in the HCC survey. This figure should be viewed in context of the lower rate of Caesarean sections at the site.



The rate of eclampsia is less than 1 per 1000 deliveries at the ORH. Good antenatal care would help detect the warning signs early and therefore avoid the situation of having a women presenting with eclampsia.

Obstetric inpatient activity (FCEs)

There were 10377 Obstetric FCEs during 2006 for women resident in Oxfordshire PCT. 9961 (96%) of these occurred at the ORH with the RBBH accounting for 2.5% of the total.

Trust	FCEs
The Oxford Radcliffe Hospital NHS Trust	9961
Royal Berkshire & Battle Hospital NHS Trust	251
Swindon & Marlborough NHS Trust	60
Buckinghamshire Hospitals NHS Trust	16
Gloucestershire Hospitals NHS Foundation Trust	14
Others (less than 10 FCEs in the year)	75
Total	10377

A non significant trend was noted in the number of FCEs carried out when compared to deprivation status.

Deprivation status	FCEs	Total number of births	Number of FCEs per pregnancy
30 Least Deprived	1794	1483	1.2
Neither Most Nor Least Deprived	4821	3674	1.3
30 Most Deprived	3346	2362	1.4
Total	9961	7519	1.3

SCBU admissions

The data obtained from SUS for Oxfordshire PCT registered women in 2006 suffers from a 50% absence of post code data. Hence it is difficult to estimate for certain if there is any variation in the admission rate by deprivation below. The rate of admission based on live births among these groups however points to higher rates of admission among children born to women in more deprived wards.

Deprivation status	Number of SCBU admissions	Total live births	Rate of admission (per 1000 live births)
30 Least Deprived	32	1482	21.5
Neither Most Nor Least Deprived	94	3660	25.6
30 Most Deprived	76	2353	32.2
Blank Postcode *	148	-	-
Total	350	7495	46.6

Section 6. Infant adverse outcomes (Rates for LA's to be interpreted with caution due to low numbers)

Perinatal and neonatal mortality – Still births and deaths occurring within 7 and 28days days per 1000 total births

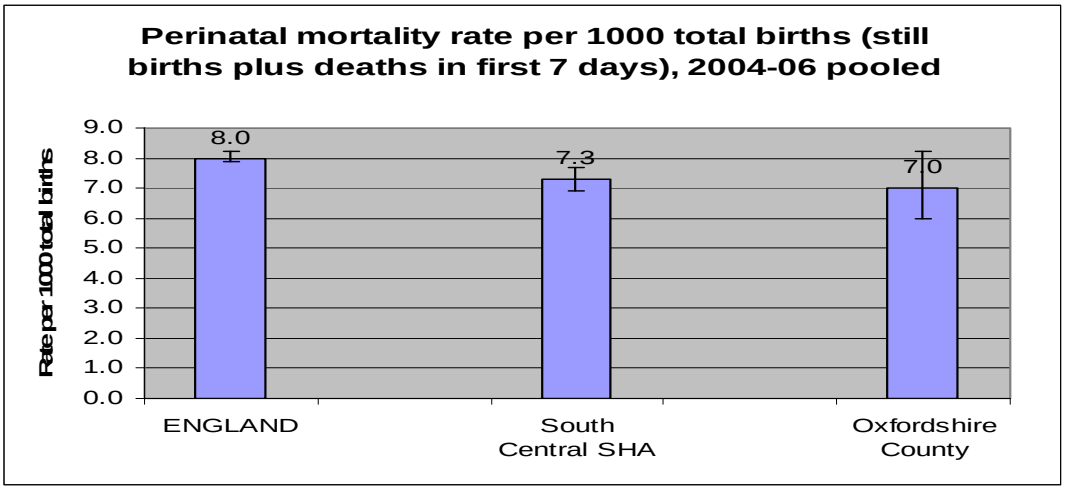
Infant mortality – Deaths under 1 year age per 1000 total live births

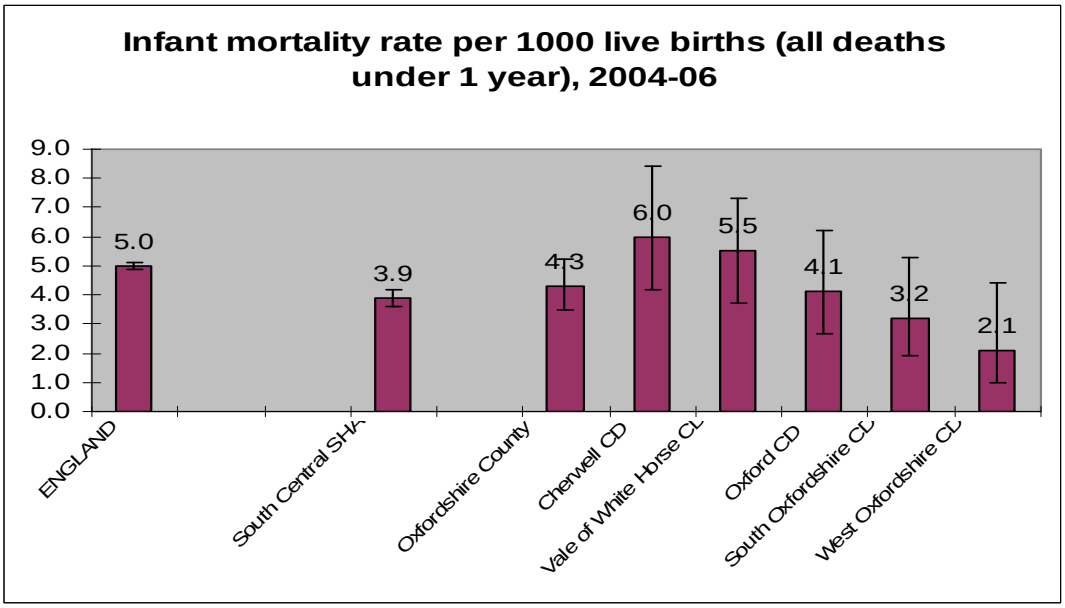
	2004		2005		2006	
	E&W	Oxon County	E&W	Oxon County	E&W	Oxon County
Under 1 year (deaths under 1 year per 1000 live births)	5.1	4.3	5.0	4.2	5	4.4
Under 4 weeks (deaths under 4 weeks per 1000 live births)	3.5	2.5*	3.4	3.2	3.5	2.6
Perinatal mortality rate (stillbirths and deaths under 1 week combined per 1000 total live and stillbirths)	-	-	7.9	7.1	7.9	6.2

- These figures have been excluded, due to a change in the definitions
** Denotes a rate calculated from less than 20 events*

The table above suggests that Oxfordshire women have better infant outcomes as compared to England and Wales. However, it is well documented that outcomes are far worse among women in the most deprived classes as compared to the least deprived. Ethnicity is another documented factor affecting infant outcomes. e.g Babies born in the most deprived areas of the country are up to six times more likely to die in infancy while babies of mothers born in Pakistan, the Caribbean and parts of Africa have particularly high infant mortality rates[15].

[15] http://www.nimhe.csip.org.uk/silo/files/maternity-matters-equality-impact-assessment.pdf





Source:
http://www.nchod.nhs.uk/NCHOD/Compendium2007_12.nsf/($All)/3BB55DCE5F5E8578802573B5003E636B/$File/04N_181CRP2_06_V1_D.xls?OpenElement#a41

Infant mortality by deprivation status, Oxfordshire county, 2006

Deprivation grouping	Total Infant Deaths	Live Births	Infant mortality rate per 1000 births
30 Least Deprived	11	1766	6.2
Neither Most Nor Least Deprived	10	3840	2.6
30 Most Deprived	14	2385	5.9
Grand Total	**35**	**7991**	**4.4**

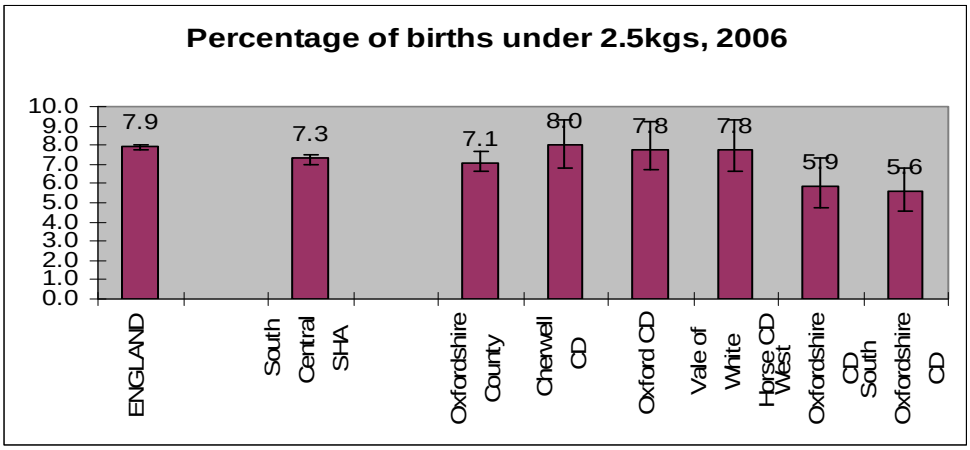
Sources: ADBE 2006 (Oxfordshire, Buckinghamshire, Wiltshire), ADDE 2006 (Oxfordshire, Buckinghamshire, Wiltshire), 2007 Index of Multiple Deprivation (SOAs grouped to Ward)

Perinatal mortality is a good indicator of the availability of high quality healthcare to a population. Infant mortality on the other hand is determined in a large part by non medical factors like social deprivation, education status of the mother, employment status etc. The infant mortality rate in Cherwell DC is higher than the rate for England, although not statistically significant.

Nationally, a clear U-shaped association between maternal age and perinatal mortality is evident in the current national data[16] . The CEMACH report states that with the steadily increasing average maternal age, maintaining perinatal mortality at current rates may be a challenge in the years ahead. In line with maternal mortality data, there is also a clear association with both ethnicity and social deprivation. Data from the ORH for 2007 also shows that Pakistani and Indian women had a higher rate of still births as compared to other ethnic goups. However, again the numbers of this ethnic group delivering at the ORH are very small compared to the White British population and therefore comparisons are difficult to make.

Low birth weight

Oxfordshire County	2004		2005		2006	
	E&W	Oxon County	E&W	Oxon County	E&W	Oxon County
7.1 Proportion < 2500gms (per 100 live births with stated birthweight)	7.6	6.4	7.6	7.0	7.6	6.8



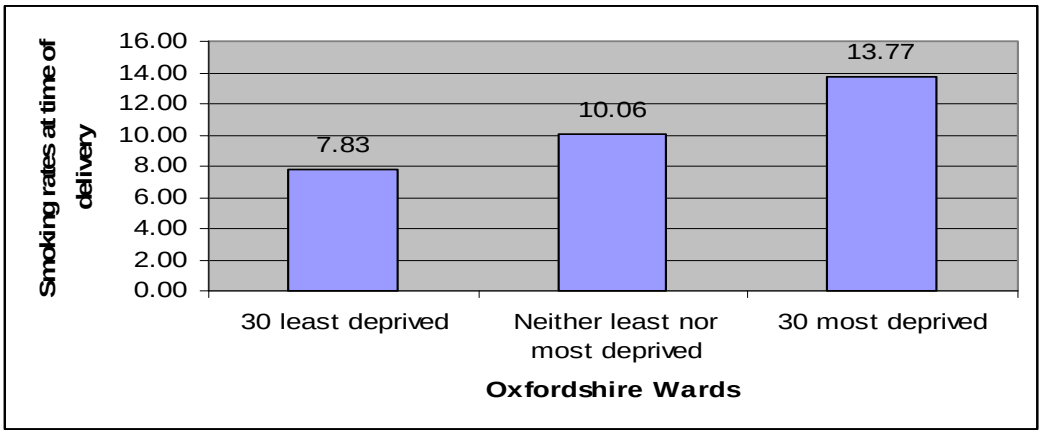
In 2006, 8.3% of live births among Oxfordshire women resident in the 30 most deprived wards were under 2.5kgs as compared to 6.4% of women resident in the 30 least deprived wards.

[16] Confidential Enquiry into Maternal and Child Health. Perinatal Mortality2005: England, Wales and Northern Ireland. CEMACH: London; 2007.

Section 8. Public health targets

- Smoking at the time of delivery – provision and uptake of cessation advice

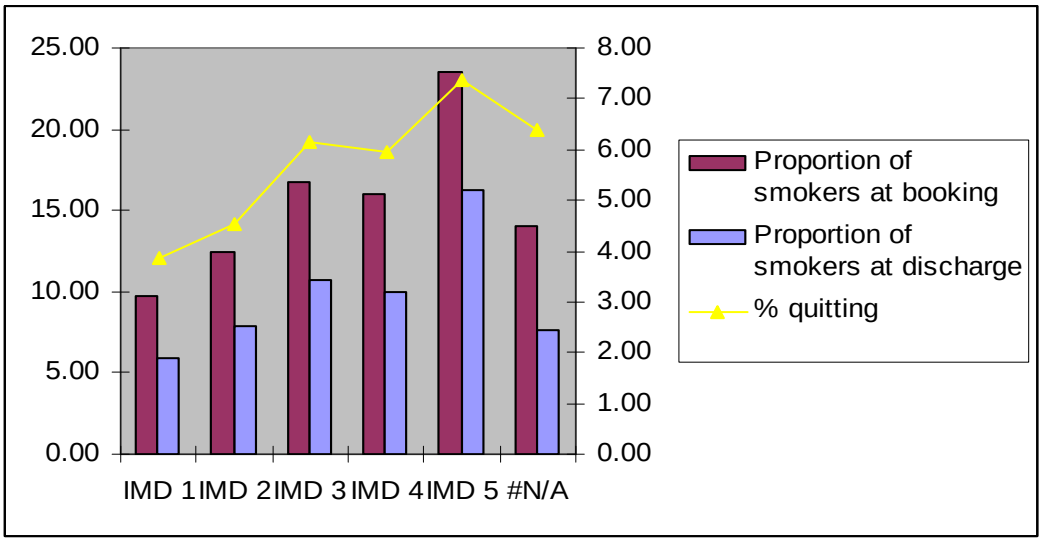
Between 2004 and 2007, 21,387 women delivered at the ORH. Of these women, 10.8% were smoking at the time of delivery. The graph below however shows the disparity in the rates between the women living in the most deprived wards as compared to the least.



Sources: BF&SATOD 03/06 Data, ORH Annual LDP Report - Breast Feeding and SATOD CY 06 and 07, 2007 Index of Multiple Deprivation (SOAs grouped to Ward)

Based on the data for 2007 supplied by the ORH, 13.4% of Oxfordshire women who delivered at the ORH Trust were smoking at the time of booking. At the time of delivery, the rate had dropped to 8.5%, equating to 361 women reporting that they quit smoking during pregnancy.

Examining the same data for relationship with deprivation, we note that the prevalence of smoking is the highest among women from the most deprived quintile of wards as is the prevalence at the time of discharge. However, the highest rates of quitting during pregnancy are also seen among women from the most deprived wards. This obviously addresses inequalities.

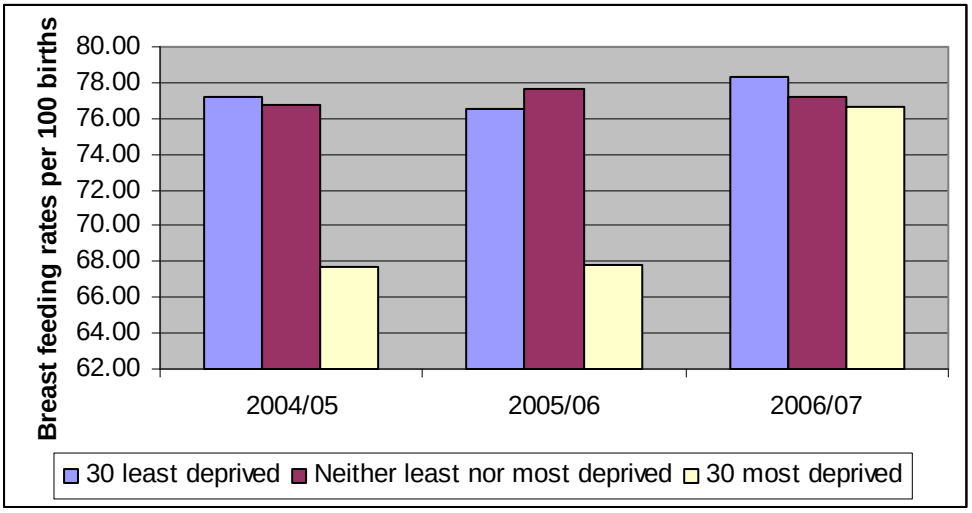


The adverse effects of smoking during pregnancy derived from outcome data from the ORH for 2007 are illustrated below. The numbers involved are very low however and not useful for statistical purposes.

	Rates of (per 1000 women delivering)		
Smoking status	**Antepartum still born**	**Foetal death**	**Intrapartum still born**
non smoking at discharge	0.28	0.24	0.03
smoking at discharge	0.80	0.16	0.16

- Breast feeding initiation rate

The overall breast feeding initiation rates* have increased over the years from 73.97 to 77.23 per 100 live births. The graph below however demonstrates the difference in the initiation rates among women living in the most deprived wards as compared to the least deprived.(* data restricted to ORH deliveries only)



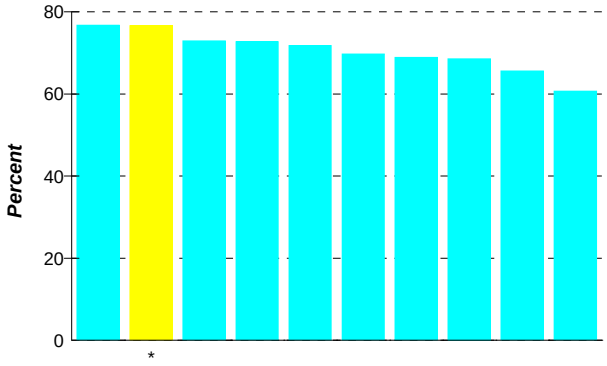
Sources: BF&SATOD 03/06 Data, ORH Annual LDP Report - Breast Feeding and SATOD CY 06 and 07, 2007 Index of Multiple Deprivation (SOAs grouped to Ward)

The Wallingford and Chipping Norton Community Hospitals are fully certified as 'Baby friendly' hospitals based on their meeting the 10 criteria required to promote Breast feeding[17].

[17] http://www.babyfriendly.org.uk/page.asp?page=60

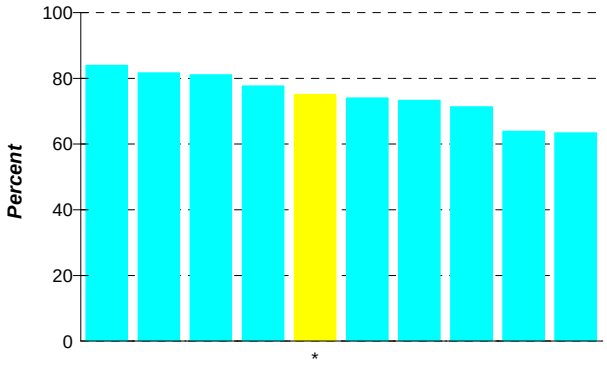
Patient satisfaction:
(To be read in conjunction with Priscilla's paper)

Fig: Women's satisfaction with their overall care



Oxford Radcliffe Hospitals vs South Central within South Central

Fig: % women given a choice of where to have their baby



Oxford Radcliffe Hospitals vs South Central within South Central

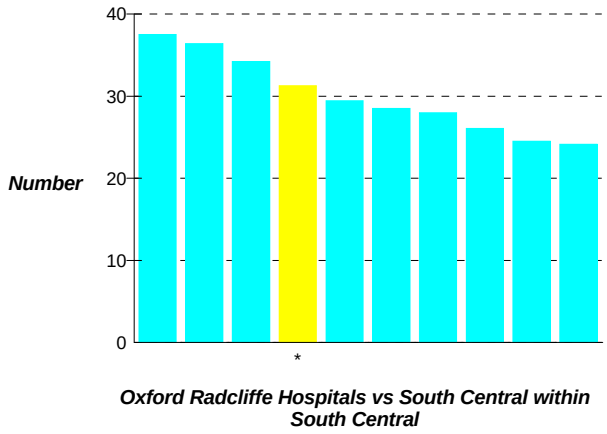
Capacity:
Staffing

Towards Safer Childbirth indicates that to support on-to-one care in delivery the equivalent of 36 midwives per 1000 deliveries are required rising to 40 in trusts handling more complex women.
The HCC survey indicates that the ORH Trust which receives tertiary referrals is operating at a shortfall.

It has been calculated that on average a vulnerable woman would need 2.5 additional hours of midwife contact time and 4 hours of care from other branches of the NHS[18].

[18] http://www.nimhe.csip.org.uk/silo/files/maternity-matters-equality-impact-assessment.pdf

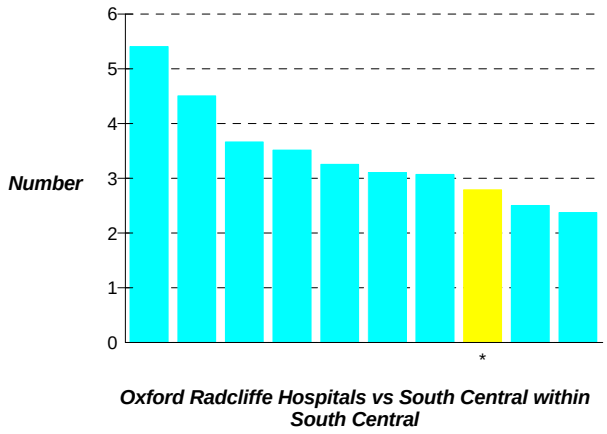
Chart E5a: Midwives per 1000 deliveries



- birthrate plus
(needs to be inputted)

Beds

E11a: Delivery beds per 1000 deliveries



This graph would indicate that the number of beds available is less than the average available in South Central. Whether this has ever resulted in women in labour being diverted elsewhere is not known.

Finance:
(Work carried out by Nina Griffith)
PCT funding
Additional streams of funding

3. Findings:

- There are roughly 146,693 women in the child bearing age group (15-44yrs) registered with Oxfordshire PCT in 2008. This population is estimated to make up 44% of the total population of women in Oxfordshire PCT. This figure however hides a variation, in that women in this age group make up 55% of all women in Oxford City council area while only 36% in West Oxfordshire.
- Over the next 20 years, the population of 15-44yrs women is likely to grow by 2%. This growth is expected to be led by Cherwell Vale and Oxford City.
- There is a higher proportion of women living in the more deprived quintiles of wards in Oxfordshire as compared to the least deprived quintiles.
- Live birth rates and Fertility rates have been relatively stable over the last three years. More deprived wards have higher rates of fertility.
- Between 88 to 97% of Oxfordshire women, receive the minimum number of antenatal checkups at the ORH.
- Just under 7% of pregnant women booked late. Women from the less deprived quintile of wards tended to book later than women from more deprived wards. There was a higher proportion of late bookings among women from Black and Chinese ethnic groups.
- There was a higher proportion of pregnant women in more deprived wards who were either obese or overweight at the time of booking. The prevalence of overweight among pregnant women mirrors community prevalence rates.
- Most deliveries at the ORH take place at the John Radcliffe. However, a higher proportion of women from more deprived wards were delivered at the Horton hospital in 2007. Home delivery rates are around 3%.
- The C-section rates at the ORH are the lowest in the South Central SHA region. There was no variation by ethnicity or deprivation status. However, morbidity due to perineal tears was higher – probably a direct result of the higher number of 'normal' deliveries conducted at the ORH.
- Cherwell DC had the highest rates of infant mortality and low birth weight, although not statistically different from other DCs or England rate.
- Smoking rates at booking are highest as expected among women from most deprived wards. However, the rates of quitting by the time of delivery was also higher among the most deprived. This addresses inequalities.
- The gap between the most deprived wards and the least deprived in terms of breast feeding initiation rates has been reduced in the last year.

Limitations:

- We have adopted a predominantly epidemiological basis to this needs assessment. Due to small numbers, rates are an unreliable measure for comparison. Where possible, we have looked at three years of data. However, time and resource constraints have limited some analysis to just a single years' data.
- The needs assessment has not looked in detail into the service delivery aspect in detail – consequently there is no discussion on issues relating to the provider concerns.
- It was agreed that we would not be assessing needs relating to assisted fertility and fetal medicine.

Recommendations:
- After discussion following meeting on the 28th April.

Issues to be addressed in the future:

- Maternal health needs of Travellers
- Maternal health needs of Ethnic minorities

Appendix

Table 1. Where and how did Oxfordshire women deliver within the ORH, 2007?

Place of Delivery	Delivery Method	Multipara	Primipara	Total
John Radcliffe Maternity	Breech	21	23	44
	CS in labour	149	311	460
	CS not in labour	460	209	669
	Forceps	90	507	597
	Spontaneous	1991	1273	3264
	Unknown	2	2	4
	Ventouse	87	338	425
John Radcliffe Maternity Total		2800	2663	5463
Horton Maternity Unit	Breech	4	4	8
	CS in labour	42	104	146
	CS not in labour	89	51	140
	Forceps	11	70	81
	Spontaneous	538	285	823
	Ventouse	18	69	87
Horton Maternity Total		702	583	1285
Midwife led Units				
Chipping Norton	Spontaneous	83	29	112
Wallingford	Spontaneous	115	60	175
Wantage	Spontaneous	71	11	82
Home	Breech	1		1
	Spontaneous	183	41	224
	Unknown	2		2
Home Total		186	41	227
In Transit	Spontaneous	10	1	11
Other	Breech	1		1
	Spontaneous	3		3
Other Total		4		4
Grand Total		3971	3388	**7359**

Table 2. Outcome of deliveries by parity and location in Oxfordshire women at the ORH Trust, 2007

Place of delivery	Outcome	Multiparous	Primipara	Grand Total
John Radcliffe Maternity	Live Birth	2814	2683	5497
	Antepartum Still Born	10	12	22
	Fetal Death	6	8	14
	Intrapartum Still Born	1	2	3
	Other Still Born	2		2
	Termination	13	12	25
John Radcliffe Maternity Total		2846	2717	5563
Horton Maternity	Live Birth	701	586	1287
	Antepartum Still Born	3	3	6
	Fetal Death	1	2	3
	Termination	2		2
Horton Maternity Total		707	591	1298
Home	Live Birth	186	40	226
	Other Still Born		1	1
Home Total		186	41	227
Wallingford	Live Birth	115	60	175
Chipping Norton	Live Birth	83	29	112
Wantage	Live Birth	71	11	82
In Transit	Live Birth	10	1	11
Other	Live Birth	4		4
Grand Total		**4022**	**3450**	**7472**

Table 3. Outcome of delivery by Ethnic group, Oxfordshire residents at the ORH, 2007

Ethnic Group	Antepartum Still Born	Fetal Death	Intrapartum Still Born	Live Birth	Other Still Born	Termination	Grand Total	Stillbirth rate/1000 women
White - British	19	10	2	5452	2	20	5505	4.2
Any other White background	3	1		625		2	631	4.8
White - Irish	2			75			77	26.0
Indian		2		135		1	138	0.0
Pakistani	2	1		189		1	193	10.4
Bangladeshi				52			52	0.0
Chinese				57		1	58	0.0
Mixed - White and Asian				9			9	0.0
Mixed - White and Black African				8			8	0.0
Mixed - White and Black Caribbean				12			12	0.0
Any other Asian background				72			72	0.0
Black - African				173	1	1	175	5.7
Black - Caribbean				27			27	0.0
Any other Black background	1			19			20	50.0
Any other Ethnic Group	1			72			73	13.7
Any other Mixed background				27			27	0.0
Does not want to give Ethnic Group		3	1	390		1	395	2.5
Grand Total	28	17	3	7394	3	27	7472	4.6

*Rates unreliable as numbers very small.

Glossary

Healthcare Commission Maternity Services review 2007-

This was a national review which used indicators arranged in a performance framework with three broad categories:

- Clinical care – indicators that measure the quality of clinical care provided and which take into account NICE guidance and guidance set by other influential organisations, in particular Royal Colleges.
- Women centred care – indicators which reflect on the experience women have received and check whether realistic expectations are being met and there is sufficient progress in implementing the National Service Framework for maternity.
- Efficiency and capability – indicators reflecting on department resources, for example, midwife and obstetrician staffing, and how these relate to the number of deliveries managed by the trust along with indicators which look at the quality of facilities and the types of services made available to women.

Total Fertility rate:
The Total Fertility Rate (TFR) is the average number of children a group of women would have if they experienced the age-specific fertility rates of the year throughout their childbearing lifespan.

Maternal mortality:
Maternal deaths while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

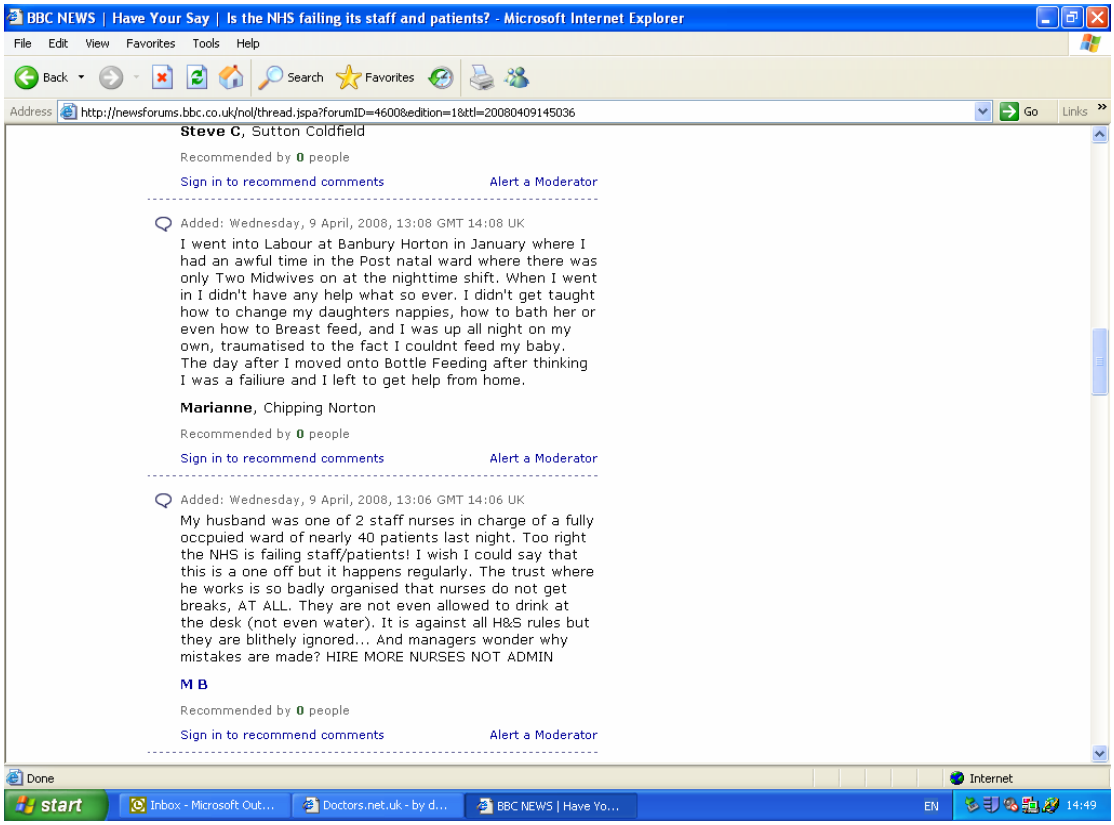
Perinatal and neonatal mortality – Still births and deaths occurring within 7 and 28days days per 1000 total births respectively

Infant mortality – Deaths under 1 year age per 1000 total live births

http://www.healthcareworkforce.nhs.uk/maternity.html

http://www.northwest.nhs.uk/maternity/

In the news


BBC NEWS | Have Your Say | Is the NHS failing its staff and patients? - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://newsforums.bbc.co.uk/nol/thread.jspa?forumID=4600&edition=1&ttl=20080409145036
Go Links
Steve C, Sutton Coldfield
Recommended by 0 people
Sign in to recommend comments
Alert a Moderator
Added: Wednesday, 9 April, 2008, 13:08 GMT 14:08 UK
I went into Labour at Banbury Horton in January where I had an awful time in the Post natal ward where there was only Two Midwives on at the nighttime shift. When I went in I didn't have any help what so ever. I didn't get taught how to change my daughters nappies, how to bath her or even how to Breast feed, and I was up all night on my own, traumatised to the fact I couldnt feed my baby. The day after I moved onto Bottle Feeding after thinking I was a failiure and I left to get help from home.
Marianne, Chipping Norton
Recommended by 0 people
Sign in to recommend comments
Alert a Moderator
Added: Wednesday, 9 April, 2008, 13:06 GMT 14:06 UK
My husband was one of 2 staff nurses in charge of a fully occpuied ward of nearly 40 patients last night. Too right the NHS is failing staff/patients! I wish I could say that this is a one off but it happens regularly. The trust where he works is so badly organised that nurses do not get breaks, AT ALL. They are not even allowed to drink at the desk (not even water). It is against all H&S rules but they are blithely ignored... And managers wonder why mistakes are made? HIRE MORE NURSES NOT ADMIN
M B
Recommended by 0 people
Sign in to recommend comments
Alert a Moderator
Done
Internet
start
Inbox - Microsoft Out...
Doctors.net.uk - by d...
BBC NEWS | Have Yo...
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Appendix: 'Modernising Maternity Care' - Commissioning toolkit requirement:

1. Monitor and assess population's health status

Question	1. Needs significant improvement	2. Meets minimum standards	3. Good to best practice	Evidence source
How does the PCT identify unmet needs of women and their babies throughout pregnancy, birth and afterwards in their catchment area?	PCT public health team does not conduct regular needs assessments, or the methodology is not consistent or grounded in evidence-based practice	PCT public health team conducts annual needs assessments with a consistent methodology to identify gaps in care needs	PCT public health team has a consistent methodology (eg protocol for needs assessments and health equity audits) for identifying unmet needs in the local population, particularly for marginalised subgroups, and uses them to identify gaps in care and opportunities to improve existing services (eg perinatal mental health services)	• Local needs assessment and comprehensive needs analysis • Local Area Agreement • Children and Young People's Plan • Consultation with service users
Does the PCT public health team have reliable and current data specific to women and their babies throughout pregnancy, birth and afterwards?	Population and demographic data is older than one year or does not permit segmentation by age, gender, ethnicity, deprivation or location; PCT lacks a comprehensive set of outcome indicators; data cannot easily be segmented by population subgroup	PCT collects annual demographic and epidemiological data segmented by age, gender, ethnicity, deprivation and location. PCT also measures key outcome indicators such as mortality and morbidity rates by condition, segmentable by population subgroup	PCT collects annual demographic data segmented by age, gender, ethnicity, deprivation, location and other characteristics. Data is compatible with geographic information systems (GIS) and is linked to epidemiological data, including mortality and morbidity for key conditions, segmentable by population subgroup	• Data pooling arrangements across health, social care and education • Comprehensive annual needs assessment and analysis
Does the PCT understand the key health risks and priorities for women and their babies throughout pregnancy, birth and afterwards in their catchment area?	Local public health report is a compendium of statistics and does not offer interpretation or key strategic recommendations	PCT has a fact-based understanding of the major health risks facing its population	PCT has a fact-based understanding of the major health risks facing its childbearing population, as well as an understanding of the risks facing the ethnic minority and other	• Comprehensive needs analysis undertaken • Children and Young People's Plan • Local Area Agreement • Integrated service plans • Annual child health

			population subgroups. Key areas include: • poor access to services; • perinatal and infant mortality; • prematurity; • maternal mortality; • perinatal mental health; • obesity	mapping exercise • Risk assessment undertaken – feeds into the setting of priorities • Jointly agreed priorities • Systems to involve services and users in the setting of priorities