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News

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World TB Day: TB anywhere is TB everywhere

World Tuberculosis (TB) Day 2007 is on 24 March, and has the theme: 'TB anywhere is TB everywhere'. This highlights the infectious nature of TB and emphasises the collective responsibility that touches everyone, everywhere, to contribute towards the global fight against this curable disease.

The World Health Organization (WHO) has just published the 2007 Global TB control report [1]. In 2005 there were an estimated 8.8 million new TB cases worldwide (136 per 100,000 population) and a total of 1.6 million people died of TB. According to WHO estimates, the global TB epidemic may now be on the threshold of decline, although the situation remains critical in many regions of the world such as sub-Saharan Africa and south-east Asia, so there is no room for complacency. The total number of new cases globally is still rising slowly.

Provisional aggregate data on the number of cases of TB reported in the United Kingdom (UK) in 2006 are now available (table). These early estimates indicate a rise of 2% on the provisional number of cases reported in 2005. During 2005 there was an 11% rise in the final number of cases reported (data excluding Scotland). At this stage, it is too early to tell whether these provisional results indicate a slowing of the overall trend of increase in the number of cases. The final total number of TB cases for 2006 is likely to change from the provisional figures due to the receipt of late reports, de-notifications and the removal of duplicate reports. The final results will also include clinical and microbiological information on cases, including drug susceptibility testing results.

Table Provisional number of TB cases and rates per 100,000 reported in the UK: 2005 to 2006*

	2005		2006	
Country	Number of cases	Rate†	Number of cases	Rate†
England	7768	15.4	7942	15.7
Wales	164	5.5	168	5.7
Northern Ireland	76	4.4	61	3.5
Scotland	362	7.1	384	7.5
UK Total	8370	13.9	8555	14.2

* Provisional data as of March 2006 and 2007 respectively, except Scotland, both data as of March 2007. Source: Enhanced Surveillance

† All rates expressed as per 100,000 population, calculated from the Office of National Statistics mid-year population estimates for 2005 (2006 estimates not yet available).

To coincide with World TB Day, the Health Protection Agency has released a newsletter providing a more detailed update on the UK and global TB context [2]. The All-Parliamentary Group on Global Tuberculosis launched its own manifesto for action against TB throughout the world, alongside the WHO global report for 2007 at a meeting in London on the 22 March. Information on this and other events can be obtained from the stop TB partnership website at <http://www.stoptb.org/events/world_tb_day/2007/>.

We would like to acknowledge our colleagues at Health Protection Scotland, The National Public Health Service for Wales, and the Communicable Disease Surveillance Centre Northern Ireland for providing the provisional TB figures.

References

1. *Global tuberculosis control: surveillance, planning, financing. WHO report 2007*. Geneva: World Health Organization (WHO/HTM/TB/2007.376), 2007. Available at: <<http://www.who.int/tb/en/>>.
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National electronic Library of Infection hosts National Knowledge Week on TB

The National electronic Library of Infection (NeLI) <www.neli.org.uk>, along with the *National Knowledge Service – TB Pilot*, is running its first National Knowledge Week from 26 to 30 March 2007, to highlight tuberculosis (TB) and tie in with World TB day on 24 March 2007. A comprehensive collection of peer-reviewed publications will be provided to showcase the best current knowledge and highlight current issues on tuberculosis.

NeLI will link to resources developed for patients, public, and professionals by the *National Knowledge Service - TB Pilot*. These include information resources for managers and staff in hostels for the homeless, for staff working with asylum seekers, and for staff in prisons. Areas of public or professional uncertainty or concern have also been addressed, such as through the development of information resources for carers who work with children, and for healthcare professionals and the public on TB exposure in pregnancy. All these resources are available at <<http://www.hpa.org.uk/tbknowledge/nationalknowledgeserv.htm>>. Links to other useful TB resources on the web will also be provided.

The Health Protection Agency supports the National electronic Library of Infection (NeLI) in collaboration with the National Library for Health (NLH). NeLI is one of the specialist libraries of the NLH, a single portal to evidence-based medical knowledge around infection. The core function of NeLI is to provide access to the best available evidence on prevention, treatment and investigation on infection.

NeLI produces a monthly eNewsletter – which is currently subscribed to by more than 1200 professionals. This provides information on the latest news and new resources added to NeLI. To sign up, visit <www.neli.org.uk>.

Listeria contamination of sandwiches

On 27 February 2007, routine testing of a sandwich sampled from a vending machine in Kent on 20 February, revealed high levels of *Listeria monocytogenes* contamination (160 cfu/g). The vending machine had been operating at 16°C instead of at or below 8°C. The site of manufacture of the sandwich was inspected by local authority environmental health officers on 7 March. Further food and environmental samples were taken and examined by the HPA Collaborating Laboratory, Kent Environmental Microbiology Services. The confirmed results of the subsequent testing were communicated to Kent Health Protection Unit (HPU) on 12 March. They showed significant contamination with *L. monocytogenes* of sandwiches manufactured on this site (both on day of production and at end of shelf-life) and of the environment. Levels of contamination in tested sandwiches ranged from 10 to 270 cfu/g.

An outbreak control team (OCT) meeting was held the same day involving representatives of Kent HPU, Ashford Borough Council, and Kent Environmental Microbiology Service. The factory immediately ceased production, voluntarily. The Food Standards Agency (FSA) was informed. Customers were informed by the manufacturer and advised to withdraw all sandwiches from sale.

Approximately 10,000 sandwiches were produced by the manufacturer on this site each day (except Saturday); approximately 190,000 sandwiches between 18 February and 12 March. Approximately 40% of sandwich distribution was to hospitals in the South East and London. An uncertain proportion of this distribution was consumed by patients (sandwiches were also sold to staff and visitors). The remaining 60% were distributed to various outlets including schools and commercial organisations in the South East, London, and Essex.

A risk assessment was undertaken by the OCT. Information was sent to affected strategic health authorities, for onward distribution within the NHS, and to HPUs. A joint press release was issued by the FSA and the Health Protection Agency on 16 March alerting particularly those in vulnerable groups (pregnant women, older people and the immunosuppressed) to seek medical attention if they became unwell in the following two to three months [1,2].

To date, no cases of listeriosis associated with consumption of sandwiches produced by this manufacturer have been identified.

L. monocytogenes can cause a variety of diseases. Infections range from a mild flu-like illness to severe disease. Infections in pregnancy may precipitate premature birth or miscarriage. Infections in the neonatal period may present with meningitis. Patients whose immunity to infection is impaired, such as those with haematological or solid organ malignancies and transplant recipients may develop septicaemia or meningitis. The infection can be treated with antibiotics; however, in about one third of cases the disease is fatal. Case fatality ratio varies according to co-morbidity. Clinical symptoms include, fever, myalgia, malaise and backache. Occasionally the disease manifests as a food poisoning with diarrhoea, abdominal pain, nausea and/or vomiting. Severe forms include septicaemia, meningitis and encephalitis.

Clinicians should seek advice from their local microbiologist if they suspect a patient has listeriosis, both for the laboratory diagnosis of listeriosis and for advice on treatment. Clinicians are urged to report such infections to the Consultant in Communicable Disease Control in their local Health Protection Unit. Microbiologists should ensure that isolates are sent to the HPA Centre for Infections (Cfi) for further characterisation.

References

1. HPA. Food Standards Agency and Health Protection Agency alerting consumers about sandwiches possibly contaminated with *Listeria* (Press release). London: HPA, 2007. Available at http://www.hpa.org.uk/hpa/news/articles/press_releases/2007/070316_listeria.htm.

2. Food Standards Agency. *Consumers alerted to possible listeria in sandwiches (Press release)*. London: FSA, March 2007. Available at <<http://www.food.gov.uk/news/newsarchive/2007/mar/listeria>>.

New guidance on health clearance for healthcare workers

The UK Department of Health has recently issued new guidance to the NHS on health clearance for tuberculosis, hepatitis B, hepatitis C, and HIV in new healthcare workers [1]. This guidance relates to healthcare workers new to the NHS, those who are moving to a first post or training that involves exposure-prone procedures (EPP), and returning healthcare workers who may have been exposed to serious communicable diseases whilst away from the health service.

The guidance recommends standard health clearance checks that should be completed on appointment for all new healthcare workers, including checks for tuberculosis disease/immunity, the offer of hepatitis B immunisation and testing of post-immunisation response and the offer of hepatitis C and HIV tests. Additional health clearance checks are required for those healthcare workers who will be performing EPPs, and should be completed prior to confirmation of appointment. The healthcare workers must be non-infectious for HIV (antibody negative), hepatitis B (surface antigen negative or, if positive, e-antigen negative with a viral load of 10^3 genome equivalents/ml or less) and hepatitis C (antibody negative or, if positive, negative for hepatitis C RNA).

The new guidance, which is consistent with existing policy, is intended to restrict healthcare workers infected with bloodborne viruses from working in the NHS in clinical areas where their infection may pose a risk to patients in their care. Testing is a one-off and relies on the current obligation for healthcare workers to seek confidential professional advice, if they believe that they may subsequently have been exposed to a serious communicable disease.

In addition, the UK Department of Health has released new guidelines based on recommendations from the Advisory Group on Hepatitis, allowing certain hepatitis B infected healthcare workers to perform EPPs whilst on oral antiviral therapy [2]. Previous guidance, issued in 2000, had restricted e-antigen negative hepatitis B infected healthcare workers from performing EPPs if their HBV DNA level was greater than 10^3 genome equivalents/ml (geq/ml). Those with a level at 10^3 geq/ml were subject to annual HBV DNA level testing with a restriction on EPP practice if their viral load went above that level [3]. However, the new guidance now permits e-antigen negative hepatitis B infected healthcare workers with pre-treatment HBV DNA levels between 10^3 and 10^5 geq/ml to perform EPPs while on oral antiviral therapy if their viral load level is maintained below 10^3 geq/ml. It is recommended that these healthcare workers should have their HBV DNA levels checked every three months, and should cease to perform EPPs if the level rises above 10^3 geq/ml on or after treatment, or if they stop treatment for any reason. Due to patient safety concerns, healthcare workers with a baseline viral load of above 10^5 geq/ml will not be allowed to perform EPPs while taking oral antiviral therapy. If a patient is exposed to the blood of an infected healthcare worker, the requirement for post-exposure prophylaxis and other measures should be assessed at a local level.

References

1. Department of Health. *Health clearance for tuberculosis, hepatitis B, hepatitis C and HIV: New healthcare workers*. London: Department of Health, 16 March 2007. Available at <http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_073132>

2. Department of Health. *Hepatitis B infected healthcare workers and antiviral therapy*. London: Department of Health, 16 March 2007. Available at

<http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_073164>

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Immunisation

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- ▶ Invasive meningococcal infections, England and Wales: laboratory reports, weeks 06-10/2007
- ▶ Laboratory confirmed cases of measles, mumps and rubella, England and Wales: October to December 2006
- ▶ Surveillance of viral markers of infection detected in antenatal samples tested by the National Blood Service (NBS): England, 2006

Publication of this quarter's COVER report has been delayed by one week to **30 March**, to co-ordinate with the publication schedule of Scottish immunisation statistics by Health Protection Scotland. It will be similarly delayed in June, with publication moved from 22 June to 29 June.

Invasive meningococcal infections, England and Wales: laboratory reports, weeks 06-10/2007

Please note that the data in this table contains errors. Please view the corrected data in HPR Vol 1, Issue No.25, 22 June 20007 available at:

<<http://www.hpa.org.uk/hpr/archives/2007/hpr2407.pdf>>.

	Method of diagnosis			Total reports	Cumulative*
	CSF and blood Culture	Non-culture	Other sites	06-10/06	Total to week 10/2007
Group A	-	-	-	-	7
B	-	-	-	-	7
C	-	-	-	-	1
W135	-	-	-	-	-
X	-	-	-	-	-
Y	-	-	-	-	-
Z/29E	-	-	-	-	-
Ungroupable	-	-	-	-	-
Ungrouped	1	-	-	1	2
Total	1	-	-	1	17

*Latex antigen, microscopy, polymerase chain reaction combined Health Protection Agency Centre for Infections data and Meningococcal Reference Unit data.

Laboratory confirmed cases of measles, mumps and rubella, England and Wales: October to December 2006

Data presented here is for the fourth quarter of 2006 (ie, October to December 2006). Cases include those confirmed by oral fluid IgM antibody tests and routine laboratory reports (table 1). Analyses are by date of onset. Regional breakdown figures relate to Government Office Regions rather than regional health authorities (pre-April 2002 definitions) as used previously in this section. Quarterly figures for cases confirmed by oral fluid antibody detection only from 1995 are available from:

<http://www.hpa.org.uk/infections/topics_az/measles/data_not_confirmed.htm>
 <http://www.hpa.org.uk/infections/topics_az/mumps/data_quarter.htm>
 <http://www.hpa.org.uk/infections/topics_az/rubella/data_rub_not.htm>

and annual total numbers of confirmed cases by health region and age from:

<http://www.hpa.org.uk/infections/topics_az/measles/data_reg_age.htm>
 <http://www.hpa.org.uk/infections/topics_az/mumps/data_reg_age.htm>
 <http://www.hpa.org.uk/infections/topics_az/rubella/data_reg_age.htm>

Table 1 Total confirmed cases of measles, mumps and rubella, and oral fluid IgM antibody tests in notified cases: weeks 40-52/2006

	Cases			Oral fluid IgM antibody results		Results		
	Notified	Tested	%	Total Positive	Recently vaccinated	Oral fluid IgM confirmed	Other lab confirmed	Total Confirmed cases
Measles	506	452	89%	10	5	5	10	15
Mumps	1522	1033	68%	181	1	183	101	284
Rubella	199	159	80%	3	1	2	8	10

As previously reported, the cohort at an increased risk of mumps because they have either received no measles, mumps, and rubella (MMR) vaccine, or only one dose were born between 1981 and 1990 [1]. In 2004, the number of notified cases and the proportion of oral fluid samples tested and confirmed increased dramatically. From February 2005, the Health Protection Agency (HPA) recommended that, during this period of increased mumps incidence, oral fluid samples should not be taken from individuals with clinical mumps who were born between 1981 and 1986, and that they should be managed as if they were a confirmed case [2]. In January 2006, this recommendation was changed and it is now recommended that cases in all age groups should be confirmed by oral fluid testing [3].

Measles

Only fifteen cases of confirmed measles with onset dates in the fourth quarter of 2006 were reported compared to 76 cases in the previous quarter [4]. This continuing decline in cases in the second half of the year follows the dramatic rise seen in the first six months of 2006 [5,6] giving a provisional annual total of 736 cases. The current quarterly total is similar to the number of cases recorded at the end of 2005 and demonstrates that the outbreaks in travelling communities observed earlier in the year have now resolved. Ten cases were children aged under 15 years (one aged less than 1 year, six aged from 1 to 4 years; three aged from 5 to 9 years), five were adults aged between 17 and 37 years. Two cases reported a history of receiving MMR vaccine although only one was documented.

Mumps

Two hundred and eighty-four cases of mumps with onset dates in the fourth quarter of 2006 were laboratory confirmed compared to 546 in the previous quarter, and bringing the

provisional number of total cases for 2006 to 4408 [4]. This is the fifth successive quarter to report a drop in confirmed cases and is the lowest quarterly total recorded since October to December 2002 when 159 cases were reported [7]. Notified cases also decreased this quarter from 2017 to 1522. Cases continue to be confirmed predominantly in those aged between 15 and 24 years (59%), known to be at highest risk due either to not having been routinely offered MMR vaccination in childhood, or having only received one dose (table 2).

Table 2 Confirmed cases of mumps by age group and region, England and Wales: weeks 40-52/2006

Region	Age Group								Total
	<1y	1-4y	5-9y	10-14y	15-19y	20-24y	>25y	Not known	
North East	–	–	–	1	3	1	2	–	7
North West	–	1	1	1	7	17	14	–	41
Yorkshire & Humber	–	–	–	1	18	25	16	1	61
East Midlands	–	–	–	1	10	10	11	–	32
West Midlands	–	–	–	–	3	3	7	1	14
East of England	–	–	–	–	2	3	5	–	10
London	–	1	3	5	3	12	11	1	36
South East	–	–	2	3	12	27	14	1	59
South West	–	1	–	–	–	3	4	–	8
Wales	–	–	1	–	2	1	2	–	6
Not known	–	–	–	2	3	2	2	1	10
Total	–	3	7	14	63	104	88	5	284

Rubella

Ten confirmed cases of rubella were reported this quarter bringing the provisional total for 2006 to thirty-one thirty cases. Cases were reported in a one year old (still undergoing investigation), and in three adult women (two of whom were pregnant) – F 34y who acquired her infection in the United Kingdom and F 26y believed to be infected in France. One of these women has proceeded to termination and the other has since delivered a baby who appears to be unaffected but is still being followed up. There were six cases reported in adult men whose ages ranged from 24 to 33 years.

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1. HPA. Laboratory confirmed cases of measles, mumps and rubella, England and Wales : April to June 2003. *Commun Dis Rep CDR Wkly* [serial online] 2003 [cited 16 March 2007]; **13** (39): Immunisation. Available at <<http://www.hpa.org.uk/cdr/archives/2003/cdr3903.pdf>>.
2. HPA. Changes in laboratory testing as the increase in mumps cases in England and Wales continues. *Commun Dis Rep CDR Wkly* [serial online] 2005 [cited 16 March 2007]; **15** (5): News. Available at <<http://www.hpa.org.uk/cdr/archives/2005/cdr0505.pdf>>.
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4. HPA. Laboratory confirmed cases of measles, mumps and rubella, England and Wales : July to September 2006. *Commun Dis Rep CDR Wkly* [serial online] 2006 [cited 16 March 2007]; **16** (47): Immunisation. Available at <<http://www.hpa.org.uk/cdr/archives/2006/cdr4706.pdf>>.
5. HPA. Laboratory confirmed cases of measles, mumps and rubella, England and Wales : January to March 2006. *Commun Dis Rep CDR Wkly* [serial online] 2006 [cited 16 March 2007]; **16** (25): Immunisation. Available at <<http://www.hpa.org.uk/cdr/archives/2006/cdr2506.pdf>>.
6. HPA. Laboratory confirmed cases of measles, mumps and rubella, England and Wales : April to June 2006. *Commun Dis Rep CDR Wkly* [serial online] 2006 [cited 16 March 2007]; **16** (39): Immunisation. Available at <<http://www.hpa.org.uk/cdr/archives/2006/cdr3906.pdf>>.
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Surveillance of viral markers of infection detected in antenatal samples tested by the National Blood Service (NBS), England: 2006

The National Blood Service (NBS) provide a routine screening service for antenatal samples to Primary and Acute Care trusts in England for blood grouping and detection of markers of infection. The NBS performs testing on the antenatal samples for hepatitis B surface antigen (HBsAg) and antibodies for HIV, syphilis, and rubella. The number of antenatal samples tested and positive is reported to the NBS/HPA Centre for Infections Antenatal Surveillance Scheme by NBS testing laboratories each month. If an antenatal sample is positive for HBsAg, antibodies to HIV or syphilis or negative for antibodies to rubella, the local health provider requesting the testing is advised to undertake confirmatory testing, and refer the patient for appropriate care.

In 2006 the NBS tested more than 150,000 antenatal samples from England (excluding London).

A total of 850 antenatal samples were identified by the NBS as positive for markers of infections (table). Of these samples, 469 (55%) were positive for HBsAg, 177 (21%) were positive for anti-HIV, and 204 (24%) were positive for anti-*Treponema pallidum*. Over 2% of all antenatal samples lacked antibodies to rubella. The frequency of detection varies between markers as well as collection centres. This could reflect the type of the population covered by the centre as well as the number tested in each centre.

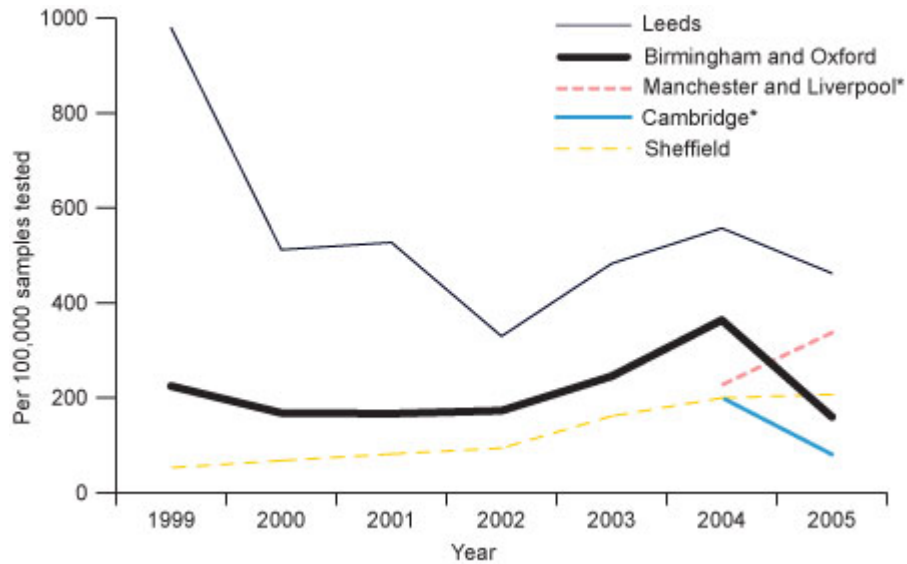
Table Infections detected in antenatal samples tested by the National Blood Service in England 2006

Collection centre*	Number	HBsAg	Anti-HIV	Anti- <i>T.pallidum</i>	Anti-rubella†
Birmingham and Oxford	Reactive	289	104	98	1457
	Tested	72,423	68,757	72,423	72,423
	frequency per 100,000 samples tested	399	151	135	2012
Cambridge	Reactive	15	9	11	–
	Tested	14,232	14,189	14,291	–
	frequency per 100,000 samples tested	105	63	77	–
Leeds	Reactive	5	1	10	–
	Tested	2742	2725	12,148	–
	frequency per 100,000 samples tested	182	37	82	–
Manchester and Liverpool	Reactive	36	2	17	86
	Tested	9169	3756	21,101	4253
	frequency per 100,000 samples tested	393	53	81	2022
Sheffield	Reactive	124	61	68	–
	Tested	55,360	53,339	55,263	–
	frequency per 100,000 samples tested	224	114	123	–
Total	Reactive	469	177	204	1,543
	Tested	153,926	142,766	175,226	76,676
	frequency per 100,000 samples tested	305	124	116	2012

*NBS centre where samples were received but not necessarily where samples have been tested

†Includes samples confirmed non-reactive for rubella antibodies.

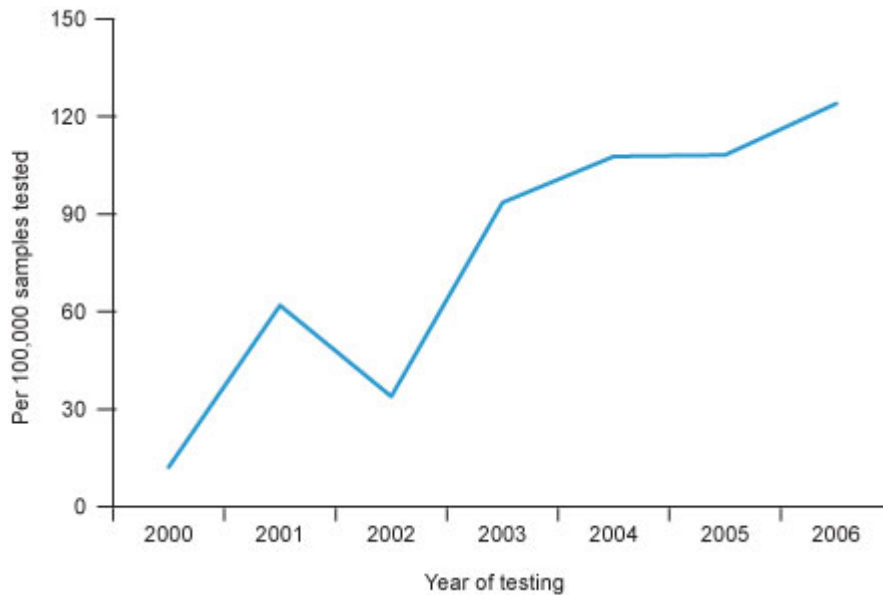
Figure 1 The frequency of HBsAg positive antenatal samples tested by the NBS, England: 1999 to 2005



*Data available from 2004.

In the period from 1999 to 2006, the average annual frequency of antenatal samples positive for HBsAg was 219 per 100,000 (95%CI 210 to 229 per 100,000) in antenatal samples screened. There is evident change in the frequency of HBsAg in antenatal samples over time (figure 1). This variation may reflect differences in antenatal population covered by collection centres, it may also be due to changes in the reporting system, as more centres are now reporting for HBsAg, as well as changes in policy in offering hepatitis B (HBV) testing [1] to all antenatal women and increasing awareness of HBV transmission.

Figure 2 The frequency of anti-HIV positive antenatal samples tested by the NBS, England: 2000 to 2006



Anti-HIV testing for antenatal women was introduced in 2000 and since then the frequency of antenatal samples positive for HIV antibodies has been increasing with an average rate of 20 per 100,000 per year (95% CI 14.6 to 25.3 per 100,000), although in the last four years the rate of increase has been slowing (figure 2). This may be due to an increase in uptake of HIV testing and greater awareness in the population of the risk of transmission of the infection.

The NBS is contracted to provide antenatal samples screening for specific trusts, for some or all four markers of infection and the number of women booking antenatal care within each trust is not available. Uptake of testing is therefore difficult to estimate. Using the number of syphilis tests as an indicator of the total number of antenatal samples being tested in 2006, we can estimate that the number of women opting out of HBsAg testing is between 2% and 5% and HIV antibody testing to be 5% and 10% for trusts where NBS provides screening for all microbiological markers.

More information is available on the HPA website or alternatively by email at infection.surveillance@nbs.nhs.uk.

References

1. Department of Health. *Screening for infectious diseases in pregnancy: Standards to support the UK antenatal screening programme*. London: Department of Health, August 2003. Available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4050934.