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# CDR WEEKLY

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## News

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Next update due: 30 May 2003

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### Outbreak of *Salmonella* Typhimurium DT193a in the South West region

Between 11 April and 16 May 2003, the Health Protection Agency (HPA) Laboratory of Enteric Pathogens (LEP) reported 52 human isolates of *Salmonella* Typhimurium DT193a, with resistance to ampicillin, sulphonamides, tetracyclines, and trimethoprim (R-type ASuTTm). Most cases (42) were reported for the South West Region of England, six from the South East, and four from other regions.

In 2002, only three isolates were reported for the South West region. In view of the large localised increase in cases, an outbreak was reported to HPA South West on 6 May by the Communicable Disease Surveillance Centre (CDSC) Colindale, London. In order to identify the mode and vehicle of transmission and to implement appropriate control measures, an epidemiological investigation was set up on 7 May. This included case finding, case interviews, and a case control study using case nominated controls. Some cases outside the South West were interviewed in order to assess any possible link with the South West Outbreak.

Twenty-four (57%) of the 42 cases in the South West were male; the age range was between 3 and 78 years (median 42). Most cases (23) were residents of Bristol and Bath, with others from Wiltshire, Somerset, and Dorset. Ten cases were hospitalised. Preliminary findings of the case interviews and the case control study suggested an association between illness and eating ham. From the source of ham reported by cases, two distributors were visited by local authorities, and food and environmental samples were taken. So far, cultures have been negative. Further tracing of the implicated ham distribution is being undertaken by the Food Standards Agency.

*S.* Typhimurium DT193a was first identified by the LEP in 2000 and since then there has been a national average of 63 human isolates per year; the majority having the R-type ASuTTm. Animal strains have also been isolated from poultry and bovine sources, but predominately from pigs.

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### Severe Acute Respiratory Syndrome – update

#### UK update

As of 20 May 2003, the United Kingdom (UK) is currently reporting four probable cases of severe acute respiratory syndrome (SARS) all of whom have recovered, and been discharged from hospital. A further 159 reports of possible cases of SARS in residents of the UK have been assessed by the Health Protection Agency (HPA) and none have been classified as probable cases.

## UK website updates

The following information has been updated on the website of the former PHLS:

- The fact sheet for clinicians: interpreting SARS test results  
<[http://www.phls.co.uk/topics\\_az/SARS/result\\_interpretation.htm](http://www.phls.co.uk/topics_az/SARS/result_interpretation.htm)>
- The frequently asked questions about SARS which now incorporates The World Health Organization (WHO) recommendations with regards to mass gatherings (see below)  
<[http://www.phls.co.uk/topics\\_az/SARS/FAQs.htm](http://www.phls.co.uk/topics_az/SARS/FAQs.htm)>
- Advice for travellers from the UK  
<[http://www.phls.co.uk/topics\\_az/SARS/traveller\\_health\\_alert.pdf](http://www.phls.co.uk/topics_az/SARS/traveller_health_alert.pdf)> and the health alert notice for travellers going to or returning from SARS affected areas  
<[http://www.phls.co.uk/topics\\_az/SARS/travel\\_guidance.htm](http://www.phls.co.uk/topics_az/SARS/travel_guidance.htm)> , both in line with WHO's recent changes to the list of affected areas (see below)

## Global update

As of 20 May 2003, 7919 cumulative probable cases and 662 deaths have been reported to WHO. China and Taiwan continue to account for the majority of new cases reported. Over the weekend 17-18 May 2003, Taiwan reported a record number of 70 cases and in the latest figures has reported a further 39 probable cases. More information is available at  
<[http://www.who.int/csr/sars/country/2003\\_05\\_20/en/](http://www.who.int/csr/sars/country/2003_05_20/en/)>.

## Taiwan

According to WHO, Taiwan is currently the most rapidly growing outbreak at present. It is believed, however, that much of the recent rise in numbers represents a backlog of patients that are only now being recognised as being infected with SARS. Cases are being reported from six hospitals and cases are being attributed to poor hospital infection control, particularly in emergency rooms. The focus of control has, therefore, been on improving hospital infection control. The lessons learnt in the previously documented outbreaks in Hong Kong, Singapore, and Toronto are being applied in Taiwan and WHO is providing further support staff to assist the authorities in bringing the outbreak under control. More information is available at <[http://www.who.int/csr/sars/archive/2003\\_05\\_19/en/](http://www.who.int/csr/sars/archive/2003_05_19/en/)>.

## Risk of transmission during air travel

The WHO has analysed information on 35 flights in which a probable symptomatic case was present. So far, symptomatic probable SARS cases on four of these flights have been associated with possible transmission of infection to those onboard the flights. This emphasises the importance of exit screening (recommended by WHO) to ensure that people with acute respiratory illness do not travel on aircraft. Additional information is available on WHO website at  
<[http://www.who.int/csr/sars/archive/2003\\_05\\_19/en/](http://www.who.int/csr/sars/archive/2003_05_19/en/)>

## Guidance for organisers of mass gatherings or conferences

The WHO has provided information for those hosting mass gatherings of people arriving from an area with recent local transmission, but anyone who is symptom free and with no history of contact with a SARS patient is free to go about their business. A person who has been in close contact with a SARS patient over the past ten days should not leave the country, but if they have they should be placed under active surveillance for ten days after the date of his/her contact with a SARS case. A person who develops symptoms within ten days of arrival should contact the host country medical service and remain in his/her room, and it is strongly recommended that those organising such gatherings need to ensure such arrangements are in place. The WHO *does not recommend* the wearing of masks by well persons who are travelling from an area with recent local transmission of SARS. Further details can be obtained from WHO website at <<http://www.who.int/csr/sars/guidelines/gatherings/en/>>.

## SARS and blood safety

The WHO has published recommendations on SARS and blood safety, although there has been no reported transmission of SARS by blood labile products or derivatives, there is a theoretical risk of transmission through transfusion since viraemia has been detected in patients with SARS. The recommendations aim to provide a generic basis on which national health authorities may wish to develop their own appropriate guidelines. Full details are available at  
<<http://www.who.int/csr/sars/guidelines/bloodsafety/en/>>.

## First global consultation on SARS epidemiology

This meeting was hosted between 16 and 19 May in Geneva, Switzerland. A consensus document summarising the findings will duly be published with the aim of providing a foundation for control and management of SARS and to help countries develop their strategy in dealing with SARS. The meeting recognised the consistent effectiveness of recommending control measures, including early identification and isolation of patients, vigorous contact tracing, management of close contacts by home isolation and public information and education to encourage prompt reporting of symptoms. Further details can be found at <[http://www.who.int/csr/sars/archive/2003\\_05\\_17/en/](http://www.who.int/csr/sars/archive/2003_05_17/en/)>.

### **Travel updates**

The WHO now recommends that persons planning to travel to Hebei province, China, consider postponing all but essential travel. Further information is available at <[http://www.who.int/csr/sars/archive/2003\\_05\\_17/en/](http://www.who.int/csr/sars/archive/2003_05_17/en/)>.

The WHO has removed the Philippines from its list of areas with recent local transmission. Twenty days have passed since the last reported probable case indicating that the chain of transmission has been broken. More details are available at <[http://www.who.int/csr/sars/archive/2003\\_05\\_20/en/](http://www.who.int/csr/sars/archive/2003_05_20/en/)>.

### **Hotel Metropole study update**

During May 2003, the HPA's Communicable Disease Surveillance Centre (CDSC) has been conducting the UK arm of a World Health Organisation study on people who stayed at the Hotel Metropole in Hong Kong in late February 2003. This was the hotel in which an index case infected fellow guests with SARS who then travelled to various destinations leading to outbreaks in countries around the world. The aim of the study is to better understand the risks and routes for transmission of SARS. The majority of guests invited to take part in the study have consented and, so far, over one hundred UK residents have been interviewed by telephone. Serum samples are also being collected via general practitioner surgeries and these will be tested for antibodies to the SARS CoV at Colindale, London.

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## Immunisation

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### Invasive meningococcal infections, England and Wales: laboratory reports, weeks 05-08/03

	Method of diagnosis			Total reports 05-08/03	Cumulative* total 2003
	CSF and blood		Other sites		
	Culture	Non-culture	Culture		
Group A	–	–	–	–	–
B	49	76	11	136	304
C	8	7	2	17	35
W135	–	2	1	3	7
X	–	–	–	–	1
Y	1	1	1	3	5
Z	–	–	–	–	–
29E	–	–	–	–	–
Ungroupable	–	–	–	–	–
Ungrouped	–	9	–	9	20
<b>Total</b>	58	95	15	168	372

\* combined CDSC data and Meningococcal Reference Unit data

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### Enhanced surveillance of meningococcal disease: weeks 01-13/2003

Regional enhanced surveillance of meningococcal disease (ESMD) began on 1 January 1998 in five regions of England and was extended to include all English regions, Wales, and Northern Ireland from the 1 January 1999. The national enhanced surveillance system relies upon consultants in communicable disease control (CCDC) reporting confirmed and probable cases of meningococcal disease occurring in their district each week. Data are collated at regional level and sent on to the Health Protection Agency (HPA) Immunisation division at the national Communicable Disease Surveillance Centre (CDSC) each month. These data are subsequently published quarterly in *CDR Weekly*. Additionally, CCDCs are asked to report details of any clusters of meningococcal disease occurring in educational establishments.

#### First quarter of 2003: weeks 01-13/2003

In the first quarter of 2003, ESMD identified 755 cases of invasive meningococcal disease in the nine English regions, Wales, and Northern Ireland. This is an increase of 16% on the total of 634 in the previous quarter, but a decrease of 27% on the total of 1040 in the equivalent quarter of 2002. Yorkshire and Humberside reported the highest number of cases in this quarter (101) as well as the highest rate (table 1).

**Table 1 Meningococcal disease by region: weeks 01-13/03**

Region	B	C	Other	Infection not confirmed	Total	Rate per 100,000
Eastern	31	4	3	16	54	1.00
East Midlands	23	1	–	34	58	1.39
London	28	4	1	57	90	1.25
North East	22	–	1	22	45	1.79
Northern Ireland	17	2	–	6	25	1.48
North West	49	2	4	33	88	1.31
South East	28	1	–	57	86	1.07
South West	53	2	5	31	91	1.84
Wales	9	1	–	26	36	1.24
West Midlands	39	4	2	36	81	1.54
Yorkshire and Humberside	44	7	4	46	101	2.03
<b>Total</b>	<b>343</b>	<b>28</b>	<b>20</b>	<b>364</b>	<b>755</b>	

A clinical diagnosis of invasive meningococcal disease was reported for 699 cases identified in England and Wales, compared to 411 cases of meningitis and septicaemia officially notified to CDSC during the same period. This implies that approximately 59% of clinically diagnosed meningococcal disease is formally notified. The overall case fatality rate, in cases identified in ESMD, with a clinical diagnosis (in England, Wales, and Northern Ireland) was five per 100 cases, whereas the case fatality rate for cases with septicaemia alone was seven per 100 cases (table 2).

**Table 2 Clinically diagnosed cases (deaths) of meningococcal disease: England, Wales, and Northern Ireland: weeks 01-13/03**

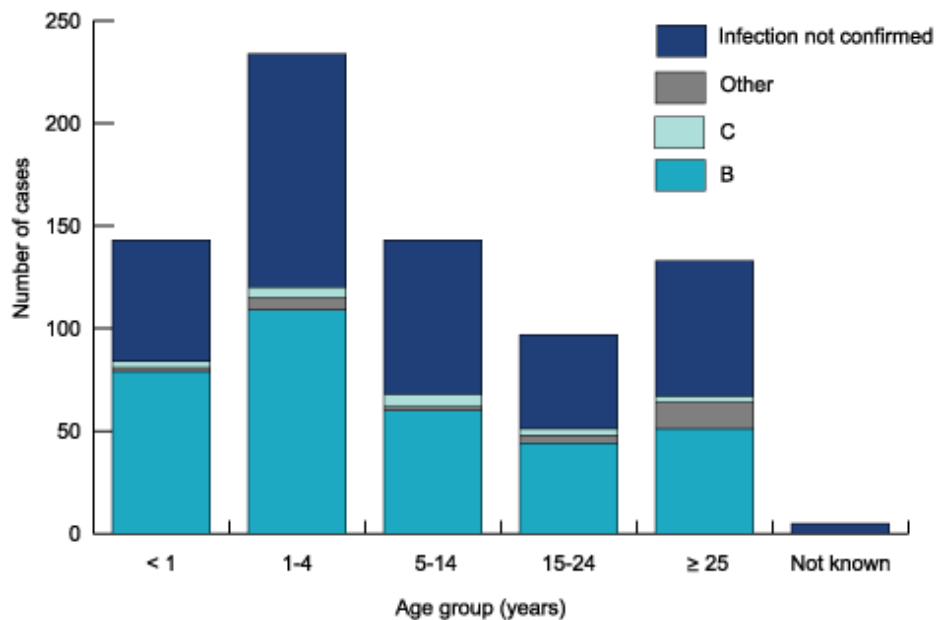
Region	Meningitis	Septicaemia	Meningitis and Septicaemia	Not meningitis or septicaemia	Total
Eastern	16 (2)	25 (4)	11	1	53 (6)
East Midlands	16	23 (2)	18	–	57 (2)
London	26 (1)	44 (3)	13 (2)	3	86 (6)
North East	7	29 (2)	6 (1)	1 (1)	43 (4)
Northern Ireland	10	13	2	–	25
North West	29	37 (6)	12	–	78 (6)
South East	26 (1)	43 (6)	15 (1)	1	85 (8)
South West	24 (1)	42 (1)	20 (1)	1	87 (3)
Wales	5 (1)	23	1	–	29 (1)
West Midlands	30 (1)	43	7	–	80 (1)
Yorkshire and Humberside	42	33 (2)	22 (1)	4	101 (3)
<b>Total</b>	<b>231 (7)</b>	<b>355 (26)</b>	<b>127 (6)</b>	<b>11 (1)</b>	<b>724 (40)</b>

Three hundred and ninety-one of the 755 cases (52%) identified in ESMD were confirmed as *Neisseria meningitidis* infection, compared to 511 reports of laboratory confirmed meningococcal disease made to Meningococcal Reference Unit (MRU) in the same period.

Serogroup B *N.meningitidis* was detected in 88% (343/391) of confirmed cases identified in ESMD, serogroup C in 7% (28/391), and the remaining 5% included other serogroups and ungrouped cases. The number of other serogroups and ungrouped cases decreased by 31% this quarter from weeks 40 to 52, in 2002.

Over half (52%) of all confirmed cases were in children under 5 years of age. Serogroup B accounted for 92% of these infections, serogroup C accounted for 4%, and other serogroups for 4%. Eight serogroup C infections occurred in this age group of children. The MenC vaccination status was unknown for two of these children, while three of them had not received the vaccine. Two children received the vaccine although it is not known whether the whole course was completed. One vaccine failure was documented (figure).

**Figure Serogroups of *N.meningitidis* identified in cases in England, Wales, and Northern Ireland by age, weeks: 01-13, 2003**



There has continued to be an overall reduction in the observed number of cases of meningococcal disease compared to the equivalent period in the previous year: serogroup B fell by 29% (343 cases compared to 483 in 2002), serogroup C by 46% (28 cases compared to 52 in 2002), other serogroups by 73% (20 compared to 74 in 2002), and unconfirmed by 15% (364 compared to 431 in 2002). This trend may reflect a real reduction in meningococcal disease, since a decline is also observed in routine data: clinical notifications fell by 32% (411 compared to 606 in 2002), and laboratory reports by 32% (511 compared to 753 in 2002).

1. PHLS. Viral meningitis in England and Wales associated with an increase of echovirus type 30. *Commun Dis Rep CDR Wkly* [serial online] 2001 [cited 22 May 2003]; **12** (20): Bacteraemia. Available at <<http://www.phls.org.uk/publications/cdr/PDFfiles/2001/cdr3501.pdf>>

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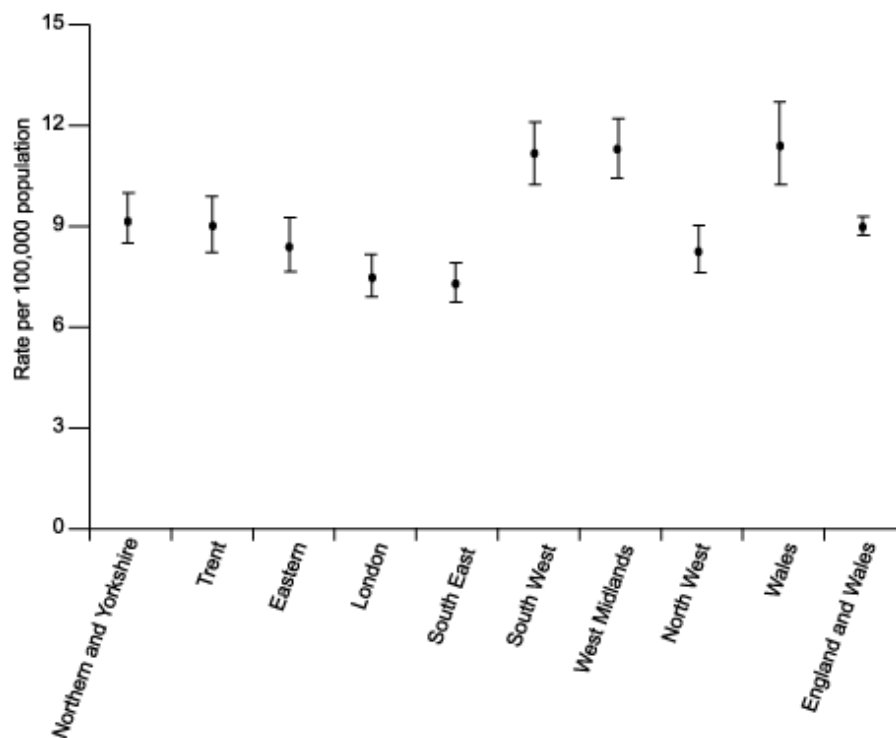
## Invasive pneumococcal infection, England and Wales: 2000

During 2000, a total of 4744 reports or referrals of invasive pneumococcal diseases (IPD) isolates were made from 249 different laboratories in England and Wales, which equates to a reporting rate of 8.9 per 100,000 population (95% CI 8.7-9.2). The numbers of reported cases by region is given in table 1. Regional reporting rates varied from a low of 7.3 per 100,000 (95% CI 6.7-7.9) in the South East to a high of 11.4/100,000 (95% CI 10.2-12.7) in Wales. Figure 1 shows the overall reporting rate of all IPD (meningitis cases are included) by region. In figure 2, reporting rates of pneumococcal meningitis by region are shown.

**Table 1 Number of reported cases by region (CDSC\*/RSIL† 2000, England and Wales 2000)**

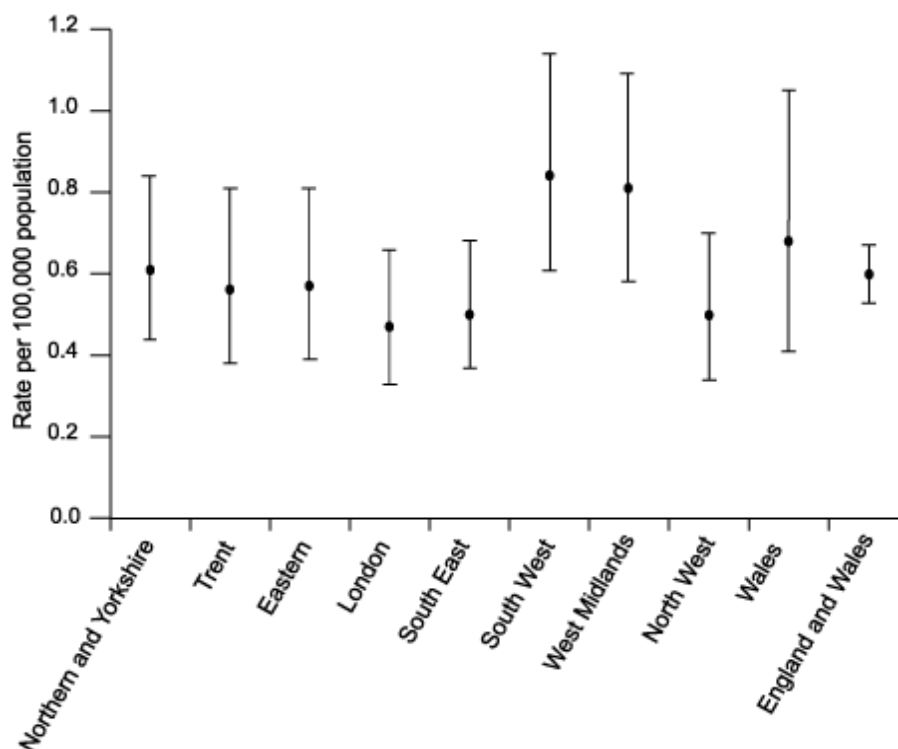
	Pnc Meningitis	Other IPD	All IPD
Northern and Yorkshire	39	544	583
Trent	29	437	466
Eastern	31	430	461
London	35	518	553
South East	44	596	640
South West	42	512	554
West Midlands	43	560	603
North West	33	515	548
Wales	20	316	336
England and Wales	316	4428	4744

**Figure 1 Invasive pneumococcal disease reporting rates by region (95% confidence intervals) per 100,000 population (CDSC\*/RSIL† 2000, England and Wales)**



\* CDSC = Communicable Disease Surveillance Centre  
 † RSIL = Respiratory and Systemic Infection Laboratory

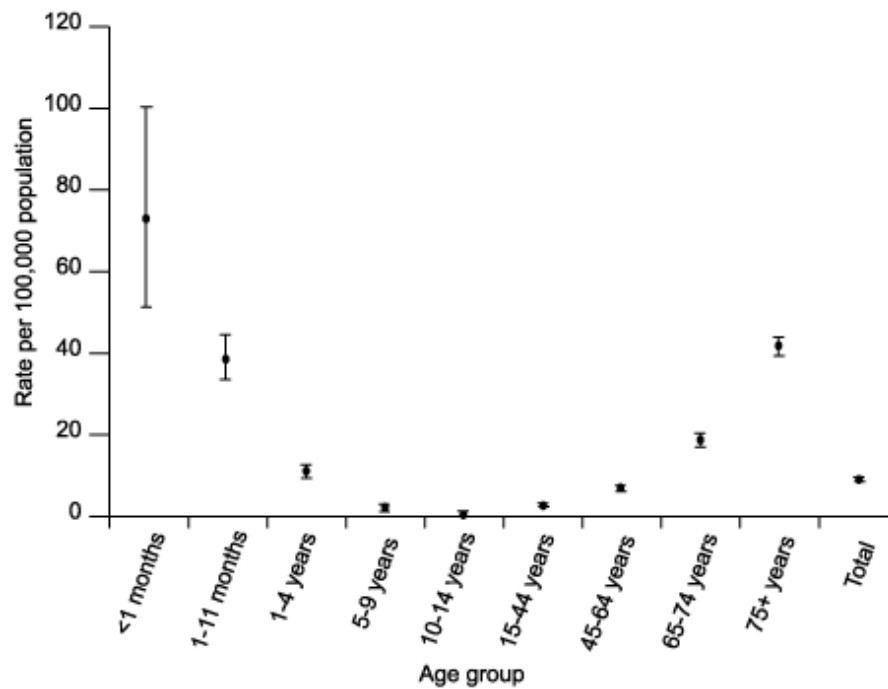
**Figure 2 Pneumococcal meningitis reporting rates by region (95% confidence intervals) per 100,000 population (CDSC\*/RSIL† 2000, England and Wales)**



\* CDSC = Communicable Disease Surveillance Centre  
 † RSIL = Respiratory and Systemic Infection Laboratory

Figure 3 shows the age specific incidence of reported IPD for standard age groups together with 95% confidence intervals. Comparisons with 1999 data show a higher reporting rate in infants (72.8/100,000 compared to 51.6/100,000 in those aged less than 1 months), whereas a very similar rate is present in those aged 75 years and over (41.5/100,000 compared to 41.6/100,000).

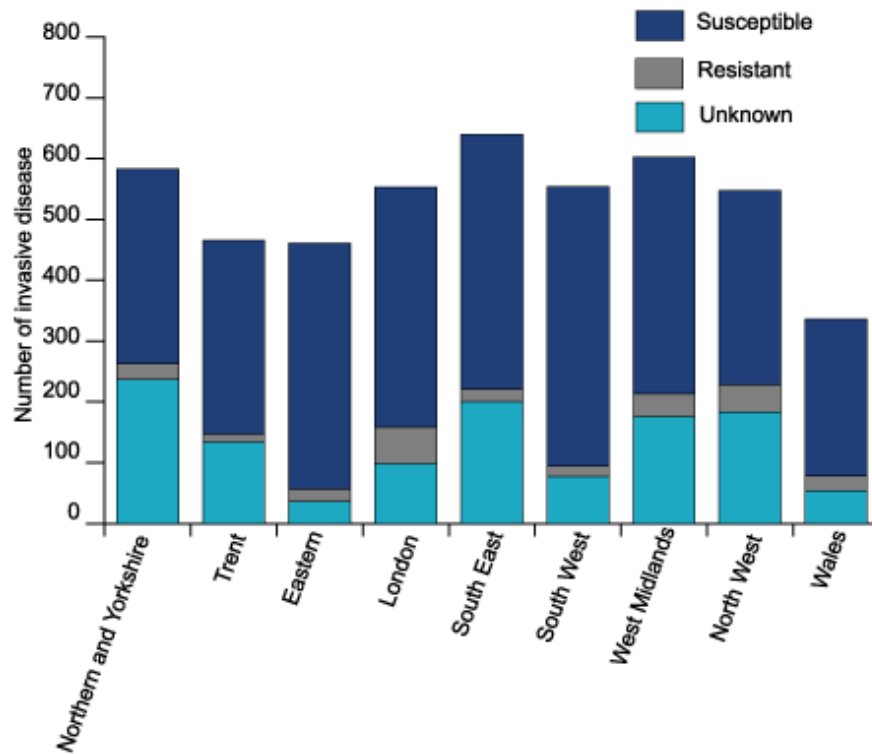
**Figure 3 Invasive pneumococcal disease reporting rates by standard age groups (95% confidence intervals) per 100,000 population (CDSC\*/RSIL† 2000, England and Wales)**



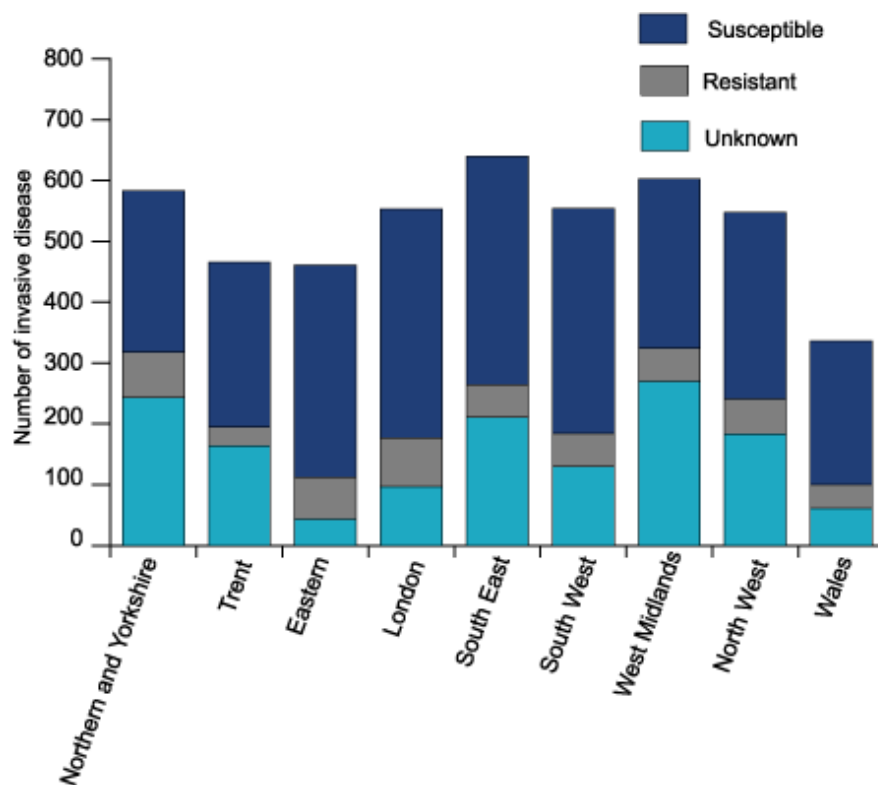
\* CDSC = Communicable Disease Surveillance Centre  
 † RSIL = Respiratory and Systemic Infection Laboratory

Results of antimicrobial susceptibility testing of IPD isolates during 2000 in either the reporting laboratory or at the Health Protection Agency (HPA) Specialist and Reference Microbiology Division found that 263/3549 isolates (7%) showed some degree of penicillin resistance; data was missing or culture unavailable for 1195 reports. The same proportion of penicillin resistant isolates was found in 1999 data. For erythromycin resistance, 513/3342 isolates (15%) were found to be resistant (13% in 1999); data was missing or culture unavailable for 1402 reports. Figures 4 and 5 show results of penicillin and erythromycin susceptibility testing in the English regions and Wales, and include the number of reports for which information was lacking.

**Figure 4 Penicillin susceptibility and resistance among invasive pneumococcal isolates, England and Wales: 2000**



**Figure 5 Erythromycin susceptibility and resistance among invasive pneumococcal isolates, England and Wales: 2000**



Serotyping results were available at HPA's Respiratory and Systematic Infection Laboratory (RSIL) and Specialist and Reference Microbiology Division for 2351 cultures, 50% of the total reports. As a consequence of the enhanced surveillance of paediatric IPD, started in 1996, the proportion of paediatric isolates referred for serotyping is considerably higher than in previous years, at 394/540 (73%) IPD isolates from children aged less than 5 years. In table 2, the theoretical vaccine coverage for the current vaccines is shown for different age groups.

**Table 2 Vaccine coverage for the current vaccines**

	< 5 years	5-64 years	≥ 65 years	All ages
<b>No cross protection</b>				
Coverage 7-valent	74.9%	47.3%	55.9%	56.0%
Coverage 9-valent	77.4%	54.9%	58.4%	60.3%
Coverage 11-valent	81.2%	64.7%	66.1%	68.1%
Coverage 23-valent	91.9%	91.2%	89.2%	90.2%
<b>With cross protection*</b>				
Coverage 7-valent	82.3%	55.8%	66.7%	65.6%
Coverage 9-valent	84.8%	63.4%	69.3%	70.0%
Coverage 11-valent	88.7%	73.3%	77.1%	77.8%
Coverage 23-valent	97.7%	96.0%	95.9%	96.3%

\*cross-serotype protection within serogroups (i.e. a vaccine containing serotype 6B also confers protection against serotype 6A)

We thank consultant microbiologists, regional epidemiologists, and laboratory staff throughout England and Wales for reporting infections and referring isolates.

