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News

Last updated: **30 March 2006**, Volume 16, No 13
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▣ Wound botulism in injecting drug users in the United Kingdom

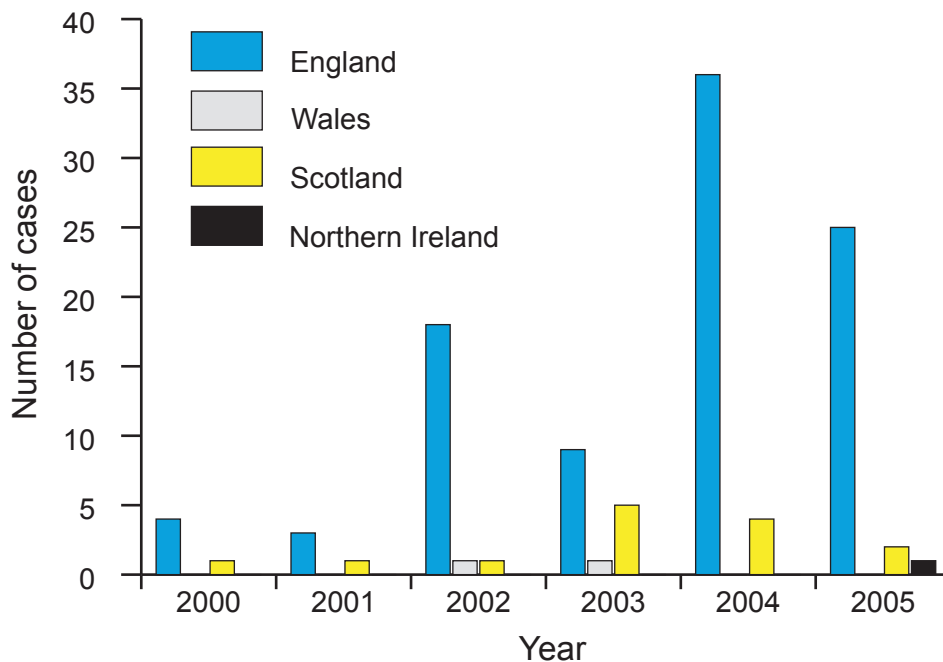
▣ Re-introduction of oral typhoid vaccine

▣ National Knowledge Service – TB Pilot

▣ Wound botulism in injecting drug users in the United Kingdom

Wound botulism was first reported in the United Kingdom (UK) among injecting drugs users (IDUs) in 2000 (1). Between 2000 and 2005, 112 cases of suspect wound botulism amongst IDUs were reported in the UK: five cases occurred in 2000, four in 2001, 20 in 2002, 15 in 2003, 40 in 2004 and 28 in 2005 (figure 1). Eighty per cent, (94) of cases occurred in England.

Figure. Cases of suspected wound botulism in injecting drug users: 2000 to 2005



All of the cases from England in 2005 for whom detailed information was available reported injecting heroin, and 64% reported also injecting methadone. All cases had used either vitamin C or citric acid for dissolving the drug. The duration of injecting ranged from one year to 30 years with an average of 10 years. Injection into skin ('skin popping') or muscle ('muscle popping') was reported by all the cases and in the previous month they had all noticed swelling and tenderness of an area of skin where they inject. The majority (75%) required ventilation during their hospital admission.

Forty-five (42%) of the 108 cases where material was submitted for laboratory examination were laboratory confirmed by either the detection of neurotoxin in serum or wound material, or by the detection of *C.botulinum* from material collected from infected wounds. Among the laboratory confirmed cases, 39 were due to *C.botulinum* type A, four to type B and two to both types A and B. Wound botulism among IDUs is now the most common presentation of this disease in the UK, and despite drug using communities existing throughout the UK is largely confined to England. Seven suspect cases were reported during the first 13 weeks of 2006 (1 January to 28 March): all occurred in England.

Injection practices amongst IDUs are likely to be important since a major risk factor for soft tissue wound infections is skin or muscle 'popping'. Clinicians should suspect botulism in any patient with an afebrile, descending, flaccid paralysis. Botulinum antitoxin is effective in reducing the severity of symptoms for all forms of botulism if administered early in the course of the disease: this should not be delayed for the results of microbiological testing. In cases of wound botulism, antimicrobial therapy and surgical debridement are important to reduce the organism load and avoid relapse after antitoxin treatment. *C. botulinum* is sensitive to benzyl penicillin and metronidazole. Advice for responding to suspect wound botulism is available on the HPA website (2). As well as providing information for health professionals, the HPA website gives advice for preventative measures for IDUs including; smoking instead of injecting heroin; if injecting, to intravenously and not intramuscularly or subcutaneously inject; not to share needles, syringes, cookers, or spoons used for injection; to use as little citric acid as possible; if injecting more than one type of drug to inject in separate places; and if swelling, redness or pain occurs at injection sites to immediately seek medical advice (2).

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Re-introduction of oral typhoid vaccine

With effect from March 2006, the oral typhoid vaccine, Vivotif® (Berna Products), has been re-introduced to the United Kingdom after it was removed from the market in 2002 (1).

Typhoid vaccine is recommended for: travellers visiting typhoid-endemic areas, especially if sanitation and food hygiene are likely to be poor; persons in close contact with typhoid cases or carriers (2); laboratory personnel who may handle *Salmonella* Typhi in the course of their work.

Vivotif® is an oral vaccine that can be administered to persons aged six years and above as a course of three doses; one capsule taken on days 1, 3, and 5. Protection against typhoid fever commences approximately 7 to 10 days after ingesting the third dose. There are now five vaccines available in the UK for prevention of typhoid fever. The other (injectable) vaccines are Typhim Vi® and Viatim® (Sanofi Pasteur MSD), and Typherix® and Hepatyrix® (GlaxoSmithKline). Details of each can be found on the typhoid vaccine information sheet from the National Travel Health Network and Centre (NaTHNaC) at http://www.nathnac.org/pro/factsheets/typhoid_vaccine.htm.

Vaccination against typhoid fever provides only partial protection against the disease, and does not provide any protection against *Salmonella* Paratyphi. *S. Paratyphi* is increasingly a cause of enteric fever in UK travellers (3). All travellers should therefore take food and water hygiene precautions during their trip (see NaTHNaC information sheet <http://www.nathnac.org/pro/factsheets/food.htm>). Further information about typhoid and paratyphoid in travellers is available at <http://www.nathnac.org/pro/factsheets/typhoid.htm>.

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National Knowledge Service – TB Pilot

The Health Protection Agency (HPA), working with the NHS and various voluntary organizations, is piloting the National Knowledge Service for TB (NKS-TB), and has recently launched the NKS-TB web pages <<http://www.hpa.org.uk/tbknowledge/default.htm>> . The aim of NKS-TB is to ensure that sources of information and knowledge on tuberculosis are brought together for healthcare professionals and patients. This will enable both professionals and patients to base their decisions on best current knowledge. Pilots are simultaneously also being conducted for oral health, diabetes, breast cancer and congestive heart failure.

Information outputs will be mapped onto the patient care pathway defined by the National Tuberculosis Action Plan (1) and National Institute for Health and Clinical Excellence (NICE) guidelines on tuberculosis (2), such that they can be used for clinical consultation or public health action. Emphasis will be on short, tailored and easily accessible information outputs. Much of the supporting technology that will be used to deliver these information outputs will be provided through the National Programme for Information Technology – particularly the Map of Medicine (3) or through the National Library for Health and its specialist libraries (4). In addition to developing information or resources relevant to NICE guidelines on TB, the pilot will identify gaps and important knowledge areas not addressed by the NICE guidelines.

The National Knowledge Service covers clinical practice, healthcare, social care, and public health; the users have been identified as being patients and the public, clinicians, managers, and public health professionals. The NKS commissioned the HPA to undertake the TB pilot, with Professor Mike Catchpole as project lead. The National Knowledge Service is part of the NHS National Programme for IT.

NKS has also been involved in developing information resources for staff working with the homeless sector staff, those working with children, and clinicians and public on 'Pregnancy and TB'.

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Enhanced surveillance of infectious syphilis in England and Wales: data to end of 2005

Introduction

Diagnoses of syphilis made at genitourinary medicine (GUM) clinics have fluctuated throughout the twentieth century, influenced by social change, conflict, changing sexual behaviour and developments in health care (1). Cases of syphilis declined during the 1980s following behavioural changes brought about by the emergence of the HIV pandemic. By the early 1990s, the number of syphilis diagnoses had stabilised. Although a low prevalence and low incidence was evident, syphilis had not been eliminated. In 1997, an outbreak of infectious syphilis was reported in Bristol (1), followed by a subsequent increase in incidence. This report summarises recent trends in the epidemiology of infectious (primary, secondary, and early latent) syphilis.

The data used in this report were derived from the information collected through the enhanced surveillance initiatives co-ordinated by the Health Protection Agency (HPA) North West, HPA North East, HPA Centre for Infections, and the National Public Health Service for Wales. These initiatives, which rely on voluntary reporting from GUM clinics, were specifically designed to collect timely, detailed information about the syphilis epidemic to inform public health interventions. Demographic, behavioural, and clinical data are collected including gender, age, ethnic background, sexual orientation, stage of infection, HIV status, location where the infection was likely to have been acquired, and connections with networks, such as saunas and bars. The first enhanced surveillance initiative started in Manchester in 1999, and was extended to cover the whole of the North West region in January 2003. The London Enhanced Laboratory Surveillance for Infectious Syphilis was established in April 2001 and was extended to include the whole of England and Wales in 2002

Results

Data to the end of December 2005 from the enhanced surveillance of infectious syphilis show that the largest outbreak areas are London and the North West where 53% (2889/5452) and 26% (1448/5452) of diagnoses respectively have been seen (figure 1). In the early stages of the epidemic, diagnoses were mainly confined to specific urban areas. The London outbreak, which was first identified in 2001 (1), developed after those seen in Manchester (1999) and Bristol (1997), and outbreaks were also seen in Manchester, Brighton, Nottingham, Newcastle-upon-Tyne, and South Wales. Regional variations in cases are seen in diagnoses made among MSM and heterosexual males and females. Smaller epidemic foci have been associated with these outbreak areas and diagnoses of syphilis are now seen in GUM clinics outside these main outbreak areas.

In England and Wales, the highest number of cases (3988) was seen in men who have sex with men (MSM), with the median age of cases being 35 (range from 16 to 80 years) (figure 2). Most (90%; 3649/4039) were of White ethnicity (figure 3); and 35% (1415/4029) had an HIV co-infection. Oral sex was a key transmission route, with 47% (1416/3024) of MSM reporting that infection was likely to have been acquired through this route. Thirty-nine per cent of diagnoses were primary syphilis, 41% and 20% of diagnoses were secondary, and early latent syphilis respectively. Social venues including pubs, clubs, and saunas were associated with the spread of infection, and there was some evidence of an increase in partners meeting through the Internet. Thirty per cent (1061/3609) of cases were diagnosed as a result of a routine STI health screen, with only a few cases (9%; 297/3436) identified through partner notification (figure 4).

Figure 1 Trends in infectious syphilis, by sex and sexual orientation, in England and Wales: 2001 to end of 2005

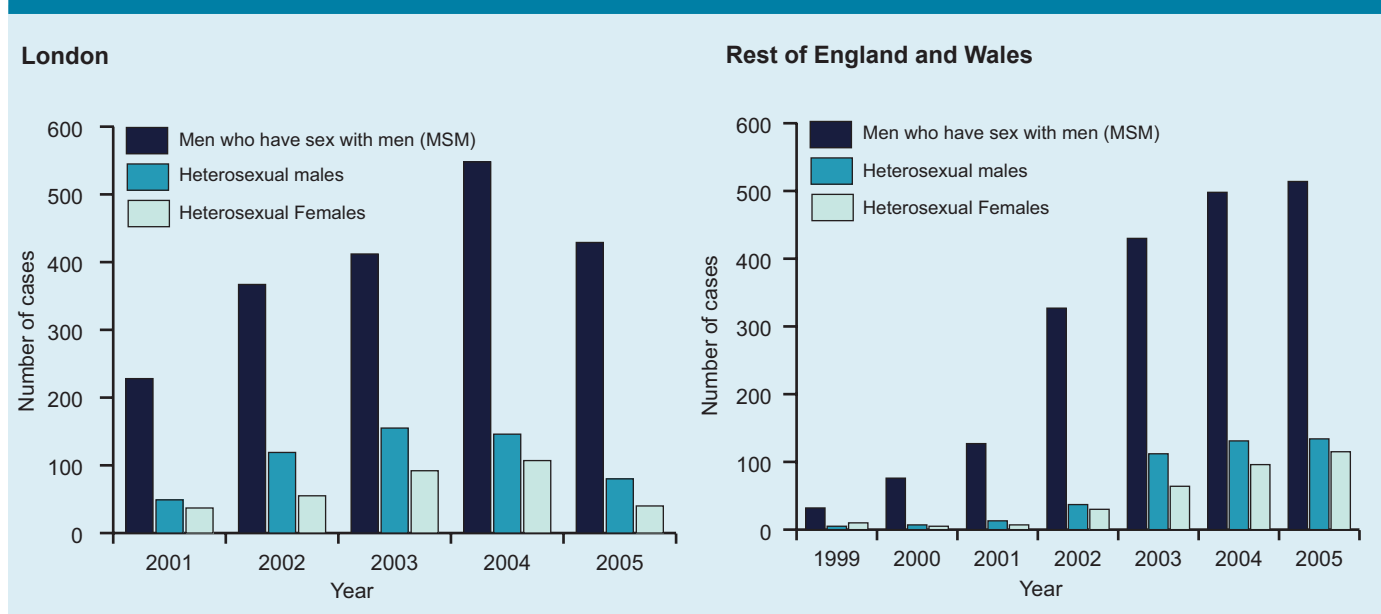


Figure 2 Cases of infectious syphilis by age and sexual orientation: 1999 to 2005

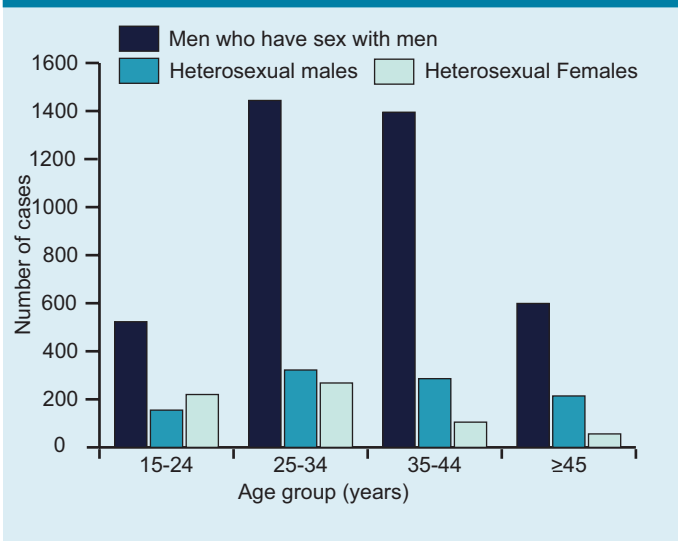


Figure 3 Cases of infectious syphilis by ethnicity and sexual orientation: 1999 to 2005

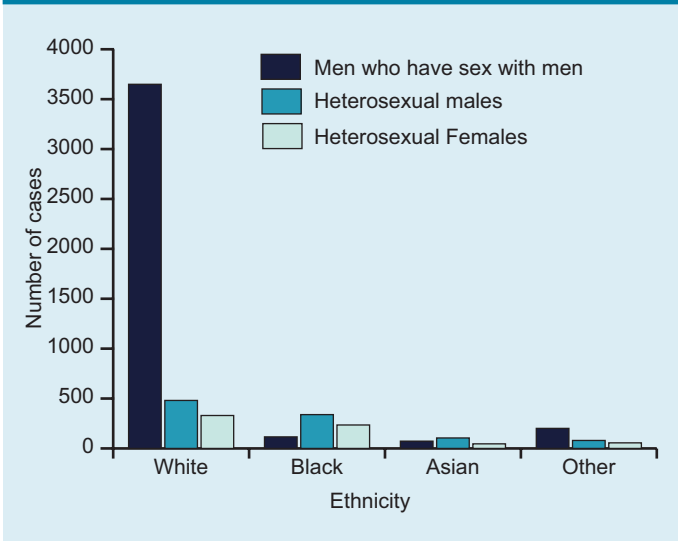
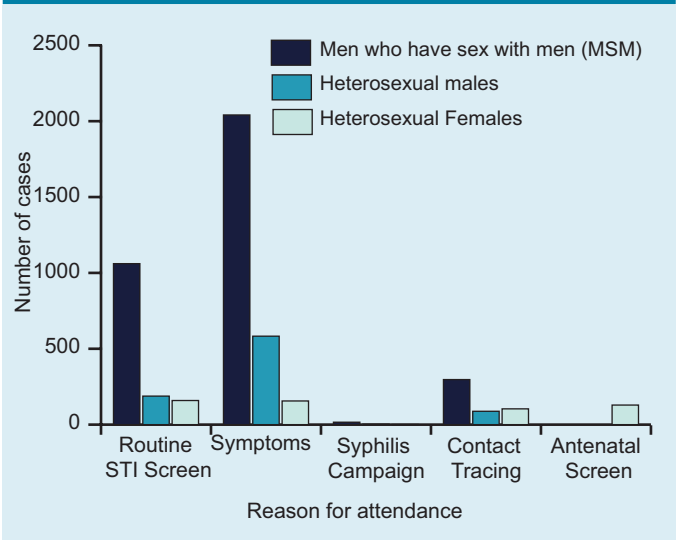


Figure 4 Cases of infectious syphilis by reason for attendance and sexual orientation: 1999 to 2005



There were 988 cases among heterosexual males in England and Wales to the end of December 2005, with a median age of 35 years (range from 17 to 92 years). Over the same period, there were 653 cases diagnosed in women, with a median age was 28 years (range 16 to 68) (figure 2). Thirty-four per cent (339/1005) of heterosexual males and 35% (235/667) of heterosexual females were either Black Caribbean or Black African (figure 3). Five per cent (46/982) of heterosexual males and 5% of females were also known to be HIV positive. Few cases were identified through contact tracing or antenatal screening (figure 4). Contact with a commercial sex worker was reported by 4% of the heterosexual males.

Discussion

Since 1997, a dramatic change in incidence has been observed in England that coincided with syphilis outbreaks in major cities in Europe, North America, and Australia. Enhanced

surveillance initiatives proved to be crucial in tracking the re-emergence of syphilis and have enabled outbreaks to be characterised quickly. The burden of diagnoses has fallen on MSM. The high number of syphilis cases co-infected with HIV suggests that the epidemiology of syphilis has been influenced by developments in the HIV epidemic, including the availability of effective anti-retroviral therapies and the increased prevalence of HIV prevalence. There have also been increased reports of unsafe sex among MSM that have been associated with a number of factors including: increased availability of Viagra® (Sildenafil citrate); an increase in traditional ‘sexual market places’, such as saunas and cruising grounds; and the rapid growth in internet chat rooms which has increased the opportunity to contact new sexual partners. The first outbreak to be identified (Bristol, 1997) (1), was among heterosexuals, and since then there has been a steady stream of heterosexual cases. Factors including travel abroad, commercial sex work (CSW), sex parties, and the use of illicit drugs, such as ‘crack’ cocaine, have been associated with syphilis infection. The proportion of all heterosexual cases acquired abroad is similar to that seen in the mid-1990s when incidence was low.

Traditional models of partner management have been largely unsuccessful as many partners are anonymous and untraceable. Local initiatives have provided new approaches to health promotion and control that have been tailored to local needs and developments. Syphilis awareness has been raised through targeted information campaigns such as ‘Look what’s back!’, ‘Sex Pigs’ (Terrance Higgins Trust), and ‘Spreads Easily’ and ‘Boys Just Want to Have Fun’ (Manchester). These have promoted knowledge about syphilis to inform decision making and choice in sexual relationships.

Although the diagnoses of syphilis continue to be centred within high-risk groups, increased incidence among heterosexuals is an important development within the epidemic. Cases of congenital syphilis have emerged, and this represents an emerging public health problem. It is unlikely that increased prevalence of STIs and HIV will bring about sexual behaviour modification on the scale that coincided with the emergence of HIV in the mid-1980s. It seems likely

that the prevalence of syphilis, in common with that of HIV and *Neisseria gonorrhoeae*, has re-set to a new level.

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