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News

Rabies risk in France and trends in terrestrial rabies in western Europe

France is officially rabies free following a six-month period when responsible authorities had to check for signs of terrestrial rabies transmission in the south-western area of the country. This area was declared rabies-infected in August 2004 (1) after a dog with rabies was illegally imported from Morocco. The rabid dog had come into contact with a large number of both people and animals (2).

As a result of the incident, the Health Protection Agency issued advice that rabies post-exposure vaccination should be considered for rabies prone exposures such as dog bites occurring in the three Départments of Gironde, Dordogne, and Lot et Garonne during a six month period from September 2004 to the end of February 2005, or until France declared the incident over (1). As no secondary cases were detected in animals during this period, the area has been declared rabies free again, officially since 4 March 2005. Consequently, such exposures can now be considered very low risk. Each exposure should be assessed carefully, however, since further importations of animals are likely to occur into France and other rabies free countries, and rabies remains endemic in countries surrounding the European Union (EU) including Morocco. France has held an information campaign to dissuade people from bringing potentially rabid animals back to France (3)

Although this incident is over, some concerns have been raised about rabies control in western Europe with signs of rabies transmission in foxes in Germany (4). Most EU countries are rabies-free but the risk that rabies re-establishes itself will continue as long as rabies remains endemic in wildlife in the rest of the Eurasian continent. Thus surveillance of rabies in wildlife, especially foxes, control of movement of animals including the pet passport scheme in the United Kingdom (UK), and close working between human and veterinary public health experts will continue to form the basis of prevention of human rabies in the UK.

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Poliomyelitis in Yemen

On 20 April 2005, four polio cases due to wild poliovirus type 1 were confirmed in Hudeida governate, on the red Sea coast of south-west Yemen, . Prior to these cases, wild poliovirus has not been found in Yemen since acute flaccid paralysis (AFP) surveillance began in 1996 (1).

The World Health Organization in Yemen was informed of a cluster of AFP cases in children on 4 April 2005, the first of which occurred in February 2005. The cases were detected through AFP surveillance activities and investigated.. On 20 April 2005, stool specimens tested by the polio network laboratory in Oman revealed wild poliovirus type 1 in four of the cases. The laboratory and field investigation of other AFP cases is ongoing.

Yemen had already conducted a pre-planned nationwide immunisation campaign from 13 to 15 April 2005, to try and immunise all children in Yemen under the age of five years (of which there are 4.5 million). WHO is working with the Ministry of Health in Yemen to plan for further intensive house-to-house immunisation activities in the immediate geographic vicinity of the cases. Planning for the next nationwide immunisation campaign to be conducted in the second half of May 2005 is being intensified and a potential third campaign in June 2005 is being discussed.

Surveillance activities have been intensified in the affected region in Yemen and Ministries of Health in neighbouring countries have been informed. It is essential that all countries maintain and strengthen AFP surveillance, as long as polio exists anywhere in the world, in order to reduce the risk of polio importation.

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1. WHO Communicable Disease Surveillance and Response. *Poliomyelitis in Yemen*. Geneva: World Health Organization, 25 April 2005 [online] [cited 27 April 2005]. Available at <http://www.who.int/csr/don/2005_04_25/en/index.html>.

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HIV/Sexually Transmitted Infections (STIs)

Recent trends in gonorrhoea in England, Wales, and Northern Ireland

Key Points

- *Neisseria gonorrhoeae* is the second most commonly diagnosed bacterial sexually transmitted infection in England, Wales, and Northern Ireland.
- Since 1994, rates of diagnosis have increased substantially in all age groups.
- Higest rates are seen in men aged from 20 to 24 years and women aged from 16 to 19 years.
- In 2003, 9% of GRASP isolates showed resistance to ciprofloxacin.
- Third generation cephalosporins – ceftriaxone or cefixime – are recommended as first-line therapy.

Recent trends in gonorrhoea in England, Wales, and Northern Ireland 120kB

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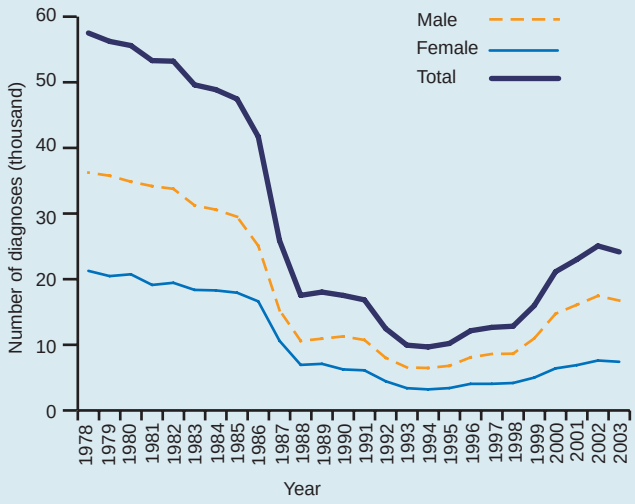
Despite a decrease in diagnoses of gonorrhoea between 2002 and 2003, diagnoses of gonorrhoea remain at their highest level since the late 1980s. Young people, men who have sex with men (MSM), and some ethnic minority groups remain at highest risk of infection. This report reviews recent trends in the epidemiology of gonorrhoea using data from three data sources; returns from genitourinary medicine clinics (KC60), laboratory reports, and data from the Gonococcal Resistance to Antimicrobials Surveillance Programme (GRASP).

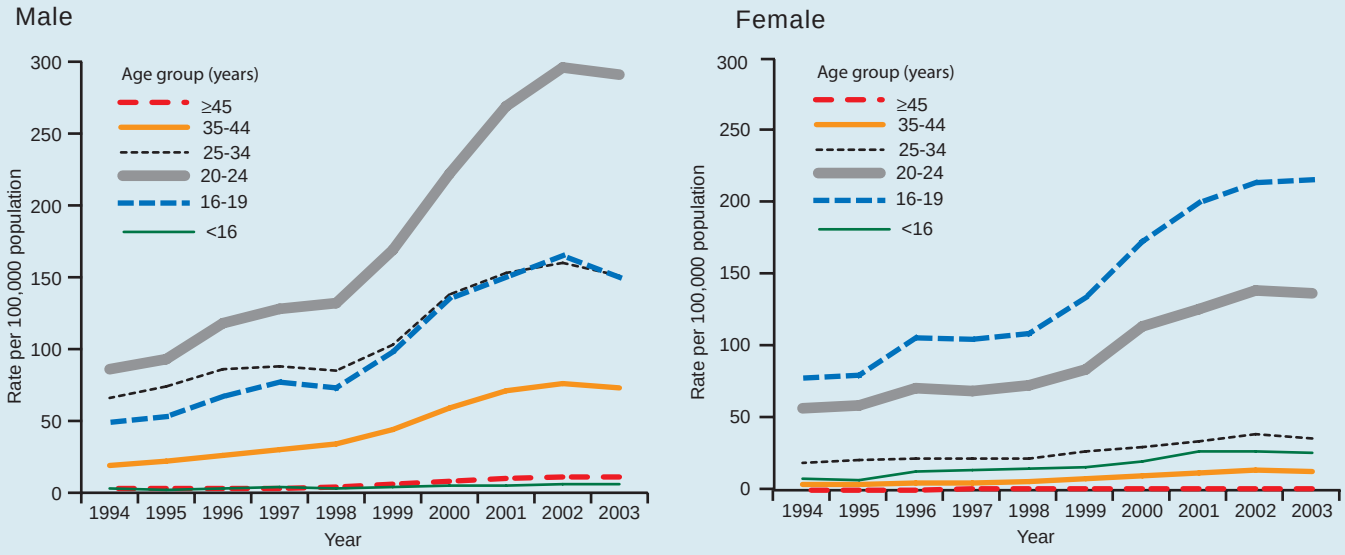
Neisseria gonorrhoeae is the second most commonly diagnosed bacterial sexually transmitted infection (STI) in England, Wales and Northern Ireland with over 24,000 infections diagnosed at genitourinary medicine (GUM) clinics in 2003 (1). Between 2002 and 2003 total diagnoses decreased by 4% (25,065 to 24,157). Over the past ten years the total number of diagnoses in England and Wales and Northern Ireland has increased by 146%, from 9821 diagnoses in 1994 to 24,157 in 2003 (figure 1).

Figure 1 New diagnoses of uncomplicated gonorrhoea in GUM clinics in England and Wales, 1978 to 2003



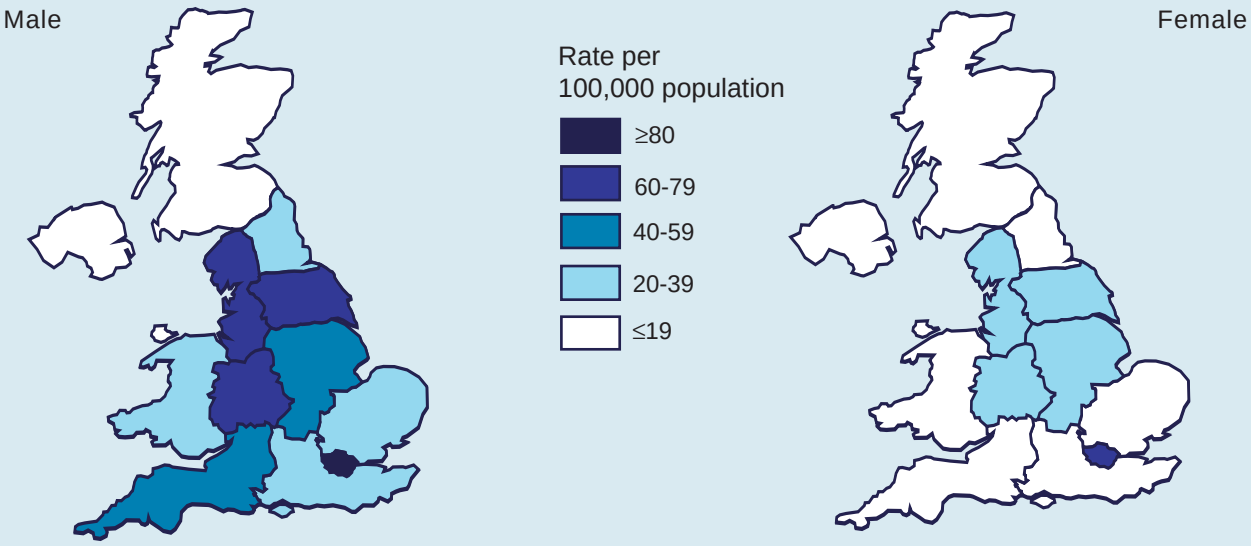
Pre- 1991 Data for England and Wales only, Enlgand, Wales, and Northern Ireland data included from 1991 to 2002.

Figure 2 Rate of diagnoses (per 100,000) of uncomplicated gonorrhoea by sex and age group, GUM Clinics, United Kingdom*, 1994 to 2003



*1995 data not available for Northern Ireland: 2001, 2002 and 2003. Data not available for Scotland.

Figure 3 Rates of diagnosis of uncomplicated gonorrhoea in males and females by region, United Kingdom: 2003*



* 2000 data used for Scotland

Rates of diagnosis have increased substantially in all age groups since 1994, with the highest rates in 2003 seen amongst males aged from 20 to 24 years (291/100,000) and females aged from 16 to 19 years (216/100,000) (figure 2). Forty per cent of women diagnosed with gonorrhoea were less than 20 years of age.

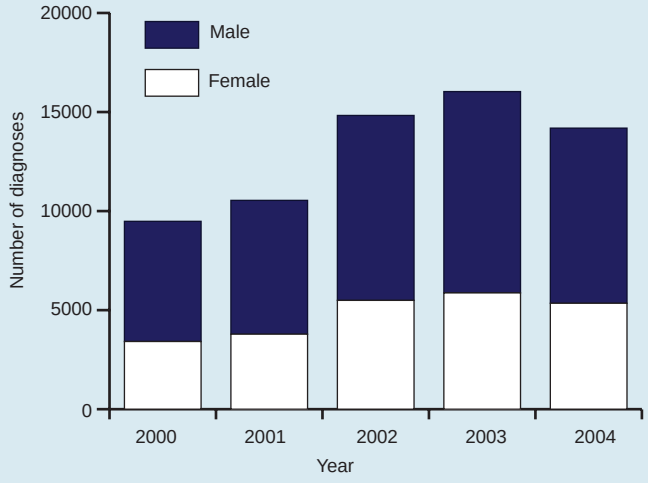
In 2003, London accounted for a disproportionate number of diagnoses, 38% and 37% of total diagnoses in males and females respectively. Rates of diagnoses were much higher in London then elsewhere in the UK at 170/100,000 in males and 71/100,000 in females (figure 3). Outside London rates in males were highest in the West Midlands (68 /100,000) and the North West (64/100,000) and lowest in Northern Ireland (15/100,000). Rates in females outside London were highest in the West Midlands (32/100,000) and Yorkshire and Humberside (29/100,000), and lowest in Northern Ireland (3/100,000).

Since 1995, laboratories across England and Wales have voluntarily reported positive diagnoses of gonorrhoea (LabBase II). This report provides an insight into the epidemiology of gonorrhoea in all sites where it is diagnosed, including non-GUM settings. LabBase II data are downloaded as a real-time electronic dataset allowing analysis of a full 2004 dataset. During 2004, 14,178 diagnoses of gonorrhoea were reported to LabBase II compared to 16,742 in 2003, an decrease of 15% (figure 4). Eight thousand eight hundred and forty of these diagnoses were in males and 5347 were in females, decreases of 17% and 13% respectively compared to 2003. The highest number of reports was seen in the 25 to 34 years age group for males and the 16 to 19 year group for females (figure 5).

The KC60 data show that 41% of infections diagnosed in females reported to LabBase II were in those aged less than 20 years. London remains the region reporting the highest number of diagnoses, 3535 in 2004, accounting for 24% of the total diagnoses made. West Midlands, and Yorkshire and Humber regions account for a further 17% and 13% respectively (figure 6). As LabBase II is a voluntary reporting system the proportion of diagnoses reported may reflect laboratory participation rather than disease burden.

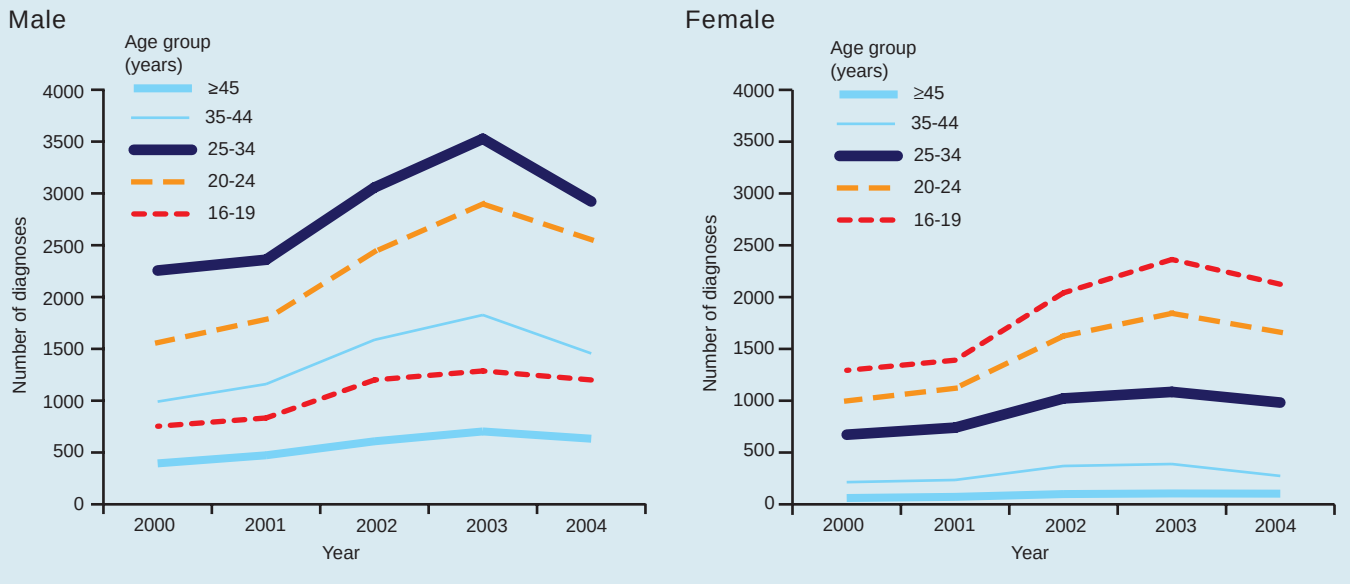
Gonococcal infection tends to be concentrated in population subgroups at greater behavioural risk, with high rates being seen in urban and deprived areas. In the United Kingdom (UK) such groups include young women, men who have sex with men (MSM), and black ethnic minorities (2,3,4). The high rates of gonorrhoea seen in urban areas in part reflects the geographical concentration of MSM, young people, and black ethnic

Figure 4 Number* of positive gonorrhoea diagnoses in England and Wales reported to LabBase II: 1998 to 2004



*The data shown does not inlcude individuals of unknown gender (227 in 2004)

Figure 5 Number of positive gonorrhoea diagnoses by gender and age group in England & Wales reported to LabBase II: 2004

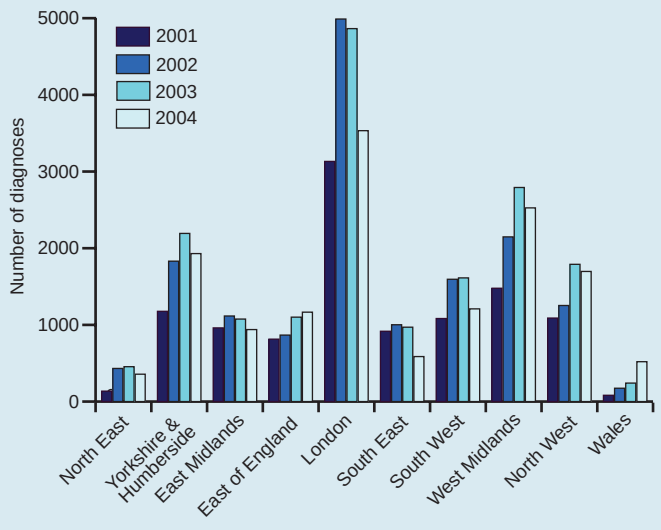


minority populations within those areas, and the patterns of sexual mixing within these groups.

In 2003, 3641 gonococcal diagnoses reported through LabBase II were homosexually acquired compared to 3372 in 2002, an increase of 10%. This accounts for 22% of all male diagnoses in 2003. Since 1995, the annual rates of infection in MSM have shown sustained increases in the 16 to 24 year age group (figure 7). Increases were also seen in the older age groups, a reversal of the downward trend observed in 2002. Of all diagnoses made in MSM, 49% were made in London, while the North West, and South East regions accounted for a further 16% and 11% respectively. The increasingly high rates of gonorrhoea in MSM probably reflect increases in high risk sexual behaviour, with many MSM reporting more sexual partners and unsafe sex than previously (5). Moreover, rectal diagnoses of gonorrhoea among males reported to LabBase II increased by 36% (from 474 to 643 positive isolates) in 2003 compared to 2002.

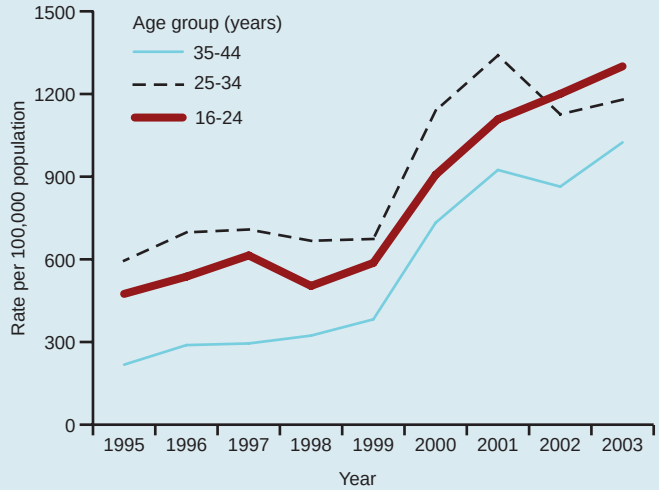
Ethnicity data is not routinely collected as part of the KC60 dataset but it is collected as part of the Gonoccocal Resistance to Antimicrobials Surveillance Programme (GRASP). Data from GRASP 2003 highlights the disproportionate burden of gonococcal disease found among black and other ethnic minorities.

Figure 6 Number of positive gonorrhoea diagnoses by region*, reported to LabBase II, 2001 to 2004



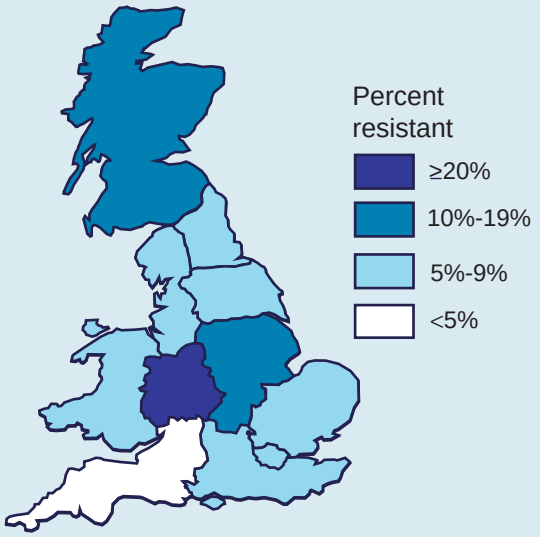
Region of reporting laboratory.

Figure 7 Rates of diagnoses (per 100,000) of uncomplicated gonorrhoea in MSM by age group, GUM Clinics, United Kingdom: 1995 to 2002*



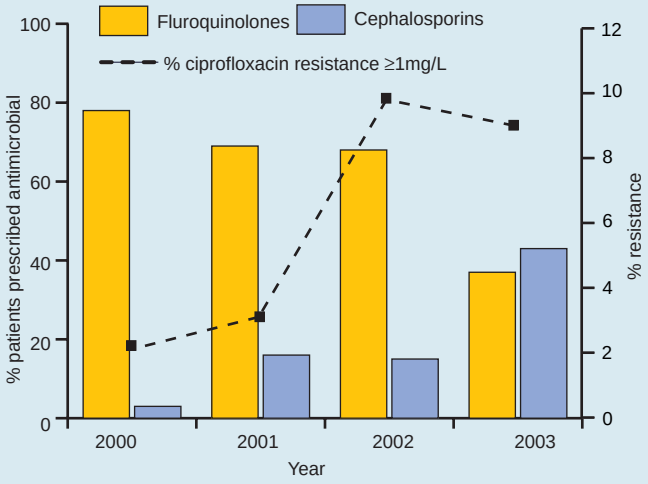
Diagnostic rates in MSM were calculated using population data derived from the National Survey of Sexual Attitudes and Lifestyles 2000. Estimates were based on the number of men who reported sexual contact with a man within the past five years. Data were only available for MSM aged 16 to 44 years old.

Figure 8 Distribution of ciprofloxacin resistant gonorrhoea* by region, GRASP, United Kingdom: 2003†



Data Source: The Gonococcal Resistance to Antimicrobial Surveillance Programme (GRASP).
*Ciprofloxacin Resistant Definition: MIC≥1mg/L
†Data not collected for Northern Ireland

Figure 9 Changes in prescribing practice of participating GRASP GUM clinics compared with the prevalence of ciprofloxacin resistance*, England and Wales: 200 to 2003



Data Source: The Gonococcal Resistance to Antimicrobials Surveillance Programme (GRASP).
*Ciprofloxacin Resistant Definition: MIC≥1mg/L

Despite accounting for about 5% of the total population of England and Wales, ethnic minority groups account for 48% of all gonococcal infections diagnosed at GRASP clinics. Black ethnic groups were most severely affected, in particular Black Caribbeans who accounted for 29% of all infections seen. High rates of gonorrhoea in these groups are likely to be due to a number of factors. Sexual attitudes and behaviours vary considerably across ethnic groups (6-8) and there are also ethnic inequalities in socio-economic status, and access to, and use of, healthcare services (9, 10).

If gonococcal infection is left untreated complications, including pelvic inflammatory disease, infertility, and ectopic pregnancy may occur (11). *N. gonorrhoeae* infection can be easily treated with appropriate antimicrobials. Decreased susceptibility, or resistance to antimicrobial therapy, however, increases both the likelihood of onward transmission and the development of adverse sequelae. Ciprofloxacin resistance was first seen in the UK in the 1990s (12) and has been reported increasingly over recent years (13-16). In 2003, 9.0% of GRASP isolates in England and Wales showed resistance to ciprofloxacin compared with the 9.8% prevalence observed in 2002 (17). A more homogenous distribution in the prevalence of ciprofloxacin resistance across the regions was seen in 2003 compared to previous years, with the exception of the West Midlands where a high prevalence of 21%, more than double that seen in any other region, was observed (figure 8).

In 2003 the Clinical Effectiveness Group of the British Association of Sexual Health and HIV (BASHH) updated the treatment guidelines for uncomplicated gonococcal infection. These guidelines now recommend the use of third generation cephalosporins, ceftriaxone or cefixime, in place of fluoroquinolones or penicillin as first-line therapies (18). They also highlight the need for specific regional prescribing strategies dependent on the regional antimicrobial resistance prevalences. The recommendations affect clinical practice in several ways. For example, as ceftriaxone is given by intramuscular injection this may lead to additional costs for GUM clinics (staff time, cost of drugs, patient time) which need to be balanced against the costs of failed treatment and repeat hospital visits. In order to minimize these costs orally administered cephalosporins, such as cefixime, may be useful alternatives (19). These recommendations were reflected in the prescribing practices of GRASP clinics in 2003, with 42% of individuals being prescribed a cephalosporin compared to 15% in 2002 (figure 9). The treatment changes made by clinics in 2003 to more effective first-line therapies may be in part responsible for the stabilisation of the prevalence of ciprofloxacin resistance.

Getting Ahead of the Curve, a strategy for combating infectious diseases, published in 2002, highlighted the importance of detailed surveillance data (20). Enhanced surveillance systems such as case-based surveillance (disaggregate data), GRASP and LabBase II are being developed at the Health Protection Agency Centre for Infections to further improve STI surveillance. The ongoing development of enhanced surveillance permits the collection of behavioural, demographic and microbiological data, to provide a more detailed insight into the changing epidemiology of gonococcal infection.

Data Sources

In England, Wales, and Northern Ireland, data are collected on the KC60 statistical return. This consists of a quarterly report of aggregate data on the total number of episodes of each STI patient seen (diagnoses), or sexual health services provided (workload) at Genitourinary Medicine Clinics. LabBase II, laboratory reporting is a system of electronic reporting of laboratory diagnoses of STIs from all healthcare settings. GRASP is a sentinel surveillance programme created to monitor gonococcal antimicrobial resistance prevalence in England and Wales.

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