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Outbreak of infection with *Salmonella* Anatum in England, Wales and Scotland, ongoing analytical study

The Health Protection Agency, the National Public Health Service for Wales (NPHS) and Health Protection Scotland (HPS) are performing a case-control study to determine the cause of an outbreak of *Salmonella* Anatum affecting England, Wales and Scotland.

Since 1 November 2007, there have been 87 primary indigenous cases in England and Wales (E&W), and 44 in Scotland, with the most recent known onset date of 11 February 08 (Figure 1).

Figure 1 Epidemic curve of *S. Anatum* in England and Wales: 1 November 2007 to 27 February 2008

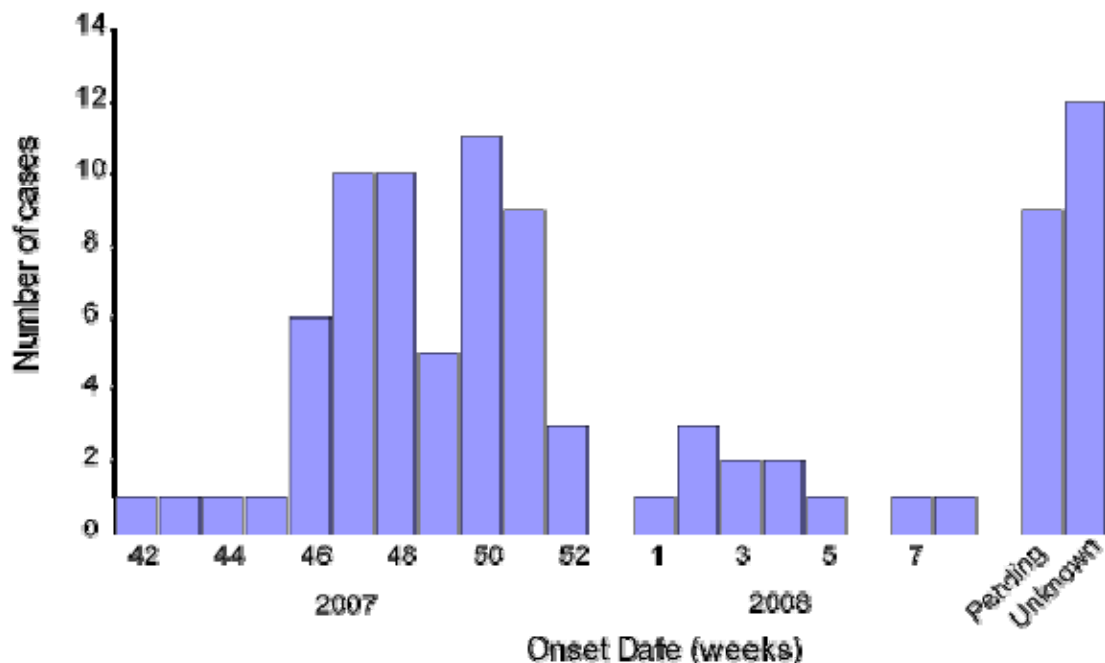
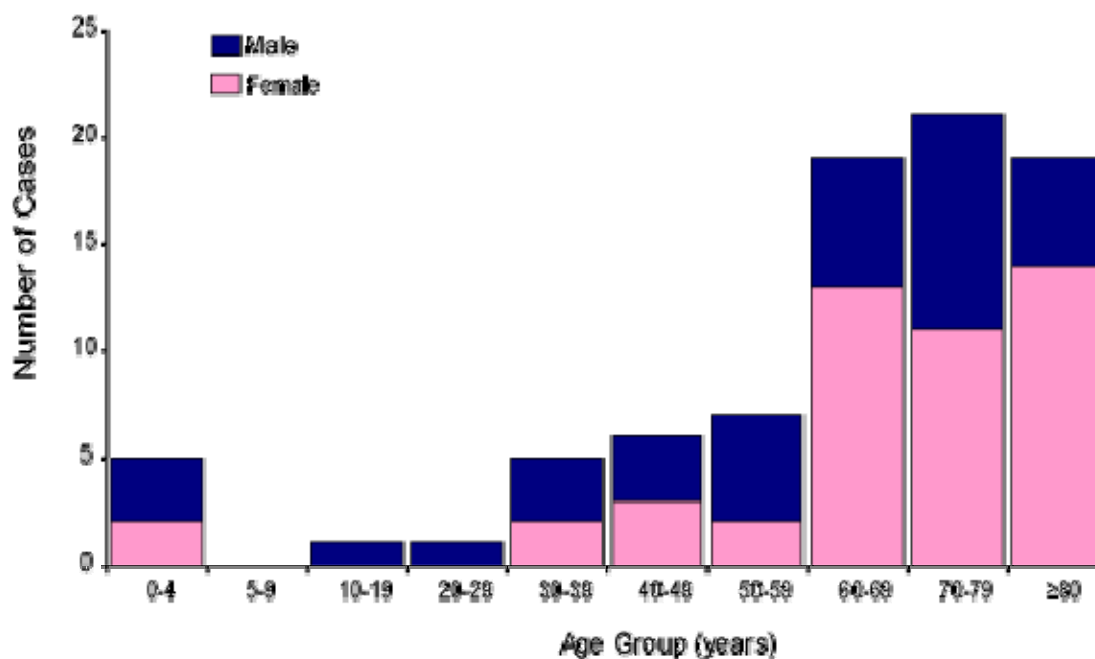


Figure 2 Age and sex distribution of *S. Anatum* cases in England and Wales: 1 November 2007 to 27 February 2008



Cases are distributed across Wales and nine HPA regions in England , with the greatest concentration in the North West (33%), the North East (16%) and Yorkshire and Humber (15%) (Table 1).

Table 1 Incidence of *S. Anatum* by region, 1 November 2007 to 27 February 2008

Country/Region	No. cases	Incidence per 100,000
North West	29	0.423
Yorkshire and Humber	14	0.272
North East	13	0.509
West Midlands	7	0.130
South West	7	0.137
East	2	0.036
East Midlands	2	0.046
South East	1	0.012
London	2	0.027
Wales	10	0.337

Detailed interviews were conducted with eligible cases between 23 December 2007 and 30 January 2008. On the basis of the evidence collected, the outbreak control team has decided to undertake a case-control study to test specific hypotheses raised from the trawling interviews. The collaborative study will involve a team including members from HPA, HPS and NPFS.

ONS data on healthcare associated infection mortality

Latest statistics from the Office for National Statistics identified a 72 per cent increase between 2005 and 2006 in the number of death certificates in England and Wales mentioning *Clostridium difficile* infection [1]. This increase follows the reissuing of guidance on completion of death certificates in 2005, with particular emphasis on the need to include healthcare-associated infections on the certificate where relevant to the patient's death [2]. Mandatory surveillance data for *C. difficile* associated disease in patients 65 and over increased by 7% over this same period [3].

The total number of death certificates on which *C. difficile* was mentioned was 6,480 in 2006, with *C. difficile* selected as the underlying cause of death in around half (3490; 55 %) of these cases. Of all deaths occurring in NHS general hospitals between 2002 and 2006, 0.99% involved *C. difficile*.

Deaths involving *C. difficile* are predominantly among older age groups. Mortality rates in 2006 for deaths in the 85 and over age group were 2,795 and 2,785 deaths per million population for males and females respectively. Mortality rates were 0.2 and 1.3 deaths per million population for males and females respectively in the under 45 age group.

In contrast to the above trend in deaths certificates with mention of *C. difficile*, deaths with mention of MRSA showed little change between 2005 and 2006 [4].

References

- [1] Report: deaths involving *Clostridium difficile* : England and Wales, 1999 and 2001-06. *Health Stat Q* 2008; 52-56.
- [2] Office for National Statistics' Death Certification Advisory Group. *Guidance for doctors certifying cause of death*. London: Office for National Statistics, 2005.
- [3] HPA. Surveillance of Healthcare Associated Infections Report 2007 . London : Health Protection Agency; 2007.
- [4] Report: deaths involving MRSA: England and Wales, 1993-2006. *Health Stat Q* 2008; 57-62.

HPA website relaunch

An upgraded Health Protection Agency website, www.hpa.org.uk, is due to be launched mid-afternoon on Friday 29 February. The site's new design aims to make information about the Agency's activities more easily accessible and allow the content to be more speedily updated. HPR readers are invited to visit the new site and complete the online survey which can be accessed via the [HPA Website Feedback](#) link at the bottom right hand corner of the home page. HPR will remain available in its current format at www.hpa.org.uk/hpr.

Infection reports

Last updated: 22 February 2008, Volume 2, No 09

HIV/Sexually Transmitted Infections (STIs)

▶ Gonorrhoea trends in England, Wales and Northern Ireland

The total number of diagnoses of gonorrhoea in England, Wales and Northern Ireland fell for the fourth consecutive year in 2006, according to returns from genitourinary medicine (GUM) clinics and other sources. The distribution of the disease, however, remains unevenly spread across regions and by sexual orientation, age group and ethnic group.

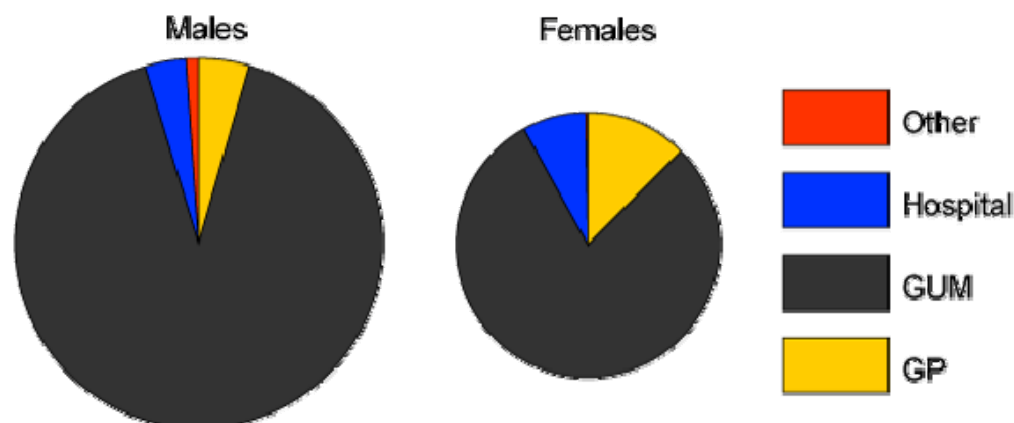
The HPA analysis indicates that:

- ▶ the downward trend in diagnoses in recent years continued with a 2% fall between 2005 and 2006
- ▶ against the overall trend, diagnoses among men who have sex with men (MSM) continued to rise
- ▶ young adults, black ethnic minorities and MSM continue to be at disproportionately higher risk
- ▶ the prevalence of ciprofloxacin-resistant gonorrhoea among MSM is a cause for particular concern
- ▶ London experienced the highest rates of diagnosis for both sexes and Northern Ireland experienced the lowest

This report on current epidemiology of uncomplicated gonorrhoea diagnoses in England, Wales and Northern Ireland (EWNI) in 2006 is based on data from three sources: aggregated data collected using KC60 returns from diagnoses made in GUM clinics; voluntary reporting from laboratories diagnosing *Neisseria gonorrhoeae*; and the Gonococcal Resistance to Antimicrobials Surveillance Programme (GRASP). (GRASP is a sentinel surveillance system collecting gonococcal isolates for susceptibility testing and associated patient demographic data from 26 sentinel GUM clinics and their associated laboratories in England and Wales [1].)

In 2006 voluntary reporting from laboratories showed that the great majority of gonorrhoea diagnoses were made by GUM services; 91% of diagnoses in men and 79% in women were made in this setting (Figure 1). Data in this report will therefore represent the majority of gonorrhoea diagnoses.

Figure 1 Proportion of gonorrhoea diagnoses by setting of clinical care in England and Wales by sex; 2006



Data from hospital outpatients has been included in GUM figures.
Source: voluntary reporting from laboratories

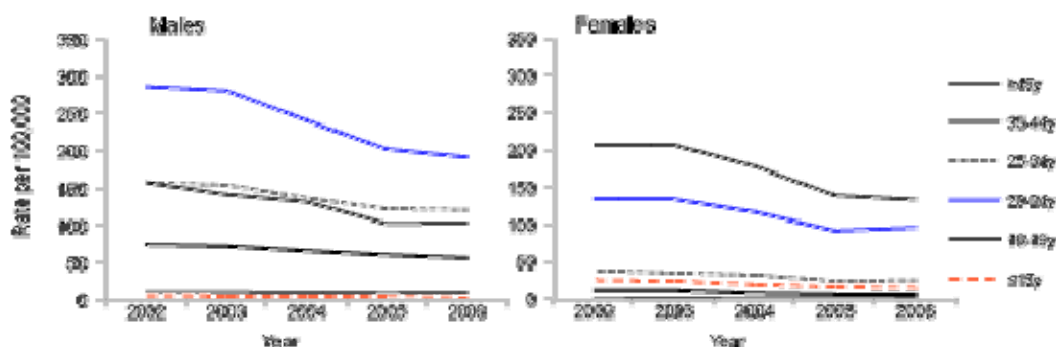
Gonorrhoea remains the second most common bacterial sexually transmitted infection (STI) in EWNl. In 2006 the overall number of reported diagnoses in GUM clinics decreased for the fourth successive year [2], dropping by 2% against 2005, from 18,418 to 18,120. More than twice as many cases are reported in men than in women (12,886 and 5,210 respectively). Below, diagnoses of gonorrhoea in three main risk groups are examined: young adults, men who have sex with men (MSM) and black ethnic minorities [3].

Young adults

A high proportion of 16-24 year olds are diagnosed with gonorrhoea, compared to other age groups. GUM clinics in EWNl reported 3,617 cases of gonorrhoea among women and 5,031 among men aged 16-24, equivalent to 69% and 39%, respectively, of the total number of diagnoses made. Population rates are highest in men aged 20-24 and women aged 16-19: there were 191 diagnoses per 100,000 in men and 134 per 100,000 in women in 2006 (Figure 2).

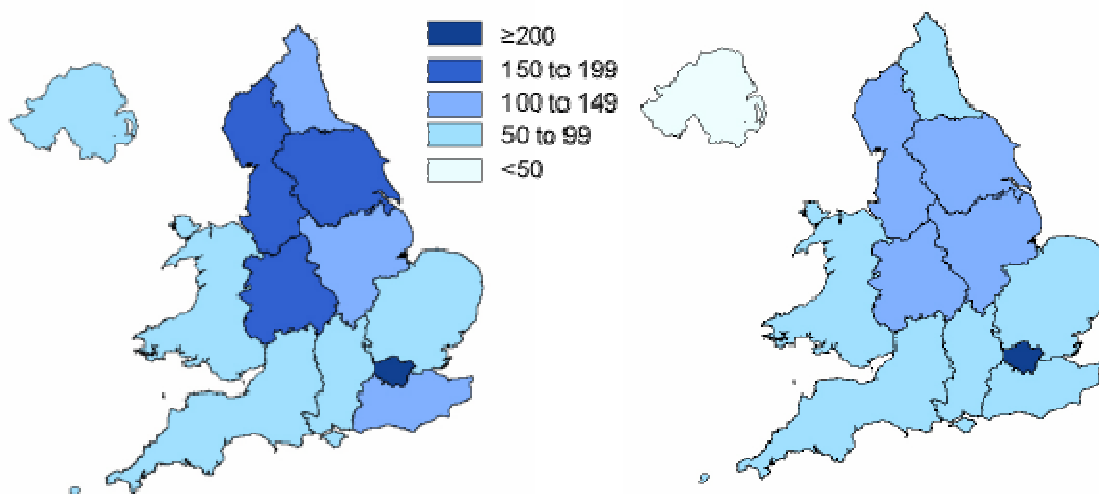
Gonorrhoea diagnoses decreased in all age groups and in both sexes during the five years to 2005 but between 2005 and 2006 rates rose by 5% in 20-24 year old women and by 1% in 16-19 year old men.

Figure 2: Rates of uncomplicated gonorrhoea diagnoses by age group in England, Wales and Northern Ireland; 2002-2006.



Rates of gonorrhoea in 16-24 year olds also vary considerably by Strategic Health Authority (SHA) (Figure 3). In 2006, London had the highest rates for both women and men, at 226 per 100,000 and 318 per 100,000 respectively. Men in the North West, Yorkshire and the Humber and West Midlands all had rates above 150 per 100,000 (176, 162 and 160 respectively). Outside London, women had rates under 150 per 100,000, with the North West, Yorkshire and the Humber, West Midlands and East Midlands ranging from 112 to 139 per 100,000 (139, 139, 127 and 112 respectively). Northern Ireland experienced the lowest rates of diagnosis for both sexes, at 59 per 100,000 for men and 19 per 100,000 in women.

Figure 3: Rates of uncomplicated gonorrhoea diagnoses in 16-24 year olds, by SHA and sex; 2006.

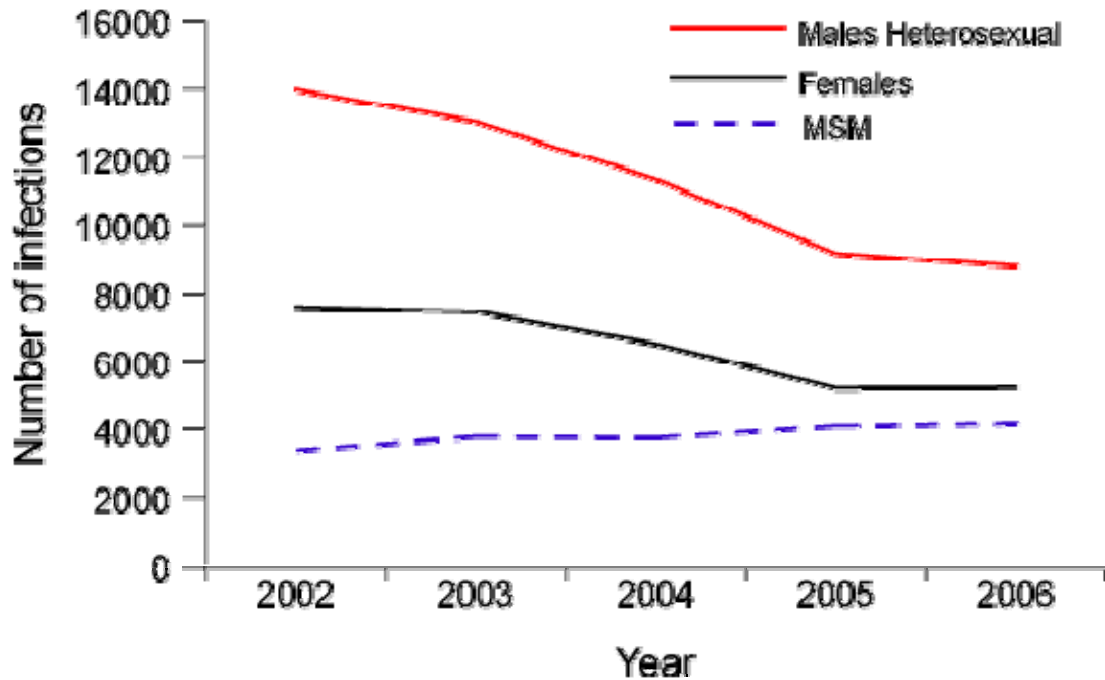


Source: GUM clinic and KC 60 returns, 2006

Men who have sex with men (MSM)

While the number of gonorrhoea diagnoses among heterosexuals attending GUM clinics has fallen over the last five years, numbers have increased in MSM (Figure 4). Between 2002 and 2006 in EWNl, gonorrhoea diagnoses among MSM rose by 23%, from 3,368 to 4,145, compared to a 37% decrease among heterosexual men (13,981 to 8,765).

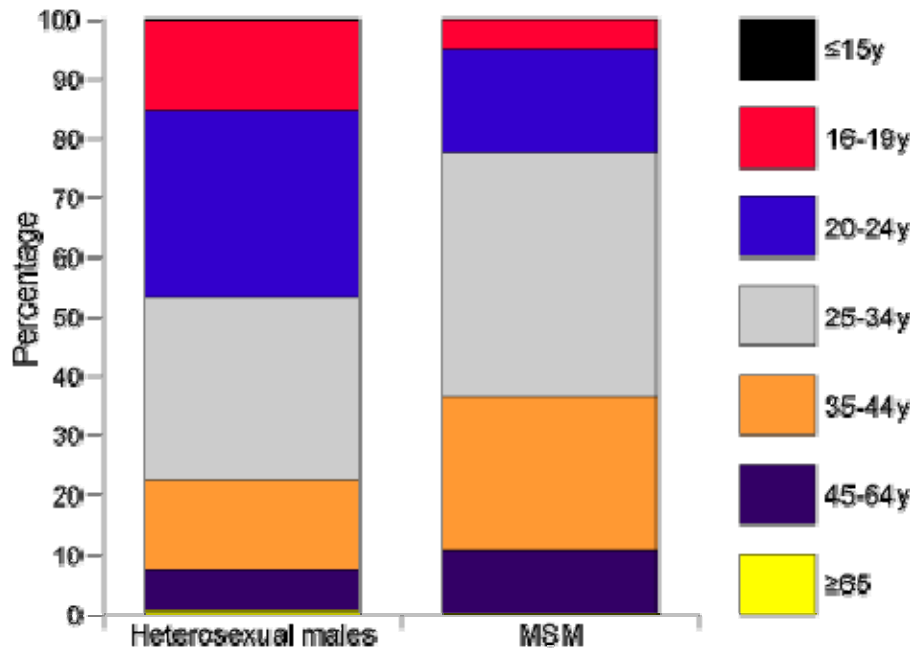
Figure 4 Number of gonorrhoea diagnoses by sex, sexual orientation and year in England, Wales and Northern Ireland: 2002-2006



Source: GUM clinic and KC 60 returns

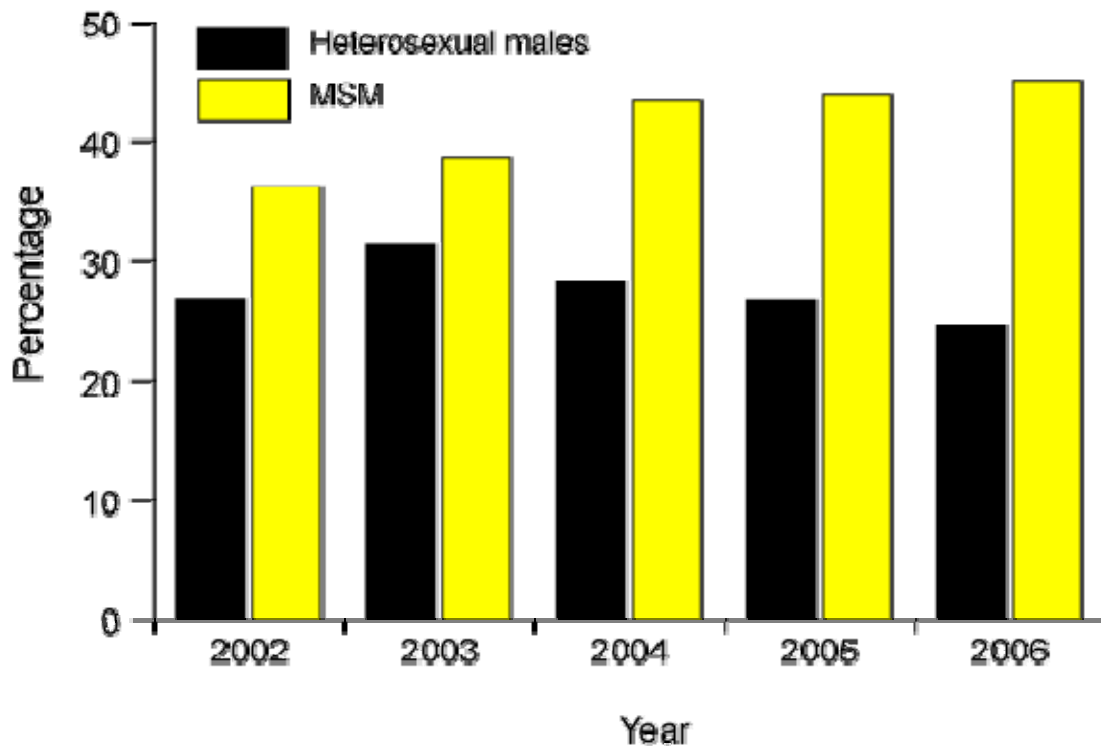
Over three-quarters (77%) of MSM diagnosed with gonorrhoea are aged over 24 years compared with 53% of heterosexual men (Figure 5). Data from GRASP are suggestive of ongoing risk taking behaviour among MSM. Since 2002, a consistently higher proportion of MSM have reported a previous infection with gonorrhoea compared to heterosexual men (Figure 6).

Figure 5 Age distribution of heterosexual men and MSM diagnosed with gonorrhoea: 2006



Source: GUM clinic and KC 60 returns

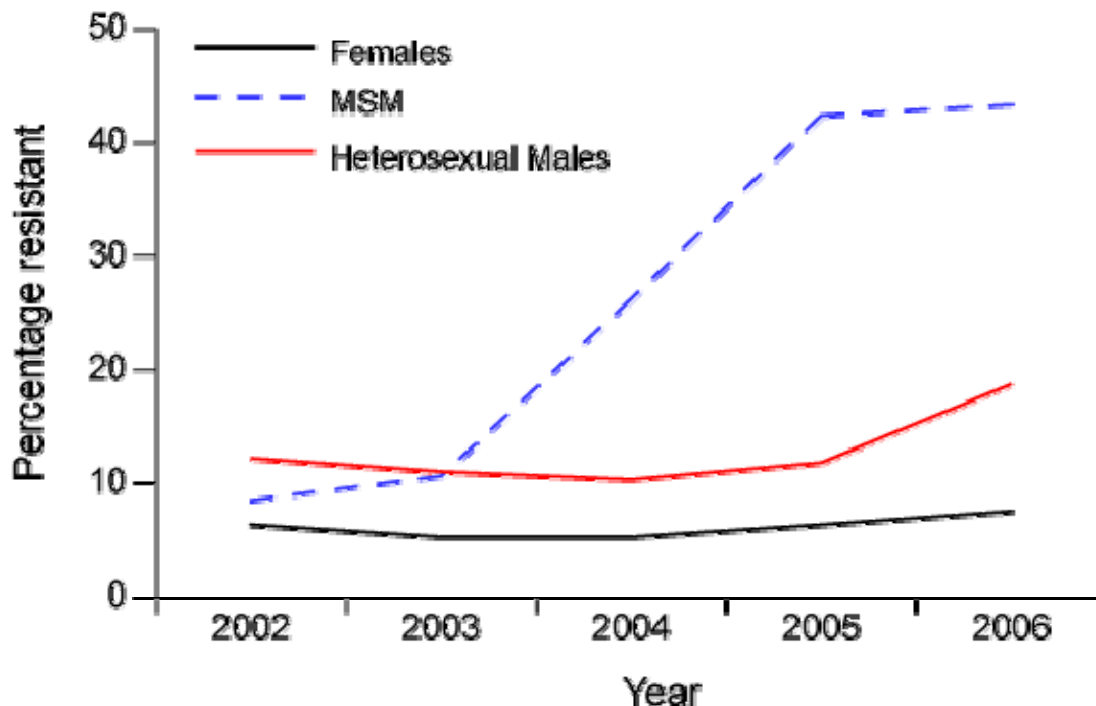
Figure 6 The percentage of heterosexual men and MSM reporting a previous gonorrhoea diagnosis



Source: GRASP data from 26 GUM clinics

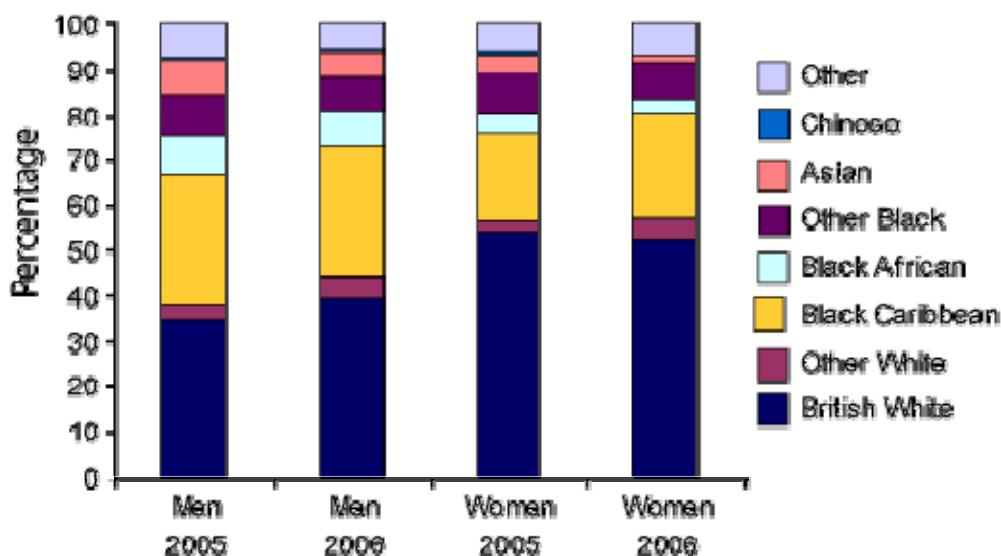
The prevalence of ciprofloxacin-resistant gonorrhoea amongst MSM has been rising steadily since 2003, reaching 43% in 2006 (Figure 7). This was double the prevalence amongst heterosexual men (19%) and five times higher than prevalence amongst women (7.5%).

Figure 7 The prevalence of ciprofloxacin resistance by gender and mens' sexual orientation: 2002-2006



Source: GRASP data from 26 GUM clinics

Figure 8 Proportion of heterosexuals diagnosed with gonorrhoea by ethnic group and gender: 2005-2006

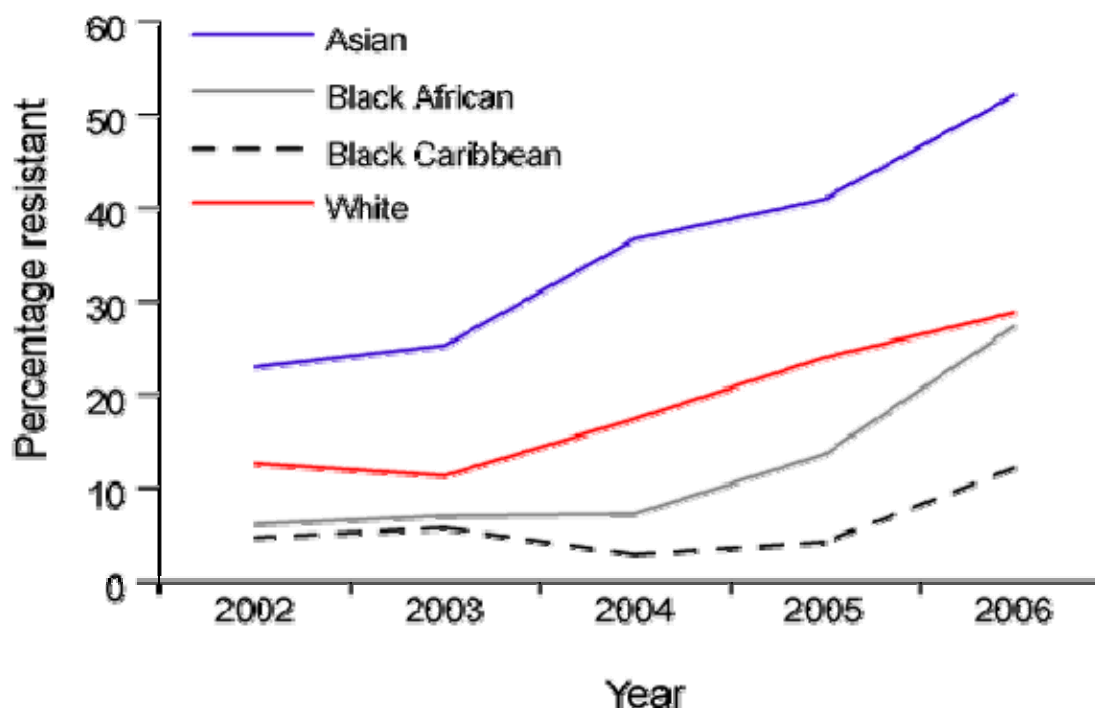


Source: GRASP data from 26 GUM clinics

Of gonococcal isolates collected through GRASP in 2006, 52% from Asian patients and 29% from white patients were ciprofloxacin resistant. Both these groups have seen continued increases in resistance since 2003. Prevalence of resistance amongst isolates from Asian individuals is thought to be driven by heterosexual men having sexual contact abroad in their country of origin [1]. The high prevalence of resistance amongst isolates from white individuals is due to the high proportion of white cases who were MSM. In MSM there was high prevalence of resistance in both endemic (41%) and imported strains (52%) [1].

Despite the disproportionate burden of gonorrhoea in black ethnic groups, the prevalence of ciprofloxacin resistance has previously remained much lower in these groups compared to other ethnic groups. However in 2006 the prevalence of ciprofloxacin resistance rose to 12% in black Caribbean and 27% in black African populations, indicating increased transmission of ciprofloxacin resistant strains is occurring in these populations [1].

Figure 9: The prevalence of ciprofloxacin resistance by ethnic group: 2002-2006



Source: GRASP data from 26 GUM clinics [1]

Conclusions

Despite observed falls in overall gonorrhoea diagnoses in England, Wales, and Northern Ireland in the past few years, there remain certain groups who are disproportionately affected. Young adults, MSM, and black ethnic groups have the highest burden of the infection and the recent and sustained rises in diagnoses among MSM are a particular cause for concern. Enhanced surveillance systems are an indispensable resource in monitoring the changing epidemiology of gonorrhoea and informing future prevention measures.

References

1. HPA. *The Gonococcal Resistance to Antimicrobials Surveillance Programme Annual Report 2006*. London: HPA, 2007.
2. Hughes G, Simms I, Leong G. 2006: a Mixed Picture. Data from UK Genitourinary Medicine Clinics. *Sex Transm Inf.* 2007; **83**: 433-435.
3. HPA. *Testing Times - HIV and other Sexually Transmitted Infections in the United Kingdom: November 2007*. London: HPA, 2007.
4. The UK Collaborative Group for HIV and STI Surveillance. *Mapping the Issues. HIV and Other Sexually Transmitted Infections in the United Kingdom: 2005*. London: HPA Centre for Infections. November 2005.
5. Jin F, Prestage GP, Zablotska I, Rawstone P, Kippax SC, Donovan B, *et al*. High rates of sexually transmitted infections in HIV positive homosexual men: data from two community based cohorts. *Sex Transm Inf* 2007; **83**: 397-9.
6. Risley C, Ward H, Choudhury B, Bishop C, Fenton K, Spratt B. Geographic and demographic clustering of gonorrhoea in London. *Sex Transm Inf.* 2007; **83**: 48 -7.