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House of Commons

Health Committee

**SEXUAL HEALTH**

Minutes of Evidence

Wednesday 17 July 2002

**Communicable Disease Surveillance Centre,  
Public Health Laboratory Service**

Dr Kevin Fenton and Dr Gwenda Hughes

**Department of Population Sciences, Royal Free Hospital**

Professor Anne Johnson

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Dr Jackie Cassell

**St Mary's Hospital, Portsmouth**

Dr Jean Tobin

HC 990-iii, Session 2001-02

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# House of Commons

## Health Committee

### SEXUAL HEALTH

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WEDNESDAY 17 JULY 2002

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## Members present:

Mr David Amess  
John Austin  
Andy Burnham  
Mr Simon Burns  
Jim Dowd

Julia Drown  
Sandra Gidley  
Siobhan McDonagh  
Dr Doug Naysmith  
Dr Richard Taylor

(In the absence of the Chairman, John Austin was called to the Chair)

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**Memorandum by HIV/STI Division PHLS Communicable Disease Surveillance Centre (SH63)****SEXUAL HEALTH IN BRITAIN: THE CHANGING EPIDEMIOLOGY OF HIGH-RISK  
SEXUAL BEHAVIOURS, AND STIs INCLUDING HIV****1. SUMMARY OF KEY POINTS**

1. The past decade has seen substantial increases in high-risk sexual behaviours in the British population. Although condom use has increased, it is likely the increase in unsafe sex has been even greater.
2. Although substantial declines in STI incidence were observed throughout the 1980s and early 90s, new diagnoses of STIs have risen continually since 1995. Diagnoses of chlamydia, gonorrhoea and syphilis have all more than doubled over the past five years.
3. Distinct "core-groups" (eg young people, gay and bisexual men, some ethnic minorities) bear a disproportionate burden of disease.
4. New treatments have had a major impact with rises in HIV prevalence (due to decreasing numbers of deaths at a time when new diagnoses are increasing). As a result, the number of people requiring long term treatment is increasing rapidly.
5. Gay men remain the group at highest risk of acquiring HIV in the UK, and there is evidence that transmission through sex between men is continuing at a substantial rate.
6. Over 70 per cent of heterosexually acquired HIV infections diagnosed in the UK in 2000-01 were in people from, or associated with exposure in, Africa.
7. Although the potential still exists for HIV transmission through injecting drug use there is no evidence of significant current spread amongst IDUs in the UK.
8. London, Edinburgh, Brighton and Manchester are the cities in the UK with the largest HIV infected populations, although other metropolitan areas have significant numbers of HIV infected residents.
9. Although preventable HIV infections are still occurring in children, the proportion of maternal HIV infections detected in pregnancy has increased especially in London.
10. Poor GUM clinic access is now widespread throughout England. The median time to first appointment in 2002 has lengthened to 12 days for men and 14 days for women.

**2. INTRODUCTION: THE PHLS COMMUNICABLE DISEASE SURVEILLANCE CENTRE**

2.1 The Public Health Laboratory Service is a network organisation consisting of nine Group Laboratories based on 49 sites strategically located throughout England and Wales, which are linked to specialist microbiological reference units and epidemiological experts. The Communicable Disease Surveillance Centre, CDSC, was set up by the PHLS on 1 January 1977 to provide a highly active centre for the surveillance and control of infectious disease in support of public health physicians and others involved in the investigation and control of communicable disease. It now forms a unified central epidemiological unit of the PHLS and is the national centre for the surveillance and control of communicable disease in England and Wales.

2.2 The main objectives of the HIV/STI Division of the CDSC are to determine and describe the geographic, demographic and risk factor distributions of STIs and BBVs; to monitor the progression of STIs and BBVs in "at risk" populations and to estimate incidence of particular infections (especially HIV) in important behavioural risk groups; to provide data and analyses for planning and targeting preventative



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[Continued]

activities (health promotion) aimed at reducing risk behaviours and interrupting transmission of STIs and BBVs; and to establish and maintain appropriate surveillance mechanisms to facilitate the early detection of significant changes in the epidemiology of STIs and BBVs.

2.3 This report presents the most up-to-date information on the status of the HIV and STI epidemics in England and Wales, as well as the behaviours that transmit them. The evidence is based upon data derived from existing HIV/STI surveillance programmes as well as recently published research studies. Further information on the structure of the HIV/STI Division, or about the nature, range and outputs of our surveillance programmes may be obtained from the PHLS website located at [www.phls.co.uk](http://www.phls.co.uk).

### 3. RECENT CHANGES IN POPULATION SEXUAL BEHAVIOUR: A MAIN DRIVING FACTOR FOR RISING HIV AND SEXUALLY TRANSMITTED INFECTIONS (STIs).

3.1 Population patterns of sexual behaviour are major determinants of sexually transmitted infections (STI) and HIV transmission. The most recent data on sexual behaviour in Britain are derived from the MRC funded second National Survey of Sexual Attitudes and Lifestyles (Natsal 2000). This study confirmed that there have been many changes in both social norms, reflected in more tolerance towards sexual diversity, and in sexual behaviour in the UK in the past decade.<sup>1</sup> There has been an increase in a wide range of behaviours associated with HIV and STI transmission, including numbers of heterosexual partners, age at first sexual intercourse, homosexual partnership, concurrent partnership, heterosexual anal sex, and payment for sex.<sup>1</sup>

#### *Key point one*

*The past decade has seen substantial increases in high-risk sexual behaviours in the British population. Although condom use has also increased, this is likely to have been offset by greater increases in unsafe sex.*

3.2 For both men and women the numbers of lifetime heterosexual partners have increased substantially since 1990 (Figure 1), and these increases have been highest in young people.<sup>1,2</sup> The mean number of lifetime partners has increased from 8.6 and 3.7 partners ever for men and women respectively in 1990 to 12.7 and 6.5 in 2000.<sup>1</sup>

3.3 Concurrent partnerships (having more than one sexual partner at the same time) are important for STI transmission dynamics, as they increase the probability that an infection will be passed on to more than one person. The proportion of men and women who had concurrent relationships in the past year has also increased since 1990 and was 14.6 per cent and 9.0 per cent respectively in 2000 (Figure 2). The rate was highest in young people, with over 20 per cent of 15-24 year old men and 15 per cent of 15-24 year old women having a concurrent partnership in the last year.<sup>1</sup>

3.4 While condom use has increased in the UK, the increase in numbers of sexual partners may have served to discount some of the public health advantages of this increase. Overall the proportion of the population, who reported two or more partners in the past year and did not use condoms consistently, had increased since 1990, from 13.6 to 15.4 of men and from 7.1 per cent to 10.1 per cent of women (Figure 3).

3.5 Age at first intercourse has declined from 21 for women and 17 for men surveyed in 1990 to 16 for men and women born in the early to mid 1980s.<sup>2</sup> Young people do not always have the negotiation skills to ensure the use of condoms consistently and effectively, and yet are a group with both higher rates of partner change, and more concurrent partners.<sup>1,2</sup>

3.6 The proportion of men in Britain who had ever had a homosexual partner increased from 3.6 per cent in 1990 to 5.4 per cent in 2000, and the proportion that had had a homosexual partner in the last five years also increased (Figure 2).<sup>1</sup> Community surveys of men who have sex with men have seen high risk sex increase since 1996.<sup>3,4,5</sup>

3.7 Unsafe sex amongst men who have sex with men, particularly occurring with a partner of unknown HIV status, has increased in London since 1996.<sup>1,4</sup> The proportion of gay men in London reporting unprotected anal intercourse (UAI) in the past year increased from 32 per cent in 1996 to 44 per cent in 2000 (Figure 4). Evidence suggests that these increases in UAI are with both regular and casual partners.<sup>4</sup> Recent growth in traditional (such as saunas and cruising grounds) and new (websites and internet chat rooms) sexual market places has increased the opportunity for men who have sex with men to acquire new sexual partners.<sup>6</sup>

3.8 Implications for GUM services: The observed increases in high-risk sexual behaviour have driven, and continue to drive, global increases in HIV and STI transmission. In turn, these place additional pressures on existing services.



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#### 4. RECENT EPIDEMIOLOGY OF SEXUALLY TRANSMITTED INFECTIONS

4.1 One of the most sensitive markers of changes in high-risk sexual behaviour is the resultant increase in transmission and diagnosis of sexually transmitted infections. Sexually transmitted infections (STIs) cause considerable reproductive morbidity and poor health outcomes including pelvic inflammatory disease (PID), infertility, ectopic pregnancy, cervical cancer, neonatal disorders and death.<sup>7</sup> Early diagnosis and treatment of STIs, as well as targeted prevention efforts, can significantly reduce the likelihood of these complications occurring.

4.2 The long established network of over 200 GUM clinics in England and Wales, and the robust STI surveillance (KC60) programme are well placed to identify these increases early. Unsurprisingly, the past decade has seen substantial changes in the epidemiology of STIs and HIV infection.

##### *Key point two*

*Although substantial declines in STI incidence were observed throughout the 1980s and early 90s, new diagnoses of STIs have risen continually since 1995. Diagnoses of chlamydia, gonorrhoea and syphilis have all more than doubled over the past five years.*

4.3 Diagnoses of acute bacterial STIs in genitourinary medicine (GUM) clinics in England, Wales and Northern Ireland more than doubled between 1995 and 2000<sup>8</sup> and specifically: gonorrhoea increased by 102 per cent (10,204 to 20,663 cases) (Figure 5); chlamydia increased by 107 per cent (30,877 to 64,000 cases) (Figure 6), and infectious syphilis increased by 145 per cent (136 to 333).

4.4 Preliminary analyses of the latest data suggests there were further significant increases in 2001.<sup>9</sup> These rises are mostly associated with an increase in higher risk sexual behaviour although greater testing for chlamydia has also contributed.<sup>10</sup> Diagnoses of STIs had fallen sharply in the mid to late 1980s in the wake of the HIV and AIDS epidemic and had remained at low levels until the mid-1990s.<sup>11</sup>

4.5 However, chlamydial and gonococcal infections in females usually show no symptoms which means they often do not get diagnosed. The chlamydia screening pilot in Portsmouth and Wirral, which was funded by the Department of Health and co-ordinated centrally by the Public Health Laboratory Service Communicable Disease Surveillance Centre, tested all sexually active young women attending a range of health care settings, including general practice and family planning clinics, regardless of whether they had symptoms. Approximately 17,000 women were tested between September 1999 and August 2000, equivalent to about 45 per cent of the sexually active female population aged under 25 years in those areas.<sup>12</sup> The results suggested that between 10 per cent and 11 per cent of women aged under 25 and attending health care services may be infected with chlamydia.<sup>13</sup> Many of these women would have been unaware of their infection and therefore at risk of developing chlamydial complications.

4.6 Implications for GUM services: Increasing STI diagnoses reflect increasing GUM clinic throughput as well as rising disease prevalence in the community. As many clinics are now operating at maximum capacity, the effectiveness of GUM clinic based prevention interventions such as partner notification and behavioural counselling are at risk as clinics fail to cope with demand.

##### *Key point three*

*Distinct "core-groups" (eg young people, gay and bisexual men, some ethnic minorities) bear a disproportionate burden of disease.*

4.7 Certain groups in the population tend to be at particular risk of infection and re-infection with STIs. These include:

4.8 Young people, particularly teenage females. The highest rates of gonorrhoea and chlamydia occur among teenage females.<sup>14</sup> Over 40 per cent of the 6,313 females diagnosed with gonorrhoea in 2000 were under 20 years old, and among 12 to 15 year old females diagnosed with gonorrhoea, almost a quarter will return with another episode of gonorrhoea within a year.<sup>15,16</sup>

4.9 Gay men. There have been numerous large outbreaks of syphilis in England over the last few years, notably in Manchester, Brighton and most recently in London, where over 290 cases were diagnosed in the last year.<sup>17,18</sup> These outbreaks have predominantly involved gay men, many of whom were also infected with HIV.<sup>19</sup>

4.10 Black ethnic minorities. Several studies have shown particularly high rates of bacterial STIs, especially gonorrhoea, among the black Caribbean population.<sup>20, 21, 22, 23</sup> In London, gonorrhoea rates are thought to be 10 times higher in black ethnic groups than in whites.<sup>24</sup> A quarter of black Caribbeans diagnosed with an acute STI will be diagnosed with another acute STI within a year.<sup>25</sup>



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4.11 Although sexual behaviour is a key determinant of STI transmission, other factors may be associated with an increased probability of disease spread. These include: high levels of asymptomatic infection; ineffective partner notification measures; poor access to GUM clinic services.<sup>26, 27, 28, 29, 30</sup> Consequently, the development of prevention measures should always consider not only the behavioural context, but the provision and utilisation of sexual health services as well.

4.12 Implications for GUM services: Inequalities in GUM service provision are exacerbated in poor urban areas where high disease prevalence, increasing demand, poor access times and overstretched staff result in a negative feedback loop of service deterioration. The inverse-care law, whereby those in greatest need often have the poorest access to GUM services, applies equally well to Britain today.

## 5. RECENT EPIDEMIOLOGY OF HIV INFECTION

5.1 Population changes in sexual behaviour will also influence the transmission of HIV infection, however other factors eg HIV testing behaviours, patterns of health service utilisation, in-migration from high-prevalence areas, patterns of injecting drug use, and vertical (mother to child) transmission also influence the distribution of this disease in the population.

5.2 Nevertheless, HIV continues to be the most important communicable disease in the UK. It is an infection associated with serious morbidity, high costs of treatment and care, significant mortality and, since it affects mainly younger adults, high number of potential years of life lost. Because HIV is a chronic disease, diagnosis of HIV does not necessarily represent recent infection.

5.3 It is estimated there are about 33,500 HIV infected people alive in the UK of whom about 9,400 have not yet had their infection diagnosed. The HIV epidemic in the UK is broadly similar to that of much of Northern Europe (Germany, Holland and the Scandinavian countries), while South West Europe (Spain, Portugal, Italy, France) has experienced a much larger epidemic, especially among IDUs. A rapidly spreading mainly IDU epidemic is currently occurring in the Baltic States, the Russian Federation and other Eastern European countries but this has not so far impacted on the UK. The sub-Saharan epidemic however has had a large impact as the detailed notes below illustrate.

### Key point four

*The impact of new treatments on AIDS incidence and deaths—New treatments have had a major impact with rises in HIV prevalence (due to decrease in death rates) and increases in the number of people requiring long term treatment.*

5.4 Beginning in 1995, highly active antiretroviral therapies began to have a major impact on AIDS incidence and deaths from AIDS in the UK. Figure 7 shows the reduction for the period 1996–01. There were dramatic falls in 1996–98 and the lower numbers of AIDS cases and deaths have been sustained since then. That this is an effect of treatment is evidenced by the fact that the reduction is only seen in those who have their infection previously diagnosed. A large proportion of the AIDS cases now are in those who don't have their HIV diagnosed until they develop an AIDS defining illness.

5.5 The decrease in deaths and increasing new diagnoses has resulted in rising numbers of diagnosed HIV infected people. The increase was from 14,206 in 1996 to 23,017 in 2000, and if the trend continues will result in almost 34,000 diagnosed HIV infected people alive in 2005.

5.6 Despite the enormous promise of treatment advances, the problems of side effects, compliance and the development of resistant strains of HIV, all temper optimism at this stage.

5.7 Implications for GUM services: As people live longer with HIV, the increasing prevalence have placed substantial pressures on existing services to fund expensive anti-retroviral therapy, often at the expense of other HIV/STI prevention interventions.

### Key point five

*Gay men remain the group at highest risk of acquiring HIV in the UK and there is evidence that transmission through sex between men is continuing at a substantial rate.*

5.8 In the 10 years from January 1992 there were almost 14,000 new diagnoses of HIV infection acquired through sex between men (Figure 8). Although some of these will have been acquired earlier in the course of the UK epidemic, there is substantial evidence pointing to continuing transmission in the 1990s. This includes:

- infections being diagnosed in those who have previously tested negative in recent years (seroconvertors)
- infections newly diagnosed in under 25s many of whom will have only recently become sexually active



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- no ageing cohort effect (median age and median CD4 all count have remained fairly constant in those newly diagnosed in the last 10 years)
- acute STIs are occurring in both diagnosed and undiagnosed HIV positive men (Fig.5)
- behavioural surveys suggest that risk taking is increasing
- innovative new tests ("detuned assay") showing an HIV incidence of around 3 per cent (MSM attending clinics having syphilis tests)

5.9 88 per cent of HIV reports in men who have sex with men (MSM) in the last five years for whom we have reported ethnicity are white. New diagnoses are occurring across the age spectrum, not only in younger gay men. The annual prevalence survey shows that men who have sex with men constitute the largest number of HIV infected people within the UK (table 1).

#### *Key point six*

*Over 70 per cent of heterosexually acquired HIV infections diagnosed in the UK in 2000–01 were in people from, or associated with exposure in, Africa.*

5.10 The rapid rise in new diagnoses in those who have acquired HIV heterosexually is shown in (Figure 8). 71 per cent of the new diagnoses ascribed to heterosexual transmission in 2000 and 2001 were in people from or who acquired their infection in Africa (2895 of 4106). Although in the early 1990s this was mainly in people from Uganda, in more recent years increases have been seen in new diagnoses from other African countries, especially Zimbabwe.

5.11 The numbers of those newly diagnosed each year whose only exposure is heterosexual sex within the UK is small—comprising less than 15 per cent of the total heterosexual reports. However, those newly diagnosed who have a heterosexual partner who is an IDU or bisexual man are decreasing in numbers—only 3.5 per cent of the new diagnoses in 1997–01 were in this category. In contrast numbers acquiring HIV heterosexually from a partner who acquired their infection heterosexually are increasing slowly and formed 9.5 per cent of the new diagnoses of heterosexually acquired infection diagnoses in the five years 1997–01.

5.12 Implications for GUM services: The changing epidemiology means that GUM services must increasingly adapt to the new clientele with the provision of culturally competent services.

#### *Key point seven*

*Although the potential still exists for HIV transmission through injecting drug use there is no evidence of significant current spread amongst IDUs in the UK.*

5.13 Drug injecting has played a leading role in the spread of HIV infection in South Western Europe and in parts of Eastern Europe and the possibility still exists in the UK both for explosive outbreaks (as experienced in the mid 1980s in Edinburgh) and ongoing transmission in injecting drug users. In the UK, data from the Unlinked Anonymous (UA) programme suggest a prevalence of about 1 per cent among injecting drug users (IDUs) in contact with drug agencies.

5.14 Over recent years the percentage of IDUs sharing needles or syringes has risen dramatically. In 2000, almost a third (31 per cent) of current injectors reported sharing within the previous month, the figure was higher in women (39 per cent) and in London (41 per cent). In addition laboratory reports of acute Hepatitis B in IDUs are rising as well as the prevalence among recent injectors (7 per cent, in 2000).

5.15 Injecting drug use is also the main transmission route for the hepatitis C virus (HCV). UA data has demonstrated an overall prevalence of 33 per cent of HCV among current injectors and a linear relationship with injecting duration which is indicative of ongoing transmission (Figure 10).

5.16 There is little doubt that, were it not for needle exchange programmes, we would have seen much larger numbers of HIV infected IDUs with the potential for transmission to their sexual partners. The experience of other countries shows that it is imperative that these programmes are sustained, and surveillance maintained to a high level in order to detect any increase in HIV infection in IDUs in the UK.



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*Key point eight*

*London, Edinburgh, Brighton and Manchester are the cities in the UK with the largest HIV infected populations, although other metropolitan areas have significant numbers of HIV infected residents.*

5.17 There is a very great variation in geographical distribution of HIV infected people. 63 per cent of the cumulative total of diagnosed HIV infected people are resident in London (Fig. 11). Furthermore the Unlinked Anonymous testing programme shows that among STD clinic attenders, HIV positivity rates are about five times higher in gay men, and eight times higher in heterosexual men and women in London than they are in the rest of England and Wales.

5.18 Among the UK IDU population it is estimated that around 50 per cent (30 to 70,000) are resident in London. Further, data from the UA programme indicates a much higher prevalence of HIV (3.6 per cent compared to 0.21 per cent), Hepatitis B (26 per cent compared to 20 per cent) and Hepatitis C (48 per cent compared to 30 per cent) in London resident IDUs compared to the rest of England and Wales.

*Key point nine*

*Although preventable HIV infections are still occurring in children born in the UK, the proportion of maternal HIV infections detected in pregnancy has increased especially in London.*

5.19 HIV infection among pregnant women has assumed greater public health importance since it became known that the use of treatment by the mother, caesarean section and the avoidance of breast-feeding reduces the risk of mother to child transmission of HIV to from one in four to less than one in 50.

5.20 The prevalence of HIV infection among pregnant women is greatest in inner London. Of women delivering during the first half of 2001, almost 0.5 per cent of pregnant women delivering in inner London, 0.3 per cent of women in outer London and 0.04 per cent outside London were infected with HIV. Prevalence has increased steadily in all areas of England, with the greatest increase occurring outside inner London (Figure 12).

5.21 There has been a steady increase in the proportion of HIV-infected women diagnosed before delivery, allowing the women to access treatment to prevent transmission to the baby. During 2000, an estimated 87 per cent of HIV-infected pregnant women in inner London were diagnosed before they gave birth, thereby exceeding the national target of 80 per cent set by the Department of Health for 2002. In outer London and the rest of England, an estimated 69 per cent and 56 per cent of pregnant women respectively, had their infection diagnosed prior to delivery (Figure 13). However, because of the increasing prevalence, the number of HIV infected infants has not fallen. More than half of the children diagnosed with AIDS aged less than one year and born in 2000 were born in what have been regarded as low prevalence areas.

5.22 Implications for GUM services: Although the uptake of antenatal screening in inner-London continues to exceed set targets, there are concerns regarding the provision of these services outside of London. Future GUM and HIV service provision must take into account the needs of these HIV infected children and families.

## 6. IMPACT ON EXISTING GUM CLINIC SERVICES

6.1 Recent increases in sexual behaviour, rapidly increasing STI and HIV diagnoses, coupled with the sexual health promotion and growing awareness of GUM services have lead to substantial increases over the past decade. Although services have largely coped with the increases, there is now growing evidence that GUM services are now over-stretched resulting in delayed access times and a failure to effectively control STI spread in the community.

6.2 The delay in access time to curative service is important in STI transmission as this increases the duration of infectiousness (since the individual remains untreated for longer) and increases the probability of disease transmission (since infected individuals continue to have sexual intercourse).

*Key point 10*

*Poor GUM clinic access is now widespread throughout England. The median time to first appointment in 2002 has lengthened to 12 days for men and 14 days for women.*

6.3 The total number of episodes seen in GUM clinics in the UK nearly doubled between 1990 and 1999, rising from 624,269 to 1,169,537<sup>31</sup> (Figure 14). This rise has almost certainly contributed to the large increase in patient waiting times recently reported by GUM clinics.<sup>32</sup> If patients wait longer to get treated this may increase the likelihood of STIs being passed on to sexual partners and of the development of STI-related complications.<sup>33, 34</sup>



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6.4 During 2002, the unprecedented demand for GU Medicine services has increased with a corresponding deterioration in patient access times, especially in London and other major conurbations. For most GUM clinics, the numbers of women attending exceeds that of men. Consequently appointment delays for women are longer because of their longer examination times.

6.5 Poor access is now widespread throughout England. The median time to first appointment in 2002 has lengthened to 12 days for men and 14 days for women, compared with five and six days respectively in 2000 when concern was first expressed. The majority of the 700,000 new attenders at GU Medicine clinics each year are having unacceptable delays for initial assessment and treatment.<sup>35</sup>

6.6 Poor access to curative services frustrates STI prevention and control. Persons at increased risk fail to obtain timely treatment and may continue to spread their STI. This is particularly worrisome in areas experiencing STI outbreaks (eg syphilis outbreaks in Manchester and London) or in hyperendemic areas (eg South London) since early and effective treatment of disease should be the primary goal of STI control.

6.7 In the absence of any increase in GUM capacity, the problems of GUM clinic access are likely to worsen, not improve, given the current trends. It is also of concern that the government's Sexual Health and HIV Strategy proposes to introduce a range of HIV/STI prevention initiatives including Hepatitis B Screening, HIV testing promotion, and chlamydia screening. Taken in concert, these interventions will further increase pressures on overstretched services. Consequently, the benefits of screening and sexual health promotion are likely to be offset by the frustration and delays experienced by GUM clinic attenders and those providing curative services.

## 7. CONCLUSIONS

7.1 Sexual health in Britain is deteriorating as evidenced by the recent marked increases in bacterial and viral sexually transmitted infections, focal outbreaks of syphilis in metropolitan areas, and the increasing diagnoses of HIV infection, particularly among homosexual men and heterosexuals who may have acquired their infection abroad.

7.2 Whilst increases in high-risk sexual behaviour are key determinants of this deterioration, other factors for example changes in health seeking behaviour, as well as true increases in the prevalence of disease in the community are also contributing to the observed increases in STIs.

7.3 Placed in concert, the behavioural changes and increases in STIs have placed substantial pressures on the available Genitourinary Medicine Clinics. Evidence of this increased burden include: delays in GUM clinic access times (currently two to three weeks); increases in workload for GUM clinic and administrative staff.

7.4 The impact of these increases have had a deleterious effect on service provision and have resulted in a vicious circle in which the increased workload increases staff stress; overstretched staff are leaving the service;

## 8. RECOMMENDATIONS

8.1 In view of the available evidence we recommend the following:

8.2 Urgent investment into existing GUM services to reduce waiting times and improve access to STI screening, diagnosis and treatment. This has been identified as a priority area in the governments Sexual Health and HIV strategy, and must be implemented urgently. GUM clinic waiting times are increasing and many clinics, particularly those in worse affected areas, turn patients away on a daily basis. Planned initiatives outlined in the Sexual Health and HIV Strategy such as HIV testing promotion, chlamydia screening and Hepatitis B Screening will severely exacerbate the lack of GUM capacity due to the resultant increased demand. Shifting sexual health care into primary care is unlikely to adequately meet these increased needs given similar burdens on those services.

8.3 Timely implementation of population based screening for genital chlamydia infection among young women. The government's proposals to implement a national screening programme for Chlamydia trachomatis infection are welcome, however, it is of utmost importance that this be implemented as quickly as possible. The DH funded Chlamydia Pilot Study has confirmed the feasibility and acceptability of opportunistic screening. In a context of increasing high-risk behaviours and rising STIs, such innovative interventions should be implemented without delay.

8.4 Target interventions with population sub-groups vulnerable to sexual ill-health. Available surveillance and research data confirm significant inequalities in the distribution of STIs and HIV in the England and Wales. Young people, gay men and ethnic minorities in particular, appear to be at substantially increased risk of poor sexual health outcomes. Funds should be made available urgently to support innovative, evidence based and participatory prevention interventions with population sub-groups at increased risk.



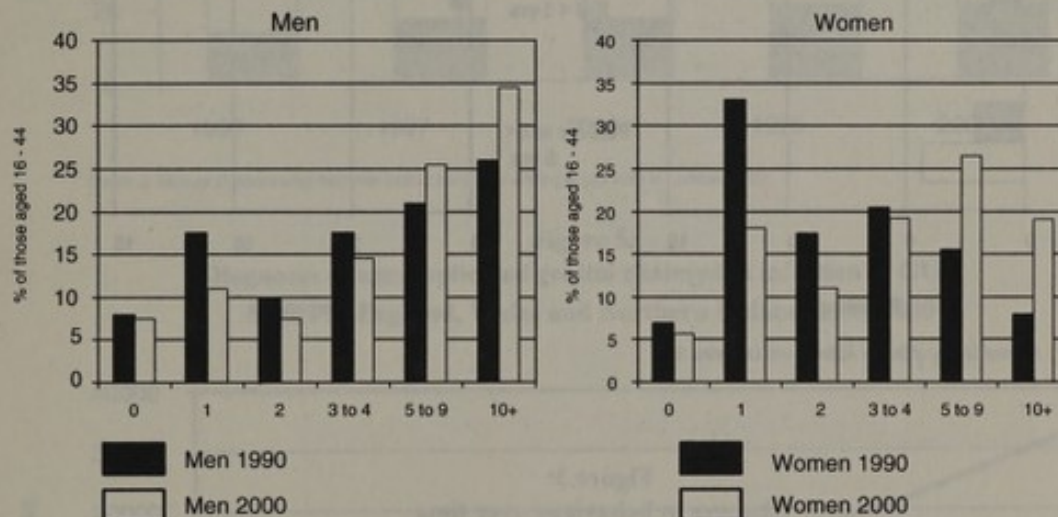
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8.5 Tackle regional variations in sexual health outcomes. STI and HIV surveillance data confirm the disproportionate burden of STIs in “hot-spots”—socio-economically deprived, inner city areas in Britain. In such settings, STI rates are among the worst in Western Europe, rivaling levels seen in deprived areas in the US and some developing countries. Plans to roll-out sexual health provision outside of GUM clinic sector in these areas are unlikely to be successful as general practice services are also overstretched. We therefore recommend that consideration is given to increasing the capacity (ie increasing GUM clinic sessions, clinics etc.) in worse affected areas with the piloting and evaluation of innovative models of GUM service provision and partner notification.

8.6 Sustain and improve HIV and STI surveillance. There is a need to maintain and enhance the surveillance effort as the HIV epidemic grows in size and complexity. We must maintain the ability to retain anonymised tissue specimens (in tissue which would otherwise be discarded) on the large scale necessary for the unlinked anonymous programme. The ability to evaluate and monitor the outcomes of prevention programmes at a national level also needs to be enhanced.

**Figure 1:**  
Percentage distribution of heterosexual  
partners: lifetime, by gender, 1990 and 2000

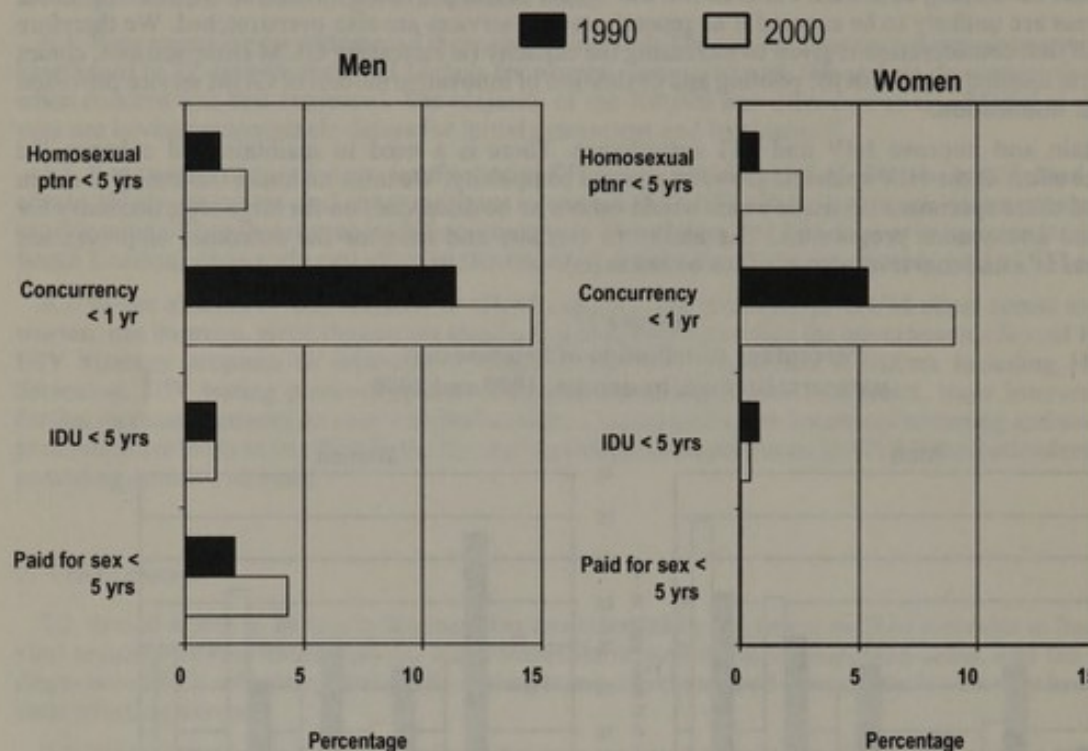


National Survey of Sexual Attitudes and Lifestyles, 2000

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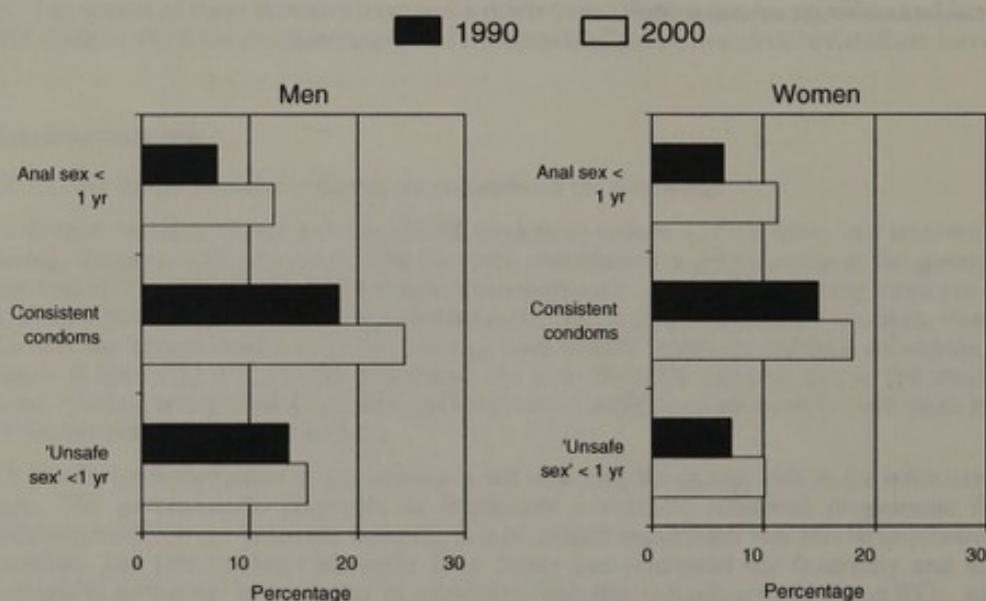
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**Figure 2:**  
Changes in behaviour over time



National Survey of Sexual Attitudes and Lifestyles, 2000

**Figure 3:**  
Changes in behaviour over time



"Unsafe sex" = 2+ partners last year + inconsistent condom use last 4 weeks

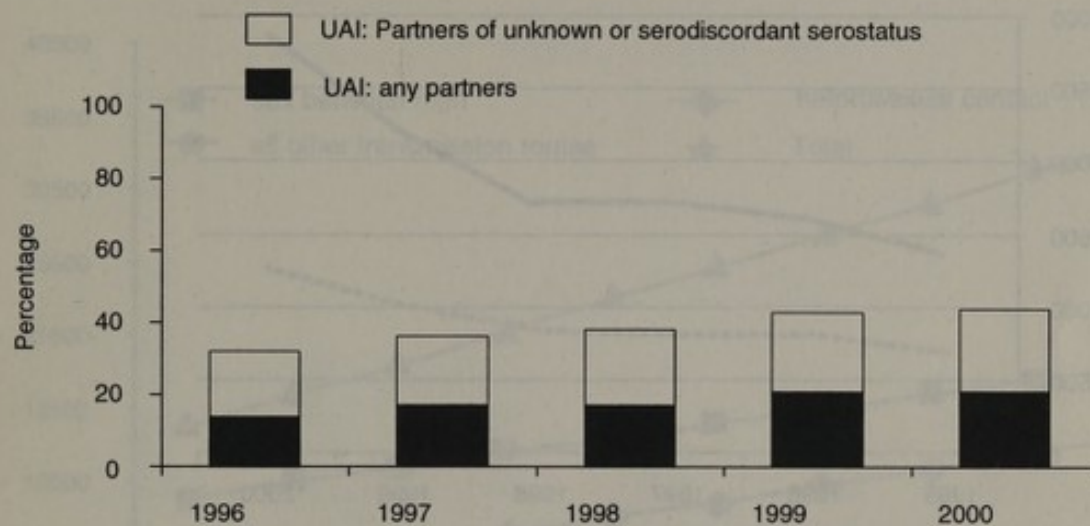
National Survey of Sexual Attitudes and Lifestyles, 2000



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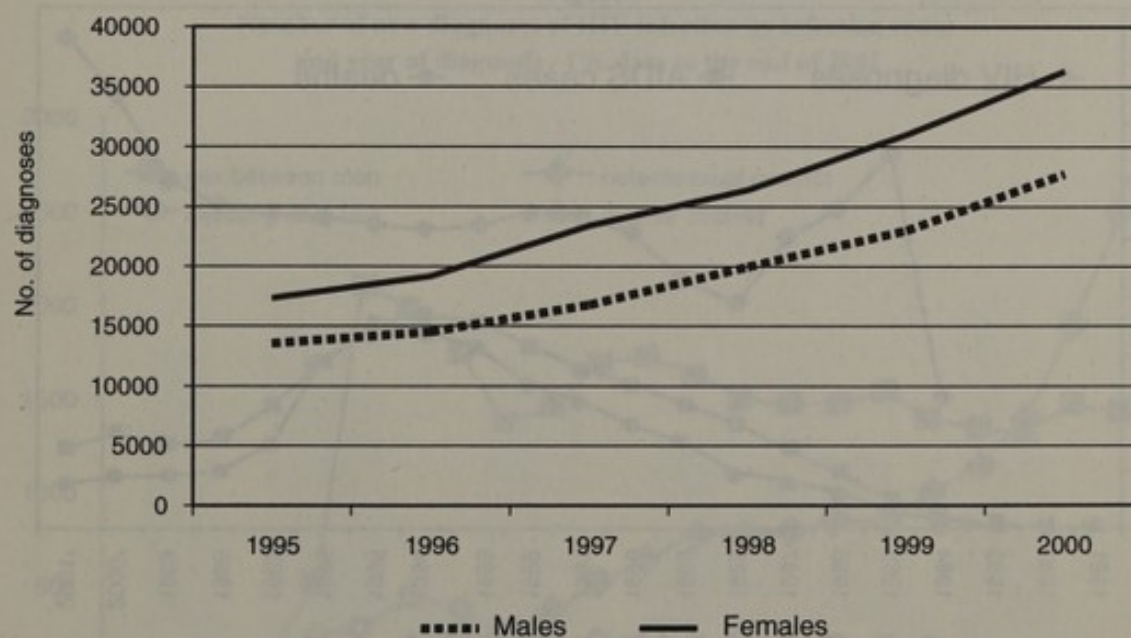
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**Figure 4:**  
**Men who have sex with men. London**  
**Unprotected anal intercourse in the past year**



*Dodds J, Mercey D. Monitoring high risk sexual behaviour amongst gay men in London, 2000*

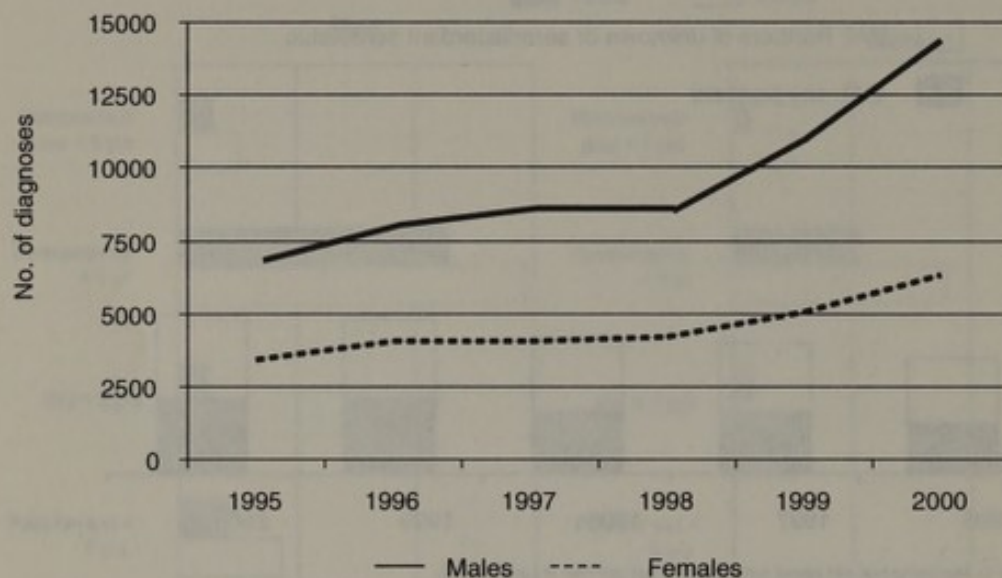
**Figure 5:**  
**Diagnoses of uncomplicated genital chlamydial infection in GUM**  
**clinics in England, Wales and Northern Ireland, 1995-2000**



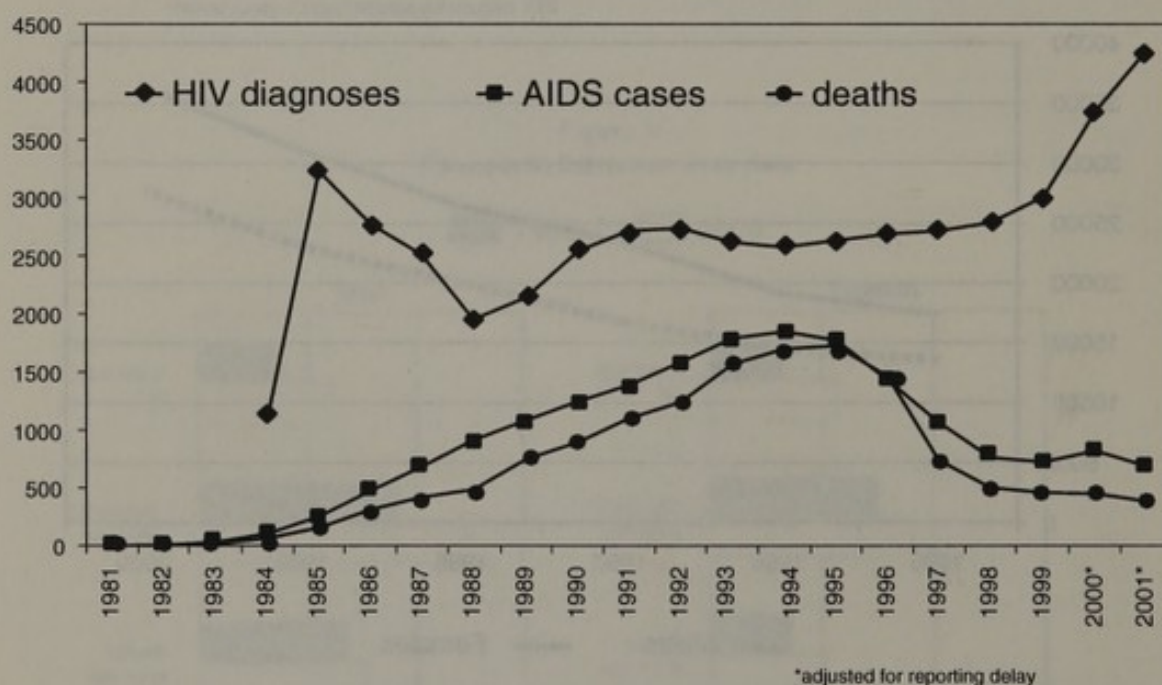
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**Figure 6:**  
**Diagnoses of uncomplicated gonorrhoea in GUM clinics in**  
**England, Wales and Northern Ireland, 1995-2000**



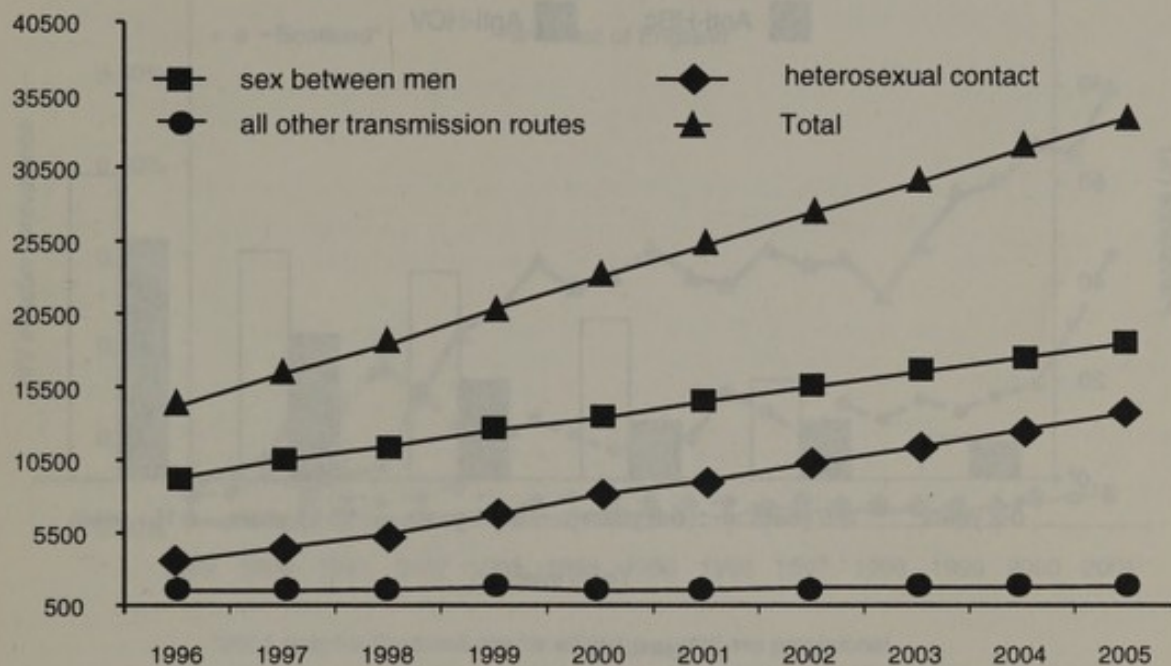
**Figure 7:**  
**Number of new HIV and AIDS diagnoses and deaths by**  
**year of diagnosis (or death) - UK data to the end of 2001**



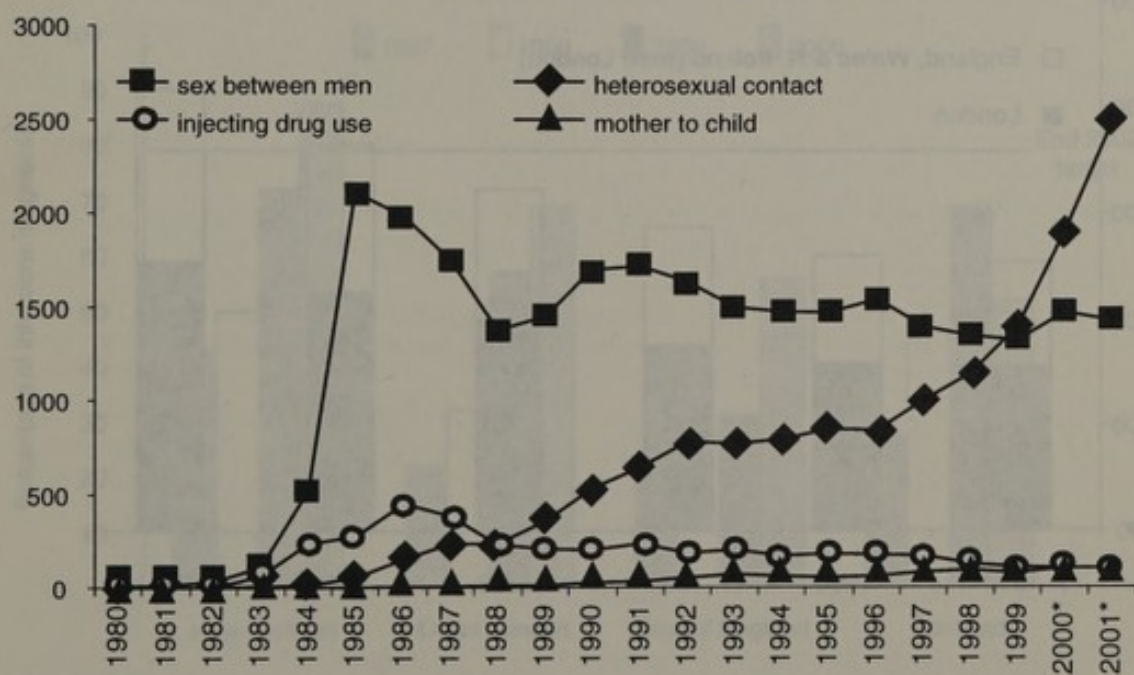
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**Figure 8:**  
End of year diagnosed prevalence of HIV by route of infection  
based on observed SOPHID data 1995 - 2000 and linear  
extrapolation 2001 - 2005



**Figure 9:**  
Number of new diagnoses of HIV infection by infection route  
and year of diagnosis - UK data to the end of 2001



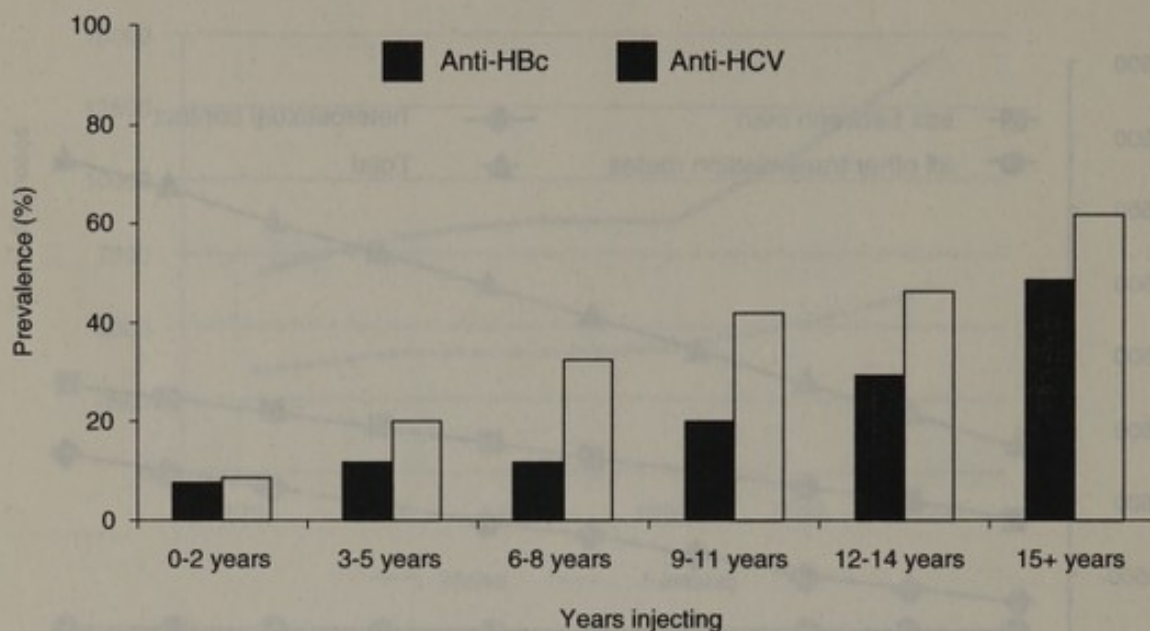
\*adjusted for reporting delay



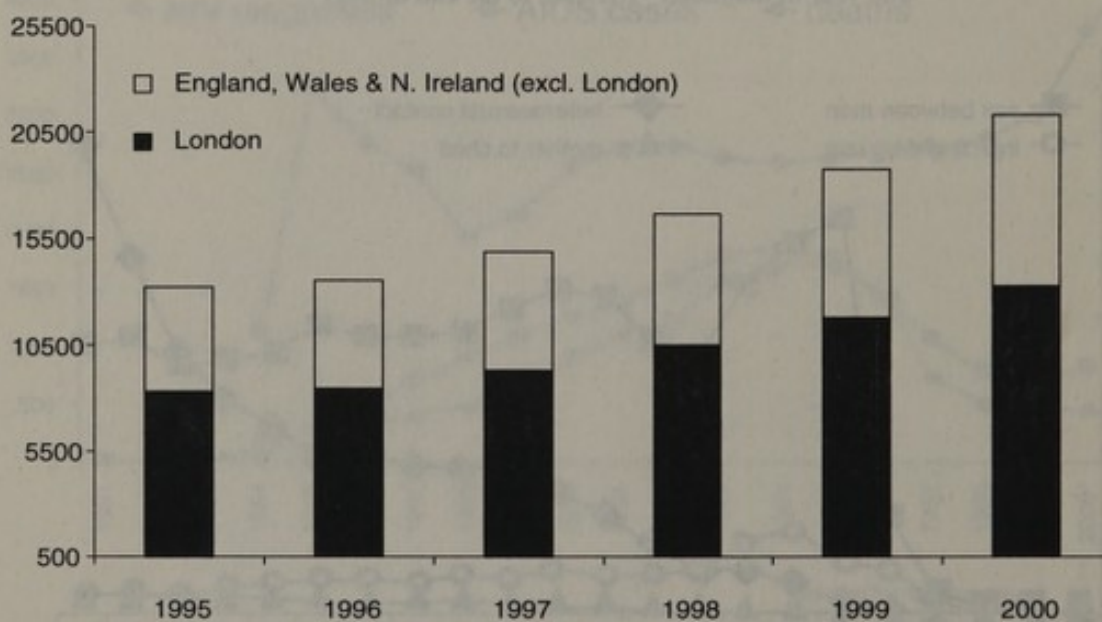
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**Figure 10:**  
**Prevalence of hepatitis B (anti-HBc) and hepatitis C (anti-HCV) in**  
**injecting drug users by injecting duration: 2000 (n=2,865)**



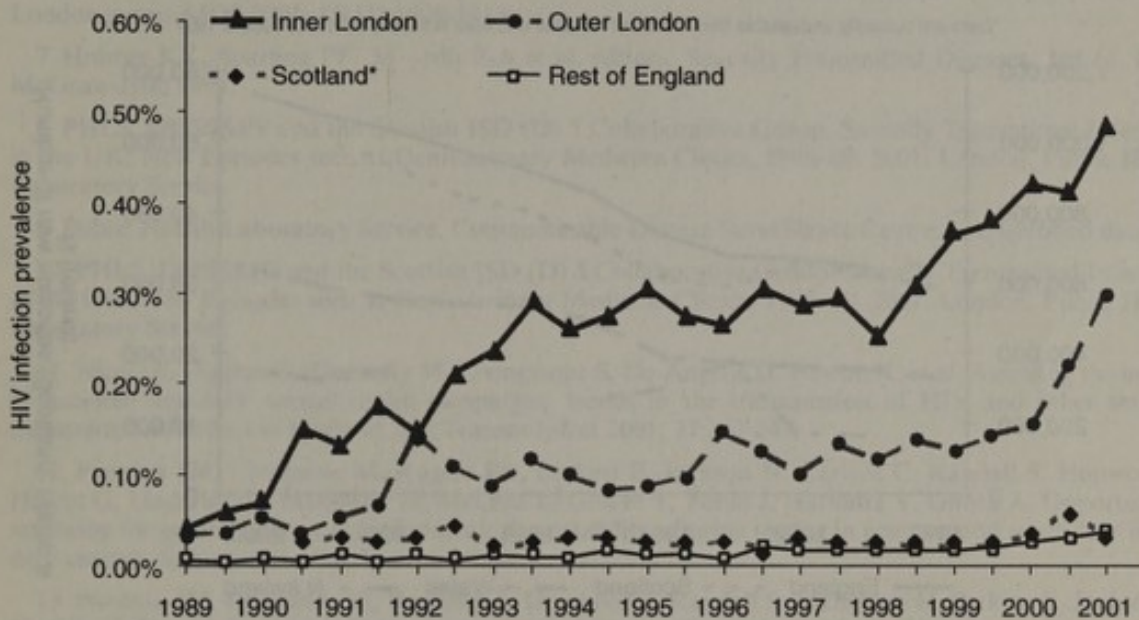
**Figure 11:**  
**Prevalent Diagnosed HIV infection - individuals reported to**  
**SOPHID as resident in England, Wales or N. Ireland by broad**  
**region of residence and survey year**



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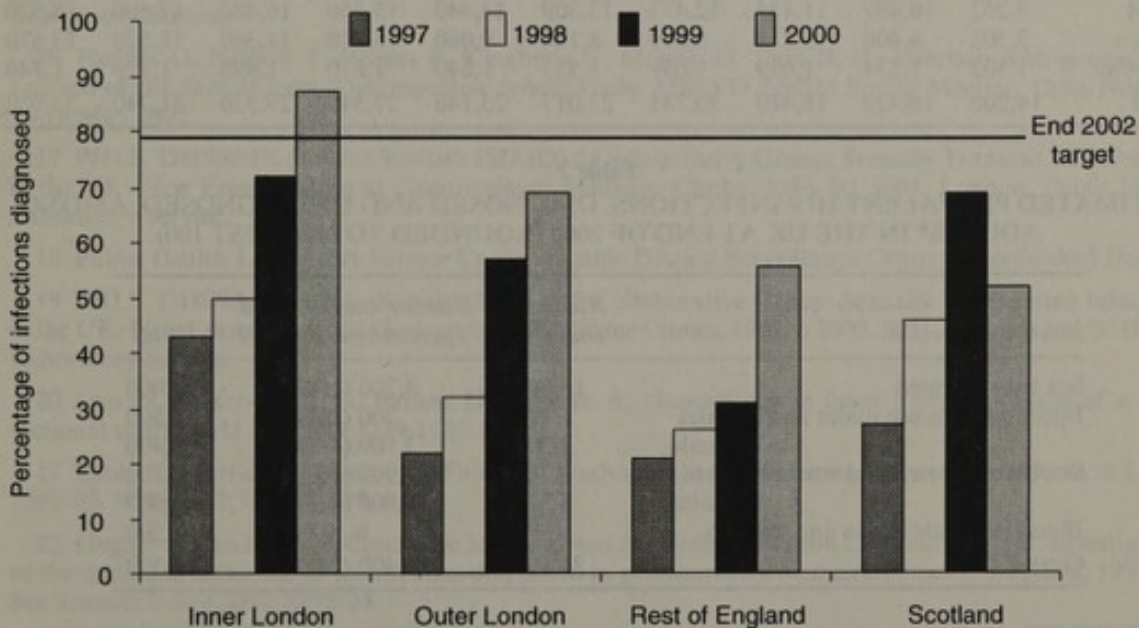
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**Figure 12**  
Trends in Prevalence of HIV Infection in Pregnant Women by  
Area of Residence: data to June 2001



\*2001 data for Scotland are for whole year and are provisional

**Figure 13:**  
Estimated proportion of maternal HIV infections diagnosed  
prior to delivery: 1997 to 2000\*



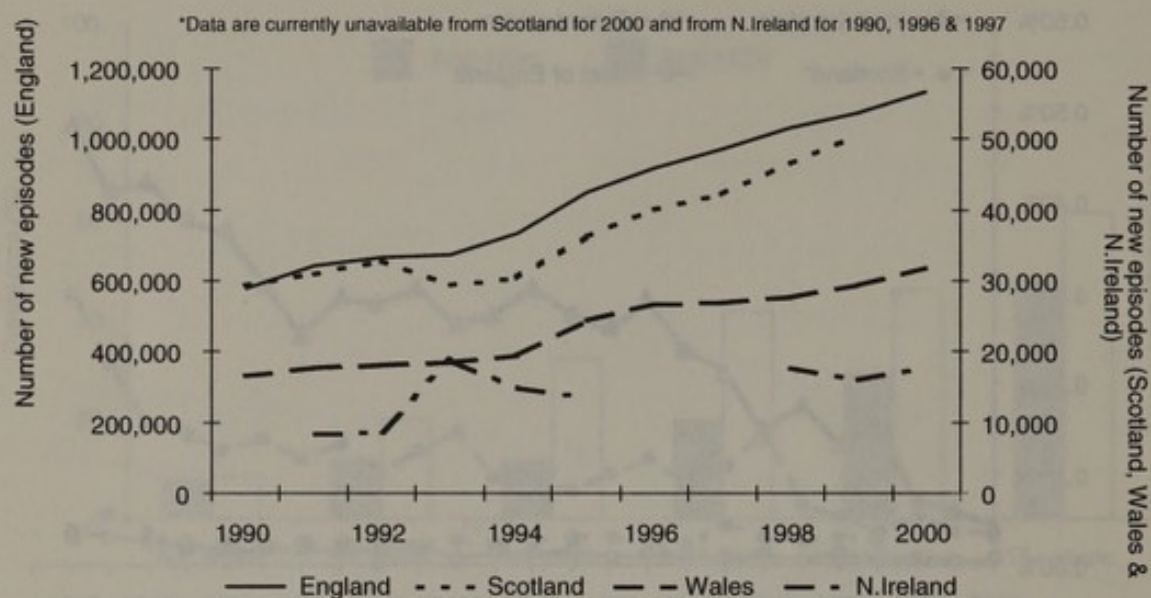
\*The proportions diagnosed may rise as late reports of diagnosed women are incorporated



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**Figure 14:**  
**All diagnoses and workload at GUM clinics, by country: 1995**



**Table 1**  
**END OF YEAR HIV PREVALENCE OF DIAGNOSED INFECTION IN RESIDENT ADULTS, ENGLAND, WALES AND NORTHERN IRELAND: 1996-2000 AND EXTRAPOLATIONS TO 2001-05\***

<i>Year</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>
MSM	9,202	10,489	11,434	12,473	13,309	14,440	15,460	16,480	17,500	18,520
Hetero	3,502	4,406	5,336	6,620	8,154	9,060	10,210	11,360	12,520	13,670
All other	1,502	1,534	1,639	1,651	1,553	1,640	1,670	1,690	1,720	1,740
Total	14,206	16,429	18,410	20,745	23,017	25,140	27,340	29,530	31,740	33,930

**Table 2**  
ESTIMATED PREVALENT HIV INFECTIONS, DIAGNOSED AND UNDIAGNOSED, AMONG  
ADULTS\* IN THE UK AT END OF 2000 (ROUNDED TO NEAREST 100)

<i>Route of Infection</i>	<i>Number Diagnosed</i>	<i>Number Undiagnosed (percentage of total)</i>	<i>Total</i>
Sex between men	13,800	3,200 (19%)	17,000
Injecting drug use males and females	1,300	200 (13%)	1,500
male	3,300	3,100 (48%)	6,400
Sex between men and women female	5,200	2,900 (36%)	8,100
total	8,500	6,000 (41%)	14,500
Blood products males and females	500	0 (0%)	500
Grand Total	24,100	9,400 (28%)	33,500

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#### Examination of Witnesses

DR GWENDA HUGHES and DR KEVIN FENTON, Communicable Disease Surveillance Centre, Public Health Laboratory Service; PROFESSOR ANNE JOHNSON, Department of Population Sciences, Royal Free Hospital; DR JACKIE CASSELL, British Medical Association; DR JEAN TOBIN, Consultant in Genitourinary Medicine, St Mary's Hospital, Portsmouth, examined.

#### John Austin

250. Could I welcome the witnesses today and could I apologise for the absence of David Hinchliffe, the Chair of the select committee? He is unavoidably away due to a family problem. Could I ask the witnesses to briefly introduce themselves. Tell us your designation and where you are from.

(Dr Tobin) I am Jean Tobin. I am a consultant in genitourinary medicine at Portsmouth and I am involved in the Portsmouth arm of the Department of Health chlamydia screening pilot.

(Dr Cassell) I am Jackie Cassell and I represent the British Medical Association. I work at University College, London in research in sexual health.

(Professor Johnson) I am Anne Johnson. I am involved in infectious disease epidemiology at University College, London, in the Department of Primary Care and Population Sciences. I have worked on HIV epidemiology for a number of years.

(Dr Fenton) I am Kevin Fenton. I am a consultant epidemiologist at the Communicable Disease Surveillance Centre. I am a senior lecturer at UCL Medical School and I currently head the HIV division on communicable disease.

(Dr Hughes) I am Gwenda Hughes. I am a consultant scientist at the Communicable Disease Surveillance Centre and head of the section on transmissible infections.

251. The primary purpose of this session is to examine the trends in the prevalence of sexually transmitted infections and the possible factors underlying those trends. Firstly, a question to Gwenda Hughes and Kevin Fenton. In your written

evidence, you outline the recent trends for acute sexually transmitted infections. Could you summarise these and indicate what projections you have made of what will happen in the next few years?

(Dr Fenton) We have seen substantial changes in the epidemiology of sexually transmitted infections over the last 20 years. In part, a lot of these changes have been mediated by behavioural modifications in the general population. There have also been substantial changes in how individuals access care and how they take up sexual health services. In the early 1970s and towards the early 1980s, we were seeing some decline in STIs. At that time, we were noticing for some infections—for example, gonorrhoea—over 60,000 diagnoses each year. At the beginning of the 1980s at the commencement of the global HIV pandemic we noticed substantial declines in the numbers and rates of both bacterial and viral sexually transmitted infections and these declines have continued throughout the 1980s right up to the mid-1990s. These declines were particularly marked across Britain and were observed especially in so-called high risk groups—for example, gay and bisexual men—and this adds credence to the fact that these groups in particular had adopted a variety of behavioural modifications during that time. As such, we saw some of the lowest rates and numbers of sexually transmitted infections by the mid-1990s and we often describe a nadir or a bottoming out of STI incidence at about 1994 to 1996. This was seen across all STIs. Since 1995, however, we have been noticing a gradual, sustained increase in the numbers and rates of both bacterial and viral sexually transmitted infections. Since 1995, we have seen a doubling of



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[Continued]

**[John Austin Cont]**

rates and numbers of chlamydia, gonorrhea and syphilis. There are a variety of reasons to explain why these infections have all increased. What we also should remember is that, because the infections bottomed out in 1995, the initial rate of increase by the end of 1990 was seeing approximately the same numbers of infections as we have seen at the beginning of the decade as we did at the end of the decade. However, since 2000, we have observed and we continue to observe substantial increases in all sexually transmitted infections. Undoubtedly, sexual behaviour will be a key determinant of the increases in these STIs, but a number of *ad hoc* studies as well as our surveillance data confirm that people are also attending GUM services more. They are taking advantage of HIV testing and sexual health screening. That may also contribute to the increases in diagnosis that we are observing. We are also aware that people are taking more interest in their sexual health, partly because of the sexual health campaigns throughout the 1990s. Clearly, this will also contribute to increasing diagnoses. Finally, we have been seeing increases in the sensitivity of our diagnostic tests. We are getting better at diagnosing a variety of STIs. For example, genital chlamydial infection. That may also be contributing to the increases in the numbers and rates of STIs which we are observing. A large part of these increases has been mediated by sexual behaviour.

**Dr Naysmith**

252. You said screening may have contributed partly to these increases. What kind of screening? Has it contributed to the detection or the increase?

(Dr Fenton) I am using that term in its widest application, not in terms of the chlamydia screening programmes which are being developed at present. If individuals are going to STI clinics more, they will have a greater opportunity to be screened and tested for STIs.

253. Not in the sense of people being screened for other things and you are picking these up?

(Dr Fenton) That may also contribute to it. Another good example is genital chlamydial infection where the diagnostic technology has improved since the mid-1980s. We have been using a succession of more sensitive tests to diagnose chlamydia and therefore we are getting better at picking up asymptomatic infections.

**John Austin**

254. You gave a very clear picture of the trends to date and some of the underlying reasons. Have you made any projections for the near future?

(Dr Fenton) We have not at the Communicable Disease Surveillance Centre done any specific projections for STIs. We tend to do projections for HIV and AIDS by using a variety of statistical modelling.

(Dr Hughes) What we have seen is a consistent rise particularly in infections like gonorrhea since about 1995. The evidence that we have from the preliminary data for last year is that that is continuing. It is rising at quite a sharp rate and does not seem to be easing off.

255. Dr Cassell, you have published a report on STIs. What prompted the BMA to produce that report?

(Dr Cassell) The Board of Science and Education of the British Medical Association produced the report and that is a standing committee of the BMA, which works at the interface between the profession and the public and government and aims to contribute to public health through education, particular of professionals with a view to educating the public. It produces a variety of reports in response to the concerns of members. For example, at the annual representatives' meeting, debates might be generated on issues of concern in members' working lives. A number of issues of concern were raised over several years in relation to sexual health, particularly the sexual health of young people. As a consequence, the Board of Science and Education decided to produce this report with a view to educating professionals and raising awareness that this is an important health issue in order to help professionals in talking to their patients about risks, being aware that these risks are very real in their working lives and also with a view to improving services at all levels.

**Julia Drown**

256. We are expecting in March next year the work of the Sexual Health Services Data Group to report, mentioned at the beginning of the health implementation plan. Could you give us any insight into the work that they are doing and possible recommendations that might come out of that?

(Dr Hughes) What the group is trying to do is to find out what information do we need to be able to monitor sexual health in the population effectively so that we can develop appropriate intervention strategies and monitor how effective they are once they have been developed. What is likely to happen is that they are going to recommend that there are new standards for data collection across all health services which are providing sexual health services. There will be a minimum amount of information that will be felt to be necessary. That will need to come not just from the specialist services but also from primary care, especially now we have the sexual health strategy where there is a commitment to greater delivery of services in primary care. We are clearly going to need to get information from primary care to be able to monitor how effective that is going to be. What is obvious is that these are quite big changes and that there would need to be considerable training involved and investment in information systems in order for these changes to be realised. They are going to make recommendations in relation to the data that should be collected. They are currently looking at how different strategies could be used to try and get that information. That is still under discussion.

257. That is about getting better data rather than saying there should be different screening programmes to get the data?

(Dr Hughes) The remit of that group is to look at getting better quality information in order for us to be able to monitor these programmes.



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[Continued]

## [Julia Drown Cont]

(Dr Fenton) Although we do have a very comprehensive STI surveillance system, it does have its limitations. We are very much hoping to get detailed information on inequalities in sexual health and sexual ill health in the population and to target our interventions quite closely to undertake targeted interventions. One of the strategic visions the data group has for STI surveillance is to take a long term approach to see what we need to inform STI prevention and control. What do we want to have in seven years' time? What would we like to do in two years' time?

258. Can you see things that should be happening that we as a Committee might want to recommend should happen that perhaps might not have come out of the data group or other work?

(Dr Hughes) At the moment, we have broad, reasonable information from genitourinary infection clinics but we have no information from primary care currently. If we are going to address that situation and particularly if we are going to have more services delivered through general practice, we are going to have to monitor that. There is going to need to be some investment put into information systems to be able to collect that information, to train people to gather that information and then to look at how that information might be integrated across all the services.

259. It is about trying to make sure that, in developing services into primary care, the proper data is picked up?

(Dr Hughes) That is right.

260. You spoke earlier about some determinants of STI transmission. Is there anything else you want to add in terms of predetermined STI transmission, Dr Fenton?

(Dr Fenton) The distribution of any STI in the population is an interplay between three main things. One is the degree of infectiousness of the organism. The second is the patterns of sexual behaviour in the individual or in that society. The third is their interaction with curative health services. In groups which classically have poor access to services or have been marginalised by services, they are far more likely to have higher rates of any infectious disease or condition. We see that as well in sexually transmitted infections and HIV. Some of the groups of concern are black and ethnic minority communities in Britain, where for some infections—for example, gonorrhea—we are seeing extremely high rates in these communities, exceeding many other developed and developing countries. These are key issues that we need to be looking at. The degree of interaction with services also will play a part in uncovering STIs in the community so interventions such as contact tracing, partner notification and outreach services are going to be vital in diagnosing infections in the community.

261. On the effectiveness of the virus, presumably it is like we see in so many parts of medicine? It is getting increasingly difficult to control things because they are becoming more easily transmittable?

(Dr Fenton) Not necessarily. One of the benefits of working at CDSC is that you see all the STIs in a spectrum. There are some infections which are highly infectious—for example, gonorrhea—and there are

those which are less infectious—for example, HIV—and because of these variations in infectivity or infectiousness we are able to look at variations in trends. For example, gonorrhea has been argued to be a very good marker for sexual behaviour change because of its very high rate of infectiousness and the need for rapid partner change for it to be transmitted in the population. It is from that level that we are looking at some of the determinants of transmission.

262. It is not that some of them are becoming easier to transmit?

(Dr Fenton) No.

## Dr Naysmith

263. I wonder how the recommendations in Dr Cassell's report fit in with what we have just heard.

(Dr Cassell) Would you like me to summarise the recommendations at this stage?

264. That would be helpful.

(Dr Cassell) The recommendations of the report are in four main areas. One is services for sexually transmitted diseases and treatment services. Secondly, adolescent education and service provision. That includes treatment services for young people, the education and training of health professionals and the prevention of STIs. In general, we are very much in agreement with the views of CDSC as expressed by Dr Fenton and Dr Hughes. I will summarise first the recommendations on treatment services. First of all, we think there should be more facilities in genitourinary medicine sexual health clinics. We think sexual health clinics should have longer hours, more trained staff and increased funding.

265. Is that because you think they are Cinderella services at the moment and not properly funded?

(Dr Cassell) Cinderella services is not a term that I would particularly use. These services certainly have improved and come out as the mainstream of health services over the last year, but there is evidence that there is an increasing problem of access with far higher numbers of diagnosed infections of chlamydia and gonorrhea being seen; and also strong evidence that people find it difficult to obtain quick appointments.

That evidence has been obtained by CDSC and through independent research.

266. Is it true that the service is rather patchy, depending on which part of the country you are in?

(Dr Cassell) In the context of our report, I would not like to comment in detail but I know the CDSC have done surveys that address that directly. The second recommendation is that sexual health clinics should pay increasing attention to publicity, that we should make sure that people know about us and also it would be important that services are provided outside city areas. This is particularly important in areas of the country where there is a long distance between the cities that have services. At the moment, there is no other developed service and it can be a long way to go for specialist care. The third recommendation on treatment is that risk reduction counselling—in other words, advice on safe sex, on routes of transmission—should be a standard part of management of sexually transmitted infections,



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[Continued]

**[Dr Naysmith Cont]**

whether those are managed in primary care, in sexual health services or elsewhere. The second area is specifically about services and education for adolescents. We think that there should be improvement in school sexual education and this should cover the full spectrum of sexually transmitted infections, not just HIV, because these infections are very common amongst young people. Sexual health services need to be available for all people, including young people. This means there must be increased willingness to refer on the part of school nurses, for example, and other groups who young people contact more easily in their daily lives than clinic services. We also recommend improved and targeted services—for example, drop in clinics and perhaps dedicated young people sessions in family planning clinics and such like. Our main area of concern is the lack of representation of sexually transmitted infections as a significant health problem in the media. We think the Broadcasting Standards Committee should survey this and make recommendations that this is addressed and sexuality is raised and represented in programmes targeted at young people. Thirdly, we have some recommendations for training professionals which I am sure would be in line with what has been said so far. We think there should be increased training for GPs, for all primary care staff with regard to sexual histories, the management of sexually transmitted infections and referral. There should be increased awareness of the need to maintain confidentiality in this field and to be non-judgmental. There are many standards for confidentiality both for young people and for other people and these need to be respected and known to be respected in sexual health. Services outside sexual health services need to be proactive in the prevention of infection and detection through appropriate advice. Finally, we also make some recommendations about prevention. Firstly, we think it is important that policy makers take account of rising STI prevalence and particularly its costs. This is something that members of the Association have particularly talked about. The costs of infertility, ectopic pregnancy, and pelvic inflammatory disease to the general practitioner are very little. Particularly, people should realise that there is an overlap between the risks of STIs and HIV. We think the cost effectiveness of this is something that really needs to come out into the open at the top of the agenda. Finally, partner notification. That is, making sure that a patient is enabled to tell their partner and ensure their partner's treatment, which is extremely important in cases of sexually transmitted infections because without that we risk losing control of infections for onward transmission and patients continuing to suffer complications.

267. Would it be fair to say that there is pretty good agreement between you all and not a lot of conflict?  
(Dr Cassell) I think so.

**Jim Dowd**

268. I am a Member of Parliament representing an inner south London constituency. From what I have heard so far, particularly what Dr Fenton said about infectivity, I have heard a lot about the mechanics of dealing with STIs and their consequences. We are

humankind. We surely must know more now than we ever did about sexual health. Why are we suffering such a problem when we should be wiser than we were? I do not wish to sound like somebody who has just stepped off The Mayflower but rather than the mechanics of it there is the essence of promiscuity—for example, the fewer partners you have, the less risk you are likely to face in incurring STIs and related diseases.

(Professor Johnson) We do know a great deal more about sexual behaviour in the population than we did many years ago. There have been two major surveys done in this country, unlike many other countries in the world. One of the things that we found in the recent survey which was carried out in the year 2000, and we were able to compare this with data from 1990, is that there has been an increase in the numbers of partners that people report over that recent time period. It is important to understand and to refer back to what Dr Fenton said that, in the late 1980s, we saw plummeting rates of gonorrhea and other infections in this country. That was a result of concerns about the AIDS epidemic in the early 1980s. During that time, we were experiencing major education campaigns targeted at those at greatest risk, primarily gay men in the early 1980s, but also more generally, in the general population. Probably, when we measured sexual behaviour in 1990, we may have been seeing lower rates of partner change than had we measured sexual behaviour in just before the AIDS epidemic. As you have heard, we are seeing now a higher rate of sexual partner change and that fits in with everything that we observe about increasing sexually transmitted infections. However, the rates of sexually transmitted infections—I will be corrected by Dr Fenton—I do not think are as high now as they were at their peak prior to the AIDS epidemic. The changes in numbers of partners we believe are genuine though we think they are partly a result of the improved methods and they are also partly a result of the changing of attitudes towards sex in this country. We are a society that has become more tolerant. For example, we are a less homophobic society. We are more tolerant of homosexual behaviour and I think that has been very important in the openness with which we can address homosexual health issues. People may be more happy now to report. Attitudes have changed. People have become more tolerant of casual sex. We live in a society exposed to sexual images from many different sources. We have become an increasingly intolerant society of sexual infidelity within long term relationships. We live in a society that is changing, in which the role of men and women has altered. People are getting married later. They have kids later. Women are increasingly involved in higher education and so on. There are good sides and bad sides to some of those changes. We live in a society in which women in particular suffer much less dangers of things like childbirth, termination of pregnancy and so on than we did 50 years ago. In the long term, there have been major benefits, but these are complex issues in society which are the interface between attitudes, demography and sexual practices.

269. Are you saying that in the 1980s the intervention or arrival of HIV, because of its cataclysmic potential, forced a serious rethink of how



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people behaved, not just those communities most readily associated with it, but for everybody, but because we prepared for a dreadful scenario which never arrived people then assumed that it never would arrive.

(Professor Johnson) I think there is no doubt that this country achieved a great deal in terms of HIV control in the 1980s. We did better than many countries in Europe. We certainly did better than the developing world. However, with all prevention activity, this is not a one shot thing. You cannot just have a prevention campaign in the 1980s and think the problem has gone away. We have perhaps to some extent lost our focus in understanding that we have to continue these health education messages but change them in a way that is appropriate to the cultural attitudes and mores of the year 2000, not the year 1982. It is very easy to lose focus of that. I hear people often say that the AIDS epidemic is no longer a big problem but how shocked people were last week at the Barcelona AIDS conference to hear that we have an enormous epidemic internationally which is having a dramatic effect. We are not immune from that in this country in so far as we have very close interactions with many of the countries with big epidemics. We need investment in our local epidemic and we need to invest in prevention of the global epidemic which is really devastating in many countries.

**Dr Taylor**

270. Can I go back to the BMA booklet because I think it is absolutely excellent and will inform our report tremendously. It is worth noting that three of our panel are acknowledged not as authors but are thanked for their contributions, so this has a very wide authorship. I want to go on to think about chlamydia specifically for a short time. The table that we have been given from the PHLS official report in March of this year shows that chlamydia cases in 1990 were about 30,000 and shot up by 2000 to double that, 60,000. We have already hinted that part of that is because of better availability of the tests, better awareness. How much of what we used to call non-specific urethritis is covered by a diagnosis of chlamydia and is it a true increase or is it just better diagnosis and better awareness?

(Dr Hughes) We think the main reason we have seen this rise is because of a greater public and professional awareness of chlamydia. More people are aware of chlamydia and when you go to a GUM clinic now you will almost certainly be screened for it and also there are more sensitive tests. The main reason we are seeing this rise is because we are detecting more infections. However, we are still only seeing the tip of the iceberg as far as chlamydia is concerned. Because about 70 per cent of infections in women will show no symptoms, most people do not go to a GUM clinic and get diagnosed with it. The only way to get an idea of how common the infection is is to do a cross section survey of where you screen people. The sexual behaviour study shows that three per cent of 18 to 25 year olds in the population are infected with chlamydia. The chlamydia screening pilot looked at women under 25 attending various health care sessions, and if you look at the general

practice population, between eight and nine per cent of those young women were infected with chlamydia. There are much higher rates with high risk groups like those attending genitourinary medicine clinics.

**271. Infected and probably unaware?**

(Dr Hughes) Most of those would have been unaware because most of them will not have had symptoms and therefore will not have perceived a problem. You can look at diagnosis in GUM clinics but you are not getting a full picture of the epidemiology in the community and it is a much more common infection than was previously believed. This highlights that if you want to control an infection like chlamydia you are going to have to screen for it because most people will not have symptoms.

**272. Is there widespread availability of the screening tests or is this limited by cost?**

(Dr Hughes) It is not widespread. If you go to a GUM clinic, you will be offered a chlamydia screening test.

**273. If somebody turns up to a physician or a GP with symptoms suggestive, even if it is eye problems, they will be able to get a test, will they?**

(Dr Hughes) If symptoms are suggestive of a chlamydia infection, yes, they should be offered a test but because most of them will not have the symptoms they will not be.

**Dr Naysmith****274. What is the incidence of false positives or is it a virtually 100 per cent successful test?**

(Dr Hughes) The tests are very sensitive and specific, particularly the new nucleic acid amplification tests being used in the pilot schemes.

**Dr Taylor****275. Dr Tobin, do you still diagnose NSU or has that diagnosis gone down?**

(Dr Tobin) It has gone down very much. A lot of it was chlamydia.

**John Austin**

276. Dr Taylor referred to the reported cases having more than doubled of male and female in the last ten years. There is also likely to be under reporting. It is suggested in some of the material that we might need to talk about the figures and that some of the increase shown in the figures may be because of increased public awareness; and yet your evidence shows that the most at risk group is the younger age group. The evidence suggests that there is a appalling level of ignorance in that age group, more than three-quarters of young people now knowing about the infection at all. Are these figures a considerable under-estimate of the prevalence of chlamydia, particularly in younger age groups?

(Dr Fenton) There is quite likely to be an under-estimate because the surveillance data really depends on attendance to a GUM clinic. Therefore, we only get information from the STI surveillance systems on attendances and diagnoses in that setting. If we look



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at chlamydia diagnoses made in microbiological labs in the country, we do see even more diagnosis of chlamydia in young people, which reflects the fact that they are going to youth services, general practices etc., and are being screened for chlamydia in those settings as well. Yes, the STI surveillance data that we obtain from the GUM clinics are likely to under-estimate the truth occurrence of the disease in the general population. In this regard, the chlamydia study which was done as part of the second national survey of sexual actions and lifestyles for the first time gave us a picture of the burden of the disease in the general population. In that study, we were not able to ask young people under the age of 18 to provide a urine sample for chlamydia screening. I think this is an area for further work.

Sandra Gidley

277. Dr Fenton and Dr Hughes, would you go as far as to say that chlamydia was a public health problem and, if so, how best can it be controlled?

(Dr Hughes) Yes, I think it is a public health problem. Looking at pilots in general practice populations, the prevalence of infection in women under 25 was between eight and nine per cent so that does suggest that it is a public health problem. Also, most of those infections would not have been detected without screening because most of those women would not have symptoms, which suggests that if you are going to control this infection you need to be looking at screening women for the infection.

(Professor Johnson) One of the points to emphasise to the Committee is that chlamydia is a major cause of pelvic inflammatory disease and tubal infertility in women. That is its major public health burden. You know how much the NHS is increasing spending on infertility problems. One of the things we have seen in this country is rather a piecemeal approach to testing for chlamydia outside of GUM clinics. We have talked about these new tests which are a tremendous advance in terms of having a better test that can also be carried out without having to do genital examinations on patients and therefore is much more applicable in general practice, but the new tests that we have been talking about are not widely available in general practice. People are still relying on less sensitive tests. If one wants to role out this programme, one of the differences between chlamydia and syphilis and gonorrhea is that we have had very good control of syphilis and gonorrhea over the last 50 years because of the availability of penicillin and tests which identify them. Chlamydia is still widely disseminated in the population and therefore we need a different strategic approach, one that relies more heavily on primary care by more active screening programmes, particularly amongst young people, and which engage not only women but also the men. Dr Fenton has pointed out the results of the national survey. One of the key findings is we have as much asymptomatic infection in men as in women. If we focus the screening solely on women, we will miss half of the problem. Partner notification is what one would like to do but this is much more difficult than one imagines, even in experienced

hands. It is very difficult in general practice, where partners may not use the same general practitioner. We need to think not just of screening women but of screening men, of looking for chlamydia, raising awareness in young people. We need to raise awareness, dare I say it, in some of our professional bodies across the range of services. We need to look for chlamydia in antenatal settings, in abortion clinics and other settings and, in primary care, possibly also in the contraception service, if we are going to push the prevalence down in the population to the stage that we have now got to with gonorrhea and syphilis, where one could do much more focused work to try and drive some of these infections to extinction. The Swedes have done it and they have good public health indicators that they are driving down their rates of pelvic inflammatory disease. They are driving down their rates of gonorrhea almost to extinction by really well coordinated screening programmes and that is something we do not yet have in this country.

278. Can I clarify why the tests are difficult and still not widely used? Are they difficult to obtain? Is it an ignorance on the part of practitioners or is it a cost issue?

(Professor Johnson) I do not think it is ignorance; it is availability of tests. These tests have become developed in the last ten years and available in clinical practice perhaps in the last five years but have been available largely in laboratories with a specific interest in developing and buying the kit to do them. They are considerably more expensive than some of the previous technologies. However, this is a very rapidly advancing field. It is not my specialist area at all but one would hope to see some of the costs of these tests coming down. I think it is fair to say that in many health authorities the funding may not be available for widespread use of these tests, and certainly not in the context of broad base screening programmes.

279. Are you implying that there is a long term cost saving because of the pelvic inflammatory disease?

(Professor Johnson) Yes. There are questions about how best to deliver all these programmes because one wants to try and use them in those sectors of the population where we anticipate the prevalence would be highest and we know that is likely to be the youngest sectors of the population and those we predict might be changing partners more frequently.

280. Dr Tobin, you have been taking part in one of the pilot studies in Portsmouth. Is there anything you would like to add to the debate so far as to what you found or where you go from here?

(Dr Tobin) The results have not yet been published, so they are not generally available, although a lot of them are known. We have already heard that this was an opportunistic screening for chlamydia in Portsmouth and The Wirral and it lasted one year from September 1999 to August 2000. We were trying to screen people mostly in primary care. General practice produced 70 per cent of our positive tests and after that the remaining were from girls attending family planning clinics, GU medicine and termination of pregnancy clinics. We also did a small amount of work in gynaecology out-patients. The



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target group was sexually active women, aged between 16 and 25 and we screened some men but they were only men who attended GU medicine and youth clinics. We also screened some of the under 16s if they attended for sexual health reasons, but not otherwise. To give you some idea of the scale of this, it was thought that in Portsmouth there were 26,000 sexually active women in that age group and about 13,000 in The Wirral. The result at the end of the year was that in Portsmouth we had tested 50 per cent of those women and in The Wirral we had tested 40 per cent. We discovered that about 80 per cent of the target group attended their general practitioner at some point during that year so they were available to be offered a test. One of the main things about the chlamydia pilot was whether people would accept the test. Were they prepared to be screened for a sexually transmitted infection which had not been tried in our population at large before? We found they were very keen to be tested. The acceptance rate in Portsmouth was 76 per cent and 84 per cent in The Wirral. In Portsmouth we had major problems because we were overwhelmed with specimens as so many people wanted to be tested. The highest acceptance rate was in GU medicine, which is understandable. We had about a 98 per cent seemed very odd and it was down to a level of 38 per cent in one of the TOP clinics. When we enquired as to why these people had not accepted a simple urine test for chlamydia, it was mostly because they had already been screened elsewhere or they could not produce a specimen of urine. The overall feeling was that people were very willing to have this test performed because it was no longer an invasive test. Our findings were that overall ten per cent of the population targetted were positive and most of those came from primary care. Our highest rate was in the youth clinics, where 17 per cent were found to be positive. Our antenatal clinic rate was ten per cent. Previously chlamydia had not been deemed a problem in antenatal women. We also found that if somebody was screened just once during the year the overall rate was 8.3 per cent, but if they came back and wanted to be screened again, usually in terms of partner change, the rates shot up to 27 per cent positivity in Portsmouth and 30 per cent in The Wirral. Those people were perhaps opting in, realising that they were at increased risk. We have been talking about sensitivity of the test and we have some very interesting figures on those tests. We were able to use LCR, a DNA technique and, a very sensitive test. In GU medicine, we double screened everyone. We used our other test, an ELISA technique which is the standard test still in GU medicine clinics in this country, with only ten per cent having the extra sensitive tests. We found that using the ELISA test we would have missed 30 per cent of our women and 46 per cent of our men had we been relying on this test alone which is in standard use in this country. That was a very significant finding. We had been worried that having found that somebody was positive for chlamydia they might not be prepared to come back to be treated. The treatment rates were 98 per cent and 92 per cent in the two sites, so these were highly motivated people.

281. Were partners treated as well?

(Dr Tobin) Yes. We did contact tracing. There were better results with contact tracing if patients were seen in GU medicine clinics. Overall, for traceable partners, we had a rate of around 80 per cent of those being seen. The rate was lower if contact tracing was attempted outside GU medicine clinics.

282. When are the results going to be fully available?

(Dr Tobin) They have been submitted for publication. They have not at this moment been accepted but we hope they will be within the next week.

283. The government is planning a further ten sites. Do you think this is enough or should we be pressing for nation-wide provision?

(Dr Tobin) Those involved in the chlamydia screening saw what an enormous problem it was because the figures were almost twice as high as we anticipated. We rather hoped we might go straight on to a general roll-out of the chlamydia screening programme nationwide. It is going to take a while to roll out the programme, anyway but I would much rather that than just another ten sites and expanding very slowly afterwards, because an awful lot of people are going to be able to get an asymptomatic infection during that time.

284. What about the costs of this because there will be a cost implementation of national screening. Are you able to put a figure on that?

(Dr Tobin) I cannot. It depends entirely what is going to be included in a screening programme. The costs of the tests and the treatment are very easy to estimate but we are going to have a look at partner notification and partner treatments also—as well as possible screening for other STIs. I cannot tell you what I think that figure will be. I think the Department of Health has a fairly good idea. It has tried to cost this.

Julia Drown

285. I wondered if the sort of figures you were reaching were the percentage figures you need to reach in order to get the disease down to not being a problem. You say Sweden has had success. I cannot remember the percentage but in public health terms is that sufficient to get a grip on the problem of chlamydia?

(Professor Johnson) You will only get a grip on the problem if this is true across the country, with these very high prevalences, by opportunistic screening—i.e., trying to screen those at highest risk. A 10 per cent prevalence I would regard as very high. The only way we can get that down is by ensuring that we are identifying people, treating them and avoiding them becoming reinfected. This is an iterative process because the more chlamydia is out there the more likely you are to catch it if you have unprotected sex with a new partner. The aim of the public health programmes is to try and keep one step ahead of the curve and drive down the case reproduction number. That is, the number of new cases that an infected person transmits their infection onto. If you can drive that down so on average one person does not go on to infect at least one other, gradually you will push down the level of infection in the community. As you



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drive down that level of infection, hopefully by a concerted public health programme to diminish the amount of infection in the community, you will be able to change your control strategy. For example, gonorrhoea and syphilis. We see relatively little syphilis in the population now because we have penicillin and we have control programmes and good tests. These things are now getting pushed into the core group of the highest activity population. At this point in time, we are at the stage of a widespread infection in the population and we need, therefore, to have a population-based strategy for screening to push that prevalence down. It may be that if we are successful we could then change our policy to something different once we have got the infection under control.

286. If the Department of Health did say that they were going to go national with the pilot, as happened in the Wirral, and concentrate on the 16-25 group, in your view would that be enough to get us one step ahead or not?

(Professor Johnson) That depends on being able to identify a sufficiently high proportion of those that are infected and getting sufficient numbers of people in to be screened. I think Dr Tobin has suggested 75 per cent rates which are very high levels of acceptability. One can model these issues by mathematical methods, by saying, "if we screen this many people, will this begin to drive down the epidemic?" I do not have those—

287. Has that been done?

(Dr Tobin) We have one major problem. At this moment we do not know how often we need to offer re-screening to the target population. There is a study being undertaken in Portsmouth and Wirral to look at that, but we are not going to have those figures for a couple of years.

288. We cannot do modelling until we have done re-screening.

(Professor Johnson) We can. There are cost-effectiveness studies, which you may have at your fingertips but I do not.

(Dr Hughes) The study looking at infection rates is something we look at to refine the opportunistic screening model to make it more effective and efficient. I would not think it was a reason to postpone screening now because I think we have established that there is a big enough problem, that there is a lot of untreated infection.

289. My question is whether that is enough. Is the way it has been done enough to get to the problem, now that it has been done in Portsmouth and the Wirral, or will we still not be a step ahead and need to have a wider focus on younger people and so on?

**John Austin**

290. What have the Swedes done that we have not done?

(Professor Johnson) Again, I do not have all the detail. My understanding, which is a broad understanding, is that the Swedes have taken an opportunistic approach for a number of sexually transmitted diseases. The studies I am thinking of are those that are population-based associations where, once they have introduced screening, they have

looked at their chlamydia rates and then they have also looked at their pelvic inflammatory disease rates and noted that those have been coming down at the same time as their chlamydia rates have come down. They have done a lot of opportunistic testing for STDs across a number of services. We would have to look at those in detail. Their gonorrhoea rates are particularly low, but I think they have tried to screen across a number of services for STDs. They also have very good and quite firm partner-notification systems. Dr Fenton may know more about them. A note of caution: as we have said with the education programmes, one needs to be constantly vigilant because if behaviours change, some of these things re-emerge and many countries are seeing the same problem of re-emergence of STDs.

(Dr Fenton) On the comprehensive nature of the prevention of control programme in Scandinavia, it is not just about screening. It starts with sex education in schools and preparing young children about STIs and chlamydia, straight through to professionals, through to screening programmes. It is a comprehensive package and not just a shot in the arm.

291. Dr Cassell mentioned the particular importance of education in schools. Do you have a view as to who is best positioned to carry out that education, and is that resource there? School nurses were mentioned in part of your answer. Do you see school nurses as the key?

(Dr Cassell) There needs to be close liaison between health professionals and school staff as to who, and at what age, in whatever context, should be providing that education, and that will be constantly under review. Clearly, it is important that there is a link between the education provision, which may be provided to some extent by teachers, and the clinical provision within the schools. I think that is not something that one can take a comprehensive view about.

**Mr Burns**

292. You mentioned schools and the health side. You have not mentioned parents. What role is there for parents, and who do you think are the most important of the groups to provide the impetus, or should it be a combination of all three?

(Dr Cassell) I think that Professor Johnson might like to comment on recent findings of Natsal-2 survey in relation to that. Clearly, parents have an important role in preparing their children emotionally and morally for their future sexual life, and that is clearly important and has shown to be important in reducing risk of sexual intercourse for example. There is also evidence that having information from school is associated with reduced risk. That second point, that school education does not lead to (inaudible) onset—the evidence for that is the basis on which the recommendation for school-based sex STI education across all the spectrum of diseases was recommended in the BMA report.

293. Given that sex education in schools is a highly emotive subject, rightly or wrongly, and given that there is a group of parents who strenuously object to the thought of their children receiving sex education—



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and probably the younger the sex education starts the more parents it might involve—how do you get the message across to parents that maybe there is a role in schools with the health side of the equation as well, working together to educate young people to try to minimise problems?

(Dr Cassell) We do not take a particular view on that in this report because, clearly, its purpose is to raise the issue of sexually-transmitted infections. There are other BMA reports that have addressed this issue. It clearly runs right through any education through schooling and it is a general problem with education. It is clear that we would not be wishing to discourage parental involvement but to ensure the best possible outcomes.

294. How do you think one can persuade those parents who will not be very keen on sex education in schools, that maybe there is an alternative beneficial way forward?

(Dr Cassell) As the representative of the BMA today and this report, I would not like to make up an answer to that. I am sure they would be happy to respond at length to that, but it would be unwise of me to come up with an answer I might not wish to defend at a later stage.

**Andy Burnham**

295. You said, Dr Cassell, that there is evidence that access to good sex education in schools leaves children able to make better choices. We heard last week from the Family Planning Association, which caused some concern, myself included, that sex education should begin in primary schools. What would you say to that? It seems to me that there is a balance to be struck here. Clearly, you can start too early. They were talking about four and five-year olds. Is that too young? You said there was evidence.

(Dr Cassell) I do not particularly want to answer that first.

Dr Maysmith: It is not the unanimous view of this Committee.

Mr Burns: Let us not start arguing in public.

Andy Burnham: It is an interesting issue because it is something that does not happen here.

**Jim Dowd**

296. At what age should we start raising these things with children?

(Dr Hughes) To turn it on its head, what you can say that from information in studies we have done, the risk of sexually-transmitted infections is high in teenagers, and that that is the age with the highest rate, so you certainly need to get to them before they are teenagers. We did a study where we looked at how quickly people came back with a sexually-transmitted infection and we found that the highest rates were young teenagers, aged 12-15. So if they had gonorrhoea, a quarter of them came back within a year with another episode of gonorrhoea. I think you have to recognise that they are an "at risk" group, and very young age groups.

297. Quite clearly, it should be before 12, but how much before 12?

(Dr Fenton) There are other issues here. What do we mean by "sex education"? It may well be that at different ages children will be more responsive to different types of education about relationships and interaction between men and women, boys and girls; and there are key life skills that are appropriate at each age group, as we age. The qualitative work that we have been doing at University College, London, and the Natsal survey, suggest that young people do want to hear from their parents about sex and sexual intercourse and sexual relationships. Unfortunately, the reality is that most kids only learn about sex in schools or from their peers in the school grounds. We also know from Natsal—the first national survey on attitudes and lifestyles—that the quality of sex education is going to be a key determinant of the way you begin having sex and your happiness, your comfort with the type of sexual relationships you have. This all argues towards starting sex education early—but also tailoring messages so that they are appropriate for the particular age. Finally, there is working with parents. Again, some of the qualitative work suggests that the reasons why parents do not speak to their children about sex is that they are embarrassed and feel ashamed to talk about sex, or they simply do not have the skills to talk about sex with their kids, because their parents did not speak to them about it. The innovative work currently among African communities is to help the workers to work with African parents, to talk about HIV with their children and to get them to begin to open the discussion and discourse around sexual health. There are many facets to it, and it is not just about sex education; there are other aspects of looking at relationships and life and respect.

**Dr Maysmith**

298. We wanted to ask a couple of questions about genital warts. Now is the time to decide who is expert on that! There is probably no dispute that there is an alarming growth in the incidence of genital warts, but there is a little bit of a difference in whether people think that is serious or not in the quote from the BMA Board on Science and Education, where it states that it is "little more than a cosmetic nuisance"; yet we know that the viruses of the type that cause genital warts are associated with cancer. How serious a problem are genital warts?

(Dr Hughes) In terms of diagnosis, they are the most common diagnosis at the moment in GUM clinics; and chlamydia is catching up. They are believed to be incredibly common infections. As we said, they are caused by the human papilloma virus. The types of virus that cause the warts are not usually the same types as associated with cervical cancer.

299. There is some evidence that some of them are.

(Dr Hughes) Yes, other types of human papilloma virus, which are also sexually transmitted, are—

300. And can also cause warts.

(Dr Hughes) It is less. It is rare for that to be the case. But they are all transmitted in the same way.

(Dr Tobin) There is a lack of agreement about this, even between GU medicine physicians. There are some who feel that they are just a nuisance and only their appearance is a problem. There is no doubt that



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some types of wart viruses are related to cervical cancer, and quite the best way of dealing with that problem is probably through cervical cytology on the screening programme that is available. I think it would be unwise to suggest to people that genital warts are something that could safely be ignored. They should be seen and some treatment offered. There are treatments now that patients can use themselves to get rid of them, so they are not transmitting either the less worrying types of virus or the more serious types. One has also to bear in mind that those who have acquired this virus are also at risk of having acquired other infections so they may be a high-risk group of patients who we would like to see at least once. It would be a worrying message to get across to people that genital warts are perfectly okay and one should not do anything about them.

301. There is also a suggestion that condoms do not prevent the spread of genital warts. Is that generally agreed to be true?

(Dr Tobin) The problem is that a lot of people will not know they have genital warts. There is quite a long incubation period and so if they have a partner they have been with for a while, it is very likely that that person has already acquired the warts if they are going to, and to use condoms then is not going to be particularly helpful. The teaching at the moment is that you cut down the risk of transmitting genital warts, though you will not completely remove the risk, if with a new partner you use a condom.

**Sandra Gidley**

302. Moving on to syphilis, the numbers are relatively low compared to other STIs, but there was a big percentage increase between 1999 and 2000. Is there anything that causes particular concern about that? Is syphilis a special case, or does it follow the epidemiology of the other STIs?

(Dr Fenton) Syphilis is a particularly interesting STI because, as Anne has said, nearly forty years of effective prevention and control have driven syphilis almost to extinction or elimination in Britain. In fact, by the early 1990s we saw a handful of cases which were acquired in the United Kingdom. Many cases were imported from high-prevalence countries. Since 1997, however, that has changed dramatically. We have had a number of outbreaks of infectious syphilis across the country, and these have occurred in both heterosexuals and homosexual populations. The biggest outbreaks to date and the most difficult to control have occurred in gay men. There are outbreaks currently ongoing in London, Brighton and Manchester. The significance of all of this is that as with gonorrhoea and other STIs, syphilis is a relatively good marker of high-risk partner change and resurgence of unsafe sexual behaviours. A number of studies we have done in the outbreak sites have confirmed that the disease has been re-introduced into gay men who are having extra partner change or who are using venues that facilitate rapid exchange of partners, and meeting partners with similar high-risk lifestyles. Similarly, in the heterosexual outbreaks, work in those sites has also shown that the infection had been located among the commercial sex workers, among heterosexuals who were practising a variety of esoteric sexual practices.

It is resurgent, and is located in particular core groups of society. As an indicator of high-risk behaviours, we need to be aware of them.

303. It does not need to be treated in a different way; it would be targeted in exactly the same way as for gonorrhoea and other STIs.

(Dr Fenton) No, it will need both a general approach to controlling it, which is consistent, but you also need targeted approaches for syphilis as well because of the high concentration of high-risk cores.

**Dr Maysmith**

304. One of the things we have already had a few hints about is that service is a bit patchy around the country, but most people, according to the written evidence, suggest that the service is under very heavy pressure, and that there is a lack of access. To what extent do you think lack of access and pressure on the system is attributable to the increase in STIs?

(Dr Fenton) Maybe we had better start off with some of the work we have done. Every year for the last two or three years we have been doing a study on access to GUM services, and that has shown a marked increase in access times to GUM clinics. The last study was approximately over ten days for a routine appointment for services, and clearly this will have implications for disease transmission on a number of fronts. We know that if individuals are initially symptomatic of an STI, delayed access to services may result in a number of things. First of all, they may have a resolution of their symptoms and therefore believe that they are no longer infectious, and therefore not attend services. A very good example of that is having syphilis: you may have a chancre or a sore for a few weeks and that resolves spontaneously. The other difficulty with delayed access to services is that there are a number of studies that have shown that the presence of a vaginal discharge or a penile discharge does not necessarily inhibit someone from being sexually active. Studies from the United States and from Britain show 30 per cent of individuals, despite being symptomatic, also continue to have sexual intercourse. If you increase the delay in the length of time for them to have access to services, it will increase the probability of transmission and infection in the community.

305. You talked about the possibility of someone having a chancre and it resolving before they got a chance to see an expert, and you then suggested they might think it has gone away, and they have not got an infection at all. Is there evidence of that happening?

(Dr Fenton) Classically, it is describing syphilis, because of the disappearance of the primary chancre. In the outbreak sites we have seen cases of people who are presenting with secondary syphilis, that is a generalised form of the disease. When asked about an ulcer or a cut on the penis or vagina, they would say, "absolutely, I saw that four weeks ago and it went away on its own". It is simply the rationalisation of symptoms by patients before attending services. The real issue around delayed access to services is the probability of onward



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transmission of that disease during that interval period that it takes for them to arrive at the clinic and be given a diagnosis.

306. What about the recommendation for the number of consultants per head of population? The Royal College recommends about 1:113,000; and yet we have a couple of examples here: South Buckinghamshire Trust has a ratio of one consultant for a population of 300,000. That is nearly a third under-doctored. Is that common in the service?

(Dr Tobin) Yes, it is very common. I can think of many examples. In my own area there has been one only recently. We had a population of 600,000 and two consultants. We now have another half time consultant, so we have done well. I think one has to look at the issues within GU medicine, especially if we are going to have screening campaigns that will involve more providing more consultants, and we need more properly trained doctors in other grades. But we also have to look at the resources we already have, which may be some of our nurses. Many clinics have coped by training their nurses to a very high level, where they are able to manage a substantial amount of the workload. In my own area, that is the only way we have been able to keep our waiting-lists down. I think one has to look at being able to offer patients both an appointment and a walk-in service. A walk-in service by itself, while preferred by patients, can be very inefficient as a way of spreading the workload across clinic times. We have got round that by having nurses perform triage for us, like in A&E. Staffing on all fronts has to be very seriously considered, especially when one is looking for more education and training for them.

307. When I visited my GUM clinic in Bristol, I discovered there were lots of doctors employed on contracts, doctors who elsewhere might have been moving up the training scale, consultant scale, and they were claiming that they were not getting proper training and being supported. Would that be something that is common?

(Dr Tobin) We have had many doctors who have helped us out in GU medicine. We have our specialist registrars of course, and we will hit a problem with them in the next year or so, when many of them will have completed their training and there are not going to be enough consultant posts open for them to apply for. We have a trained workforce waiting for jobs to be created, as it were. We also have a lot of clinical assistants who work in GU medicine.

308. That is probably what I am referring to.

(Dr Tobin) Many of them work outside and have other interests, like general practice, and do not wish to move up the scale. I am sure there are some isolated cases where people have not been able to progress, but I have not personally any experience of that.

**Jim Dowd**

309. Can I go back to the view that sexual ill health, rather like wealth in our society, is not evenly distributed amongst the population. In the south-east of London, where I am particularly concerned with the issues relating to my own area, the occasion of sexual health is disproportionate in certain groups,

as we have seen, and there is evidence to support that at least statistically. In my own area of south-east London, the Caribbean population is well established. It is not a new population and has been there for three generations; and yet there seems to be a disproportionate occurrence in that group. I separate the Caribbean from the African population, which has a different profile and different background. It is by no means restricted to those two groups, but the evidence presented to us, and the evidence I have as a constituency MP, is that there are particular problems there with STI with teenage pregnancy. What work has been done by any or all of you to try to establish why there should be this discrepancy?

(Dr Fenton) I can speak from the perspective of work with black and ethnic minorities. This has been an area of interest to us at University College London. We have done a range of studies both within the community with NGO clinics, as well as in the second national survey of Natsal where we have seen funding from the Department of Health to look at ethnic variations in STIs. There is a multiplicity of factors that come into play. Clearly, there are issues around sexual behaviour, and ways in which sexual behaviour will facilitate the transmission of STIs; but rather than the numbers of partners, we need to look at sexual mixing patterns in the general population. There have been a number of studies done in south London, which have shown that sexual behaviour among many minority communities or micro communities is highly assaultive. In other words, we are much more likely to have sex or sexual relationships with individuals who look like ourselves; we choose our partners from within our own ethnic groups and social class, *et cetera*. That is in a community which is poorly accessed by health services, or poorly engaging with health services, which facilitates transmission of infection in that group. It may lead to very high rates of disease. There are also cultural factors which influence the transmission of disease, and these factors may influence people's confidence in the health services. We know from a number of studies that black and ethnic minorities often feel disenfranchised by health services, NHS services, and they will choose not to attend these services for a variety of reasons. There are cultural factors that influence how people deal with the symptoms of STIs and the importance that they place on those symptoms. A multiplicity of facts is operating, particularly with the black and ethnic minority communities. You did mention other groups that also have high rates of STIs—that gay and bisexual men, for example, have a disproportionate effect with HIV, and we have seen a dramatic increase of STIs in this group. Again, we are looking at patterns of sexual mixing and a resurgence of high-risk sexual behaviour in this group, which is driving those. The final group we are particularly concerned about is young people. We know from our sexual behaviour studies that young people are having sex earlier; they have more opportunities for multiple partnerships. They are much more likely to have chaotic relationships when they begin their sexual career, moving from one partner to another and having overlapping partnerships. These behaviours are going to increase the risk of STI. Sexual mixing is also an issue for



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young people. Young girls are more likely to have sex with slightly older men, who may be at increased risk of acquiring STI. In each of these groups there are different driving factors and therefore different control measures are necessary.

(*Professor Johnson*) We have talked a lot about the increased risk in the general population, but another area of concern from the research we have been carrying out each year, in the form of a survey of gay venues in London, involving 2,000 gay men each year, is that since 1995 every year we see a year-on-year increase in the level of risk behaviour in these men surveyed. We are seeing the re-emergence of unprotected anal intercourse at higher levels each year. There is a real public health challenge here because while in this country it is fair to say we have seen a tremendous response, both from government and from the voluntary sector to try and control the epidemic—and we have done well. Nevertheless, there are new challenges; it is a moving target. We have now got effective anti-retroviral therapies, which are marvellous: people are living longer, they are less sick; they are back in the workplace and have a better quality of life. But they have another effect, which is that as people live longer, there are more people living with HIV in this country. At a population level, that means the prevalence of HIV infection in these communities is rising because people are living longer. That, combined with increased risk behaviours in these groups, and increased sexually transmitted diseases, creates the impetus for further new HIV infections, which we know are happening, and creates another anxiety, which we all have, which is transmission of anti-retroviral-resistant infections; in other words, anti-retroviral treatments select out resistant viruses. What does that mean in strategic terms? It means that we need to work with people who are HIV-infected and work with those who treat them, to help people have a lifelong strategy to prevent them passing on HIV. All of us in our own lives now have difficulties in maintaining our health goals. It means investing, probably at the level of GUM services, to help those who we know are infected to prevent transmission of the infection. That is a classic infectious disease control programme. Following that is the question of what we are going to do about the relatively high level of undiagnosed HIV infection in the community, and how we can ensure that people across the board—gay men and African communities—those who have become infected by whatever route—access the new treatments available and, for example, prevent mothers from passing on infection to their unborn babies and so on. That does mean that we need to think carefully about having good programmes to ensure that people are screened and diagnosed for HIV in an appropriate environment; that they can access treatment and that part of the treatment strategy is a lifelong strategy for preventing passing on infection.

310. The more diverse the community, the more susceptible it is to having that representation within it—is that right—and therefore that complicates the issue? It is easy to be gay in London than anywhere else in the country—one knows that—we meet people from all over the country who go there because it is easier to be like that there. The more

diverse a community is, the more it is at risk from having one of the factors that you have outlined present within it; so where there is a more stable community—I hesitate to use the pejorative term—but in a different part of the country where the population turnover or social change is much less, they are much less likely to place the multiplicity of risk you have outlined across the whole field of STI.

(*Professor Johnson*) That is true. That is why we see the highest rate of STIs and HIV in large metropolitan areas where there is that kind of diversity; and that would be true throughout the world.

(*Dr Fenton*) Having said that, the second national survey has shown that the change in the last decade was quite marked outside of London as well. The change is occurring not only in the city and metropolitan areas.

311. In circumstances where there are more variables. We have seen a submission stating that until a few years ago STI and HIV were almost two separate groups; but there has been some convergence—there are now more reported occurrences of an overlap between the two. Is that your experience, and can you offer any explanation as to why that should be so?

(*Dr Fenton*) It is absolutely correct. Our surveillance systems among HIV positive individuals show an increasing proportion of HIV positive, particularly homosexual men who are attending GUM clinics with an STI diagnosis. The evidence from the recent outbreaks of infections has confirmed this as well. In London, currently, of the 300 cases of infectious syphilis diagnosed in gay men in the last year, 48 per cent of them were HIV positive. In Manchester, of the 200 men who acquired infectious syphilis over the last two years, 38 per cent are HIV positive; so we are beginning to see an overlap between the transition networks for STIs and HIV. In a sense, it is not surprising because people are likely to have acquired HIV in part because of their high-risk sexual lifestyles, and therefore if they are continuing that behavioural mode, then that would also put them at risk of other STDs. We are seeing the phenomenon of an increasing overlap between HIV and STIs.

312. Can I now ask you a completely loaded question? We have a population now that has lived with HIV and have accepted that as a fact of life—it is no longer a threat.

(*Professor Johnson*) I do not know whether or not there is new evidence on that, but that issue is often raised. It goes back to what you said earlier, that there was a lot of information about this around ten years ago, and we do not hear it—

313. In the early days there was a public perception of inevitability—it was just a question of “when”, but because of improved treatment and therapies, that is not now the case.

(*Professor Johnson*) Those things have certainly changed people; they have a very different expectation of life if they have HIV, and that is a public good. The question is, as we move through this epidemic, knowing that we are still seeing quite a lot of new infection in this country, are we really tailoring our prevention messages to fit in with



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current reality, and are we continuing to invest in it? Anecdotally, people ask, "is this still a problem?" We may not be getting the message across in a way that is current to current realities, and that means that prevention messages need to be as up-to-date with the epidemiology as vaccines are up-to-date with the technology.

Andy Burnham

314. I would like to direct a few questions about the Natsal survey. I found it very interesting, when I saw the contrast between the first survey in 1992 and the follow-up survey ten years later. Did you carry out both?

(Professor Johnson) I was involved in both. They were carried out by—

315. For the Department of Health?

(Professor Johnson) The first survey was funded by the Wellcome Trust and the second survey was a grant awarded by the Medical Research Council with funding from the Department of Health.

316. You cannot help but think that the 2000 survey paints a very different picture of sexual activity amongst particularly young people. Things seem to have moved dramatically in that time. For women, the age of first sex went from 21 years to 16 years; and for men 17 years to 16 years. The number of lifetime partners increased fairly dramatically for both men and women. Numbers of people having concurrent sexual relationships has gone up, and the proportion of men and women having anal sex. In all areas it just seems that there is a dramatic change in what people are doing. To what extent is that caused by differences in methodology that were used? How comparable are the two surveys? Can we trust them as being totally comparable?

(Professor Johnson) Can I comment on one point of fact? You said that the age of first intercourse had declined from 21 to 16 over ten years; it is actually from 21 to 16 over 50 years because we have seen a steep decline that has been going on through the course of the century. In 1990, some of the people we asked were 60 when we asked when they had first intercourse, so we were going right back over 50 years.

317. So they are not directly comparable.

(Professor Johnson) In 1990 we were asking people aged 16 to 59, so the 59-year olds would have been born in 1930; so the oldest people in the first survey were born in 1930. The second survey asked people aged 16 to 44 and was carried out in 2000. The oldest people in the 2000 survey were born in 1955. The comparisons in *The Lancet* paper compared those aged 16 to 44 in the 1990 survey with those aged 16 to 44 in the 2000 survey; so they were the same ages at the time of the survey, but they would have been born at different times. The question is: are they comparable? They are comparable in the sense that both surveys were undertaken using similar probability sample surveys; that is, we aim to end up with a random sample of the population. They were the same in that for the questions on which we have made comparisons, identical wordings were used. They are different to the extent that the second survey used computer-assisted interviewing, and the first

survey used pen and paper interviews. In the first survey, we would have handed the respondent a booklet in which they would have marked down the answers, privately in their own time, but in their home, with an interviewer present but not in view of what they were writing; and the answers were put in a sealed envelope before being handed back to the interviewer. On the second survey, the questions were on a laptop computer, which was handed to the respondent, who tapped in the answers, using the number pad, in the same way that you would get money out of the bank. That second method we know, from a randomised experiment that we did in the feasibility stage, results in people completing the survey—a greater completeness of data because they do not skip questions. We could not establish that they were more honest, in that we did not find different rates of reporting sensitive behaviours—although there is evidence of that from other studies elsewhere. So we have reason to believe that the methodology might improve people's willingness to report.

318. But it might be marginal.

(Professor Johnson) Yes. I think perhaps a more important way in which people have been made more willing to report is that attitudes to sex have changed very substantially in the last decade. People are much more accepting of homosexual behaviour and much more tolerant. They are more tolerant of casual sex and so on. In our own lifetimes we can think back to 1990. We talk about things in a different way in 2000 than we did in 1990. On the basis of that and the scientific evidence of the liberalisation of attitudes, it would suggest to me that people may feel more willing to report stigmatised behaviours than they were ten years ago. We believe that the changes we observe are partly a result of true change—and the evidence to back that up is the rising STD rates and the other triangulation to other forms of survey work suggesting the same trend. We believe that the magnitude of the change is over-estimated in a sense because of the methodological differences and the changing attitudes. However, I think the results now should be giving us a more accurate picture of true behaviours than ten years ago.

319. The answer is that probably society has changed, but possibly not quite so dramatically as people may suggest. As you say, there is a different culture. Has the rise of clubbing, more prevalence of drug-taking, or anything like that induced more risk-taking in terms of trends of what young people do out of school hours?

(Professor Johnson) I cannot give you chapter and verse on the extent to which these things have influenced the behaviours, partly because we did not have that level of detail in the first survey. We do have data for the second survey, which looks at where people meet their partners and how long it is between first meeting someone and having first intercourse with them. That data is not fully analysed yet, but it is a very important area of the points at which people might take risks.

320. Do you think we have a more risk-taking kind of society in that people have more extreme behaviour and people are going further than they used to?



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(Professor Johnson) I am not sure that one can generalise about those things. There is a whole area of study about risk-taking behaviour, which suggests that, if you make things safer people will take more risk. This is the theory of risk compensation. There are many aspects of sexual health that have greatly improved, and one or two have massively improved—perinatal mortality rates, maternal mortality rates—and septic abortion are greatly reduced. One has to take that view of the checks and balances. It is difficult to give a firm answer.

321. Whatever the differences of methodology, it shows that age of first sexual intercourse amongst women is not decreasing and plateau-ing. Am I right in thinking that has happened in other European countries and in the United States? In the early 1980s it happened in other countries and the USA in the late nineties, and in Britain and New Zealand it occurred in about 1983.

(Professor Johnson) I am not sure that is quite the conclusion we came to. Around 50 per cent of young people nowadays have had intercourse by their seventeenth birthday. In Kaye Welling's paper in *The Lancet*, in that she concluded that the increase in the proportion of women reporting first intercourse before age 16 does not appear to have continued throughout the past decade. We are beginning to see that there is some levelling off in this decline of the age of first intercourse. It is very difficult to produce comparative figures across Europe and the United States, simply because very few countries have these data sets to make a comparison. You will see various surveys, but very few—

322. Is Natsal better than what most are doing?

(Professor Johnson) I think it is fair to say that Britain is the only country in the world to have done two surveys of this magnitude that could be compared. The only study in the States was of under 4,000 people.

323. It strikes me it is an enormously valuable piece of work. Two questions flow from that: is there a proposal to repeat it? If so, will it be in 2010; and, if so, is that not too long? Is society not changing far more quickly?

(Professor Johnson) Having just published the paper six months ago, we are a bit doubtful at the thought of doing another one right now, because these are very expensive surveys to undertake. This one cost about £1.4 million. It raises a very important question: how do we obtain behavioural surveillance data at a level that is not prohibitively costly? The Communicable Disease Surveillance Centre clearly has a surveillance system in place for diseases, but we need to have surveillance for underlying behaviour. We have some of that in London for gay men, but we could achieve the sort of behavioural surveillance data by obtaining data on sexual matters from some of the existing surveys in which government currently invests. An example would be the Health Survey for England, which is a survey undertaken every year, with funding from the Department of Health. One way of trying to reduce the costs of these big surveys would be from time to time to have a module of key questions on sexual behaviour, which we have demonstrated is acceptable.

Jim Dowd

324. To refer back to the risk-taking aspect, clubbing has declined markedly since the 1960s. We have seen the growth of industrial clubbing, which is something else entirely; but the risk assessment of it—I got the impression that the consequences now of the same sort of behaviour from 10-25 generations more ago is now much less severe than it was then, and may have served to blunt people's awareness.

(Professor Johnson) As I said, the literature on risk is about those checks and balances. Interestingly, if you take a historical perspective, many of the changes in behaviour which I have discussed, particularly the fall in the age of first intercourse and the increase in sex before marriage—those changes occurred before the technological developments; so that the—

325. And the social developments that went with them.

(Professor Johnson) I would argue that those were part of the social developments that drove the need for better contraception, for better abortion facilities, which altered the legislation on sexuality and so on. We are a very complex society. We do try to diminish risk, and that is in a sense what some of the developments in modern societies are about. There is less risk in certain areas of our health and dramatic improvements in life expectancy. I suppose that with infectious diseases generally people felt in the 1970s, with antibiotics, that we had somehow licked infectious diseases, but they come back to remind us that they are endlessly evolving. HIV has perhaps changed the balance of the risks that people were prepared to take. Whether that is good or bad is not for us to say.

326. If you are in a position where you acquire any STI or anything else which is to all intents and purposes untreatable, that might describe a course of action, as opposed to knowing we may or may not contract it, but there are antibiotics and all kinds of treatments that will affect your behaviour.

(Professor Johnson) I think that is what we saw in the eighties for the AIDS epidemic. People should not think HIV has gone away because it has not. We need to think carefully about young people's sexual behaviour because a lot of women who were having sex early expressed high levels of regret that they had had sex too early. We should pay attention to that.

Andy Burnham: It is very interesting. You have touched this a couple of times: you were asked the extent to which changes in sexual behaviour amongst gay men occurred in the community.

Julia Drown

327. Do these figures include the number of gay partners?

(Professor Johnson) I would imagine those figures were the ones taken from *The Lancet* paper. Are you asking whether it was an equal number between men and women? You are asking an academic and I would have to give you an academic response. There is a discrepancy in any survey. Men always, on average, reported a higher average than women. You have to think about this. In a closed society, men and women should over a defined time period report a



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similar average. Now, this is not a closed population because we know that 16-44 year-old women tend to have sex with older men, on average; and there is a complex factor in those figures which means that you have to take account of the age mixing pattern. So in the survey there are a higher proportion of single men than there are single women, because women get married early. We know that single status is a very strong predictor of multiple partner change. I am sure this Committee does not want to hear more about this, but I could give you a paper which addresses this issue.

328. It would be helpful as there is such a massive difference.

(Professor Johnson) Yes.

Jim Dowd

329. You are describing heterosexual relationships in the main, surely?

(Professor Johnson) They are in the main heterosexual partners. The figures you are describing are actually—

330. The rate of partners amongst gay men, for example, is far higher than either for lesbians or the heterosexual community at large.

(Professor Johnson) Yes. The other thing I should say is about these large sample surveys, the mean number of partners is heavily influenced by the small proportion with very many partners. This is a very important thing about sexual behaviour, and you have raised it already—most people have few partners and a few have many. The top 1 per cent of distribution contributes very disproportionately to the mean. You will always get people who report hundreds or even thousands of partners in these large surveys and they can shift the mean massively. One of the calculations we have done is that if you under-sample women in the sex industry, you are systematically missing that group of people who shift the mean. Nevertheless, having said all that, to justify the difference, I think you know that in society there are different constraints upon our attitudes to women's sexual behaviour and men's sexual behaviour, which may lead men to over report and women to under report.

331. It may also be the difference between what men and women would include as "sexual encounter".

(Professor Johnson) Yes.

Julia Drown: You mentioned changes in sexual behaviour. Is there anything else on that?

Andy Burnham

332. You mentioned complacency, referring to unprotected sex. Is that a main behavioural change?

(Professor Johnson) I mentioned that there was increased risk behaviour. I could not say that that is due to complacency. I think there is increased risk behaviour in gay men and I think that is a considerable concern. We do need to understand the methods to try and prevent further HIV transmission.

Dr Taylor

333. Professor Johnson coped with those last questions masterfully, so here is a much easier one! Looking at the general level of knowledge in the population about STIs, particularly chlamydia, what is the level in the population—and what is the level of knowledge with GPs?

(Professor Johnson) I do not have figures at my fingertips, but I think there have been surveys done which have suggested that people are much less aware of chlamydia infection than they are on other STDs. I think this is highly relevant to the sexual health strategy and the proposals to engage primary care more: you heard some of the complexities of the testing and how rapidly the technology is changing, so if one wants to try and engage primary care in a greater proportion of STDs diagnoses and achieve better control through that mechanism, I think one would have to invest in a considerable level of training around some of these issues because it is a rapidly developing field. I think we need to know a lot more about the amount of work that GPs are already doing in this field—and Dr Cassell has some recent data on that. I think a lot more people go to their family doctors in the first place with STD symptoms and consult and get referred on to GUM than we previously recognised. There may be a great opportunity to engage GPs more, but these are busy people and one needs to invest in both training and in asking them to take on this additional workload.

334. I am rather bothered because PCTs are clubbing together for services like sexual health, and one can see the position where the PCT that has that responsibility puts more into it than the other PCTs, and that is worrying, I think. It is taking away the urgency from the PCTs that do not have a responsibility in a way.

(Professor Johnson) You mean because they have not got a GUM clinic on their patch?

335. Absolutely.

(Professor Johnson) This is a very complex area, but it seems to be that if you are going to engage in primary care, you have to provide the support, and you have to provide the very close links with the GUM service and the laboratory service—because it is the laboratories that make the diagnoses. You have to make sure you get the contact tracing right. STDs—because sexual behaviour is not equally distributed and neither are STDs, and there are very much higher rates in London, where one would want to see greater investment in places with higher rates—so this is not a case of equal investment across the different PCTs. It probably does need some investment in places with high rates, to try and get better services. If you want to get the GPs involved, then you have to think how to provide that level of support.

Sandra Gidley

336. Coming back to education and information, it has been mentioned during today that young people are unaware of many of these diseases or infections. Presumably, they lack the information. Was there anything in the Natsal survey that questioned the source of information about sexual matters? I would



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be interested on hearing comments between the link information and sexual behaviour. How does it impact?

(Professor Johnson) Broadly, we found that schools now are the most important source of education for both boys and girls but more important for boys than girls, in the sense that girls tend to rely more on their parents than the boys do. There has been an increase in the importance of lessons at school. Close to 40 per cent of boys now report that as their main source of information, and girls report their parents as a more important source than the boys do. This is a difficulty in terms of causal association, but we did find that those who reported that lessons at school were their prime source of information were less likely to have adverse sexual health outcomes in their teen years; in other words, they were less likely to have teen pregnancies and so on. I think there is a broader issue about people who have teenage pregnancies: they tended to be young women who had low levels of educational attainment. You would rightly say, is it because they have had a baby that they will not get their GCSEs and so on—or is the other way round? I suspect both things are going on, and we need better longitudinal studies to understand that relationship. Low educational attainment was the strongest association with teenage pregnancies. The family background was less important—things like measures of social environment like housing or single-parent families and so on. The educational environment probably is important and perhaps education—not sex education necessarily but broad issues of educational standards—is important in this broader area. I would not like to attribute cause and effect, but those are the associations.

337. Would you say that from that survey, if we are looking at policy around these areas, that the impact of education should be something that we should consider most seriously; or are there other policy areas that we need to look at?

(Professor Johnson) I think one should try and unpick this association between quality of education, educational achievement and demand and for sexual health outcomes. There are other studies which suggest that the availability of services locally are very important, and awareness of local services, so that young people can get the services and information they need. There is broader literature on that and more detailed information, which you might hear about in your session on health education.

338. I was interested in Dr Cassell's comments about the media and there being an awareness in programmes that are targeted towards young people. Was that a source of information for young people, and would you agree with the comments of the BMA that there should be more focused media awareness through programmes like *Eastenders*, for example?

(Professor Johnson) There is some very interesting data from CDSC looking at the impact of various media campaigns on people coming into HIV testing clinics, as a measure of awareness. The government campaigns did cause something of a blip, but the thing that really kicked the rates up was the discussion on a national soap. When these issues are raised on national soaps—I cannot remember the exact event

because I am not an *Eastenders* fan personally, but there was an event which caused a large change in behaviour. I think that chlamydia may have featured recently in a soap.

339. I would like to ask a very sexist question. Was awareness better among females than males? Teenage girls are avid readers of these dreadful magazines that my daughter used to bring home. There were frequently quite serious information messages in those. Boys do not read things in the same way and I just wondered if that came through the survey.

(Professor Johnson) We did not ask about people's knowledge about STIs in the surveys, so we do not know; but you are absolutely right, a lot of the teenage pregnancy campaign was through young people's magazines.

(Dr Tobin) We did a little study during the chlamydia pilot. Before the pilot started we asked everybody coming into GU medicine and family planning clinics in Portsmouth if they knew about chlamydia. Then we looked at what happened during the one year, as to what they knew about chlamydia. We found that in the targetted age group, of young women, knowledge was about 40 per cent. They knew a little bit about it at the beginning. At the end of the study it was about 100 per cent. Obviously, we could be said to be in an area where chlamydia screening was all happening, so we did the same study in an area a long way away where there was no chlamydia pilot going on; and the rate of knowledge increased exactly the same. The figures were almost identical. We asked them how they found out about it and it was through girls' magazines and the television campaign at the time. We also looked at the men to see what happened there, and found the level of knowledge among men was about 20 per cent, and it actually went down during the pilot. There is a role for the media, certainly, and young girls' magazines are a very good way to get to them.

(Professor Johnson) We need to find a way to get to the boys.

(Dr Fenton) Absolutely.

### Julia Drown

340. Is there agreement across the panel that there has been a lack of high profile campaigns that continue to tell people about risky behaviour, sexually transmitted diseases and so on? Should that have been continuing?

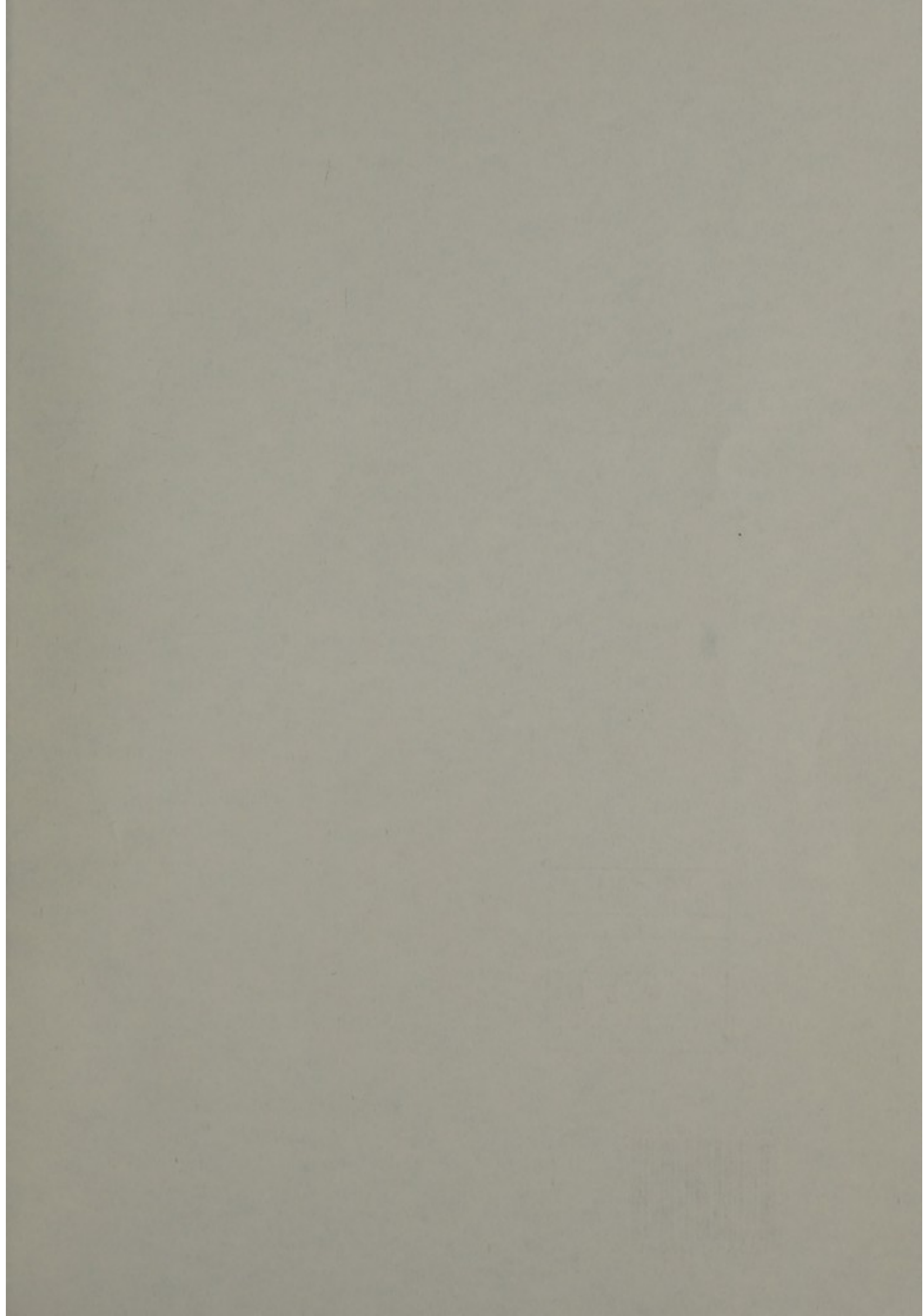
(Dr Fenton) One of the things we have noticed anecdotally over the last seven to ten years is the increasing sexualisation of the media as well. It is not just girls' magazines, but it is television as well. On the one hand, you are getting these messages to start having sex earlier and having multiple partnerships; but you are not having concomitant messages to say "use a condom" or telling them to reduce the number of partnerships. The balance is shifting. That is one of the issues of using the media.

John Austin: I thank all of our witnesses for coming here this afternoon. If, when reading the transcript, you feel there is anything you want to add, we are always willing to accept further submissions.

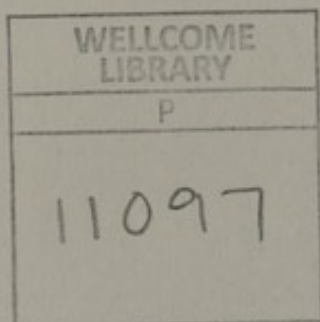












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