

aids treatment update

Sexual health & HIV

When Sigma Research reported on the findings of their national survey of people living with HIV in the UK earlier this year, one of the striking areas of need was around sex. According to *What do you need?*, forty per cent of all survey respondents felt unhappy about their sex lives, with half having experienced problems with sex in the previous twelve months. The nature of these problems varied widely, from erectile dysfunction to illness, treatment side-effects, and anxiety about HIV, self-image, or lack of self-confidence.

Dissatisfaction with our sex lives is not uncommon, and it's clearly not a problem restricted to people with HIV. But it is an area where HIV creates specific difficulties; difficulties which Sigma's report suggests are often not well-catered for - two thirds of those who'd experienced problems with sex had not received any help to deal with it. Negative social - and professional - attitudes towards people with sexually transmitted infections clearly drive these problems, and they're further confounded by our lack of knowledge about areas of risk, and about how to respond to risks which are difficult to quantify.

An example here is superinfection with HIV, the subject of our lead article this month. Contracting HIV a second time is a real phenomenon, with real implications for HIV-positive people's health. Yet the development of neat health promotion messages on superinfection is not straightforward. We've tried to provide readers with information, but we encourage you to speak to your health care team about how these matters might relate to you and to your wider sexual health.

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sex and superinfection

2 two case reports of HIV superinfection have been published in medical journals this year, but do two swallows make a summer? by edwin j bernard

The past few months have seen much publicity surrounding several individual reports of superinfection with HIV – that is, a second infection with a genetically different virus after the first virus has already established an infection. Reactions to these reports have varied widely amongst journalists, commentators and public health educators, some of whom have been alarmed enough to warn that unprotected anal sex (often called 'barebacking'; sometimes negotiated, sometimes not) between HIV-positive gay men may be more deleterious to health than previously thought, and are urging these activities to cease. Others take a different view, arguing the *frequency* with which superinfection occurs is not established, making the actual risk difficult to contextualise.

Whilst evidence of superinfection also affects future vaccine development, the scope of this article is to examine the relevance of our current knowledge of superinfection to people currently living with HIV. What do the studies show? How likely is superinfection to occur, and what is the clinical significance?

Basic science

Globally, there are two basic types of HIV: HIV-1 and HIV-2. HIV-1 affects all regions of the world, whereas HIV-2 is found mainly in West Africa.

HIV-1 is further subdivided into groups M, O and N. M is the group that is predominant. Within group M there are further divisions or groupings based on the genetic make up of the viruses. These groups are called subtypes or clades, of which there are at least 9, labelled as A to I. In Europe, North America and Australasia, HIV-1, group M, subtype B is far the most common. However, each subtype can mutate (for example, because of selective pressure from the immune system), leading to a variety of different strains even within the subtype.

Early in the history of HIV, it was thought impossible for a cell already infected with a retrovirus like HIV to become infected with another virus. Within ten years, test tube experiments proved otherwise¹. It is now believed that the initial immune response to HIV infection is more specific than previously thought, and may not necessarily protect from infection from a different subtype. This is one reason why development of a preventative vaccine is proving so difficult.

The mid-nineties discovery of recombinant HIV (HIV that has genetically reconstructed itself by combining two subtypes within the same cell) within certain populations in Africa, South America and Asia, was proof of multiple infection: that more than one HIV virus could infect the same cell within humans.

Dr Steve Taylor, Clinical Research Fellow and Specialist Registrar in GU & HIV Medicine at Birmingham Heartlands and Coventry Hospitals, explains the significance of this finding: "The fact that recombinants exist is evidence that at least two different viruses have infected the same cell in some people at some time in the past. Evidence [from test tube studies] supports the fact that this can occur."

Proof of superinfection

Multiple infection can occur at three distinct phases of HIV disease. It can occur during primary infection (known as coinfection or simultaneous infection) if two different strains of HIV infect the same cell. It can occur after primary infection but before the immune system has produced antibodies to HIV; the window period. This is called serial infection. Or it can occur once the immune system and the virus have settled down into a steady state during chronic infection, when HIV and the immune system are in a kind of equilibrium. This is

known as superinfection, and until this year, it was only a theory. The publication of 'A Patient with HIV-1 Superinfection' by Swiss doctors in the *New England Journal of Medicine* in September 2002 provided scientific evidence that it can occur².

"This is the first published case of *in vivo* [within the body] superinfection following sexual exposure," says Dr. Taylor. "It appears well-documented and scientifically rigorous. It essentially provides proof that this phenomenon can occur – at least with different clades of HIV-1. The worry is that this case represents the tip of the iceberg and this event occurs far more frequently than we recognise. Having said this, there are currently no data on how *often* this is occurring in our patients, or what the clinical impact will be."

The Swiss group first described the case in February, at the Seattle Retroviruses Conference, and it was subsequently widely reported. However, conference reports are not subject to the scrutiny of peer review, and until evidence is published in a well-respected scientific journal, it cannot be considered to be quite as veracious. Notably, several previous reports of superinfection; by Sonnenborg at a Glasgow conference in 1998 and by Angel at a San Francisco conference in 2000, which were widely reported to be 'proof' of superinfection, have yet to be published.

Earlier this year, a report of two cases of superinfection in injection drug users in Thailand was published in the *Journal of Virology*³. Whilst this was also an important 'proof of principle' paper, and is of relevance for vaccine design, it may be less significant with regards to superinfection via the sexual route, since the mechanisms of infection by direct blood inoculation may be quite different.

The Swiss case

In November 1998, a 38 year-old gay man presented with acute retroviral syndrome. Resistance testing revealed no mutations and identified the virus as HIV-1 subtype AE. Hepatitis B virus was also acquired sexually at this time. For the next 27 months he received HAART consisting of zidovudine, lamivudine, abacavir and amprenavir with one interruption of six weeks. He was also entered into a therapeutic vaccine study and monitored closely.

At the time of his second treatment interruption (January 2001), HIV-1 RNA rose to 80,000 copies and then decreased to 21,000 copies in February 2001. In March 2001, the man had several unprotected sexual contacts in Brazil and in April 2001, his HIV-1 RNA fluctuated between 200,000 and 400,000 copies. He experienced mild symptoms of transient fatigue and fever. In August 2001, HAART was resumed and his viral load decreased rapidly. Treatment was interrupted yet again when liver function tests increased to four times pre-HAART levels. Subsequent testing revealed acquisition of hepatitis C virus in March 2001.

Genetic testing revealed that from November 1998 to February 2001, his predominant HIV-1 subtype was AE. In contrast, from April 2001 onwards, his HIV-1 subtype was B. Further subtype B- and AE-specific tests confirmed these results. Immune function tests showed that his immune system's CD8 (killer) cells recognised subtype AE between November 1998 and March 2001. The number of specific CD8 cells decreased markedly in April 2001 and subsequently his CD8 cells didn't recognise the new B subtype, allowing for new (super) infection.

The Harvard case

Since the man in the Swiss case was originally infected with subtype AE usually found in Asia and then acquired the predominant Western subtype B in Brazil, does that mean that superinfection only occurs between different subtypes and that being exposed to the same subtype doesn't result in superinfection?

Most scientists believe this is not the case: it is simply easier to detect two different clades of HIV-1. Besides, we should soon have published evidence that superinfection can occur within subtypes. In July, Dr Bruce Walker of Harvard Medical School reported the first case of superinfection of two variants of subtype B at the International AIDS Conference in Barcelona⁴. A man involved in a treatment interruption study had achieved virological control after three cycles of treatment and interruption, but when viral breakthrough appeared to occur, Dr Walker and his team investigated the case in detail. Dr Walker found that the man had been infected with a new clade B virus following an unprotected sexual encounter.

glossary

antibody Protein substance produced by the immune system in response to a foreign organism.

antiretroviral A substance that acts against retroviruses such as HIV.

CD4 A molecule on the surface of some cells onto which HIV can bind. The CD4 cell count roughly reflects the state of the immune system.

clade A term for the different sub-types of HIV.

HAART Highly Active Antiretroviral Therapy, a term used to describe anti-HIV combination therapy with three or more drugs.

hepatitis Inflammation or infection of the liver.

in vitro Latin term for experiments conducted in artificial environments, e.g. in test-tubes.

in vivo Latin term for experiments conducted in humans or animals.

recombinant Genetically reconstructed.

resistance A drug-resistant HIV strain is one which is less susceptible to the effects of one or more anti-HIV drugs because of its genotype.

RNA Ribonucleic acid, the form in which HIV stores its genetic material.

strain A variant characterised by a specific genotype.

sub-type A viral sub-population which is genetically distinct to other sub-populations of the same virus.

viral load Measurement of the amount of virus in a sample. HIV viral load indicates the extent to which HIV is reproducing in the body.

The protein on the envelope of the new virus was only 12% different to the man's original virus, nevertheless he was unable to control the second infection. The existing HIV-specific CD8 immune response was less able to recognise the new virus, leading to uncontrolled viral replication. "I think the public health message is that it is possible to become re-infected with a second version of HIV," Dr Walker told the meeting. "I don't want to draw too many conclusions from a single case, but he was definitely controlling one of the viruses and not the other."

Dr. Walker was also the co-author of an editorial in the *New England Journal of Medicine* that appeared in the same issue as the Swiss report⁵. The editorial noted two ways of looking at the Swiss case: optimists would say that one case of superinfection does not define the likelihood of such events, whereas pessimists may consider this case to be the tip of the iceberg.

A diversity of messages

One of the conclusions of the Walker & Goulder editorial – that people with and without prior HIV exposure should remain vigilant in preventing new infection – has been interpreted as taking "aim at HIV-positive persons who have long assumed that unprotected sex with HIV-positive sex partners carried no AIDS-related risk for either".⁶

So, are reactions to the Swiss superinfection report more a litmus test of morals and ethics around unprotected anal sex between positive men than good science? Jack Summerside, THT's Head of National Living Well with HIV Services believes so.

"Fear is never a useful tool and HIV prevention should never be about fear," he argues.

Gay Men Fighting AIDS (GMFA) feel that the news from Barcelona and the *New England Journal of Medicine* doesn't require them to change their negotiated sex and bareback campaigns, the latter of which stated in 2000: "Positive men may be reinfected (or superinfected) with a drug resistant strain or a more aggressive strain of HIV. This could severely limit treatment options and may reduce life expectancy. We don't know how often reinfection occurs but there is increasing evidence that it does happen."

Chickens and eggs

Dr. Miguel Quinones-Mateu of the Lerner Research Institute Department of Virology in Cleveland, Ohio is one of several scientists currently exploring the clinical significance of superinfection. "My interest is in the fitness of virus," he tells me, having already found in test tube studies that HIV fitness together with viral load may be a strong predictor for the rate of disease progression.⁷ "We believe that fitness plays a role in superinfection. In other words, if you're infected with a less fit virus and then are exposed to a more fit virus, you can get superinfected."

He outlines the scenario he thinks is happening in every major city in the developed world: "My wild-type virus is under control because of the antiretroviral therapy I am taking. I have a very low viral load, I am doing fine because my virus is less fit, not able to replicate very well. Then one night I meet somebody who is infected with a drug-resistant virus and I get exposed to that drug-resistant virus that is going to be more fit than my virus. If it gets into my own body, it could take over the infection, and I will be superinfected."

It's a frightening idea, as yet unproven.

"It's a chicken and egg situation. We know that it's happening," he asserts. "The fact that we have recombinants means it is happening. But now we have to go back to see the event occurring. What we're trying to prove here, and it's not easy, is that one of the reasons for failure of therapy could be getting superinfected with a drug resistant virus."

One of his projects (in collaboration with colleagues in Madrid) is a longitudinal study following a cohort of twenty, monogamous HIV-infected gay and straight couples. He summarises the paper he is about to submit to the *Journal of Virology*: "So far, we haven't seen any cross-infection," he admits. "It is possible that either the immune system, or viral fitness, or both, is avoiding potential superinfection. We plan to continue, because my guess is that eventually it is going to happen."

Another project (in collaboration with colleagues in San Francisco) is the screening of three existing cohorts to evaluate if superinfection with HIV drug resistant variants could be responsible for antiretroviral therapy failures.

“We are looking for patients who have failed therapy suddenly, with huge viral load jumps of 2-3 logs in several weeks, so we can do genetic sequencing of stored blood samples. The database search is happening right now,” he adds, “and we don’t know what we’re going to find.”

Results from these studies along with others, including an ongoing trial in Tanzania looking at the frequency and clinical significance of superinfection amongst a cohort of 600 high-risk women, will provide much-needed information in the next few years.

Making our own minds up

But what about now? Based on current scientific evidence, whilst it is true that there are no documented cases of superinfection with a drug resistant strain of HIV, or any evidence of how common superinfection is, or what the clinical implications might be, it would be fatuous to end the story here.

Steve Taylor is well-versed in the mechanics of HIV sexual transmission (see ‘HAART and Prevention’ in October’s *ATU*) and also sees HIV-positive patients. I asked him about superinfection and unprotected sex.

Edwin J Bernard (EJB): In the developed world, for HIV-positive individuals engaging in high-risk sex, if superinfection is happening, what factors would make it more or less likely?

Steve Taylor (ST): This is largely theoretical. However, the probability of superinfection is likely to be determined by a number of factors which may include: the nature of the anti-HIV immune response in the recipient; whether or not the recipient is on antiviral drugs, and whether these are effective in controlling their

virus. In addition, the quantity and characteristics of the new virus the recipient is exposed to will be important, such as whether or not the virus is drug resistant.

There are no data, but it is biologically plausible that the probability of superinfection exists as a spectrum comprising both higher and lower risks. For example, I would expect a person who is not on therapy and is engaging in receptive anal sex with someone with a high viral load and co-existing sexually transmitted infections (STIs), being at the higher risk end. While two people on effective, suppressive HAART, who can be sure they have no co-existing STIs, would be somewhere at the other end.

EJB: Is the fittest virus always the one transmitted?

ST: Not necessarily. In my opinion if the virus is fit enough to cross mucous membranes, attach to cells, enter and replicate, it is ‘fit enough’ to initiate an infection, if the immune system allows it. Therefore it will depend to a certain extent on the chance of one of these viruses being in the right place at the right time. Hence the infecting virus may not always represent the fittest virus found in the infecting person.

EJB: Why do you think some people want to tell HIV-positive gay men not to have unprotected anal sex on the basis of current knowledge of superinfection, whereas others are concerned that this is scare-mongering?

ST: I would suggest that safer sex should be a universal message to gay men, HIV-positive or not, in order to protect themselves and their partners from STIs. This is irrespective of the risks of superinfection, real or not.

key conclusions

- Evidence suggests that HIV-positive people can contract HIV a second time. This is called superinfection.
- Superinfection could cause HIV treatment to fail, and speed up the progression of HIV disease.
- It is not known how commonly superinfection occurs, and this is the subject of further scientific investigation.
- Condom use protects against pregnancy, and against most sexually transmitted infections, including HIV.

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hiv in the uk

6 what has the latest reorganisation of our health care system done for our ability to respond to the UK HIV epidemic? by anna poppa

Earlier this year the Government published a *National Strategy on Sexual Health and HIV*, the first plan of its kind to be issued in the UK. After 21 years of AIDS, many viewed the document as a welcome, and overdue attempt to structure the nation's response to this important area of public health. As sexually transmitted infections (STIs) are currently spreading at unprecedented rates in the UK, and the latest projections from the Public Health Laboratory Service (PHLS) forecast that by 2004 there will have been 40,000 diagnosed HIV infections (as opposed to AIDS diagnoses), it seems an effective response is needed now more than ever.

Last June, the Department of Health began filling in some of the detail missing from the original *National Strategy* document by issuing an implementation plan describing how they would roll out their planned activities. In the wake of another World AIDS Day, we report here on the progress made regarding the HIV-related elements of the strategy. These comprise fundamental changes to the way that HIV services should be commissioned and provided. As such, they're of relevance to everyone affected by HIV in this country.

Labour & NHS Modernisation

Party politics aside, there can have been few British institutions more fitting of New Labour's 1997 'things can only get better' election hymn than the NHS. The foundations of the Blair administration's moves to modernise the NHS were inscribed in *Shifting the Balance of Power*. This document outlined a future healthcare system in which the existing local health purchasing authorities would be phased out, in order that Primary Care Trusts (PCTs) could take on responsibility for commissioning all the health services their local population

required, be they hospital, primary or community health services. Presented as a visionary change of culture, *Shifting the Balance of Power* would "put the patient first", mandating PCTs to enable the involvement of local people in their local plans.

Implementing the National Strategy

The Government's *National Strategy on Sexual Health and HIV* is therefore one policy document which sits within their overarching *NHS Plan*. So alongside specific activities aimed at reducing the impact of STIs and HIV, the strategy also set out changes regarding commissioning responsibilities and the new role here for PCTs.

This issue is important because one of the key criticisms voiced when the *National Strategy* was opened for consultation was the concern that this change in commissioning arrangements would effectively place responsibility for buying local HIV services in the hands of people without sufficient understanding of the disease. Whilst it's probably too early to assess the extent to which these worries were warranted, a recent survey of specialist HIV and sexual health doctors conducted by the Terrence Higgins Trust, the British HIV Association (BHIVA) and PACT (The Association of Providers of AIDS Care and Treatment) found that 57% felt their ability to provide services had worsened since the NHS reorganisation came into full flow in April this year. In comparison, just 2% thought things had got better.

The Department of Health asked all PCTs to designate a sexual health and HIV lead commissioner who would implement the *National Strategy* locally, by summer 2002. At the time of writing, it's not clear that all PCTs

have yet managed this. Those which have may have placed this responsibility with an individual who has several other health areas in their remit. Whilst this might be workable in many areas of low HIV prevalence, it seems likely to present challenges elsewhere. If we take the example of the London area, of the five PCTs with responsibility for commissioning HIV treatment services, most have a brief which includes other health areas, and several come from a non-HIV commissioning background.

A further criticism of the *National Strategy* was the coincidence of the move to PCT commissioning with the removal of the 'ring-fence' around statutory funds for HIV prevention (which acts to stop local commissioners diverting this money to other budget areas). Without this protected status, many believed prevention services would be under threat, and at just the time when responsibility for commissioning them was being re-organised.

At the time, HIV consultants argued that in order to make the changes in the *National Strategy* work, they needed to hang onto this ring-fenced budget, and recruit an extra thirty to forty HIV consultants in England and Wales. HIV specialists are split on the value of moving to a system similar to the one being implemented in cancer care, in which major regional centres are responsible for most care, and every hospital is part of a regional network. Such 'managed networks' are developing slowly.

Of course it isn't possible for every disease area to be a priority, and for all the worrying signs about incidence, in terms of sheer numbers affected and absolute costs to the state, sexual health and HIV are some way off the top of the list. The *NHS Plan* identified five key areas for improved services and outcomes: cancer, coronary heart disease, mental health, older people, and children. There are also a small number of conditions for which a *National Service Framework* is either in place or in development (cancer, children, coronary heart disease, diabetes, long-term health conditions, mental health, older people, paediatric intensive care, and renal services); documents which guide health commissioners and providers on appropriate standards and targets.

Ultimately, the Department of Health has not been sufficiently compelled by these arguments to alter their original plan radically – in April this year, the prevention ring-fence ended, PCT commissioning of sexual health and HIV services began, and there is no plan to develop a *National Service Framework* for this area.

What does the Strategy propose?

There are five key aims to the *National Strategy*:

- To reduce the transmission of HIV and STIs, with a national goal of achieving a 25% reduction in the number of newly acquired HIV infections and gonorrhoea infections by 2007.
- To reduce the prevalence of undiagnosed HIV and STIs – in particular, by setting a national standard that all GUM services should offer an HIV test to clinic attendees on their first screening for STIs, and working towards shorter waiting times for urgent appointments in GUM services.
- To reduce unintended pregnancy rates – including setting a national standard.
- To improve health and social care for people living with HIV.
- To reduce the stigma associated with HIV and STIs.

Following a consultation exercise which supported the identification of these key objectives, the next step for the Department of Health would be to make proposals for how these targets should be met, and nominate agencies with responsibility for ensuring that they are. Their implementation plan includes the activities listed below.

When we approached the Department for a progress report, Jane Mezzone, Sexual Health Programme Manager, responded with a dose of realism around the timescale for such fundamental reorganisation: "The expectation that we will do [everything in the implementation plan] in a year is unrealistic. It's a ten year strategy."

The extent of personnel changes within the HIV sector is clearly hampering further the pace at

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which institutions may be expected to move. "I've been shocked by the expertise that's left the field," says Jane.

- An initial **mapping exercise**, intended to identify gaps and weaknesses in nationwide services, was due to report its findings in Autumn 2002. Most responses have been received, but the report will not be available before Spring 2003.
- A sexual health and HIV **commissioning toolkit**, designed to support the implementation and development of PCT plans from April 2003, is to be published by the Department by the end of 2002. This will advise on partnership models; how to undertake local needs assessments; include examples of good practice in providing information to the public, and to people with HIV specifically, on sexual health and HIV (based on a Department-led review to be completed in Summer 2002). This activity remains on schedule.
- Work with professional bodies and service users to develop recommended **service standards**. These will cover HIV treatment (for which adherence and paediatric services are noted inclusions), treatment of STIs, and psychosexual services. Standards for HIV treatment of adults were due to be published in Autumn 2002, and are expected very soon.
- Under the aim of ensuring better **support for people with HIV**, the Department planned to commission reports into the support needs of both HIV-positive adults, and children with HIV and their families, in Summer 2002. These too are in development.
- Develop a **national sexual health training strategy** aimed at doctors, nurses, midwives, health visitors, health advisors, youth and social workers, and other relevant professionals. Following a mapping exercise to be completed by Summer 2002, the strategy is to be in place by the end of 2002.

- A **national information campaign** targeting young people on the risks of unprotected sex was due to appear in Autumn 2002. The Department is investing £2million in this campaign during 2002-03, with further funds coming via a private sector partnership. According to a recent newspaper report, this campaign begins very soon.
- A new **HIV testing campaign** was due to begin by the end of 2002. After concern was raised over the capacity of testing clinics to manage the increased demand, it is understood that this project has been put on hold until 2003.

Recruitment to a new Independent Advisory Group, charged with monitoring progress in meeting the aims of the *National Strategy*, and reporting back to government annually, closed in early November. However, the responsibility for ensuring that PCTs implement the strategy according to their set performance indicators, now rests with England's twenty-eight Strategic Health Authorities, another tier of newly-created agencies.

The HIV epidemic in the UK

At present, surveillance of HIV infection in the UK is the responsibility of the PHLS. According to the latest data from their Survey of Prevalent Diagnosed Infections (SOPHID), there was a 16% rise in diagnosed infections in the year 2000-2001, taking the total to 27,000.

Many people who have HIV infection currently remain undiagnosed. To the end of 1999, it's estimated that a third of the total prevalence of adult HIV infections (around 33,500 people) in the UK were undiagnosed. While undiagnosed infections are proportionately more prevalent amongst people who contracted HIV through sex between men and women (estimated as 45% for females, and 56% for males), the absolute number is greatest amongst gay and bisexual men. In this group, it is believed that around

25% of infections are undiagnosed, which equates to around 4,000 men.

Concern at the level of undiagnosed infections is one factor behind the moves in the *National Strategy* to encourage HIV testing amongst those at risk. Between 50-60% of HIV diagnoses made each year are in people with CD4 counts below 200, the immune threshold at which intervention with HIV treatment is strongly recommended – delaying past this point results in shorter survival and more ill health. Median CD4 counts at diagnosis in people exposed heterosexually are significantly lower than in those exposed via sex between men, or via injection drug use.

New HIV diagnoses amongst gay and bisexual men have remained fairly constant for some time, running at a rate of around 1,400-1,600 per year. Since 1990 there has been little appreciable change in either the median age, or the median CD4 count in this group at diagnosis, suggesting these are incident (new) infections rather than the product of an aging cohort.

Diagnosed HIV infections are increasing most rapidly amongst heterosexuals. The vast majority of these contracted HIV abroad, with 75% exposed in Africa. The increase observed in British black Caribbeans is much smaller, but is still a matter for concern – there is a well-established link between ethnicity and acquisition of STIs in the UK, and the experience of other industrialised nations demonstrates that non-white communities carry a disproportionate burden of HIV infections.

HIV diagnoses amongst injection drug users has remained stable at around 7% per year. In this group, there is evidence of an aging cohort effect – the median age at diagnosis has been rising since 1990, suggesting these largely reflect infections acquired during the 1980s.

HIV diagnosis during pregnancy has improved substantially. In 2001, diagnoses in the London area passed the 80% target set by the Department of Health. However, the estimated number of mother-to-child infections has not altered (it's about 21 per year), because there has been a coincident increase in the number of births amongst HIV-positive women. The majority of these women are black Africans.

Combating infectious disease

In January this year, the Government launched *Getting Ahead of the Curve*, a wide-ranging strategy for combating infectious diseases. One of the main proposals was the establishment of a new agency, the National Infection Control and Health Protection Agency. This body would replace a number of existing quangos, amongst them the PHLS, who are responsible for gathering and reporting the surveillance data reviewed above – in other words, for informing our understanding of the changing UK epidemic.

The Health Protection Agency comes into effect from April 2003, a timetable which the PHLS continues to argue is too fast. In a letter to the Deputy Chief Medical Officer in July this year, the PHLS Chairman Lord Turnberg asked that transfer of PHLS laboratories into the NHS should be delayed a further year to allow adequate time for the establishment of the new, NHS-based managed pathology networks which are to take over the public health microbiology function for which the PHLS is currently responsible. Despite the PHLS Board's view that this timetable is "impractical and unsafe", there are no plans to delay the launch of the Health Protection Agency next April.

Patient and public involvement

Acknowledging the concerns expressed during consultation on the *National Strategy*, the Department of Health plans to monitor funding levels within the HIV sector, including those routed to the HIV voluntary sector. All users of the NHS can be part of this process by making their views known if there is a drop in service provision. Details of both your PCT and your Strategic Health Authority can be found on the DOH website (<http://www.doh.gov.uk>).

It seems few would quarrel with the Government's desire to put patients 'at the heart of the NHS', and as citizens we are all responsible for holding the Government to account. Through *Shifting the Balance of Power*, the Government has directed PCTs to empower patients to have a voice in the planning and provision of local health services. Every PCT must now document their activities in a published Patient Prospectus. Have you read yours?

editor's note

Thanks to Jane Mezzone, Sexual Health Programme Manager at the Department of Health, and to Lisa Power, Corporate Head of Policy, Campaigns and Research at Terrence Higgins Trust.

policy documents from tht

THT have produced a number of briefing papers on issues relating to the development of HIV commissioning and service provision in the UK. More information is available from the THT by telephoning THT Direct on 0845 1221 200.



Sexual transmission of hepatitis C virus

People with HIV are at increased risk of acquiring hepatitis C virus (HCV) through sex according to a recent review in the medical journal *Hepatology*. Norah Terrault, of the University of California at San Francisco states that while the sexual transmissibility of HCV is low compared to other sexually transmitted viruses, sexual transmission is still likely to contribute significantly to national HCV epidemics given the common nature of sexual behaviour, and the high prevalence of people with HCV infection.

As we reported in September's *ATU*, a number of UK HIV clinics have observed an increase in HCV infections amongst people who appear to have been at risk only through sexual exposure. These cases appear to be concentrated amongst people with HIV infection. One of the centres featured in the *ATU* article, the Chelsea and Westminster Hospital, London, reported their findings at a recent HIV conference in Glasgow.

Browne and colleagues identified 21 people who tested positive for HCV infection during the period between 1997 and June 2002, having previously tested HCV-negative. Of these, 17 were known to be HIV-positive, two seroconverted for HIV at the time of HCV diagnosis, and the two others were HIV-negative. All 19 HIV-positive individuals were gay men. Of the 21, 17 did not report injecting drug use or blood transfusion (both common HCV transmission routes), whilst 13

reported having had unprotected sex recently. Six of the HIV-positive gay men had also been treated for syphilis in the year preceding their HCV diagnosis.

New US lipodystrophy guidelines published

The International AIDS Society-USA has published recommendations for assessing, monitoring and treating metabolic complications such as insulin resistance and abnormal body fat distribution that are occurring in association with HIV infection and antiretroviral therapy. The recommendations were published in the November 4th issue of the *Journal of Acquired Immune Deficiency Syndromes*.

The panel recommends baseline testing of glucose, cholesterol and triglycerides in all individuals starting anti-HIV therapy, and at regular intervals thereafter. Measurements should be taken fasted, and cholesterol monitoring should include total cholesterol, LDL cholesterol and HDL cholesterol. Abnormal cholesterol levels are associated with an increased risk of heart disease, whereas raised triglycerides increase risk of stroke. The panel recommend that people with abnormal values should be treated according to risk calculations established by a population cohort known as the Framingham dataset, and provided with dietary advice in line with the US National Cholesterol Education Programme guidelines.

People with fat gain, particularly in the central area, should be advised to begin a programme of aerobic and resistance exercise (weight training), both for its potential to reduce central fat and its moderating effect on raised triglycerides.

According to the panel, growth hormone, testosterone and rosiglitazone cannot be recommended for routine use at present.

NAM publish a patient's guide to lipodystrophy in our booklet series for people with HIV. Free copies are available to HIV-positive readers.

Missing HIV

As we note in this month's article on HIV in the UK, late diagnosis of HIV infection is a significant problem in the UK. Currently, around two thirds of people diagnosed with HIV have CD4 counts below 200 at the time of diagnosis, the point where intervention with HIV therapy is strongly recommended.

Reports from a number of UK HIV centres suggest that far from being the result of late presentation alone, many individuals' infections are missed by health care professionals, often despite repeated presentation with symptoms indicative of HIV disease. At a conference in Glasgow in November, doctors reported on missed diagnoses in the Glasgow area.

Patients who were diagnosed HIV-positive between 1998-2002, and had a CD4 count below 200 at presentation, were identified. Complete medical records from the diagnosing clinic (Gartnavel General Hospital) and other hospitals, were available for 32 people. Of these, two had refused an HIV test, and 18 were diagnosed with HIV during their first inpatient or outpatient visit. There were no documented risk factors for HIV in the remaining twelve patients, which seems to have left their health care providers suspecting other problems were to blame for their ill health. The median CD4 count within the group was nine, however, and eight patients had clinical symptoms suggestive of HIV infection, which had been reported a median of 17 months prior to their eventual HIV diagnosis. The most frequent clinical

symptoms were abnormal blood cell counts, skin disorders, oral thrush, weight loss, pneumonia, and persistent diarrhoea. Most of those with undiagnosed symptomatic infection had multiple clinical symptoms.

Risk factors for heart disease in HIV patients

Researchers from the Royal Free Hospital, London, have reported that multiple risk factors for heart disease are common amongst people with HIV attending their clinic. These are factors which must be addressed, they argue, if HIV therapy is to remain effective over the long-term.

Three hundred and ninety-four people were surveyed regarding a range of lifestyle factors and their general medical history. Eighty-five per cent were male, and 73% were currently on HAART. Some HIV drug combinations have been shown to increase levels of blood fats (cholesterol and triglycerides) which are established predictors of future cardiovascular problems. Whilst it is not clear that this alone will result in significant heart disease in future, there is concern that those individuals with multiple risk factors should be expected to face an increased risk.

Thirty-four per cent of the group were over 40; 20% had a body mass index over 26kg/m²; 29% had a family history of heart disease; 14% reported increased blood pressure; 3% had diagnosed diabetes; 7% consumed alcohol above the recommended weekly limit; 45% were smokers; and 24% were ex-smokers. Eighteen per cent had raised cholesterol levels, and 36% had raised triglycerides. Those on HAART were more likely to have a family history of heart disease, and raised cholesterol and triglycerides, than those not on HAART, though this is an observed association only – there is no clear evidence from this study that this increased risk was the result of taking HAART.

Whilst 72% of current smokers had previously tried to quit, 65% of ex-smokers reported stopping smoking after starting HAART, suggesting that this is an important group to target with smoking cessation interventions.

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editor

Anna Poppa

founded by Peter Scott

editorial assistant

Thomas Paterson

design

Alexander Boxill

printing

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