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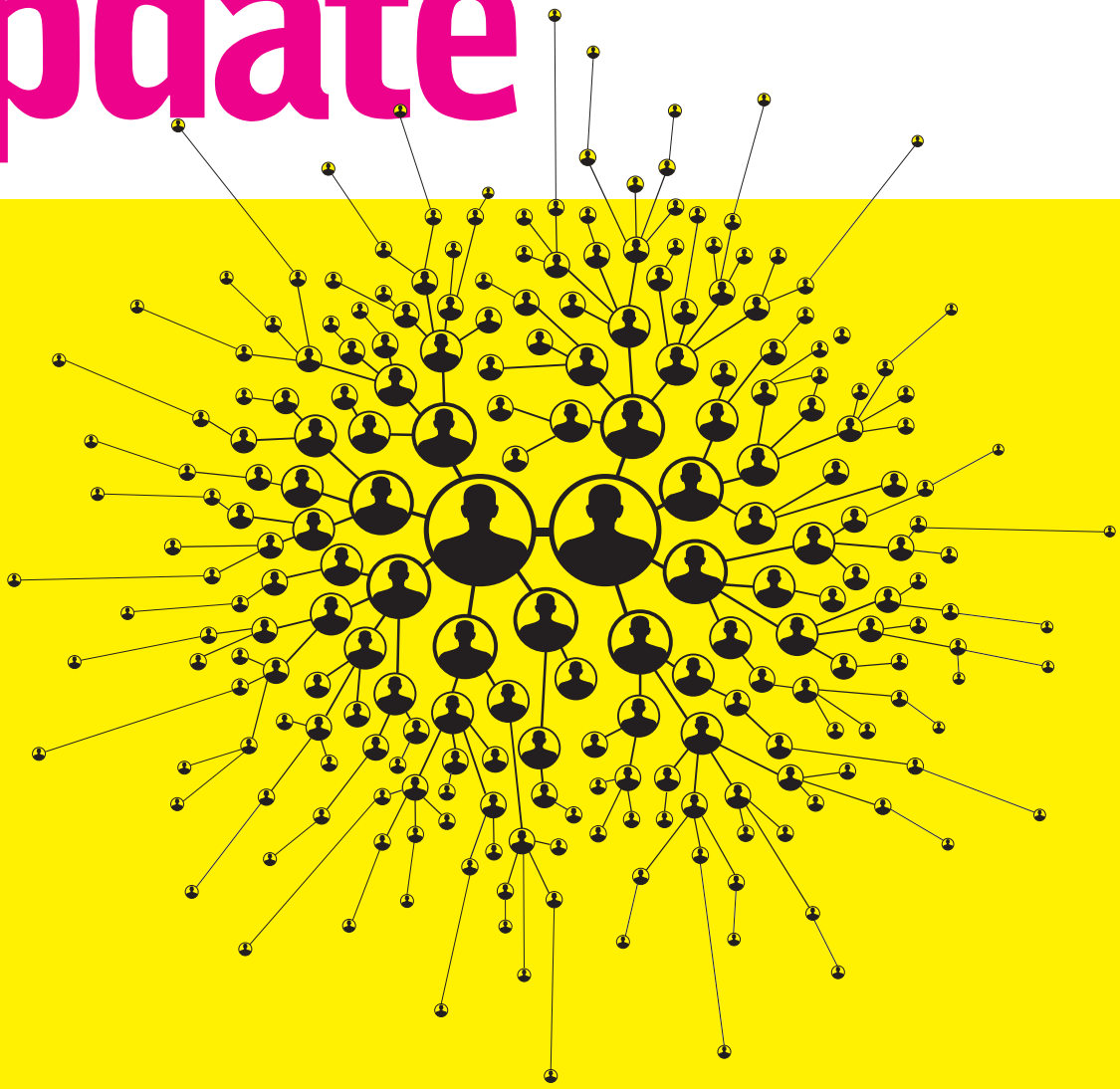
hiv treatment update



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in this issue

Gus Cairns

A hope and a warning. That's what we have in this issue. The warning is about hepatitis C (see *The New Epidemic* on page 4). It's now becoming unpleasantly clear that the transmission of this chronic and potentially lethal infection between gay men is not an occasional event that only happens between people into esoteric sex practices. On the contrary; there's every sign that we may be at the tipping point where an epidemic that's been slowly gaining pace starts to affect the gay community at large.

More dangerously still, for a variety of reasons that are still unclear, it might turn out to be almost exclusively restricted to gay men who already have HIV. The implications both for sexual health and for stigma among a group who already have enough problems (see *Upfront*, opposite) are worth thinking about very seriously. Studies are already finding that positive gay men who contract hepatitis C are feeling further stigmatised, even by fellow positive gay men.[1]

The biggest challenge the hepatitis C epidemic throws at us is how to refresh prevention messages. One hundred per cent condom use amongst gay men in the UK has declined slowly but steadily, according to the annual Gay Men's Sex Surveys, since 1997. It's now the exception rather than the rule; just over half of the men surveyed the last time the survey asked (in 2005)[2] hadn't always used a condom in the last year, and just under two-thirds of those with HIV. And yet this is the only HIV reduction strategy we have (apart from circumcision) the efficacy of which has been proven in scientific studies, again and again.

Many people would rather not use condoms if they didn't have to and this problem has led to a global search for HIV prevention methods that might add to the quality of sex, or at least not intrude on it. One method that could offer hope of an alternative sooner than you might think, if a couple of studies produce positive results, is pre-exposure prophylaxis (PrEP) – taking anti-HIV drugs to prevent HIV.

As Keith Alcorn points out on page 8, the real dilemmas associated with PrEP will only start if we get those results. Who will use it and, more crucially, who will decide who gets it? And, if the net result is that already-wobbly condom use declines further, will the net result on HIV transmission be neutral or even negative?

And just as crucially – given what we started with – will we just replace bad health due to HIV with bad health due to other STIs like hepatitis C? Using PrEP, our interviewee Paul found (see page 10), didn't prevent him catching something else.

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upfront

Sex, sleep and self-esteem: what we need most

by Gus Cairns

Anxiety and depression, bad sleep, bad sex, and low self-esteem: these are our biggest bugbears as people living with HIV.

More than two-thirds of the 1777 people with HIV who answered a recent survey on their needs have reported that they've had problems in these areas of their lives in the previous twelve months. In the areas of sleep and sex, the number of people reporting problems has increased significantly since an earlier survey six years ago.

The last time the HIV-positive population of the UK answered the question "*What do you need?*" (*WDYN*) was in 2001, when the previous survey of that name was conducted by Sigma Research. The results of the second *WDYN* survey conducted in 2007-8, have just been published.[1] Like the first, it asked HIV-positive people in the UK whether they had had problems in the previous year in 18 areas of their lives.

This survey also asked about five other areas not explored by the first survey. These were direct problems with HIV treatments, access to treatments, immigration, work, and work skills/training.

The make-up of the population answering *WDYN* changed between 2001 and 2008. The 2008 respondents were somewhat less likely to be male (79% versus 85% in 2001) and white (79% versus 89%). They were also older, with only 30% in their 30s compared with 43% in 2001.

The proportion of people who had had problems with sleep in the last year increased from 58% to 70% between the first survey and the second, and the proportion with sex problems from 50% to 68%. Other areas that saw steep increases between surveys were drugs and alcohol, where the proportion citing problems related to these nearly doubled from 14% in 2001 to 27% in 2008, and problems with friends, where an increase from 25% in 2001 to 41% in 2008 may indicate an increasing proportion of people experiencing social isolation. Although only a minority of respondents had had problems with immigration, the proportion that did increased from 4% to over 7%.

In some other areas results cannot be compared between surveys as different questions were asked. For instance, the 2008 survey asked whether people had problems with both self-confidence and self-esteem – and 71% did – while the previous survey asked about self-confidence alone – and 41% did. The new survey split questions about discrimination into 'discrimination from family' (experienced by 11%) and 'discrimination from healthcare workers' (a worrying 20%).

The finding that in the new area of employment and employability people had significant levels of need is an important one: this wasn't included in the 2001 survey. Fifty-four per cent of respondents had needs in the area of work skills and training, perhaps indicating a wish to get back into employment, while over a quarter mentioned problems with work itself.

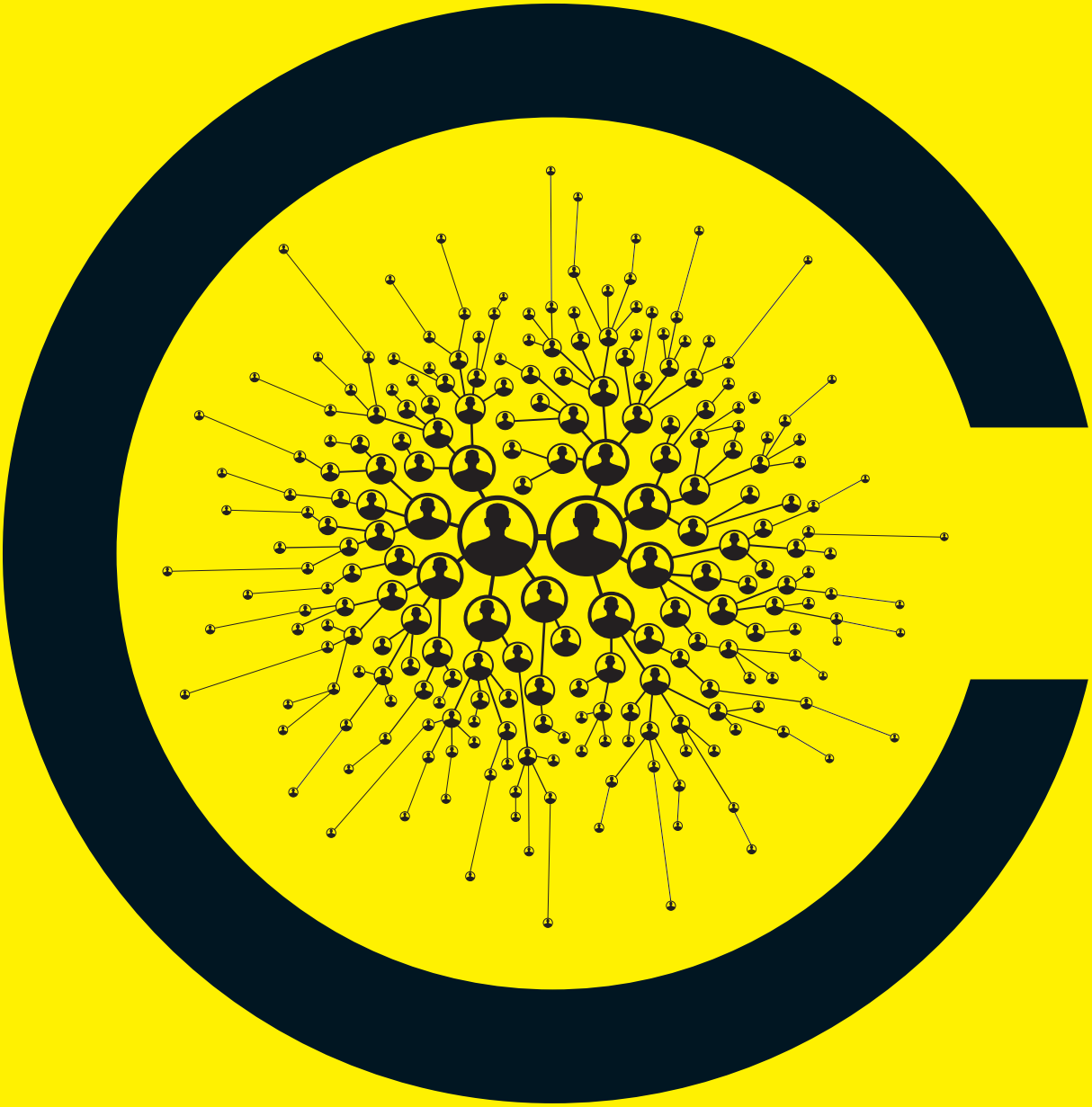
The survey also allows us a glimpse of the needs that you, *HTU*'s readers, have. The questionnaire was sent to all *HTU* readers and more people – 30% of respondents – accessed the questionnaire via this mailout than in any other way, with NAM's website aidsmap.com contributing another 10% of respondents. The questionnaire was also distributed by numerous other HIV organisations including Terrence Higgins Trust, Positively Women, the George House Trust, the Cara Trust and GMFA.

The figures show that the respondents who accessed the survey via *HTU* were older and more likely to be male, white and UK-born than other respondents. They were also somewhat more likely to be gay, had the highest education levels of respondent groups, and were less likely to be newly diagnosed (only 3% of *HTU* readers had been diagnosed in the last year compared with 18% of THT respondents).

HTU readers had the highest levels of need when it came to disturbed sleep and to sexual problems and also to problems directly to do with HIV treatment. These may reflect greater age and time living with HIV than other respondents. They also had the lowest level of need when it came to training and skills, perhaps reflecting higher levels of education and employment.

What do we conclude from these figures? The most striking finding is undoubtedly that there was no area in which *fewer* people had problems than in 2001. In areas like money, diet, and the biggest one, anxiety and depression, needs were more or less unchanged; in the areas mentioned above, they were increased.

What do you need? can be criticised for some shortcomings. In particular, it doesn't ask about severity of need, so, for instance, it lumps together people who had a few blue Mondays during 2008 with people who experienced a year of crushing depression. But the last survey proved very influential in prioritising services for people with HIV during the last seven years, and we trust the new one will do the same.



the new epidemic

HIV and hepatitis C infection in gay men

"I'm surprised there isn't a greater sense of urgency about this in the community." Those were the words of Dr Kevin Fenton of the US Centers for Disease Control at the International AIDS Conference in Mexico last year.

He was talking about a Dutch study[1] that showed that more than one in five HIV-positive gay men attending a sexually transmitted infection (STI) clinic in Amsterdam had hepatitis C, compared with only one in 250 negative men. All of them had contracted it since 2000, with numbers rising by 50% in the last year.

Hepatitis C infections among gay men with HIV represent a growing epidemic of an STI that, like HIV, is both chronic and potentially fatal.

Of the 40 million people infected worldwide with HIV, about ten million also have hepatitis C.[3,4] In countries where HIV is mainly spread through needles, 70 to 90% of HIV-positive people are co-infected with hepatitis C, compared to fewer than 5% where HIV is mainly spread heterosexually. In countries where gay sex is the main transmission route, about 10% are co-infected. That figure may be about to rise substantially.

Several studies presented at the Conference on Retroviruses and Opportunistic Infections (CROI) this February confirmed these figures and were summarised in last month's *HTU* (see **Double Trouble** in issue 184). A second Dutch study[4] confirmed that infection rates were accelerating among HIV-positive gay men at one clinic, with an annual infection rate of one per 75 HIV-positive patients.

Meanwhile a study from New York[5] suggested that the UK may be one of the focal points for hepatitis C, with an especially high-risk gay subculture. The average time lag between HIV and hepatitis C infection was less than four years in UK patients compared with seven years in the New Yorkers and ten years in those observed in a French study.[6] UK patients were a lot riskier in terms of behaviours that could transmit hepatitis C. They were more than twice as likely to be into fisting and unprotected sex and to do these in group situations, and to use a variety of recreational drugs.

The one risk factor that's universal in studies is unprotected anal sex, but I think the amplifier for hepatitis c is serosorting.
Emma Thomson, Imperial College School of Medicine

Hepatitis C: how do you catch it?

One of the biggest problems with hepatitis C is knowing exactly how it's transmitted and, therefore, what prevention message to give. It has been seen as an exclusively blood-borne virus, so it was assumed that only sex that was traumatic – that damaged the mucous membranes and exposed people to blood – could allow hepatitis C to be passed on. For this reason practices like fisting and heavy S&M have been chief suspects as the means of transmission, and gay men who aren't into them may have felt they were safe. But are they?

The French and New York studies did not find that hepatitis C transmission was significantly associated with fisting. It was associated with lots of partners, unprotected anal sex in general, sex toys and – in the words of the New York study – "sex while high". In contrast, in the original UK study to which the New York study was compared,[7] men who reported fisting were three to four times more likely to acquire hepatitis C. So while fisting may be amongst the highest-risk sexual practices for hepatitis C, unprotected sex in general, especially with multiple partners, carries a significant risk too.

But why are people with HIV so very much more vulnerable? *HTU* spoke to infectious disease specialist Janice Main and clinical research fellow Emma Thomson of Imperial College School of Medicine.

"If you have HIV and another viral infection, you tend to have much higher viral loads of the other infection," says Janice. "People with HIV not only have more hepatitis C virus in their blood, they also have more in their sperm. One study found it in the semen in over a third of HIV-positive men compared with less than a fifth of negative men."[8] Having HIV also reduces the ability of the immune system to repel hepatitis C infection and to control its subsequent course.[9]

Having HIV is, however, not enough to explain why positive men in the Dutch study were up to 50 times more vulnerable to hepatitis C. Groups of gay men who are having high-risk sex with each other are more likely to meet partners who already have hepatitis C, and to catch STIs that facilitate viral transmission. "The one risk factor that's universal in studies is unprotected anal sex," says Thomson, "but I think the amplifier for hepatitis C is serosorting – HIV-positive men picking each other out for unprotected sex – which concentrates groups of high-risk people."

One study of gay men in Brighton found that positive gay men were 13 times more likely to contract hepatitis C than negative men, but did find five cases among negative men too. Four of these subsequently caught HIV.[10] This suggests that there's nothing in being HIV-negative that specifically protects you against hepatitis C; the higher your behavioural vulnerability to one virus, the higher it is to the other.

Garry Brough knows how he got hepatitis C. The HIV-positive, London-based health trainer tested positive in September 2008. "I had a chest infection and throat problems that went on longer than they should, and I went in for full blood tests," he says. "My liver enzymes were quite high, but I'd had a negative hepatitis C check in July. They thought it might be glandular fever."

But the result came through positive for hepatitis C. "I realised it must have been in Brazil. I was on holiday there in July

and went to Gay Pride in Sao Paulo. There was a party that night. Despite my knowledge of the issues, and being there with a friend who I knew had hepatitis C already, let's just say I'd just been marching with three million gay people and I was high. There was group sex with other HIV-positive guys and condoms not being used. It was a fantastic night, but a little expensive with hindsight. I felt like an idiot for having contracted [hepatitis C]."

He hadn't been fisting, and had not had sex with his hepatitis-positive friend. "But if it's group sex with six, seven, eight people, well, it becomes...more traumatic for the rectal mucosa." You get sore, in other words.

How does it affect you?

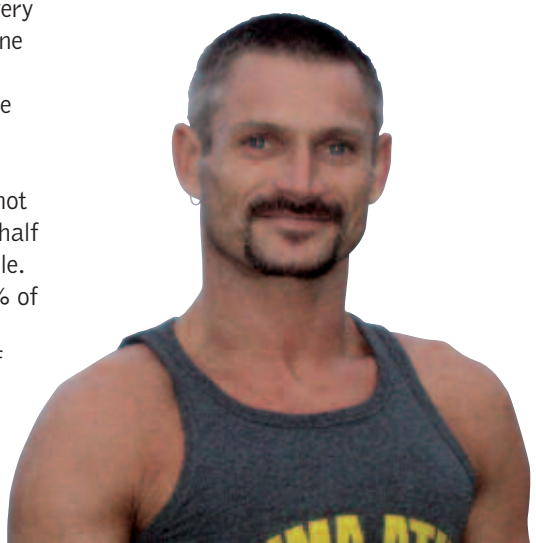
In HIV-negative people, about 15 to 30% of people will spontaneously clear hepatitis C without treatment. In HIV-positive people, that figure is only 5 to 10%.[11] The stronger the immune response the body can mount against the virus – and therefore the more severe the initial symptoms may be – the more likely you are to clear it.

If you don't, hepatitis C causes liver damage faster in people with HIV. As AIDS is to HIV, the severe liver damage called cirrhosis is to hepatitis C. A cirrhotic liver is one where the healthy liver cells have been replaced by so much scar tissue that this resilient organ can't do its job anymore. This results in numerous life-threatening conditions: liver cancer, internal bleeding, a form of dementia caused by liver waste products poisoning the brain, and so on.

This sounds alarming, but for many people chronic hepatitis C is a slowly progressing infection. Firstly, 70% of HIV-negative people will develop liver damage only very slowly if at all. Of the remainder, only one in five will develop cirrhosis within 20 years of infection – just 6% of everyone who gets infected.

For HIV-positive patients, the news is not so good. Cirrhosis develops one-and-a-half to four times faster in co-infected people. In one Spanish study, for instance, 25% of those with HIV had cirrhosis 15 years after infection compared with 6.5% of those who were HIV-negative.[12]

I did decide to disclose my hepatitis c status to partners and discuss it, but a lot of people advised me not to. Many gay men are still very ignorant about hepatitis c and misinformed about risk...my advice is to treat it in the same way as disclosing HIV: if you do it with confidence you're less likely to get negative reactions.
Garry Brough



A 40-year-old HIV-positive gay man used to the ten-year 'AIDS time bomb' of untreated HIV infection may feel that a 50/50 chance of cirrhosis at the age of 70 is not too bad. But hepatitis C infection adversely affects the health a long time before your liver gives up.

"In my co-infected patients it's not their livers I worry about so much as their brains," says Janice Main. Hepatitis C virus comes from the same family as dengue fever and Japanese encephalitis. These viruses are notorious for causing memory and concentration problems, aches and pains, chronic fatigue and depression. "I see a lot of patients with ME [myalgic encephalomyopathy or 'chronic fatigue syndrome']", says Main, "and my hepatitis C patients, both HIV-negative and positive, look like ME patients."

In one study, for instance,[13] HIV-negative patients with hepatitis C experienced muscular and joint pain 90% of the time compared with half of the time for patients with hepatitis B, and fatigue two-thirds of the time compared with 30% of the time. "Add in the concentration, memory and movement problems already known to be associated with HIV and you have a couple of viruses significantly corroding your quality of life."

How do you treat it?

Fibrosis (damage to the liver short of cirrhosis) can be improved by HIV treatment alone. In one German study, co-infected people on HIV drugs survived for over seven-and-a-half years while those not on therapy survived for just over four.[14]

The state-of-the-art treatment for hepatitis C is a weekly injection of pegylated interferon and a twice-daily oral dose of ribavirin, a drug that amplifies the effect of interferon. According to whether people have HIV and what kind of hepatitis C they have, you have to take this for six to eleven, or even 16, months.

Garry initially decided not to take treatment. "I'm fit, don't smoke or drink and put myself on a detox diet. I thought, 'If there's a chance anyone can clear this by themselves, I'm the man'." He didn't, though.

"My impression was that I could afford to wait for treatment because there are new

drugs in the pipeline coming along quite imminently. I had also just started a new job and had heard nothing but horror stories about the side-effects of treatment.''

''However I talked to the hepatologist [liver specialist], and he explained several things. Firstly, new treatments for hepatitis C are not imminent; secondly, even when they do turn up they will initially replace the ribavirin, but not the interferon; and thirdly, the earlier you get treated, the greater the chance of clearing the virus.'' He decided to start treatment and at the time we talked was still taking it.

Hepatologists are cautious about talking about a 'cure' for hepatitis C, so they use the term 'sustained viral response' (SVR). This means that there is no detectable hepatitis C in your body six months after the end of treatment. In HIV-negative people who take treatment soon after infection (and excluding those who clear the virus spontaneously), 95% of people can expect to achieve an SVR, regardless of viral genotype. HIV-positive people have lower success rates. Janice Main achieves an SVR rate of about 70% with her acutely infected patients. Exactly how early treatment needs to be started for this kind of success rate is currently being investigated in a study by the St Mary's team.

Once you get into treating chronic infection, success rates go down, and genotype makes a difference. The largest study of treatment in co-infected people, the APRICOT study,[15] achieved an SVR for more than 60% of patients with genotypes 2 and 3 but less than 30% of patients with genotype 1 – and let's not forget that these are the majority.

Emma Thomson confirms that it's largely fear of side-effects that stops people taking the treatment. The chief side-effects are muscular aches and pains, 'fluey' symptoms and depression, due to the interferon, and anaemia and low white blood cell count, caused by the ribavirin. Interferon will also cut your CD4 cell count by an average of 140, so if yours is low, it might not be the time to start. There's no doubt the side-effects can be severe and difficult to tolerate: in the APRICOT trial, a quarter of patients stopped taking their treatment. But Garry feels some of this fear is misplaced.

''I think the side-effect horror stories are really unhelpful. There's an incredibly wide range of experiences, from people who have shocking side-effects to ones who have none at all.''

''The biggest thing I noticed was more intense feelings and some problems getting to sleep. I've always been the type who cries at movies, but it made me much more emotional. I also felt as if I was coming down with the flu after one of my injections, though only for an afternoon. But on the whole, and speaking only for myself, it's been very tolerable. As for injecting, I was very nervous about the idea especially as I don't have much body fat to inject in. But apart from a little bruising I've had no mishaps and the needle is so fine you hardly feel it going in.

''At the same time, I'd rather do without any side-effects. I'm due to take 48 weeks of treatment but my hepatitis C viral load came down from 1.3 million to undetectable within eight weeks and I've asked my doctor if I can get away with 24 weeks.'' The generally accepted guideline in hepatitis treatment is that if you are not undetectable for hepatitis C within twelve weeks, you are highly unlikely to achieve an SVR but there is little consensus about how long treatment needs to be in people with HIV.

There is a huge research programme underway looking at new treatments for hepatitis C and more than 50 candidate drugs are in human trials. We don't have enough room in this issue to look at future hepatitis C options and will examine them in a forthcoming issue.

Facing up to a new epidemic

The other point about hepatitis C treatment is that, even if a cure is achieved, it does not stop you catching it again. Hepatitis C does not produce a broad, long-lasting immune response and people can be reinfected, infected simultaneously with more than one strain, or superinfected with one strain on top of another – and need more than one course of treatment.

Knowing what public health message to give about hepatitis C to an HIV-educated and probably quite message-resistant group of high-risk gay men is problematic. What campaigns there have been have concentrated on advice such as using gloves for fisting, or avoiding other hepatitis-specific risks such as sharing straws used to snort drugs, which are assumed to spread hepatitis C through nasal bleeding. However, it is becoming increasingly clear that 'regular' unprotected sex, especially sex occurring in group situations, is also a risk factor.

Another risk cited by Garry is the stigma of hepatitis C. ''I did decide to disclose my status to partners and discuss it, but a lot of people advised me not to. Many gay men are still very ignorant about hepatitis C and misinformed about risk. I've had some nervous reactions from partners but my advice is to treat it the same way as disclosing HIV: if you do it with confidence you're less likely to get negative reactions.''

A recent study presented at the CHAPS gay men's HIV health promotion conference[16] suggests that being diagnosed with hepatitis C can be a wake-up call and has caused a lot of gay men to reassess their lifestyle and sex lives. Garry has decided to stop the whole group sex/party 'thing'. ''It was something the partner I was seeing when I went to Brazil wanted but I'd already decided it was a behaviour I wanted to change and had done so until we got together. Ironically we split up the day before I got my hepatitis C diagnosis. Talk about bolting the stable door after the horse has gone!''

Support

The Hepatitis C Trust runs two support groups for gay men with hepatitis C in London, one specifically for men co-infected with HIV.

The gay men's support group is a drop-in (open) group that meets on the third Wednesday of every month (next meeting Wed 20th May). For details phone the Hepatitis C Trust helpline on 0845 223 4424 (10.30 to 4.30) or email helpline@hepctrust.org.uk.
The group for co-infected men is not a drop-in group: in the first instance call the Hepatitis C Trust helpline, and ask to speak to Sam or Denis. It meets every two weeks on Tuesdays (next dates 12th and 26th May). For support groups outside London, also contact the Trust's helpline.

a jagged little pill

are we prepared for PrEP?

Pre-exposure prophylaxis (PrEP) is the idea of taking HIV drugs in order to avoid being infected with HIV in the first place. We might know if it works within the next year. We need to start thinking now about how it will be made available, says **Keith Alcorn.**

By the end of next year we may have the results from the first large studies of pre-exposure prophylaxis. The first study is due to report by the end of this year, and at least one more is likely to report by the end of 2010. They are looking at how well a daily dose of the HIV drug tenofovir will prevent HIV infection in gay men in the United States and in injecting drug users in Thailand.

It's possible neither study will produce a clear-cut result. We will then need to wait for results from the larger, longer studies using tenofovir plus FTC (*Truvada*), whose results are due in 2010-12, before we know if it works and who for. These studies, supported by the US Centers for Disease Control and the Bill and Melinda Gates Foundation, are looking at gay men, women and HIV-discordant heterosexual couples, so cover every significant route of infection in adults.

What if the tenofovir-only studies show this drug alone has some protective effect? If that happens, we may have to consider how PrEP should be implemented much sooner than expected.

This may raise some thorny issues. Although the results from one trial will probably not change international public health policy, gay men in particular might begin to adopt PrEP informally if they hear of positive results from the first trials.

At the moment there's little evidence that tenofovir or *Truvada* are being used systematically as PrEP by gay men in the UK, although we interview one man who does in this issue. But gay newspapers in the US have reported the informal use of tenofovir in several large cities, and one HIV physician (Marcus Conant of San Francisco), has gone on record to say he has prescribed it to some gay male patients.[1]

Awareness of PrEP is still low in the UK, but in fact PrEP is already being used here, to assist in risk reduction when HIV-discordant partners are trying to conceive. Dr Stephen Taylor of Birmingham's Heartlands Hospital told *HTU* that his hospital has been providing drugs for pre-exposure prophylaxis to partners of patients, and Swiss researchers in 2007 successfully used two doses of PrEP to protect HIV-negative women trying to conceive with HIV-positive men. But these women's partners had undetectable viral loads and they only had unprotected sex on the days when the woman was most likely to conceive. The risks some people run are far greater.

Dr Mike Youle of the Royal Free Hospital in London says that taking the drugs when sex is anticipated, rather than every day, is the way that most people are likely to use PrEP. He is currently exploring ways of raising money outside the usual funding mechanisms for a European trial of intermittent PrEP, which he says will be critical to proving the concept.

This idea was explored by a study presented at the Conference on Retroviruses and Opportunistic Infections (CROI) in February,[2] which showed that in monkeys recently exposed to HIV, a dose of *Truvada* given one to three days before exposure led to a 15-fold reduction in infection rates, whereas dosing just two hours beforehand provided only fourfold protection. However the animals also received another dose of the drugs two hours after exposure, so it wasn't a pure PrEP trial.

The big unknowns are whether people who become infected despite PrEP will develop resistance as a result, and whether there might be long-term side-effects. People with HIV will generally tolerate some side-effects in exchange for effective treatment of an otherwise life-threatening condition. HIV-negative people may be much less willing to tolerate even minor side-effects to guard against infections that might not have happened anyway. Drug licensing authorities will also be less forgiving.

The question of expectations goes to the heart of a major uncertainty about PrEP: will people consider themselves at enough risk to use it? Research has consistently shown that a substantial proportion of gay men have unprotected anal intercourse with partners whose status they assume on the basis of guesswork, as a German study presented at CROI showed.[3]

The 2006 Gay Men's Sex Survey[4] found 53% of the 12,155 gay men responding had unprotected anal intercourse at least once in the previous year, compared with

The morning-before pill
HTU talks to one man who takes PrEP

Paul, 44, works as a scientific liaison officer and is a gay man who keeps himself well informed about HIV. He has been using PrEP as protection against HIV during sex for the last six years and so far has remained negative. He talked to *HTU* about why he started, how he does it, and how he thinks it could be used.

***HTU*: So how did you start using it?**
I met my partner James in 2003. I came out during the 'Don't die of ignorance' campaigns in the late 1980s and was very scared of HIV, but then I fell in love with someone who happened to have it.

From the start the sex we had was very different from what I'd experienced with anyone else. It was more intense and intimate and also rougher – we're both into S&M and fisting. He was very open about being positive and having an undetectable viral load and also about not liking condoms. Before that I'd had 20 years of safer sex but I felt 'I'd really like to know what it's like to be that intimate'.

So I thought: What about PrEP? My job had involved reading up on the animal studies. I knew we were likely to have sex every weekend so post-exposure prophylaxis, PEP, wasn't the answer.

How do you use it – and how do you get it?
I use my partner's pills. We don't have sex so often that his clinic is likely to notice; in fact these days after six years it's down to about, say, once every two months.

I used tenofovir then switched to *Truvada* when he did. I take one dose about two hours before sex then another 24 hours after sex and a third 24 hours after that. We always plan sex because we're into quite rough stuff so I always know when we're going to have it. I don't think I've had any side-effects; I got a slight headache after one *Truvada* dose but it might just as well have been caused by poppers!

Did you have any reservations about taking it?
Oh yes, loads. I felt guilty about barebacking anyway: why should a reasonably intelligent person like me put themselves at risk of a life-threatening infection? I went to counselling, hoping it would make me see clearly what I was doing. But instead it just reinforced my decision about the level of risk I was happy with. Having had intimate bareback sex with my partner, it just felt like this dispiriting retrograde step to start using condoms again.

In the end I think the PrEP, as well as hopefully adding more protection, helped me live better with the guilt of not using condoms. It helped me feel I was doing as much as possible to reduce my risk.

Do you test regularly? And would you use PrEP if your partner had a detectable viral load?
Yes, I test every six months and so far I'm still negative. HIV isn't that easy to catch and it could just be luck, of course. I'm quite prepared for that positive HIV test and I don't think either of us will have a drama. But I'm not going to relax PrEP because it's much better not to have HIV than to have it. James is pleased I'm taking it.

My partner's 100% adherent and has always been undetectable, but we both do play outside the relationship sometimes and on a couple of occasions I have used it with HIV-positive guys who were not on treatment. I've asked them not to cum in me, though I've heard that doesn't make a lot of difference. With HIV-positive guys we always negotiate and they play to my level of safety or me to theirs, whichever is safer.

Even if we use condoms I will take PrEP. With the kind of sex I like, there's plenty of other transmission risks even if you do use condoms. I'm amazed at how guys will use condoms but quite happily share pots of lube, for instance.

These days I'm almost a 'reverse serosorter': I'd rather have sex with an HIV-positive guy who knows he's undetectable than a guy whose last test was negative but could be coming down with HIV and have a really high viral load.

Do you still have doubts about it?
Well, the obvious thing is that it doesn't protect you against other STIs [sexually transmitted infections]. In fact I have caught an STI and had to get treatment for it. Since then we've really tightened up on other precautions like not sharing lubes.

It's not me really, however, who's had doubts about it. My GUM clinic was concerned I was using it as a method of preventing HIV infection, and still [is]. Rightly so in a way, as the evidence is still in its infancy. But I haven't exactly felt 100% supported in my decision and they keep on wanting me to talk it over with the health adviser.

If the current trials prove it works, who do you think should get it, and how?
I think initially people in serodiscordant relationships should get it – even if they use condoms. They should be willing to have counselling and contemplate behaviour change; clinics might worry about being pressured to provide it if it works and won't want to be seen to condone unsafe sex. Maybe the clinic could see it as a 'stopgap' pending other behaviour change. However I think it's important not to use behaviour change as a condition. Secondly, I think it would be useful for clinics to identify people at high risk who are having problems with condom use: maybe the doctor and the health adviser could review patients together. Then it might be suggested as part of the solution.

Any last words?
PrEP has helped me tackle my fear of HIV and my guilt at barebacking. I'm in a wonderful relationship and am very happy with the sex I'm having. I didn't want fear of HIV to affect that and PrEP fell naturally into place as a strategy. I only hope that the studies show it to be effective and that I haven't just been lucky so far.

49% in the 2005 survey. It's clear that current HIV prevention activities are failing to persuade large numbers of gay men to use condoms in order to avoid HIV infection, and have been failing to do so for many years.

If PrEP was available, it might protect all those men who have trouble using condoms consistently, who have high numbers of sexual partners or who have HIV-positive partners. But it could also introduce another layer of complexity to decision-making about condom use, and another opportunity to make vague assumptions about whether someone is positive or not, or at risk or not.

On the other hand it might conceivably reduce stigma, shifting the onus of status disclosure away from the positive person and towards equal negotiation.

PrEP might also have the potential to increase uptake of HIV testing, and the frequency of testing. If gay men knew they had an extra layer of protection against HIV that was only obtainable from a clinic they might test more frequently, might make fewer assumptions about their own and their partners' HIV status, and might talk more about their status with partners.

How would it be delivered?

Initially PrEP would probably have to be prescribed through sexual health clinics, accompanied by regular HIV testing. But some advocates want the drugs with the best safety records eventually to be available over the counter. This approach would shift the cost of providing PrEP to the user, making it more affordable to the NHS in the long term.

The short-term cost of PrEP could be enormous at current drug prices, but its cost needs to be considered in the context of the long-term cost of 7000-plus new people with HIV per year in the UK, each of them requiring antiretroviral therapy for 20 to 40 years or so at an annual cost of £10,000 a year for drugs and care.

The greatest impact on new infections would probably come from targeting PrEP to men with histories of serial risk-taking and repeat testing, to HIV-negative gay men with a high number of sexual partners, and to HIV-negative men and women in HIV-discordant relationships, especially women seeking to conceive. Most doctors working in sexual health clinics already know of some people who would fit this category and would benefit greatly from an alternative or additional intervention to condoms.

PrEP has helped me tackle my fear of HIV and my guilt at barebacking. I'm in a wonderful relationship and am very happy with the sex I'm having. I didn't want fear of HIV to affect that and PrEP fell naturally into place as a strategy. I only hope that the studies show it to be effective and that I haven't just been lucky so far.
Paul

The Department of Health has already instructed NHS trusts to offer *post*-exposure prophylaxis (PEP), which – in theory – should now be available from clinics and A&E departments to people after a high-risk sexual exposure But in practice, obtaining PEP is a lottery depending on where you live, who you speak to and whether you or your partner know enough about your entitlement to demand it. Given the evidence that some healthcare workers are still reluctant to offer PEP to people who have taken risks, what are the chances of their offering PrEP to people who are *thinking* of taking a risk?

Given the current rate of new infections, and the potential long-term unsustainability of treating ever-growing numbers of people with HIV infection, there needs to be serious consideration of how PrEP might be made available in the UK. Condoms were never designed to be used as a lifelong protection measure and their limitations as a prevention method are evident from the steady rate of new infections. Maybe people are entitled to something more. ■

news in brief

Funding research

HIV cure drive urged

Scientists and community advocates have both issued calls for more funding to be directed at the long-term goal of finding a cure for HIV infection. A group of researchers, led by Professor Douglas Richman at the University of California in San Francisco, has urged President Obama to direct part of a $10 billion increase in the US National Institutes of Health budget towards searching for ways to eradicate HIV from the body. "Without a vaccine," said Richman, "we are left with the substantial financial burden of lifelong treatment for tens of millions of people."

In New York, the Treatment Action Group has thrown down a similar gauntlet to funders and researchers.[1] TAG's Mark Harrington said: "We are not going to find a cure for AIDS till we get serious and put it on the map," and TAG's newsletter editor Bob Huff noted that the US National Institutes of Health's Office of AIDS Research does not mention "cure" as one of its list of critical AIDS research priorities for 2010.

Professor Jonathan Weber of London's Imperial College has said that, after 27 years in HIV research, he no longer believes a vaccine against HIV to be achievable and, at the recent Conference on Retroviruses and Opportunistic Infections (CROI) in Montreal, Professor Robert Siciliano stated that, "We have reached the theoretical limit of antiretroviral therapy."[2] In adherent patients, he said, there remains a stubborn low-level population of virus in the tissues and blood that showed no signs of decaying with time. A study by Hiroyu Hatano from the University of California at San Francisco, using ultrasensitive viral load tests, showed that after one year on therapy 80% of people still had a viral load greater than three copies, and that this remained exactly the same four years later despite full adherence. Other studies presented at CROI had had no luck in reducing this amount of residual virus using intensified drug-treatment strategies.

Siciliano commented that the residual virus might be lurking in a reservoir of cells yet to be detected. Douglas Richman told aidsmap.com that in people on successful HIV therapy only one-in-a-million CD4 or other immune cells might contain HIV and targeting and eliminating these cells, and only those cells, needed to be a major research priority.

Transmission

HIV transmission risk varies hugely according to disease status and STIs

It has proven extremely difficult to estimate the exact risk of HIV transmission because how infectious, or easily infected, people are varies enormously. Now two studies in heterosexuals and one in gay men have produced estimates of how likely people are to transmit or acquire HIV in specific situations.

Two studies of heterosexuals,[1,2] published in *The Lancet Infectious Diseases* found that, in a 'typical' heterosexual couple, the risk of HIV transmission to partners in developed countries was one per 1250 sex acts from male to female and one per 2500 from female to male. Given that the average number of sex acts a year in Americans under 30 is 112, this would mean it would take a young man at least 11 years to infect a female partner on average, and at least 22 years for a woman to infect a man. It has always been a puzzle why HIV seems to spread far faster than this in some situations.

The *Lancet* studies found a much higher transmission frequency in studies from the developing world. In these studies the chance of transmission was one per 526 sex acts when the man was HIV-positive and one in 114 when the woman was. The fact that, contrary to expectations and epidemiological evidence, men appeared more vulnerable may be due to the men concealing casual and commercial sex contacts; sex with a commercial sex worker raised the risk of HIV transmission elevenfold.

Other factors that raised the risk of transmission were if one or both of the partners had genital ulcer disease – this raised the risk of transmission to one in 36 acts – or whether the partner had a high viral load due to early infection (one in 151 acts) or late-stage AIDS (one in 181 acts). Finally, anal sex in heterosexuals raised the risk to one per 59 acts; a recent US study[3] found that one in five US heterosexuals under 26 had had anal sex with their last partner.

Meanwhile a study among gay men in Brighton[4] has found that having a sexually transmitted infection raised the risk of transmission nearly threefold, as did a high viral load (over 100,000) relative to a low one. The study found that HIV therapy reduced the risk of transmission by 96%, though it did find at least one (and possibly two) cases out of 41 transmissions where the source partner appeared to have an undetectable viral load in their blood.

The economy

Global recession threatens treatment programmes

Botswana, a country that is the envy of Africa for its provision of HIV treatment to 94% of those citizens who need it, may have to abandon its treatment programme by 2016 if the global economic situation has not improved by then.

Nearly one-in-four people in the diamond-rich southern African country has HIV, but despite this huge prevalence Botswana has managed to provide antiretroviral therapy for 94% of those living with HIV

who need treatment – that's 113,000 people or one in 16 of all its citizens.

However, the Botswana government, which funds 80% of HIV treatment, has said that the global economic recession will force huge cuts in the programme. Botswana's main export is diamonds and it is forecast that revenue from them will fall by 50% in 2009/10. The country's president, Ian Khama, said on World AIDS Day in 2008 that Botswana could not shoulder the cost of a treatment programme that will double in size by 2016, and Robson Dimbungu of the National AIDS Coordinating Agency has stated: "The budget we have now is not going to sustain us beyond 2016."

Adding that, "For those who are going to be infected after 2016, I think it is going to be very tough for them," he said that the only long-term answer to the country's HIV problem was better prevention: "The bottom line is that we really need to change our behaviour."

Meanwhile a study from Ethiopia[1] underlines how many lives HIV treatment programmes have saved in Africa. A careful study of causes of death in Ethiopia's capital, Addis Ababa, which included interviews with families and cemetery clerks, found that deaths halved from 8467 in 2001 to 4230 in 2007. The excess of deaths, due to AIDS, over what would normally be expected, declined from 92% to 28% in women and 80% to 13% in men during that time.

But the researchers emphasised that the HIV treatment programme in Ethiopia was in its infancy, with only 2% on second-line regimens, and that their findings raised questions about how the decline in mortality could be sustained.

Stigma

How stigma stymies safety in Britain and Tanzania

Two studies of HIV-related stigma, one among gay men in London and Manchester and another among women in Tanzania, show how stigma towards people with HIV can work against the effectiveness of HIV prevention and treatment programmes.

A Sigma Research study[1] of 42 HIV-positive gay men's experiences of stigma has found that it counteracts their attempts to maintain safer sex. Though almost all said that they would never want to transmit HIV, their own fears of being stigmatised meant that in practice they often took risks.

Firstly, fear of rejection, violence and recourse to the law by partners led to gay men seeking sex in situations where disclosure was felt to be unnecessary. This included anonymous situations, like saunas, where the men rationalised that others there must be HIV-positive too. Secondly, men's expectations of themselves that they 'should' maintain condom use led them to reject the deliberate adoption of risk-reduction strategies like serosorting, withdrawal and so on. Lastly, grappling honestly with the dilemmas of sexual safety was made more difficult by men's tendency to blame HIV transmission on other, 'irresponsible' men with HIV.

Meanwhile, in Tanzania a survey[2] of HIV-negative community members has found that the increasing availability of treatment has not resulted in any reduction of stigma. Instead the stigma against HIV-positive people has changed from seeing people with AIDS as a 'burden' to people with HIV as 'irresponsible' for having caught it in the first place. HIV-positive people are increasingly seen as being a danger to the community because recovery from AIDS has meant they are now "difficult to identify physically". People with HIV were seen as naturally 'greedy' types who are unlikely to take responsibility for their partners. The researchers conclude that intensified education and awareness campaigns, particularly targeting community leaders, must accompany the roll-out of HIV treatment.

references to all articles [continues on page fifteen]

In this issue [page two]

1 Owen G *An 'elephant in the room'? Stigma and hepatitis transmission among HIV-positive 'serosorting' gay men.* Cult Health Sex 10: 601 – 610, 2008.

2 See *www.sigmaresearch.org.uk/files/report2007c.pdf*

Sex, sleep and self-esteem: what we need most [page three]

1 See *http://www.sigmaresearch.org.uk/files/report2009b.pdf*

The new epidemic: HIV and hepatitis C infection in gay men [page four]

1 Urbanus A *HCV is emerging as an STI among HIV-infected MSM: a threat to the MSM community?* 17th International AIDS Conference, Mexico City, abstract THPDC203, August 7 2008.

2 Thomson, Emma and Main, Janice *Epidemiology of Hepatitis C Virus Infection in HIV-Infected Individuals.* J Viral Hepat 15(11):773-781, 2008.

3 Soriano V et al. *New therapies for hepatitis C virus infection.* Clin Infect Dis 48:313-320, 2009.

4 Van den Berk G et al. *Rapid rise of acute HCV cases among HIV-1-infected men who have sex with men,* Amsterdam. 16th Conference on Retroviruses and Opportunistic Infections, Montreal (CROI), abstract 804, 2009.

5 Fishman S et al. *Age and risky behaviors of HIV-infected men who have sex with men with acute HCV infection in New York City are similar, but not identical, to those in a European outbreak.* CROI abstract 801, 2009.

6 Ghosn J et al. *Evidence for ongoing sexual transmission of hepatitis C (2006 to 2007) among HIV-1-infected men who have sex with men: France.* CROI abstract 800, 2009.

7 Danta M et al. *Evidence for sexual transmission of HCV in recent epidemic in HIV-infected men in South-East England.* 56th Annual Meeting of the American Association for the Study of Liver Diseases, San Francisco, abstract 67040, 2005.

8 Leruez-Ville M et al. *Detection of hepatitis C virus in the semen of infected men.* Lancet 356(9223):42-3, 2000.

9 Danta M et al. *Impact of HIV on host-virus interactions during early hepatitis C virus infection,* J Infect Dis 197 (online edition), 2008.

10 Fisher M et al. *Acute hepatitis C in men who have sex with men is not confined to those infected with HIV, and their number continues to increase.* 14th Conference on Retroviruses and Opportunistic Infections, Los Angeles, abstract 130, 2007.

11 Vispo E et al. *Natural History of HIV/HCV coinfection.* Hot topics in Viral Hepatitis 10:7-15, 2008.

12 Sanchez-Quijano A et al. *Influence of human immunodeficiency virus type 1 infection on the natural course of chronic parenterally acquired hepatitis C.* Eur J Clin Microbiol Infect Dis 14: 949-953, 1995.

13 Barkhuizen A et al. *Musculoskeletal pain and fatigue are associated with chronic hepatitis C: A report of 239 hepatology clinic patients.* Am J Gastroenterol 94: 1355-1360, 1999.

Africans develop AIDS more slowly

A surprise finding in two recent studies suggests people of African origin are better able to fight CD4 decline, **writes Gus Cairns**

All other things being equal, people of African background – which includes Africans living in Europe and African-Americans in the USA – progress more slowly to AIDS than people of other racial backgrounds.

This finding, from two studies presented at the recent Conference on Retroviruses and Opportunistic Infections in Montreal, may seem contrary to experience. But the findings are robust: in both Europe and the USA people of African descent with HIV had slower CD4 declines and progressed more slowly to AIDS compared with people of European descent, and the figures were highly statistically significant. If they subsequently had higher mortality, this was to do with unequal access to good treatment; but the studies showed that they started with an advantage when it came to fighting CD4 declines.

The figures will need to be confirmed by other surveys, and causation is not clear. But the European researchers suggest that it might be down to having an immune system already primed to deal with more diseases than Europeans. As in the 'hygiene hypothesis' explaining why allergic conditions such as asthma have increased in rich countries, Europeans may paradoxically be too disease-free to cope well when HIV comes along.

The US study found a specific and unexpected association with hepatitis B infection: people who had caught hepatitis B and had resolved it were more likely to develop AIDS slowly. The US researchers suggest that genes that are known to be associated with slow HIV progression may help people fight off hepatitis B once infected. Hepatitis B infection, like HIV, is more common in Africans and African-Americans than in Europeans.

In the European study,[1] the CD4 decline in patients of African and European descent in the Swiss HIV Cohort[2] were compared. For the current study 463 European and 123 African patients were chosen and matched by age. Unusually for a cohort study, the majority were women. The African patients had, on average, been infected for a shorter time (seven versus eleven years) and had a lower CD4 count at the time of cohort recruitment – 494 in Africans and 577 in Europeans.

The Africans were observed for four years before they started HIV therapy and the Europeans five years. During that time the Africans averaged half the HIV viral load (5300 versus 10,250 in Europeans). They also had nearly half the rate of CD4 decline of the Europeans: the average annual CD4 decline was 28.2 cells/mm^3 in Africans and 52.5 cells/mm^3 in Europeans. These differences were highly statistically significant: there was less than a one-in-a-thousand chance that the findings were a random effect.

The researchers analysed results according to HIV subtype, because in some other studies viral subtype has been associated with faster progression. The subtypes analysed were A (most common in East Africa), B (predominant in Europe and North America), C (mainly from southern Africa) and AG (west Africa). The average viral load was at least 10,000 in every subtype analysed in Europeans and below 10,000 in every subtype in Africans, and Africans had slower CD4 declines in every subtype except type A.

The researchers, calling their findings "remarkable", surmise that one reason for slower progression in Africans might be "evolutionary adaptation to higher overall levels of antigenic exposure in Africa". In other words, Africans may be more likely to have genes that developed in response to other tropical infections, and which confer a degree of resistance to HIV.

The US study[3] presented tended to support this theory by finding that African-Americans had slower HIV progression than other ethnicities and

also tended to have specific genes associated with slower progression. It also uncovered an unexpected and very strong association with hepatitis B infection.

The Multicenter AIDS Cohort Study (MACS)[4] studied 234 people not taking HIV treatment, comparing 55 'long-term non-progressors' (LTNPs) with 179 'expected progressors' (EPs). The definition used for LTNPs was that none of these people had progressed to an AIDS-defining illness 15 years after infection, while EPs had all progressed to AIDS by their twelfth year of infection. The LTNPs were observed for as long as 22 years after infection, by which time just two people had developed AIDS. In the EPs the shortest time to an AIDS diagnosis was three years and the median time about 6.5 years.

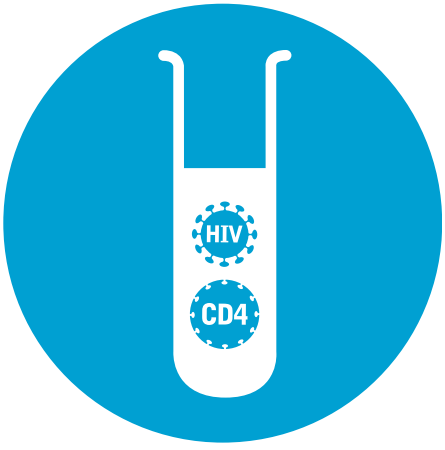
A number of factors were associated with being an LTNP. The first was age at infection: 60% of LTNPs were aged 25 to 35 at infection compared with 45% of EPs; in contrast 13% of EPs were over 45 at infection compared with 2% of LTNPs (just one person).

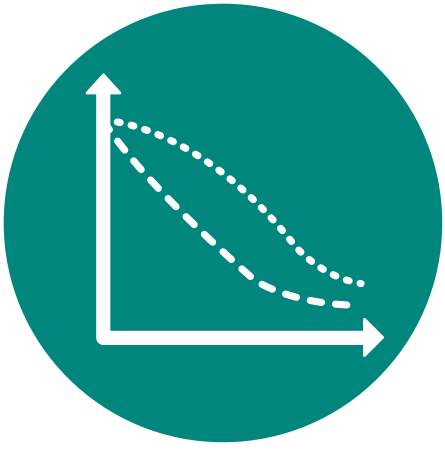
The second was African ethnicity. Nearly a quarter (22%) of LTNPs were African-American compared with just 4% of EPs. This was highly statistically significant.

This was a striking enough finding, but more striking was the association with hepatitis B. Nearly three-quarters (73%) of LTNPs, versus 42% of EPs, had had hepatitis B and had 'resolved' it, i.e. had cleared the virus and developed protective antibodies to it. In contrast, 22% of LTNPs and 56% of EPs had either never been infected with hepatitis B or had been vaccinated against it. The same associations were not seen with hepatitis C nor with HHV-8, the virus that causes Kaposi's sarcoma.

The researchers also found three specific immune-system genes to be associated with slow progression and note that they "have also been associated with recovery from hepatitis B infection", though why slow progression should be associated with higher rates of hepatitis B infection in the first place is unclear. It could be because white people are more likely to have the hepatitis B vaccine, or because the same genes that confer resistance to HIV progression might also confer vulnerability to hepatitis B.

Either way, these two surveys produce results contrary to what many people might have expected. If Africans were given equal access to optimal HIV therapy and good-quality healthcare, they might well do better than Europeans. ■





references to all articles continues

14 Qurishi N et al. *Effect of Antiretroviral therapy on liver-related mortality in HIV/HCV coinfected patients.* International AIDS Conference, Barcelona, abstract no. ThPeC7490, 2002. Hepatology 30:1054-1058, 1999.

15 F J Torriani and others (for the APRICOT Study Group) *Peginterferon Alfa-2a plus Ribavirin for Chronic Hepatitis C Virus Infection in HIV-infected Patients.* N Eng J Med 351(5): 438-450, July 29, 2004.

16 De Croy S *Hepatitis C and HIV. Presentation at 12th CHAPS Conference,* Brighton. See www.chapsonline.org.uk/c12/, 2009.

A jagged little pill: are we prepared for PrEP? [page eight]

1 See Wilson C *Safer Sex in a Pill.* New Scientist, 19 November 2008.

2 Garcia-Lerma G et al. *Prevention of rectal simian HIV transmission in macaques by intermittent pre-exposure prophylaxis with oral Truvada.* 16th Conference on Retroviruses and Opportunistic Infections, Montreal, abstract 47, 2009.

3 Schmidt AJ et al. *HIV-serosorting among German men who have sex with men. Implications for community prevalence of STIs and HIV-prevention.* 16th Conference on Retroviruses and Opportunistic Infections, Montreal, poster abstract 1021, 2009.

4 Weatherburn P et al. *Multiple chances: findings from the United Kingdom Gay Men's Sex Survey 2006.* Sigma Research, 2008. See www.sigmaresearch.org.uk/files/report2008c.pdf

News in brief [page twelve]

How stigma stymies safety in Britain and Tanzania

1 Bourne A et al. *Relative safety II: risk and unprotected intercourse among gay men with diagnosed HIV.* London: Sigma Research, 2009.

2 Roura M et al. *Scaling up stigma? The effects of antiretroviral roll-out on stigma and HIV testing. Early evidence from rural Tanzania.* Sexually Transmitted Infections, online publication: Doi:10.1136/sti.2008.033183, 26 November 2008.

HIV cure drive urged

1 Richman D et al. *The challenge of finding a cure for HIV infection.* Science 323(5919):1304-1307, 2009.

2 TAGline 16(1): *Recommendations to Stimulate Research on HIV Persistence.* See www.treatmentactiongroup.org/publication.aspx?id=2820, 2009.

3 Siciliano R *New approaches for understanding and evaluating the efficacy of ARVs.* 16th Conference on Retroviruses and Opportunistic Infections (CROI), Montreal, abstract 16, 2009.

4 Hatano H et al. *Evidence of persistent low-level viremia in long-term HAART-suppressed individuals.* CROI, abstract 425, 2009.

Global recession threatens treatment programmes

1 Reniers G et al. *Steep decline in population-level AIDS mortality following the introduction of antiretroviral therapy in Addis Ababa, Ethiopia.* AIDS 23:511-518, 2009.

HIV transmission risk varies hugely according to disease status and STIs

1 Boily MS et al. *Heterosexual risk of HIV-1 infection per sexual act: systematic review and meta-analysis of observational studies.* The Lancet Infectious Diseases (LID) 9:118-129, 2009.

Africans develop AIDS more slowly [page fourteen]

1 Müller V et al. *African Ethnicity Is Associated with Slower Disease Progression in the Swiss HIV Cohort Study.* 16th Conference on Retroviruses and Opportunistic Infections, (CROI), Montreal, abstract 1025, 2009.

2 See http://www.shcs.ch/html/shcs_enter.htm

3 Phair J et al. *Slow Progression of HIV-1 Infection in the Multicenter AIDS Cohort Study.* CROI, abstract 1027, 2009.

4 See http://www.statepi.jhsph.edu/macs/macs.html

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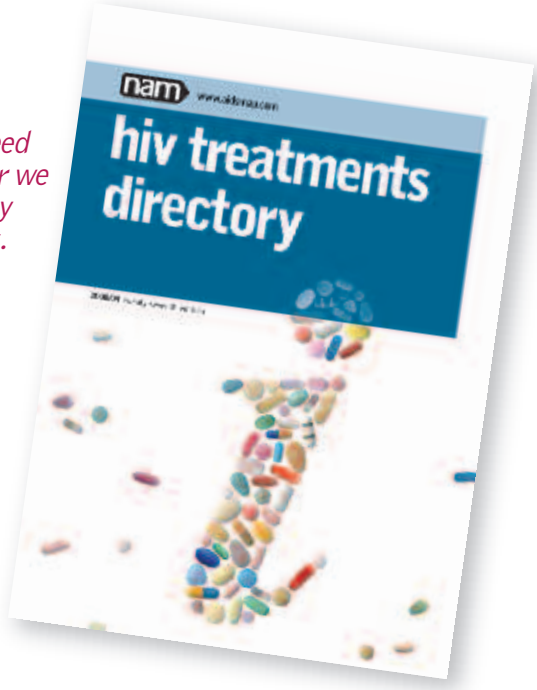

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