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hiv treatment update

Gus Cairns

in this issue

"I disagree with arguing whether the glass is half-full or half-empty. The point is it's the same glass."

Who's right about the state of the world? The sunny optimists who greet every reversal with a smile and a chorus of "Things will only get better"? Or the grumpy pessimists who, while never happy, will never be disappointed?

As psychotherapist Tom Warnecke says in our piece on positive psychology and the art of happiness (see page 4), it's not about arguing whether life is a bowl of cherries or a vale of tears. It's about whether your mental attitude is working for you.

Studies show that an optimistic attitude towards life and the future brings good health and a better quality of life. In the case of people with HIV, researchers have chosen typically to measure our depression rather than our happiness, and there's good evidence that misery and anxiety impact negatively on our health.

So developing 'happiness skills' might especially benefit HIV-positive people. It's not that having HIV has to be inevitably depressing. It's more to do with the way that living with the virus becomes so medicalised and politicised that we stop smelling the roses along the way.

Even good news in the world of HIV tends to be presented as a triumph over overwhelming odds and looming disaster, and there is always something new and terrible to get angry about.

HIV treatment programmes in Africa are starting to have a sizeable positive impact on public health (see page 3). Fantastic news. So what do we AIDS activists do? Get furious because people aren't getting CD4 and viral load tests.

What a struggle. But life is about more than a disease one happens to have. Can we also start cultivating the art of living life as if it were fun?

Speaking of which, people sometimes talk about something they enjoy being "the most fun you can have with your clothes on". This hints at the fact that, for many people, the most fun they have usually involves sex.

People with HIV sometimes have to battle against disapproval from others or conquer their own feelings of unworthiness and unattractiveness in order to get sex and enjoy it.

For women with HIV, the social attitude seems to be that ideally, they shouldn't have sex at all. If they do, they absolutely must use a condom and deserve to be prosecuted if they don't.

This is why Roger Pebody's piece about contraception for women with HIV (page 8) is quietly revolutionary. It acknowledges that there are HIV-positive women out there who do have sex and might just be doing it for pleasure and love, not only because they want a kid, thank you very much. They might be having sex because it makes them happy. There's a revolutionary idea. However you achieved it, we hope you had a happy summer.

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upfront

HIV treatment is working in Africa. Will it be sustained?

by Gus Cairns

The provision of HIV treatment for patients in Africa has now started to produce real public health benefits, the Fifth International AIDS Society Conference in Cape Town heard this summer.

However these are being threatened by the global recession, political opposition, the inadequacy of health systems, and concerns about drug side-effects and resistance.

While there was a lot of new information on treatments (see pages 14 and 15), almost a majority of presentations at the IAS conference looked at the provision of HIV treatment to poor countries, and particularly to Africa.

Figures presented by the World Health Organization (WHO) at the conference estimated that four million people worldwide were receiving antiretrovirals (ARVs) by the end of 2008 (nearly three million of them in sub-Saharan Africa), compared with three million a year previously (two million in Africa).

Several papers found that recent increases in ARV provision had resulted in dramatic declines in other diseases. One study found that the prevalence of tuberculosis (TB) in patients with HIV in one Cape Town township had gone down by nearly two-thirds in just two years and that, as a result, overall TB prevalence had shrunk by 20%, due to an increase in ARV provision to those in need from 12 to 90% between 2004 and 2008.

Another study from Uganda found that malaria cases in people with HIV had fallen by 75% in the four years of an ARV treatment programme, while one from KwaZulu Natal found that mortality in babies under two fell by nearly 60% between 2001 and 2007, due to fewer mothers with HIV dying.

ARV provision produced social and economic benefits, too. One study of HIV patients in the Johannesburg area found that the proportion with a job increased from 27% before starting treatment to 47% after three years on treatment.

These successes were accompanied by concerns that ARV treatment programmes might not be sustainable, however. A report issued by the international charity Médecins sans Frontières (MSF) before the conference warned that "financing for HIV/AIDS is stagnating".

Using South Africa as an example, it found that the global recession and resultant cuts in the government's health budget had led to a halt in the recruitment of new patients to ARV programmes. One study found that more than half of South Africans eligible for treatment had to wait over a year to actually receive it, and another that 20% of patients eligible for ARVs died waiting for them.

MSF's Head of Mission in South Africa, Eric Goemaere, said: "All around us, clinics stop enrolling because there are just not enough ARV supplies."

Given this, it might seem like a luxury to raise the CD4 count at which to start treatment from 200 to 350, in line with developed-country guidelines, or to substitute cheap but toxic drugs like d4T with more tolerable but expensive ones like tenofovir.

Dr Francois Venter, president of the South African HIV Clinicians Society, warned treatment activists that demands for tenofovir needed to be considered in the light of poor progress towards delivering treatment in general. "A lot of my patients die without even having access to d4T," he said.

It is therefore important to continue to look into ways of providing ARV treatment more cheaply. One way is to save on monitoring: data from the large DART trial in Uganda found that although prescribing ARVs on the basis of clinical symptoms rather than CD4 counts resulted in somewhat more deaths or HIV-related illnesses, doing this could mean that over 30% more people could be put on ARVs.

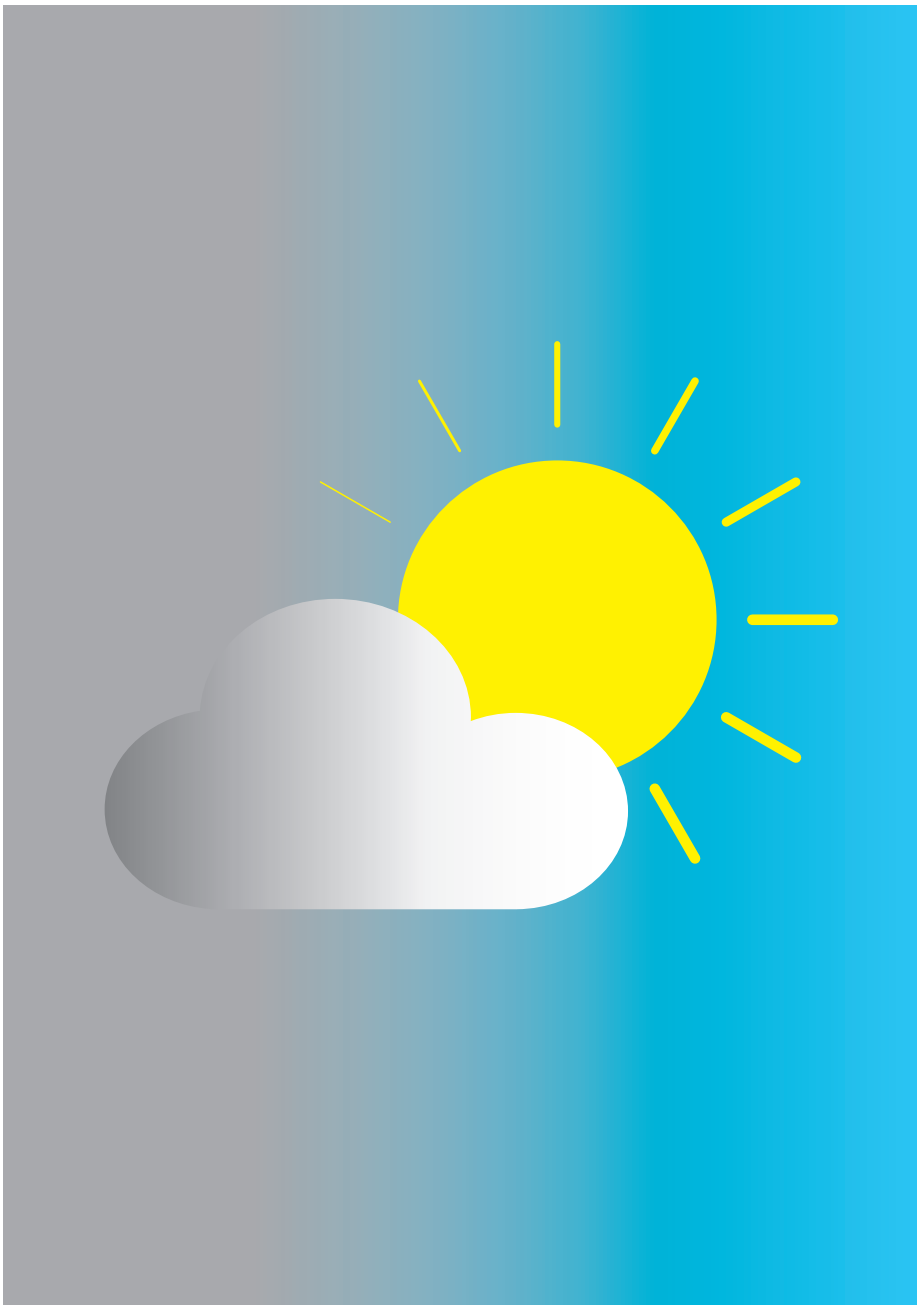
Another way is to 'task shift', training lower-paid health workers to provide what doctors normally do. A study from Lesotho was able to prescribe the more expensive regimen of tenofovir, 3TC and efavirenz to patients with CD4 counts below 350 due to savings by using nurses instead of doctors.

There was a strong defence of the large global HIV programmes by several figures at the conference, after a couple of years in which programmes like the US PEPFAR initiative and the Global Fund for HIV, TB and Malaria have been accused of diverting money away from strengthening health systems in resource-poor countries and from other health goals such as reducing child mortality and non-communicable diseases like diabetes.

Francois Venter said that the most efficient way of achieving a worldwide reduction in child mortality was to put all HIV-positive mothers on ARVs, while Michel Kazatchkine said that a quarter of the Global Fund's grants had gone towards strengthening healthcare systems.

Former UNAIDS special envoy to Africa, Stephen Lewis, said that the critics of HIV funding were in danger of dismantling the progress that had been made in global health. "You can't permit an argument in favour of slicing the pie differently rather than demanding a larger pie to be used to justify a terrible reversal in public policy," he said. "The gains we've made and the momentum we've achieved are being put at risk."

walking back to happiness



People with HIV, as endless studies attest, have higher rates of depression, addictions and other mental health problems than the general population. But even if we aren't depressed, could we be happier? *Gus Cairns* investigates 'positive psychology', the study of happiness, which aims to transform 'can't complain' into 'on top of the world'.

Dr Martin Seligman started his career as an expert on human misery. As a psychologist he had uncovered the phenomenon of 'learned helplessness' – thought to be at the core of depression.

However, he became disillusioned with his studies. He doesn't disavow the strides that have been made in treating mental health problems, but he believes the focus on mental illness had costs.[1,2] Firstly, it sometimes turned people into victims. Concentrating on the link between bad childhood experiences and subsequent problems could give the impression that one inevitably followed from the other. And it didn't take on improving the abilities of people with average lives and talent.

The father of positive psychology, Abraham Maslow, noted that "Freud supplied us the sick half of psychology and we must now fill it out with the healthy half".[3] Seligman and others have investigated what happiness consists of and how people can increase their chances of feeling good.

What is happiness?

Psychologists tend not to talk a lot about happiness *per se*, but rather its components. There is general agreement that happiness/living well/good fortune is a very complex idea, not a simple, single emotional state.

The 'happiness psychologists' divide the state of happiness up into three main domains of experience:

Pleasure might be the experience you first think of when you think of happiness. Joy, sensuality, hilarity, orgasm: these are the sensations people crave and pursue. But pleasure fades; it is primarily caused by new sensations, and the brain simply won't respond to the same thing with the same rush the second time round.

If people's only understanding of happiness is pleasure, they'll need more each time to get the same rush. Compulsively pursuing pleasure *and nothing but* is usually bad for the health and will eventually contribute to negative emotions.

Flow is a term invented by the Hungarian psychologist Mihaly Csikszentmihalyi[4] to mean focused attention. Csikszentmihalyi

describes it as "being completely involved in an activity for its own sake... Your whole being is involved, and you're using your skills to the utmost."

Depending on your personality and strengths, this could entail reading, writing or teaching, dancing, making love, having a rewarding conversation with a friend, rock climbing, closing a business deal...

Flow is not happiness in itself, any more than pleasure is. But studies have found that people who are able to achieve this state frequently are happier and healthier than people who find it difficult to focus attention.

Unlike pleasure, flow involves *challenge*: the task being accomplished must be sufficiently hard for its elegant performance to be a reward. Nonetheless, if your only way of achieving happiness is to achieve flow, you may have found something precious, but you may also have found a lonely obsession.

The third component of happiness is **meaning**. This is the factor that provides a framework around the other components of happiness and makes them permanent.

Meaning, as psychologists define it, is not mystical and not a set of external truths like a religion or a philosophy.

Abraham Maslow devised a pyramid or hierarchy of human needs: starting with physiological needs (food, shelter); then physical security and the feeling of safety; the need to feel loved and to belong; the need for self-esteem (feeling of value in the world). Finally, if a person has achieved all these needs, there is 'self-actualisation'. This is only possible if all the other needs have been met: Maslow defined it as "a person's need to be and do that which the person was 'born to do'." Not everyone gets to this point.

Maslow's self-actualisers:

- were all 'reality-centred', down to earth and could instinctively differentiate fraudulent from genuine.
- were 'problem-centred', focusing on external problems rather than being self-absorbed.
- typically had a few, close personal relationships rather than a large number of shallow friendships.
- tended to be spontaneous and creative, not usually bound too strictly by social conventions.

These people achieved, permanently or intermittently, a sense that their lives had meaning and that they were living that meaning.

How do you measure happiness?

Even though you can't measure emotions with a blood test (yet), you can measure other people's feelings by asking them how they feel. If you ask one person how they feel, you have to take their word for it. But if you ask 10,000 people a set of identical questions about whether they are anxious or depressed or satisfied, and score the answers, and compare how reliably the answers tally with other indicators of mood and health – you can end up with some reliable instruments.

Some of these, like the Beck Depression Inventory, have been in use for nearly 50 years.[5] Most list a series of multiple-choice statements and ask people which one tallies with "very like me" or "not at all like me" – for example:

0. I do not feel sad.

1. I feel sad.

2. I am sad all the time and I can't snap out of it.

3. I am so sad or unhappy that I can't stand it.

Psychologists Peter Hills and Michael Argyle at Oxford University tried to encapsulate happiness in a 29-item questionnaire.[6] This is a series of statements ranging from "I am intensely interested in other people" to "I feel that I am not especially in control of my life".

Self-assessed happiness, however, is a tricky thing to measure because it's so tempting for people, however honest they are, to adjust their answers towards the way they would *like* to feel, or think the psychologist would like them to feel. One way to solve this problem is to try to ask more objective questions about a person's life in a so-called quality-of-life survey.

Quality of life

'Quality of life', a vast area of social and psychological science, started off as a means of establishing the effect of physical illness, and now measures much more. Quality-of-life surveys are used by economic planners to predict market trends (happy people buy more) and by social scientists to measure the impact of unemployment.

Dr Richard Harding is Senior Lecturer in Palliative Care at King's College London. He says: "Quality-of-life studies have been central to the study of the personal experience of chronic illness, especially in cancer care.

"However, even in cancer care, it was soon realised that people's quality of life often did not only relate to their state of physical health. Modern questionnaires measure a lot more than just physical health. They measure patients' physical, functional, cognitive, emotional, spiritual and social abilities, and their degree of burden from a range of physical and psychological symptoms such as fatigue, pain, and nausea, in order to determine their global health-related quality of life."

Harding advocates for the same degree of investigation into the patient's self-reported experience of disease to determine the quality of life of people with HIV.

"The assessment and care of people with HIV is arguably often focused on viral suppression and immune response, plus perhaps an assessment of whether they are depressed because that affects adherence, to the exclusion of understanding the patient experience of disease and their quality of life", he says. "Although there has been some post-HAART research into HIV patients' quality of life,[7] it needs to be an essential component of clinical practice."

Harding has applied quality-of-life methodology to studies of people with HIV, with sobering results.[8] Many symptoms experienced by people with HIV went unreported because, he told the the AIDS Impact Conference two years ago, "clinical encounters with HIV-positive patients concentrate on their CD4 count and viral load".

Harding and colleagues conducted two studies. In one, in collaboration with

Professor Lorraine Sherr of University College London Royal Free Medical School, 904 patients, attending five HIV clinics in London and Brighton, were interviewed. In the second, with GMFA, 347 gay men with HIV were interviewed across the UK. He used a quality-of-life questionnaire called the Memorial Symptom Assessment Scale Short Form. Rates of as high as 80% were found for symptoms like 'feeling worried' and 'feeling sad'. Harding commented that both the prevalence and the self-rated severity of these symptoms were comparable to findings from a study of patients with advanced cancer.

The GMFA study asked broader questions about treatment and health optimism, the respondents' current job and financial status, future life plans, what their own expectations of their future health were and what they felt would support them to maintain good mental and physical health.

A number of themes emerged:

- Less exclusive focus in healthcare appointments on CD4 and viral load and more on treatment side-effects and mental wellbeing.
- More guidance on maintaining general health.
- To quote a respondent: "A sympathetic partner who isn't scared of having a positive boyfriend".
- Advice on rebuilding careers, including "employment outside the HIV field".
- More emphasis and publicity about combating anti-HIV stigma and discrimination.

"Messages from clinicians that patients can now expect to have a 'near-normal life expectancy' are not reflected in our respondents' expectations", Harding commented at the time.

Quality-of-life measuring instruments of an extremely sophisticated nature now exist, starting to match the complex definition of happiness. For instance, the World Health Organization's quality-of-life assessment tool WHOQOL[9] asks people about six 'domains' or areas of their life:

I disagree with... arguing whether the glass is half-full or half-empty. The point is it's the same glass and we can help people recognise real resources.
Tom Warnecke, Vice-chair of UKCP

- Physical health (e.g. energy and fatigue, pain, sleep quality)
- Psychological health (e.g. body image, feelings, self-esteem, memory and concentration)
- Independence (e.g. mobility, capacity to work)
- Social relationships (friendships, social support, sex)
- Environment (e.g. money, personal safety)
- Religion, spirituality and personal beliefs.

All in all, a long way from defining a person's health by their CD4 count.

How to be happier

Martin Seligman believes that we can improve our quality of life and happiness.

He does think there is a genetic component to happiness. However, there are a number of external influences on happiness that can be altered; and there are subjective changes we can make to improve satisfaction with our life.

Predictors of happiness

What are the determinants of happiness? Studies that relate subjective happiness to different people in different countries worldwide report some surprising results:

Health and happiness have remarkably little to do with each other. People with HIV may be an exception to this, but their high unhappiness scores, it appears, are not *caused* by HIV: they may have a lot more to do with other factors, such as social isolation.

Income matters a bit. On average, inhabitants of poor countries tend to be a little less happy than those of rich countries. But there are huge variations. Economic growth may be as important as absolute income. When it comes to individuals, very poor people tend to be less happy, but everyone on or above a basic level of income is as happy as each other; millionaires are only marginally happier than those who are comfortably off.

Age has an effect. Older people are generally calmer and more satisfied with their lives than young people. They don't hit the heights of happiness so much, but neither do they plumb the depths of despair.

Race, education and **climate** on their own make no difference.

So what does make a difference? There are two consistent predictors of greater happiness:

Religion. Having a religion or strong spiritual belief is strongly associated with happiness, and the more fundamentalist the religion, the happier the individual person. Some may find this disconcerting, but religion could be seen as one example of the kind of cause that gives meaning to a life.

Marriage and **friendship.** The strongest predictor of happiness is a successful marriage or 'primary' relationship. Equally, one of the strongest predictors of unhappiness is an unhappy marriage. Happy people also tend to have a richer social life. Both of these could be because happy people tend to attract mates and friends, rather than because marriage or friendship as such make you happy.

If you can't change your immediate circumstances, though, can you change your feelings? Positive psychologists feel that the answer is yes.

They believe there are two ways to do this.

Live in the present. People can try to pack their lives with pleasure, flow and meaning, but still be unhappy because they are preoccupied either with regretting the past or fearing the future.

Seligman recommends developing conscious gratitude to the people who have helped you along the way and conscious forgiveness of those who may have hurt you, in order to look back on the past with contentment and serenity, rather than bitterness and remorse.

When it comes to predicting the future, pessimists tend to generalise bad events ("I didn't get the job because I'm bad at job applications"), while attributing positive events to chance ("I was lucky, really, I only got the job because that other candidate dropped out"). Optimists do the reverse: for them, bad events are specific ("They were unclear about the presentation they wanted") and good ones are general ("I got the job because I really know the field well"). It is possible to retune one's habitual responses to avoid catastrophising bad events and minimising good ones.

Play to your strengths. By doing some anthropological research across a number of cultures, psychologist Katherine Dahlsgaard[10] was able to generate a list of six key virtues, and 24 sub-characteristics, that all cultures, at all epochs of history, appear to have valued.

These were:

Wisdom and knowledge (curiosity, love of learning, critical thinking, originality, social intelligence, perspective)

Courage (bravery, perseverance, honesty)

Humanity and **love** (kindness and generosity, loving and receiving love)

Justice (fairness, teamwork, leadership)

Temperance (self-control, discretion, modesty)

Transcendence and **spirituality** (appreciation of beauty, gratitude, optimism, sense of purpose, forgiveness, playfulness and humour, enthusiasm).

A psychological questionnaire helps people measure how strong they are in a particular area (for instance, "I am always able to see the big picture" for perspective). This helps people understand their particular strengths and play to them, and to try harder in areas where they're weaker.

Psychologists now aim to compile a diagnostic manual of mental strengths to pit against the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders), used to diagnose mental illness.

Is positive psychology useful?

I asked a couple of practising psychotherapists in the UK what they thought of the positive psychology movement.

Tom Warnecke is vice-chair of the United Kingdom Council for Psychotherapy (UKCP). "The field can be accused of prescribing rose-tinted glasses for everyone," he says. "But on the other hand a lot of people in mental distress fail to appreciate the assets and strengths they do have. For instance a client of mine was in despair because her professional life was falling apart. But she had a good supportive relationship and was just taking it for granted. She wasn't making best use of it because she 'didn't want to be a burden'.

"I disagree with putting a spin on things or arguing whether the glass is half-full or half-empty. The point is it's the same glass, and we can help people recognise real resources."

James Antrican is UKCP's chair, and more circumspect. "I see positive psychology as a little like a placebo," he says. "It can help people feel better by connecting with themselves so they can start to make real changes.

"...everyone needs a bit of pathology too: gloominess is sometimes the very thing that pushes us into making useful readjustments. I agree we should celebrate our strengths; but maybe sometimes we should use our discontent as a strength too." ■

To read more

Want to know if you're truly happy or a natural grump? Want to know what your strongest virtues are and your weakest points? For more on positive psychology, including a number of diagnostic questionnaires, go to: **www.authentichappiness.sas.upenn.edu**

Where to get help

The best way to find a supportive psychotherapist is often through personal recommendation.

Alternatively, you could contact a local HIV organisation for information on services they provide, or contacts they may have who provide counselling and psychotherapy.

London services are often funded to provide counselling to people in particular boroughs, so it's a good idea to check with them directly to see if they can provide services to you directly, or if they can put you in touch with therapists they work with. You could start with the Terrence Higgins Trust (**info.counselling@tht.org.uk**) PACE (**info@pacehealth.org.uk** – for lesbian, gay, bisexual and transsexual people) and Shaka Services (**info@shakaservices.org.uk** – for African, African Caribbean and Asian people).

All counsellors and psychotherapists should be accredited by one of the two UK psychotherapy organisations. Check the 'find a therapist' buttons at UKCP (**www.psychotherapy.org.uk**) or BACP (**www.bacp.co.uk**).

Want to learn more?

In London the City Lit (**www.citylit.ac.uk**) offers an introductory course on "Positive psychology and happiness" in December.

Dr Martin Seligman is in London to give a free lecture on Positive Psychology on Tuesday, 29 September from 5.30pm - 6.30pm at Friends House, 173 Euston Road, London NW1 2BJ. All welcome.

contraceptive choices for women with HIV

Information for women with HIV often includes advice on pregnancy and conception, but information on contraception that takes into account the needs of positive women can be harder to come by. *Roger Pebody* explores the options available to women with HIV in the UK.

Nine out of ten women and girls receiving care for HIV in the UK are of reproductive age.[1] Many women with HIV have a very strong desire to have children, and the availability of effective measures to prevent mother-to-child transmission has enabled thousands to do so safely. Indeed, questions about conception and pregnancy tend to figure highly on the list of HIV-positive women's concerns.

But what about *contra*ception? A woman with HIV – like any other woman – may wish to delay pregnancy for a more suitable time, to limit her number of children, or to avoid pregnancy altogether, and so will need advice and access to contraceptive methods.

Two small studies at this year's BHIVA conference found that between a third and a half of heterosexuals with HIV were not planning to have a child in the future.[2,3]

Getting appropriate information and advice on contraception is especially important because some types of hormonal contraceptives can be affected by antiretroviral drugs. In general, the contraceptives become less effective, while the antiretrovirals themselves are not affected.

Dr Sharon Moses works in sexual and reproductive health in Leicester. "We had a couple of women who came to the clinic, didn't disclose that they were HIV positive, asked for their preferred contraceptive method, and then came back pregnant," she says.

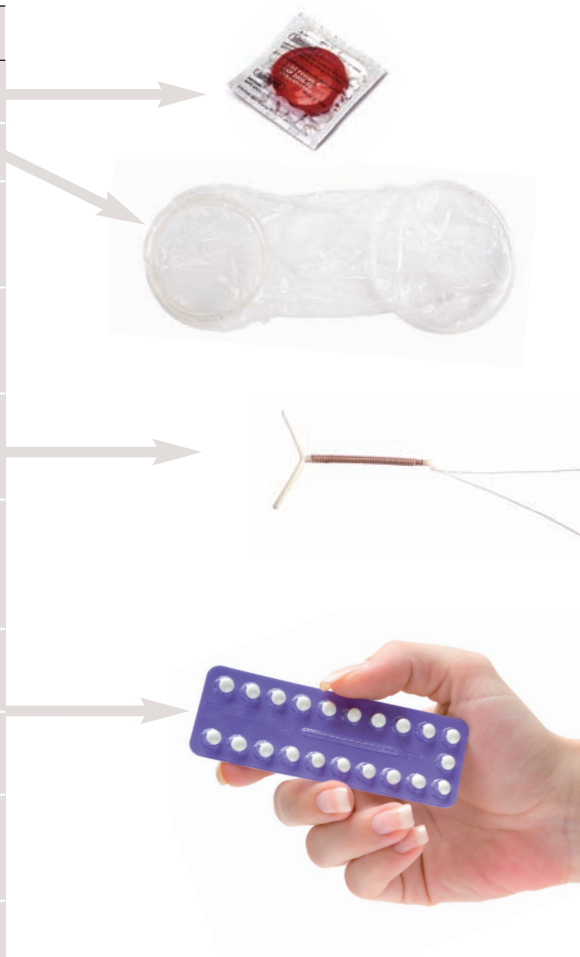
Now Sharon works more closely with the HIV clinic in Leicester and raises awareness among her immediate colleagues of the specific needs of women with HIV.

Of course, an HIV-positive woman's choice of contraception may be affected by her desire to avoid HIV transmission as well as pregnancy.

As Ursula Harrisson, Clinical Lead for HIV Women's Services at the Chelsea and Westminster Hospital, comments, "A lot of women are quite happy using condoms. They see them as being a perfectly reasonable non-hormonal contraceptive that will give protection against HIV transmission and sexually transmitted infections, as well as pregnancy."

Contraceptive methods

Non-hormonal methods	Male condom
	Female condom
	Diaphragm or cap A flexible device placed in the vagina during sex, *not recommended for women with HIV*.
	Intrauterine device (IUD) A small flexible device, containing copper, that is fitted in the womb, and works for up to ten years. Also known as a 'coil'.
Hormonal methods – *not affected by the use of antiretroviral drugs*	Intrauterine system (IUS) Also known as *Mirena*, this is a hormonal version of the IUD that releases the hormone progestogen, and works for up to five years.
	Injection An injection given by a doctor or nurse, containing the hormone progestogen. The most common version is *Depo Provera* and should be taken every twelve weeks.
Hormonal methods – *affected by the use of antiretroviral drugs*	Combined pill Contains the hormones oestrogen and progestogen.
	Progestogen-only pill Contains the hormone progestogen.
	Skin patch A small beige patch applied to the skin like a sticky plaster, changed once a week. Releases oestrogen and progestogen.
	Vaginal ring A small plastic ring that is inserted for three weeks at a time and releases oestrogen and progestogen.
	Implant A small flexible rod that is inserted under the skin, and releases progestogen for up to three years.



However, some contraceptive specialists feel that condoms are a relatively ineffective method. When couples use them consistently and according to instructions, around 2% of women are still likely to become pregnant in a year. Many people find that they are less effective than that, because they don't follow all the instructions on the pack or are not able to use them each and every time.

Many other contraceptive methods are more reliable. For example, contraceptive injections have a failure rate of 0.3%, and when the combined pill is taken with perfect adherence, the failure rate is 0.1%.

At the same time, it seems that not all women with HIV are getting information about the full range of contraceptive methods, perhaps because it is thought that condoms and female condoms are the only appropriate methods to use.

"Service users say they often feel that they are not allowed to use hormonal contraceptives because of being HIV positive, nor are they advised of any other contraceptives except condoms," say Beatrice Osoro and Stella Gwimbi from Positively Women.

Gráinne Cooney is a nurse practitioner in sexual and reproductive health at the Chelsea and Westminster Hospital in London. She says that women are always advised to use condoms, but "in reality, women may not always use them, either through choice or due to pressures in a relationship".

Given that a condom may break – or that a partner may refuse to use one – many women choose a strategy of 'double protection' and use condoms in addition to another, more reliable, form of contraception.

Gráinne tells us that women often say "I just want to be absolutely sure – if we have an accident, I want to have something else on board that will protect me against unplanned pregnancy."

For women who are not on treatment

For women not on antiretroviral treatment, almost all contraceptive methods can be considered. This means that as well as the condom, female condom, combined pill, progestogen-only pill, skin patch and vaginal ring, there are four types of long-acting reversible contraceptive available: injection, implant, intrauterine device and intrauterine system.

Contraceptive specialists often encourage the use of long-acting methods because they don't require the user to remember to use them each time she has sex or to take them each day, and so failure rates are lower. Women may also prefer them because they are more discreet.

The only contraceptives not recommended for HIV-positive women not taking treatment are diaphragms and caps. These barrier methods are normally used with a nonoxynol-9 spermicide, and repeated use of this has been shown to irritate mucosal surfaces, causing genital sores and lesions. A lesion in an HIV-

positive woman may make transmission to an HIV-negative partner more likely.[4] However, some doctors think this advice is overly cautious.

Contraception and antiretrovirals

If you are taking HIV treatment, the options change. Some hormonal contraceptives can be affected by antiretroviral drugs (ARVs), making the contraceptive less effective, potentially leading to an unplanned pregnancy.

There are possible drug interactions with both non-nucleoside reverse transcriptase inhibitors (NNRTIs) and protease inhibitors (PIs). Nucleoside and nucleotide transcriptase inhibitors (NRTIs) are not affected, but this is small comfort as almost everyone taking antiretroviral therapy will be taking either an NNRTI or a PI in addition to their nucleoside backbone.

However, the evidence so far suggests that the new NNRTI etravirine (*Intelence*) can be used safely with contraceptives, as can drugs from the newer classes of integrase inhibitors, fusion inhibitors and entry inhibitors.

It's also worth remembering that other medication may interact with hormonal contraceptives too – this is the case for the TB drug rifampicin, for example.

All types of hormonal contraceptives are affected by the use of these antiretrovirals, except *Depo Provera* and other contraceptive injections, and the *Mirena* intrauterine system. There are no problems with non-hormonal methods including condoms, female condoms and the intrauterine device ('coil').

Dr Eki Sangha, contraceptive expert at the Birmingham Heartlands HIV Service explains: "Both antiretrovirals and hormonal contraceptives may be processed in the liver by the same enzymes, with the contraceptive being processed faster than usual. The end result is that levels of the contraceptive hormones may not be high enough".

Eki continues: "There are a limited number of pharmacokinetic studies which have described the relationship between specific antiretrovirals and the contraceptive hormones oestrogen and progestogen. What we don't have are any studies of the efficacy of contraception in women taking antiretrovirals, in other words solid evidence of the impact of these drug interactions on rates of contraceptive failure."

The UK guidelines recommend that contraceptives not affected by ARVs should be considered instead. However, if a woman still wishes to use such a contraceptive, 'double-protection' with the additional use of male or female condoms is recommended. Using a partially effective method may be better than using no contraceptive at all.

In the case of the combined-contraceptive pill (by far the most popular form of hormonal contraception in the general population), the guidelines also suggest that it may be possible to prescribe an increased dose of the contraceptive pill – perhaps taking an older product that contains a higher level of hormones, or taking a double dose.

However, not all professionals are comfortable with this. "It's an unlicensed, non-evidence based practice," Sharon Moses says.

The worry is that whereas the pill is safe for the vast majority of users, its use is associated with a very small increase in the risk of a blood clot, heart attack or stroke. A large dose is likely to increase this risk.

Several alternatives are available. In particular, there are two types of hormonal methods that do not interact with antiretrovirals. And both are long-acting and reversible.

Injections are effective

Contraceptive injections deliver the hormone progestogen. The most commonly used in the UK, *Depo Provera*, should be taken every twelve weeks. It is extremely reliable.

However, there are a couple of points to consider. One is that after stopping the injections, it can sometimes take up to a year for a woman's fertility to return. For a woman who doesn't want to get pregnant right now, but may wish to do so after a few months, this may make the method unsuitable, particularly for older women who still want the possibility of having a child.

Another concern is that *Depo Provera* affects levels of oestrogen, causing 'thinning' of the bones. Whilst this is not normally a problem for most women (bone density returns after the injections are stopped), it may be more of a problem

Hormonal contraception and HIV infection

Some research has suggested that there may be links between the use of hormonal contraceptives and acquiring HIV, transmitting HIV or the speed of HIV disease progression. However in each area, study results are inconsistent. There isn't yet strong enough evidence for international or national guidelines to recommend that women avoid using hormonal contraceptives because of these concerns.

There has been some concern that hormonal contraceptives, especially those which deliver progestogen only, might speed up HIV disease progression. Two studies found that women using contraceptives had greater CD4 cell count falls and higher viral loads.[5,6] However a study involving women from 14 countries recently showed that women using the combined contraceptive pill, injections or implants were no more likely to need antiretroviral therapy nor to die early than women who used no hormonal contraception.[7]

For HIV-negative women, some – but not all – studies have suggested that use of hormonal contraceptives (especially injections) is associated with an increased risk of HIV infection.[8]

Amongst HIV-positive women, use of hormonal contraceptives may increase HIV viral load in genital fluids, which would increase the risk of HIV transmission. Studies have given contradictory results.[9,10] A Kenyan study found that women starting contraception had a modest but significant increase in the prevalence of HIV-infected cells (proviral DNA).[11]

Moreover there are indications that hormonal contraceptives can raise the chances of having cervical inflammation, contracting chlamydia and possibly genital herpes in HIV-positive women, and it may be that increased viral load in genital fluids is fundamentally driven by factors such as these.[12]

for women who already have risk factors for osteoporosis. Since less severe bone mineral loss (osteopenia) is more common in people with HIV than in HIV-negative people and using protease inhibitors is associated with higher rates of osteoporosis, this may need to be taken into account.

Gráinne Cooney says that the approach at the Chelsea and Westminster is much the same as for any other woman. "The clinician will make an assessment of the woman's risk of osteoporosis, which will include HIV status and use of antiretroviral therapy. All women are given health promotion advice on how to maintain healthy bones and are monitored regularly," she says. "UK guidelines do not exclude women living with HIV from using *Depo Provera*."

The IUD and IUS are effective

An intrauterine device (IUD, also known as a 'coil') is a small, flexible device that is often in the shape of a 'T' and is fitted in the womb by a doctor or nurse. The *Mirena* intrauterine system (IUS) is the hormonal version. Both can be left in place for several years.

Both the IUD and IUS remain effective when women use antiretrovirals, and both are very reliable.

They can affect a woman's periods. IUD users often find that they are heavier, longer or more painful, whereas the opposite is the case with the hormonal IUS. Some women using the IUS find that their periods are irregular or stop altogether. Personal preferences differ – some women are pleased to have a method that reduces heavy, painful periods, whereas other women are disturbed by the absence of bleeding.

A check-up for bacterial sexually transmitted infections is needed before fitting an IUD or IUS. Any infection should be treated before the coil is inserted; otherwise there could be a risk of pelvic inflammatory disease.

Contraceptive services

Given the specific issues for women on HIV treatment, where can women go to get the right advice? In the general population, most women seek contraception from their general practitioner (GP) or from a community contraceptive clinic.

Emergency contraception

If you are relying on condoms for contraception, specialists say it is essential that you are aware of emergency contraception in case a condom breaks or comes off.

The emergency contraceptive pill is a hormonal method, and it is affected by antiretrovirals. This means that the usual 1.5mg dose may be ineffective, and in this case UK guidelines recommend that you take two pills, in other words a 3mg dose.[13] Emergency contraception is often sought over the counter in a local pharmacy where staff may not ask about the use of HIV drugs, and you may not wish to disclose your HIV status. You could ask to speak privately to the pharmacist or say you take antiretrovirals as this may be less disclosing.

Alternatively an intrauterine device (IUD) fitted within five days of either unprotected sex or ovulation will work as an emergency contraceptive. This is unaffected by antiretrovirals and can be more reliable.

Many women with HIV continue to do so, but if they don't feel comfortable disclosing their use of anti-HIV drugs or are not aware that it is important to do so, they won't get the right advice. Also, some, but not all, mainstream services may lack confidence in dealing with drug interactions.

Disclosure and specialist knowledge are less likely to be problems if a service is provided by the HIV clinic, or by a service attached to it. Some HIV clinics are making particular efforts to address women's sexual and reproductive health needs, by providing specialist clinics for women with HIV where contraception can be provided along with sexually transmitted infection screening, annual cervical screening, investigation of gynaecological problems and advice on conception.[14,15] Studies presented at this year's BHIVA conference suggested that such integrated, holistic services would be popular.[16,17]

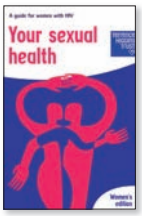
There is a specialist clinic available to women at the Chelsea and Westminster, but Ursula Harrisson doesn't feel that this is enough. "The problem with having a dedicated clinic once a week is that women don't necessarily have the time to come in that day," she says. "They may have their HIV appointment on another day or they may be busy with work or childcare."

The hospital is developing a system so that specialist nurses and doctors are always available to address women's health issues whenever the HIV outpatient clinic is operating.

However the services provided vary across the country, and many HIV clinics won't have the resources to provide specialist services. Many women will continue to go to mainstream services for contraception.

But that doesn't mean that the HIV clinic has no role to play. HIV clinicians and pharmacists will still be available to answer women's questions about interactions between their antiretroviral drug regime and their preferred method of contraception. ■

For more information



● Terrence Higgins Trust has published a booklet for women with HIV called *Your Sexual Health*, which includes a comprehensive section on contraception. Call THT Direct on 0845 12 21 200 for a copy.

● The UK guidelines on the sexual and reproductive health of people living with HIV were published in 2008. Section five covers contraception, and the complete document can be viewed here: www.bhiva.org/cms1191550.asp

● The Faculty of Sexual and Reproductive Healthcare publishes detailed guidance on all contraceptive methods, which takes note of specific issues for women using antiretrovirals. www.ffprhc.org.uk

● The University of Liverpool's HIV drug interactions website provides the detail on interactions with each antiretroviral drug. www.hiv-druginteractions.org

● The THT booklet *Your Sexual Health* and NAM's patient information booklet *HIV & Women* are both available through NAM's free booklet scheme. The scheme works with clinics and organisations in the UK – contact Rose for more information on 020 7840 0050 or email rose@nam.org.uk.

Regularly in the news since the first cases were identified earlier this year, what does the swine flu epidemic mean for people with HIV in the UK? *Gus Cairns* has a look.

Q: I've heard that there will be huge numbers of cases of swine flu this autumn in addition to seasonal flu.

A: Firstly, it may surprise some people to hear that the number of cases of 'flu-like illness' notified to doctors plummeted during August.

Flu reports peaked at about 225 new cases per 100,000 people (one case per 444 people) in the week ending 21 July.[1] Since then flu cases have fallen almost as fast as they rose and as of the week we are writing (week ending 30 August) the number of new cases being reported is about 20 per 100,000. This is still considerably above the average for this time of year, but at present the epidemic is not rapidly increasing.

Seasonal flu tends to peak around Christmas – last year about 45 cases per 100,000 were reported in Christmas week. Some experts are concerned there may be a considerably larger flu peak this autumn, possibly sparked by the return of children to school. The truth is that this new flu virus has surprised us so far and we simply don't know what it is going to do next.

Q: We know people with HIV are specially vulnerable to flu. Will we see a lot of sickness and deaths in people with HIV?

A: Swine flu is somewhat more contagious than seasonal flu because it's a new strain and few people have pre-existing immunity. But it doesn't, thankfully, appear to be more virulent for most people.

We will probably see the same proportion of complications and deaths due to swine flu in people with HIV as that from seasonal flu. Immune suppression may make the complications of flu worse: this especially applies to people with pre-existing lung conditions such as TB, asthma and COPD (emphysema). Because of this, people with HIV are amongst the groups entitled to free seasonal-flu vaccination each year.

However flu is not an opportunistic infection: people with HIV are no more likely to acquire flu than the general population and, as long as they don't develop complications, unlikely to die from it.

Seasonal flu particularly affects the people who are classically vulnerable: small children and, in particular, the elderly. The immunosuppressed also belong to that group. But a useful analysis in *Eurosurveillance* journal[2] of deaths due to swine flu in the early stage of the epidemic (before July) found that, to quote the paper, "healthy young adults" were the most likely group to die from swine flu with peak mortality in the 20 to 49 age group.

Ninety per cent of the people whose medical history was well documented who died with swine flu had another underlying medical condition, with obesity and/or diabetes the most common one. There was also a strong association between pregnancy and swine flu.

"Immunosuppression" was seen in 7% of people who died, but in the people where the cause of immune suppression was

known, it was due to things like cancer chemotherapy and transplants and not HIV. Out of the 218 cases documented in the paper where an underlying condition was recorded, there was not one person *known* to have HIV.

Q: If I think I have flu what should I do?

A: If you think you have flu you should call the National Pandemic Flu Service (NPFS) on 0800 1513 100 or log on to www.pandemicflu.direct.gov.uk.

The general advice is to stay at home, to avoid spreading flu as well as to rest, and to restrict medications to ones for aches and fever such as paracetamol. If it is felt that you have flu you will be offered antivirals, which can be collected by a 'flu friend'.

If you want to avoid passing it on to people at home, use a tissue when you cough and sneeze, dispose of tissues carefully, wash your hands scrupulously, and regularly clean hard surfaces. Alcohol-based hand rub after touching surfaces can help too. There is no evidence that wearing a face mask will stop you catching flu. There is some evidence that wearing a mask may reduce the chances of you transmitting flu when you've very infectious and close to people; otherwise the Health Protection Agency only recommends them for healthcare workers.[3]

Regarding the antiviral capsule oseltamivir (*Tamiflu*) and the inhalation zanamivir (*Relenza*), their efficacy in reducing symptoms is mild: both reduced the length of time people had feverish symptoms by one to one-and-a-half days out of an average five.[4,5] They were quite effective at preventing flu, reducing the incidence of other household cases by 70-90%,[6,7] but this requires a ten-day course of treatment and obviously involves starting treatment as soon as one person develops symptoms.

Drug resistance is a problem in treating flu, as it is in HIV. In the last two years one of the seasonal flu viruses has already become resistant to oseltamivir, and the first case of resistant swine flu was reported from Denmark at the beginning of July.

For this reason the *British Medical Journal*[8] recently proposed that antivirals should only "still be considered for people on medication for asthma, obese people, and pregnant women who have been in close contact with probable cases". However at present people with immunosuppression are entitled to receive *Tamiflu*, so to obtain it and for more information phone the NFPS.

Q: When *should* I seek medical help?

A: The advice initially is to phone the NFPP as above and not to go to your GP or the hospital. They will advise if you need to seek medical help – though if symptoms suddenly get much worse or are still getting worse after five days, safety is the first priority.

The World Health Organization provides a useful list of symptoms that indicate complications and which should indicate a call to the doctor or to A&E. They include:

- Shortness of breath, either during physical activity or while resting
- Difficulty breathing
- Turning blue
- Bloody or coloured sputum
- Chest pain
- Altered mental state, including drowsiness and confusion
- High fever that persists beyond three days
- Low blood pressure
- In children, warning signs include fast or laboured breathing, lack of alertness, difficulty in waking up, and little or no desire to play.

One or more of the above symptoms, could indicate something altogether more serious than swine flu such as TB, pneumonia or a heart condition. So it's important to get a proper diagnosis.

If your CD4 count is under 200, it is important that you seek advice if you have symptoms of swine flu, particularly if your symptoms are severe.

Q: What about my regular health appointments?

A: If you have flu you shouldn't be trying to struggle to the clinic to get your quarterly CD4 count done, both for your own sake and because you may infect others.

The NHS is also worried about the impact a serious autumn epidemic could have on health services if a lot of healthcare workers get sick. Contingency plans have been put into place by some commissioners to issue HIV drugs for longer periods in case appointments need to be postponed or drugs cannot be home-delivered on time. It is always a good idea to keep at least one month's supply of HIV drugs at home. At your next appointment you could discuss having extra supplies.

Q: What about the vaccine? I've heard that a third of healthcare workers won't take it because they're worried about safety.

A: The government has said that people with HIV will be a priority group for swine flu vaccination. As with seasonal flu, you will get it from your GP. The first batch of the swine flu vaccine arrived in the UK on 28 August, but is undergoing safety tests by the European Medicines Agency. It is unlikely to be licensed until October.

Whether the vaccine will benefit people with HIV is at present an open question based both on getting more data on safety and more data on whether people with HIV in general or with low CD4 counts are at increased risk.

It's true that a third of nurses and GPs in two separate polls said they would be reluctant to be vaccinated for swine flu, and up to 60% of GPs expressed some doubts based on concerns about it not being safety-tested for long enough,[9] but this needs to be put into the context of a traditionally low uptake of seasonal flu vaccine in health workers (about 15%).

It is important at this stage not to draw any conclusions either about what will happen to people who do take the vaccine or what will happen if they don't. Severe adverse effects caused by vaccines are very rare. The health workers' stance was controversial because being vaccinated would protect patients as well as themselves. Professor David Salisbury, the Department of Health's Director of Immunisation, said: "They have a duty to their patients not to infect their patients and they have a duty to their families." ■

For more advice see the NHS website on **www.nhs.uk** or phone the National Flu Pandemic Service on 0800 1513 100/200.

IAS conference news

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HPV vaccine

Cancer danger spurs calls for HPV vaccine studies

Human papillomavirus (HPV), the group of viruses that cause anal and cervical cancer and also cause genital warts, leads to much more anal cancer in HIV-positive people than in HIV-negative, according to one study reported at the IAS conference.[1]

It found that the annual risk of anal cancer has increased from 11 cases per 100,000 before 1996 to 128 after 2006. This is nearly 100 times the rate in the general population. The rate in people who have had HIV for over 15 years is 348 per 100,000: one case in 288 patients a year.

Meanwhile another study from South Africa found that pre-existing HPV infection considerably increases the risk of acquiring HIV.[2] It found that infection with HPV types 16 or 18, which cause 70% of cancers, multiplied the risk of HIV infection in men four to five times.

Both of these studies suggest there might be benefits from giving the HPV vaccine to people with HIV and people at risk of it. In the second, researcher Bertrand Auvert agreed this was worth investigating as an HIV prevention measure.

In a third study[3] researcher Stephen Berman looked at HPV prevalence and subtypes in HIV-positive gay men and found that 56% did not have antibodies to HPV 16 or 18 and might therefore benefit from being vaccinated against them. He found another 11% with weak antibody responses who might also benefit from a booster shot of vaccine, though this idea needs more research.

The importance of HPV prevention was further underlined by a South African study[4] of HIV-positive women with pre-cancerous cervical cells. Only 55% of them responded to surgical treatment, compared with 17% of HIV-negative women.

HIV treatment

New ways to use old drugs

A number of studies of licensed drugs modified conventional wisdom on how to use them.

One study[1] found that it was safe to stop boosting the protease inhibitor drug atazanavir with ritonavir after the first eight months on therapy. A group of 419 treatment-naive patients were randomised either to continue taking a regimen containing atazanavir plus ritonavir (plus abacavir/3TC), or to stop taking the ritonavir. By the 19th month of the study significantly more patients on unboosted atazanavir had a viral load below 400 than on atazanavir/ritonavir (92% versus 86%). Patients who stopped ritonavir also experienced a fall in their cholesterol levels and fewer developed the benign jaundice that is sometimes a side-effect of atazanavir.

Atazanavir is often preferred to other protease inhibitors because it does not raise blood lipid (fat) levels. Another study compared boosted atazanavir with another lipid-friendly drug, nevirapine.[2] It found that in patients who started with a viral load over 100,000, significantly more patients on nevirapine than on atazanavir achieved a viral load under 50 (60% versus 52%). After 48 weeks two-thirds of patients taking either atazanavir or nevirapine had viral loads under 50.

Two studies found that simplifying therapy to a single drug appeared to be safe in the case of the protease inhibitor darunavir (boosted by ritonavir). The MONET study[3] found that 86% of patients taking solo darunavir and 88% of patients taking conventional triple-therapy including darunavir maintained viral loads under 50. Meanwhile a French study, MONOI,[4] found that 87% of patients on darunavir monotherapy achieved viral loads under 400 compared with 92% on triple therapy. Temporary 'blips' in viral load were more common in monotherapy subjects, however.

Investigator Christine Katlama said that the majority of patients did just as well on monotherapy but that the effects of less-than-perfect adherence were more apparent when patients used a single drug.

Abacavir

Abacavir: heart attack link less strong

An apparently strong link between the antiretroviral (ARV) drug abacavir and heart attacks looks a little weaker after two studies[1,2] at the IAS conference suggested that the observed increase could be due to factors like kidney disease and recreational drug use.

Last year analyses of two large studies, D:A:D[3] and SMART,[4] found taking abacavir approximately doubled the risk of heart attacks and other cardiovascular events.

At the IAS, one large study looked at nearly 20,000 patients from the US Veteran's Administration. The use of abacavir was associated with a 27% increase in heart attacks and a 17% increase in strokes compared with people taking other ARVs.

These modest increases disappeared entirely when the investigators took into account people's other risk factors. In particular, they found that people with kidney disease were significantly more likely to have heart attacks – and also significantly more likely to take abacavir, because of the fear of tenofovir-related kidney disease associated with abacavir's main competitor tenofovir.

Meanwhile a study from Spain followed what happened in a group of 80 patients randomised either to take abacavir/3TC or tenofovir/FTC. This trial was too small to measure cardiovascular disease risk directly, so instead investigators measured biomarkers known to be associated with

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risk such as C-reactive protein. They found no significant differences between patients taking abacavir and those taking tenofovir.

In the meantime, in another piece of better news for the drug, a study[5] in the *Journal of Infectious Diseases* has found no evidence that abacavir is significantly less potent than tenofovir in patients who started with a high viral load. Patients in the UK CHIC cohort taking abacavir were no more likely to experience treatment failure than those taking tenofovir – a finding that contradicts a study presented last year.[6]

Maraviroc

Gene test may increase maraviroc use

A new cheap test for tropism – the kind of cell a strain of HIV prefers to infect – may clear the path for greater use of an innovative HIV drug, the IAS conference heard.[1]

Maraviroc (*Celsentri*) was approved for use as a new HIV drug two years ago, but has languished on the shelves. As of March this year, the number of patients prescribed it in London was zero.

This is because maraviroc does not work against every type of HIV. HIV can bond with two different cell surface molecules or co-receptors. The vast majority of transmitted HIV bonds to the CCR5 receptor. But as time goes on more of it becomes able to bond also to the CXCR4 receptor, sometimes exclusively. HIV can therefore be 'R-tropic', 'X-tropic' or 'mixed tropic' and, because maraviroc works by blocking off the CCR5 receptor, it will only work against R-tropic virus.

The test to determine R-tropism, the *Trofile* assay, is expensive (initially at US$1960 a test) and takes three weeks to turn around. This is because it is a phenotypic test which involves incubating HIV with susceptible cells.

Professor Richard Harrigan of the British Columbia Centre for Excellence in HIV/AIDS, however, has developed a cheaper genotypic test which determines the sequence of building blocks in the V3 loop of HIV's envelope protein that bonds to the co-receptors. The two tests performed almost identically.

Cost is not the only barrier to maraviroc use. Clinical trials found that it was not as potent as the standard drug efavirenz in treatment-naive patients. Maraviroc's manufacturers Pfizer always suspected that this was due to failure to detect patients with small amounts of X4 virus. By re-analysing samples with a new, more sensitive *Trofile* assay, they found that a statistically equivalent proportion of patients achieved viral loads under 50 on maraviroc as did on efavirenz (58.5% versus 62.4%).[2]

Anti-HIV drugs

New integrase inhibitor looks good...

A second-generation integrase inhibitor drug, S/GSK1349572, has achieved high rates of HIV viral suppression after only ten days, a study[1] by its joint manufacturers GlaxoSmithKline (GSK) and Shionogi has found.

We have one licensed integrase inhibitor drug, raltegravir, which is approved as a first-line therapy in the US and is likely to be approved in Europe following results from another study, which found that it was as effective as efavirenz and had 30% fewer side-effects.[2] However, patients taking a failing therapy based on any of the first generation of integrase inhibitors are unlikely to benefit from the others such as the yet-to-be-licensed elvitegravir. Test-tube studies presented at Cape Town found that S/GSK1349572 worked against viruses resistant to other integrase inhibitors.

The drug also has what GSK called "unprecedented" potency. A 50mg dose given as the sole anti-HIV drug for ten days produced a viral load under 50 in 70% of patients. This compares with 25% under 50 after two weeks in the two pivotal clinical trials of raltegravir,[3,4] itself seen as an unprecedented initial viral load drop. The only side-effect that was more common on S/GSK1349572 than placebo was headache.

...but who should take it next?

A phase 2b clinical trial is starting of the 50mg dose of S/GSK1349572. However in July a dispute arose between GSK and American and European treatment activists about who should be included in this larger trial.

Members of the European AIDS Treatment Group (EATG) and the US AIDS Treatment Activists' Coalition (ATAC) urged that the lowest CD4 count for patients on the trial should be 200 rather than 100 cells/mm^3 as originally proposed by GSK.

The European Medicines Agency says that no treatment-naive patient with a CD4 count under 200 should be included in a trial of a new drug, as there are plenty of alternative established regimens. A straw poll of European physicians conducted by EATG found that only three of 38 doctors thought it was legitimate to try new HIV drugs on patients with CD4 counts under 200.

Shionogi-GSK eventually changed their mind about the inclusion criteria for the study and issued a joint press release[1] with EATG and ATAC.

GSK commented: "In response to evolving regulatory recommendations and HIV community consensus on the appropriate patients to include in dose-ranging studies of investigational agents, the amendment increases the minimum allowable CD4 count to 200 cells/mm^3."

"We have evolved from the days of urging faster drug development to now in some cases saying 'What's the hurry?'" former EATG chair Nikos Dedes told *HTU*.

other news

UK policy

Government considering revising policy on charging foreign nationals

The government is considering allowing refused asylum seekers and some other undocumented migrants in England free health care, including antiretroviral drugs, Junior Health Minister Ann Keen announced on 20 July.

These measures have not been finalised and will be put out for consultation in the autumn. They will also only apply to England: Scotland and Wales have their own systems.

HIV drugs are normally not free of charge to people who are not entitled to residence in the UK. This is despite the fact that treatment for other conditions that are regarded as requiring 'immediately necessary treatment' is free. These include pregnancy and some AIDS-related conditions like TB – resulting in situations where some patients have been treated for TB but charged for the ARVs that would prevent it recurring.

In a statement to the House of Commons, Ann Keen said that the government was committed to ensuring that "immediately necessary treatment should never be denied or delayed to those that require it" and confirmed that NHS guidance is being revised to ensure this is made clear.

Last year the National AIDS Trust and the British HIV Association sent a joint letter to the Department of Health demanding that HIV was re-classified as a condition that required 'immediately necessary treatment' and that it should therefore never be withheld if people could not afford to pay for it.

Herpes and HIV

Even healed herpes increases HIV risk

Even infection with the herpes virus HSV-2 where there are no herpes sores present considerably increases the risk of HIV infection, a study in *Nature Medicine* has found.[1]

Large studies that treated herpes with the drug aciclovir have made disappointingly little difference to HIV acquisition rates in people with HSV-2.[2] The study suggests why, after uncovering a mechanism for HIV infection through skin that has apparently healed from herpes sores.

There were 37 times more CD4 cells at the sites of healed sores than in skin that had never been affected, and a lot more CD4 cells with the CCR5 receptor essential for the vast majority of HIV infection (see maraviroc story on page 15). As a result, HIV replicated five times more quickly in tissue from herpes-affected areas than it did in other areas and aciclovir treatment made no difference.

They also found in healed areas a higher number of cells called dendritic cells, which are not themselves infected with HIV but grab hold of virus and carry it deeper into the body.

"Sores and breaks in the skin due to HSV-2 are associated with a long-lasting ... influx of [immune] cells that are a perfect storm for HIV infection," said researcher Larry Corey. "We believe HIV gains access to these cells mainly through microscopic breaks in the skin that occur during sex."

Anti-herpes drugs may not affect this long-lived immune response and an HSV-2 vaccine may be necessary, he said.

HIV prevention

Gay men substantially reduce risk behaviour after diagnosis

A study from London[1] has found that gay men who were diagnosed during early HIV infection substantially reduced their risk behaviour.

The study found that 65 out of 96 men studied reduced their number of sexual partners after diagnosis and only seven had more. The proportion always using condoms when they were insertive ('top') for anal intercourse doubled from 31% to 61% and the proportion always using them when receptive more than tripled from 17% to 64%. There was also a 44% reduction in the number of men diagnosed with a new sexually transmitted infection.

Three-quarters of the 98 men surveyed were deemed by researchers to have behaviour which posed no risk of onward transmission. Nonetheless this left 24 who did continue with risky behaviour. These tended to be men who already had a higher than average number of partners; there was also an association with the recreational drug ketamine.

The study concentrated on men in primary infection because studies have indicated that between a quarter and a half of all HIV infections are transmitted by people in early infection. This study therefore can't say if London gay men diagnosed in later infection would decrease their risk behaviour by as much, though some studies from the USA found they did.

Infectiousness

How reliable is an 'undetectable' viral load?

A Swiss study[1] of 6168 patients has indicated that the chances of a person with a viral load under 50 having a viral load of over 1000 at the next test are only 2%, and only 1% if the person started taking HIV drugs in the era of triple-combination therapy.

A viral load of 1000 is generally regarded as the limit above which people are more likely to be 'infectious', though there are isolated cases of people apparently transmitting HIV with lower viral loads. This therefore helps answer the question: if your last viral load was undetectable, does this mean you are uninfectious?

The chances of someone having a detectable viral load (above 50) on their next test was 14%, but only 5% in patients who had started treament with triple combination therapy. This 14% probability increased to 30% if patients missed more than one dose of their antiretroviral drugs between tests.

The investigators looked in more detail at the cases where viral loads rebounded to over 1000. They found that in 77% of cases this could be explained by poor adherence, but in the remainder there was no apparent explanation.

They conclude that although in the majority of cases people may rightly conclude that they have remained 'undetectable' and probably uninfectious, "unexplained rises in viral load to over 1000 copies per millilitre, although rare, do occur."

references to all articles [continues on page nineteen]

Walking back to happiness [page four]

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Contraceptive choices for women with HIV [page eight]

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Don't panic! A short Q&A on swine flu [page twelve]

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IAS conference news [page fourteen]

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Cancer danger spurs calls for HPV vaccine studies

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New ways to use old drugs

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Abacavir: heart attack link less strong

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htu: here's what you said

Selina Corkery looks at the results of the 2009 readers' survey.

A big thank you to all of you who took part in this year's *HTU* readers' survey. We have, over the years, asked you about some significant changes to *HTU* – such as the name change from AIDS Treatment Update in 2007, and a radical redesign in 2005.

This year, we were interested in how people feel about HTU since those changes – monitoring how well *HTU* fulfils the remit we set it in 2005 of developing the expertise of people living with HIV and providing information for HIV-positive health, allowing readers to make informed decisions about other aspects of their health, including lifestyle choices.

"There are many complex issues to consider when switching treatment. Regardless of how well one understands them, HTU has been an excellent guide to ensure that my doctor has considered all the relevant issues."

377 people took part in this year's survey – a response rate of about 5% of copies in circulation. Although that's not as high as for previous surveys, we think it still gives us a good idea of what you think about *HTU*.

Firstly, we're pleased to say that you read *HTU* thoroughly. About two-thirds of those who answered the survey said they regularly read *HTU*'s entire contents, with 57.4% of readers saying they start at the beginning and read it through to the end. Others decide what to read by flipping through it (22.5%) or looking at the contents list (16.4%) but each element of *HTU* is read by around two-thirds of respondents.

Just over 71% of respondents said someone else read their copy, with between one and 'five or more' additional people reading those copies.

As well as sharing their copy, 63% of those of you who completed the survey said you recommended *HTU* to others. Mostly this was to friends, family or anyone who was HIV-positive (some recommended it specifically to newly diagnosed people and others to those with treatment issues), but others recommendations were also made to patients, non-HIV healthcare workers, colleagues and social workers.

The key reason for *not* recommending *HTU* to others was the fact that it would disclose the reader's status. Clearly, concerns about stigma and discrimination are still very present for people with HIV (and we're exploring these issues in more detail in a series of articles in *HTU*). But other reasons included that the detailed content might be too technical or frightening to people (especially those recently diagnosed).

75.5% of respondents find *HTU* easy to understand, and 56.3% think that the technical level is about right. Roughly equal numbers of people (between 2 and 5%) find it too difficult or too simple, and too technical versus not technical enough.

Secondly, most of you think *HTU* keeps you informed: 66.9% of respondents had learnt something useful to them, and 24.5% had learnt something that seemed vitally important to them.

"I was have difficulty achieving [an] undetectable viral load, but through reading about different treatments available, I was able to discuss new treatments and adjust my medication… I now have [an] undetectable viral load."

And you use the information in it. Just over 90% said they were more likely to discuss their health and treatment with their healthcare team and 93.3% said they felt more confident in doing so – armed with the information they needed to ask the right questions and, if necessary, push for a particular outcome.

93.3% said they felt better equipped to take decisions about their treatment and care and 50.2% had taken a decision or made a change to their treatment and care based on something they had read in *HTU*.

We asked some questions about the 'look' of *HTU* and this is where your responses became more divergent, with two schools of thought. Some of you value illustration to increase accessibility and readability, and others would prefer to have more written information over increased use of photography, illustration or graphs and diagrams. However, the latter group was in the minority – and there was recognition that there would be readers who would find a very text-heavy style off-putting or even inaccessible.

"I feel really connected with current HIV issues and treatments – especially now that I have moved out of London. Thank you very much."

You gave us some very useful suggestions on what would make *HTU* more accessible and useful, including the use of glossaries, summaries and more personal stories.

What about the content? By far the most requested subject area was new/future treatments and science (83.6%), but current treatments and HIV-related conditions were also in demand (81.1%). Between 50 and 65% of respondents wanted to see information on:

- co-infections and other medical conditions (66.1%)
- social and psychological issues (68%)
- healthcare services and the NHS (58.7%)
- political, policy and legal issues (57.9%).

And 36.1% of respondents overall would like to see more on prevention, or on sexual and reproductive health, but this is a little higher in the younger age ranges and for heterosexual respondents (43.1%).

We'll be taking into account your suggestions for future content, which means that you can expect to see more coverage of issues such as ageing, mental health, employment, managing finances (including benefits), and being in a serodiscordant relationship – and we'll take your suggestions into account in planning NAM's other information materials too.

And the group of readers *HTU* reaches? That's perhaps where we need to make more progress.

HTU has a lot of longstanding and loyal readers (36.5% of respondents had being reading it for ten years or more, and nearly 50% for between three and nine), and we're delighted you're still getting new information out of it (as the results of the survey show).

Many of the issues covered in *HTU* are of interest to anyone with HIV, or those who care for/about them. But some of our readers, because of their gender, sexuality or how they became infected, for example, described themselves as feeling 'invisible' in much of *HTU*'s content and we will be aiming to redress that. Our readership doesn't match the make-up of the HIV-positive population in the UK, and it certainly doesn't reflect the characteristics of many of those who are more recently diagnosed. Very few of our survey respondents came from the African community – a situation it's important to address.

We're not planning wholesale changes but, rather, aiming to make it clear that *HTU* is for anyone with HIV, while still covering issues specific to groups within that population.

If you haven't let us know what you think about *HTU*, or if you have but have more to say, we're always eager to hear from you. You can ring us on 020 7840 0050, email us at info@nam.org.uk or use our new online feedback pages, including one for *HTU*:
www.aidsmap.com/cms1283653.aspx

We really value feedback from people who use our information materials, whether someone uses them regularly, as *HTU* subscribers do, or only occasionally when a specific need arises.

references to all articles continues

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Gene test may increase maraviroc use

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2 Heera J et al. *The MERIT study of maraviroc in antiretroviral-naive patients with R5 HIV-1: 96-week results.* Abstract TuAB103.

New integrase inhibitor looks good…

1 Lalezari J et al. *Potent antiviral activity of S/GSK1349572, a next generation integrase inhibitor, in integrase inhibitor naïve HIV-1-infected patients.* Abstract TuAb105.

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…but who should take it next?

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Other news [page sixteen]

Even healed herpes increases HIV risk

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Gay men substantially reduce risk behaviour after diagnosis

1 Fox J et al. *Reductions in HIV transmission risk behaviour following diagnosis of primary HIV infection: a cohort of high-risk men who have sex with men.* HIV Medicine 10:432-438, 2009.

How reliable is an 'undetectable' viral load?

1 Combescure C et al. *How reliable is an undetectable viral load?* HIV Medicine 10: 470-76, 2009.

goggles on, helmet secured, trainers tied...

On Saturday 1st August, three of NAM's bravest staff took on the London Triathlon Team Relay Challenge to raise money for NAM.

It began with a wetsuit-clad Caspar (our Director) bravely diving into the freezing cold Thames for the 1500m swim. The 17th man out of the water, he dashed to pass the baton to Kieran (our Graphic Designer) who pedalled as fast as his legs would go around the gruelling 40km track. Tom (our Web Developer) took on the last leg of the race, valiantly pounding the tarmac for 10km, smiling (or perhaps grimacing) the whole time, and cheered on the whole way round by NAM supporters.

The triumphant trio sprinted across the finishing line together as the timer clicked to 2 hours 47 minutes (and 24 seconds) and NAM secured their proud place as 217th out of 406 teams. What an effort!

On behalf of Caspar, Kieran and Tom and the whole NAM team we would like to thank you all for your generous donations. The money we raise through events like this really does make a difference to the work NAM is able to achieve ... not to mention making the aches and pains the NAM team felt the next day seem worth it!

We are still hoping to achieve our £3000 target so any contribution, no matter how small, is hugely appreciated. With your help, NAM works to empower people living with HIV to understand their health and treatment and to support them to live longer, healthier lives.

Visit our donation pages at **www.aidsmap.com/triathlon** to see pictures from the day – and to give what you can. Alternatively you can post a cheque made payable to NAM to the address on HTU's inside front cover, or ring us on 020 7840 0050 to donate. Thank you!

Fancy doing something similar for NAM? NAM has brand new justgiving.com pages so if you're planning on doing something sporty, something crazy, or just have a big birthday or anniversary coming up, why not turn it into a fundraiser for NAM? For more information contact NAM on 020 7840 0050 or email laura@nam.org.uk

thanks to our funders

NAM's treatments information for people living with HIV is provided free thanks to the generosity of:

Abbott Laboratories Ltd; Abbott Fund; Allan & Nesta Ferguson Charitable Trust; Avexa Ltd; Boehringer Ingelheim Ltd; Bristol-Myers Squibb Pharmaceuticals Ltd; Cavidi AB; Delphic Diagnostics Ltd; Derek Butler Trust; Government of the United Kingdom, Department of Health; Government of the United Kingdom, Department for International Development; Diana, Princess of Wales Memorial Fund; Elton John AIDS Foundation; Estate of Sidney Klieff; F. Hoffmann-La Roche Ltd; Gilead Sciences Ltd; GlaxoSmithKline PLC; GlaxoSmithKline's Positive Action; Hugh Fraser Foundation; Lloyds TSB Foundation for Northern Ireland; Manchester City Council; Merck & Co., Inc; Merck Sharp & Dohme Ltd; Merck Sharp & Dohme Romania SRL; Miss Agnes Hunter's Charitable Trust; NHS Ashton, Leigh & Wigan; NHS Birmingham East and North; NHS Bolton; NHS Brighton & Hove; NHS Manchester; NHS Norfolk; NHS Pan-London HIV Prevention Programme; NHS Salford; NHS South East Essex; NHS South West Essex; NHS West Sussex; NHS Worcestershire Health Services; Pfizer Ltd; Roche Molecular Systems, Inc.; Roche Products Ltd; Sanofi Pasteur MSD; Schering-Plough Corporation; Tibotec (a division of Janssen-Cilag) Ltd; UNAIDS; World Health Organization. .

NAM would also like to acknowledge the generous support of its individual donors.

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Every year NAM provides information resources, like *hiv treatment update*, to thousands of people living with HIV, completely free of charge. To do this we really do rely on the generosity of people like you to help us continue our vital work. You can make a difference today. Please make a donation by visiting **www.aidsmap.com/donate** or by ringing us on **020 7840 0050**.

where to find out more about hiv

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  NAM's factsheets, booklets, directories and website keep you up to date about key topics, and are designed to help you make your healthcare and HIV treatment decisions. Contact NAM to find out more and order your copies.
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  Visit our website for the latest news about HIV & AIDS, a fully searchable treatments database and a complete list of sexual health clinics in the UK.
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  An HIV treatment phoneline, where you can discuss your issues with a treatment advocate.
  0808 8006 013
  Mon-Wed, 12pm-4pm