

# AIDS TREATMENT UPDATE

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## Choices in pregnancy

**Studies emphasise importance of low viral load in preventing mum-to-baby transmission**

BY ANNA POPPA

Recent months have seen a deluge of new information being reported on pregnancy and HIV of importance to women and their carers in rich and poor nations alike. As we reported in last month's *News in Brief*, several relatively low-cost interventions such as short-courses of anti-HIV drugs have been shown to have a significant impact on the spread of the virus to newborns in developing countries, if only the political will and financial means to implement them can be found.

In the West, transmission rates have fallen dramatically, to the point where health officials in the US now routinely discuss whether and how mother-to-baby transmission can be eliminated. Despite this degree of confidence, there are many important but unanswered questions about how HIV-positive women and their doctors should manage pregnancy. Though some treatment guidelines consider standard AZT monotherapy (still the only anti-HIV regimen to have been well studied in pregnancy) to be unacceptable treatment in the age of HAART, the safety of most antiretrovirals in pregnancy is not known.

How women with HIV deliver their babies has become just as controversial. A number of studies have reported lower rates of transmission in women taking AZT who gave birth by a procedure called elective caesarean section (which is a caesarean delivery planned for the 38<sup>th</sup> completed week of pregnancy), compared to either vaginal delivery or an emergency caesarean. However, there is no clear information about whether elective caesarean section might also be beneficial in women taking combination therapy with very low viral load at the time of delivery (see report on page 4).

Ironically, the great success of anti-HIV treatment and appropriate antenatal care in reducing rates of

mother-to-baby transmission to such low levels may well mean that these issues will never be fully resolved through randomised, controlled clinical trials – the gold standard of clinical research. To detect a reduction in the rate of transmission from say 2% to 1% would require the enrolment of many thousands of women into a trial, a prohibitively large number.

### VIRAL LOAD THE KEY FACTOR

Doctors have known for some time that there are a number of factors which influence the risk of HIV transmission from mother-to-baby. Some examples include the mother's viral load and CD4 count, whether she has access to AZT during pregnancy, the antenatal and obstetrical care she receives, and whether the child is breast-fed or bottle-fed. Now new research from two large studies involving American women suggests that of all these factors, the most important is the mother's viral load.

Both reports were published last month in the *New England Journal of Medicine*. In the first, Lynne Mofenson reported on 480 mother-and-infant pairs who took part in a study called PACTG 185<sup>1</sup>. This trial was designed to investigate the effects of

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immunisation with HIV antibodies in women who were also being treated with AZT during their pregnancy. (The study was unable to detect any benefit due to the immunisation because of the unexpectedly low transmission rate seen in the study overall). Mofenson found the most significant predictor of transmission to be the mother's viral load level at delivery. Of 107 women who had viral load below 500 copies at delivery, none transmitted HIV to their baby. The transmission rate in those with detectable viral load (i.e. any viral load above 500 copies) was 6.7%.

The second report involved 552 mother-infant pairs who were enrolled in the Women and Infants Transmission Study<sup>2</sup>. The women in this study gave birth between 1990 and 1995, and so their use of anti-HIV therapy varied. Just under 60% (321 women) received no treatment at all during their pregnancy. The remainder received AZT either according to the 076 protocol (129 women; see sidebar on this page), or because it was indicated for their own health (101 women).

Again, this study found that the risk of transmission increased as viral load increased. None of the 57 women with viral load below 1000 copies transmitted HIV to their baby, regardless of whether they received AZT. Overall, the highest risk was seen in the subgroup of women who were not treated and who had viral load over 100,000 copies, where the rate of transmission was 63%.

Any use of AZT during pregnancy was associated with a lower rate of transmission (15.2% in treated women versus 24.6% in untreated women). This benefit was seen regardless of whether women's viral load fell in response to taking the drug, suggesting that the extent of AZT's treatment effect in pregnancy is not fully captured by viral load results, something which other researchers have proposed in the past. According to Dr Gareth Tudor-Williams of St Mary's Hospital, London, "There may be something about AZT which we've yet to discover in terms of being a kind of therapeutic vaccine for the baby".

The recent finding from the HIVNET study that a one-off dose of nevirapine given to otherwise untreated Ugandan mothers during labour, and to their infants at birth, reduced the risk of transmission (see *AIDS Treatment Update* 80) is further evidence that anti-HIV therapy may act as a form of post-exposure prophylaxis. Whether this might also be true of multi-drug HAART regimens is not known.

## IS THERE A 'SAFE' VIRAL LOAD LEVEL?

Taken together, the major finding of the two US studies is that women with low viral load below 500 to 1000 copies did not transmit HIV to their babies, regardless of whether they

## *Use of treatments continues to require careful balancing of potential risks & benefits to both mother & baby.*

had received AZT. However, there are several other studies which have reported transmission at very low viral load levels. A 1997 report from the French Perinatal Cohort found the transmission rate to be 2% in women with viral load below 1000 copies<sup>3</sup>, and other doctors have reported transmission even at viral load levels below 200 copies. This means that having a very low viral load is no guarantee of complete protection against mother-to-baby transmission.

Thus women whose viral load is very low and who have not previously been treated with anti-HIV drugs should still be offered AZT during pregnancy as its benefit appears to be greater than its effect on viral load.

## HAART FOR ALL PREGNANT WOMEN?

Though AZT is the only anti-HIV therapy which is licensed for use in pregnancy, both UK and US guidelines for the treatment of HIV-positive pregnant women recommend the use of multi-drug combinations where the mother's own health suggests this is appropriate treatment for her (see summary of UK guidelines on page 3). Three drug combinations have long eclipsed AZT monotherapy as the standard of care in adults with HIV who are not pregnant, and have consequently been advocated in pregnancy too. Prior treatment with sub-standard regimens (whether a single drug or dual therapy) is known to prejudice response to a subsequent three drug combination.

This new research further supports the use of HAART in pregnancy, not only because it is 'better' therapy for the mother, but because if reducing maternal viral load to very low levels results in very low levels of transmission, then HAART is much more likely to produce this outcome than AZT monotherapy.

## BALANCING CONCERNS ABOUT SAFETY

However, though there's no doubt that novel drug combinations are being increasingly used by pregnant women, there is very little

### THE 076 PROTOCOL

The 076 protocol is the regimen which was used in the trial which first established the preventative effect of AZT monotherapy in mother-to-baby transmission, (after the study's codename ACTG 076). The protocol has three components: AZT orally for the mother from the second trimester of pregnancy; AZT intravenously to the mother during labour; and AZT to the new-born for the first six weeks of life.

### ANTENATAL TESTING

Plans to ensure all pregnant women in the UK are offered an HIV test where announced by the Government in August. See this month's News in Brief for details.

hard evidence about their effectiveness and safety. In the last year, preliminary reports from three US clinics have described some 180 mother-infant pairs exposed to HAART during pregnancy where (so far) just one child has been infected<sup>4,5,6</sup>.

However, welcome as these findings are, they come from small, observational, uncontrolled studies and so cannot be used to draw firm conclusions. Until much larger numbers of women and children have been followed for longer periods, the 'true' rate of transmission will remain unclear, as will the longer-term safety of being exposed to antiretrovirals in the womb. Far from being a simple choice between treatment regimens which are either 'adequate' or 'inadequate', pregnant women's use of treatments continues to require careful balancing of the potential risks and benefits to both mother and baby.

As we have previously reported in *AIDS Treatment Update* (see issues 75 and 80), equally preliminary reports from French obstetricians have associated the combination of AZT and 3TC with eight cases of severe metabolic abnormalities, including two deaths, in uninfected children. A review of North American cohorts of children exposed to antiretrovirals in the womb has since found no evidence to support this proposed connection. Though UK health officials have advised that the benefits of preventative antiretroviral therapy in pregnancy currently outweigh the potential risks, it is necessarily the case that the more HAART is used in pregnancy, the more uninfected children will be exposed to a greater number of drugs in the womb.

Current UK guidelines on pregnancy have sought to strike a balance between these competing priorities, by continuing to recommend the use of AZT monotherapy to women whose CD4 count remains high and whose viral load is low, albeit for a shortened period beginning after the second trimester (sixth month) in order to limit the potential for development of drug resistance. That some

women will prefer to take a shorter course of treatment involving a drug combination is acknowledged by the guidelines' authors.

### WHICH HAART COMBINATION?

As is the case for anyone facing choices about treatment combinations, pregnant women will be influenced by a range of factors. Previous treatment and individual preferences about the volume of pills to be taken, the number and timing of doses per day, and the potential side-effects are all likely to be important in addition to concerns about the specific use of treatments during pregnancy. Though protease inhibitors are sometimes perceived to be less easy to tolerate by both mother and baby than NNRTIs, as Dr Gareth Tudor-Williams commented, "This is a somewhat data-free zone".

Though the recent HIVNET study has provided the first data on the effectiveness of short-course nevirapine in women receiving no other antiretrovirals, information on its use in treated women is lacking. This is, however, the subject of a large, ongoing international trial called ACTG 316. The number of women to be recruited has recently been increased, and a number of UK centres are expected to participate soon (see sidebar on this page).

### VIRAL LOAD NOT THE ONLY FACTOR

The studies reported by Mofenson and Garcia also highlighted a number of obstetric factors which influenced transmission. Premature delivery, an interval of more than four hours between rupture of membranes (the term for when the mother's waters break) and delivery, low birth weight (below 2500g or 5.5lbs), and an infection of the membrane containing amniotic fluid at delivery called chorioamnionitis, were all found to raise the risk of transmission. Obstetrical care which aims to reduce the incidence of these factors should further reduce transmission.

### NEVIRAPINE STUDY

Three London centres plan to take part in ACTG 316 and should begin enrolling women in the coming months. They are St Mary's, Newham General and St George's in Tooting.

### REFERENCES

- 1 Mofenson L et al. *NEJM* 341(5):385-393, 1999.
- 2 Garcia PM et al. *NEJM* 341(5):394-402, 1999.
- 3 Mayaux M-J et al. *Journal of Paediatrics* 131:857-862, 1997.
- 4 Beckerman K et al. 12th World AIDS Conference, Geneva, abstract 12151, 1998.
- 5 Stek A et al. 6th Conference on Retroviruses & Opportunistic Infections, Chicago, abstract 687, 1999.
- 6 Morris A et al. 6th Conference on Retroviruses & Opportunistic Infections, Chicago, abstract 686, 1999.

## UK guidelines on treatment in pregnancy

Current UK guidelines prepared by the British HIV Association (BHIVA) advise that women with high CD4 counts (for example above 200-500 cells) and low viral load (for example below 10,000-30,000 copies) should be offered AZT according to the 076 protocol, but suggest deferring treatment until the third trimester of pregnancy to limit the risk of drug resistance and reduce fetal exposure. Elective caesarean section is also recommended for women in this group, though the guidelines' authors note some women may choose a short-course of combination therapy instead, which they stop after delivery.

Women with advanced disease, a high viral load or low CD4 count are advised to take triple therapy (involving two nucleoside analogues plus either an NNRTI or a protease inhibitor). However, the lack of knowledge on safety is noted. Further viral load reduction is likely to further reduce transmission, so the benefits may outweigh the potential risks to the child, as well as being beneficial to the mother.

## THE DEBATE ON MODE OF DELIVERY

Earlier this year, an international team of researchers reported a meta-analysis of fifteen mother-to-baby transmission cohort studies<sup>1</sup>. By pooling their data, they reviewed 8,533 births in Europe and America, finding that the risk of transmission was reduced from 7.3% to 2.0% by the use of elective caesarean section ('c-section' for short). Overall, the rate of transmission was reduced by 87% in women who received anti-HIV therapy plus elective c-section compared to untreated women who delivered in other ways.

The French Perinatal Cohort reported an even bigger reduction; the use of AZT plus elective caesarean delivery resulted in a transmission rate of 0.8% compared to 6.6% in women on AZT with vaginal deliveries<sup>2</sup>.

Whilst these studies provide observational data, a recent report from the European Mode of Delivery Collaborative Study allocated women at random to elective caesarean delivery or vaginal delivery – so although the sample is smaller its findings are less open to bias<sup>3</sup>. 3 of 170 (1.8%) infants born to women assigned elective caesarean section, and 21 of 200 (10.5%) born to women assigned vaginal delivery were HIV-infected. This represents a reduction in the rate of transmission of 80%.

69.7% of women allocated elective c-section took antiretroviral therapy during pregnancy (mostly AZT according to the 076 protocol), along with 58.2% of women who were allocated to vaginal delivery. One of 119 (0.8%) babies delivered by elective c-section to treated mothers was infected. Importantly, complications following delivery were uncommon, and there were no serious adverse events in either group.

### ELECTIVE CAESAREANS FOR ALL?

Taken together, these studies suggest that planning delivery by elective c-section is an appropriate choice for women who are being treated with AZT. They do not provide useful information about the best mode of delivery for women receiving other anti-HIV combinations, who may already be at very low risk of transmitting HIV to their baby.

Those who suggest that elective c-sections may be unnecessary in women receiving HAART support their case by pointing to the various studies, such as those discussed in the preceding pages, which show that low viral load equals a low risk of transmission.

Another recently published European report may offer some guidance on identifying further women who might benefit

from elective caesarean delivery<sup>4</sup>. This analysis of 373 mother-infant pairs similarly found that transmission rates rose with increasing maternal viral load levels, (though there was no threshold below which transmissions did not occur). The majority of women in this study were untreated, though 21% received AZT. Overall, elective c-section was associated with a 79% decrease in transmission compared with vaginal delivery or emergency caesarean.

In a sub-group of women with high viral load, this benefit in favour of elective caesarean delivery persisted. Given that the majority of these women were untreated, this suggests that the subset of women who decline or cannot tolerate anti-HIV therapy, (or who are diagnosed at later stages of pregnancy) may be another group for whom elective c-section is an appropriate choice.

### RISK OF COMPLICATIONS

It has been argued that across-the-board elective caesarean delivery may expose some women to an increased risk of postnatal complications. Though no evidence of this was found in the European Mode of Delivery Collaborative Study noted above, earlier analyses of women in other studies, appeared to support this view.

In an analysis of postnatal infection and illness in 1,112 women in the Women and Infants Transmission Study, researchers found an overall rate of 19% in women who had elective caesareans<sup>5</sup>. Infectious conditions including endometritis, urinary tract infections and wound infections occurred after 11% of elective caesarean deliveries, 21% of non-elective caesareans, in 8% of women with vaginal forceps delivery, and in 4% of those who gave birth vaginally without the use of instruments.

Similarly, in an analysis of 497 women from PACTG 185, infectious conditions were seen after 26% of elective caesareans, 40% of non-elective caesareans, 19% of assisted vaginal deliveries, and 13% of spontaneous vaginal deliveries<sup>6</sup>.

### SUMMARY

Elective caesarean delivery has been proven to reduce mother-to-baby transmission in untreated women, and in women taking AZT in pregnancy. It is not known which mode of delivery is best for pregnant women whose viral load is fully suppressed by HAART, as these women may already be very unlikely to transmit HIV to their babies.

### REFERENCES

- 1 International Perinatal HIV Group. *NEJM* 340(13):977-987, 1999.
- 2 Mandelbrot L et al. *JAMA* 280:55-60, 1998.
- 3 Parrazini F for The European Mode of Delivery Collaboration. *Lancet* 353:1035-1039, 1999.
- 4 European Collaborative Study. *AIDS* 13(11):1377-1385, 1999.
- 5 Read J et al. 6th Conference on Retroviruses & Opportunistic Infections, Chicago, abstract 683, 1999.
- 6 Watts H et al. 6th Conference on Retroviruses & Opportunistic Infections, Chicago, abstract 684, 1999.

# A positive alliance

## News of a major new European/US study for HIV-infected children

INTERVIEW BY ANNA POPPA

**AIDS Treatment Update:** How did the proposed collaboration between PENTA (Paediatric European Network for Treatment of AIDS) and the US PACTG (Paediatric AIDS Clinical Trial Group) come about?

**Gareth Tudor-Williams:** Both in North America and Europe the number of infected but previously untreated children is fortunately dwindling due in large measure to the success of antenatal screening and prevention of mother/infant transmission. It was recognised that it would not be possible to recruit sufficient numbers of children in a timely fashion in the USA or Europe alone to answer clinically relevant questions.

Over the past eighteen months a dialogue has developed between several members of PENTA and PACTG. The resulting protocol represents a consensus on the highest priority questions that need answering although inevitably this has involved compromise on both sides and it isn't hard to see other questions that larger numbers could address.

**ATU:** What are these questions?

**GTW:** The trial is designed to answer the questions of what treatment to start with, and when to switch therapy, in children who are previously untreated. It will allow comparison of two different nucleoside analogue combinations as initial therapy with and without a protease inhibitor.

Optimal criteria for switching therapy have yet to be defined. There is a logical argument in favour of 'tight' control as soon as the virus becomes detectable (or if viral load fails to reach undetectable limits by week 24), then a switch should be made to a different and probably more intense regimen.

The problem with this approach given the limitations of drugs available to children is that this may rapidly use up all available options for therapy. An alternative approach would be to try and maximise the benefit of each regimen, and only switch when the viral load is consistently above a much higher threshold. This will preserve options for longer, and there is some evidence that virus replicating despite HAART may be less pathogenic inside the body.

Much discussion has taken place around the higher threshold. Below 1,000 copies has generally been associated with slow disease progression in children. An upper threshold

needed to be at least 1 log above this but it was felt that 100,000 copies was unacceptably high and a threshold of 30,000-50,000 copies is not uncommonly used in current clinical practice.

**ATU:** Can you outline the study design?

**GTW:** The study is a randomised open-label trial for children between one month and sixteen years of age. They must be naive to antiretroviral therapy except for exposure to drugs used to prevent perinatal transmission (usually AZT for three to six weeks postnatally). There is an initial randomisation to two NRTIs [either d4T/ddl or 3TC/abacavir] plus PI [nelfinavir] versus two NRTIs and an NNRTI [efavirenz]. If a child needs second-line therapy this allows switching to the opposite arm [i.e. switch to the other two NRTIs and swap the PI for the NNRTI or vice versa, with the option of adding a fourth drug at the discretion of the physician]. A second randomisation determines the criteria for such a change in therapy based on viral load. Half will be randomised to 'tight' control, i.e. as soon as their viral load rises to above 1,000 copies they would be switched, whilst the other half would stay on their first-line treatment until their viral loads rose above 30,000 copies. The primary outcome measure will be viral load at four years from randomisation.

256 children will need to be enrolled over a twelve month period (half of whom will be from Europe).

**ATU:** What are the potential pitfalls in embarking on such a long and large study?

**GTW:** The trial is designed to run over the next five years and realistically will not start enrolling until the end of this year. The obvious pitfall is that, by the end of the study, new drugs will have become available that will render our initial treatment arms obsolete.

Another potential pitfall is that parents and carers of children may be daunted by the prospect of a study that lasts so long. However the reality is that any course of treatment for a child is a long-term proposition whether or not they are enrolled in a clinical trial. It is obviously critical that the trial design incorporates sufficient flexibility to ensure that no child would be prevented from taking advantage of any new developments particularly with regards to second-line

### NOTE

Dr Gareth Tudor-Williams is Senior Lecturer in Paediatric Infectious Diseases at Imperial College School of Medicine, and Consultant Paediatrician at St Mary's Hospital, London. He is also a member of NAM's Medical Advisory Panel.

An extended version of this interview can be read on the NAM/BHIVA website at <http://www.aidsmap.com>

therapy during the course of this study.

ATU: The UK is relatively fortunate to have only a small number of HIV-infected children. How does this influence the care they receive?

GTW: It's true that the number of HIV-infected children in the UK is small in relation to the global epidemic. This has led to just a few centres developing comprehensive services for children and their families. However, they now look after sizeable numbers of children. At St Mary's we're involved in the care of over 100 infected children, which is as large a cohort as many US centres. By actively participating in the design and execution of international trials and attending clinical meetings we've been able to keep abreast of developments in the management of children and adults with HIV world-wide. The available treatment for children in the UK is therefore comparable to that available in the US or any industrialised country. In many respects the fact that we are not overwhelmed with numbers has enabled us to provide more individualised care and achieve better long-term follow-up rates than the larger US centres.

ATU: What's the most important thing that AIDS researchers have learnt about HIV paediatric management in recent years?

GTW: From the point of view of HIV in children it is the advances in prevention of mother/

infant transmission that have had the most dramatic impact in recent years. As this issue of *AIDS Treatment Update* highlights we are now in a position to reduce mother/infant transmission from approximately 30% to 1% or less in developed countries.

As far as the management of infected children go I think recent recognition that children metabolise antiretrovirals differently to adults and we therefore need to pay more attention to therapeutic drug monitoring and improved individual and population pharmacokinetics is an important advance.

ATU: What is the most important thing that AIDS researchers have failed to learn?

GTW: Over and over again in the clinic we face the reality that however potent the inhibitors of HIV may be in the test tube they will not work in children unless they can be formulated in a way that is tolerable for very long term use. Thus, AIDS researchers, which in its broadest sense I take to include the pharmaceutical industry, need to continue the efforts at finding ways to formulate drugs, particularly the protease inhibitors, for use in younger children. It would be a tragic mistake to consider this a diminishing market simply in view of current trends in developed countries. The reality is that well over 1,600 children are infected each day world-wide and finding effective and affordable strategies to help them remains a very serious challenge.

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- ◆ British HIV Association draft antiretroviral treatment guidelines, and comments from the community and HIV

clinicians, are published at [aidsmap.com](http://aidsmap.com)

- ◆ Best of the net: selected links on 36 topics, including diet & nutrition, alternative & complementary therapies, UK-specific treatment resources, French and Spanish treatment information, pregnancy, women & HIV, hepatitis C, and medical journals online
- ◆ NAM's online bookshop: order the *HIV & AIDS Treatments Directory* and other NAM publications at [aidsmap.com](http://aidsmap.com)

To find your way around the site, click on the map on the left hand side of the front page. A free booklet explaining how to use the website to find HIV information on the web, and listing UK HIV organisations offering free internet access, is available from [admin@nam.org.uk](mailto:admin@nam.org.uk), or by calling 020 7627 3200.

<http://www.aidsmap.com> is a website produced by NAM in partnership with the British HIV Association. Background to all the topics covered by *AIDS Treatment Update* is always available at [aidsmap.com](http://aidsmap.com), and the site is updated weekly by our team of writers in London and Sydney.

## Antenatal HIV tests

Last month the Government announced a new HIV testing programme aimed at reducing the number of babies born with HIV in the UK. All pregnant women are to be offered an HIV test as part of their routine antenatal care. Though testing will remain voluntary, women will have to 'opt-out' of the new scheme if they do not wish to confirm their HIV status.

As we discuss elsewhere in this issue, medical advances mean that the risk of HIV transmission from mother-to-baby can now be significantly reduced through the uptake of appropriate antenatal care and anti-HIV treatment. However, these measures can only be applied where women have their infection diagnosed. UK statistics suggest there were 265 children born to HIV-positive women in 1997, and that more than two thirds of those infections remained undiagnosed at the time of birth. Efforts to encourage women at risk to test have since improved the UK's record, which is one of the worst in Europe. Dr Di Gibb of Great Ormond Street Hospital told *AIDS Treatment Update*, "Detection rates were still very low in 1998, even in London. I think this [initiative] is very important for the UK."

The vast majority of women whom the scheme hopes to identify live in London, however, which has led some people to question whether the routine testing of all pregnant women – most of whom will be at very low risk of HIV infection – will prove a cost-effective strategy. According to research published in the 19<sup>th</sup> June issue of the *British Medical Journal*, a universal screening programme was estimated to be cost-effective in London and other high prevalence areas. In areas with low prevalence, such schemes might only prove cost-effective if the increased volume of HIV tests performed would reduce the overall unit cost of HIV testing.

## Ritonavir capsules

The new soft capsule formulation of ritonavir has passed through the first stage of the European Union licensing procedure after the Committee for Proprietary Medicinal Products (CPMP) adopted a positive opinion on its approval last month. The European Commission are expected to 'rubber stamp' this decision by mid-November, allowing the

prescription of ritonavir capsules throughout the UK and other member states.

Until then, manufacturers Abbott Labs are making the new capsules widely available through a named patient programme. For more details of this scheme, your doctor should contact Abbott on 01628 644370.

## New from NAM

The fifth booklet in NAM's information series for positive people, *Resistance*, has now been published. This new resource describes current thinking on limiting the risk of resistance developing, and profiles new resistance tests.

Such was the demand for NAM's *Anti-HIV Drugs* booklet that it went out of print in record time. A revised edition is now available. Full updates of the *Viral Load* and *Nutrition* booklets are also planned for publication in the Autumn.

People personally affected by HIV can order free copies of these booklets, and *Clinical Trials*, by writing, telephoning or emailing us (see contact details on back page). Organisations can buy copies at 50p each – simply send remittance and a covering note to us (cheques payable to NAM Publications). Orders can be placed in advance for the new editions of *Viral Load* and *Nutrition*.

## NAM forum

At the next NAM Information Forum on Monday, September 20<sup>th</sup> Dr Anton Pozniak will discuss the 1999 update of the UK's guidelines on treatment of HIV infection. The guidelines aim to ensure that people with HIV are offered a uniform, high standard of care throughout the country, and to act as a source of reference on HIV management. They can be read in full on the NAM/BHIVA website at <http://www.aidsmap.com>

This year two HIV community group representatives joined the guidelines' writing committee. One of them, James Deutsch, Chief Executive of the HIV fundraising charity CRUSAID, will join Anton as a speaker. The venue is the Palms Room, 4<sup>th</sup> Floor, University of London Union, Malet Street, London WC1. Forums are free and run from 7pm to 9pm, and a sign language interpreter is available.

### NAM ANNUAL REPORT

Our annual report covering NAM's work in 1998 is now available. If you would like a copy, please telephone Claire on 020 7627 3200.

### ATP GUIDES

The AIDS Treatment Project have revised their guides to Combination Therapy and Changing Treatment. For a free copy call ATP on 020 7407 0777.

# GLOSSARY OF TERMS

**amniotic fluid** Fluid within the amniotic membrane which surrounds and protects the foetus whilst in the womb

**antenatal** Before birth

**antiretroviral** Something that attacks retroviruses such as HIV

**caesarean section** Abdominal operation to remove an infant from the womb

**CD4** Molecule on the surface of some cells onto which HIV binds. CD4 cell count roughly reflects the state of the immune system

**cohort** A group of people who share at least one common factor (e.g. being HIV-positive) and are studied over a period of time

**HAART** Highly Active Antiretroviral Therapy, a phrase used to describe HIV combination therapy with three or more drugs

**log** Short for logarithm, a measurement scale often used when describing viral load

**metabolism** The mechanisms which sustain life, including turning sugar and fat into energy

**monotherapy** Taking a drug on its own, as opposed to in combination with other drugs

**NNRTI** Non-nucleoside reverse transcriptase inhibitors: anti-HIV drugs that include nevirapine, delavirdine, and efavirenz

**NRTI** Nucleoside analogue reverse transcriptase inhibitors: anti-HIV drugs that

include AZT, ddI, ddC, 3TC and d4T

**obstetric** Relating to antenatal care

**post-exposure prophylaxis** Preventative treatment given following possible transmission of infection

**postnatal** Following birth

**protease** An enzyme that HIV uses to break up large viral proteins into smaller ones

**protease inhibitor** Anti-HIV drugs which target the protease enzyme, e.g. saquinavir, ritonavir, indinavir, nelfinavir

**randomisation** Process of selecting by chance the treatment that a trial participant will receive

**regimen** Drug or treatment combination

**resistance** A drug-resistant HIV strain is less susceptible to the effects of one or more anti-HIV drugs because of its genetic make-up

**reverse transcriptase** An enzyme which converts genetic material from RNA into DNA, an essential step in the lifecycle of HIV

**undetectable viral load** A level of viral load that is too low to be picked up by the particular viral load test used

**viral load** The amount of virus in a sample. HIV viral load indicates the rate at which HIV is reproducing in the body

**virologic response** Effect of treatment on viral load

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Free to individuals in the UK affected by HIV or AIDS. Professional/organisational rate: £69/year. Voluntary organisation rate: £50/year. Overseas rate: within EU add £10/year; outside EU add £15/year. Tel: Helen or Claire on 020 7627 3200

## Medical Advisory Panel

Dr Fiona Boag, Dr Ray Brettle, Professor Janet Darbyshire, Dr Martin Fisher, Professor Brian Gazzard, Dr Diana Gibb, Professor Frances Gotch, Professor Paul Griffiths, Dr Margaret Johnson, Dr Jacqueline Mok, Dr Graeme Moyle, Dr Barry Peters, Professor Tony Pinching, Dr Gareth Tudor-Williams, Professor Jonathan Weber, Dr Ian Williams, Dr Mike Youle

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## ANY QUESTIONS?

The following national agencies, all based in London, offer one-to-one advice and information about treatment options, in person or over the telephone:

- ♦ **AIDS Treatment Project**

Phoneline: 0845 9470047  
Monday & Wednesday, 6pm - 9pm  
All calls charged at local rates.

- ♦ **Body Positive**

Treatment Advice: Tue, Wed & Fri 2pm - 7pm  
Call Adam, Jo or Robert on 020 7287 8010 to make an appointment.

- ♦ **The Terrence Higgins Trust**

Helpline: 020 7242 1010 Daily 12noon - 10pm  
Treatment Support: Call the Treatments Team on 020 7831 0330 for an appointment.

NAM recommends readers to seek treatment advice from more than one source, and to discuss all your decisions with your doctor.

The publishers have taken all such care as they consider reasonable in preparing this newsletter. But they will not be held responsible for any inaccuracies or mis-statements of fact contained herein. Inclusion in this newsletter of information on any drug or clinical trial in no way represents an endorsement of that drug or trial. This newsletter should always be used in conjunction with professional medical advice.

Donations towards production costs are welcomed.