# British HIV Association
# Clinical Audit Report 2006–7

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## Cohort audit of patients starting treatment

This year BHIVA's main audit project used a cohort method to assess outcomes in patients starting antiretroviral treatment for HIV. Initial data were collected on patients who started treatment for the first time between April and September 2006, and then a further questionnaire was used to collect follow-up data on the same patients in spring 2007.

This was more challenging for participating centres than one-off retrospective data collection, but was broadly successful. Initial forms were submitted for 1319 patients from 133 centres, among whom 1170 from 122 centres had matching follow-up forms and were included in the analysis.

The main outcome measure for this audit was HIV viral load, since the usual goal of treatment is to drive this below the detection limit of 50 copies/ml within about six months. Achieving this is strongly associated with good long-term clinical outcomes – avoidance of disease progression and drug resistance. Figure 1 shows that 68% of patients reached this target.

This figure rose to 74% when patients who had stopped treatment for medically valid reasons were excluded (i.e. those who had been on short-term treatment solely to prevent mother-to-child transmission or in a clinical trial for early HIV infection).

> ‘Patients are still starting treatment late, and it's not all down to late diagnosis of HIV’

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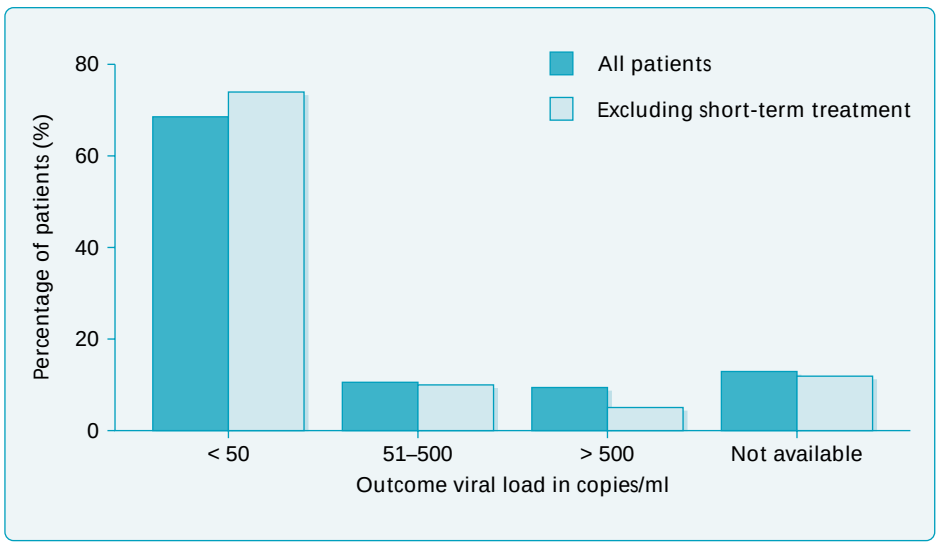


**Figure 1:**
Outcome viral loads for all analysed patients and after excluding those who had stopped short-term treatment for valid reasons.

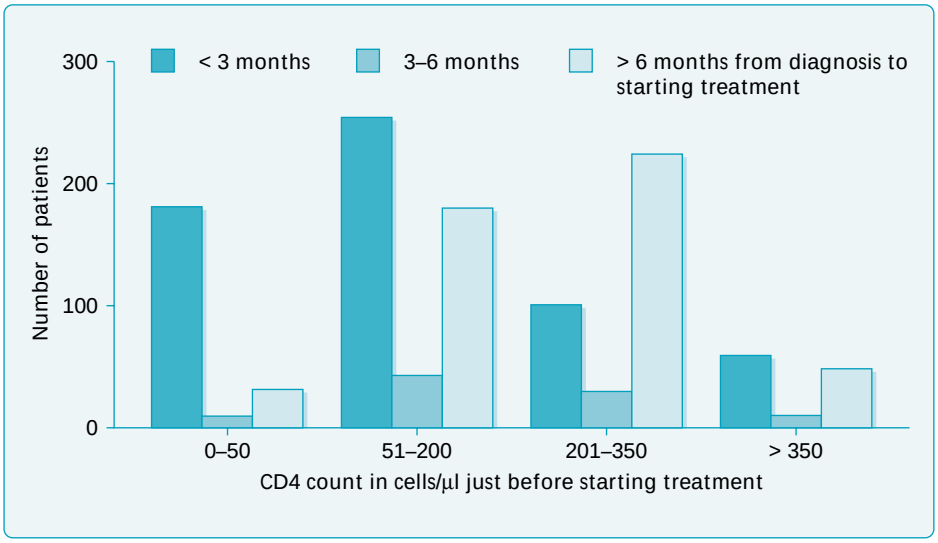


**Figure 2:**
Relationship between baseline CD4 cell count and time between HIV diagnosis and starting treatment.

Other noteworthy results included:

- Clinical guidelines recommend starting treatment before the onset of severe immune deficiency, i.e. before the CD4 cell count falls below 200 cells/µl. However, in this audit most patients started treatment late, at lower CD4 counts. As shown in Figure 2, this was mostly because of late diagnosis of HIV infection, but it is also of concern that a substantial number of patients started treatment with advanced immunodeficiency even though they were *not* recently diagnosed.
- Consistent with other studies, patients who started treatment with very low CD4 cell counts had poorer outcomes. They were less likely to achieve undetectable viral load and much more likely to die.
- 17% of patients had not been tested for HIV drug resistance before starting treatment, despite a clear recommendation in clinical guidelines. Among those who did have a resistance test result available, nearly 7% showed evidence of baseline drug resistance, illustrating the importance of this test.

> ‘Most patients achieved good short-term outcomes – but not all had been tested for baseline drug resistance’

- As Figure 1 shows, no viral load outcome was available for a significant minority of analysed patients. The most common reason for missing data was because patients had transferred their care to a different clinical centre, but around 4% of all patients had stopped attending their original clinic and were not known to be receiving care elsewhere. It is of concern if HIV patients are not receiving regular follow-up, especially during the early months after starting treatment.
- According to guidelines, HIV viral load measured at four weeks after starting treatment is an important indicator of long term success. A rapid fall in viral load to under 1000 copies/ml by this time provides motivation and reassurance, while failure to achieve this gives early warning of poor adherence or other problems. It was disappointing that in this audit only 45% of patients had a viral load measurement within four weeks of starting treatment, and only 73% within six weeks. ■

## Clinical networks and standards

In March 2007 BHIVA published *Standards for HIV Clinical Care* in partnership with the Royal College of Physicians, the British Association for Sexual Health and HIV and the British Infection Society. This key document was prepared via a consultation process led by a small core group working under the auspices of the Audit and Standards Subcommittee, and sets out recommendations for the organisation of NHS clinical care for adults with HIV, including the role of managed clinical networks. Following on from this, BHIVA’s main audit project for 2007–8 will include a survey of current network arrangements and a ‘snapshot’ audit of inpatients and day-patients, to investigate how services are currently used and any problem areas such as delays in transferring or discharging patients.

## Late diagnosis

Several BHIVA audit projects, including this year’s cohort study, have raised concerns about late diagnosis of HIV infection. The Chief Medical Officers have written to all doctors, citing the 2005–6 mortality audit which found that at least 35% of HIV-related deaths could be attributed to late diagnosis. They highlighted the importance of offering and recommending HIV tests to patients who may have unacknowledged but identifiable risk, or symptoms or signs of possible HIV infection.

# Patient monitoring and assessment

During the year a survey was also conducted, of clinic policies and practice regarding baseline assessment and immunisation of newly diagnosed HIV patients, routine monitoring of stable HIV patients on and off antiretroviral therapy, and topics discussed with HIV patients at the time of their diagnosis. Data were successfully collected through a web-based system as BHIVA's first substantive online audit.

Some of the findings of this survey were disappointing. Despite clear guidelines, baseline HIV resistance testing, GUM (sexual health) screening and hepatitis B immunisation were reported as routine for newly diagnosed HIV patients by only 83%, 91% and 80% of centres respectively. All centres said they routinely discuss disclosure of HIV status to sexual partners and GPs with such patients. However, only 93% routinely discuss correct use of condoms, and 84% the availability of post-exposure prophylaxis (PEP) for future sexual partners.

This survey also showed variations in practice in areas not covered by current clinical guidelines, such as screening for latent opportunistic infections. BHIVA is in the process of producing comprehensive guidelines on this topic. Another interesting finding, as shown in Figure 3, was that many centres are moving away from the historic practice of routinely monitoring stable, well HIV patients as often as every three months. This may enable resources to be redirected towards patients needing more intensive monitoring, such as when starting or changing treatment.

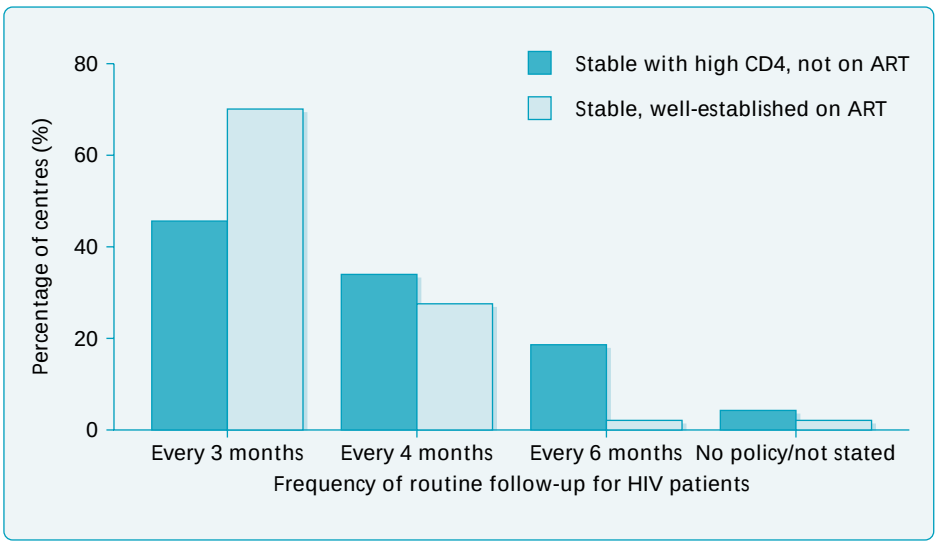


**Figure 3:**
Centre policies regarding review of HIV patients.

## In the pipeline

As part of its rolling audit programme, the subcommittee is planning a case-note review of patients with HIV and active tuberculosis for autumn 2008, to be accompanied by a survey of arrangements for multi-disciplinary review of patients with treatment failure or drug resistance. A case-note review of HIV and hepatitis B or C co-infection is provisionally scheduled for 2009.

# Audit publications

Publication and feedback is an essential part of the clinical audit cycle, to enable participating centres and others to reflect on findings and change practice where necessary. The subcommittee sends each audit participating centre a confidential summary of its own results with aggregated data for comparison, as well as presenting national results at conferences and on the BHIVA website at www.bhiva.org.

The committee also seeks to publish its major findings in appropriate peer-reviewed journals. Articles accepted to date are as follows:

1. Lucas SB, Curtis H, Johnson MA, on behalf of the British HIV Association (BHIVA) and BHIVA Audit and Standards Subcommittee. National review of deaths among HIV-infected adults. *Clinical Medicine*; accepted for publication.
2. Hart E, Curtis H, Wilkins E, Johnson M. On behalf of the BHIVA Audit and Standards Subcommittee. National review of first treatment change after starting highly active antiretroviral therapy in antiretroviral-naïve patients. *HIV Medicine,* 2007, **8**,186–91.
3. De Silva S, Brook MG, Curtis H, Johnson M. On behalf of the BHIVA Audit and Standards Subcommittee. Survey of HIV and hepatitis B or C co-infection management in the UK 2004. *Int J STD AIDS*, 2006, **17**, 799–801.
4. Curtis H, Johnson MA, Brook MG. Re-audit of patients initiating antiretroviral therapy. *HIV Medicine*, 2006, **7**, 486.

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5. McDonald C, Curtis H, de Ruiter A, Johnson MA, Welch J on behalf of the British HIV Association and the BHIVA Audit and Standards Subcommittee. National review of maternity care for women with HIV infection. *HIV Medicine*, 2006, **7**, 275–80.

6. Sullivan AK, Curtis H, Sabin CA, Johnson MA. Newly diagnosed HIV infections: review in UK and Ireland. *BMJ*, 2005, **330**, 1301–2.

7. Brook MG, Curtis H, Johnson MA. Findings from the British HIV Association's national clinical audit of first-line antiretroviral therapy and survey of treatment practice and maternity care, 2002. *HIV Medicine*, 2004, **5**, 415–20.

8. Curtis H, Sabin CA, Johnson MA. Findings from the first national clinical audit of treatment for people with HIV. *HIV Medicine*, 2003, **4**, 11–7.

# Action points

*For commissioners and trusts:*

- Encourage all HIV treatment and care providers to take part in the BHIVA audit programme.
- Promote earlier HIV testing/diagnosis in a wide range of clinical settings.

*For participating clinical centres:*

- Review individual centre audit results and prepare an action plan, if necessary, to address:
  - Early diagnosis and timely initiation of HIV treatment;
  - Pre-treatment testing for baseline HIV drug resistance – recommended for all patients;
  - Any remediable factors affecting patient retention and attendance;
  - Effective monitoring and support for patients around the time of starting treatment;
  - Sexual health screening and hepatitis B immunisation for HIV patients;
  - Ensuring HIV patients know how to use condoms and how to obtain post-exposure prophylaxis if needed for a sexual partner.
- Share and discuss action plan with commissioners and trust management as appropriate.

*For all:*

- Work with other NHS organisations to develop managed clinical networks for HIV.

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*Continued from front*

Dr E Monteiro
*Leeds Teaching Hospitals*

Dr C O'Mahony
*Countess of Chester Hospital*

Dr ELC Ong
*Newcastle General Hospital*

Ms K Orton
*Department of Health*

Dr A Rodger
*Royal Free Hospital, London*

Dr CJ Skinner
*The Royal London Hospital*

Professor C Sabin
*Royal Free and UCMS, London: Medical Statistician*

Dr E Street
*Leeds Teaching Hospitals*

Dr A Tang
*Royal Berkshire Hospital*

Ms I Vaughan
*London Specialised Commissioning Group Audit Information and Analysis Unit*

Dr EGL Wilkins
*North Manchester General Hospital*

Dr D Wilson
*CDC North East Protection Unit (Co Durham & Tees Valley team)*

Ms Maria Yeomans
*London Specialised Commissioning Group Audit Information and Analysis Unit*

More information about the work of the subcommittee is available at: www.bhiva-clinical-audit.org.uk

# Contact details

## BHIVA Secretariat:

Mediscript Ltd
1 Mountview Court
310 Friern Barnet Lane
London N20 0LD

Tel: 020 8369 5380
Fax: 020 8446 9194

Email address: bhiva@bhiva.org
Website: www.bhiva.org

## Audit Co-ordinator:

Hilary Curtis PhD
39 Esmond Road
London NW6 7HF

Tel: 020 7624 2148
Email: hilary@regordane.net