British HIV Association
BHIVA

British HIV Association CLINICAL AUDIT REPORT 2008–9

November 2009

Registered Charity 1056354

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Action points from audit and survey 2008–9

For commissioners:

- Require routine, opt-out HIV testing of TB patients as a key quality indicator for all TB services.
- Ensure laboratory services meet standards for turnaround times for tests of public health importance such as sputum smear microscopy.
- Collaborate across geographical boundaries to support the continued development of managed clinical networks for HIV.

For clinicians:

- Support non-HIV specialist colleagues in providing HIV testing in line with 2008 national guidelines.
- Clarify arrangements for notifying TB in people with HIV, and ensure all cases are notified.
- Strive to support patients in attending for care and adhering to treatment for both TB and HIV.
- Review and if necessary re-audit local test turnaround times and raise any concerns with trust management.
- Continue to work with colleagues in other trusts to strengthen HIV clinical networks and develop local protocols and care pathways.

Note: BHIVA has sent each audit-participating site a report comparing its performance with national data, for use in action planning.

Tuberculosis and HIV co-infection

The main project for the year was an audit of 236 HIV-positive adults with active tuberculosis (TB), with accompanying surveys of how both TB and HIV services manage TB/HIV co-infection. Full results are available from the BHIVA website, but key findings and issues were that:

- Contrary to the 2008 national HIV testing guidelines, not all services routinely test TB patients for HIV on an opt-out basis. This is of concern because HIV infection is a major risk factor for developing active TB, and other data indicate that in 2003 about 8% of adult TB cases in the UK were in people with HIV. If an underlying HIV infection remains undiagnosed, the person will remain at high risk of potentially life-threatening complications even if the TB is cured. For 103 (44%) of the audited patients, active TB was the first sign of their HIV infection, illustrating the importance of such testing.
- Most patients (163, 69%) had advanced HIV disease with CD4 cell counts under 200 cells/mm^3 when measured nearest to the time of their TB diagnosis (*see* Figure 1). This included 73 patients who had been diagnosed with HIV before they sought care for TB. This reflects existing concerns about people with known HIV infection who are not receiving or not benefitting from antiretroviral treatment.
- Among 60 sputum smear-positive TB cases, for 8 (13%) it took two days and for 17 (28%) it took three or more days to receive the result, whereas the national standard is within 24 hours on a six day/week service (*see* Figure 2). This is worrying in public health terms as well as for individual patient care, since sputum smear positivity is a marker of infectious TB.
- At some sites responsibility for statutory notification of TB cases among people with

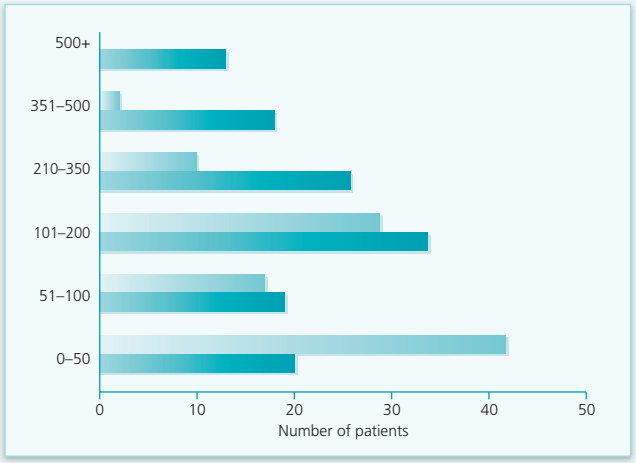

Figure 1: CD4 cell count in cells/mm³ when measured nearest to time of TB diagnosis: numbers of patients already diagnosed with HIV (■), and not diagnosed with HIV before developing TB (■).

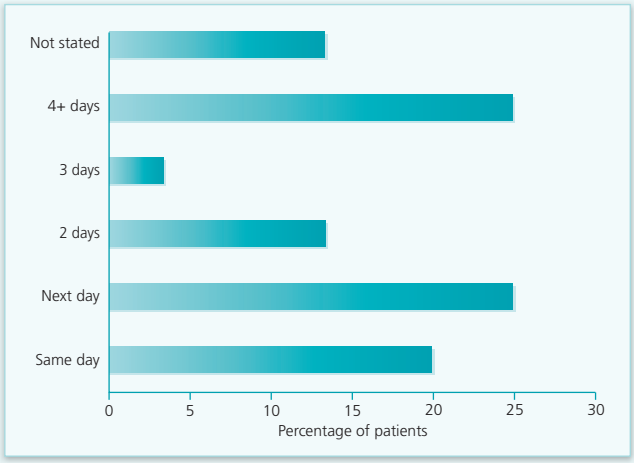

Figure 2: Time to receive sputum smear results for positive cases (percentage of patients, *n*=60).

HIV was unclear. Six cases were said not to have been notified, including three with sputum smear-positive disease, which raises public health concern.

- There was a high rate of extra-pulmonary TB with only 96 (41%) patients having pulmonary-only disease. This is consistent with previous studies involving people with HIV, but means that TB diagnosis and treatment is more complex for this patient group.
- Although not covered by guidelines or standards, information about HIV status had been passed on with the TB notification for about two-thirds of patients for whom data was available. The committee's view is that this information should be passed on unless the patient refuses consent, as it is important when tracing and assessing close household contacts. Standard tests for TB may give misleading results if such contacts also have HIV.
- Completion of treatment is a key outcome for TB since it cures the patient and prevents TB transmission and drug resistance. The audited completion rate was 81% which did not meet the 85% national standard, although this standard is for all TB cases and not specifically those in people with HIV. A significant minority of patients were reported to attend irregularly and adhere poorly with treatment for TB, HIV or both, and not surprisingly this group were less likely to complete their treatment. In line with guidelines, some received directly observed therapy (DOT) for TB which is an important measure in supporting adherence. ■

HIV treatment failure and resistance

The committee also conducted a survey of arrangements for care of HIV patients experiencing failure of highly active antiretroviral therapy (defined as persistently detectable viral load on treatment) or drug resistance. This sought to explore the extent of clinical network engagement, in line with the 2007 Standards for HIV Clinical Care which recommend that networks develop protocols to ensure that outpatient HIV units can receive advice and input from HIV centre specialist units when assessing and managing such patients. Findings were that:

- HIV treatment failure is reassuringly rare, with most sites estimating five or fewer cases per year both of first failure with no or single class resistance and of second or subsequent failure. This shows the success of modern regimens.
- When failure does occur, it is managed locally more than through clinical networks. For example, 61 (87%) of participating sites had a regular arrangement for assessing patients with treatment failure/resistance and of these 38 were local to the site and 23 were network-based. About a quarter of outpatient HIV units would not routinely seek external advice even when assessing patients with second or subsequent line failure.
- Assessment of patients with failure/resistance is usually multidisciplinary; at least an HIV specialist physician and nurse would routinely be involved at most sites (*see* Figure 3). Unsurprisingly, specialist virologists are more

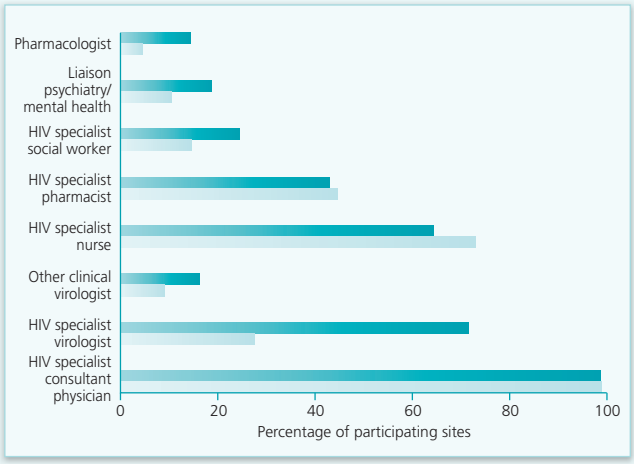

Figure 3: Professionals who would be routinely involved in assessment of patients with first-line HIV treatment failure and no or single class resistance (■) and second or subsequent failure (■) as percentage of participating sites (*n*=70).

likely to be involved in second or subsequent rather than first-line failure. Fewer than half the sites would routinely involve a specialist pharmacist, and involvement of social work or mental health professionals was uncommon, perhaps suggesting insufficient support for patients with psychosocial problems leading to poor adherence and treatment failure.

- In line with this, when asked what would improve management of patients with treatment failure/resistance, several respondents cited better access to expert advice, especially HIV specialist pharmacists and virologists but also mental health specialists, specialist nurses, pharmacologists, social workers and dieticians.
- Direct discussion and interaction was clearly seen as important for multidisciplinary assessment of complex cases, and also valuable for professional development. However, some respondents felt that this need not always be face to face and more use could be made of online forums or teleconferencing.
- Some respondents felt that commissioning arrangements were unclear and did not support clinical networks effectively. ■

Audit publications

Publication and feedback is an essential part of the audit cycle, to enable clinicians and others to reflect on findings and change practice if necessary. The subcommittee sends each clinic or department 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 to date are as follows:

1. Street E, Curtis H, Sabin CA, Monteiro EF, Johnson MA on behalf of the British HIV Association (BHIVA) and BHIVA Audit and Standards Subcommittee. British HIV Association (BHIVA) national cohort outcomes audit of patients commencing antiretrovirals from naïve. *HIV Medicine*, 2009, **10**, 337–342.
2. Lomax N, Curtis H, Johnson M on behalf of the British HIV Association (BHIVA) and BHIVA Clinical Audit Subcommittee. A national review of assessment and monitoring of HIV-infected patients. *HIV Medicine*, 2009, **10**, 125–128.
3. 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*, 2008, **8**, 250–252.
4. 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**, 186–191.
5. 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.
6. Curtis H, Johnson MA, Brook MG. Re-audit of patients initiating antiretroviral therapy. *HIV Medicine*, 2006, **7**, 486.
7. McDonald C, Curtis H, de Ruiter A, Johnson MA, Welch J on behalf of the British HIV Association (BHIVA) and the BHIVA Audit Subcommittee. National review of maternity care for women with HIV infection. *HIV Medicine*, 2006, **7**, 275–280.
8. Sullivan AK, Curtis H, Sabin CA, Johnson MA. Newly diagnosed HIV infections: review in UK and Ireland. *BMJ*, 2005, **330**, 1301–1302.
9. 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**, 415–420.
10. Curtis H, Sabin CA, Johnson MA on behalf of the British HIV Association Clinical Audit Committee. Findings from the first national clinical audit of treatment for people with HIV. *HIV Medicine*, 2003, **4**, 11–17.

Future plans

Data collection started in autumn 2009 for an audit of HIV patients' co-infection with hepatitis B and/or C. An accompanying survey is also looking at the role of adult HIV services in ensuring that their patients' children are tested for HIV and supporting adolescent patients through the transition from paediatric to adult care. For 2010–11 the Committee is preparing to re-audit the new HIV diagnoses (audited in 2003) to assess the impact of the 2008 national HIV testing guidelines, and an audit of patients with advanced HIV disease not on treatment is provisionally planned for 2011–12. ■

Other activities

H1N1 pandemic influenza

The committee has initiated an appraisal of the impact of pandemic H1N1 influenza on HIV patients and services, which is to continue through winter 2009–10. Preliminary findings indicate that most services ask HIV-positive patients with flu-like symptoms to phone the clinic, probably reflecting concern that non-influenza disease may be mis-diagnosed if these patients are channelled solely via the national flu hotline.

Primary care

Following the 2007 *Standards for HIV Clinical Services*, a draft briefing paper has been prepared which expands on the role of primary and community care in relation to HIV. Consultation is continuing with external stakeholders with a view to finalising this.

The wider audit environment

The committee is in contact with the recently established *Healthcare Quality Improvement Partnership*, which seeks to promote better health services by supporting audit and similar quality improvement work, and has contributed to its discussions on criteria for best practice in clinical audit. There is also close liaison with the Audit and Outcomes Sub-Group of the London HIV Commissioners' Consortium. ■

Financial details

BHIVA's National Clinical Audit programme for 2008–9 has been funded by the Department of Health.

Costs are within budget, with any surplus being carried forward towards the audit programme for 2009–10 and other projects within the remit of the Association's work. ■

Further information

Details of previous BHIVA audits together with specimen questionnaires findings and reports, list of articles and further resources are available on the BHIVA website at: **www.bhiva.org**

Acknowledgements

BHIVA would like to thank all audit-participating centres, and to acknowledge the contribution of the Department of Health towards the funding of its audit programme.

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

Date of preparation: November 2009