Routine monitoring and assessment of adults with HIV

BHIVA national audit 2015
Aoife Molloy on behalf of BHIVA
Audit and Standards Sub-Committee
Aim and method

Audit adherence to BHIVA guidelines for routine investigation and monitoring of adult HIV-1-infected individuals 2011 and, where relevant, immunisation guidelines.

Case-note review of adults (>16) who attended for specialist HIV care during 2014 +/- or 2015:

- 50-100 patients per HIV service
- Self-audit spreadsheet tool used
- Data collected during June-August 2015

Accompanying brief survey of clinic practice/policy
Participation

- 123 services submitted patient data
- 112 completed the survey
Clinic practice/policy survey
Frequency of monitoring

Patients stable on ART with fully suppressed VL and CD4 >350 cells/mm³

% of services

VL  CD4  See for review by physician/specialist nurse
Provision within HIV clinic

- Sexual health screening: 86% of services
- Cervical cytology: 64% of services
- Flu vaccination: 64% of services
Case-note audit
## Demographics

<table>
<thead>
<tr>
<th>Total</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>8258</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>5482</td>
<td>66.4%</td>
</tr>
<tr>
<td>Female</td>
<td>2763</td>
<td>33.5%</td>
</tr>
<tr>
<td>Transgendered/transgendering</td>
<td>9</td>
<td>0.1%</td>
</tr>
<tr>
<td>Not stated</td>
<td>4</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>4853</td>
<td>58.8%</td>
</tr>
<tr>
<td>Black-African</td>
<td>2592</td>
<td>31.4%</td>
</tr>
<tr>
<td>Other</td>
<td>733</td>
<td>8.9%</td>
</tr>
<tr>
<td>Not recorded/not stated</td>
<td>80</td>
<td>1.0%</td>
</tr>
</tbody>
</table>
## Demographics, continued

<table>
<thead>
<tr>
<th>Total</th>
<th>8258</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exposure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>4320</td>
<td>52.3%</td>
</tr>
<tr>
<td>MSM</td>
<td>3550</td>
<td>43.0%</td>
</tr>
<tr>
<td>Other</td>
<td>252</td>
<td>3.1%</td>
</tr>
<tr>
<td>Not recorded/not stated</td>
<td>136</td>
<td>1.6%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-29</td>
<td>674</td>
<td>8.2%</td>
</tr>
<tr>
<td>30-49</td>
<td>5001</td>
<td>60.6%</td>
</tr>
<tr>
<td>50-69</td>
<td>2396</td>
<td>29.0%</td>
</tr>
<tr>
<td>70+</td>
<td>172</td>
<td>2.1%</td>
</tr>
<tr>
<td>Not stated</td>
<td>15</td>
<td>0.2%</td>
</tr>
</tbody>
</table>
Attendance for care

Inclusion criterion was HIV clinic attendance during 2014 and/or 2015.

Most were recent attenders:

- 62.0% seen and reviewed by a clinician within 3 months up to audit data extraction in June-August 2015
- 96.5% within 1 year
ART status and management
Baseline resistance testing

Target 90%

Achieved: 80.8%

Not achieved: 19.2%
19.2% no resistance test recorded

9.1% not possible, eg transferred in VL suppressed
1.4% neither tested nor sample stored
7.9% not recorded/not known
0.8% not answered
Variation in resistance testing

- 33 (27%) sites had a recorded resistance test or stored sample for >90% of audited patients

- 33 (27%) sites had a recorded resistance test or stored sample for <75% of audited patients
7395 (89.5%) patients were on ART

90.1% (6660) VL measurement within past 6 months

93.4% (6908) annual* adherence documentation

89.0% (6584) annual* recording of all medication

*To allow for varying appointment dates, guidelines recommending “annual” monitoring/procedures were interpreted as within 14 months (425 days).
Viral hepatitis
Hepatitis A

Guideline: People with HIV should be screened for HAV immunity, and vaccinated if susceptible.

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccinated/immune/seropositive</td>
<td>5053</td>
<td>61.2%</td>
</tr>
<tr>
<td>Equivocal</td>
<td>2</td>
<td>0.0%</td>
</tr>
<tr>
<td>Seronegative</td>
<td>983</td>
<td>11.9%</td>
</tr>
<tr>
<td>Not recorded</td>
<td>1979</td>
<td>24.0%</td>
</tr>
<tr>
<td>Not answered</td>
<td>241</td>
<td>2.9%</td>
</tr>
</tbody>
</table>
11.9% of patients were apparently unvaccinated and seronegative for hepatitis A.

Status was not recorded for a further 24.0%.

Among 306 hepatitis B infected (HBsAg+) individuals, 24 (7.8%) were apparently unvaccinated and seronegative for hepatitis A.
Hepatitis B

Guideline: People with HIV should be screened for anti-HBc, anti-HBs, HBsAg, and vaccinated if susceptible.

- Anti-HBc, anti-HBs, HBsAg status all reported: 6781 (82.1%)
- HBsAg positive, antibody status incomplete: 72 (0.9%)
- HBsAg negative, antibody status incomplete: 841 (10.2%)
- HBsAg not known: 437 (5.3%)
- HBsAg not answered: 127 (1.5%)
Hepatitis B antibody titre

Guideline: Patients successfully immunised against HBV should have annual anti-HBs test.

3605 individuals were positive for anti-HBs and negative for HBsAg and anti-HBc:

- 2416 (67.0%) annual anti-HBs test done
Guideline: People with HIV should be screened for hepatitis C antibodies.

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis C antibody negative</td>
<td>7539</td>
<td>91.3%</td>
</tr>
<tr>
<td>Hepatitis C antibody positive</td>
<td>439</td>
<td>5.3%</td>
</tr>
<tr>
<td>Equivocal</td>
<td>1</td>
<td>0.0%</td>
</tr>
<tr>
<td>Not known</td>
<td>194</td>
<td>2.3%</td>
</tr>
<tr>
<td>Not answered</td>
<td>85</td>
<td>1.0%</td>
</tr>
</tbody>
</table>
Further hepatitis C testing

Guideline: Anti-HCV negative patients should be re-tested regularly, annually for MSM/IDU.

Done as follows for anti-HCV negative patients:
- 65.4% of all
- 74.1% of MSM
- 61.8% of IDU

Guideline: Anti-HCV positive patients should be tested for HCV RNA and, if positive, genotype.

RNA test done for:
- 91.1% anti-HCV positive patients
Cardiovascular health
Calculation of CVD risk

Guideline: 10 year CVD risk should be calculated within 1 year of first presentation, and within past 3 years if on ART.

44.9% of those on ART, within past 3 years

32.3% of those not on ART, at any time

Combined: 43.6%

Excluding individuals with established CVD, or age <50 and obviously at low risk: 45.2%
Variation in CD risk calculation according to site

26 (21%) sites met the 70% target for patients on ART to have had CD risk recorded within 3 years.
BP, glucose, lipids

Guideline: BP, glucose and lipid profile should be assessed annually.

BP: 85.5%
Glucose: 77.0%
Lipids: 83.2%

Target
90%
Smoking

Guideline: Smoking history should be documented within past 2 years.

Documented within past 2 years: 65.9%

Of 34.1% not documented within past 2 years:

Never smoker: 13.7%
Current smoker: 3.7%
Ex-smoker: 2.4%
Smoking status not answered: 14.3%

Target
90%
Smoking cessation

Guideline: People with HIV should be encouraged to stop smoking (cancer guidelines).

- 45.2% of current smokers had been offered a cessation service
Laboratory measurements
Guideline: LFT, eGFR, glucose and lipid profile should be assessed annually.

97% 96% 77% 83% 71% 0%

LFT, eGFR, glucose, lipids

Note: self-audit spreadsheet tool did not present results for individual measurements, only all four together.
Guideline: Urinalysis and urine protein/creatinine ratio should be assessed annually, with urinalysis 3-6 monthly if on tenofovir.

Urinalysis or uP/C:

Not on tenofovir, annually: 73.7%

On tenofovir, 6 monthly*: 74.8%

Combined: 74.4%

*To allow for varying appointment dates, six monthly was interpreted as within 8 months (243 days).
Sexual and reproductive health
Sexual health screening

Guideline: Patients should be offered annual sexual health screen, and HIV notes should record outcome of offer, including whether declined.

Recorded as offered for:
- 65.7% all patients
- 72.7% of MSM
- 60.8% of heterosexuals
Syphilis serology

Guideline: Syphilis serology should be documented at 3-monthly intervals as part of routine HIV blood set (unless indicated otherwise).

Done within 8 months (243 days) for:
- 63.0% all patients
- 73.4% of MSM
- 55.3% of heterosexuals
Cervical cytology

Guideline: Cervical cytology should be performed annually.

- 53.2% of women: done
- 21.9% of women: recorded that advised to obtain from GP or sexual health clinic

Note: the self-audit spreadsheet tool did not provide an option for women ineligible for cervical cytology.
Contraception

Guideline: Contraception and plans for conception should be discussed annually.

- Contraception was reported not relevant for 31.7% of women
- It had been discussed for 63.0% of women for whom it was relevant
Bone health
Fracture risk and BMD

Guideline: Fracture risk should be assessed every 3 years if aged >50.

- 16.7% done

Guideline: Among those on ART, bone mineral density should be measured in men >70 and women >65.

- 17.4% done for both sexes >70
Variation in fracture risk assessment

- 16 (13%) sites recorded fracture risk assessment within past 3 years for >50% of patients aged over 50
- 54 (44%) sites recorded this for <5% of patients aged over 50
Respiratory vaccination
Flu and pneumococcus vaccine

Guideline: People with HIV should be offered annual influenza vaccine.

Done: 21.1%
Advised obtain from GP: 36.2%

Guideline: Patients with CD4 >200 cells/mm\(^3\) should receive pneumococcus vaccine.

- 26.4% done
Conclusions and recommendations
Conclusions

The audit achieved good participation and showed good practice in some areas.

However, areas of possible concern included:

- Variation in recording of baseline resistance test
- Low rates of monitoring of cardiovascular and bone health, with wide variation
- Smoking status not reported for one in seven patients
Conclusions, continued

- Significant proportion of patients with unknown HBsAg status at some sites
- Individuals susceptible to HAV, including those infected with HBV
- Low reported coverage of flu and pneumocococcus vaccine.

Some findings may reflect issues of recording/reporting, especially in relation to care provided outside the HIV specialist service itself.
Recommendations

- Clinical services should review and develop systems to prompt both performance and recording of recommended interventions.

- Efforts should be made to obtain resistance data for all HIV patients.

- Clinical attention should focus on CVD and smoking-related disease, as major health concerns for people with HIV.
Acknowledgements

The BHIVA Audit and Standards Sub-Committee would like to thank all HIV clinical services who submitted audit data.

Committee membership:

- A Freedman (chair), B Angus, D Asboe, G Brough, F Burns, D Chadwick, D Churchill, H Curtis (co-ordinator), V Delpech, K Doerholt, Y Gilleece, P Gupta, A Molloy, J Musonda, C Okoli, O Olarinde, E Ong, S Raffe, M Rayment, C Sabin, A Sullivan