Regional Differences in Self-Reported HIV Care and Management in the EuroSIDA Study

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Background

- HIV positive individuals in Eastern Europe (EE) have a poorer clinical outcome compared with individuals in other parts of Europe
  - Increased risk of AIDS-related mortality\(^1\)
  - Lower odds of virological response\(^2\)
  - Regional differences remained even after adjustment for known patient-related factors\(^{1,2,3}\)

\(^1\) J Reekie et al, PLoS ONE 2012; \(^2\) W Bannister et al, JAIDS 2006; \(^3\) D Podlekarova et al, BMC Infectious Diseases 2012.
Hypothesis

- The observed poorer clinical outcome for HIV-positive individuals in EE may partly be explained by differences in the set-up for HIV management.
Objective

- To explore regional variability in self-reported HIV management at individual EuroSIDA clinics
Methods

- Survey conducted in early 2014 in all currently active EuroSIDA clinics
- Questions related to HIV healthcare and clinical management of HIV-positive individuals
- EE clinics were compared to the rest of participating EuroSIDA clinics combined
- Fisher’s exact test for association
**Eastern Europe (EE):** Belarus, Estonia, Lithuania, Russian Federation, Ukraine

**All other European countries (non-EE):** Austria, Belgium, Czech Republic, Croatia, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Sweden, Switzerland, United Kingdom

**Non-participating EuroSIDA countries**
Participating clinics

- 80/97 clinics
  - Total response rate 82.5%
- 12/15 in EE
  - Response rate 80.0%
- 68/82 in non-EE
  - Response rate 82.9%
- No differences in patient demographics in participating vs non-participating clinics
Participating clinics

- 79/80 clinics urban location
- University-affiliated:
  - 1/12 in EE, 41/68 in non-EE
- HIV positive patients in care in participating clinics:
  - 30,000 in EE, 100,000 in non-EE
Results
Regional differences in guidelines followed

Based on the survey question: Does the clinic follow standard clinical guidelines for the treatment of people with HIV? If yes, which guidelines are used?
Regional differences in resistance testing

Based on the survey question: Is resistance testing performed before initiating ART? When HIV-positive patients taking ART need to change regimens because of treatment failure, is it currently standard practice to perform resistance testing to guide decision-making about the next regimen?
Based on the survey question: How often does the clinic request CD4 cell count/viral load testing for HIV-positive patients who are not clinically eligible for ART? How often does the clinic request CD4 cell count/viral load testing for HIV-positive patients who have initiated ART?
Based on the survey question: When do antiretroviral treatment-naïve patients, who have been followed in the clinic for at least 3 months (i.e. excluding late presenters), generally start ART?
Based on the survey question: Does the clinic routinely perform the following types of screening for HIV-positive patients?

**Regional differences in routine screening**

<table>
<thead>
<tr>
<th>Routine screening</th>
<th>Percentage of clinics (%)</th>
<th>Region (n responding clinics)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cardiovascular disease</td>
<td></td>
<td>EE (n=12/12)</td>
</tr>
<tr>
<td>tobacco use</td>
<td></td>
<td>non-EE (n=68/68)</td>
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<tr>
<td>alcohol consumption</td>
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- **cardiovascular disease**: p = 0.015
- **tobacco use**: p < 0.0001
- **alcohol consumption**: p < 0.0001
Regional differences in cancer screening

**Based on the survey questions:** Does the clinic routinely perform: ¹Screening for cervical cancer: cervical smear and gynaecological exam. ²Screening for anorectal cancer: anal pap and anorectal exam.
Regional differences in TB screening

Based on the survey questions: Does the clinic screen HIV-positive individuals for tuberculosis?
Regional differences in TB screening method

Based on the survey questions: If the clinic screens HIV-positive individuals for tuberculosis, please indicate which method
Regional differences in integrated TB and HIV care

Based on the survey question: Does the clinic provide TB treatment for HIV patients diagnosed with TB?
Limitations

• Self-reported questionnaire
• English language
  • Interpretation of questions
• Limited number of clinics, especially in EE
• EuroSIDA clinics not necessarily representative of HIV management in all of Europe
• Possible bias: alter responses in a direction perceived to be more correct/adherent to guidelines
Summary

• Compared with non-EE clinics, clinics in EE reported:
  ▪ Deferral of ART initiation until CD4 < 350 cells/mm³
  ▪ Significantly less resistance testing before ART initiation and after treatment failure
  ▪ Significantly less screening for cardiovascular disease
  ▪ Significantly less screening for tobacco use and alcohol use
Summary

- Compared with non-EE clinics, clinics in EE reported:
  - Similar proportion of clinics performing TB screening, in spite of higher TB prevalence in EE
  - Poor integration of HIV and TB care
Summary

• Other findings:
  ▪ Regional differences in guidelines followed
  ▪ Poor over-all screening for cervical cancer, no significant regional differences
  ▪ Poor over-all screening for anorectal cancer, no significant regional differences
  ▪ Data about hepatitis screening previously reported\(^1\)

Regional differences in hepatitis testing, vaccination and treatment in the EuroSIDA study. See poster at: http://www.cphiv.dk/Ongoing-Studies/EuroSIDA/Presentations
Conclusion

- Marked regional differences in self-reported HIV management across Europe
Future directions

• Investigate clinical implications of regional differences in HIV management
• Identify opportunities to reduce apparent regional disparities
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