Acceptability, feasibility and costs of universal offer of rapid point of care testing for HIV in an acute admissions unit: results of the RAPID project

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Impact of late diagnosis

- Morbidity
- Mortality
- Transmission
- USA
  - 2006 Revised recommendations

- UK
  - 2008 National guidelines (NICE 2011)
  - Testing initiatives

- ECDC
Project BRIEF

10/05-1/09

28,365 patients approached in ED settings
  91% eligible
  95% tested (24,495 POCTs)
  116 tested HIV + (0.47%)
RAPID Design

- Health Advisor
- Multimedia tool

- UCLH
  - Acute Medical Admissions Unit

- HIV testing
  - All stable patients
  - Aged 19-65
  - POCT - Insti™

- Resource use data collected
RAPID in action
## Eligible admissions to AAU (n=606)

<table>
<thead>
<tr>
<th>Category</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>56.8%</td>
</tr>
<tr>
<td>Median age</td>
<td>44 (19-65)</td>
</tr>
<tr>
<td>Known HIV +</td>
<td>7 (1.2%)</td>
</tr>
<tr>
<td>Inappropriate or patient not present</td>
<td>307</td>
</tr>
<tr>
<td>Discharged</td>
<td>44</td>
</tr>
<tr>
<td>Patient absent</td>
<td>64</td>
</tr>
<tr>
<td>Too unwell</td>
<td>107</td>
</tr>
<tr>
<td>Cannot consent</td>
<td>56</td>
</tr>
<tr>
<td>Other</td>
<td>36</td>
</tr>
<tr>
<td>Tested already</td>
<td>8</td>
</tr>
<tr>
<td>Remaining</td>
<td>282</td>
</tr>
</tbody>
</table>
POCT uptake 135/144 = 93.7%
## Uptake

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td><strong>Uptake of video by age</strong></td>
<td></td>
</tr>
<tr>
<td>40+ years</td>
<td>43.4%</td>
</tr>
<tr>
<td>&lt;40 years</td>
<td>64.2%</td>
</tr>
<tr>
<td><strong>Uptake of test by age</strong></td>
<td></td>
</tr>
<tr>
<td>40+ years</td>
<td>71.8%</td>
</tr>
<tr>
<td>&lt;40 years</td>
<td>76.9%</td>
</tr>
</tbody>
</table>

No difference in uptake of video or test by gender
Acceptability

Patients
✓ POCT in AAU a good idea 97.5%
✓ HIV testing in AAU appropriate 96.7%
✓ Video answered questions 81.5%
✓ Liked information via video 89.9%

Staff (n=88)
✓ 90% useful or very useful
✓ 75% more likely to test
✓ 100% should continue
Risk profile of RAPID participants*

- 44% born outside of UK
- 60% never previously tested
- Of those previously tested
  - 31% tested >5 years
  - 15% did not receive result of last test
- 21.5% reported behavioural risk
  - 9% sex between men
  - 2.5% IDU or sex with IDU
  - 8% previous STI
  - 4% sex with known HIV +
Risk profile of those not tested

No difference in gender, ethnicity, indicator disease status or length of stay in those participating or approached compared to those not.

- 75 indicator disease admissions
- 71% not tested

- 27 Africans admitted
- 63% not tested
New diagnoses

- 135 tests
- 3 reactives – all confirmed HIV positive
- 3/135 = 2.2%

- Prevalence diagnosed HIV:
  - 10/606 = 1.7%
New diagnoses

- British man, 48yr – PCP
  - CD4 20
- Nigerian woman, 42yr – Bacterial pneumonia
  - CD4 40
- British man, 60yr – Bleeding Haemorrhoids
  - CD4 590
<table>
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<th>Health Advisor</th>
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</tr>
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<tbody>
<tr>
<td>Cost per hour</td>
<td>€ 43</td>
</tr>
<tr>
<td>Training</td>
<td>€ 1612.59 (37.5 hours)</td>
</tr>
<tr>
<td>Start-up costs</td>
<td>€ 2042</td>
</tr>
</tbody>
</table>

### 3 Tests per hour
- Cost per patient: € 25.48
- Cost per case identified: € 1293.60

### 6 Tests per hour
- Cost per patient: € 18.99
- Cost per case identified: € 964.32
## Cost estimates for first 1000 patients

<table>
<thead>
<tr>
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<th>Health Advisor</th>
<th>Health-care Assistant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per hour</td>
<td>€ 43</td>
<td>€ 16.72</td>
</tr>
<tr>
<td>Training</td>
<td>€ 1612.59 (37.5 hours)</td>
<td>€ 1254.24 (75 hours)</td>
</tr>
<tr>
<td>Start-up costs</td>
<td>€ 2042</td>
<td>€ 2042</td>
</tr>
</tbody>
</table>

### 3 Tests per hour
- Cost per patient: € 25.48, € 16.66
- Cost per case identified: € 1293.60, € 845.93

### 6 Tests per hour
- Cost per patient: € 18.99, € 14.14
- Cost per case identified: € 964.32, € 717.87
Conclusions

- Offering of HIV POCT acceptable to patients
- HIV POCT feasible
- Effective
- Digital media liked
- Cost efficient: €25 per patient screened (≈€ 14)
  €1294 per case identified (≈€718)

But
- Substantial proportion remain untested
- High proportion possibly diagnosed anyway

Supports recommendation of HIV testing all acute medical admissions
Acknowledgements

- UCLH AAU staff & patients
- NHS Camden & Islington Sexual Health Commissioners
- Gilead