Understanding continuing high HIV incidence: sexual behavioural trends among MSM in London, 2000-2013

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Background

• Over the last decade, the annual number of new HIV diagnoses among MSM in the UK has increased; an all-time high with 3250 diagnoses in 2013.

• Modelling studies indicate HIV incidence has remained unchanged or slightly increased, despite increases in HIV testing and ARV treatment coverage.

• An increase in sexual risk behaviours, including serosorting, among MSM has been observed in numerous countries.
Aims and methods

Aim
• to examine trends in sexual behaviours among MSM
• to explore potential transmitters and acquirers of HIV

Methods
• Gay Men’s Sexual Health Survey: 10 serial cross-sectional surveys between 2000 and 2013 among MSM in London gay social venues
• Self-completed questionnaires
• HIV antibody testing using Orasure oral fluid collection devices
Definitions

Undiagnosed:
Positive orasure specimen and either:
  “had never had an HIV test”
  “believe current status negative or don’t know”
  “result of my last HIV test was negative”

Casual partner:
– Partner with whom UAI only once

Serosorting:
– assumed told by the partner, UAI with partner of ‘presumed’ same status
HIV positivity by recruitment venue type, 2000-2013 (n=11,876)

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Bars</th>
<th>Clubs</th>
<th>Saunas</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV negative</td>
<td>87.2%</td>
<td>87.2%</td>
<td>88.6%</td>
<td>78.0%</td>
</tr>
<tr>
<td>HIV positive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>diagnosed</td>
<td>8.3%</td>
<td>8.5%</td>
<td>6.8%</td>
<td>12.0%</td>
</tr>
<tr>
<td>undiagnosed</td>
<td>4.5%</td>
<td>4.3%</td>
<td>4.6%</td>
<td>10.0%</td>
</tr>
</tbody>
</table>

- No overall significant trend in HIV positivity, between 9%-18% over the period
- Median age: HIV- 33.9 yrs, HIV+ diagnosed 37.9 yrs, HIV+ undiagnosed 34.8 yrs
- White ethnicity: 87%
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Trends in UAI and serosorting, 2000-2013

- UAI (blue line)
- Serosort (light pink line)
- Exclusively serosort (orange line)

- UAI with partners of unknown status

- p < 0.001

Year:
- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2008
- 2011
- 2013

Data values:
- UAI:
  - 2000: 43.2%
  - 2001: 32.6%
  - 2002: 52.6%
  - 2003: 55%
  - 2004: 55%
  - 2005: 55%
  - 2006: 55%
  - 2008: 55%
  - 2011: 37.7%
  - 2013: 37.7%

- Exclusively serosort:
  - 2000: 18.3%
  - 2001: 27.7%
  - 2002: 21.4%
  - 2003: 21.4%
  - 2004: 21.4%
  - 2005: 21.4%
  - 2006: 21.4%
  - 2008: 21.4%
  - 2011: 21.4%
  - 2013: 21.4%
MSM who are potential ‘transmitters’ and ‘acquirers’ of HIV

**Transmitters**

- HIV+ undiagnosed reporting unprotected anal intercourse in the last year

  or

- HIV+ diagnosed reporting UAI and not exclusively serosorting

**Acquirers**

- HIV- reporting unprotected anal intercourse 1+ casual partner in the last year

  or

- HIV- reporting UAI and not exclusively serosorting with any partner type
Proportion of MSM who are potential ‘transmitters’ and ‘acquirers’ of HIV

- Transmitters: 4.6%
- Acquirers: 21.0%
- All other MSM: 74.4%

Pie chart showing the distribution of MSM as transmitters, acquirers, and all other MSM.

Graph showing the proportion of MSM who are potential transmitters and acquirers from 2000 to 2013.

- Transmitters: p=0.16
- Acquirers: p=0.96
Trends in UAI partner numbers in the last year of potential ‘transmitters’

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Summary

- UAI increasing but the type of UAI partners is changing with more serosorting
- Up to 1 in 20 MSM could be at risk of transmitting HIV
- Subgroup of MSM at risk of transmitting HIV are reporting increasing partner numbers
- 1 in 5 HIV negative MSM at risk of acquiring HIV infection.
Limitations

MSM at risk of transmitting HIV

- No viral load or ARV adherence data to determine what fraction of diagnosed MSM are virally suppressed
- Potential overestimating % at risk of transmitting
Limitations

Survey design

- Convenience samples, lack of generalisability
- Validity of self reported data, recall bias
- Disclosure
- Changing profile of people attending gay social venues
Conclusions

- Changes in sexual risk behaviour, increase in UAI and serosorting
- Importance of core groups in HIV infection among MSM in the UK
- Increasing partner numbers of core groups may explain the sustained HIV incidence despite increases in testing and ARV coverage.
We thank Gary Murphy and Bharati Patel for performing the laboratory testing.

We further thank all participants, recruiters and staff for their valuable contributions over the years.