Barriers and facilitators to routine HIV testing among Massachusetts community health centers: An example of Community-Based Participatory Research

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The Fenway Institute of Fenway Health
Purpose

- To briefly describe Fenway Health’s model of integrated, community-based care, education & research.
- To present findings from a 2008 study examining the barriers and facilitators to routine HIV testing in primary care settings among a sample of Massachusetts community health centers (CHCs).
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Key Personnel

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• Matthew Mimiaga, ScD, MPH, Co-Investigator\textsuperscript{1,3}
• Carey V. Johnson, ScM, Study Coordinator\textsuperscript{1}
• Rodney VanDerwarker, MPH, Administrative Director\textsuperscript{1}

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What is Fenway Health?

- Founded 1971: Primary care neighborhood health center
- 13,153 primary care patients; 75,789 visits in 2009, ↑12%
- Diverse populations, specializing in the care of sexual and gender minority people
- Largest primary care center for MSM in New England
- >1200 HIV+ pts in care
- Involved in NIH, CDC and HRSA funded research, since the start of the AIDS epidemic
The Fenway Institute

• Interdisciplinary center of excellence
• Focus on health promotion, disease prevention
• Addresses the needs of diverse lesbian, gay bisexual, and transgender (LGBT) communities, people living with HIV/AIDS and other community-based initiatives
• Approaches: Research and evaluation, professional development, community education, and health policy advocacy
• Local, national and international impact
The health care issues surrounding sexual minorities is an area in which little research and few studies have been conducted, and in which practical knowledge and guidance has been hard to find. Until now.

Introducing The Fenway Guide to Lesbian, Gay, Bisexual, and Transgender Health! Written by leading clinicians in the field of LGBT health and in conjunction with the world renowned Fenway Community Clinic, this one-of-a-kind comprehensive resource helps healthcare professionals gain a better understanding of the health issues pertinent to the LGBT patient and community.

Areas of Interest:
- Understanding the developmental lifecourse of the LGBT patient
- The process of coming out and identity formation
- Providing a LGBT patient with proper health promotion and disease prevention
- Evolution of sexual expression
- The basics of transgender and intersex health
- Demographic and epidemiological information
- LGBT psychosocial and legal issues
- Disorders of sex development (DSDs) and the clinical challenge

Designed to address the needs of diverse clinicians, this book provides medical professionals with guidance, practical guidelines, and discussions of clinical issues relevant to the LGBT population. The Fenway Guide to Lesbian, Gay, Bisexual, and Transgender Health is an invaluable reference for healthcare professionals seeking further knowledge and guidance on sexual minority health care.
CDC Revised Recommendations
September 2006

For patients in all health-care settings
(e.g. primary care, emergency depts, STD clinics, community clinics, correctional facilities)

- Routine HIV testing for all patients 13-64 and for all pregnant women unless patient declines (opt-out testing)

- Annual HIV testing for persons at high risk for HIV infection (i.e. MSM, recently incarcerated)

- Separate written consent and prevention counseling should not be required

CDC, 2006
Routine HIV Testing: Opportunities

- Increases opportunities for testing
  *Makes HIV testing a routine part of medical care*

- Utilizes accurate, rapid testing technologies
  *Provides new opportunities for early diagnosis*

- Normalizes HIV testing
  *Helps identify infections and triage into care*

- Promotes awareness of serostatus
  *Helps prevent new infections*

- Prevention for positives
Routine HIV Testing: Challenges

- Provider and patient awareness
- Stigma and discrimination
- Lose possible benefit of counseling
- Perceived coercion; privacy, civil liberties concerns
- Legal issues
- Resources to pay for more testing and care
## Where is HIV Testing Currently Performed?

<table>
<thead>
<tr>
<th>Location</th>
<th>HIV tests*</th>
<th>HIV+ tests**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private doctor/HMO</td>
<td>44%</td>
<td>17%</td>
</tr>
<tr>
<td>Hospital, ED, Outpatient</td>
<td>22%</td>
<td>27%</td>
</tr>
<tr>
<td>Community clinic (public)</td>
<td>7%</td>
<td>12%</td>
</tr>
<tr>
<td>HIV counseling/testing</td>
<td>5%</td>
<td>9%</td>
</tr>
<tr>
<td>Correctional facility</td>
<td>0.6%</td>
<td>5%</td>
</tr>
<tr>
<td>STD clinic</td>
<td>0.1%</td>
<td>6%</td>
</tr>
<tr>
<td>Drug treatment clinic</td>
<td>0.7%</td>
<td>2%</td>
</tr>
</tbody>
</table>

*National Health Interview Survey, 2002  
**Suppl. to HIV/AIDS surveillance, 2000-2003
Methods
Facilitators & Barriers to Routine HIV Testing Among Massachusetts Community Health Centers

- Formative research to study barriers and facilitators to implementing the new CDC guidelines on routine HIV testing among a sample of Massachusetts CHCs
- Quantitative surveys and qualitative interviews examined administrator and provider attitudes, beliefs, perceptions and practices
- Findings will be used to develop future interventions to address barriers to HIV testing
Routine HIV Testing

For this study, routine HIV testing was defined as

• Voluntary HIV testing performed for all patients in a setting unless the patient specifically declines HIV testing, i.e., ‘opt-out’ testing.

NASTAD, 2007
Participating CHCs

- The Massachusetts League of Community Health Centers represents 52 community health centers
  - primary and preventive care for 1 of 9 state residents (>700,000) through more than 285 sites

- 31 CHCs were enrolled, representing 60% of League member CHCs
  - 15 Ryan White (RW) funded
  - 16 non-Ryan White funded

- Enrollment and data collection from April to December, 2008
Communities hosting Massachusetts League Community Health Centers

23 Greater Boston
4 SE & the Cape
4 Central & West
Phase 1 Quantitative Survey

- Anonymous survey administered by paper or online to maximum 5 personnel from each CHC
- 137 completed surveys, including
  - 31 senior-level administrators
  - 29 medical directors
  - 77 medical providers
- Administrators responded from the perspective of their health centers; medical directors and providers responded from the perspective of their individual clinical practice
- Questions were adapted from comparable surveys administered by National Association of Community Health Centers (NACHC) & National Alliance of State and Territorial AIDS Directors (NASTAD)
Phase 2 Qualitative Interviews

- Confidential in-depth, face-to-face interview administered to 1 personnel from each CHC
- 30 completed interviews, including
  - 9 senior-level administrators
  - 15 medical directors
  - 6 medical providers
Results
### HIV Services

Median number of HIV-infected patients served in past 12 months

<table>
<thead>
<tr>
<th></th>
<th>RW CHCs</th>
<th>Non-RW CHCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators*</td>
<td>169</td>
<td>5</td>
</tr>
<tr>
<td>Medical directors/providers*</td>
<td>32</td>
<td>1</td>
</tr>
</tbody>
</table>

* (*p<0.001)

There were no statistically significant differences in the gender, age or race/ethnicity of HIV-infected patients between RW and non-RW CHCs.
## HIV Testing

<table>
<thead>
<tr>
<th></th>
<th>RW CHCs</th>
<th>Non-RW CHCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provided HIV testing</td>
<td>100%</td>
<td>94%</td>
</tr>
<tr>
<td>Dedicated HIV testing program**</td>
<td>93%</td>
<td>40%</td>
</tr>
<tr>
<td>Median annual HIV tests*</td>
<td>931</td>
<td>400</td>
</tr>
<tr>
<td>Median annual funding***</td>
<td>$122,000</td>
<td>$0</td>
</tr>
<tr>
<td>On-site medical staff</td>
<td>93%</td>
<td>87%</td>
</tr>
<tr>
<td>On-site non-medical staff**</td>
<td>93%</td>
<td>40%</td>
</tr>
<tr>
<td>Off-site referral</td>
<td>20%</td>
<td>40%</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001
## HIV Testing

### Testing technologies used

<table>
<thead>
<tr>
<th>Test Type</th>
<th>RW CHCs</th>
<th>Non-RW CHCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional blood test</td>
<td>93%</td>
<td>93%</td>
</tr>
<tr>
<td>Conventional oral test</td>
<td>73%</td>
<td>40%</td>
</tr>
<tr>
<td>Rapid test*</td>
<td>73%</td>
<td>33%</td>
</tr>
</tbody>
</table>

* (p<0.05)
Routine HIV Testing

- 60% RW administrators vs. 27% non-RW administrators indicated both they and their CHCs were aware of CDC 2006 recommendations.

- 53% administrators vs. 33% medical directors/providers have implemented routine HIV testing ($p<0.05$).

- 38% of respondents overall indicated routine testing had been implemented in their health centers.

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prenatal/obstetrical care</td>
<td>25%</td>
</tr>
<tr>
<td>Family medicine</td>
<td>25%</td>
</tr>
<tr>
<td>Dedicated HIV testing program</td>
<td>20%</td>
</tr>
<tr>
<td>Family planning</td>
<td>19%</td>
</tr>
<tr>
<td>STD clinic</td>
<td>14%</td>
</tr>
<tr>
<td>HIV clinic</td>
<td>13%</td>
</tr>
</tbody>
</table>
## Routine HIV Testing

10 most frequently reported barriers to implementation

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constraints on providers’ time</td>
<td>68%</td>
</tr>
<tr>
<td>Time required to administer counseling</td>
<td>65%</td>
</tr>
<tr>
<td>Time required to administer informed consent</td>
<td>52%</td>
</tr>
<tr>
<td>Lack of funding</td>
<td>35%</td>
</tr>
<tr>
<td>Need for additional training</td>
<td>34%</td>
</tr>
<tr>
<td>Staff availability</td>
<td>33%</td>
</tr>
<tr>
<td>Informed consent statutes/regulations</td>
<td>27%</td>
</tr>
<tr>
<td>Lack of provider buy-in</td>
<td>25%</td>
</tr>
<tr>
<td>Educating providers about statutory/regulatory requirements</td>
<td>25%</td>
</tr>
<tr>
<td>Counseling statutes/regulations</td>
<td>23%</td>
</tr>
</tbody>
</table>
Routine HIV Testing

Bivariate associations with decreased odds of providing routine HIV testing included:

- Time to administer informed consent (OR=0.41, 95% CI: 0.20, 0.85)
- Time to administer counseling (OR=0.32, 95% CI: 0.15, 0.67)
- Constraints on providers’ time (OR=0.22, 95% CI: 0.10, 0.49)
- Educating providers about statutory/regulatory requirements (OR=0.26, 95% CI: 0.10, 0.69)
Routine HIV Testing

Bivariate associations with *increased* odds of providing routine HIV testing included:

- On-site HIV testing provided by non-medical staff (OR=2.04, 95% CI: 1.01, 4.22)
- Written procedures requiring providers:
  - To offer HIV testing (OR=2.92, 95% CI: 1.25, 6.79)
  - To discuss drug use (OR=3.10, 95% CI: 1.29, 7.48)
  - or alcohol use (OR=2.92, 95% CI: 1.24, 6.87)
- To offer HIV testing for patients receiving STD testing or services (OR=2.35, 95% CI: 1.01, 5.67)
Routine HIV Testing

In a final multivariable model

• Time to administer informed consent was associated with *decreased* odds (OR=0.21, 95% CI: 0.05, 0.92)

• On-site HIV testing by non-medical staff was associated with *increased* odds (OR=9.84, 95% CI:1.77, 54.70)
Routine HIV Testing

Barriers identified from interviews included

- Time: constraints on providers’ time, time to administer informed consent and pre- and post-test counseling
- Resource constraints, including funding, staffing & space
- Discomfort: provider, patient and community discomfort
- Knowledge: inconsistent levels of awareness and implementation of CDC recommendations
- State policy: concerns regarding incompatibility with Massachusetts HIV testing policy
Routine HIV Testing

• Most interview respondents identified time as a barrier:

“That’s the big issue. I think time. Time is it. It -- it’s really -- uh -- like I said, the -- the 30-minute visit, the 15-minute visit, it’s -- it’s crazy. You have to try and get everything in...Whenever you walk in with a patient, you have your own agenda; they have theirs. And it takes more than 15 minutes, even more -- you know -- more than 30 minutes, sometimes, to get through both of your agendas.”

Ryan White clinical director who has implemented routine HIV testing throughout health center
Routine HIV Testing

• Discomfort was identified as a barrier during interviews but not from surveys:

“The barriers include provider discomfort with testing, partly because, uh, we were always trained that it's such a terrible disease that if you could keep it out of your brain, you were going to be happier. You know, you can't admit this in public, but the patients’ providers, just like everybody else, don't think about the terrible stuff.”

*Ryan White medical director who has implemented HIV testing during routine physicals*
Routine HIV Testing

• Awareness and implementation of CDC recommendations was inconsistent among interview respondents:

“So I know that the recommendations have been revised, that the testing now is more recommended to be done. I don't know the details.”  Non-Ryan White medical director

“Generally any patient who is greater than 16/17 who is sexually active we would recommend the HIV test…we generally recommend IV drug users and previous transfusions, men who have sex with men, all would expect that you would like to recommend the HIV test. It is the policy to try to recommend it here. It isn't always apparent but it is the policy to…”  Non-Ryan White medical director
Routine HIV Testing

• There was perceived incompatibility with Massachusetts HIV testing policy, particularly among state-funded testing programs, regarding:
  • Need for separate, written informed consent
  • Pre- and post-test counseling requirements
  • Reporting of patient test results
  • State reporting and testing quotas for specific populations

“What we do here in the health center -- it's the opposite of what the CDC is saying that they want done. But we don't do that here in Massachusetts. We don't do opt-out, we do opt-in.”

*Non-Ryan White senior administrator*
Routine HIV Testing

Facilitators identified from interviews included

- Release of state-level guidelines, accompanied by resources and an accountability mechanism

- Organizational buy-in, including commitment of senior-level management and the identification of one or more “champions” of routine HIV testing at each health center

- Collaborative analysis of patient and resource flow to integrate routine HIV testing into existing activities
Routine HIV Testing

Facilitators to improve screening rates *cont’d*

- Patient, provider and community education and marketing
- Provider training
- Clinical reminders, such as the use of prompts within the electronic medical record
Conclusions

• Routine HIV testing is not currently being implemented uniformly among Massachusetts community health centers

• Future efforts to increase routine testing should address concerns regarding time, informed consent, funding, training & staff availability

• Development of a revised testing protocol addressing these concerns and tailored to the expressed needs of individual health centers is warranted
Thank you!

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