HIV in the VA 2015: Where are we?

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Office of Patient Care Services/Specialty Care Services
Veterans Health Administration

Road map

• Where have we been?
  ✦ How HIV has changed in the last 30 years

• Where are we now?
  ✦ How HIV care is organized in VA

• Where are we going?
  ✦ Improving HIV care in VA
Take-home lessons

- It’s not just the virus anymore
- Good HIV care means good primary care
- VA is a leader in HIV care for the U.S.

Where have we been?

How HIV has changed in the last 30 years
A tale of two patients

May 1988 – Case 1
18-year-old woman with newly diagnosed HIV infection admitted to Bellevue Hospital with severe dehydration
Dx: Cryptosporidium parvum enteritis

Course: Pt dies after 1 week

April 2003 – Case 2
46-year-old male with newly diagnosed HIV infection admitted to DC VA Medical Center with severe dehydration
Dx: Disseminated C. neoformans infection

Course:
• Successful liposomal AmB tx
• Highly active anti-retroviral therapy (HAART) started

April 2010: CD4 450, VL <75

Two decades ago, HIV infection was an irreversible, fatal disease

“It’s the virus, stupid”

Egger M et al. Lancet 2002; 360-119-29

Better living through chemistry

Note: Data have been adjusted for reporting delays.
HIV can be treated more effectively than many other serious diseases

<table>
<thead>
<tr>
<th>Condition</th>
<th>Intervention</th>
<th>Per-person survival gains (mo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-small-cell lung cancer</td>
<td>Chemotherapy</td>
<td>7</td>
</tr>
<tr>
<td>Node and breast cancer</td>
<td>Adjuvant chemotherapy</td>
<td>29</td>
</tr>
<tr>
<td>Coronary artery disease</td>
<td>Bypass surgery</td>
<td>50</td>
</tr>
<tr>
<td>Relapsed non-Hodgkin’s lymphoma</td>
<td>Marrow transplant</td>
<td>92</td>
</tr>
<tr>
<td>Prophylaxis in HIV/AIDS</td>
<td>OI prophylaxis</td>
<td>3</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>HAART</td>
<td>160</td>
</tr>
</tbody>
</table>


Where are we?

How HIV care is organized in VA
Veterans Health Administration

- 144 VA Medical Centers
- 1,203 community-based outpatient clinics
- 9.1 million enrollees
- 92.4 M outpatient visits/707K admissions
- 53,000 health care providers
- Annual budget of $46B (FY 2014)

National Center for Veterans Analysis and Statistics
Although HIV/AIDS is not the most common chronic disease in VHA . . .

<table>
<thead>
<tr>
<th>Rank</th>
<th>Disease</th>
<th>Patients</th>
<th>Cost ($M)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hypertension</td>
<td>1,615,498</td>
<td>603.0</td>
</tr>
<tr>
<td>2</td>
<td>Diabetes</td>
<td>908,814</td>
<td>627.7</td>
</tr>
<tr>
<td>3</td>
<td>Hyperlipidemia</td>
<td>791,524</td>
<td>198.2</td>
</tr>
<tr>
<td>4</td>
<td>Skin diseases</td>
<td>586,213</td>
<td>491.0</td>
</tr>
<tr>
<td>5</td>
<td>CAD</td>
<td>507,034</td>
<td>733.9</td>
</tr>
<tr>
<td>6</td>
<td>CHF and other</td>
<td>368,253</td>
<td>672.6</td>
</tr>
<tr>
<td>7</td>
<td>COPD</td>
<td>360,174</td>
<td>358.6</td>
</tr>
<tr>
<td>8</td>
<td>PTSD</td>
<td>343,858</td>
<td>546.4</td>
</tr>
<tr>
<td>9</td>
<td>Arthritis</td>
<td>342,076</td>
<td>232.9</td>
</tr>
<tr>
<td>10</td>
<td>Addictive disorders</td>
<td>137,125</td>
<td>700.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>HIV/AIDS</td>
<td>24,250</td>
<td>52.6</td>
</tr>
</tbody>
</table>

VHA Patient Care Services 2008 – 2012 Strategic Plan, Appendix D  
*Excludes pharmacy costs

. . . VHA is the largest HIV provider in the US

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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</thead>
<tbody>
<tr>
<td>VHA</td>
<td>26,975</td>
<td>27,268</td>
<td>27,447</td>
<td>27,405</td>
</tr>
<tr>
<td>VISN 2</td>
<td>244</td>
<td>263</td>
<td>263</td>
<td>261</td>
</tr>
</tbody>
</table>

VHA National HIV Clinical Case Registry (CCR), 31 Dec 2014 snapshot; VHA Allocation Resource Center
HIV can be seen in older Veterans . . .

VHA National HIV Clinical Case Registry (CCR), 31 Dec 2014 snapshot

. . . and newer ones

- >300,000 active duty personnel have served in Operations Iraqi Freedom (OIF), Enduring Freedom (OEF), and New Dawn (OND)
- HIV testing is performed at least every 24 months while deployed
- >45 personnel have acquired HIV in theater

VHA has a sophisticated infrastructure for addressing HIV nationally and locally

- VHA spends ~$1B annually for HIV
- VISNs receive specific funding for HIV patients
- All FDA-approved anti-retrovirals are on the VHA National Formulary
- The VHA National HIV Program sets policy and supports providers in the field
- All VAMCs have an HIV Lead Clinician
- VHA maintains national and local electronic clinical case registries of all HIV+ Veterans in care

HIV care in VHA is diverse

2009 Survey of VHA's National HIV/AIDS Programs; VHA Corporate Data Warehouse
VA Continuum of Care

Adapted from Backus LI et al. J Acquir Defic Syndr 2015; 69: 474-80

VHA provides excellent care to HIV+ Veterans

VHA National HIV Clinical Case Registry (CCR), 31 Dec 2014 snapshot
Where are we going?

Improving HIV care in VA

Delayed HIV testing leads to bad things

Case 3
42 yo AAM, in care at DC VAMC x 6 y
PMH: HBV, cocaine/EtOH use, homelessness
HPI: Brought to AEC after seizure. LP → 7 WBC, 6 RBC, prot 73, cryptococal Ag 1:32. CSF Cx grew Cryptococcus neoformans. CD4 37, VL >500,000.
Course: AmB x 4 weeks, with resolution. D/C’d on PCP, MAC, cryptococcal prophylaxis. CD4 currently 869 on HAART
Veterans Benefits and Services Act of 1988

SEC. 124. RESTRICTION ON TESTING FOR INFECTION WITH THE HUMAN IMMUNODEFICIENCY VIRUS.

(a) GENERAL RULE.—Except as provided in subsection (b), the Administrator may not during any fiscal year conduct a widespread testing program to determine infection of humans with the human immunodeficiency virus unless funds have been appropriated to the Veterans’ Administration specifically for such a program during that fiscal year.

Risk-based testing delays HIV diagnosis

- Veterans Aging Cohort Study examined >4,000 Veterans dx’d with HIV between 1998-2002
  - Median time in VA care – 3.7 y
  - CD4 < 200 at diagnosis - 51%
  - AIDS OI within 1 y of dx – 36%
  - Evidence of HIV before dx – 13%

- “Current testing practices based on clinical suspicion of HIV infection are too insensitive”

Gandhi N et al. Med Care 2007; 45:1105-9
## Risk-based testing misses at-risk Veterans

<table>
<thead>
<tr>
<th>At-risk definition</th>
<th>Number of Veterans at risk for HIV</th>
<th>Number of Veterans tested</th>
<th>% of at-risk Veterans tested for HIV</th>
</tr>
</thead>
<tbody>
<tr>
<td>EtOH use, SUD, hepatitis, or STD</td>
<td>13,991</td>
<td>5,076</td>
<td>36%</td>
</tr>
<tr>
<td>SUD, hepatitis, or STD</td>
<td>9,703</td>
<td>4,085</td>
<td>42%</td>
</tr>
<tr>
<td>Cocaine, opiate, or amphetamine use, HBV, HCV, or STD</td>
<td>7,540</td>
<td>3,387</td>
<td>45%</td>
</tr>
<tr>
<td>Cocaine, opiate, or amphetamine use</td>
<td>4,658</td>
<td>2,258</td>
<td>48%</td>
</tr>
</tbody>
</table>


### Why risk-based screening is a problem

- Providers may be uncomfortable assessing risk
- Providers may not have adequate time to assess risk
- Patients may not be comfortable revealing risks
- Patients, especially women, may be unaware of their risks
- Offering testing based on risk misses infected patients
VHA Informed Consent Handbook
1004.01: August 17, 2009

- Written informed consent and prescribed pre- and post-test counseling are no longer required
- Verbal consent must be obtained and documented in the medical record
- Written educational materials about HIV testing must be provided to patients.

http://www.hiv.va.gov/vahiv?page=prtop03-va-01

VHA Directive – HIV Testing

- Current VHA policy: HIV testing is a part of routine medical care.
- Providers routinely provide HIV testing to all Veterans who give verbal consent.
- Veterans who test positive for HIV infection are referred for state-of-the-art HIV treatment as soon as possible after diagnosis.
Barriers to HIV testing in the VA

- Organizational barriers
  - Informed consent & pre-test counseling requirements
  - Constraints on provider time
  - Limited opportunity for timely, in-person post-test notification
  - Uncertain capacity to manage newly diagnosed patients

- Provider behaviors
  - Incomplete recognition of HIV risk factors
  - Reliance on trained counselors to order HIV tests
  - Discomfort with HIV counseling
  - Lack of prioritization of HIV testing

Eliminating written informed consent removes only ONE barrier

CDC recommended routine HIV testing in 2006

- Routine HIV testing, with patient notified that testing will be performed unless he/she declines
- Screen high-risk patients at least annually
- Separate written informed consent should not be necessary
US Preventive Services Task Force has finally endorsed routine HIV testing

“The USPSTF recommends that clinicians screen for HIV infection in adolescents and adults aged 15 to 65 years. Younger adolescents and older adults who are at increased risk should also be screened. Grade: A Recommendation.”

Ann Intern Med 2013;159:51-60

There is nothing new under the sun – there is only the history we haven’t read yet

Note: Data have been adjusted for reporting delays and missing risk factor information.
Interventions to improve HIV testing

• Organizational changes
  ♦ Collaboration between stakeholders (ID, PC, Lab, Nursing)
  ♦ Quality improvement grants to promote testing
  ♦ Process improvements (e.g., not relying on one class of providers)

• Knowledge
  ♦ Academic detailing
  ♦ Feedback to providers and facilities on testing rates
  ♦ Social marketing

• Tools
  ♦ Clinical reminders
  ♦ Rapid testing (where appropriate)

HIV testing electronic clinical reminder
Social marketing to providers and Veterans

DID YOU KNOW?

90% of Veterans in VA care have never been tested for HIV.

HIV testing saves lives.

Do your part. Offer the test to every patient.

www.hiv.va.gov

Progress, not perfection

% Outpatients EVER Tested for HIV

VHA Corporate Data Warehouse
Veterans EVER Tested for HIV by Race/Ethnicity, 2012

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (N=948,614)</td>
<td>23.0%</td>
</tr>
<tr>
<td>Black (N=891,183)</td>
<td>43.4%</td>
</tr>
<tr>
<td>Hispanic (N=308,598)</td>
<td>40.1%</td>
</tr>
<tr>
<td>Unknown (N=1,132,585)</td>
<td>21.0%</td>
</tr>
<tr>
<td>**API (N=99,703)</td>
<td>31.2%</td>
</tr>
<tr>
<td>*AI/AN (N=48,022)</td>
<td>29.5%</td>
</tr>
</tbody>
</table>

* American Indian/Alaska Native; ** Asian Pacific Islander
Veterans EVER Tested for HIV by Race/Ethnicity & Gender, 2012

**Veterans EVER Tested for HIV by Race/Ethnicity & Gender, 2012**

- **AI/AN (N=48,022)**
  - Male: 28.6%
  - Female: 37.3%
- **API (N=99,703)**
  - Male: 30.1%
  - Female: 42.3%
- **Black (N=891,183)**
  - Male: 20.3%
  - Female: 42.6%
- **Unknown (N=237,573)**
  - Male: 20.3%
  - Female: 49.3%
- **White (N=4,126,109)**
  - Male: 22.4%
  - Female: 33.2%
- **Hispanic (N=308,598)**
  - Male: 39.6%
  - Female: 46.9%

VHA Corporate Data Warehouse

*American Indian/Alaska Native; **Asian Pacific Islander

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**Veterans EVER Tested for HIV by Age & Gender, 2012**

- **Under 30**
  - Male: 30.80%
  - Female: 39.50%
- **30 to 49**
  - Male: 33.90%
  - Female: 42.70%
- **50 to 69**
  - Male: 29.40%
  - Female: 35.80%
- **70 and Over**
  - Male: 13.10%
  - Female: 13.70%

VHA Corporate Data Warehouse
HIV Seropositivity of Veterans by Race/Ethnicity, 2012

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>*AI/AN (N=5,263)</td>
<td>0.53%</td>
</tr>
<tr>
<td>**API (N=11,579)</td>
<td>0.27%</td>
</tr>
<tr>
<td>Black (N=124,714)</td>
<td>0.34%</td>
</tr>
<tr>
<td>Unknown (N=81,796)</td>
<td>0.31%</td>
</tr>
<tr>
<td>White (N=313,827)</td>
<td>0.48%</td>
</tr>
<tr>
<td>Hispanic (N=39,439)</td>
<td>0.94%</td>
</tr>
</tbody>
</table>

As HIV patients live longer, new comorbidities are emerging

Case 4

58 yo M with HIV x 13 y; VL <40, CD4 = 651.
PMH: HTN, COPD, HCV, smokes 1 ppd, EtOH use, SUD
HPI: Left-sided CP radiating to left arm x 3d
Course: Admitted to MICU; cath showed 90% mid-LCx obstruction. Received PCI with stent without complication
Cardiovascular, metabolic, and other conditions are emerging in HIV+ Veterans

VHA National HIV Clinical Case Registry (CCR), 31 Dec 2014 snapshot

“Smoking kills. If you’re killed, you’ve lost a very important part of your life.”

FIGURE 1. Kaplan-Meier survival curves for HIV-positive and HIV-negative subjects stratified by smoking status. P-values shown on graphs represent overall comparison between current, former, and never smokers. In pair-wise comparisons, HIV-positive current smokers have significantly decreased survival compared to never (p < 0.001) and former smokers (p = 0.004). Survival is not significantly different between HIV-positive former and never smokers (p = 0.15). Survival across groups was compared with the log-rank test.

Crothers K et al. AIDS Educ Prev 2009; 21 (3 supp): 40-53
“It’s the patient, stupid”

Case 5
50 yo M with HIV x 13 y; VL <75, CD4 = 312.
Comorbidities:
- Hypertension (poorly controlled)
- DM type 2 (HbA1C 12.6%)
- Dyslipidemia (LDL 196 mg/dL)
- Tobacco use (>1 ppd)
- Routinely misses ID and diabetes education appts
- Would not co-operate with tele-health/care coordination
• 10 yr CAD risk: 37%

HCV is an increasing problem for HIV+ (and HIV- negative patients)

Case 6
HPI: 61 yo AAM with epigastric pain
PMH: HIV, HTLV-I, chronic hepatitis C
Labs: AFP 529; AST 71, ALT 43; TBili 2.0; Alb 3.4
CT: Multiple large enhancing lesions of liver and pancreas; invasion of portal vein and stomach
Bx: Well-differentiated hepatocellular carcinoma
Dx: HCC, Stage IV
Course: Palliative care only; pt died 6 mo after dx
Rates of end-stage liver disease in VA due to HCV in VA are increasing in all veterans, especially HIV+

VHA’s Patient-Aligned Care Team is the preferred model for HIV care in VHA

- Coordinated, comprehensive care
- Team-based care
- Co-management conferences
- Co-location
- Establish relationships
- Focus on primary care
Integrated care improves viral suppression in HIV+ patients

<table>
<thead>
<tr>
<th>TABLE 1. Four Levels of Integrated HIV Care Clinics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services</td>
</tr>
<tr>
<td>Components of Integrated HIV Care</td>
</tr>
<tr>
<td>Levels</td>
</tr>
<tr>
<td>Nurse practitioner, physician assistant</td>
</tr>
<tr>
<td>Clinical coordinator</td>
</tr>
<tr>
<td>HIV physician specialist</td>
</tr>
<tr>
<td>Dedicated pharmacist</td>
</tr>
<tr>
<td>Social worker</td>
</tr>
<tr>
<td>Psychiatrist</td>
</tr>
<tr>
<td>Psychologist</td>
</tr>
</tbody>
</table>

*V* indicates that the services are available at the HIV clinics to offer integrated services to HIV-infected patients.

Hoang T, et al. Med Care 2009; 47:560-7

Primary Care of Veterans with HIV – a resource for PCMH and HIV care in VA

http://www.hiv.va.gov/vahiv?page=pcm-00-00
Summary

- HIV is a moving target
- Offer HIV testing to every untested patient
- Our emphasis is on tools that will help providers take better care of Veterans
Questions?

www.hiv.va.gov

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