Global Health Comes Home: HIV in the US Foreign-Born Population

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Foreign-Born: Definitions

- **Immigrant** - A foreign-born individual who voluntarily leaves his/her country of origin and has been admitted to reside permanently in US as a Lawful Permanent Resident.

- **Refugee** - A foreign-born individual unable or unwilling to return to his or her country of origin because of past persecution or a well-founded fear of persecution, based on the person's race, religion, nationality, membership in a particular social group, or political opinion.

- **Asylee** - Refugee who is already in USA or at port of entry.

- **Unauthorized immigrant** - A foreign-born individual who has entered or remained in the US without approval for his admission.
Figure 2
Foreign-Born Share of U.S. Population,
Actual and Projected: 1850–2050
(% of total)

Note: Projections for 2005–2050 indicated by broken line.
Source: Pew Research Center, 2008; Gibson and Jung (2006)
What About Foreign-Born Populations and HIV?

- Are Foreign-Born persons bringing HIV to US?
- How will immigration reform affect US HIV prevalence?
- Is HIV different in Foreign-Born Populations?
- Do Foreign-Born individuals have different needs than US-born?
- Limited and fragmented data on HIV in FB
- Skewed epidemiologic data
- Lack of outcomes data
- Need for modification of data collection methods
- Need for prioritization of funding for research in FB
- Referral to clinical trials
HIV Epidemic Research in the US

Overall

Evidence

Gap

Foreign-Born

Evidence

Gap

EvidenceGap
US HIV Travel Ban

- For approximately 22 years US travel and visa regulations excluded persons with HIV from travelling or immigrating to the US.
  - HIV was listed along with syphilis and tuberculosis as diseases of public health significance due to concern for spread to US citizens.
  - HIV-infected individuals could apply for waiver, however, application process was time-consuming and complex.
  - Scientific data did not support the threat to the public health and efforts were begun to reverse ban.
### Table 1b. Regional population, immigration and HIV estimates used to calculate the weighted regional rate estimates.

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary</td>
<td>Low</td>
<td>High</td>
<td>Primary</td>
<td>Low</td>
</tr>
<tr>
<td>Africa*</td>
<td>22,880,000</td>
<td>21,170,000</td>
<td>24,800,000</td>
<td>1,267,495,000</td>
<td>16.05</td>
</tr>
<tr>
<td>Asia</td>
<td>4,800,000</td>
<td>3,920,000</td>
<td>6,060,000</td>
<td>3,727,145,000</td>
<td>1.29</td>
</tr>
<tr>
<td>Europe</td>
<td>2,360,000</td>
<td>1,800,000</td>
<td>3,200,000</td>
<td>731,284,000</td>
<td>3.23</td>
</tr>
<tr>
<td>N. America</td>
<td>1,300,000</td>
<td>480,000</td>
<td>1,900,000</td>
<td>338,831,000</td>
<td>3.84</td>
</tr>
<tr>
<td>Oceania</td>
<td>75,000</td>
<td>53,000</td>
<td>120,000</td>
<td>34,240,000</td>
<td>2.19</td>
</tr>
<tr>
<td>S. America</td>
<td>1,830,000</td>
<td>1,610,000</td>
<td>2,170,000</td>
<td>572,190,000</td>
<td>3.20</td>
</tr>
<tr>
<td>Global estimates</td>
<td>33,245,000</td>
<td>28,033,000</td>
<td>38,250,000</td>
<td>6,671,185,000</td>
<td> </td>
</tr>
</tbody>
</table>

#### Regional HIV Rate per 1,000 immigrants entering the U.S. based on regional weight estimates:

- **U.S. Immigrant estimates:**
  - Primary: 4.06
  - Low: 2.94
  - High: 5.09

- **Regionally weighted number of Legal Permanent Residents:**
  - U.S. Immigrant estimates: 1,052,415

- **Total number of HIV infected immigrants:**
  - U.S. Immigrant estimates: 4,275

Borse et al, CDC 2008.
Impact of change in immigrant-related legislation:
Prevalence of additional HIV Cases

Cumulative total cases

Years after initiation of change

Borse et al, CDC 2008.
HIV in Foreign-Born CDC 2009

- Data from 31 States from 2002-2007.

- 162,367 new diagnoses. Of those 24,913 (15.3%) were FB.

Prosser et al. 17th CROI, 2010.
HIV in FB Risk Factors: CDC 2009

Data from 31 States from 2002-2007.

162,367 new diagnoses. Of those 24,913 (15.3%) were FB.

<table>
<thead>
<tr>
<th>Transmission Category</th>
<th>U.S.-Born No.</th>
<th>U.S.-Born %</th>
<th>Foreign-Born No.</th>
<th>Foreign-Born %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male-to-male sexual contact</td>
<td>67,507</td>
<td>67.3</td>
<td>9,996</td>
<td>58.9</td>
</tr>
<tr>
<td>Injection Drug Use</td>
<td>12,658</td>
<td>12.6</td>
<td>1,236</td>
<td>7.3</td>
</tr>
<tr>
<td>Male-to-male sexual contact and injection drug use</td>
<td>5,732</td>
<td>5.7</td>
<td>508</td>
<td>3.0</td>
</tr>
<tr>
<td>Heterosexual Contact</td>
<td>13,550</td>
<td>13.5</td>
<td>5,066</td>
<td>29.8</td>
</tr>
<tr>
<td>Other</td>
<td>805</td>
<td>0.8</td>
<td>177</td>
<td>1.0</td>
</tr>
<tr>
<td>Subtotal</td>
<td>100,252</td>
<td>72.9</td>
<td>16,981</td>
<td>68.2</td>
</tr>
</tbody>
</table>

| Females                                                   |                |            |                  |                |
| Injection Drug Use                                        | 8,117          | 21.80      | 520              | 6.6            |
| Heterosexual Contact                                      | 28,401         | 76.30      | 7,197            | 90.7           |
| Other                                                     | 685            | 1.90       | 215              | 1.8            |

Prosser et al. 17th CROI, 2010.
Stage of HIV in FB: CDC 2009

More rapid progression to AIDS in the FB population.

<table>
<thead>
<tr>
<th>Diagnosis of AIDS after diagnosis of HIV infection</th>
<th>U.S.-Born</th>
<th>Foreign-Born</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>&gt;12 months</td>
<td>71,381</td>
<td>11,215</td>
</tr>
<tr>
<td>&lt;12 months</td>
<td>41,073</td>
<td>9,151</td>
</tr>
<tr>
<td>Total</td>
<td>112,454</td>
<td>20,366</td>
</tr>
</tbody>
</table>

Table 2. Time to an AIDS diagnosis after a diagnosis of HIV infection among U.S.-Born and Foreign-Born Persons, 31 U.S. States, 2002-2006

37% of those were born in Mexico and 28% were born in Africa.
HIV In Colorado

- In 2012, there were 2027 new HIV diagnoses in Colorado
- 1729 (85%) were US-Born and 298 (15%) Foreign-Born
HIV Testing in FB Persons

- Seattle:
  - Only 35% of Africans surveyed (N=203) had ever tested for HIV.
  - About 70% indicated willingness to be tested if testing were free and easy.

- Denver-Hispanic Women:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>FBHW n=226</th>
<th>USBHW n=94</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever been tested for HIV?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>113 (54.9%)</td>
<td>72 (82.8%)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

HIV Testing in an STD Clinic -

Los Angeles STD clinic 1993-1999

✧ Tested 61,120 patients
  ✧ USB 1.8% tested HIV+
    ✧ Majority African Americans
  ✧ FB 1.6% tested HIV+
    ✧ Majority Mexico/Central America
  ✧ Proportion of + tests essentially = in USB vs FB
  ✧ Average time living in the US: 12 years

What About Risks for HIV for FB Immigrants?

- Minority groups (African-Americans and Latinos) have an increased risk for HIV in this country.
- Does being foreign-born put one at increased risk for HIV?
- Estimating the risk of HIV for US immigrants is complex.
- Origination from high HIV prevalence areas (Africa, Asia) vs low HIV prevalence areas (Mexico) compared with US
  - Inherent risk compared to home country likely different upon immigration
## HIV Prevalence “Shifting”

<table>
<thead>
<tr>
<th>Country</th>
<th>Prev. (%) 15-49</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>18.1</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>15.3</td>
</tr>
<tr>
<td>Mozambique</td>
<td>12.5</td>
</tr>
<tr>
<td>Kenya</td>
<td>8.3</td>
</tr>
<tr>
<td>Uganda</td>
<td>5.4</td>
</tr>
<tr>
<td>Nigeria</td>
<td>3.1</td>
</tr>
<tr>
<td>Rwanda</td>
<td>2.8</td>
</tr>
<tr>
<td>Haiti</td>
<td>2.2</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>2.0</td>
</tr>
<tr>
<td>Ghana</td>
<td>1.9</td>
</tr>
<tr>
<td>Ukraine</td>
<td>1.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Prev. (%) 15-49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panama</td>
<td>1.3</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>1.1</td>
</tr>
<tr>
<td>Russia</td>
<td>1.1</td>
</tr>
<tr>
<td>El Salvador</td>
<td>0.8</td>
</tr>
<tr>
<td>Guatemala</td>
<td>0.8</td>
</tr>
<tr>
<td>US</td>
<td>0.6</td>
</tr>
<tr>
<td>Somalia</td>
<td>0.5</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.3</td>
</tr>
<tr>
<td>India</td>
<td>0.3</td>
</tr>
<tr>
<td>China</td>
<td>0.1</td>
</tr>
<tr>
<td>Philippines</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>
Other Factors May Increase HIV Risk for FB Populations

- Unintentional HIV “Serosorting”
  - Assimilation into existing local ethnic groups that interact minimally with other groups may translate into high HIV prevalence in selected FB ethnic groups
- Isolation:
  - Displacement from important family structures/social networks in home country may lead to increased high risk activities: substance abuse, prostitutes, casual partners, MSM activity in HT self-identified men
Increased HIV Risk for FB Populations

- Increased representation of FB in jails/prisons?
  - Incarceration is a risk factor for HIV
- Mental Illness among foreign-born
  - FB persons more likely with hx torture, exposure to extreme violence, mood disorders, Post Traumatic Stress Disorder
  - Mental illness is a risk factor for HIV and is associated with isolation, high-risk activities and incarceration
Living with HIV as an Immigrant in the US
**Unique Issues for HIV in Immigrants**

- Lack of HIV/AIDS information
  - Modes of HIV transmission
  - Treatment availability/Prognosis
  - Illiteracy
  - Language barriers
- Lack of knowledge /trust in US care settings
  - Disclosure
  - Denial/Stigma
  - Cultural/Religious Practices
  - Lack of Healthcare
HIV Education Needs Among Sudanese Immigrants & Refugees in the Midwest

- 55% thought HIV transmitted by mosquitoes, 40% thought transmitted by cough/sneeze and 40% thought person could get HIV from public bathroom
- 55% thought protected if had sex with persons who looked healthy
- 36% thought HIV punishment from God
- Large proportion engaged in high risk behavior

Tompkins et al. AIDS and Behavior. May 2006
Unique Issues for HIV in Immigrants—Clinical Issues

- HIV-2—More common in immigrants (W. Africa)
  - Lack viral load testing/resistance testing
  - Differences in outcomes and response to therapy
- Non-B subtypes—more common in immigrants
  - Difficulties in diagnosis
- Differing opportunistic infections and comorbidity risks
  - TB, Kaposi’s Sarcoma, Trypanosomiasis, Leishmaniasis, Strongyloides, Schistosomiasis, Hepatitis B
Unique Issues for HIV in Immigrants—Clinical Issues

- Pharmacokinetics/genomics and Ethnicity
- Complications and long-term sequelae of genital mutilation
- Child-bearing customs and cultural pressures for child-bearing and breast feeding
- Unique mental health issues
Psychological, Psychosocial and Physical Health of FB with HIV

- HIV positive refugees, Latinos, and U.S. borne assessed across domains of psychological, psychosocial and physical health functioning (n=84)
- Refugees and Latinos assessed for level of acculturation and immigrant related stigma.

Conclusions

- Compared to the other two groups, refugees had more traumatic experiences, greater psychosocial stress on measures of traumatic events, stigma, and social support within the community.

- Refugees reported significant isolation from their community and perceive considerable HIV-related stigma.

- The combination of elevated psychosocial and psychological distress may be associated with greater barriers to healthcare and difficulty integrating into American society for refugees.
Disclosure-Bala

-Bala is a 27 y/o Female from Liberia who came to US as refugee with her father and step-mother.

-As part of immigration screening, HIV testing was performed and she was diagnosed for first time.

-Upon arrival in US, stepmother told other Africans in community of Bala’s HIV diagnosis without her consent

-Bala cut ties with her family, she later heard they had moved to Nebraska
Disclosure-Bala

- Bala began dating an HIV- African man. She was afraid to disclose her HIV status.

- After 6 months of dating (and unprotected intercourse), she told him she was HIV +

- He was furious and ended relationship

- She was very lonely and afraid to date but feeling pressure from community to get married

- She desperately wanted children and her mother was pressuring her to have children
Disclosure-Bala

- She then met another African man and became engaged
- Once pregnant she disclosed her HIV status
- At first they tried to work things out
- Bala delivered a beautiful HIV-negative baby girl
- She and her husband are now divorced.
  - Bala has custody of her daughter but her ex-husband is petitioning for more time with her
- She is now engaged to her previous boyfriend; they do not discuss the HIV and do not use condoms
Stigma

- HIV infection considered shameful
- HIV infection considered death sentence
- Perpetuates silence, denial, and lack of disclosure
- Prevents acknowledgment of problem and accession of HIV care
- Prevents dissemination of accurate information
- Promotes spread of HIV in closed-knit communities
Concerns for HIV-Infected Immigrants in Small Ethnic Communities

- Isolation
- Hopelessness
- Impact on relationships between opposite sex
- Women’s rights issues
  - Rape
  - Violence
  - Lack of power
- Financial
Francoise is a 24 y/o Female from Rwanda. She is Tutsi and her husband is Hutu. This has never been in issue for the couple or their families.

During war, the two were separated and each believed the other to be dead.

Francoise was hiding in a church when it was ambushed by Hutu rebels. She was raped.

She eventually made her way to a refugee camp and was reunited with her husband.
HIV and Rape as a Weapon of War

❖ As part of refugee medical screening, HIV test was performed and Francoise is found HIV+. Her husband is negative. She has had no other sexual partners or blood transfusions.

❖ Francoise and her husband were granted refugee status and settled in Denver.

❖ She is now enrolled in a clinical trial and receives medications.

❖ She is compliant with her medications and doctor’s appointments.
HIV and Rape as a Weapon of War

- She and her husband have worked at the same jobs for 5 years.
- She has learned English.
- She is now trying to get pregnant by home insemination.
Rape As a Weapon of War

“We are not killing you. We are giving you something worse. You will die a slow death”

Taunted the mercenaries who raped and mutilated the Tutsie women, some as young as 12, after killing their menfolk.

Rwanda genocide – 80% of women raped who opted for voluntary testing were found to be HIV positive.
Western v. Traditional Medicine

- It differs from culture to culture.
- Difficulty with acceptance of HIV infection without symptoms
  - Weakness
  - Losing weight
  - Unable to work or move
  - To be bed ridden
- Belief that they will be cured by God/higher power
Belief of Bad Spirit/Witchcraft

✦ “I am under a spell-some witchcraft that was done to me.”

✦ “My girlfriend/boyfriend, wife/husband is negative so that means it is a bad spirit or witchcraft-wouldn’t my sexual partner have it too?”

✦ “People wanting to make money put this spell/witchcraft on me.”

✦ Looking for “traditional” medicine; meaning traditional religious cure to exorcise or cure the bad spirit.
Financial Concerns

- Immigrants may not seek HIV-testing, medical care or HIV medications because they believe that they cannot afford it.
- Low paying jobs and extreme work schedules/hours may lead to lack of care seeking
- Lack of employee health benefits
- Sending money back home is a priority and may lead immigrants to neglect their own health needs.
Confidentiality

- Given the size of the community people are VERY concerned regarding confidentiality.

- Avoid as much as possible to be seen at the clinic, especially if they see someone from the same country or their same origin.
  - May refuse translators

- They suffer due to lack of cultural and or emotional support.
Sara’s Strength

“Sara” is a 46 y/o woman from Eritrea

- Served as a freedom fighter, sustained multiple gun shot wounds
- Husband killed in war
- Came to US as refugee 15 yrs ago
- Lives with close-knit family
- Brother brings to all appts.
Engagement in Care

- Trust of HIV clinic, HIV provider and staff
  - “Safe” zone where they may be free to discuss concerns
  - Clinic staff/providers may be the only persons they talk to about HIV
  - High rates of compliance with medications and visits
  - Immense gratitude
  - Relationship with provider in their cultural context
Foreign-Born and HIV Program at University of Colorado Denver
Foreign-Born and HIV Program-Goals

✦ Improvements in care of foreign-born HIV-infected individuals
  ✦ Improve morbidity and mortality outcomes in immigrant patients
  ✦ Increase rates of retention in care
  ✦ Increase rates of patient satisfaction with HIV care
  ✦ Provide patient HIV treatment and prevention education

✦ Fill knowledge gaps in FB HIV
  ✦ Creation of longitudinal foreign-born HIV database
  ✦ Development of clinical research projects in immigrant health and HIV
UCH Foreign-Born and HIV Program

- Expert HIV primary care and treatment
- Specialized Women’s Services
- Psychosocial care program
- Immigration medical exams and documentation preparation assistance
- Clinical trials referral

- Prevention strategies
- Pre and Post foreign travel medical Care
- Comprehensive reproductive care program including fertility services
- Comprehensive Care for undocumented HIV+ immigrants (MCPN and GJ)

UCH Satellite clinics in GJ, Pueblo, Durango, MCPN-Aurora and Fort Collins
Program Demographics

- N=150, Mean Age 40 years, 10% of HIV clinic populations
  - (Data for Denver and GJ only-2010 )
- Women 39%
- Refugees represent 20%
- Region of Origin (46 different countries represented)
  - Africa: 42%, Latin-America/Caribbean: 46%, Asia/Europe 12%
- HIV Risk Factor
  - Heterosexual sex: 70%, MSM: 21 %, Transfusion/Needle stick/rape: 3 % and IDU: 5%
Program Demographics

❖ Reason for HIV test
  ❖ Immigration 21%, Illness 33%, Partner positive 12% and Pregnancy 7%
❖ History of opportunistic infection: 22 %
  ❖ Most common OI:
    ✤ Tuberculosis 42%
    ✤ PCP 29%
❖ Mean CD4 cell count: 502
❖ Antiretroviral Therapy: 92%

Carten, ML; et al. “Characteristics of Foreign-Born HIV Infected Individuals and Differences by Region of Origin and Gender“, Journal of Immigrant Health 2012
Increased HIV Risk in FB Populations—Possible Solutions

✶ HIV TESTING IS CRUCIAL

✶ In country of origin
  ✶ Continuation of HIV screening at immigration medical screening for persons from high HIV prevalence areas
  ✶ Make waiver process easier

✶ In US
  ✶ HIV screening at intake refugee medical screening
  ✶ HIV screening in other medical settings as priority in FB populations (mobile health units, community clinics, migrant health clinics, STD clinics, Emergency Departments) from high prevalence areas
Increased HIV Risk in FB Populations—Possible Solutions

- Community-Based Organization HIV testing programs
  - Resettlement agencies, churches, etc
  - Novel paradigms will be needed to reach FB populations and achieve “buy-in”
  - Involvement of church/community leaders
Increased HIV Risk in FB Populations - Possible Solutions

- HIV Education in FB populations
  - HIV risk factors and risk reduction strategies
  - HIV care and treatment in US
  - Introduction to medical care practices in US
- Prioritization of HIV prevention and testing efforts in FB populations (local, state, federal levels)
- Funding streams urgently needed
HIV in FB Populations-Future Directions

- National HIV-Foreign-Born Registry:
  - Multi-Site Consortium
  - Collection of clinical data prospectively in “real time”
  - Monitor trends and needs
  - Fill knowledge gaps
  - Inform allocation of resources

HIV in FB Populations-Future Directions

- Immigrant HIV Provider Network
  - Data sharing
  - Provider Education Platform
  - E-Clinical Consultation
  - Blog
Foreign-Born HIV Health Initiative

Questions? Comments?