U.S. Rural vs. Non-Rural HIV Care Continuum Differences: Study Results and AETC Program Interventions

June 17, 2015
The findings and conclusions in this study are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.
About the AETCs

The AIDS Education and Training Centers (AETCs), a national network of leading HIV experts, provide locally based, tailored education and technical assistance to healthcare teams and systems to integrate comprehensive care for those living with or affected by HIV. The AETCs transform HIV care by building the capacity to provide accessible, high-quality treatment and services throughout the United States.

The AIDS Education and Training Centers are funded by the Health Resources and Services Administration, HIV/AIDS Bureau
Compared to urban residents, rural residents are more likely to:

- live below the poverty level
- have little or no health insurance
- have less or limited access to healthcare specialists
- self-describe their health as "fair or poor"

- have higher death rates (ages 1-24)

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Regarding PLWH in the rural U.S.,² ³ ⁵

25% put off obtaining care because they do not have a way to get to their provider,

3/4 seek care in urban areas,

and, late HIV diagnosis is more common, particularly for males and older adults.

What makes treating PLWH in rural areas so challenging?\(^1,4,5,6\)

**TOP 5 Barriers!**

- vast distance & small populations
- fewer providers & facilities
- fewer specialized services, support & networking opportunities
- stigma & fear
- patient's uncertainty of confidentiality

Rural residents are less likely to have ever been tested for HIV

\(<10\%\) of rural residents have reported being tested

Limited availability of access to medication in rural areas


Background

Persons living in rural areas of the United States and its territories often have less access to resources and services for the management of chronic illness than persons in non-rural areas.
Persons living with HIV (PLWH) in rural areas have additional potential barriers including:

- **isolating stigma**, 
- **exponential stigma** (related to one or more factors including having HIV, sexual orientation, substance use, poverty, race/ethnicity), 
- increased risk of **breaks in confidentiality**, and 
- **fear of being victimized or ostracized** within the rural community for disclosure of stigmatized characteristic(s).
AETC Rural Health Committee Definition of “Rural”

**Rural** is a geographic area that is populated with **less than 50,000 people** (or non-metropolitan for designated areas with less than 500,000 people) with one or more of the following geographical barriers:

- Travel distance (> 20 miles) to nearest medical facility with HIV care services
- Travel time to nearest medical facility (> **1 hour**)
- **Limited number of** medical providers and specialist on an as needed basis (including mental health providers)
- Environmental barriers to access the care – i.e., water (isolated on an island), no roads, no mode of transportation or the money to pay for long-distance transportation, lack of internet service to contact provider by computer or cell phone

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Limited resources for addressing health disparity and inequities (poverty, age, race/ethnicity, gender, sexual orientation, mental health/comorbidities, residency status, educational level, language/cultural differences) – with additive stress for each layer of societal discrimination

Health insurance limitations – medical provider coverage (have PCP, but no HIV specialist); prescription payment limitations (need prior approval, large copay, limited marketplace options, needed ARVs not on company formulary, coverage of PEP and PrEP prescriptions)

Limited continuity of care – many rural areas are designated health care provider “shortage” areas with new graduate health care professions going to those sites for loan repayment, but once the loan repayment service is completed, they leave (meaning fewer “experts” in HIV care, and high provider turnover rate for PLWH getting care at those clinics)
HIV Care Continuum Outcomes among Persons Living with HIV Infection, 2011—United States and Puerto Rico

N = 1,201,100

2011

- Diagnosed: 86.0%
- Received medical care: 39.8%
- Prescribed ART: 36.8%
- Viral Suppression: 30.1%

Research Question:
Are there differences in care outcomes between PLWH in rural (< 50,000 population) and non-rural areas (≥ 50,000 population)?
Methodology

- A National HIV Surveillance System data analysis by CDC was done.

- Adults and adolescents (ages ≥13 years) diagnosed with HIV in 18 US jurisdictions that had complete laboratory reporting of CD4 and VL results and had submitted the results to CDC by December 2013 were included in the analysis.

- **Prevalence Ratios** were used to identify significant differences between residential rural, metropolitan, and non-rural/non-metropolitan populations.
U.S. Jurisdictions with Complete Reporting of HIV-Related Laboratory Data to CDC as of December 2013

Complete

Puerto Rico
Lab data were used to assess:

- **Linkage** to HIV medical care (≥1 CD4 or VL test within 3 months of diagnosis among persons diagnosed in 2012),
- **Retention** in HIV medical care (≥2 CD4 and/or VL tests at least 3 months apart during 2011), and
- **Viral suppression** (VL < 200 copies/mL in 2011) among PLWH diagnosed before 1/1/2011
Data was residentially grouped:

- **Rural** (<50,000 population),
- **Non-Rural/Non-Metropolitan or Suburban** (50,000-499,999 population), &
- **Metropolitan** (≥500,000 population) categories for statistical comparison based on the population size of the area of residence at diagnosis of HIV infection.
Results

<table>
<thead>
<tr>
<th>Percentage (%)</th>
<th>Metropolitan (&gt;500,000)</th>
<th>Suburb (499,999-50,000)</th>
<th>Rural (&lt;50,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Linkage to care</strong></td>
<td>80.8</td>
<td>81.1</td>
<td>84.4*</td>
</tr>
<tr>
<td>(n = 20,768)</td>
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<tr>
<td><strong>Retention in care</strong></td>
<td>52.2</td>
<td>48.2*</td>
<td>47.7*</td>
</tr>
<tr>
<td>(n = 440,746)</td>
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<tr>
<td><strong>Viral suppression</strong></td>
<td>47.5</td>
<td>43.2*</td>
<td>41.9*</td>
</tr>
<tr>
<td>(n = 440,746)</td>
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</tr>
</tbody>
</table>

*Statistically significant.
Limitations

- The retention and viral suppression data are categorized based on the persons area of residence at diagnosis of HIV infection. Migration often occurs after HIV diagnosis. These data may not directly represent where persons are currently living and receiving care.
Limitations

- These data are based on **18 jurisdictions only** and may not be representative of what is occurring nationally.
Limitations

- We did not have sufficient address information for some cases to categorize persons into a population category. Accuracy of findings could be impacted depending on the true distribution of the unknown residence group in the various populations.
Limitations

- No data on incidence of routine HIV testing in rural and non-rural populations, as well as whether those testing HIV positive in rural areas are more likely to be diagnosed at a later-stage of HIV disease compared to those in non-rural areas.
Examples of AETC Program strategies for overcoming barriers to rural HIV care

**HIV care training is offered to rural healthcare providers in several regions nation-wide via the AETC Telehealth Training Centers Program**

A team of Kansas AETC faculty regularly travels to rural areas to provide HIV care & training.

**Florida/Caribbean AETC partners with the US Virgin Island Dept. of Health, Federally Qualified Health Centers, hospitals, community based organizations, and other primary care providers to address stigma associated with HIV testing in the US Virgin Islands**

**Georgia AETC & the Georgia Dept. of Public Health collaborate to ensure quality assurance measures are met**

**Pacific AETC utilizes promotoras & community health workers to deliver training and HIV care services in Arizona and on the U.S./Mexico border**
KANSAS AETC
Outreach Clinic Sites

Region 1
Region 2
Region 3
Region 4
Region 5
Region 6
Region 7
Region 8
Region 9
Satellite Clinics

• University sponsored aircraft
• Team: Physician, APRN, PA, MA, Lab tech, Outreach Case Manager
• Local FQHC Clinic or Health Departments provide space and local CM support
• Supplies: computers, support materials and vaccines are taken to each visit.
PRISON TELEHEALTH

• Televideo connection for consultation
• Medical records are sent in advance
• Video connection goes into an exam room with video equipment and into physicians office
• Patient and onsite nurse/APRN are available to assist
Reduction of Funding to Rural U.S.

• Loss of local case management support
• Loss of personnel for case finding
• Reduction of health care providers!
• Loss of care for rural patients!
Why ECHO?

1. People need access to specialty care for their complex health conditions.

2. There aren't enough specialists to treat everyone who needs care, especially in rural and underserved communities.

3. ECHO trains primary care clinicians to provide specialty care services. This means more people can get the care they need.

4. Patients get the right care, in the right place, at the right time. This improves outcomes and reduces costs.
ECHO Structure: Clinical Team and Theoretical Base

**Clinical Team and Theoretical Base**

- Psychiatry & Addictions
- Social Work
- Nursing
- Infectious Disease
- Pharmacy
- Community Clinician

**Theoretical Base**
- Situated Learning Theory
- Force Multiplier Effect

**Structure**
- 1x per week VTC
- Clinical update
- Case discussion

**Practical Benefits**
- Just-in-time support
- Interdisciplinary consultation
Horizontal knowledge transfer

Community Clinicians

- Pharmacy
- Infectious Disease
- Psychiatry & Addictions
- Social Work
- Nursing

Locations:
- Pocatello
- Corvallis
- Kalispell
- Spokane
Fostering peer-to-peer network and support system across region.
Pregnancy Cases
ECHO Model

Psychiatry & Addictions

Social Work

Infectious Disease

Pharmacy

Nursing

Community Clinicians

Patient
Meeting a Professional Need

- Shift to teams in interactive learning environment engaged in collaborative problem solving over time
- **ECHO =** mentoring, not consultations
Arizona AETC
University of Arizona
College of Medicine
Tucson AZ 85724
Improving HIV prevention, linkage and treatment in rural Arizona: *Along the U.S. – Mexico Border*

- Yuma Family and Community Residency HIV Training
- U.S. Immigration and Customs Enforcement (ICE) Clinician Training
- Local, in-person CME trainings throughout Arizona and California border areas
  - Continuity of Care curriculum developed by UCLA PAETC. Factsheets can be found at: [AETCBorderhealth.org](http://AETCBorderhealth.org)
  - Collaborative trainings with other federal training centers including the Addiction Technology Transfer Center. HIV and Methamphetamine Factsheet: [http://aidsetc.org/resource/tips-hiv-clinicians-working-methamphetamine-users-0](http://aidsetc.org/resource/tips-hiv-clinicians-working-methamphetamine-users-0)
- Up next: Training for promotoras
Improving HIV prevention, linkage and treatment in rural Arizona:

*Working with clinicians serving American Indian populations*

- Adult HIV Clinical Preceptorship Program
- On-site training for staff and community health representatives (CHRs).
- HIV Grand Rounds at Tribal (638) and Indian Health Service (IHS) facilities.

**Lessons learned:**
- On-site training is key. Working with small communities where “everyone knows everyone.” Personal relationships are highly valued. Traveling to local sites demonstrates that you really care about the community.
- Internet and phone connections can be unreliable making online trainings a challenge.
- High turn-over, particularly among providers. Important to develop relationships with local nurses, medical assistants and HIV advocates.
Best practices for overcoming barriers in rural HIV care

Travel and Transportation

Ask clients about their transportation needs. Utilize community planning groups to assess the need for services. Tap into existing resources like social service agencies and faith groups, or check into local and government funding support for transportation needs.

Clients may be eligible for
- Bus tickets
- Vouchers
- Gas cards
- Ferry/boat tickets

To help with transporting clients to and from appointments, consider using
- Case managers
- Outreach workers
- Peer advocates
- Volunteers

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HIV Training for Rural Providers

Rural providers who want to learn about HIV care can utilize the AIDS Education and Training Center (AETC) Program's free clinical training services to build their capacity to deliver basic HIV care, or know where to turn for help or advice if needed.

The AETC Program offers:

- In-person trainings
- Telehealth education
- Clinical consultations
- Conferences
- Preceptorships
- Skills-building workshops
- Technical assistance
- And more!

Visit the AETC National Resource Center website at http://aidsetc.org for more information about HIV care training opportunities, training materials, capacity building support, and more, that is tailored to rural primary care providers.
AETC Rural Health Committee Recommendations

1. Increased research on HIV in rural U.S. and its territories
2. Increased interdisciplinary workforce development in rural areas
3. Increased rural HIV prevention, testing, and care funding
4. Federal Needle Exchange/Syringe Access Program funding

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THANK YOU FOR YOUR PARTICIPATION!

PLEASE COMPLETE THE FOLLOWING POST-TRAINING EVALUATION:
https://www.surveymonkey.com/r/P6WW8JS

For the slides and recording of this training, go to the AETC NRC website: www.aidsetc.org