Scott County: ranked 92nd in many health and social indicators among 92 counties, including life expectancy.
**Why Austin?**

Expanding epidemic of injection drug use heralded by dramatic increase in acute HCV infections

2006  
2012

Suryaprasad Clin Infect Dis; 2014, 59(10):1411-1419
Expanding epidemic of injection drug use heralded by dramatic increase in acute HCV infections

FIGURE 1. Incidence of acute hepatitis C among persons aged ≤30 years, by urbanicity and year — Kentucky, Tennessee, Virginia, and West Virginia, 2006–2012

Ingredients of an Outbreak

- Poor public health infrastructure
- Increased IDU
- Large needle sharing network
- Multiple injections per day
- Introduction of highly infectious HIV+ person into network
Outbreak Notification

• Late 2014: 3 new HIV cases identified in SE IN
• DIS learned 2 had shared needles → contact tracing
• Identified 8 more new infections in jurisdiction with 5 new HIV infections from 2009-13—traced to Austin
• All cases report injection of the opioid analgesic oxymorphone (Opana® ER and generic ER)
• ISDH HIV/STD Division creates contact maps, determines cluster description and cause
• Rural injection of oral opioid = largest HIV outbreak of its kind in the US
Drug Use Among HIV+ Cases

- Multigenerational sharing of injection equipment (insulin syringe)
- **Daily injections**: 4-15
- Number of partners: 1-6 per injection event

OPANA® ER – crush-resistant formulation: half-life 7-9 hours

<table>
<thead>
<tr>
<th>Dosage Strength</th>
<th>OPANA® ER with INTAC® Tablet Images*</th>
<th>GENERIC oxymorphone ER Global Pharma (Impax) Tablet Images*</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 mg</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>30 mg</td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Case Epidemiology

• Total cases: 237
• 503 of 570 (88%) of named contacts linked to outbreak located and offered testing
• 541 total individuals tested
• Contacts remaining to trace: 0
• Positivity rate among tested contacts: 44%
• Average number of unique contacts per case: 8 (range: 0-80)
• HCV co-infection: 222/237 (94%)
HIV Case Demographics

- Median age: 34 years, range 18-60 years
- Male: 59%
- 99% non-Hispanic white
- Risk factors
  - 221 (93%) admitted injecting drugs: oxymorphone, meth, heroin
  - 27 (11%) admitted exchanging sex for drugs or money
- Socioeconomic factors
  - High poverty (19.0%) and unemployment (8.9%)
  - Low educational attainment (21.3% do not complete high school)
  - High proportion without health insurance and medical care access
Phylogenetics

• HIV specimens
  – 96% of all analyzed specimens map to one cluster
  – Acquired within past six months

• HCV specimens
  – Multiple strains and clusters
  – HCV has been repeatedly introduced over years to decades
  – Many infections are recent, some older
Epidemic Curve 12.31.2015

Reporting period is weekly (7 days) from November 16, 2014 – December 31, 2015

Specimen Collection Date
Scope of Response

Outbreak

- Syringe Exchange
- One-Stop Shop
- Addiction Treatment
- Medical Care
- Laboratory Testing
- Epidemiology
- Community Education
- Community Capacity Building
# Outbreak Interventions

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very few insured/limited access to services</td>
<td>One-stop shop: vaccines, testing, care coord, insurance, transportation</td>
</tr>
<tr>
<td>No HIV/HCV care</td>
<td>Assist local MD via IU, federal partners for care, testing, PrEP</td>
</tr>
<tr>
<td>Limited HIV awareness</td>
<td>You Are Not Alone campaign, infographics, press briefings, Jeannie White Ginder event at Austin HS</td>
</tr>
<tr>
<td>Syringe exchange illegal</td>
<td>Issue executive order and new law</td>
</tr>
<tr>
<td>Limited addiction services</td>
<td>Raise MAT awareness, training to prescribe Suboxone®, designate local mental health provider as FQHC, SAMHSA collaboration</td>
</tr>
<tr>
<td>Focus on HIV infection</td>
<td>HCV effort gaining momentum as HIV epidemic better controlled</td>
</tr>
</tbody>
</table>
HIV Testing Performed
Continuum of HIV Care--Austin, Indiana
May 15, 2015

Mean VL: 431,836
Acute and Chronic Hepatitis C Rates
Scott County and Indiana, 2013-2017

Rate (per 100,000 population)
Hepatitis C Screening Status
Scott County Outbreak

HCV Status of those HIV+ in Scott County Outbreak Population

- 222 HCV Positive
- 15 HCV Negative

N=237

94% HCV positivity

HCV Status of those HIV- in Scott County Outbreak Population

- 100 HCV Positive
- 169 HCV Negative

N=269

37% HCV positivity
Acute and Chronic Hepatitis C Cases Ages 18-39 by Percent of Total, Scott County and Indiana, 2013-2017

Scott County

Indiana

2013: 56.6%
2014: 62.5%
2015: 68.9%
2016: 59.6%
2017: 62.6%

0.0 10.0 20.0 30.0 40.0 50.0 60.0 70.0 80.0
% Age 18-39

2013 2014 2015 2016 2017

Scott County

Indiana
Percent of Acute and Chronic Hepatitis C Cases Answering “Yes” to Injection Drug Use, Scott County and Indiana, 2013-2017

*“Yes”/“No” + “Yes” + “Unknown”*
Scott County SSP

- Community Outreach Center and mobile unit
- Donations accepted for needles, supplies
- ID cards issued
- One-for-one plus model
- Partnership for disposal
- Connection to other services
- Renewed in May 2016, 2018
Indiana Syringe Exchange Law

• Local health officer declares to county/municipality:
  – Epidemic of hepatitis C or HIV;
  – Primary mode of transmission is IV drug use;
  – Syringe exchange is medically appropriate as part of the comprehensive public health response.

• The executive/legislative body of county/municipality:
  – Conducts a public hearing
  – Votes to adopt the declaration of the local health officer
SSP Statistics

Source: CDC
Other Policies and Models

- Better collection and use of RW rebate funds to expand capacity
- Blended funding between CDC/HRSA/Rebate/State funds to enhance programs
- Emphasis on one-stop shop models of care that eliminate barriers that have prevented successful health outcomes
- Aggressive linkage to care after initial diagnosis and outreach to HIV+ clients who have experienced a disruption in care
- Consultants to assist with building agency leadership capacity, expansion and policies/procedures
- HIV and HCV ECHO modules to link local physicians
County-level Vulnerability to Rapid Dissemination of HIV/HCV Infection Among Persons Who Inject Drugs


<table>
<thead>
<tr>
<th>Vulnerable Counties and National Ranks (from 1-220)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott</td>
</tr>
<tr>
<td>Washington</td>
</tr>
<tr>
<td>Starke</td>
</tr>
<tr>
<td>Fayette</td>
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</tbody>
</table>
County Vulnerability Index
HIV Infection: Tip of a High-Mortality Iceberg

Adapted from and with permission of Phil Peters, CDC

- 197 diagnoses
- 5 deaths during contact tracing
- 716 HCV + total, 93% HIV+ coinfected with HCV
- Network of at least 500 PWID

Got your attention now?
Road to Recovery: First Steps

- Distribute Naloxone to first and lay responders
- Decrease opioid over-prescribing, increase addiction treatment services, including MAT
- Retest/educate high-risk persons
- Repeatedly refer high-risk persons to SSP and PrEP
- Expand HIV/HCV testing efforts at sensitive venues
- Conduct studies to gather additional risk factor data
- Continue to evaluate SSP
- Develop long-term, sustainable solutions to improve public health infrastructure and socioeconomic disparities
Road to Recovery

• Expanded SSP to include diabetes syringe exchange
• 95% of participants are tested, 86% stop sharing
• Conflicting laws still problem: SSP v. paraphernalia
• Recovery is beautiful
  – Recovery groups increased from 4 in 2015 to 18 in 2018
  – Over 40 peer recovery coaches out of about 200 in Indiana located in Scott County
  – Three people in recovery staff the SSP
• RWJF: Scott County 91/92 on indicators
  – First time in 9 years not ranked 92
Reporting period is weekly (7 days) from January 1, 2016 – December 31, 2016
Epidemic Curve 12.31.2017

Specimen Collection Date

Reporting period is weekly
(7 days) from January 1, 2017 – December 31, 2017
Epidemic Curve 12.31.2018

Specimen Collection Date

Reporting period is weekly (7 days) from January 1, 2018 – December 31, 2018
Road to Recovery: Four Years Later

“There is hope in the community. Even the air is different here.”

~~Beth Keeney, Lifespring Health Systems~~
Total diagnosed = 237 (237 confirmed). Persons were ineligible if deceased (n=7) or outside of the jurisdiction (n=2); estimates are based on the number of eligible persons (n=228); ** Patients engaged in care if have at least one VL or CD4 *** Percent virally suppressed is stable at 75% when denominator changed to number engaged in care. Clinical services were initiated 3/31/15.
Lessons Learned
1. Rural Differs from Urban

- Injection practices: repeated use of needles
- Limited knowledge of disease risk/transmission
- Lack of resources: monetary, SEPs
- Reduced access to physical and mental health care and recovery options
2. Know Your Risk Factors

- Outbreak potential for HIV is high in communities where HCV prevalence is high among persons who inject drugs
- Review CDC vulnerability assessment data
- Become familiar with local data so any increases are easily identified before an outbreak occurs
- Encourage health care providers to promptly report new HIV and HCV cases
- Look for clusters of HIV and HCV
3. Prepare In Advance

- Identify community partners and leadership for assistance, services, and potential response
- Determine who can provide HIV treatment and coordinate treatment with care resources (Ryan White, Medicaid)
- Increase HIV/HCV testing in high-risk communities
- Consider PrEP for high-risk, HIV negative individuals
- Increase awareness/availability of addiction recovery services, MAT, and naloxone
- Imperative to get input from stakeholders (health, law enforcement, community) in developing a comprehensive response that includes syringe exchange
4. Be Ready to Escalate

- Activate incident command
- Identify mission, goals, indicators of success
- DIS critical to case investigations/contact tracing
- Keep everyone informed
- Involve local agencies from beginning
- Monitor resources carefully
- Plan de-escalation and long-term sustainability at beginning
Acknowledgements

- Centers for Disease Control and Prevention (CDC)
  - Division of HIV, STD, TB, and Viral Hepatitis
- Scott County Health Department
- Foundations Family Medicine
- Indiana Family and Social Services Administration
  - Division of Mental Health and Addiction
- Indiana State Department of Health (ISDH)
  - Division of HIV, STD, and Viral Hepatitis
Thank You

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317-233-7400

The health of the people is really the foundation upon which all their happiness and all their powers as a state depend. ~Benjamin Disraeli

Indiana State Department of Health
Promoting, protecting, and improving health of Hoosiers since 1881