

# Outbreak of HIV and Hepatitis C Linked to Injection Drug Use in Rural Indiana

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State Epidemiologist

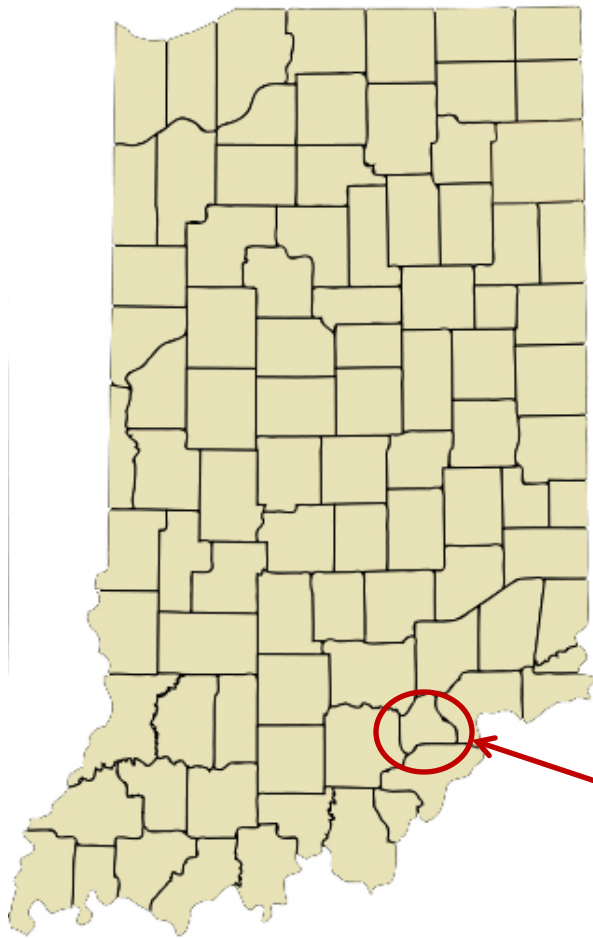
North Carolina State Health Director's Conference  
January 21, 2016



Indiana State  
Department of Health

# Geographic Distribution

Scott County pop. 24,000; Austin pop. 4,200



Scott County: ranked 92<sup>nd</sup> in many health and social indicators among 92 counties, including life expectancy







# Outbreak Notification

- Late 2014: 3 new HIV diagnoses identified in D9
- 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 in Indiana**

# 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

Dosage Strength	OPANA® ER with INTAC® Tablet Images*	GENERIC oxymorphone ER Global Pharma (Impax) Tablet Images*
40 mg		
30 mg		

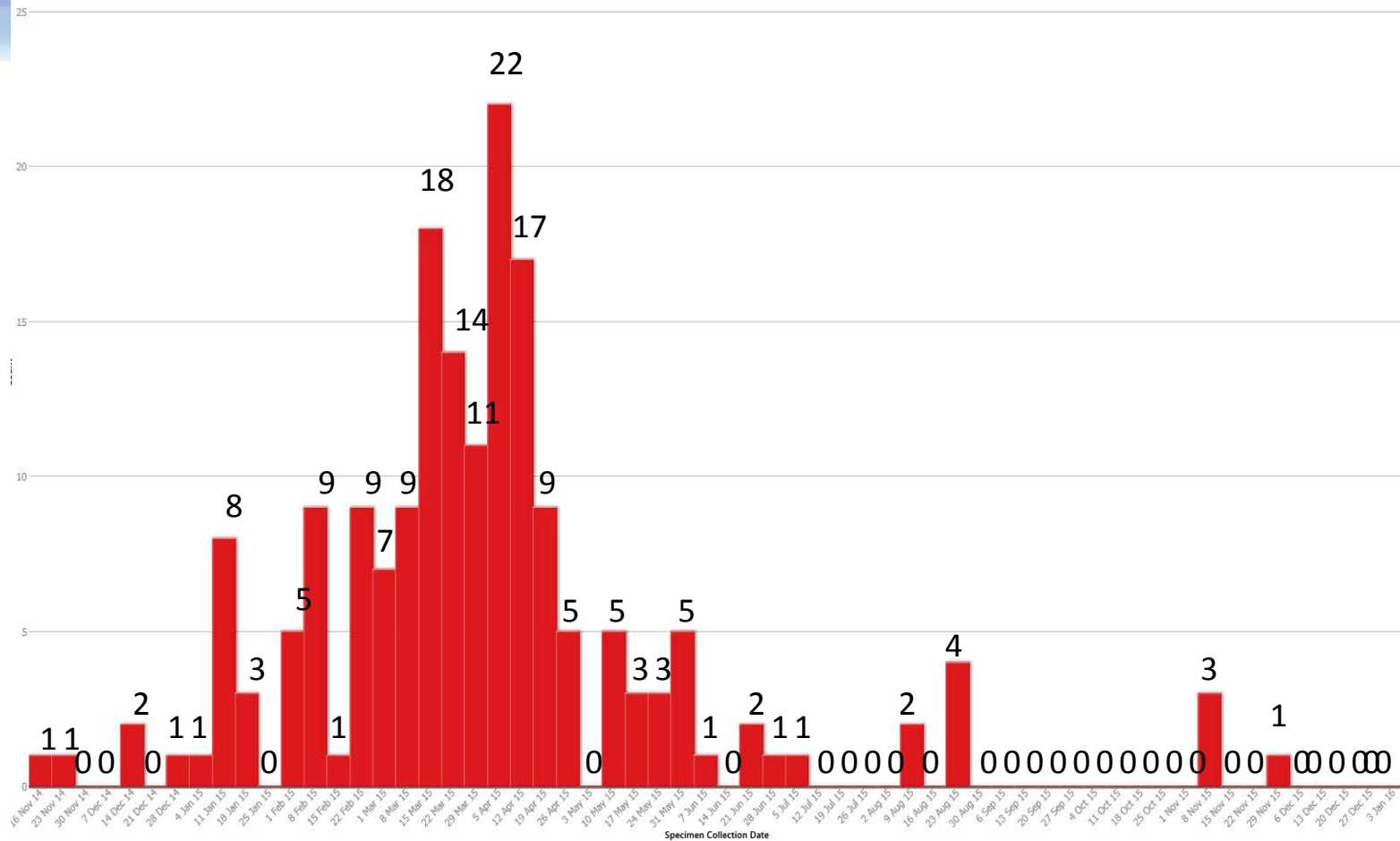


# Case Epidemiology: 1/7/16

- Total cases: 185
- 451 of 514 (88%) of named contacts linked to outbreak located and offered testing
- Contacts remaining to trace: 0
- Positivity rate among tested contacts: 39%
- Average number of unique contacts per case: 8 (range: 0-80)
- **HCV co-infection: 171/185 (92%)**



# Epidemic Curve 1.7.2016





# HIV Case Demographics

- Median age: 33 years, range 18-60 years
- Male: 57%
- 100% non-Hispanic white
- Risk factors
  - 167 (95%) admitted injecting drugs: oxymorphone, meth, heroin
  - 24 (5.7%) 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

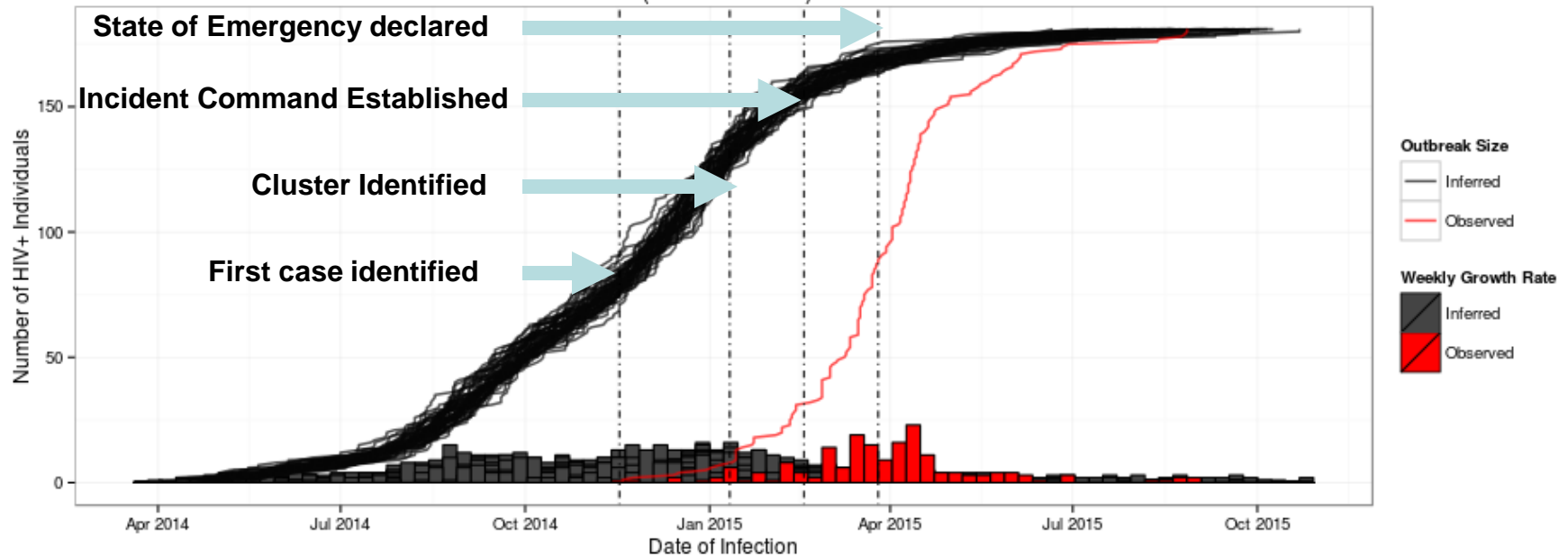
- HIV specimens
  - Almost all analyzed specimens map to one cluster
  - Acquired within past six months
- HCV specimens
  - Multiple strains and clusters
  - HCV has been repeatedly introduced over years to decades
  - Many infections are recent, some older



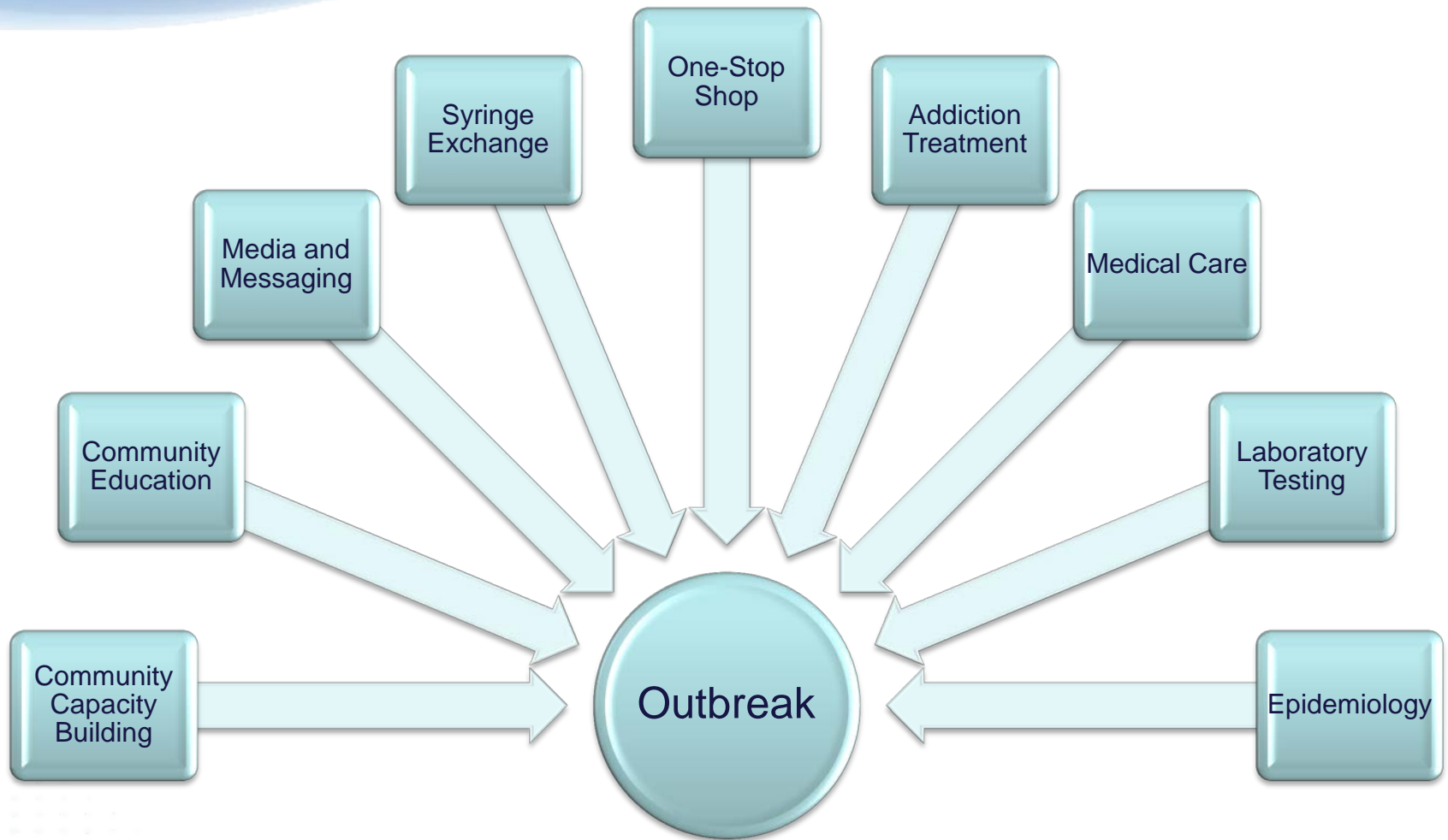
# Phylogenetics

**Predicted Final Outbreak Size = 185**  
**Observed Final Outbreak Size = 184**

Observed vs Inferred Epidemiological Curve  
(50 simulations)

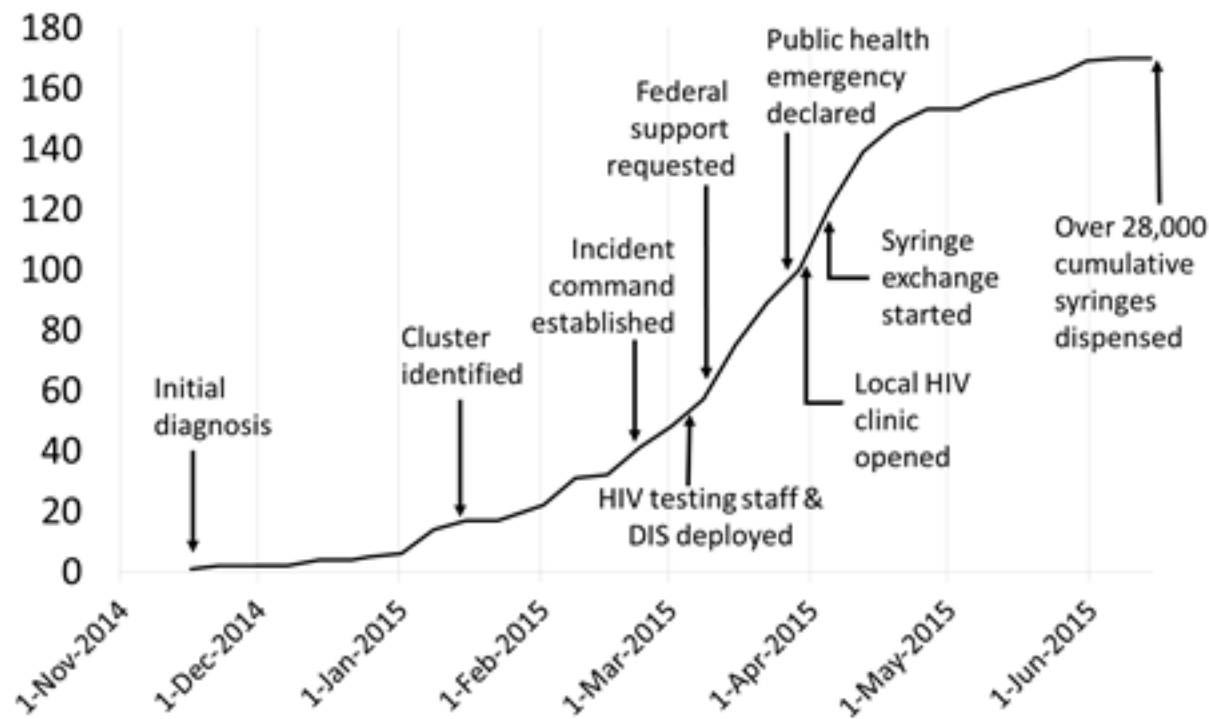


# Scope of Response



# Timeline of Interventions

**Figure 1.** Cumulative HIV infections associated with injection of the prescription opioid Oxymorphone, by date of diagnosis, Southeastern Indiana (n=170)



# Outbreak Interventions

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

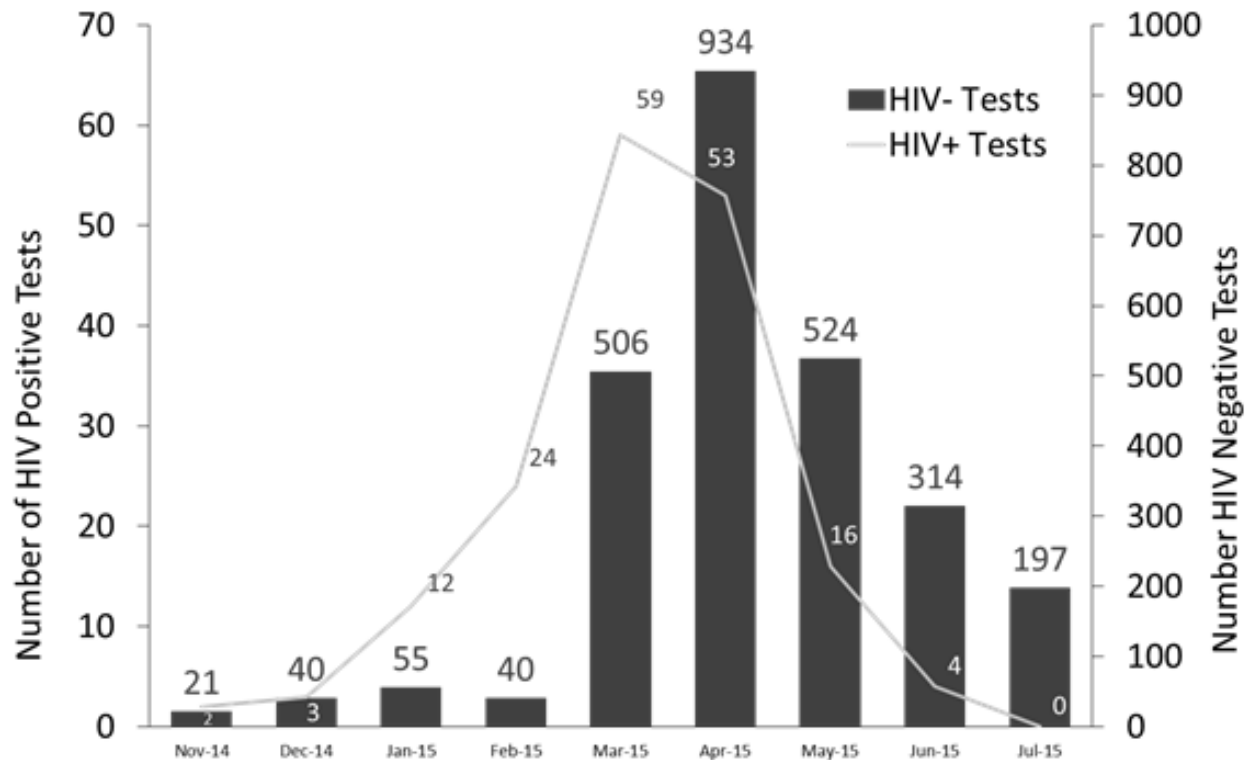


# One-Stop Shop

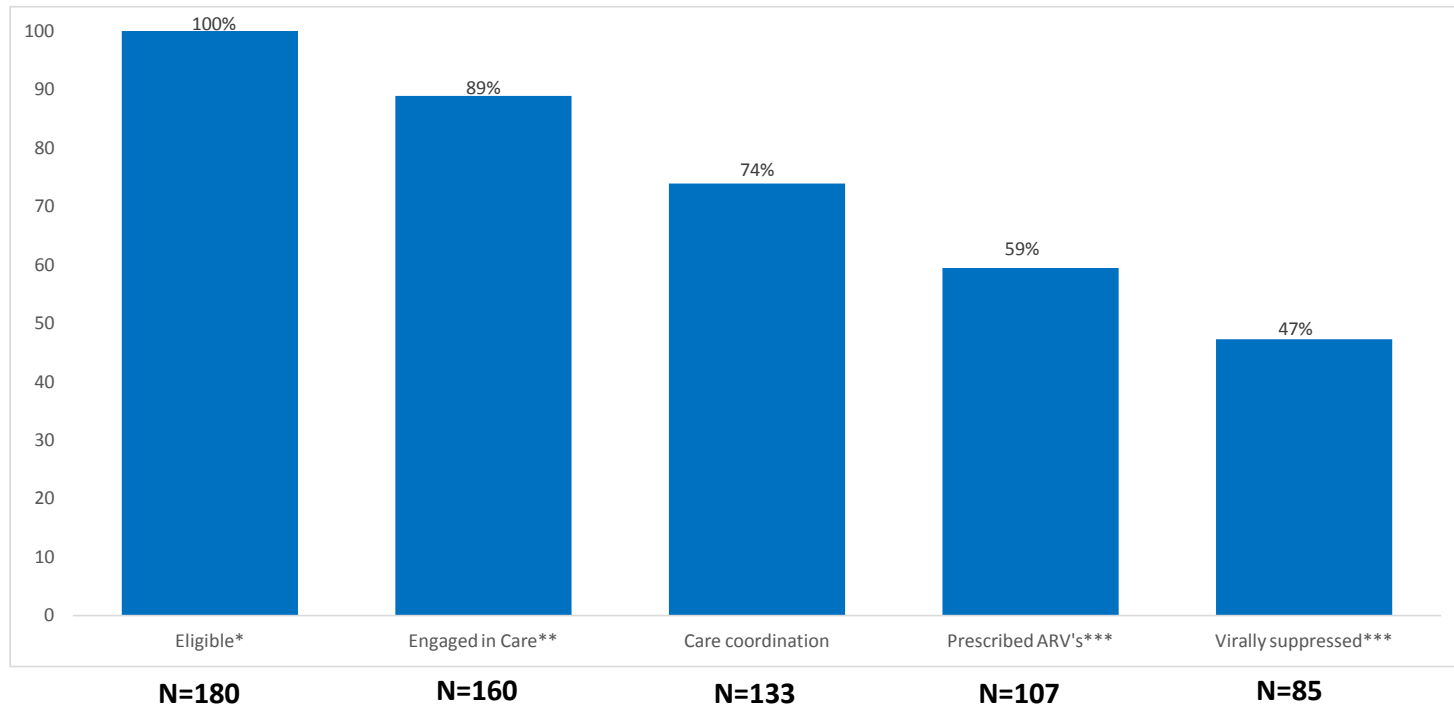




# HIV Testing Performed



# Continuum of HIV Care--Austin, Indiana January 8, 2015



Total diagnosed=185 (185 confirmed). Persons were ineligible if deceased (n=1) or outside of the jurisdiction (n=4); estimates are based on the number of eligible persons (n=180); \*\* Patients engaged in care if have at least one VL or CD4 \*\*\* Percent on ARV's increases to 67% and virally suppressed increases to 53% when denominator changed to number engaged in care. Clinical services were initiated 3/31/15. ART data updated through 1/8/16.

# Communications

## HIV FACTS

ANYONE CAN GET HIV

HIV is the virus that causes AIDS

### How you CAN get HIV

You can get HIV by having sex without a condom with someone who has HIV

That includes:

- Vaginal Sex
- Anal Sex
- Oral Sex



You can get HIV by sharing syringes, needles and other things used to inject drugs with someone who has HIV



### Find out if you have HIV



- People with HIV may not look sick
- Many people do not know they have HIV
- The only way to know if you have HIV is to get an HIV test
- If you have HIV there are medicines you can take to keep you healthy
- If you do not have HIV, there are medicines to prevent getting it
- Talk to your doctor about what medicine is right for you

### How you CAN NOT get HIV



Touching



Food



Sneezing



Water



Hugging



Mosquitoes

For more information, please call Indiana State Health Department at 1-866-588-4948.

### Protect yourself from HIV

If you have sex, use a condom



- Condoms work very well to prevent HIV
- You have to use them the right way, every time you have sex

If you shoot drugs, use clean needles



- Use new needles every time
- Do not share your needles
- NEVER buy needles from someone on the street, even if they look like a doctor

For more information, please call Indiana State Health Department at 1-866-588-4948.

## PrEP

(Pre Exposure Prophylaxis)

What is PrEP?



PrEP means taking medicine to lower your chance of getting HIV. You can only take PrEP if you do not have HIV.

Who may need PrEP?

PrEP may be good for you if:

You are in a relationship with someone who has HIV



You inject drugs



You do not use condoms all the time and you have sex with someone who may have HIV



Where can you get PrEP?



- You can talk to a doctor at the Austin Betterment Center Health Clinic (At Foundations Family Medicine)
- Open Every Tuesday 10 a.m. - 4p.m
- For more information or to schedule a visit during another time, call 812-794-8100

For more information, please call Indiana State Health Department's HIV hotline at 1-866-588-4948.

# Communications

HELP PREVENT HIV

**DON'T SHARE THESE.  
DON'T ABUSE THESE.**

Any drug can be abused. If you or a friend are abusing drugs, get help. Never share needles. It increases your risk of getting HIV.

HIV Services Hotline **1-866-588-4948**  
Addiction Hotline **1-800-662-HELP(4357)**  
[www.StateHealth.IN.gov](http://www.StateHealth.IN.gov)

YOU ARE <sup>NOT</sup>  
**ALONE**

  
Indiana State  
Department of Health

Campaign materials originally developed by the New York State Department of Health, 2010



# Communications

## Mother of Ryan White teen HIV patient, speaks in Austin, Ind.

Karma Dickerson, @WHAS11Karma 12:06 a.m. EDT May 13, 2015



(Photo: WHAS)

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AUSTIN, Ind. (WHAS11) – As Southern Indiana battles and unprecedented HIV outbreak, the mother of a teen who became famous for his fight for equal treatment of those living with HIV and AIDS.



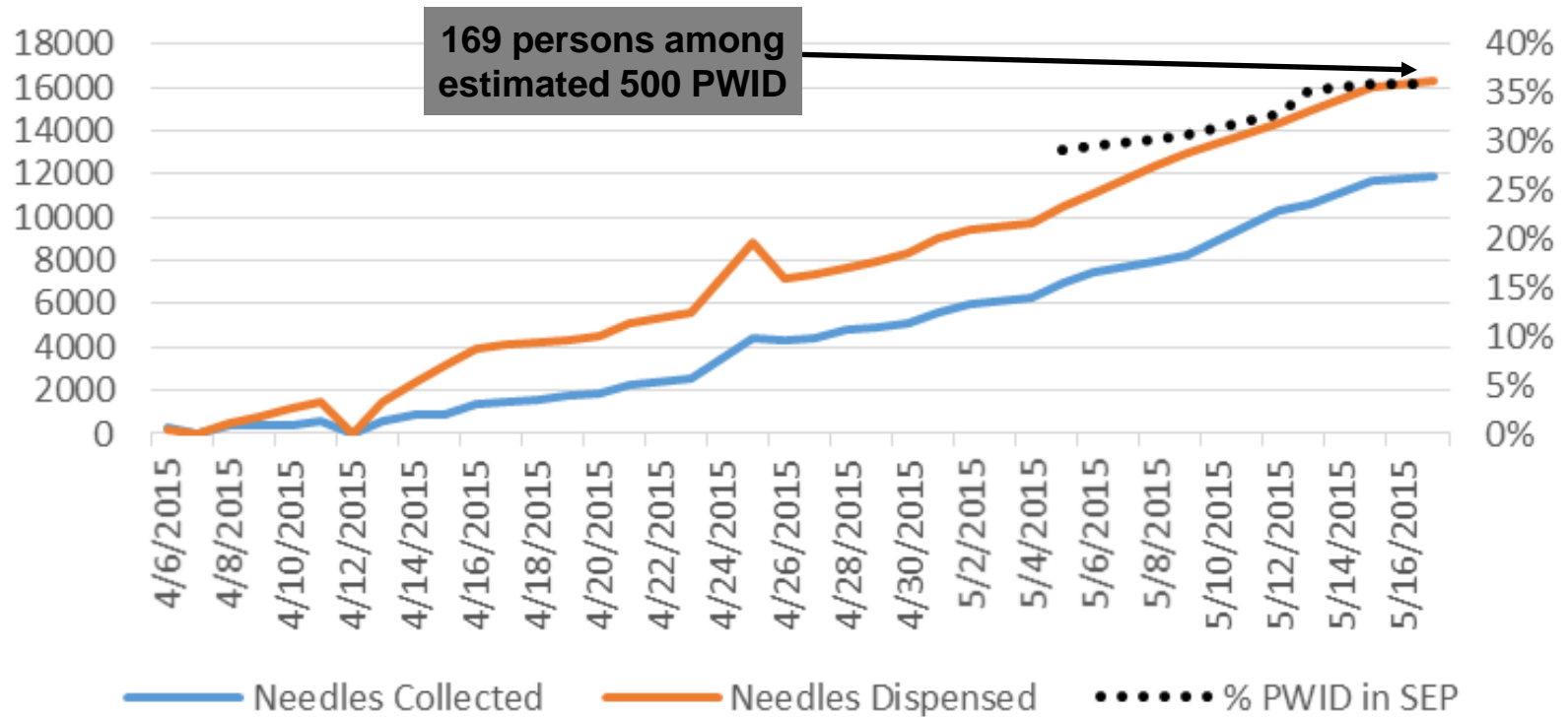
# Scott County HD SEP

- Community Outreach Center and mobile unit
- Donations accepted for needles, supplies--no state or federal funds
- ID cards issued
- One-for-one plus model
- Partnership for disposal
- Connection to other services



# Syringe Exchange Program

Cumulative Total Needles Dispensed and Collected - Austin, Indiana, April and May 2015





# 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
- The county/municipality notifies the ISDH Commissioner and:
  - Requests the Commissioner to declare a public health emergency
  - Other measures to address the epidemic have not worked
- Commissioner must approve or deny within 10 days from submission
  - Can request additional information extending the deadline for an additional 10 days



# County Data Profiles

- Created in May to assist local health departments in recognizing HIV and HCV outbreaks
- Posted on ISDH website  
<http://www.in.gov/isdh/26680.htm>
- Includes:
  - number and incidence of HIV, HCV, STDs, drug overdoses and deaths
  - county and state data comparison
  - information on key state and local resources/contacts



# Hepatitis C

- Indicator of unsafe injection practice and HIV risk
- Testing and linkage-to-care project
  - Received \$200,000 from viral hepatitis prevention grant
  - Identify at-risk counties
  - Provide testing kits to community health centers
  - Link to care through local physicians and Project ECHO
- Project ECHO
  - Health care providers participate in consultation group with ID physicians, gastroenterologists
  - Current partnership with Baylor University
  - Development of Indiana Project ECHO underway with IU School of Medicine



# Moving Forward

- Naloxone distribution: first and lay responders
- Decrease opioid over-prescribing, increase addiction treatment services, including MAT
- Medication-assisted treatment (MAT)
  - Multiple options (e.g., buprenorphine, methadone, naltrexone)
  - Highly effective, especially in combination with other interventions
  - Reduces HIV and HCV infections
  - Improves adherence to ART
  - Cultural/ community/ education barriers

# Moving Forward

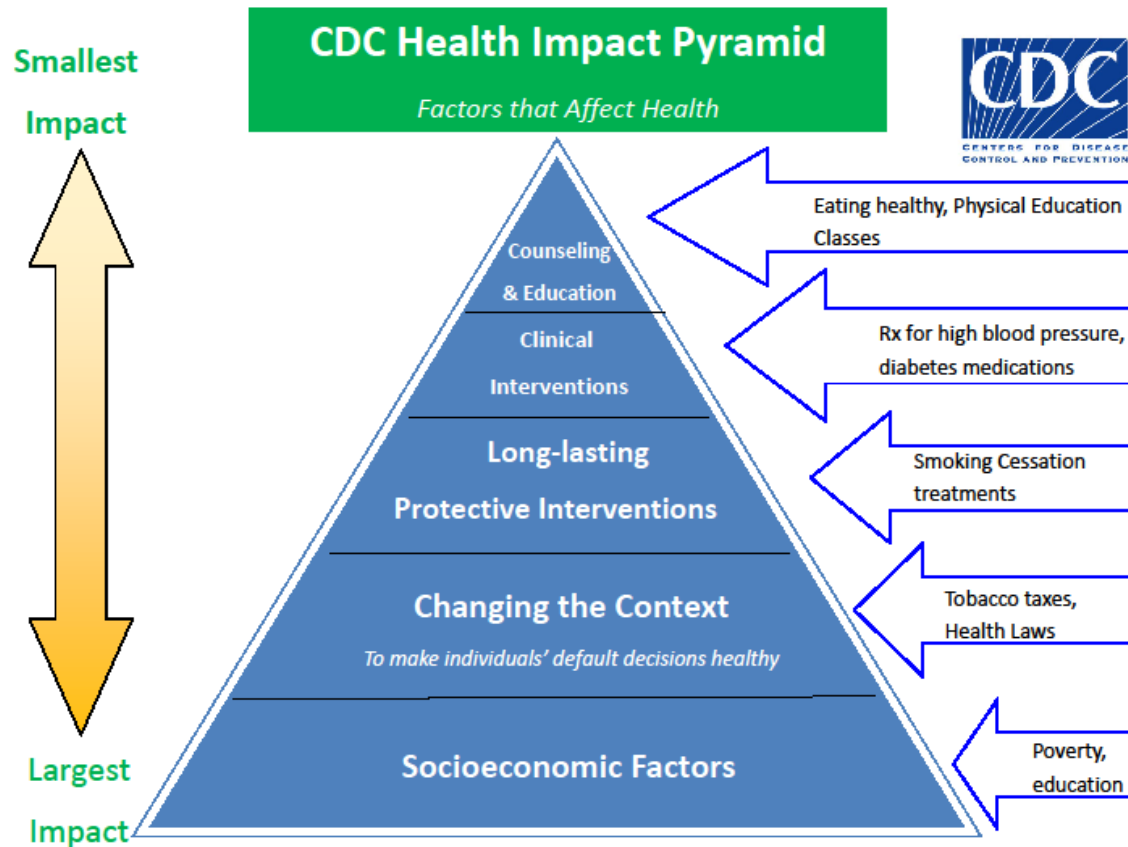
- Prevent those exposed from becoming infected
  - Systematic retesting and education of high-risk persons
  - Repeatedly refer high-risk persons to SEP and HIV pre-exposure prophylaxis (PrEP)
- PrEP
  - Daily oral medication
  - Can reduce the risk of HIV infection by up to **74%** in PWID
  - Target populations
    - HIV-negative PWID
    - Commercial sex workers (both genders)
    - Persons with HIV-infected sex partner
  - Need willing providers to prescribe



# Moving Forward

- Expand HIV/HCV testing efforts to detect early signals
  - Routine HIV testing at “sensitive” venues (e.g., jails, addiction service facilities, EDs)
  - Active outreach testing to at-risk population (e.g., PWID)
- Conduct studies to gather additional risk factor data
  - Qualitative study (interviews, focus groups) completed
  - Quantitative study (case-control) launched January 20
- Evaluate SEP
- Build sustainability and develop long-term solutions to improve public health infrastructure and socioeconomic disparities
  - IU NIDA grant to support additional health care providers
  - Collaboration with BC Centre of Excellence

# Health Impact Pyramid



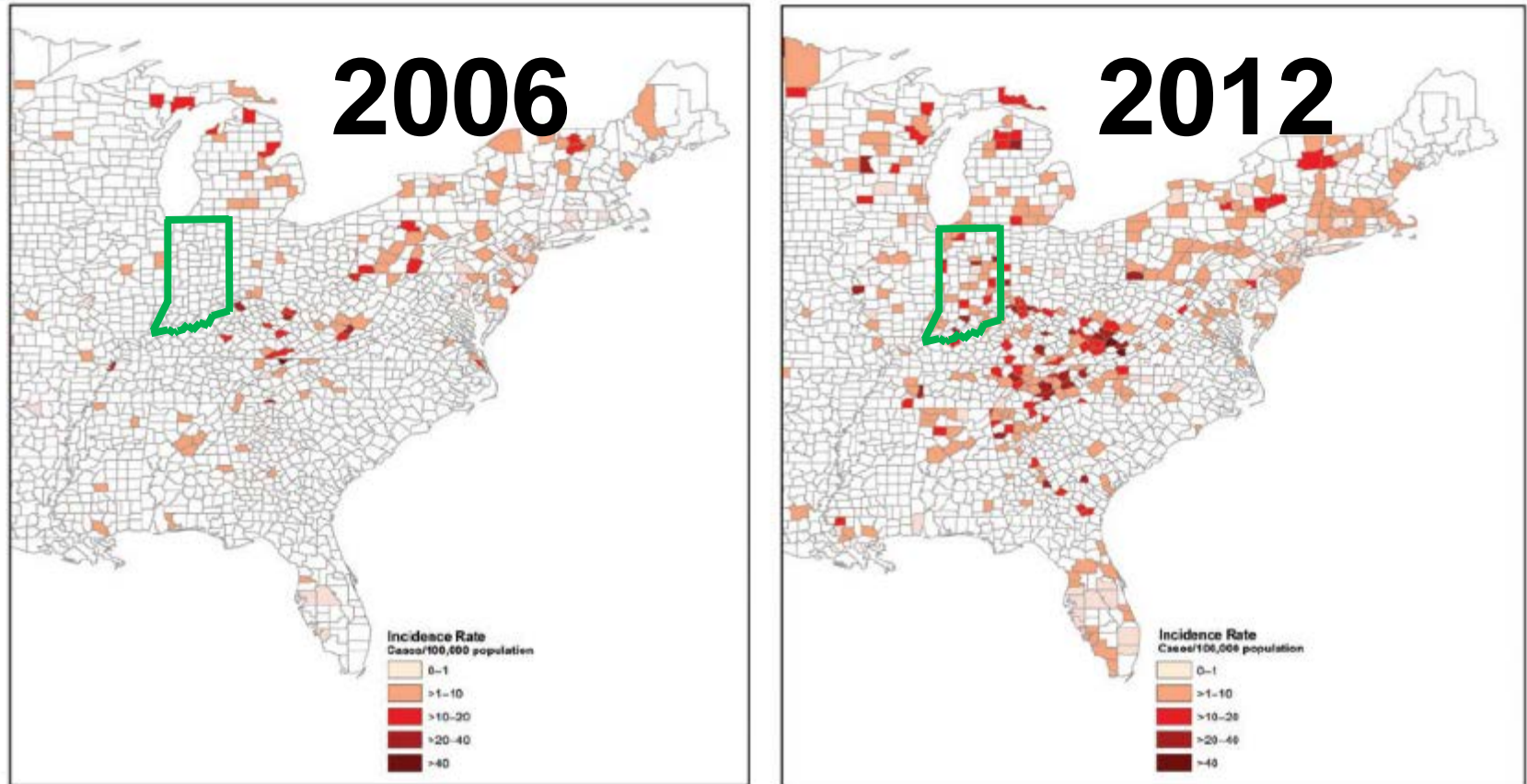
# Ingredients of an Outbreak





# Why Austin?

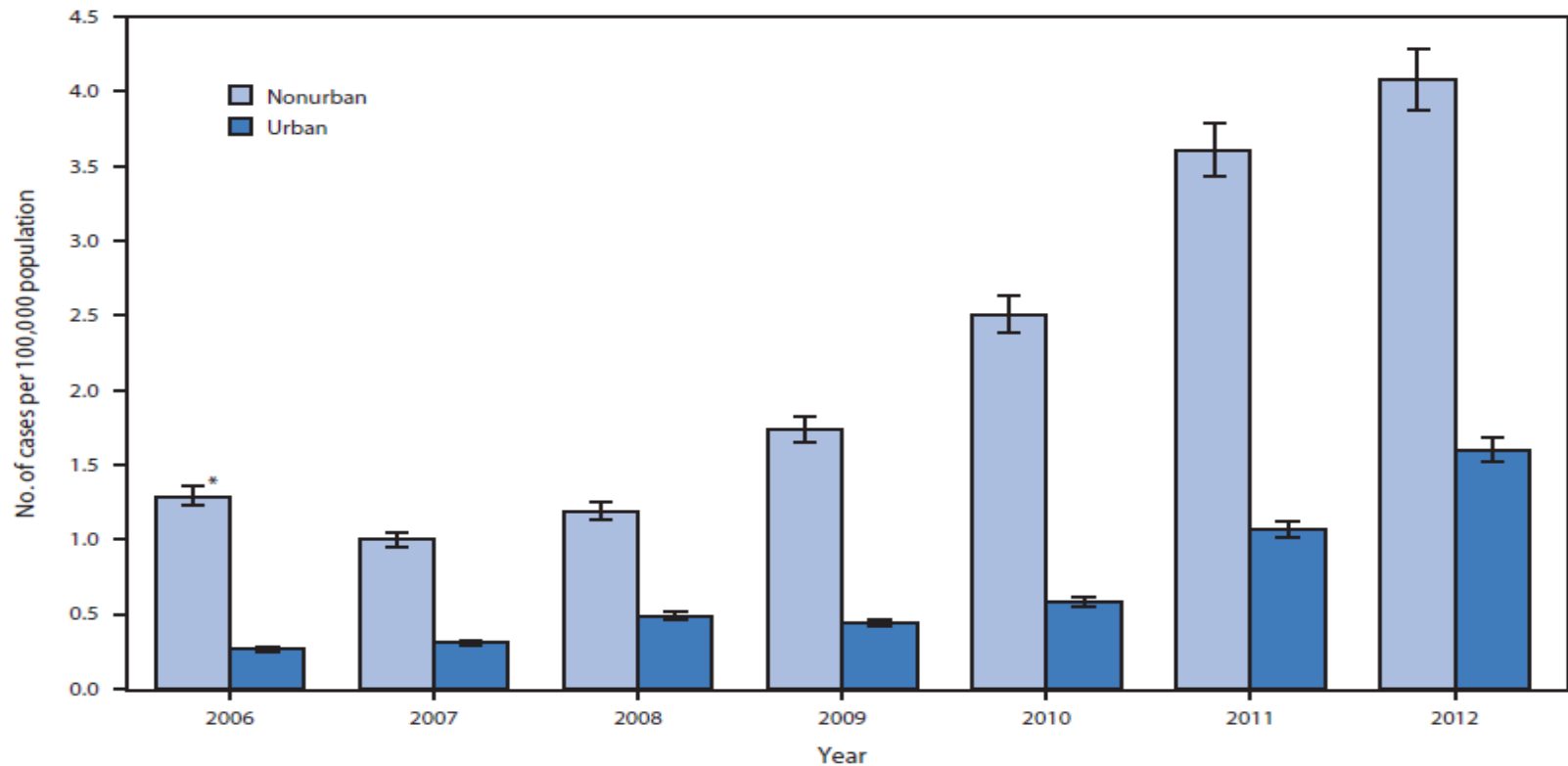
Expanding epidemic of injection drug use heralded by dramatic increase in acute HCV infections



# Just Austin?

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

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



MMWR Morb Mortal Wkly Rep 2015, 64(17): 444-448, "Increases in Hepatitis C Virus Infection Related to Injection Drug Use Among Persons Aged  $\leq 30$  Years — Kentucky, Tennessee, Virginia, and West Virginia, 2006–2012"

# Lessons Learned

1. Expect the unexpected
  - Outbreak potential for HIV is high in communities where HCV prevalence is high among persons who inject drugs
  - Encourage health care providers to promptly report new HIV and HCV cases
  - Become familiar with local data so any increases are easily identified before an outbreak occurs
  - Look for clusters of HIV and HCV

# Lessons Learned

## 2. Prepare in advance

- Identify community partners and leadership for assistance, services, and potential response
- Increase HIV/HCV testing in high-risk communities
- Consider PrEP among high-risk individuals in these communities
- Increase awareness/availability of addiction recovery services and MAT
- SEPs must be part of **comprehensive** response and embraced by the community

# Lessons Learned

## 3. Be ready to escalate response

- Activate incident command
- Identify mission, goals, indicators of success
- Keep everyone informed
- Involve local agencies from beginning
- Monitor resources carefully
- Plan de-escalation and long-term sustainability at the same time



# Conclusion from Austin

- Expanding epidemic of injection drug use
- New and growing group of U.S. residents highly vulnerable to HIV and HCV infection
- Effective prevention requires a combination of services with effective wrap-around
  - Perfect should not be the enemy of “good enough”
- Urgent need to understand
  - What was unique (or not) here?
  - Where could it be happening now or in the future?

# Acknowledgements

- Centers for Disease Control and Prevention (CDC)
  - Division of HIV/AIDS Prevention (DHAP)
  - Division of Viral Hepatitis (DVH)
  - Division of STD Prevention
  - Epidemic Intelligence Service (EIS) Program Office
  - Laboratory
- Scott County Health Department
- Clark County Health Department
- Disease Intervention Specialists (EMAC states)
- Indiana University School of Medicine, Division of Infectious Diseases
- Foundations Family Medicine
- Indiana Department of Mental Health and Addiction
- Indiana State Department of Health (ISDH)

# Thank You!

**For more information please contact:**

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Indiana State  
Department of Health