HEPATITIS C IN WESTERN NORTH CAROLINA

JACKSON COUNTY DEPARTMENT OF PUBLIC HEALTH
WHAT IS HEPATITIS C?

- Bloodborne pathogen
- Infection ranges in severity
  - Acute HCV: Mild, lasting a few weeks
  - Chronic HCV: Serious, lifelong illness
- Re-infection is possible
- No vaccine available
- Syndemic with HIV

http://www.medicinenet.com/hepatitis_c_pictures_slideshow/article.htm
PROGRESSION OF HCV INFECTION

For Every 100 People Infected with the Hepatitis C Virus:
- 75–85% Will Develop Chronic Infection
- 60–70% Will Develop Chronic Liver Disease
- 5–20% Will Develop Cirrhosis
- 1–5% Will Die of Cirrhosis or Liver Cancer

OVER TIME
TRANSMISSION

- Primarily through exposure to infectious blood
  - Injection drug use (IDU)
  - Needlestick injuries
  - Birth to infected mother

- Infrequently through:
  - Sex
  - Sharing personal items
  - Invasive healthcare procedures
TWO EPIDEMICS IN NC

**Historic Epidemic**
- Chronic
- 110,000+ infected
- 75% of cases are among baby boomers
- ~25% infected with HIV are co-infected with HCV
- 50% unaware of infection

**Emerging Epidemic**
- Acute
- Reported cases have tripled from 2010-2014
- Underreported & underestimated
- Coincides with increasing use of *injectable opioids*
- Mostly among:
  - Younger,
  - White,
  - and Rural persons in poorer communities
In the period 2009-2013, 34 Jackson County residents died as a result of unintentional poisoning, with a corresponding age-adjusted mortality rate of 17.1 deaths per 100,000 population, higher than the WNC or NC averages.

Of the 34 unintentional poisoning deaths in the county in that period, 26 (76%) were due to medication or drug overdoses, with a corresponding mortality rate of 13.1, significantly higher than the average NC rate but lower than the WNC rate.

<table>
<thead>
<tr>
<th>County</th>
<th>Unintentional Poisoning Deaths for Select Locations and Percent that are Medication/Drug Overdoses (2009-2013)*</th>
<th>Rate of Unintentional Medication/Drug Overdose Deaths (2009-2013)**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>#</td>
</tr>
<tr>
<td>Jackson</td>
<td>34</td>
<td>17.1</td>
</tr>
<tr>
<td>WNC (Regional) Total</td>
<td>560</td>
<td>14.8</td>
</tr>
<tr>
<td>Non-WNC (Regional) Total</td>
<td>4,749</td>
<td>10.7</td>
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<tr>
<td>State Total</td>
<td>5,309</td>
<td>11.0</td>
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</tbody>
</table>
“Other opioids” caused the highest proportion of drug overdose deaths (38.7%) in Jackson County for 2009-2013.
Unintentional Poisoning Mortality Rates: North Carolina, 2001-2011

**Crude rates per 100,000 person-years**

2001-2003

- 3.1 - 6.7
- 6.8 - 8.4
- 8.5 - 11.8
- 11.9 - 15.0
- 15.1 - 50.0
- <5 deaths; data are suppressed

Unintentional Poisoning Mortality Rates: North Carolina, 2001-2011
Crude rates per 100,000 person-years

2004-2006
- 3.1 - 6.7
- 6.8 - 8.4
- 8.5 - 11.8
- 11.9 - 15.0
- 15.1 - 50.0
- <5 deaths; data are suppressed

Unintentional Poisoning Mortality Rates: North Carolina, 2001-2011
Crude rates per 100,000 person-years

2007-2009

- 3.1 - 6.7
- 6.8 - 8.4
- 8.5 - 11.8
- 11.9 - 15.0
- 15.1 - 50.0
- <5 deaths; data are suppressed

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CDC POLICY IMPACT: PRESCRIPTION PAINKILLER OVERDOSES

For every 1 death there are...

- 10 treatment admissions for abuse
- 32 emergency dept visits for misuse or abuse
- 130 people who abuse or are dependent
- 825 nonmedical users

Source: CDC-www.cdc.gov/homeandrecreationalsafty/rxbrief/
Hepatitis C (Acute) Rates by County, January 1 - December 31
YEAR=2012

Rate per 100,000 population

A. 0
B. >0-2
C. >2-5
D. >5-7
E. >7-18
F. 19+

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Rate per 100,000 population
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COUNTIES MOST VULNERABLE TO A HCV/HIV OUTBREAK

- Data sources
  - Emergency department visits for opioid overdose
  - Reported cases of acute HCV
  - Chronic HCV data from Medicaid
  - Percent white population
  - Percent unemployed
- Identified 11 most vulnerable NC counties, all in Western NC
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Regions 1 &amp; 2</th>
<th>Statewide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases 2011-2016</td>
<td>116 (56%)</td>
<td>470</td>
</tr>
<tr>
<td>5-year change</td>
<td>185%</td>
<td>200%</td>
</tr>
<tr>
<td>Average Age</td>
<td>33</td>
<td>35</td>
</tr>
<tr>
<td>Women</td>
<td>57%</td>
<td>52%</td>
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<tr>
<td>White (non-Hispanic)</td>
<td>87%</td>
<td>81%</td>
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<tr>
<td>American Indian</td>
<td>11%</td>
<td>4%</td>
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# Root Causes of HCV & IDU

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<th>Root causes</th>
<th>SES</th>
<th>Environmental</th>
<th>Cultural Bias</th>
<th>Lack of Resources</th>
<th>Barriers to Access</th>
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<tr>
<td>SES</td>
<td>Living in poverty</td>
<td>Overprescribing of opioids leading to IDU</td>
<td>Perceptions of the disease &amp; its cause as a personal failure vs. failure of the system</td>
<td>Lack of primary &amp; secondary prevention efforts</td>
<td>Lack of insurance coverage making treatment inaccessible</td>
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<td>Lack of educational opportunities, affordable housing, living wage job opportunities</td>
<td>Sharing needles</td>
<td>Negative perceptions of addiction &amp; the associated social stigma</td>
<td>Lack of knowledge &amp; awareness of how HCV can be transmitted &amp; prevented</td>
<td>Cost of treatment</td>
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<td>Overburden of the healthcare system</td>
<td>ACES</td>
<td>Lack of education for PCPs regarding HCV</td>
<td>Lack of available clean needles for SSPs</td>
<td>Lack of treatment options</td>
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<td>Criminalization of addiction &amp; drug use which makes treatment &amp; behavior change difficult</td>
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<td>Limited access to PCPs or behavioral health care</td>
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<td>Lag time between screening &amp; treatment</td>
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<td>Environmental</td>
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HEP C TLC

Test
- High risk populations for HCV, HIV, and other sexually transmitted infections

Link
- Medical care for HCV infection
- Mental health and substance abuse disorder treatment
- Social services assistance, as appropriate

Cure
- Curative treatment
- Eliminate onward transmission and reduce prevalence
PUBLIC HEALTH RESPONSE TO HCV

- Enhanced surveillance
  - Chronic HCV reportable through electronic laboratory reporting (ELR)
- Outreach and screening
  - Targeted screening of high risk groups
  - Client education
  - HAV/HBV vaccination
- Linkage to cure
  - HCV Bridge Counselors
  - Expanded primary care capacity to treat HCV
**HCV BRIDGE COUNSELOR**

- Position available to serve Region 1
- Fully funded by the NC DPH Communicable Disease Branch
  - Funding available for remaining of FY16-17
  - Potential to continue for future fiscal years
- Primary goals for position:
  1. Link people who are infected with HCV to clinical providers for treatment and care
  2. Provide disease specific education to patients and the community
  3. Link providers to the NC HCV Test, Link, and Cure Academic Mentorship Program
ACKNOWLEDGEMENTS

“Hepatitis C in North Carolina: Two Epidemics with One Public Health Response.” Sarah Rhea, DVM, PhD. NC Division of Public Health.

“Hepatitis C: Two Epidemics, One Response.” Aaron Fleischauer, PhD, MSPH. NC Public Health.

Hepatitis C (Acute) Rates by County. NC Communicable Disease Branch.

NC State Center for Health Statistics and NC DPH, Chronic Disease and Injury Section, Injury and Violence Prevention Branch