The burden of Hepatitis C in Bullitt County, KY

What does the data say?

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October 13, 2015
Overview

- Austin, Indiana and the shifting setting of HCV/HIV outbreaks
- Introduction to HCV
- National and state epidemiology of HCV
- HCV rates in Bullitt County
- Moving forward
Austin, Indiana

- HIV outbreak in small community of approximately 4,200 residents
- As of August 31, 2015 there were a total of 181 confirmed HIV cases
  - 86% (~150) co-infected with HCV
- Outbreak is associated with injection of Opana (prescription pain-killer)
- Austin now has a higher incidence of HIV than "any country in sub-Saharan Africa, they’ve had more people infected with HIV through injection drug use than in all of New York City last year."—CDC Director Tom Frieden.
Introduction to HCV

- Viral illness spread through contact with infected blood
  - Sharing needles, syringes, or other equipment to inject drugs
    - In 2013, 61% of acute cases reported IDU (CDC)
  - Needle stick injuries
  - Being born to HCV+ mother
  - Sharing personal care items that may have come in contact with another person’s blood
  - Having sexual contact with a HCV+ person
  - Solid organ transplants and blood transfusions before 1992
- May be asymptomatic, or may have symptoms such as: anorexia, abdominal pain, jaundice, dark urine, etc.)
The Cost of HCV

• 75% - 85% of those infected will develop chronic infection
• Combining several antivirals (simeprevir, sofosbuvir, ribavirin and others) can clear the virus from the liver in more than 95% of people in just 12 weeks (The New England Journal of Medicine)
  • However, 12 week treatment of sofosbuvir and ribavirin costs approximately $84,000 or $1,000 per day
  • 3 months on simeprevir costs $66,000 or $733 per day
Epidemiology of HCV

- In 2013, estimated 29,718 cases of acute hepatitis C virus infections in the United States
  - The rate of acute HCV infection more than doubled between 2008 and 2012 from 1.6 per 100,000 to 4.1 per 100,000

- Estimated 2.7 million in the United States with chronic HCV

- Kentucky has the highest rate of acute HCV infection in the US
  - 200% increase since 2000
Disclaimer

- All hepatitis C data for Bullitt County is preliminary and has been collected and analyzed by Brittany Bell. Data has not been verified by the Kentucky Department for Public Health nor the CDC.

- All data presented as 2015 only includes data through September 2015. This is displayed with a dashed line in all charts.
Chronic Hepatitis C Cases reported to the Bullitt County Health Department, 2012 - 2015

Number of Cases

2012 2013 2014 2015

Male   Female

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Louisville, KY 40215
502-543-2415
www.bullittcountyclerk.org I contacttcr@ky.gov
Hepatitis C, acute
2012 Case Definition
Clinical Description
An acute illness with a discrete onset of any sign or symptom consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain), and either: a) jaundice, or b) elevated serum alanine aminotransferase (ALT) levels >400 IU/L.

*A documented negative HCV antibody laboratory test result followed within 6 months by a positive test (as described in the laboratory criteria for diagnosis) result does not require an acute clinical presentation to meet the surveillance case definition.

Laboratory Criteria for Diagnosis
One or more of the following three criteria:
- Antibodies to hepatitis C virus (anti-HCV) screening-test-positive with a signal to cut-off ratio predictive of a true positive as determined for the particular assay as defined by CDC. OR, http://www.cdc.gov/hepatitis/HCV/LabTesting.html.
- Hepatitis C Virus Recombinant Immunoblot Assay (HCV RIBA) positive. OR
- Nucleic Acid Test (NAT) for HCV RNA positive (including qualitative, quantitative or genotypic testing)

A case is confirmed if it meets either two criteria:
- Absence of HCV antibody to hepatitis B core antigen (if done) AND
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Case Classification
Confirmed
A case that meets the clinical case definition, is laboratory confirmed, and is not known to have chronic hepatitis C.
HCV cases (positive lab) reported to the Bullitt County Health Department that did not meet CSTE case definition, 2012 - 2015
Age of injection drug users reported to the Bullitt County Health Department as possible viral hepatitis cases, 2012 - 2015
Moving forward...

- Could Bullitt County see an HIV/HCV epidemic like the one in Austin?
- Kentucky has the highest rate of acute HCV in the country
- HIV/HCV is a major issue in the IDU population – a population that we have here in Bullitt County
- HCV is becoming more common in our younger populations – possibly caused by IDU
- How to best address this emerging issue in Bullitt County?