Hepatitis C Testing and Linkage to Care

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Overview

- Changing face of HCV in US
- Guidelines for HCV testing and treatment
- CDC HCV testing and linkage to care project
- HCV program at the Durham County Department of Public Health
The Changing Face of HCV in US

Estimated 3 - 4 million infected persons in the U.S

Ever HCV Infected
Acute HCV Infection
Peak Prevalence
Peak Cirrhosis

Adapted from Davis GL et al Gastroenterol 2010;138:513-521
Estimated Number of Persons Infected with HCV in the US

Figure 2 Estimated Number of Persons Infected with HCV in the United States.

This graphic shows data representing seroprevalence (anti-HCV) and chronic infection (HCV RNA) from three distinct NHANES studies. The numbers on the bar graph represent millions of persons.

Deaths From Hepatitis C Have Surpassed Deaths From HIV Infection

Age-adjusted Mortality Rates of HIV and Hepatitis C: United States, 1999-2010

- 16,600 deaths
- 8369 deaths

**Treatment Cascades**

- **HIV**
  - Infected: ~1,145*
  - Diagnosed: ~964*
  - On ARV Treatment: ~700**
  - Up 6%^*  CDC estimates at the end of 2010 taken from the HIV Surveillance Supplemental Report vol. 18 no. 5.

- **HBV**
  - Chronically Infected: ~2,000†
  - Diagnosed: ~300‡‡ Based on Gilead estimates as of Q1 2013.

- **HCV**
  - Infected: ~4,000
  - Diagnosed: ~1,600
  - Treated: ~140

* CDC estimates at the end of 2010 taken from the HIV Surveillance Supplemental Report vol. 18 no. 5.
^ Growth rate calculated as MAT (moving annual total).
† CDC 12/4/08 Institute of Medicine presentation.
‡‡ Based on Gilead estimates as of Q1 2013.

One-time HCV testing is recommended for persons born between 1945 and 1965*, without prior ascertainment of risk.

Rating: Class I, Level B

Other persons should be screened for risk factors for HCV infection, and 1-time testing should be performed for all persons with behaviors, exposures, and conditions associated with an increased risk of HCV infection.

1. Risk behaviors
   - Injection-drug use (current or ever, including those who injected once)
   - Intranasal illicit drug use

2. Risk exposures
   - Long-term hemodialysis (ever)
   - Getting a tattoo in an unregulated setting
   - Healthcare, emergency medical, and public safety workers after needlesticks, sharps, or mucosal exposures to HCV-infected blood
   - Children born to HCV-infected women
   - Prior recipients of transfusions or organ transplants, including:
     - Who were notified that they received HCV-infected blood or organs
     - Who had tested positive for antibody to HCV

Annual HCV testing is recommended for persons who inject drugs and for HIV-seropositive men who have unprotected sex with men. Periodic testing should be offered to other persons with ongoing risk factors for exposure to HCV.

Rating: Class IIA, Level C

*Regardless of country of birth
HCV Testing Algorithm

For persons who might have been exposed to HCV within the past 6 months, testing for HCV RNA or follow-up testing for HCV antibody is recommended. For persons who are immunocompromised, testing for HCV RNA can be considered.

* To differentiate past, resolved HCV infection from biologic false positivity for HCV antibody, testing with another HCV antibody assay can be considered. Repeat HCV RNA testing if the person tested is suspected to have had HCV exposure within the past 6 months or has clinical evidence of HCV disease, or if there is concern regarding the handling or storage of the test specimen.

HCV Therapy

- 8-12 week regimen
- Can be a single pill (with or without ribavirin)
- Well tolerated but costly
- 80-90% cure rates

<table>
<thead>
<tr>
<th>Start</th>
<th>Treatment</th>
<th>Finish</th>
<th>Test for Cure</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>12</td>
<td>24</td>
</tr>
</tbody>
</table>
Evolving HCV Treatment

- Prior to 2011: Pegylated interferon; ribavirin
- May 2011: Protease inhibitors – boceprevir; telaprevir
- November 2013: Simeprevir
- December 2013: Polymerase inhibitor – Sofosbuvir
- October 2014: Ledipasvir/sofosbuvir
- November 2014: Simeprevir/sofosbuvir
- December 2014: Ombitasvir/partaprevir/ritonavir/dasabuvir
- July 2015: Ombitasvir/paritaprevir/ritonavir; daclatasvir

To conduct 2000 HCV tests to identify chronic HCV-infected persons not previously aware of their infection in Durham County

- Targeted screening - STD clinic, homeless clinic, community sites including residential substance abuse recovery program
- Universal screening – Detection center

To link a minimum 75% of persons who test positive for HCV RNA to care, treatment, and preventive services.

- HCV Bridge Counselor (patient navigator)
- Collaborations with HCV care providers
- On-site HCV assessment clinics
# HCV Testing Results, Durham County, 2012-2014

<table>
<thead>
<tr>
<th>Testing Facility</th>
<th>Total Tests</th>
<th>HCV Antibody Positive</th>
<th>HCV Antibody Positive/RNA Positive</th>
<th>HCV Antibody Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Jail</td>
<td>699</td>
<td>87 (12%)</td>
<td>71 (10%)</td>
<td>612 (88%)</td>
</tr>
<tr>
<td>STD Clinic</td>
<td>773</td>
<td>110 (14%)</td>
<td>82 (10%)</td>
<td>662 (86%)</td>
</tr>
<tr>
<td>Community Testing Sites</td>
<td>1418</td>
<td>272 (19%)</td>
<td>210 (15%)</td>
<td>1146 (81%)</td>
</tr>
<tr>
<td>Homeless Clinic</td>
<td>113</td>
<td>32 (28%)</td>
<td>27 (24%)</td>
<td>81 (72%)</td>
</tr>
<tr>
<td>Total</td>
<td>3003</td>
<td>501 (17%)</td>
<td>390 (13%)</td>
<td>2501 (83%)</td>
</tr>
</tbody>
</table>
HCV Bridge Counselor Role

- Made first contact with HCV-infected clients
  - Assisted with post-test counseling and control measures

- Provided education to newly diagnosed persons
  - Alcohol prevention
  - Benefits of treatment

- Collected drug history, medical history, and contact information

- Served as the middle person to help facilitate the first doctor's visit
HCV Linkage to Care, Durham County, 2012-2014

Persons identified with chronic HCV infection: 382

- Received HCV post-test counseling: 315 (82%)
- Did not receive HCV post-test counseling: 67 (18%)*

- Referred to HCV care: 227 (59%)
- Reported “already in care” or had a primary provider: 16 (4%)
- Not referred to HCV care: 72 (19%)*

- Attended first appointment: 187 (49%)
- Appointment pending: 27 (7%)
- Missed appointment: 13 (3%)

* Reasons for not being referred for HCV care: incarceration (n=16), relocation (n=16), refusal of linkage services (n=6), loss to follow-up/could not be located (n=25), or other (n=9).
Lessons Learned

- HCV testing and linkage to care can be facilitated at the local public health level and integrated with HIV/STI programs.

- HCV bridge counseling is important to assist patients with barriers to care, including transportation, insurance status, stigma and other concerns about diagnosis.

- Getting HCV-infected patients to treatment remains problematic due to limited access (e.g. small number of prescribing providers, treatment costs).
FOCUS PROGRAM

“HIV and Hepatitis C Testing and Linkage to Care in Durham, North Carolina”

Gilead Sciences, Inc.
The FOCUS Model

**TEST:** FOUR PILLARS OF ROUTINE SCREENING

**TESTING INTEGRATED INTO NORMAL CLINICAL FLOW**
To promote the normalization and sustainability of testing.

**ELECTRONIC MEDICAL RECORD MODIFICATION**
To prompt testing, automate processes, populate lab orders and track performance.

**SYSTEMIC POLICY CHANGE**
A multi-level, organization-wide commitment to implement routine testing and linkage to care.

**TRAINING, FEEDBACK & QUALITY IMPROVEMENT**
To identify best practices and motivate staff.

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**HIV**

**MMWR**

**Morbidity and Mortality Weekly Report**

**Weekly / Vol. 63 / No. 25**

**June 27, 2014**

**National HIV Testing Day and New Testing Recommendations**

**Routine HIV Screening in Two Health-Care Settings — New York City and New Orleans, 2011–2013**

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**HCV**

**MMWR**

**Morbidity and Mortality Weekly Report**

**Weekly / Vol. 64 / No. 17**

**May 8, 2015**

**Hepatitis Awareness Month and National Hepatitis Testing Day — May 2015**

APPENDIX A: Testing Integration Flow Chart

<table>
<thead>
<tr>
<th>DCoDPH, LCHC patient</th>
<th>Social Services client</th>
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<tbody>
<tr>
<td>Routine clinical services</td>
<td>Referral to DCoDPH</td>
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</table>

Eligibility determined by EMR and/or risk factor

Lab order generated in Patagonia
Staff reviews order in EMR

Patient offered HIV and/or HCV testing

Patient agrees to testing
Patient declines testing
Innovative Strategies

- Maximizing opportunities to provide routine HIV/HCV testing within a human services facility;

- Offering HIV/HCV screening to clients seeking social services;

- Co-location of services (primary care clinic within health department) under one roof to assist linkage to care;

- Creation of an HIV/HCV testing and coordination resource center for the community within the health department.
Questions