Viral Hepatitis C Testing
Recommendations for Persons Born 1945-1965

Local Health Departments and Hepatitis C: Webcast 1.3

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Role of Public Health in HCV Prevention

Public Health Core Functions - Institute of Medicine, 1988

Guided by research...

- Assessment
- Policy Development
- Assurance
Outline

- Assessment and policy development leading to recommendations
- Public health strategies to provide assurance in implementing recommendations
Assessment and Policy Development for the Viral Hepatitis C Testing Recommendations for Persons Born 1945-1965
Impact of Prevention Measures on Hepatitis C Virus (HCV) Infection in U.S.

- Discovery of HCV: 1989
- Anti-HCV test licensed: 1992
- 1986 Indirect blood screening for HCV and HIV prevention measures
- Needle stick Safety and Prevention Act: 2001
- 22,000 new acute HCV cases reported in 2012

Prevalence of Current HCV Infection Among Persons in the United States

<table>
<thead>
<tr>
<th>Prevalence Civilian, Non-Institutionalized Populations (NHANES)</th>
<th>2.7 million (2.2-3.2 million) 1.0% (0.8%-1.2%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated HCV Infection Among Homeless and Incarcerated Persons (Not Included in NHANES)</td>
<td>360,000-840,000 22%-52%</td>
</tr>
</tbody>
</table>

Two of Three Americans Living with HCV Were Born During 1945-1965

- Reflects historical high HCV incidence before viral discovery in 1989
- Five-fold higher prevalence than other US adults (3.39% vs 0.55%)
  - 81% of all HCV+ US adults
  - Of all HCV-related mortality in US, 73% were born in this cohort

### Adjusted Odds Ratios for the Presence of HCV RNA: NHANES 2003-2010

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Odds Ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Categories</strong></td>
<td></td>
</tr>
<tr>
<td>(20-39 referent)</td>
<td></td>
</tr>
<tr>
<td>Age 40-49</td>
<td>6.0 (3.2-11.1)</td>
</tr>
<tr>
<td>Age 50-59</td>
<td>9.5 (5.3-16.8)</td>
</tr>
<tr>
<td><strong>Race-Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>(all others referent)</td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>1.6 (1.1-2.3)</td>
</tr>
<tr>
<td><strong>High School Education</strong></td>
<td></td>
</tr>
<tr>
<td>(high school or more referent)</td>
<td></td>
</tr>
<tr>
<td>Less than High School/GED</td>
<td>2.0 (1.2-3.3)</td>
</tr>
<tr>
<td><strong>Family Income</strong></td>
<td></td>
</tr>
<tr>
<td>(&gt;2.0 times poverty level referent)</td>
<td></td>
</tr>
<tr>
<td>&lt;2.0 times poverty level</td>
<td>3.7 (2.6-5.3)</td>
</tr>
<tr>
<td><strong>Age ≥ 60</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Age Categories</strong></td>
<td></td>
</tr>
<tr>
<td>(≥ 70 referent)</td>
<td></td>
</tr>
<tr>
<td>Age 60-69</td>
<td>6.0 (3.2-11.1)</td>
</tr>
<tr>
<td><strong>Race-Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>(all others referent)</td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>10.0 (4.9-20.1)</td>
</tr>
</tbody>
</table>
The Growing Burden of Hepatitis C in the United States

- Of 2.7 million HCV-infected persons in primary care
  - 1.47 million will develop cirrhosis
  - 350,000 will develop hepatocellular carcinoma (HCC)
  - 897,000 will die from HCV-related complications

Rein D, Dig Liver Dis 2010.
Increases in Hepatitis C Mortality

Reported Deaths 19,368
Median age - 59 years
Advances in HCV Therapy

- 1991: 6% IFN
- 1999: 16% IFN
- 1999: 34% IFN/RBV
- 2001: 42% IFN/RBV
- 2002: 39% Peg-IFN (PEG)
- 2011: 54 – 56% Peg/RBV
- 2014: 67-72% Peg/RBV
- 2014: >90% All oral DAA

HCV Deaths Averted with Birth Cohort Testing Using Different Treatments

PR = Pegylated Interferon plus Ribavirin for all genotypes, PRPI; PR = PR plus a protease inhibitor for genotype 1, PR for genotypes 2/3; PRS/SR = pegylated interferon, ribavirin, and sofosbuvir for genotype 1, and sofosbuvir plus ribavirin for genotypes 2 and 3; SS/SR = Sofosbuvir and Simeprevir for genotype 1, and sofosbuvir and ribavirin for genotypes 2 and 3.

Risk-based Recommendations for HCV Screening

- Since 1998, CDC recommendations included risk-based screening
  - Injection drug use
  - Blood transfusion before 1992 and other blood exposures
  - HIV infected persons

- 45%-85% of infected persons remained unidentified

- Barriers to testing
  - Lack of clinician awareness of HCV testing guidelines
  - Clinician reluctance to ask about risks
  - Patient reluctance to disclose or failure to recall risks

Broader HCV Testing Recommendation in 2012
One time Test for Persons Born 1945 –1965

- Prevalence ~6 times higher than other ages (3.29% vs 0.55%)
- Represent 81% of adult chronic infections and 73% HCV deaths
- Benefit of treatment, with SVR reducing
  - Liver cancer risk: 70%
  - All-cause mortality: 50%
- No reported risk factors: 44%
Combined Birth-cohort and Risk-based Testing Effectively Identify HCV-infected Patients

Indications for Testing for Persons Reported with HCV

- Birth cohort testing: 68%
- Risk based only: 27%
- Birth cohort + risk based: 77%

CDC and USPSTF Updated Recommendations for HCV Testing

- **One time screening test for persons born 1945-1965**
- **Major risk**
  - Past or present injection drug use
- **Other risks**
  - Received blood/organs prior to June 1992
  - Received blood products made prior to 1987
  - Ever on chronic hemodialysis
  - Infants born to HCV infected mothers
  - Intranasal drug use
  - Unregulated tattoo
  - History of incarceration
- **Medical**
  - Persistently elevated ALT
  - HIV (annual testing)
Assurance for the Viral Hepatitis C Testing Recommendations for Persons Born 1945-1965
The goal of HCV therapy is a sustained virologic response (SVR).

SVR is the suppression of HCV to undetectable levels in the blood usually determined 12 weeks after the end of treatment.

SVR represents a cure of HCV infection.

Reduces risks of liver cancer and mortality:
- 70% reduction in hepatocellular carcinoma
- 90% reduction in liver related mortality
- 50% reduction in all cause mortality

HCV Test, Care, and Cure Continuum, United States

3.2 million persons living with HCV

- All HCV infected: 1.6 M (50%)
- anti-HCV tested: 1.2 M (38%)
- HCV care: 750,000 (23%)
- HCV RNA: 360,000 (11%)
- Treated: 200,000 (6%)

Educate Communities:
Know More Hepatitis
National Multi-Media Campaign

- **Goals:**
  - Increase awareness of hepatitis C
  - Encourage testing of those born 1945-1965

- **Campaign Implementation:**
  - Phase I – August 2012
  - Phase II – January 2015

- **Audiences:**
  - Primary Care Providers
  - Consumers (Born from 1945 to 1965)
Know More Hepatitis
National Multi-Media Campaign Strategies

• Help with dissemination from state and local partners
• Primarily *donated* time and space
Campaign materials & how to use them to help implement Know More Hepatitis

- Website
- Fact sheets
- Infographics
- Posters
- Video PSAs
- Live read radio scripts
- Buttons & Badges
- Shareable digital content
- Resources for providers
Online Viral Hepatitis Risk Assessment

- Personalized recommendations based on CDC’s hepatitis testing and vaccination guidelines
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. 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.

To differentiate past, resolved HCV infection from biologic false positivity for HCV antibody, testing with another HCV antibody assay can be considered.
Early Identification and Linkage to Care Capacity Building

- Hepatitis C virus testing and linkage to care: 24 sites funded 9/2012–9/2014
  - PWID (10)
  - Community Health Centers (7)
  - Settings to strengthen care and treatment (2): Project ECHO
  - Other: HIV/STD clinic, liver clinics, emergency departments

- Community based programs to improve healthcare capacity to test and cure hepatitis C: 3 sites funded 9/2014–9/2018
  - Improve primary care capacity to test and cure
  - Leverage Affordable Care Act
  - Build surveillance capacity to monitor outcomes and impact
1945-1965 Birth Cohort Testing* & Linkage to Care
Oct 2012 - Sept 2014
No. Tested = 43,068

*Venues Include: Health Departments; Hospitals; Corrections; Shelters
Prevention and Public Health Funding and Secretary's Discretionary Funding

- HCV Ab Reactive: 3694 (9%)
- RNA Tested from Ab Positive: 2848 (77%)
- Persons RNA Positive: 2020 (71%)
- Referred to Medical Care: 1646 (81%)
- Attended 1st Medical Appt: 1198 (73%)
HCV Testing of Persons Born 1945-1965 in Two University Medical Center Emergency Departments

HCV “Baby Boomer” Antibody Prevalence by Site

- **Houston**: 11 months
  - 1421
  - 9.9%
- **Birmingham**: 11 weeks
  - 1359
  - 11.1%
Extension for Community Health care Outcomes (ECHO)

- Expand PCP capacity in HCV management
- Rural and underserved populations
- Use videoconferencing
- Share “best practices”
- Case based learning
- Similar SVR achieved as those in HCV clinics

During 9/2012 – 2/2014

- Trained 66 PCP predominantly from rural settings
- Most PCP (93%) with no experience in HCV care
- Of 280 patients, 129 (46%) received treatment
  - More than twice that observed in other CDC studies
Community-based Programs to Test and Cure Hepatitis C: 9/2014 –9/2018

- Goal: develop package of services to improve healthcare capacity to test and cure
  - Identify and educate target population
  - Incorporate HCV testing in primary care practices
  - Implement regular consultation of primary care provider with HCV specialists
  - Case management
  - Monitor outcome and community impact via data system
  - Leverage Affordable Care Act: free testing, insurance enrollment, and improve quality of care through use of EMR
Health Care Reform
Impact on Viral Hepatitis Prevention

- Insurance coverage for those with preexisting, chronic disease
- Testing covered as a non-copay preventive service
- Incentive for adoption of health information technology to care for patients
- Emphasis on quality of provider care: use of performance measures
American Medical Association
Performance Measures Updated

- Screening
  - One-time screening: patients at risk (injection drug use ever, blood transfused prior to 1992, or born during 1945–1965)
  - Annual HCV screening: patients who are active injection Drug Users

- Care and treatment
  - Referral to treatment for patients identified with HCV Infection
  - Sustained Virologic Response (SVR)
  - Confirmation of Hepatitis C viremia
  - Hepatitis C RNA and genotype testing before initiating treatment
  - HCV RNA testing between 4-12 weeks after treatment start
  - Discontinuation of antiviral therapy if inadequate response
  - Screening for HCC in patients with Hepatitis C Cirrhosis

- Additional performance measures on prevention (vaccination, alcohol consumption counseling, HCC screening)

Yellow= newly developed performance measures
Summary: U.S. Strategies to Enhance HCV Testing and Care

- Broader testing recommendations, risk based and birth-cohort
- Multiple efforts to increase uptake
  - Education, capacity building, performance measures
- Community based programs to improve healthcare capacity to test and cure hepatitis C
  - Better linkage to care crucial to realize full potential of advances in treatment
- Challenges: under-diagnosis, access to care, and cost of medications
Local Strategies to Enhance HCV Testing and Care

• Gather community data to guide service delivery and inform policy
• Improve reporting
• Update professional training/ public awareness
• Assist in the expansion of HCV testing
• Target providers and health systems with interventions to promote delivery of HCV testing and care
  – Promote development of clinical decision tools and performance measures
    • Use to monitor and report back to providers and health systems
• Convene stakeholders
  – Meetings with Medicaid, other payers,
  – Presentations to providers, public health officials, others
• Participate in policy development
• Work in conjunction with the state Viral Hepatitis Prevention Coordinator
Local Health Departments and Hepatitis C
NACCHO Educational Series

Webcast 1.1  Hepatitis C: Where Are We Now?
Webcast 1.2  The National Viral Hepatitis Action Plan
Webcast 1.3  Viral Hepatitis C Testing Recommendations for Persons Born 1945-1965
Webcast 1.4  Leveraging Partnerships to Address Hepatitis C: Philadelphia’s Model

All materials available at www.naccho.org/hepatitisc

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