IMPLEMENTATION OF A COMPLEX PRIMARY CARE INTERVENTION TO DIAGNOSE AND TREAT HCV IN LOW INCOME LATINX PATIENTS

Barbara J Turner MD, MSEd
Senior Advisor, Gehr Center for Health Systems Science and Innovation
Professor of Clinical Medicine, Keck School of Medicine of the University of Southern California

Addressing Health Disparities
Disclosures

Deputy Editor of Educational Resource for the American College of Physicians
Hepatitis C public health priority

- Chronic HCV infection: leading cause of end-stage liver disease and hepatocellular carcinoma (HCC) in the US \(^3\)
- **2.4 million** persons U.S. have chronic HCV (with estimates up to **4.9 million**) and **half** are unaware \(^1\)
- Most are **low-income** \(^2\)
- Can be cured: short-course of highly effective direct-acting antivirals (DAAs)

STOP HCC-HCV Overview

- Implement HCV screening and evaluation, treatment of chronic HCV treatment in baby boomers (1945-65)
- 21 primary care practices in 6 health care systems serving South Texas
- Practices serve low-income patients (Medicaid, uninsured)
- Funded by federal- and state-grants
Demographics of South Texas vs Texas state

South Texas Region Population by Race and Ethnicity, 2018

South Texas Region and Texas Household Income Percentile, 2018

Income categories:
- more than $125,000
- $75,000 to $125,000
- $50,000 to $75,000
- $25,000 to $50,000
- less than $25,000
HCV in baby boomers; Chronic HCV in Texas

- Baby boomers (born 1945-65) represent ¾ of all chronic HCV infections nationally
- Nearly 400,000 Texans (1.79%) were estimated to have chronic HCV+
  - The majority in South TX

Liver cancer (hepatocellular carcinoma) in Texas

- Texas HCC mean incidence 9.3/100,000 persons:
  - Tied for the highest of all states
- National mean incidence is 7.9/100,000
- 2,000 new cases in Texas annually
  - Incidence in South Texas as high as 19.1/100,000

Implementation and Evaluation Framework

Program reflects NIMHD CBPR Goals

• Enhance community capacity by supporting equal community participation in research for which they will directly benefit

• Establish sustainable programs that improve health behaviors and health outcomes in health disparity populations

• Accelerate translation of research findings to health disparity communities by designing effective and culturally tailored interventions
Reach and Engagement for Adoption

- Learning from community, patients, and providers
  - Focus groups and surveys of community and patients ¹,²
  - Meetings and focus groups with primary care practice administrators, clinicians, priorities and barriers to screening HCV ²
- Educational initiatives

Community outreach

Community health workers, peer educators and physicians
Booth at community events such as fairs
Peer testimonial videos: stimulated community discussion/education
Education for Professionals and Staff

STOP Hepatocellular Carcinoma (HCC)

HCV Epidemiology and Evaluation

Manage and Treat HCV: Essentials for Primary Care Clinicians

Alcohol Use in HCV: 3 part series including Screening, Brief Intervention, Treatment (SBIT)
STOP HCV-HCC website

- Stophepatitisc.com
- Resources for clinicians, patients, and community
- Bilingual, low literacy
Implementation: HCV Screening and Care

**Screen**
- EMR modification
- Opt-out testing w/posters
- Reflex to RNA
- Test free if uninsured
- Registry

**Educate + Evaluate**
- Mobile app about HCV w/allied health provider support
- Care navigation
- Protocol-based lab evaluation
- Free for uninsured

**Care Plan**
- Specialist teleconference ‘office hours’ for case presentation
- Holistic care plan - not only HCV treatment
- Care navigation

**Treat to Cure**
- DAA access: PAP* or Medicaid
- Address risky behaviors, comorbidities, DAA adherence
- Cure: sustained viral response @ 12 weeks
- Liver ultrasound for HCC q6 mos. if cirrhosis

PAP = Pharmaceutical company prescription assistance program
Role of the electronic medical record (EMR)

- Best practice alert in the EMR promotes HCV screening \(^1\)
- FQHCs often lack this function
- Work around: practice team must scan chart to see if HCV screen needed with challenges in following up the test
- Work around: testing companies (e.g. LabCorp) provide test results for clinic patients
- Some EMRs facilitate a registry of patients

\(^1\) J Gen Intern Med. 2019;34(10):2005-2013
Posters in practice: opt out alert about HCV screening

**MILLIONS OF AMERICANS HAVE HEPATITIS C. MOST DON'T KNOW IT.**

If you were born between 1945 and 1965, we will include the hepatitis C test with your other lab work. If you have questions or concerns, please talk with your nurse.

**Millones de Americanos tienen hepatitis C. La mayoría no lo saben.**

Si usted nació entre los años 1945 y 1965, incluiremos la prueba de detección de hepatitis C con el resto de sus análisis de laboratorio. Por favor diríjase a su enfermero(a) si tiene preguntas al respecto.
Reflex testing: Reduces patient and provider burden
¿Cómo puedo proteger mi hígado?

Elimine el alcohol.

Cerveza, vino, licor fuerte, u otro alcohol puede dañar el hígado aún más.

Informe a su doctor o proveedor de la salud que lo vacunen contra otros virus que pueden causar Hepatitis (A y B). ¡No hay vacuna para la Hepatitis C!
Specialist teleconference hours

- Developed efficient case presentation form
- Specialist set aside lunchtime biweekly for 10-15 minute case presentations
- Suggest DAA regimen as well as other laboratory and/or clinical issues to address (e.g. substance use, diabetes, alcohol)
- Patients with more advanced disease had few options
Example of patient case summary

| Race/Ethnicity | Hispanic | Last Updated | 8/3/2018 |

<table>
<thead>
<tr>
<th>Chronic Diseases</th>
<th>Current Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>Viagra 25mg Tablet</td>
</tr>
<tr>
<td>Essential Htn</td>
<td>Vistril 25mg</td>
</tr>
<tr>
<td>Sexual Dysfunction</td>
<td>Paroxetine 20mg tablet</td>
</tr>
<tr>
<td>HCV</td>
<td>Metoprolol Tartrate 50mg Tablet</td>
</tr>
<tr>
<td>Back Pain w/o sciatica</td>
<td>Atorvastatin 10mg Tablet</td>
</tr>
<tr>
<td></td>
<td>Amlodipine 5mg Tablet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance Use</th>
<th>Tobacco (ppd x years)</th>
<th>Never Smoker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alcohol</td>
<td>No Alcohol</td>
</tr>
<tr>
<td></td>
<td>Average drinks per day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average days per week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Max drinks per day (binging)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Illlicit drug use - (which)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment Naïve</th>
<th>Yes <em>X</em></th>
<th>No ___</th>
</tr>
</thead>
</table>

| Signs of cirrhosis | Yes ___ | No _X_ | Uncertain ___ |

| Ultra sound Result: 5/31/18 - The liver is normal in size measuring 15.2cm. It is normal in echogenicity and smooth in contour without focal mass. Evaluation is limited due to... |
### Effectiveness - quantitative metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of all eligible subjects screened</td>
<td>% of all anti-HCV+ subjects with HCV RNA</td>
</tr>
<tr>
<td>% of uninsured with chronic HCV counseled; % completed staging tests</td>
<td>% of uninsured with chronic HCV counseled; % completed staging tests (free)</td>
</tr>
<tr>
<td></td>
<td>% of with specialist presentation</td>
</tr>
<tr>
<td></td>
<td>% completed application to pharmaceutical company prescription assistance program</td>
</tr>
<tr>
<td></td>
<td>% initiated DAA; % completed DAA</td>
</tr>
<tr>
<td></td>
<td>% sustained viral response at 12 weeks</td>
</tr>
</tbody>
</table>
### Effectiveness: Screening

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N (%)</th>
<th>Best performance clinic</th>
<th>Worst performance clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration (mo)</td>
<td></td>
<td>43</td>
<td>29</td>
</tr>
<tr>
<td>Eligible pts</td>
<td>27,000</td>
<td>5,085</td>
<td>2,832</td>
</tr>
<tr>
<td>Screened</td>
<td>13,334 (48.1)</td>
<td>3,628 (71.3)</td>
<td>560 (19.8)</td>
</tr>
<tr>
<td>Mean age</td>
<td>59.3 (5.4)</td>
<td>61.4 (5.5)</td>
<td>59.0 (4.7)</td>
</tr>
<tr>
<td>% women</td>
<td>8,761 (65.7)</td>
<td>2,463 (67.9)</td>
<td>300 (53.6)</td>
</tr>
<tr>
<td>% Latino</td>
<td>11,759 (88.2)</td>
<td>3,541 (97.6)</td>
<td>431 (77.0)</td>
</tr>
<tr>
<td>% uninsured</td>
<td>8,848 (66.4)</td>
<td>2,277 (62.8)</td>
<td>157 (28.0)</td>
</tr>
<tr>
<td>anti-HCV +</td>
<td>695 (5.2)</td>
<td>85 (2.3)</td>
<td>108 (19.3)</td>
</tr>
<tr>
<td>HCV RNA tested</td>
<td>520 (74.8)</td>
<td>79 (92.9)</td>
<td>64 (59.3)</td>
</tr>
<tr>
<td>HCV RNA +</td>
<td>349 (2.6)</td>
<td>49 (1.4)</td>
<td>51 (9.1)</td>
</tr>
</tbody>
</table>
Figure. Care cascade for uninsured patients with chronic HCV infection from 4 practices using the teleconsultation model.
Some Challenges

- Busy primary care practice with competing priorities
- Lack of financial incentive for HCV screening/care
- Unsupportive EMR
- Lack of coverage for uninsured care navigation, testing, and treatment for advanced disease
- Maintain patient engagement in care
- Access to DAA therapy (especially Medicaid) but recent victory:
  - Texas Medicaid removed minimum fibrosis, sobriety, and prescriber requirements for hepatitis C treatment as of September 1, 2021.
- Patients with decompensated cirrhosis or uncontrolled comorbidities
Keys to Success - Qualitative review

- Community engagement - fairs, rodeos, community groups
- Organizational commitment
- Professional education with incentives
- EMR redesign
- Free testing and evaluation for uninsured
- Reflex HCV RNA
- Care navigation - community health worker or licensed vocational nurse
- Efficient hepatologist consultation
- Registry for performance feedback and PDSA
- Patient-centered not liver-centered management
Funding Acknowledgments