HCV linkage to care: Challenges and Opportunities

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The hepatitis C care continuum (US)

- HCV infected: 3.2 million
- Diagnosed: 1.6 million
- Referred: 1.0-1.2 million
- Accessed care: 630,000 - 750,000
- Initiated treatment: 220,000 - 360,000
- Sustained virologic response: 170,000 - 200,000

Defining linkage to care [AASLD/IDSA 2014 guidelines]

- Persons with current (active) HCV infection should receive education and interventions aimed at reducing progression of liver disease and preventing transmission of HCV.
- Evaluation by a practitioner who is prepared to provide comprehensive management, including consideration of antiviral therapy, is recommended for all persons with current (active) HCV infection.

**REFERRAL**

**FROM** a venue where testing takes place (primary care doctor, HIV clinic, opiate substitution clinic, needle exchange program)

**TO** a specialist/someone who can treat (gastroenterologist, hepatologist, ID physician)

**LINKAGE TO CARE**

- Referred: [1.0-1.2 million]
- Access care: [630,000 – 750,000]
- Initiated treatment: [220,000 – 360,000]
- Sustained virologic response: [170,000 – 200,000]

**ATTEND** at least one appointment?
**RECEIVE** counseling?
**RECEIVE** HCV RNA test?
**RECEIVE** disease staging?
**RECEIVE** evaluation for treatment?

http://www.hcvguidelines.org/
## Barriers to linkage to care

### SYSTEM - LEVEL

**Health care system issues**
- Limited accessibility of HCV care locations
- Insufficient funds allocated for HCV
- Overburdened health systems
- Cost / insurance
- Segregated service delivery

**Workforce issues**
- Insufficient number of providers who can treat HCV
- Insufficient resources for case managers, navigators, social workers

### PROVIDER - LEVEL

- **Knowledge** (misconceptions about who is at risk for progression and who needs treatment)
- **Perceptions** (may only refer good candidates who they perceive to need treatment; hesitance to refer persons with a history of/active drug use)

### PATIENT- LEVEL

**General barriers**
- General health care access (primary care provider, insurance, health literacy, patient provider-relationship)
- Competing health priorities (mental health, comorbidities)
- Stability factors (substance use, employment, income, housing, drug treatment, social support)

**HCV-specific barriers**
- Poor knowledge
- Lack of symptoms
- Fears about treatment
- HCV stigma
# Overcoming barriers at multiple levels

<table>
<thead>
<tr>
<th><strong>SYSTEM - LEVEL</strong></th>
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<tbody>
<tr>
<td><strong>Health care system issues</strong></td>
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<tr>
<td>• Mechanism to pay for treatment</td>
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<tr>
<td>• Integrated services (co-location)</td>
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<td>- with HIV care, STD services, community health centers, primary care, methadone programs, needle exchange</td>
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<tr>
<td><strong>Workforce issues</strong></td>
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<tr>
<td>• Multidisciplinary team care</td>
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<td>• Telemedicine</td>
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<tr>
<th><strong>PROVIDER - LEVEL</strong></th>
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<tbody>
<tr>
<td>• Education at all levels (Primary care physicians, ID physicians, Service providers)</td>
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<tr>
<td>• Sensitization to substance use and related comorbidities</td>
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<tr>
<td>• Consistent and frequently updated guidelines</td>
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<tr>
<td>• Expansion of non-invasive disease staging</td>
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<tr>
<th><strong>PATIENT- LEVEL</strong></th>
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<tr>
<td><strong>General barriers</strong></td>
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<tr>
<td>• Patient navigation / Case management</td>
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<tr>
<td>• Peer support</td>
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<td>• Brief interventions (e.g., for alcohol use)</td>
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<tr>
<td>• Incentives</td>
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<tr>
<td><strong>HCV-specific barriers</strong></td>
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<tr>
<td>• Education / counseling</td>
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<tr>
<td>• Messaging around cure</td>
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### Service integration + referral for HCV tx

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<tr>
<th>Additional services</th>
<th>Case mgmt / navigation</th>
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<tbody>
<tr>
<td>Education, counseling, motivational interviewing</td>
<td>Coordinate primary care &amp; hepatology appts; psychiatric care, alcohol counseling, legal, social services</td>
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<tr>
<td>Wound mgmt, HBV vaccination, other general and specialty care (e.g. mental)</td>
<td>Welfare services, counseling, referral to other health services, support through HCV treatment</td>
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<tr>
<td>ID and prevention screening</td>
<td>Referrals to health care (including HCV care) upon release</td>
</tr>
<tr>
<td>HCV RNA test, education, counseling, HBV vaccine, HCV treatment discussion</td>
<td>Insurance evaluation/assistance; referral for specialty care; appt reminders; outreach</td>
</tr>
<tr>
<td>Acute/primary care, prevention services, substance use tx, HIV/other testing</td>
<td>Case management, mental health services, post-prison release services</td>
</tr>
<tr>
<td>Other specialty medical services, wound care, on-site pharmacy</td>
<td>Case management services available</td>
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1. Methadone clinics
2. Needle exchange
3. Prisons
4. Public health clinics
5. Primary health care
6. HIV clinics

Example: Public health STD clinic in Baltimore

- **Onsite SERVICES**
  - Immediate HCV RNA test
  - Medical education, risk reduction, alcohol counseling (+brief intervention)
  - Hepatitis B immunization
  - HCV treatment discussion

- **Patient NAVIGATION**
  - Insurance evaluation & assistance with insurance application
  - Appointment scheduling with HCV treatment specialist
  - Reminder calls for appointments
  - Community outreach

But, 89% attended their initial follow-up visit at the clinic where they were diagnosed!

25% who have not attended specialist appointments have been seen in the STD clinics 3 or more times since HCV diagnosis

41% linked to care

Falade-Nwulia O et al IDSA 2014
**Service integration including on-site HCV treatment**

<table>
<thead>
<tr>
<th>Methadone clinics(^1)</th>
<th>Internal medicine physician, physician assistant, part-time psychiatrist, nurse</th>
<th>Substance abuse counseling, peer support groups, hepatitis A and B vaccination</th>
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<tr>
<td>Needle exchange</td>
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<td>Prisons</td>
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<tr>
<td>Public health clinics</td>
<td>Lead clinician (physician, nurse or PA), nurse or medical assistant with specialist support (telemedicine)</td>
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<tr>
<td>Primary health care(^2)</td>
<td>3 HIV clinicians, psychiatrist, 2 clinical pharmacists, health educator, substance counselor</td>
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<td>HIV clinics(^3)</td>
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\(^1\) Harris J Addict Med 2010; \(^2\) Arora N Engl J Med 2011; \(^3\) Cachay AIDS Res Ther 2013
Example: Project ECHO

- Goal is delivery of specialty medical care to underserved populations
- Uses:
  - Telehealth technology
  - Best practice protocols
  - Case-based learning to train and support primary care providers to manage HCV
- Allows for consultation with multidisciplinary experts (e.g., mental health, substance abuse, medical specialties)

The way forward..

- Consistent definition of **linkage to care**

- **Integrating HCV testing, counseling** with other services is a great first step
  - Incorporate HCV RNA testing into locations where screening is done

- To **improve linkage to care** rates, will need more....
  - Patient navigation, case management
  - Integrating HCV treatment in settings where HCV-infected individuals come into contact with the health care system

- Interventions demonstrated to be most successful often include **multiple interventions delivered in combination**
  - Identifying which groups will require more intervention than others
  - Alternatives – incentives?

- Challenges will be greater in resource-constrained settings
Incentives: *Lessons from HIV?*

- **Voucher incentives for linkage to care** (visiting government ART center), initiating ART, routine clinical visit and viral suppression
- **Modest incentives** (~4 USD)
- Vouchers could be **traded** for groceries (e.g., rice, lentils) or Household items (e.g., toothpaste, soap)

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Solomon SS et al, CID 2014
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• Integrate with strategies to improve outcomes along the **entire continuum**..
Interventions that target the entire continuum may be most cost-effective

- **Integrated case management** (6-month intervention to improve linkage and initiation)
- **Linkage intervention** (3-month intervention based on ARTAS intervention)
- **Treatment initiation intervention** (3-month intervention with additional nurse, MD time)
- **Peer Navigator** (12-18 month intervention to improve linkage, treatment initiation and support persons through therapy – Based on NHC Check Hep C program)

Need HCV Seek, Test, Link and Cure programs

**Expanded HIV testing**
- Social mobilization
- Universal offer of testing in ED/hospital admissions

**Test**

**Linkage to care**
- Randomization of test sites
- FI link to care
- SOC link to care

**Prevention for positives**
- Randomization of HIV+
- CARE+ + SOC
- SOC only

**Viral suppression**
- FI for viral suppression
- SOC for viral suppression

**Initiate / continue ART per current guidelines**

**Viral suppression**

**HIV Example (HPTN 065)**

http://www.hptn.org/research_studies/hptn065.asp
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- Challenges will be greater in **resource-constrained** settings
Challenges greater in resource constrained settings.

- 3.2 million HCV-infected in US
- 5,777 HCV-infected PWID in India

Therapeutics - Goal is one size _fits_ all
Access – One size _will not_ fit all populations or countries
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