

Primary Care Provider Training Models for HCV Management

February 19, 2019



NASTAD's vision is a world free of HIV and viral hepatitis

- NASTAD is a non-profit association that represents public health officials who administer HIV and hepatitis programs in the U.S. and around the world.
- We strengthen domestic and global governmental public health through advocacy, capacity building, and social justice.

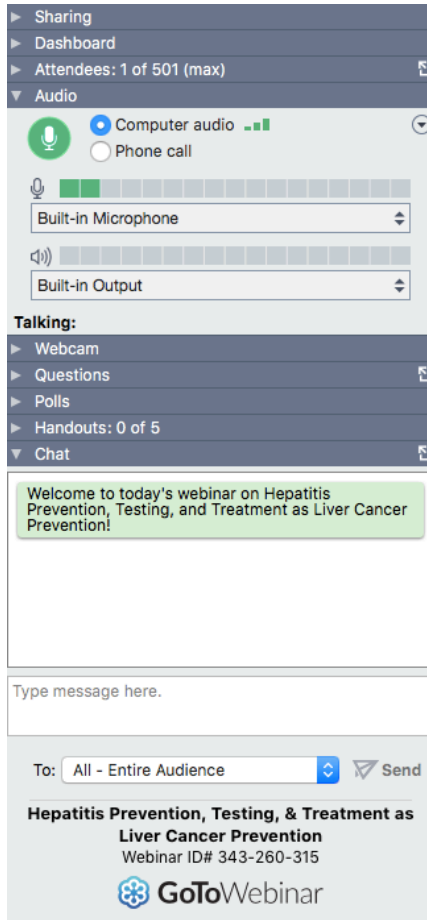
Phone/Audio Options

Call-In #: 213-929-4212

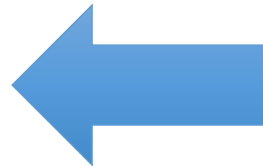
Attendee Access Code: 731-689-856

All attendees are muted.

Questions?



The screenshot shows the GoToWebinar interface. At the top, there is a navigation menu with options: Sharing, Dashboard, Attendees: 1 of 501 (max), Audio, Talking, Webcam, Questions, Polls, Handouts: 0 of 5, and Chat. The Audio section is expanded, showing 'Computer audio' selected and 'Phone call' as an option. Below this, there are dropdown menus for 'Built-in Microphone' and 'Built-in Output'. The 'Talking' section is also expanded, showing 'Webcam', 'Questions', 'Polls', 'Handouts: 0 of 5', and 'Chat'. A green message box says 'Welcome to today's webinar on Hepatitis Prevention, Testing, and Treatment as Liver Cancer Prevention!'. Below the message box is a text input field with the placeholder 'Type message here.'. At the bottom, there is a 'To:' dropdown menu set to 'All - Entire Audience' and a 'Send' button. The webinar title 'Hepatitis Prevention, Testing, & Treatment as Liver Cancer Prevention' and ID# 343-260-315 are displayed, along with the GoToWebinar logo.



Questions? Submit questions in the chat box at anytime throughout the webinar.

Speakers

- Noele Nelson, CDC's Division of Viral Hepatitis
- John Scott, University of Washington
- Jeff Duchin, Public Health Seattle-King County
- Andrew Aronsohn, The University of Chicago Medicine
- Risha Irvin, Johns Hopkins University
- Onyeka Anaedozie, Maryland Department of Health

TEST AND CURE: A POPULATION-BASED PROGRAM TO REDUCE THE HEP C BURDEN IN KING COUNTY

Jeff Duchin, MD

Public Health – Seattle & King County

John Scott, MD, MSc

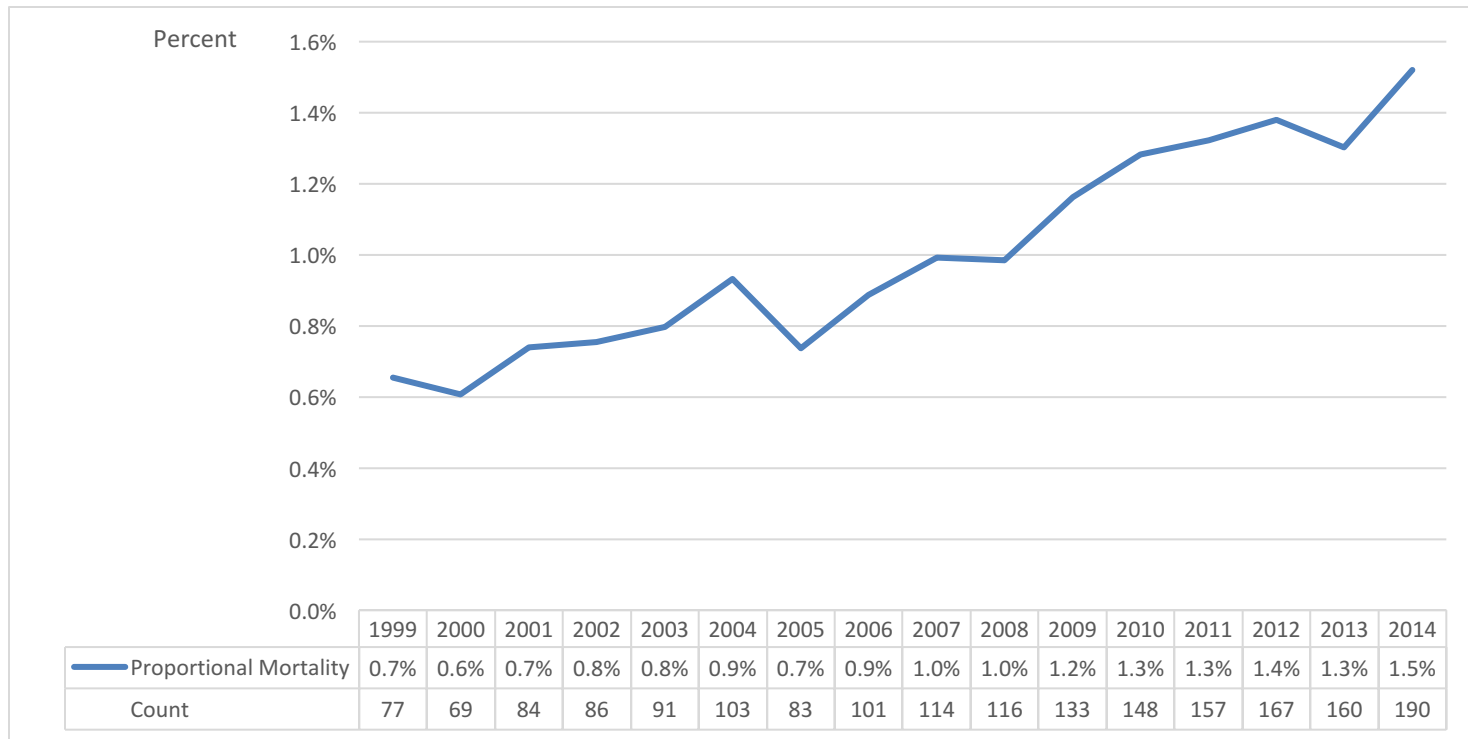
University of Washington



Disclosures

- JS reports fees serving on the data adjudication cmte for Novartis (not HCV study)
- JD has nothing to disclose.
- Funding comes from the Centers for Disease Control and Prevention (PI:Duchin, Spach) and WA State Dept of Health

Hep C as a cause of death in King County, 1999-2014



THE HCV TEST & CURE (TAC) PROJECT

Public Health 
Seattle & King County

 UNIVERSITY of WASHINGTON

HCV Test & Cure

- Goal: Build sustainable public health and community healthcare systems to increase the number of persons identified, evaluated, treated and cured of chronic HCV infection
- Collaboration between Public Health- Seattle & King County, University of Washington, and community healthcare providers:
 - HealthPoint community health centers
 - Neighborcare community health centers
 - Harborview Medical Center
 - Group Health Cooperative
 - Swedish Medical Center
 - Country Doctor community health centers
- Other partners: Washington Department of Health, Washington Healthcare Authority)
- The Hepatitis Education Project

HCV Test & Cure Target Populations

- Baby boomer cohort
- Persons who inject drugs
- Low income
- Under or uninsured
- Racial and ethnic minorities

HCV Test & Cure: Key Elements

- Clinic EHR-based interventions
 - Identify persons eligible for testing
 - Monitor and evaluate indicators of HCV testing, linkage to care, staging of liver disease, treatment status and outcome and other recommended interventions (alcohol counseling, immunization)
- Expand treatment capacity through provider training, consultation
- Implement HCV RNA test result reporting & “reflex RNA testing”
- Case management for linkage to care and treatment
- Develop enhanced public health surveillance database
- HCV community (public & healthcare provider) education
- Promote access to care through ACA enrollment

Outcomes

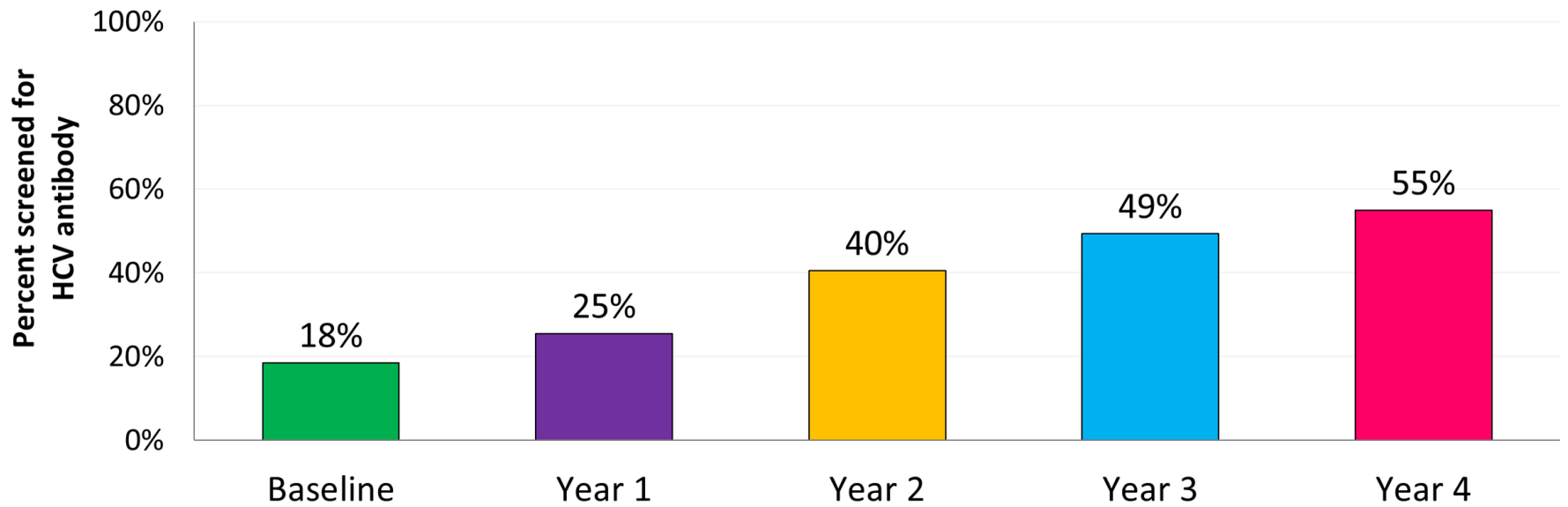
Short Term

- Increase capacity of PCPs to diagnose, treat, cure HCV
- Increase awareness of HCV in the community
- Improve quality of care for persons with HCV
- Increase Public Health capacity to follow-up reports of HCV cases
- Improve timeliness and completeness of HCV surveillance data

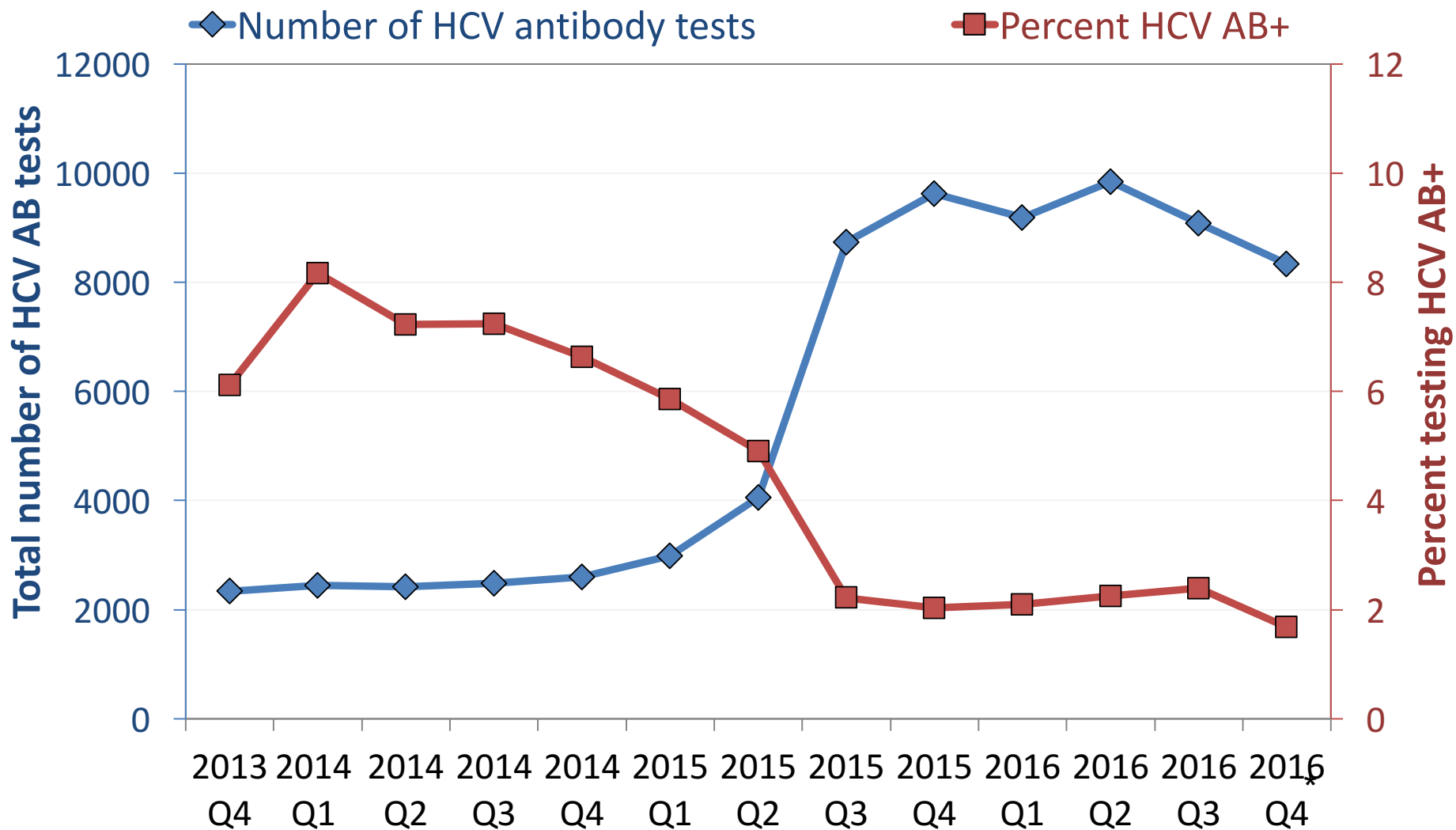
Long term

- Increase in HCV testing in the community
 - 50% increase in number of diagnoses per year
 - 50% increase in number treated and cured per year
- Reduced HCV-associated morbidity and mortality

Figure 1. Percent of baby boomer patients visiting partner primary care clinics who have been screened for HCV antibody, by study year of visit



Number of HCV antibody (Ab) tests performed on baby boomers at all partner sites, and percent that were HCV Ab positive(+),



*2016 Q4 incomplete

Figure 2. Percent of patients who received confirmatory RNA testing after HCV antibody positive (Ab+) results, by study year of Ab test

■ Reflex RNA
(Same specimen tested for Ab and RNA)

■ RNA tested later
(separate specimens tested)

■ Not tested for RNA
(Ab+ Only)

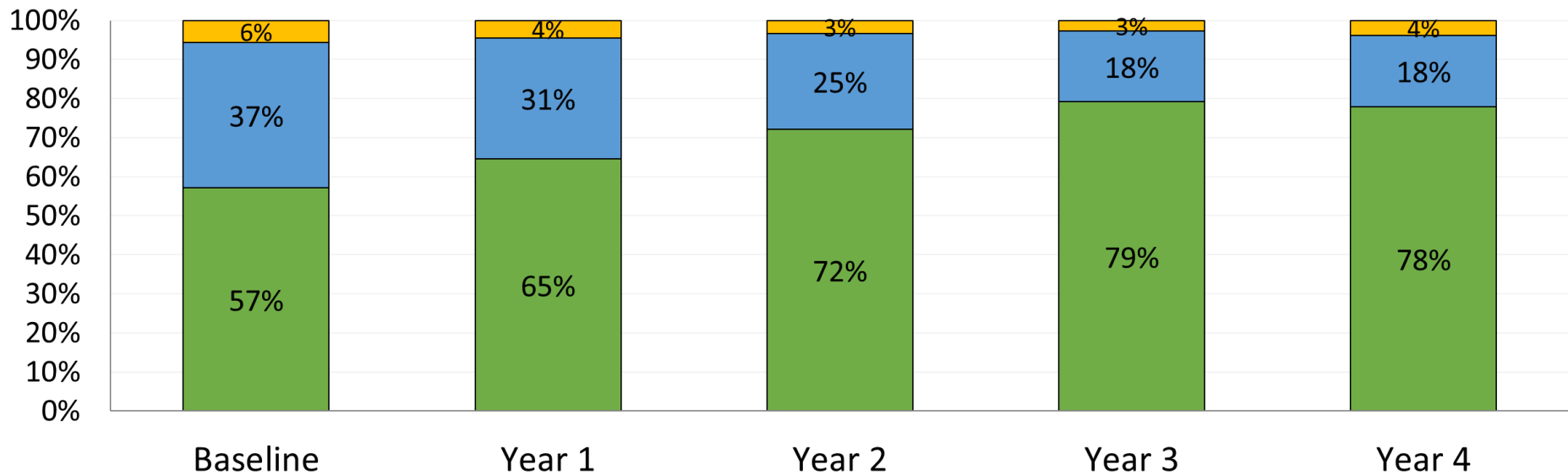
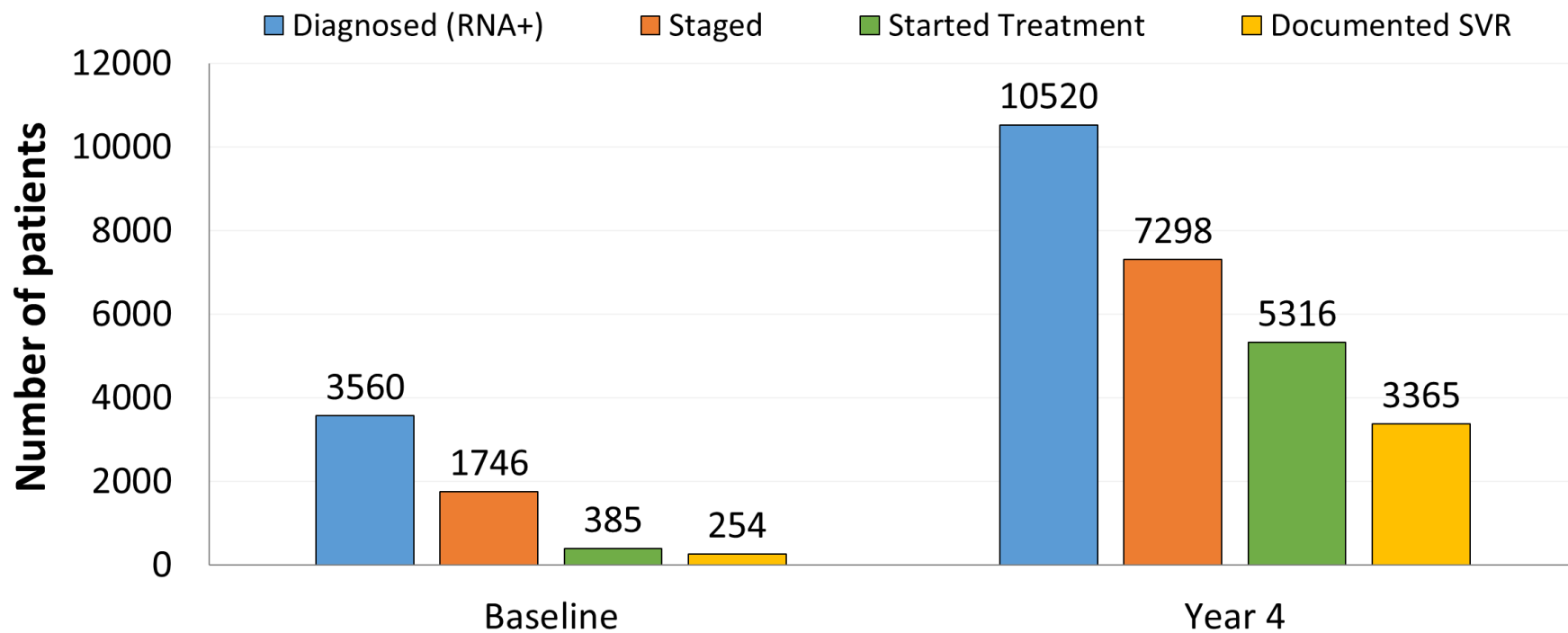


Figure 3. Continuum of care for HCV patients of HCV-TAC partner clinics at the end of Baseline compared to the end of Year 4



PCP TRAINING



Extension for Community Health Outcomes



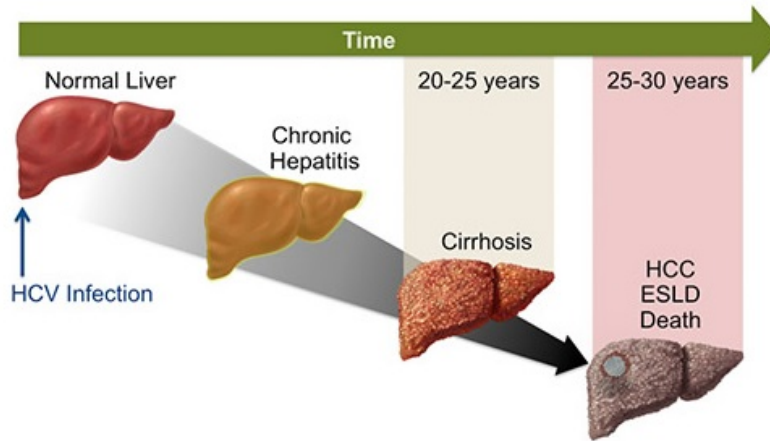
Theoretical Base
Situated Learning
Theory

Structure
1x per week VTC
Clinical update
Case Consultation

Practical Benefits
Just-in-time support
Interdisciplinary
Consultation

ONLINE CURRICULUM

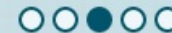




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About Hepatitis C Online

Hepatitis C Online is a free educational web site from the University of Washington. The site is a comprehensive resource that addresses the diagnosis, monitoring, and management of hepatitis C virus infection.

Contributors

Site Overview

What's New



Ombitasvir-Paritaprevir-Ritonavir and Dasabuvir
Viekira Pak™



Ledipasvir-sofosbuvir
Harvoni™
New HCV Treatment!



Sofosbuvir
Sofaldi™
Updated Information!

Take the Free Online Course

Browse or create an account and track your progress as you work through the course. After registering, you can obtain free CME or CNE credit.

Browse the Course Modules

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Free Continuing Education

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New Users

Create a free account to get started.

 **Required for CE**

[Register](#) >

Returning Users

 [Forgot password?](#)

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Available Modules

1 Screening and Diagnosis of Hepatitis C Infection

This module is for any clinician who may encounter persons with hepatitis C virus infection and would like to establish core competence in testing for hepatitis C, counseling patients on preventing hepatitis C transmission, and diagnosing acute hepatitis C infection.

2 Evaluation, Staging, and Monitoring of Chronic Hepatitis C

This module is intended for clinicians involved in long-term management of persons with chronic hepatitis C infection. Content includes initial evaluation, natural history, preventing liver damage, staging of liver fibrosis, evaluation of cirrhosis, surveillance for hepatocellular carcinoma, and

3 Management of Cirrhosis-Related Complications

This module addresses the diagnosis and management of complications that may arise in patients with cirrhosis, including ascites, spontaneous bacterial peritonitis, varices, hepatic encephalopathy, and referral for liver transplantation.

4 Evaluation and Preparation for Hepatitis C Treatment

This module is for clinicians evaluating patients for hepatitis C treatment, including clinicians who will independently assess treatment candidacy and clinicians who will provide treatment candidacy with assistance from a hepatitis C expert.

5 Treatment of Chronic Hepatitis C Infection

Module 5 is for clinicians treating chronic hepatitis C infection. Material covered includes recommendations for treatment-naïve and treatment-experienced HCV-infected patients based on guidance from the AASLD, IDSA, and IAS-USA.

6 Treatment of Special Populations and Special Situations

This module is designed for clinicians who provide management of special populations of persons infected with HCV and/or complex HCV-related special treatment issues. Material covered is at a more advanced level.

In Development - Module Coming Soon

7 Special Topics

This module is designed for clinicians who would like to review special topics that are not addressed in the

Medications to Treat HCV

Drug Summaries, Clinical Studies, and Slide Decks

All materials are available for download in their original formats as PDF or PowerPoint.

Section Editors

David H. Spach, MD
H. Nina Kim, MD

FDA-Approved

Boceprevir

(Victrelis)

- [Drug Summary »](#)
- [Clinical Trials »](#)
- [References »](#)
- [Slide Deck »](#)
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Ledipasvir-Sofosbuvir

(Harvoni)

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- [Slide Deck »](#)
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Ombitasvir-Paritaprevir-Ritonavir and Dasabuvir

(Viekira Pak)

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Peginterferon alfa-2a

(Pegasys)

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Peginterferon alfa-2b

(PegIntron)

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Ribavirin

(Copegus, Rebetol, Ribasphere)

- [Drug Summary »](#)
- [Clinical Trials »](#)
- [References »](#)
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- [Download »](#)



Simeprevir

(Olysio)

- [Drug Summary »](#)
- [Clinical Trials »](#)
- [References »](#)
- [Slide Deck »](#)
- [Download »](#)



Sofosbuvir

(Sovaldi)

- [Drug Summary »](#)
- [Clinical Trials »](#)
- [References »](#)
- [Slide Deck »](#)
- [Download »](#)



Telaprevir

(Incivek)

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- [Clinical Trials »](#)
- [References »](#)
- [Slide Deck »](#)
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Education program

	2014	2015	2016
UNIVERSITY OF WASHINGTON			
Online Curriculum Participation/Completion	0	4	32
In-Services	0	150	38
ECHO Participation/Case Presentation	1	9	8
SWEDISH			
PCP Training for Non-Treaters (education on screening/testing/referrals, shadowing)	0	147	3
PCP Training for Treating Providers (1-on-1 mentoring, e-consults, noontime talks, small group education programs)	0	0	4
GROUP HEALTH / KAISER PERMANENTE			
HCV Onboarding for Specialty Pharmacists (training and certification program)	0	20	6
Internal Training for Treating Providers	10	2	2

EMR INTERVENTIONS

Swedish Medical Center HCV Epic Tools: HCV Screening and Initial Management Smartset

▼ Hepatitis C Screening and Initial Management

▼ Lab Orders

▼ Screening

HCV REFLEX TO MOLECULAR BIOLOGY

With positive antibodies, reflexes to RNA qualitative. Medicare covers once in a lifetime for the following: those born 1945 through 1965, those who have had continued illicit injection drug use since the prior negative screening test

▶ Screening Edmonds

▼ Positive Screen

All labs below should be completed after a Hepatitis C screening positive result. APRI score can be calculated at the following link

[LINK --> APRI Score](#)

HIV 4TH GENERATION 1/O/2 REFLEX

Routine, Normal

HEPATITIS A AB TOTAL

Routine, Normal

HEPATITIS B SURFACE ANTIGEN

Routine, Normal

HEPATITIS B SURFACE AB

Routine, Normal

HEPATITIS B CORE AB

Routine, Normal

HCV GENOTYPE

Routine, Normal

HEPATITIS C GENOTYPE TO UW - Minor and James Only

Routine, Normal

HCV FIBROSURE

Routine, Normal

HCV RNA BY RT-PCR, QUANT

Routine, Normal

HIV 4TH GENERATION 1/O/2 REFLEX

Routine, Normal

CBC WITH DIFF (ABS-%)

Routine, Normal

COMPREHENSIVE METABOLIC PANEL (CMP)

Routine, Normal

PROTIME (PT)

Routine, Normal

PROTIME,INR-BKOFB

Routine, Back Office

FERRITIN

Routine, Normal

▶ Positive Screen Edmonds

▼ Referral Orders

▼ Hepatology Referral

Swedish Liver Center/Swedish Liver Care Network. Refer with positive Hep C screening.

SMG Hepatology FH

Routine

▼ Diagnosis Options

▼ Diagnosis Options

Need for hepatitis C screening test [Z11.59] [edit](#)

Hepatitis C antibody test positive [R89.4] [edit](#)

Chronic hepatitis C (HCC) [B18.2] [edit](#)

▼ Immunizations

Coverage varies by plan, and Medicare does not cover

▼ Immunizations

HEP A, ADULT, 2 DOSE SCHEDULE

Back Office, Qty-1, Coverage varies by plan, and Medicare does not cover

HEP A/HEP B, ADULT, 3 DOSE SCHEDULE

Back Office, Qty-1, Coverage varies by plan, and Medicare does not cover

HEP B, ADULT

Back Office, Qty-1, Coverage varies by plan, and Medicare does not cover

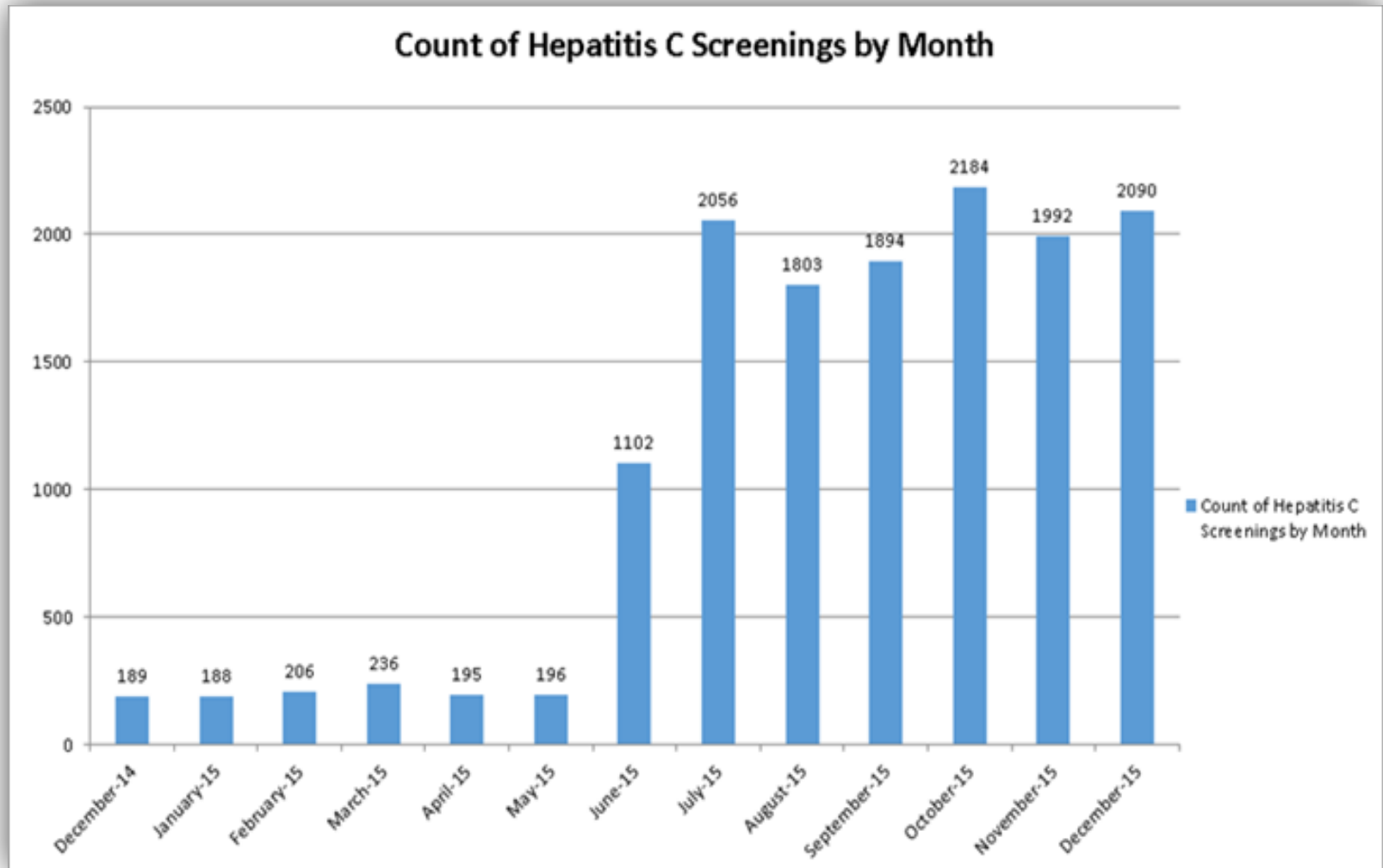
▶ Future Immunizations

▼ Level of Service Options

▶ New Patient

▶ Established Patient

Swedish Medical Center EMR Intervention



Launch of EMR Intervention

HealthPoint EMR Intervention

- Uses medical assistants to ask all Baby Boomers the following questions at start of visit and with associated workflow
- **“Have you ever been tested for Hepatitis C ?”**
[] Yes, [] No [] Uncertain

if No or Uncertain ASK TO TEST

if Yes CONTINUE

- If patient is **AGREEABLE** to lab testing follow the steps below:

Place order: **Test Code 144045** Hepatitis C Antibody Testing with reflex to NAA (*this is a venipuncture blood test*)

Use **Z72.89** as the diagnosis code

Give patient CDC babyboomer screening handout

<http://www.cdc.gov/knowmorehepatitis/media/factsheets.htm>

- If patient **DECLINES** the venipuncture blood test, for any reason, follow the steps below:

Give patient CDC babyboomer screening handout

<http://www.cdc.gov/knowmorehepatitis/media/factsheets.htm>

Document per protocol

Successful Efforts in WA State for ALL Payers to Fund HCV Therapy



- ✓ Court paves way for all Medicaid patients to have access to antivirals, regardless of level of scarring
- ✓ Many patients previously denied coverage are now getting on treatment

<http://www.seattletimes.com/seattle-news/health/court-paves-way-for-medicaid-patients-to-get-costly-hepatitis-c-treatment/>

Challenges

- **Data extraction**
 - Partners can only report on what's captured in their EMRs – we have missing data on risk factors, co-morbidities, biopsy/fibroscan results, start/stop treatment dates
 - Patients bounce around healthcare systems; records are scanned in (difficult to extract data), if available at all
 - Free-text notes are hard to interpret
- **Data integration**
 - Trying to achieve a “unified” surveillance system where manual reporting, ELR, and partner lab/clinic data are all fed into a single database (these databases are still managed separately, but we are getting closer)
- **Cost and slow pace of IT upgrades (e.g., EMR prompts)**
- **High cost of antivirals**

Thanks!

- PHSKC
 - Elizabeth Barash, Hanna Thiede, Rigan Rai, Shelly McKiernan, Atar Baer, Sara Glick
- UW
 - Pam Landinez, Kent Unruh, David Spach, Matt Golden
- DOH
 - Anne Brenner, Jon Stockton
- WA Medicaid
 - Dan Lessler, Donna Sullivan
- Hepatitis Education Project
 - Michael Ninburg
- Swedish/Providence, Group Health, Neighborcare, Country Doctor, HealthPoint partners



THE UNIVERSITY OF
CHICAGO
MEDICINE



HepCCATT: A Novel and Comprehensive Approach to Hepatitis C Care

Andrew Aronsohn, MD

Associate Professor of Medicine

The University of Chicago Medicine

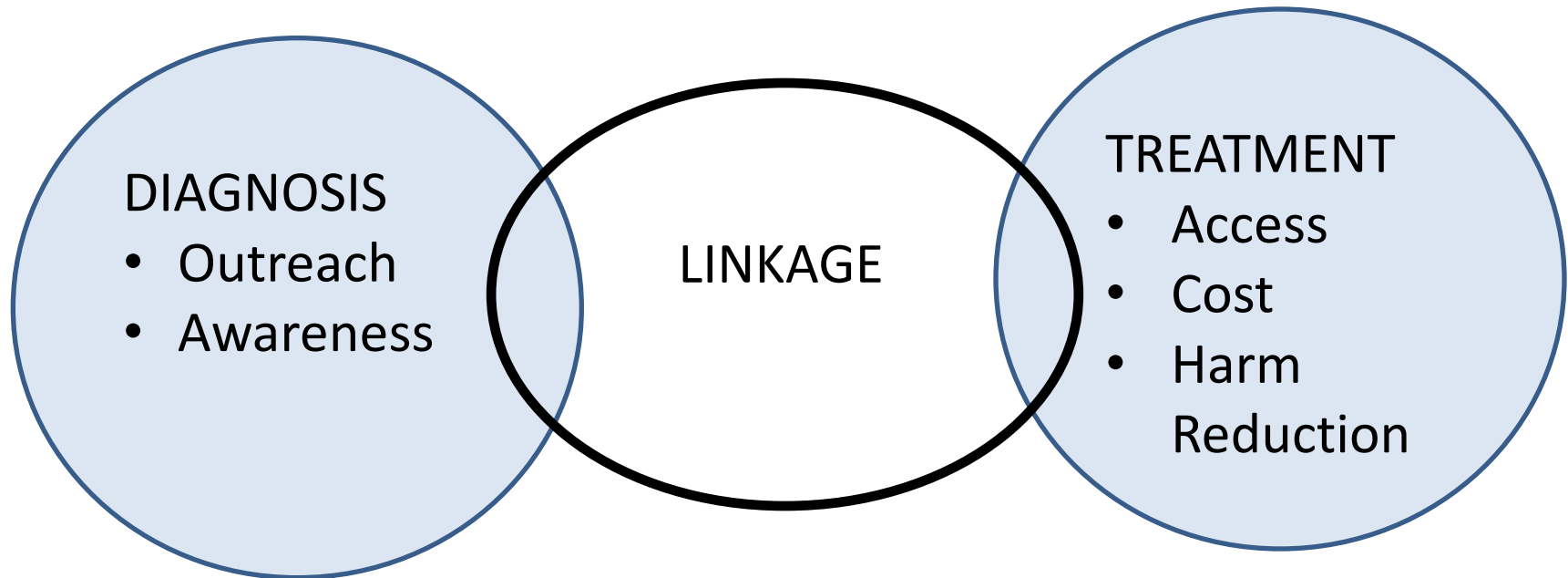
Objectives

- Define HepCCATT
 - Technology / surveillance
 - Case management / Advocacy
- Provider training
 - Course description
 - HCV training
 - Capacity building
 - Outcomes

Disclosures

I have no disclosures

Challenges in HCV Care



HEP C CATT

THE HEPATITIS C COMMUNITY ALLIANCE TO TEST AND TREAT

The Centers for Disease Control and Prevention awarded the ECHO-Chicago program at the University of Chicago Medicine \$1.55 million grant annually for a presumed 4 years to lead an unprecedented public health collaboration to build Chicago capacity to test and effectively treat HCV infections.

Project Partners

HepCCATT includes public health departments, academic medical centers, a community health center network, pharmacies, patient advocacy organizations and community health centers

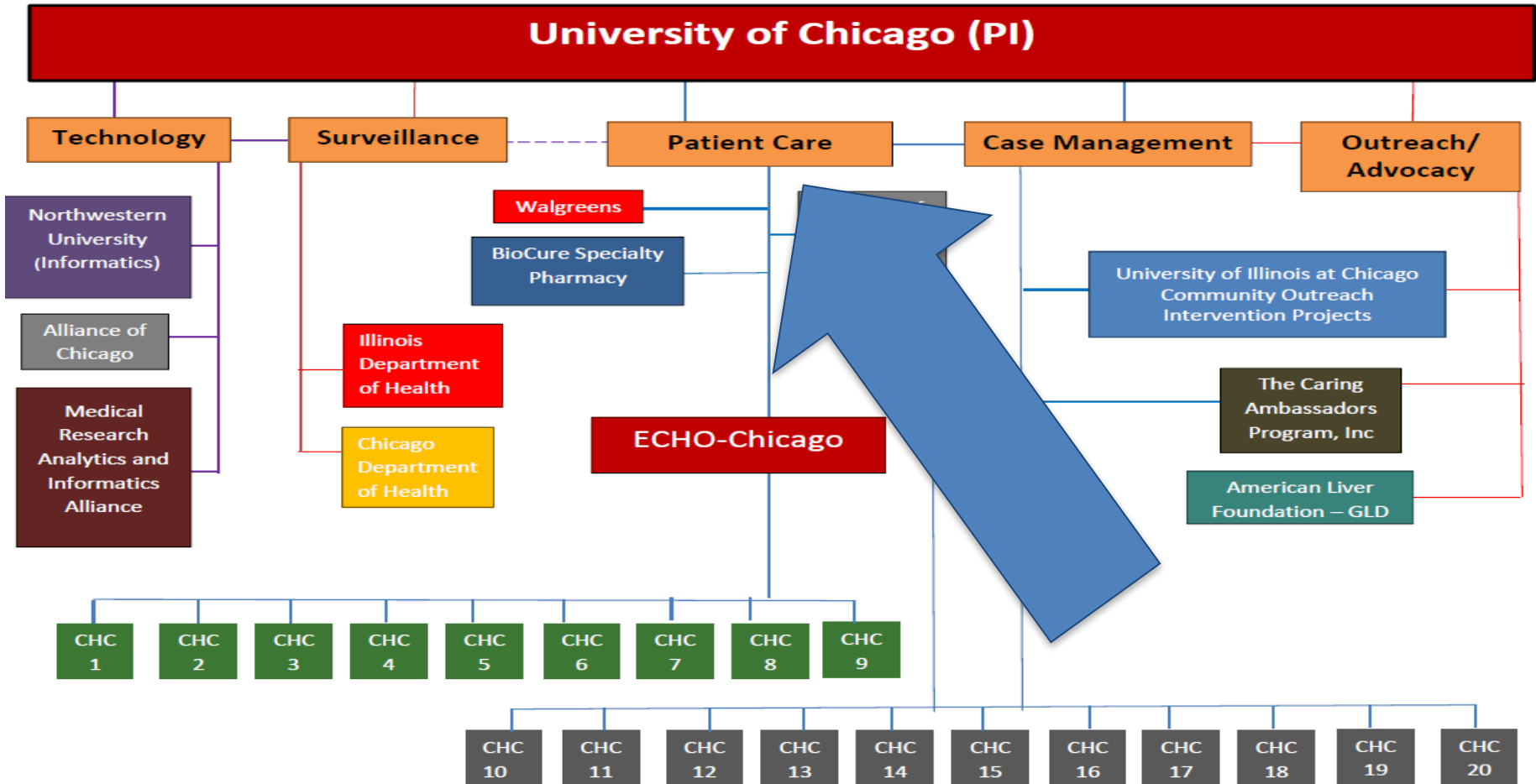


HepCCATT Aims and Activities

Aim is to increase identification, treatment and cure of hepatitis C (HCV) infection in Chicago

1. Raise public awareness and knowledge of HCV infection
2. Integrate electronic clinical data to improve surveillance, identification, and linkage to treatment
3. Expand capacity to screen, treat, and cure HCV (ECHO-Chicago) to reduce the number of undiagnosed and untreated HCV infected
4. Enhance linkage and adherence to quality HCV care through case management
5. Coordinate among all stakeholders, including state agencies and legislators, to identify ways to improve access and reduce the cost of HCV care

Role and Responsibilities



Origins of ECHO



ECHO in Chicago

High Yield Quality Transfer of Knowledge

Natural History of Cirrhosis

Stage	Definition	1-year mortality	Median Survival
1	Compensated without varices	1%	>12 years
2	Compensated with varices	3%	
3	Decompensated with ascites without variceal hemorrhage	20%	~2 years
4	Decompensated with/out ascites with variceal hemorrhage	57%	

Dr. James G. Garcia-Torres G, Pagliaro L. Natural history and prognostic indicators of survival in cirrhosis: a systematic review of 118 studies. J Hepatol. 2006;44:237-252.



A social learning network

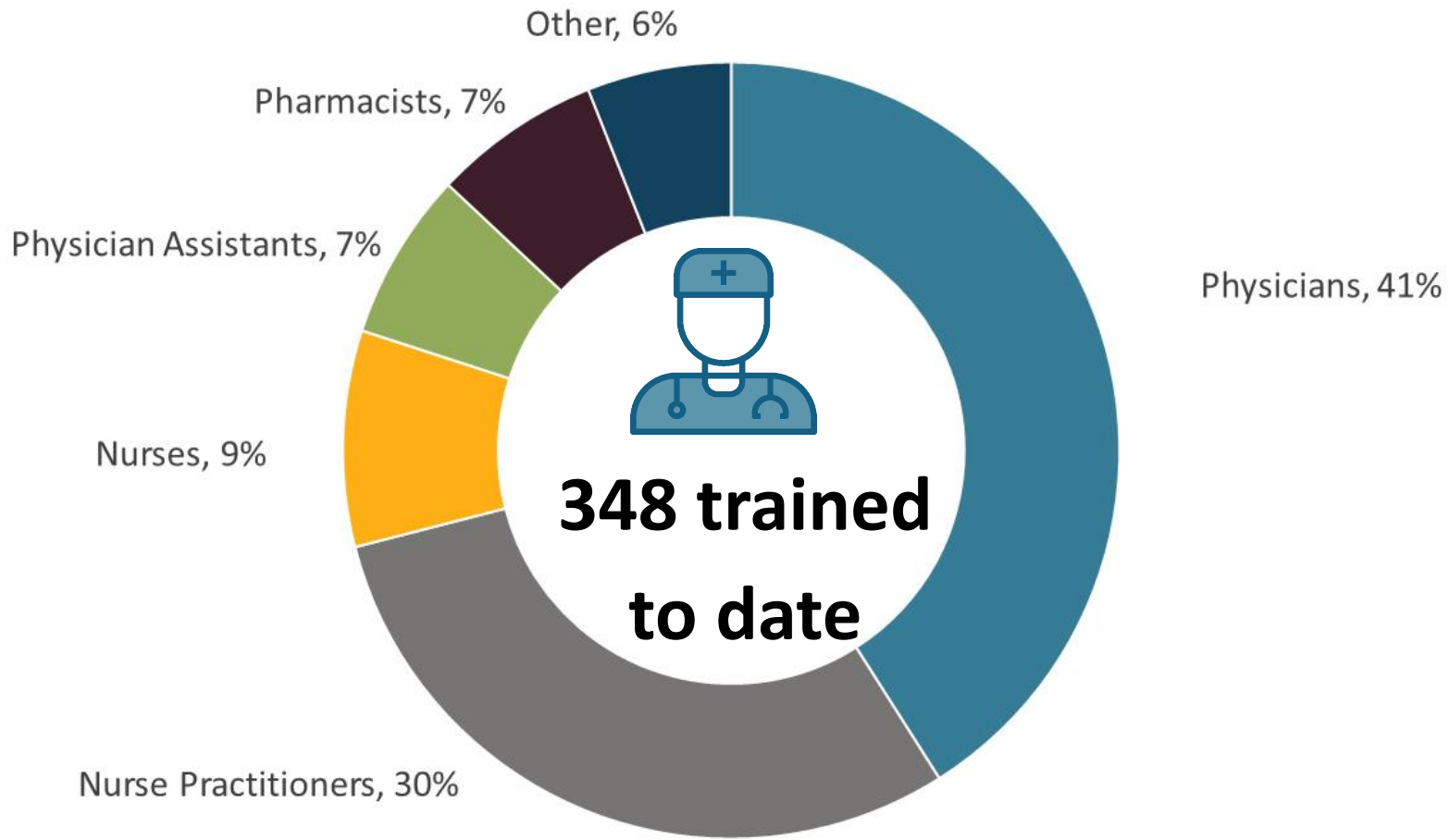
HCV ECHO Chicago: HCV Training Series

10 session rolling curriculum
10 - 20 minute didactics each session
2-3 case presentations / session

- Hepatitis C 101
- Staging of the Liver
- Cirrhosis of the Liver
- HepCCATT Case Management
- Obtaining Medications for HCV Patients
- Monitoring patient on therapy
- Treatment of Genotype 1 – Naïve
- Treatment of Genotype 1 - Cirrhosis
- HCV Therapy in Genotypes 2-4
- Management of HIV/HCV Co-infection

GOAL:
Independent
HCV care of
most patients
after 10
sessions

HCV - Participation



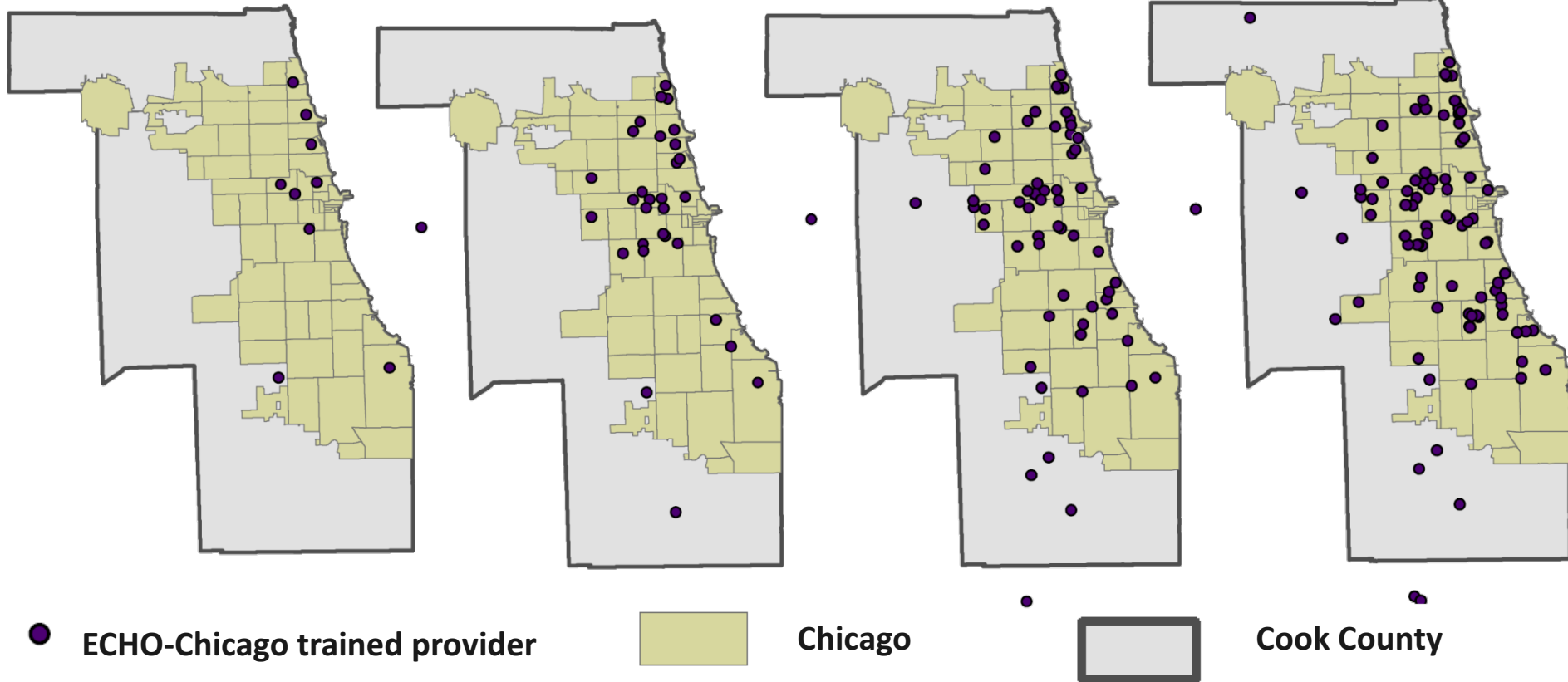
Cumulative providers trained by year

Baseline
9/30/13-9/29/14

Year 1
9/30/14-9/29/15

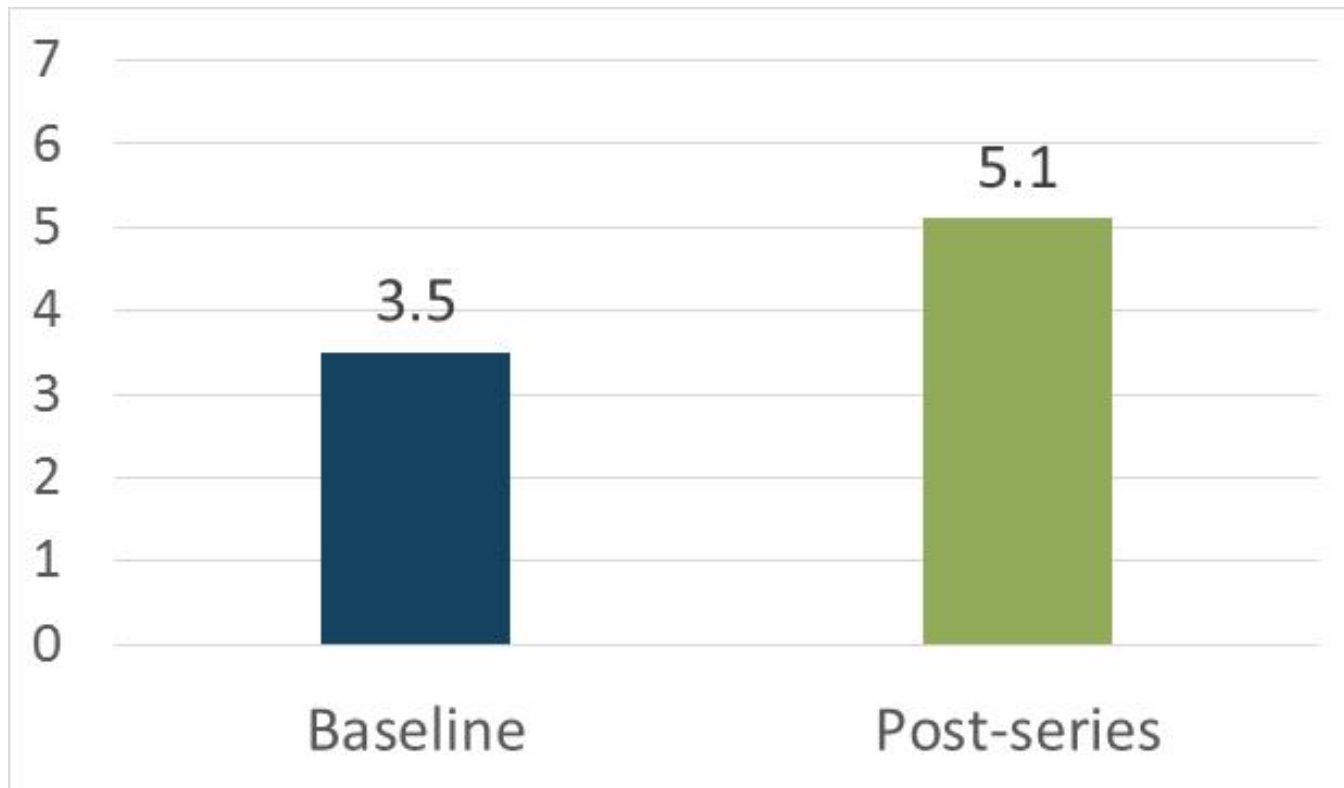
Year 2
9/30/15-9/29/16

Year 3
9/30/16-9/29/17



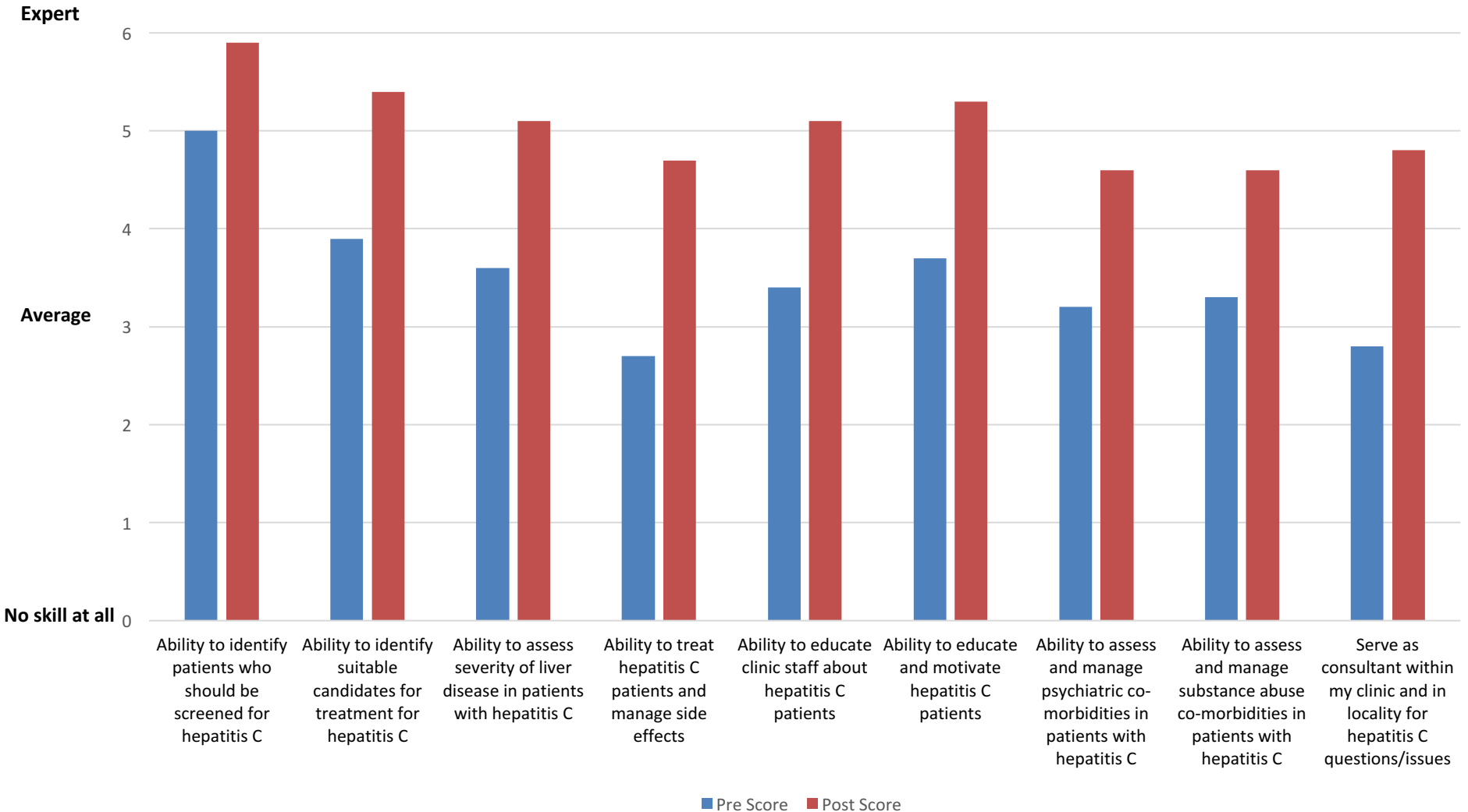
HCV Provider Training – self-efficacy

Mean change in self-efficacy of 1.6 post-series as compared to baseline (n=227)



HCV Self Efficacy Survey n=233

All Categories p<. 0001



HCV Training Series - Impact

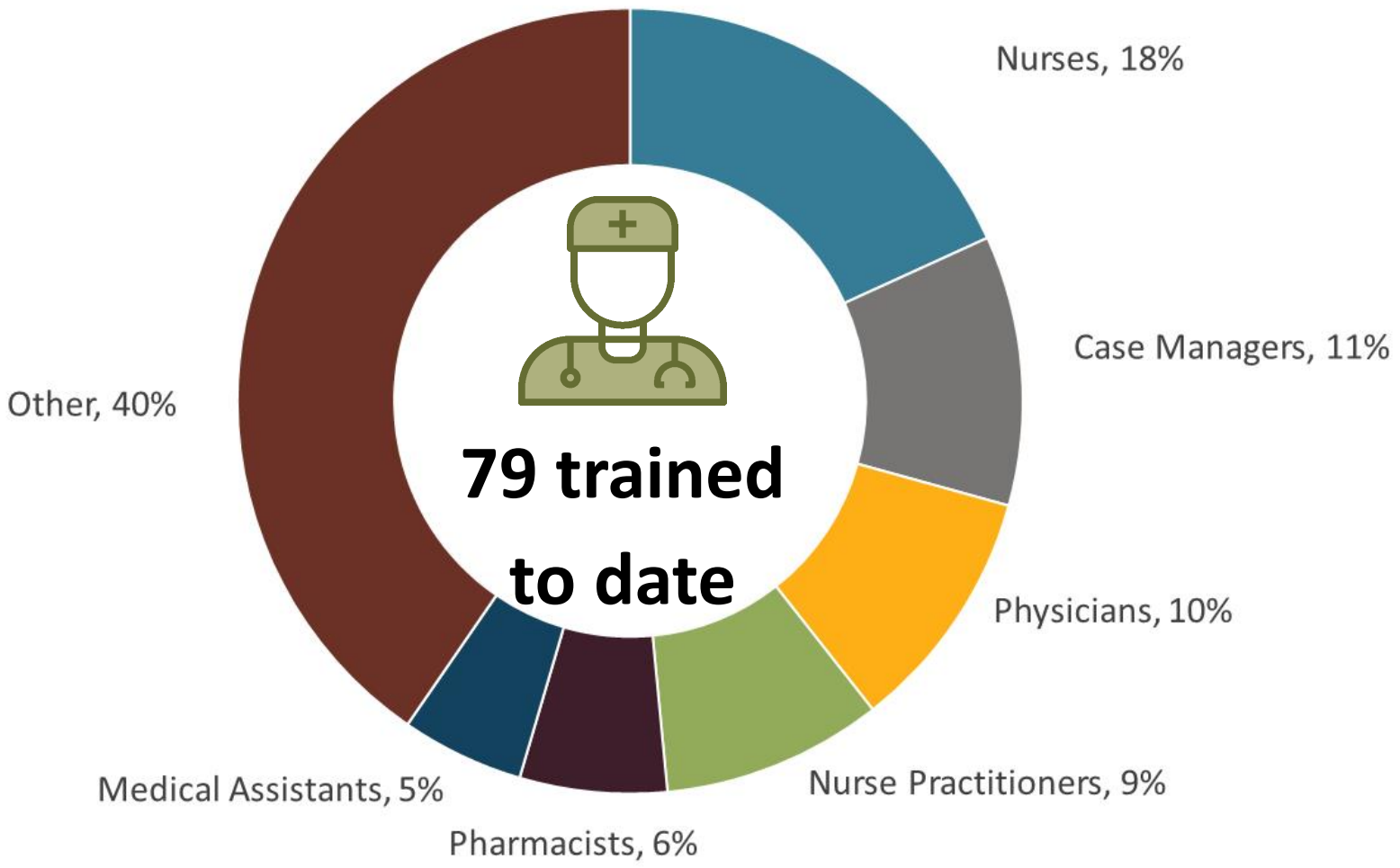
Self-reported changes as a result of participating:

- **Changed HCV screening practices – screening based on age cohort in addition to screening based on risk factors**
- Improved our process for prior authorizations
- Increased the number of prior authorizations that have been approved
- **Stopped routinely referring patients with HCV to specialty care and have started treating patients for Hep C directly**
- **Developed a clear flow from diagnosis to evaluation for treatment**
- Increased counseling about treatment options for patients with chronic Hep C
- **Set up Hepatitis C subclinic within their practice**

Case Management/Capacity Building ECHO model based Program

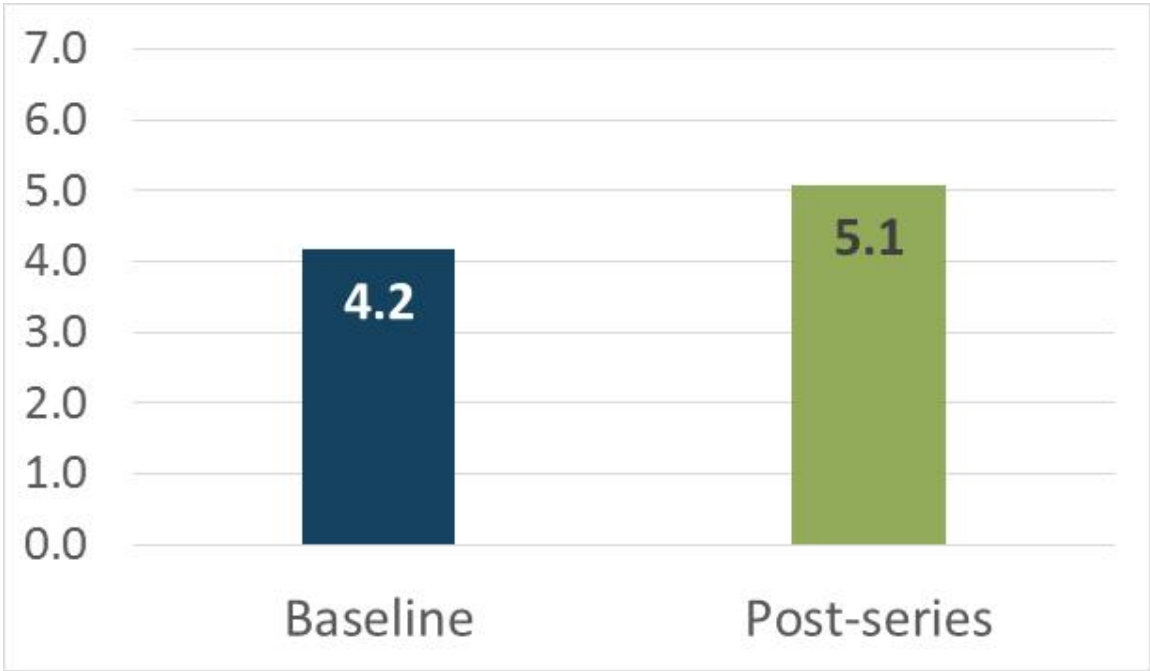
- Unique program
- Launched in January 2017 utilizing the ECHO-Chicago videoconferencing platform
- Includes tools: needs assessment, HCV registry template, checklists, example workflows
- 9 sessions designed to target various providers/support staff who are involved in HCV diagnosis and treatment

HCV Case Management - Participation



HCV Case Management – Self-Efficacy

Mean change in self-efficacy of 0.9 post-series as compared to baseline (n=40)

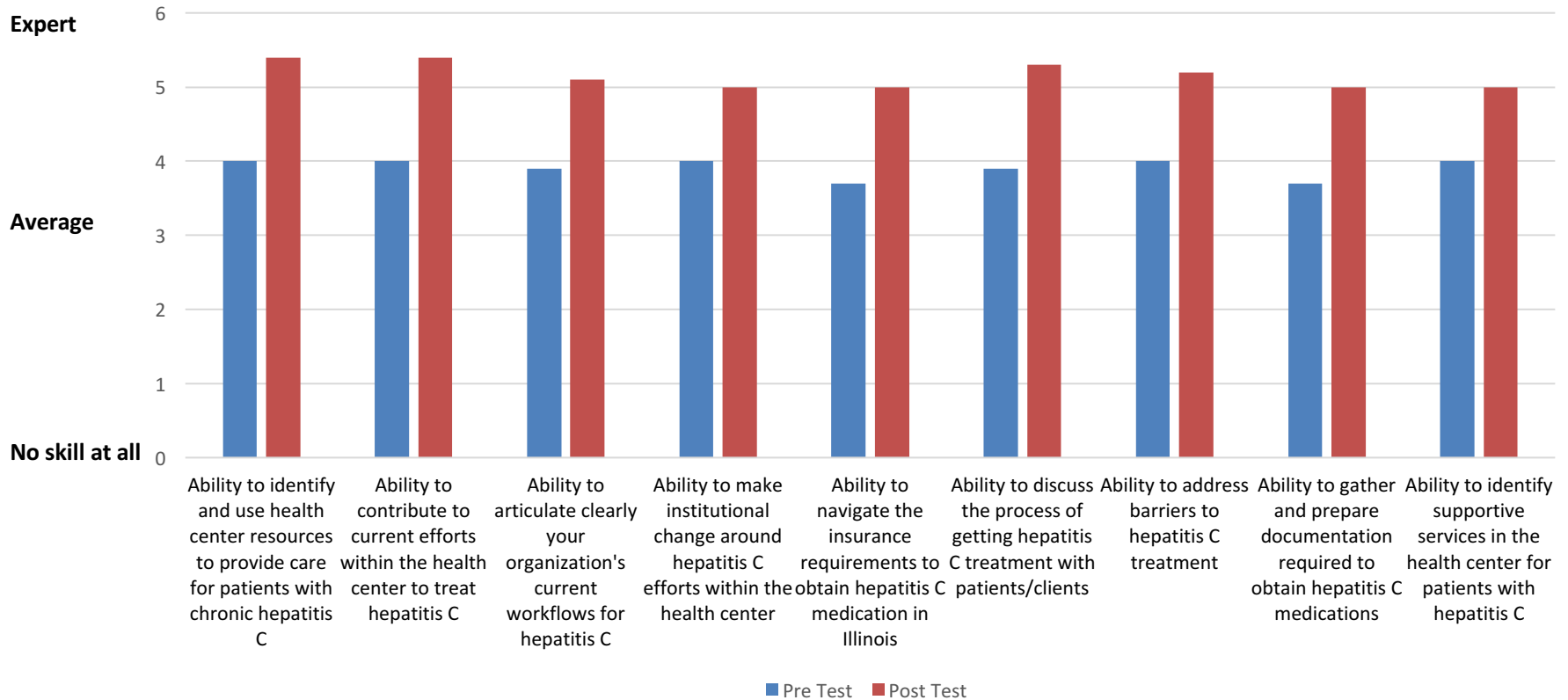


p<0.001

Capacity Building Survey

n=44-61

P<.005 for all



HCV Case Management - Impact

Self-reported changes as a result of participating:

- Develop report to track HCV treatment progression
- **Developed or improved workflow for HCV**
- **Better able to navigate the prior authorization process and explain it to patients**
- Assessing patient's willingness to start medication
- **Improved coordination between the care team**
- Established a relationship with a specialty pharmacy

Lessons Learned: Barriers

- Time of providers
- Time of staff
- Different learning needs
- Access to medicine for patients
- Need for wrap around services
- Dedicated personnel



November 2018: Lifting of Fibrosis Restrictions in IL



Criteria for Prior Approval of Direct-Acting Antivirals (DAAs) for Hepatitis C

1. The patient is 12 years of age or over, and has a diagnosis of Chronic Hepatitis C infection genotype 1, 2, 3, 4, 5 or 6 confirmed by lab documentation and quantitative baseline HCV-RNA.
2. Patient's Metavir/fibrosis score must be documented in the request for prior approval. The patient's Metavir/fibrosis score can be determined based on Liver Biopsy, Transient Elastography (FibroScan[®]), FibroTest[®]/FibroSure[®], or FibroMeter[™].



Keys for Success: Multidisciplinary

- Team comprised of:
 - Pharmacist
 - Social worker
 - Addiction specialist
 - Physician



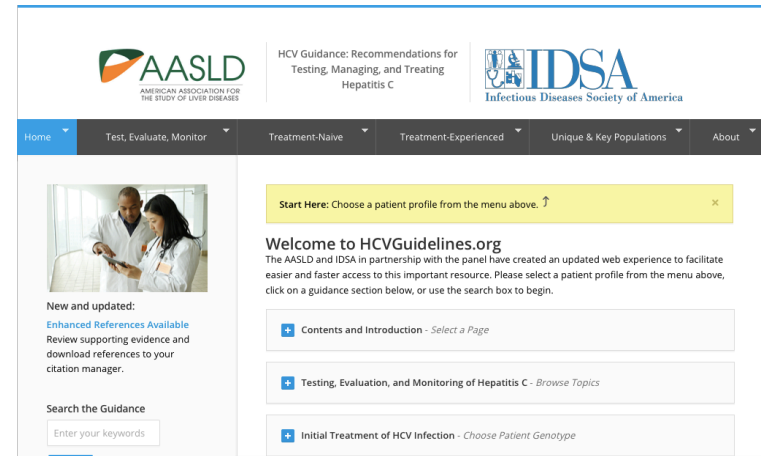
- Different cases / providers have different needs

Keys for Success: Central Coordinator

- Single point of contact
- Recruiting new providers
- Relationships with primary care sites
- Technology issues
- CME
- On site during sessions
- Evaluations

Keys for Success: Curriculum

- Flexibility
 - Changing landscape of HCV
 - Various needs of providers
 - Access
 - Addiction
- Simplicity
- Use of established guidelines rather than memorization of data



Next Steps...

- Continue Provider Trainings
 - In Chicago and beyond
- Capacity Building
- Special “Medicaid Approval” Sessions for non specialists
- Advocacy
- Elimination projects

Thank you

hepcatt@peds.bsd.uchicago.edu

www.hepcatt.org



Hepccatt Info



@HepCCATT



773-834-1311

Sharing the Cure: Transforming Primary Care Practices into Hepatitis C Treatment Centers

RISHA IRVIN, MD, MPH

DIRECTOR, SHARING THE CURE

ASSISTANT PROFESSOR, DIVISION OF INFECTIOUS DISEASES, JOHNS HOPKINS

MARYLAND COMMUNITY-BASED PROGRAMS TO TEST AND CURE HEPATITIS C (CDC PS14-1413)

Treatment: *With new medications, nearly all HCV-infected persons could be cured....*

THE NEW ENGLAND JOURNAL OF MEDICINE

ORIGINAL ARTICLE

Telaprevir with Peginterferon alpha-2a and sofosbuvir for Chronic HCV Genotype 1 Infection

CROI Latest News | Videos

All-Oral Regimens Work in HCV

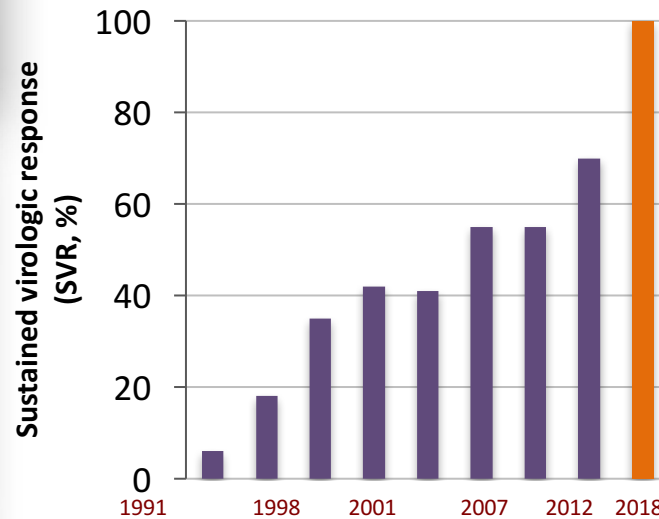
By Michael Smith, North American Correspondent, MedPage Today
Published: March 05, 2013
Reviewed by F. Perry Wilson, MD, MSCE; Instructor of Medicine, Perelman School of Medicine at the University of Pennsylvania and Dorothy Caputo, MA, BSN, RN, Nurse Planner

Efficacy of boceprevir, an NS3 protease inhibitor, in combination with peginterferon alfa-2b and ribavirin in treatment-naïve patients with genotype 1 hepatitis C infection (SPRINT-1): an open-label, randomised, multicentre phase 2 trial

Oral combination therapy with a nucleoside polymerase inhibitor (RG7128) and danoprevir for chronic hepatitis C genotype 1 infection (INFORM-1): a randomised, double-blind, placebo-controlled, dose-escalation trial

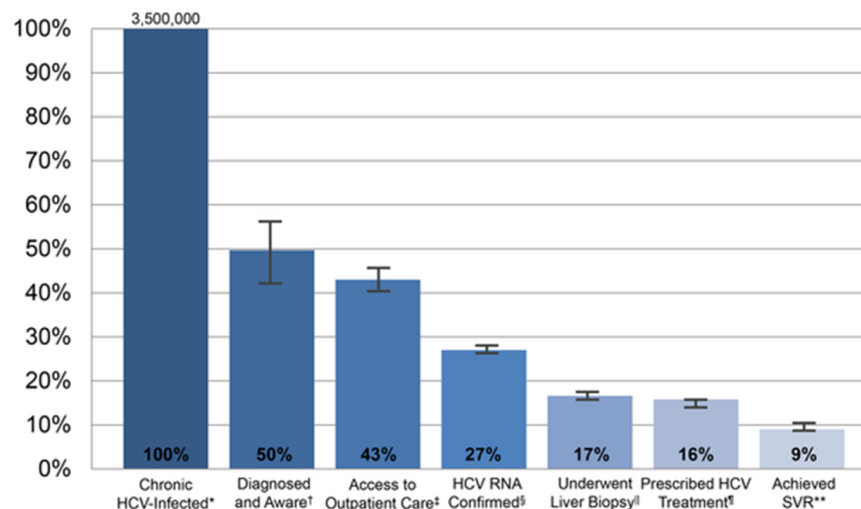
Simeprevir and Sofosbuvir Achieve High Cure Rates in Hep C Null-Responders

An interim analysis showed that two second-generation, direct-acting antiviral hepatitis C virus (HCV) therapies simeprevir and sofosbuvir led to high cure rates in people who had previously failed a hep C therapy. Representatives from Janssen Pharmaceuticals announced findings from this Phase IIIa open-label COSMOS study at the 20th annual Conference on Retroviruses and Opportunistic Infections (CROI) in Atlanta. In the study, the protease inhibitor simeprevir (TMC435), given once daily along with Gilead Sciences' investigational nucleotide inhibitor sofosbuvir (GS-7977), with or without ribavirin for 12 and 24 weeks. All 80 study participants had genotype 1 of hep C, mild to moderate liver fibrosis and were prior null-responders to antiviral treatment.



Hepatitis C Care Continuum in the United States

While we have improved greatly upon sustained virologic response (SVR)/cure rates in the era of direct-acting antivirals (DAAs), we still see significant barriers with respect to awareness of chronic HCV infection, access/linkage to care, and initiation of treatment.



* Chronic HCV-infected; N=3,500,000.

† Calculated as estimated number chronic HCV-infected (3,500,000) x estimated percentage diagnosed and aware of their infection (49.8%); n=1,743,000.

‡ Calculated as estimated number diagnosed and aware (1,743,000) x estimated percentage with access to outpatient care (86.9%); n=1,514,667.

§ Calculated as estimated number with access to outpatient care (1,514,667) x estimated percentage HCV RNA confirmed (82.9%); n=952,726.

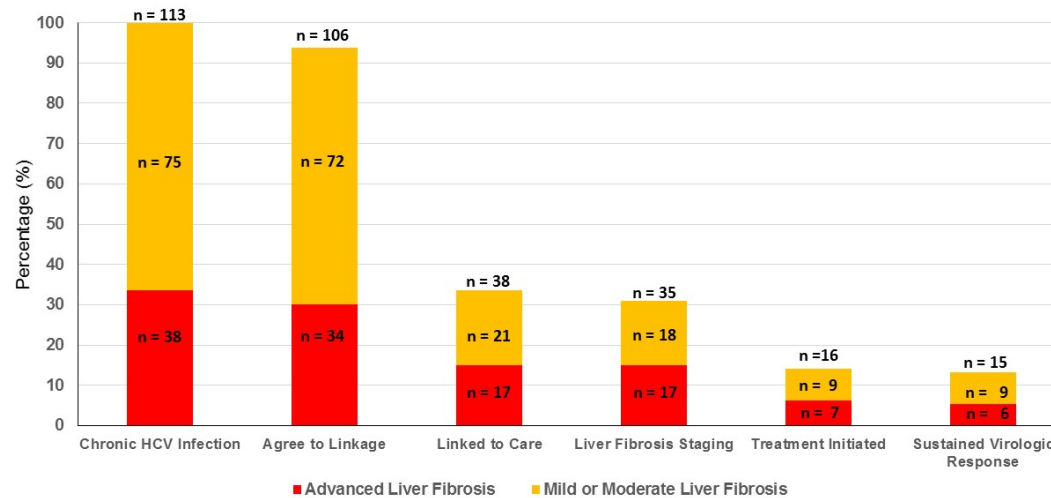
|| Calculated as estimated number with access to outpatient care (1,514,667) x estimated percentage who underwent liver biopsy (38.4%); n=581,632.

¶ Calculated as estimated number with access to outpatient care (1,514,667) x estimated percentage prescribed HCV treatment (36.7%); n=555,883.

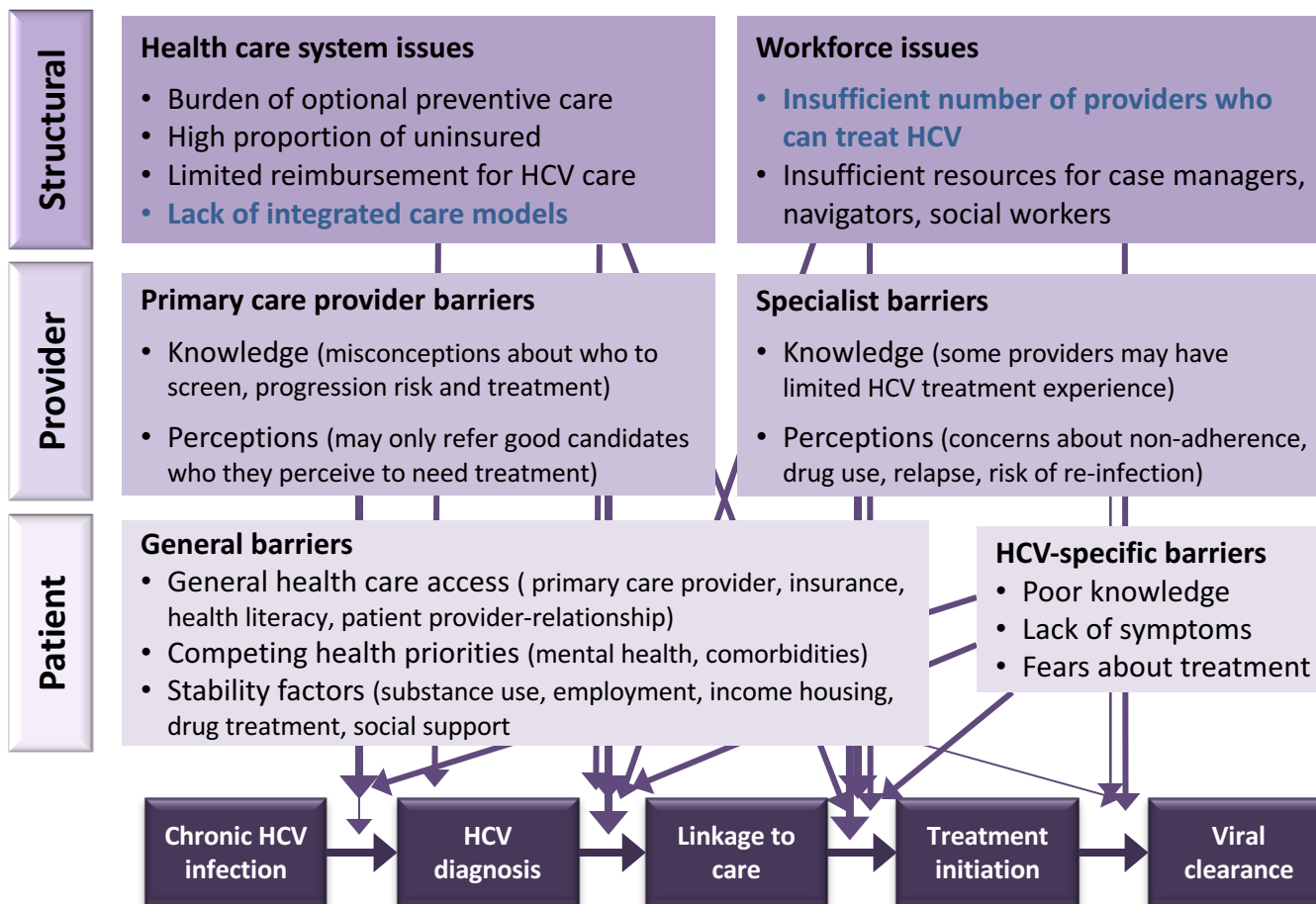
** Calculated as estimated number prescribed HCV treatment (555,883) x estimated percentage who achieved SVR (58.8%); n=326,859.

Note: Only non-VA studies are included in the above HCV treatment cascade.

Hepatitis C Care Continuum in an Urban Emergency Based Screening Program



Barriers to Hepatitis C Care and Treatment



Source:
Shruti Mehta, PhD,
Johns Hopkins

Sharing the Cure

- Launched in partnership with the Maryland Department of Health (Centers for Disease Control and Prevention) in 2014
 - Community-Based Programs to Test and Cure Hepatitis C (PS14-1413)
 - Division of Infectious Diseases at Johns Hopkins School of Medicine administers the training program
- Comprehensive Program
 - Focused on HCV testing, diagnosis, linkage, treatment along with program implementation
 - Provider training → Staff training programs
 - Practice transformation

Program Development Process

- Meetings with Primary Care Sites for development input
- Meetings with HIV/HCV testing and outreach programs
- Engagement with leaders in education and training
- Review of state guidelines around HCV training and consultation with Maryland Medicaid

Maryland Medicaid Guidelines

- Maryland Medicaid: Consult performed and medication prescribed by a provider specializing in infectious disease, gastroenterology, hepatology or **Hepatitis C. (Initially updated October 2014)**
- Patient Treatment Plan: It is recommended that patients have a treatment plan developed in **collaboration with a physician with expertise in Hepatitis C management.**
 - How should we define a provider specializing in Hepatitis C? What training is required?

New York State Health Department: Defining the Experienced Hepatitis C Provider

Category	Criteria
Clinical Experience	<p>Management AND treatment of at least 10 patients with HCV infection within the past 12 months.</p> <p>OR</p> <p>Management and treatment of 10 patients with HCV infection in partnership (defined as consultation, preceptorship, or via telemedicine) with an experienced HCV provider who meets the above criteria</p>

Sharing the Cure: Program Components

- 1-day in person HCV course on HCV evaluation, treatment, and cure
 - Lectures from leading experts involved in HCV clinical guidelines development
 - Small group discussions
 - Program implementation lunch panel
- Mini-preceptorship
 - Clinical guidance
 - Staff support: social work, RN patient adherence leads, fibroscan technician
 - Support paperwork (prior authorization, patient assistance forms, treatment calendar)
- Videoconference
- Ongoing Consultation
- Hepatitis C education sessions for additional medical staff including medical assistants, nurses, pharmacists, case managers (practice transformation)



Sharing the Cure: Videoconference

- 1 hour conference: 10-15 minute topical didactic presentation by JHU faculty
 - Sample topics: Initial evaluation and staging of disease; treatment initiation and monitoring; drug-drug interactions; cirrhosis and recognizing related complications in decompensated cirrhosis; pharmacy access and issues; alcohol use, risk assessment and brief interventions; ESRD and HCV treatment
- Case presentation and discussion with clinical HCV expert
 - Each provider required to present 10 cases for certification
- Discussion of treatment and program implementation as well as barriers with clinicians
- Final exam (developed by Dr. Michael Melia [education lead]; 20 question test on which providers must score 70%)

Onsite Education: Optimizing HCV Care

Evidence-based resources for medical care and patient support

Epidemiology, pathophysiology, natural history of HCV

Screening: target populations and interpretation of lab results

Counseling messages: transmission, cure, liver health, insurance issues

Liver disease progression, understanding staging

Rationale for cure

Preparation for treatment, on-treatment monitoring

Onsite Education: Optimizing HCV Care

HCV as opportunity:

- intervention with alcohol use, preventive care, cigarette cessation, HTN/DM management, psychosocial issues, vaccinations, develop trust between providers and patient

Care of cirrhotic patients

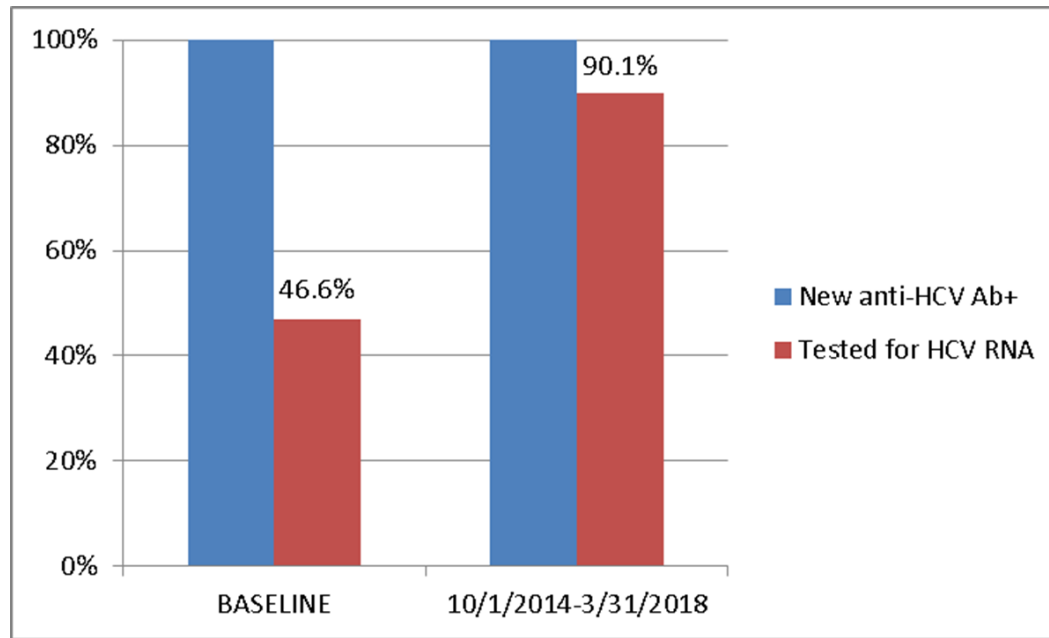
Care of patients post cure of HCV

Talking points and resources for patients denied cure

Program Data



RNA Confirmation



HCV RNA follow-up on positive HCV antibody results at five clinical partner sites with continuous participation

Patients Evaluated by Sharing the Cure Providers

**Patients seen for HCV by participating providers at coalition clinical sites* 5/1/2015-3/31/2018
(for diagnosis, treatment workup, and/or treatment)**

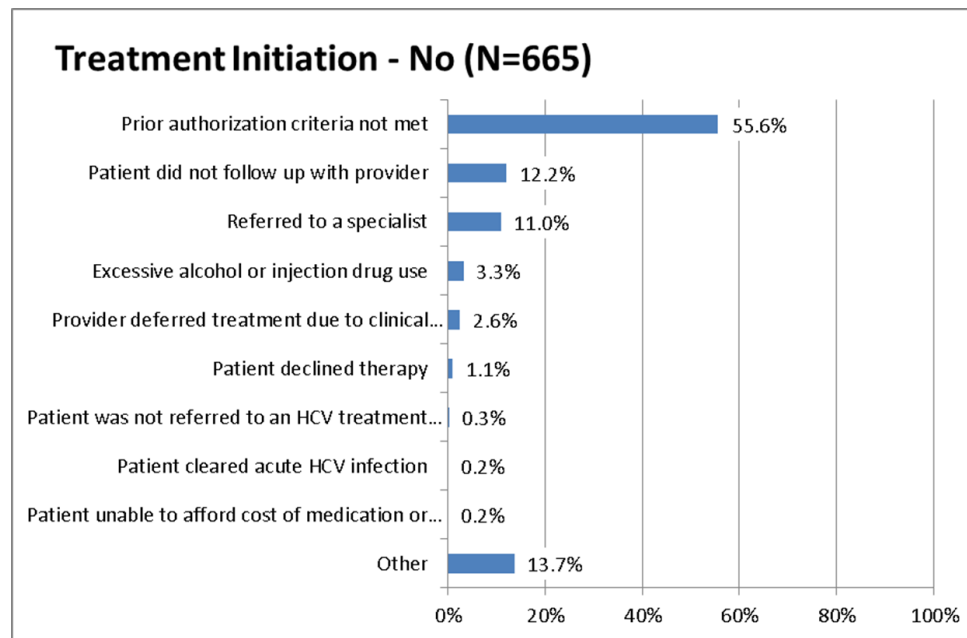
Characteristics (N=2,816)	N (%)
Born 1945-1965	2,010 (71.4) range: 1933-2000
Male	1,810 (64.3)
Black/African American	2,106 (74.8)
Medicaid enrollee	1,934 (68.7)
Diagnosis status for inclusion	
HCV RNA+	2,329 (82.7)
HCV Ab+ (or indeterminate)/RNA-	355 (12.6)
HCV Ab+ (no RNA results)	131 (4.7)
HCV Ab indeterminate (no RNA results)	1 (<0.1)
Among those HCV RNA+ (N=2,329)	
Worked up for treatment, with liver staging results	1,569 (67.4)
Metavir liver fibrosis score below 2	648 (41.3)

*Sites of 9 clinical partners, regardless of continuous participation in the coalition.

Patients Evaluated by Sharing the Cure Providers

Treatment initiation decision (N=1,483)	
No	665 (44.8)
Yes	818 (55.2)
Started treatment	702 (85.8)
Pending	57 (7.7)
Reason given for not starting treatment	59 (7.2)
Among those who started treatment (N=702)	
Treatment ongoing (or no treatment end date reported)	71 (10.1)
Did not complete treatment	33 (4.7)
Treatment complete (<i>including 39 who ended treatment with treatment status unknown but NOT listed as incomplete</i>)	598 (85.2)
Among those who ended treatment (N=631)	
Post treatment RNA results reported	582 (92.2)
Undetectable	569 (97.8)
Detectable	13 (2.2)
12 weeks post treatment end (as of 3/31/2018)	592 (93.8)
SVR achieved	449 (75.8)
SVR not achieved	13 (2.2)
No SVR results reported	130 (22.0)

Reasons for Not Initiating Treatment



Sharing the Cure: Program Data

- Nine partner clinical sites → Practice Transformation
- Cohorts 1-4 are finished training
 - Cohort 5 will launch in March 2019 with primary care providers and HIV providers
 - Expansion outside of Baltimore City and Baltimore County
- Providers have started HCV treatment in 804 individuals (Incoming data)
 - Treating ongoing in 73 patients (9%)
 - Complete in 661 patients (82%)
 - Discontinued in 31 patients (4%)
 - Unknown in 39 patients (5%)
- Sustained Virologic Response/Cure
 - 661 patients are 12 weeks post HCV treatment
 - SVR data available on 501 patients and 492 (98%) have documented sustained virologic response/cure
- We are Sharing the Cure in Maryland and beyond!!!!

Expansion: Delaware Sharing the Cure Course (Modified)

- Partnership with the Delaware Department of Health and Social Services
 - Focused on primary care centers, substance use treatment centers, and prisons
 - Also training additional providers to sit within specialty practices (NPs, PAs)
- Course Components
 - Half-day conference in HCV evaluation, treatment and cure (videoconference/video modules)
 - Weekly videoconference
 - Case presentation
 - Certification exam

Challenges: Provider Training and Practice Transformation

- Varying levels of provider knowledge
 - Accelerated track versus standard track
- Balancing the needs for condensed training with competence and ability to implement an HCV program
 - Continued follow-up with providers (<https://sharingthecure.jhu.edu/>)
 - Trainings for sites that want testing/linkage support versus the ability to treat
- Provider time/scheduling
- Support systems at the clinic level
 - RN support/treatment adherence
 - Substance use treatment/support

Maryland Community-Based Programs to Test and Cure Hepatitis C (Maryland Department of Health Team)

- Jeffrey Hit, MEd, Director, Infectious Disease Prevention and Health Services Bureau, Prevention and Health Promotion Administration
- Onyeka Anaedozie, MPH, CPH, Deputy Director, Infectious Disease Prevention and Health Services Bureau, Prevention and Health Promotion Administration
- Boatemaa Ntiri-Reed, JD, MPH, Former Chief, Center for Viral Hepatitis, Infectious Disease Prevention and Health Services Bureau, Prevention and Health Promotion Administration (Director, Hepatitis, NASTAD)
- Mary Kleinman, MPH, Former Epidemiologist, Center for Viral Hepatitis, Infectious Disease Prevention and Health Services Bureau, Prevention and Health Promotion Administration
- CaSaundra Bush, MPH, Epidemiologist, Center for Viral Hepatitis, Infectious Disease Prevention and Health Services Bureau, Prevention and Health Promotion Administration
- Hope Cassidy-Stewart, MHS, Deputy Center Chief, Evaluation, Center for HIV Prevention and Health Services, Prevention and Health Promotion Administration
- Kirstie Neal, MPH, Viral Hepatitis Prevention Coordinator, Center for Viral Hepatitis, Infectious Disease Prevention and Health Services Bureau, Prevention and Health Promotion Administration

Sharing the Cure Development Team (Johns Hopkins School of Medicine)

- Tracy Agee, NP, Former Coordinator, Sharing the Cure
- Sherilyn Brinkley, NP, Expert Discussant
- Oluwaseun Falade-Nwulia, MBBS, MPH, Expert Discussant
- Risha Irvin, MD, MPH, Director, Sharing the Cure (rirvin1@jhmi.edu)
- Sean Manogue, MPH, Coordinator, Sharing the Cure
- Michael Melia, MD, Education Metrics, Sharing the Cure
- Juhi Moon, MD, Expert Discussant
- Mark Sulkowski, MD, Director, Viral Hepatitis Center
- David Thomas, MD, MPH, Division Director, Division of Infectious Diseases

Questions?

**WE CAN
ELIMINATE**

HEPATITIS

#EndHepatitis

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