Increasing Hepatitis C Screening and Linkage to Care in the Community

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Clinical Directors Network, Inc. (CDN)
Webcast Series
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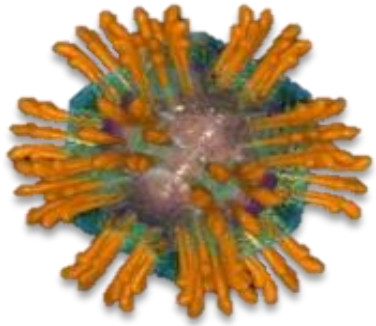
Disclosures

Dr. Seña receives:

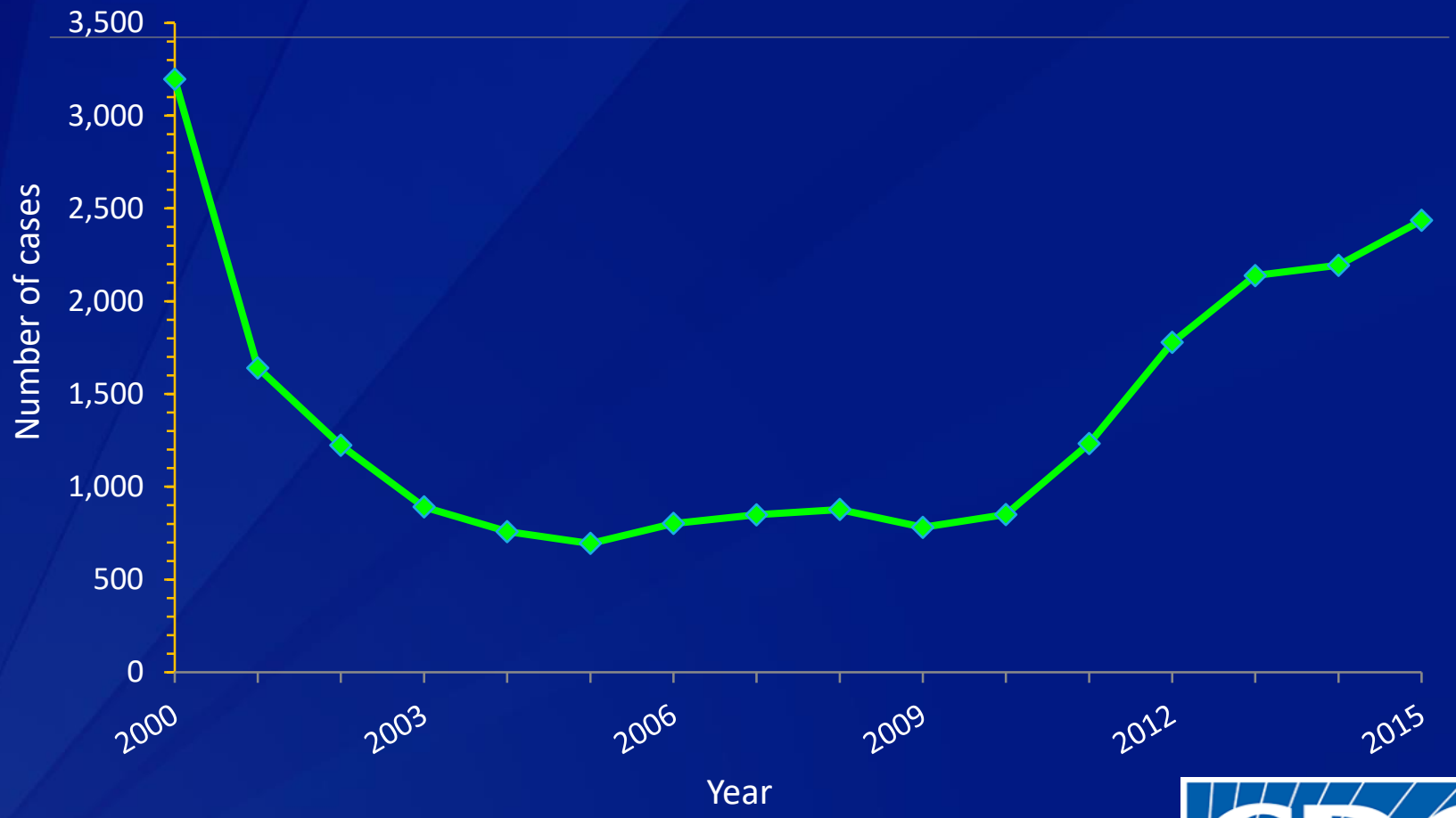
- Grant funding from the Gilead Sciences FOCUS program
- Consulting fess from UptoDate Inc.

Learning Objectives



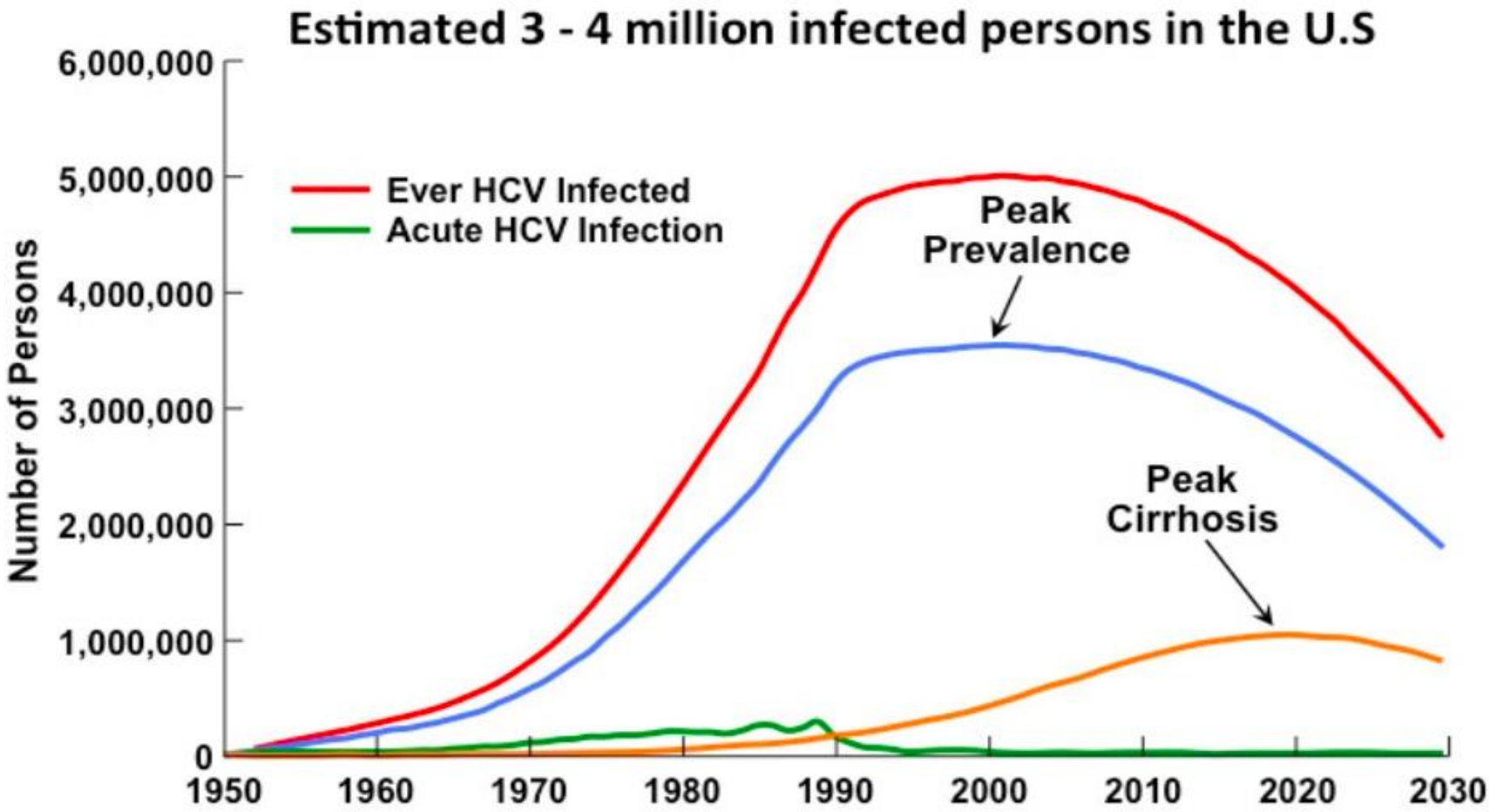
- Review data supporting community-based HCV screening, and strategies for integration with publicly funded programs.
- Review NC statewide model of HCV provider education and training among community-based clinics.
- Discuss integral role of HCV bridge counseling or patient navigation in assisting underserved population with chronic HCV infections.

Figure 4.1. Reported number of acute hepatitis C cases — United States, 2000–2015



Source: CDC, National Notifiable Diseases Surveillance System (NNDSS)

The Changing Face of HCV in US

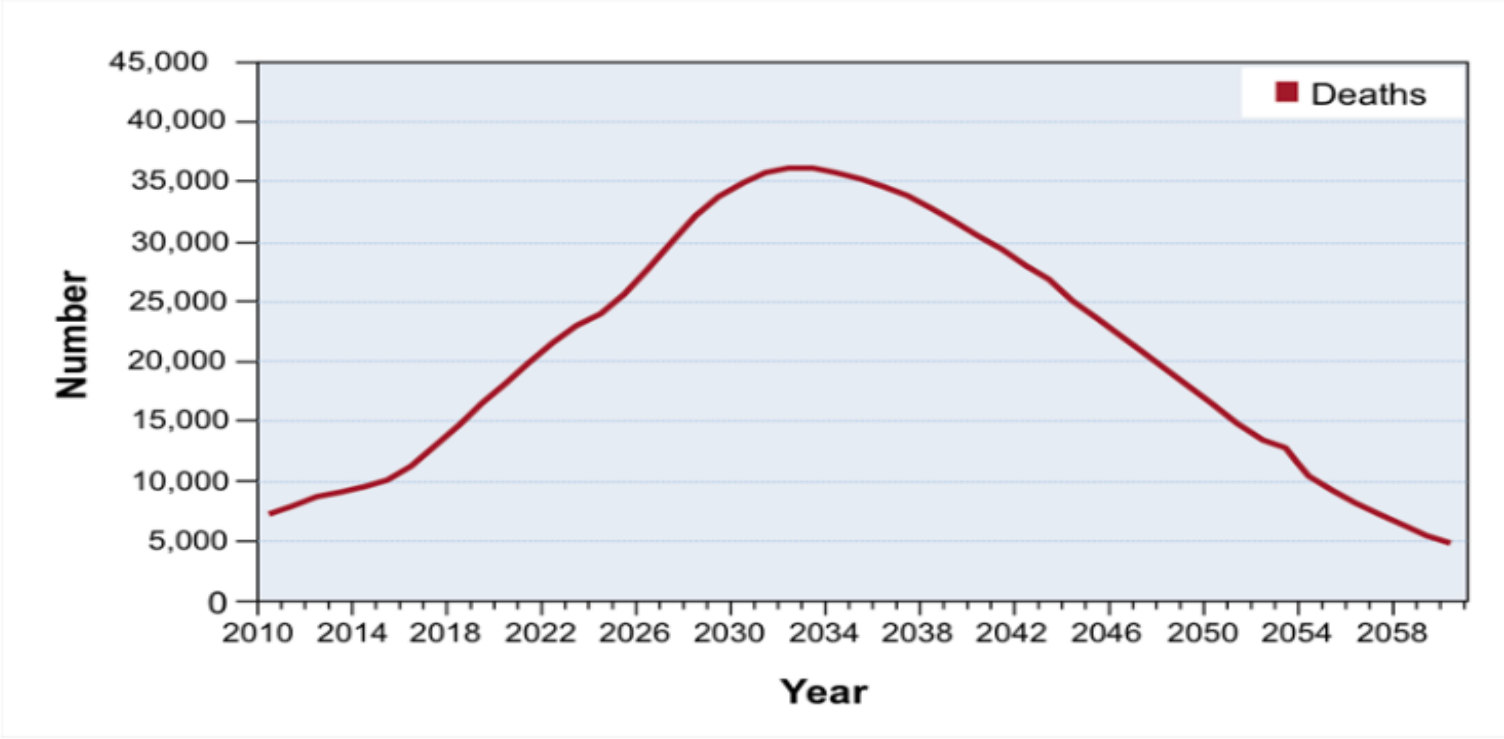


Adapted from Davis GL et al Gastroenterol 2010;138:513-521

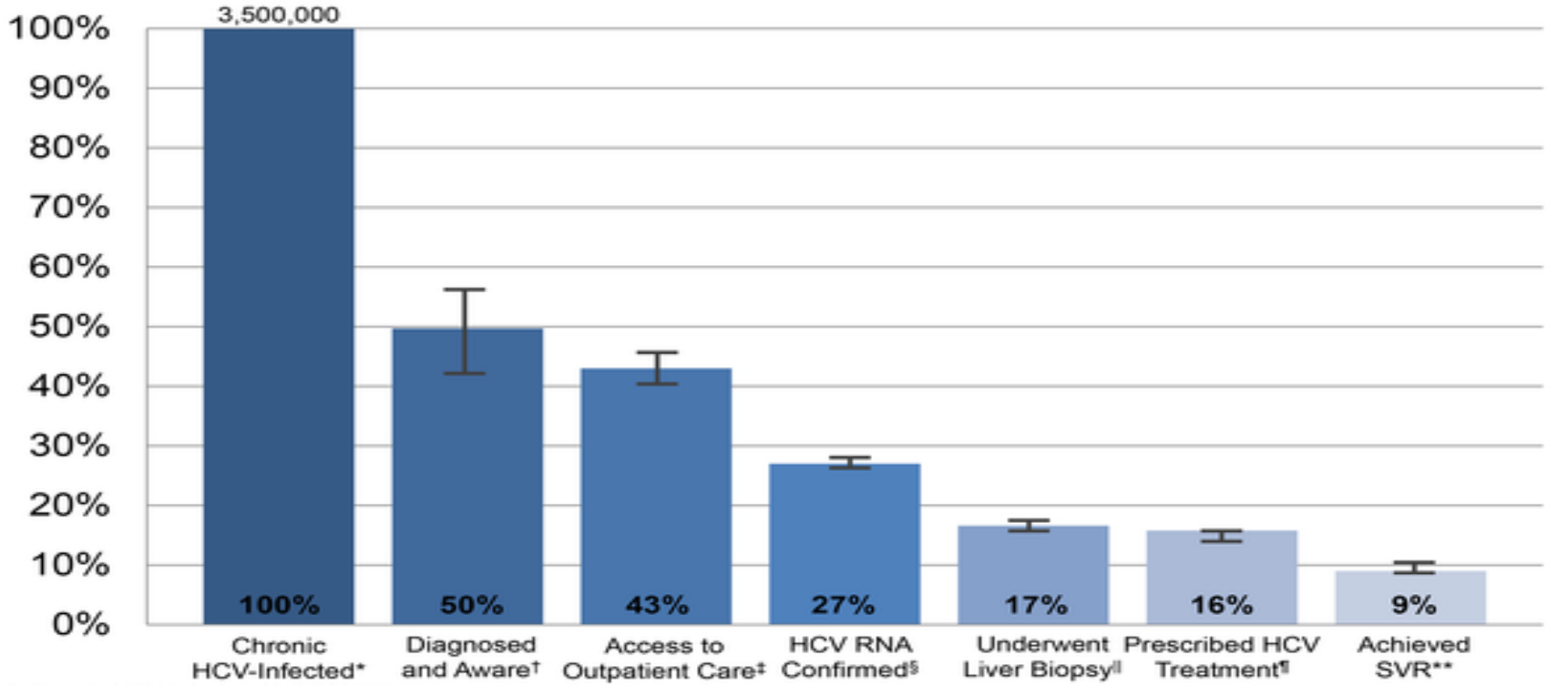
Annual Deaths Associated with Hepatitis C Infection

Among persons with chronic hepatitis C infection and no liver cirrhosis, the hepatitis-C related deaths peak in 2030 to 2035.

Source: Rein DB, Wittenborn JS, Weinbaum CM, Sabin M, Smith BD, Lesesne SB. Forecasting the morbidity and mortality associated with prevalent cases of pre-cirrhotic chronic hepatitis C in the United States. Dig Liver Dis. 2011;43:66-72.



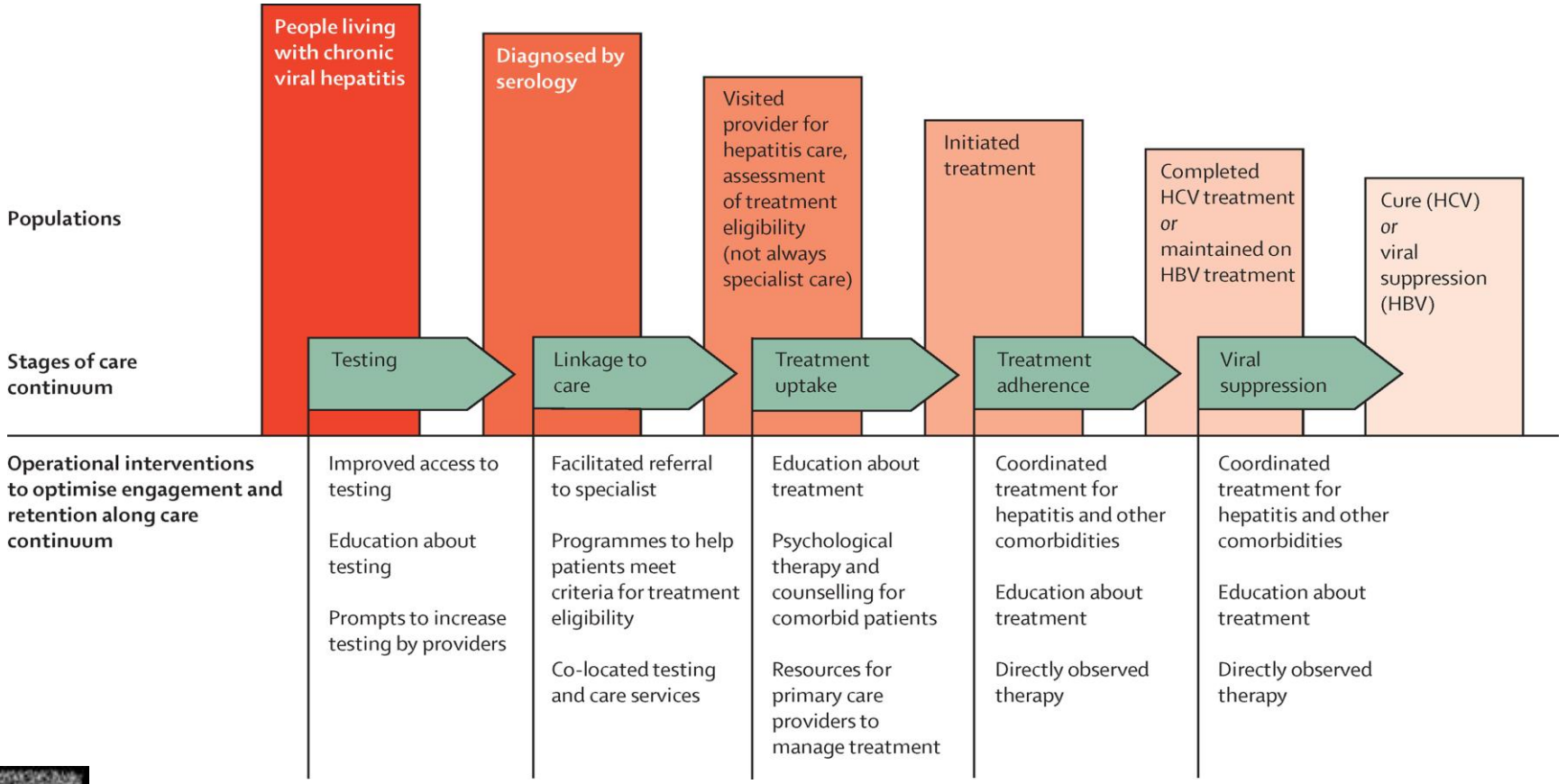
Hepatitis C Care Continuum



* 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 (62.9%); 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.

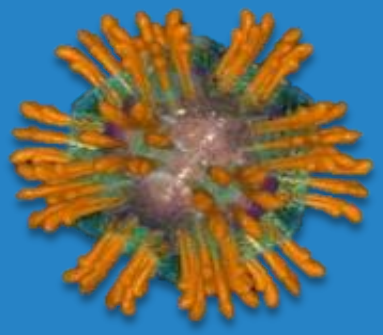
Yehia BR, Schranz AJ, Umscheid CA, Lo Re V III (2014) The Treatment Cascade for Chronic Hepatitis C Virus Infection in the United States: A Systematic Review and Meta-Analysis. PLoS ONE 9(7): e101554. doi:10.1371/journal.pone.0101554

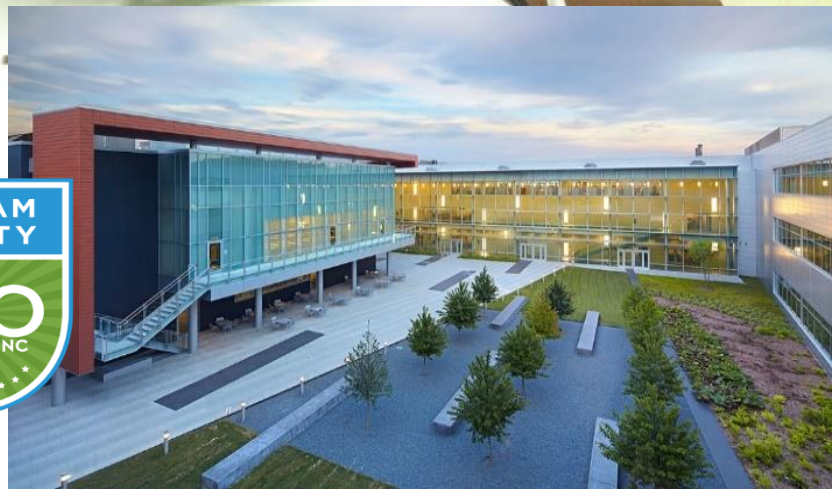
Interventions along Care Continuum



The Lancet Infectious Diseases 2016 16, 1409-1422DOI: (10.1016/S1473-3099(16)30208-0)

Hepatitis C Testing: Strategies in the Community





DURHAM COUNTY DCO NC 1881

Question #1

The Centers for Disease Control and Prevention recommends routine hepatitis C testing among which of the following groups?

1. Incarcerated persons
2. Men who have sex with men
3. Pregnant women
4. None of the above

CDC HCV Testing Recommendations

- **Adults born from 1945 through 1965** should be tested once
- **HCV testing is recommended** for those who:
  - Currently injecting drugs
  - Ever injected drugs, including those who injected once or a few times many years ago
  - Have certain medical conditions, including persons who:
    - received clotting factor concentrates produced before 1987
    - were ever on long-term hemodialysis
    - have persistently abnormal alanine aminotransferase levels (ALT)
    - have HIV infection
  - Were prior recipients of transfusions or organ transplants

https://www.cdc.gov/hepatitis/hcv/guidelinesc.htm

CDC HCV Testing Recommendations

- **HCV- testing based on a recognized exposure is recommended:**
  - Healthcare, emergency medical, and public safety workers after needle sticks, sharps, or mucosal exposures to HCV-positive blood
  - Children born to HCV-positive women

- **Persons for whom routine HCV testing is of uncertain need:**
  - Recipients of transplanted tissue
  - Intranasal cocaine and other non-injecting illegal drug users
  - Persons with a history of tattooing or body piercing
  - Persons with a history of multiple sex partners or STDs
  - Long-term steady sex partners of HCV-positive persons

https://www.cdc.gov/hepatitis/hcv/guidelinesc.htm

AASLD
AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES

HCV Guidance: Recommendations for Testing, Managing, and Treating Hepatitis C

IDSA
Infectious Diseases Society of America

Risk Exposures
• Persons on long-term hemodialysis (ever)
• Persons with percutaneous/parenteral exposures in an unregulated setting
• Healthcare, emergency medical, and public safety workers after needle-stick, sharps, or mucosal exposures to HCV-infected blood
• Children born to HCV-infected women
• Prior recipients of transfusions or organ transplants, including persons who:
  • Were notified that they received blood from a donor who later tested positive for HCV
  • Received a transfusion of blood or blood components, or underwent an organ transplant before July 1992
  • Received clotting factor concentrates produced before 1987
• Persons who were ever incarcerated
 	
Other Conditions and Circumstances
• HIV infection
• Sexually-active persons about to start pre-exposure prophylaxis (PreP) for HIV
• Unexplained chronic liver disease and/or chronic hepatitis, including elevated alanine aminotransferase (ALT) levels
• Solid organ donors (deceased and living)
	I, B

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AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES

HCV Guidance: Recommendations for Testing, Managing, and Treating Hepatitis C

IDSA
Infectious Diseases Society of America

HCV Testing for Persons With Ongoing Risk Factors

Recommendation for HCV Testing for Persons With Ongoing Risk Factors	
RECOMMENDED	RATING ⓘ
Annual HCV testing is recommended for persons who inject drugs and for HIV-infected men who have unprotected sex with men. Periodic testing should be offered to other persons with ongoing risk factors for HCV exposure.	IIa, C

Question #2

Screening for hepatitis C programs have been reported from various community settings, with the exception of?

1. Federally qualified healthcare centers
2. Tattoo parlors
3. Homeless shelters
4. County detention centers or jails

CDC Hepatitis Testing and Linkage to Care Initiative: Durham County, North Carolina

- To conduct 2000 HCV tests to identify chronic HCV-infected persons not previously aware of their infection
  - Targeted screening - STD clinic, homeless clinic, community sites including residential substance abuse recovery program
  - Universal screening – Detention center

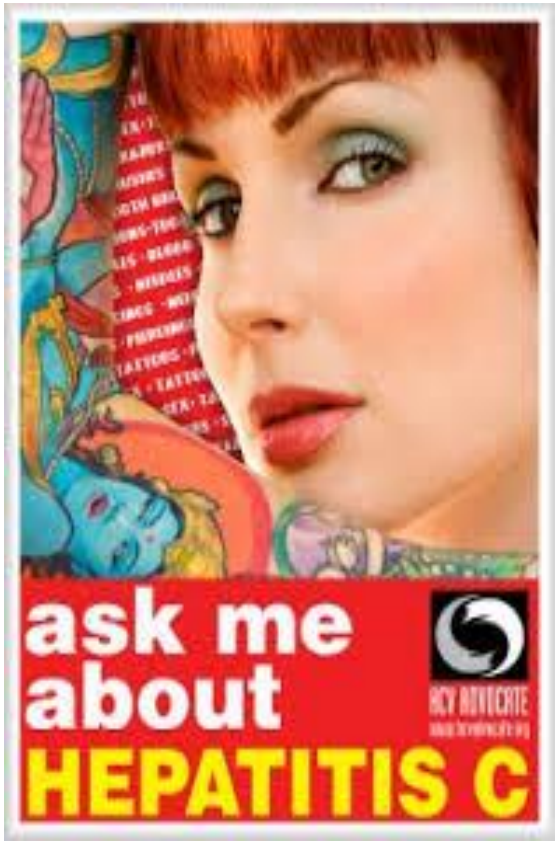
- To link a minimum 75% of persons who test positive for HCV RNA to care, treatment, and preventive services.
  - HCV Bridge Counselor (patient navigator)
  - Collaborations with HCV care providers
  - On-site HCV assessment clinics

HCV Testing Results, Durham County, 2012-2014

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

(Seña AC, et al. *Pub Health Rep* 2016; 131)

Screening Programs for Hepatitis C



Morbidity and Mortality Weekly Report

Identification and Linkage to Care of HCV-Infected Persons in Five Health Centers — Philadelphia, Pennsylvania, 2012–2014

Catelyn Coyle, MPH[1], Kendra Viner, PhD[2], Elizabeth Hughes, DrPH[3], Helena Kwakwa, MD[2], Jon E. Zibbell, PhD[3], Claudia Vellozzi, MD[3], Deborah Holtzman, PhD[3] (Author affiliations at the end of text)

Hepatitis C Virus Testing and Linkage to Care in North Carolina and South Carolina Jails, 2012–2014

Ben T. Schoenbachler, MPH[a]
Bryce D. Smith, PhD, MSSW[b]
Arlene C. Seña, MD, MPH[c,d]
Alison Hilton, MPH[c]
Sallie Bachman, LMSW[e]
Mulamba Lunda, MPH[f]
Anne C. Spaulding, MD, MPH[g,h]

ABSTRACT

Objective. We evaluated a hepatitis C virus (HCV) testing and linkage-to-care post-release program among detainees of small- to medium-sized jails in North Carolina and South Carolina as part of the Hepatitis Testing and Linkage to Care initiative.

Methods. An HCV testing and linkage-to-care program was implemented in

Page *et al. BMC Public Health* (2017) 17:171
DOI 10.1186/s12889-017-4102-5

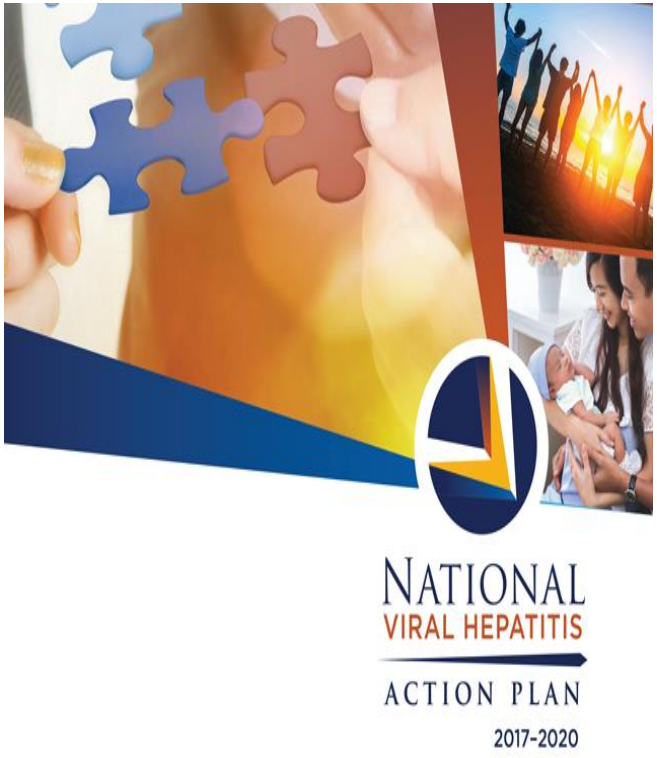
BMC Public Health

RESEARCH ARTICLE Open Access

HCV screening in a cohort of HIV infected and uninfected homeless and marginally housed women in San Francisco, California

Kimberly Page[1*], Michelle Yu[2], Jennifer Cohen[3], Jennifer Evans[2], Martha Shumway[4] and Elise D. Riley[5]

Strategies in the Community



The National Viral Hepatitis Action Plan 2017-2020 states:

"…**Integrating** *or including viral hepatitis prevention and care services with other physical health, mental health*, and **social services** *can effectively prevent infection or identify and link individuals with viral hepatitis into care*."

Durham FOCUS Program

- Gilead FOCUS partnership with UNC-CH Infectious Diseases and the Durham County Department of Public Health in March 2016.

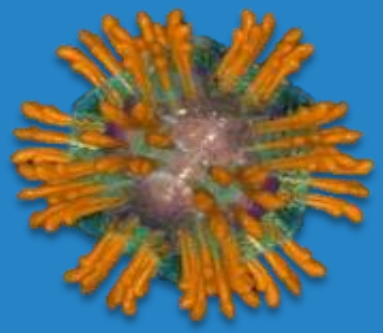
- Routine opt-out HIV and HCV testing (with reflex RNA) was implemented at Durham County Human Services:
  - Health Department Clinics: STI, TB, Immunization, Refugee, Family Planning, Maternal Health, Dental
  - County Detection Center and community testing locations
  - Durham County Department of Social Services
  - Lincoln Community Health Center Primary Care

HCV Testing, Durham, NC; 2015-16

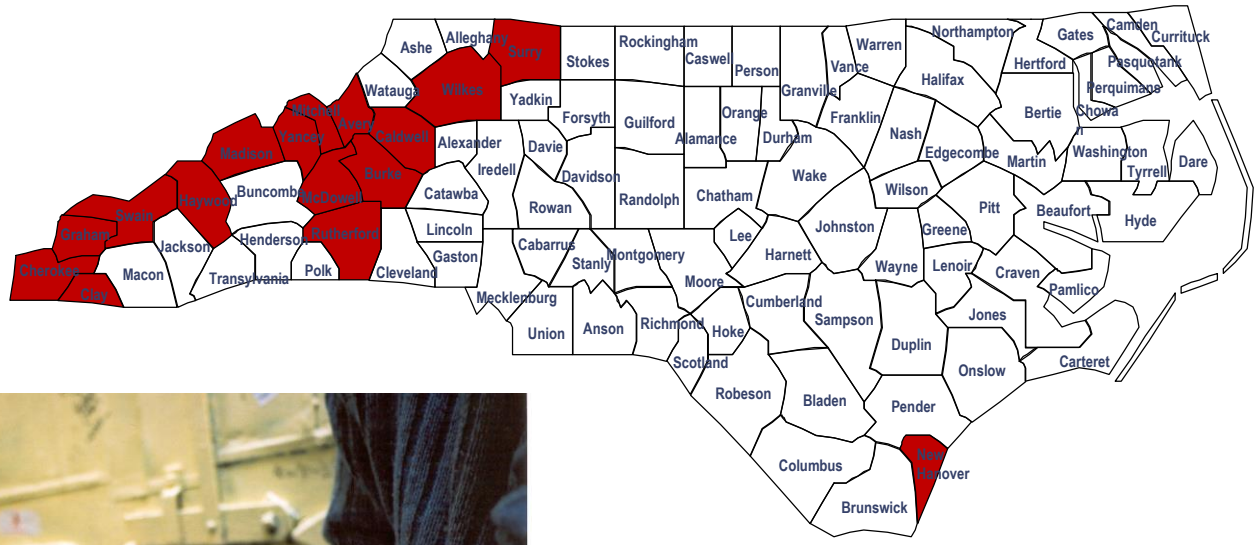
Nearly half (41.7%) of persons identified with chronic HCV were from the detention center.

Clinic or Program	HCV tests N	HCV Ab+ n (%)	HCV RNA+ n (%)	Linked to HCV care n (%)
TOTAL	4558	340 (7.5)	230 (5.0)	147 (65)
STI clinic	680	49 (7.2)	37 (5.4)	31 (84)
Tuberculosis Clinic	108	7 (6.5)	1	1
Refugee Health Clinic	32	4	1	1
Family Planning Clinic	32	2	0	_
Maternal Health Clinic	493	5 (1.0)	3 (0.6)	2 (67)
FQHC Clinics	1013	86 (8.5)	54 (5.3)	44 (81)
Social Services	369	27 (7.3)	16 (4.3)	9 (56)
Community Outreach	585	27 (4.6)	22 (3.8)	14 (64)
Detention Center	1246	133 (10.7)	96 (7.7)	45 (47)

HCV Education for Healthcare Providers in Community



Vulnerability Assessment of North Carolina Counties



RED = highest injection drug use and acute HCV incidence

Rural North Carolina Counties Designated Health Professional Shortage Areas

HPSA‡ by profession:

- Primary care only
- Dental only
- Mental/behavioral health only
- Primary care and dental
- Primary care and mental/behavioral health
- Primary care, dental and mental/behavioral health

‡Shortage area may be whole county, or population group or geographical area within a county. Data as of September 16, 2014.

*Counties that are white are urban counties or rural counties without an official HPSA designation.

Data provided courtesy of the North Carolina Office of Rural Health and Community Care

Question #3

Telemedicine approaches to expand hepatitis C education among primary care providers are not likely to be cost-effective.

1. True
2. False
3. Not known

Telemedicine =use of telecommunication and
and information technologies with the goal of providing clinical healthcare to distant or isolated individuals.

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Outcomes of Treatment for Hepatitis C Virus Infection by Primary Care Providers

Sanjeev Arora, M.D., Karla Thornton, M.D., Glen Murata, M.D., Paulina Deming, Pharm.D., Summers Kalishman, Ph.D., Denise Dion, Ph.D., Brooke Parish, M.D., Thomas Burke, B.S., Wesley Pak, M.B.A., Jeffrey Dunkelberg, M.D., Martin Kistin, M.D., John Brown, M.A., Steven Jenkusky, M.D., Miriam Komaromy, M.D., and Clifford Qualls, Ph.D.

ABSTRACT

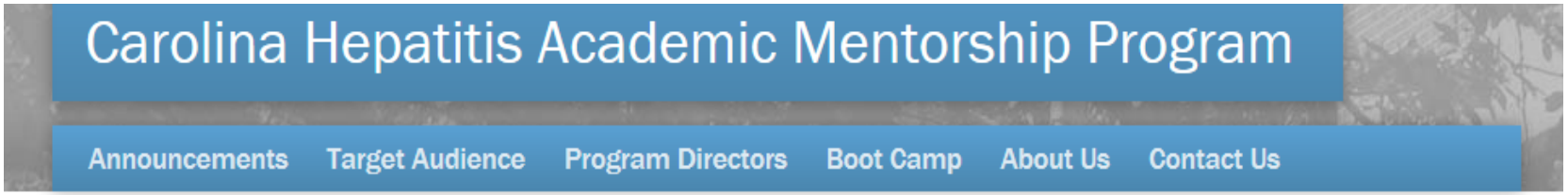
CLINICAL PRACTICE INVITED ARTICLE

Ilie J. C. Goldstein, Section Editor

Use of Telemedicine Technologies in the Management of Infectious Diseases: A Review

Parmvir Parmar,[1] David Mackie,[2] Sunil Varghese,[2] and Curtis Cooper[1,2,3]

[1]Faculty of Medicine, University of Ottawa, [2]Ottawa Hospital and Regional Viral Hepatitis Telemedicine Program, and [3]Division of Infectious Diseases, Department of Medicine, University of Ottawa, Ontario, Canada



Welcome to CHAMP

Carolina Hepatitis C Academic Mentorship Program (CHAMP) is a dynamic telemedicine training platform designed for providers delivered by providers

Mission

To improve the health of rural and underserved communities in North Carolina by building a primary care workforce with the expertise to manage and cure hepatitis C

Our goals

- Establish a North Carolina primary care workforce trained to diagnose, care for, and cure persons infected with hepatitis C infection
- Expand access to primary care providers with specialty training in hepatitis C care in rural and low resource settings
- Recruit health care providers practicing in local health departments, Federally Qualified Health Centers (FQHCs), hospitals, and community clinics
- Remove barriers to care for persons diagnosed with hepatitis C

Member Login

Forgot your password?

PRESENTED BY:

UNC SCHOOL OF MEDICINE

DukeHealth

ADDITIONAL INFORMATION

HCV Guidelines

CDC Hepatitis C Information

https://www.med.unc.edu/champ

NC CHAMP "Bootcamp" Training

HCV Testing and Linkage to Care

- If HCV Ab+, check quantitative HCV RNA, genotype, liver panel (ALT, Tbili, alb), INR, Cr, platelet count.
- Check HAV IgG and HBsAg, HBsAb, HBcAb and vaccinate if not immune.
- Check HIV if indicated.
- Abdominal imaging for liver cancer screening if cirrhosis suspected on exam or labs.
- Evaluate modifiable risk factors.
- Limit Tylenol to 2g per day.
- Two cups of coffee daily has liver benefits.
- Fibrosis assessment (next talk).
- Discuss limiting transmission (small groups).

UNC HEALTH CARE

Key Points for Community Providers

Interpretation of HCV Laboratory Tests

Antibody to HCV	HCV RNA	Interpretation	Other possible interpretation
Negative	Negative	No infection	---
Positive	Positive	HCV present	---
Positive	Negative	Resolved infection	False (+) <1% Treated infection
Negative	Positive	Infection present (immunocompromised)	Early infection False (+)

UNC HEALTH CARE

Key Points for Community Providers

Combining tests?

- EASL guidelines

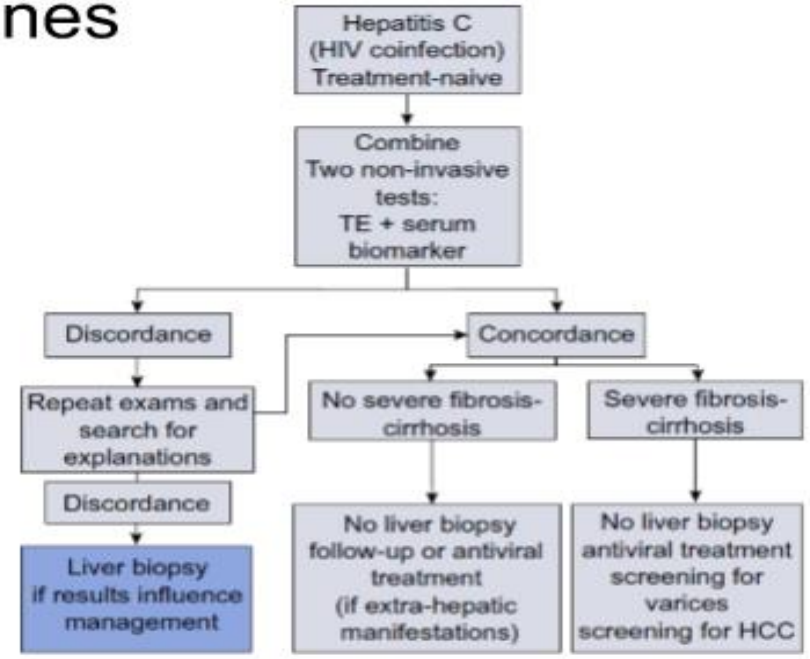


Fig. 1. Proposed algorithm for the use of non-invasive tests in treatment-naive patients with Hepatitis C with or without HIV coinfection.

EASL-ALEH. J Hepatol. 2015

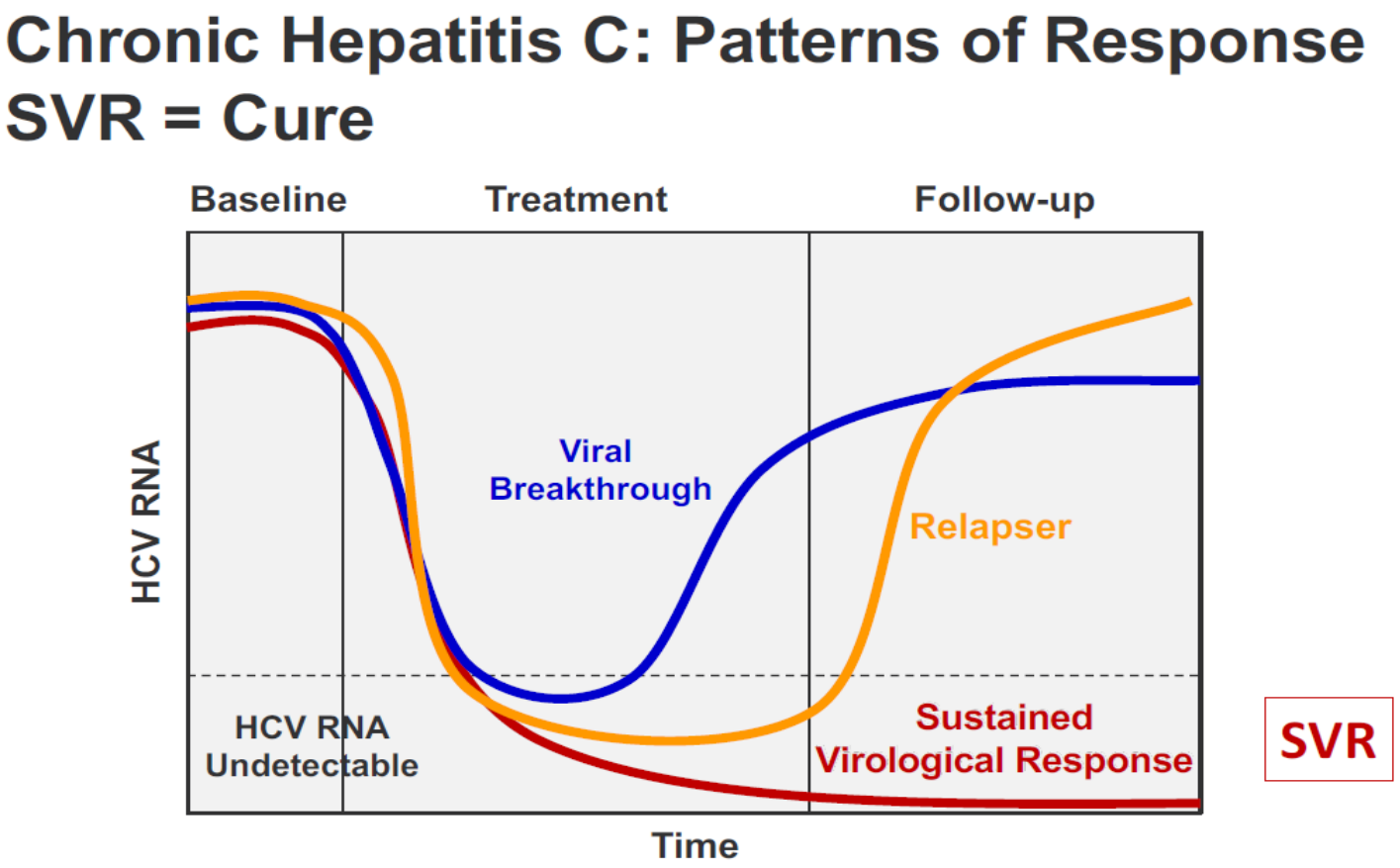
Key Points for Community Providers

Principles of All-Oral Regimens for HCV

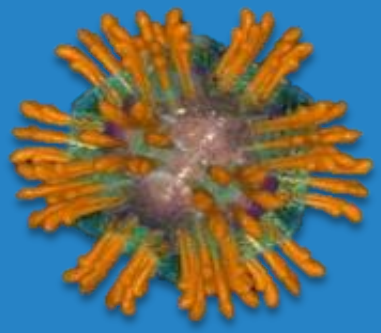
- **Combine drugs from different classes**
  - Hit multiple targets to increase efficacy
  - Diminish risk of viral resistance
- **Possible strategies**
  - Two drugs: Backbone/anchor drug +/- additional agent
  - Multiple drugs: When combined achieve superior efficacy than might be predicted by individual drug characteristics
- **If done properly**
  - Near universal efficacy
  - Shortened duration of therapy
  - Adverse events have minimal impact on quality of life

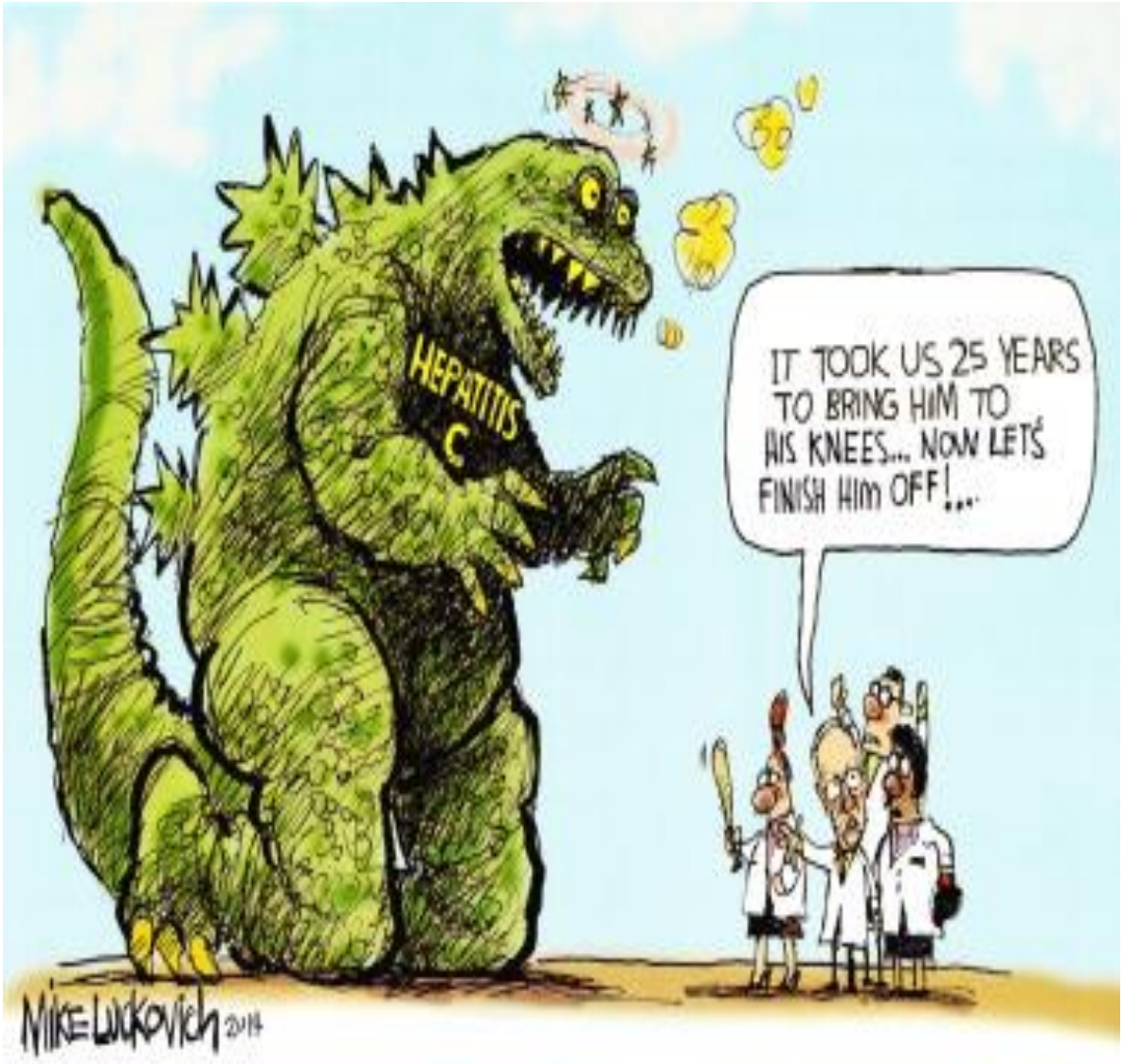
THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

Key Points for Community Providers



Summary

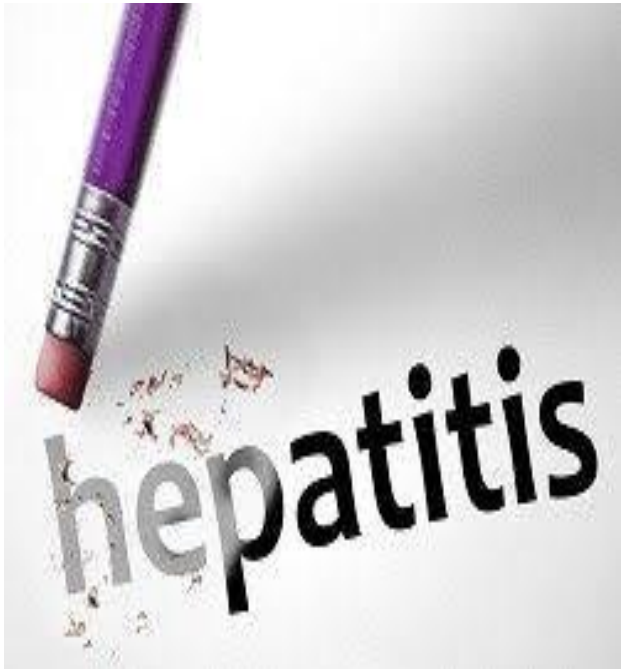



HEPATITIS C
IT TOOK US 25 YEARS TO BRING HIM TO HIS KNEES... NOW LETS FINISH HIM OFF!...
MIKE LUCKOVICH 2014

Addressing the Gaps in HCV Care

- **HCV Screening**
  - Reflex HCV RNA testing
  - Electronic medical record prompts
- **HCV Assessment**
  - Algorithms for baseline tests (platelets, LFTs)
  - Genotype, fibroscan
  - Harm reduction counseling
  - Referrals (Medicaid/Medicare, mental health and substance abuse services)
- **HCV Management**
  - Patient navigators or bridge counselors
  - Trained providers
  - Highly effective, less expensive drug regimens
  - Pharmacy assistance
  - Primary care for management post-HCV cure

“Erasing” HCV and Reducing Morbidity



- Assess the needs and resources in your community;
- Collaborate with public health;
- Use CDC guidance for HCV screening, but consider other high-risk populations;
- Train more healthcare providers in HCV screening, assessment and management;
- Provide support services to assist clients throughout the HCV care continuum.

Acknowledgements

FOCUS Team
Alison Hilton, MPH
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Staff and clients

Lincoln Community Health Center
Barbara Johnston, MD

Gilead FOCUS Program
Liz Mallas, Regional Lead

BRIDGE COUNSELING
&
PATIENT NAVIGATION

Candice Givens, BSW
Bridge Counselor,
Durham County Department of Public Health
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BRIDGE COUNSELORS/ PATIENT NAVIGATORS

- Lacks universal definition
- Connect to screening
- Follow-up post screening
- Facilitate linkage to care
- Address **barriers** care*
- Assist through treatment process
- Make referrals
- Advocates
- Emotional/ Social support

NAVIGATION PROCESS

Referral Received:
- EMR Notification
- Health Education Transfer

Initiate Contact
- Phone calls (3 attempts)
- 2 Letters to home address*
- Home visit to address on file

Supportive Services
- Substance Abuse
- Mental Health
- Medicaid
- Primary Care

Bridging Session
- Control Measures
- Release of Info
- Biopsychosocial Assessment
- Patient Education
- Immunization Review

HCV Referral
- Hepatology (Duke)
- Infectious Diseases (UNC)
- Primary Care Provide

*Dependent on insurance/ patient preference

Facilitate Scheduling; Appt Reminder calls, letters, and transportation assistance

Missed Appointment

Attended 1st Appt

HCV Care/ Treatment

QUESTION #4:

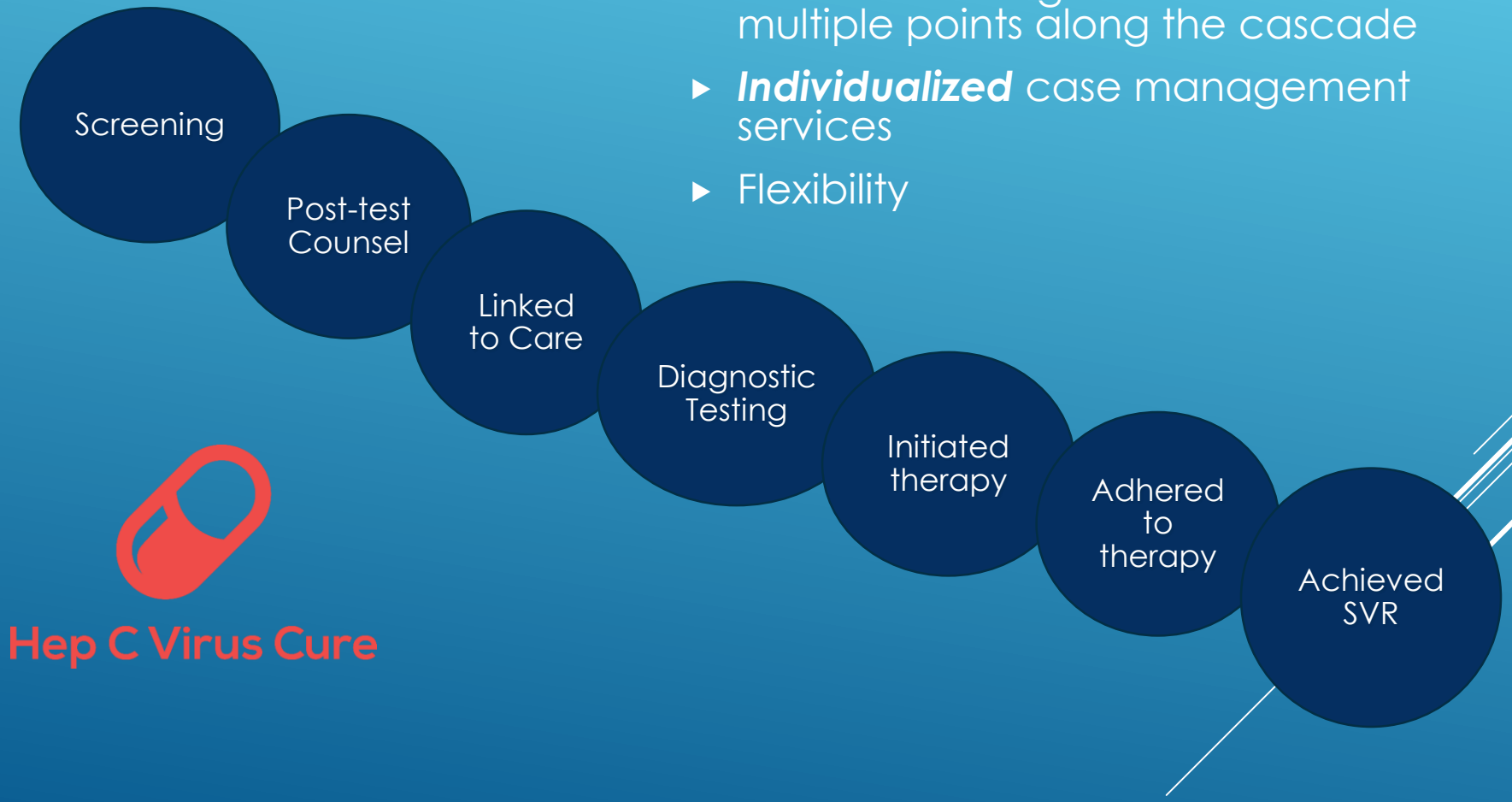
The role of the Bridge Counselor or Patient Navigator includes tasks that closely resemble roles of ALL of the following **except:**

1. Social worker/ case manager
2. Community outreach worker
3. Infectious Disease/ GI Specialist
4. HCV Community Advocate

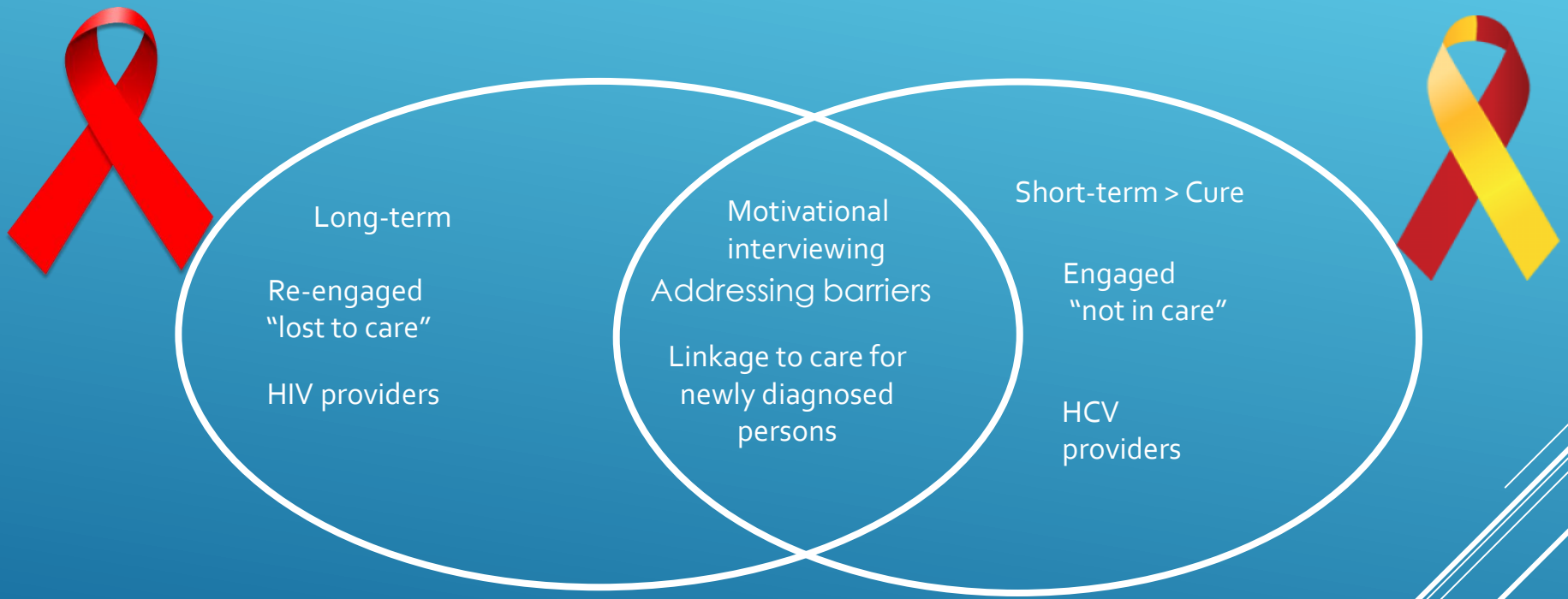
BRIDGE COUNSELORS/ PATIENT NAVIGATORS

IMPACT ON HCV TREATMENT CASCADE

- Comprehensive linkage interventions
- Successful navigation addresses multiple points along the cascade
- ***Individualized*** case management services
- Flexibility



HIV VS. HCV LINKAGE TO CARE



Seña AC, et al. *J Acquir Immune Defic Syndr.* 2017;76

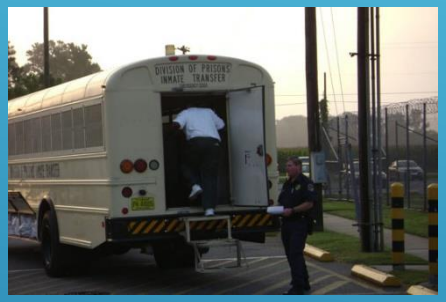
QUESTION #5

UNIVERSAL LINKAGE-TO- CARE MODELS ARE APPLICABLE TO ALL CHRONIC HCV PATIENTS REGARDLESS OF PERSONAL DEMOGRAPHICS, BARRIERS, AND LOCATION OF SCREENING.

1. TRUE 2.FALSE

LINKAGE TO CARE FROM VARIOUS SETTINGS

ONE SIDE ***DOES NOT*** FIT ALL!



- Health Department Clinics
- Department of Social Services
- Community health centers
- Primary Care Clinics
- Prisons

lincoln community Health Center

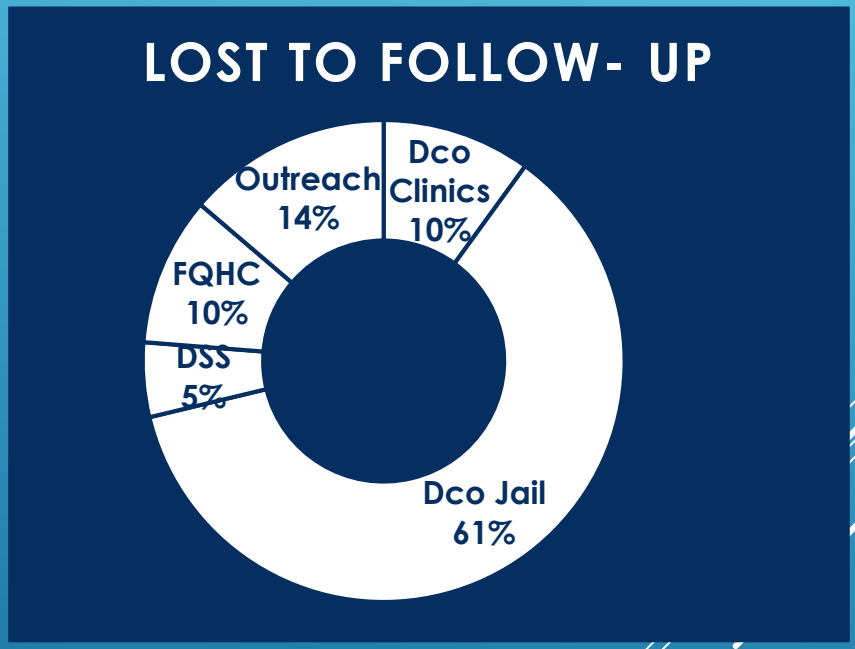
DCO Social Services

COMMON BARRIERS TO CARE

- Insurance status
  - Uninsured, underinsured
- Transportation
- Low health literacy/ education
- Low socioeconomic status
- Cultural orientation
- Lack of trust in medical systems
- Scheduling
- Access to healthcare from rural areas
- **Incarceration**
- Competing health priorities (including substance abuse)
- Patient, provider, and systems barriers

LOST TO FOLLOW-UP

- Occurs at various points along cascade
- **VULNERABLE POPULATIONS**
- Opportunities for continued contact
  - Baltimore study at local health departments found those not linked to care "were seen at the STI clinic 3 or more times within the 9mos. following their diagnosis".
- Interventions needed across the cascade. Addressing distal barriers have greater impact than earlier occurrences.



HCV AND INCARCERATION

- Increased difficulty to link to care
  - Especially for post-release linkage to care models
- Competing Priorities (housing, income, reunification, etc.)
- Substance abuse
- Mental health
- Health comorbidities
- Highest lost to care rate among Durham Co. FOCUS
  - Follows nationwide trend
- Outside only model >>> Release Focused Model

SOLUTIONS FOR LINKAGE IMPROVEMENTS

- More detailed contact information.
  - i.e.: **Multiple** phone numbers/ addresses
- **Pre-release** bridging sessions
- Incentive Packages
- Health resource page for all inmates
- Housing referrals

WHY IS BRIDGE COUNSELING/ NAVIGATION IMPORTANT?

- Improved screening rates and follow-up
- Supportive and addresses barriers improves assessment and treatment
- Encourages teamwork among **multidisciplinary** teams
- HCV Advocacy
  - Prevention
    - Safe injection programs
  - Testing
  - Streamline HCV treatment management

RESOURCES

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