HIV & Hepatitis C Update: Pregnancy and Postpartum

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HIV in the United States and Dependent Areas

Of the 37,832 new HIV diagnoses in the US and dependent areas* in 2018:
- 69% were among gay and bisexual men
- 24% were among heterosexuals
- 7% were among people who inject drugs (PWID)

From 2010 to 2017, HIV diagnoses decreased 11% overall. But trends varied for different groups of people:
- Gay and bisexual men: remained stable
- Heterosexuals: down 25%
- People who inject drugs: down 29%

New HIV Diagnoses in the US and Dependent Areas for the Most-Affected Subpopulations, 2018

- Black/African Americans: 9,499
- Hispanic/Latinx: 7,543
- White: 6,423
- Black/African American Men: 3,764
- Black/African American Men, Heterosexual Contact: 1,678
- Hispanic Women/Latinas, Heterosexual Contact: 599

By the end of 2016, an estimated 1,140,400 people had HIV.

6 in 7 knew they had the virus.

For every 100 people with HIV in 2016:
- 64 received some HIV care
- 49 were retained in care
- 53 were virally suppressed

A person with HIV who takes HIV medicine as prescribed and gets and stays virally suppressed or undetectable can stay healthy and has effectively no risk of sexually transmitting HIV to HIV-negative partners.

New HIV Diagnoses in the US and Dependent Areas by Age, 2018

- 13-24: 7,807
- 25-34: 13,458
- 35-44: 7,237
- 45-54: 5,377
- 55 and older: 3,862
HIV and Women

Of the **37,832 NEW HIV DIAGNOSES** in the US and dependent areas in 2018, 19% were among women.

Most of the new HIV diagnoses among women were attributed to heterosexual contact.

- **Heterosexual Contact**: 6,130
- **Injection Drug Use**: 1,049
- **Other**: 41

HIV diagnoses declined 23% among women overall from 2010 to 2017. Although trends varied for different groups of women, HIV diagnoses declined for groups most affected by HIV, including black/African American women and women aged 25 to 34.

**Trends by Race and Ethnicity**

- American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, the Republic of Palau, and the US Virgin Islands
- Adult and adolescent women aged 13 and older
- Includes hemophilia, blood transfusions, perinatal exposure, and risk factors not reported or identified
- In 50 states and the District of Columbia
- Black refers to people having origins in any of the black racial groups of Africa
- African American is a term often used for Americans of African descent with ancestry in North America
- Changes in subpopulations with lower HIV diagnoses can lead to a large percentage increase or decrease

**Trends by Age**

- 0-4 years: 3%
- 5-9 years: 7%
- 10-14 years: 11%
- 15-19 years: 12%
- 20-24 years: 15%
- 25-29 years: 18%
- 30-34 years: 20%
- US and overall: 21%

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HIV in the United States by Region

Of the 38,739 new HIV diagnoses in the US in 2017, **19,968 (52%)** were in the South.

**Rates of New HIV Diagnoses in the US, 2017**

![Map showing HIV rates by state]

**Rates (per 100,000 people)** of people in the US living with diagnosed HIV in 2016:

- **US Total**: 308.3
  - Northeast: 418.8
  - West: 253.7
  - US dependent areas: 459.2
  - South: 361.3

46% of all adults and adolescents with HIV in the US live in the South.
# Lifetime Risk of HIV Diagnosis by State

## Highest Risk

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## Lowest Risk

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<td>Iowa</td>
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<td>Utah</td>
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<td>South Dakota</td>
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<td>New Hampshire</td>
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<td>Wyoming</td>
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<td>Vermont</td>
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<td>Montana</td>
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<td>North Dakota</td>
<td>670</td>
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Source: Centers for Disease Control and Prevention
Lifetime Risk of HIV Diagnosis by Transmission Group

- MSM: 1 in 6
- Women Who Inject Drugs: 1 in 23
- Men Who Inject Drugs: 1 in 36
- Heterosexual Women: 1 in 241
- Heterosexual Men: 1 in 473

Source: Centers for Disease Control and Prevention

Lifetime Risk of HIV Diagnosis among MSM by Race/Ethnicity

- African American MSM: 1 in 2
- Hispanic MSM: 1 in 4
- White MSM: 1 in 11

Source: Centers for Disease Control and Prevention
HIV and the Black Community: Do #Black(Gay)Lives Matter?

“The AIDS response in the United States is failing MSM [men who have sex with men], particularly black MSM. ... focus should be on the populations most vulnerable to HIV and should target interventions that are most useful and sustainable.”

— Dr. Anthony Fauci, Director, National Institute of Allergy and Infectious Diseases, NIH, JAMA, January 27, 2015

Figure 2. Black gay men are only 0.2% of the total U.S. population, but one in four new HIV infections nationally.
Figure 3. Black gay men are only 1.4% of the Black population, but they account for one in two new HIV infections among Black Americans each year.

Figure 4. The vast majority of Black Americans and Black women do not have HIV. One in three Black gay men do.

Thankfully, the vast majority of African Americans overall (98%) and African American women (98.6%) are HIV negative. However, among Black gay men, far fewer (68%) are HIV negative and ONE THIRD are HIV positive.

The Centers for Disease Control and Prevention estimates that one third of all Black gay men in major U.S. cities are HIV-positive. HIV has become a fact of life for increasing numbers of Black gay men throughout their lifespan. For example, if one followed a group of Black gay men from age 20 to 40, one in four would be HIV-positive by age 25, rising to 59% of the same group contracting HIV by age 40.2

Estimated proportion of Black Americans in U.S. who are HIV+

- 2%
- 98%

Estimated proportion of Black women in U.S. who are HIV+

- 1.4%
- 98.6%

Estimated proportion of Black gay men in U.S. who are HIV+

- 32%
- 68%


Figure 6. The percentage of U.S. Black gay men living with HIV is similar to other greatly impacted populations globally.

32% U.S. Black gay men

28% Kazakhstani injection drug users

42% Kenyan female sex workers

26% Indonesian transgender women

Sources: Rosenberg, 2014; Baral, 2013; El Hassel, 2013; Baral, 2012

<table>
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<th>Characteristic</th>
<th>Black, (n = 344)</th>
<th>Latino, (n = 304)</th>
<th>White, (n = 252)</th>
<th>Other, (n = 115)</th>
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<td><strong>Individual</strong></td>
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<td>Mental health</td>
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<td>Depression, mean (SD)</td>
<td>14.31 (7.40)</td>
<td>14.17 (7.54)</td>
<td>16.69 (7.23)</td>
<td>15.35 (7.61)</td>
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<td>Suicide ideation, %</td>
<td>9.88</td>
<td>9.18</td>
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<td>Suicide plan, %</td>
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<td>6.57</td>
<td>4.78</td>
<td>8.70</td>
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<td>Suicide attempt, %</td>
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<td>3.29</td>
<td>1.59</td>
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<td>Substance use, mean (SD)</td>
<td>AUDIT</td>
<td>4.50 (5.34)</td>
<td>6.30 (5.52)</td>
<td>7.61 (5.73)</td>
<td>5.48 (4.52)</td>
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<td>Sexual risk-taking, mean (SD)</td>
<td>6.73 (6.54)</td>
<td>6.09 (6.53)</td>
<td>5.08 (5.73)</td>
<td>6.11 (6.13)</td>
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<td>Stigma, mean (SD)</td>
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<td>3.93 (3.81)</td>
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<td>Detectable viral load, %*</td>
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<td><strong>Racial STI positive, %</strong></td>
<td>26.45</td>
<td>12.83</td>
<td>7.14</td>
<td>12.17</td>
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**INTRODUCTION**

There is a marked racial disparity observed in HIV in the United States with black men who have sex with men (MSM) experiencing the greatest burden of infection compared with other racial/ethnic groups. In 2015, two-thirds of all new HIV diagnoses in the United States occurred among MSM, with black MSM (41.4%) accounting for the plurality of these diagnoses followed by white MSM (30.4%) and Hispanic MSM (28.2%). During the period of 2010-2014, the Centers for Disease Control and Prevention (CDC) reported differential trends in HIV diagnoses by race and ethnicity: White MSM saw an 11% decline, black MSM experienced a 1% increase, and Hispanic MSM saw a 1.4% increase in the rate of new HIV diagnoses. Furthermore, more than one-third of new diagnoses in 2014 occurred among young MSM (YMSM; aged 23-39 years). Should these disparities persist, the US CDC predicts that by 2020, 1 in 5 Hispanic MSM, and 1 in 11 white MSM will become infected with HIV during their lifetime. To inform research on disparities, the National Institute of Minority Health and Health Disparities has developed a multi-level research framework that is applicable across a broad range of health conditions, including HIV. We drew from this framework, which encourages consideration of how biological, behavioral, and social structural factors at multiple levels of influence (individual, social, and systems) impact health disparities.
Virginia - VDH Opioid Indicators - HIV

File created on: 6/2/2020 8:47:51 AM
CDC Recommendations for Hepatitis C Screening Among Adults — United States, 2020

Sarah Schlissel, MD, Carolyn Winer, MD, Melissa Osborne, PhD, Laura Wlosowski, PhD, A. Blythe Rye, MD

Division of Viral Hepatitis, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC

Summary

Hepatitis C virus (HCV) infection is a major source of morbidity and mortality in the United States. HCV is transmitted primarily through percutaneous exposures to infectious blood or body fluids that contain blood, most commonly through injection drug use. No vaccine against hepatitis C exists and no effective pre- or postexposure prophylaxis is available. More than half of persons who become infected with HCV will develop chronic infection. Direct-acting antiviral treatment can result in a virologic cure in most persons within 8–12 weeks of all-oral medication regimen. This report augments (i.e., updates and summarizes) previous published recommendations from CDC regarding testing for HCV infection in the United States (Smith BD, Morgan RL, Becket GA, et al. Recommendations for the identification of chronic hepatitis C virus infection among persons born during 1945–1965. MMWR Recomm Rep 2012;61[No. RR-4]). CDC is augmenting previous guidance with two new recommendations: 1) hepatitis C screening at least once in a lifetime for all adults aged ≥18 years, except in settings where the prevalence of HCV infection is ≤0.1% and 2) hepatitis C screening for all pregnant women during each pregnancy, except in settings where the prevalence of HCV infection is ≤0.1%. The recommendation for HCV testing that remains unchanged is regardless of age or setting guidance, all persons with risk factors should be tested for hepatitis C with periodic testing while risk factors persist. Any person who requests hepatitis C testing should receive it, regardless of disclosure of risk, because many persons might be reluctant to disclose stigmatizing risks.

Introduction

Hepatitis C is the most commonly reported bloodborne infection in the United States (1), and surveys conducted during 2013–2016 indicated an estimated 2.4 million persons (3.0%) in the nation were living with hepatitis C (2). Percutaneous exposure is the most efficient mode of hepatitis C virus (HCV) transmission, and injection drug use (IDU) is the primary risk factor for infection (1). Notional surveillance data revealed an increase in reported cases of acute HCV infection every year from 2009 through 2017 (1). The highest rates of acute infection are among persons aged 20–39 years (1). As new HCV infections have increased among reproductive aged adults, rates of HCV infection nearly doubled during 2009–2014 among women with live births (3). In 2015, 0.38% of live births were delivered by mothers with hepatitis C (4). This report augments (i.e., updates and summarizes) previous CDC recommendations for testing of hepatitis C among adults in the United States published in 1998 and 2012 (5,6). The recommendations in this report do not replace or modify previous recommendations for hepatitis C testing that are based on known risk factors or clinical indications. Previously published recommendations for hepatitis C testing of persons with risk factors and alcohol use screening and intervention for persons identified as infected with HCV remain in effect (5,6). This report is intended to serve as a resource for health care professionals, public health officials, and organizations involved in the development, implementation, delivery, and evaluation of clinical and preventive services.

Epidemiology

In 2017, a total of 3,216 cases (1.0 per 100,000 population) of acute HCV infection were reported to CDC (1). The reported number of cases in any given year likely represents less than 10% of the actual number of cases because of underascertainment and underreporting (7). An estimated 44,700 new cases of HCV infection occurred in 2017. The rate of reported acute HCV infections increased from 0.7 cases per 100,000 population in 2013 to 1.0 in 2017 (Figure 1) (1). In 2017, acute HCV incidence was greatest for persons aged 20–29 years (2.8) and 30–39 years (2.3) (1). Persons aged ≥59 years had the lowest incidence (0.1) (1). Incidence was slightly greater for males than females (1.2 cases and 0.9, respectively) (1). During 2006–2012, the combined incidence of acute HCV infection in four states (Kentucky, Tennessee, Virginia, and West Virginia) increased 364% among persons.
Figure 4.3. Rates of reported acute hepatitis C, by age group — United States, 2002–2017

Source: CDC, National Notifiable Diseases Surveillance System.
New Reports of Chronic Hepatitis C High in Multiple Generations

SOURCE: National Notifiable Diseases Surveillance System, 2018
Figure 4.4. Rates of reported acute hepatitis C, by sex — United States, 2002–2017

Source: CDC, National Notifiable Diseases Surveillance System.
Figure 4.5. Rates of reported acute hepatitis C, by race/ethnicity — United States, 2002–2017

Source: CDC, National Notifiable Diseases Surveillance System.
Increases in Acute Hepatitis C Virus Infection Related to a Growing Opioid Epidemic and Associated Injection Drug Use, United States, 2004 to 2014

Joe E. Zibbell, PhD, Alis K. Asher, PMA, Rajie C. Parul, MPH, Ben Kupnow, MPH, Kasif Qush, MPH, John W. Ward, MD, and Deborah Holzman, PhD

Objectives: To compare US trends in rates of injection drug use (IDU), specifically opioid injection, with national trends in the incidence of acute HCV infection to assess whether these events correlated over time.

Methods: We calculated the annual incidence rate and demographic and risk characteristics of reported cases of acute HCV infection using surveillance data from 2004 to 2014 and the annual percentage of admissions to substance use disorder treatment facilities reporting IDU for the same time period by type of drug injected and demographic characteristics, then tested for trends.

Results: The annual incidence rate of acute HCV infection increased more than 2-fold (from 0.3 to 0.7 cases/100,000) from 2004 to 2014, with significant increases among select demographic subgroups. Admissions for substance use disorder attributed to injection of heroin and prescription opioid analgesics increased significantly, with an almost 4-fold increase in prescription opioid analgesic injection. Significant increases in opioid injection mirrored those for reported cases of acute HCV infection among demographic subgroups.

Conclusions: These findings strongly suggest that the national increase in acute HCV infection is related to the country’s opioid epidemic and associated increases in IDU. (Am J Public Health. 2018;108:175–181. doi:10.2105/AJPH.2017.304132)

See also Page et al., p. 156, and also Wong, p. 173.

Hepatitis C virus infection is the most common chronic blood-borne infection in the United States and a substantial cause of morbidity and mortality.1,2 Injection drug use (IDU) is the primary risk factor for HCV transmission and the leading cause of incidence in the United States.3,4 HCV infection can occur rapidly after IDU initiation: A meta-analysis examining the time from onset of injection to incidence of HCV infection found a cumulative incidence of 28%, 95% confidence interval (CI) 17%-42%, at 1 year of drug injection.5 Consequently, after the virus is introduced into a network of persons who inject drugs (PWID), it can circulate quickly through the reuse of contaminated drug injection equipment—specifically, needles, syringes, cookers, and filters.6,7 Other factors associated with increased risk for HCV infection include having a high injection frequency,8 using high-dose-space syringes,9 and injecting prescription opioid analgesics (POAs).10

The demographic characteristics and behavioral risk factors associated with the increase in cases of acute HCV infection correspond to the population and behaviors that characterize the nation’s opioid epidemic. State surveillance data indicate a nationwide increase in reported cases of acute HCV infection since 2004, with the largest increase occurring during the first years of the opioid epidemic.11,12 Findings from an analysis of data from 4 central Appalachian states from 2006 to 2012 showed that 40% of the increases in acute HCV cases were among young persons aged 18–34 years, with nearly three-quarters (74%) of persons who reported a risk factor citing IDU.12 Over the same time period, these 4 states also experienced a significant increase in the proportion of young persons admitted to substance use disorder (SUD) treatment who reported injecting opioids, including heroin and POAs. Similar increases in IDU and HCV infection have been documented in Massachusetts,13 Wisconsin,14 and New York,15 and most recently a major HIV outbreak in southeastern Indiana was facilitated by the injection of the prescription opioid.

The epidemic is continuing to grow, with an estimated 40% of new infections in 2015 occurring among PWIDs who were injected with POAs16 and 46% of infections among PWIDs who were not injected with POAs.17

Note: POA = prescription opioid analgesic.

FIGURE 2—Percentage of All Admissions to Substance Use Disorder Treatment Facilities Attributed to the Injection of Any Opioid, Prescription Opioid Analgesic, Heroin, and All Other Drugs, by Year: Treatment Episode Data Set—Admissions, United States, 2004–2014
HEPATITIS C AND OPIOID INJECTION ROSE DRAMATICALLY AMONG WHITE AMERICANS FROM 2004-2014

- HCV increased by 300%
- Admissions for opioid injection increased by 134%

Source: Centers for Disease Control and Prevention and Substance Abuse and Mental Health Services Administration
HEPATITIS C AND OPIOID INJECTION ROSE DRAMATICALLY AMONG WOMEN FROM 2004-2014

- HCV increased by 250%
- Admissions for opioid injection increased by 99%

Source: Centers for Disease Control and Prevention and Substance Abuse and Mental Health Services Administration
HEPATITIS C AND OPIOID INJECTION ROSE DRAMATICALLY IN YOUNGER AMERICANS FROM 2004-2014

- Among people aged 18-29, HCV increased by 400% and admission for opioid injection by 622%
- Among people aged 30-39, HCV increased by 325% and admission for opioid injection by 83%

Source: Centers for Disease Control and Prevention and Substance Abuse and Mental Health Services Administration
Figure 4.7. Reported cases of acute hepatitis C* by risk behavior/exposure† — United States, 2017

- Injection drug use: 400 (Yes), 1,059 (No), 1,757 (Missing)
- Multiple sex partners: 131 (Yes), 312 (No), 2,773 (Missing)
- Surgery: 123 (Yes), 855 (No), 2,238 (Missing)
- Sexual contact: 66 (Yes), 270 (No), 2,880 (Missing)
- Men who have sex with men¶: 32 (Yes), 260 (No), 1,483 (Missing)
- Needle stick: 36 (Yes), 441 (No), 2,739 (Missing)
- Household contact: 120 (Yes), 316 (No), 2,880 (Missing)
- Occupation: 11 (Yes), 1,082 (No), 2,123 (Missing)
- Dialysis patient: 7 (Yes), 1,148 (No), 2,061 (Missing)
- Transfusion recipient: 2 (Yes), 990 (No), 2,194 (Missing)

Source: CDC, National Notifiable Diseases Surveillance System.

* Hepatitis C
† Risk behavior/exposure
¶ Men who have sex with men
§ Missing
Antibodies to a Retrovirus Etiologically Associated with Acquired Immunodeficiency Syndrome (AIDS) in Populations with Increased Incidences of the Syndrome

In the United States, the retrovirus outcome of an opportunistic infection causing acquired immunodeficiency syndrome (AIDS) has been described. Acquired immunodeficiency syndrome is characterized by a progressive decline in the immune system, resulting in an increased risk of opportunistic infections and malignancies. Antibodies to the retrovirus associated with AIDS have been identified in populations with increased incidences of the disease.

Although direct evidence is not available for this association, it is believed that antibodies to the retrovirus associated with AIDS are associated with an increased risk of opportunistic infections and malignancies. The presence of antibodies to the retrovirus associated with AIDS has been associated with an increased risk of opportunistic infections and malignancies in populations with an increased incidence of AIDS.

Three case series provide support for this theory. The first case series, reported by the CDC, described a cluster of AIDS cases in a particular geographic area. The second case series, reported by the National Institutes of Health, described a cluster of AIDS cases in a particular demographic group. The third case series, reported by the World Health Organization, described a cluster of AIDS cases in a particular geographic area.

These case series suggest that the retrovirus associated with AIDS is associated with an increased risk of opportunistic infections and malignancies. The presence of antibodies to the retrovirus associated with AIDS has been associated with an increased risk of opportunistic infections and malignancies in populations with an increased incidence of AIDS.

Conclusions:

1. Antibodies to the retrovirus associated with AIDS are associated with an increased risk of opportunistic infections and malignancies. The presence of antibodies to the retrovirus associated with AIDS has been associated with an increased risk of opportunistic infections and malignancies in populations with an increased incidence of AIDS.

References:

Supplement Article

Using Interrupted Time Series Analysis to Measure the Impact of Legalized Syringe Exchange on HIV Diagnoses in Baltimore and Philadelphia

Monica S. Ruiz, PhD, MPH, Allison O'Rourke, MPH, Sean T. Allen, DrPH, MPH, David R. Holtgrave, PhD, David Metzger, PhD, Jose Benitez, MSW, Kathleen A. Brady, MD, C. Patrick Chaulk, MD, MPH, and Leana S. Wen, MD

Background: Syringe exchange programs (SEP) reduce HIV incidence associated with injection drug use (IDU), but legislation often prohibits implementation. We examined the policy change impact allowing for SEP implementation on HIV diagnoses among people who inject drugs in 2 US cities.

Setting: Philadelphia, PA, and Baltimore, MD.

Methods: Using surveillance data from Philadelphia (1984–2003) and Baltimore (1985–2013) for IDU-associated HIV diagnoses used autoregressive integrated moving average modeling to construct 2 tests to measure policy change impact. We forecasted the number of HIV diagnoses per city had policy not changed in those 2 years after implementation and compared it with the number observed diagnoses postpolicy change, obtaining an estimate for the averted HIV diagnoses. We then used interrupted time series analysis to assess the immediate step and trajectory impact of policy change on IDU-attributable HIV diagnoses.


FIGURE 3. Forecasted versus actual diagnoses of IDU-associated and MSM-associated HIV diagnoses (control case scenario) in Baltimore during the 10 years after the change in syringe exchange policy.
FIGURE 1. Forecasted versus actual diagnoses of IDU-associated HIV infection in Philadelphia during the 10 years after the change in syringe exchange policy.

FIGURE 2. Forecasted versus actual diagnoses of IDU-associated HIV diagnoses in Baltimore during the 10 years after the change in syringe exchange policy.
What are Syringe Services Programs (SSPs)?

Syringe Services Programs, often called SSPs, are community-based prevention programs. SSPs provide a range of health services, and they provide a lifeline to those struggling with substance abuse. Comprehensive SSPs offer patients vaccinations and testing for diseases, referrals to treatment for substance use disorder and other diseases (such as viral hepatitis and HIV), and sterile injection equipment to prevent the transmission of infectious diseases.

Scientists, including those at the Centers for Disease Control and Prevention (CDC), have studied SSPs for more than 30 years and found that comprehensive SSPs benefit communities.

- SSPs save lives by lowering the likelihood of deaths from overdoses.
- Providing testing, counseling, and sterile injection supplies helps prevent outbreaks of other diseases. For example, SSPs are associated with a 50% decline in the risk of HIV transmission.
- Users of SSPs were three times more likely to stop injecting drugs.
- Law enforcement benefits from reduced risk of needlesticks, an increase in crime, and the ability to save lives by preventing overdoses.
- When two similar cities were compared, the one with an SSP had 86% fewer syringes in places like parks and sidewalks.

What can a Syringe Services Program (SSP) do?

SSPs adapt to local needs by providing comprehensive support services, such as ways to get treatment, medicines to prevent overdoses, and tools to prevent HIV and viral hepatitis. Many support services may be operated in partnership with federal government funding.

- Counseling on treatment and prevention of HIV and Hepatitis B and C, such as antiretroviral therapy and pre-exposure prophylaxis (PrEP).
- Referral to substance use treatment, medical care, mental health services, and other support services.
- Vaccines for diseases like Hepatitis A and B.
- Testing for diseases like HIV and Hepatitis C.
- Access to and safe disposal of sterile syringes and injection equipment.

More than 30 years’ worth of research demonstrates that SSPs protect the public’s health. They save lives, help those experiencing a substance use disorder get the support needed to regain a healthy life, and reduce the impact of drug use on the community.

Visit [www.cdc.gov/PWID](http://www.cdc.gov/PWID) to learn more.
County-Level Vulnerability Assessment for Rapid Dissemination of HIV or HCV Infections Among Persons Who Inject Drugs, United States

Michelle M. Van Handel, MPH,* Charles E. Rose, PhD,* Elaine J. Hallsey, MA,† Jessica L. Kolling, MPH,‡ Jon E. Zibbell, PhD,§ Brian Lewis, BS,¶ Michele K. Bohm, MPH,¶ Christopher M. Jones, PharmD, MPH,¶ Barry E. Flanagan, PhD,|| Azfar-E-Alam Siddiqi, MD, PhD,* Kashif Iqbal, MPH,* Andrew L. Dent, MA, MBA,† Jonathan H. Mermin, MD, MPH,** Eugene McCray, MD,* John W. Ward, MD,§ and John T. Brooks, MD*

FIGURE 2. Counties for which estimated vulnerability scores or their upper 90% confidence interval exceeded the 95th percentile. Map produced by the Geospatial Research, Analysis, and Services Program (GRASP).

FIGURE 3. Estimated rate of people living with diagnosed HIV infection (PLWH) per 10,000 population in and around each vulnerable county at year-end 2012. The weighted average rate of people living with diagnosed HIV infection in the vulnerable county (inset A) and 20 miles beyond the vulnerable county border (inset B) was calculated using the area proportion of each adjacent county within the 20-mile buffer zone and the number of PLWH and county population estimates at year-end 2012. Map produced by the Geospatial Research, Analysis, and Services Program (GRASP).
https://opioid.amfar.org/
Virginia - VDH Opioid Indicators - HCV

File created on: 6/2/2020 8:49:48 AM
HCV Mortality

Annual number of hepatitis C-related deaths vs. other nationally notifiable infectious conditions in the US, 2003-2013

Source: Centers for Disease Control and Prevention
Treatment as Prevention
The Continuum of Hepatitis C Testing and Care

Kendra Viter, Danica Kuncio, E. Clare Newbern, and Caroline C. Johnson

HEPATOL Vol. 61, No. 3, 2015

Table 1. Demographics of Individuals at Each Stage in the Continuum of Hepatitis C Testing, Referral to Care, and Treatment in Philadelphia, January 2010 to December 2013

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Stage 1 (N = 13,596)</th>
<th>Ab only N = 7,213</th>
<th>No Ab + RNA (N = 4,638)</th>
<th>No Antiviral Treatment (N = 1,505)</th>
<th>Antiviral Treatment (N = 228)</th>
<th>P Value</th>
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<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>8,487 (62)</td>
<td>4,392 (61)</td>
<td>2,947 (64)</td>
<td>598 (64)</td>
<td>170 (71)</td>
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<td>2,821 (39)</td>
<td>1,691 (36)</td>
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<td>0</td>
<td>0</td>
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<td>&lt;1</td>
<td>176 (2)</td>
<td>123 (2)</td>
<td>44 (&lt;1)</td>
<td>9 (&lt;1)</td>
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<td></td>
<td>1-18</td>
<td>178 (1)</td>
<td>99 (1)</td>
<td>67 (1)</td>
<td>12 (1)</td>
<td>0</td>
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<tr>
<td></td>
<td>19-30</td>
<td>2,093 (15)</td>
<td>1,366 (19)</td>
<td>597 (13)</td>
<td>113 (8)</td>
<td>17 (7)</td>
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<td></td>
<td>31-44</td>
<td>2,661 (20)</td>
<td>1,619 (22)</td>
<td>811 (17)</td>
<td>196 (15)</td>
<td>36 (14)</td>
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<td></td>
<td>45-64</td>
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<td>2,766 (60)</td>
<td>1,051 (70)</td>
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<td>&gt;64</td>
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<td>642 (9)</td>
<td>353 (8)</td>
<td>125 (8)</td>
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<td>Race/ethnicity</td>
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<td>279 (37)</td>
<td>359 (44)</td>
<td>121 (50)</td>
<td>99 (45)</td>
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<tr>
<td></td>
<td>White</td>
<td>849 (43)</td>
<td>371 (49)</td>
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<td>81 (33)</td>
<td>85 (39)</td>
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<td>18 (2)</td>
<td>10 (4)</td>
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<td>78 (4)</td>
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<td>12 (5)</td>
<td>4 (2)</td>
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<td>179 (9)</td>
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<td>1,262</td>
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<td>93 (52)</td>
<td>276 (85)</td>
<td>130 (88)</td>
<td>170 (86)</td>
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<td>48 (15)</td>
<td>17 (12)</td>
<td>28 (14)</td>
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<td>7,100</td>
<td>4,314</td>
<td>1,359</td>
<td>41</td>
</tr>
</tbody>
</table>

*2013 data only.

Fig. 1. The continuum of hepatitis C testing, referral to care, and treatment in Philadelphia from January 2010 to December 2013.
Hepatitis C Cascade of Care among People Who Inject Drugs in Vancouver, Canada

Samantha Young, MD, Evan Wood, MD, PhD, BSc, M.J. Milloy, PhD, K. DeBeck, PhD, S. Dobner, MA, E. Nosova, PhD, T. Kerr, PhD, and K. Hayashi, PhD

Abstract

Background: People who inject drugs (PWID) have high rates of Hepatitis C Virus (HCV) infection. Little is known about the rates of diagnosis and treatment for HCV among PWID. Therefore, this study aims to characterize the cascade of care in Vancouver, Canada to improve HCV treatment access and delivery for PWID.

Methods: Data were derived from three prospective cohort studies of PWID in Vancouver, Canada between December 2005 and May 2015. We identified the progression of participants through five steps in the cascade of care: (1) chronic HCV, (2) linkage to HCV care, (3) liver disease assessment; (4) initiation of treatment; and (5) completion of treatment. Predictors of undergoing liver disease assessment for HCV treatment were identified using a multivariable extended Cox regression model.

Results: Among 1,771 participants with chronic HCV, 1,359 (84.5%) had ever been linked to care, 1,257 (80.0%) had undergone liver disease assessment, 163 (10.4%) had ever started HCV treatment, and 71 (4.5%) had ever completed treatment. In univariable analyses, HIV co-infection, use of methadone maintenance therapy, and hospitalization in the past 6 months were independently and positively associated with undergoing liver disease assessment (all P < 0.001), while daily heroin injection was independently and negatively associated with undergoing liver disease assessment (P = 0.01).

Liver Disease Assessment

Chronic HCV: 100%
Linked to Care: 86.50%
All: 80%
Biopsy or Fibroscan: 38%
Started Treatment: 10%
Completed Treatment: 4.50%
Barriers to Treatment Uptake (PWID)

• Individual
  • Unknown status
  • Lack of knowledge that treatment cures
  • Fear of side effects, stigmatization
  • Mistrust of health care system

• Health Provider
  • Concern regarding adherence, reinfection
  • Coexisting mental health diagnoses or active drug use
  • Lack of HCV Tx knowledge

• System Many
  • Insurance status
  • Limited services/expertise in the system
  • Complicated PA for medication
HEPATITIS C & INJECTION DRUG USE

What is Hepatitis C?
Hepatitis C is a serious liver disease caused by the Hepatitis C virus. Some people get only a short term, or acute, infection and are able to clear the virus without treatment. If someone clears the virus, this usually happens within 6 months after infection. However, about 80% of people who get infected develop a chronic, or lifelong, infection. Over time, chronic Hepatitis C can cause serious health problems including liver damage, liver failure, and even liver cancer.

What are the symptoms?
Symptoms of Hepatitis C can include: fever, feeling tired, not wanting to eat, upset stomach, throwing up, dark urine, grey-colored stool, joint pain, and yellow skin and eyes. However, many people who get Hepatitis C do not have symptoms and do not know they are infected. If symptoms occur with acute infection, they can appear anytime from 2 weeks to 6 months after infection. Symptoms of chronic Hepatitis C can take decades to develop, and when symptoms do appear, they often are a sign of advanced liver disease.

Should I get tested?
Yes. If you have ever injected drugs, you should get tested for Hepatitis C. If you are currently injecting, talk to your doctor about how often you should be tested.
The Hepatitis C Antibody Test is a blood test that looks for antibodies to the Hepatitis C virus. A reactive or positive Hepatitis C Antibody Test means that a person has been infected at some point in time. Unlike HIV, a reactive antibody test does not necessarily mean a person still has Hepatitis C. An additional blood test called a RNA test is needed to determine if a person is currently infected with Hepatitis C.

How is Hepatitis C spread among people who inject drugs?
The Hepatitis C virus is very infectious and can easily spread when a person comes into contact with surfaces, equipment, or objects that are contaminated with infected blood, even in amounts too small to see. The virus can survive on dry surfaces and equipment for up to 6 weeks. People who inject drugs can get Hepatitis C from:

- Needles & Syringes. Sharing or reusing needles and syringes increases the chance of spreading the Hepatitis C virus. Syringes with detachable needles increase this risk even more because they can remain more blood after they are used than syringes with fixed needles.
- Preparation Equipment. Any equipment, such as cookers, cottons, water, ties, and alcohol swabs, can easily become contaminated during the drug preparation process.

Fingers. Fingers that come into contact with infected blood can spread Hepatitis C. Blood on fingers and hands can contaminate the injection site, cottons, cookers, ties, and swabs.

Surfaces. Hepatitis C can spread when blood from an infected person contaminates a surface and then that surface is reused by another person to prepare injection equipment.

All equipment used to prepare and inject drugs can spread Hepatitis C when contaminated and shared.

Can Hepatitis C be prevented?
Yes. The best way to prevent Hepatitis C is to stop injecting. Drug treatment, including methadone or buprenorphine, can lower your risk for Hepatitis C since there will no longer be a need to inject.
However, if you are unable or unwilling to stop injecting drugs, there are steps you can take to reduce the risk of becoming infected:

- Do not share any equipment used to inject drugs with another person.
- Always use new, sterile needles, syringes and preparation equipment—cookers, cottons, water, ties, and alcohol swabs—for each injection.
- Set up a clean surface before placing down your injection equipment.
- Do not divide and share drug solution with equipment that has already been used.
- Avoid using syringes with detachable needles to reduce the amount of blood remaining in the syringe after injecting.
- Thoroughly wash hands with soap and water before and after injecting to remove blood or germs.
- Clean injection site with alcohol or soap and water prior to injecting.
- Apply pressure to injection site with a sterile pad to stop any bleeding after injecting.
- Only handle your own injection equipment. If you do inject with other people, separate your equipment from others to avoid accidental sharing.

Use new syringes and equipment with every injection.
The Hepatitis C virus is difficult to kill. The best way to prevent Hepatitis C is to use new, sterile syringes and equipment with every injection. If using a new syringe is not possible, bleach has been found to kill the Hepatitis C virus in syringes when used as a solution of one part bleach to 10 parts water for two minutes. Bleach, however, may not be effective when used to clean other types of equipment used to prepare or inject drugs. Although boiling, burning, or using common cleaning fluids, alcohol, or peroxide can reduce the amount of virus, this may not prevent you from getting infected. Cleaning previously used equipment and syringes should only be done if new, sterile equipment is not available.

Can Hepatitis C be treated?
Yes. New and improved treatments are available that can cure most people with Hepatitis C. Most of the new treatments are taken as pills and do not require interferon injections. However, treatment for Hepatitis C depends on many different factors, so it is important to talk to a doctor about options.

Can someone get re-infected with Hepatitis C?
Yes. Someone who clears the virus, either on their own or from successful treatment, can become infected again.

Does injecting put you at risk for other types of hepatitis?
Yes. People who inject are more likely to get Hepatitis A and Hepatitis B. Getting vaccinated for Hepatitis A and B will prevent these types of hepatitis. There is currently no vaccine for Hepatitis C.

For More Information
Talk to your health professional, call your health department, or visit www.cdc.gov/hepatitis.
Annals of Internal Medicine

Elbasvir-Grazoprevir to Treat Hepatitis C Receiving Opioid Agonist Therapy
A Randomized Trial

Gregory J. Dore, MD; Frederick Altice, MD; Alain H. Litwin, MD; Olav Anne Luetkemeyer, MD; Ronald Nahass, MD; Cheng-Yuan Peng, MD; Anita Y.M. Howe, PhD; Isais N. Gendrano, MPH; Errol Chen, MPH; I David C. Nickle, PhD; Bach-Yen Nguyen, MD; Janine Wahl, MD; Elias Heather L. Platt, MD; on behalf of the C-EDGE CO-STAR Study Group

Background: Hepatitis C virus (HCV) infection is common in persons who inject drugs (PWID).

Objective: To evaluate elbasvir-grazoprevir in treating HCV infection in PWID.

Design: Randomized, placebo-controlled, double-blind trial.

Setting: Australia, Canada, France, Germany, Italy, the Netherlands, New Zealand, Norway, Spain, Taiwan, the United Kingdom, and the United States.

Patients: 301 treatment-naïve patients with chronic HCV genotype 1, 4, or 6 infection who were at least 80% adherent to visits for opioid agonist therapy (OAT).

Intervention: The immediate-treatment group (ITG) received elbasvir-grazoprevir for 12 weeks; the deferred-treatment group (DTG) received placebo for 12 weeks, no treatment for 4 weeks, then open-label elbasvir-grazoprevir for 12 weeks.

Measurements: The primary outcome was sustained virologic response at 12 weeks (SVR12), evaluated separately in the ITG and DTG. Other outcomes included SVR24, viral recurrence or re-infection, and adverse events.

Results: The SVR12 was 91.5% (95% CI, 86.8% to 95.0%) in the ITG and 89.5% (95% CI, 81.5% to 94.8%) in the active phase of the DTG. Drug use at baseline and during treatment did not

RESEARCH NEWS

Curative hepatitis C treatment is effective in drug users, trial shows

Susan Mayor

London

Patients with hepatitis C infection being treated for opioid addiction have high rates of virologic response to oral, once daily treatment with a fixed combination of elbasvir and grazoprevir regardless of ongoing drug use, a randomised trial has shown.1

Injecting drug users are the main group affected by hepatitis C in high income countries, but most trials of antiviral therapies have excluded people with recent injection drug use.

The new trial included 301 people with chronic hepatitis C infection (virus genotypes 1, 4, or 6) who were at least 80% adherent to visits for opioid agonist treatment. They were randomly allocated to immediate treatment with elbasvir (an NS5A inhibitor) plus grazoprevir (an NS3A/4A protease inhibitor) for 12 weeks or to deferred treatment with placebo for 12 weeks, followed by elbasvir-grazoprevir for 12 weeks after a wash-out period of no treatment for four weeks.

The results, published in Annals of Internal Medicine, showed that 91.5% (95% confidence interval 86.8% to 95.0%) of patients given immediate treatment and 89.5% (81.5% to 94.8%) of the deferred treatment group achieved sustained virologic response (undetectable levels of hepatitis C virus) at 12 weeks.

Drug use at baseline and during treatment did not affect sustained virologic response at 12 weeks or adherence to hepatitis C treatment in the study, which was funded by Merck & Co. More than half of the patients in each group tested positive for at least one potential drug of misuse, including methadone, at each visit during the trial.

“These results support the removal of drug use as a barrier to interferon-free HCV [hepatitis C virus] treatment for patients receiving oral opioid agonist therapy,” said the research group, led by Gregory Dore, of the Kirby Institute at the University of New South Wales, Australia.

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“These results support the removal of drug use as a barrier to interferon-free HCV [hepatitis C virus] treatment for patients receiving oral opioid agonist therapy,” said the research group, led by Gregory Dore, of the Kirby Institute at the University of New South Wales, Australia.
DMAS HCV Policy Changes

• No sobriety restrictions
• No liver damage restrictions
• Generalists and specialists can prescribe
• Mavyret (glecaprevir/pibrentasvir) and Epclusa (sofosbuvir/velpatasvir) available with abridged prior authorization form
• Preferred Office Based Opioid Treatment Programs now asked to implement universal screening and referral for HCV
USPSTF HCV Guideline Screening Recommendations

BOX 1. Persons recommended for hepatitis C testing

- Universal hepatitis C screening:
  - Hepatitis C screening at least once in a lifetime for all adults aged ≥18 years, except in settings where the prevalence of HCV infection (HCV RNA-positivity) is ≤0.1%
  - Hepatitis C screening for all pregnant women during each pregnancy, except in settings where the prevalence of HCV infection (HCV RNA-positivity) is ≤0.1%

- One-time hepatitis C testing regardless of age or setting prevalence among persons with recognized risk factors or exposures:
  - Persons with HIV
  - Persons who ever injected drugs and shared needles, syringes, or other drug preparation equipment, including those who injected once or a few times many years ago
  - Persons with selected medical conditions, including persons who ever received maintenance hemodialysis and persons with persistently abnormal ALT levels
  - Prior recipients of transfusions or organ transplants, including persons who received clotting factor concentrates produced before 1987, persons who received a transfusion of blood or blood components before July 1992, persons who received an organ transplant before July 1992, and persons who were notified that they received blood from a donor who later tested positive for HCV infection
  - Health care, emergency medical, and public safety personnel after needle sticks, sharps, or mucosal exposures to HCV-positive blood
  - Children born to mothers with HCV infection

- Routine periodic testing for persons with ongoing risk factors, while risk factors persist:
  - Persons who currently inject drugs and share needles, syringes, or other drug preparation equipment
  - Persons with selected medical conditions, including persons who ever received maintenance hemodialysis

- Any person who requests hepatitis C testing should receive it, regardless of disclosure of risk, because many persons might be reluctant to disclose stigmatizing risks.
WHO SHOULD GET TESTED FOR HEPATITIS C?

EVERY ADULT

At least once

EVERY PREGNANT WOMAN

Every pregnancy

EVERYONE WITH RISK FACTORS

Regularly

SOURCE: CDC Recommendations for Hepatitis C Screening, MMWR, April 2020
USPSTF HCV Guideline Screening Recommendations

BOX 2. Management of persons with HCV infection

- Medical evaluation (by either a primary-care clinician or specialist [e.g., in hepatology, gastroenterology, or infectious disease]) for chronic liver disease, including treatment and monitoring
- Hepatitis A and hepatitis B vaccination
- Screening and brief intervention for alcohol consumption
- Avoiding new medicines, including over-the-counter and herbal agents, without first checking with their health care provider
- HIV risk assessment and testing
- Weight management or losing weight and following a healthy diet and staying physically active for persons who are overweight (BMI ≥25 kg/m²) or obese (BMI ≥30 kg/m²)
- Avoiding or stopping donating blood, tissue, or semen
- Refraining from sharing appliances that might come into contact with blood, such as toothbrushes, dental appliances, razors, nail clippers, glucose meters, and lancet devices.
HIV/HCV/STI Testing during COVID-19 pandemic

Dear Colleague,

May 27, 2020
Page 2

The kit is then mailed back to the lab which performs the testing and returns results to the clinician.

Although providing access to HIV/HCV/STD testing has become more challenging, the benefits of knowing one’s status and initiating early treatment continue. Indeed, if untreated HIV infection increases the risk of more severe COVID-19, then the benefits of testing and treatment initiation are greater than ever. OA and STD CB remain committed to moving forward with efforts to end the HIV/HCV/STD epidemic while considering the needs of the communities and individuals at risk for COVID-19 in every decision.

Sincerely,

Phil Peters, MD
Office of AIDS Division Medical Officer
Center for Infectious Diseases
California Department of Public Health

Kathleen Jacobson, MD
Chief, STD Control Branch
Center for Infectious Diseases
California Department of Public Health
Prevalence of Maternal Hepatitis C Virus Infection in Ohio

Robert M. Rossi, MD, and Carri R. Warshak, MD

Fig. 2. Maternal hepatitis C virus infection rates in Ohio by county for 2006 (A) and 2015 (B).
Hepatitis C Virus Knowledge Among Pregnant Women on Opioid Maintenance Therapy: A Retrospective Cohort Study

Elizabeth E. Krans, MD, MSc, Susan L. Zickmund, PhD, Vinod K. Rustgi, MD, Seo Young Park, PhD, Shannon L. Dunn, BS, and Eleanor B. Schwarz, MD, MS

Abstract

Background: The purpose of this study was to describe the delivery of prenatal care services to women with opioid use disorder (OUD) on opioid maintenance therapy at high risk for hepatitis C virus (HCV) infection. Methods: We conducted a retrospective cohort evaluation of 791 pregnant women with OUD from 2009 to 2012. HCV screening was defined as documentation of (a) an anti-HCV antibody test or (b) a provider discussion regarding a known HCV diagnosis during pregnancy. Multivariate logistic regression was used to identify predictors of HCV screening during pregnancy. Results: Among 791 pregnant women with OUD, 641 (77.2%) were screened for HCV infection and 369/611 (60.4%) were HCV positive. In multivariable analysis, patients who were married (odds ratio [OR] = 0.52; 95% confidence interval [CI] = 0.29, 0.91), used buprenorphine (OR = 0.45; 95% CI = 0.28, 0.71), and were cared for by private practice providers (OR = 0.29; 95% CI = 0.19, 0.45) were significantly less likely to be screened. In contrast, patients who used benzodiazepines (OR = 1.72; 95% CI = 1.02, 2.92), intravenous (IV) opioids (OR = 0.13; 95% CI = 3.96, 9.36), had legal problems (OR = 2.25; 95% CI = 1.12, 4.45), had children not in their custody (OR = 1.81; 95% CI = 1.01, 3.24), and who had a partner with substance abuse history (OR = 2.38; 95% CI = 1.23, 4.59) were significantly more likely to be screened. Of 369 HCV-positive patients, a new diagnosis of HCV was made during pregnancy for 108 (29.3%) patients. Only 94 (25.5%) had HCV viral load testing, 61 (16.5%) had HCV genotype testing, and 38 (10.4%) received an immunization for hepatitis A. Although 285 (77.2%) patients were referred to hepatology, only 71 (24.9%) attended the consultation. Finally, only 6 (1.6%) patients received HCV treatment 1 year following delivery. Conclusions: Prenatal care approaches to HCV infection remain inconsistent, and the majority of patients diagnosed with HCV infection during pregnancy do not receive treatment after delivery.
Hepatitis C Testing Among Perinatally Exposed Infants

BACKGROUND: Hepatitis C virus (HCV) prevalence doubled among pregnant women from 2009 to 2014, reaching 3.4 per 1000 births nationwide. Infants exposed to HCV may acquire HCV by vertical transmission. National guidelines recommend that infants exposed to HCV be tested; however, it is unclear if these recommendations are being followed. Our objectives were to determine if infants exposed to HCV were tested and to determine hospital- and patient-level factors associated with differences in testing.

FIGURE 1
Number of infants exposed to HCV per 1000 live births in Tennessee by county, 2005-2014.

FIGURE 2
Testing of infants exposed to HCV.

EXPOSED INFANTS

23%

VS

EXPOSED BLACK INFANTS

10%

Maternal and infant dyads
N = 384837

Exposed to HCV
n = 4072 (1%)

Tested
n = 946 (23%)

Not tested
n = 3126 (77%)

Adequate testing
n = 733 (77%)

Inadequate testing
n = 213 (23%)
HCV Summary

Particular Care Needed: PWID During Pregnancy Especially Postpartum
Managing HIV and Hepatitis C Outbreaks Among People Who Inject Drugs

A GUIDE FOR STATE AND LOCAL HEALTH DEPARTMENTS

March 2018
Version 1.0

The American Association for the Study of Liver Diseases and the Infectious Diseases Society of America Present

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

Last Updated: November 6, 2019
www.hcvguidelines.org

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We answer your questions on:

**HIV/AIDS Management**
(800) 933-3413

**Perinatal HIV**
(888) 448-8765

**PEP: Post-Exposure Prophylaxis**
(888) 448-4911

**PrEP: Pre-Exposure Prophylaxis**
(855) 448-7737

**Hepatitis C Management**
(844) 437-4836

**Substance Use Management**
(855) 300-3595

Online consultation services: nccc.ucsf.edu
UVA Project ECHO: Neonatal Abstinence Syndrome

- Fridays 8:00-9:00am
- May-September 2020
- Link to Register: https://connect.VirginiaProjectECHO.org/Series/Registration/272
- Zoom Link for Sessions: https://virginia.zoom.us/j/199108591

Registered participants will receive calendar invitations, email reminders with Zoom link included, and access to resources uploaded to the series landing page.

- ProjectECHO@UVA.edu