NEW YORK STATE OF OPPORTUNITY. Department of Health

Hepatitis C and the opioid crisis

Dual epidemics

May 11, 2018

Erie County Opiate Epidemic Task Force

Burden of Hepatitis C Disease

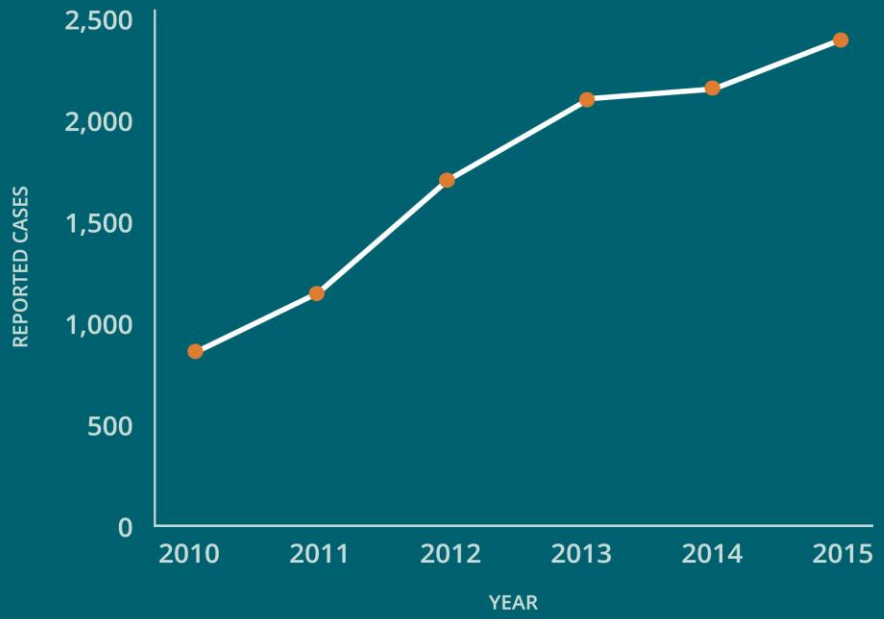
- Approximately 3.5 million persons are currently infected with HCV.[1,2]
- Baby boomers account for 75% of HCV cases in the U.S.[3]
- Mortality among HCV-infected persons increased during 2006-2010.[4,5]
- In 2007, HCV-related deaths exceeded HIV-related deaths.[4]
- In 2013, HCV associated deaths exceeded the combined number of deaths of 60 other infectious diseases as underlying causes. [5]
- The number of HCV-associated deaths increased 10.9% from 2011 through 2014 and decreased 0.2% to 19,629 in 2015.[6]

1)Edlin BR, Eckhardt BJ, Shu MA, Holmberg SD, Swan T. Hepatology. 2015 Nov;62(5):1353- 63; 2) Centers for Disease Control and Prevention. MMWR. 2011;60(17):537-41, 3)CDC. MMWR 2012;61(RR04):1-18; 4) Ly KN, Xing J, Klevens RM, Jiles RB, Ward JW, Holmberg SD.. Ann Intern Med. 2012;156(4):271-8; 5) Mahajan R, Xing J, Liu SJ, Ly KN, Moorman AC, Rupp LB, et al. Clin Infect Dis. 2014;58(8):1055-61;6)Ly KN, Hughes EM, Jiles RB, Holmberg SD. Rising mortality associated with hepatitis C virus in the United States. Clin Infect Dis 2016:62:1287-1288.

Burden of Hepatitis C among People Who Inject Drugs (PWID)

- **The most common risk factor associated with HCV transmission is injection drug use**
- PWID remain at highest risk for HCV infection
- PWID account for 60% of existing HCV infections
- PWID account for 80% of new HCV infections
  - Acquisition of HCV is fairly rapid after the start of IDU
- Increase in new HCV cases among young adults (15-29 years)
  - Living in suburban and rural areas
- Increases among women of child bearing age (14 -55 years)
  - IDU as the primary risk
- Most PWID are willing to receive HCV treatment
  - Only 1-2% are actually treated each year
  - HCV treatment could act as prevention
- Dual epidemics- opioids and HCV

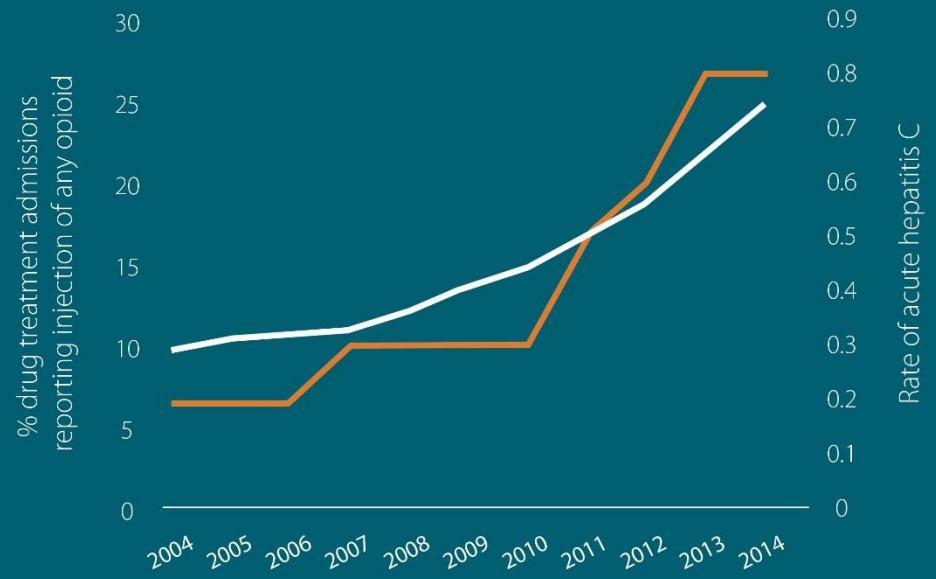
NEW HEPATITIS C INFECTIONS HAVE NEARLY TRIPLED SINCE 2010



GIVEN LIMITED TESTING AND UNDERREPORTING, CDC ESTIMATES THE ACTUAL NUMBER OF AMERICANS NEWLY INFECTED IS **34,000**

Source: Centers for Disease Control and Prevention

HEPATITIS C AND OPIOID INJECTION ROSE DRAMATICALLY AMONG WHITE AMERICANS FROM 2004-2014



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

HCV Rate Among White (Non-Hispanic) Americans

Any Opioid Injection Among White (Non-Hispanic) Americans

Source: Centers for Disease Control and Prevention and Substance Abuse and Mental Health Services Administration

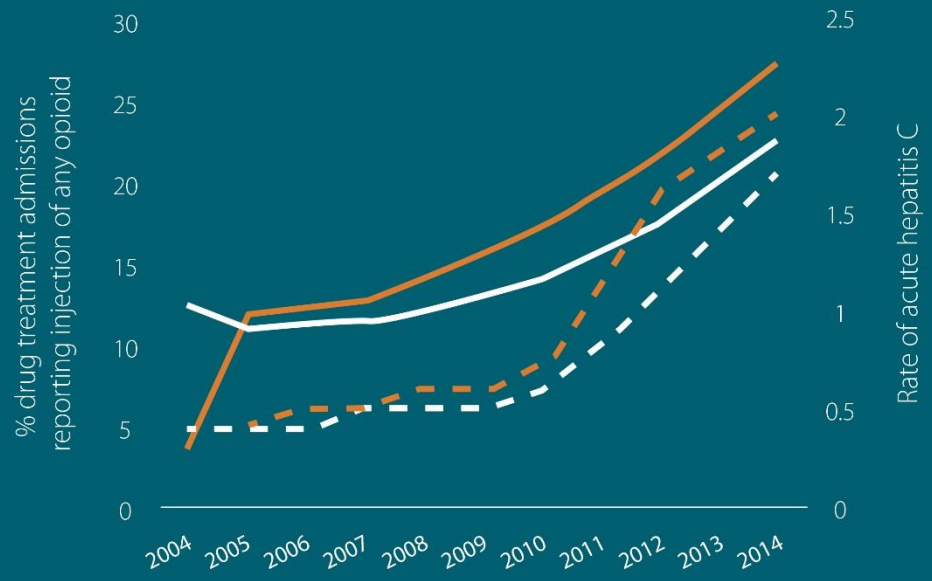
HEPATITIS C AND OPIOID INJECTION ROSE DRAMATICALLY AMONG WOMEN FROM 2004-2014

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

HCV Rate Among Women
Any Opioid Injection Among Women

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%

Any Opioid Injection (18-29)
Any Opioid Injection (30-39)
HCV Rate (18-29)
HCV Rate (30-39)

Source: Centers for Disease Control and Prevention and Substance Abuse and Mental Health Services Administration

Morbidity and Mortality Weekly Report

Notes from the Field

Hepatitis C Virus Infections Among Young Adults — Rural Wisconsin, 2010

During November 2010, Wisconsin Division of Public Health (DPH) staff members noted the number of hepatitis C virus (HCV) infections reported annually among persons aged <30 years in six contiguous rural counties of Wisconsin had increased from an average of eight cases per year during 2004–2008 to an average of 24 cases per year during 2009–2010. To understand factors associated with this increase, DPH, local health departments, and CDC investigated the epidemiologic and laboratory characteristics of 25 cases reported during 2010 among adults aged <30 years who resided in these six counties.

Among the 25 patients investigated, medical records of 21 were reviewed, 17 were interviewed, and 16 provided blood samples for quasispecies analysis (1) to assess relatedness of

Hepatitis C Virus Infection Among Women Giving Birth — Tennessee and United States, 2009–2014

Morbidity and Mortality Weekly Report

Risk Factors for HCV Infection Among Young Adults in Rural New York Who Inject Prescription Opioid Analgesics

Individual and Network Factors Associated With Prevalent Hepatitis C Infection Among Rural Appalachian Injection Drug Users

Jennifer R. Havens, PhD, MPH, Michelle R. Lofwall, MD, Simon D. W. Fro
and Richard A. Crosby, PhD

Almost 2% of US residents have antibodies to the hepatitis C virus (HCV). Because HCV is highly transmissible parenterally, injection drug use is an efficient mechanism for virus transmission.[1] In a comprehensive meta-analysis examining HCV infection among injection drug

Objectives. W
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MMWR Weekly

May 16, 2008 / 57(19);517-521

Use of Enhanced Surveillance for Hepatitis C Virus Infection to Detect a Cluster Among Young Injection-Drug Users --- New York, November 2004--April 2007

Infection with hepatitis C virus (HCV) is a leading cause of chronic liver disease in the United States (1). Chronic hepatitis B and C virus infections were added to the nationally notifiable diseases list in 2003 (2). Approximately 3.2 million persons in the United States have chronic HCV infection (3). The most common risk factor for HCV infection is illicit drug use (specifically injection-drug use [IDU]) (3,4), although approximately one third to one half of cases have no identified risk factor (4; New York State Department of Health [NYSDOH], unpublished data, 2008). Because approximately 80% of acute HCV infections are asymptomatic and no serologic markers for recent infection exist, distinguishing recent from distant infection based on serology alone is challenging (5) and establishment of national HCV

Indiana HIV outbreak, hepatitis C epidemic sparks CDC alert

Morbidity and Mortality Weekly Report
July 22, 2016

Increased Hepatitis C Virus (HCV) Detection in Women of Childbearing Age and Potential Risk for Vertical Transmission — United States and Kentucky, 2011–2014

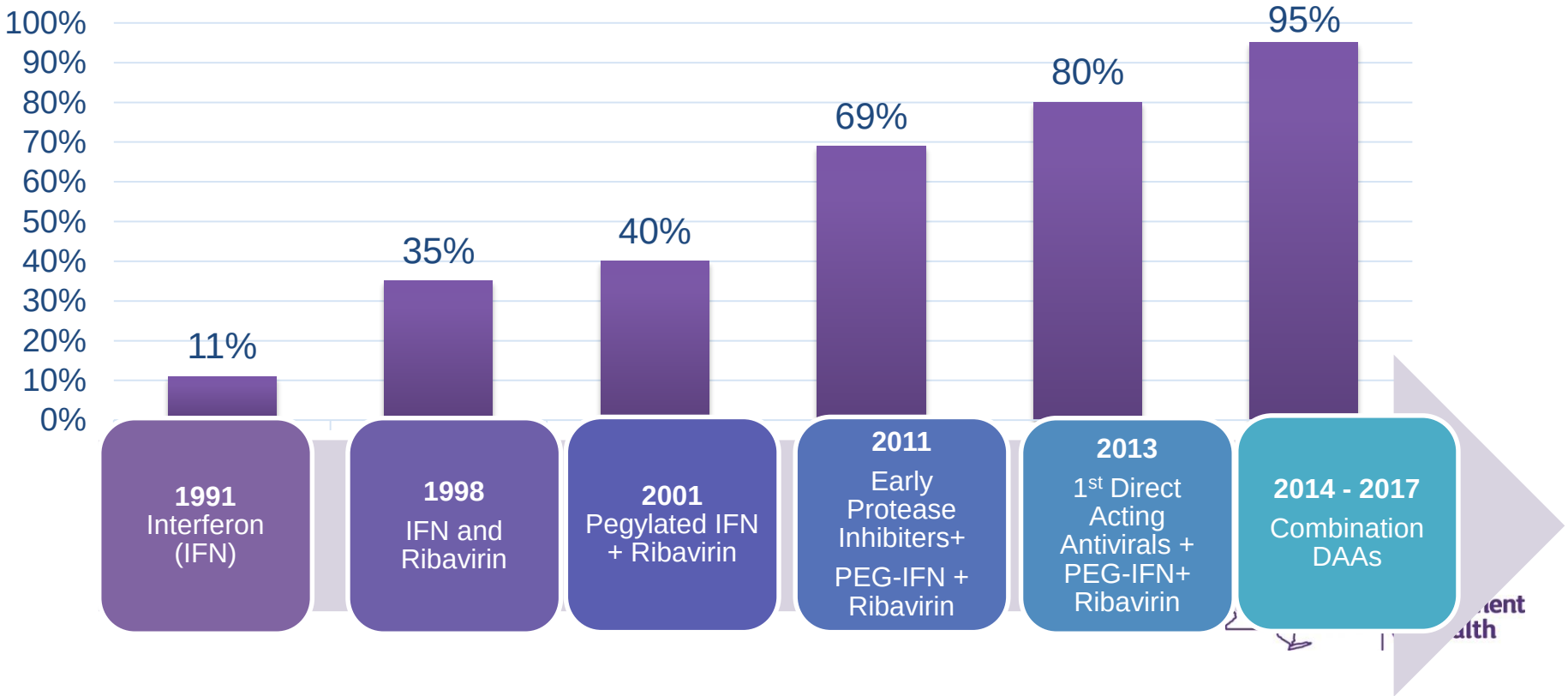
Increases in Acute Hepatitis C Virus Infection Related to a Growing Opioid Epidemic and Associated Injection Drug Use, United States, 2004 to 2014

Jon E. Zibbell, PhD, Alice K. Asher, PhD, Rajiv C. Patel, MPH, Ben Kupronis, MPH, Kashif Iqbal, MPH, John W. Ward, MD, and Deborah Holtzman, PhD

Hepatitis C is curable

- Combinations of direct acting antivirals (DAAs)
- Most regimens taken one a day – many one pill a day
- Shorter duration (approx. 12 weeks); 8 weeks for some
- Effective in historically ‘hard-to treat’ patients:
  - Cirrhosis
  - HIV coinfected
- Current treatment regimens have far fewer side effects
  - Recommended treatment regimens no longer include interferon

Progress in Hepatitis C Treatment Rates of Cure (SVR)



Barriers to treating HCV in PWID

Patient barriers
- Lack of HCV knowledge
- No symptoms
- Misinformation/fear about medications
- Lack of insurance
- Stigma
- Competing health priorities: mental health, substance use, HIV
- Alcohol use
- Socio-economic factors: employment, income, child care, housing, social support

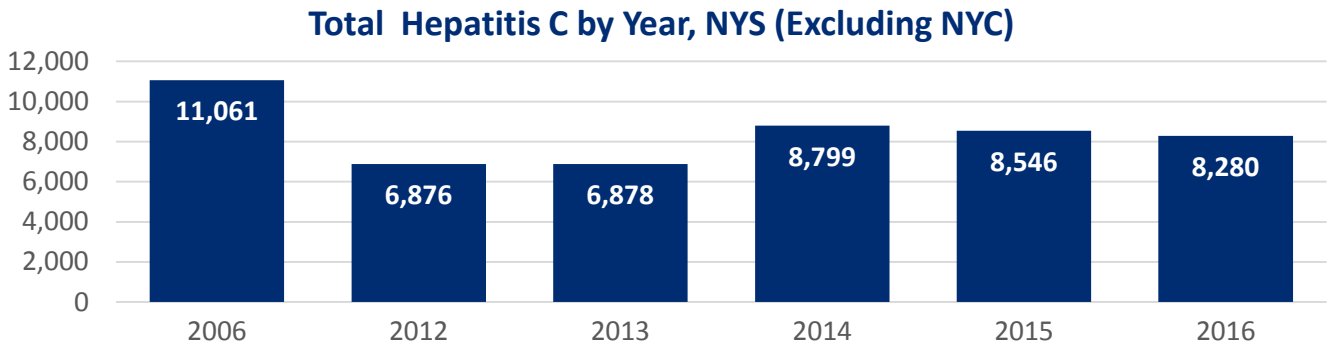
Provider barriers
- Lack of provider capacity
- Lack of HCV knowledge
- Concerns about adherence
- Reinfection
- Abstinence requirement

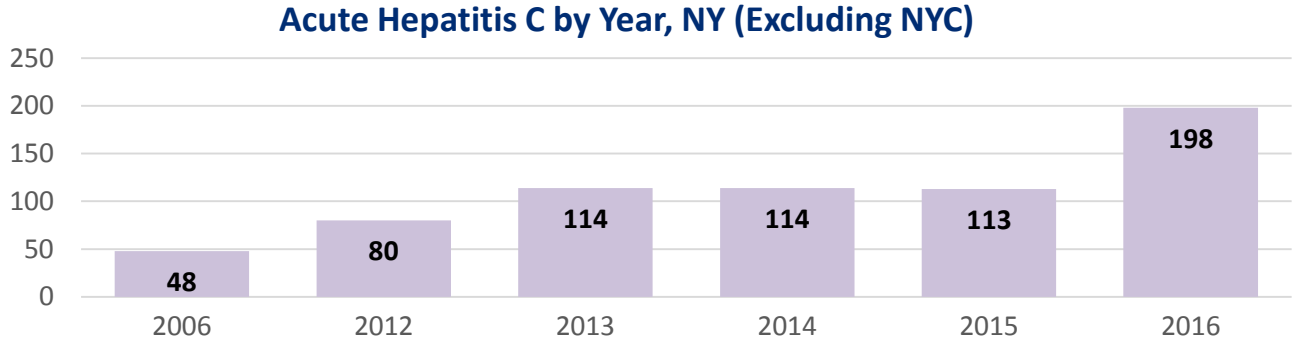
Systems barriers
- Lack of provider capacity
- Insufficient resources for case managers, navigators, social workers
- Cost of medications
- Medicaid restrictions
- Stigma

Facts about HCV treatment among PWID

- Active injection drug use is no longer a contraindication for HCV treatment (AASLD/IDSA and NYSDOH)
- Several studies show that PWID:
  - Are adherent to treatments [1,2]
  - Have similar treatment outcomes as non-PWID[1]
    - With or without MAT
  - Low reinfection rates[1,3-5]
- No drug-drug interactions between HCV medications and MAT

1) Dore GJ, et al. Ann Intern Med. 2016; 2) Grebely J. et al. The Lancet. 2018; 3) Aspinall EJ, et al. Clin Infect Dis. 2013;57(suppl 2):S80-S89; 4) Midgard H, et al. International Liver Congress 2015. Abstract 0061; 5) Weir A, et al. Drug Alcohol Depend. 2016;165:53-60.





Note: Reporting of hepatitis C is mandated under New York State Sanitary Code (10NYCRR 2.10,2.14). Data represent cases that meet CSTE/CDC case definition for national notification and are current as of 8/24/2017. Case definitions changed in 2016, resulting in more cases defined as acute and fewer defined as chronic compared to previous definitions

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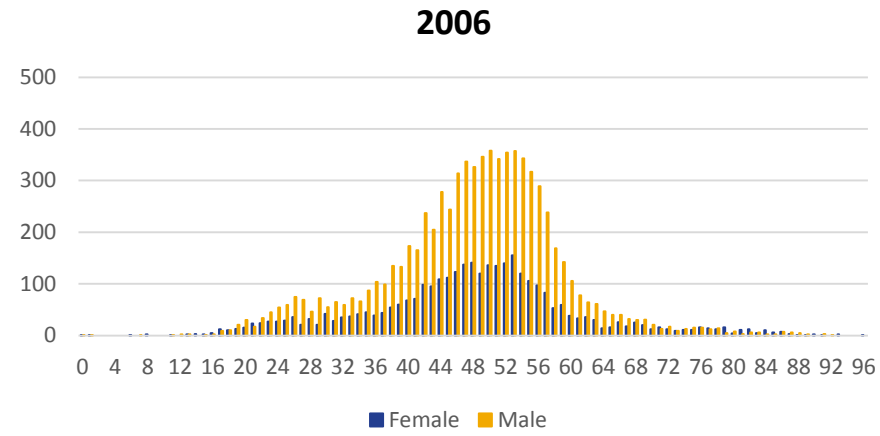
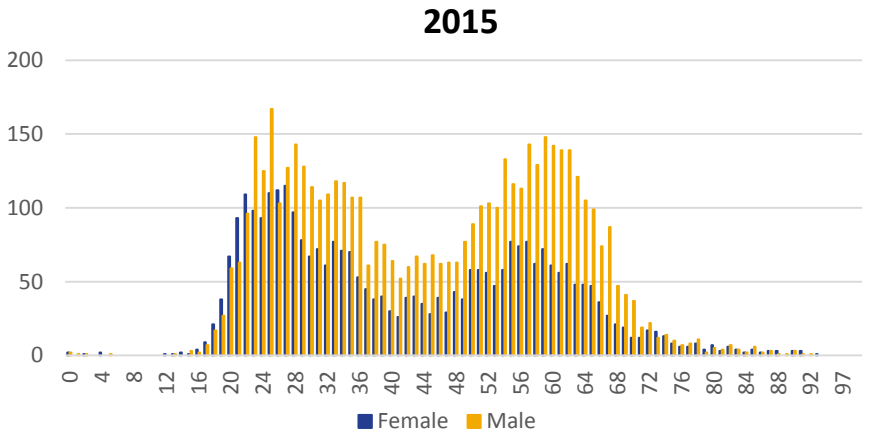
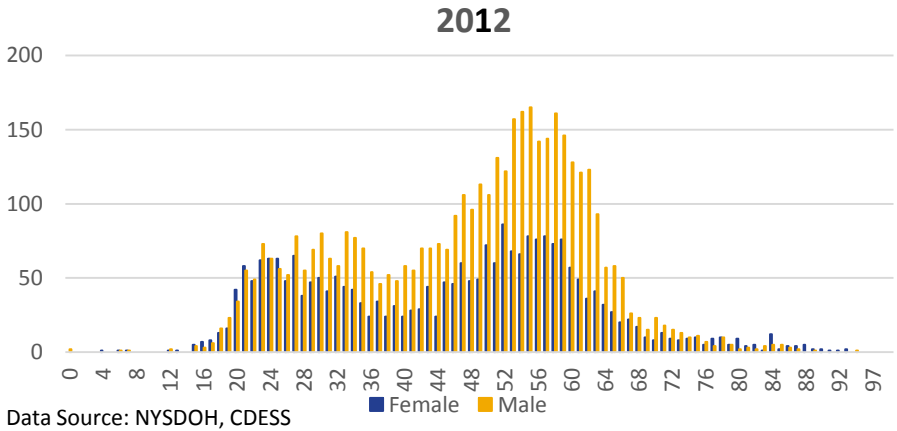
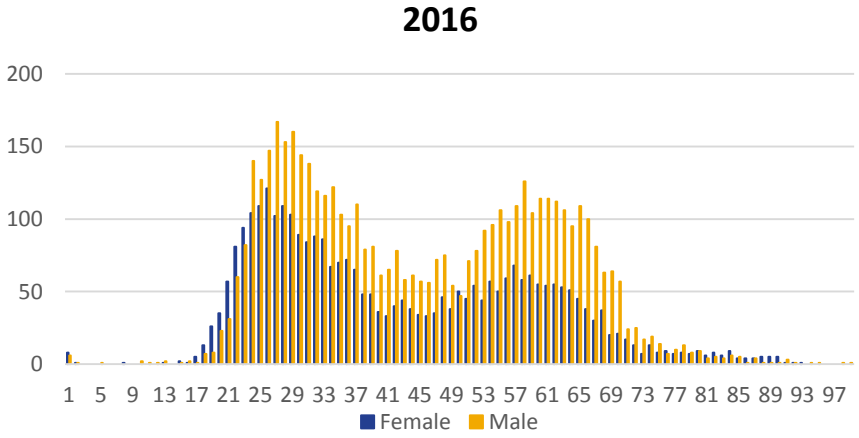
Source: NYS DOH Communicable Electronic Disease Surveillance System.

Total Hepatitis C by Age, Sex and Year, NYS (Excluding NYC)



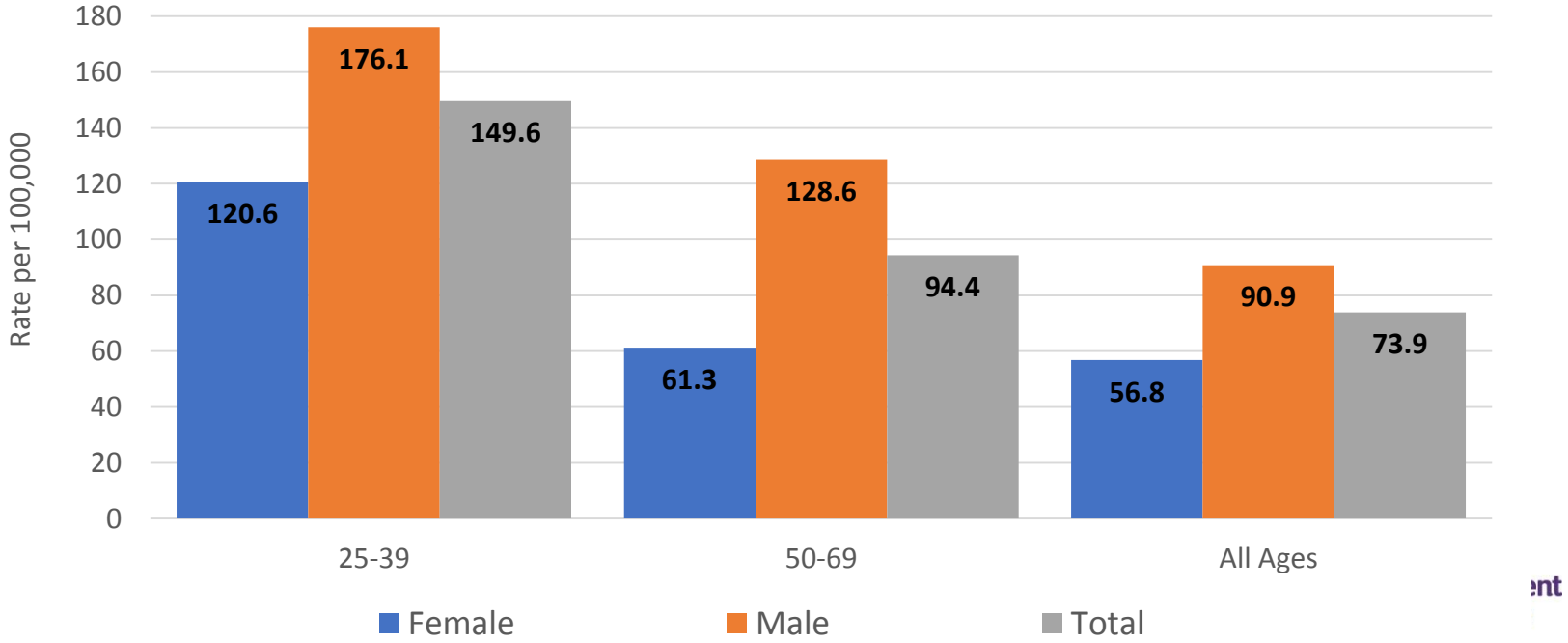






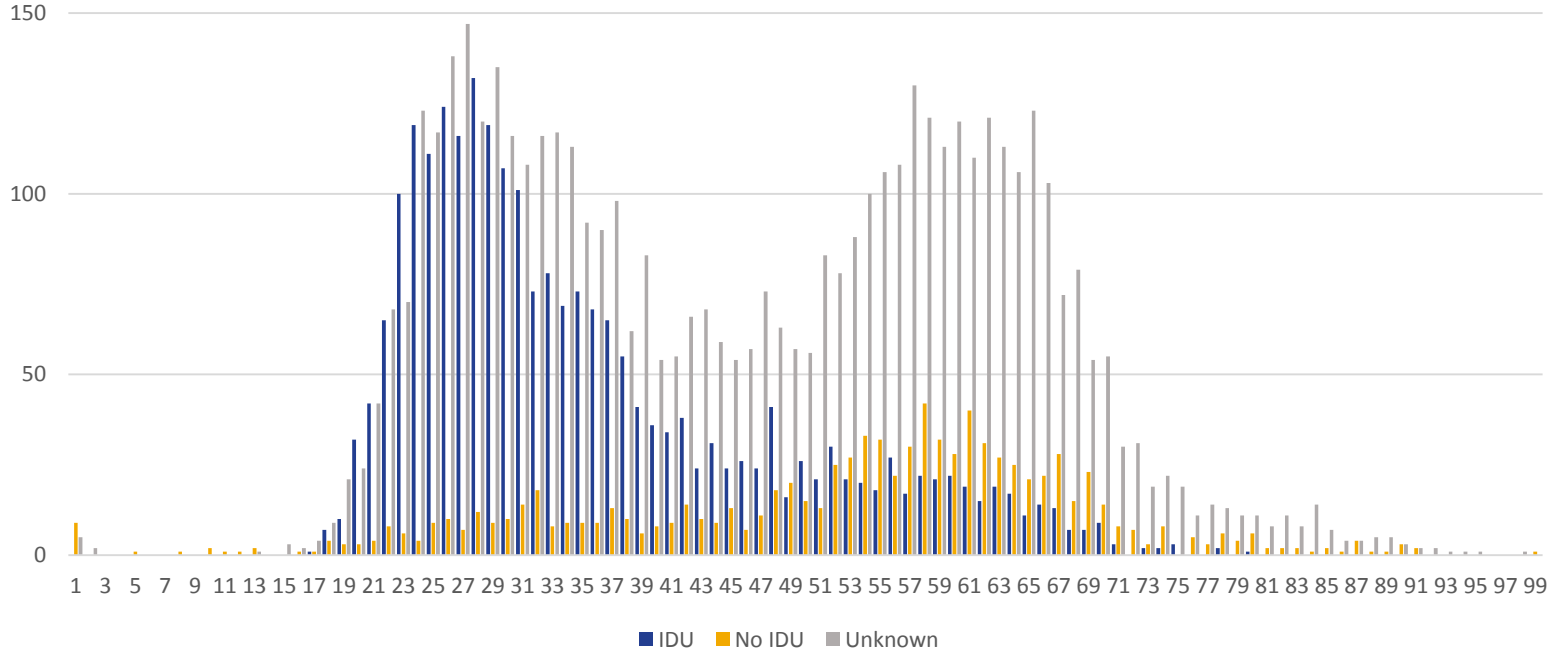
Data Source: NYSDOH, CDESS

Total Hepatitis C Rates: NYS (Excluding NYC) by Sex and Age Group, 2016



Source: NYS DOH Communicable Electronic Disease Surveillance System.

Total Hepatitis C: NYS (Excluding NYC) by Age & Injection Drug Use (IDU), 2016



Source: NYS DOH Communicable Electronic Disease Surveillance System.

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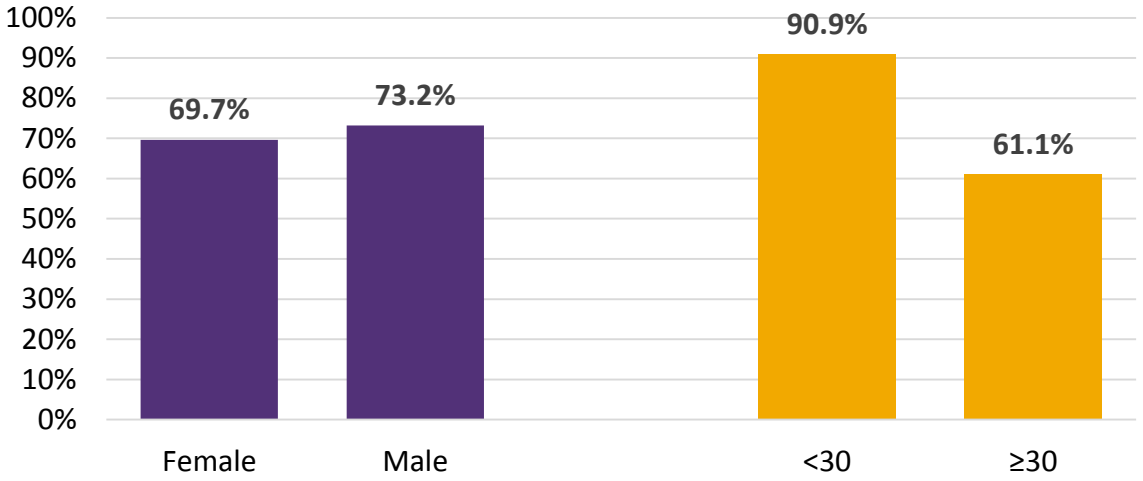
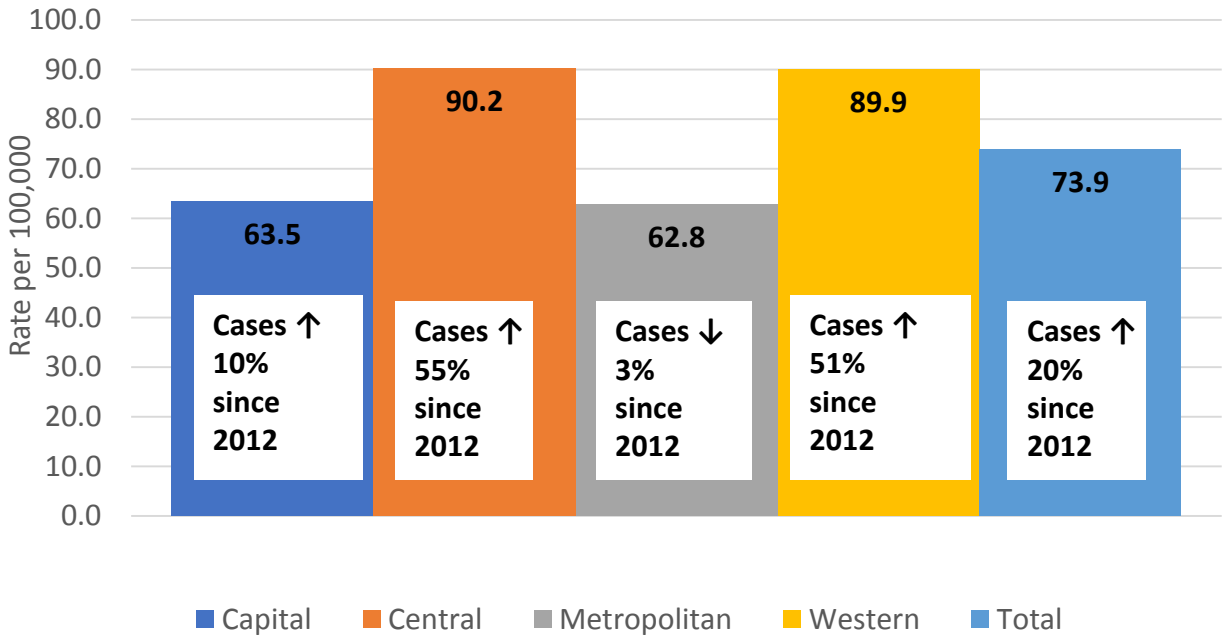
Total Hepatitis C : NYS (Excluding NYC) Injection Drug Use by Sex and Age, 2016



Percent IDU among those with available information

Source: NYS DOH Communicable Electronic Disease Surveillance System.

Total Hepatitis C Rates: NY (Excluding NYC) by Region, 2016



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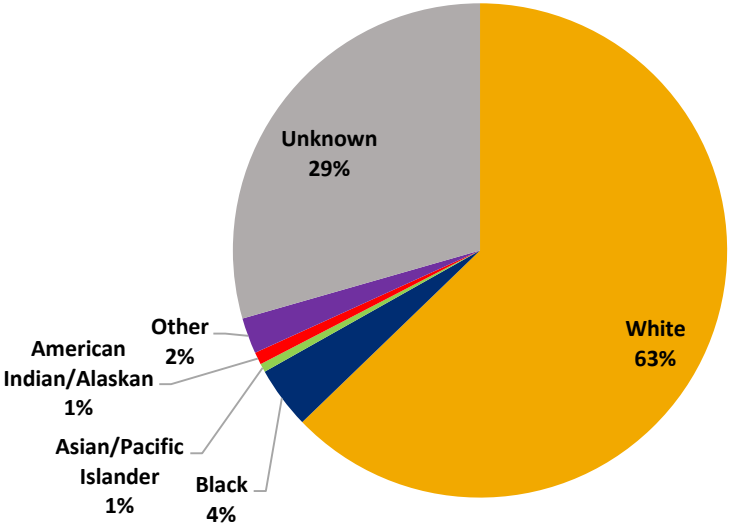
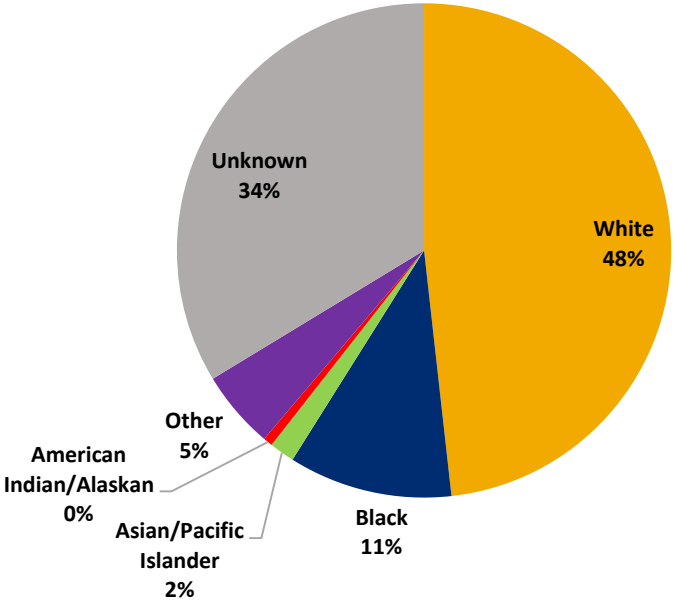
Source: NYS DOH Communicable Electronic Disease Surveillance System.

Total Hepatitis C : 2016, NY (Excluding NYC) <30 Years by Race



Total Hepatitis C : 2016, NY (Excluding NYC) 30+ Years by Race



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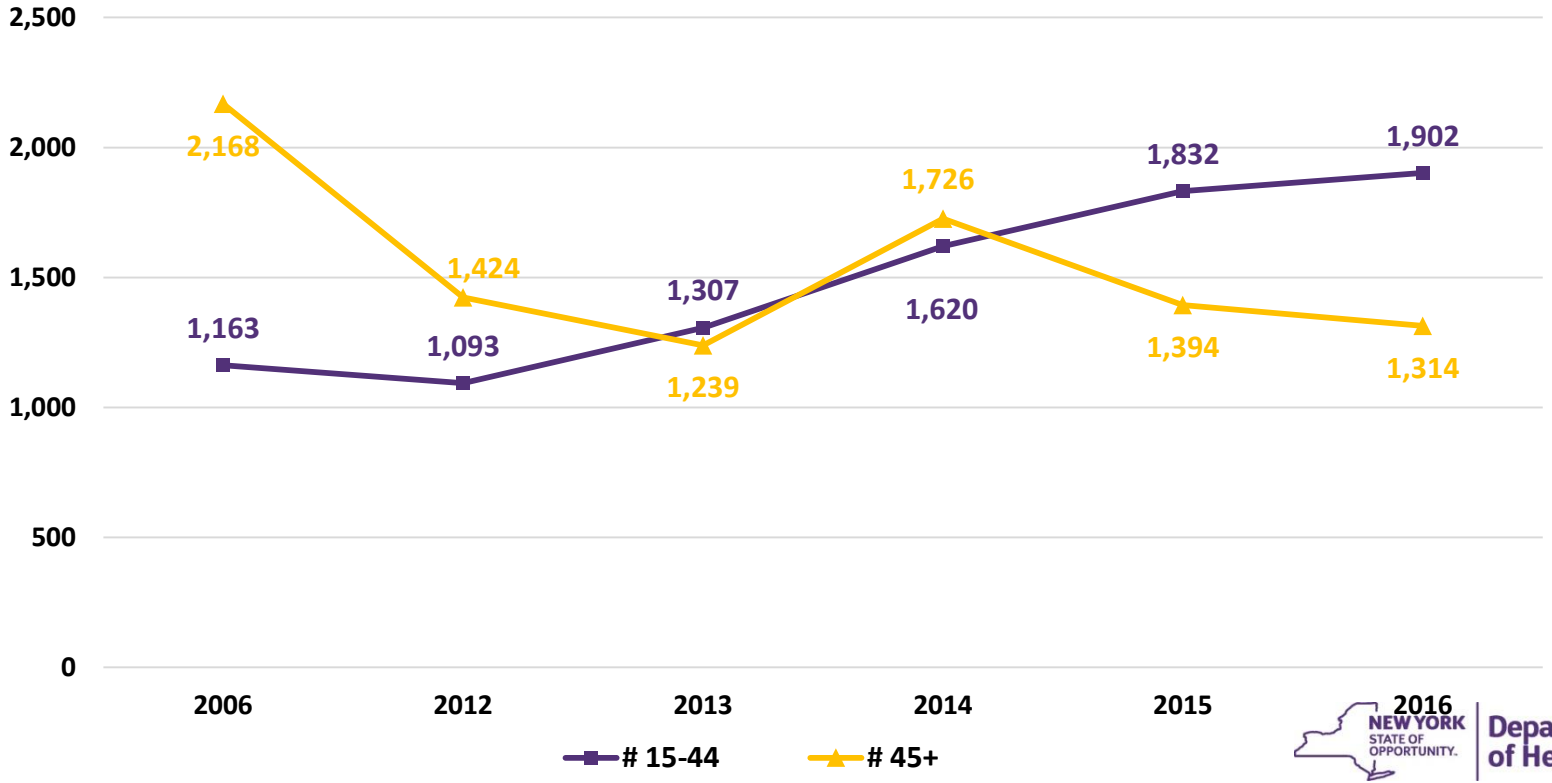
Source: NYS DOH Communicable Electronic Disease Surveillance System.

Total Hepatitis C Among Females: NYS (Excluding NYC) by Year and Age Group



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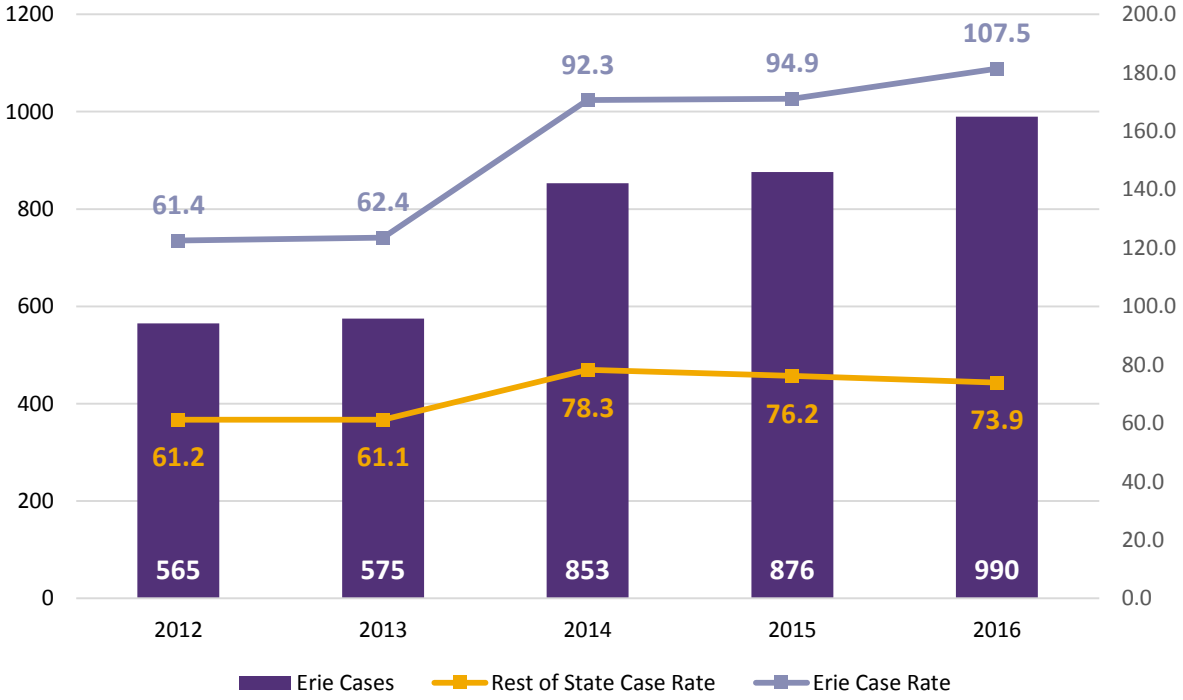
Erie County Total Hepatitis C Cases & Rates 2012-2016



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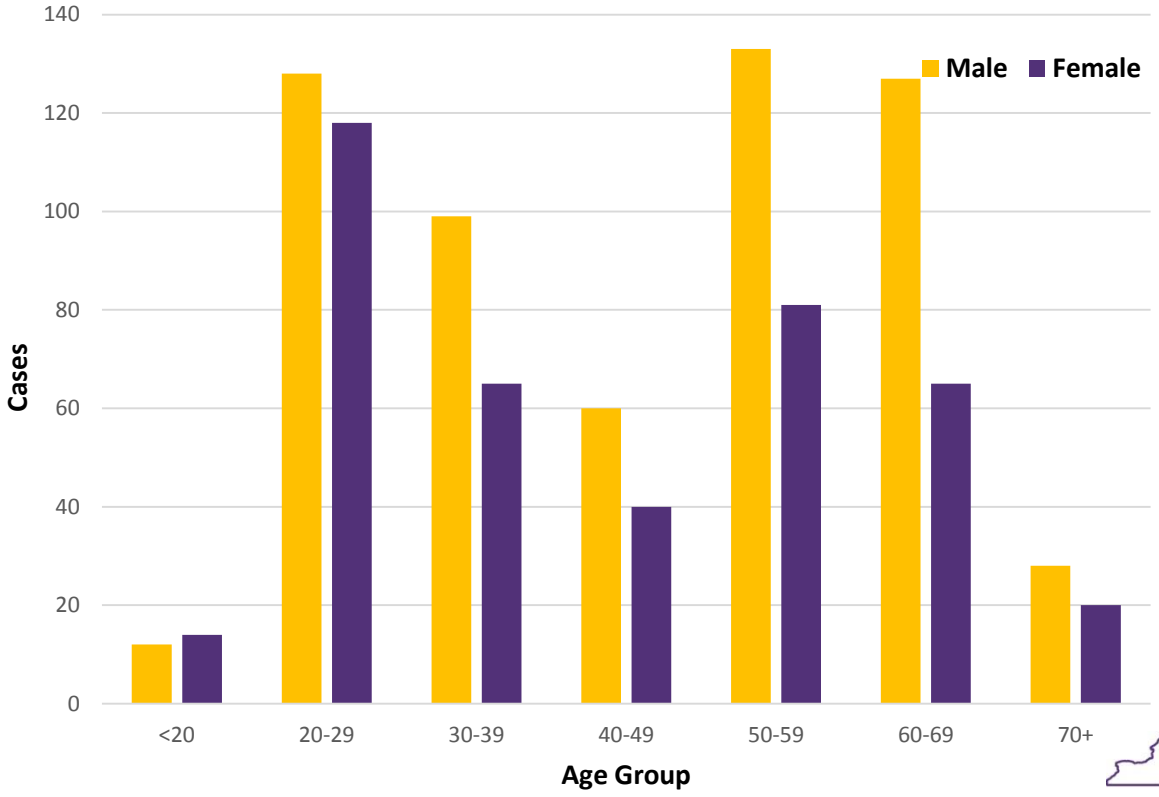
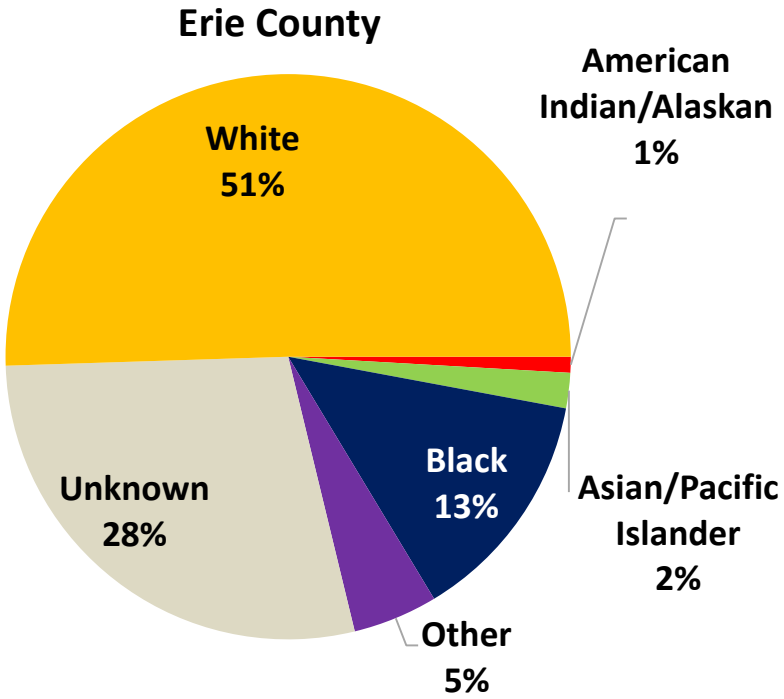
Source: NYS DOH Communicable Electronic Disease Surveillance System. Data as of 1/16/2018

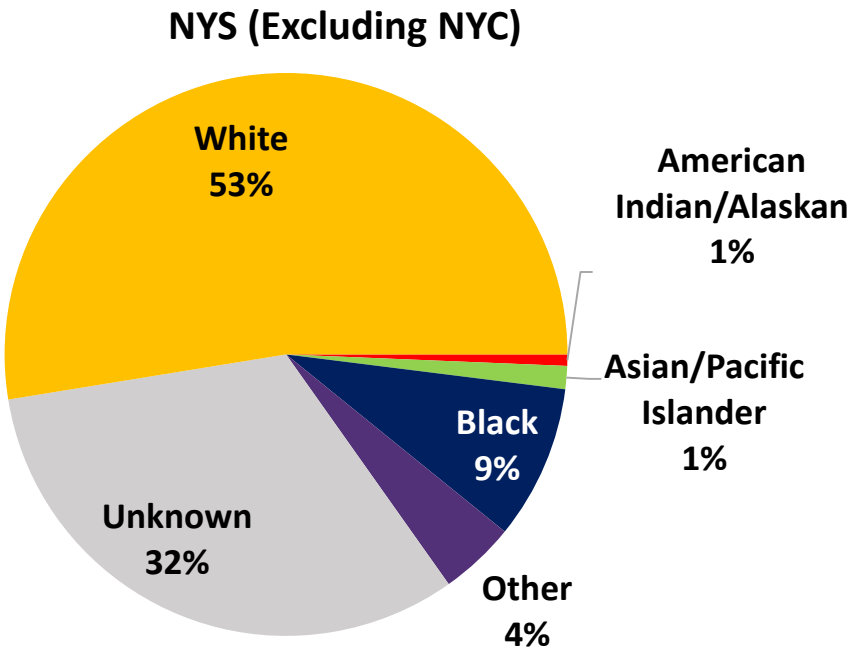
Erie County: Total Hep. C Cases by Sex & Age - 2016



Source: NYS DOH Communicable Electronic Disease Surveillance System. Data as of 1/16/2018

Total Hepatitis C by Race: 2016





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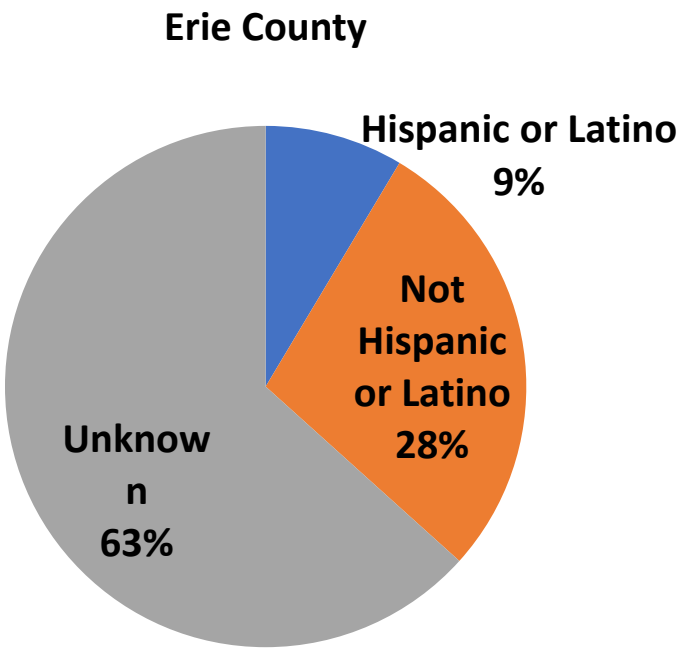
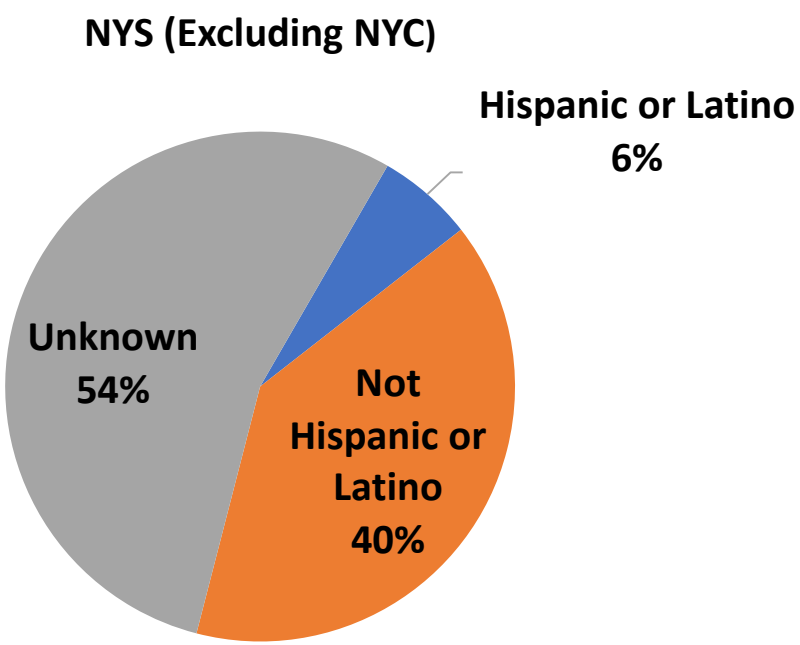
Source: NYS DOH Communicable Electronic Disease Surveillance System. Data as of 1/16/2018

Total Hepatitis C by Ethnicity: 2016





Source: NYS DOH Communicable Electronic Disease Surveillance System. Data as of 1/16/2018

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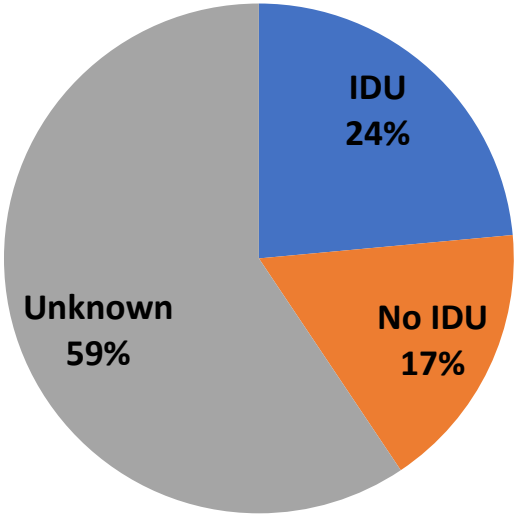
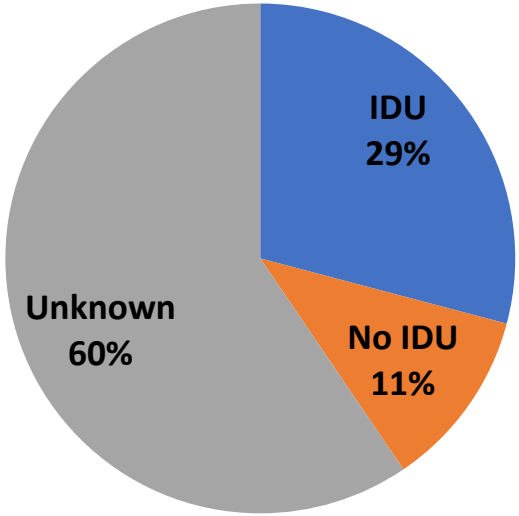
Total Hepatitis C by Injection Drug Use: 2016

Erie County



NYS (Excluding NYC)



Source: NYS DOH Communicable Electronic Disease Surveillance System. Data as of 1/16/2018

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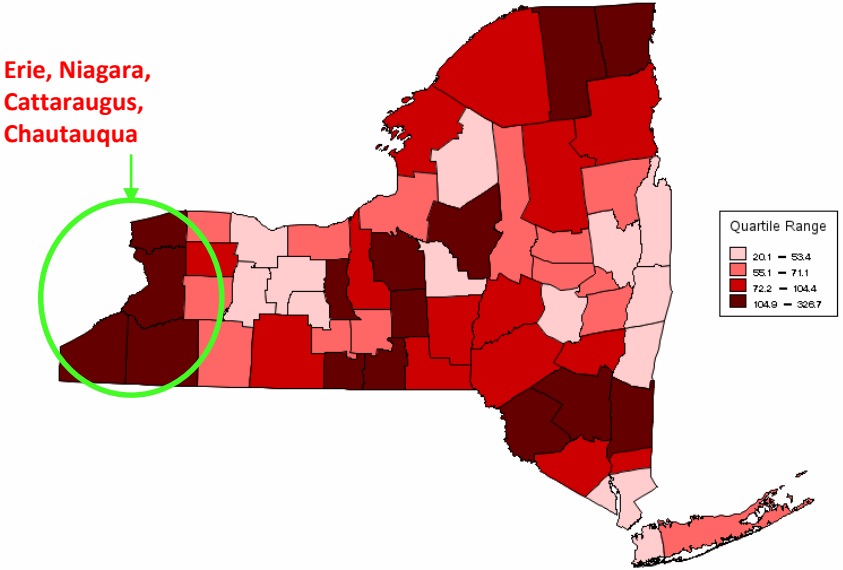
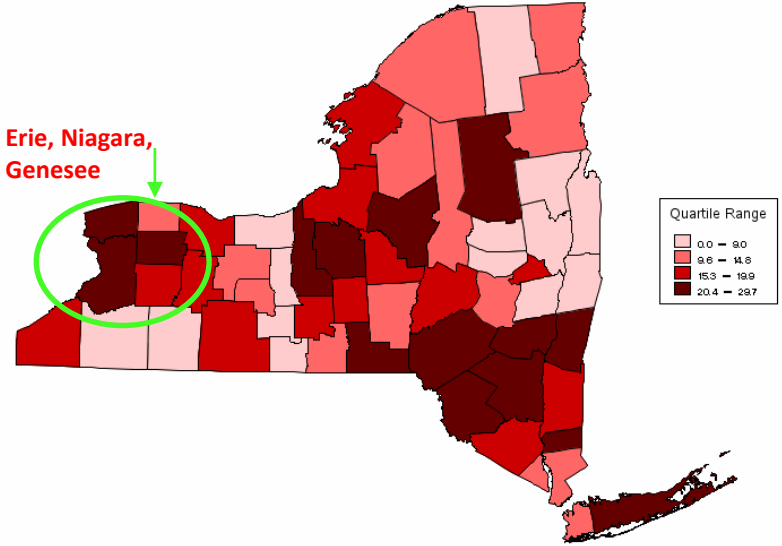
Dual epidemics

Total Hep C (Acute+Chronic) Rates per 100,000: Excluding NYC, 2016



Source: NYS DOH CDESS, as of Aug. 8, 2017 & 2016 NCHS bridged population estimates

Opioid Overdose Deaths (Excluding NYC)
Rate per 100,000: 2016



Source: NYS Vital Stats
Underlying cause of death: X40–X44, X60–X64, X85, Y10–Y14 AND Any opioid in all other causes of death: T40.0, T40.1, T40.2, T40.3, T40.4, T40.6

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Hepatitis C Elimination

https://www.governor.ny.gov/news/governor-cuomo-announces-statewide-expansion-enhanced-rental-assistance-program-increase-access

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Governor Announces Nation's First State-Level Hepatitis C Elimination Strategy to Increase Access to Medication, Expand Comprehensive Programs and Enhance Treatment Services

"*Ending the Epidemic*" Progress Report Issued Highlights New York's Historic Advancements in Ending the AIDS Epidemic by the end of 2020

Governor Andrew M. Cuomo today announced he is advancing a statewide expansion of the HIV/AIDS Services Administration rental assistance program for New Yorkers living with HIV/AIDS. Additionally, the Governor announced the nation's first state-level Hepatitis C comprehensive elimination strategy to end the Hepatitis C and HIV epidemics in New York State. The new effort aims to stop the Hepatitis C virus in its tracks by increasing access to medications that can cure Hepatitis C and expanding programs to connect New Yorkers in high-risk communities with wrap-

HCV Elimination Strategy

What	How	Why
Accurate surveillance data	Resources for state and local health departments	Monitor incidence and prevalence; characterize the infection in the population.
Identify persons with HCV	Screening of baby boomers, people who inject drugs (PWID) and others	Most people with HCV do not know their status.
Decrease incidence	Treat and cure PWID	More likely to transmit infection. Treating will prevent new cases.
Decrease morbidity and mortality	Treat and cure persons with advanced liver disease.	More likely to die from HCV and incur costs associated with increased morbidity, such as advanced liver disease, liver transplant.
Prevent reinfection	Enhance and expand harm reduction services and OTPs to PWID.	In the absence of an effective vaccine or effective prophylaxis, prevention efforts are going to be needed/enhanced.

HCV Prevention

- Education, awareness and training – clients and staff
- Evidence-based strategies to recruit and engage PWID into HCV care and treatment
- Not one intervention alone will work
  - Multi-prong approaches are needed
  - Harm reduction services + MAT + HCV treatment
- Expand capacity for and access to MAT
  - Buprenorphine prescribed by PCPs, PAs, NPs
  - Target young people abusing prescription opioids before transition to injection
- Harm reduction and syringe access
  - Not just syringe access/exchange
    - Provide sterile drug preparation and injection equipment

HCV Prevention

- Co-locate HCV screening, counseling and linkage to care within programs serving PWID
  - Utilize dried blood spot testing for HCV RNA testing
- Develop effective interventions to reach young PWID and non-injectors
  - Peer delivered syringe exchange
  - Utilize social media, social networks
- HCV treatment as prevention

HCV Screening, Diagnosis and Linkage to Care

- Expand HCV screening to venues other than traditional health care settings
  - CBOs, SEPs, mobile vans, homeless shelters, jails/prisons, SU programs
- Utilize point of care rapid testing for hard to reach populations

HCV Care and Treatment

- PWID should be a high priority for HCV treatment
- Access to affordable treatments
- Nondiscriminatory polices on accessing treatment
- Integration of HCV treatment:
  - Primary care settings
  - Substance use treatment programs
  - Jails and prisons

HCV Care and Treatment

- Establish new models of care
  - HCV treatment at syringe exchange program/drug user health hubs
- Educate and train providers (PCPs, SU providers) to care for and treat PWID
- Establish case management, patient navigation and peer support programs to ensure adherence to HCV treatment
- Eliminate stigma associated with drug use

What's your role

- Raise awareness within your community and organizations of the connection between opioid use and HCV
- Educate your colleagues, staff, clients and policy makers on HCV
- Ensure PWID are aware of their HCV status
  - Identify HCV testing programs in your area; refer clients
- Familiarize yourself with health care providers in your area that provide HCV treatment
  - Refer clients infected with HCV
- Make HCV educational materials available to your clients

Resources

- NYSDOH Hepatitis C Web Site
  - www.health.ny.gov/hepatitisc
    - NYS Hepatitis C Rapid Testing locations
    - Listing of HCV providers
    - HCV educational materials and order form
    - HCV clinical guidelines and recommendations
    - NYS HCV Testing Law information

Acknowledgments

- Larissa Wilberschied
- Angie Maxted
- Angelica Bocour

Contact

- Colleen Flanigan, RN, MS
  - AIDS Institute
    - Director, Bureau of Hepatitis Health Care
    - Colleen.Flanigan@health.ny.gov
    - www.health.ny.gov/hepatitis

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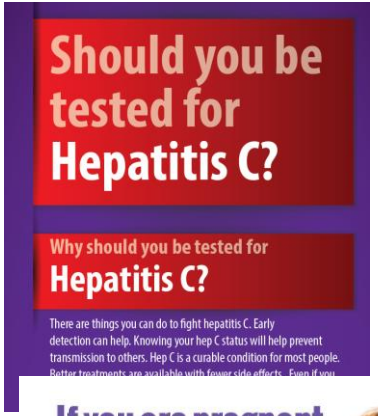

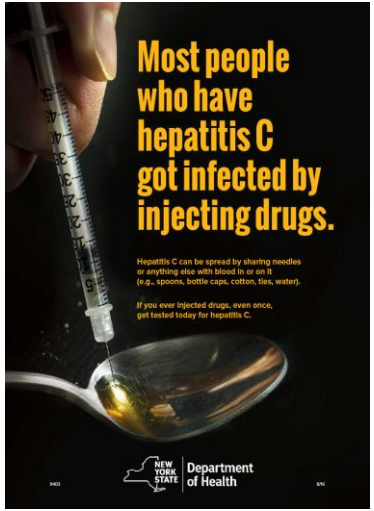

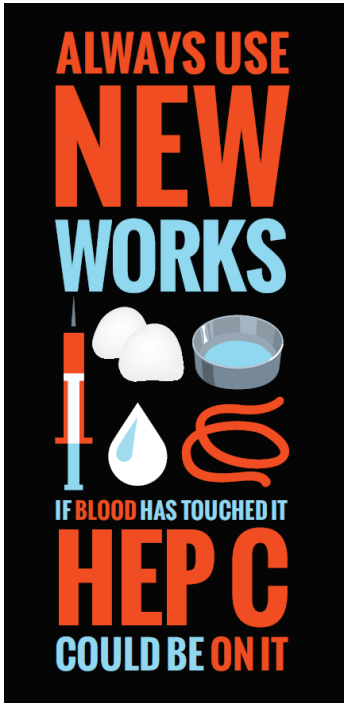

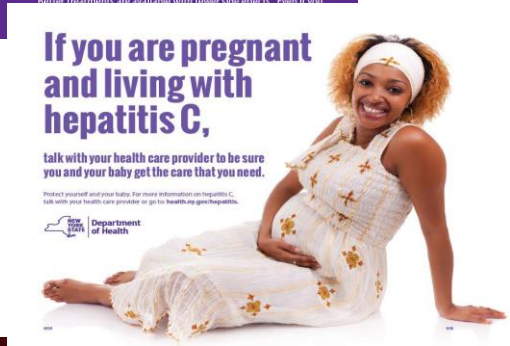

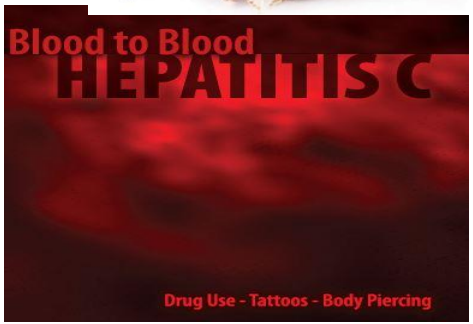

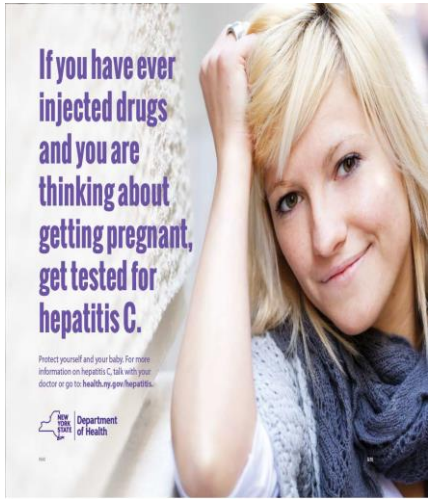

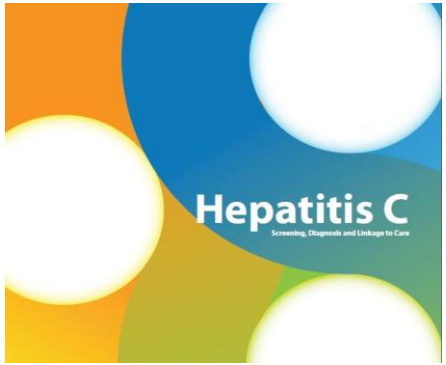

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