



Hepatitis C virus (HCV) Tool Kit for Local Health Departments in North Carolina

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Hepatitis C Overview (1)

- **Hepatitis** means inflammation of the liver. In the United States, the most common types of viral hepatitis are hepatitis A, hepatitis B, and hepatitis C.
- **Hepatitis C** is a liver disease that results from infection with the hepatitis C virus.
- Hepatitis C is spread by contact with infected blood. Today, primarily transmitted by injection drug use (IDU).
- **Acute Hepatitis C** virus infection is a short-term illness that occurs within the first 6 months after someone is exposed to the hepatitis C virus. Approximately 15%–25% of people will clear the virus from their bodies without treatment and do not develop chronic infection; the reasons for this are not well known.
- For most people, acute infection leads to chronic infection.
- **Chronic Hepatitis C** virus infection is a long-term illness that occurs when the hepatitis C virus remains in a person's body. Without treatment, hepatitis C can last a lifetime and lead to serious liver problems, including cirrhosis (scarring of the liver) liver failure, and even liver cancer.
- There is no vaccine available for hepatitis C.
- Once a person is infected with the hepatitis C virus, he or she will always have antibodies to the virus.
- If a person clears the hepatitis C virus, he or she can be re-infected. Re-infection rates are estimated to be between 5-10%. The likelihood of re-infection is higher for persons who engage in high risk behaviors. (2) In other words, getting infected and clearing the virus does not protect you in the future.
- Of those people who become infected with hepatitis C virus, 75%-85% will develop a chronic, lifelong infection.
- About 3.2 million people in the United States are estimated to have chronic hepatitis C, and most do not know they have it.
- Over time, approximately 60%-70% of people with chronic hepatitis C develop liver disease, and 1%-5% will get liver cancer and die.
- More than 16,000 people die from chronic hepatitis C every year in the United States.
- Treatment regimens for hepatitis C is expensive. Patient Assistant Programs are available. More information can be found in the "Helpful Links: Treatment Resources"

What Public Health Personnel Can Do To Support Hepatitis C Infected Persons: Counseling Patients about Living with Hepatitis C

Topics that should be discussed with hepatitis C infected persons include:



How Hepatitis C Is Transmitted (1)

- The hepatitis C virus is transmitted by exposure to infected blood when blood from a person infected with the hepatitis C virus enters the body of someone who is not infected.
- Today, most people become infected with hepatitis C by sharing needles or other equipment to inject drugs.
- Before widespread screening of the blood supply began in 1992, hepatitis C was also spread through blood transfusions and organ transplants.
- Hepatitis C can be transmitted through sex if exposure to infected blood, although experts believe this does not occur very often. However, there is some research showing that men who have sex with men (MSM), who are HIV-positive, and have multiple sex partners have an increased risk for hepatitis C.
- There is little evidence that hepatitis C is transmitted by getting tattoos in licensed, commercial facilities, but whenever tattoos or body piercings are given in informal settings (such as prisons) or with non-sterile instruments, transmission of hepatitis C and other infectious diseases is possible.
- Hepatitis C **is not** transmitted by kissing; hugging; shaking hands; sharing food, glasses, or utensils; coughing; sneezing; mosquitos; or animals.

How to Prevent Getting Hepatitis C (1)

- Do not share any injection equipment including needles, water, cottons, cookers, or preparation surfaces to inject drugs, cosmetic substances, or steroids. Washing hands before preparing an injection is also very important.
- Do not use any personal items that may have come into contact with the blood of a person infected with hepatitis C. This includes medical equipment, such as glucose monitors.
- Do not get tattoos, piercings, or body art from an unlicensed facility or in an informal setting.
- **Any blood spills, including dried blood, which could still be infectious should be cleaned using a dilution of 1 part household bleach to 10 parts water.**
 - Hepatitis C virus can survive outside of the body at room temperature on surfaces up to 3 weeks.



Hepatitis C Infected Persons Should Be Advised to Protect their Livers from Further Harm:

- Following confirmatory testing, all hepatitis C infected persons **must** be linked to care.
 - **Linkage to care** is a critical step in managing hepatitis C infection and is often the biggest hurdle. Hepatitis C infected persons must be linked to primary and/or specialty care to evaluate the presence of disease, severity of liver disease, treatment therapy evaluation, and mental health and substance abuse support.
- Hepatitis C infected persons should be advised to avoid alcohol because it can accelerate liver disease
- Some medications and supplements can cause liver damage in hepatitis C positive persons. Anyone diagnosed with hepatitis C should discuss their medications or supplements, including over-the-counter medications (such as non-aspirin pain relievers) with their health care providers.
- Hepatitis C positive persons should be vaccinated against Hepatitis A and B
 - Combined Hepatitis A and B vaccine (**Twinrix**) is indicated for vaccination of persons aged ≥ 18 years against hepatitis A and B. Any person in this age group having an indication for both hepatitis A and B vaccination can be administered Twinrix, including patients with chronic liver disease, users of illicit injectable drugs, men who have sex with men, and persons with clotting factor disorders who receive therapeutic blood products.(3)
 - **Refer to Treatment Resources for additional hepatitis B vaccine recommendations**

What Local Health Departments Can Do

- Identify providers in your community who can be part of your linkage to care network
- Identify mental health and substance use disorder treatment providers and resources to refer persons for appropriate treatment
- Identify community based organizations to link to promote prevention messages, increase hepatitis C screening and testing, and linkage to care for hepatitis C – infected persons.
- Collaborate with local law enforcement to build network infrastructure to address the needs of people who inject drugs (PWIDs)



- Link hepatitis C-infected persons who are actively injecting to Syringe Exchange Services.
- Link hepatitis C –infected person to Patient Assistant Programs (PAPs) or Medication Assistant Programs (MAPs) to evaluate free or reduced cost medications and vaccinations for hepatitis C.

The State's Response

- Overview of hepatitis C in North Carolina
 - Since 2010, North Carolina has seen a five-fold increase in reported acute hepatitis C cases
 - Based on a 1.1% prevalence estimate, approximately 110,000-150,000 North Carolinians are living with chronic hepatitis C
 - In 2016, there were 186 reported acute hepatitis C cases in North Carolina
- North Carolina Department of Health and Human Services (NC DHHS) has launched **North Carolina Hepatitis C: Test, Link, Cure (TLC)**, program to combat the acute hepatitis C and injection drug use epidemics. [NC Hepatitis C: TLC](#) aims to establish new partnerships with health care providers and stakeholders in the state with a focus on outreach, surveillance, and linkage to care. Initial activities will be implemented through local health departments, community based organizations, substance use disorder treatment centers, and federally qualified health centers in the western and southeast coastal regions of the state. The goal is to eventually advance the program statewide.
- The impacts in North Carolina from this program and other initiatives will help to increase screening for high risk persons and one-time testing for Baby Boomers (People born between 1945-1965). Increase the number of persons who know their hepatitis C status and increase vaccinations for hepatitis A and B.
- In 2016, NC DPH partnered with UNC and Duke Schools of Medicine to develop a new provider training program, [NC Carolina Hepatitis Academic Mentorship Program](#). NC CHAMP is a telemedicine training program intended for primary care providers serving underserved patient populations. The program was created to link primary care providers to disease specialists at academic medical centers for specialized viral hepatitis training. The objective is to expand access to providers who can deliver specialized hepatitis C care at various access points in communities which provide medical services to underserved and marginalized populations



Useful Links to Learn More about Hepatitis C

- NC DPH: Hepatitis C
 - http://epi.publichealth.nc.gov/cd/diseases/hep_c.html
- NC Hepatitis C Test, Link, Cure (TLC)
 - http://epi.publichealth.nc.gov/cd/hepatitis/HepatitisC_TLC.pdf
- NC DPH: Hepatitis C Fact Sheet
 - http://epi.publichealth.nc.gov/cd/hepatitis/HepatitisCFactSheet2016_rev2.pdf
- Viral Hepatitis C-Hepatitis C Information
 - <http://www.cdc.gov/hepatitis/HCV/index.htm>
- Patient Education Materials
 - <http://www.cdc.gov/hepatitis/hcv/patienteduhcv.htm>
- Guide Comprehensive Guide to Counseling and Testing Hepatitis C for Public Health Professionals
 - <http://www.cdc.gov/hepatitis/resources/professionals/pdfs/counselingandtesting.pdf>
- American Association For The Study of Liver Diseases-Practice Guidelines
 - <http://www.aasld.org/publications/practice-guidelines-o>

Treatment Resources

A list of resources for public health personnel, providers, and hepatitis C infected people for the treatment of hepatitis C.

- **Patient Assistant Program**
 - Are programs run by companies to provide free or low cost medications or vaccinations to people who cannot afford to buy these supplies otherwise.

Helpful links:

- Hep C Hope
 - http://www.hepchope.com/?utm_source=bing&utm_medium=cpc&utm_campaign=Search%20-%20Decision&utm_term=%20Bhepatitis%20%20Bhope&utm_content=Hep%20C%20Hope%20-%20BMM&gclid=COn6oJWt88wCFYJogQodaC8G-w&gclsrc=ds
- HCV Advocate: Patient Assistant Programs
 - http://hcvadvocate.org/hepatitis/factsheets_pdf/Patient_Assistance.pdf



- Abbvie
 - <http://abbviepaf.org/index.cfm>
- Bristol Meyers Squibb
 - <http://www.bms.com/products/Pages/programs.aspx>
- Gilead
 - <http://gilead.com/responsibility/us-patient-access>
- Merck
 - <http://www.merckhelps.com/>
- NeedyMeds
 - <http://www.needymeds.org/>
- Rx Assist
 - <http://rxassist.org/>

- **Vaccination Resources**
 - ACIP recommends implementation of standing orders to identify adults recommended for hepatitis B vaccination and administer vaccination as part of routine services. To ensure vaccination of adults at risk for HBV infection who have not completed the vaccine series, ACIP recommends the following implementation strategies:
 - Provide information to all adults regarding the health benefits of hepatitis B vaccination, including risk factors for HBV infection and persons for whom vaccination is recommended.
 - Help all adults assess their need for vaccination by obtaining a history that emphasizes risks for sexual transmission and percutaneous or mucosal exposure to blood.
 - Vaccinate all adults who report risks for HBV infection.
 - Vaccinate all adults requesting protection from HBV infection, without requiring them to acknowledge a specific risk factor (3)(4)



- **Immunization Branch**

- **North Carolina Immunization Program**
- On-Call Nurse : (919) 707-5575
- Regional Immunization Nurse Consultants-See link
 - http://www.immunize.nc.gov/providers/ncip/pdf/rin_map_201601.pdf

Helpful Links:

- North Carolina Immunization Branch
 - <http://immunize.nc.gov/providers/ncir.htm>
- Immunization Information System (IIS)
 - <http://www.cdc.gov/vaccines/programs/iis/index.html>

References

1. *Guide Comprehensive Guide to Counseling and Testing Hepatitis C for Public Health Professionals.* [Online] <http://www.cdc.gov/hepatitis/Resources/Professionals/PDFs/CounselingandTestingPC.pdf>.
2. *Risk Factors for Hepatitis C Virus Reinfection After Sustained Virologic Response in Patients Coinfected With HIV.* Young J1, 2, Rossi C1, Gill J3, Walmsley S4,5, Cooper C5,6, Cox J1, Martel-Laferrriere V7, Conway B8, Pick N9, Vachon ML10, Klein MB1,5 and Investigators, Canadian Co-infection Cohort. 2017, *Clinical Infectious Diseases*, pp. 1154-1162.
3. *Morbidity and Mortality Weekly Report.* *cdc.* [Online] <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5037a4.htm>.
4. *Morbidity and Mortality Weekly Report.* [Online] CDC. <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5516a1.htm>.