In short, yes, HCV can be transmitted via sexual activity. However, it is uncommon except when the individual has an HIV coinfection. In the U.S. it is most commonly transmitted through exposure to the blood from injection drug use. In other regions, inadequately sterilized instruments and needles, unsterilized objects for cultural rituals, traditional medicine, tattooing, ear- and body-piercing, unsafe practices related to blood transfusions or handling of blood have been reported. Primary prevention for HCV involves avoiding behaviors that can transmit the disease and effective safety measures implemented with the collection, storage, and utilization of blood to eliminate transfusion transmitted infection. Though not all-inclusive, several risk factors are:

- Injection drug users
- HIV coinfection
- Medical conditions, such as those requiring hemodialysis or persistently abnormal alanine aminotransferase (ALT) levels
- People who have received transfusions or organ transplants
- Health care and public safety personnel occupationally exposed
- Infants born to HCV infected mothers

The onset of symptoms can occur between 2 weeks to 6 months with approximately 75% -85% showing no signs of symptoms. Asymptomatic individuals can develop chronic hepatitis without proper diagnosis. It is recommended that individuals with these risk factors are screened. All adults over the age of 18 should be tested at least once as well as women during each pregnancy. The HCV antibodies is the first step in screening a patient as it identifies who has been exposed to the virus (Figure 1). No further action is needed if the individual doesn't have a known risk factor. If risk of exposure is suspected or recent, the viral load may not be high enough for detection and the HCV RNA test is needed. Additionally, the HCV antibody test doesn't distinguish between current or past infections, and there is a risk for a false-positive. An HCV RNA test is intended to measure the level of HCV RNA. No detection of HCV RNA indicates the individual does not have a current infection. However, precautions need to be taken when the risk of exposure is recent or ongoing. It may be advised that the individual is periodically tested. Those who have HCV RNA detected have a current infection and need to seek treatment as soon as possible. Overall, the treatment protocol will vary depending on the HCV genotype, viral concentration (acute vs chronic), risk factors (injection drug abuse), age (developed immunity vs undeveloped immunity), or health status, such as immunodeficiencies from HIV or other comorbid conditions.

One important consideration towards the HCV epidemic is the parallel opioid crisis. Injection drug use (IDU) is the primary risk factor for HCV injections in the U.S. The current opioid use nationwide contributes to the ongoing infections including HIV, Hepatitis A and B. The incidence of HCV continues to increase despite effective HCV prevention and treatment. In 2022, a total of 4,848 new acute cases, 93,805 new chronic cases, and 12,717 HCV related deaths reported. However, the CDC also noted two critical aspects 1) disruptions to health care access and surveillance capacity were caused by the COVID-19 pandemic and 2) HCV case definition changed in 2020 that would correspond to a decrease in reported cases. Although controversial, access to clean needles and syringes to persons who inject drugs

can help prevent increased rates of HCV, while also providing an opportunity to educate this vulnerable population groups and bridging the gap in screening and treatment.

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