

## Unsafe Injection Practices & Hepatitis C (7/08)

Centers for Disease Control and Prevention. Acute hepatitis C virus infections attributed to unsafe injection practices at an endoscopy clinic — Nevada. MMWR 2008;57:513–517.

Hepatitis C virus (HCV) infection is the most common bloodborne illness, the leading cause of chronic liver disease, and the primary indication for liver transplantation in the United States. HCV is primarily spread through exposure to infectious blood; injection-drug use is the major contributor to HCV transmission in the United States. Although HCV infection can result in acute illness, most of its effects on the liver, including cirrhosis and liver cancer, are not apparent until years after exposure. Many of the estimated 3.2 million persons living with chronic HCV infection in the United States are unaware of their infection status.

This report describes an outbreak of six cases of acute hepatitis C associated with unsafe injection practices at an endoscopy clinic. None of the individuals had significant risk factors for HCV infection within the typical incubation period (15 to 160 days before onset of symptoms), and five of the cases had procedures on the same day. The genetic relatedness of the viruses from the case patients who had procedures on that day, supports the epidemiological finding and points to a common source of injection. The lack of genetic relatedness to the other patient suggests a separate transmission incident. The two distinct clusters suggest patient-to-patient transmission rather than staff-to-patient transmission.

Inappropriate reuse of syringes on individual persons and use of medication vials intended for single-person use on multiple persons was identified through direct observation of infection-control practices at the endoscopy clinic. Specifically, a clean needle and syringe were used to draw medication from a single-use vial. The medication was injected directly through an intravenous catheter into the patient's arm. If a patient required more sedation, the needle was removed from the syringe and replaced with a new needle; the new needle with the old syringe was used to draw more medication. Backflow from the patient's intravenous catheter or from needle removal might have contaminated the syringe with HCV and subsequently contaminated the vial. Medication remaining in the vial was used to sedate the next patient. As soon as improper injection practices were observed, health officials advised the clinic to stop these practices and educated the staff about the risks.



Most outbreaks of health-care-associated HCV have involved patient-to-patient transmission attributed to unsafe injection practices. The reuse of syringes and needles or mishandling of medication vials usually have been implicated. In some situations, syringes or needles used on HCV-infected persons were directly reused on other persons. In other instances, syringes or needles used on HCV-infected persons were reused to draw medication from a vial from which medicine was then drawn and administered to multiple persons, as was found in this investigation.

**DECS Comment: Although case-control studies have not indicated an increased risk for acquiring HCV from medical, surgical, or dental procedures in the United States, outbreaks of HCV in health-care settings have occurred. Although this outbreak did not occur in a dental setting, it did occur in an outpatient clinic setting. It is possible for this to occur in an outpatient dental setting where intravenous sedation is used during conscious sedation. These transmissions could have been prevented by adherence to basic principles of aseptic technique for the preparation and administration of parenteral medications. While these recommendations are not new, safe injection practices are now considered to be elements of standard precautions.**

### **Infection-Control and Safe Injection Practices to Prevent Patient-to-Patient Transmission of Bloodborne Pathogens:**

- Do not administer medication from a syringe to multiple patients, even if the needle on the syringe is changed.
- Use single-dose vials for parenteral medications when possible.
- Do not combine the leftover contents of single-use vials for later use.
- If multidose vials are used, use a sterile device to access a multiple-dose vial and avoid touching the access diaphragm. Both the needle and syringe used to access the multidose vial should be sterile. Do not reuse a syringe even if the needle is changed.
- Keep multidose vials away from the immediate patient treatment area to prevent inadvertent contamination by spray or spatter.
- Discard the multidose vial if sterility is compromised.
- Use fluid infusion and administration sets (i.e., IV bags, tubings and connections) for one patient only and dispose them appropriately.