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CDC HEALTH ADVISORY

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CDC Urging Dialysis Providers and Facilities to Assess and Improve Infection Control Practices to Stop Hepatitis C Virus Transmission in Patients Undergoing Hemodialysis

Summary

The Centers for Disease Control and Prevention (CDC) has received an increased number of reports of newly acquired hepatitis C virus (HCV) infection among patients undergoing hemodialysis. Infection control lapses in dialysis care could expose patients to HCV. Any case of new HCV infection in a patient undergoing hemodialysis should prompt immediate action. CDC is urging dialysis providers and facilities to:

- 1) Assess current infection control practices and environmental cleaning and disinfection practices within the facility to ensure adherence to infection control standards;
- 2) Address any gaps identified by the assessments;
- 3) Screen patients for HCV, following CDC guidelines, to detect infections, determine treatment potential, and halt secondary transmission; and
- 4) Promptly report all acute HCV infections to the state or local health department.

Background

CDC has received an increased number of reports of acute HCV infection among patients undergoing hemodialysis. Between 2014 and 2015, CDC has been contacted about 36 cases of acute HCV infection in 19 different hemodialysis clinics in eight states. While investigations are ongoing, so far, HCV transmission between patients has been demonstrated at nine of those clinics, based on epidemiologic and viral sequencing evidence. Lapses in infection control (e.g., injection safety, environmental disinfection, and hand hygiene) were commonly identified at these facilities. Although the exact means of transmission could not be discerned, these lapses all could potentially contribute to HCV transmission. The increase in acute HCV infections might be due, in part, to improved screening and awareness of the potential for HCV infection in the hemodialysis setting. Regardless, this increase underscores the widespread potential for patients to acquire serious infections during dialysis care.

Dialysis facilities should actively assess and continuously improve their infection control, environmental cleaning and disinfection, and HCV screening practices, whether or not they are aware of infections in their clinic. Any case of new HCV infection in a patient undergoing hemodialysis is likely to be a healthcare-associated infection and should be reported to public health authorities in a timely manner. A recent publication describes a dialysis facility where an outbreak of HCV continued for five years before being detected, highlighting the importance of HCV screening to identify these infections early and prevent further transmission.¹ HCV transmission can be prevented when proper infection prevention and environmental disinfection practices are consistently followed.

Recommendations

In response to the increased identification of HCV transmission in dialysis clinics, CDC recommends the following actions be followed:

Dialysis providers

- Evaluate infection control practices in each facility and ensure adherence to infection control standards.
 - CDC has checklists and audit tools (<http://www.cdc.gov/dialysis/prevention-tools/index.html>) that providers can use to assess their practices, identify gaps, and improve infection control practices to protect patients.²
- If gaps are identified, promptly address any issues to protect patients' health and safety (<http://www.cdc.gov/dialysis/>).
 - Take action to improve injection safety (<http://www.cdc.gov/injectionsafety/>), hand hygiene (<http://www.cdc.gov/handhygiene/>) and routine environmental disinfection procedures, as appropriate.
- Ensure staff are aware of and trained to implement infection control guidelines (<http://www.cdc.gov/dialysis/guidelines/index.html>) for hemodialysis settings.^{3,4} Facilities should provide regular (e.g., annual) training (<http://www.cdc.gov/dialysis/clinician/index.html>) of staff to ensure adherence to infection control recommendations.^{3,4}
- Follow CDC recommendations for HCV screening of hemodialysis patients and management of patients who test positive:
 - CDC recommends that chronic hemodialysis patients be screened for HCV antibody^{12,13} (anti-HCV) (<http://www.cdc.gov/hepatitis/hcv/hcvfaq.htm>) upon admission to the dialysis clinic and every six months thereafter if susceptible to HCV infection.⁵
 - For those patients with a positive anti-HCV test result, the test should be followed with a Nucleic Acid Test (NAT) for HCV RNA.⁶ Follow CDC recommendations for interpretation of test results and further actions.⁷ Ensure patients identified to have HCV infection are aware of the diagnosis and are referred to appropriate care and evaluation. Persons with chronic HCV infection, including those with end-stage renal disease, may benefit from treatment.
- Immediately report any case of new HCV infection among patients undergoing hemodialysis to the state or local health department.^{5,8}
 - New HCV infection can present as a change in anti-HCV status from negative to positive, in the absence of signs or symptoms.
 - Communicate test results to the patient and arrange for clinical evaluation for possible treatment of HCV infection.
 - Determine the HCV infection status of all other patients receiving care in the facility.
- Be transparent. Inform patients if HCV transmission is suspected to have occurred within the facility, and explain steps being taken to address the problem.

Health departments

- Investigate any acute HCV infection in a hemodialysis patient for a possible healthcare-associated etiology.⁹

Patients

- If you do not know if you have or might have hepatitis C, ask your healthcare provider.
- Ask your healthcare providers questions about your dialysis care, such as:
 - Do you follow CDC recommendations?
 - Do I need to be tested for hepatitis C virus?
 - What can be done to prevent me from getting an infection during my dialysis treatment?
- Review educational resources for patients (<http://www.cdc.gov/dialysis/patient/index.html>) on dialysis safety and hepatitis C^{10,11} (<http://www.cdc.gov/hepatitis/hcv/cfaq.htm>) provided by CDC and other partners.

Additional Resources

1. Nguyen, DB; Gutowski, J; Ghiselli, M; et al. (2015) A Large Outbreak of Hepatitis C Virus Infections in a Hemodialysis Clinic. *ICHE*, Nov 17: 1—9.

2. CDC Dialysis Infection Prevention Tools: <http://www.cdc.gov/dialysis/prevention-tools/index.html>
3. CDC Dialysis Clinician Education Resources: <http://www.cdc.gov/dialysis/clinician/index.html>
4. CDC Recommendations and Guidelines for Dialysis Settings: <http://www.cdc.gov/dialysis/guidelines/index.html>
5. CDC Recommendations for Preventing Transmission of Infections among Chronic Hemodialysis Patients. MMWR 2001; 50(RR05);1-43.
6. Recommended Testing Sequence for Identifying Current Hepatitis C Virus (HCV) Infection: http://www.cdc.gov/hepatitis/hcv/pdfs/hcv_flow.pdf
7. Interpretation of Results of Tests for Hepatitis C Virus (HCV) Infection and Further Actions: http://www.cdc.gov/hepatitis/hcv/pdfs/hcv_graph.pdf
8. Mbaeyi C, Thompson ND. Hepatitis C virus screening and management of seroconversions in hemodialysis facilities. Semin Dial. 2013 Jul-Aug;26(4):439-46. doi: 10.1111/sdi.12097. Epub 2013 May 31.
9. CDC. [Notes from the Field: Hepatitis C Outbreak in a Dialysis Clinic – Tennessee, 2014](#). MMWR 2016; 64(50);1386-7.
10. CDC Dialysis Patient Resources: <http://www.cdc.gov/dialysis/patient/index.html>
11. CDC Hepatitis C FAQs for the Public: <http://www.cdc.gov/hepatitis/hcv/cfaq.htm>
12. CDC Viral Hepatitis – Hepatitis C Information: <http://www.cdc.gov/hepatitis/hcv/hcvfaq.htm>
13. Kamili, S. Laboratory Diagnostics for Hepatitis C Virus Infection. Clinical Infectious Diseases.2012; 55(S1);43-48. Accessed January 26, 2016.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

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