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Telephone (775) 328-2447

Fax (775) 328-3764

epicenter@washoecounty.us

WASHOE COUNTY HEALTH DISTRICT • P.O. BOX 11130 • RENO, NEVADA • 89520-0027 • (775) 328-2447

WHAT DO WE KNOW ABOUT HEPATITIS C IN WASHOE COUNTY?

World Hepatitis Day – July 28th

In the United States, May is Hepatitis Awareness Month, and May 19th is National Hepatitis Testing Day. In the world, July 28th is the World Hepatitis Day. Many of the estimated 800,000 to 1.4 million persons living with hepatitis B and the estimated 3 million persons living with hepatitis C virus (HCV) infection in the United States are unaware of their infection and are therefore not receiving necessary care and treatment.¹ Based on the recent publication by the World Health Organization (WHO) in April, 2014, the field of HCV therapeutics is evolving rapidly, and a number of compounds are in various stages of development. These new compounds can cure more than 90% of persons with HCV infection and are effective against genotypes that were previously difficult to treat.² The objectives of this issue of Epi-News are to report major findings from the enhanced surveillance on HCV by Washoe County Health District (WCHD) and to identify opportunities within healthcare practice settings to improve bringing infected persons to care.

Hepatitis C is a reportable condition in Nevada as well as in the nation. However, public health agencies generally only investigate acute hepatitis C cases, not chronic hepatitis C. But in Washoe County, WCHD conducted an enhanced surveillance for all HCV infection from May 1, 2002 through December 31, 2012 and maintained all laboratory data on HCV till present. Therefore, local surveillance data is an excellent tool to help us understand the status of HCV in Washoe County.

Did all hepatitis C cases get reported?

WHO reported that the prevalence of HCV in North America is 1.3%. A recent study indicated a HCV prevalence of 1.7%-2.3% in the United States.³ As of December 31, 2013, a total of 7,125 HCV infections were reported among Washoe County residents, of which, 317 deceased, which lead to a current prevalence of 1.6% in Washoe County. Every year, WCHD receives nearly 4,000 HCV related laboratory test report. Majority of reports were among previously reported individuals or out of jurisdictional cases (e.g., ~27% in 2013). The number of newly identified cases was from 884 in 2003 down to 356 in 2012 and 461 in 2013. Therefore, the

¹ <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6318a1.htm>

² World Health Organization. Guidelines for the screening, care and treatment of persons with hepatitis C infection. April 2014.

³ Norbert Brau. Evaluation of the Hepatitis C Virus-Infected Patient: The Initial Encounter. Clinical Infectious Diseases 2013;56(6):853-60

overall prevalence appears to be close to national estimate and Washoe County healthcare providers and laboratories have been doing a good job in reporting.

Why are these people tested?

Of 2,856 cases reported between May 1, 2012 and December 31, 2012 with completed reasons for testing, nearly 60% of the cases were identified through follow-up testing on a previous marker of hepatitis or evaluation of elevated liver enzymes. Nearly 30% of cases were

Reasons for Testing	No. Cases*	%
Follow-up testing for previous marker of hepatitis	1,031	36.1
Evaluation of elevated liver enzyme	642	22.5
Screening of asymptomatic patient with risk factors	552	19.3
Symptoms of acute hepatitis	132	4.6
Prenatal screening	79	2.8
Blood/organ donor screening	87	3.0
Screening of asymptomatic patient without risk factors	41	1.4
Other reasons	292	10.2
Total	2,856	100.0

identified through passive screening, including asymptomatic persons with or without risk factors, blood or organ donors, and pregnant women.

Did a new screening guideline impact healthcare providers' ordering practice?

On August 17, 2012, the Centers for Disease for Disease Control and Prevention (CDC) recommended a universal screening for HCV among persons born during 1945-1965 regardless of risk factors. This recommendation definitely impacted the number of cases reported due to increased universal screening among baby boomers. Preliminary evaluation of local



data indicates that the number of newly reported cases in 2013

was nearly 30% higher than that reported in previous year, i.e., 2012. By contrast, the number of newly reported cases from 2004 through 2012 ranged from 23% lower to 3% higher than those reported in the

immediate previous year. This illustrates that healthcare providers are following CDC's new guideline.⁴

Who is infected?

WCHD surveillance data 2002-2013 indicate:

- ◆ 69% of cases are in the 40-59 year age group among 7,101 cases with known age.
- ◆ 64% of cases are male among 7,073 cases with known gender.
- ◆ 33% of the case reports (2,383 cases) were missing information on race/ethnicity.
- ◆ 83% of cases are White, non-Hispanic among 4,742 cases with known race/ethnicity.
- ◆ African Americans are disproportionately affected by chronic HCV infection. They have the highest ratio of proportion of cases to proportion of the population.

What risk factors are among these infected persons?

Approximately 31% of cases acknowledged that they had injected drugs not prescribed by a physician, and 5% received a blood transfusion prior to 1992. Thirty-three percent (33%, 1,191/3,647) of cases reported current alcohol use – indicating a need for better education of HCV patients by health care providers. Overall, 45% (1,838/4,118) of cases had one or more risk factors, 30% (1,291/4,118) of cases denied risk factors and 25% (1,061/4,118) had unknown risks. Twelve percent (12%, 1,219/4,118) of cases had no health insurance. Behavioral risk factor data was obtained via chart review rather than through patient interview.

How many are under treatment?

Of 7,125 lab-confirmed case reports, 1,372 (19%) contained documented genotypes, which likely indicated that a small proportion of persons with HCV infection were actually in therapy during the surveillance period. Of 1,372 cases with documented genotype, 918 (67%) had genotype 1; 202 (14.7%) had genotype 2; 217 (15.8%) had genotype 3; and 35 (3%) had 2 or more genotypes or other genotypes.

What is the mortality rate among infected persons?

Of 7,125 cases, 317 (4.4%) expired. Of these 317 cases, Hepatitis C was the primary cause of death in 34 cases (10.7%), and the secondary cause of death in 208 cases (66%).

What can local healthcare providers do?

- ◆ **Screen** recommended population (see following box for a recommendation)
- ◆ **Order** correct tests with appropriate sequence (See following page for the testing algorithm recommended by CDC)
- ◆ **Report** HCV patients to WCHD at 775-328-2447 or fax to 775-328-3764
- ◆ **Link** infected patients to care. Treatment of HCV infection is sophisticated. It is recommended that patients be referred to a specialist. The treatment can involve multiple steps. For example, screening for alcohol use, assessing degree of liver fibrosis and cirrhosis, and treating with different drug regimens based on HCV genotypes. Details regarding treatment recommendations can be found in a recently published guideline by WHO.⁵
- ◆ **Educate** patients to avoid high risk behaviors such as alcohol use and get vaccinated against hepatitis A and B. Local surveillance data indicated that approximately half of HCV patients with documented serology tests showed immunity to hepatitis A or B.

Testing for HCV is recommended for:⁴

- ◆ **All persons born during 1945–1965 regardless of risk factors.**
- ◆ HIV-infected patients.
- ◆ Persons who have ever injected illegal drugs, including those who injected once or a few times many years ago and do not consider themselves as drug users.
- ◆ Persons with selected medical conditions, including
 - persons who received clotting factor concentrates produced before 1987;
 - persons who were ever on chronic (long-term) hemodialysis; and
 - persons with persistently abnormal alanine aminotransferase levels.
- ◆ Prior recipients of transfusions or organ transplants, including
 - persons who were notified that they received blood from a donor who later tested positive for HCV infection;
 - persons who received a transfusion of blood or blood components before July 1992; and
 - persons who received an organ transplant before July 1992.
- ◆ Health care, emergency medical, and public safety workers after needle sticks, sharps, or mucosal exposures to HCV-positive blood.
- ◆ Children born to HCV-positive women.

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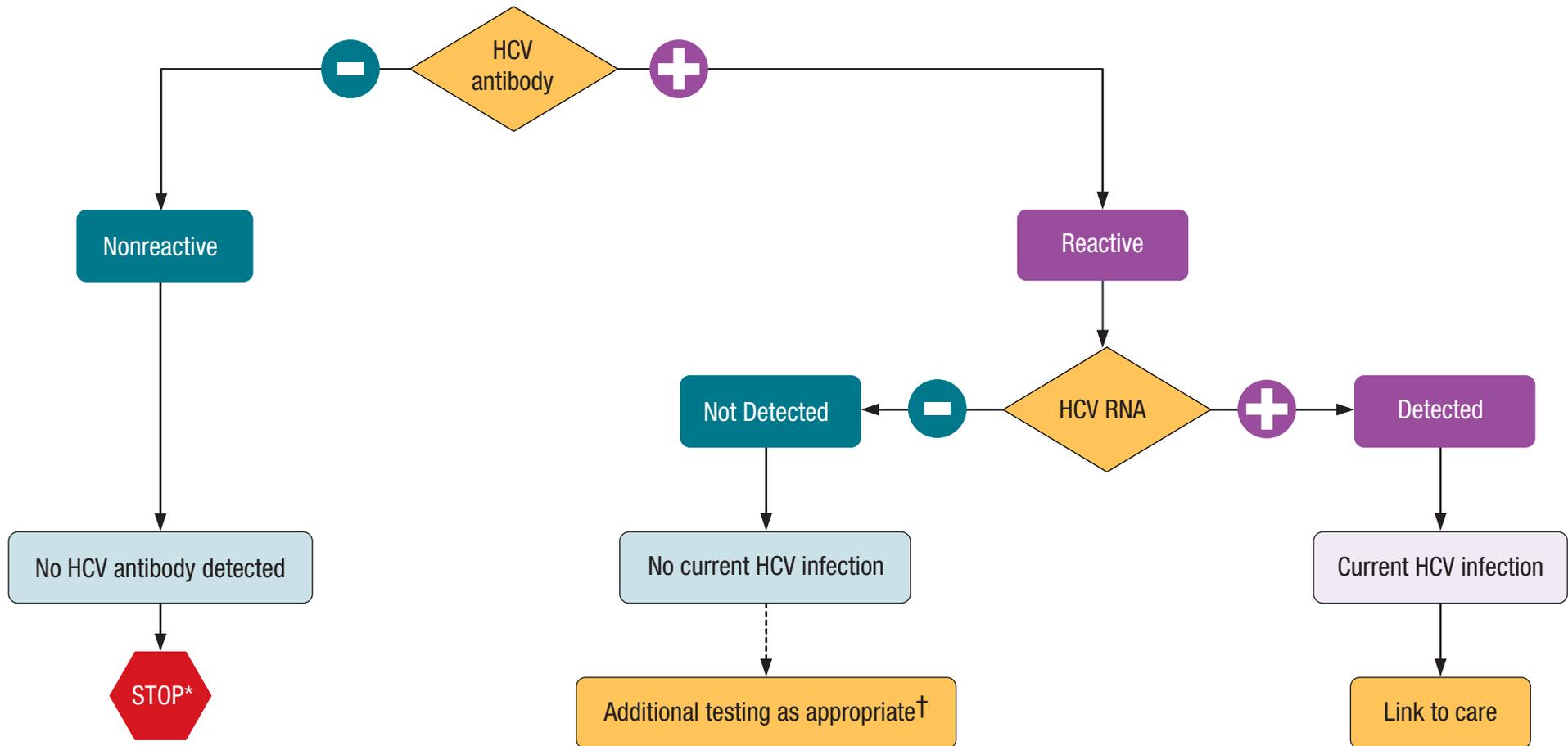
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6104a1.htm?s_cid=rr6104a1_e#Box

⁵ World Health Organization. Guidelines for the screening, care and treatment of persons with hepatitis C infection. April 2014.

Recommended Testing Sequence for Identifying Current Hepatitis C Virus (HCV) Infection



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention



* For persons who might have been exposed to HCV within the past 6 months, testing for HCV RNA or follow-up testing for HCV antibody is recommended. For persons who are immunocompromised, testing for HCV RNA can be considered.

† To differentiate past, resolved HCV infection from biologic false positivity for HCV antibody, testing with another HCV antibody assay can be considered. Repeat HCV RNA testing if the person tested is suspected to have had HCV exposure within the past 6 months or has clinical evidence of HCV disease, or if there is concern regarding the handling or storage of the test specimen.

Source: CDC. Testing for HCV infection: An update of guidance for clinicians and laboratorians. MMWR 2013;62(18).