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## May is Hepatitis Awareness Month

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### Hepatitis Surveillance and Hepatitis Screening Recommendations

#### Background

"Hepatitis" is a general term for inflammatory conditions of the liver. It is characterized by jaundice, hepatomegaly, anorexia, abdominal and gastric discomfort, abnormal liver function, clay-colored stools and dark urine. Hepatitis may be caused by bacterial or viral infection, parasitic infestation, alcohol, drugs, toxins or transfusion of incompatible blood. It may be asymptomatic, mild and brief, or severe, fulminant and life threatening. In Nevada, viral hepatitis (hepatitis A, B, C, delta, unspecified) is a reportable disease per Nevada Administrative Code (NAC).

#### Acute Viral Hepatitis Incidence, Washoe County, 2009

| Viral Hepatitis Type | 2009 Incidence* in Washoe | 2008 Incidence* in US | Healthy People 2010 Objective* |
|----------------------|---------------------------|-----------------------|--------------------------------|
| A                    | 0.7 <sup>§</sup>          | 0.9                   | 4.5                            |
| B                    | 0.96                      | 1.3                   | N/A**                          |
| B - 19-24 years      | 0.0 <sup>§</sup>          | N/A**                 | 2.4                            |
| B - 25-39 years      | 1.1 <sup>§</sup>          | N/A**                 | 5.1                            |
| B - >39 years        | 1.7 <sup>§</sup>          | N/A**                 | 3.8                            |
| C                    | 0.96 <sup>§</sup>         | 0.3                   | 1.0                            |

\* Cases per 100,000 population

\*\* Not available

§ HP 2010 Objective was achieved

#### Chronic Viral Hepatitis Prevalence in Washoe County as of 2009

Nationwide, there are about 1.25 million Americans living with chronic hepatitis B. In the US, an estimate of prevalence for chronic hepatitis B is below 2% ([www.cdc.gov/ncidod/diseases/hepatitis](http://www.cdc.gov/ncidod/diseases/hepatitis)). Between 1990-2009, 1198 unique (non-duplicate) cases of chronic hepatitis B virus (HBV) infection have been reported in Washoe County. Forty-three percent (43%) were Asian/Pacific Islander. A total of 1184 household and sexual contacts were identified. Of 1184 contacts, 53% (630/1184) completed seroscreening and 59% of susceptible contacts (166/283) completed the hepatitis B vaccine series. All 16 infants born to women with chronic HBV infection in 2009 received HBIG and HBV vaccine within 12 hours of birth, as recommended.

Nationwide, there are about 3.9 million Americans living with chronic hepatitis C. In the US, an estimate of prevalence for chronic hepatitis C is 1.8%

([www.cdc.gov/ncidod/diseases/hepatitis](http://www.cdc.gov/ncidod/diseases/hepatitis)). Between May 1, 2002 and December 2009, a total of 5,292 unduplicated cases of hepatitis C virus (HCV) infection were reported in Washoe County. This represents approximately 1.3% of the county population. Nearly twenty percent (20%) of cases were identified through screening tests. Seventy-three percent (73%) of cases were ages 40-59 years, and 65% were male. African Americans and White non-Hispanics were disproportionately affected by chronic HCV infection. Six out of 10 cases had one or more risk factors, 63.5% had genotype 1 and 30.8% had genotype 2 or 3 infection. About 4% (135/3396) died. Hepatitis C was the leading cause of death in 13 cases, and the secondary cause of death in 108 cases.

#### Hepatitis B Screening Recommendations

Active screening among high-risk population subgroups is an important strategy in preventing the transmission of HBV, given the lack of symptoms in most chronically infected persons. In 2008, the Centers for Disease Control and Prevention issued an updated set of recommendations for identification and public health management of persons with chronic HBV infection (Table 1).<sup>i</sup>

**Table 1 Updated CDC Screening Guidelines for Chronic HBV Infection<sup>i</sup>**

##### Testing is now recommended for:

- ◆ Men who have sex with men
- ◆ Injection drug users
- ◆ Persons needing immunosuppressive therapy
- ◆ Persons with abnormal liver function tests (ALT/AST) of unknown etiology
- ◆ Persons born in regions of intermediate (prevalence 2%-8%) or high ( $\geq$ 8%) HBV endemicity
- ◆ US-born persons (not vaccinated as infants) whose parents were born in regions of high endemicity

##### Testing continues to be recommended for:

- ◆ Pregnant women
- ◆ Infants born to HBsAg-positive mothers
- ◆ Household, needle sharing & sexual contacts of persons known to be HBsAg-positive
- ◆ HIV-positive persons
- ◆ Hemodialysis patients
- ◆ Donors of blood, plasma, organs, tissues or semen
- ◆ Persons who are the sources of blood or body fluids for exposure that might require post-exposure prophylaxis (e.g., needlestick, sexual assault)

Please share this document with all physicians & staff in your facility/office.

**Table 2. Geographic Regions with HBsAg Prevalence  $\geq 2\%$ <sup>i</sup>**

| Region                    | HBsAg Prevalence $\geq 2\%$   |
|---------------------------|---|
| Africa                    | All countries   |
| Asia                      | All countries   |
| Australia & South Pacific | All countries except Australia & New Zealand  |
| Middle East               | All Countries except Cyprus & Israel  |
| Eastern Europe            | All countries except Hungary  |
| Western Europe            | Malta, Spain, & indigenous populations in Greenland   |
| North America             | Alaska Natives and indigenous populations in Northern Canada  |
| Mexico & Central America  | Guatemala & Honduras  |
| South America             | Ecuador, Guyana, Suriname, Venezuela & Amazonian areas of Bolivia, Brazil, Columbia, and Peru             |
| Caribbean                 | Antigua-Barbuda, Dominica, Grenada, Haiti, Jamaica, St. Kits-Nevis, St. Lucia, and Turks & Caicos Islands |

**Hepatitis C Screening Recommendations**

Testing should be offered routinely to persons most likely to be infected with hepatitis C virus (HCV) who might require medical management. **Testing should be accompanied by appropriate counseling and medical follow-up.** In addition, anyone who wishes to know or is concerned regarding their HCV-infection status should be provided the opportunity for counseling, testing, and appropriate follow-up.<sup>ii</sup>

The determination of which persons at risk to recommend for routine testing is based on various considerations, including a known epidemiologic relationship between a risk factor and acquiring HCV infection, prevalence of risk behavior or characteristic in the population, prevalence of infection among those with a risk behavior or characteristic, and the need for persons with a recognized exposure to be evaluated for infection. For persons at potential (or unknown) risk for HCV infection, the need for, or effectiveness of, routine testing has not been determined. For some groups, routine testing for HCV infection is not recommended unless they have risk factors for infection.<sup>ii</sup>

**Table 3 CDC Screening Guidelines for HCV Infection<sup>ii</sup>**

|   |
|---|
| <p><b>Persons who should be tested routinely for HCV infection based on their risk for infection:</b></p> <ul style="list-style-type: none"> <li>◆ Persons who ever injected illegal drugs, including those who injected once or a few times many years ago and do not consider themselves as drug users.</li> <li>◆ Persons with selected medical conditions, including                             <ul style="list-style-type: none"> <li>○ persons who received clotting factor concentrates produced before 1987;</li> <li>○ persons who were ever on chronic (long-term) hemodialysis; and</li> <li>○ persons with persistently abnormal alanine aminotransferase levels.</li> </ul> </li> <li>◆ Prior recipients of transfusions or organ transplants, including:                             <ul style="list-style-type: none"> <li>○ persons who were notified that they received blood from a donor who later tested positive for HCV infection;</li> <li>○ persons who received a transfusion of blood or blood components before July 1992; and</li> <li>○ persons who received an organ transplant before July 1992.</li> </ul> </li> </ul> |
| <p><b>Persons who should be tested routinely for HCV-infection based on a recognized exposure:</b></p> <ul style="list-style-type: none"> <li>◆ Healthcare, emergency medical, and public safety workers after needle sticks, sharps, or mucosal exposures to HCV-positive blood</li> <li>◆ Children born to HCV-positive women.</li> </ul>   |

**Table 3 (continued) CDC Screening Guidelines for HCV Infection**

|   |
|---|
| <p><b>Persons for whom routine HCV testing is of uncertain need:</b></p> <ul style="list-style-type: none"> <li>◆ Recipients of transplanted tissue (e.g., corneal, musculoskeletal, skin, ova, sperm).</li> <li>◆ Intranasal cocaine and other noninjecting illegal drug users.</li> <li>◆ Persons with a history of tattooing or body piercing.</li> <li>◆ Persons with a history of multiple sex partners or sexually transmitted diseases.</li> <li>◆ Long-term steady sex partners of HCV-positive persons.</li> </ul> |
| <p><b>Persons for whom routine HCV testing is not recommended:</b></p> <ul style="list-style-type: none"> <li>◆ Health-care, emergency medical, and public safety workers.</li> <li>◆ Pregnant women.</li> <li>◆ Household (nonsexual) contacts of HCV-positive persons.</li> <li>◆ The general population.</li> </ul>  |

**Washoe County Hepatitis Surveillance**

Surveillance systems for hepatitis B and C have been in place in Washoe County since 1990 and 2002, respectively. All reported hepatitis B and hepatitis C cases have been registered in the surveillance system. Data is analyzed annually and included in the *Annual Communicable Disease Summary* available on line at: [http://www.washoecounty.us/health/cdpp/cd%20annual%20summary/cd\\_ansum.html](http://www.washoecounty.us/health/cdpp/cd%20annual%20summary/cd_ansum.html).

Hepatitis is reportable by law in the state of Nevada (<http://www.leg.state.nv.us/NAC/NAC-441A.html>). Health care providers, hospitals and laboratories in Washoe County should fax reports to the Communicable Disease Program confidential reporting fax at **(775) 328-3764**. Timely and complete reporting for all laboratory-confirmed cases is a critical element in the success of hepatitis surveillance.

For additional questions regarding hepatitis surveillance, please contact the Communicable Disease Program at (775) 328-2447.

<sup>i</sup> Centers for Disease Control and Prevention. Recommendations for Identification and Public Health Management of Persons with Chronic Hepatitis B Virus Infection. MMWR 2008;57(no. RR-8):10.

<sup>ii</sup> Centers for Disease Control and Prevention. Recommendations for prevention and control of hepatitis C virus (HCV) infection and HCV-related chronic disease. MMWR 1998;47(No. RR-19):20-26.