



Public Health and Hepatitis Prevention

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Industry Role in Viral Hepatitis Advocacy



Overview

- ➔ Epidemiology of the viral hepatitis epidemic in the United States
- ➔ Challenges in addressing viral hepatitis epidemic
- ➔ Strategic activities to address the viral hepatitis epidemic
- ➔ Partnership activities

Epidemiology of the Viral Hepatitis Epidemic in the United States



New Infections Continue to Occur

➔ Estimated new infections, 2007

- Hepatitis A: 25,000
- Hepatitis B: 43,000
- Hepatitis C: 17,000

Viral Hepatitis Infection Trends

- ➔ Healthcare-related outbreaks are increasing
 - Hepatitis B in elderly diabetics
 - Hepatitis B/C in outpatients receiving invasive procedures
- ➔ Vaccine coverage is lowest among adults with behavioral risks
 - Adults represent 95% of new HBV infections
- ➔ HCV new infection rates have plateaued since 2003
 - Among young IDUs, annual incidence is > 10%

About 4.5 Million People in the U.S. Have Chronic Viral Hepatitis (CVH)

- ➔ More than 50% are unaware of their infection status
 - Most remain unaware until there is profound liver damage
 - Don't receive timely prevention services and care
- ➔ CVH is the leading cause of chronic liver disease and liver cancer
 - Rates have tripled since 1975
 - Liver cancer is the fastest growing cancer in incidence in the U.S.
- ➔ HCV is the leading indicator for liver transplantation
- ➔ HCV is the 4th leading infectious disease cause of years of potential life lost*

Chronic Hepatitis B and C Impacts Asian Americans, Blacks, Baby Boomers, and Immigrants

- ➔ One in 12 A/PI in the U.S. has chronic HBV
- ➔ The rate of HCV in blacks is twice that in whites
- ➔ Persons born between 1940 and 1965 are at greatest risk for HCV
 - 4.3% overall in persons aged 40-49
 - 13.6% in black men aged 40-49
- ➔ ~40,000 persons with chronic HBV immigrate to the U.S. each year
- ➔ Annually ~800 infants of (mostly foreign-born) HBV+ women are chronically infected with HBV

HIV Accelerates CVH Morbidity and Mortality

- ➔ Co-infection is common: up to 35% of HIV+ persons also have CVH
 - ~ 25% have HCV
 - ~ 10% have HBV
- ➔ CVH is a leading cause of death for HIV+ persons
- ➔ Effective co-infection treatment is possible, but complicated
- ➔ HCV sexual transmission among HIV+ MSM is an emerging issue

Deaths from Chronic Hepatitis B and C

- ➔ Without timely care, 1 in 4 persons with CVH hepatitis will die prematurely of liver cirrhosis or liver cancer
 - 10,000-15,000 persons in the U.S. die of CVH each year, comparable to the HIV/AIDS burden
 - The hepatitis B infection death rate in A/PI is 6-7 times greater than in whites
 - The hepatitis C infection death rate in blacks is double that in whites
- ➔ Current medical costs for HCV alone are estimated at \$30 billion per year*
- ➔ Absent effective interventions, CVH deaths and associated health costs will grow significantly over the next decade

* Pyenson et al, Milliman, Inc. 2009

Challenges in Addressing Viral Hepatitis Epidemics



CVH Surveillance Is Limited

- ➔ Limited Federal funding is available (few states)
- ➔ High volume of case reports overwhelms underfunded, understaffed health departments
- ➔ Wide variable in data quality and completeness limits utility 1) to assess health burden and 2) to link with HIV and cancer registries
- ➔ National surveys are not representative of populations at high risk for infection (e.g., A/PI)
- ➔ No cohort studies of patients with CVH, with complete clinical, demographic, and behavioral data, are currently available

Staggering Worldwide Chronic Hepatitis Disease Burden

➔ 350-370 million people have chronic HBV infections

- Prevalence is greatest in eastern Asia and sub-Saharan Africa
- Most chronic cases of HBV are transmitted perinatally or intrafamilially early in childhood
- ~700,000 die each year from HBV-related disease
- Timely delivery of birth dose vaccination is crucial to transmission prevention

➔ 120-180 million people have chronic HCV infections

➔ Transmission modes:

- Less developed countries: healthcare exposures
- Developed countries: injection drug use
- ~370,000 die each year from HCV-related disease

Hepatitis A / E Disease Burden Is Not Well Quantified

- ⇒ HAV: significant morbidity, economic costs due to trade/tourism disruption, death due to acute liver failure
- ⇒ HEV: large outbreaks, high death rates in pregnant women
- ⇒ Prevention needs: safe food and water, immunization

Strategic Prevention Activities



Strategic Activities for Viral Hepatitis Prevention

- ➔ Develop Prevention Policies and Practices
- ➔ Build State/Local Capacity to Prevent Viral Hepatitis through Program Integration
- ➔ Gather Data to Guide Disease Prevention and Measure Program Impact
- ➔ Act Globally to Prevent and Control Viral Hepatitis

Develop Prevention Policies and Practices (1)

➔ ACIP vaccination recommendations

- Hepatitis A vaccination for all children ≥ 1 yr., and high risk adults
- Hepatitis B vaccination
 - Universal infant vaccination beginning at birth
 - Catch-up of all persons < 19 yrs
 - Catch-up of adults at risk for infection (e.g. sexual, injection drug use)



➔ Other prevention activities

- Blood, blood product, and organ screening guidelines
- HCV prevention and control guidelines
- National Hepatitis C Prevention Strategy

Develop Prevention Policies and Practices (2)

➔ Recommendations for identification and management of persons with CVH

- HBV (2008)
- HCV (proposed 2011)

➔ Identification and protection of newly vulnerable populations

- Contacts of adoptees from HAV endemic areas
- Non-hospital invasive procedures (HBV, HCV)
- Residential care settings (HBV)

Build State/Local Capacity To Prevent Viral Hepatitis Through Program Integration (1)

- ➔ Facilitate viral hepatitis prevention services integration with existing public health programs
 - Fund one staff position (Average award = \$90,000) in each of 55 state/local health departments
 - Coordinate use of section 317 funds for hepatitis B vaccination in 1,800 non-traditional settings (e.g., STD)
 - Leverage integration of HCV testing in STD clinics
 - In 13 states, leverage HIV funds to integrate HCV screening and testing for African Americans
 - No dedicated federal funding for core viral hepatitis public health services
 - Limited state funding for core viral hepatitis public health services
 - No funding for community-based organizations to provide services

Build State/Local Capacity To Prevent Viral Hepatitis Through Program Integration (2)

- ➔ Support perinatal hepatitis B prevention coordinators for all states
- ➔ Support development of training and education programs by 6 community-based organizations (Average award = \$150,000)
- ➔ Support active case surveillance for acute and chronic disease in nine state/local areas (average award = \$377,000)
 - Elsewhere, passive reporting lowers quality and limits usefulness
- ➔ Provide CDC epidemiologic and laboratory staff to augment state/local outbreak responses

Gather Data To Guide Disease Prevention and Measure Program Impact (1)

- ➔ Conduct active case surveillance for acute and chronic disease in sentinel sites
 - Use acute case data to measure immunization impact
 - Use chronic case data to set goals, monitor burden and HIV co-infection
- ➔ Supplement with other case surveillance
 - National HIV Behavioral Survey- 25 sites.
 - REACH - 28 sites.
 - NHANES
 - Cancer registries
 - Health-care data bases

Gather Data To Guide Disease Prevention And Measure Program Impact (2)

⇒ Conduct research and evaluation:

- Rapid HCV test evaluation (FR notice with DHAP)
 - Laboratory proficiency
 - Potential integration with HIV testing
 - Utility for hard-to-reach populations (e.g., active IDU) and non-traditional settings
- New HCV testing strategies (e.g., age-based)
- Emerging pathogens (drug resistant HBV, HEV)
- Vaccine efficacy
- Clinical preventive services to prevent sequelae of chronic viral hepatitis

Act Globally to Prevent and Control Viral Hepatitis

- ➔ Provide DVH staff assignee to help guide WHO priorities and policies
- ➔ Provide support for WPRO goal of eliminating hepatitis B in the Western Pacific
- ➔ Provide surveillance and laboratory assistance (e.g., Pakistan, Uganda)

Viral Hepatitis Partnership Activities



Institute of Medicine Review

- ➔ Funding: CDC and Federal partners (part A)
NVHR and corporate partners (part B)
- ➔ Purpose: Examine the current and future health burden of chronic viral hepatitis and associated disease
 - Assess the effectiveness of current prevention strategies and programs
 - Assess surveillance, research, and program needs
 - Recommend priorities to guide surveillance, research, and program development
- ➔ Launch: Fall 2008
- ➔ Target: Report release in Winter 2010

International Disease Prevention

- ➡ Funding: Direct support by ZeShan Foundation (Hong Kong) for a WHO Medical Officer in China and East Asia through a conditional gift to CDC -- not CDC Foundation -- for a portion of the position cost
- ➡ Purpose: Promote the adoption of comprehensive policies in China and Asia to help eliminate hepatitis B
- ➡ Launch: July, 2009
- ➡ Target: Three-year term

The Chronic Hepatitis Cohort Study (CHeCS)

- ➔ Funding: Contributions from pharmaceutical companies through the CDC Foundation
 - Two companies have made commitments
- ➔ Purpose: Timely collection of data from routine clinician-patient interactions in multiple settings
 - Demographics of persons in care
 - Spectrum of disease/natural history
 - Treatments and care benefits and problems
- ➔ Target: Data from >15,000 chronic HBV and HCV patients

Summary

- ➔ NCHHSTP and DVH are actively leveraging available funding wherever possible to provide state and local partners with the resources they need to address viral hepatitis prevention issues
- ➔ Viral hepatitis prevention remains critically underfunded in a time of escalating disease burden and public health costs
- ➔ NCHHSTP and DVH look forward to working with industry partners to find new and innovative ways to support viral hepatitis prevention efforts at the local, state, and national levels