Hepatitis and Liver Cancer

A National Strategy for Prevention and Control of Hepatitis B and C

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

Advising the nation / Improving health

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Institute of Medicine

- Part of the National Institute of Science
- Charted and funded by US Congress to advise US government on health issues and disparities
- Evidenced-based approach
  - Project performed over 18 months
  - Strong support staff at IOM: full time PhD, full time Masters level person, part time logistic support person
- Results presented to pertinent government agencies and Congress in January 2009.

Statement of Task

The IOM will form a committee to determine ways to reduce new HBV and HCV infections and the morbidity and mortality related to chronic viral hepatitis. The committee will assess current prevention and control activities and identify priorities for research, policy, and action. The committee will highlight issues that warrant further investigations and opportunities for collaboration between private and public sectors.

Committee Examined

- Strategies for preventing new HBV and HCV infections
- Strategies for reducing morbidity and mortality from chronic HBV and HCV infections
- Assess the type and quality of data needed from state and local viral hepatitis surveillance systems to guide and evaluate prevention services
- Health Disparities of specific subpopulations at high risk, such as:
  - Asian Americans, African Americans, and persons born in HBV endemic countries
  - Illicit drug users, men who have sex with men, and youth

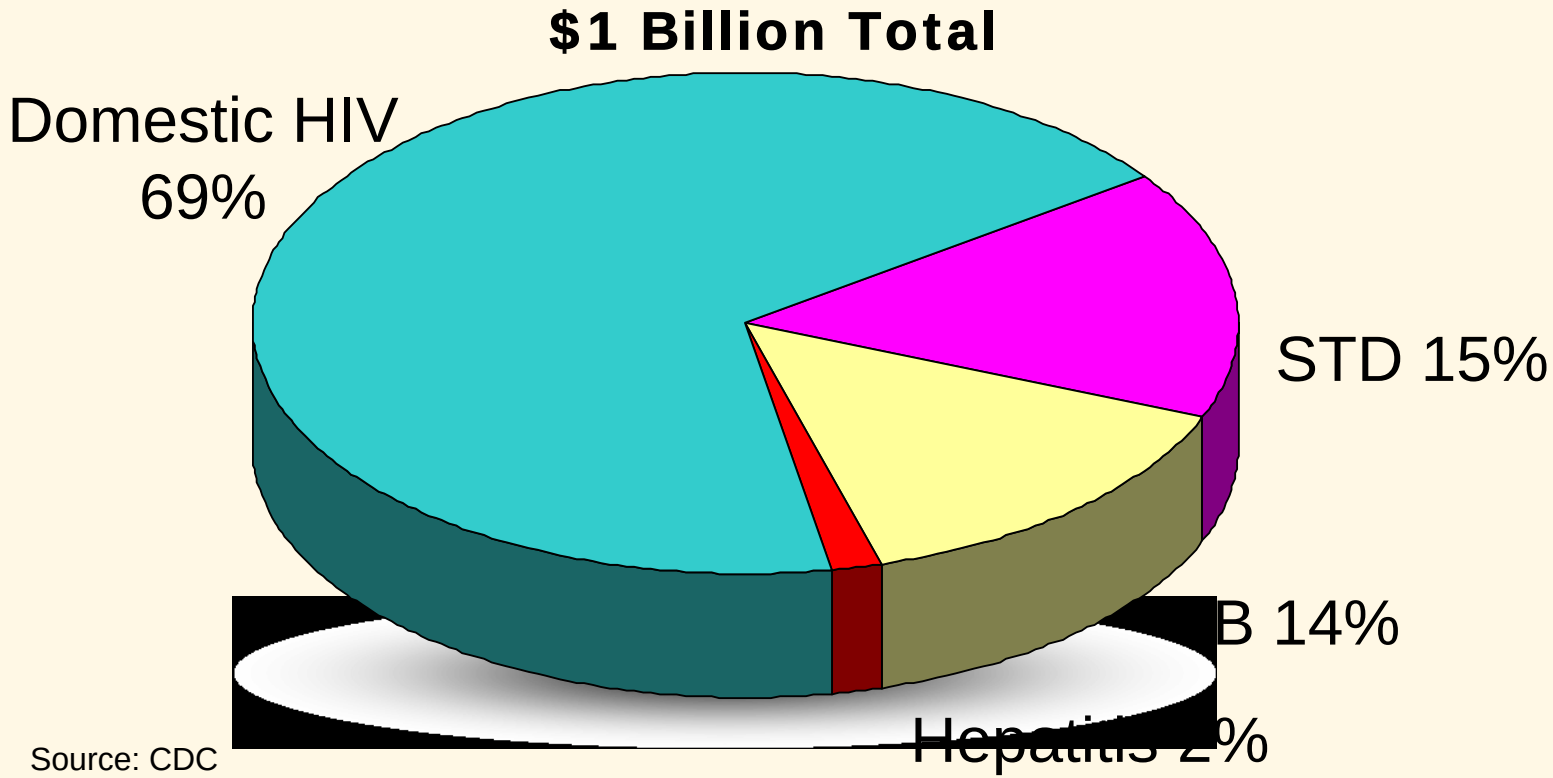
Lack of awareness and associated deaths

Virus	Prevalence	% of Population Unaware of Infection Status	Deaths in 2006 Related to Infection
HBV	800,000 –1.4 million	About 65%	3,000
HCV	2.7–3.9 million	About 75%	12,000
HIV	1.1 million	About 21%	14,016

Sources: CDC; Lin et al, 2007; Hagan et al 2006

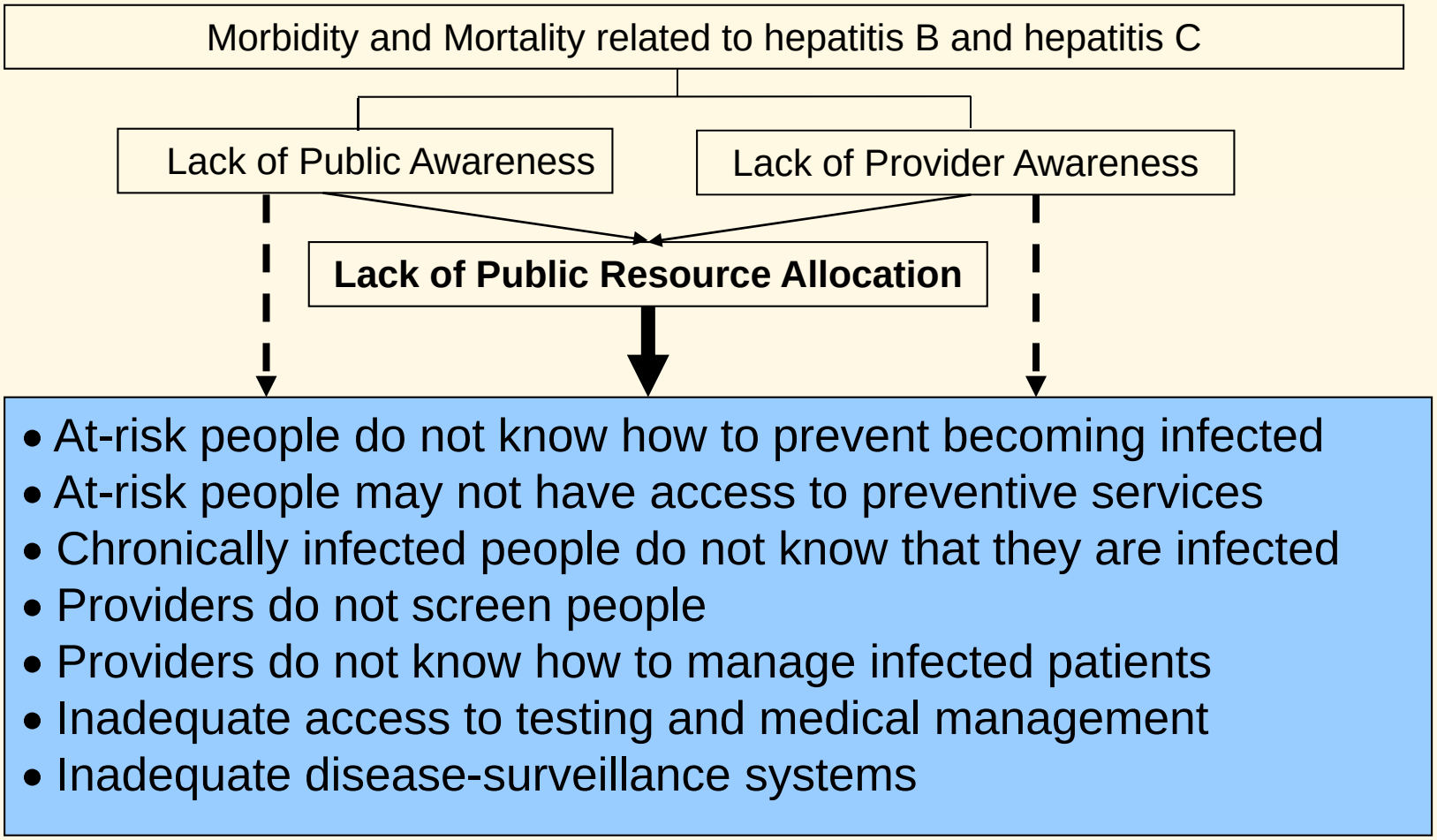
Lack of Public Resource Allocation

National Center for HIV/AIDS, Viral Hepatitis, Sexually Transmitted Disease, and Tuberculosis Prevention Funding

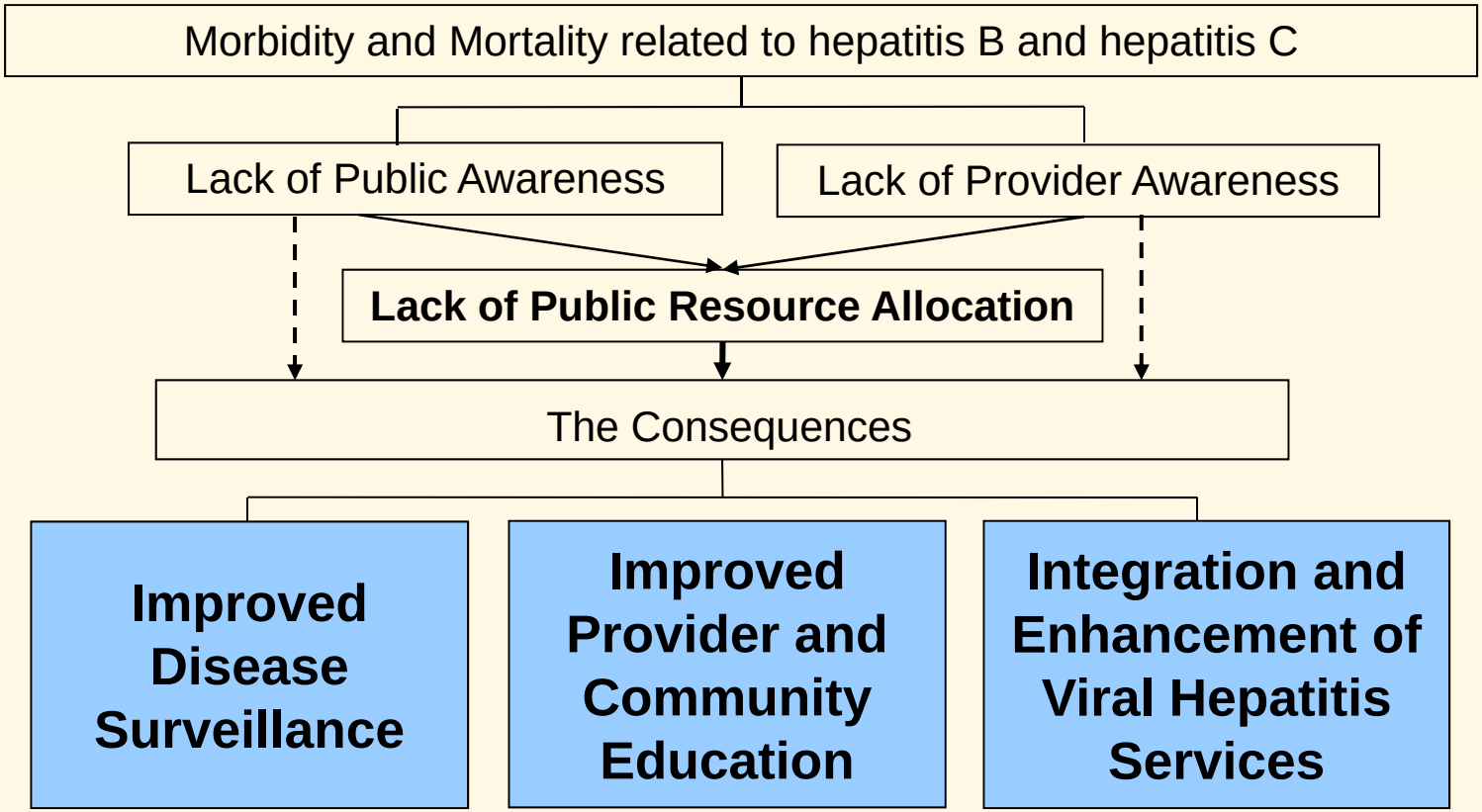


Source: CDC

The Consequences



The Recommendations



Recommendation 2-1

The Centers for Disease Control and Prevention should conduct a comprehensive evaluation of the national hepatitis B and hepatitis C public-health surveillance system.

- Include assessment of the system's attributes, including completeness, data quality and accuracy, timeliness, sensitivity, specificity, predictive value positive, representativeness, and stability.
- Be consistent with CDC's Updated Guidelines for Evaluating Public Health Surveillance Systems.
- Be used to guide the development of detailed technical guidance and standards for viral hepatitis surveillance.
- Be published in a report.

Disease Surveillance Recommendations

2-2. The Centers for Disease Control and Prevention should develop specific cooperative viral-hepatitis agreements with all state and territorial health departments to support core surveillance for acute and chronic hepatitis B and hepatitis C.

2-3. The Centers for Disease Control and Prevention should support and conduct targeted active surveillance, including serologic testing, to monitor incidence and prevalence of hepatitis B virus and hepatitis C virus infections in populations not fully captured by core surveillance.

Comprehensive Viral Hepatitis Services

Community Outreach
- Community-awareness programs
- Provider-awareness programs

Prevention
- Vaccination
- Harm reduction
- Needle-exchange programs
- Drug and alcohol treatment services
- Vaccination of hepatitis B virus-susceptible contacts

Identification of Infected Persons
- Risk-factor screening
- Laboratory testing

Social and Peer Support
- Positive prevention services
- Education and referral to other related services and care

Medical Management
- Assessment for and provision of long-term monitoring for viral hepatitis and selection of appropriate persons for treatment (in accordance with American Association for the Study of Liver Diseases guidelines)
- Psychiatric and other mental-health care
- Adherence support

Provider and Community Awareness Findings

Health-Care and Social-Service Providers

Low levels of knowledge about hepatitis B and hepatitis C

- Prevalence and incidence
- Who is at risk
  - •Chronic vs. acute
  - •Who to test?
  - •Who to vaccinate?
- Interpretation of test results
- Clinical sequelae
- Medical management for chronic infection

General and At-Risk Community

Low awareness within general community

Low awareness within at-risk communities

- Hepatitis B
- Hepatitis C

Stigma

Limited educational programs

Improved Provider and Community Awareness

Health-Care and Social-Service Providers

3-1. The Centers for Disease Control and Prevention should work with key stakeholders (other federal agencies, state and local governments, professional organizations, health-care organizations, and educational institutions) to develop hepatitis B and hepatitis C educational programs for health-care and social-service providers.

General and At-Risk Community

3-2. The Centers for Disease Control and Prevention should work with key stakeholders to develop, coordinate, and evaluate innovative and effective outreach and education programs to target at-risk populations and to increase awareness in the general population about hepatitis B and hepatitis C.

Primary Care and the General Population

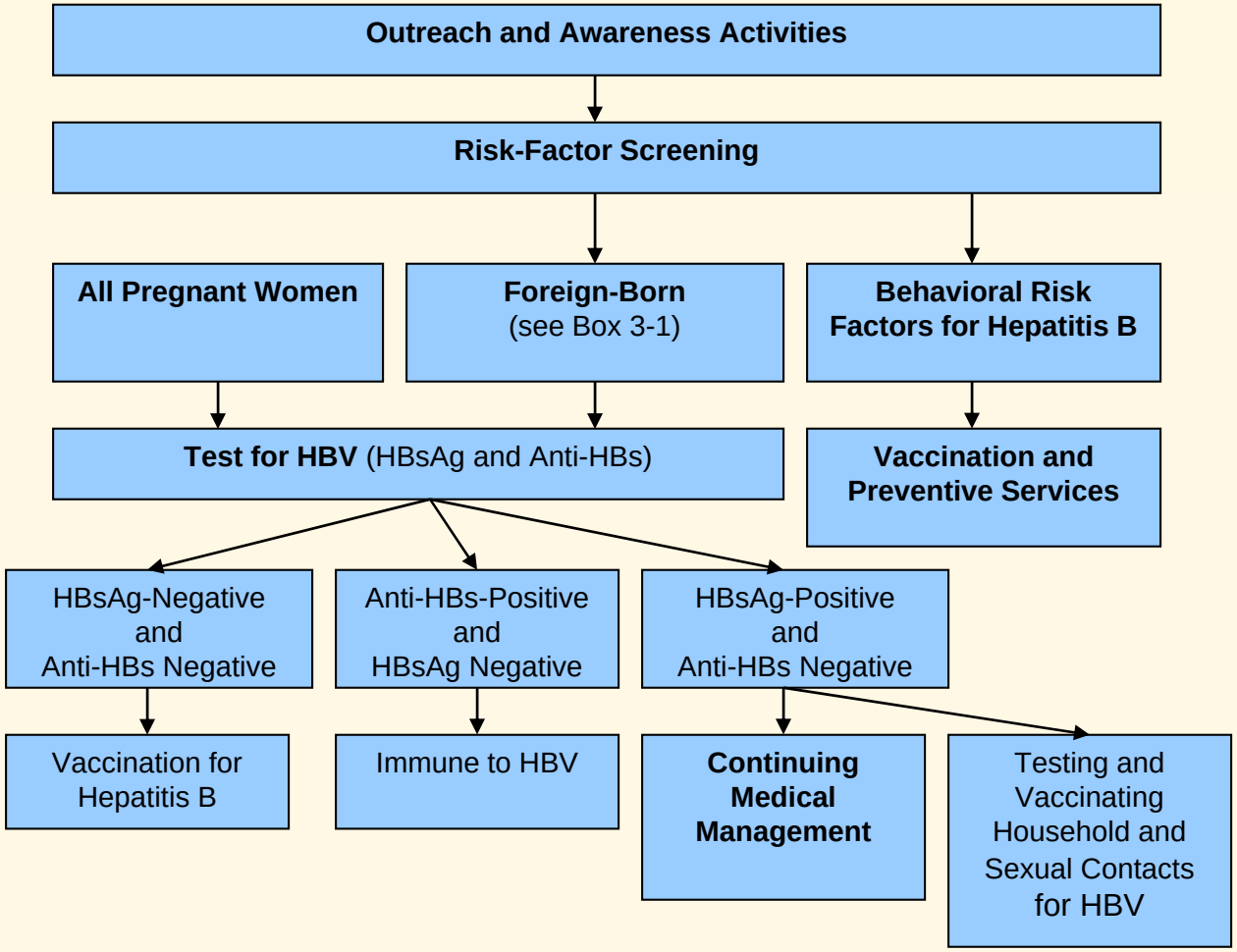
5-1. Federally funded health-insurance programs—such as Medicare, Medicaid, and the Federal Employees Health Benefits Program—should incorporate guidelines for risk-factor screening for hepatitis B and hepatitis C as a required core component of preventive care so that at-risk people receive serologic testing for hepatitis B virus and hepatitis C virus and chronically-infected patients receive appropriate medical management.

5-9. The Health Resources and Services Administration should provide adequate resources to federally funded community health facilities for provision of comprehensive viral-hepatitis services.

Populations and Setting of Special Interest

- Pregnant Women
- Foreign-Born
- Illicit Drug Users
- Incarcerated Populations
- High Impact Settings
  - STD Clinics
  - HIV Clinics
  - Homeless Shelters
  - Mobile Health Units

Model for Viral Hepatitis B Services



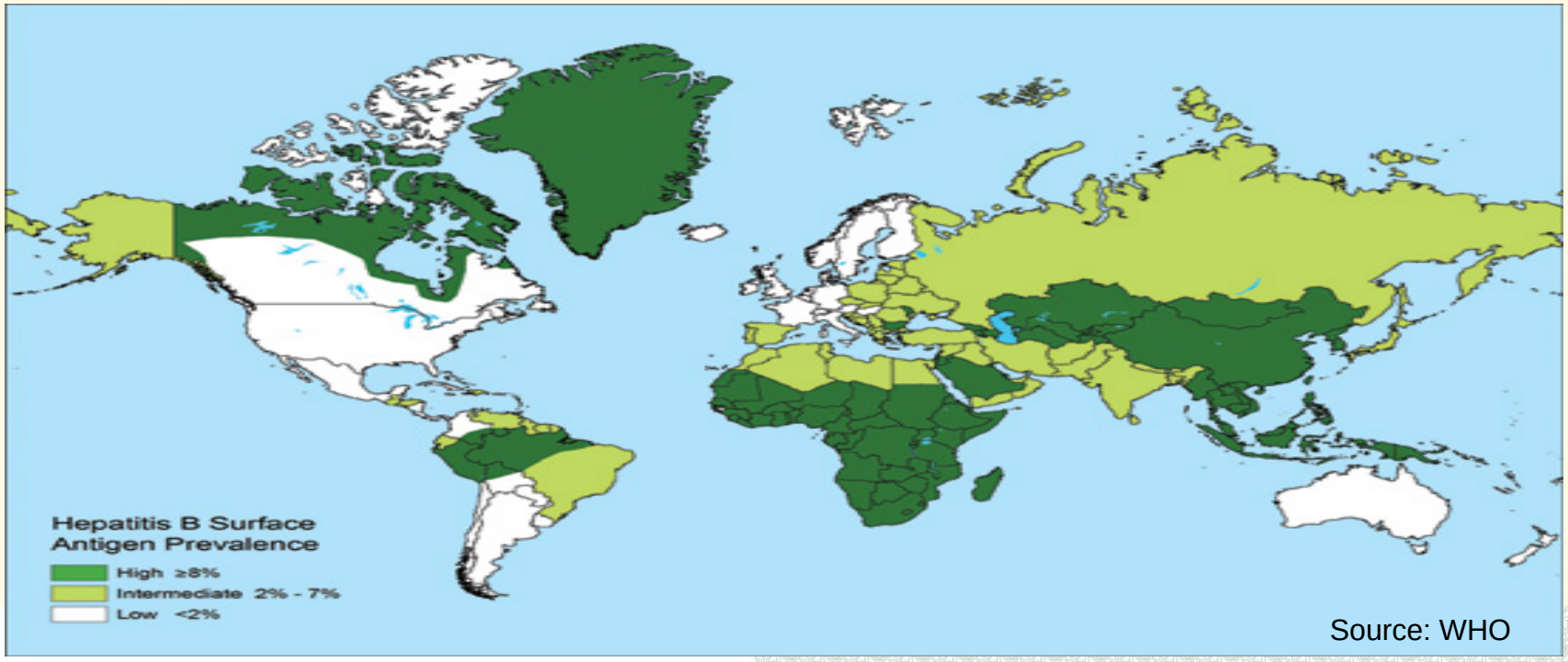
Pregnant Women

5-6. The Centers for Disease Control and Prevention should provide additional resources and guidance to perinatal hepatitis B prevention program coordinators to expand and enhance the capacity to identify chronically infected pregnant women and provide case-management services, including referral for appropriate medical management.

5-7. The National Institutes of Health should support a study of the effectiveness and safety of peripartum antiviral therapy to reduce and possibly eliminate perinatal hepatitis B virus transmission from women at high risk for perinatal transmission

Foreign-Born Populations

5-2. The Centers for Disease Control and Prevention, in conjunction with other federal agencies and state agencies, should provide resources for the expansion of community-based programs that provide hepatitis B screening, testing, and vaccination services that target foreign-born populations.



Source: WHO

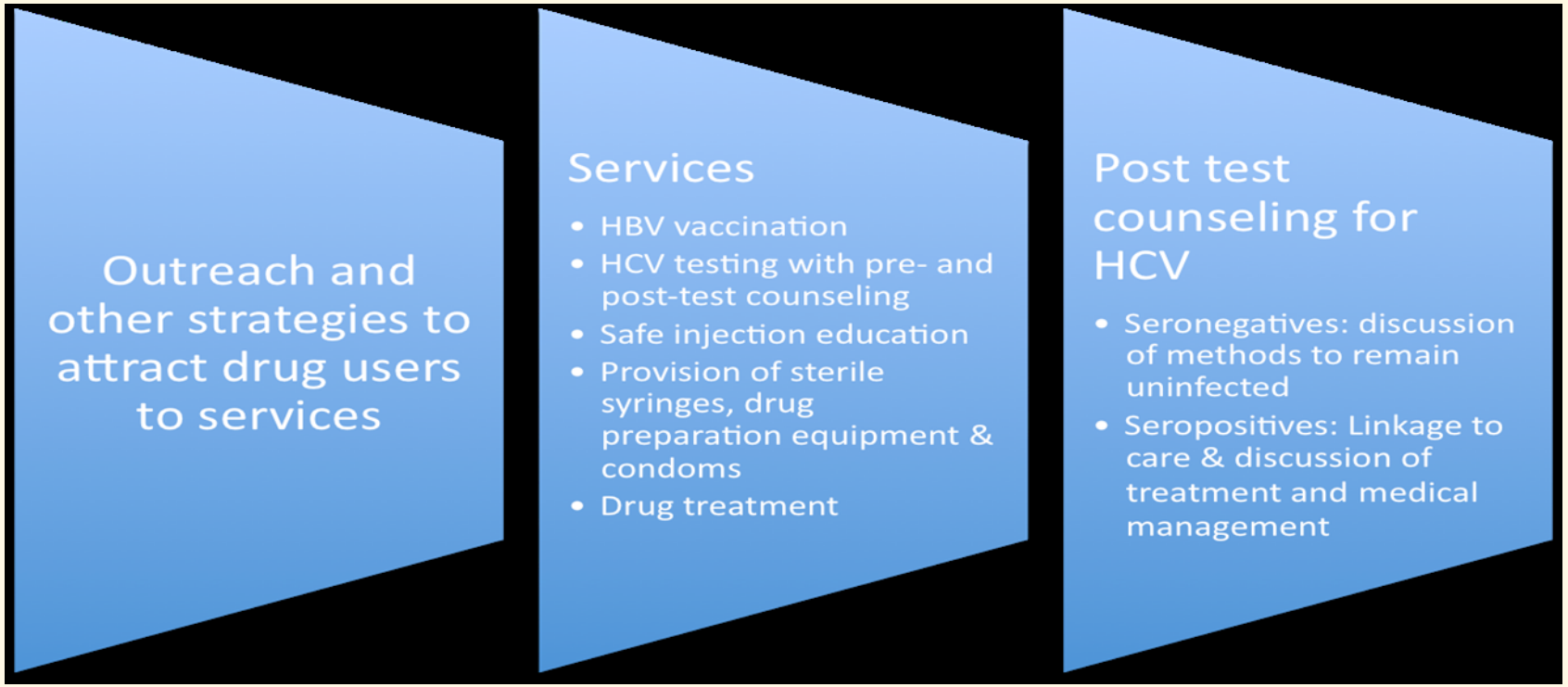
Illicit Drug Users

5-3. Federal, state, and local agencies should expand programs to reduce the risk of hepatitis C virus infection through injection-drug use by providing comprehensive hepatitis C virus prevention programs. At a minimum, the programs should include access to sterile needle syringes and drug-preparation equipment because the shared use of these materials has been shown to lead to transmission of hepatitis C virus.

5-4. Federal and state governments should expand services to reduce the harm caused by chronic hepatitis B and hepatitis C. The services should include testing to detect infection, counseling to reduce alcohol use and secondary transmission, hepatitis B vaccination, and referral for or provision of medical management.

5-5. Innovative, effective, multicomponent hepatitis C virus prevention strategies for injection drug users and non-injection drug users should be developed and evaluated to achieve greater control of hepatitis C virus transmission.

Model of Hepatitis C Services for Illicit Drug Users



Incarcerated Populations

5-8. The Centers for Disease Control and Prevention and the Department of Justice should create an initiative to foster partnerships between health departments and corrections systems to ensure the availability of comprehensive viral hepatitis services for incarcerated people.

High Impact Settings

5-10. The Health Resources and Services Administration and the Centers for Disease Control and Prevention should provide resources and guidance to integrate comprehensive viral hepatitis services into settings that serve high-risk populations such as STD clinics, sites for HIV services and care, homeless shelters, and mobile health units.

Desired Outcomes

- Screening is widely used as a part of good primary care
- At-risk people and communities actively seek testing, preventive services, and appropriate medical management
- Better information leads to:
  - Improved understanding of hepatitis B and hepatitis C
  - More effective and targeted prevention programs
  - More research on effective vaccination and treatment options
- Infected people have better health outcomes
- Decreased transmission leads to fewer carriers of HBV and HCV and fewer cases of hepatitis B and hepatitis C
  - Resulting in a long-term decrease in cases of liver cancer and liver failure