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A National Strategy
for the Elimination of
Hepatitis B and C

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Outline

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Statement of Task

- Phase One
 - *Question: Is it feasible to eliminate hepatitis B and C from the United States?*
 - *Answer: Yes, but not likely without attention to serious barriers.*
- Phase Two
 - *What exactly is the strategy to eliminate viral hepatitis from the United States?*

Public Health Significance

- Chronic HBV and HCV infections affect 3 to 5 times more Americans than HIV; worldwide it is 10 times more.
- Viral hepatitis kills more people (worldwide) every year than HIV, road traffic injuries, or diabetes.
- Despite being the 7th leading cause of death in the world, viral hepatitis consumes less than 1% of the NIH research budget.
- 1.3 million Americans have hepatitis B, 2.7 million have hepatitis C
- HBV and HCV account for ~80% of the world's liver cancer.
- Chronic hepatitis B increases odds of liver cancer 50 to 100 times, hepatitis C 15 to 20 times.
- Viral hepatitis is driving the 38% increase in liver cancer in the US between 2003 and 2012.

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Public Health Significance

- There's an effective vaccine for hepatitis B.
- New treatments can cure the vast majority of hepatitis C patients; treatment for hepatitis C is expensive, but it is still cost-effective compared to other interventions.
- It is possible to eliminate hepatitis B and C in the United States, averting about 90,000 deaths by 2030.
- This report is a roadmap to get there.

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Public Health Significance

- 2016 WHA resolution to elimination viral hepatitis by 2030
- Member states are developing national strategies for elimination
- Each national strategy should consider five strategic directions



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Hepatitis B Targets

- A 50 percent reduction in mortality from chronic hepatitis B is possible in the United States by 2030. This would avert over 60,000 deaths.
 - Meeting this goal will require diagnosing 90 percent of chronic hepatitis B cases, bringing 90 percent of those to care, and treating 80 percent of those for whom treatment is indicated.
 - The same level of diagnosis, care, and treatment will reduce new cases of HBV-related hepatocellular carcinoma by about a third and new cases of HBV-related cirrhosis by about 45 percent.
 - The elimination of hepatitis B virus infection in neonates and children under 5 is possible, as demonstrated in Alaska Natives.
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Hepatitis C Targets

- A 90 percent reduction in incidence of hepatitis C (relative to the 2015 incidence carried forward) is possible in the United States by 2030. Meeting this goal will require treatment without restrictions on severity of disease and a consistent ability to diagnose new cases, even as prevalence decreases.
- The same levels of diagnosis and treatment would reduce mortality from hepatitis C in 2030 by 65 percent relative to 2015, and avert 28,800 deaths by 2030.
- Meeting these targets depends on diagnosing at least 110,000 cases a year until 2020, almost 89,000 a year between 2020 and 2024, and over 70,000 each year between 2025 and 2030.

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A Central Coordinating Office

- Hepatitis elimination will require coordinated action from various federal and state government agencies.
- The leadership of a single office would help ensure efficient and harmonious work.

The highest level of the federal government should oversee a coordinated effort to manage viral hepatitis elimination.

Information

- Not all state and local health departments are in a position to measure hepatitis disease burden.
- Integrated, highly-automated, electronic surveillance systems could go far toward a more accurate understanding of viral hepatitis disease burden.

The CDC, in partnership with state and local health departments, should support standard hepatitis case finding measures, and the follow-up, monitoring, and linkage to care of all viral hepatitis cases reported through public health surveillance. CDC should work with the National Cancer Institute to attach viral etiology to reports of liver cancer in its periodic national reports on cancer.

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Information

- A better understanding of the epidemiology of viral hepatitis comes from research in high-risk populations.
- Such research can help clarify the true incidence and prevalence of HBV and HCV infection.

The CDC should support cross-sectional and cohort studies to measure HBV and HCV infection incidence and prevalence in high-risk populations.

Essential Interventions

- Hepatitis B is vaccine-preventable, but only about a quarter of adults older than 19 are fully immunized.

States should expand access to adult hepatitis B vaccination, removing barriers to free immunization in pharmacies and other easily accessible settings.

Essential Interventions

- Early testing for HBV viremia can help determine the best course of treatment for HBsAg+ pregnant women, balancing questions of drug resistance and hepatitis flare against the risk of mother-to-child transmission.

The CDC, AASLD, IDSA, and ACOG should recommend that all HBsAg+ pregnant women have early prenatal HBV DNA and liver enzyme tests to evaluate whether antiviral therapy is indicated for prophylaxis to eliminate mother-to-child transmission or for treatment of chronic active hepatitis.

Essential Interventions

- The most effective way to prevent hepatitis C among people who inject drugs is to combine strategies that improve the safety of injection with those that treat the underlying addiction.
- People who inject drugs account for about 75% of new HCV infections.

States and federal agencies should expand access to syringe exchange and opioid agonist therapy in accessible venues.

Essential Interventions

- There are settings where increased screening could payoff handsomely, but screening can put a burden on the health system and providers.
- Society stands to benefit from any measure that sheds light on the subclinical burden of HBV and HCV infection.

The CDC should work with states to identify settings appropriate for enhanced viral hepatitis testing based on expected prevalence.

Essential Interventions

- Curing hepatitis C has clinical benefit, including reduction in cirrhosis and return to normal liver function.
- Treating everyone with hepatitis C, regardless of disease stage would avert considerable suffering in patients. It would also protect society by reducing the population reservoir for infection.

Public and private health plans should remove restrictions that are not medically indicated and offer direct-acting antivirals to all chronic hepatitis C patients.

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Service Delivery

- There are gaps between the practice of medicine as recommended by experts and what really happens. NCQA is interested in closing those gaps.
- HEDIS indicators command a certain attention from providers and health plan managers. Inclusion of viral hepatitis in HEDIS would increase attention to these services.

The NCQA should establish measures to monitor compliance with viral hepatitis screening guidelines and hepatitis B vaccine birth dose coverage and include the new measures in HEDIS.

Service Delivery

- One of the main bottlenecks in hepatitis care is the need for patients to be treated by specialists. As a result, viral hepatitis care remains out of reach for people in rural and underserved areas.

AASLD and IDSA should partner with primary care providers and their professional organizations to build capacity to treat hepatitis B and C in primary care. The program should set up referral systems for medically complex patients.

Service Delivery

- The people most affected by viral hepatitis can be hard to reach.
- People with the most serious need for health care, including people with behavioral health problems, need more support services.

The Department of Health and Human Services should work with states to build a comprehensive system of care and support for special populations with hepatitis B and C on the scale of the Ryan White system.

Service Delivery

- Incarcerated people bear a disproportionate burden of viral hepatitis. This is an opportunity; jails and prisons are an ideal place to vaccinate against hepatitis B and treat hepatitis C.

The criminal justice system should screen, vaccinate, and treat hepatitis B and C in correctional facilities according to national clinical practice guidelines.

Financing

- Eliminating hepatitis C in the United States depends on treating at least 260,000 patients a year with direct-acting antivirals.
- None of these drugs will come off patent before 2029, one year before the target elimination date.
- Delaying mass treatment would result in tens of thousands of deaths and billions of dollars in wasted medical costs.

The federal government, on behalf of HHS, should purchase the rights to a direct-acting antiviral for use in neglected market segments, such as Medicaid, the Indian Health Service, and prisons. This could be done through the licensing or assigning of a patent in a voluntary transaction with an innovator pharmaceutical company.

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Research

- There can be no elimination of viral hepatitis without better attention to research gaps.
- Mechanistic research questions include: curative therapy for chronic HBV infection and HCV vaccine.
- Implementation research questions include: stigma alleviation, understanding networks of drug users, and health in incarcerated people.

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