Hepatitis C Elimination

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Disclosures

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Agenda

• The hepatitis C virus transmission and disease

• Hepatitis C prevention care and treatment
  • Benefits
  • Strategies to expand access

• Feasible next steps
Tenets of Disease Elimination

- Only certain diseases are eligible as targets for elimination
- Goals should be simple to compel action
- Progress toward elimination can begin before goals are set
- The first 20% of cases are easier to find than the last 20%
- Research is the lifeblood of disease elimination
- Political commitment is as important as technical proficiency
- The ultimate goal of disease elimination is health equity
The 2020 Nobel Prize for Discovery of Hepatitis C Virus

“For the first time in history, the disease can now be cured, raising hopes of eradicating Hepatitis C virus from the world population” -Nobel Committee

Baruch Blumberg was awarded the 1976 Nobel Prize in Medicine for discovery of hepatitis B virus.

Science is not an end but a means to achieve a greater purpose.

Global Goals for Viral Hepatitis Elimination
A Rare Opportunity for Health Impact

✓ Biologic feasibility: Human required for replication; No intermediate hosts, environmental propagation

✓ Technical feasibility:
  • Prevent transmission-
    • Hepatitis B vaccine
  • Avoid parenteral blood exposures
  • Prevent mortality– care and treatment
    • HBV treatment- long term viral suppressive therapy
    • HCV treatment and cure
  • Reliable tests- high sensitivity and specificity

✓ Goals: WHO goals for elimination of hepatitis as a public health threat

✓ Impact: 1.5 million HCV related deaths averted by 2030

✓ Endorsement:
  • World Health Assembly, 2016, 2022
  • International Task Force for Disease Eradication, 2017

Absolute HBV and HCV Elimination Targets: WHO 2016-2021
Global Strategy

Global Goals for Viral Hepatitis Elimination
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## Coverage Targets for Global HCV Elimination Goals

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baseline – 2020</th>
<th>Targets – 2025</th>
<th>Targets – 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of new hepatitis C infections per year among people who inject drugs per year</td>
<td>8 per 100</td>
<td>3 per 100</td>
<td>2 per 100</td>
</tr>
<tr>
<td><strong>Milestones</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning – number of countries with costed hepatitis elimination plans</td>
<td>TBD</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Surveillance – number of countries reporting burden and cascade annually</td>
<td>130</td>
<td>150</td>
<td>170</td>
</tr>
<tr>
<td><strong>Coverage</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of needles and syringes distributed per person who injects drugs⁴</td>
<td>200</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>Hepatitis C – percentage of people living with hepatitis C diagnosed / and cured</td>
<td>30%/30%</td>
<td>60%/50%</td>
<td>90%/80%</td>
</tr>
</tbody>
</table>

Declines in the Major Cause of Incident HCV Infection
Health-Care Related Exposures

- 1.8% HCV transmission risk after percutaneous exposures

Global
- 97% of global blood supply screened for HCV
- 88% decrease in use of non-sterile syringes
- 66% of new HCV infections

Outbreak Settings
- Outpatient or long-term care facilities
- Hemodialysis settings
- Dental
- Drug diversion by HCV-infected health care providers,

Progress toward elimination can begin before goals are set

Pioneer Programs Demonstrate Feasibility of Hepatitis Elimination
Effective HCV Elimination Programs - Egypt

- Hepatitis Action plan (World Bank support)
- President calls for all adult HCV testing plus NCD screening
- Mass Media Campaign
- Healthcare facility: 7,486
- Online registration: No patient costs
- Electronic registry
- HCV AB rapid test <$1.0/test
- 75 million tested
- 2,207,397 anti-HCV+
- HCV PCR+ 1,161,560
- HCV treatment center: 1,073,586 treated
- 20% decline in liver related deaths
- HCV PCR in 77 labs <$5/test
- 1,044,515 SVR

Source: Mohamed Hassany, National Hepatology and Tropical Medicine Research Institute Cairo, www.globalhep.org
Egypt is on track for HCV elimination with >90% diagnosed and >90% initiated treatment.
National or Area Hepatitis Elimination Profiles (N-HEP) 30 Profiles Available

Objectives:

1. Assess Status of Hepatitis Elimination on
   • Hepatitis burden
   • Policy development– Develop standard framework for policy environment
   • Program implementation
   • Health equity for key populations
   • Partnerships

2. Assess progress toward program targets and health outcome goals

3. Highlight achievements, challenges, and feasible next steps

**HCV Elimination in the US Department of Veterans Affairs**

**Leadership Team (LT)**
One national leadership team dedicated to overseeing national program

*Members:* VA central office leaders, hepatologists, Lean experts, data analysts, public health experts, evaluation team

*Responsibilities:* Support VISN-level teams, develop policies and metrics, provide education and networking opportunities, develop tools, manage and disseminate data

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**VISN HITs**
20 regional teams focused on improving HCV care, overseen by LT

*Members:* Physicians, pharmacists, NP/PA/RN, system redesign (30-40 members)

*Responsibilities:* Communicate with leadership team and facilities in the VISN regarding HCV care, identify barriers to HCV care and implement solutions at facilities

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**VAMC HCV care teams**
147 teams at individual VA hospitals

*Members:* Physicians, pharmacists, NP/PA/RN, system redesign experts, clerks (6-10 members)

*Responsibilities:* Provide care for Veterans with HCV, implement changes developed collaboratively with the HITs, identify barriers

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VA has screened >85% of patients for hepatitis C.
As Native People and as Cherokee Nation Citizens, We Must Keep Striving to Eliminate Hepatitis C.”

“Chief Bill John Baker

CNHS HCV Care Model

Universal Screening
Screened 50,246 patients
All patients aged 20-69

Patient Navigator
Staff contacts HCV+ individuals and arranges follow-up testing and evaluation

HCV Evaluation and Non-Adherence Risk Assessment
Nurse, BH counselor, HCV provider, case manager, pharmacist, community health worker
DAA procured and MAT started, if needed

HCV Treatment
All patients offered treatment

Community Health Worker
Home visits for patients at high risk of non-adherence

### Disparities in Hepatitis C Prevalence, United States

<table>
<thead>
<tr>
<th>Rates</th>
<th>US (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>1.3</td>
</tr>
<tr>
<td>Females</td>
<td>0.57</td>
</tr>
<tr>
<td>Born 1945-1969</td>
<td>1.6</td>
</tr>
<tr>
<td>Born &gt; 1969</td>
<td>0.5</td>
</tr>
<tr>
<td>Non- Hispanic Whites</td>
<td>1.0</td>
</tr>
<tr>
<td>Non- Hispanic Blacks</td>
<td>2.3</td>
</tr>
</tbody>
</table>

H Braden, Hepatology Commun

The ultimate goal of disease elimination is health equity.
Rates* of Death with Hepatitis C Listed as a Cause of Death† Among US residents, by Demographic Characteristic, 2018

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2018 on CDC WONDER Online Database.
*Sex, and race/ethnicity-specific rates are age-adjusted per 100,000 U.S. standard population in 2000
†Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Revision (ICD-10) codes B17.1, and B18.2 (hepatitis C).
Testing Persons Born 1945-1965, United States

Key Implementation Strategies

- HCV testing policy 2012
  - All persons born 1945-1965
- Electronic prompts for HCV testing
- Clinical education of providers
- Access to HCV therapies
- Simple models of HCV care
- No or limited costs to patients
- Health promotion campaigns
- Feedback to performance of providers

From 2011-2017, 139%-374% increase in HCV testing

Percent of Baby Boomers (Born Between 1945-1965) Tested for HCV

Haridy J, Gastro Hep 2020, CDC, unpublished data
## Trends in HCV Treatment – United States

### Patients

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baby Boomers</td>
<td>64%</td>
<td>46%</td>
</tr>
<tr>
<td>Born after 1964</td>
<td>29%</td>
<td>51%</td>
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</table>

### Prescribers

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialists</td>
<td>60%</td>
<td>47%</td>
</tr>
<tr>
<td>Nurse (NP)</td>
<td>18%</td>
<td>26%</td>
</tr>
<tr>
<td>Primary care</td>
<td>11%</td>
<td>16%</td>
</tr>
</tbody>
</table>

### Payers

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid</td>
<td>21%</td>
<td>34%</td>
</tr>
<tr>
<td>Medicare</td>
<td>33%</td>
<td>26%</td>
</tr>
<tr>
<td>Private</td>
<td>42%</td>
<td>36%</td>
</tr>
</tbody>
</table>

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**The number of people who initiated* hepatitis C treatment in the U.S. declined from 2015 to 2020.**

COVID-19-related disruptions to hepatitis C testing and treatment likely contributed to the decline in 2020.

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*Based on national prescription claims data.

For more information, visit [cdc.gov/nchhstp/newsroom](http://cdc.gov/nchhstp/newsroom).

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An estimated 1.2 M persons treated for HCV

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Teshale, CID 2022.
HCV Testing and Treatment, United States 2014 - 2021

Unique Individuals (N)

<table>
<thead>
<tr>
<th>Frequency (cumulative)</th>
<th>HCV Ab tested</th>
<th>HCV Ab+</th>
</tr>
</thead>
<tbody>
<tr>
<td>46,646,661</td>
<td>2,253,500</td>
<td></td>
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</tbody>
</table>

Proportion

- 100.0% for HCV Ab tested
- 4.8% of Ab tested
HCV Testing and Treatment, United States 2014 – 2021

Unique Individuals (N)

- HCV Ab tested: 46,646,661
- HCV Ab+: 2,253,500
- HCV RNA tested: 3,117,372
- HCV RNA+: 1,951,742

Frequency (cumulative)

- HCV Ab tested: 46,646,661
- HCV Ab+: 2,253,500
- HCV RNA tested: 3,117,372
- HCV RNA+: 1,951,742

Proportion

- HCV Ab tested: 100.0%
- HCV Ab+: 4.8% of Ab tested
- HCV RNA tested: 100.0%
- HCV RNA+: 62.6% of RNA tested
HCV Testing and Treatment, United States  2014 - 2021

Unique Individuals (N)

<table>
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<th>Parameter</th>
<th>Frequency (cumulative)</th>
<th>Proportion</th>
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<tr>
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<tr>
<td>HCV RNA tested</td>
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<td>100.0%</td>
</tr>
<tr>
<td>HCV RNA+</td>
<td>1,951,742</td>
<td>62.6% of RNA tested</td>
</tr>
<tr>
<td>Treated</td>
<td>672,745</td>
<td>34.5% of RNA+</td>
</tr>
<tr>
<td>Cured</td>
<td>643,043</td>
<td>95.6% of treated</td>
</tr>
</tbody>
</table>
14 states and DC have removed prior authorization for treatment-naive patients and/or preferred drug regimens.

“The prior authorization requirement prevents many primary care providers from having the confidence and the time to treat”.

Center for Health Law and Policy Innovation, the National Viral Hepatitis Roundtable (NVHR)
Hepatitis C: State of Medicaid Access www.stateofhepc.org
Restrictions to Treatment of HCV infection

- 27 states require documentation of genotype
- 15 states require documentation of chronic infection
- 20 states require labs to be collected within a certain timeframe
- 23 states impose adherence requirements
- 9 states impose barriers to replacing lost/stolen meds

Center for Health Law and Policy Innovation, the National Viral Hepatitis Roundtable (NVHR)
Hepatitis C: State of Medicaid Access www.stateofhepc.org
## Point of Care HCV Testing Improves Access to Screening, Care and Treatment

Cunningham E, Lancet Gastro Hep 2022

<table>
<thead>
<tr>
<th>Address patient-level barriers</th>
<th>Antibody testing</th>
<th>RNA testing</th>
<th>Linkage to care</th>
<th>Treatment initiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient education</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient navigation</td>
<td></td>
<td>✓</td>
<td></td>
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<tr>
<td>Patient reminders for tx</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Motivational interviewing</td>
<td></td>
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<table>
<thead>
<tr>
<th>Address provider-level barriers</th>
<th>Antibody testing</th>
<th>RNA testing</th>
<th>Linkage to care</th>
<th>Treatment initiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider care coordination</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provider education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Point-of-care antibody testing</strong></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address systems-level barriers</th>
<th>Antibody testing</th>
<th>RNA testing</th>
<th>Linkage to care</th>
<th>Treatment initiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried blood spot testing</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrated care</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>On-site oral swab collection</td>
<td></td>
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<tr>
<td><strong>POC RNA testing</strong></td>
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<tr>
<td>Opt-out screening</td>
<td></td>
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<tr>
<td>Pharmacist led treatment</td>
<td></td>
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<tr>
<td>On site testing</td>
<td></td>
<td></td>
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<tr>
<td>Telehealth</td>
<td></td>
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</tr>
</tbody>
</table>
Strategies that Expand Access to HCV Testing and Care

- Testing policies
- Provider education
- Clinical decision tools
- Reflex RNA testing of HCV antibody + specimens
- Performance indicators/incentives
- Patient navigation
- Co-localization of HCV and primary care
- Accessible HCV therapies

<table>
<thead>
<tr>
<th>Study</th>
<th>Strategy</th>
<th>Increase in testing</th>
<th>Total tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care</td>
<td>Best practice alert (BPA)</td>
<td>Two-fold increase</td>
<td>71%</td>
</tr>
<tr>
<td>Primary care</td>
<td>BPA</td>
<td>15-fold increase</td>
<td>11%</td>
</tr>
<tr>
<td>Health system Only 17% of persons</td>
<td>BPA and clinical support</td>
<td>Two-fold increase 1945-19 65 report HCV testing (2018)</td>
<td>10%</td>
</tr>
</tbody>
</table>

Association of Reflex Testing and Receipt of HCV Treatment, 2014-2021

- Received HCV treatment
  - 30% among persons having reflex HCV RNA testing
  - 8% among persons for whom HCV Ab and RNA testing were ordered separately

- Median time from first HCV Ab+ test to treatment
  - 8.1 mos. median, 14.5 mos. mean among persons having reflex HCV RNA
  - 12.4 mos. median, 19.9 mos. mean HCV Ab and RNA testing ordered separately

*Percent treated for individuals for whom Ab and RNA testing were ordered separately may be underestimated due to inclusion of those who may not have a confirmed RNA+ test result.

Reflex testing (HCV Antibody with reflex to RNA test) was identified by matching the test date (date the specimen was drawn) of the Antibody test with that of the RNA test. Reflex testing analyses are only available with data from one large US national laboratory.

Receipt of treatment was determined based on a viral load decline of at least $1.2 \times \log_{10}$ units since the first positive HCV RNA test, indicating that treatment was initiated in the immediate period prior to the decline. Time to treatment analysis was limited to individuals with an Ab+ test at least 28 days prior to the viral load decline.
Improve HCV Treatment Options for Pregnant Women

Routine HCV recommendation
CDC March 2020
USPSTF April 2020
1st quarter 2021
41% pregnant women screened

Anti-viral prophylaxis not yet recommended;

TIP-HepC Registry of pregnant women treated for HCV www.globalhep.org

Newly Reported Chronic Hepatitis C Cases by Sex and Age – United States, 2018 (N = 137,713)

Screen adults for hepatitis C virus (HCV) infection Grade B
All asymptomatic adults (including pregnant persons) aged 18 to 79 years without known liver disease.
Periodically screen persons with continued risk for HCV infection

CDC Recommendations for Hepatitis C Screening Among Adults — United States, 2020

• Hepatitis C screening at least once for all adults aged ≥18 years, except in settings with anti-HCV prevalence of <0.1%
• Hepatitis C screening for all pregnant women during each pregnancy, except in settings with anti-HCV prevalence of <0.1%
• One-time hepatitis C testing among persons with recognized risk factors or exposures; routine testing for ongoing risks
• Any person who requests hepatitis C testing

Potential impact
• ~256,000 additional diagnoses
• ~280,000 additional cures
• ~4,400 fewer cases of hepatocellular carcinoma
• Incremental cost-effectiveness ratio of $28,000 per QALY (<$100,000 per QALY considered cost-effectiveness for the US)
Expand Access To Preventive Services for PWID in the United States

44 states, D.C., Puerto Rico operate at least one SSP

526 self reported SSPs in the country

~2,500 SSP needed for close access to syringe services

Estimated 3.69 million (95%CI 1.87-7.27) PWID in 2018
~3 times higher than in 2011
43.7 % (40.7-46.7) current HCV infection

Only 30% (4,986) drug treatment facilities offer HCV testing

States can request federal support for SSP (no equipment purchases)

Harm Reduction Coverage Remains Insufficient in US, and Most Countries
Examples of Promising Strategies and Technologies for Expanding Access to HCV Treatment
Simplification Increases HCV Care Access Minimal Monitoring (MINMON) of HCV Treatment

379 (95%) of the 399 persons who initiated treatment achieved SVR

1. No pre-treatment genotyping
2. All 84 tablets of SOF/VEL dispensed at entry
3. No scheduled on-treatment clinic/labs
4. Remote contact at Weeks 4 and 22

Research is the lifeblood of disease elimination

Solomon S, et al Lancet Gastroenterol Hepatol 2022
Patient-Centered Models of HCV Treatment for Persons Who Inject Drugs: The HERO Study

- PWID – injecting within 90 days
- Patient navigation (PN) Two week prescriptions (n=379)
- Modified directly observed therapy (mDOT) (n=376)
  - At least 5 doses observed/week
- 8 states
  - Opioid treatment programs 41%
  - Community health centers 59%
- Treatment
  - Initiation: 82.5%
  - Adherence 74.1%*
  - Completion 82.7%
  - SVR 92%
  * higher for DOT

- ITT all randomized
- mITT all randomized and initiated treatment
- Per protocol (PP): randomized; initiated treatment; complied with assigned care and had SVR outcomes

Alain Litwin, Lancet Gastroenterol Hepatol 2022
### Benefits of HCV Point of Care Testing

**Sens: 100%; Spec: 98% (finger stick)**

Test result in ~ 50 minutes

Evidence of improved linkages to care and treatment

Cost about $17 per test, global pricing

Not yet licensed in the United States

<table>
<thead>
<tr>
<th>HCV testing/treatment</th>
<th>Time from HCV Ab-treatment</th>
<th>% treated for HCV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same site/ Same day</td>
<td>0 days (0–0)</td>
<td>97%</td>
</tr>
<tr>
<td>Same site/different day</td>
<td>14 days (14-53)</td>
<td>74%</td>
</tr>
<tr>
<td>Different site and visit/</td>
<td>19 days (17-57)</td>
<td>74%</td>
</tr>
<tr>
<td>Different site/visit lab POC</td>
<td>64 days (64-64)</td>
<td>89%</td>
</tr>
<tr>
<td>Lab-based HCVRNA</td>
<td>67 days (50-67)</td>
<td>53%</td>
</tr>
</tbody>
</table>

Grebely J Lancet Gastro Hep 2017; Iwamoto J Viral Hep 2019; Thedia MD; AJTM 2021; Mohamed Z, Liver Int 2019
Options for Improvements in HCV Testing: Self Testing

HCV self-testing (HCVST) is a potential approach to improve diagnosis.

- Success approach for improvements in HIV testing
  - 32 RCTs (indirect evidence for HCV); 77% increase uptake
  - 88 countries with national policies for HIV self-testing
- No data to guide HCV ST
- Large patient preferences for self-testing
  - Finger stick- dried blood spot
  - Oral fluid – Orasure (not licensed in the US)
    - Acceptability >95%
    - Successful use 60% PWID; 80% MSM

Box 3. NEW WHO recommendation on hepatitis C virus self-testing (HCVST)

HCV self-testing should be offered as an additional approach to HCV testing services (strong recommendation, moderate-certainty evidence).

Remarks
- HCVST needs to be followed by linkage to appropriate post-test services, including confirmation of viraemic infection, treatment, care and referral services, according to national standards.
- It is desirable to adapt HCVST service delivery and support options to the national and local context, which includes community preferences.

who.int Farjardo E, BMJ ID May 2022
Long acting Therapies for HCV
The LONGEVITY project

• Five year project to develop long acting formulations for hepatitis C,
• Goal: a single-injection cure for HCV administered at the point of diagnosis.

• Home University of Liverpool

• Compound Gecaprevir/pibrentasvir

• Patient preference:
  37.7% injection versus 50.8% oral medications

• Provider survey: recently closed
HCV Vaccine

• Spontaneous HCV clearance demonstrates the potential for vaccine development

• An HCV vaccine would improve prevention particularly for high incidence populations (PWID)

• Target population: Universal vaccination before initiation of high-risk behavior (adolescents)

• Challenges
  • Correlates of protective immunity are unknown
  • Culturing HCV is difficult, live attenuated or killed virus vaccines are impractical
  • HCV genetic variability makes selection of a protective antigen difficult

• Most recent candidate was unsuccessful in reducing incident infection:
  (adenovirus 3 vector priming vaccination followed by a recombinant modified vaccinia Ankara boost encoded for HCV nonstructural proteins

Page K NEJM 2021; Cox AL, Cold Spring Harb Perspect Med. 2020 Feb
Overcome Health Inequities to Eliminate Hepatitis

Mortality
- Older persons
- Black Americans, American Indian/Alaskan Native

Incidence
- Younger adults
- White Americans
- Non-urban populations

Access to services
- Geography
- Social/economic status
- Systemic barriers
Presidential Initiative to Eliminate Hepatitis C in the United States

We are seeking to mount a national program to eliminate hepatitis C in the United States
Francis Collins

FY 2024 President’s budget requests $12.3 billion in mandatory funding over five years

Outcomes: 92.5% diagnosed; 89.6% cured of HCV
Avert 24,000 liver related deaths;
Save $18.1B over 10 years; $13.3b to Federal government
Must be passed by the US Congress
Scale up of POC RNA testing a prominent goal of the initiative

Projected Health Benefits and Health Care
Savings from the United States National
Hepatitis C Elimination Initiative


https://www.nber.org/papers/w31139
HCV Elimination Program - Louisiana

- One time cost for unlimited HCV treatments for Medicaid and correctional facilities
- Educate public on availability of cure, mobilize priority populations for screening
- Expand HCV screening and care linkages
- Strengthen HCV surveillance to link persons to treatment
- Expand provider capacity to treat hepatitis C
- Implement harm reduction and complementary treatment strategies
- Extend elimination efforts to all populations within the state
- Begin with incarcerated populations

Department of Corrections Cohort 2020

- HCV RNA Confirmed: 1433 (100%)
- Prescribed Treatment: 1409 (98%)
- Completed Treatment: 1320 (92%)
- Cured: 964 (67%)

Number of Persons Who Started Treatment for HCV Through Medicaid/Correction

Slide Courtesy of Risha Irvin, John Hopkins University
United States:
Dr. Francis Collins,
Science Advisor to the President
Coalition for Global Hepatitis Elimination

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“Hepatitis is a pandemic. Elimination of hepatitis is an achievable goal if we work together.”
Nobel Laureate Professor Charles M. Rice

Hepatitis Awareness, Ibadan Oyo State, Nigeria
IT TOOK US 25 YEARS TO BRING HIM TO HIS KNEES... NOW LET'S FINISH HIM OFF!...