

HCV patients without CKD (all P-values <0.001). **Conclusion:** CKD is associated with significant healthcare utilization and economic burdens in CLD driven by outpatient visits, ED visits and inpatient admissions. CKD is a significant cost multiplier in CLD patients with LT, DCC, Cirrhosis, HBV and HCV.

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The following people have nothing to disclose: Mohamed I Elsaid, You Li, Tina John, Vinod K Rustgi

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AN OPTIMIZATION TOOL FOR GLOBAL HEPATITIS C ELIMINATION: A CASE FOR HEPATITIS C ELIMINATION IN CHINA

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Background: The World Health Assembly recently pledged to eliminate hepatitis C virus (HCV) by 2030. However, most countries do not have a national strategy for HCV screening and treatment that can lead to HCV elimination. Furthermore, optimal resource allocation (screening vs treatment) of limited budget to eliminate HCV is not known. Our objective was to develop an open-access, interactive budget calculator to identify strategies that can lead to HCV elimination and the optimal allocation of budget to eliminate HCV. We demonstrate the tool using China as an example. **Methods:** We developed an interactive, open-access, online tool to simulate the clinical management of HCV by incorporating HCV natural history, transmission rate, diagnosis rate, access to antiviral therapies, and cost of antiviral and disease management. The tool uses a validated dynamic microsimulation model in the backend, which is parameterized by country-specific disease and population characteristics and costs. **Results:** Figure shows the screenshot of Hep C budget calculator using China as an example. The top panel allows users to set specific targets (e.g., WHO's HCV elimination targets). The middle panel displays screening and treatment strategies that can meet user-defined elimination targets. The bottom panel shows project temporal trends in HCV disease and cost burden of different scenarios that can lead to HCV elimination. For instance, in 2019, around 9 million people have chronic HCV infection in China. To achieve HCV elimination, annual HCV screening would need to be scaled-up to at least 8.5% to diagnose 600,000 people per year, and treatment rate would need to be scaled-up to 45-80% of the eligible HCV individuals. This scenario would decrease liver-related deaths from 105,000 in 2015 to 33,000 in 2030 (68% reduction). The total cost of HCV elimination, including the cost of treatment, screening and disease management between 2020 and 2030 would be \$94.7 billion. **Conclusion:** Hep C budget calculator allows policy makers to identify potential strategies that can lead to HCV elimination by 2030 and budget needed to eliminate HCV for each strategy.

Hep C Budget Calculator

Choose your inputs:

1. Select a country: China

2. Select Hep C Elimination Targets

Incidence Reduction by 2030: 0% 50% 100%

Mortality Reduction by 2030: 0% 50% 100%

Diagnosis Rate by 2030: 0% 50% 100%

Treatment Coverage by 2030: 0% 50% 100%

3. Set Cost and Budget

Antibody Test Cost (\$): 17

Venous Test Cost (\$): 144

Treatment Cost (\$): 5981

Set a budget limit? Yes No

Find Potential Strategies

Potential Strategies:

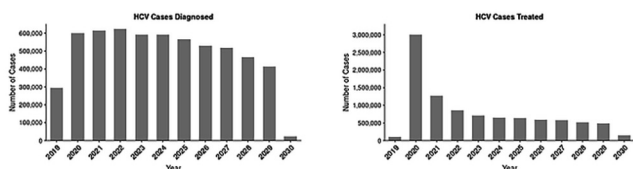
Show 10 entries

This table lists potential strategies that fulfil no constraints.

| Intervention (Annual Rate) | | Hep C Elimination Targets (by 2030) | | | | Prevalence & Costs (by 2030) | |
|----------------------------|----------------|-------------------------------------|---------------------|--------------------|----------------|------------------------------|------------------|
| Screening Rate | Treatment Rate | Incidence Reduction | Mortality Reduction | Treatment Coverage | Diagnosis Rate | Prevalence % | Total Costs * |
| 9.0% | 80% | 90% | 68% | 93% | 93% | 0.05% | \$94,748,717,148 |
| 10.0% | 70% | 91% | 71% | 93% | 93% | 0.05% | \$94,819,316,430 |
| 10.5% | 65% | 91% | 72% | 93% | 93% | 0.05% | \$94,848,326,923 |
| 8.5% | 75% | 91% | 71% | 93% | 93% | 0.05% | \$94,850,308,925 |
| 8.5% | 70% | 91% | 67% | 93% | 93% | 0.05% | \$94,913,475,097 |
| 8.5% | 80% | 91% | 69% | 93% | 94% | 0.05% | \$94,925,500,559 |
| 11.0% | 60% | 91% | 71% | 92% | 92% | 0.05% | \$95,000,384,831 |
| 10.5% | 60% | 91% | 69% | 92% | 93% | 0.05% | \$95,012,430,960 |
| 11.5% | 55% | 91% | 70% | 92% | 93% | 0.05% | \$95,109,309,223 |
| 10.5% | 70% | 92% | 72% | 93% | 94% | 0.05% | \$95,123,694,341 |

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THE ECONOMIC COST AND HEALTH BURDEN OF NON ALCOHOLIC STEATOHEPATITIS IN THE EU5 COUNTRIES

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