Homie Razavi

CDA Foundation – Polaris Observatory

From Economic Analysis to Financial Dialogue
The CDA Foundation

Accelerate hepatitis B and C elimination through verified data, modeling, intervention strategies, expanded access, and knowledge-sharing.

http://polarisobservatory.org

• **Mission Statement:** Provide data, tools, training and decision analytics to support elimination of hepatitis B and C, globally, by 2030

http://gprofund.org

• **Mission Statement:** Provide access to low cost, quality medicines and diagnostics through pooled procurement
Countries/regions that have used our analyses to shape their hepatitis national strategy

- Australia
- Brazil
- Colombia
- Egypt
- Iceland
- Mongolia
- Morocco
- New Zealand
- Philippines
- Saudi Arabia
- Viet Nam

Influenced
- Belgium
- British Columbia
- France
- Ireland
- Japan
- Kyrgyzstan
- Luxembourg
- Mexico

Influenced
- Pakistan
- Qatar
- Russia
- Switzerland
- Taiwan
- United States (+ states)
- Uzbekistan
HCV elimination has a positive return on investment in every country we have analyzed.

We work with national experts to collect diagnostic, healthcare & treatment costs.

Economic analyses have been conducted for 25 countries.
The obstacle to HCV elimination is the upfront investment

Cameroon will spend more up front, but after 15 years, HCV healthcare costs will be minimal.

There has been a lot of focus on reducing drug prices, but we also need to address the screening costs & the number of tests needed.
There are multiple options for financing hepatitis elimination

**Self Funded**
- Appropriate for countries with a strong Public health system
- The public health system covers the cost of screening & treatment

**Patient Co-Pay**
- Appropriate for countries with a limited healthcare budget

**Loan / Bonds**
- Appropriate for all countries

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![Diagram showing financing options](image-url)
The decision to pursue an elimination strategy and buying a house are very similar

**Buy a House**
- **Do nothing** – continue to pay rent, with rent increases year after year
- **Take Action** – Purchase a house
- **Cost** – Upfront down payment and monthly mortgage payments
- **Financing** – Take on a loan
- **Outcome** – own the house after loan payment

**Elimination of HCV**
- **Do nothing** – HCC, cirrhosis, liver related deaths and liver transplantation will continue to increase as the population ages
- **Take Action** – Pursue an elimination strategy with increased screening & treatment
- **Cost** – Upfront cost for screening, treatment & harm reduction
- **Financing** –
  - Take-on low/no interest loan
  - Issue a bond
- **Outcome** – minimize disease burden & eliminate HCV
With lower price, countries can fund the elimination strategy using their existing budget.

Drug prices have been dropping globally.
Most countries don’t realize that the cost of screening could surpass the cost of treatment.

- **Anti-HCV prevalence in NZ**
  - Yes: 76.0%
  - No: 1.1%

- **Viremic rate in NZ**
  - Yes: 50.0%
  - No: 49.0%

- **% diagnosed in NZ**
  - Yes: 50.0%
  - No: 49.0%

- **Already Dxed**
  - Yes: 2.0
  - No: 0.42%

- **Screening Cost/ Newly Dxed**
  - Status Quo: $3,084
  - 2.6

- **Cost Per Test**
  - Anti-HCV: $10
  - RNA: $231

- **Already Dxed**
  - Yes: $2,476
  - No: $608

- **Anti-HCV+**
  - Yes: 239
  - No: 98.9%

- **RNA+**
  - Yes: 0.42%
  - No: 0.26%
Screening in high risk populations will reduce the anti-HCV screening costs significantly.
Without a national registry or a voucher system, the cost of screening will increase exponentially by 2025.
A registry or a voucher system can reduce screening costs significantly by 2025

Anti-HCV prevalence will stay the same

In the undiagnosed/untreated population, viremic rate will stay the same

With a registry, only those not diagnosed are tested

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<tr>
<th></th>
<th>Cost Per Test</th>
<th>RNA</th>
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<tbody>
<tr>
<td>Anti-HCV</td>
<td>$10</td>
<td>$231</td>
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<tr>
<td>RNA</td>
<td>$10</td>
<td>$231</td>
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<tr>
<td>100.0%</td>
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<td>Status Quo</td>
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<td>SQ High Risk</td>
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<td>Status Quo 2025</td>
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Conclusions

• National financing for hepatitis elimination can be supported through:
  ▪ Self funding (stand alone budget or part of the existing budget)
  ▪ Co-pays that diminishes with price reduction (always less than catastrophic expenditure)
  ▪ Bonds / Loans

• Prices will go down with volume but a global procurement mechanism is needed to support countries with small orders

• Without a national screening strategy, the cost of screening will surpass the cost of treatment

• The same financing issues will be faced by all future curative therapies as well (e.g. HBV)
Appendix
Drug & diagnostic prices will drop with volume

There is a misconception that manufacturers make the same profit along the price elasticity curve. However, dropping prices without an increase in volume will lead to substantial losses. They are willing to lower prices for guaranteed volume & payment.

Public markets are not price sensitive once the prices drop below threshold.
However, for countries with low volume orders, the national tendering process will not result in reduction in prices.

Global procurement can provide a mechanism for lower drug and diagnostic prices.

This will result in significant reduction in the cost of elimination.

However, current tendering process does not allow countries to participate in global procurement mechanisms.

Country orders are too small to get discounted pricing.

Pooled procurement negotiates prices at the international level.
The current medicine approval process is complex & can take 3 yrs for access
The current diagnostics approval process is complex & can take 2 yrs for access

Private Health System
- Registration
- Out of Pocket Insurance
- 6m - 1 year
- 1 - 2 years

Public Health System
- Registration
- Reimbursement Approval
- Tender Process
- 100% Coverage
- Co-Pay
- Out of Pocket Insurance
- 100% Coverage
- 1 - 2 years

Country

International Agencies
- WHO
  - Pre-Qualification
- FDA
  - Approval

International Aid
- 100% Coverage
- 1 - 2 years

Patient Access