EGYPT CAN ELIMINATE HEPATITIS

NATIONAL HEPATITIS ELIMINATION PROFILE

The National Committee for Control of Viral Hepatitis (NCCVH) set a national strategy in 2014 to make treatment paid for by the Egyptian government available for all and to scale up treatment to millions.

THE HEALTH BURDEN OF VIRAL HEPATITIS

1% Prevalence of HBsAg, 2019

0.4% Prevalence of chronic HCV, 2019

Estimated prevalence. No recent surveys conducted following the national elimination program.

450,000 Number of persons living with HCV infection, 2021

NO DATA New HBV infections

10 New HCV infections per 100,000, 2020
### Egypt Hepatitis Elimination Profile

#### Mortality

<table>
<thead>
<tr>
<th></th>
<th>HBV- related deaths</th>
<th>HCV- related deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000</td>
<td>19.4 (11.80 - 28.70)</td>
<td>35.9 (24.20-48.90)</td>
</tr>
<tr>
<td>Deaths per 100,000, 2019</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Progress Towards 2020 WHO Elimination Goals

**Prevention of New Infections and Mortality**

<table>
<thead>
<tr>
<th></th>
<th>HBV Percentage change in new infections</th>
<th>HCV Percentage change in new infections, 2015-2020</th>
<th>HCV Percentage change in deaths, 2015-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO DATA</td>
<td>-40%</td>
<td>-51%</td>
</tr>
<tr>
<td></td>
<td>WHO 2020 Target -30%</td>
<td>WHO 2020 Target -30%</td>
<td>WHO 2020 Target -10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Prevalence of HBsAg in children &lt; 5 years (%)</th>
<th>2019</th>
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</tr>
<tr>
<td></td>
<td>-0.11% (0.09-0.13%)</td>
<td>0.11% (0.09-0.13%)</td>
</tr>
<tr>
<td></td>
<td>SDG 2020 Target 1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Legend**

- **Goal achieved**
- **Partial progress towards goal**
- **Limited/no progress towards goal**
ACCESS TO RECOMMENDED VACCINATION, TESTING AND TREATMENT

92% Hepatitis B timely birth dose vaccination of newborns, 2020

WHO 2020 Target 50%

95% Hepatitis B 3 dose vaccine coverage for infants, 2017

WHO 2020 Target 90%

10-15% Proportion of persons living with HBV diagnosed, 2021

WHO 2020 Target 30%

25% Proportion of diagnosed HBV persons receiving appropriate treatment, 2021

WHO 2020 Target 200

0 For persons who inject drugs (PWID), number of sterile needles per year

96% Proportion of persons (>12 yrs) living with HCV diagnosed, 2021

WHO 2020 Target 30%
**Policy Environment for the Elimination of Hepatitis**

**Achievement**

- Proportion of diagnosed persons who have initiated treatment: 92%
- Number of persons tested for HCV: 62.5 M adults screened in 7 months
- Number of people treated for HCV, 2014-2020: 4,000,000
  - Oct - Nov 2018: 17.9 M
  - Dec 2018 - Feb 2019: 21.3 M
  - Mar - Apr 2019: 23.3 M

**Innovations**

- Monitoring of HBV and HCV diagnosis and treatment
- A closed virtual private network (VPN), the National Network of Treatment Centers (NNTC), was founded to connect the viral hepatitis treatment centre databases to the head office which improved monitoring and evaluation

**Roadblocks**

- Mortality
- Incidence
- Prevalence

**Strategic Information**

- Routine official reports to monitor HBV and HCV
- Estimates of HBV and/or HCV economic burden
- DHS survey conducted in 2015 and national 2018-2019 screening campaign followed for HCV
- NCCVH database exists that assigns all individuals an electronic national ID number

**Innovations**

- The Ministry of State for Administrative Development developed a web-based online registration system website (www.nccvh.org.eg) for registration of patients with HCV and scheduling appointments at the treatment centres

**Notes:**

9. Proportion of diagnosed persons who have initiated treatment
10. Number of people treated for HCV, 2014-2020
11. 1.6 Million persons treated for HCV, 2020
12. 6.5 M adults screened in 7 months
**Roadblocks**

*HCV incidence has not been evaluated and is not known after the mass HCV testing and treatment program.*

**Prevention of Mother to Child Transmission**

Policy for universal hepatitis B vaccination of newborns \(^{13}\)  
Adopted  
HepB birth dose adopted in 2015.

Recommendations for:

- HBV testing of pregnant women \(^{14}\)  
  Adopted  
  *TDF treatment of pregnant women with high viral load still not adopted.*

- HCV testing of pregnant women \(^{14}\)  
  Adopted

**Access and Registration of Medicines and Tests**

- **HCV:** Registration of originator medicines \(^{15}\)  
  Adopted

- **HCV:** Eligible for generic medicines \(^{16}\)  
  Adopted

- **HCV:** Registration of generic medicines \(^{17}\)  
  Adopted

- Licensed point-of-care PCR testing to detect HBV and HCV \(^{4}\)  
  Adopted

**Achievements**

*In 2014, the NCCVH negotiated prices of originator direct-acting antivirals (DAA’s) to about 10% of prices in the United States at the time.*

Local companies began to locally manufacture HCV medicines at low cost. Pharco obtained WHO pre-qualification for its generic DAA’s, contributing to public and private partnerships to improve testing and treatment.

*Mass procurement through a single negotiating body ensured low prices for HCV diagnostics.*

**Innovations**

*The Egyptian government & Pharco launched initiatives to extend their experience to help global hepatitis elimination (e.g. initiative with goal to provide HCV treatment to 1 million Africans).*
TESTING TO DIAGNOSE HBV AND HCV INFECTION

Testing recommendations for:

HBV: Risk-based \(^\text{18}\)

HBV: Universal \(^\text{4}\)

HCV: Risk-based \(^\text{18}\)

HCV: Universal \(^\text{18}\)

No patient co-pays for HBsAg and anti-HCV testing \(^\text{12}\)

**Adopted**

- Currently, all patients evaluated or treated for HCV are screened for HBV. In addition, some hospitals screen all admitted patients for HBV.

**Partially Adopted**

- Universal HCV Testing Policy was implemented which aimed at mass screening of adults older than 18 years (61 million) and school-children aged 12 to 18 years, after obtaining consent from their legal guardians (9 million).

**Adopted**

- HCV screening is free of charge and includes testing for anti-HCV antibody using a WHO prequalified rapid diagnostic test.

**ACHIEVEMENTS**

The Egyptian Presidential Initiative, 100 Million Healthy Lives, was launched in October 2018 with the goal of screening the entire adult population for HCV. This program is the largest HCV screening program in the world. Under the 100 Million Healthy Lives, over 240,000 people were screened per day. There were 77 PCR testing sites around the country with capacity for 36,000 PCR tests daily.

- The Egyptian national HCV program demonstrated to the world that population screening of all adults is possible even in resource-limited settings.

- The Egypt national HCV testing program’s success demonstrated that RDTs can be highly effective as a part of a national HCV diagnostic algorithm.

- The screening of school children 12-18 years (this included both Governmental, private schools and technical schools).

**INNOVATIONS**

HCV screening was integrated with screening for non-communicable diseases, including diabetes, hypertension, and obesity.

**ROADBLOCKS**

Need to scale-up testing and active case finding for key at-risk groups, including people living with HIV (PLHIV), people who inject drugs (PWID), and people who are incarcerated. Regular screening for reinfection among these groups is essential to identify acute infections and treat them early to reduce the risk of transmission.
## ACCESS TO HBV AND HCV TREATMENT

### HBV:
- National treatment guidelines 
  - Adopted
- Simplified care: Simplified treatment and monitoring algorithm for primary care providers 
  - Not Adopted
- Simplified care: No patient co-pays 
  - Adopted

### HCV:
- National treatment guidelines 
  - Adopted
- Simplified care algorithm: Less than 2 clinic visits during treatment 
  - Adopted
- Simplified care algorithm: Non-specialists can prescribe treatment 
  - Adopted
- Simplified care algorithm: No patient treatment co-pays 
  - Adopted
- No fibrosis restrictions 
  - Adopted
- No sobriety restrictions 
  - Adopted
- No genotyping 
  - Adopted

### Achievements

Over 150 specialized centers for treatment of viral hepatitis were established within Ministry of Health and Population healthcare facilities. Centers were geographically distributed in the most populous areas, so that eventually no patient would have to travel more than 50 km to a center.

### Innovations

To correct low rates of patient follow-up for SVR12 testing, the national program implemented strategies such as phone calls to identify the cause of “no show,” issuing “certificates of cure,” and initiating hepatitis B vaccination free of charge to encourage return for SVR12 testing.
HEALTH EQUITY AND ADDRESSING DISPARITIES

National strategy addresses populations most affected  
- Adopted

National anti-discrimination laws against persons living with hepatitis B and/or C  
- Partially Adopted

National policy for adult hepatitis B vaccination  
- Partially Adopted

National policy for:
- Harm reduction for persons who inject drugs (PWID)  
  - Partially Adopted

- Syringe exchange in federal prisons  
  - Not Adopted

Decriminalization of possession of syringes & paraphernalia  
- No Data

Decriminalization of drug use  
- Not Adopted

Laws exist to protect people against discrimination on the basis of disability caused by an infectious disease, except where discrimination is necessary to protect public health. However, no hepatitis specific law is in place. Limited instances of discrimination against HBV and HCV patients have been reported.

HBV vaccination was offered at the end of HCV treatment to encourage individuals to return for SVR12 testing. This strategy was not based on reaching populations at highest risk of HBV infection.

OST has been recently approved in Egypt and is provided in limited specialized centers. Syringe exchange programs are very limited.

The estimated prevalence of HCV among HIV infected Egyptian patients was around 34.8%.

The estimated incidence of new HCV infections among PLHIV in a study conducted between 2016-2019 was 4.06 cases per 100 person-years with 83.3% of new HCV infection cases reported injecting drug use history. In the same study, the incidence among HIV-positive PWID was 7.08 cases per 100 person-years.

According to the UNODC, the estimated HCV prevalence among PWID in Egypt is 55%.

ROADBLOCKS

Participation in the 100 Million Healthy Lives National Program was lower among men than among women and was lower among those younger than 25 years of age than among older persons.

Need to develop more tailored interventions for key at-risk groups.

About 10.25 million Egyptians live overseas and may have been unable to participate in the 100 Million Healthy Lives National Program.

Patients living with HCV continue to face discrimination within the community, and in some cases within the healthcare settings. Discrimination has declined following national campaign.
INNOVATIONS

Paid public Awareness & media/TV coverage were used to increase awareness and motivate people to seek HCV screening and treatment. Local & global public figures were recruited to be ambassadors for this campaign.

FINANCING

Public budget line for HBV and HCV testing and treatment

Adopted

$310.2 Million - Egypt’s Healthcare System Project - (129.6M = HCV screening, 130.6M = HCV treatment, 50M = blood transfusions)

ACHIEVEMENTS

Almost 88% of patients treated for HCV were sponsored by the government (29% through the HIO and 56% through governmental support funds) (El-Akel et al)

NEXT STEPS TOWARD ELIMINATION

Validate elimination of HCV with both internal and external WHO processes

Document lessons learned in HCV elimination and disseminate to other countries

Continue to focus on HCV prevention, including improving blood safety, reducing demand for unnecessary injections, scaling up use of auto-disposable syringes, emphasizing infection control, and leveraging mass media campaigns

Continue to test all pregnant women for HBV and HCV to sustain gains in reduction of incidence, prevalence, and mortality

Implement HCV and HBV rescreening and treatment for at-risk individuals who missed the national screening program, including persons who inject drugs, persons who are incarcerated, persons who are on dialysis, and the immunosuppressed/immunocompromised (multiple transfusions, etc).

Establish harm-reduction program for persons who inject drugs and develop more tailored strategies for delivering enhanced screening, linkage to care, and treatment to persons at increased risk

Scale-up HBV testing and treatment
SOURCES


WORKING TOGETHER,
WE WILL ACHIEVE ELIMINATION.

This National Hepatitis Elimination Profile (N-HEP) was developed by the Coalition for Global Hepatitis Elimination. Funding for this N-HEP was provided by Gilead Sciences. The Coalition for Global Hepatitis Elimination retained final control over the content.

The Coalition thanks Dr. Imam Waked, Dr. Mohamed Hassany, Professor Wahid Doss, Professor Gamal Esmat, and Professor Manal Hamdy El-Sayed for their review and feedback.

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