Evaluation of the National Program for Treatment of Chronic HCV in Egypt

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The Magnitude of HCV problem in Egypt
The Magnitude of HCV problem in Egypt

- Prevalence
- Incidence
- Risk Factors
- Morbidity
- Mortality
Geographic HCV prevalence

Alexandria 5.9%  
(95% CI: 4.2-7.7)

Lower Egypt  
28.4%  
(95% CI: 27.1-29.2)

Middle Egypt  
26.5%  
(95% CI: 23.7-29.4)

Upper Egypt  
19.4%  
(95% CI: 17.2-21.6)

Cairo  
8.2%  
(95% CI: 6.7-9.8)

Frank et al., (2000)
• Over an average of 1.6 years, asymptomatic anti-HCV seroconversion occurred in 33 people (3.1/1,000 person-years [PY]), including 28 (6.8/1,000 PY) in the Nile Delta, where prevalence was 24% and 5 (0.8/1,000 PY) in the Upper Egypt (baseline prevalence of 9%).

• The strongest predictor of incident HCV was having an anti-HCV-positive family member. Among those that did, incidence was 5.8/1,000 PY, compared (P < .001) with 1.0/1,000 PY.

Mohamed et al, Hepatology, 2005
Indication for Liver transplantation in Egypt

Leading causes of Cancer in Egyptians 1999-2002 (NCIR)

Total of 32054 cases

- Breast: 6690 cases (21%)
- Bladder: 3188 cases (10%)
- Others: 9875 cases (32%)
- Colon: 798 cases (2%)
- Lung: 1239 cases (4%)
- Blood: 1559 cases (5%)
- Liver: 3258 cases (10%)
- L.N: 3344 cases (10%)
- Skin: 658 cases (2%)
- Ovary: 720 cases (2%)
- Unknown: 725 cases (2%)

Leading causes of Cancer in Egyptians 1999-2002 (NCIR)
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Trend of Cancer Mortality in Egypt 1973-1996

Age Adjusted Rate/100,000

Breast  Leukemia  Lung  Liver  Bladder
Unfortunately, till 2007 we did not have a national control program for control of viral hepatitis.
Egyptian National Control Strategy for Viral Hepatitis

2008-2012

April 2008
Arab Republic of Egypt, Ministry of Health and Population
National Committee for the Control of Viral Hepatitis
The National Control Strategy for Viral Hepatitis

the first comprehensive approach to reduce the prevalence, incidence, and burden of disease associated with hepatitis B and C in Egypt.

It represents a comprehensive response to the challenge of this major public health issue and is informed by the latest medical and scientific research on viral hepatitis in Egypt.
The plan has been elaborated in concert with the

- Egyptian National Committee on Viral Hepatitis
- officials from the Ministry of Health and Population,
- the Ministry of Higher Education,
- various U.N. agencies and
- WHO (Geneva and Cairo), as well as
- researchers at Egyptian universities and
- other local and international societies involved in the fight against viral hepatitis.
The main goals of the National Control Strategy

• Detect the prevalence and incidence of HBV and HCV

• Reduce the prevalence of chronic HBV and HCV infection in the 15-30 age group by 20% of 2008 levels by 2012

• Expand access to treatment to within 100 km for all Egyptians and Treat 50% of persons needing treatment by 2012.

• Continue to produce high-quality scientific research

• Ensure programmatic sustainability
Objectives

National Survey

Availability of treatment

Awareness and Media Campaign

Infection Control

Research
Objectives

National Survey
(Demographic Health Survey, DHS 2008)
www.measuredhs.com

Availability of treatment

Awareness and Media Campaign

Infection Control

Research
Self-reported prevalence of HCV infection

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Ever tested for hepatitis C virus</td>
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<td></td>
<td></td>
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<tr>
<td>Yes</td>
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<tr>
<td>No</td>
<td>77.9</td>
<td>79.6</td>
<td>78.7</td>
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<td>20.1</td>
<td>14.6</td>
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<tr>
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<td></td>
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<tr>
<td>according to doctor or health professional</td>
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<td></td>
<td></td>
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<tr>
<td>Tested, yes</td>
<td>0.8</td>
<td>2.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Tested, no</td>
<td>1.2</td>
<td>3.9</td>
<td>2.5</td>
</tr>
<tr>
<td>Not tested</td>
<td>77.9</td>
<td>79.6</td>
<td>78.7</td>
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<tr>
<td>Never heard about hepatitis C</td>
<td>20.1</td>
<td>14.6</td>
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<tr>
<td>Missing</td>
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<td>0.0</td>
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<tr>
<td>Treated for hepatitis C after test</td>
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<td>0.7</td>
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<td>83.5</td>
<td>81.2</td>
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<tr>
<td>Never heard about hepatitis C</td>
<td>20.1</td>
<td>14.6</td>
<td>17.5</td>
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<tr>
<td>Missing</td>
<td>0.4</td>
<td>0.9</td>
<td>0.7</td>
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www.measuredhs.com (Egypt Demographic and Health Survey 2008)
HCV Egypt 2008

Overall Prevalence 14%

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Women 2008</th>
<th>Men 2008</th>
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<tbody>
<tr>
<td>15-19</td>
<td>2.7</td>
<td>5.5</td>
</tr>
<tr>
<td>20-24</td>
<td>5.5</td>
<td>4.4</td>
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<td>4.6</td>
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<td>35-39</td>
<td>13.3</td>
<td>14.3</td>
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<tr>
<td>40-44</td>
<td>21.2</td>
<td>24.6</td>
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<tr>
<td>45-49</td>
<td>23.6</td>
<td>35</td>
</tr>
<tr>
<td>50-54</td>
<td>27.1</td>
<td>49.3</td>
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<tr>
<td>55-59</td>
<td>43.5</td>
<td>43.5</td>
</tr>
</tbody>
</table>
HCV Prevalence National Surveys 1996 vs 2008 15-60 Ys

1996: 22.9
2008: 14.2
1996 Men: 11.8
2008 Women: 16.6
2008 All: 20.1
1996 All: 25.8
HCV Prevalence National Surveys 1996 vs 2008
Women 15-60 Ys

Women 1966
Women 2008

<table>
<thead>
<tr>
<th>Age Group</th>
<th>1966</th>
<th>2008</th>
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<tr>
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<td>25.1</td>
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<td>35-39</td>
<td>13.3</td>
<td>28.1</td>
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<tr>
<td>40-44</td>
<td>21.2</td>
<td>29.4</td>
</tr>
<tr>
<td>45-49</td>
<td>23.6</td>
<td>28.3</td>
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<tr>
<td>50-54</td>
<td>26.9</td>
<td>27.1</td>
</tr>
<tr>
<td>55-59</td>
<td>30.3</td>
<td>35.0</td>
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## Total Number of HCV Positive Cases in 1996-2008

<table>
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<tr>
<th>Age Group</th>
<th>Female cases</th>
<th>Male cases</th>
<th>1996 All cases</th>
<th>Female cases</th>
<th>Male cases</th>
<th>2008 All cases</th>
<th>Chronic HCV 1996</th>
<th>Chronic HCV 2008</th>
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<tr>
<td>15-19</td>
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<td>722443</td>
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<td>20-24</td>
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<tr>
<td>25-29</td>
<td>453044</td>
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<td>30-34</td>
<td>609555</td>
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<td>55-59</td>
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<td>5252409</td>
<td>9244604</td>
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<td>3414050</td>
<td>5839102</td>
<td>6008993</td>
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</table>
Objectives

National Survey

Availability of treatment

Awareness and Media Campaign

Infection Control

Research
Patient management

- Scaled-up case detection efforts via Voluntary Counseling and Testing
- Improved access to treatment, including the opening of Viral Hepatitis Treatment Centers (VHTC)
- Reductions in the price of drugs (20% of its global price), and expanded subsidization of antiviral therapy
- Attaining optimal clinical management of all patients, (including pediatric patients and persons suffering from advanced liver disease)
Viral Hepatitis Treatment Centers (VHTC)
21 Centers in the first 3 years (2007-2010)

- **Cairo:**
  - NHTMRI - Al Kahera Al Fattemia
  - New Cairo - Ahmed Maher Teaching Hospital

- **Alexandria:**
  - Quabbary - Shark El Madina

- **Eight centers in Delta region:**
  - Tanta, Damietta, Al Mansoura, Zagazig, Shebin El-Kom, Kafr El-Sheikh, Damanhour and Benha

- **Six centers in Upper Egypt:**
  - Assuit, Qena, Menia & Sohag, BeniSuef and Aswan.

- **Suez Canal Area** Ismailia
Positive

- Governmental appreciation of the magnitude of HCV problem in Egypt
- National guidelines for treatment of chronic HCV
- MOHP and universities cooperation.
- Different specialties cooperation
- Working in a team
- Starting treatment for more than 100,000
- >90% governmental funding
- EVR >75%
- Data for >100,000 patients to answer a lot of questions.
Positive

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• **NHTMRI** in collaboration with **Cairo University** and **Ain Shams University**, are responsible for:

- Training of different specialties.
- Quality control and site visits.
- Data management.
Positive

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- Different specialties cooperation
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- **Starting treatment for more than 100,000**
- >90% governmental funding
- EVR >75%
- Data for >100,000 patients to answer a lot of questions.
• In 2007, 10 centers started treatment for about 20,000 patients.
• In 2008, another 40,000 patients started treatment in 16 centers distributed in 13 governorates.
• In 2009 another 4 centers joined the national program.
Positive

• Governmental appreciation of the magnitude of HCV problem in Egypt
• National guidelines for treatment of chronic HCV
• MOHP and universities cooperation.
• Different specialties cooperation
• Working in a team
• Starting treatment for more than 100,000
• >90% governmental funding
• EVR >75%
• Data for >100,000 patients to answer a lot of questions.
Cost of treatment

- Governmental expense
- Medical Insurance (HIO)
- Special medical insurance
- Patient Support Organization (NGO)
- Cash
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• National guidelines for treatment of chronic HCV
• MOHP and universities cooperation.
• Different specialties cooperation
• Working in a team
• Starting treatment for more than 100,000
• >90% governmental funding
• SVR = 50% (HCV Genotype 4)
• Data for >100,000 patients to answer a lot of questions.
Preliminary Results

(80/80/80)

- EVR  12 weeks  75%
- MVR  24 weeks  65%
- ETR  48 weeks  60%
- SVR  72 weeks  50%
Positive

• Governmental appreciation of the magnitude of HCV problem in Egypt
• National guidelines for treatment of chronic HCV
• MOHP and universities cooperation.
• Different specialties cooperation
• Working in a team
• Starting treatment for more than 100 000
• >90% governmental funding
• EVR >75%
• Data for >100 000 patients to answer a lot of questions.
QUESTIONS TO BE ANSWERED

• 1) Cost effective analysis
• 2) Non invasive detection of hepatic fibrosis
• 3) Effect of treatment on disease progression
• 4) Role of complementary and alternative medicine
• 5) Treatment of non responders
Thank you
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