VIRAL HEPATITIS

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Team Lead of the World Health Organization’s Global Hepatitis Programme
Overview

• What do we know about viral hepatitis?
• What can be done in hepatitis prevention, diagnosis and treatment?
• Current response: gaps and new opportunities
Number of deaths/year from selected conditions, Global Burden of Disease Study 2010 and 2013

- HIV/AIDS
- Viral hepatitis
- Tuberculosis
- Malaria

2010
2013

## Characteristics of main types of viral hepatitis infections

<table>
<thead>
<tr>
<th></th>
<th>Hep A</th>
<th>Hep E</th>
<th>Hep B ± D</th>
<th>Hep C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mode of transmission</strong></td>
<td>Contaminated food, water</td>
<td></td>
<td>Blood, sex, mother-to-child</td>
<td></td>
</tr>
<tr>
<td><strong>Number chronic infections</strong></td>
<td>0</td>
<td>Very few</td>
<td>~240 million</td>
<td>~130-150 million</td>
</tr>
<tr>
<td><em><em>Annual</em> deaths</em>*</td>
<td>15,000</td>
<td>50,000</td>
<td>686,000</td>
<td>704,000</td>
</tr>
</tbody>
</table>

*Source: Global Burden of Disease Study 2010 Lozano et al, Lancet 2012*
HCV viremic prevalence, reported and estimated

Gower et al. J. Hepatology 2014
What can be done? HAV and HEV

<table>
<thead>
<tr>
<th>Hepatitis virus</th>
<th>Intervention</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAV and HEV</td>
<td>Safe food and water</td>
<td>Variable access</td>
</tr>
<tr>
<td>HAV vaccine</td>
<td>Universal childhood immunization in 12 countries</td>
<td></td>
</tr>
<tr>
<td>HEV vaccine</td>
<td>Vaccine available; used primarily in China</td>
<td></td>
</tr>
</tbody>
</table>
## What can be done? HBV and HCV

<table>
<thead>
<tr>
<th>Intervention</th>
<th>HBV</th>
<th>HCV</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBV vaccine</td>
<td>✓</td>
<td></td>
<td>HBV vaccine coverage:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 81% for childhood immunization</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 38% for birth dose</td>
</tr>
<tr>
<td>Safe blood</td>
<td>✓</td>
<td>✓</td>
<td>39 countries without universal testing of blood donations</td>
</tr>
<tr>
<td>Infection control practices</td>
<td>✓</td>
<td>✓</td>
<td>Significant risk in some countries due to overuse of injections and reuse of syringes</td>
</tr>
<tr>
<td>Harm reduction</td>
<td>✓</td>
<td>✓</td>
<td>Insufficient coverage of services</td>
</tr>
<tr>
<td>Safer sex practices</td>
<td>✓</td>
<td>✓</td>
<td>Vaccination (HBV), condom promotion, partner reduction</td>
</tr>
<tr>
<td>Prenatal interventions</td>
<td>✓</td>
<td></td>
<td>Inadequate coverage or HBV birth dose, role of HBIG, antivirals?</td>
</tr>
<tr>
<td>Treatment</td>
<td>✓</td>
<td>✓</td>
<td>Very low coverage</td>
</tr>
</tbody>
</table>
Immunization coverage with Birth dose of HepB, 2013

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Date of slide: 30 July 2014
# Evaluation of injection practices, 2000 and 2010

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of healthcare injections (per person per year)</td>
<td>3.40</td>
<td>2.88</td>
</tr>
<tr>
<td>Proportion of re-use during healthcare injections</td>
<td>0.398</td>
<td>0.055</td>
</tr>
<tr>
<td>Number of unsafe healthcare injections (per person per year)</td>
<td>1.35</td>
<td>0.16</td>
</tr>
</tbody>
</table>

WHO guideline on the use of safety-engineered syringes for intramuscular, intradermal and subcutaneous injections in health-care settings
Hepatitis Treatment

• Hepatitis B
  – Safe, effective
  – Leads to reversal of cirrhosis and reduced risk of cancer, cirrhosis, and death
  – Usually life-long
  – Generics available
  – Cost as little as US$4/month

• Hepatitis C
  – Safe, effective
  – Leads to reversal of cirrhosis and reduced risk of cancer, cirrhosis, and death
  – 12 weeks of treatment
  – >90% cure
  – Cost US$ 900 – 100,000/patient
Improved sustained virological response (cure rate) with newer HCV medicines
Prices of sofosbuvir
list price for 12 weeks of treatment, per patient US$

Reuters news website April 2014
WHO’s role in improving access to hepatitis therapy

Screening

- World Hepatitis Day observance
- Improved prevalence estimates

Care

- Treatment Guidelines
- Prequalification of generic medicines
- Essential Medicines List
- Simplifying regulatory approval process
- Technical assistance with intellectual property
- Advocacy, guidance and technical assistance for improved treatment access
- Multi-stakeholder engagement

Treatment

- Prequalification of diagnostics
- Screening/testing guidelines

Monitoring

Promoting development of national hepatitis plans
Timeline of key WHO hepatitis guidelines

- Hepatitis prevention Among PWID
- Consolidated HIV Treatment
- HCV Treatment
- Key population
- HBV Treatment
- HCV Treatment Update
- Hepatitis Testing Guidelines
- Hepatitis Consolidated Guidelines

2013 2014 2015 2016
Member States with National Viral Hepatitis Plans (NVHP)  
n=22

AMRO  
1. Colombia  
2. Brazil  
3. Argentina  
4. Canada  
5. Peru  
6. The US

EURO  
1. Kyrgyzstan  
2. Moldova  
3. France  
4. United Kingdom  
5. Ireland  
6. Uzbekistan

EMRO  
1. Egypt  
2. Iran  
3. Lebanon  
4. Bahrain

WPRO  
1. Australia  
2. Japan  
3. Mongolia  
4. New Zealand

SEARO  
1. DPRK  
2. Indonesia

Member States with NVHP