Global Overview of Viral Hepatitis

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Global Hepatitis Programme
## 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>103,000</td>
<td>56,000</td>
<td>786,000</td>
<td>499,000</td>
</tr>
</tbody>
</table>

*Source: Global Burden of Disease Study 2010 Lozano et al, Lancet 2012*
Number of hepatitis deaths by virus type and disease outcome, 2010

Most deaths are due to chronic hepatitis B and C

Number of deaths/year from selected conditions, 2010

1.4 million people died in 2010 of viral hepatitis

Source: Global Burden of Disease Study 2010 Lozano et al, Lancet 2012
Estimated annual deaths from selected causes by region, 2010

Different patterns of mortality in different parts of the world

Source: Courtesy of IHME – Global Burden of Disease Study
Regional distribution of estimated number of annual deaths due to viral hepatitis

- Asia Pacific: 70%
- Africa & Middle East: 14%
- Europe: 9%
- Americas: 7%

Source: Courtesy of IHME – Global Burden of Disease Study
Number of global deaths due to hepatitis A, 1990 and 2005

Source: Global Burden of Disease Study 2010 Lozano et al, Lancet 2012
Endemicity of HAV in EMRO Region

Hepatitis A
The key challenge is to ensure that HAV vaccine is included—as one dose—in high income countries and in those with improving socio economic status as a sizeable proportion of population are susceptible to hepatitis A.

Countries with routine Hep A immunization, 2012

<table>
<thead>
<tr>
<th>Country</th>
<th>Nationwide</th>
<th>Part of the country</th>
<th>High Risk groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMR</td>
<td>5</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>EMR</td>
<td>3</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>EUR</td>
<td>3</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>WPR</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Global</td>
<td>12</td>
<td>1</td>
<td>12</td>
</tr>
</tbody>
</table>

Hepatitis A and unspecified Hepatitis. Cases and rates – Argentina 2000-2013
Anti-HEV seroprevalence
Hepatitis E outbreaks – 1980 to 2007
Anti-HEV prevalence, Germany 2010

Emerging Infectious Diseases 2012
SAGE recommendations on HEV vaccination

• HEV vaccination not recommended for:
  – inclusion in routine immunization
  – special groups (e.g. Pregnant women)

• Use could be considered in outbreak situations
Global prevalence of chronic hepatitis B virus infection, 2005, adults (19-49 years)

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: refer to data models described in manuscript
Map Production: Public Health Information
and Geographic Information Systems (GIS)
World Health Organization

Source: Ott et al. Vaccine 2012
HBV estimates

• HBV estimates unchanged:
  – 240 million infected (Ott et al)
  – 786,000 deaths (GBD)

• New estimates expected early 2015
  – Country-specific prevalence estimates
  – Effectiveness of various HBV vaccine schedules
  – HBV vaccination impact model
Global Immunization 1989-2012, 3rd dose of HBV coverage in infants

Global coverage at 79% in 2012

Percent of infants born in countries with universal HBV birth dose policy, by WHO region

- WPRO
- AMRO
- SEARO
- EURO
- EMRO
- AFRO
Distribution of published estimates of HCV prevalence

Number of citations

180m
170m
160m
150m
130-170m
80m
Other

Courtesy of S. Kumble and P. Easterbrook
HCV viremic prevalence, reported and estimated

Gower et al. J. Hepatology 2014
HCV viremic prevalence, reported

Gower et al. J. Hepatology 2014
Countries with the greatest number of HCV-viremic persons

Gower et al. J. Hepatology 2014
Blood Screening for Transfusion-Transmissible Infections (TTI)

- Syphilis: 142 countries tested, 4 countries not tested
- Hepatitis C virus: 149 countries tested, 4 countries not tested
- Hepatitis B virus: 159 countries tested, 11 countries not tested
- HIV: 163 countries tested, 7 countries not tested

Number of countries
### 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>

New WHO initiative on injection safety under the DG mandate

- **Main objective:** to promote rational and safe use of injections
  - Transition to universal use of safety-engineered injection devices
  - Reduce *curative* unsafe injections
  - Avoid *unnecessary* injections (when an oral option is available)

- **Main outputs:**
  - Global policy (with background technical work)
  - Global strategy and campaign
Prevalence of HCV among persons who inject drugs


HCV prevalence in PWID >50% in most countries; between 60-80% in 25 countries and >80% in 12 countries
Drug use prevalence

• 153 - 300 million people use illicit drugs/year
  – or between 3.4 – 6.6% of adult population*

• 11-21 million people inject drugs **

• 158 countries report IDU

Global harm reduction coverage

**Opioid Substitution Therapy**
- 8 per 100 PWID
- 72 countries have OST
- 86 countries with IDU have no OST

**Needle and Syringe Programmes**
- 2 needles per PWID/per month
- 82 countries have NSP
- 76 countries with IDU have no NSP
Conclusions

• Effective tools exist to prevent blood-bourne transmission of hepatitis B and C
• Preventable infections continue to occur
• Issue of coverage, scale, and quality
• With increased attention to treatment, important to retain focus on prevention
Estimated chronic HCV prevalence, diagnosis and treatment rates in 2013

Dore J al. J Viral Hep (2014),

World Health Organization
Enhanced engagement at WHO: 2014

Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec

WHO Executive Board meeting

Strategic and Technical Advisory Meeting

Global Partners Meeting on Hepatitis

Launch of HCV treatment guidelines

HBV treatment guidelines meeting

Meeting with pharmaceutical and diagnostics companies

Launch HEV Outbreak manual

SAGE - HEV vaccination recommendations

World Health Assembly – Hepatitis Resolution

World Health Organization
Key products - 2014

- Strategic Advisory Group of Experts (SAGE) on Immunization
  - SAGE news
  - 27 October 2014

- GUIDELINES
  - WHO GUIDELINES FOR THE SCREENING, CARE AND TREATMENT OF PERSONS WITH HEPATITIS C INFECTION

- WATERBORNE OUTBREAKS OF HEPATITIS E: RECOGNITION, INVESTIGATION AND CONTROL

- CALL TO ACTION TO SCALE UP GLOBAL HEPATITIS RESPONSE
  - GLOBAL PARTNERS’ MEETING ON HEPATITIS
    - (Convened by WHO in March 2014 in Geneva)
Plans for 2015-2016

- **Normative work**
  - HBV treatment guidelines
  - Consolidated hepatitis guidelines

- **Strategic Information**
  - Guidance
  - Monitoring indicators
  - Global Hepatitis Report
  - Technical assistance

- **Enhancing treatment access**
  - Essential Medicines List
  - Prequalification of diagnostics and generics
  - Guidance on Intellectual Property

- **Global Hepatitis Strategy**
  - Elimination target setting
  - Extensive stakeholder consultations
  - Launch at 2016 World Health Assembly

- **National Planning Initiative**
  - Finalize tool kit
  - National workshops
• Thank you