Viral Hepatitis (A, B& C) Surveillance in Greece

Georgia Nikolopoulou, MD
Office for Viral Hepatitis
Aims of Infectious Diseases (ID) Surveillance

• Identification / management of
  – new cases
  – outbreaks
• Monitor
  – incidence trends
  – transmission patterns
• Data for Prevention Management
  – Organization
  – Development
  – Evaluation
ID Surveillance in Greece (past)

• 1950:
  – Royal law, code “ΦΕΚ: 262/1950”
  – mandatory recording of new ID cases

• 1992:
  – Establishment of HCDCP

• 1998
  – Initial attempt on ID surveillance
ID Surveillance in Europe

• 19 March 2002 EU Decisions
  – 2002/253/EK, EU Council
  – 2119/98/EK, EU Parliament

• Definition of:
  – ID case that need notification
  – 41 ID under surveillance
  – Additional bio-terrorist ID under surveillance
ID Surveillance in Greece (current)

• Complying with the EU decisions
• 2003:
  – Public law code “3172/2003 ΦΕΚ 197”
  – Epidemiological Surveillance responsibility of HCDCP
HCDCP 2003

- New list of diseases for Mandatory Notification System
- Case definition of every notifiable ID
- Standardized Notification form
- Weekly reporting
- Campaign to inform health professionals
# Standardized Notification form

- **Demographics**
- **Risk factors**
- **Clinical characteristics**
- **Laboratory results**
Problems

- Physician Compliance
- Data quality
- Inappropriate concept of involved health personnel
  - Additional Clerkship work
  and not
  - Information that will guide rational action towards ↓ ID
• Surveillance of Viral Hepatitis in Greece is based on the mandatory notification system.
Acute Hepatitis A (a-HepA)
a-HepA - Clinical criteria®

Acute illness with:

• Discrete onset of symptoms (e.g. fatigue, abdominal pain, loss of appetite, intermittent nausea, vomiting)  
  and

• Jaundice or elevated serum aminotransferase levels
a-HepA - Lab criteria®

• IgM anti-HAV positive  
  or  
• HAV RNA positive  
  or  
• Detection of HAV antigen in stools

® EU 2002, HCDCP 2003
a-HepA, Case Classification®

• **Confirmed:**
  – meets the clinical case definition and
  – is laboratory confirmed

• **Probable:**
  – meets the clinical case definition and
  – has epidemiologic link to a case of a-HepA

Limitation:
The case definition doesn’t include asymptomatic cases which are IgM anti-HAV positive.
Acute Hepatitis A: incidence per 100,000 inhabitants, Greece
Acute Hepatitis A: 1998-2006
Mean annual incidence / geographical region

Mean annual incidence per 100,000 residents

- Attica: 1.0
- Aegean Islands: 1.1
- Thrace: 3.2
- Ionian Islands: 0.9
- Epirus: 1.7
- Thessaly: 2.7
- Peloponnesse: 2.3
- Central Creede, Evia: 1.2
- Macedonia: 2.3
- Thrace: 3.2
- Attica: 1.0

Patient residence
Acute Hepatitis B (a-HepB)
a-HepB - Clinical criteria®

An acute illness with:

- Discrete onset of symptoms (e.g. fatigue, abdominal pain, loss of appetite, intermittent nausea, vomiting)

and

- Jaundice or elevated serum aminotransferase levels

© EU 2002, HCDCP 2003
a-HepB - Lab criteria®

- IgM anti-HBc positive
  or
- HBV DNA positive
a-HepB, Case Classification®

- **Confirmed:**
  - meets the clinical criteria and
  - is laboratory confirmed

- **Probable:**
  - meets the clinical criteria and
  - has positive HBsAg.

Limitations:
- HBsAg +, asymptomatic infants<12 m/o: should notified
- Other asymptomatic cases, anti-HBc IgM + or HBsAg +: should not notified
Acute Hepatitis B: incidence per 100,000 inhabitants, Greece

Incidence / 100.000


Incidence / 100.000

0.00 0.50 1.00 1.50 2.00 2.50 3.00

Acute Hepatitis B: incidence / age group

Incidence per 100.000

<table>
<thead>
<tr>
<th>Year</th>
<th>0-4 y/o</th>
<th>5-14 y/o</th>
<th>15-24 y/o</th>
<th>25-44 y/o</th>
<th>45-64 y/o</th>
<th>&gt;65 y/o</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- 0-4 y/o
- 5-14 y/o
- 15-24 y/o
- 25-44 y/o
- 45-64 y/o
- >65 y/o
Acute Hepatitis B: 1998-2006
Mean annual incidence/geographical region

- Attica: 2.3
- Aegean Islands: 0.4
- Thessaly: 2.0
- Epirus: 0.9
- Ionian Islands: 0.6
- Peloponesse: 0.6
- Central Crereece, Evia: 0.7
- Macedonia: 3.0
- Thrace: 3.0
- Crete: 0.6
Acute Hepatitis B: Average cases/year 2004-2006, Greece

- Special group
- Connected with acute case of HepB
- Foreign Citizen
- Immunization for HepB
- Tatoo
- Medical profession
- Dental procedure
- Haemodyalisis
- Transfusion
- Surgical operation

2004-6: Average cases/year
Hepatitis C

1. Acute
2. Asymptomatic/confirmed by anti-HCV, 1st diagnosis
Acute Hepatitis C
(a-HepC)
a-HepC - Clinical criteria®

An acute illness with:

• Discrete onset of symptoms (e.g. fatigue, abdominal pain, loss of appetite, intermittent nausea, vomiting)

and

• Jaundice or elevated serum aminotransferase levels

© EU 2002, HCDCP 2003
a-HepC - Lab criteria®

- Anti-HCV positive and
- IgM anti-HAV negative and
- IgM anti-HBc negative
  or
- HCV RNA positive

® EU 2002, HCDCP 2003
a-HepC, Case Classification®

• **Confirmed:**
  – meets the clinical criteria and
  – is laboratory confirmed

• **Probable:**
  – n/a
Asymptomatic
Confirmed by anti-HCV (+)
1st diagnosis
Newly diagnosed as HepC, Clinical criteria

Asymptomatic = no clinical manifestations

- May have chronic liver disease ranging from
  - Mild
  - Severe (cirrhosis, cancer)
Newly diagnosed as-HePC, Lab criteria

- Anti-HCV positive (repeat reactive) by EIA, and
- Verified by an additional assay p.e
  - RIBA or
  - RT-PCR for HCV RNA

OR

- HCV RNA positive
Newly diagnosed as-HepC, Case Classification

- **Confirmed:**
  - Asymptomatic Case diagnosed for first time and
  - is laboratory confirmed

- **Probable:**
  - n/a
Hepatitis C: incidence per 100.000 inhabitants, Greece

- Acute Hepatitis C infection
- Asymptomatic pt, initial diagnosis of HCV infection
Acute Hepatitis C: incidence / age group

Incidence per 100,000

- 0-4 y/o
- 5-14 y/o
- 15-24 y/o
- 25-44 y/o
- 45-64 y/o
- >65 y/o

Acute Hepatitis C:
Mean annual incidence/geographical region

Mean Annual incidence per 100,000
Chronic Hepatitis B & C

- COHORT STUDY 2003
  - National epidemiological study
  - Sponsored by HCDCP
  - 25 hepatology centers

**Aim:**
Evaluate epidemiology / natural course of chronic Hepatitis B & C
Prevalence of Hepatitis in Greece?

National Seroprevalence Study