HEPATITIS B IN TURKEY

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Communicable Disease Department
Ministry of Health, TURKEY
<table>
<thead>
<tr>
<th>AREA</th>
<th>769.604 km²</th>
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<tbody>
<tr>
<td>POPULATION</td>
<td>67,803,927</td>
</tr>
<tr>
<td>0-4 Ages</td>
<td>10 %</td>
</tr>
<tr>
<td>5-9 Ages</td>
<td>10 %</td>
</tr>
<tr>
<td>10-14 Ages</td>
<td>10 %</td>
</tr>
<tr>
<td>15-64 Ages</td>
<td>64 %</td>
</tr>
<tr>
<td>65+ Ages</td>
<td>6 %</td>
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</tbody>
</table>
URBAN POPULATION 65 %
RURAL POPULATION 35 %
LIFE EXPECTANCY AT BIRTH (years) 68.7
PROPORTION OF THE LITERATE POPULATION 87 %
PER CAPITA INCOME 3400 USD
Turkey is an intermediate endemicity country for Hepatitis B infections

- 2/3 of acute viral hepatitis among children is hepatitis A,
- 60% of acute viral hepatitis among adults is Hepatitis B in our country.
- HBsAg positive 5%
- Anti HBs positive 25-30%
• Almost 1/3 of our population has already infected by Hepatitis B virus

• Approximately 3-4 million carriers

• nearly 350 hepatocellular Carcinoma
HBsAg positivity based on the surveys from universities in Turkey

- Chronic liver and cirrhotic patients 57.3%
- Barber and coiffeur 12.3%
- Hemodialysis patients 10.1%
- Female sex workers 9.6%
- Soldier donors 7.4%
- Civilian donors 5.2%
- Health staff 4.8%
- Pregnants 4.4%
HEPATITIS B PREVENTION AND CONTROL PROGRAM

• **Objective:** to decrease morbidity and mortality of hepatitis B

• **Strategies:**
  * Surveillance
  * Immunization
  * Education
  * Safe blood supply and blood products
  * Safe injection practices
SURVEILLANCE

- Notification system
- Collection and management of data
- New case definition
Acute Hepatitis B Case Definition

Hepatitis B clinical definition
having sudden onset of jaundice, dark urine, malaise, fatigue, nausea, vomiting, anorexia, right upper quadrant abdominal pain.
Raised urine bilirubin and serum ALT level

Laboratory criteria for diagnosis
HbsAg and/or anti HBc IgM positivity.

confirmed case
A case that meets the clinical case definition and is laboratory confirmed.
Annual number of reported Hepatitis B cases, Turkey 1990-2003

number of cases

year

0 1000 2000 3000 4000 5000 6000

Hepatitis B cases by age in Turkey, 1998-2003

number of cases

year

65+ ages
45-64 ages
25-44 ages
15-24 ages
10-14 ages
5-9 ages
1-4 ages
<12 months

1998 1999 2000 2001 2002 2003
Regional Differences in Hepatitis B incidence, Turkey 2003

(1/100,000)
IMMUNIZATION

- Vaccination of infants
- Vaccination of persons at high risk of infection
Vaccination of Infants
Recommended schedule for Hepatitis B vaccine in 1998 by MoH, Turkey

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Dose 1</th>
<th>Dose 2</th>
<th>Dose 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. alternative</td>
<td>At birth</td>
<td>3\textsuperscript{rd} month</td>
<td>9\textsuperscript{th} month</td>
</tr>
<tr>
<td>2. alternative (infants born outside health facilities)</td>
<td>3\textsuperscript{rd} month</td>
<td>4\textsuperscript{th} month</td>
<td>9\textsuperscript{th} month</td>
</tr>
<tr>
<td>3. alternative (for infants &gt; 3 month)</td>
<td>Anytime</td>
<td>1 month after the first dose</td>
<td>5 months after the 2\textsuperscript{nd} dose</td>
</tr>
</tbody>
</table>
# Recommended Vaccine schedule for Hepatitis B in 2003 by MoH, Turkey

<table>
<thead>
<tr>
<th>Routine immunization</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; dose</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; dose</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>At birth (within the first 72 hours)</td>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; month</td>
<td>9&lt;sup&gt;th&lt;/sup&gt; month</td>
</tr>
<tr>
<td>Babies can not be caught at birth or all persons at high risk groups</td>
<td>Anytime</td>
<td>1 month after the first dose</td>
<td>5 months after the second dose</td>
</tr>
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HBV risk groups

First Priorities
- Health care workers (frequent blood contact)
- Students attending health schools
- Patients of hemodialysis units
- Recipients of certain blood products
- Injection drug users
- Household contacts of HBV carriers
- Female sex workers
- Homosexuals
- Heterosexuals with multiple partners
- Persons have chronic liver diseases
- Prisoners
- Extended travel to areas of high endemicity
- Barbers and coiffeurs
Second Priorities

- Institutions for the mentally retarded
- Dormitories
- Fire brigade staff
- Troops, police officers (special units being under the risk)
- Other staff taking a part at the accidents and disasters
Hepatitis B vaccination coverage rate among children <12 months of age by year - Turkey, 1999-2004

Coverage rate (%)

*first 3 months of 2004
HBV-3 Vaccine Coverage among children < 12 months of age by province in Turkey - 2003
## Cost of Hepatitis B vaccine in Turkey, 2003

<table>
<thead>
<tr>
<th></th>
<th>Pediatric dose</th>
<th>Adult dose</th>
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<tbody>
<tr>
<td>MoH</td>
<td>0,27 $</td>
<td>0,54 $</td>
</tr>
<tr>
<td>Private sector</td>
<td>11 $</td>
<td>14 $</td>
</tr>
</tbody>
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Comparison of Hepatitis B Vaccine purchased by MoH and imported by private sector in Turkey, 1998-2003
Allocated fund for Hepatitis B vaccines by MoH in Turkey, 1998-2003

USD

<table>
<thead>
<tr>
<th>Year</th>
<th>USD</th>
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<tbody>
<tr>
<td>1998</td>
<td>30000000</td>
</tr>
<tr>
<td>1999</td>
<td>30000000</td>
</tr>
<tr>
<td>2000</td>
<td>60000000</td>
</tr>
<tr>
<td>2001</td>
<td>60000000</td>
</tr>
<tr>
<td>2002</td>
<td>20000000</td>
</tr>
<tr>
<td>2003</td>
<td>20000000</td>
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EDUCATION

• Public education
• Education of people at the high risk groups
• Education and training of health care workers about disease, routes of transmission, protection, vaccine schedule and surveillance.
SAFE BLOOD SUPPLY AND BLOOD PRODUCTS

• HBsAg screening is an obligatory test
• approximately 1 400 000 donors in every year
• HBsAg positivity rate is 3-5%
SAFE INJECTION PRACTICES

- Use of personal protective equipment
- Use of disposable materials
- Disinfection of the tools
- Management of health care waste
Problems and suggestions about Hepatitis B for Turkey

- Difficulty in reaching all infants
- Low rates of vaccine coverage
- Drop out rate
- Inadequate notification
- Misperceptions