Prevention and control of perinatal hepatitis B virus transmission in the Republic of Kyrgyzstan

Republican Centre of Immunoprophylaxis
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Target Programme “Viral Hepatitis” in the Republic of Kyrgyzstan, 1999-2010

Programme goal:
Reducing the incidence of acute viral hepatitis, and preventing chronic hepatitis, cirrhosis and hepatocellular carcinoma

Objectives:
- national policy development;
- reliable aetiological diagnosis of viral hepatitis;
- immunization against viral hepatitis B;
- safety of health-related interventions;
- reduction of risk of perinatal infections
Hepatitis B prevalence study, 1998-1999

<table>
<thead>
<tr>
<th>Location</th>
<th>HBs Ag (%)</th>
<th>anti-HBe (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bishkek - city</td>
<td>44.9</td>
<td></td>
</tr>
<tr>
<td>Chuiskaya Oblast</td>
<td>42.3</td>
<td></td>
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<tr>
<td>Issykulska Oblast</td>
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<td>Narynskaya Oblast</td>
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<td></td>
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<tr>
<td>Jalal-Abadskaya Oblast</td>
<td>61.6</td>
<td></td>
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<tr>
<td>Republic of Kyrgyzstan</td>
<td>43.8</td>
<td></td>
</tr>
</tbody>
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Viral Hepatitis (VH) Sentinel Surveillance System - since 2000 onwards

- **Northern Region**
  - Naryn (sera from VH patients treated at the Oblast Hospital)

- **Southern Region**
  - Jalal-Abad (sera from VH patients treated at the Oblast Hospital)

- **Central region**
  - City of Bishkek, (sera from each 5th VH patient treated at the Infectious Diseases Hospital)

- **Republican Reference Laboratory of Viral Infections**
  - (EIA for 5 markers)
Percent of hepatitis B in the viral hepatitis structure, 2004

**VH structure according to official statistics**

- HAV: 85.9%
- HBV: 9.7%
- HCV: 2.5%
- HDV: 0.2%
- HEM: 0.1%
- Unknown: 1.3%
- HEV: 0.01%

**VH structure according to sentinel surveillance system data**

- HA: 43%
- non A non C: 18%
- HD: 3%
- HB: 25%
- MIXED HEPATITIS: 3%
- HC: 7%
Introduction stages for immunization against hepatitis B

- 1999 – in 5 of 8 regions of the Republic;
- 2000 – continued vaccination in 5 of 8 regions;
- 2001–2005 – all regions of the country
Coverage of infants <1 year with 3 doses of HepB vaccine

- 1999: 10.4%
- 2000: 43.7%
- 2001: 57.4%
- 2002: 98.9%
- 2003: 98.7%
- 2004: 99.2%
- 2005: 97.4%
Timing of hepatitis B vaccination according to the National Immunization Schedule

- **Dose 1** – within 24 hours after birth;
- **Dose 2** – at 2 months (together with DPT and OPV);
- **Dose 3** – at 5 months (together with DPT and OPV)
Ensuring managed deliveries

- Deliveries at health facilities – 98,2%;
- Deliveries outside health facilities attended by health care workers – 0,5%;
- Home deliveries not attended by health care workers – 1,3%
Vaccination of the neonates

- **Deliveries at health facilities**
  - Specially trained nurse - within 24 hours after birth

- **Home deliveries**
  - Polyclinic vaccination nurse
  - Feldcher (physician’s assistant)
    - on the day of registration
Coverage of the neonates with first dose of BCG, OPV and HepB
Coverage of infants in their first year of life with HepB1 and HepB3
Incidence of viral hepatitis B in children <1 year and <5 years
Case fatality due to viral hepatitis B in children < 5 years

![Graph showing case fatality rates from 1997 to 2005. The graph displays a peak in 1999 followed by a sharp decline, with a notable increase in 2002. The graph is labeled "IMMUNIZATION."
Incidence of viral hepatitis B distributed by age according to sentinel surveillance data, 2000-2003

The chart shows the distribution of viral hepatitis B by age group from 2000 to 2003. The age groups are: <5 years, 5-9 years, 10-14 years, 15-19 years, 20-29 years, 30-39 years, and >40 years. The data is represented by bars for each year, with different colors indicating the years 2000, 2001, 2002, and 2003.
Challenges

- Inadequate financing
- Need for hepatitis B immunization of adolescents (aged 14-16 years) and risk groups (health care workers, laboratory technicians, etc.)
- Diagnosis of viral hepatitis B
- Cold chain improvement
- Training of health personnel in hepatitis B control
Objectives

- Donor fund raising;
- Mobilization of additional financial resources from the regional budgets for the procurement of vaccines and diagnostic preparations;
- Development and introduction of a new system of HBV surveillance;
- Revision of the existing training programmes on viral hepatitis;
- Implementation of a special survey of HBV vaccination coverage;
- Screening of pregnant women for HbsAg;
- Strengthening of the cold chain.