

Technical Viral Hepatitis Prevention Board Meeting  
IDENTIFICATION AND MANAGEMENT OF PERSONS WITH  
CHRONIC VIRAL HEPATITIS IN EUROPE  
Budapest, Hungary, March 18-19, 2010

Identification and management of chronic viral  
hepatitis in Russia

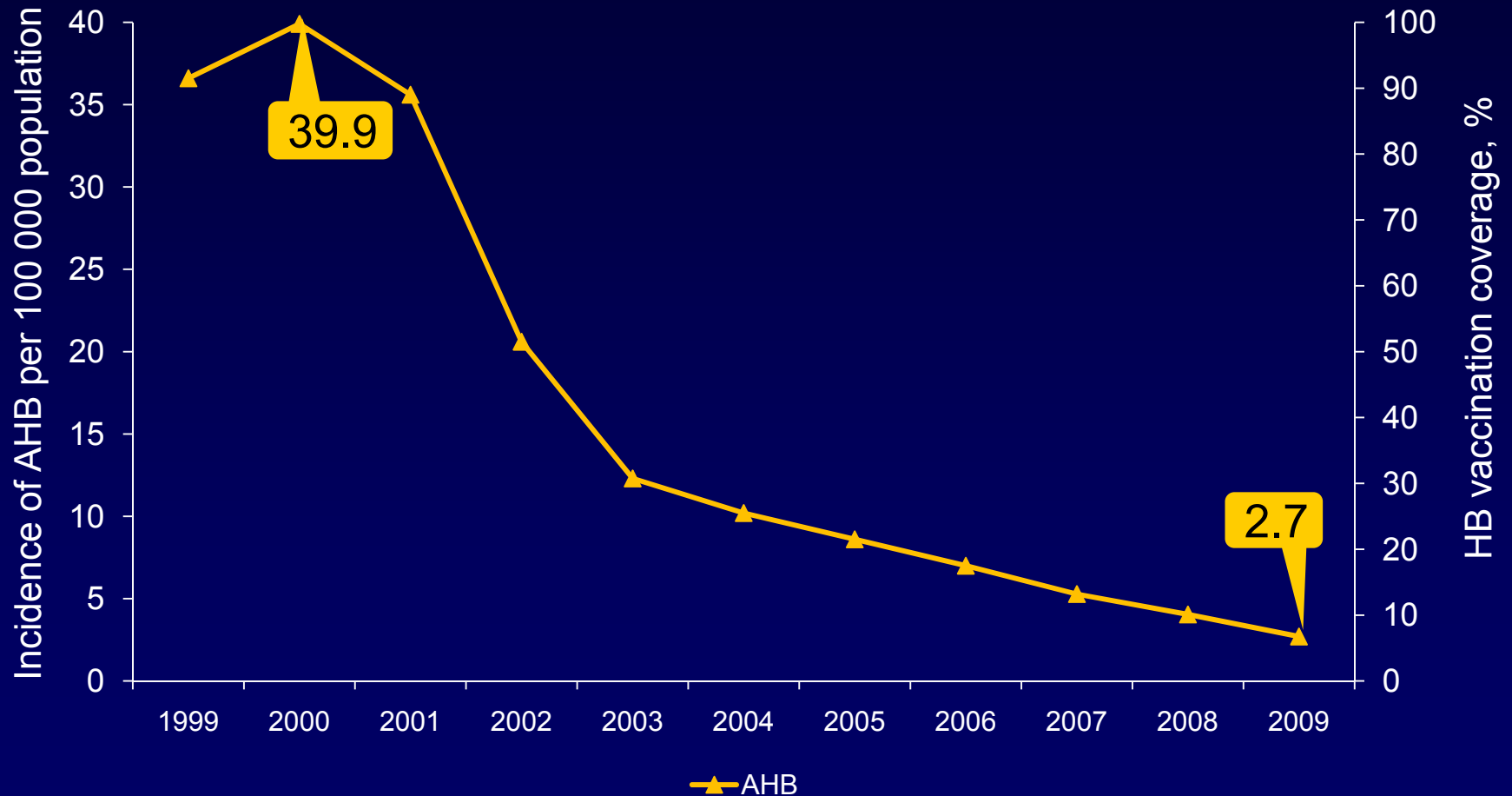
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Reference Center for Viral Hepatitis  
Moscow, Russia**

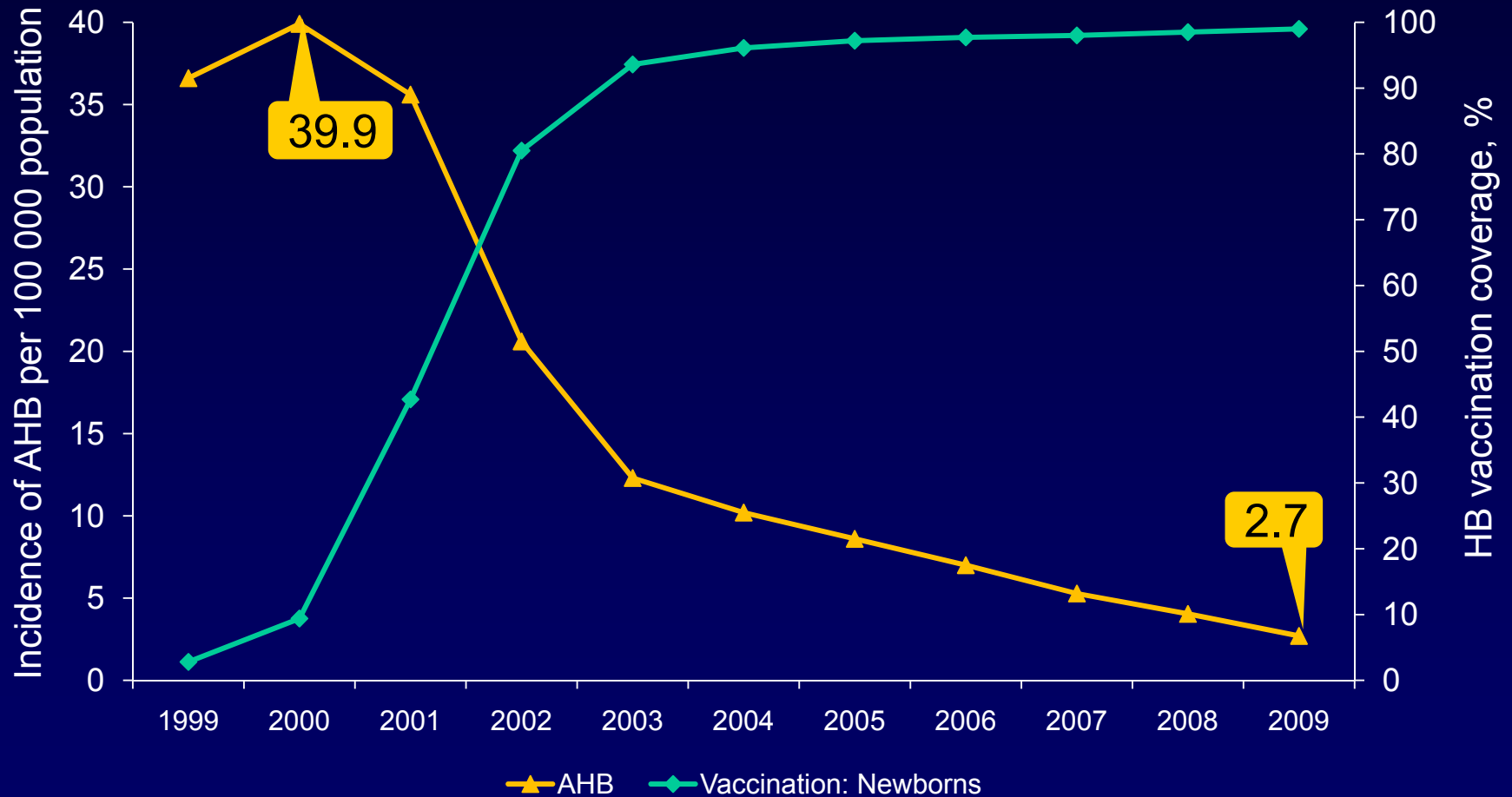
# Presentation Outlines

- Incidence and prevalence of hepatitis B and C in Russia;
- Screening strategy for hepatitis B and C;
- Chronic hepatitis B and C treatment options and programs;
- Summary

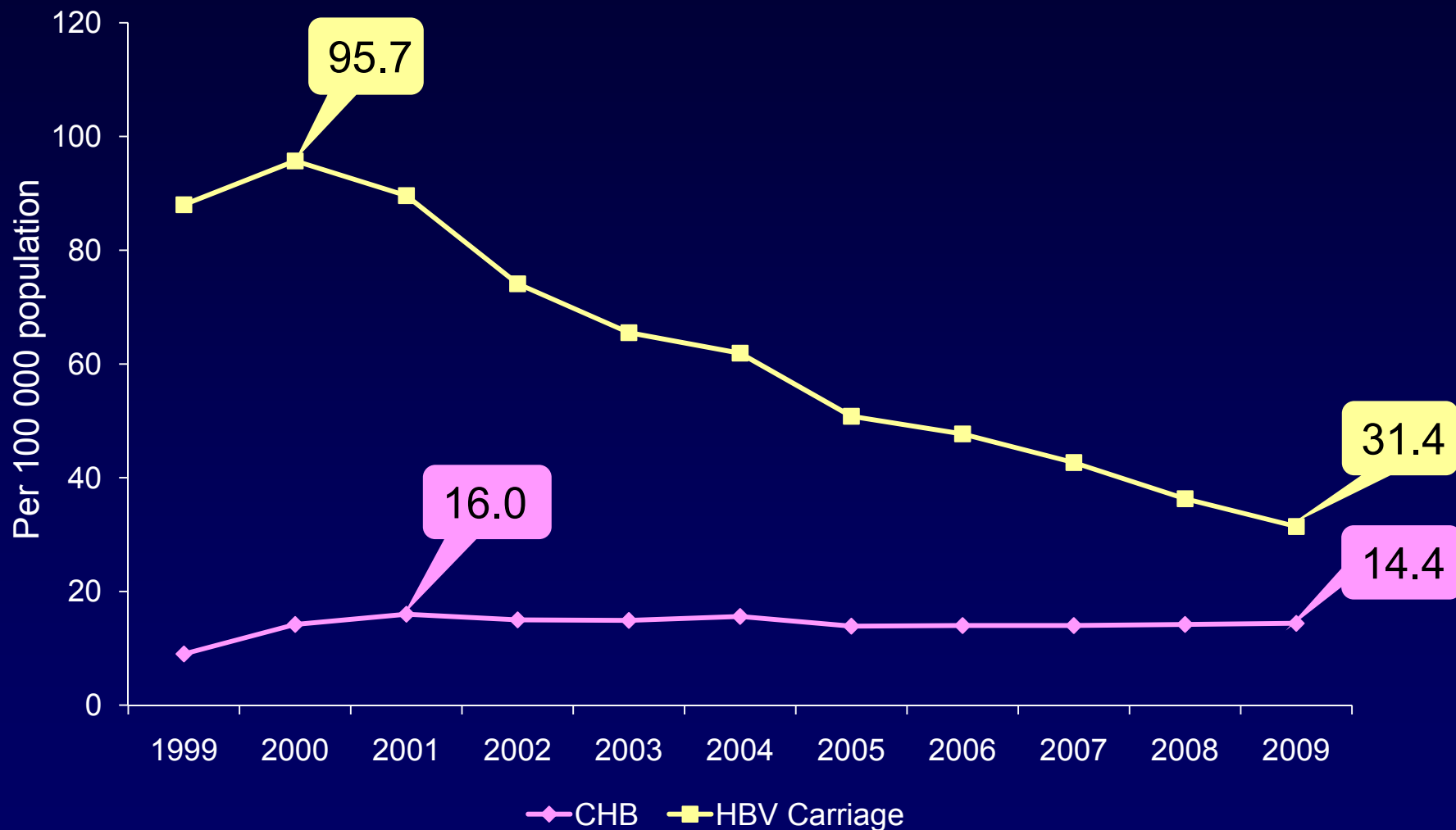
# Incidence of Acute Hepatitis B and vaccination coverage, 1999-2008



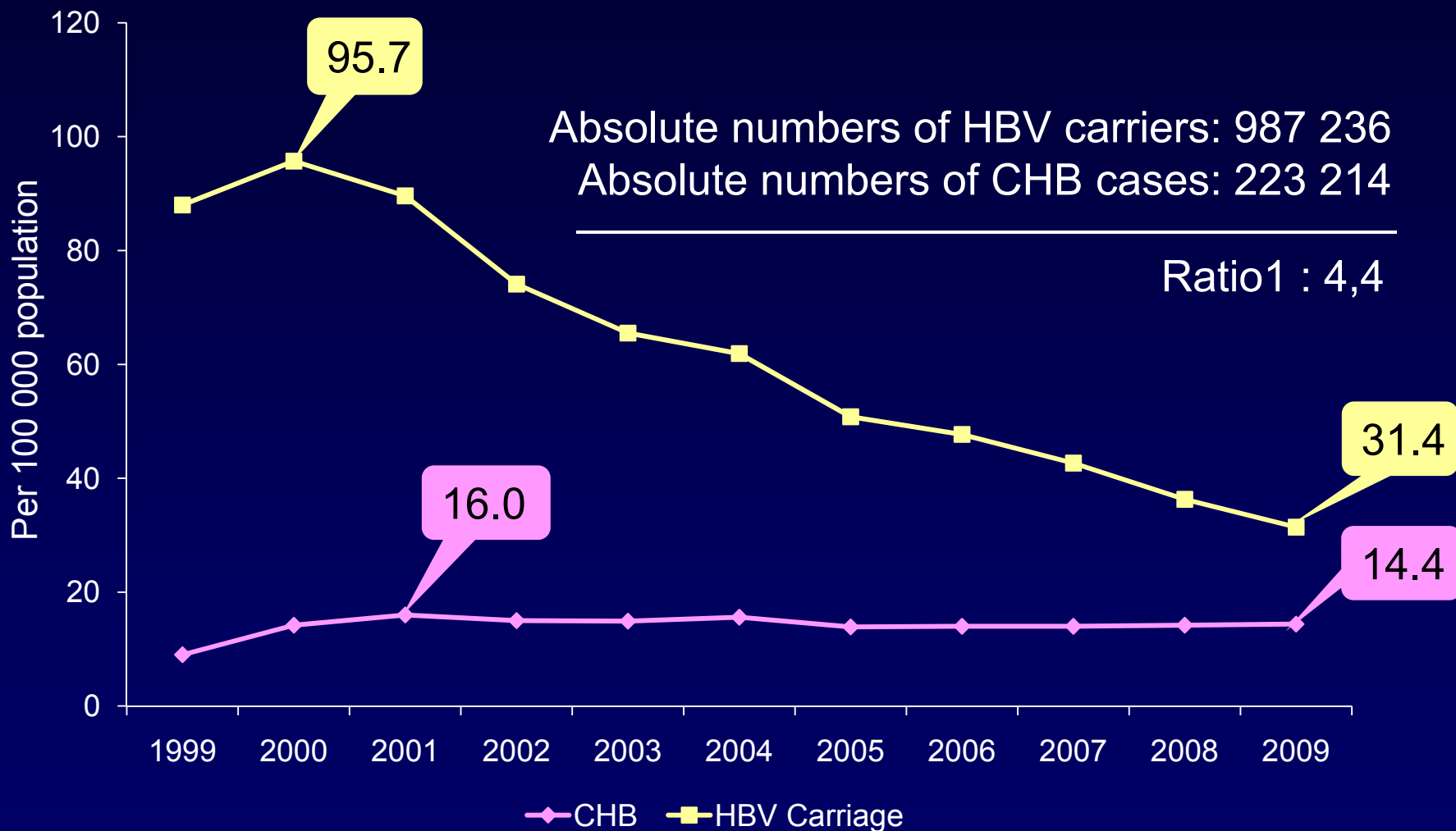
# Incidence of Acute Hepatitis B and vaccination coverage, 1999-2009



# Incidence of Chronic Hepatitis B and HBV Carriage, 1999-2009



# Incidence of Chronic Hepatitis B and HBV Carriage, 1999-2009



# Prevalence of HBV Infection in Moscow, 2004-2009



# Prevalence of chronic HBV infection in Russia

**Total population of Russia (1.01.2010)** **141.9 mil**

**Rate of HBsAg detection** **2.0%**

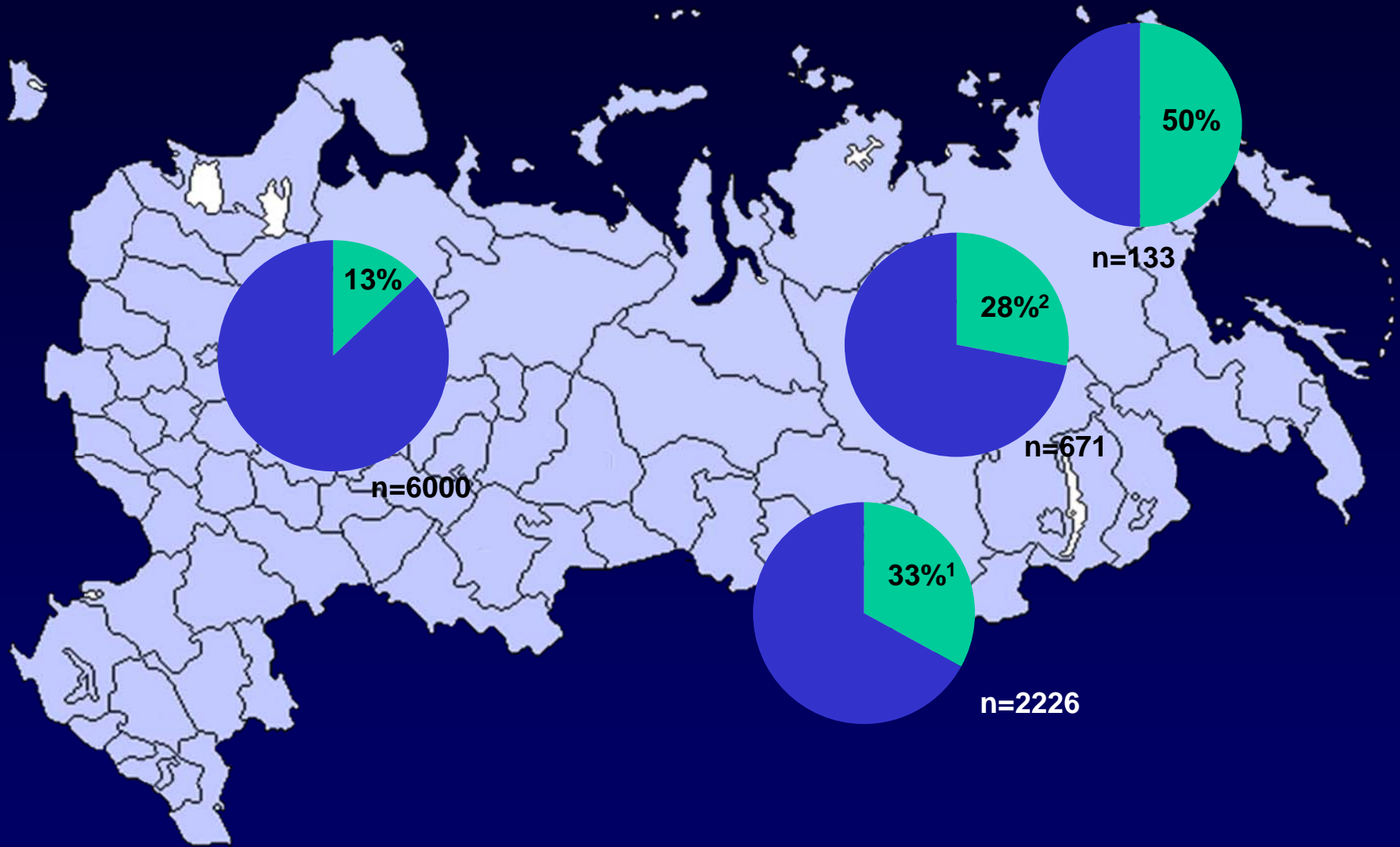
**Estimated number of chronic HBV infection cases** **2.8 mil**

**Ratio«CHB : inactive HBV carriers»** **1 : 4,4**

**Estimated number of CHB cases** **645 000**



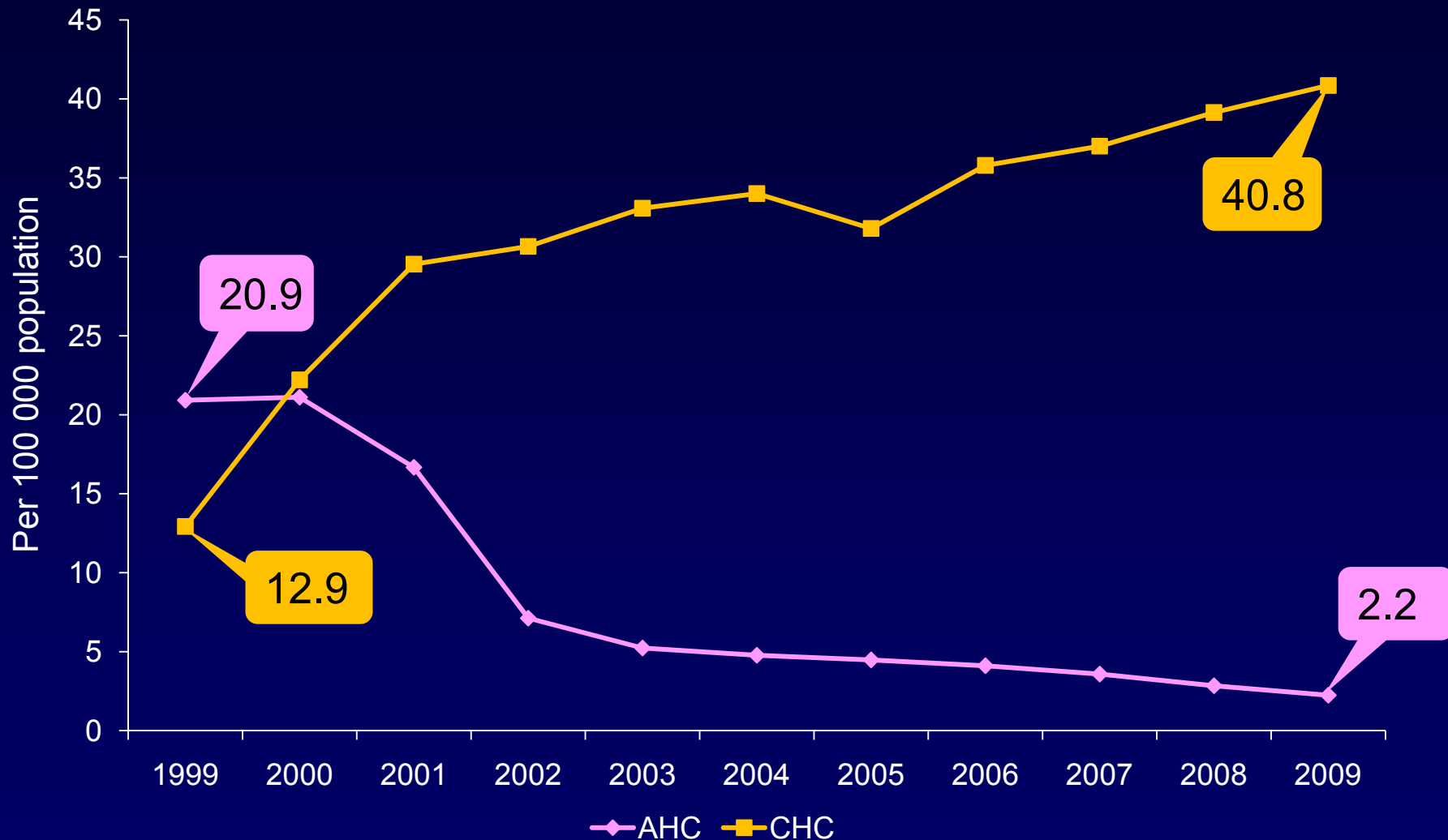
# HDV Infection among HBsAg positive patients



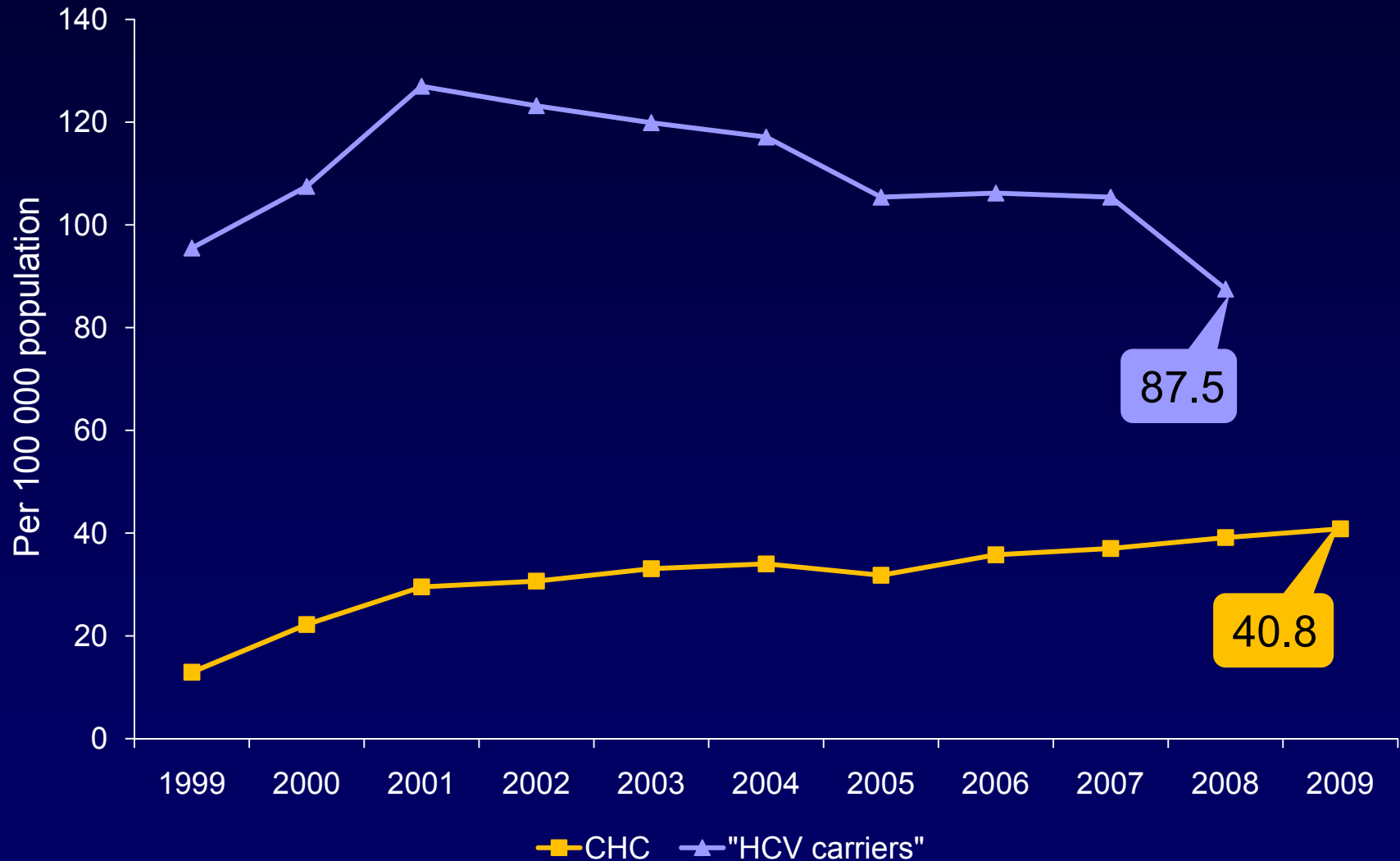
[<sup>1</sup>Ilchenko L.Yu. et al. Proceedings of Institute of Poliomyelitis and Viral Encephalitis, 2009:XXVI, 217-226.]

[<sup>2</sup>Pavlov N.N. et al. Abstract p. 240-241, Fifth conference on Viral Hepatitis B, C and D, Moscow, May 2003.]

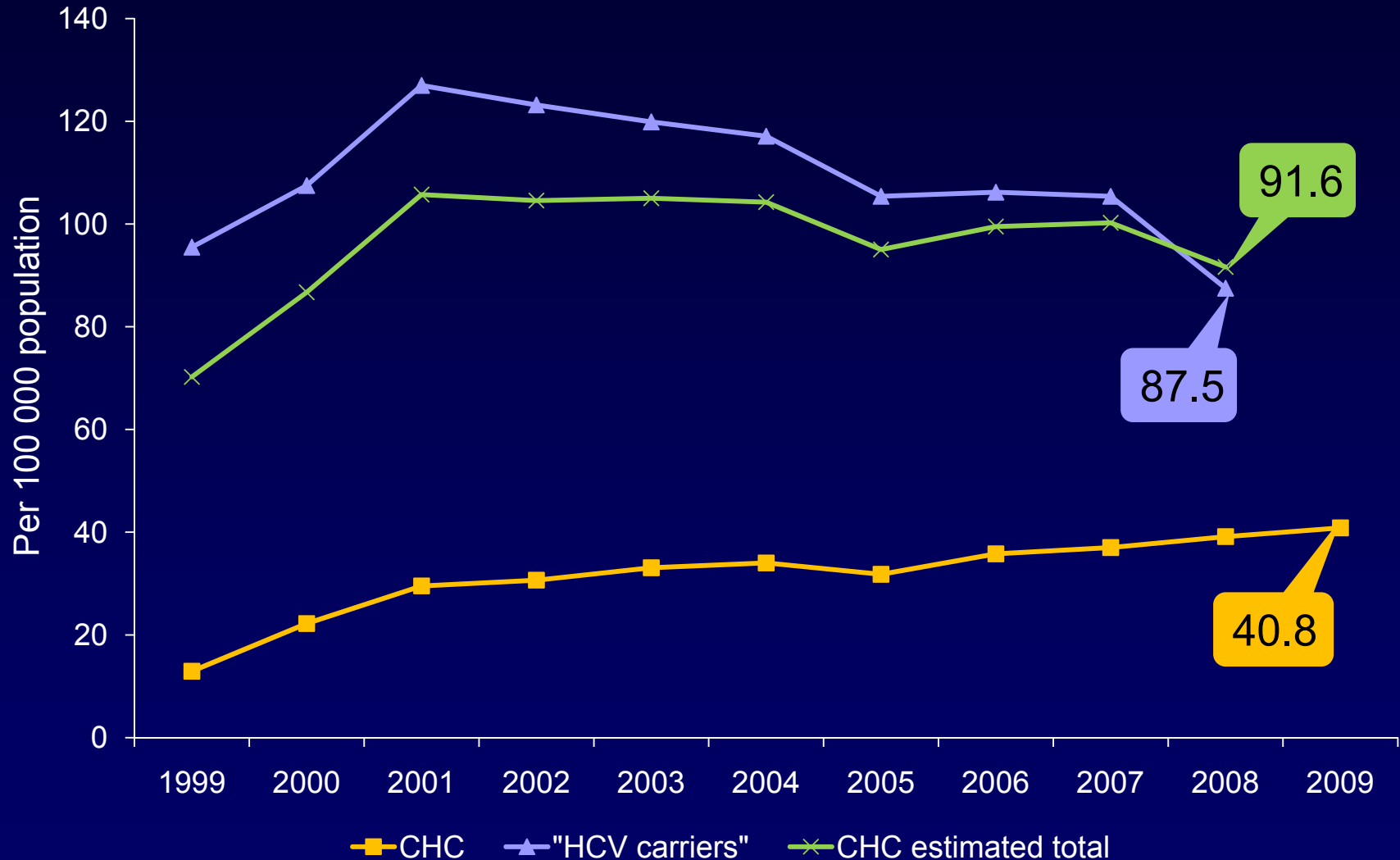
# Incidence of Acute and Chronic Hepatitis C, 1999-2009



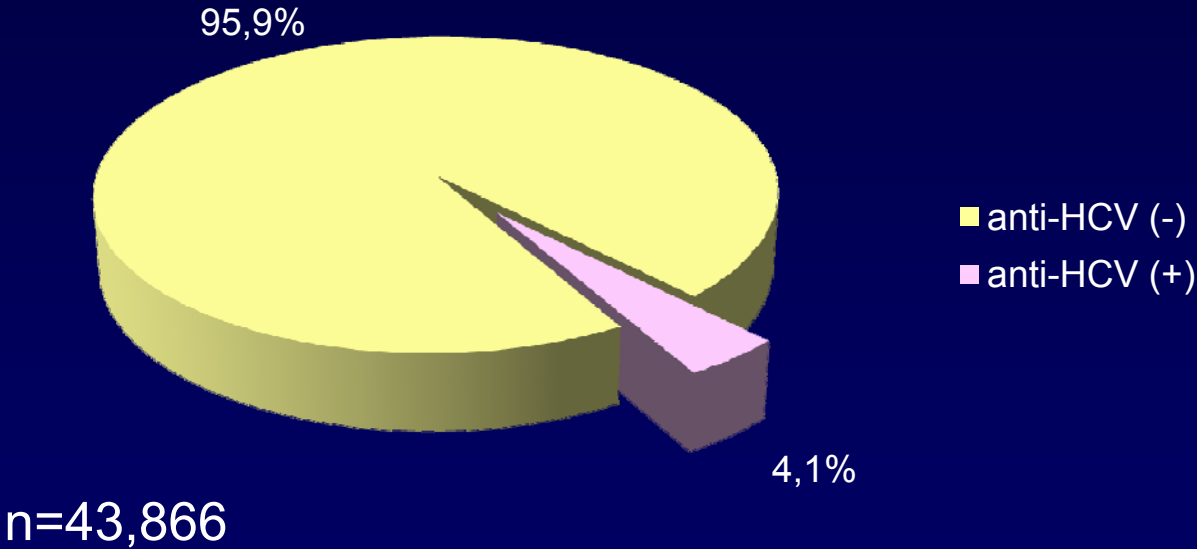
# Incidence of Chronic Hepatitis C, 1999-2009



# Incidence of Chronic Hepatitis C, 1999-2009



# Rate of anti-HCV detection in General Population in Moscow, 2005-2009



# Prevalence of Chronic Hepatitis C in Russia

**Total population of Russia (1.01.2010) 141.9 mil**

**Rate of anti-HCV detection 4.1%**

**Estimated number of anti-HCV positive cases 5.9 mil**

**Ratio of chronization 60%**

**Estimated number of CHC cases 3.6 mil**

# Goals of Hepatitis B and C Screening Strategy

*The goals of the Screening Strategy are to lower the incidence of acute Hepatitis B and C and reduce chronic hepatitis B and C burden through the interruption of infection transmission and early disease detection.*

# Viral Hepatitis Screening Programs in Russia

Screening groups	Schedule
- Blood donors	At every donation
- Pregnant women	During I and III trimester
- Newborns of women with CHB or CHC	0, 3,6 months; 1, 2, 3 years of age
- Health care workers	At hiring, then every year
- In-patients	At the point of admission
- Out-patients (Drug and alcohol abuse clinics, STI clinics)	At the first appointment; then every year
- Patients on hemodialysis	At the first appointment; then on regular basis
- Orphanage	At admission; then every year
- Households and contacts	At index case identification; then every year
- Military personnel	At hiring; then every year



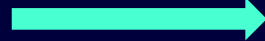


Health Care Facility



HBsAg (+) or  
Anti-HCV (+)

24 h

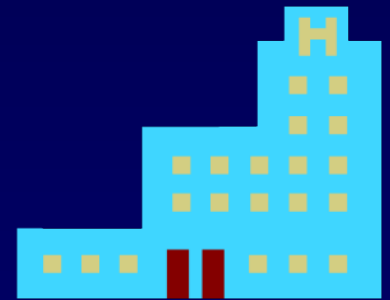
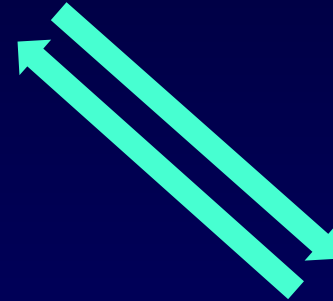


Local Administration,  
responsible for ID  
surveillance

Monthly



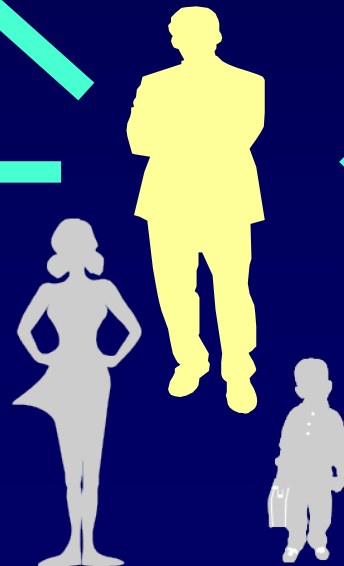
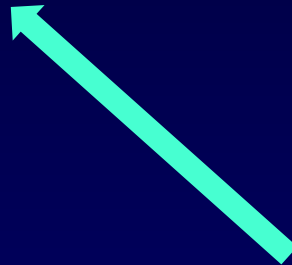
Federal Center for  
Hygiene and Epidemiology



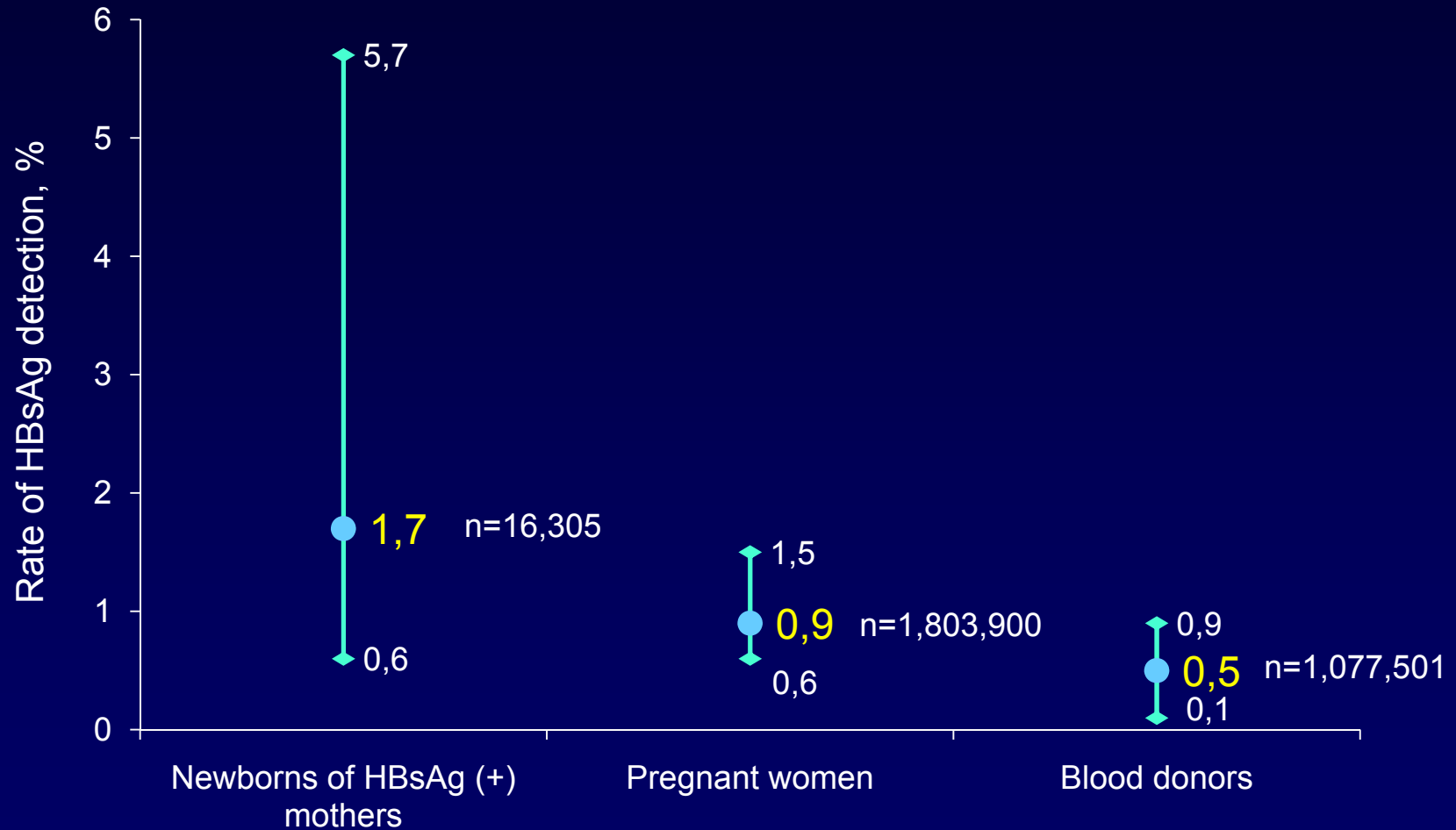
Local Out-patient  
Clinic



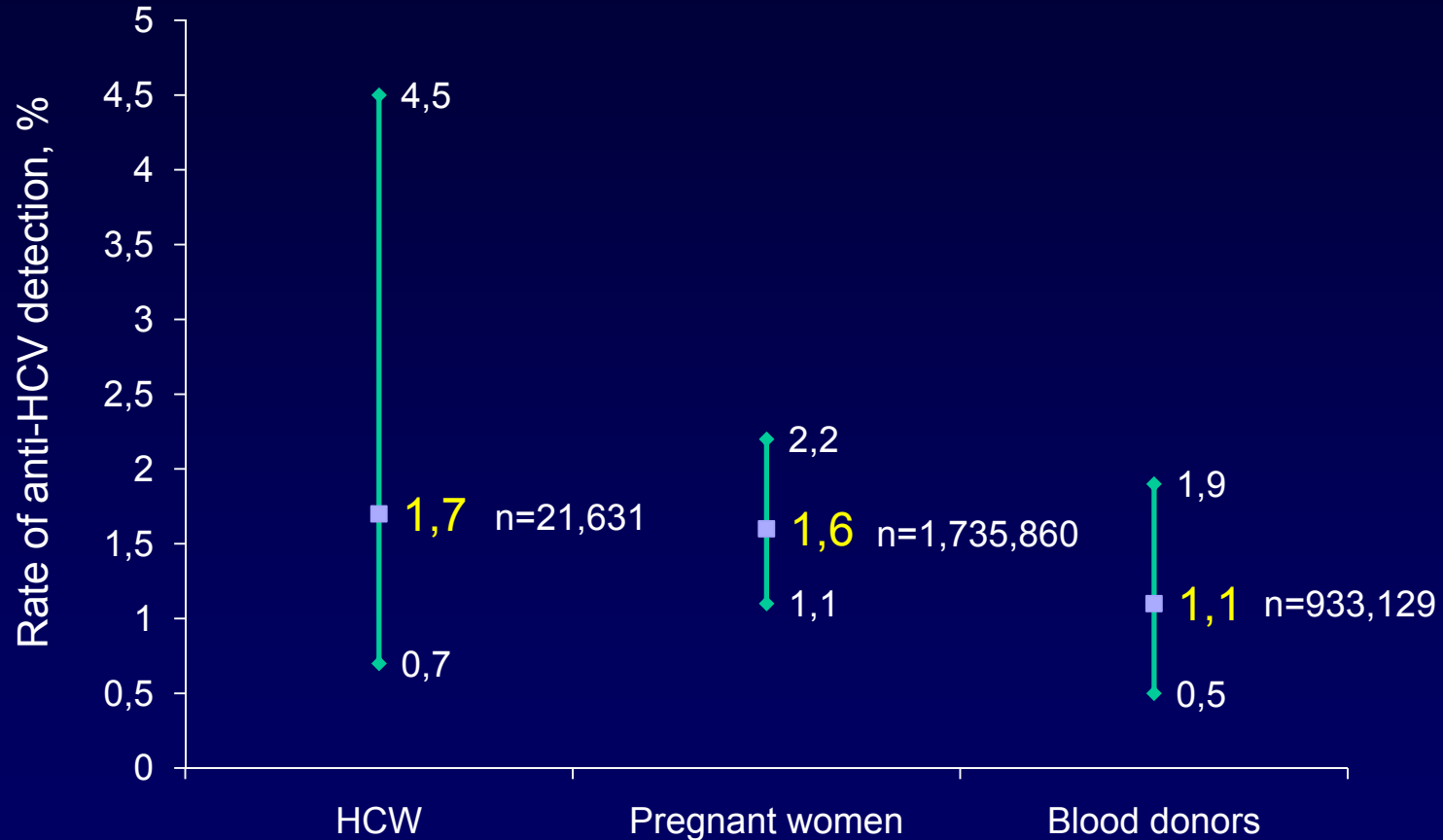
Hepatology Center



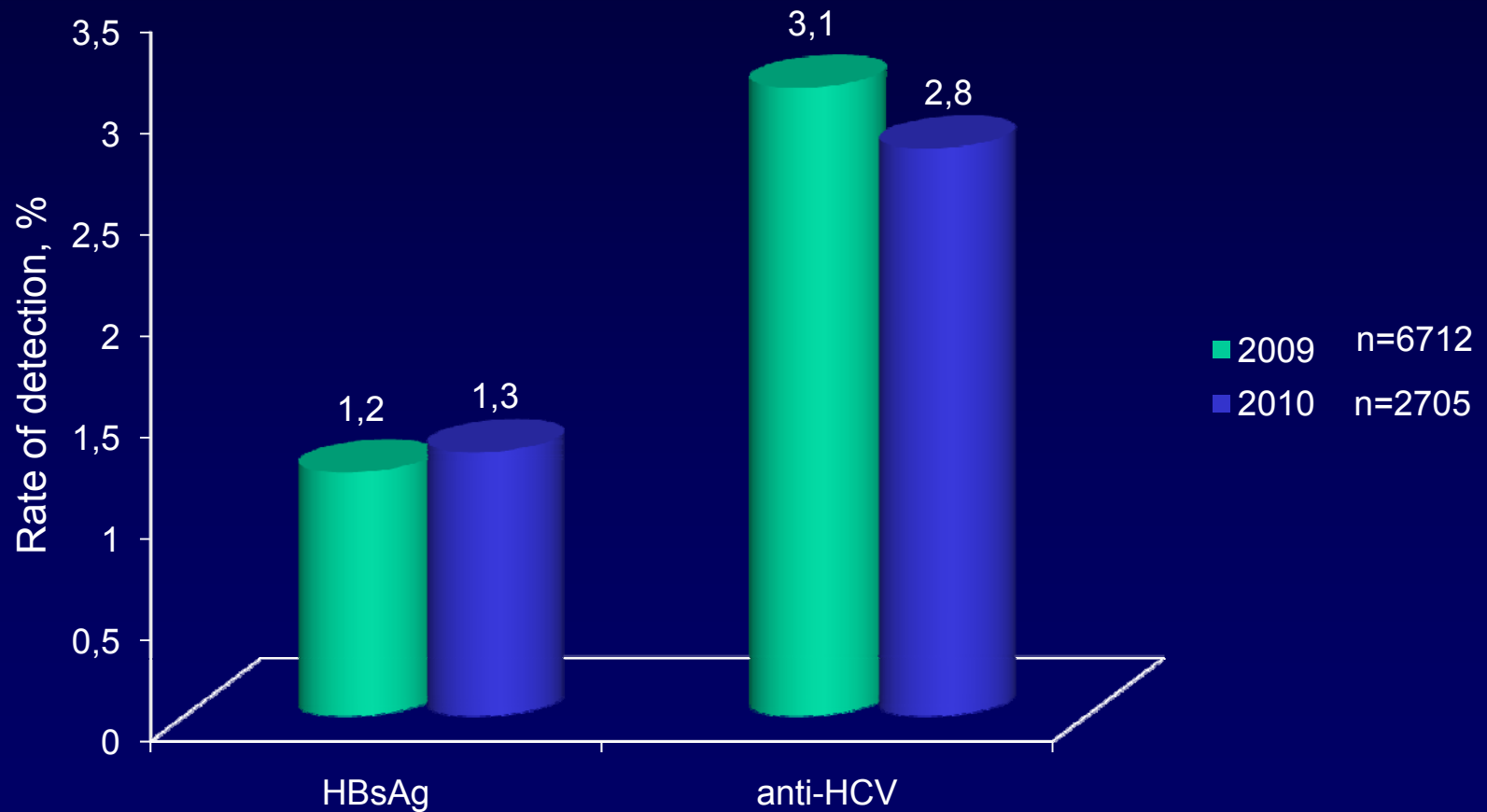
# Rate of HBsAg within Selected Groups in 2007, Russia



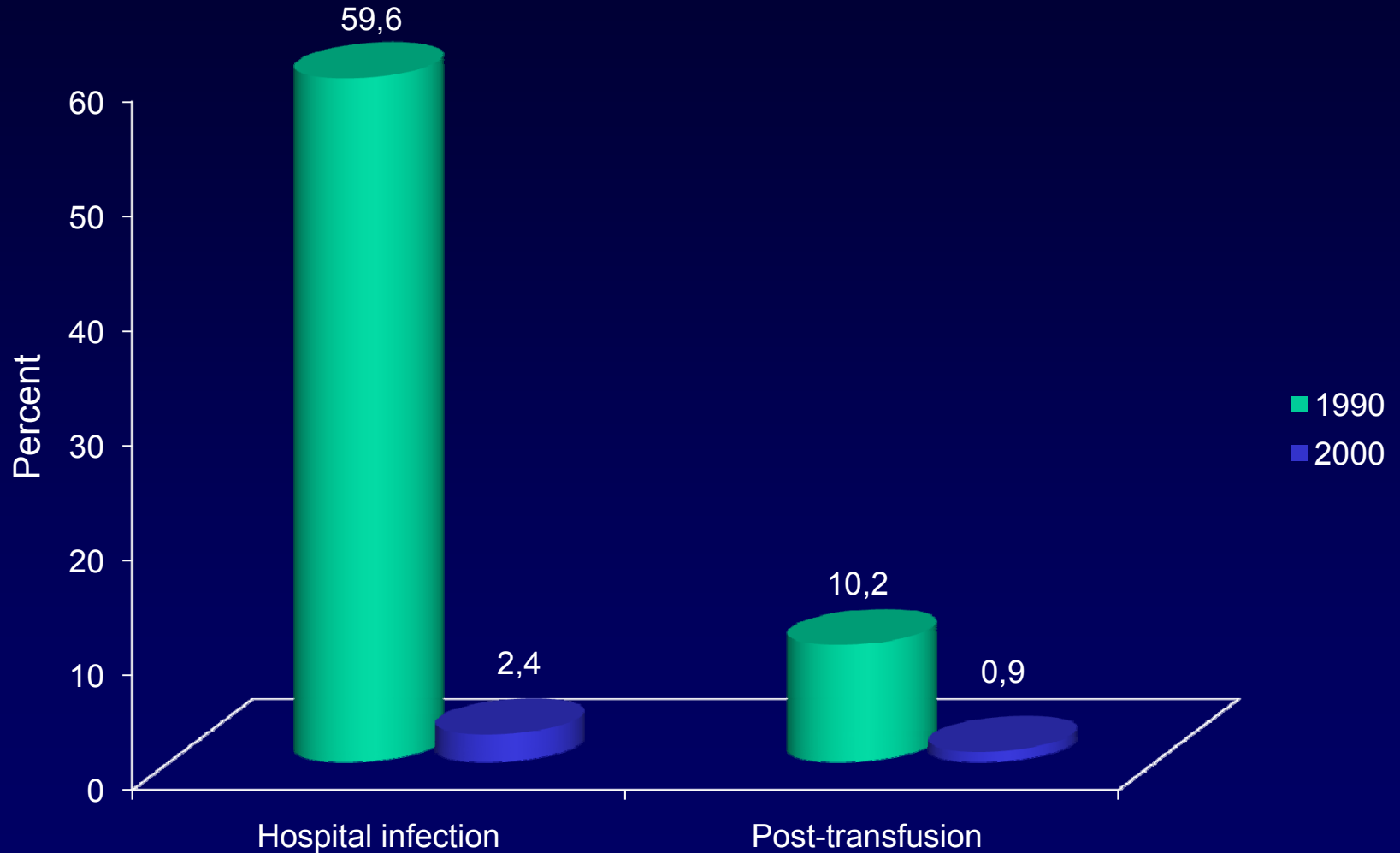
# Rate of anti-HCV within Selected Groups in 2007, Russia



# Rate of HBsAg and anti-HCV among In-Patients in 2009-2010, Moscow



# Impact of Screening Strategy on Rate of HBV transmission in Health Care Settings



[Shakhgildian I.V. et al. Parenteral Viral Hepatitis: Epidemiology, Diagnostics and Prevention. Moscow, 2003, 182-195.]

# Cost of screening programme

## **Covered by Mandatory Health Insurance**

- HBsAg (screening and confirmatory test)
- Anti-HCV (screening and confirmatory test)

# Cost of Evaluation and Follow-up

## **Covered by Mandatory Health Insurance**

- Blood Chemistry (every 3-6 month)
- Abdominal Ultrasound (every 6-12 month)
- Liver Biopsy (in some regions)

## **Paid Out of Pocket**

- Viral Load (HBV and HCV)
- Viral Genotype (HCV and HBV)
- Drug Resistance
- Liver Biopsy
- Non-invasive Fibrosis and Disease Activity Assessment

# Cost of Screening Program for Pregnant Women in 2007

	HBsAg	Anti-HCV
Pregnant Women Screened	1.8 mil	
Cost per test, USD	0.7	0.7
Test per one women	2	2
<b>Cost of the program , USD</b>	<b>2.52 mil</b>	<b>2.52 mil</b>
Rate of positivity, %	0.9	1.6
Total number of infected	16,200	28,800
<b>Cost per one infected, USD</b>	<b>156</b>	<b>87</b>



# Treatment Options

## Chronic Hepatitis B

- Nucleoside Analogues
  - Lamivudine
  - Telbivudine
  - Entecavir
- IFNs
  - Standard
  - Pegylated

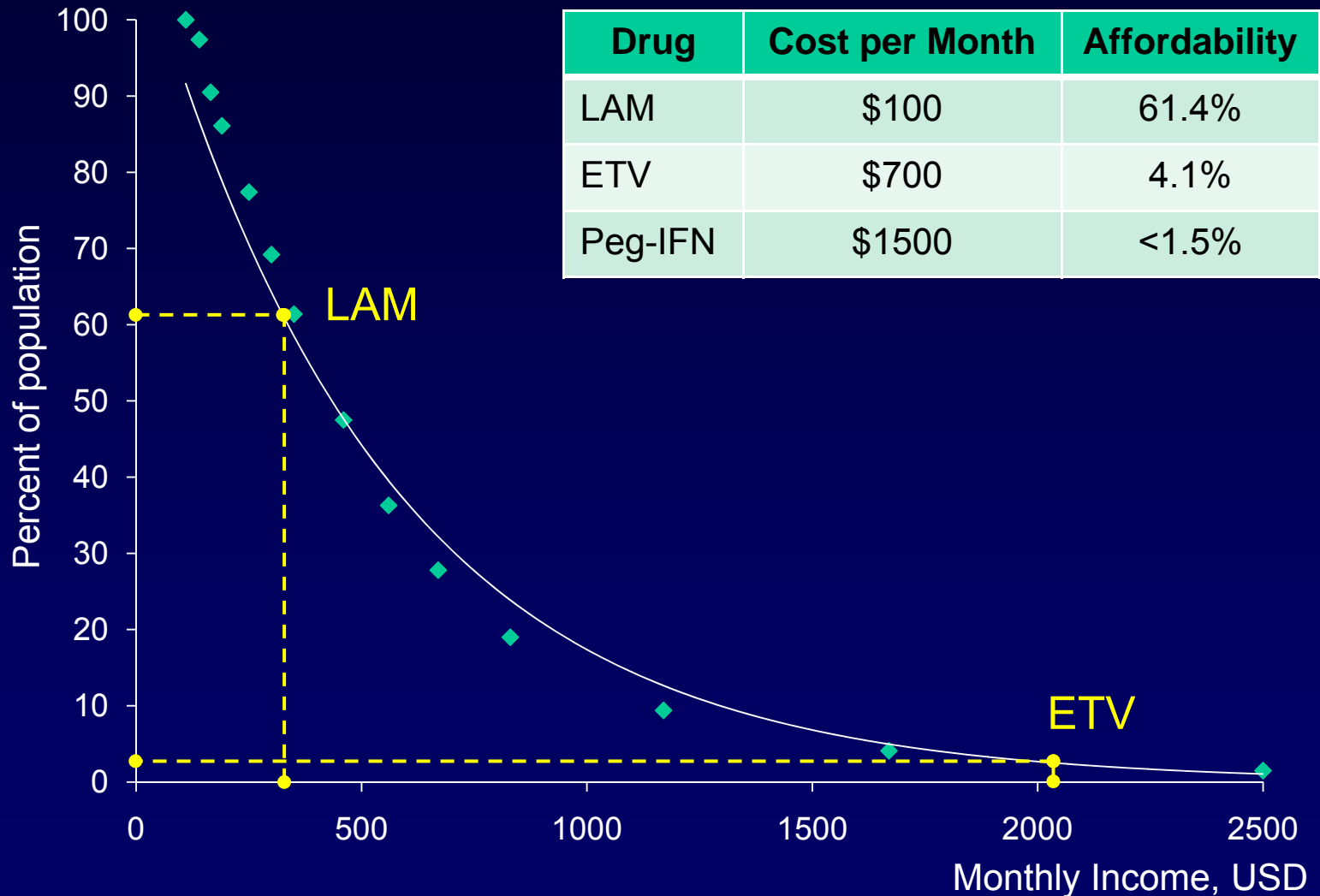
## Chronic Hepatitis C

- IFNs
  - Standard
  - Pegylated
- Ribavirin

# Treatment Programs

- **National Public Health Project**
  - HCV-HIV or HBV-HIV coinfection (100%)
  - CHC or CHB monoinfection (unspent funds)
- **Federal Target Program (2007-2011)**
  - Diagnostic Capacity Strengthening
  - In 2009  $\approx$  500 CHB patients got treatment
- **Additional Drug Supply Program**
  - Groups entitled for special benefits
- **High-Tech Medical Care State Program (Liver Transplantation)**
  - 6 Liver Transplant Centers

# Average Monthly Income Russia, 2009



# Summary (1)

- Over the last 10 years a steep decline in the incidence of acute Hep B and C cases was observed. However the burden of chronic infection due to Hep B and C is still very significant. Rate of HBsAg in the general population is about 2 percent and Anti-HCV about 4 percent.
- An extensive range of obligatory screening programs for Hep B and C is in place, covering major risk groups; cost-effectiveness analysis is need to be performed;

# Summary (2)

- Hepatitis surveillance needs major improvement: introduction of nationally integrated electronic surveillance system in all regions; development of chronic viral hepatitis patients register on regional and federal levels;
- Cost of Screening programs is covered by Mandatory Health Insurance, while additional diagnostic evaluation (viral load etc.) is paid out of pocket.
- An access to treatment programs for chronic Hep B and C is very limited. Development of an effective treatment strategy and programs for CHB and CHC is urgently needed.