

**Impact of the VHPB meeting :
Prevention and Control of Viral
Hepatitis in Israel**

Jerusalem, Israel

March 14-15, 2014

Impact of the VHPB meeting

VIRAL HEPATITIS PREVENTION BOARD MEETING



PREVENTION AND CONTROL OF VIRAL HEPATITIS IN ISRAEL: LESSONS LEARNT AND THE WAY FORWARD

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Goals

- Present the epidemiology of viral hepatitis and chronic liver disease in Israel
- Share experience in prevention and treatment of viral hepatitis in Israel
- Identification of loopholes in surveillance of viral hepatitis and treatment
- Assessment of current public health policies regarding screening of risk groups

Participants

- Directors of various departments at the ministry of health (MOH) including:
 - Public health
 - Epidemiology
 - Health economists
 - Technology&infrastructure
- Health district officers
- Israel Center for Disease Control
- National Blood Bank service

- Israel Assoc. for the Study of the Liver
- Travel medicine
- Army Medical Core
- Patients association
- Nephrologists
- Soc.Pediatric Infectious Disease
- Hepatologists
- Gastroenterologists

Background

- Israel has a heterogeneous, relatively young population of 8.08 million, of whom about 80% are Jewish and 20% non-Jewish, mainly Arab (2012)
- The country has experienced massive waves of immigration including in the late 1940- 1950s migrants from North Africa, Arab countries, Romania and Poland, former USSR (1990) and from Ethiopia (1980s-2000)
- Immigrants from Africa have entered the country illegally as refugees or migrant workers

Health Economics & Demography I

- The health system rests on the principles of equity, with universal health care coverage
- The government regulates health care through policy setting and implementation as well as financial support
- Gross national income per capita - US\$**27,110**
- Health expenditure as % of **GDP - 7.63%**
Per capita health expenditure - **\$1319**
- Overall life expectancy at birth - **82 years**
 - 83.6 years for F and 79.9 years for M
- The median age of the population is 30 years
- Total fertility rate - 2.9/woman
- The number of physicians per capita - 3.3 per1000

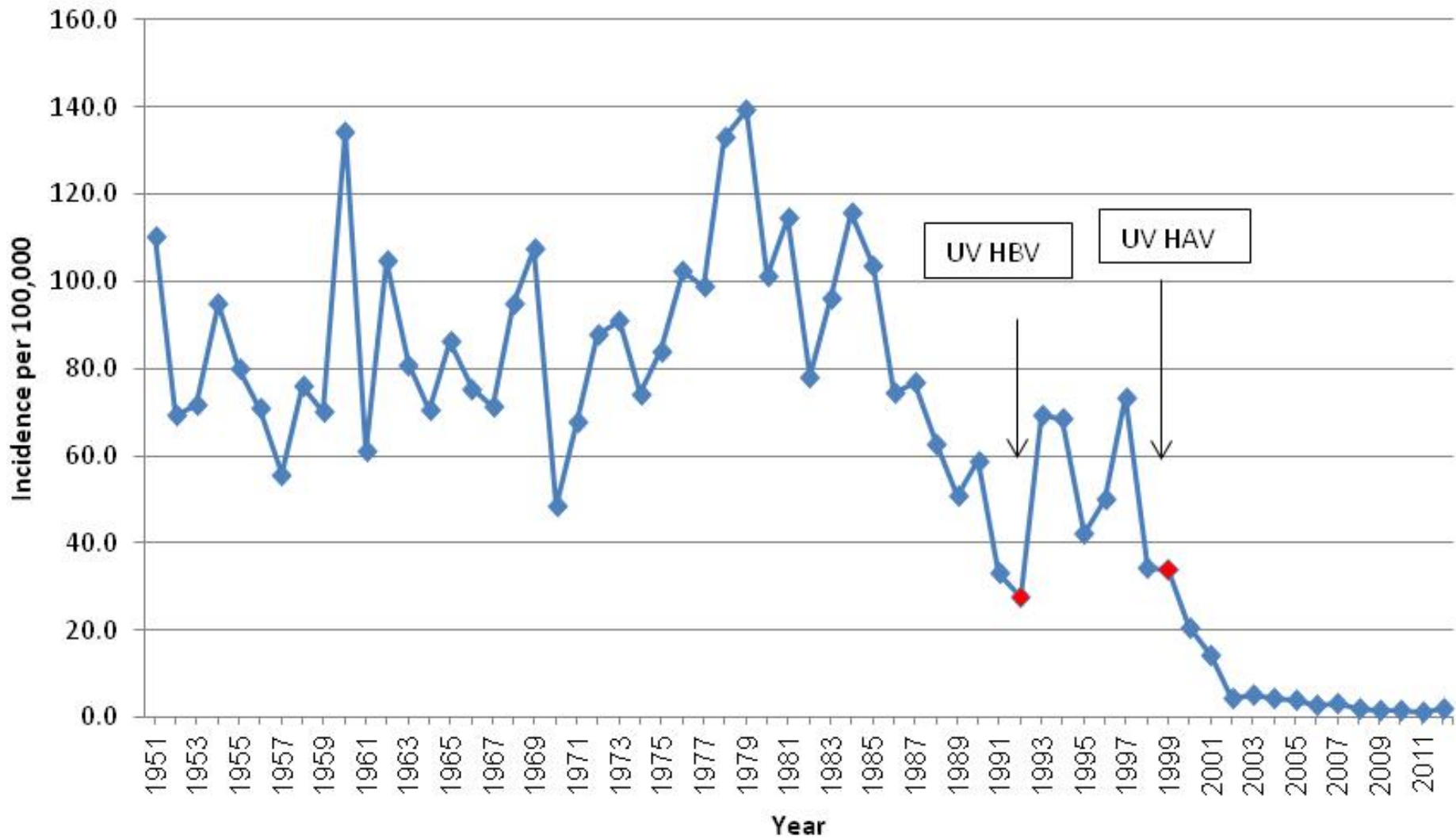
Health Economics & Demography II

- Health tax proportional to income
- Health insurance is mandatory
- Private insurance agencies supplement extra care
- Funding of pharmaceuticals & devices - reviewed annually
- MOH approval of new drugs must be honored by HMOs
- The MOH Advisory Committee on Infectious Diseases and Immunization sets policy for immunization:
 - Universal vaccination against HBV started in 1992
 - Universal vaccination against HAV started 1999
- Up to date anti-virals against HBV and HCV approved by so called “Health basket”
- Blood donors are not remunerated

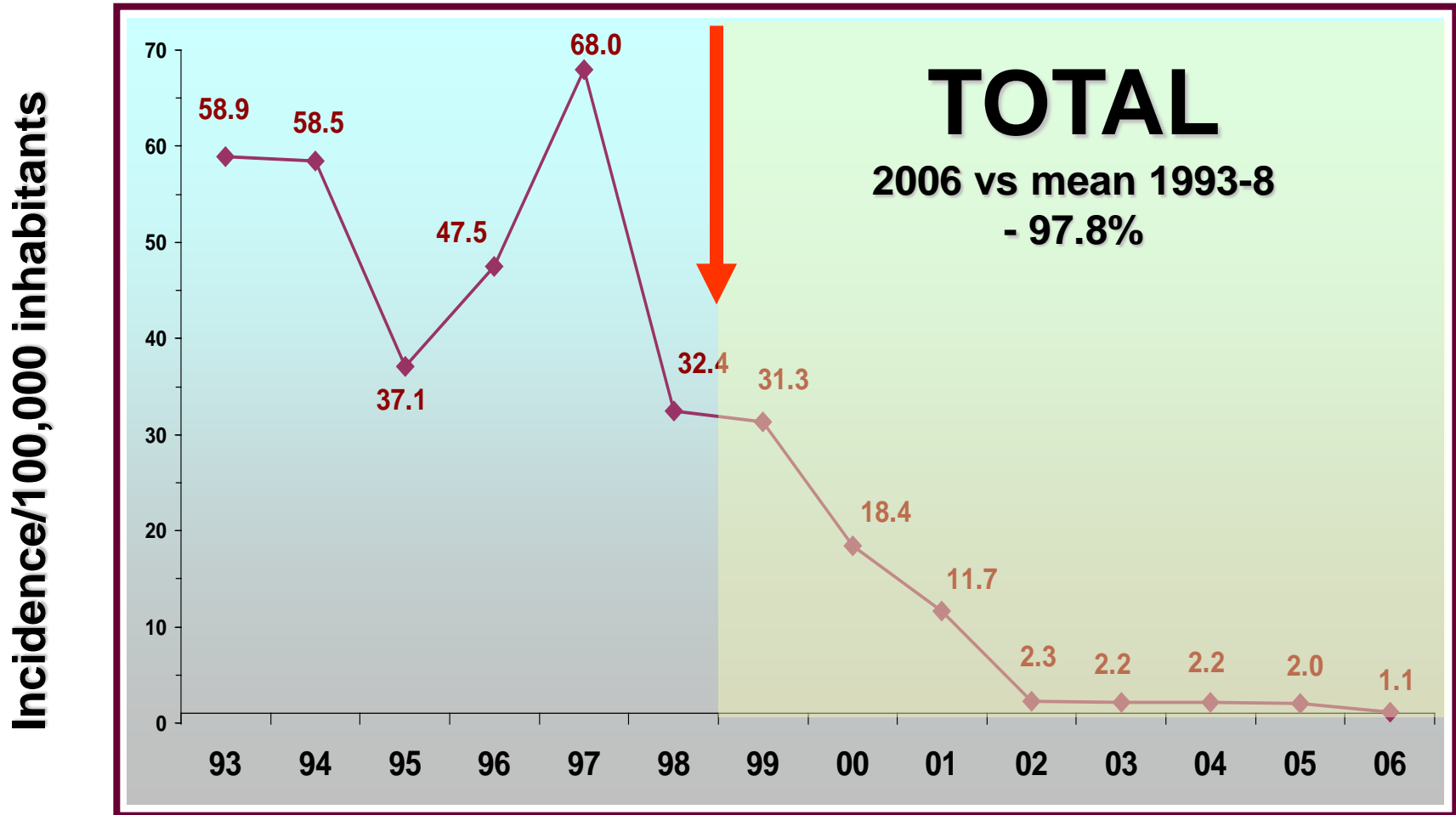
Activities Reviewed

- **Surveillance of viral hepatitis**
 - Acute hepatitis A,B,C,D,E
 - Chronic hepatitis B and C
 - HBV/HCV/HIV co-infection
 - Hepatocellular carcinoma
 - End-stage liver disease due to HBV and HCV
 - Health care workers
 - Special risk groups
 - Immigrants (i.e. former USSR, Ethiopia)
 - Household contacts of HBV carriers
 - MEM
 - IVDA
 - Renal failure and Dialysis
 - Travelers
 - Recipients of chemo/immunotherapy
 - Hemophiliacs, Thalassemia
- **Epidemiology of viral hepatitis**
- **Prevention of transmission of viral hepatitis via vaccination against HAV and HBV**
 - Vaccination rates
 - Follow-up of immune memory after vaccination
 - Anti-vaccine groups
- **Prevention of transmission of viral hepatitis via**
 - injecting drug use
 - in health-care settings treatment and care
 - In co-infection with HIV

Annual incidence of viral hepatitis, Israel 1951-2012

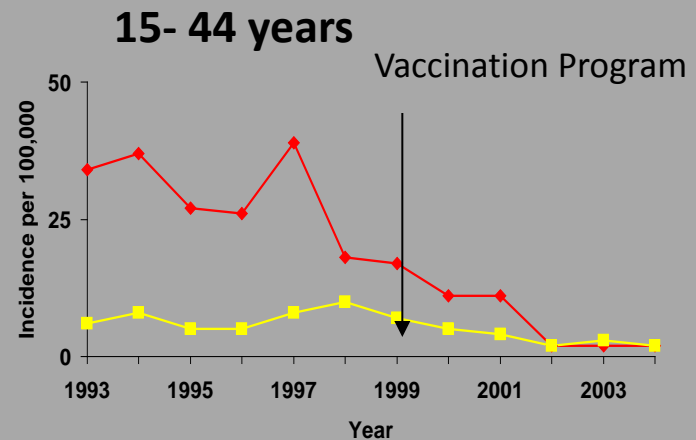
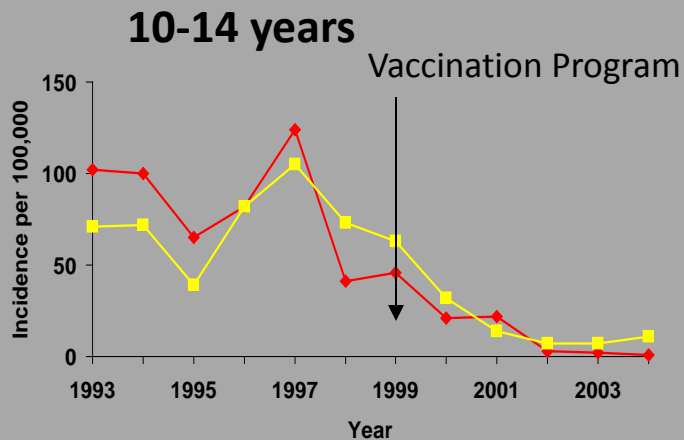
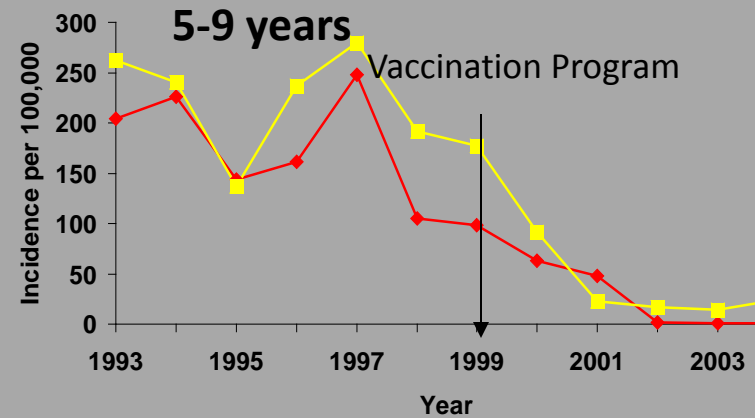
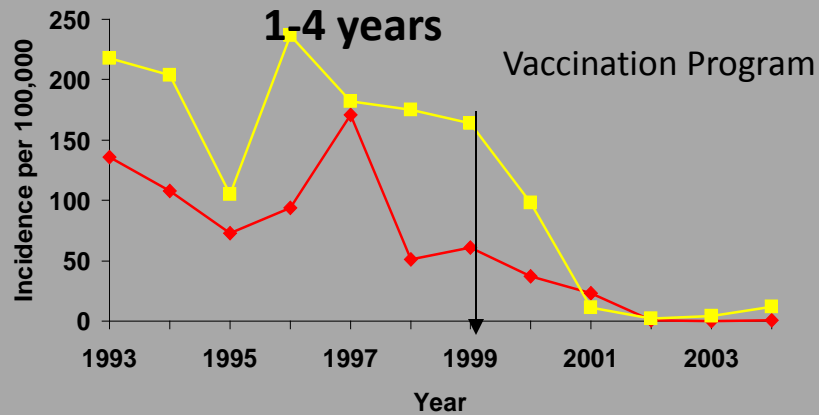


Total Reduction in Reported HAV Disease 1993-8 vs 2002-6



Vaccine coverage: ~ 90% receive 1 dose; > 80% receive 2 doses

Hepatitis A Incidence, by Age and Population Group, Israel, 1993-2004

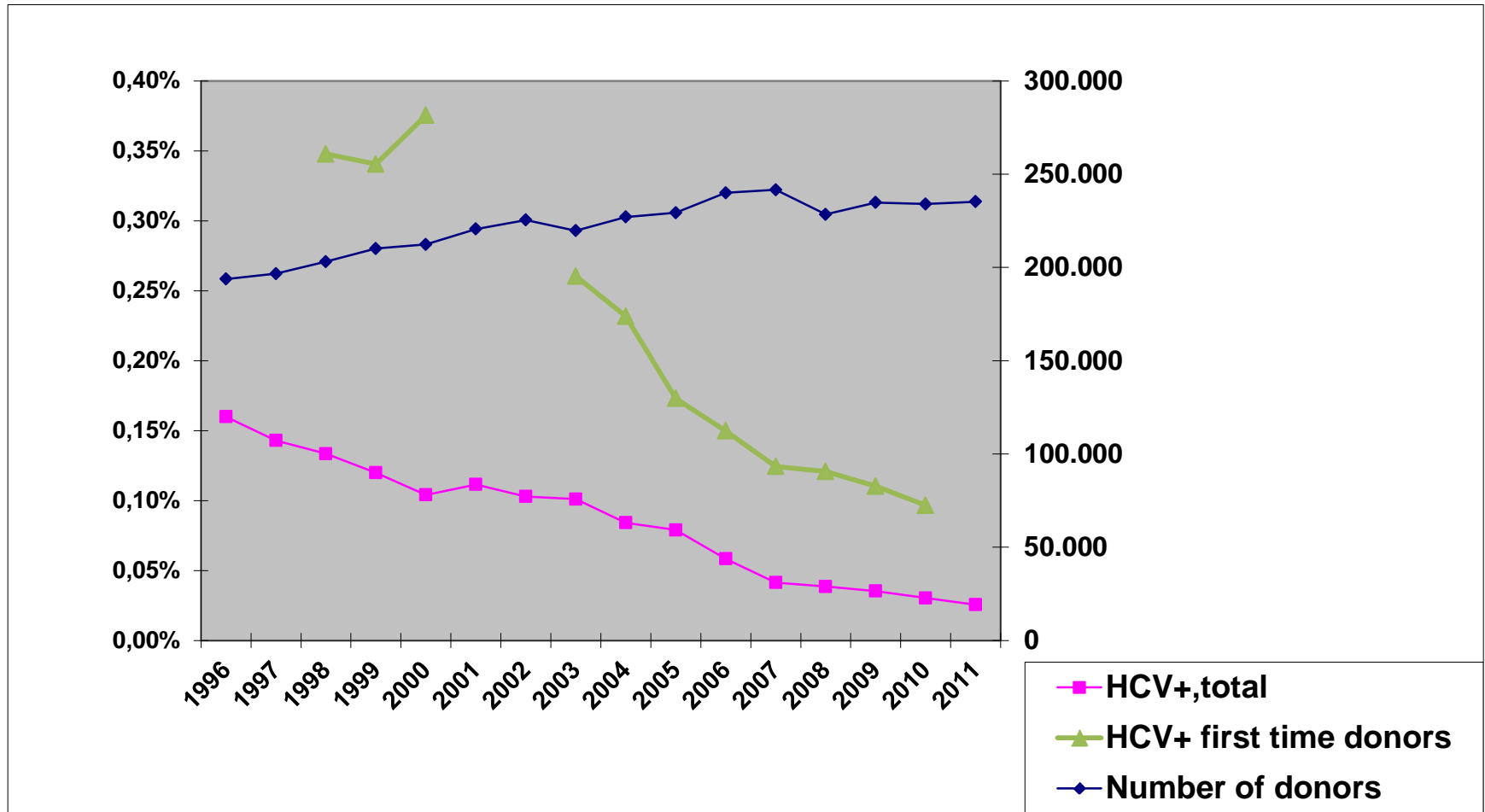


■ Jews
 ■ Non-Jews

Estimated HBV and HCV Burden in Israel

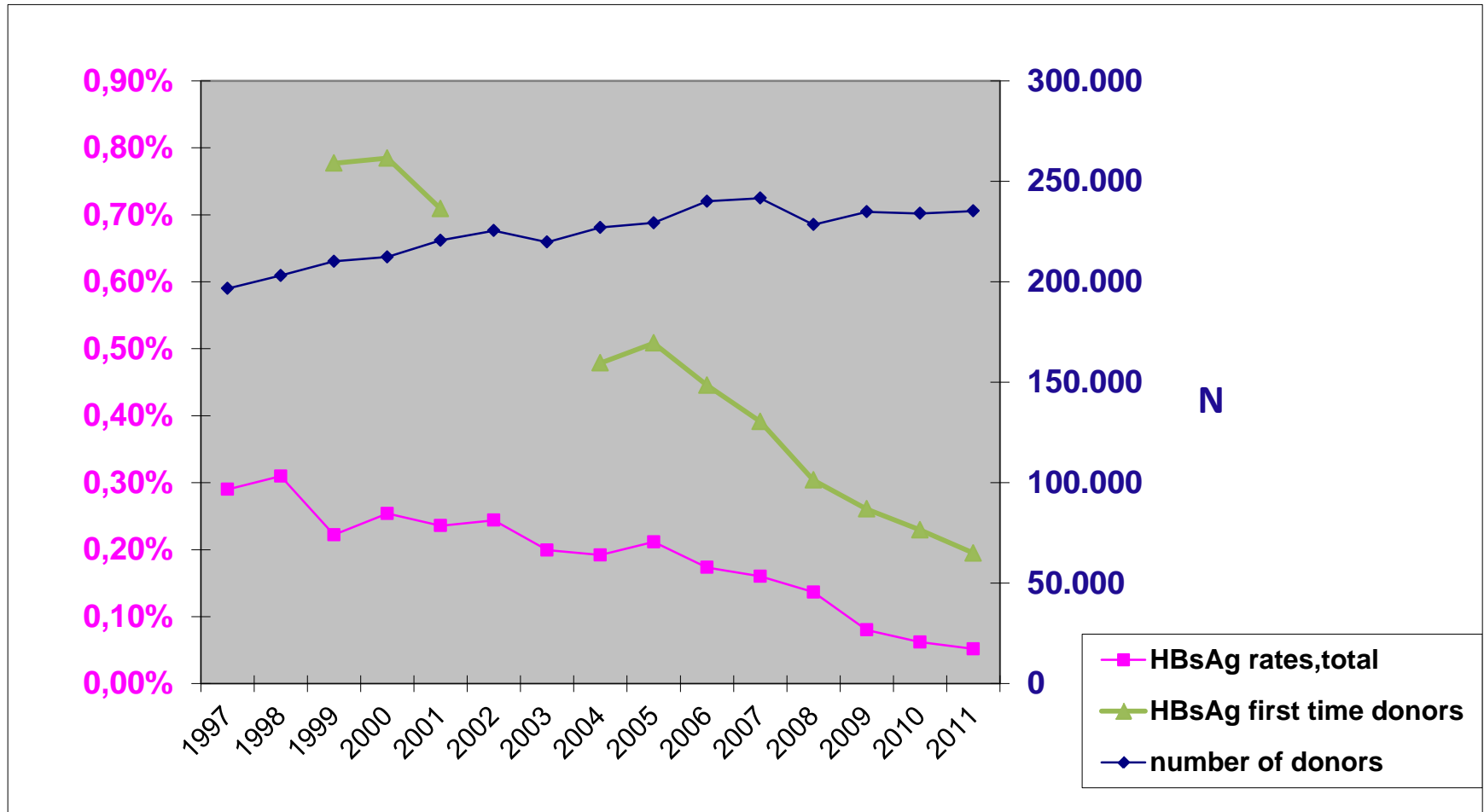
- HBsAg carriers ~ 80,00-100,000 carriers
- HCV ~ 60,000-100,000 carriers

Detection of HCV in Israeli blood donors (1st time and overall donors)



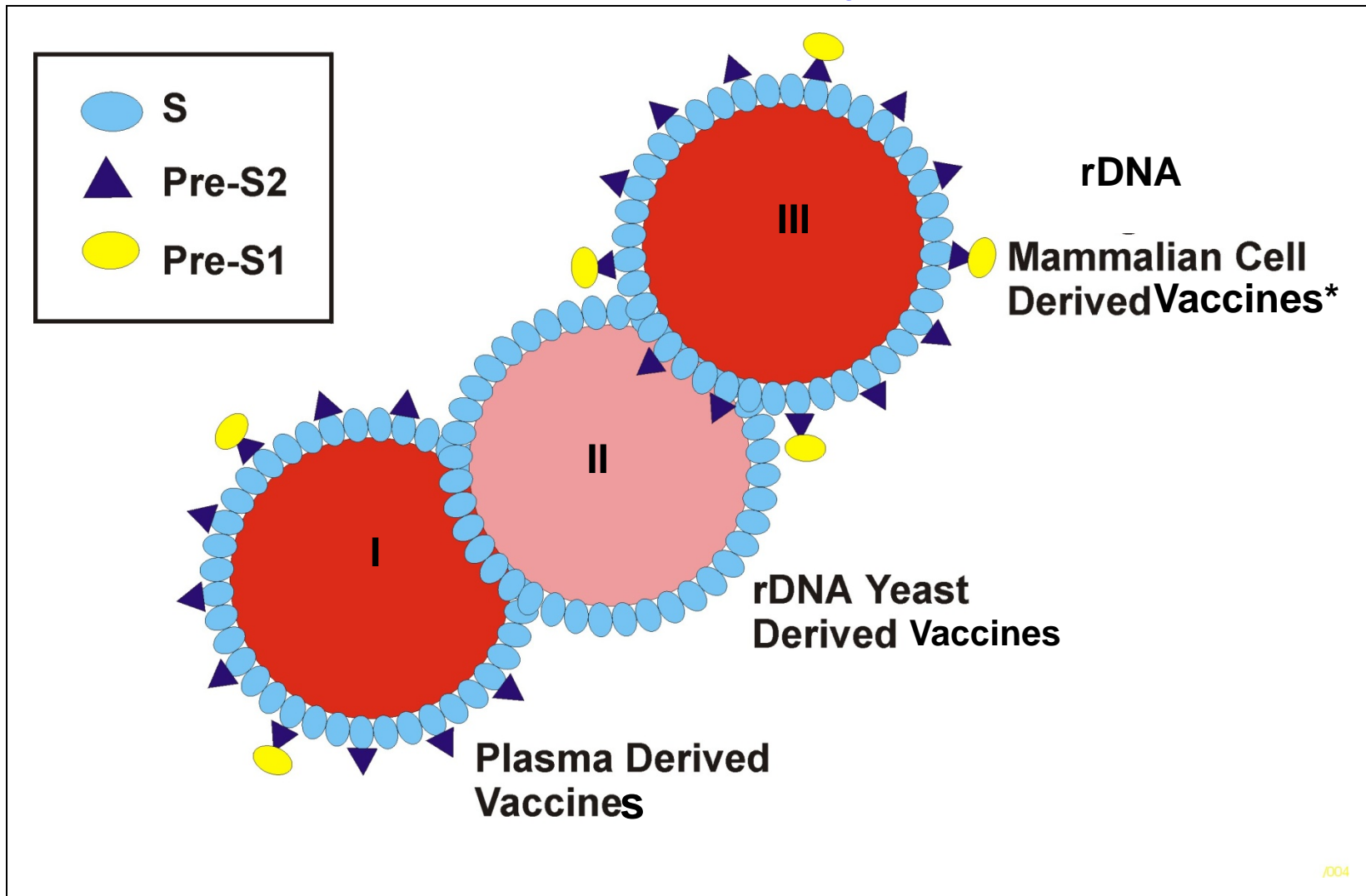
Source : MDA Israel Blood Banking Services, 2012-E.Shinar, V.Yahalom

Detection of HBV in Israeli blood donors (1st time and total donors)



Source : MDA Israel Blood Banking Services, 2012-E.Shinar, V.Yahalom

Three Generations of Hepatitis B Vaccines



*Pre S/S HBV vaccine trade names: Bio Hep B, Hepimmune, Sci B Vac

Comparative immunogenicity of a PreS/S hepatitis B vaccine in non- and low responders to conventional vaccine



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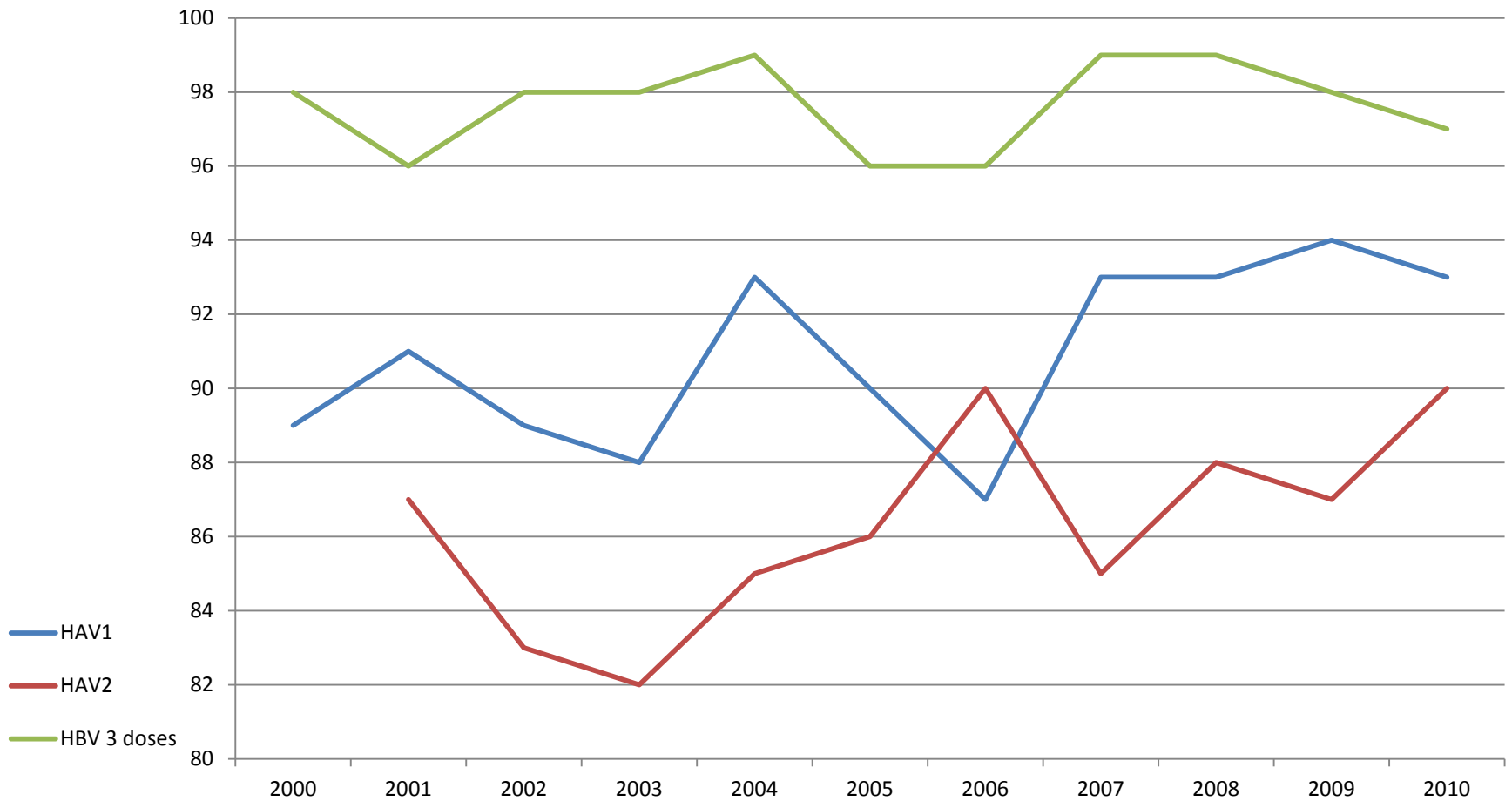
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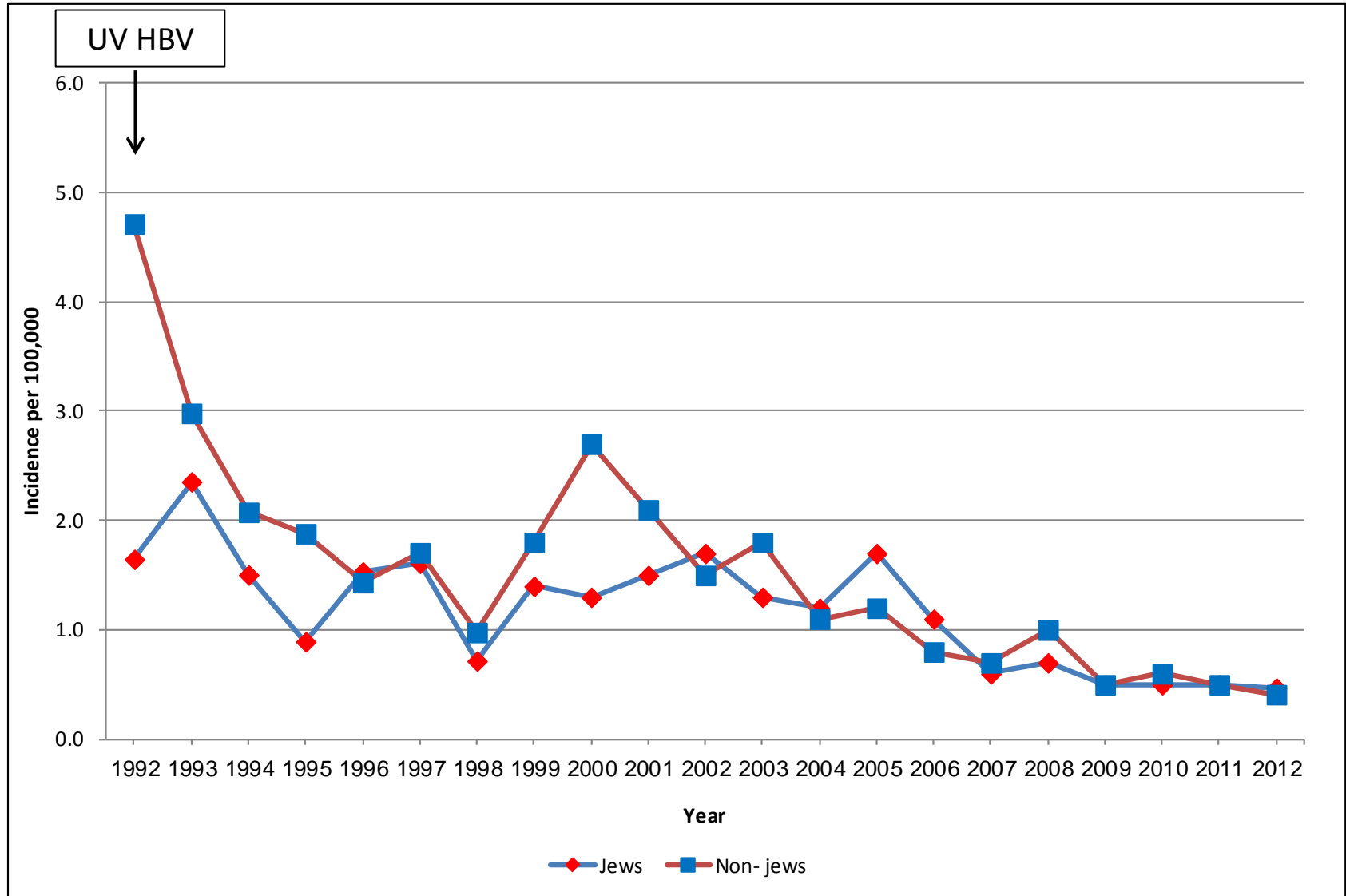
Comparative immunogenicity of a PreS/S hepatitis B vaccine in non- and low responders to conventional vaccine

Pamela Rendi-Wagner^{a,*}, Daniel Shouval^b, Blaise Genton^c, Yoav Lurie^d,
Hans Rümke^e, Greet Boland^f, Andreas Cerny^g, Markus Heim^h,
Doris Bachⁱ, Manfred Schroeder^j, Herwig Kollaritsch^a

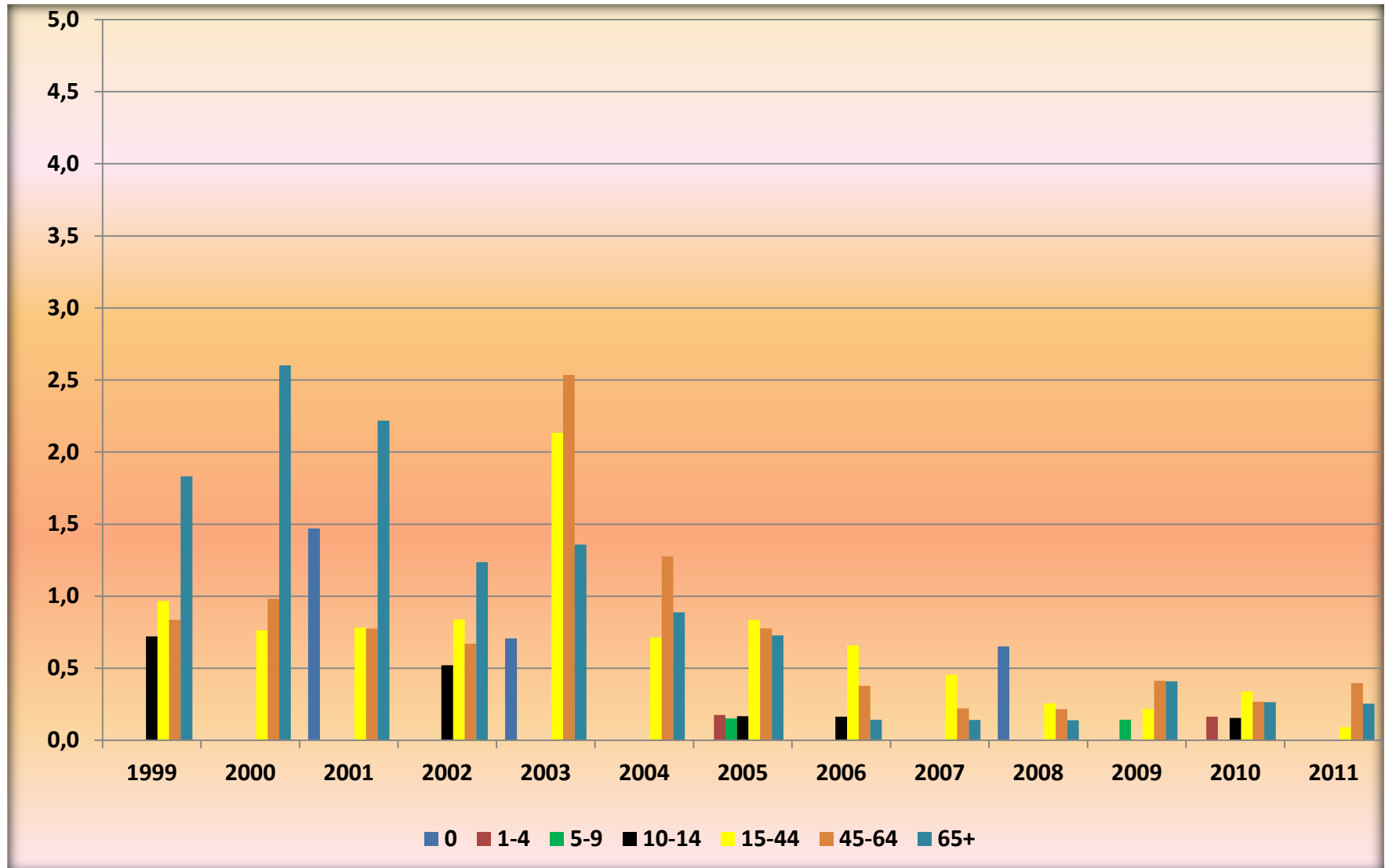
HAV & HBV National Vaccine Coverage, 2000-2010



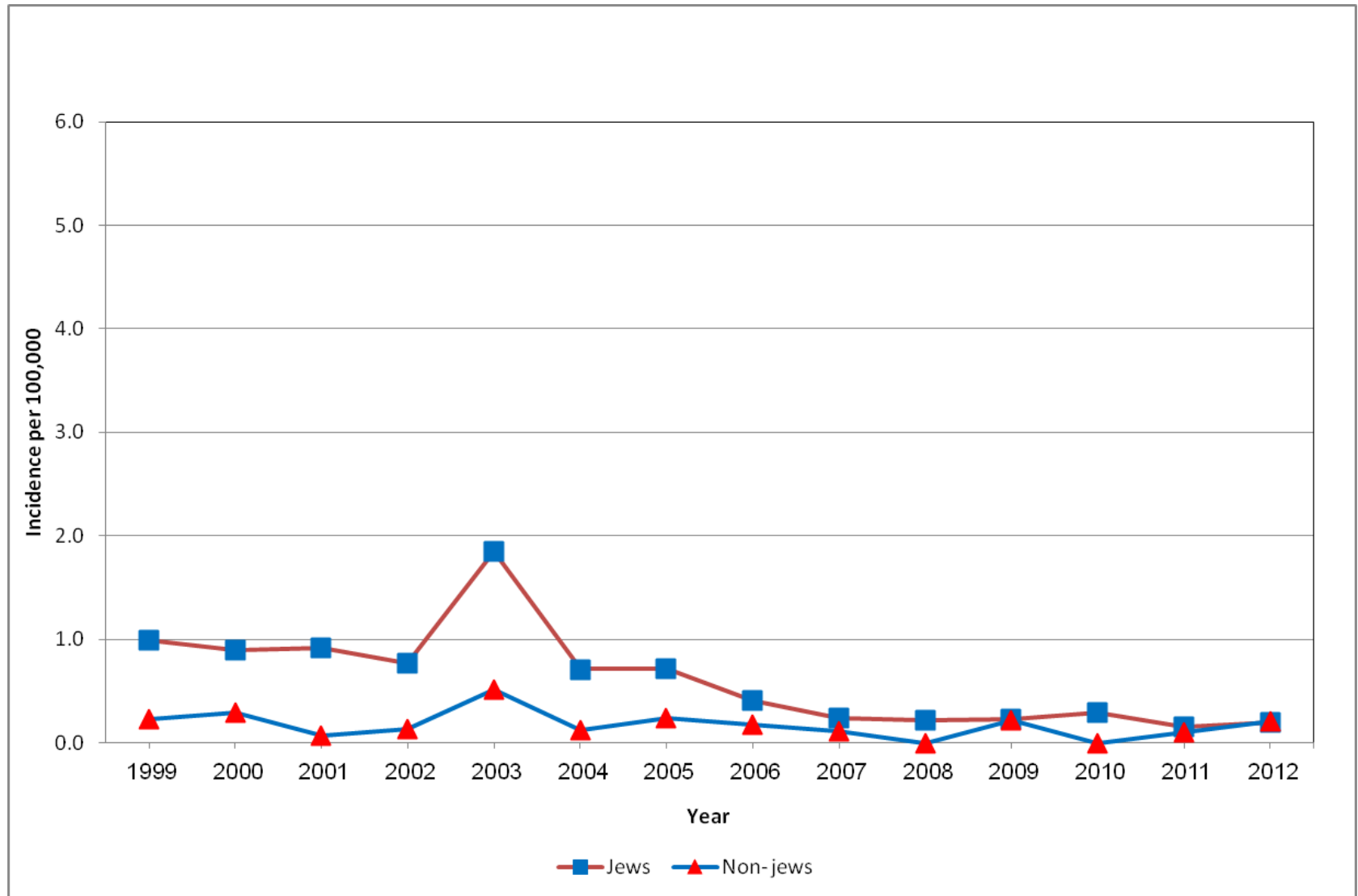
Incidence of acute HBV in Israel, 1992 – 2012, rate/100.000, by population groups



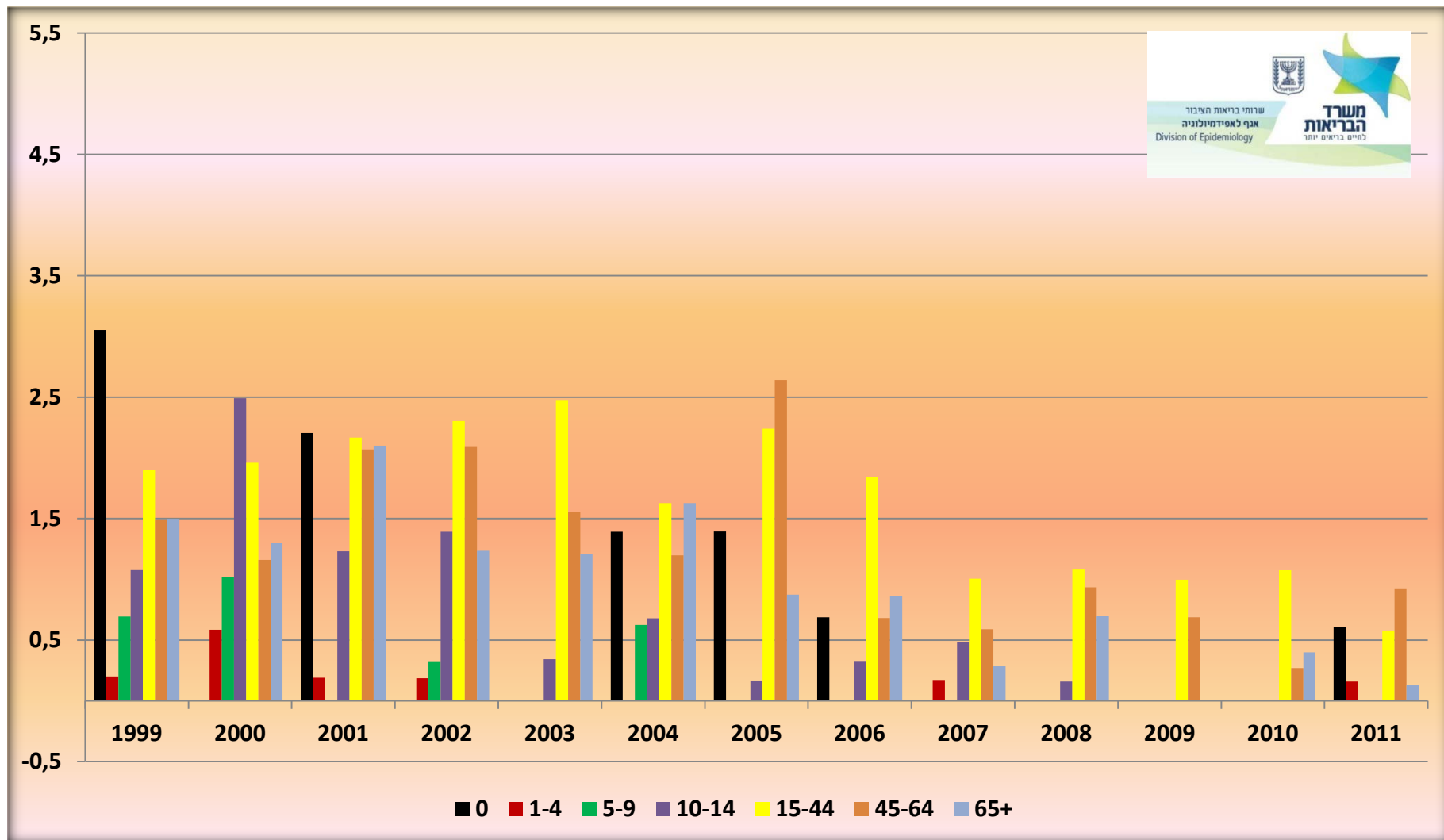
Incidence of acute HBV in Israel, 1999 – 2011, rate/100.000, by Age-groups



Incidence of acute HCV in Israel 1999 – 2012, rate/100.000, by population groups



Age adjusted incidence of acute HCV in Israel 1999 – 2011, by Age-groups



Summary VHPB Report – Israel

Achievements

- The dramatic control of hepatitis A through a programme of universal vaccination of toddlers against HAV provides a good example of how data can be used for sound policy-making.
- The great fall in incidence rates of hepatitis B provide further testimony to the value of universal childhood vaccination against hepatitis B.
- Other achievements include the high vaccination coverage rates, the creation of registries and databases, and improvements in electronic reporting.
- The development of a third generation hepatitis B vaccine holds promise
- The remarkable collaboration and teamwork demonstrated

Summary VHPB Report – Israel

Concerns

- National policy on screening for hepatitis B and hepatitis C in defined risk groups requires better implementation via designated U
- No overall national policy for screening of pregnant women for HBsAg. Re-evaluation was recommended
- Lack of monitoring of post vaccination immunity against hepatitis B
- Introduction of a national registry for surveillance of prevalence of chronic hepatitis B and C
- Serious shortage of organ donors
- Number of hepatologists and supporting services is not enough to cope with existing and expected rising burden of hepatitis C patients
- Improvement in:
 - forecasting disease burden for hepatitis B and hepatitis C
 - quality of surveillance
 - under-reporting
 - funding

Thank You



The Hadassah-Hebrew University Campus – Jerusalem, Israel