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

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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 (1908s-2000)

• Immigrants from Africa have entered the country illegally as refugees or migrant workers
• 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
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

Estimated HBV and HCV Burden in Israel

- HBsAg carriers ~ 80,000-100,000 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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HAV & HBV National Vaccine Coverage, 2000-2010

Division of Epidemiology, Ministry of Health, Israel
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

Division of Epidemiology, Ministry of Health, Israel
Incidence of acute HCV in Israel
1999 – 2012, rate/100,000, by population groups

Incidence per 100,000

Year

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

Division of Epidemiology, Ministry of Health, Israel
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 policymaking.

• 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