

**VHPB Meeting, Israel**  
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**Ministry of Health**  
**Israel**

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# Immunization policy in Israel

Immunization policy is mainly formulated by the Advisory Committee on Infectious Diseases and Immunization.

This is a multidisciplinary committee of 21 experts from the Ministry of Health, Health funds, Academia and Israel Defense Forces.

Members are nominated since the 70's by the Head of Public Health Services for 5 years terms.

## Two kinds of members in The Advisory Committee

- A. 13 core members chosen based on expertise:** These are specialists in public health, epidemiology, pediatric infectious diseases, virology and bacteriology.
- B. 8 ex-officio members:** Heads of relevant departments at MOH, specialists in public health, pediatrics, pharmacy and public health nursing.

# Advisory Committee on Infectious Diseases and immunization

The committee meets about 5 times a year, mainly by telephone conferences.

Simple matters are discussed regularly by e mail.

The recommendations of the Committee have to be approved by the Head of Public Health Services.  
Most of the recommendations are approved.

# **Advisory Committee on Infectious Diseases and Immunization**

Conflict of interests are dealt with using the ACIP principles

All the minutes of the discussions are published in the internet site of the Division of Epidemiology.

# The Committee on Travelers' Health

Hepatitis A and B prevention is also discussed at the Advisory Committee on Travelers' Health.

Four of its 6 members including the chair, are also members of the Advisory Committee on Infectious Diseases and Immunizations.

Advisers on hepatitis to these two committees are Prof. Daniel Shouval and Prof. Ran Tur-Caspa.

# Prevention of Hepatitis B

The main issue discussed in 1991 relating to the recommendation for routine HepB vaccination of infants (in addition to high risk groups vaccination that had been practiced before) was whether to recommend HepB screening of pregnant women.



# The committee voted against screening of HBsAg in pregnancy

This recommendation was based on:

1. **The low contribution of perinatal transmission** to the overall transmission of HBV in Israel. The main route of transmission was demonstrated to be horizontal between young siblings.
2. Published data on **the relatively low added value of HBIG** if the active vaccine is administered to newborns on time.



# The committee voted against screening of HBsAg in pregnancy



3. The **doubling of the cost of the program** if screening would have been added.

No cost-effectiveness data were available at that time.

This decision was repeatedly challenged especially since screening is part of the program in the US and other Western countries.

The committee recommended in 1994 to perform a study to evaluate perinatal transmission in the current program.

# Evaluation of the prevention of perinatal transmission

The study was done in 1995. It included 411 Israeli born infants 9-36 months of age, born to mothers from Ethiopian origin who were fully vaccinated according to age against HepB.

82% had protective antiHBs titers ( $>10\text{mIU/ml}$ )

**24 mothers were HBsAg(+), none of their children was positive for HBsAg.**

Calculations based on the above data suggested that in this group HBsAg screening during pregnancy is not cost-effective.



# Evaluation of the prevention of perinatal transmission

The results suggested that the Israeli vaccination program is effective even in high risk population, and additional measures are not cost-effective.

Zamir C et al. *Pediatric Infectious Disease Journal* 18:262-266, 1999.



# A catch up program



- In 1997 the committee discussed recommending a catch up program among 11-13 years old pupils.
- Half of the members voted for it. The other half recommended decision only after obtaining the results of a cross sectional study done by ICDC on HBsAg carriage rates and anti-HBs positive rates among pupils.

## A catch up program

Two years later, in 1999, the committee discussed the results:

Anti-HBs Ab's were found among 29% of 12-16 YO, 3% of them from natural infection: 10.9% among Arabs and 2.5% among Jews.

The authors recommended a catch up program. **Head of PHS did not approve this recommendation.**

# HBV PEP among terrorist attack victims

In 2001 the committee recommended HBV PEP by active immunization to every person who involved in a terrorist attack and was not vaccinated before.



# HepB prevention among HCW's



The policy was published on 2009 , based on the recommendations of “Shouval Committee”. It was not discussed at the Advisory Committee, but its members were requested to comment on the drafts of the guidelines.

1. Requirement of HepB vaccination documentation from all HCW's.
2. Post vaccination anti-HBs levels 4-8 weeks after completion of vaccination among 5 profession: physicians, nurses, dentists, dental hygienists and paramedics.

# HepB prevention among HCW's

3. Guidelines on HCW's performing high risk invasive procedures.
4. Guidelines on employment of HCW's who are HBsAg carriers.





# 3<sup>rd</sup> Vs 2<sup>nd</sup> generation vaccines

In 6 situations it was recommended to prefer 3<sup>rd</sup> (Pre-S/S) on 2<sup>nd</sup> (S) generation vaccines.

This was formulated by a meeting of subgroup of the committee and the Travelers' committee with Prof. Shouval.

1. Dialysis patients
2. IV drug users
3. HIV infected persons

## 3<sup>rd</sup> Vs 2<sup>nd</sup> generation vaccines

4. Sexual partners of HBsAg carriers.
5. Travelers to hyperendemic countries if less than 3 doses can be administered until departure.
6. Non responder HCW's after the first 3 dose 2<sup>nd</sup> generation vaccine series.

The same forum advised for purchasing the two kinds of vaccines for routine vaccination of infants.

# **HBV vaccine for diabetic patients <60 YO, 2012**

After release of the US ACIP recommendation on this issue in 2012, the Committee decided to delay its decision until more epidemiological data will be presented from Israel and abroad on the risk of HBV infection in diabetic patients, including cost-effectiveness evaluation of this policy.

# **HBV vaccine to diabetic patients less than 60 YO, 2012**

After the ACIP recommendation on this issue in 2012 the Committee decided to delay its decision till more epidemiological data will be presented from Israel and abroad on the relation between DM and HBV infection, including cost-effectiveness evaluation of this policy.

# **HAV prevention**

**Surprisingly, no official discussions were made on routine vaccination of children against HAV which started in 1999.**

Committee members were consulted by the Epidemiological Division and Head of Public Health Services. All of them approved the program on principle especially because of the status of Israel as a country of intermediate endemicity.

# Universal vaccination against HAV

**What would have happened if the  
Committee discussed this issue on  
1998?**

**Priorities: Catch up of MMR**

**Acellular pertussis instead of Whole cell vaccine**

**IPV instead of OPV**

# Evaluation of

## **universal HAV vaccination**

Since Israel was the first (and till 2005 the only) country to include HAV vaccine in its routine vaccination program the committee recommended in 1999 that it is vital to establish a longstanding evaluation program. Its funding should originate from both MOH and the manufacturer.

The committee recommended to nominate a working group for that purpose.

# Effectiveness of HAV vaccination program

- The evaluation program headed by Prof. Ron Dagan confirmed demonstrated the effectiveness and safety of this schedule. The effectiveness was much higher than expected.
- It also demonstrated **significant herd immunity and no need of a catch up program.**

Dagan et al, JAMA. 2005 ;13;294(2):202-10.



# The age for the 1<sup>st</sup> dose of HAV vaccine

- The vaccine was originally registered in Israel from the age of 12 months onwards.
- At that age two injections were already given (MMR and DTaP-Hib-IPV). It was decided that if a third injection on the same visit could be avoided, this option should be preferred.
- According to serological data from Israel on maternal antibody decay and age specific incidence rates of Acute Hepatitis A, delaying the first HAV dose by six months to the age of 18 months was considered reasonable.

# The age for the 1<sup>st</sup> dose of HAV vaccine

The committee discussed in December 1998 the reservations raised by Prof. Daniel Shouval concerning the administration of the 1<sup>st</sup> dose of HAV vaccine at age 18months.

He suggested raising the age to 2 years.

# The age for the 1st dose of HAV vaccine

The committee voted against this. Its decision was based on data from Israel on the prevalence rate of maternal Ab according to age of the infant and on data concerning age at infection in Israel (Prof. Dagan).

The committee expected that administering the 1<sup>st</sup> dose at 18 months of age will not reduce effectiveness.

# Reassuring the safety of a clinical trial of Epaxal, 2004

The committee reassured MOH that a delay of one month in administering MMR to participants of the phase III clinical trial of Epaxal among 100 one year old children does not threaten their health.

# HAV PEP

In 2007 the Committee recommended to change HAV PEP from IG to active immunization in most cases.

# Summary

Generally the Committee was heavily engaged and influential in formulating guidelines for HBV and HAV **vaccination policy**. It did not deal with most of the **other ways of prevention and treatment** of these infections.

Updating certain aspects of the HBV vaccination program was done by the Epidemiology Division by consulting only specific members of the committee.

In the very unique moment of including HAV vaccine in the routine program the committee was not involved. Why and are there implications?