

# Need for Chronic Viral Hepatitis Monitoring System

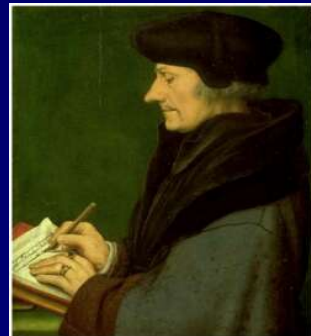
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**Erasmus MC**  
University Medical Center Rotterdam



Rotterdam  
November 2008



# **National Strategy on HBV and HCV**

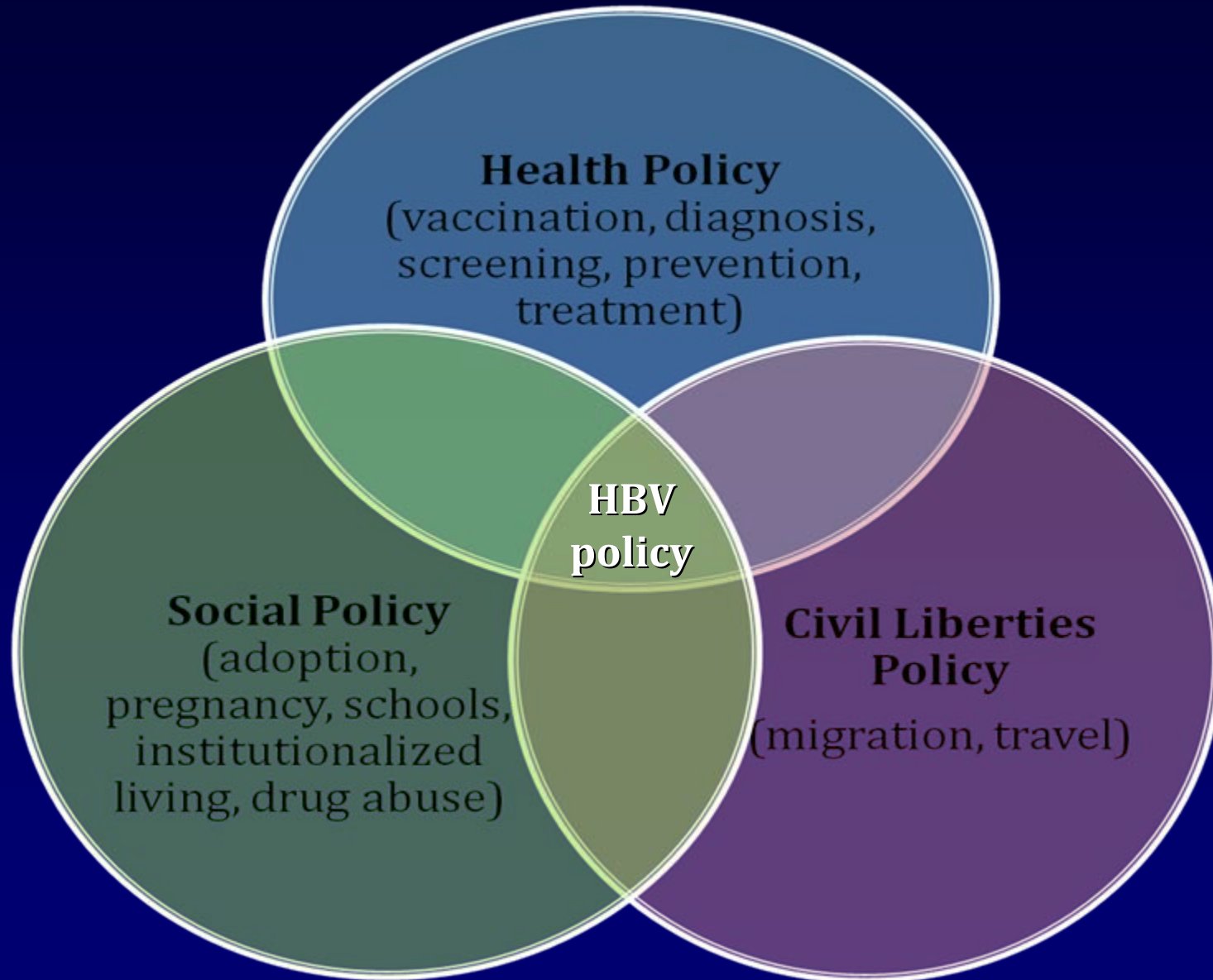
## **Main targets:**

- **Monitoring**
- **Prevention**
- **Early Diagnosis**
- **Access to Care**

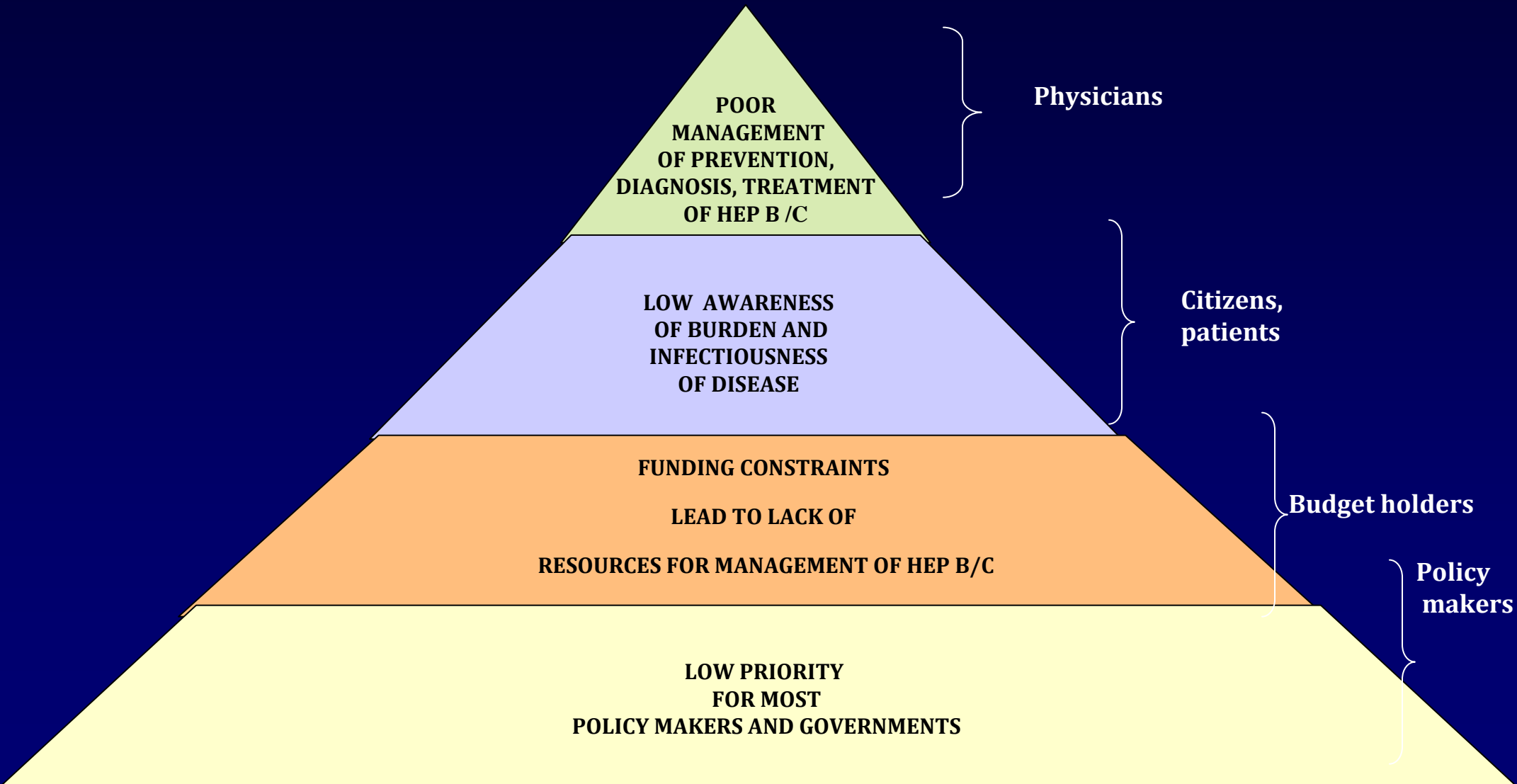
## **Should involve:**

- **National Leadership**
- **Public Health Networks**
- **Advocacy Groups**
- **Prioritized HBV, HCV Research**

# HBV/HCV Involves Several Policy Areas



# Why is management of Viral Hepatitis Suboptimal?



# **Why do we need viral hepatitis monitoring in The Netherlands?**

- **To assess the magnitude of the problem of viral hepatitis**
  - **To clarify mortality statistics**
  - **To assess the effect of immigration and travel**
- **To monitor the effect of treatment. Because there is effective treatment nowadays.**

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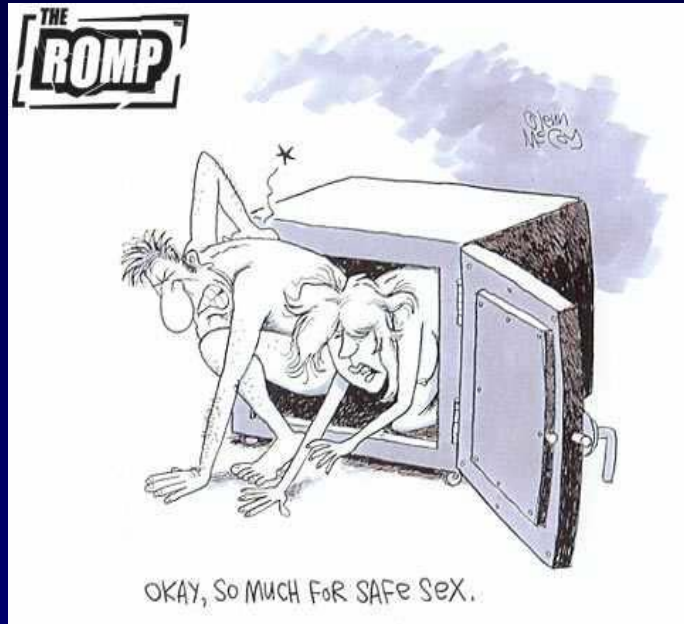
# Transmission

Mother to Child



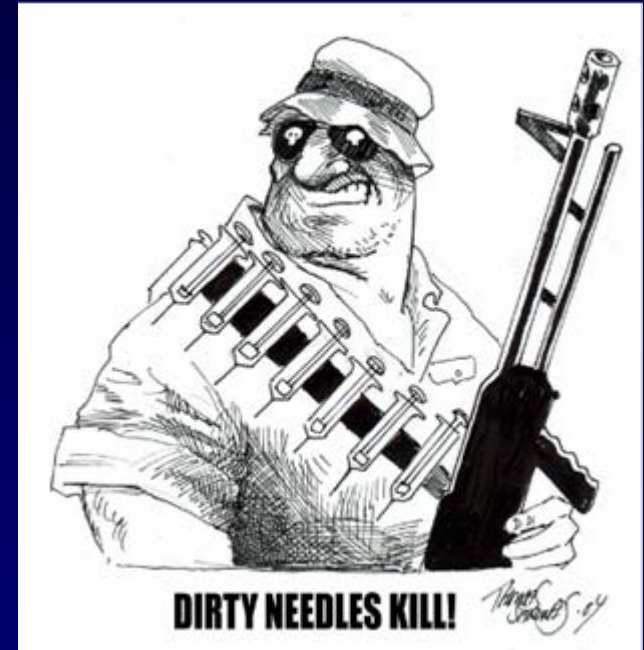
**HBV**

Sexual Contact



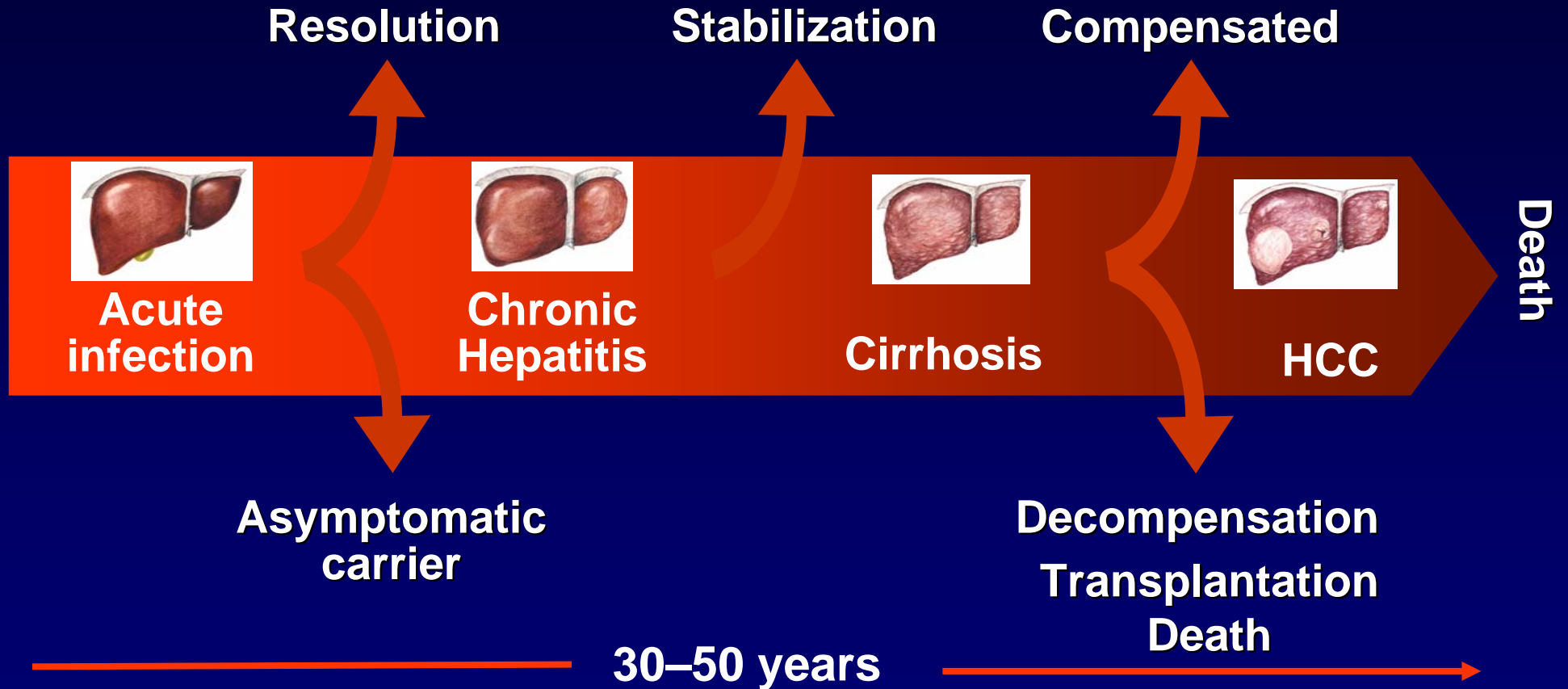
**HBV  
(HCV)**

Blood



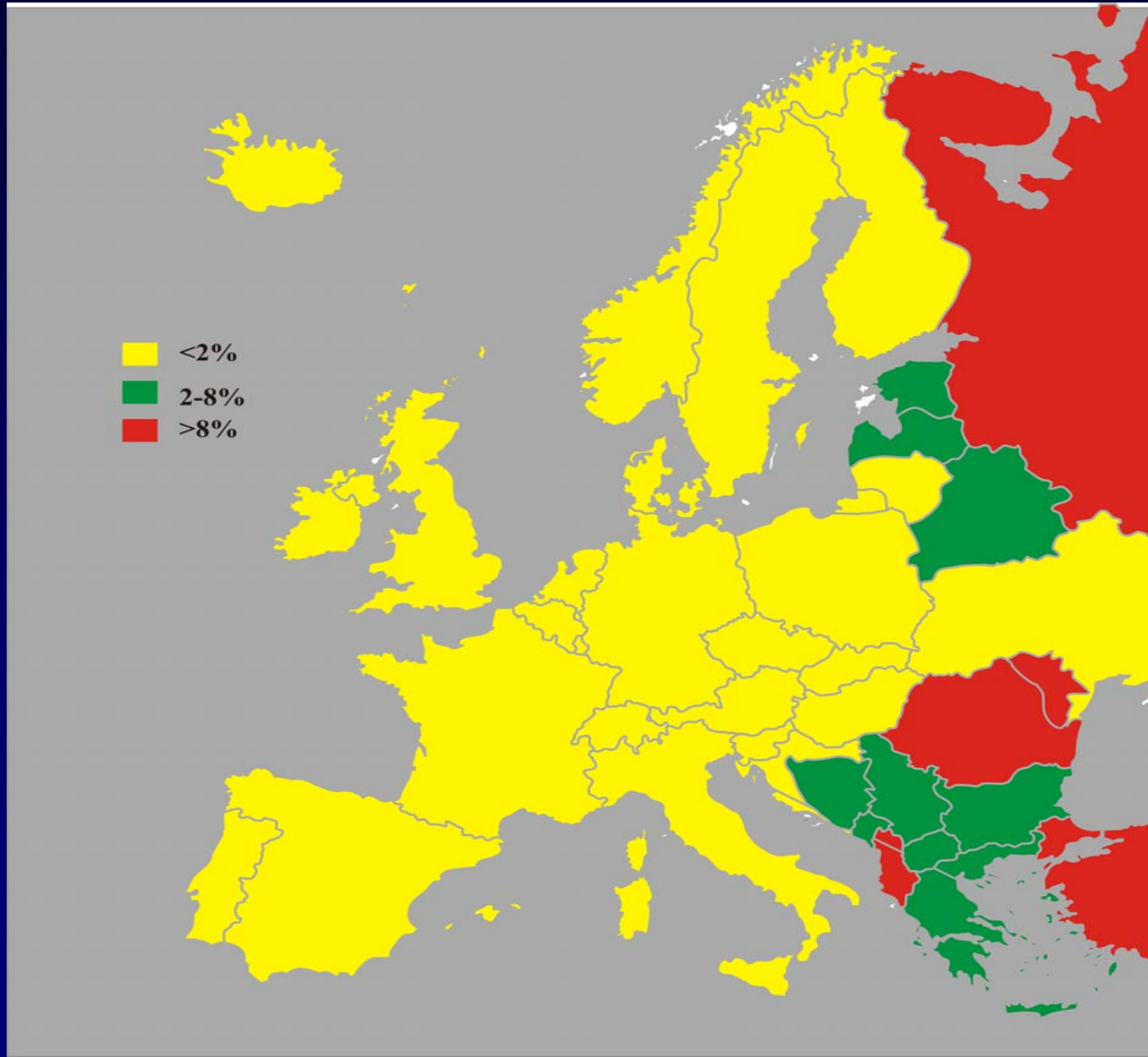
**HBV  
HCV**

# HBV/HCV Disease Continuum





# HBsAg prevalence in Europe

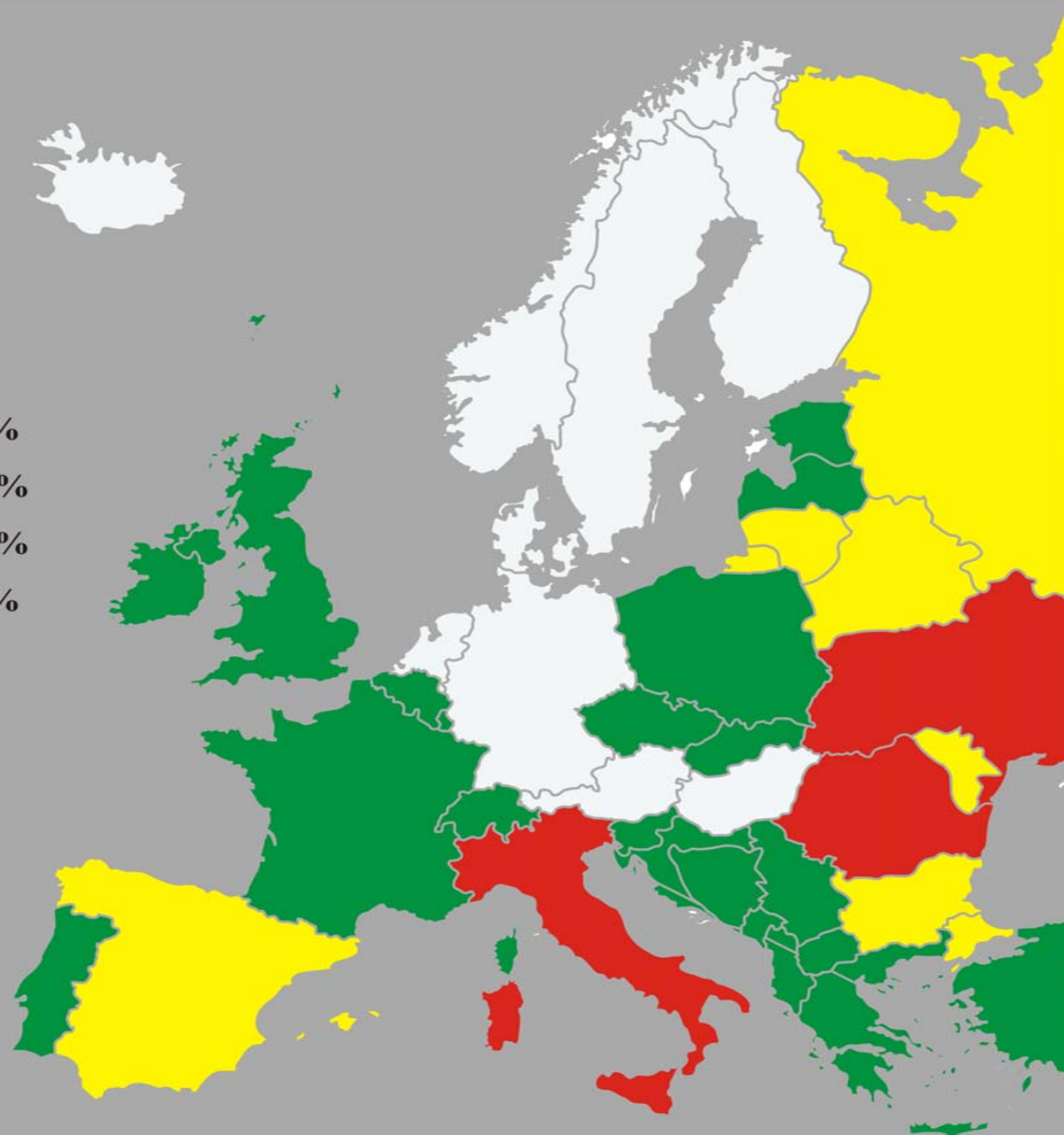
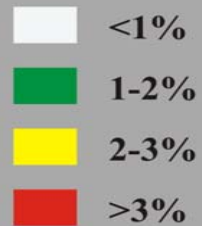


Chronic HBV:  
14 millions  
36,000 deaths/yr

# Epidemiology of hepatitis B in EU

- 7000 to 8000 newly diagnosed cases per year in EU
- Most affected age group: 25-44 year, followed by 15-24 year
- Men 1.8 times more affected than women
- Clustered to sub-populations
  - Injecting drug users
  - Sex workers
  - Men who have sex with men
  - HIV patients
  - Prisoners
  - Immigrants from high endemic regions
- HBsAg prevalence varies widely in Europe

# Anti-HCV prevalence in Europe



Chronic HCV:  
9 million  
86,000 deaths/yr

# Epidemiology of hepatitis C in EU

- 27,000 to 29,000 newly diagnosed cases per year in EU
- Most affected age group: 25-44 year, followed by 15-24 yr
- Men 1.9 times more affected than women
- Clustered to sub-populations – no sexual transmission
  - Injected drug users
  - HIV patients
  - Prisoners
  - Immigrants from high endemic regions
- HCV prevalence: high variability across MS
  - Low:  $\leq 0.5\%$  in Scandinavian countries, Austria, The Netherlands
  - High:  $\geq 3\%$  in Bulgaria, Greece, Italy, Romania

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## OVERLEDEN

Stuurman **Chun Wei Cheung** (34) van de Nederlandse mannenacht (roeien) overleed zaterdag op 14 oktober aan leverkanker. Zijn grootste succes was een zilveren medaille op de Olympische Spelen van 2004 in Athene. Met het Amsterdamse Nereus won Cheung twee keer de Varsity. Twee maanden geleden eindigde de nationale mannenacht als dertiende op het WK.



**Stuurman Cheung werd 34 jaar**

# Worldwide Mortality

WHO Regio	Hepatitis B & C	
	Original	Recalculation
<b>Africa</b>	29,078	<b>90,822</b>
<b>America</b>	12,941	<b>74,091</b>
<b>East Mediterrane</b>	14,289	<b>76,584</b>
<b>Europa</b>	9,068	<b>145,184</b>
<b>ZO Azie</b>	50,382	<b>579,755</b>
<b>West Pacific</b>	40,321	<b>314,360</b>
<b>World</b>	<b>156,079</b>	<b>1,380,796</b>

HIV/AIDS	TBC	Malaria
2,203,203	303,087	1,087,758
102,751	43,989	1,470
50,548	131,014	56,967
42,923	74,504	142
373,795	690,527	64,462
46,007	360,693	10,531
<b>2,819,227</b>	<b>1,603,814</b>	<b>1,221,330</b>

**Number of Death due to HCC and Cirrhosis caused by viral hepatitis.**

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# De prevalence of Hepatitis B

China



8 - 10%



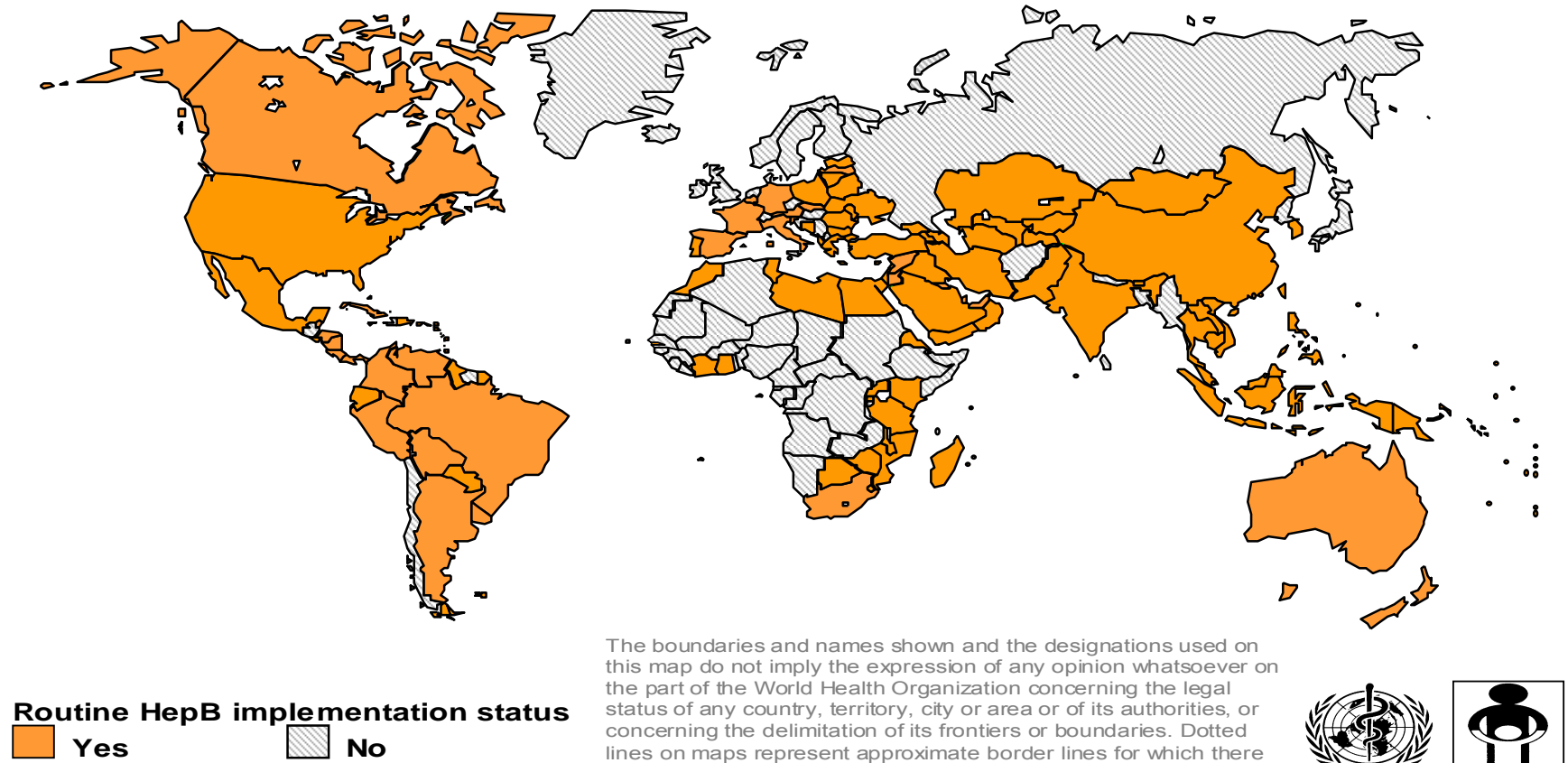
Nederland



0.1 - 0.2%

# Universal Hepatitis B Vaccination program

Fig 1. Global status of countries using HepB vaccine in their national immunization system, May 2002



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.



June 2002

# Migrant population and migration rates in Europe

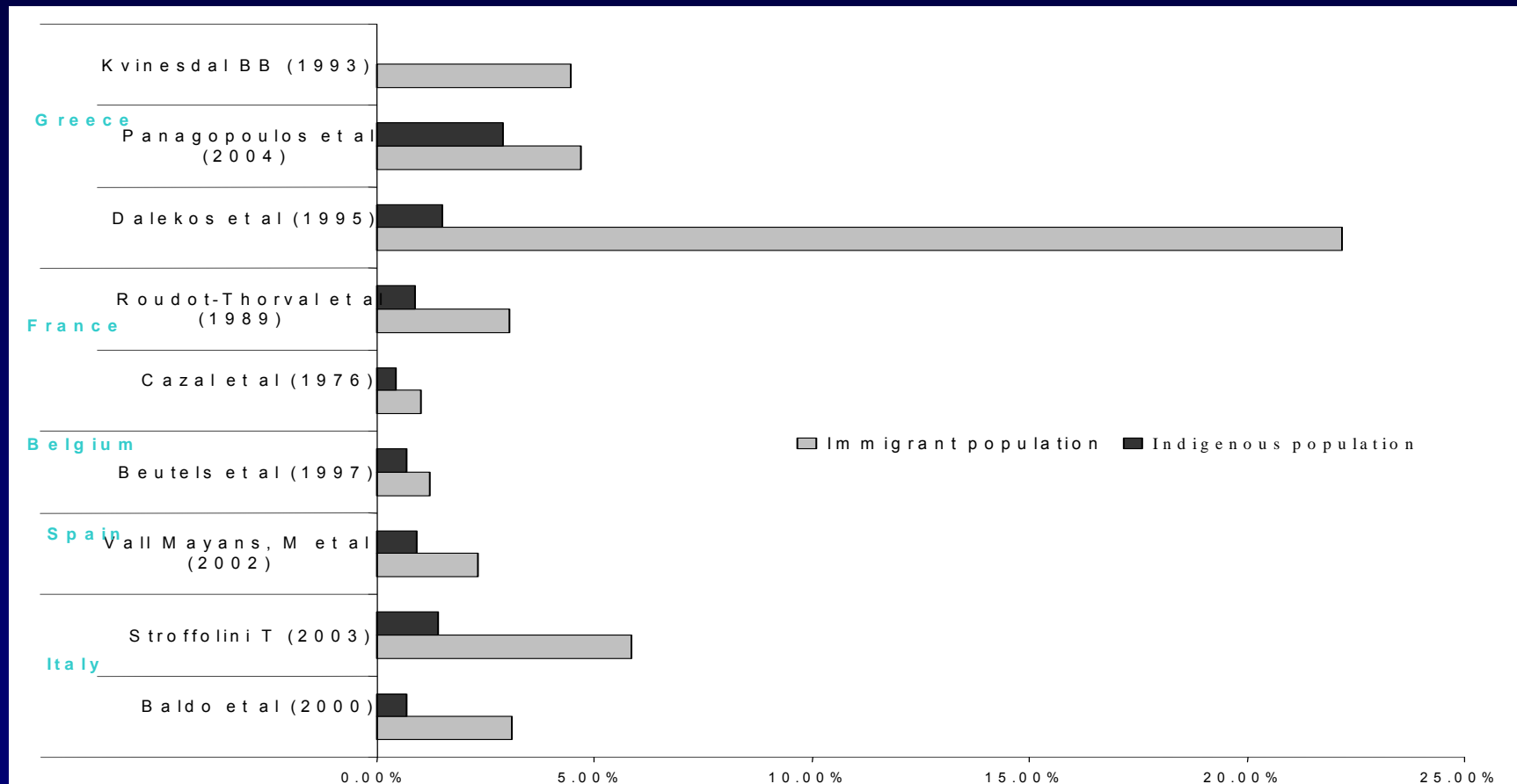
Migrant population and net migration rates in European countries

Country	Total population (millions)	Migrants (N)	Migrants (%)	Net migration rate (per 1000 population)
Germany	82.5	8,000,000	9.7	NK
France	64	4,800,000	7.5	NK
United Kingdom	60.6	4,600,000	7.6	NK
Italy	58.9	2,700,000	4.6	9.7
Spain	44.7	4,800,000	10.7	15
The Netherlands	16.5	1,714,000	10.4	NK
Greece	11.3	1,150,000	10.2	NK
Belgium	10.4	985,000	9.5	1.22
Portugal	10.7	560,000	5.2	3.4
Sweden	9.2	1,100,000	11.9	1.7
Denmark	5.5	350,000	6.4	6.1
Austria	8.3	1,000,000	12	NK
Poland	38.1	–	–	–0.69
Romania	22.3	–	–	–0.16
Bulgaria	7.3	–	–	–4.3

Estimates 2006 (data available at: <<http://epp.eurostat.ec.europa.eu/portal>>).

# Impact of Migration

Low national prevalence can mask the areas of high endemicity within the country

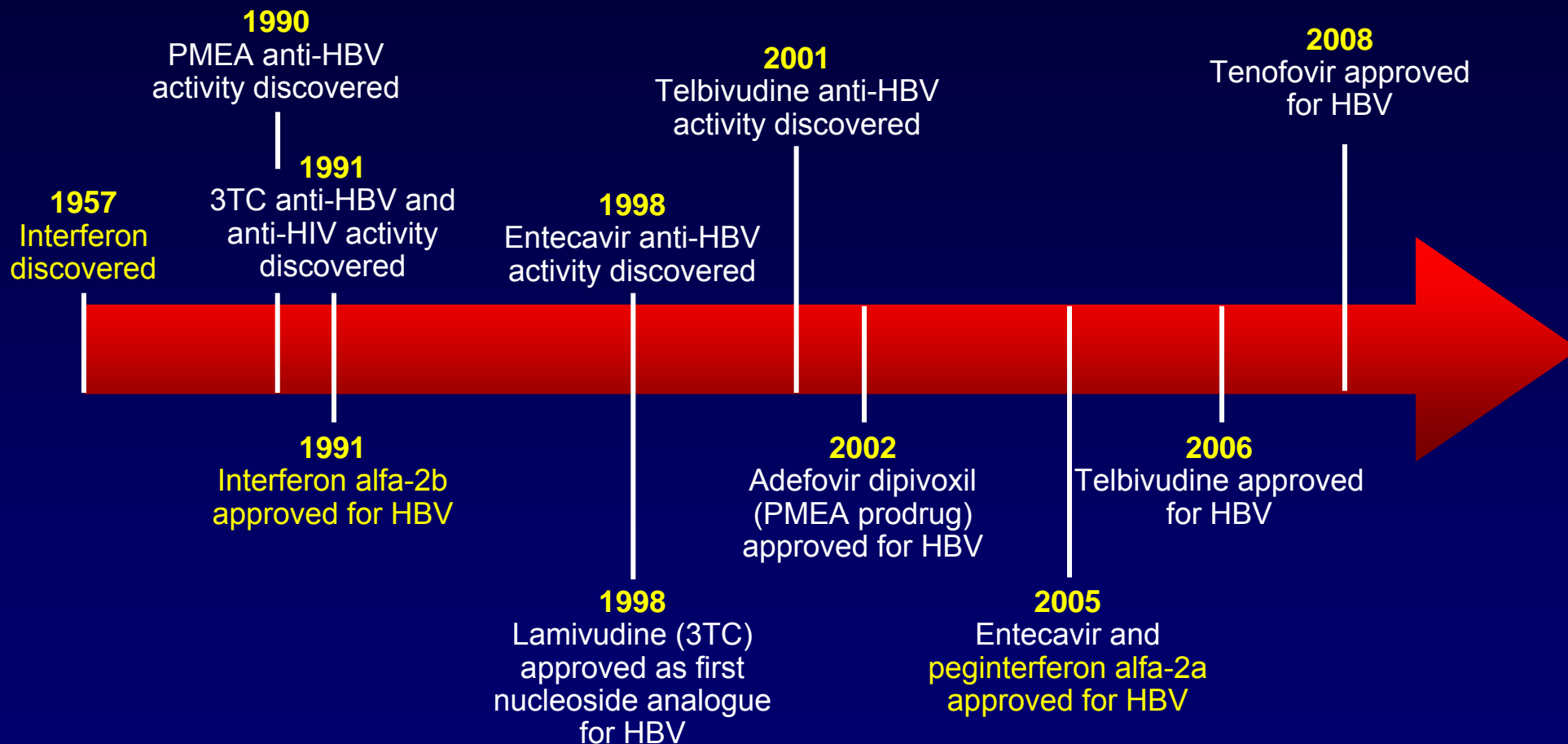


Prevalence of HBsAg in host vs. immigrant populations

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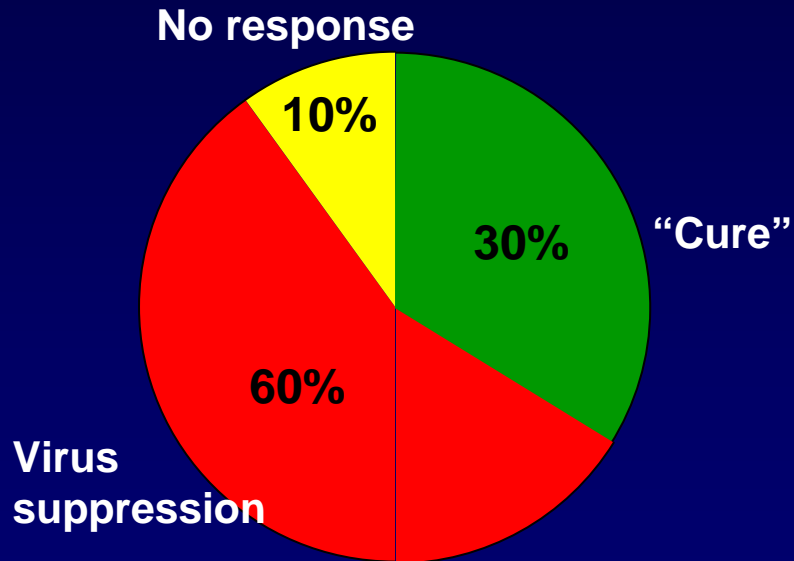
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# Advances in HBV Treatment



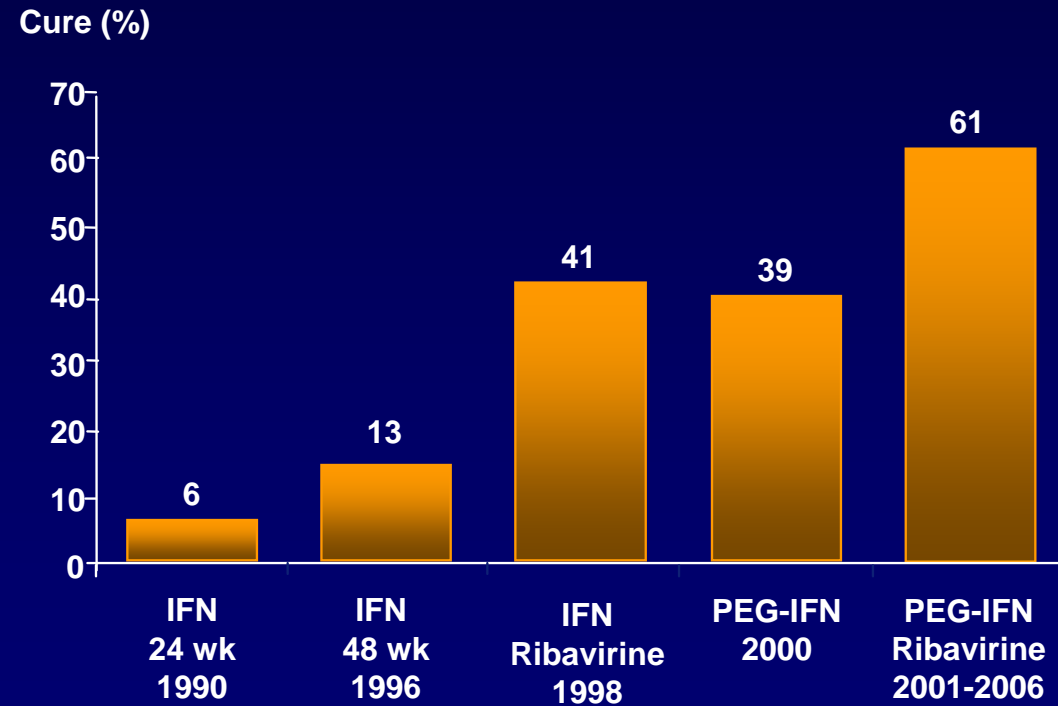
# Results of Antiviral Therapy

## Chronic Hepatitis B



Anno 2008

## Chronic Hepatitis C



# **Viral hepatitis monitoring in The Netherlands**

**What should be done?**



# Hepatitis Monitoring

## Mission statement

To strengthen surveillance in order to reinforce detection, prevention and control of HBV and HCV in The Netherlands.

- Financial support for a national monitoring system for chronic HBV/HCV, as well as for treatment monitoring
- Monitoring/ data acquisition overlapping with HIV but in part separate organisational structure
- Disseminate the results to stakeholders for timely public health actions at national and EU level