



## Mihály Makara Dr.

**Country:** Hungary

**Affiliation:** Outpatient Clinic, Saint Laszlo Hospital,  
Central Hospital of Southern Pest National Institute of  
Hematology and Infectious Diseases

**Function:** Hepatologist

**Main expertise:** He has great experience in the field of infectious diseases and hepatology especially in viral hepatitis. His latest area of research is the study of adverse childhood experiences in the background of addictions and health impairment.

**HBV/HDV screening practices  
Country example – Hungary**

**Mihály Makara MD.**

**DPC, Szent László Hospital,  
National Institute of Hematology  
and Infectology, Hungary**

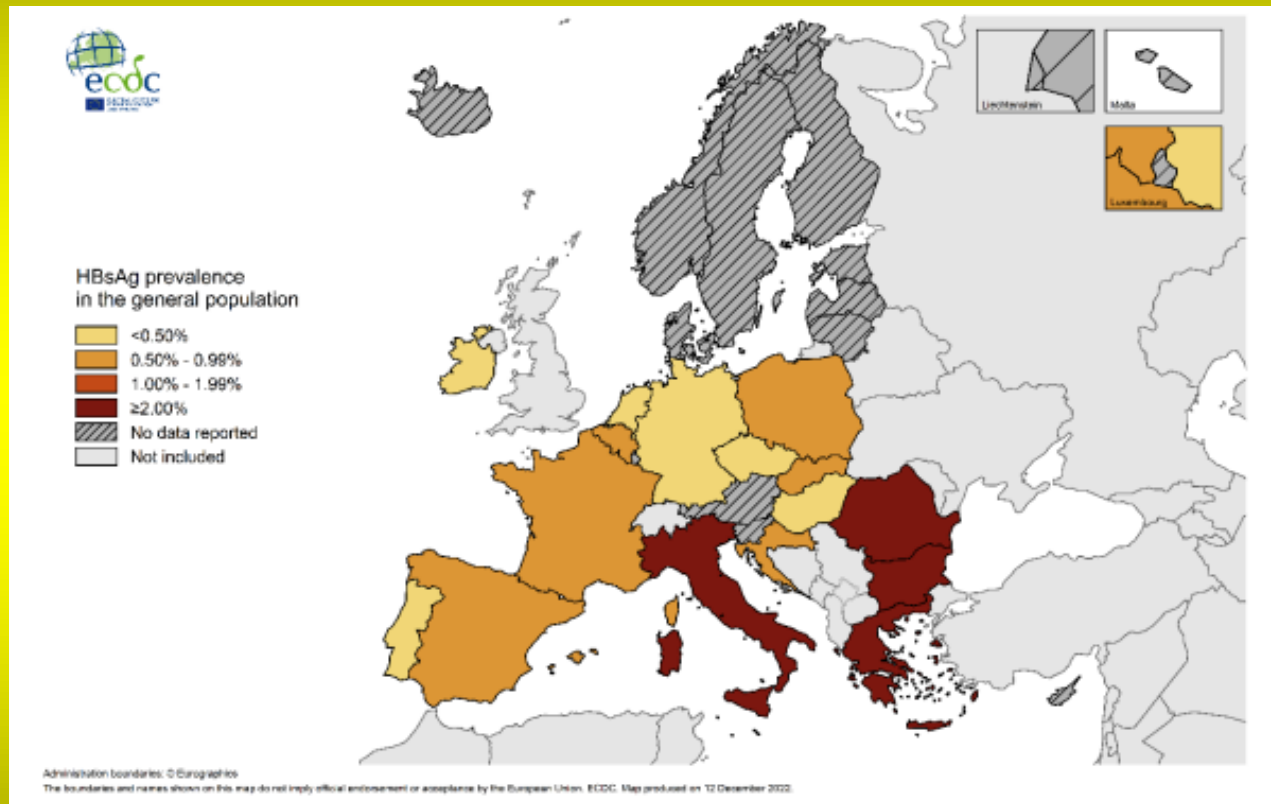
## Disclaimer

Sponsorship, trials, advisory boards: Abbott, Abbvie, Bristol-Myers Squibb, Gilead, Janssen-Cilag, MSD, Novartis, Pfizer, Roche, Swixx.

# Screening methods (HBV)

- Rapid tests: HIV, HCV, HBV, syphilis combined
- HBsAg, anti-HBc, anti-HBs

# Estimates of hepatitis B surface antigen (HBsAg) prevalence in the general population based on pooled estimates of prevalence up to 2021



# Screening in pregnancy

- First trimester (only HBsAg)

Year	Number screened	HBsAg positive	
		Number	%
2019	87 068	93	<b>0,10</b>
2020	99 522	74	<b>0,07</b>
2021	85 938	93	<b>0,10</b>
2022	82 711	66	<b>0,08</b>
2023	75 195	66	<b>0,09</b>

Source: NNGYK Járványügyi és Infekciókontroll Főosztály

# HBsAg positive pregnant women

- All referred to hepatology center
- If PCR is  $>200.000$  IU/mL, tenofovir is prescribed for the 3rd trimester
- The newborn is vaccinated by active and passive vaccines.

# Screening done

- All blood, plasma and milk donors
- All patients on hemodialysis, chemotherapy, or biological therapy
- All HIV+ patients
- All relatives to patients
- All reported needle stick or other injuries



# Screening done only occasionally (WHO 2024 March)

- Immigrants
- Sex workers
- MSM
- PWUD
- Prisoners (probation for drug use also)
- Patients with chronic liver diseases  
(repeatedly elevated liver enzymes)

# Hepatitis screening in roma population 2018 (n=101)

<b>Age</b>	
<18 years	37
18-25 years	18
25-30 years	14
30-40 years	34
>40 years	38
	141

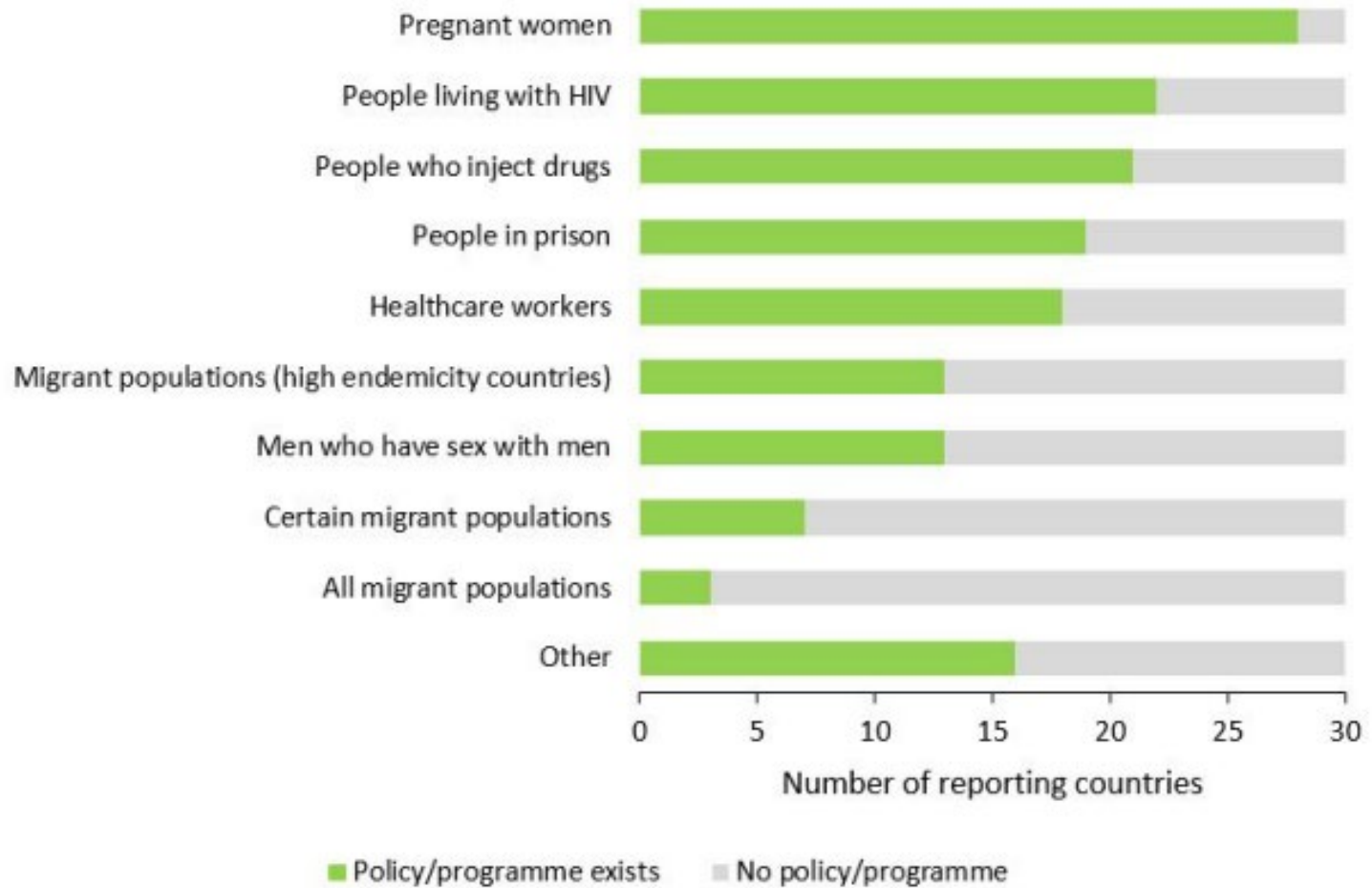
screening	positive	%	interpretation
HBsAg/aHBc	2	1,38	Acute or chronic HBV infection
aHBs	78	54,00	HBV vaccinated
only aHBc	4	3,00	Occult hepatitis
aHBs/aHBc	4	3,00	Recovered HBV infection

# Drug users on detox (2018)(n= 140)

	<b>HIV</b>	<b>HBsAg</b>	<b>Anti-HCV</b>
<b>Positive</b>		<b>4</b>	<b>35</b>
<b>Doubtful (haemolytic)</b>	<b>4</b>		
<b>%</b>		<b>2,85</b>	<b>25</b>

# Existence of an HBV testing policy or programme for key populations in countries in the EU/EEA, 2023

Population group with an HBV testing policy or programme



# General vaccination

- Universal school vaccination was begun in 1999 at the age of 14, than 13.
- Today at age of 12 years old (2 adult vaccines, changed to 3 vaccines this year)
- HBsAg status is not done before vaccination
- Effectiveness (anti-HBs) is not tested
- The vaccinated Hungarian population are aged 12- 39.
- Acute HBV is rare: Generally seen only in MSM 39 years older.

# Key recommendations from the Hungarian national guideline

- All patients with a **high risk** (including every patient with chronic liver disease) to be screened for HBV (**HBsAg, anti-HBc**).
- **In high risk populations anti-HBs** serology must also be performed if immunization history is incomplete or unknown.
- In case of HBV seronegativity, **vaccination** against HBV is indicated for all patients with **chronic liver diseases and also for patients with a high risk of HBV infection. Vaccination can also be offered to any other individuals.**
- **Re-test of anti-HBs is recommended 1 month after the vaccine series** for patients with high risk, such as healthcare workers (HCW), people who receives blood transfusions or on hemodialysis, and family members of infected people. If the titer is below 10 IU/L, vaccination must be repeated. If the titer is above 10 IU/L, the patient is to be considered lifelong immunized – so neither re-vaccination nor anti-HBs follow up are necessary (except before immunosuppressive therapy).

# Key recommendations from the Hungarian national guideline (cont.)

- To exclude/confirm HDV infection, an **anti-HD test is essential for all HBsAg positive patients**. For anti-HD positive patients, anti-HD-IgM or HDV RNA test is necessary. A HDAg test can also be performed. HDAg test gives a positive result characteristically in case of acute HDV infection. The negative result of the HDAg test doesn't exclude chronic HDV infection (i.e., replication of HDV)!
- **PCR for HBV DNA test is indicated if the HBsAg test is positive.**

# Hepatitis D virus

- All HBsAg positive patients are tested (anti-HDV) in hepatology centers (33)
- All anti-HDV positives are tested for HDV RNA (quantitative)
- Practicly there are no endemic cases
- Many patients come from Romania, Mongolia, Ukraine (20 countrywide)
- Bulevirtide not available



# Conclusions

- Vaccination should be changed to WHO recommendations
- Testing of vulnerable populations should be implemented (esp. migrants and unvaccinated populations)