Panel debate: how is HBV/HDV screening organised in the region, including how to reach special populations

Slovakia 🇸🇰

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Elimination of Viral Hepatitis in the Czech Republic, Hungary, Poland and Slovakia: Lessons Learnt and the Way Forward

VHPB Regional meeting, Prague, 29-30 October 2024
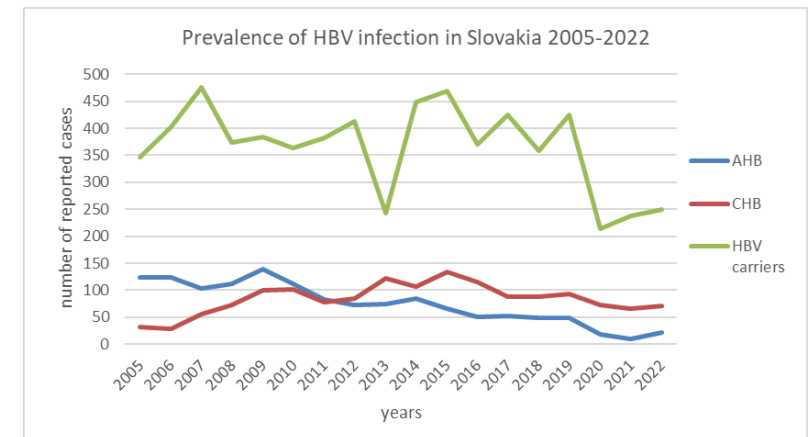
Screening for hepatitis B in Slovakia

Study (author & year)	Study population		Sample size		HBsAg +		
	Age groups	Region	n	n	%	p Chi^2	
IS SR 2018 (PHA SR, 2019)	1-69 years	Slovakia	1-69 years 4,215 25-69 years 1,340	4 4	0.09 0.30		
EPID 2010-2011 (Schreter, 2011)	≥15 years	Slovakia (patients hospitalized in infectious disease clinics)	4,598 Male 2,214 Female 2,384	79 50 29	1.7 2.3 1.2	< 0.01	
HepaMeta 2011 (Jarcuska, 2011)	18-55 years	Eastern Slovakia	855 Roma 452 non-Roma 403	66 55 11	7.9 12.4 2.8	<0.001	
HBV prevalence 2008-2009 (Kristian, 2013)	>18 years	Eastern Slovakia	All samples tested 59,279 RP<5%* 25,686 RP≥5%** 33,593 Pregnant women 13,798 RP<5%* 4,775 RP≥5%** 9,023	1,031 417 654 292 47 245	1.74 1.62 1.83 2.12 0.98 2.72	ns <0.01	

IS SR - Immunological survey in the Slovak Republic; PHA SR - Public Health Authority of the Slovak Republic; EPID - Epidemiological aspects of the occurrence of viral hepatitis B and C in Slovakia, a prospective multicenter epidemiological project; HepaMeta - Prevalence of hepatitis B/C and metabolic syndrome in the population living in separated and segregated Roma settlements, cross-sectional population-based study; ns - non-significant difference; *RP<5% – regions with lower representation of Roma population (< 5%); ** RP≥5% – regions with higher representation of Roma population (≥ 5%)

general routine screening for HBV in Slovakia:
- every **blood donor** tested for HBsAg and anti-HBc IgG
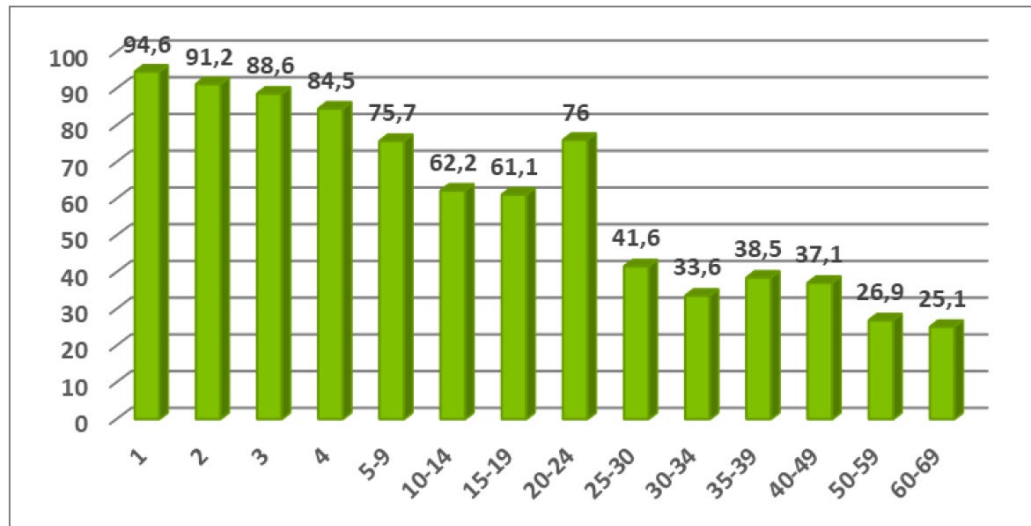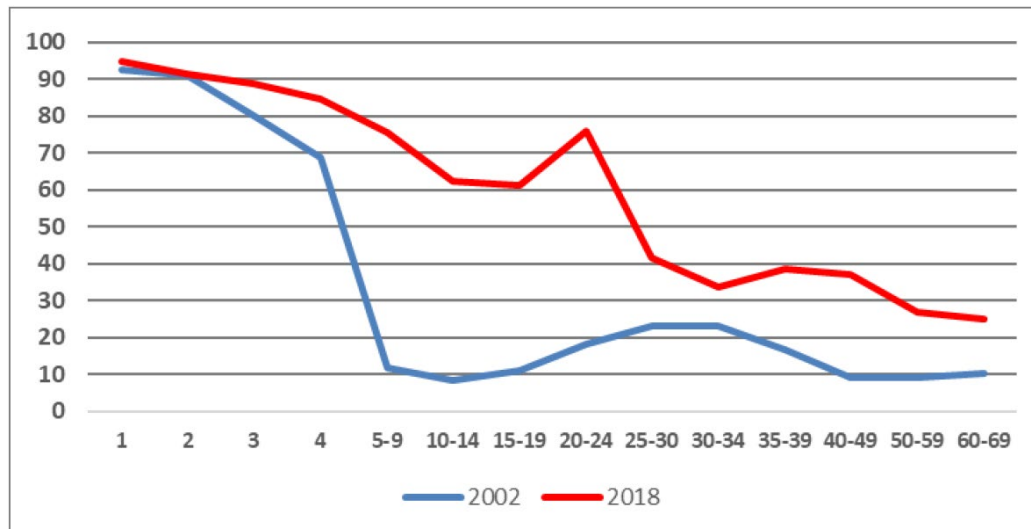- every **pregnant woman** tested for HBsAg in the first trimester

routine testing for HBV in risk groups:
- oncological and immunosuppressed patients
- haemodialysis patients
- health care workers (including anti-HBs)
- prisoners, IVDUs, ...

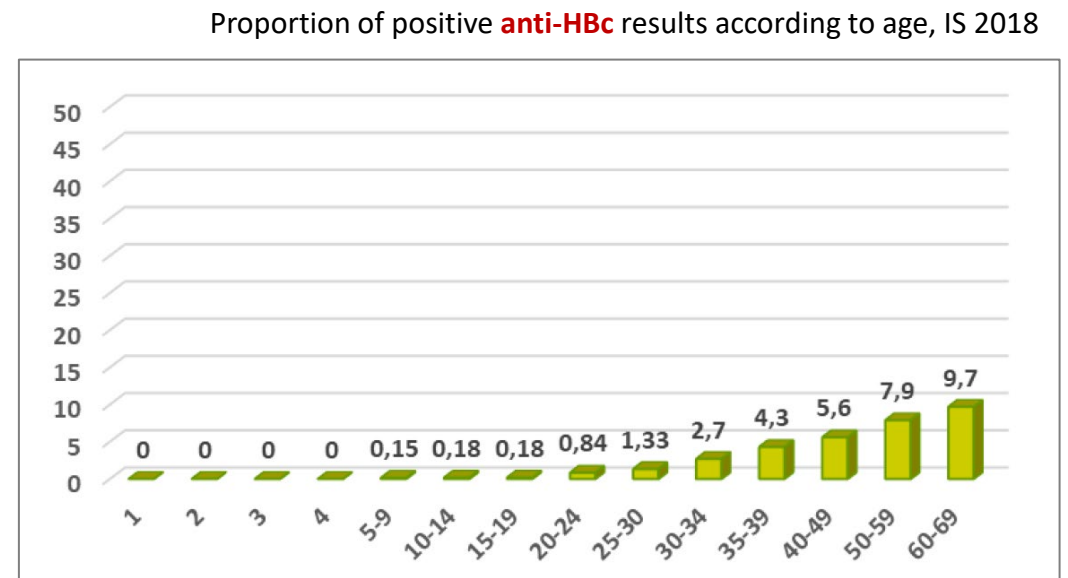Prevalence of HBV infection in Slovakia 2005-2022

Immunological survey in the SR in 2018 (population vaccinated by the age of 25)

Proportion of positive **anti-HBs** results according to age, IS 2018

Proportion of positive **anti-HBc** results according to age, IS 2018

Proportion of positive **anti-HBs** results according to age, IS 2002 and 2018

Screening for hepatitis D in Slovakia

Study, region	HDV pilot project, Eastern Slovakia	B-MARK Eastern Slovakia	HEGITO Middle Slovakia	Internal dept. NT Western Slovakia	TOTAL
Duration (yrs.)	2008	2019 - 2023	2022 - 2023	2022 - 2023	-
Number of patients	86	206	37	14	**343**
Sérology for HDV	anti-HDV IgG	anti-HDV IgM, IgG	anti-HDV IgG	-	-
PCR confirmation	-	HDV RNA	-	HDV RNA	-
anti-HDV posit.	0	**1 (0,5%)**	**2 (5,4%)**	0	**3 (0,9%)**
HDV RNA pozit.	-	**0**	-	-	**0**
Origin of HD+ pts.	-	SK	SK, UA	-	-

Kristian P. et al. Is Slovakia Almost a Hepatitis D Free Country? Viruses 2023;15(8):1695.

- **routine reflex testing** (every HBsAg positive patient) **started in November 2023** (Košice, East-SK)
- ELISA tests used for **anti-HDV IgM, anti-HDV IgG** and **HDAg**
- **293** persons tested in **10** months, detection of **anti-HDV positivity** in **1 patient, HIV+, from UA** (confirmed by PCR)
- according to available information, **2** other confirmed cases from Bratislava (West) and **1** from Banska Bystrica (Middle) – in total: **no Slovak origin**, 3x from Ukraine, 1x from Moldova; **2** case **HIV coinfected**
- Problems: **routine testing limited**, available only in larger centers, **PCR confirmation almost unavailable**