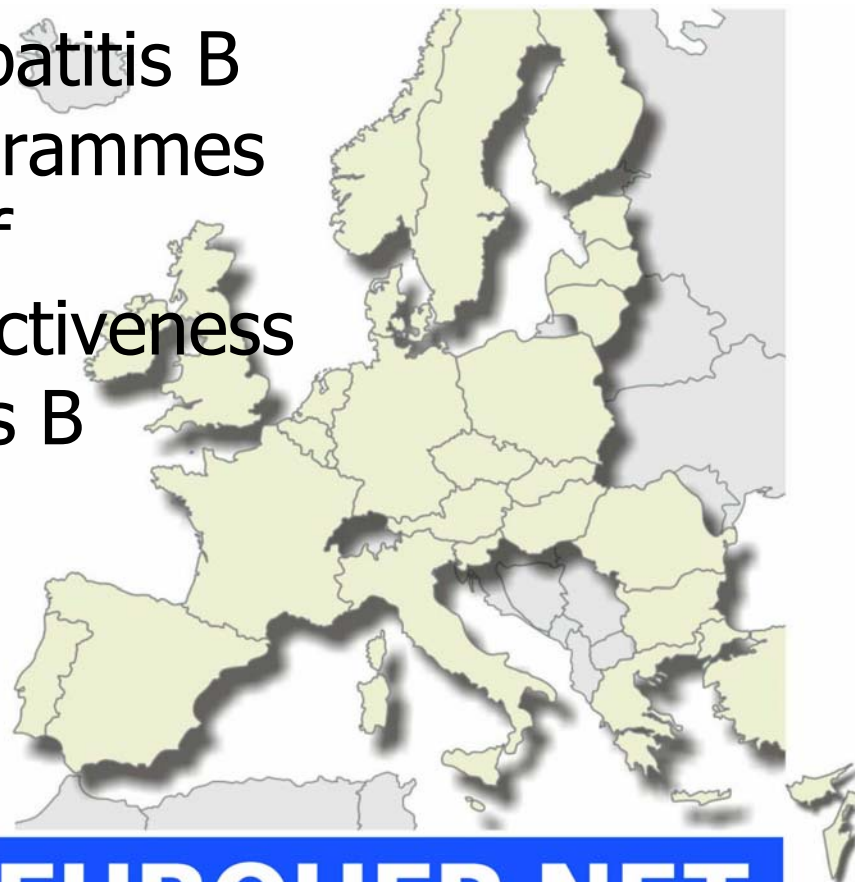




Overview of hepatitis B prevention programmes and reporting of vaccination effectiveness against hepatitis B



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**Surveillance and Prevention of
Vaccine Preventable Hepatitis**



Participating countries

Austria	Lithuania
Belgium	Luxembourg
Bulgaria	Latvia
Czech Republic	Malta
Germany	The Netherlands
Estonia	Norway
England and Wales	Poland
Greece	Romania
Hungary	Slovak Republic
Israel	Slovenia
Italy	Turkey



Endemicity of hepatitis B

- 19/22 countries are low endemic for hepatitis B according to the HBsAg carrier rates in the population (<2%).
- 3 countries are of intermediate endemicity (2-7% HBsAg positive carriers in the total population).



Prevention of hepatitis B through vaccination

- Antenatal testing
- Universal hepatitis B programmes
 - Universal policies in Europe
 - Schedules
 - Reimbursement of universal programmes
 - Booster policy
- Risk group programmes
 - Risk group policies
 - Reimbursement of risk group programmes
 - Booster policy



- Antenatal screening of pregnant women

- 14/22 countries perform universal antenatal testing except for Bulgaria, Israel, Lithuania, Luxembourg, Norway, Poland and Romania.
- Universal vaccination programmes for newborns make universal screening avoidable.
- Turkey performs selective antenatal testing (started in 2005 with newborn programme).



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- Universal hepatitis B vaccination programmes

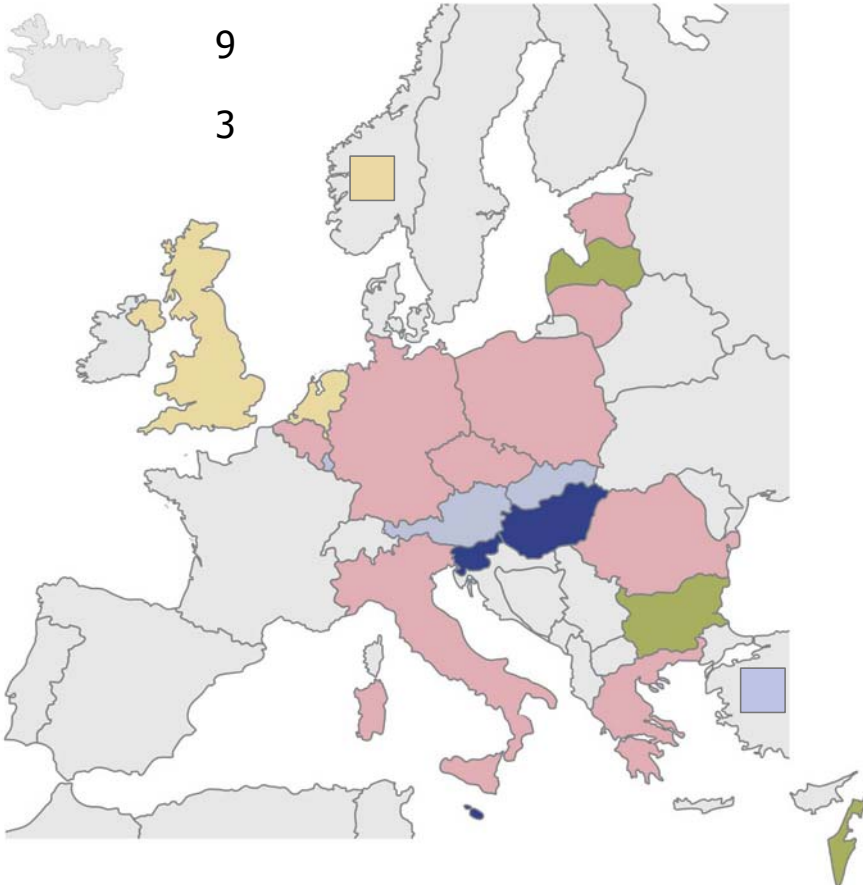
Policies

Universal programme	Number of countries (N=22)	Starting at age
universal screening policy for pregnant women	14	
neonates	7	<24 h
infants	9	3 d-3 m
childhood	4	6-9 y
adolescents	8	10-14 y
combination newborn/infant and childhood/adolescent	9	



Starting at age	Number of countries
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Only neonatal programme	3
Only infant programme	4
Only children/adolescents programme	3
Combination newborn or infant/adolescent programme	9
Only risk groups	3





Schedules

Country	Age	Schedule	Country	Age	Schedule
Austria	infants	0.1.2.12	Italy	infants	0.2.6
Belgium	infants	0.1.6		adolescents	0.1.6
	adolescents	0.1.6	Latvia	neonates	0.1.6-8
Bulgaria	neonates	0.1.6	Lithuania	2-3 days	0.1.6
Czech Republic	infants	0.1.6		adolescents	0.1.6
	adolescents	0.1.6	Luxembourg	infants	0.1.6
Estonia	neonates	0.1.6	Malta	children	0.1.6
	adolescents	0.1.6	Poland	neonates	0.1.6
Germany	infants	0.1.6		adolescents	0.1.6
	adolescents	0.1.6	Romania	neonates	0.2.6
Greece	neonates	0.1.6		children	0.1.6
	6 year olds	0.1.6	Slovak Republic	infants	0.1.6
Hungary	adolescents	0.1.6	Slovenia	children	0.1.12
Israel	neonates	0.1.6	Turkey	neonates	0.2.9



Reimbursement of universal programmes

		Reimbursed	
		yes	no
Universal programme			
	mandatory	12/12	0/12
	not mandatory	7/7	0/7

12 countries with mandatory programmes,
7 countries with recommended programmes.



Booster policy in universal programmes

- There is no booster mentioned in any universal programme



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- Risk group policies

Risk group programmes	Number of countries (N=22)	Mandatory	Booster	Reimbursement
injecting drug users	16	2	0	10
men who have sex with men	13	1	0	7
attendees of STI clinics	10	0	0	5
dialysis patients	18	8	8	13
groups with occupational risk	22	11	2	16
household contacts of known hepatitis B carriers	19	7	1	13
hospitalised patients	0	0	0	0
neonates born to HBsAg positive mothers	18	12	1	14
other	12	2	0	5



Additionally mentioned risk groups

Belgium	Clotting factor disorder patients, transplantations candidates, thalassaemia, mentally disabled
Bulgaria	HIV+, military personnel, police, adolescents, HCW
Germany	HIV+, mentally disabled, chronic liver disease patients, sex workers, prisoners, travellers to high endemic areas
England and wales	Residents from institutions for learning difficulties, gay and bisexual men and sex workers
Hungary	Medical students
Lithuania and Greece	?
Malta	Tourists to high endemic areas, police, prisoners, chronic renal and liver and blood conditions, environment department workers
Netherlands	Children of immigrants from endemic areas
Norway	Newborns of immigrants and immigrants <25 years, sex workers
Poland	Medical and paramedical students, chronic liver and renal diseases
Slovenia	Medical students, immunocompromised persons



Booster policy in risk groups

- Eight countries report booster policies in risk groups.
 - 8 countries: dialysis patients
 - 2 countries: occupational risk
 - 1 country: neonates of carrier mothers
 - 1 country: household contacts of known carriers

- There was no question on coverage rates in the programmes for risk groups



Vaccination effectiveness

- 'the extent to which vaccination, when deployed in the field, does what it is intended to do for in a defined population'
- take into account
 - **incidence** of the acute hepatitis B cases,
 - **coverage rates** of the specific vaccination programme
 - eventual **changes in the methodology**
 - **completeness of the reporting system**
 - a number of **years** before any measured effect on hepatitis B incidence or burden of disease can be **attributed** to universal hepatitis B vaccination, especially in the case of infant vaccination.



Vaccination effectiveness

- Vaccinated birth cohorts
- Coverage rates of vaccinated birth cohorts



Coverage of the universal newborn and infant programmes

Country	Starting age	1995	1996	1997	1998	1999	2000	2001
AT	3 months					33.50%	33.20%	41.80%
BE(1)	4 months					50-68%		
BG	newborn	95.40%	93.50%	77.20%	97.10%	97.30%	93.70%	93.30%
CZ	9 weeks							97%
DE(2)	2 months							41%
EE	newborn							
England and Wales								
GR	newborn				89.3%			
HU								
IL	newborn	>95%	>95%	>95%	>95%	>95%	>95%	
IT (1)	3 months	93%	94%	96%	96%	96%	96%	96%
LT	2 days				95.70%	95.20%	99.0%	99.2%
LU	1-2 months							94.5%
LV	newborn					94.90%	95.00%	96.10%
MT								
NL								
NO								
PL	newborn						99.30%	99.60%
RO	newborn			99.90%	99.90%	98.90%	99%	98%
SI								
SK	9 weeks				50%	99.20%	99.20%	99.40%
TR	newborn					0.64	0.66	0.72

(1) coverage at 24 months

(2) coverage at 5 years old

no programme in place
existing programme, but no coverage data available



Coverage of the universal childhood and adolescent programmes

Country	Starting age	1995	1996	1997	1998	1999	2000	2001
AT								
BE	11-12 years							
BG								
CZ	12 years							96.50%
DE	10 years							
EE	12-13 years						75%	89.5%
England and Wales								
GR	6 years							
HU	14 years					99.60%	99.50%	99.90%
IL								
IT(1)	12 years	92%	>93%	>93%	>93%	>93%	>93%	>93%
LT	12 years							
LU								
LV								
MT	9 years							
NL								
NO								
PL	14 years					12.50%	86.80%	93.60%
RO	9 years							
SI	6 - 7 years				90%	98%	96.57%	97.04%
SK								
TR								

	no programme in place
	existing programme, but no coverage data available



Conclusion

- Vaccination programmes have evolved in different countries in function of the perceived disease burden by hepatitis B and the availability of an effective vaccine. No two countries in Europe have exactly the same time-scheme of vaccine inoculations.
- **European recommendations** on vaccination strategies or schedules could be helpful in the elimination of hepatitis B in Europe.