

Presentation of the EUROHEP.NET survey results

***Adaptation or Simplification of
Hepatitis A Vaccination***

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Background - WHO Position Paper

- In **highly endemic countries**, almost all persons are asymptotically infected with HAV in childhood, which effectively prevents clinical hepatitis A later in life. In these countries, large scale vaccination programs are not recommended
- In **regions of low endemicity**, vaccination is indicated for individuals with increased risk of contracting the infection, such as travelers to areas with higher endemicity
- In countries of **intermediate endemicity**, where a relatively large proportions of the adult population is susceptible, and where hepatitis A represents a significant public health burden, often with large outbreaks, large scale childhood vaccination may be considered as a supplement to health education and improved sanitation

Communities (Populations, Regions) with *Intermediate* Rate of HAV Infection

- Often large communities
- Wide age range (including children, adolescents and young adults)
- Rates 50-200/100,000/year
- Cases are often concentrated in specific neighborhoods where disease rate may be very high
- Young children with asymptomatic infections can be a substantial source for infections in both older and younger individuals
- Widespread post-exposure prophylaxis with IG has not been very successful
- Universal vaccination might be the best choice
- Use of active HAV vaccine to interrupt epidemics makes sense

Communities (Populations, Regions) with **Low** Rate of HAV Infection

- **Most cases in school children, adolescents and young adults**
- **Rates reflect low year-to-year variations**
- **Community outbreaks are rare**
- **Rates <20/100,000/year**
- **Cases are often imported (incoming tourists, outgoing tourists coming back)**
- **Main vaccination policy could be the vaccination of high risk groups**

Groups at Increased HAV Disease, Severe Outcome or Potentially Transmitter

- 1) Travelers**
- 2) Men who have sex with men**
- 3) Users of injecting and non-injecting drugs**
- 4) Persons with clotting factors disorders**
- 5) Persons working with non-human primates**
- 6) Persons with chronic liver diseases**
- 7) Persons who work with young children that may be often asymptomatic distributors**
- 8) Food-service establishments/food handlers**
- 9) DCC**
- 10) Health-care institutions**
- 11) Schools**
- 12) Workers exposed to sewage**
- 13) Others?????.....**

Strategies for Preventing HAV Through Routine Immunization

GOALS

- 1. Protect persons from infection**
- 2. Reduce disease incidence by preventing transmission**
- 3. Ultimately eliminate transmission**

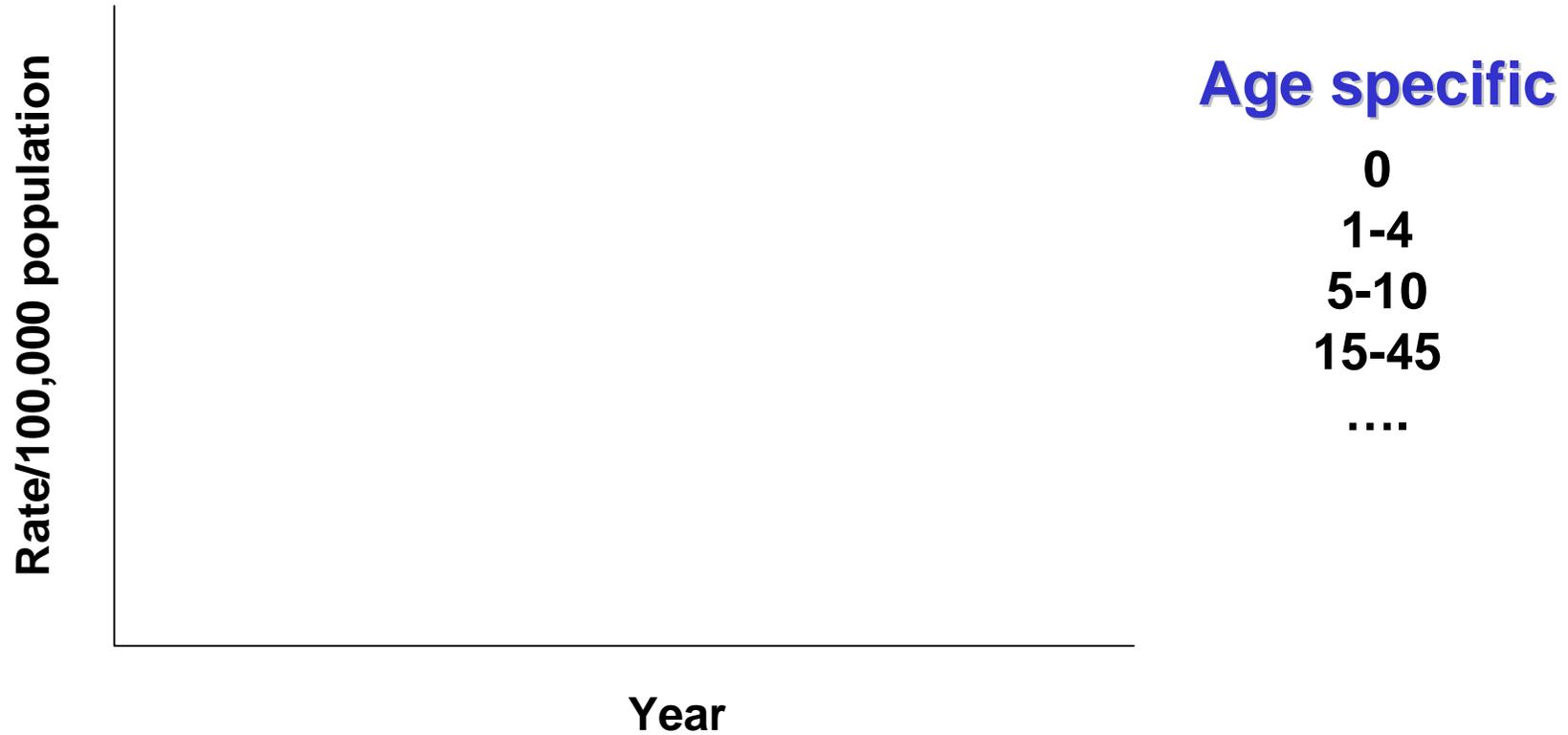
Because of their high disease incidence and their critical role in transmission, children should be the primary focus of immunization strategies. Routine childhood immunization will achieve:

- 1. Prevention of in age groups that account for at least 1/3 of the cases**
- 2. Eliminate an important source of infection for other children and adults**
- 3. Increase the rate of immune persons in the society since each year another immune cohort is added to the community (HAV vaccine provides long-lasting immunity)**

Strategies for Immunizing Children in Communities (Populations, Regions) Where Vaccination is Judged Needed

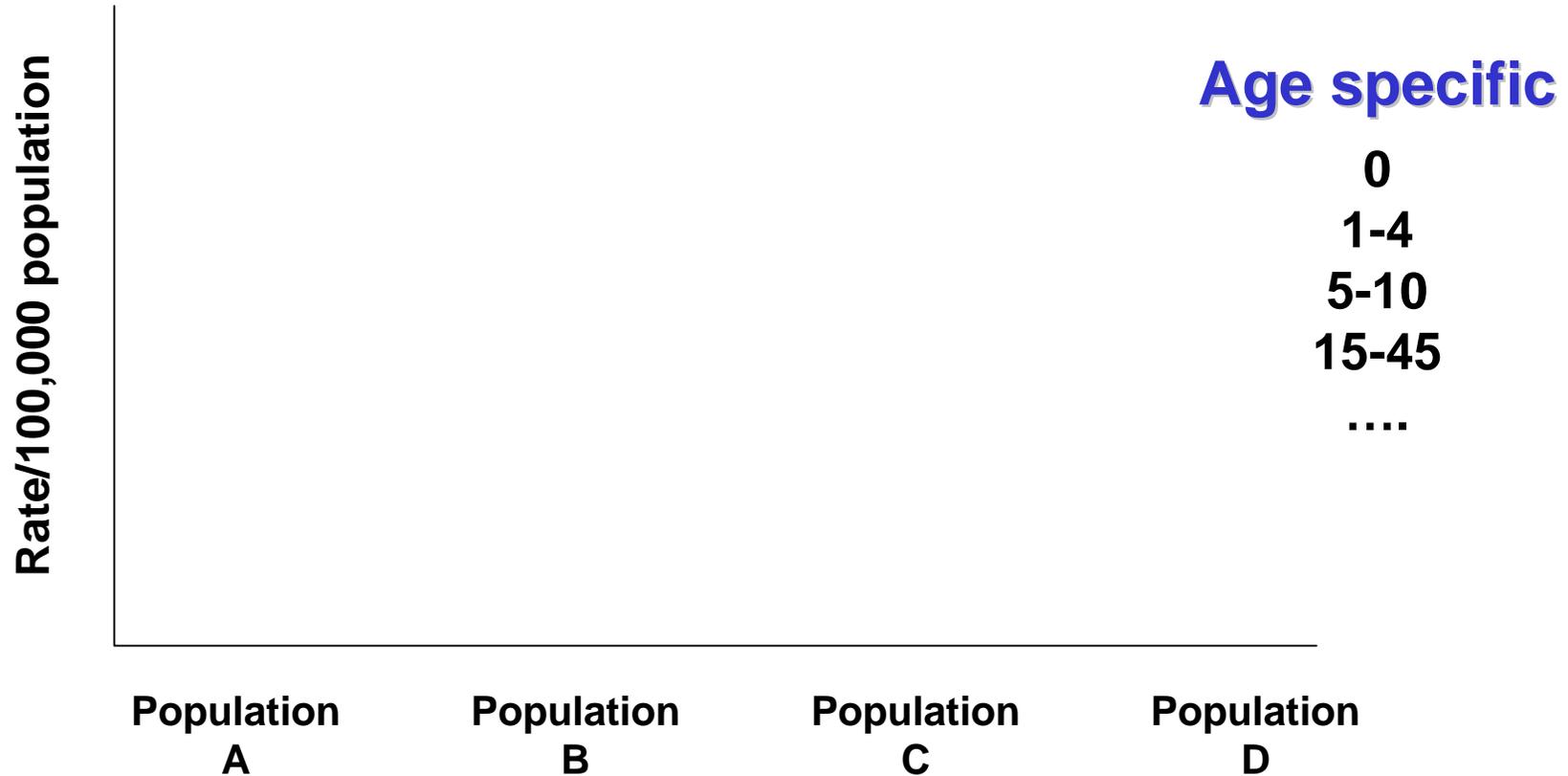
- 1. Immunize only children ≤ 2 years**
- 2. Immunize several cohorts (especially pre-school individuals catch-up)**
- 3. Add also children > 15 yrs**
- 4. Others?.....**

**Fist steps towards
recommendations of
prevention - establish
epidemiological status**

(1)

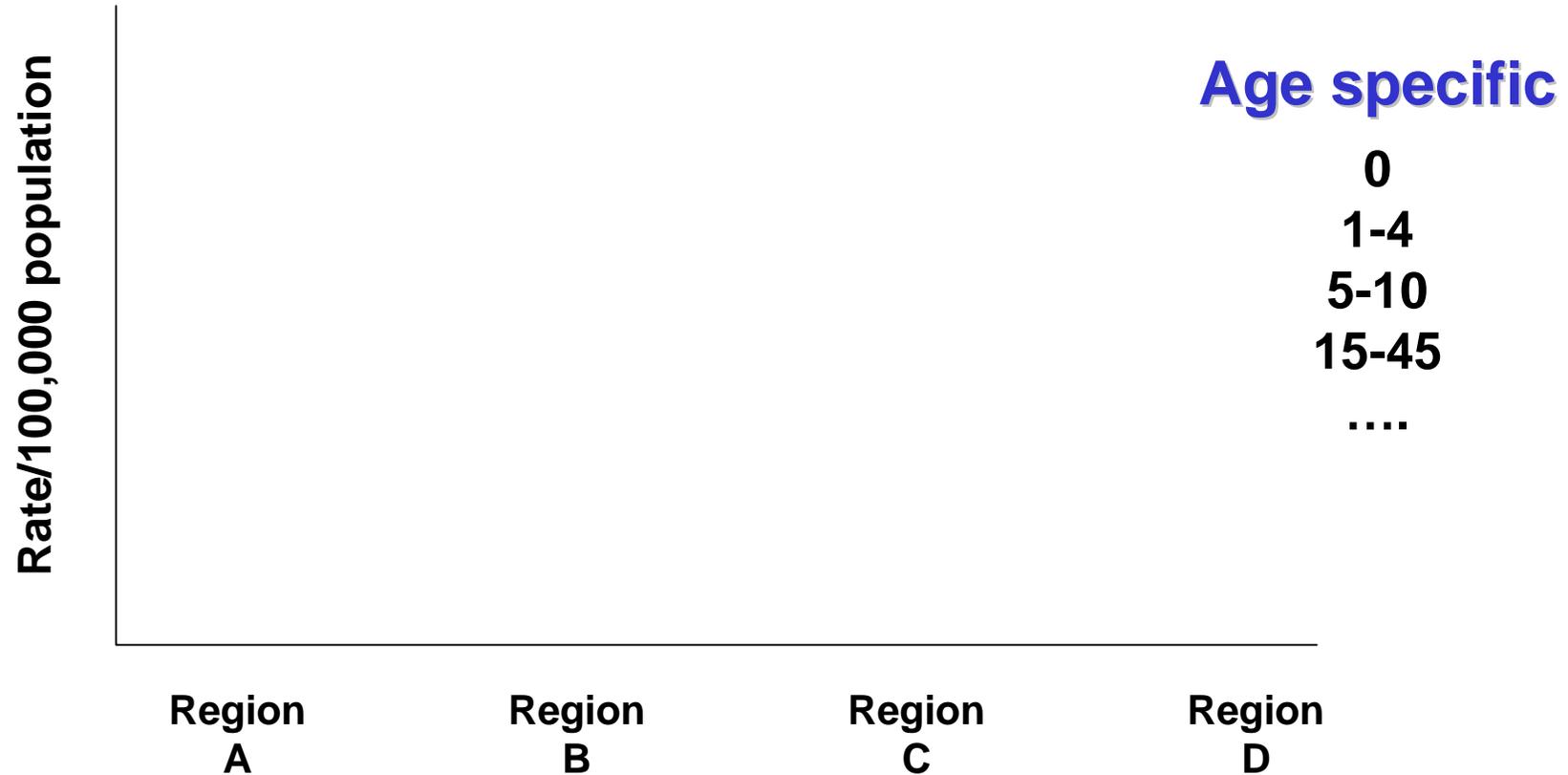
Changing incidence???

Age shift???

(2)

Risk population????

Population with shift vs populations with no shift???

(3)

Regional variations??

**Where are we
in Europe??**

ACTION	N/23	%
HAV national surveillance	23	100
Recommendations already in place	20	87
Electronic minimal data already exists	15	65
Standard age-distribution electronic individual data available	13	57
EC case definition	16	70
Asymptomatic case never included	16	70
Asymptomatic cases never included in outbreak investigation	14	61
Outbreak definition already in place	16	70
Registration of outbreaks already in place	17	74
Hospitalization data already in place	5	22
Mortality data already in place	7	30
Age-specific serology data	5	22

Do you have a Case Definition

21/22 (95%)*

Same as European Union

16/23 (70%)*

*** slightly different countries filled this questionnaire**

Report of (total 23 countries)

Variable	N reporting	% reporting
Age	20/22	91
Sex	20/22	91
Residence	20/22	91

The second survey, was not really a questionnaire on what is in place in the country, but what is your opinion on the proposed guidelines. From the first survey (22 countries) I fill in the results on this question, but the question was partial. Extra mentioned items: seasonal variation, place of infection, hospital admission, occupation, family size, educational level, minority group, food and health workers, country of birth of mother.

Definition Outbreak (total 22 countries)

DEFINITION	NUMBER
≥ 2 cases	10
≥ 3 cases	4
> 5 cases	1

- Norway adds 'an unexpected number of reported cases among risk groups' as a second part of this definition
- One country defines an outbreak 'if 1/3 of the members of the community are infected'.
- In 4 countries the following similar definitions are used: 'any extreme incidence according to place, time'; 'incidence higher than the average in a specified population and time'; 'accumulation of cases in a specific time and location'; 'occurrence of cases with common source of infection and ways of spreading in a community or region
- Turkey reported to have no standard definition for hepatitis A outbreaks.

N Reported Cases 2000 in 28 Countries

(Israel excluded since vaccine is given)

Number of total cases	N countries
$\geq 10,000$	3
1,000-9,999	6
100-999	11
10-99	7
< 10	1

Countries with Sharp Decrease from 1990-5 to 2000-1

			Total Population
Austria	1	381 to 133	~ 8
Germany	6	~5,000 - 6,000 to 2,220 - 2,800	~81
Portugal	12	700 - 900 to ~100	~10
UK	15	7,300 – 7,400 to ~1,300	~52
Bulgaria	16	20,000 – 21,000 to 6,000 – 7,000	~8
Czech Republic	18	800 – 1,500 to 300 – 600	~10
Estonia	19	900 – 1,200 to ~80	~1
Hungary	20	~1,250 to ~350	~10
Lithuania	22	2,000 – 4,000 to 60-80	~3
Latvia	21	2,000 – 4,000 to 60-80	~2.5
Poland	24	10,000 – 20,000 to 250-800	~38
Romania	25	40,000 – 60,000 to ~20,000	~22
Slovenia	27	250 – 500 to 20 – 40	~2
Israel	28	2,500 – 3,000 to 700 - 1000	(with vaccines) ~6

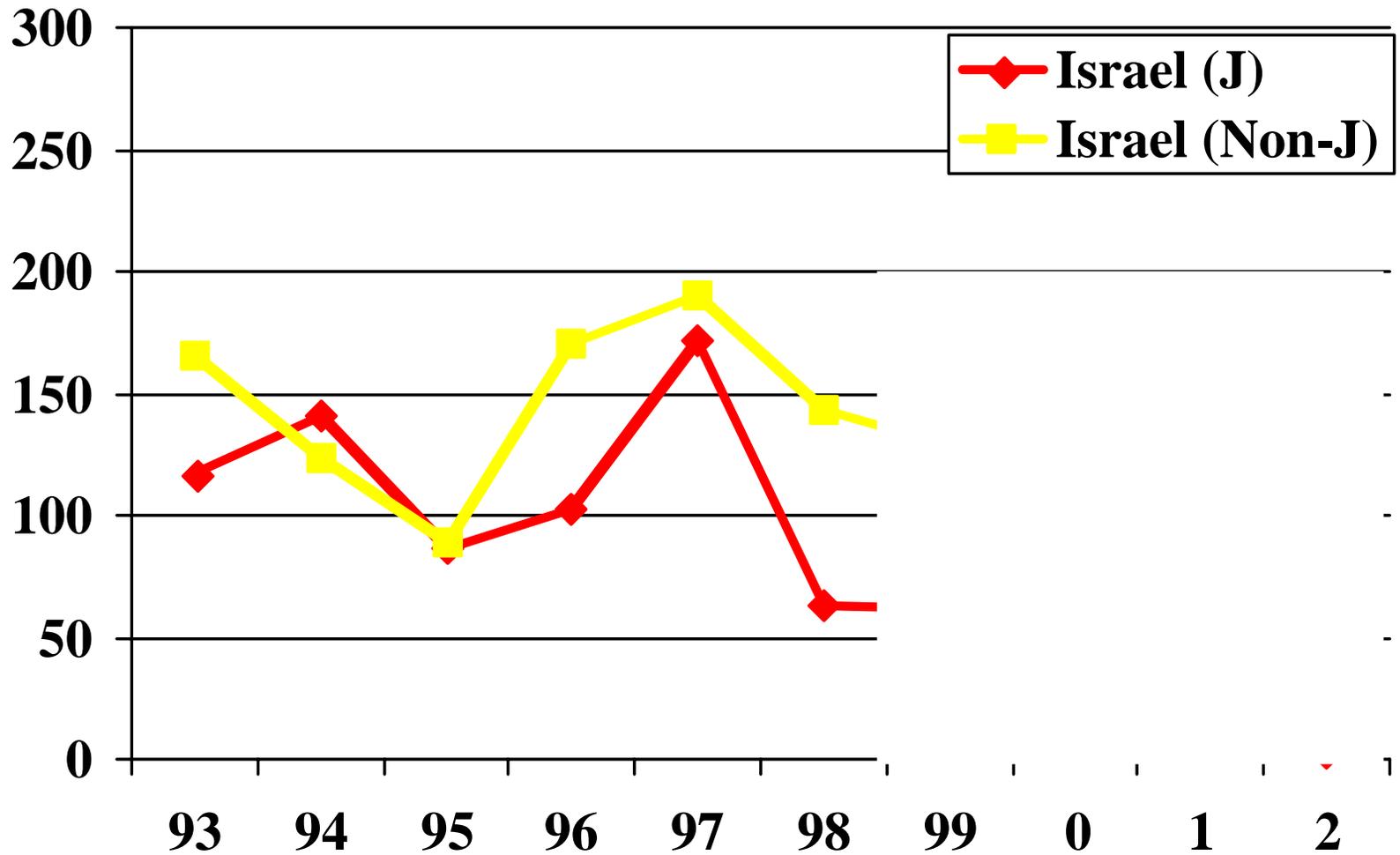
Countries with no Marked Reduction 1990-95 vs. 2000-1

			Total Population
Belgium	2	500 – 700 to 350 – 450	~10
Denmark	3	90 – 200 to 80 – 100	~5
Finland	4	50 – 70 to ~50	~5
Italy	9	700 – 1,200 to 900 – 1,100	~33
Luxemburg	10	10 – 100 to 90 – 200	~0.5
Sweden	14	20 – 300 to 150 – 200	~9
Malta	23	< 15 to < 10	~ 0.3
Slovakia	26	1,200 – 1,600 to 700 – 1,000	~5

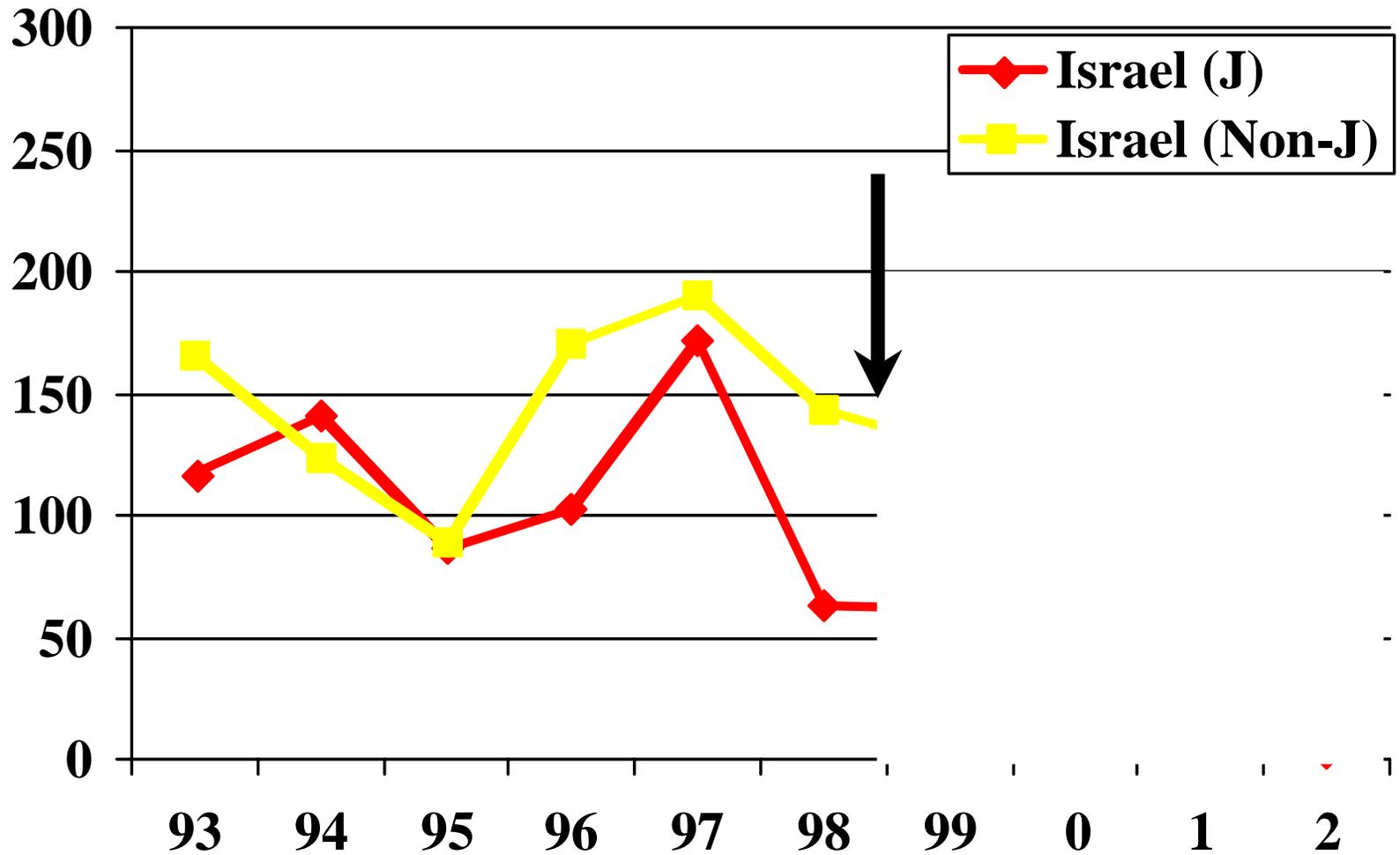
Universal Vaccine Program

- 1) Puglia, Italy, children since 1997**
- 2) Poland – voluntary vaccine in national vaccination program**
- 3) Israel – Age 18 at 24 months, since 1999**

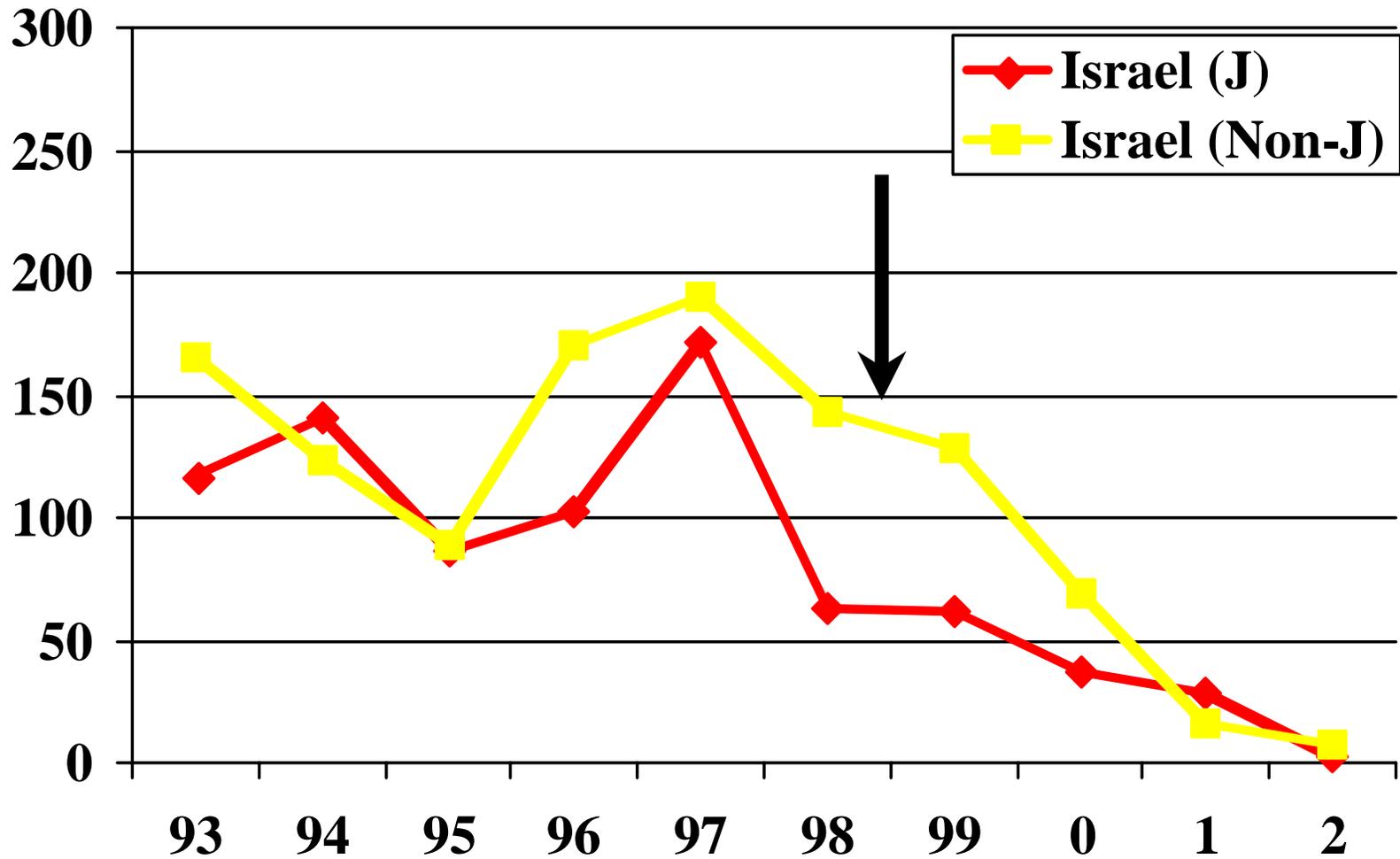
Incidence age 0-14 as surrogate for need of vaccine



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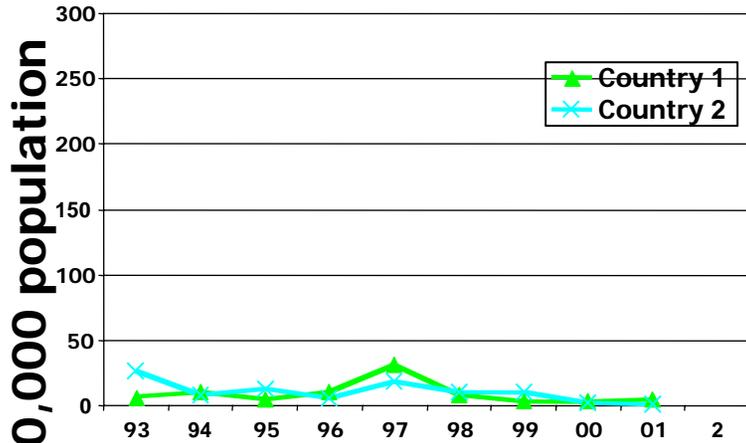


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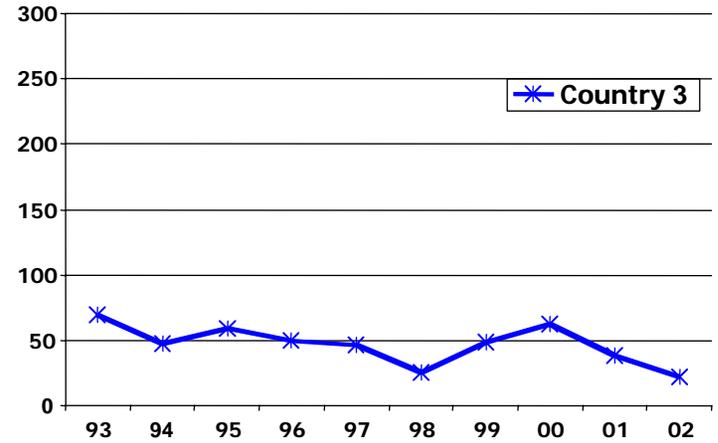


Incidence of HAV Disease Age 0 - 14 yrs: 3 different Patterns in 4 Countries Without Universal Immunization and one Country (Country 5) with a Universal Immunization Program Since 1999 (Yrs 1993-2001)

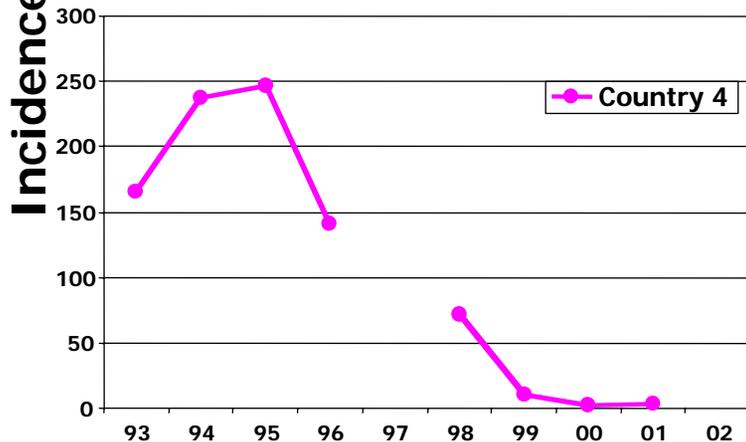
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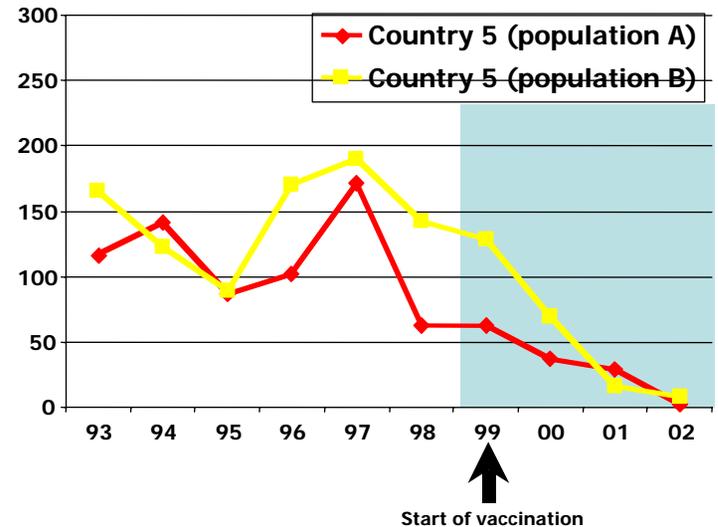
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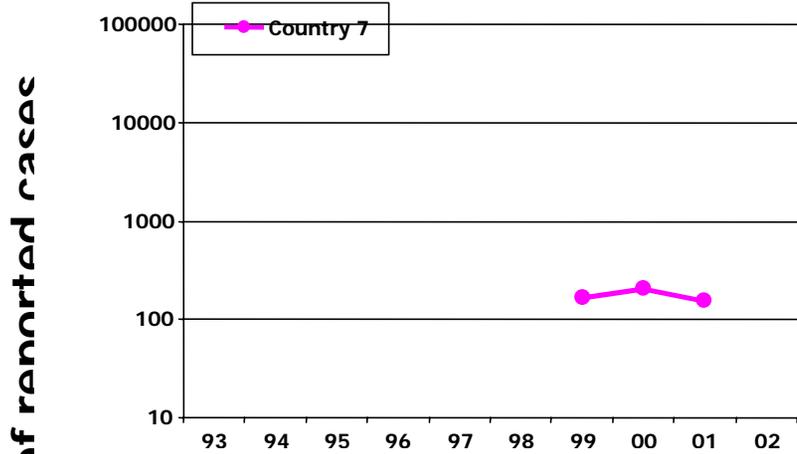


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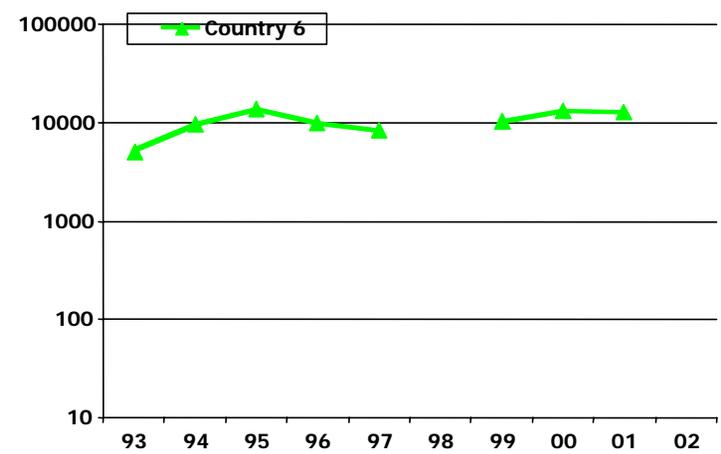


Number of HAV Cases Age 0 - 14 yrs: 3 different Patterns in 6 Countries Without Universal Immunization and one Country (Country 5) with a Universal Immunization Program Since 1999 (Yrs 1993-2001)

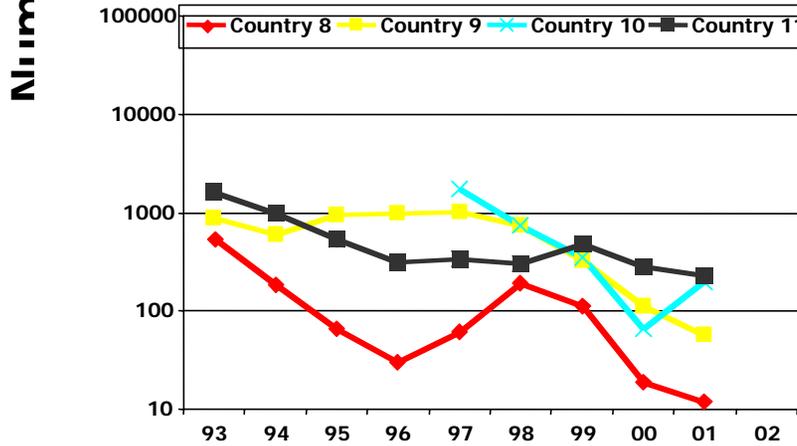
N of cases age 0-14 as surrogate for need of vaccine



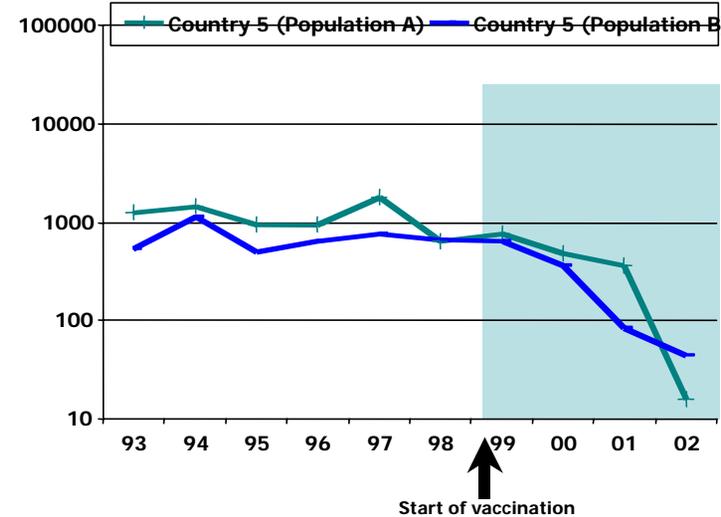
N of cases age 0-14 as surrogate for need of vaccine



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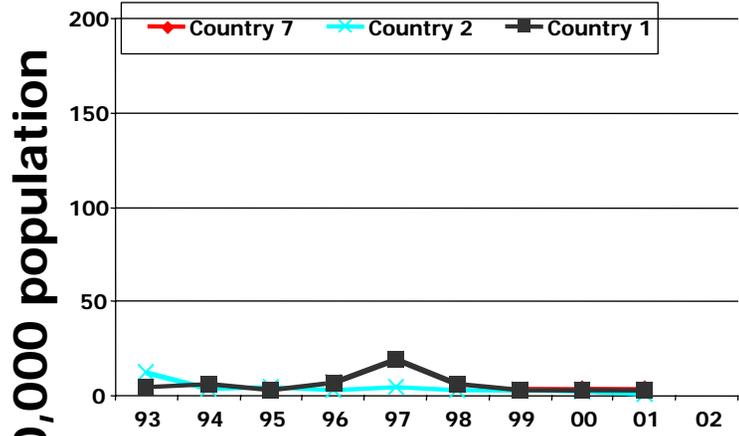
N of cases age 0-14 as surrogate for need of vaccine



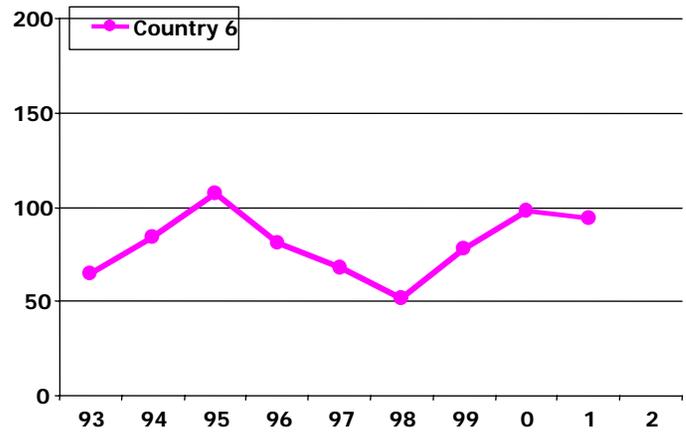
Number of reported cases

Overall HAV Disease Incidence : 3 different Patterns in 5 Countries Without Universal Immunization and one Country (Country 5) with a Universal Immunization Program Since 1999 (Yrs 1993-2001)

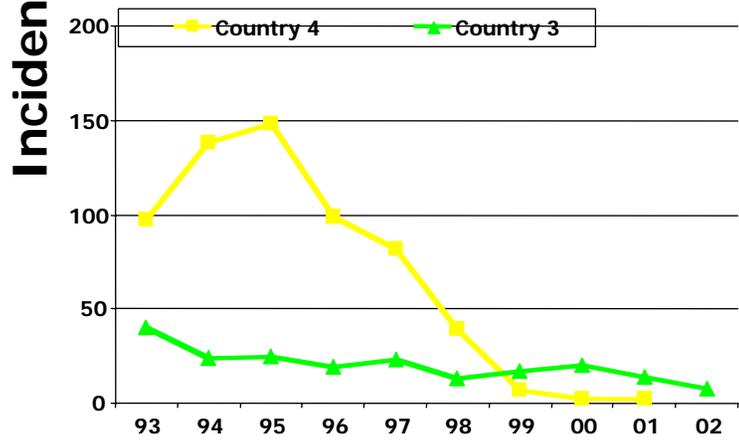
National (all ages) incidence as surrogate for vaccine need



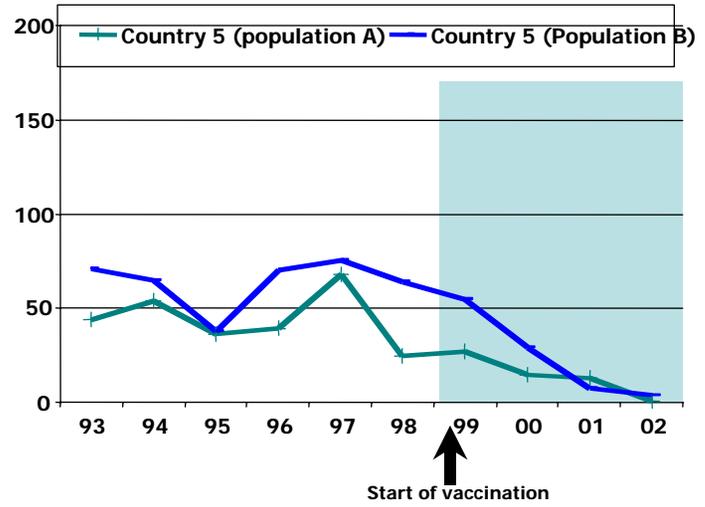
National (all ages) incidence as surrogate for vaccine need



National (all ages) incidence as surrogate for vaccine need



National (all ages) incidence as surrogate for vaccine need



Incidence / 100,000 population

Vaccination

ACTION	N	% of 23
Universal	1	4
May accept universal	22	96
Risk group vaccination	17	74
Post-exposure prophylaxis policy	12	52

Policy of Post-Exposure Prophylaxis (Variable timings) in 22 Countries

Policy	N	%
Immunoglobulins only	3	14
Vaccine only	10	45
Both	7	31
Other (not specified)	1	5
No reported policy	1	5

Vaccination Policy of High Risk

GROUP	N/22	%
Drug Users	9	41
Men who have sex with men	7	32
Travelers	17	77
Chronic liver disease	13	59
Clotting factor disorder	11	50
Medical + paramedical personnel in hospital	6	27
Persons in areas of extended outbreaks	9	41
Children in DCC	2	9
DCC personnel	2	9
Residents + Staff of institutions	8	36
Food service providers	5	23
Household contacts of infected persons	17	77
Children of migrant (2nd, 3rd generation before visiting parents' country)	5	23

NO DATA WERE COLLECTED ON

- **Coverage of vaccination**
- **Some countries cover partially or completely some costs.**

First Steps Towards Recommendations of Prevention - Establish Epidemiological status

**This first step is not yet fulfilled
in most individual countries and
in Europe as a whole**