

Current vaccination policies for healthcare workers, vaccination coverage and serological testing

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Current vaccination policies for healthcare workers : European mini-survey

Background

- HBV infection is a serious risk for HCWs
- European Directive (2000/54/EC) on the protection of workers from risks related to the exposure to biological agents at work
- Objective of the survey: to get an idea on the policy of hepatitis B vaccination in HCWs in the countries of the European union

Current vaccination policies for healthcare workers : European mini-survey

-Questionnaire developed

-Questionnaire sent to 25 member states of European Union contacted through various channels (ICOH, study partners, ...)

-Answers were received from 6 countries :

Belgium , France, Italy, Luxembourg, United Kingdom, Switzerland

Current vaccination policies for healthcare workers : European mini-survey

-Sources

- EASL study (Gunson et al;2003)
- International Commission on occupational health (ICOH)-Scientific Committee on OH of HCWs
 - ICOH national secretaries
- EASOM (European Association of Schools of Occupational Medicine)
- Partners in European studies on HCWs

Current vaccination policies for healthcare workers : Belgium

▪ **In Belgium**

- Vaccination against HBV was initiated in 1983 mainly through Fund for Occupational Diseases (FOD)
- Legal basis
- KB 28.06.1983 (FOD)
- KB 04.08.1996 (European Directive 90/679/EEC)
- KB 29.04.1999 (Mandatory vaccination) HBV vaccination mandatory for certain groups of HCWs

Current vaccination policies for healthcare workers : European mini-survey

- HBV vaccination mandatory for all HCW: Belgium, France
- HBV vaccination recommended : Italy, Luxembourg, United Kingdom, Switzerland
- All countries perform vaccination for HCWs at the start of job or in medical and/or nursing school

Current vaccination policies for healthcare workers : Belgium

▪ **Description of the program**

- Vaccination: vaccine type & schedule
- Monovalent vaccine 0,1,2,12 Bivalent vaccine 0,1,6
- Pre-test screening for hepatitis B markers (1983-1993)
- Monitoring of seroconversion through anti-HBs
- Criteria for booster injections
- Target groups
- ± 250 000 HCW received 1 000 000 doses of HB vaccine (1983-2003)
- IDEWE vaccinated ± 125 000 HCW (1983-now)

Current vaccination policies for healthcare workers : European mini-survey

▪ **Description of the program(1)**

- Vaccination : vaccine type & schedule :
 - Monovalent vaccine It, UK, CH
 - Bivalent vaccine Be, Fr,Lux

- Schedule
 - 0,1,6 All 6
 - 0,1,2,12 Be, UK, CH (if rapid response is needed for higher risk groups)



Current vaccination policies for healthcare workers : European mini-survey

▪ **Description of the program (2)**

▪ Pre-test screening for hepatitis B markers:

- No : Fr, It, Lux, CH
- Yes/no : Be, UK (EPP)

▪ Issues :

- What are the objectives of pre-test screening ?
- Which markers should be tested ?
- At what prevalence level of HBV markers is pre-testing justified ?
- Prevalence of anti-HBc in selected European countries ranges between 5 and 30% (Gunson et al;2003)
- Does testing make sense in already immunized cohorts ?



Current vaccination policies for healthcare workers : European mini-survey

▪Description of the program (3)

▪Post-vaccination testing : protective level

- 10 IU/l : Fr, It
- 10-100 IU/l : Be, UK
- 100 IU/l : CH

Post-vaccination testing : issues

- Objectives ?
- Which markers ?

Current vaccination policies for healthcare workers : European perspective

Occurrence of HBV infections in HCW through the analysis of serological markers of HBV infection

- Seroprevalence of of HBsAg in practising HCW ranges from 0.3 tot 3.0% in selected European countries (At,Fr, De, Gr, Is, It, Pt, Se)(Gunson et al;2003)
- In a study of 132 HCWs 5 (3.8%) non-responders showed evidence of HBV infection (De Schryver et al; in press)

Current vaccination policies for healthcare workers : European mini-survey

▪Description of the program(4)

▪Booster injections ?

▪Yes: Be, UK,

▪No : Fr, It, CH

Management non-responders :

-one additional dose: Be, It, Lux,

-other strategies : Fr, UK, CH

Current vaccination policies for healthcare workers : estimation of coverage :Belgium

Up to 1990 studies show low coverage rates in HCW

“traditional” health care workers : 40%

allied hospital workers: 25 %

IDEWE study (Vranckx et al; 2004)

Study in 21 general hospitals and one University Hospital in Flanders (Belgium)

n= 5068 HCW

Current vaccination policies for healthcare workers : estimation of vaccination coverage: Belgium

Hepatitis-B vaccination coverage, seroconversion and seroprotection in healthcare workers (Vranckx et al;2004)

Age	%vaccinated	%seroconverted	%seroprotected
<25y	77.5	73.0	71.4
25-34y	88.7	86.6	84.9
35-44y	84.0	80.6	78.8
45-54y	81.6	79.0	75.8
>55y	86.2	80.0	73.8
Total	84.9	82.0	80.0



Current vaccination policies for healthcare workers :estimation of vaccination coverage: Belgium

Vaccination by task (traditional versus allied HCW)(n=5041)

Job/task	% vaccinated
Administration	39.1
Nursing staff	94.8
Laboratory	97.3
Physiotherapy	85.4
Maintenance-technical	87.7
Catering	44.4
Not specified	77.4
Total	84.9

Current vaccination policies for healthcare workers : estimation of coverage : European mini-survey

- Published data
- Best estimate
- Belgium : 85% (2004)
- Fr (90%)
- Italy : 65% (1998)
- UK (85%)
- CH (95%)

Studies on vaccination status in HCWs having needlestick injuries could give interesting data for surveillance and monitoring

Current vaccination policies for healthcare workers : PubMed search(1)

Country	Year of study	Sample	Profession	% vaccinated	Reference
Belgium	1999	200	GP's	75	Michiels et al; 2000
France	2003		HCWs (non-medical)	80-100	Denis et al;2004
France	2003		Physicians in hospitals	55-100	Denis et al;2004
Germany	2000	3617	Medical	75	Borchert&
			Housekeeping	42	Horst-
			Other	21	Schaper;2001



Current vaccination policies for healthcare workers : PubMed search (2)

Country	Year of study	Sample	Profession	% vaccinated	Reference
UK	2001	78	GP's	95	Smith; 2004
		93	Nurses	96	
		81	Consultants	92	
		88	Comm nurs	91	
Turkey	2002	452	Nurses	72	Kosgeroglu et al;2003

Current vaccination policies for healthcare workers :studies in HCWs having needleprick

Country	Year of study	Sample	Profession	% vaccinated	Reference
Netherlands	2000	223	All HCWs	38	Caesar et al;2001
Netherlands	2003	98	All HCWs	17	Kidger-Koppelaar et al;2004

Current vaccination policies for healthcare workers :conclusions

- HBV vaccination policies for HCWs vary across countries of European Union
- Booster policies are not very well defined and seem to have different aims and objectives
- To monitor vaccination coverage, the follow-up of needlestick injuries seems attractive
- The objectives of serological testing pre/post-vaccination are not clearly defined



Current vaccination policies for healthcare workers

- Questions and Answers