



HProImmune

Promotion of Immunization for Health Professionals in Europe



ISSUE 04

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The Project

The Institute of Preventive Medicine Environmental and Occupational Health, Prolepsis, is coordinating a 3-year European project, which started on September 1, 2011. HProImmune is co-funded by the 2nd EU Public Health Program 2008-2013. The project aims to improve the existing knowledge on barriers concerning Health Care Workers (HCWs) immunization and develop educational material for health professionals as regards the immunizations they need to protect themselves, their families and their patients.



The HPROIMMUNE Project has received funding from the European Union / DG Health and Consumer Protection.



Executive
Agency for
Health and
Consumers

The online HProimmune survey

The basic aim of the online survey, launched in October 2012, was to identify barriers towards immunization for HCWs in Europe being part of the work undertaken by the partnership for Work Package 5 of the project. It was translated in 10 languages (English, German, Greek, Italian, Spanish, Portuguese, Romanian, Swedish, Lithuanian and French) and received over 5,500 responses from health professionals from 38 countries. The survey was designed by the partnership, in collaboration with the Advisory Board of the project.



Methodology

The questionnaire consisted of 14 questions and examined the risk perception of HCWs towards a number of communicable diseases of special interest for health professionals, their vaccination status during the past 10 years, reasons for being and not being immunized, and finally their attitudes towards obligatory vaccination. Demographic characteristics of the respondents, such as education, specialty, work setting, years of experience, gender, age, and country of employment, were also included so as to explore differentiated behavior among sub-groups.

The following diseases were included in the survey:

Influenza (flu), Tuberculosis, Measles, Mumps, Rubella (German measles), Meningitis, Varicella (chickenpox), Hepatitis A, Hepatitis B, Pneumococcal disease, Tetanus, Diphtheria, Pertussis (whooping cough).

The sample was adjusted using WHO weights by country and HCW specialty, so as to be representative with respect to the number of HCWs working in participant countries.

Participants (HCWs) characteristics

The 24.6% of the 5,553 respondents were medical doctors, 42.7% nurses and 32.8% allied health professionals. Note that this is one of the few available studies in the literature that the behavior of other personnel except physicians or nurses is recorded. The 59% of participants hold a postgraduate degree and 67% have more than 10 years experience in the field. 80.7% of the respondents were female, while there were a good number of representatives from all age groups in the range of 25-64.

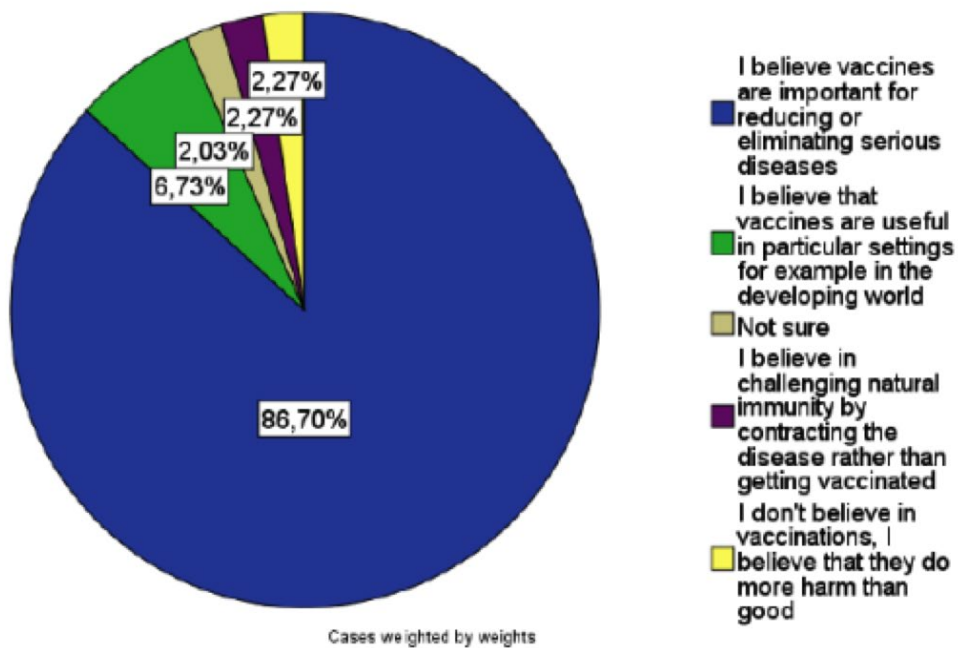
Table 1: Specialties of Health Care Workers (HCWs) participating in the study

Medical doctors (of total)	% 24.6	Nurses (of total)	% 42.7	Allied health professionals (of total)	% 32.8
General Practice, family medicine	42.0	Hospital nurse	28.0	Assistants / Aides (home health aides, orderlies)	33.5
Internal medicine specialty	19.4	Primary health care nurse	19.5	Administrative health care service personnel	20.9
Pediatric specialty	16.1	Nurse in other settings (home, outpatient clinic)	14.8	Physical, Occupational, Respiratory therapists	13.9
Surgical specialty	15.9	Public health nurse	13.3	Psychologists	5.6
Laboratory	6.6	Maternal health or school health nurse	8.4	Hospital epidemiologists	4.9
		Infection control nurse	6.1	Social workers	4.6
		Midwife or maternal health nurse	5.0	Laboratory Technicians	4.4
		Emergency department nurse	4.8	Support personnel (Food services, maintenance)	4.0
				Pharmacist	2.9
				Ambulance personnel	2.9
				Dental Hygienists	2.3

Main findings

The online survey showed that the overwhelming **majority (86.7%) of HCWs acknowledge the importance of vaccines and have a positive attitude towards vaccines.**

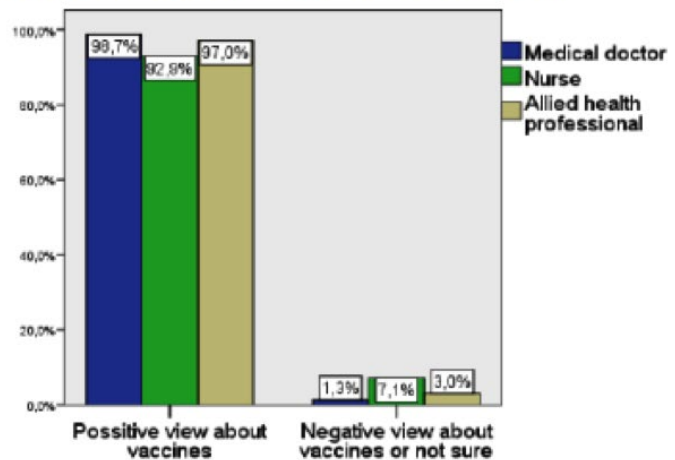
Which of the following statements do you feel that best reflects your personal view about vaccines-



Although all HCWs hold a positive view towards vaccination (positive rates above 90% in all sub-groups), physicians hold a more positive view compared to nurses (which have 7 times higher odds of not believing in vaccination) and allied health professionals (which have 3 times higher odds of not believing in vaccination).

Which of the following statements do you feel that best reflects your personal view about vaccines-II

Country	Positive view about vaccines	Negative view about vaccines or not sure
Sweden	96.9%	3.1%
Greece	97.0%	3.0%
Finland	98.4%	1.6%
Italy	90.4%	9.6%
Germany	93.9%	6.1%
Malta	100.0%	0.0%
Lithuania	98.0%	2.0%
Romania	98.3%	1.7%
Slovenia	32.1%	67.9%
Spain	97.3%	2.7%
Poland	95.9%	4.1%
UK	100.0%	
Cyprus	100.0%	
Ireland	100.0%	
Total	95.5%	4.5%

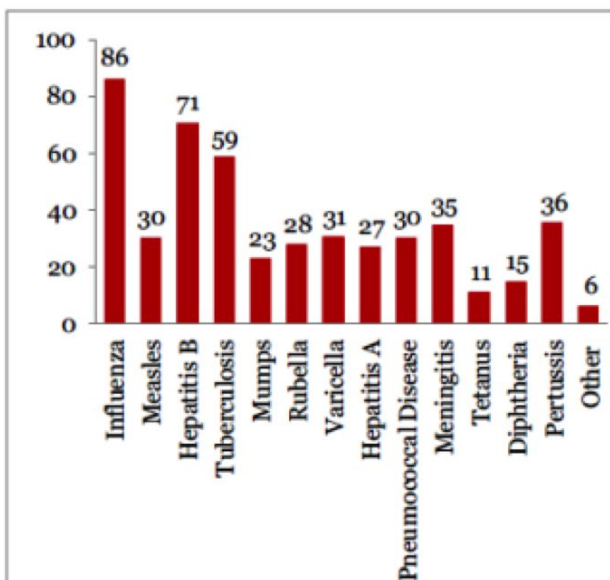


Logistic regression analyses:

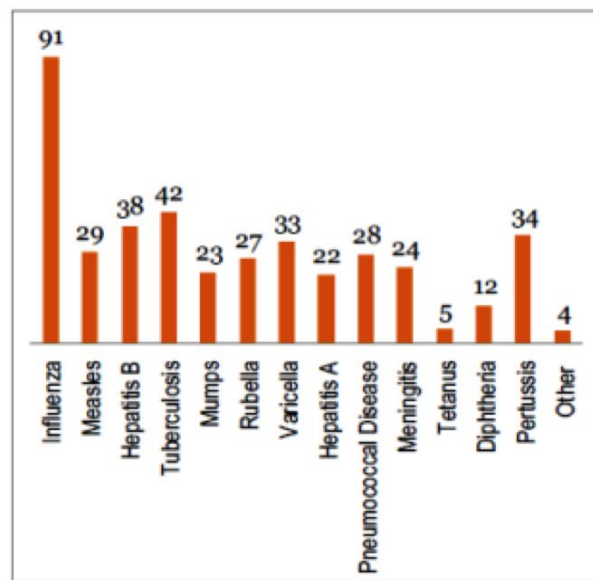
- The odds of not believing in vaccination for nurses are about 7 times the odds for medical doctors (OR=7.47, p-value<0.001).
- The odds of not believing in vaccination for allied health professionals are almost 3 times the corresponding odds for medical doctors (OR=2.93, p-value=0.003)

Health professionals recognize the risk of exposure to vaccine-preventable diseases during their work, resulting in subsequent exposure to their families and their vulnerable patients. Seasonal influenza, Hepatitis B and Tuberculosis, are the diseases that HCWs believe that they are most at risk of contracting and transmitting to their patients and their families.

Which of the following diseases do you believe that HCWs are more at risk of contracting due to the nature of their work?



Which of the following diseases do you believe that HCWs are more at risk of transmitting to patients and family?



Many health professionals are not up-to-date in their vaccination according to current recommendations. The majority of HCWs have not received vaccinations against MMR or varicella in the last 10 years, the same standing for Td vaccine in most of the participant countries. 56.2% of HCWs have received seasonal influenza vaccine during the last 10 years. It is alarming that in many countries, such as Sweden, Greece, Italy, Malta, Lithuania, Romania, Slovenia, Spain, Cyprus about half or more than half of HCWs have not received Hepatitis B vaccine.

Percentage of HCWs who have **not** received vaccination against VPDs in the last 10 years (by country and disease)

Country	Pink>50% Red>75%		MMR (mumps- measles- rubella vaccine)	Varicella (chickenpox) vaccine	Hepatitis B vaccine	Td or Tdap (adult tetanus, diphtheria and pertussis vaccine)
	Seasonal influenza (flu) vaccine	Pandemic influenza (swine flu) vaccine				
Sweden	63.9%	34.9%	84.4%	96.4%	48.4%	61.5%
Greece	57.5%	73.7%	82.6%	87.4%	48.5%	59.9%
Finland	34.1%	31.9%	69.2%	92.9%	37.4%	20.9%
Italy	53.3%	76.6%	90.6%	92.5%	50.8%	55.9%
Germany	45.2%	70.1%	60.9%	82.8%	24.2%	21.0%
Malta	40.0%	50.0%	80.0%	100.0%	50.0%	66.7%
Lithuania	52.0%	89.8%	94.0%	98.0%	70.0%	71.4%
Romania	43.0%	54.5%	95.3%	98.3%	48.5%	89.4%
Slovenia	79.3%	85.7%	96.6%	100.0%	64.3%	82.8%
Spain	49.5%	79.1%	76.6%	91.0%	47.3%	46.5%
Poland	35.0%	82.4%	93.9%	98.8%	25.4%	74.6%
UK	29.5%	51.6%	77.1%	99.0%	35.8%	56.8%
Cyprus	75.0%	87.5%	77.8%	88.9%	62.5%	50.0%
Ireland	40.6%	24.5%	77.4%	100.0%	43.4%	78.3%
Total	43.8%	65.6%	76.7%	91.6%	37.1%	47.4%

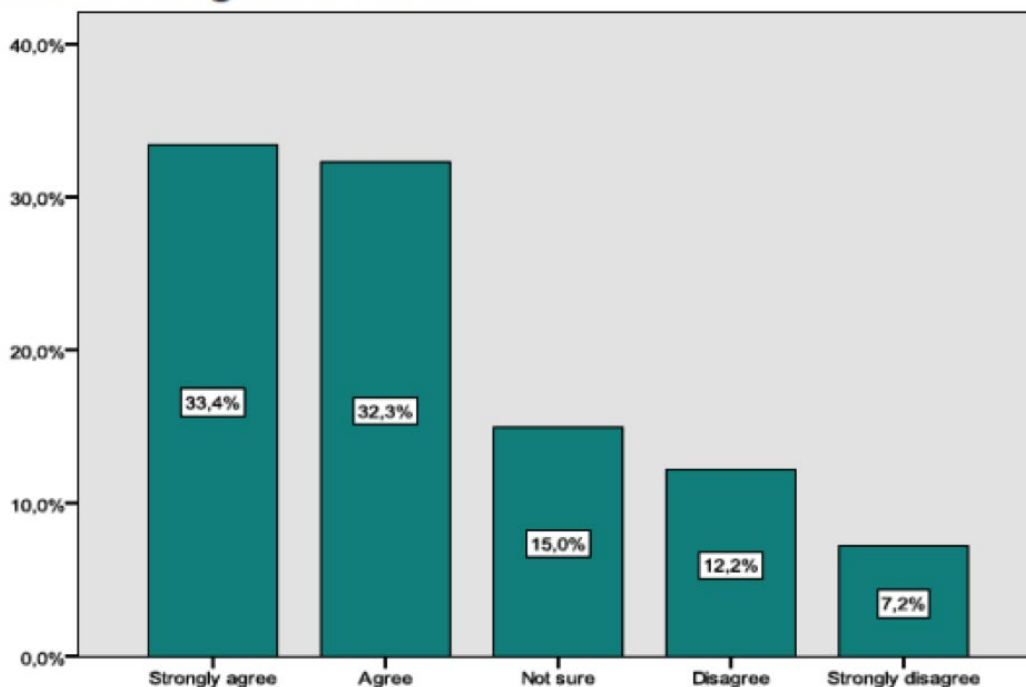
The main reasons for not receiving vaccination include concerns about vaccine side effects (short-term and long-term), not believing of being at risk of contracting these diseases, the employer/insurance does not cover vaccination costs, and for seasonal influenza the belief of challenging natural immunity by contracting the disease.

General perception about mandatory vaccination

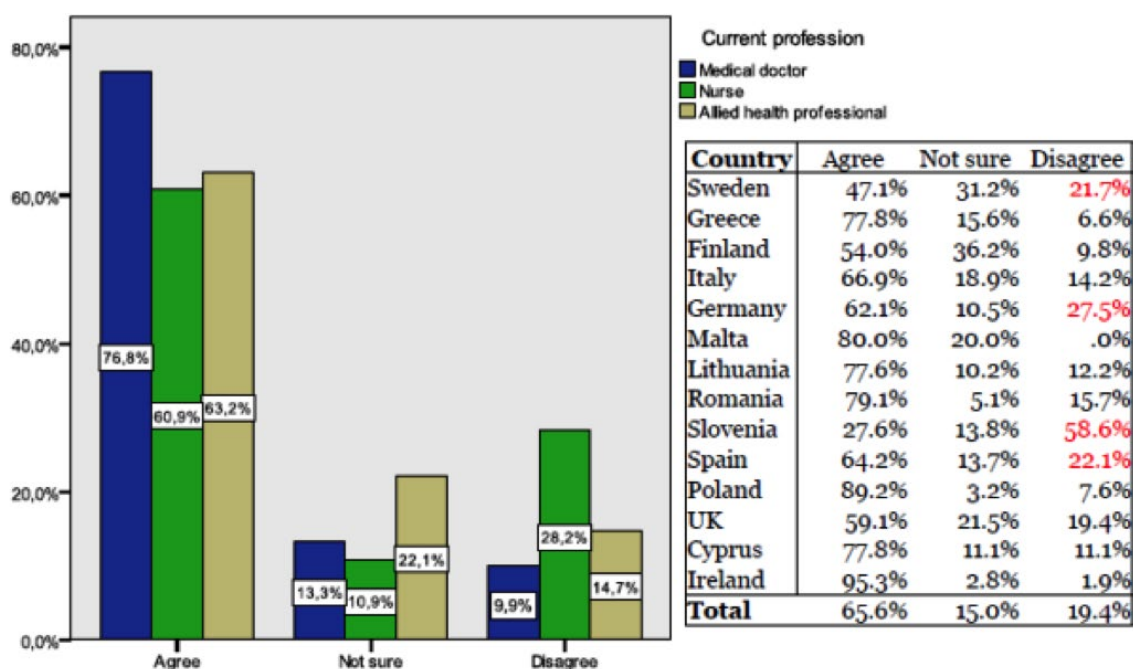
The **66%** of health professionals believe that certain vaccines should be mandatory for HCWs with clinical work. The significant majority of physicians (76.8%) believe that vaccination should be mandatory, whereas, the corresponding percentages are lower for nurses and other allied categories (60.9% and 63.2%).

There is considerable differentiation with respect to countries, so that the percentage of HCWs not believing in obligatory vaccination is elevated in Slovenia (58.6%), Germany (27.5%), Spain (22.1%) and Sweden (21.7%).

Do you think that it should be mandatory for HCWs who come in regular contact with patients to be vaccinated against VPDs?



Do you think that it should be mandatory for HCWs who come in regular contact with patients to be vaccinated against VPDs?



Concluding remarks

Although the majority of HCWs (87%) believe vaccines are important for reducing or eliminating serious diseases, the majority of them have not received vaccination against various serious diseases. The 66% of HCWs (physicians 77%) believe vaccination should be obligatory, which is an important message to all health policy makers. The responses vary considerably with respect to type of vaccine, country, profession and work setting.

Partnership

● Main Partner:

- Institute of Preventive Medicine, Environmental and Occupational Health, Prolepsis, Greece

● Associated Partners:

- National Institute of Infectious Diseases Prof Dr Matei Bals - Romania
- Nofer Institute of Occupational Medicine - Poland
- Mokymų Tyrimų ir Vystymo Centras Lithuania
- Istituto Superiore Di Sanità - Italy
- Fundatia Romtens - Romania
- Cyprus University of Technology Cyprus
- Technische Universität Dresden Germany
- National Hellenic Nurses Association - Greece
- Hellenic Center for Disease Control and Prevention - Greece



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