



**Report on the findings of the focus group
conducted in the seven countries**

2013

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Abstract

Background: Within the framework of the European project “Promoting immunizations for HCWs in Europe” HCWs’ attitudes, organisational and attitudinal barriers and enablers towards immunization were explored in Greece, Italy, Germany, Cyprus, Romania, Poland, and Lithuania to guide the development of a toolkit to increase vaccination coverage in HCWs.

Aim: The aim of the current research report is to summarize views, needs, barriers (triggers both organizational and attitudinal) and enablers of Healthcare workers towards immunization and vaccination in the seven countries.

Sample and method: The sample consisted of 282 HCWs. The convenience sample was recruited from hospitals and other settings from 7 countries. A focus group approach has been selected.

Results: the participants were knowledgeable about vaccinations and immunization. In general the HCWs of the sample have emphasized the importance of immunization and were favorable to their vaccination and that of the public. Many of them were familiar with the booster immunization program. The vast majority of the participants considered that HCWs belong to the high risk groups for acquiring a vaccine preventable disease. The main reasons given for not being vaccinated were: thinking it was not needed, concern about its effectiveness, delayed availability and distribution of influenza vaccines, lack of support regarding the provision of information on the benefits of immunisation, physicians do not recommend vaccination to their patients, lack of prevention strategies, lack of authorities’ commitment to vaccination, lack of accessibility to vaccines for the vulnerable population, different immunization schedule among the EU countries, lack of an expert in epidemiology in each hospital and the existence of an anti-vaccination movement after the experience of H1N1 pandemic in 2009. Some of the enablers for vaccination are the followings: the belief that the main perceived benefit of vaccination was personal and patient protection against influenza, perception that vaccination protects them and their families, educational programs and materials, the role of occupational physician as a key person for promoting vaccination, the existence of a National Seasonal Campaign, self awareness of HCWs for immunization and the role of the infection control personnel.

Conclusion: Targeted health education programmes should be developed to overcome misconceptions about influenza vaccination.

Keywords: immunization, influenza vaccination, healthcare workers

Introduction

Despite recommendations by the World Health Organization and Centres for Disease Control and Prevention (CDC and ECDC) that have been endorsed by many European countries, and the documented benefits for healthcare staff, vaccination coverage levels in healthcare staff remain unacceptably low.

Many studies have examined why healthcare staff do not receive an annual influenza vaccination. Some of the reasons are fear of injections, fear of vaccine side effects and especially influenza-like symptoms, busy schedules, fear of developing influenza, perceived lack of vaccine efficacy, opposition to vaccination in general, low personal risk of illness, avoidance of medications, lack of time and forgetting to get the vaccine.

Thus the in-depth exploration of the views, needs, barriers (triggers both organizational and attitudinal) and enablers of Healthcare workers (HCWs) is crucial for the development of a structured policy to increase vaccination coverage levels in healthcare staff.

Aim

The aim of the current research report is to summarize views, needs, barriers (triggers both organizational and attitudinal) and enablers of HCWs in the seven countries.

Sample and method

The sample consisted of 282 HCWs. The convenience sample was recruited from hospitals and other settings. Table 1 presents the composition of the sample across the seven countries.

The focus group approach was selected for data collection as it involves and uses group interaction to generate data. Before beginning the focus group interviews a questionnaire was administered to gather information about socio-demographics, and work experience of the participants. For most of them, the focus group offered a unique opportunity to express their feelings, to provide distinctive types of data and to clarify their attitudes to vaccination in a way that would be less easily accessible in a one-to-one interview. In some cases the one-to-one interview has been used.

Taking into consideration the need to guarantee validity and reliability in the collection of qualitative data, the focus group discussions were analysed in a continuous way, giving feedback to the participants for additional comments. The questions were open-ended, neutral, sensitive and well understood by the participants. All focus group interviews were recorded and transcribed verbatim.

Participants received an explanation of the purpose and aim of the study, and those who agreed to participate were asked to provide verbal consent. No personal identity information was documented and participants were informed that they had the right to withdraw from the study whenever they wished. The focus group interviews were completed between 2012 and 2013.

Results

Italy

1. Nurses and physicians

In Italy HCWs have emphasized the importance of immunization and were generally favorable to vaccination. However, all the participants agreed that the insufficient knowledge or incorrect information on the benefits of vaccination could explain the lack of vaccination awareness. Moreover, professionals with a lower educational level tended to trust the more competent colleagues and rely on them. In general training, communication and dissemination of information were considered essential, especially if these activities are carried out in an interactive way. In addition, they stressed that information on vaccination should be based on reliable and valid data as well to be individualized.

Both personal and family protection influence the decision to have the vaccine. In addition, previous personal experience of a vaccine preventable disease, in particular if complications were experienced, is considered to be cue to action that includes personal vaccination and vaccine recommendation to the others.

A suggestion for increasing vaccination coverage is to take advantage of the periodical medical examination/check up performed by the occupational physicians for promoting and administering vaccinations and to create a computerised vaccination registry.

2. Hospital administrators and infection control personnel

The more important VPDs mentioned by the participants were Hepatitis B and influenza. They considered themselves to be susceptible to a VPD. They believed that vaccination protects them from a VPD. Self protection seems to be a major predictor for getting the vaccine rather than the protection of the patients.

All the participants commented the need of promoting and increasing vaccination coverage among HCWs by providing friendly strategies and educational materials about the vaccines. Integrated campaigns, customized and based on twofold communication are deemed essential for the dissemination of reliable information among the HCWs.

REPORT OF FOCUS GROUPS RESULTS

Table 1: sample composition

| Target group | Italy | Germany | Greece | Cyprus | Romania | Poland | Lithuania |
|--|---------------|---------------|----------------|----------------|---------------|---------------|-------------|
| | FG (n) | FG (n) | FG (n) | FG (n) | FG (n) | FG (n) | FG (n) |
| Physicians | 3 (28) | 3 (11+3) | 4 (30) | 2 (12) | 1 (7) | 2 (18) | (4) |
| Nurses | | | 2 (19) | 2 (8) | 1 (8) | - | (7) |
| Administrative & Infection Control Personnel | 2 (21) | 2 (6) | 2 (11) | 4 (4)* | 2 (16) | 2 (9) | (11) |
| Public Health Personnel & Policy Makers | 1 (7) (**) | 1 (3) | 2 (2) (*) | 4 (4)* | 1 (8) | 2 (12) | 2 (13) |
| Total | 6 (56) | 6 (23) | 10 (62) | 12 (28) | 5 (39) | 6 (39) | (35) |

(*) Personal interviews

(**) The one FG was a face to face interview

For several participants immunization should be a pre-requisite for working in the health sector. There is a need to develop National Guidelines or protocols that could be easily implemented at local level, as well as to obtain the relevant budget.

The participants emphasized the role of the occupational physician as a key person for promoting vaccination and documenting the vaccination status of the healthcare workers.

3. Public Health Personnel and Policy Makers

All the participants believed that HCWs are in general at high risk for VPDs. In particular, for Hepatitis B, measles, mumps, rubella, flu and pertussis. In Italy, vaccination for HCWs is not mandatory except for tuberculosis which is compulsory for those HCWs at high risk for exposure to multidrug-resistant TB strains. Some participants did not consider compulsoriness as an efficient way for increasing vaccination coverage in general and for HCWs in particular. The development and implementation of national immunization campaigns is not considered for all the participants. Availability of information and statistical data on immunization is considered to be a need. The main enablers that emerged, are education/information, the implementation of National campaigns for the vaccination of HCWs, economic factors, legal and ethical aspects.

HCWs are often overwhelmed by scientific papers, leaflets or several forms of advertising that they do not read or consider. Workshops, congresses or meeting are the most effective way to exchange opinions with colleagues and to update knowledge. Moreover case-histories are considered very informative, sometimes more than any scientific meeting or congress.

Table 2 includes the main findings of focus groups as well as the comments of the participants.

Greece

1. Nurses

Greek nurses seem to constitute a rather heterogeneous target concerning their knowledge and beliefs about immunization as those aged <40 years-old were rather sensitized on vaccination and realized that they are at high risk as opposed to those >40 years-old. Hepatitis B vaccine is considered an important vaccine that protects from acquiring the disease. Nurses >40 years-old were not familiar with the booster immunization program. On the contrary those age <40 years old carried detailed knowledge due to personal sensitization. All participants reported that adult immunization protects from dangerous diseases and acknowledged the importance of early vaccination.

In Greece seasonal influenza vaccine is well known to them due to the annual National Campaign. Yet, participants reported a low level of compliance with influenza vaccination. Moreover, the existence of a National Campaign only for seasonal Influenza and not for other vaccine that are long-lasting and are also connected with dangerous diseases generate suspicions and cultivates feelings of insecurity that are related to the relationship between nurses and the market system.

Nurses reflected that HCWs immunization is an evidence of the willingness of the health care system to protect its employees from vaccine preventable diseases. They emphasized the absence of a formal well-organized plan for assuring HCWs immunization that should have been administered to all the hospitals of the country and could include both seasonal and long lasting vaccinations. Infection

Control personnel in each hospital is perceived as the focal point and the main person that is accountable for performing HCWs vaccination.

Nurses have identified several organizational barriers to vaccination such as: (1) lack of a structured and informal national plan for assuring HCWs immunization in all the hospitals, (2) lack of information and knowledge on adult/booster immunizations, (3) difficulties faced by the HCWs concerning the supply of adult/booster vaccines: relating to the prescription of vaccines in the hospitals, economic barriers due to the need of purchasing the vaccine. The attitudinal barriers concerning HCWs' immunizations were the following: (1) lack of sensitization on preventive initiatives, such as immunizations (2) lack of knowledge of the potential of the transmission of the disease to the patients, (3) overall belief that HCWs are well "armored" against diseases, (4) underestimation of personal hygiene measures in order to protect their selves and patients, (5) work pressure and overload, (6) self-protection and protection of patients are not directly connected with the relative disease, (7) doubts about the effectiveness of the vaccine (new and not well-tested), (8) lack of knowledge and information about its side-effects, (9) *Scapegoat*" for the absence of information and knowledge provided to HCWs about adult/booster vaccines that are related to HCWs' high risk exposure to infectious diseases, such as Hepatitis B.

On the other hand the attitudinal enablers concerning HCWs' immunizations were the following: self sensitization of HCWs on immunizations, HCWs' higher sensitization on Hepatitis B vaccine, perception that the uptake of seasonal Influenza vaccine that enhances HCWs' immunizations is related to the protection of their family-children or/and elder people. The organizational enablers concerning HCWs' immunizations were the following: Dynamic action of infection control personnel on HCWs' immunization (Keeps personal immunization records of hospitals' employees, informs HCWs' about all kind of immunization -seasonal, booster, pandemic- through door-to-door visits in each clinic of the hospital, reminds HCWs the time for immunizations repetition), door-to-door practice (overcomes the barrier of HCWs' work pressure & overload) and direct communication that promotes a sense of "caring" for the employees.

2. Physician

Immunization is a widely accepted practice for Greek physicians that is enhanced through their studies. The importance of Hepatitis B vaccine is highly recognized by the physicians, since it is connected with a very risky infectious disease that could affect them. Moreover, Hepatitis B is the most common occupational risk mainly after a needle stick injury. Physicians commented that both Hepatitis B vaccine and the testing of the HBV antibodies should be provided to all the physicians from the beginning of their studies. Physicians indicated their rather controversial stance towards seasonal Influenza vaccine and relatively low level of compliance despite the fact that it is the only vaccine provided to them annually for free, through the National Campaign.

The lack of information and knowledge concerning booster immunizations is a barrier for getting the vaccine with the exception of pediatricians who have an extended knowledge on the issue due to their specialization.

Regarding the ways through which physicians are getting informed of the immunization the participants have mentioned that they personally conduct a literature review on specific vaccines. They considered Hellenic Centre for Diseases Control and Prevention as the efficient and official agency regarding the provision of information for HCWs' immunizations.

According to the Greek physicians the main barriers of HCWs immunization are categorized in: (1) Organizational: Lack of a consistent organizational infrastructure and clinical practice concerning HCWs' immunizations in all the hospitals of the country to establish specific regulations, lack of knowledge and information provided to physicians about adult/booster vaccinations. As a result physicians neglect the issue of information and knowledge concerning immunizations. Belief that immunization is the responsibility of paediatricians and epidemiologists. (2) Attitudinal: HCWs' immunization is not a personal issue but an issue that the health care system should take care of. Additionally, work pressure & overload, the belief that seasonal influenza is not perceived as a high risk infectious disease compared to other diseases, such as Hepatitis B, uncertainty about the effectiveness of the vaccine.

3. Administration & Infection Control personnel

The infrastructures that are accountable for HCWs' immunizations are the Infection Control Office in each hospital and the Occupational Health Office, although in Greece Occupational Health offices do not exist in all the hospitals. The excess sensitization of the Administration and Infection Control personnel on the importance of Hepatitis B vaccination for the HCWs is linked with the high risk of occupational exposure to that infectious agent. As a result the protection of HCWs against Hepatitis B by getting the vaccine is considered rather essential.

The awareness of the Administration and Infection control personnel towards Seasonal & Epidemic Influenza is attributed to the experience obtained from the H1N1 epidemic, although there are major concerns about the safety of the vaccine due to the side effects. The Administration and Infection Control personnel considered there is a lack of adequate information and knowledge concerning booster immunizations.

The organizational barriers of HCWs' immunizations were the followings: lack of National Campaigns/official initiatives concerning HCWs' immunizations – existence only of the epidemic and seasonal Influenza's National Campaigns, lack of knowledge and information provided to Infection Control personnel by official bodies about HCWs' vaccinations, lack of Infection Control personnel's initiatives or spontaneous initiatives on HCWs' immunization, lack of available vaccines, difficulties faced by HCWs concerning the delivery of vaccines (not prescribed in the hospital and financial difficulties, since the cost of the vaccines is not covered by the hospital and not always covered by HCWs' insurance)

The attitudinal barriers of HCWs' immunizations were the followings: HCWs' work pressure and overload, overall sense that HCWs are well "armored" against diseases, HCWs' lack of sensitization on the fact that immunizations are not only connected to the self-protection but also to the protection of patients and the whole society; lack of specific knowledge and information concerning adult/booster immunizations, HCWs' belief that seasonal influenza is a low-risk disease, self-protection

and protection of patients against seasonal Influenza is not directly connected with the relative vaccine, seasonal Influenza vaccine's main competitor is the mask and the specific knowledge that HCWs carry due to their occupation concerning safety measures against risks connected with the transition of diseases, lack of knowledge, information and sensitization on their responsibility for patients' protection against seasonal Influenza.

The main organizational enablers of HCWs' immunizations were: Door-to-door practice (enhance HCWs' sense that the "system is taking care of them"), HCWs' work pressure & overload, HCWs' knowledge & information gap concerning immunizations. The main attitudinal enablers of HCWs' immunizations were: the sensitization of HCWs on Hepatitis B vaccine. Regarding seasonal Influenza vaccine protection of HCWs' family members, such as children and older people is a rather strong trigger

4. Policy Makers & Public Health Personnel

Policy Makers & Public Health Personnel argued on the importance of booster immunizations in general. They have also paid greater attention of seasonal Influenza vaccine in comparison to booster immunizations. Consequently, great emphasis has been given to the promotion of HCWs' seasonal Influenza vaccinations and there is launch of a relative National Campaign annually. According to them HCWs who work in hospitals are at higher risk for acquiring a VPD than private physicians.

According to the policy makers & public health personnel the main Organizational barriers are the followings: lack of a formal framework -Law- concerning HCWs' immunizations, lack of knowledge and information provided to each hospital by official bodies about HCWs' immunizations with the exception of seasonal Influenza vaccine due to National Campaign, difficulties faced by HCWs concerning the delivery of vaccines in the each hospital.

The attitudinal barriers are: the overall sense that HCWs are well "armored" against diseases, lack of sensitization on the fact that immunizations are not only connected to self-protection but also to the protection of patients and whole society, Greek doctors' and nurses' lack of a prevention culture, anti-vaccination movement, which is followed by rejection of immunizations in general, HCWs consideration that seasonal influenza is a low risk disease as far as their self-protection is concerned compared to Hepatitis B, misconceptions related to the safety of the seasonal Influenza vaccine that generate fear of the seasonal Influenza vaccine and the role of the physicians as opinion leaders in order to restore the truth concerning the safety of the specific vaccine.

The enablers of HCWs' immunization were bipolar: attitudinal (personal sensitization of HCWs) and organizational (sensitization, initiatives and dynamic action of Infection Control personnel in each hospital).

Cyprus

Generally HCWs were very positive regarding vaccination and they strongly agreed with the vaccinations, since according to them vaccines protect HCWs. Vaccines provide high degree of protection not only to HCWs and the patients but also to the general population.

All HCWs at Health Care premises must be vaccinated since they are at high risk to get sick and also they should be convinced that with vaccines they will not 'get' the disease and moreover they not 'give' the disease. HCWs are at higher risk for the listed vaccine preventable diseases than the general population. HCWs who work at the 'front line' are at high risk as the other HCWs who have close conduct with large number of patients. The most dangerous vaccine preventable diseases from the list provided are Hepatitis A and B, Tuberculosis and Pneumococcal disease. The HCWs are at greater risk for the Influenza, Tuberculosis, the Meningitis, and the Varicella disease. The majority of HCWs claimed that they are not sure whether the vaccine for the seasonal influenza is useful. Despite that the seasonal influenza vaccine is generally done by the majority of HCWs. They have many doubts about the influenza vaccine. Moreover, many HCWs do not consider that Influenza is a serious disease. Thus they have reported that Seasonal influenza vaccine is not important at all. That group of HCWs was actually very negative to the Seasonal Influenza vaccine to the HCWs. On the contrary that group of HCWs was very positive about the Hepatitis and Tetanus vaccine.

HCWs are also at risk especially when patients do not report that they have a transmitted disease. Usually HCWs use the safety regulations and thus they are to some extent protected. Sometimes patients do not know if they have a transmitted disease. On the one hand vaccines protect the HCWs but on the other hand HCWs have to protect themselves such as preventing accidents with used needles.

HCWs should be free to decide whether to make the vaccines or not and afterward to be fully responsible if they get any transmitted disease. HCWs should be vaccinated but it should be up to the individual to decide whether to make the vaccines or not. Information would be the stronger instrument despite the fact that it is not always that the case and HCWs end to have misinformation. Information is very important topic. Misinformation is vital issue at Cyprus. Prevention is the best treatment. HCWs lack awareness and many HCWs have ignorance about the benefits of the vaccinations may be because they have not pay any special attention to the utility of the vaccines and have not been correctly informed. HCWs need to be more informed about vaccines. Lately some HCWs have changed their positive opinion about vaccines. They become more negative about vaccines as time pass. In reality some HCWs are not convinced 'what' a vaccine does. Some of them have commented "vaccines are 'inserted' into our bodies without knowing if our bodies' immune system is 'ready' to 'accept' or to 'receive' the vaccine".

From all the media a huge awareness campaign was organized which had great positive impact on the general population. At that time also very negative comments were published about the negative side effects of the vaccine claiming that such a new vaccine should not be used. People were confused. At hospitals not all vaccines are for free. Some of the vaccines are very expensive. That can be a strong barrier. Some of the vaccines are not available at the governmental hospitals. The strongest barrier for vaccinations is most often the vaccines' cost and people's ignorance and neglectfulness. Some HCWs do not agree that the cost is the strongest barrier. In the past the strongest barrier was ignorance. Information and awareness campaigns should start from the school age.

At the governmental sector in each hospital there is an Infection Department with only one nurse as a staff. That nurse should take care of all the HCWs and the general population as well. That is

practically impossible thus it was strongly suggested to support and upgrade the Infections Departments. Media should not announce medical news after adjusting them in such way to be 'attractive' or 'interested'. The media's approach is unacceptable and it occurs almost on daily base. Law should be developed as soon as possible. A medical scientist or expert in the area should be the one either to present the 'case' or at least to 'approve' what will be announced. A national program is needed for the HCWs vaccines. Guidelines are needed and national plan is a necessity and thus should be developed as soon as possible. HCWs need urgently a National plan. The Health care Policy maker should 'place' HCWs at the right 'track'. The current situation will change with the development of a national strategy. Seminars about vaccines should be done to remind HCWs and to sensitize them to start making check-ups.

Lack of time was mentioned as the strongest barrier, HCWs believe that they do not need the vaccines. Many of them do not get the vaccines because of ignorance of the benefits. A national program and regulation should be developed for compulsory vaccination of the HCWs. A strategy should be developed for the HCWs to oblige them to do the compulsory vaccines. No more seminars are needed for the HCWs since they know everything about vaccines. They only need a law to force them to get the vaccines otherwise they will not get them. Laws would be very effectual.

Lithuania

1. Nurses and physicians

All HCWs recommend vaccination for the children. Especially paediatricians promote immunization of children. Paediatricians and nurses get an incentive for every immunized child from the National Insurance Fund. The participants of the focus groups have mentioned the following vaccines for adults: vaccine against Hepatitis B is necessary to prevent transmission through blood; the TB vaccine is not available to the adults, vaccine against HPV is provided only for young people. Revaccination against diphtheria should be done once every 10 years; vaccination against encephalitis is quite important for certain population groups; re-vaccination against tetanus should be done; vaccination against flu is available but many people are in doubt about it. Vaccination coverage of general population against tetanus and diphtheria is low and the same pattern applies to HCWs as well. The vaccines against encephalitis and Papiloma virus are quite expensive.

All HCWs are undoubtedly exposed to infectious diseases compared to the general population. HCWs could be classified into several groups according to their daily practice and exposure to several risk factors. One group could be professionals who have a direct contact with blood during their routine daily working tasks (obstetrician-gynaecologists, surgeons etc). Most frequently they are exposed to Hepatitis B. The second group includes the other workers in the health care sector, who are exposed to viral and other infectious diseases via the respiratory system (flu), such as health administrators, nurses, family physicians, laboratory workers etc.

In general, HCWs still believe that the only effective preventive measure against infectious diseases is vaccination. The negative attitude towards vaccination is a personal norm and there is no space for discussion. A lot of negative information about vaccination is provided in the mass-media. There is a need to inform and convince journalists about the benefits of vaccination given that they

disseminate a lot of negative information about vaccinations and physicians. A general comment of the participants was that during the pandemic several years ago, a very bad practice with too late vaccination has significantly ruined the reputation and reliability of immunization in general. This event has significantly ruined the reputation and reliability of immunization in general.

One of the barriers for immunization both for HCWs and the general public is the financial burden due to vaccine costs in case they are not provided for free. Municipalities lack competency to work with immunization issues in general public.

Everybody agrees that information campaigns are important. However the participants recall in their mind information campaigns provided by representatives of pharmaceutical companies. A separate programme could be developed regarding re-vaccinations from whooping cough, tetanus, diphtheria. A separate financial inducement for professionals for provision of immunization services could be introduced as it is in the case with children immunizations.

2. Administrative and infection Control personnel

Working in the healthcare sector is considered risky as regards the risk to get contagious diseases at work. At the highest risk remain professionals who have a direct contact with blood. Additionally they are exposed to viral infections and other wide variety of infections transmitted by patients. The most serious infectious diseases are: Hep B, Hep C, HIV, other bloodborn infections, influenza as well as infections from pathogens that are resistant to antibiotics

The general population lacks medical information on immunization against infectious diseases. There are HCWs, who are not interested in medical updates as well and are behind contemporary knowledge and do not recommend vaccinations to their patients and do not get vaccinated themselves. There is also a reduced access to vaccines in Vilnius attributed to the fact that there was an immunization unit at Lithuanian Communicable Diseases and AIDS centre in Vilnius that has been closed. As a result the general population should visit the GPs to get the vaccines. This creates additional workload for the GPs who are overloaded with their daily activities.

The absence of immunization campaigns either on a national or on a regional level has been reported from all the participants. In general more reliable information on the benefits of immunization should be produced and distributed by the public health centres. There is a mandatory reporting system for vaccinations and side effects. The facilities are reporting in unified way a number of vaccinations (children and adults groups, diseases and types of vaccines) on a monthly basis to territorial public health centre. The information related to the number of immunized staff is reported to regional public health centre and they forwarded the information to National communicable diseases and AIDS control and prevention centre.

Poland

1. Nurses and physicians

There was a negative attitude towards vaccination. The main reason is that although two years ago the sanitary-epidemiological agency has informed that vaccination would be for free, in fact, the vaccines have never come in December, even in January. It came at the end of February, and almost

everyone who earlier has requested the vaccination, resigned. A proportion of the participants got the vaccine on their own. Furthermore the participants have commented the lack of immunity tests after the vaccination.

The benefits of vaccination are the reduced number of sick leaves, and the fact that vaccines are cheaper than later compensation.

There was a gap in the percentages of the vaccinated healthcare professional as 95% of the nurses are vaccinated, as opposed to 50% of the physicians.

The main barriers-triggers for vaccination are the following: People are getting sick after vaccination, financial issues (if employer refund total price of vaccine almost 98% people would be vaccinated), the provision of information from the Media without the supervision of a physician, carelessness among physicians, lack of awareness concerning vaccination, keeping vaccine in bad conditions (problem with storage of these vaccines), fear of vaccines, wrong Act concerning MP, cooperation between MP physicians and employers, too many duties and heavy workload among physicians, lack of the knowledge of the law (there were changes in regulations concerning documentation regulations have changed recently), lack of training among physicians, lack of education, preventive actions after working hours is not welcomed from the employees, lack of information concerning healthy life, hard to find information where vaccination takes place.

The main enablers are the perception of the right path for getting the vaccine and trainings for nurses and physicians.

2. Policy Makers & Public Health Personnel

The policy makers and the public health personal have expressed some speculations regarding the storage and the conditions of vaccines' distribution. There is a lack of "health" culture and lack of information concerning vaccination among employers. The distribution of the vaccine and vaccination from the physician in the same place is preferred. The common practice is the division of finance and division of responsibility for vaccination. Social-economic studies as well as studies exploring the factors that correlate with vaccine uptake are useful in order to focus of them and develop a strategic framework for vaccination. The paradigms of the policies in the neighboring countries combined with the comments of the experts in that field are also important.

The benefit from vaccination is the decreased absenteeism.

3. Administration & Infection Control personnel

There are some vaccines, which most people consider to be necessary (i.e. vaccine against tetanus and hepatitis). Vaccination as a common practice cannot be generalized due to the individuality of the needs of each person. Flu and the flu vaccine are controversial due to the lack of specialized education.

There is a differentiation in the needs of people. Besides physicians from several specialties have a different view of the vaccination issue. Thus it is crucial to empower the experienced physicians to transfer their expertise to the others.

The benefit from vaccination is the decreased absenteeism.

The main barriers – triggers are the following: hard to persuade people to get the flu vaccine, lack of education, the role of Media as an opinion-forming means, lack of awareness regarding vaccination, the dependence of Medical market on financial resources, financial barriers, lack of physicians' accountability relating to vaccination, lack of prevention strategies and lack of authorities commitment.

The main enablers are: the construction of an internet portal in which everyone could log on and fill in questionnaires, the protection of anonymity, the conduction of surveys in separate groups and the vaccine uptake in the workplace.

Romania

1. Nurses and physicians

Nurses have been the most enthusiastic; they know the procedures, better than the physicians; they perceive the importance of immunizing the population and especially the HCWs. The physicians are responsible for vaccination. The nurses and the physicians highlighted the followings: transparency, communication of the national strategy regarding immunization and coverage of migrant population or particular population groups at risk are poor, especially those who live in isolated geographical areas. The budget for the vaccines, the information about pharmacy vigilance and the vaccination schemes are low. The use of communication tools to enhance the benefits of immunization is sparse. The physicians have a positive attitude regarding vaccination. There is inconsistency/ambiguity regarding the National Immunization Program (not very clear, coherent ideas about what type of vaccines should be in the National Immunization Program). There are different immunization schemes among EU – the national calendar is not updated in real time, some of the so called important vaccinations are not yet in the National Immunization Program (i.e Anti pneumococcal, rotavirus and HPV vaccination).

There is limited age coverage (only children 0-1 year old age), population at risk are not covered in the National Immunization Program (i.e older age for influenza, different type of professionals including HCWs, some other specific vaccines, etc.). The budget is under financing constraints. There are also some difficulties in reporting on immunization (both to SIUI and to the RENV); difficulties in validating performed immunizations (especially for the children 0-6 month)/ lack of compatibility of software used in PHC with SIUI/ software of the RENV.

There is a need to: take informed and evidence based decisions, including local context information and data relating to updating national vaccination schedule, assure access to scientific international databases, to reengineer the system that collects data regarding immunization (National Electronic Register for Child Immunization), increase the number of studies published in the local context / health services research, to assure the adequate budget for National Immunization Program and to create an eligible institution empowered to communicate about prevention and vaccination benefits.

Some of the barriers – triggers are: the lack of communication regarding the vaccination benefits to the general public, the under finance of the National Immunization Program, the lack of communication regarding the vaccination benefits to the general public, the lack of information, training, the lack of knowledge or adequate information about disease exposure, the lack of time, lack

of money, lack of commitment of personnel compulsory HCWs' vaccinations and lack of a expert in epidemiology in each institution. Attitudinal related barriers are fear of side effects, beliefs that they are not at risk of getting flu.

2. Public Health Personnel and Policy Makers

Public Health Personnel and Policy Makers shared similar views regarding immunization, with nurses and physicians.

Germany

1. Nurses and physicians

For the HCWs vaccination is of high importance as it protects not only themselves but also their families. They perceived a lack of knowledge and disinterest among the population (many parents decide that their children should not get vaccinated). Vaccinations are rational for certain groups (elderly patients, patients with diabetes and other immunodeficiency diseases). A lot of people are hostile to vaccinations. In many cases there is a skepticism regarding vaccinations against influenza and a lack of risk awareness. The attitude of HCWs does not differ from that of the general population. The implementation of mandatory immunizations is controversially discussed. There is also a societal consensus regarding immunizations. The use of reminder for vaccinations is welcomed from the HCWs. The Media do not promote vaccination in an effective way. Physicians have to be confident of vaccinations.

The benefit of vaccination is the protection against the diseases and as a result the improvement of populations' health.

The barriers-triggers of vaccination are the following: pseudo-knowledge / lack of knowledge, lack of risk awareness, the attitudes of paediatricians and general practitioners towards vaccination, the way vaccination is presented in the mass media, fear of injections/needles, financial barriers and lack of time, doubt about the efficacy of the vaccination.

The enablers of vaccination are the attitude of general practitioners and pediatricians and the role of mass media.

2. Policy Makers & Public Health Personnel

Vaccination is considered to be important for policy makers and public health personnel. They stressed that there is lack of knowledge/disinterest regarding vaccinations of HCWs. Physicians and general practitioners need more education regarding vaccination. The vaccination should be mandatory. The extent use of reminders/checks and vaccination card is important.

REPORT OF FOCUS GROUPS RESULTS

Table 2: HCWs focus groups

| Professionals | Topic | Country | | Example of transcribed verbatim |
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| <p>Nurses and physicians</p> | <p>1. Views</p> | <p>Italy</p> | <p>The more common vaccines</p> <ul style="list-style-type: none"> - for HCWs: Hepatitis B, influenza, pandemic H1N1 virus, tuberculosis, varicella - for patients and general population (especially pediatric population): hepatitis b, exanthematic diseases, influenza, pandemic H1N1 virus, HPV, tuberculosis, rubella, measles, mumps, Meningococcal, Pneumococcal, varicella <p>Lack of information for the benefits of vaccination</p> | <p><i>"I believe that there is not a substantial difference on this field between general population and HCWs. It is a so complex matter that my colleague medical doctor, has not a different perception than the person working on the street"</i></p> <p><i>"Few information on vaccinations issue"</i></p> <p><i>"There is a big problem on information"</i></p> <p><i>"Above all, there is ignorance"</i></p> <p><i>"If the HCW is not a specialist, he is not more educated than ordinary people"</i></p> <p><i>"It's well known that the risk of contracting hepatitis for people working no-stop in the operating room is very high and continuous, but how many HCWs are vaccinated?"</i></p> <p><i>"In a situation where health workers are working in emergency room, visiting 40 people every day, maybe in a crowded room, they should be immunized against influenza."</i></p> <p><i>"Vaccination against measles is not only to protect the patient, but also to protect the health worker"</i></p> <p><i>"The event of the H1N1 pandemic has obliged the health care workers, for the first time, to consider a new vaccination. From an epidemiological point of</i></p> |
| | | | <p>They perceive their vulnerability to VPDs</p> | |
| <p>Hospital administrators and infection control personnel</p> | | | | |

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| Public Health Personnel and Policy Makers | | | In general, according to the policy makers, in Italy national health communication activities or campaigns have been implemented for the general population, while for HCWs such activities have been conducted only at a local level | view the risk was irrelevant " ""There is none of those campaigns" "I don't remember any national education campaign targeted to HCWs except for the last influenza pandemic" "Some region implemented few programs" |
| Nurses and physicians | 2. Needs and benefits | Italy | The need of specific information about the different vaccines, as well as the importance of vaccination in the prevention and health protection Need of reliable data on VPDs incidence, vaccination coverage, incidence of sequelae, of gaining knowledge e.g. through specific seminars and toolkits, of appropriate premises for administering vaccination in hospitals The main benefits include protection of both HCWs and patients | "I work in an emergency room but I don't wear gloves or mask all the time because it is difficult to work wearing them, therefore I prefer to vaccinate myself because I can be a possible source of infection, rather than vaccinate my children" "This year I think I'll get vaccinated against flu because I can't afford a long sick leave neither from a family nor from a working point of view" "We are on the battlefield, in direct contact with patients, sometimes we work in critical situations with immune-suppressed patients and perhaps we should pay more attention" "It may happen to assist a not very severe patient but he can get worse because we are vehicle of viral infection" "I think HCWs should be vaccinated in general and for flu in particular, not for their safety but for patients' safety, especially those with chronic diseases. Often people come into the hospital for a reason and die due to our fault" "Vaccinations are a good way of protecting patients" "The health worker must also be vaccinated to prevent transmitting diseases to patients within the health care setting" |
| Hospital administrators and infection control personnel Public Health Personnel and Policy Makers | | Italy | Participants considered vaccinations a good way of protecting HCWs and patients Appropriate communication strategies and education activities Availability of information Availability of statistical data Shared strategies for promoting HCWs vaccination at national level, for disseminating scientific evidences and for logistic should | "It should not be a kind of quick promotion via slogans, targeted to the general population. The communication should be tailored to suit the HCWs; the advice should be a summary of the scientific evidences. It should be a three-page document |

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| | | | <p>be developed and supported by a financial investment</p> | <p><i>annexed to national vaccination plan explaining in short, specific issues (i.e. thimerosal, etc.). It should have the same strength, credibility, ability to persuade, of the original documents but it should be clear and concise "</i></p> <p><i>"We should find a way to tailor the information to the target. My question is: why should I be vaccinated? I need to be convinced of the benefit-risk ratio "</i></p> <p><i>"I was practically forced to get the vaccine to enter to the university. Then after studying and reading in literature, we discovered that the vaccine could cause multiple sclerosis, it could be a trigger for the disease. "</i></p> <p><i>"People strongly perceive the economic interest and business behind pharmaceutical companies and this creates a strong distrust"</i></p> <p><i>"I believe that all HCWs consult the internet encyclopaedia searching description of vaccines, contraindications, composition and information looking for a confirmation of the news published in the newspapers</i></p> <p><i>"In my opinion, overestimating or underestimating vaccines a priori is incorrect. On the contrary, it is good to obtain high-quality information and statistic data"</i></p> <p><i>"It is more productive to actively promote vaccinations, provide scientific information and not just opinions"</i></p> |
| <p>Nurses and physicians</p> | <p>3. Barriers - triggers</p> | <p>Italy</p> | <p>Risk perception influences the attitudes towards vaccination in several ways. Several times HCWs do not feel at risk of contracting diseases.</p> <p>The risk perception seems to be lower with vaccines defined as "historical" (such as DTP vaccine) rather than with the influenza vaccine, considered the most dangerous and less effective.</p> <p>The safety of the vaccine appears to be fundamental in the choice of vaccination.</p> <p>Generally, the risk perception influences the attitudes towards vaccination in different ways. It has been pointed out several times that the HCW does not feel at risk of contracting diseases.</p> <p>The lack of trust, sometimes the absolute mistrust, and low credibility in government institutions and in controllers were important variables in the decision to get or not vaccination.</p> <p>Participants also complained about the lack of transparency of the drug control agencies.</p> <p>One of the most problematic aspects mentioned was the lack of information and knowledge about vaccines. The participants argued that HCWs often do not have adequate information and emphasized that there is no complete information on vaccines, for example in terms of positive effects and possible adverse effects.</p> <p>Some argued that the lack of knowledge and understanding may result in an attitude of mistrust and lack of confidence in vaccination. In contrast, others argued that a greater knowledge may adversely affect the behaviour.</p> | <p>Some participants emphasized that HCWs have a low disease risk perception. Moreover, participants highlighted that people and</p> |
| <p>Hospital administrators and</p> | | | | <p><i>"The risk perception is low"</i></p> <p><i>"Indeed, their risk perception [...] is almost</i></p> |

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| <p>infection control personnel</p> | | | <p>HCWs in particular, do not seek advice concerning vaccination or just few of them. Trust in the Institutions, both National and International, seem to be very low. Diffidence against pharmaceutical industry is often reported Lack of or incorrect information is considered the most frequent cause of low compliance to vaccination among health care workers.</p> | <p>nonexistent." "Yes, it is low regarding themselves. People ask more in favour of a relative, but not on themselves" "I'm a doctor,... I don't get sick I don't seek advice.. I don't want to risk an anaphylactic shock..." "Health care workers lack information about the vaccine preventable diseases against which they should be immunized" "...in my opinion HCWs are not motivated to find information for better understanding..." "Fear must be tackled trying to explain the reasons behind the fear.. " "Information should be substantiated and updated, because all of us have heard about vaccine and autism, but not all of us know that this link has not been demonstrated". "I agree that more than the ignorance the real obstacle to HCWs immunization is a presumed knowledge"</p> |
| <p>Public Health Personnel and Policy Makers</p> | | | <p>Lack of communication; participants think that people is often confused by inconsistent or missing information published and disseminated Too complex messages are considered an obstacle for a correct information about vaccination Lack of educational activities and information Lack of national guidance</p> | <p>"I think, on a hand, no one reads that documentation. On the other hand, the institutions do not know how to promote vaccination. The new National Vaccination Plan was approved in March 2012 but it was not properly disseminated: no press conferences or press releases were prepared" "Pandemic has been a crucial event: communication problems and incorrect information played a relevant role in the failure of the vaccination campaign " "Unfortunately, the risk of contracting hepatitis B is real. There is a real risk of transmitting it to patients" "I trust him as a doctor" "I would ask to a colleague whom I trust" "I ask the infectious diseases expert because I trust him" "During my pregnancy I asked to the gynaecologist</p> |
| <p>Nurses and physicians</p> | <p>4. Enablers</p> | <p>Italy</p> | <p>Self-protection and the protection of patients were identified not only as needs but also as motivational factors in support of vaccination The trust is also seen as an enabler, in particular the confidence in senior colleagues. So the trust is given to people inside the interpersonal relationships. Generally a psychological subjection to the cultural hierarchy by two different career levels (trainee</p> | |

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| <p>Hospital administrators and infection control personnel</p> | | | <p>towards medical practitioner, junior towards senior) was perceived. At a motivational level, self protection seems to be the most important stimulus for vaccination uptake. A previous negative experience could influence current attitude and behaviour Communication and information are unique means for the promotion of vaccination Implementation of training activities, based on an accurate staff need assessment is one of the most efficacious interventions that Institutions can use. Active versus passive approach and the availability of free access informational and educational sessions are recommended by some participants.</p> | <p>colleague what was the best thing to do about vaccination for H1N1" <i>"The same influenza virus can cause a very mild disease to someone or a very severe disease to others"</i> <i>"...An information campaign which highlights vaccine complications. ... I was not vaccinated against A/H1N1 v, because I was not in time, but, considering how bad I felt, if I could have another chance I would get vaccination."</i></p> |
| <p>Public Health Personnel and Policy Makers</p> | | | <p>Education/information National campaigns for the vaccination of HCWs should be implemented Economic factors Legal aspects Ethical aspects</p> | <p><i>"A doctor essentially acknowledges the scientific congresses as learning opportunities."</i> <i>"Case-histories are more convincing than any scientific meeting or congress. This is an important element to keep in mind, not only for highlighting the tragedies but also the hardship that vaccination involves"</i> <i>"Vaccination of HCWs has always been considered a marginal activity and financial investments have never been made. I think that priority should be given to financial aspects and vaccination coverage of hospitals' employees should be included among evaluation indicators of management. Some regions have already done it."</i> <i>"we have to push on the ethical aspect, to encourage HCWs to get vaccination"</i> <i>"The ethical aspect is the winning one"</i> <i>"Vaccination is not only a benefit for individual but also for the community"</i> <i>"The HCW should be an example for the general population"</i></p> |
| <p>Nurses</p> | <p>1. Views</p> | <p>Greece</p> | <p>Nurses seem to constitute a rather heterogeneous target concerning</p> | <p><i>"It's a vaccine that every year is new ... every year"</i></p> |

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| | | | <p>their knowledge and beliefs about immunizations</p> <ul style="list-style-type: none"> ○ Nurses <40 years-old are rather sensitized on the issue and realize the high risk of their occupation ○ On the contrary nurses >40 years-old are less aware on the issue <p>Hepatitis B vaccine is considered a rather important vaccine concerning self-occupational protection</p> <p>Booster immunizations are not known to older nurses. The situation is totally different for younger than 40 years old nurses who carry detailed knowledge due to personal sensitization. Yet, all participants connected adult immunization with dangerous diseases and realized their importance</p> <p>Seasonal Influenza vaccine is well known to them due to the annual National Campaign. Yet, participants indicated low level of compliance</p> <p>Moreover, the existence of National Campaign only for seasonal Influenza and not for other vaccine that are long-lasting and also connected to much more dangerous diseases generate suspicions and cultivates feelings of insecurity that are related to the relationship between nurses and the system</p> <p>Nurses realize HCWs immunizations as a way through which the health care system shows intensive care for its employees</p> <p>They indicate the absence of an official well-organized plan on HCWs immunization that would be administered to all the hospitals of the country and would include both seasonal and long lasting vaccinations</p> <p>Infection Control personnel in each hospital is perceived as the main responsible body for HCWs immunizations</p> | <p><i>they include new strains”</i></p> <p>“I’m afraid of all these new vaccines... On one hand they are beneficial on the other hand I feel that I become a “lab rat/test animal” ... I’m referring also to H1N1 vaccine.. I know that the established vaccines... the child vaccines when they started... they started little by little... nobody was absolutely sure and they were not accepted by everybody... Their establishment took time... A vaccine in order to become safe for people needs to be tested... Not to animals but to people. That’s how science moves towards... To test something on people is unethical...”</p> <p>“It is very dangerous for us if we get pinched by a needle... and we don’t any other way of protection except of the specific vaccine”</p> <p><i>“The most common occupational accident is to get pinched by a needle... that’s the case where HCWs feel quite insecure... and in danger”</i></p> |
| <p>Physicians</p> | | <p>Greece</p> | <p>Physicians expressed a rather solid opinion concerning immunizations in general, which addresses to their benefits and value.</p> | <p><i>“There are no doubts that immunizations constitute a very important issue... Do not forget that due to immunizations there are diseases that have been disappeared in the westernized world...”</i></p> <p><i>“We as physicians have never seen some diseases due to wide spread of immunizations...”</i></p> <p><i>“Physicians who believe that immunizations are not effective... or have serious side-effects are ignorant...”</i></p> |

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| | | | <p>Concerning HCWs' immunizations physicians argued on their great importance due to their occupational high risk exposure</p> <p>Physicians believe that Hepatitis B vaccine is the most essential vaccines due to HCWs' high risk exposure → high self-occupational risk</p> | <p><i>they don't have scientific evidence for the particular argument and they are not good professionals.</i></p> <p><i>"HCWs' immunizations are not like child immunizations... they are connected with the high risk exposure of HCWs. We... as physicians... we belong to high risk population... our occupation is connected with great risks... and also we could transfer both into our patients and to the public..."</i></p> <p><i>"In the emergency Unit you feel exposed to many risks... Many accidents could occur because of the panic... for instance you could get pinched by a needle..."</i></p> <p><i>"To get pinched by a needle is the most common occupational accident of physicians... and the disease is very serious... It affects the rest of your life"</i></p> <p><i>"I feel vulnerable against Hepatitis B... what if I get pinched by a needle... we are unprotected..."</i></p> <p><i>"In the emergency room you feel quite exposed to many risks... you could get pinched by a needle... or cut your skin... that's very dangerous in order to get Hepatitis B..."</i></p> |
| | | Greece | <p>There were wide references on seasonal Influenza vaccines, since it is the only vaccine that is offered annually to HCWs, who work in public hospitals.</p> <p>The majority of physicians indicated lack of information and knowledge on the booster vaccines within the frame of the hospital that they are working → Exception of paediatricians Despite the specific knowledge gap physicians indicated their wide acceptance of booster immunizations</p> | <p><i>"Every year seasonal Influenza vaccines are provided for free to us..."</i></p> <p><i>"Injection Control personnel pass by each Unit and vaccinate us"</i></p> <p><i>"We are not informed about booster immunizations..."</i></p> <p><i>"Nobody has ever informed us about immunizations... except of seasonal Influenza... because of the National Campaign"</i></p> <p><i>"We accept booster immunizations... they are referring to vaccines that are long-lasting and tested throughout the years... Moreover, they protect against very dangerous diseases... Yet, we do not have further information about them..."</i></p> |

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| <p>Hospital administrators and infection control personnel</p> | <p>1. Views</p> | <p>Period of H1N1 epidemic seems to be an essential point of reference concerning Immunizations of HCWs that has generated negative stances of HCWs towards pandemic and seasonal Influenza immunizations</p> <ul style="list-style-type: none"> ○ Not a safe vaccine → fear of side effects ○ Large media coverage during the period of H1N1 pandemic → launch of the specific vaccines is connected with “conflict of interest” | <p>“During that period there was a mess... concerning the particular vaccines... there were informative sessions in the Hospitals’ amphitheatre about epidemic and its related vaccine... there were so many different opinions... and rumours... And media played a rather negative role... HCWs were rather suspicious on the particular vaccine...”</p> <p>“H1N1 vaccine was connected with side effects... and there was this notion that there was financial interests and conflict of interests... behind its implementation... and not health safety as such...”</p> <p>“HCWs should get vaccinated against Hepatitis B and seasonal Influenza vaccine... and they should do MMR as well...”</p> |
| <p>Policy Makers & Public Health Personnel</p> | <p>1. Views</p> | <p>Concerning HCWs’ immunizations Public Health personnel indicated that the following vaccines as being the most crucial: hepatitis B vaccine, MMR, Seasonal Influenza vaccine</p> | <p>“We used to have a very dynamic team in the Infection Control Office... they took personal records of immunizations... They informed us about booster immunizations and Hepatitis B and Tetanus... They were visiting all the Hospital’s departments and informed their personnel directly... They even remind us the time when we should do the second or the third dose of a vaccine...”</p> <p>“We are not against immunizations... we trust them... but we do not know which the available vaccines are... I didn’t know that there is booster immunization about whooping cough or measles, varicella... and I work in hospital for children...”</p> <p>“We underestimate hygiene measures... we proceed to particular actions... we wash our hands before and after patients’ examination... we are wearing mask... and we believe that we are not carriers of viruses and we won’t get sick due to hygiene measures...”</p> <p>“We know what we will do if we were sick... in order to protect ourselves and patients’ health”</p> |
| <p>Nurses</p> | <p>2. Barriers - triggers</p> | <p>Participants’ recognize two types of barriers concerning HCWs immunizations:</p> <ul style="list-style-type: none"> • Organizational (Lack of similar and consistent organizational structure and practice concerning HCWs’ immunizations in all the hospitals of the country → spontaneous initiatives of Infection Control personnel, lack of knowledge and information provided to nurses about adult vaccinations, Difficulties faced by HCWs concerning the delivery of vaccines, Lack of knowledge and sensitization of Greek patients on their rights → lack of sensitization of HCWs on the responsibility that they hold concerning the transmission of diseases to patients) • Attitudinal (Lack of sensitization on preventive initiatives like immunizations, Work pressure & overload, Overall sense that HCWs are well “armoured” against diseases, Lack of sensitization on the responsibility that they hold concerning the transmission of diseases to patients, Ambivalent attitude of nurses, HCWs consider seasonal Influenza a low risk disease as far as their self-protection is concerned → not as dangerous as other infection diseases, such as Hepatitis B, Self-protection | <p>“We used to have a very dynamic team in the Infection Control Office... they took personal records of immunizations... They informed us about booster immunizations and Hepatitis B and Tetanus... They were visiting all the Hospital’s departments and informed their personnel directly... They even remind us the time when we should do the second or the third dose of a vaccine...”</p> <p>“We are not against immunizations... we trust them... but we do not know which the available vaccines are... I didn’t know that there is booster immunization about whooping cough or measles, varicella... and I work in hospital for children...”</p> <p>“We underestimate hygiene measures... we proceed to particular actions... we wash our hands before and after patients’ examination... we are wearing mask... and we believe that we are not carriers of viruses and we won’t get sick due to hygiene measures...”</p> <p>“We know what we will do if we were sick... in order to protect ourselves and patients’ health”</p> |

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| | | | <p>and protection of patients against seasonal Influenza is not directly connected with the relative vaccine. Lack of accurate knowledge and information about its side-effects)</p> | <p><i>"I won't be worried if I catch seasonal Influenza... it's only grippie... it's not so serious... it's not like catching Hepatitis or measles"</i> <i>"As a HCW I know what to do in order to protect myself and patients in case of grippie... I wear mask, I won't cough close to patients etc..."</i></p> |
| <p>Physicians</p> | <p>2. Barriers - triggers</p> | <p>Greece</p> | <p>Participants differentiated two types of barriers concerning HCWs immunizations: Organizational and Attitudinal. Physicians explain lack of knowledge and information concerning immunizations as an issue that does not belong to the field of their specialty. They consider the general issue of immunizations as belonging to the field of pediatricians and the specific issue of HCWs' immunizations as belonging to the field of epidemiologists</p> <p>Difficulties faced by HCWs concerning the delivery of vaccines Work pressure & overload General believe and attitude that HCWs' immunization is not a personal issue but an issue that the health care system should take care of</p> <p>Seasonal Influenza is not perceived as a high risk infectious disease as other diseases, such as Hepatitis B Uncertainty about the specific vaccine</p> | <p><i>"In Greece there is no specific regulation about HCSS' immunizations, which would be applied in all the hospitals of the country."</i> <i>"I have so many thinks on my mind as a physician ... and so much work to do that I would never spent time on immunizations..."</i> <i>"There should be inspections on HCWs' immunizations... organized by the health care system... It's irresponsible not to inspect immunization coverage of the health care systems' employees. You cannot rely on physicians' personal sensitization, willingness and responsibility to get vaccinated... Because they do not get vaccinated due to the loose system..."</i> <i>"It's a vaccine that I won't do it... I have thought about my personal vaccinations... and not becoming contagious... but I do not include seasonal Influenza grippie in the vaccines that I'll do in the future because I don't think that it is so important... because the disease is not so important... it's not so serious..."</i></p> |
| <p>Hospital administrators and infection control personnel</p> | | | <p>Both Infection Control and Occupational Health personnel argued on the relatively low response of HCWs on immunizations and mentioned the main barriers as well as the enables related to the HCWs' immunization</p> <p>Participants have identified two types of barriers concerning HCWs immunizations: organizational and attitudinal Lack of available vaccines Difficulties faced by HCWs concerning the delivery of vaccines (Administrative difficulties, financial barriers)</p> | <p><i>"Of course... it would be better if we had the vaccines... personnel could directly get vaccinated in the hospital... because now... it is difficult... they have to get the vaccine from an outsource... and bring it to the hospital in order to get vaccinated"</i> <i>"HCWs had to buy the vaccines... and that is worsening the situation..."</i> <i>"HCWs get vaccinated because of self-protection... they do not realize their responsibility to their"</i></p> |

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| | | Greece | <p>Work pressure & overload</p> <p>Overall sense that HCWs are well “armored” against diseases</p> <p>Lack of sensitization on the fact that immunizations are not only connected to self-protection but also to the protection of patients and whole society</p> <p>Lack of specific knowledge and information concerning adult immunizations</p> <p>Negative effects on the effectiveness as well as the safety of immunizations in general because of the communication of H1N1 vaccine during the period of pandemic -2009 → conflict of interests concerning the launch of specific vaccine</p> <p>HCWs consider seasonal Influenza a low risk disease as far as their self-protection is concerned → not as dangerous as other infection diseases, such as Hepatitis B</p> <p>Seasonal Influenza vaccine’s main competitor is the mask and the specific knowledge that HCWs carry due to their occupation concerning safety measures against risks connected with the transition of diseases</p> <p>Fear of the seasonal Influenza vaccine: Lack of knowledge, Connection with epidemic Influenza vaccine – H1N1, Lack of trust</p> | <p>patients”</p> <p>“There is so much work every day that it’s difficult for HCWs to compliance with immunizations appointments in the hospital... they cannot put it on their program ... that the particular day I would go to infection control office or occupational health office to get vaccinated”</p> <p>“...they believe that the risk if they get sick by seasonal influenza is lower than any other infection disease that they could get due to their occupation...”</p> <p>“They don’t have specific knowledge on the seasonal pandemic Influenza vaccine ... and they often connected it with the pandemic ... and its specific vaccine ... the vaccine was new ... and not tested...”</p> <p>“During H1N1 even the scientific word... the physicians ... were divided into those who accepted it and those who expressed doubts about the specific vaccine ... So ... how could HCWs trust it...?”</p> <p>“A nurse said to me that she won’t do it because the last year did and was sick all the time ... another one told me that she got all the symptoms ... of grippe although she get vaccinated”</p> <p>“There are suggestions concerning HCWs’ immunizations ... yet ... each hospital doesn’t receive specific regulations ... Depends on the initiatives of each hospital ... and how it would handle the specific issue ...”</p> <p>“You see ... Greek doctors and nurses don’t have the specific culture that is related to immunizations and prevention ... This culture has not been cultivated throughout their study ... because all these lectures of epidemiology ... public health cover the subject only in theoretical level ... and medicine students don’t pay much attention ... and they don’t realize its importance...”</p> |
| <p>Policy Makers & Public Health Personnel</p> | <p>2. Barriers - triggers</p> | | <p>1. Organizational barriers: Lack of official framework -Law- concerning HCWs’ immunizations, Lack of knowledge and information provided to each hospital by official bodies about HCWs’ immunizations → exception of seasonal Influenza vaccine due to National Campaign, Difficulties faced by HCWs</p> <p>2. Attitudinal barriers: Overall sense that HCWs are well “armored” against diseases, Lack of sensitization on the fact that immunizations are not only connected to self-protection but also to the protection of patients and whole society, Greek doctors’ and nurses’ lack of preventive culture, Anti-vaccination movement, which is followed by rejection of immunizations in general → it appeals to the general population but is also followed by HCWs,</p> | |

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| | | | <p>they consider seasonal Influenza a low risk disease as far as their self-protection is concerned → not as dangerous as other infection diseases, such as Hepatitis B, Misconceptions related to the safety of the seasonal Influenza vaccine that generate fear of the seasonal Influenza vaccine</p> | <p>The specific misconception / insecurity and further lack of up-to-date knowledge generate a rather ambivalent attitude. Consequently, there are “rumors” and further discussions/chit-chats among HCWs in the hospitals concerning the specific vaccine, where physicians’ opinions play rather crucial role,</p> |
| Nurses | 3. Enablers | Greece | <p>1. Attitudinal enablers: Personal sensitization of HCWs on immunizations → usually they are sensitized on specific booster immunizations due to their occupational high risk exposure, HCWs’ great sensitization on Hepatitis B vaccine → high risk / very dangerous occupational disease that takes the form of serious yet common occupational accident, Concerning seasonal Influenza vaccine the argument that enhance HCWs immunizations is related to the protection of their family –children or/and elder people</p> <p>2. Organizational enablers: Dynamic action of infection control personnel on HCWs’ immunization: Keep personal immunization records of hospitals’ employees, Inform HCWs’ about all kind of immunization -seasonal, booster, pandemic- through door-to-door visits in each clinic of the hospital, Remind HCWs the time for immunizations repetition, Door-to-door practice, Direct communication → sense of “caring” for employees</p> | <p>“I was working with refugees and we all in the clinic felt quite insecure ... we were not sure about the diseases that they were carrying ... we discussed it and we learned that Hepatitis A vaccine would be rather good for us ... since Hepatitis A is a common disease in these populations ... And that’s how I get vaccinated against Hepatitis A”</p> <p>“We used to have a very dynamic team in the Infection Control Office ... they took personal records of immunizations ... They informed us about booster immunizations and Hepatitis B and Tetanus ... They were visiting all the Hospital’s departments and informed their personnel directly ... They even remind us the time when we should do the second or the third dose of a vaccine ... ”</p> |
| Physicians | 3. Enablers | Greece | <p>Attitudinal enablers: Personal sensitization of physicians on immunizations due to their occupation. Although there is information and knowledge gap concerning booster immunizations there is the notion that they are accepted by physicians due to their connection with childhood immunizations → there would be no resistance on doing them alike seasonal Influenza vaccine</p> <p>Organizational enablers → Absence of references</p> <p>Organizational enablers of HCWs’ immunizations: Door-to-door practice (It matched to the collective behavior of HCWs’ as it was described by administrative & Infection Control personnel, Influence that HCWs exert over one another concerning</p> | |
| Hospital administrators and infection control personnel | | | | <p>“...there is great sensitization as regards to Hepatitis B vaccine ... because the risk is quite high if they get pinched with a needle ... ”</p> <p>“Again it’s their personal interests ... they get</p> |

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| | | | <p>immunizations, Influence of role models of high status, such as Clinics' Directors, it Enhance HCWs' sense that the "system is taking care of them" → protects them → recognizes their work and contribution, Its implementation overcomes the following barriers: HCWs' work pressure & overload, HCWs' knowledge & information gap concerning immunizations, Implementation of National Campaigns & Official Immunization Programs (Enhance knowledge and sensitization)</p> <p>Attitudinal enablers of HCWs' immunizations: Great sensitization of HCWs on Hepatitis B vaccine, Regarding seasonal Influenza vaccine protection of HCWs' family members, such as children and older people is a rather strong trigger</p> <p>Attitudinal enablers: Personal sensitization of HCWs Organizational enablers: Sensitization, initiatives and dynamic action of Infection Control personnel in each hospitals</p> | <p><i>immunized for personal reasons.. in order to protect their selves or their family and not patients ..."</i></p> |
| <p>Policy Makers & Public Health Personnel</p> | <p>3. Enablers</p> | <p>Greece</p> | <p>The most dangerous vaccine preventable diseases from the list provided are Hepatitis A and B diseases, Tuberculosis and Pneumococcal disease. The HCWs are at greater risk for the Influenza disease, the Tuberculosis disease, the Meningitis disease, and the Varicella disease. In reality they consider that HCWs are at mostly at risk for the Hepatitis and the Tuberculosis disease. Most crucial vaccines are the Tuberculosis, Hepatitis, Tetanus, Varicella and Meningitis vaccine. The majority of HCWs claimed that they are not sure that the vaccine for the Seasonal influenza is useful. Moreover, many HCWs do not consider that Influenza is a serious disease. Some other HCWs reported that all HCWs should make vaccines for Influenza. Some other HCWs were consciously negative about vaccines in general. Despite that they have reported that they strongly agree that HCWs should do Hepatitis vaccine. For all of the transmitted diseases HCWs should be vaccinated to protect the other people. Generally HCWs were very positive regarding vaccination and they strongly agreed with the vaccinations, since according to them vaccines protect HCWs. They believe that vaccines are strongly needed to protect them.</p> | <p><i>"Strongly agree with the vaccinations in general. I believe that vaccines are strongly needed to protect us"</i> <i>"I am personally not sure if the vaccine for the Seasonal influenza is needed. Despite that I have made it"</i></p> |
| <p>Nurses and physicians</p> | <p>1. Views</p> | <p>Cyprus</p> | <p>The most dangerous vaccine preventable diseases from the list provided are Hepatitis A and B diseases, Tuberculosis and Pneumococcal disease. The HCWs are at greater risk for the Influenza disease, the Tuberculosis disease, the Meningitis disease, and the Varicella disease. In reality they consider that HCWs are at mostly at risk for the Hepatitis and the Tuberculosis disease. Most crucial vaccines are the Tuberculosis, Hepatitis, Tetanus, Varicella and Meningitis vaccine. The majority of HCWs claimed that they are not sure that the vaccine for the Seasonal influenza is useful. Moreover, many HCWs do not consider that Influenza is a serious disease. Some other HCWs reported that all HCWs should make vaccines for Influenza. Some other HCWs were consciously negative about vaccines in general. Despite that they have reported that they strongly agree that HCWs should do Hepatitis vaccine. For all of the transmitted diseases HCWs should be vaccinated to protect the other people. Generally HCWs were very positive regarding vaccination and they strongly agreed with the vaccinations, since according to them vaccines protect HCWs. They believe that vaccines are strongly needed to protect them.</p> | <p><i>"Strongly agree with the vaccinations in general. I believe that vaccines are strongly needed to protect us"</i> <i>"I am personally not sure if the vaccine for the Seasonal influenza is needed. Despite that I have made it"</i></p> |

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| <p>Hospital administrators and infection control personnel</p> | <p>1. Views</p> | <p>Cyprus</p> | <p>All listed vaccines are fundamental and very important. HCWs should do all the vaccines and mainly the Tetanus and Hepatitis B. It is for the benefit of the individual HCW to make vaccines. HCWs need to be vaccinated since they have contact with people that HCWs do not know if they have any disease or the people do know that they have any disease, it is a vicious cycle. On the one hand the majority of the HCWs were positive about vaccines and on the other hand most of the HCWs reported that they do not make the vaccines. Also, it was reported that Varicella and Influenza vaccines are not fundamental and thus are not needed. HCWs usually make Hepatitis B vaccine and the Seasonal Influenza vaccine. Nowadays most of the doctors do the Pertussis vaccine. Also, HCWs frequently do the Tetanus vaccines because they 'judge' that they need it and it is for own interest.</p> | <p><i>All vaccines for HCPs should be compulsory especially that for Hepatitis. "..... vaccines for HCPs should have been compulsory. Especially that for Hepatitis....."</i> <i>HCPs should be obliged to do Tetanus only compulsorily. All the other vaccines should be done voluntarily. HCPs should be free to decide if they need to do the vaccines</i> <i>Vaccines should be voluntary for the HCPs</i> <i>".....Seminars regarding ways of transmission of the diseaseshow easily HCPs can become sick and by presenting real cases. can be incredibly effective approach to convince them to make vaccines..... by mailing and/or handing to them leaflets would not make any different..... they will not bother to read them....."</i> <i>".....HCPs believe that with the application of the safety regulations are fully protected especially when they treat 'every' patient as infected.....HCPs should always behave in that way"</i></p> |
| <p>Policy Makers & Public Health Personnel</p> | <p>1. Views</p> | <p>Cyprus</p> | <p>Most serious diseases for HCWs are Meningitis, Tuberculosis and Hepatitis. Most risky diseases HCWs are Hepatitis, Meningitis, Tuberculosis, Rubella, and Pertussis. HCWs mostly do the Hepatitis vaccines. The most frequently vaccines done at every department are Tetanus and Hepatitis vaccines. HCWs are protected by the listed vaccines.</p> | <p><i>From all the media a huge awareness campaign was organized which had great positive impact on the general population. At that time also very negative comments were published about the negative side effects of the vaccine claiming that such a new vaccine should not be used. People were confused. At hospitals not all vaccines are for free. Some of the vaccines are very expensive. That can be a strong barrier. Some of the vaccines are not available at the governmental hospitals</i> <i>The stronger barrier for vaccinations is most often the vaccines' cost and peoples' ignorance and neglectfulness. Some HCPs do not agree that the cost is the stronger barrier. They believe that maybe nowadays that can be the case due to the economic crisis. In the past in reality the stronger barrier was ignorance.</i></p> |
| <p>Nurses and physicians</p> | <p>2. Barriers-triggers</p> | <p>Cyprus</p> | <p>From all the media a huge awareness campaign was organized which had great positive impact on the general population. At that time also very negative comments were published about the negative side effects of the vaccine claiming that such a new vaccine should not be used. People were confused. At hospitals not all vaccines are for free. Some of the vaccines are very expensive. That can be a strong barrier. Some of the vaccines are not available at the governmental hospitals</p> <p>The stronger barrier for vaccinations is most often the vaccines' cost and peoples' ignorance and neglectfulness. Some HCPs do not agree that the cost is the stronger barrier. They believe that maybe nowadays that can be the case due to the economic crisis. In the past in reality the stronger barrier was ignorance.</p> | <p><i>From all the media a huge awareness campaign was organized which had great positive impact on the general population. At that time also very negative comments were published about the negative side effects of the vaccine claiming that such a new vaccine should not be used.....</i> <i>"People were confused The same situation and atmosphere was when the Hepatitis vaccine was firstly used....."</i> <i>Also rumours exist about economical interest on behalf of the pharmaceutical companies and speculations which end up to be the stronger barrier</i></p> |

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| | | Cyprus | <p>Information and development of awareness campaigns should start from school.</p> <p>It was reported that regulation exists regarding vaccination among HCPs but not a law. It was said that a law should be developed soon. HCPs especially nurses do not check-up for the number of antibodies they have for specific diseases. Thus a law should be developed about checking the number of antibodies for Hepatitis and especially for HIV.</p> | |
| <p>Hospital administrators and infection control personnel</p> | <p>2. Barriers-triggers</p> | Cyprus | <p>The HCPs who do not make vaccines usually say that they have not thought about the issue. Generally they do not pay the appropriate consideration for vaccines</p> <p>Lack of time was mentioned as the stronger barrier</p> <p>HCPs believe that they do not need the vaccines</p> <p>HCPs do not make vaccines because of ignorance</p> <p>The Health Care centres managements' do not facilitate the participation to seminars because HCPs have to go during working hours. Thus the lack of time and the shortage of staff is the stronger barrier</p> <p>At each governmental hospital there is one Infection department. Only one person is employed at that department who try to inform all HCPs. At each hospital there is great number of HCPs and other employees and thus it is a lot of work that is expected to be done from only one person.</p> <p>The HCPs' negative attitude about vaccines is because they do not know and furthermore are not convinced about the effectiveness of some vaccines, especially the new ones. HCPs worry about the side effects</p> <p>Also HCPs believe that 'in' the vaccines there are other 'substances', not the fundamental vaccine's substance, a 'supplementary' or 'additional' substances which may have interactive side effects and thus serious consequences that would have never be done by the 'vaccine' itself e.g. encephalitis or neuritis or paralysis</p> <p>HCPs are more often not confident for the new vaccines</p> | <p>".....The lack of time and the shortage of staff is the stronger barrier....."</p> <p>".....Nowadays suggestions are made to HCPs only few HCPs do the vaccinesthe majority do not pay any attention to the suggestions..... only when they have accident they take action....."</p> |
| <p>Policy Makers & Public Health Personnel</p> | | | | |

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| <p>Nurses and physicians</p> | <p>3. Enablers</p> | <p>Cyprus</p> | <p>Media should not announce medical news after adjusting them in such way to be 'attractive' or 'interested'. The media's approach is unacceptable and it occurs almost on daily base. Law should be developed as soon as possible. A medical scientist or expert in the arena should be the one either to present the 'case' or at least to 'approve' what will be announced. An expert can be a epidemiologist or a doctor who will be related with the issue under discussion and thus s/he will tell the real facts and reality 'what and how was done'. Another way to announce such serious topics is an announcement from the CDC or the Infection Department. Only people and information coming from these sources should be used by the media.</p> | <p>"cleaners do not have that much academic education as the nurses or doctors who have been trained to protect themselves. Cleaners get vaccinated and have check-ups for the number of antibodies they have just the same way as other HCPs "</p> <p>" regulations and/or laws must be developed for the check-up of the amount of antibodies. "</p> <p>"HCPs should compulsorily do the Hepatitis vaccine, the Meningitis vaccine and the Influenza vaccine since those diseases are more usually transmitted and more frequently found in the general population and patients particularly; "</p> |
| <p>Hospital administrators and infection control personnel</p> | <p>3. Enablers</p> | <p>Cyprus</p> | <p>A national program and regulation should be developed for compulsory vaccination for the HCPs. A strategy should be developed for the HCPs to oblige them to do the compulsory vaccines</p> <p>Seminars are not needed for the HCPs since they know everything about vaccines. They only need a law to oblige them to make the vaccines otherwise they will not make the vaccines. Laws would be very effectual</p> <p>Regulations should be developed for the HCPs vaccinations and also for all the professionals who enable conduct with great number of people. Prior getting a job at Health care premises or any job relate to health issues to ask HCPs to do analysis and check-ups</p> | <p>"HCPs do not make vaccines due to misinformationthey can change their mind and their opinion only with the provision of correct information..... "</p> <p>"A well organized system at each Health Care premise would have been more flourishingby checking all the personnel without exception and find out if they have done any vaccinesFind out who have and who have not antibodies and then</p> |
| <p>Policy Makers & Public Health Personnel</p> | | | <p>HCPs are more often not confident about the new vaccines. How to deal with that barrier: provide adequate information and updating at regular meetings. Pay particular attention about the risks and the side effects</p> <p>HCPs' 'neglectfulness' is a cultural issue thus a well organized approach is needed to deal with it.</p> <p>HCPs must be reminded at times that by protecting themselves with vaccines they also protect their patients.</p> <p>HCPs do not make vaccines due to misinformation. They can</p> | |

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| | | | <p>change their mind and their opinion only with the provision of correct information. Updates about vaccines would be very useful for the HCPs to help them decide to make responsible decisions. Only with precise information HCPs will understand that they need to make the vaccines</p> <p>A well organized campaign should be developed particularly for Hepatitis , Influenza and Tuberculosis diseases</p> <p>A National plan for HCPs vaccines should be done by the Ministry of Health. An awareness campaign should be repeated every 2 years for the HCPs and the other worker at the Health Care premises and for those HCPs who work at the 'front line' who 'give' and 'get' the transmitted diseases</p> <p>For effective vaccinations for the HCPs a cooperation is needed at a local context among the HCPs to create a team of HCPs , something like a local committee to be responsible about the HCPs' vaccines</p> | <p><i>whoever would be in need will have to make the proper vaccines "</i></p> |
| <p>Nurses and physicians</p> | <p>1. Views</p> | <p>Lithuania</p> | <p>There are 4 vaccinations paid by the employer (healthcare facility):</p> <ul style="list-style-type: none"> Vaccination against Hepatitis B Vaccination against diphtheria Vaccination against and tetanus Vaccination against flu <p>Vaccination against Hepatitis B is considered as obligatory for the staff being at the risk groups (GPs, surgeons).</p> <p>Vaccinations against diphtheria (once per 10 years) and tetanus are also considered as very important.</p> <p>More discussions (and less vaccinated) regarding vaccination against flu</p> | <p><i>"I think that it is better to strengthen immunity by other means", "By getting older I've started to make this vaccination each year, and I found that it works well". So among medical professionals rejections only</i></p> |
| <p>Policy Makers & Public Health Personnel Policy Makers & Public Health Personnel</p> | <p>1. Views</p> | <p>Lithuania</p> | <p>Proper population immunization is a very serious challenge, so the mechanism to improve immunization rules compliance in healthcare facilities is needed. There is the state responsibility to assure good performance.</p> <p>Reducing coverage of children vaccination in the country shows dangerous situation, in parallel there is a trend of increasing morbidity.</p> | |

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| | | | <p>Vaccination of HCWs is not obligatory. Vaccination of HCWs who are in the risk group is recommended, there are routine procedures with making lists of HCWs in risk, proposing vaccinations and collecting signatures on their decisions. Commonly, all HCWs who could be infected through blood and other biological substances agree on Hepatitis B vaccination. Differently, speaking about vaccination against flu commonly HCWs chose the opposite positions: to be vaccinated annually or not to be vaccinated at all.</p> <p>Criteria for the risk groups identification (flu, diphtheria, Hepatitis A) is contacting with many people like HCWs and teachers. Some HCWs due to personal health etc. could not be vaccinated. However, as a rule HCWs must be vaccinated.</p> | |
| <p>Hospital administrators and infection control personnel</p> | <p>1. Views</p> | <p>Lithuania</p> | <p><i>HCW is considered one of the most dangerous professions</i> as regards the risks to get contagious diseases at work. At the highest risk remain professionals having contact with blood, they are also exposed to viral infections and other wide variety of infections brought by patients.</p> <p><i>The most risky infectious diseases</i> are: Hep B, Hep C, HIV, other blood born infections, influenza as well as infections resistant to antibiotics</p> <p><i>Vaccination is a personal decision and responsibility</i>: “a person should be informed, and if he/she rejects a proposal to be vaccinated, should take personal responsibility in the infection/illness case”; “people could decide on themselves”; etc.</p> <p><i>There are various attitudes to vaccination in society</i>: “the people are clearly on two sides of the fence”, “so many different opinions”, “there is a lot of controversial information”, etc.</p> | |
| <p>Nurses and physicians</p> | <p>2. Barriers-triggers</p> | <p>Lithuania</p> | <p>There is no chance to prove that somebody from medical staff had got infected due to his/her work: too difficult to reveal relationship and no interest because of penalties from Labour Inspection etc.</p> <p>Negative view to vaccination as an exclusively private matter.</p> | |
| <p>Policy Makers & Public Health Personnel Policy</p> | <p>2. Barriers-triggers</p> | <p>Lithuania</p> | <p>A lack of money in healthcare facilities could explain insufficient vaccination.</p> <p>Necessity to pay for vaccination is a barrier.</p> | |

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| Makers & Public Health Personnel | | <p>There is a lack of information about real situation in the field of immunization. There is a lack of information about real cases of diseases and even deaths of non-vaccinated people in opposite to the big flow of negative information on adverse effects of vaccinations and so on. There is very difficult to register professional diseases both because it is difficult to prove a causality and due to an interest of employers to hide the cases (to avoid penalties, etc.). Employers are interested to avoid registration of accidents with transmission of infections in healthcare facilities.</p> <p>Public health specialists are not active or do not manage proper tools to promote immunization.</p> <p>There is a lack of awareness among young public health professionals because of gaps in their education (due to the recent changes in curriculum): New graduates have relatively less knowledge in epidemiology.</p> <p>Polyclinics (pediatricians) and GPs are not active in proposing vaccinations (with some exception in a flu case). GPs replaced pediatricians and GPs likely are not so strong in vaccination' promotion.</p> <p>Population is quite passive and skeptical about vaccination against flu, even both free of charge and advertising by polyclinics vaccination do not attract many peoples, and commonly they say "I do not get ill". There is a lack of information about modern vaccines, many people still live with their knowledge and understanding acquired many years ago and do not mind that situation had radically changed. People also remember previous situation (with Pertussis vaccination) when they were proposed optionally to be vaccinated with one vaccine free of charge (paid by the state) or another – better one to be paid by the patient, so they could conclude that they are proposed something of low quality.</p> <p>Some NGOs are much more effective in disseminating negative (often outdated or not evidence-based) information than HCWs, because they learned how to do it and they are active.</p> <p>There is a lack of information about vaccination requirements in</p> | |
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| <p>Hospital administrators and infection control personnel</p> | <p>2. Barriers-triggers</p> | <p>Lithuania</p> | <p>other countries: people should know that, for instance, they or their children could have fewer opportunities for education or job in some countries if not meeting vaccination criteria.</p> <p>General public has a lack of medical information on immunization against infectious diseases. There are health care professionals, who are not interested in medical updates as well and are behind contemporary knowledge and do not recommend vaccinations to their patients and do not get vaccinated themselves.</p> <p>Reduced access to vaccination in Vilnius. There was an immunization unit at Lithuanian Communicable Diseases and AIDS center in Vilnius (on the way from the city center to our facility). It had been recently closed. Now all people should go to GPs to get vaccination.</p> <p>Not sure in GPs capacities to manage the deal. It creates additional workload for GPs). GPs are overloaded with their current job.</p> <p>Not all facilities likely have and enforce clear rules on immunization of the medical staff.</p> <p>No immunization campaigns either on a national or on a regional level ever have been recorded by any of the FG members. In general more reliable information on benefits of immunization should be produced and distributed by public health centres.</p> <p>Lack of research: Single study aiming to identify the level of knowledge and attitudes of health care workers towards vaccination from flue was mentioned. Researchers concluded that HCW are rather well informed about vaccination from flue though only 30% of them got vaccinated from flue themselves. The main reasons for negative attitudes towards vaccination are uncertainty about safety and effectiveness of vaccines as well as a distrust to the information provided by the state health care authorities about vaccines</p> | <p><i>"After closing the immunization unit, we already observed that more people are coming for getting vaccination"</i></p> <p><i>"we never have sufficient number of influenza vaccines for general public, therefore nation-wide immunization campaigns would be in vain since we wouldn't have anything to inject them"</i></p> |
| <p>Nurses and physicians</p> | <p>3. Enablers</p> | <p>Lithuania</p> | <p>There is national legislation (Minister of Health Order) for employers (healthcare facilities) to provide vaccination for medical staff against infections they could be contaminated. There is an obligatory reporting on vaccinations. There is an obligatory reporting on adverse effects. The data on</p> | |

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| | | | <p>adverse effects is reported to the State Pharmaceuticals Control Service.</p> <p>Learning from good practices: There is a good practice in the USA that if there is a possibility to prevent infectious disease by vaccinating an employee and one refuses to, but afterwards gets infected; all treatment costs should be covered by the employee himself/herself. Maybe we should follow this example and introduce an obligatory vaccination as we have obligatory health check ups at work - if one prefers to work as a HCW in health care institution, he/she should get vaccination against Hep B and influenza at least.</p> | |
| <p>Policy Makers & Public Health Personnel</p> | <p>3. Enablers</p> | <p>Lithuania</p> | <p>There are particular institutions in charge of communicable diseases control. Their employees consult people, particularly on vaccinations regarding travel abroad.</p> <p>According to legislation, there should be a public health specialist at healthcare facilities in charge for identification risks groups and lead/control vaccination procedures.</p> <p>Regulation requires registering all cases of infection transmission at healthcare facilities; this registration serves to prove professional diseases or injuries.</p> <p>Dissemination information about real cases of diseases and even deaths of non-vaccinated people by medical professionals.</p> <p>Making information campaigns in schools could be effective.</p> <p>Possibly an interest of pharmaceutical companies could be used in promotion vaccinations, and it actually happens.</p> | |
| <p>Nurses and physicians</p> | <p>1. Views</p> | <p>Poland</p> | <p>Vaccine purchasing</p> <p>Doctors vs. nurses (There is a breakdown - nurses vaccine themselves more likely than doctors do – moderator; Due to the fact, that there is a lot of threats in the clinic, there is a decision about the vaccination)</p> <p>Caring for hygiene</p> <p>Significant role of the GP</p> <p>Financial responsibility for vaccination should be on the employer's side</p> | <p><i>Actually, we are buying the vaccine and it is financed by social services and it is completely free for workers or it is available for a small charge</i></p> <p><i>We started to realize, that health is the foundation of life – moderator; Our health rally depends on natural conditions</i></p> <p><i>... and I would say - I would have seen the significant role of the GP - 1; No one can notice it. This is the crucial matter – the role of GP - 1 Vaccine should be refund by employer. It is employer's liability -2; In</i></p> |

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| | | | | <p><i>Labor Code we can find different legislation acts and relevant regulations which inform us, that employer is obliged to make any efforts to protect employee from dangers in the work place. [Influenza] is poses a risk to employee. It is employer's duty to protect employee from danger -2)</i></p> |
| <p>Policy Makers & Public Health Personnel</p> | <p>1. Views</p> | <p>Poland</p> | <p>Keeping vaccine in bad conditions City has no possibility to buy vaccine Lack of health culture Lack of information concerning vaccination among employers Individual approach</p> | <p><i>I Think it is laziness. Thinking – maybe tomorrow, maybe day after tomorrow and the whole season goes; In my opinion a lot of people are too much self-confidence. And in this way they threaten their environment – I; Fortunately, there are only few people who are uncritically. It is only handful of people I am not talking about cold chain but this matters with drug store – I; But if this vaccine is bought in so-called cold period, and it is wrapped in and isolating barrier of air, and we transfer it into home directly from pharmacy, and at home we put it to the fridge or refrigerator – and it is not bad Yes, because we are not buying. We always give the money, but in fact we only pay. In fact, we as city cannot buy vaccines. There is no formal way to buy it Employers are not well informed when we are talking about vaccination in Poland – Mrs.3: Some of employers want to be well informed, but they don't know how to achieve it. They see only problems (So, it must be something what in medicine is so-called individualization of the medical treatment to the subject – moderator; And the conclusion, that approach is much more centralized than diversified. It's better to solve problems in macro scale</i></p> |
| <p>Hospital administrators and infection control personnel</p> | <p>1. Views</p> | <p>Poland</p> | <p>There are vaccines, which most people consider to be necessary Flu and the flu vaccine - a source of controversy Lack of education Hepatitis as mandatory vaccination for employees</p> | <p><i>Sometimes there is no discussion and everyone agrees that there are some vaccine which are obliged - i.e. vaccine against tetanus- I We cannot generalize the concept of vaccination – we</i></p> |

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| | | | <p>Lyme disease - a fashionable topic</p> | <p>have very individual needs (and this is why I think, that that we cannot generalize everything, we have to specify it first - 1) (The things are in different way with flu, because there is a lot of controversy - 1; Doctors consider danger of flu in different relation to each other and different for patients - 1; They believe that they working for so long they have the immunization on that level, that undoubtedly they are no longer threatened. What is more, they are afraid that if the vaccinate themselves they will be sick more often. And then they have total blockade - 1) (But I think that main problem today is education - 1; but this is only a superficial knowledge, somebody said something on TV - 1; In our, doctor's environment hardly anyone reached a publications - 1; And it lingers on all the time - there is no sense to vaccinate if I am not sure how and what kind of virus will infect us. And this opinion is often repeated. And what is more, someone will suddenly say: I was vaccinated last year, and after all I was totally sick -2) (for example, now Lyme disease makes a career - 2, No, unfortunately at the moment we have to be sick on Lyme because vaccination is not very effective - moderator)</p> |
| <p>Nurses and physicians</p> | <p>2. Barriers-triggers</p> | <p>Poland</p> | <p>Reportability vs. real use of vaccines People are getting sick after vaccination Financial issues Carelessness among doctors, lack of awareness concerning vaccination Keeping vaccine in bad conditions Too many duties among doctors Lack of the knowledge of the law Lack of training among doctors Lack of education Prevention among employees after working hours</p> | <p>I was instilled once, and then I was sick for long time - 1; Or - I will fell sick after vaccination. But I don't have time to be ill - 1; When we heard something about particular vaccine, we usually transfer this information on all vaccines Yes, we have financial problem here - moderator; I am sure, that if employer refund total price of vaccine almost 98% people would be vaccinated - 2; When employee have to add 10 zloty to vaccination he is not interested in this business. But if he has to pay total price - almost anyone would be vaccinated - 1)</p> |

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| | | | <p>Lack of information concerning healthy life</p> <p>It is hard to find information where vaccination take place</p> | <p><i>It wouldn't happen to us. This is on this principle. And now, doctors' responsibility is much more higher than it was few years ago - I</i></p> |
| <p>Policy Makers & Public Health Personnel</p> | <p>2. Barriers-triggers</p> | <p>Poland</p> | <p>Lack of responsibility among doctors (rush, lack of time. Reportability vs. real use of vaccines</p> | <p><i>Nobody reminds, I suppose</i></p> <p><i>We announce campaign in October, and during whole October we receive money for vaccine – I; But whose who register for vaccination are not surely to come; They pay whenever they want to pay. He paid, he will be vaccinated – moderator: Money should be on the bank account until this day. You have money – until today we have so much. Since today vaccines will be just a little more expensive because I have to order new once – moderator; I think it would convince some people to vaccination</i></p> |
| <p>Hospital administrators and infection control personnel</p> | | | <p>It is hard to persuade people to flu vacation Lack of education Media as an opinion-forming medium Lack of awareness according vaccination Medical market depends on financing, importance of advertisement concerning vaccination. Financial barriers Lack of responsibility for vaccination among doctors Lack of prevention Lack of authorities</p> | <p><i>But I think the main problem, however, is education now; First of all we should concentrate on question – what we should do to convince our environment to vaccinate, you are exposed to diseases, why you have any doubts that you should be vaccine? Report ability is great, but what am I going to say – there is still financial barrier; there is financial barrier</i></p> |
| <p>Nurses and physicians</p> | <p>3. Enablers</p> | | <p>Right path Trainings for nurses and physicians</p> | <p><i>No, no – nurses are responsible for vaccination; We have immunization coordinator. He is responsible for vaccination but also for other issues concerning this matter: Doctor qualifies for vaccination; Doctor qualifies for vaccination, but coordinator is responsible for promotion, orders etc. Nurses take part in immunization training all the time, they improve they knowledge according to vaccination problems; Doctors have very similar trainings</i></p> |
| <p>Policy Makers & Public Health Personnel</p> | <p>3. Enablers</p> | <p>Poland</p> | <p>Social-economic studies as grounds for vaccination model.</p> | <p><i>This population, we have to know how much we have in this population, how often people were vaccinated, we have to perform "screening" concerning all this</i></p> |

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| <p>Hospital administrators and infection control personnel</p> | | | <p>To create internet portal To conduct a Survey</p> | <p><i>information, what has happened with them. And then we will see what we have to do. When we will know, what we have to do, we have to ask next question – how much money we have?</i></p> <p><i>And this is how we have talked about it. And I think that we should agree, that firstly we have to create internet portal. Without internet, there is no way to do anything. And the best idea is Internet – everyone can log on and fill in the questionnaire</i></p> |
| <p>Nurses and physicians</p> | <p>1. Views</p> | <p>Romania</p> | <p>Positive attitude regarding vaccination: low transparency and poor communication of the national strategy regarding immunization poor coverage of migrant populations or particular populations groups at risk (low educational level, socio-economic conditions extremely low, population living I isolated geographical areas budget under financing low information about pharmaco vigilance low information about the complete vaccination schemes Communication tools: Inefficient, lack of information campaign regarding the benefits of immunization Lack of Burden of vaccine preventable diseases awareness among the general public Media has an important role in supporting the process / vaccination benefits awareness among general public Positive attitude regarding vaccination: Compulsory immunization scheme should become part of a long term, coherent public health policy Physicians were reluctant in general in talking about immunization (they consider to be very knowledgeable with regard to this issue, especially with regard to the immunization of HCW; they do not know very well the legal framework for HCW; besides immunization for Hepatitis B and influenza, they do consider that other immunizations are necessary only for doctors working in infectious diseases departments (pneumococcus/ varicella/ etc).</p> | |

REPORT OF FOCUS GROUPS RESULTS

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| | | | <p>Difficulties in reporting on immunization (both to SIUI and to the RENV); difficulties in validating performed immunizations (especially for the children 0-6 months)/ lack of compatibility of softwares used in PHC with SIUI/ software of the RENV</p> | |
| Policy Makers | 1. Views | Romania | <p>Decentralization of health care institutions and fragmentation of the services provided by the District Health Authority; Low levels of funding deployed through more sources of funding/ The existence of several sources of funding creates mal -functions Legislation in place concerning the HCW immunization :guideline, services, budget , communication strategies, control mechanism Should be part of a national program: HCW is a population at risk for VPDS: INFLUENZA, Tuberculosis, Measles, Mumps, Rubella, Hepatitis B, Diphtheria, Pertussis Mandatory to be implemented at the institutional level depending the type of medical services delivered; Assumed by the institution management Mandatory vaccination linked with the employment process Vaccination process should be conducted in a controlled way Epidemiological department for each institution responsible for vaccination guideline implementation; Lack of leadership at the level of the National Immunization Programs; Low immunization coverage of the population at risk</p> | |
| Hospital administrators | 1. Views | Romania | <p>Lack of inter sectorial approaches with other sector ministries (i.e. education, administration and interior, etc) when talking about immunizations; The population knows the risks of vaccines, but does not know the risks of non immunization; Lack of control of information that promotes non vaccination. Lack of transparency of immunization policies; Dysfunction in procurement of vaccines; Dysfunctions in ensuring the chain of cold at local level; Malfunctions within structures that ensure pharmacy vigilance HCWs - Vaccination should be done at the healthcare institutional</p> | |

REPORT OF FOCUS GROUPS RESULTS

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| | | | level, and should have the following characteristics: Mandatory vaccination should be managed by each healthcare institution for its employees; Employee Ac screening should be mandatory; local guidelines should be implemented; Periodical trainings should be conducted; Vaccination process should be conducted in a controlled way; Epidemiological department for each institution responsible for vaccination guideline implementation | |
| Nurses and physicians | 2. Barriers-triggers | Romania | <p>The lack of communication regarding the vaccination benefits to the general public</p> <p>National Immunization Programs – budget under financing</p> <p>Lack of information, training – lack of knowledge or adequate information about disease exposure</p> <p>Lack of time;</p> <p>Budget allocated insufficient; lacks predictability</p> <p>The process is not well organized, structured</p> <p>Lack of commitment of personnel compulsory HCW vaccinations</p> <p>Lack of existence of a mandatory epidemiology specialty MID for each institution</p> <p>Attitudinal related barriers: fear of side effects; beliefs that these types if workers are not at risk</p> | |
| Hospital administrators | | | <p>Lack of information, training – lack of knowledge or adequate information about disease exposure</p> <p>Lack of time</p> <p>Lack of money</p> <p>The process is not organized, structured</p> <p>Lack of commitment of personnel compulsory HCW vaccinations</p> <p>Lack of existence of a mandatory epidemiology specialty MD for each institution</p> <p>Attitudinal related barriers: fear of side effects; beliefs that these types if workers are not at risk</p> | |
| Nurses and physicians | 3. Enablers | Romania | | |
| Policy Makers | 3. Enablers | Romania | Increase institutional capacity for implementing and monitoring the nationwide immunization programs; increase project management capacity of such institutional structures; deliver | |

REPORT OF FOCUS GROUPS RESULTS

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| | | | <p>founding through only one source of funding (public funding) Measures shall be taken to increase the appropriateness, predictability of one source funding (source-state budget); gradual increase of multiannual budgeting in the coming years) of the National Immunization Program</p> | |
| <p>Hospital administrators</p> | <p>3. Enablers</p> | | | |
| <p>Nurses and physicians</p> | <p>1. Views</p> | <p>Germany</p> | <p>Vaccinations are of high personal relevance due to the family Lack of knowledge/ disinterest among the population Vaccinations are rational for certain groups A lot of people are hostile to vaccinations High level of skepticism regarding vaccinations against influenza Lack of risk awareness The attitude of the general population does not differ from that of HCWs</p> | <p><i>"I think it is an important topic but it is a fundamental personal attitude ... for that reason it has always been important for me to protect myself in this regard, not only me but my family..."(N), "I am a bit more careless because I do not have a family in the background"(N), "... since I became a father I became more sensitive and informed about current vaccinations... beside that: vaccination against influenza have never played a role for me"(N) ".Apart from that I think that there is a great lack of knowledge and disinterest among the population unless it is urged in some cases. That is my impression and there is less promotion in this regard... "I think it starts with the counseling of children and should be emphasized in the occupational medical service. These would be the right places to make it popular."(N), "... it depends on the social class... you can observe the socially underprivileged who are careless regarding "U-Untersuchungen" (preventive check-ups for children) and maybe also regarding vaccinations. On the other hand there are – let's call them intellectuals – who are strictly against vaccinations." "I think that most people oppose vaccinations...", "Without trying to discourage you: regarding vaccinations you can do what you want, it will not have any effect", "That means: the general attitude</i></p> |

REPORT OF FOCUS GROUPS RESULTS

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| <p>Policy Makers & Public Health Personnel</p> | <p>1. Views</p> | <p>Germany</p> | <p>Vaccination is considered to be important Lack of knowledge/disinterest regarding vaccinations of HCW</p> | <p><i>in the society is not pro-immunization at all!"</i> <i>"... for me it (infectious diseases) is not a threat and I only do what is a threat for me... and the threat is not real for most people."</i> "... those who do not vaccinate their children hope or build on the hope that all the others are vaccinated..." "... there is no immediate threat." <i>"...for me vaccination is an important part of prevention. Prevention, because it is a relatively cheap way to avoid serious diseases or serious courses of disease, to avoid death..."</i> "Basically I have a positive attitude towards vaccinations. I am sure that the basic vaccinations for babies and infants are necessary; booster injections are also important. I am ambivalent in regard to HPV-vaccinations or vaccinations against influenza ..." <i>"Not everyone, I think that regarding vaccination against influenza more than half of them, about 60%, do know about it or ignore it..."</i> "This is truly the case because medical practitioners think they are special and medical practitioners do not catch a disease."</p> |
| <p>Hospital administrators and infection control personnel</p> | <p>1. Views</p> | <p>Germany</p> | <p>Vaccination coverage rate depends on media coverage (particularly vaccination against influenza) Consultation on immunization at the general practitioner is not sufficient Differences between East and West (of Germany)</p> | <p>"Vaccinations are only covered if something is supposed to have happened. So—to take this example again because this is the attraction here – serious multiple sclerosis due to vaccination. Paralysis of the body caused by vaccination against hepatitis B for example. Things like that are covered by the media which is counterproductive, everything else is not covered by the media", <i>"I think, but cannot prove it, that no general practitioner has sufficient time for consultation on immunization. Not to the extent necessary to rebut counter arguments. For that reason we refer to other structures – ... – which have to make time for that. For</i></p> |

REPORT OF FOCUS GROUPS RESULTS

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| | | | | <p>example the vaccination center of the health department and most probably the vaccination centers of health departments in general. They focus on nothing else.”</p> <p>“I think today there is still a difference between East and West. In former times it was tightly organized and it was accepted. I am talking about vaccinations against childhood diseases etc, today it depends on self-initiative...”</p> <p>“Among the population there is a lot of pseudo-knowledge about ingredients, about what could happen and what could not happen”</p> <p>„Above all it is the lack of fear of the appearance of these diseases because they have not appeared for years.” “It is not an actual danger.”, “For most people buying GM corn is an actual danger but a missing vaccination is not.”</p> <p>“But that is a problem of the individualistic society, again...”, “... if you enrol your child in kindergarten you have to get a declaration of no-objection from the paediatrician... at the communal kindergarten you have to. If you have to submit it you can tick it: harmless... let's say: not immunized. In my opinion this is twofold because if you bring your one-year-old child there not all it is not vaccinated against everything...”</p> <p>„If you take the last vaccination against swine influenza as an example, it was badly presented in the media or badly communicated, different vaccines for different occupational groups and officials, this causes insecurity. In the end the predicted wave of infections did not happen, particularly in our region there were only a few cases. Then, of course, the immunized person wonders if the vaccination really was necessary. Was it really worth it?”</p> <p>“... most people are scared of the vaccination, scared</p> |
| <p>Nurses and physicians</p> | <p>2. Barriers</p> | <p>Germany</p> | <p>Pseudo-knowledge / lack of knowledge influences decisions Lack of risk awareness Individualistic society Attitudes of paediatricians and general practitioners Presentation in the media Fear of vaccinations/injections/needles Effort of money and time Insecurity regarding the efficacy of the vaccination</p> | |

REPORT OF FOCUS GROUPS RESULTS

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| <p>Policy Makers & Public Health Personnel</p> | <p>2. Barriers</p> | <p>Germany</p> | <p>Media coverage Finances Information Responsibility/guidelines Ignorance or lack of knowledge influence decisions on vaccination Lack of risk awareness</p> | <p><i>of needles or the injection... ”</i> <i>“Media coverage is a factor. And the media – there are some media covering vaccinations in calmer periods but in general they cover it when it already is too late. ”</i>, <i>“I also think that the media, including conservative weekly journals which are expected to have high quality content, often cover conventional medicine in a very negative way... ”</i> <i>... it occasions cost if there is no name of a pharmaceutical company on the packaging and usually none has the money... ”</i> <i>“But to which extent is this information available for patients? Without requiring great efforts on behalf of the patient. The patient will not search for this information in professional publications. In general they are too sophisticated for the general population. ”</i>, <i>“There are many aspects and sometimes I talk to skeptical parents often resulting in 50/50. Mostly it takes an hour or even longer and that cannot be done by the pediatrician. ”</i> <i>“... there are too many players in the game regarding finance as well as organization. This makes the whole thing more difficult... ”</i></p> |
| <p>Hospital administrators and infection control personnel</p> | <p>2. Barriers</p> | <p>Germany</p> | <p>Vaccination coverage rate depends on media coverage (particularly vaccination against influenza) Uncertainty regarding cost absorption/ finances Different recommendations on vaccination in different countries/states Fears / Insecurities Complicated accessibility to vaccinations at the general practitioner</p> | <p><i>“Vaccinations are only covered if something is supposed to have happened. So– to take this example again because this is the attraction here – serious multiple sclerosis due to vaccination. Paralysis of the body caused by vaccination against hepatitis B for example. Things like that are covered by the media which is counterproductive, everything else is not covered by the media.”</i> <i>“Another question is: how much does the health insurance pay? That really is a problem!”</i> <i>“... the recommendations on vaccination in other states... it is not harmonized... ”</i></p> |

REPORT OF FOCUS GROUPS RESULTS

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| | | | | <p>„I do not visit my general practitioner, who belongs to dying species, if I have to wait for three hours, this discourages me, I don't accept waiting. ”</p> <p>„Meanwhile it takes place again, in particular on behalf of the health insurances and the AOK. ”</p> <p>„The general practitioners would be the persons to address. ”, „And who could inform you about that? – general practitioners. ”, „ You get well informed by the pediatrician but always with the message that it is your own decision. That is a bit inconclusive. ”</p> <p>„No, in general people are annoyed by the way it is presented in the media, particularly if it is done in a lecturing way. ”</p> <p>„You could motivate a lot of patients and the population to get vaccinated with the help of the media. But also by avoiding negative reports on academic medicine and making objective reports. ”</p> <p>„And if a Ministry of Health wants to do health promotion, prevention in the first stage, you can think about presenting these webpages in a way attracting the reader. ”</p> <p>„Yes, but if we think of a well functioning public health office here in XXX, let's say if we are 10 people carrying out vaccinations we cover about 50% of all vaccinations, today we are only covering 1 or 2%. ”</p> <p>„...here, you are getting informed about offered and recommended vaccinations, often against the backdrop of journeys or in the form of questions: Which one would be the next vaccination for my child? ”</p> <p>„...if we have a training on infectious diseases we are always referring to these vaccinations. What kind of prevention the medical personnel needs, and for us the recommended vaccinations are defined. ”</p> |
| Nurses and physicians | 3. Enablers | | <p>Health insurances General practitioners and pediatricians Media</p> | |
| Policy Makers & Public Health Personnel | 3. Enablers | Germany | <p>Vaccinations should be covered by the media in a less sensational but realistic or positive way. Distribution of information on the national level or on the federal states level is reasonable. A uniform design of recommendations regarding vaccinations is advisable. Public health offices / vaccination centers could take a greater share regarding vaccinations. Midwives are a good access point to young parents.</p> | |
| Hospital administrators and infection control personnel | 3. Enablers | | <p>Institutions can contribute to the opinion-making regarding vaccinations through various activities (especially information). Optimization of the counseling offered by the employer/company physician. Health insurances can be supportive, for example with the help of reminders, financial incentives. Vaccinations should be presented less sensational but realistic by the media: perhaps emphasizing complications in consequence of missing vaccinations. GPs and pediatricians are important contact persons for</p> | |

Suggestions

Greece

1. Enhancement of knowledge and sensitization of nurses on immunizations through:

- compulsory educative lectures on HCWs' immunizations
- the provision of electronic and printed material -pamphlets- containing information on immunizations for HCWs. They would contain up-to-date knowledge and information about the following issues: available vaccines for specific diseases, years of protection, specific time that booster immunization are needed, relevant antibodies examinations and cost of the vaccines, sending personal e-mails to HCWs concerning immunizations that enhance personal sensitization of HCWs. Yet, there are no personal e-mail accounts for HCWs in all the hospitals. The door-to-door practice will enhance sensitization of HCWs collectively. Posters about HCWs' immunizations would be an initiative that generates negative reactions. Dissemination of knowledge and information that is not appropriate for Professionals. Connotation of marketing ways of promotion that contradicts to scientific knowledge. Change of the issue from personal into collective through the establishment of an office in each hospital that would be responsible for HCWs' immunizations. Personal e-mails from the Medical Association. Facilitation of the access to information and knowledge regarding booster immunization. HCDCP is considered to be the reliable official body that could offer such information and knowledge.

2. Overcoming organizational barriers concerning HCWs' immunizations through:

- Generation of a strict framework concerning HCWs' immunizations that would turn immunizations into a "must", "duty" of HCWs and would overcome the barrier of HCWs' work pressure and overload. For the physicians it would turn HCWs' immunizations from an issue of personal choice and free will into a "must" -something "necessary"-, that becomes not only a professional duty of HCWs but also a duty of the health care system
- Since yet, there are participants who question the obligatory nature of immunizations. Development of a professional health booklet and portfolio that keeps records on HCWs' personal immunizations and informs personnel about the next immunization appointment. Promote of an easier way of vaccines' distribution that overcomes the barriers concerning prescription and cost of the vaccines.

3. The practice of infection & immunization indexes for each clinic of the hospital generates rather controversial responses

- Nurses seems to be more favourable towards infection indexes, since their information about the occupational risks would be enhanced
- Concerning immunization indexes participants: are rather indifferent, since they do not realize direct connection between immunization and infection indexes and are quite negative, since they consider it as disincentive, "You don't gain anything through shame... through stigmatizing a whole clinic as regards to immunizations... this is not nice... It is better to make vaccinations obligatory... rather than make somebody feel embarrassed for its immunization history..."

Italy

There is a need to increase vaccination coverage among HCWs and in order to reach this objective, it is important to provide scientific information, conveyed with appropriate tools. Integrated communication activities, customized and based on a two-ways communication are deemed essential for the dissemination of reliable information among the health staff. Implementation of training activities, based on an accurate staff need assessment is one of the most efficacious interventions that Institutions can use. Active versus passive approach and the availability of free access informational and educational sessions are recommended by some participants.

For several participants immunization should be a pre-requisite for health professionals working in the health sector. There is a need for the distribution of National Guidelines or protocols that could be easily implemented at local level, as well as to assure the availability of dedicated economic resources. From an organizational point of view, one of the most interesting suggestions is the identification of the occupational physician as a key person for promoting the check of vaccination status of health workers. The argument “*some vaccinations should be compulsory for staff working*” needs to be thoroughly discussed.

Cyprus

There is a need to develop a national program and guidelines for compulsory vaccination of the HCWs. A strategy should be developed for the HCWs to force them to uptake the compulsory vaccines.

Seminars are not needed for the HCWs in Cyprus since they believe they know everything about the vaccines. They need a regulation to force them to uptake the vaccines otherwise they will not do it. Laws would be very effectual.

Regulations should be developed for the HCWs’ vaccinations and also for all the professionals who enable conduct with great number of people. Prior getting a job at Health care premises or any job relates to health issues HCWs should perform all the check-ups. A ‘pressure’ must be developed in a form of ‘verbal warning’ and then ‘written warning’ to the HCWs and a copy must be sent to the top management if any HCW has not made the proper vaccines. If supervisors at each Health Care premises were evaluating the applicability of the vaccine protocol then HCWs would have been more protected and thus the protocol would have been more successful. There is a need to ‘face’ and deal with all HCWs’ ‘reasons’ and hesitations and try to eliminate them. The opinion leaders from the Ministry of Health must make announcements regarding the topic and develop awareness about vaccines.

Physicians should put outside their door an announcement informing people that as physicians they have done Hepatitis vaccine. Also media can be help to eliminate the ignorance about vaccines with qualitative documentaries explaining things using simple language about ‘what’ vaccines are and ‘how’ they function. Especially nowadays it is important that the most important vaccines are provided free of charge.

Lithuania

Clear rules for immunization schedule should be established by the employer (annually a list of employees who are proposed to be vaccinated is issued according to the risk groups, everybody should sign it with “yes” or “no” about flu vaccination). People should know who is responsible for vaccination. HCWs within the institution should be divided into two groups as mentioned above. Institution would provide vaccination to all the staff on request with the flu vaccines for free since vaccination costs are covered by Territorial Health

Insurance Fund. Hepatitis B vaccine is also recommended to the professionals who have direct contact with blood, but HCWs have to share the cost for the vaccine since the HC institution covers only 50% of the cost.

There is a good practice in the USA that if there is a possibility to prevent infectious disease by vaccinating an employee and one refuses to, but afterwards gets infected, all treatment costs should be covered by the employee himself/herself. This could be a good practice to increase vaccination coverage.

Vaccination against flu is providing in a “passive” way and more staff refuses to vaccinate. It is essential to assure convenient arrangements for vaccination at the facility. Public health professionals (epidemiologists) should be more involved.

GPs should be more active in promoting vaccination to the population (mainly to those age 26+ re-vaccinations against diphtheria, annual vaccination against flu, etc). Professional advice is needed as information provided mostly from mass-media is not adequate. In general, public health institutions should provide information to the general public and HCWs on immunization topics via mass media, special workshops and public activities. Ministry of Health should also be preoccupied with immunization problem occurring in general public.

Poland

In order to increase the vaccine coverage there is a need for the provision of individualized care approach. Educational lectures to enhance vaccination awareness.

Romania

Media has an important role in supporting the process / vaccination benefits awareness among general population.

Compulsory immunization scheme should become part of a long term, coherent public health policy. There is a need to organize communication campaigns tailored for the specific institutional needs, to conduct Ag screening campaign among HCWs, to conduct mandatory vaccination for HCWs prior to their enrolment and develop a National guideline concerning vaccination: influenza, Tuberculosis, Measles, Mumps, Rubella, meningococcal disease, Hepatitis A, Hepatitis B, Pneumococcal diseases, Tetanus, Diphtheria, Pertusis.

Germany

Some of the suggestions are the following:

- Vaccinations should be covered by the media in a less sensational but realistic or positive way.
- Distribution of information on the national level or on the federal states level is reasonable.
- A uniform design of recommendations regarding vaccinations is advisable.
- Public health offices / vaccination centers could take a greater share regarding vaccinations.
- Midwives are a good access point to young parents.
- The population should be sensitized regarding the risks of VPDs.
- The impact of financial factors on the area of vaccinations should be reduced.

- Information which is objective and easy to understand should be easily accessible.
- The responsibilities/regulations/finance regarding vaccinations should be clarified and communicated.
- Physicians have to be confident of vaccinations and should have enough information in order to advise and inform patients in a comprehensive way.
- Physicians have to be confident of vaccinations and should have enough information in order to advise and inform patients in a comprehensive way.
- Students of medicine have to be confident of vaccinations and should have enough information in order to advise and inform patients in a comprehensive way later on.
- There is a strong agreement on the implementation of mandatory vaccinations.
- A regular check of vaccination cards and reminders regarding vaccinations are viewed as reasonable.

DISCUSSION

This study involved a convenience sample of 282 HCWs from several hospitals and other settings. Factors such as errors in recall and social desirability response tendencies, for example saying ‘what sounds correct’, may make it difficult to generalise the findings of the study. Therefore the sample composition is representative of the views and the attitudes to immunization among HCWs in seven countries. The study provides valuable insights into some aspects of what HCWs know, think and feel about immunisation and how they act and behave. Although there are some differences between the participating countries relating to the views and the suggestions of the HCWs for improving adherence with vaccination uptake, there also some similarities on their attitudes.

Views of the HCWs regarding vaccination

Despite the recommendation by WHO, endorsed by many European countries, uptake of influenza vaccination in healthcare workers varies. In general the HCWs of the sample have emphasized the importance of immunization and were favorable to their vaccination and that of the public. Many of them were familiar with the booster immunization program. The vast majority of the participants considered that HCWs belong to the high risk groups for acquiring a vaccine preventable disease. Some countries suggest the compulsory vaccination of the personnel through a national program whereas other countries claimed that in order to increase the vaccine coverage there is a need for the provision of individualized care approach. For several participants immunization should be a pre-requisite for working in the healthcare sector. There is a need to develop National Guidelines or protocols or a National Strategy that could be easily implemented at local level, as well as to obtain the necessary budget.

Hepatitis B is considered to be the most important vaccine preventable disease given that is the more common occupational risk mainly after a needle stick injury. The vaccination still remains the most effective preventive measure against vaccine preventable diseases.

Need for education

Educate healthcare workers about the benefits of influenza vaccination and the potential health consequences of influenza illness for them and for the patients is essential. The majority of the participants claimed that there is a lack of knowledge or insufficient and incorrect knowledge and evidence based

information for the benefits of vaccination that may explain the lack of vaccination awareness. In some cases there is a lack of awareness among the young public health professionals because of gaps in their education as new graduates have relatively less knowledge in epidemiology. The information and awareness campaigns should start from the school age. These campaigns should consider the role of Mass Media in public opinion formation or change. The role of media, internet blogs is still significant, especially in affirming attitudes and opinions that are already established.

In some cases the valid and reliable information is sparse. On the other hand the information that is provided from the mass media is not the adequate as it causes a misunderstanding and may be responsible for the low vaccination awareness of the public. Some countries have emphasized the need of compulsory educative lectures on HCWs' immunizations. These lectures should be "interactive" based on electronic and printed material -pamphlets and posters- containing information on immunizations for HCWs. They should contain up-to-date knowledge and information about the following issues: available vaccines for specific diseases, years of protection, specific time that booster immunization are needed, relevant antibodies examinations and cost of the vaccines, sending personal e-mails to HCWs concerning immunizations that enhance personal sensitization of HCWs. The lectures should give an emphasis to both personal and family protection as these two facts influence the decision of the HCWs to have the vaccine. The educational programs should enhance the confidence of the HCWs to the benefits of vaccination. Physicians have to be confident of vaccinations and should have enough information in order to advise and inform patients in a comprehensive way.

Needs of the HCWs

The majority of the participants claimed that they need specific information about the different vaccines, as well as about the importance of vaccination in the prevention and health protection. They also need reliable data on VPDs incidence, vaccination coverage, incidence of sequelae, of gaining knowledge e.g. through specific seminars and toolkits, of appropriate premises for administering vaccination in hospitals. The main benefit includes protection of both HCWs and patients.

It is essential to develop a strict framework concerning HCWs' immunizations that would turn immunizations into a "must", "duty" of HCWs and would overcome the barrier of HCWs' work pressure and overload. This framework should include the output of the current research (the barriers, the enablers, the cues for action reported from the HCWs).

Attitudinal barriers for the uptake of vaccines

Some of the attitudinal reasons that explain why HCWs do not receive vaccination are the followings: fear of injections, lack of information and knowledge about the booster vaccines schedule, did not imply that they had a moral duty to accept vaccination, lack of knowledge about the benefits of vaccines, physicians do not recommend vaccination to their patients, belief that HCWs' immunization is not a personal issue but an issue that the health care system should take care of.

Organizational and institutional barriers for the uptake of vaccines

Some of the organizational and institutional reasons that explain why HCWs do not receive vaccination are the followings: busy schedules, cost of vaccination, the current policy of voluntary vaccination of healthcare

workers, lack of prevention culture, lack of prevention strategies, lack of authorities' commitment to vaccination, lack of accessibility to vaccines for the vulnerable population, different immunization schedule among the EU countries, lack of an expert in epidemiology in each hospital and the existence of an anti-vaccination movement after the experience of H1N1 pandemic in 2009, lack of a consistent organizational infrastructure and clinical practice concerning HCWs' immunizations in all the hospitals of the country to establish specific regulations, belief that immunization is the responsibility of paediatricians and epidemiologists.

In order to overcome all these barriers for influenza vaccination to healthcare workers should be provided at work and at no cost, as a component of employee's health promotion programs.

Attitudinal and organizational enablers for the uptake of vaccines

Some of the enablers for vaccination are the followings: the belief that the main perceived benefit of vaccination was personal and patient protection against influenza, perception that vaccination protects them and their families, educational programs and materials, the role of occupational physician as a key person for promoting vaccination, the existence of a National Seasonal Campaign, self awareness of HCWs for immunization, the role of the infection control personnel, the door-to-door vaccination and the direct communication of the infection control personnel with the HCWs that promotes a sense of "caring" for the staff, the construction of an internet portal in which everyone could log on and fill in questionnaires, the protection of anonymity, the conduction of surveys in separate groups and the vaccine uptake in the workplace, the role of mass media, the attitudes of GPs against vaccination, the use of reminders and vaccination card, the training of the trainers for immunization. In addition, previous personal experience of a vaccine preventable disease, in particular if complications were experienced, is considered to be cue to action that includes personal vaccination and vaccine recommendation to the others.

The existence of personal e-mail accounts for HCWs in all the hospitals facilitates the provision of this material. The campaigns consist an effective way to increase vaccine awareness. On the other hand, the existence of a National Campaign only for seasonal Influenza and not for other vaccine preventable diseases that are long-lasting and are also connected with dangerous diseases generate suspicions and cultivates feelings of insecurity that are related to the relationship between nurses and the market system. As a result the National Campaigns should be "multiple vaccines" oriented, clear, focused and specific. It should be noted that the campaigns must incorporate all the hospitals of the country including both seasonal and long lasting vaccinations. The Infection Control personnel as well as the occupational physician in each hospital are perceived as the focal points that are accountable for performing HCWs vaccination. The creation of vaccination offices and teams is beneficial. Moreover the development of a professional health booklet and a personal health portfolio that keeps records on HCWs' personal immunizations and informs personnel about the next immunization appointment has been reported from the majority of the participants. A regular check of vaccination cards and reminders regarding vaccinations are viewed as reasonable as well as the development of a mandatory reporting system for vaccinations and side effects.

Specific reference to Influenza vaccination

The findings suggest that the HCWs do not often realise that the influenza virus can be transmitted to patients and other colleagues by both symptomatic and asymptomatic healthcare staff. As a result the current policy of voluntary vaccination of healthcare workers is not effective in achieving acceptable immunisation rates.

1. Attitudinal barriers for the uptake of influenza vaccine

Some of the attitudinal reasons that explain why HCWs do not receive an annual influenza vaccination are the followings: fear of injections, fear of vaccine side effects and especially influenza-like symptoms, perceived lack of vaccine efficacy, low personal risk of illness, lack of time to get the vaccine, lack of risk awareness, lack of knowledge about the benefits of influenza vaccination and the potential health consequences of influenza illness for them and for patients (holding several misperceptions about influenza risks), did not often realise that the influenza virus can be transmitted to patients and other colleagues by both symptomatic and asymptomatic healthcare staff, overall belief that HCWs are well protected against diseases and flu, HCWs often do not recognise their role in the transmission of influenza to patients, regarding themselves as low risk for influenza infection, belief that they do not belong to a high-risk group for contracting the influenza virus (they do not belong to the front line staff).

2. Organizational and institutional barriers for the uptake of influenza vaccine

Some of the organizational and institutional reasons that explain why HCWs do not receive influenza vaccination are the followings: delayed or lack of availability and distribution of influenza vaccines.

3. Attitudinal and organizational enablers for the uptake of influenza vaccine

Some of the enablers for influenza vaccination are the followings: the belief that the main perceived benefit of vaccination was personal and patient protection against influenza