EU Info Day
Royal Olympic Hotel – Athens, Greece
8 July 2014
Agenda

8:30-9:00  Registration

9:00-9:20  Welcome and scope of meeting
Prof. Athena Linos, President of Prolepsis Institute

Chair: Prof. Jenny Kremastinou, KEELPNO - Cristina Rota, ISS

George N. Pavlakis, MD, PhD, Research Scientist

9:40-9:55  HCW immunization: The importance for public health (PH)
Patricia Blank, Senior Research Scientist, Institute of Social and Preventive Medicine, Medical Economics, University of Zurich

9:55-10:10  ECOM project: Effective communication in outbreak management: development of an evidence-based tool for Europe
Dominic McVey, Director, Word of Mouth Research Ltd

10:10-10:25  Tailoring Influenza Immunization Programmes to Healthcare Workers (HCW)
Pernille Jorgensen, Influenza & other Respiratory Pathogens, WHO Regional Office for Europe

10:25-10:35  Discussion

10:35-11:00  Coffee Break

Chair: Daniela Pitigoi, Inst. Mattei Bals - Afrodit Veloudaki, Prolepsis Institute

11:00-11:15  ECDC overview on recent studies and tools on health communication
Ülla - Karin Nurm, Senior Expert, Public Health Capacity and Communication Unit, ECDC

11:15-12:15  HProImmune Project

• 11:15-11:30  Overview of initial vaccine selection, barrier research and best practices
  Agoritsa Baka, KEELPNO - Prolepsis Institute

• 11:30-11:40  Survey results - Athanassios Petralias, Prolepsis Institute

• 11:40-11:50  Presentation of the Website Version of the Toolkit
  Dina Zota, Prolepsis Institute

• 11:50-12:00  Presentation of a piloting experience - Cristina Rota & Valeria Alfonsi, ISS

• 12:00-12:15  Discussion
12:15-12:30  The UK HCW influenza vaccination campaign: impact and learning  
Robyn Palmer and Ruth Warden, Senior Programme Officers

12:30-12:45  Vaccination of health care workers in Greece  
Helena Maltezou, Head, Department for Interventions in Health-Care Facilities, KEELPNO

12:45-13:00  Discussion

13:00-14:00  Lunch Break

Chair: Ülla - Karin Nurm, ECDC - Anastasia Pantazopoulou, Prolepsis Institute

14:00-14:15  Tell Me Project: Transparent communication in Epidemics: Learning Lessons from experience, delivering effective Messages, providing Evidence  
Prof. Manfred Green, Haifa University School of Public Health

14:15-14:30  Promoting influenza vaccination behavior in health care workers: An Intervention Mapping approach  
Birthe Lehmann, Work & Social Psychology, Faculty of Psychology and Neuroscience, Maastricht University

14:30-14:45  The World Medical Association (WMA) Campaign for Physician Immunization to Prevent Influenza Outbreaks  
Tea Collins, Medical Advisor, WMA

14:45-15:00  An actor-network approach to the HCW influenza immunisation programme in Wales 2009-2011  
Rachel Hale, University of Nottingham, Health Protection Research Group

15:00-15:15  Discussion

15:15-15:45  Coffee Break

15:30-16:00  The new Health Programme of the EU 2014-2020  
Ülla - Karin Nurm, ECDC

16:00-16:30  The way forward, gaps and identified needs- closing remarks  
Prof. Athena Linos & Agoritsa Baka
PRESS RELEASE

European Program, HproImmune - European Information Day for the Promotion of Necessary Immunizations for Health Professionals in the European Union

The majority of European health professionals would support mandatory vaccination against certain diseases.

The Institute of Preventive Medicine, Environmental and Occupational Health, Prolepsis, organizes the HproImmune project European Information Day for the Promotion of Immunization for Health Professionals on Tuesday July 8, 2014, at 8:30 a.m. at the Royal Olympic Hotel (Athanasiou Diakou 28, Athens, Greece).

The meeting is organized in the framework of the three-year European project HproImmune – Promotion of Immunization for Health Professionals in Europe (www.hproimmune.eu). The objective of this project is to provide information to health professionals about vaccinations that are necessary for their own protection, as well as to raise awareness about the most significant infectious diseases, which constitute a significant risk to their health, the health of their patients and their families.

The research conducted over the duration of this project yielded a set of five recommended vaccinations for all health professionals: those against Hepatitis B; the seasonal flu; measles, mumps and rubella (MMR); tetanus, diphtheria and pertussis (Td/Tdap); and chickenpox. Additionally, the research team investigated the health professionals’ barriers towards vaccination, which most of the time are lack of available time and no availability of the recommended vaccines in the workplace.

An online survey conducted during the HproImmune project, which received over 5,500 responses from health professionals from 38 countries, showed that the overwhelming majority of health professionals support vaccines and acknowledge their contribution in improving the health status (86.7%). However, our survey pointed out that nurses are seven times more likely to mistrust vaccines compared to medical doctors, which highlights this particular group as a target for communication campaigns.

Health professionals recognize the risk of exposure to vaccine-preventable diseases during their work, resulting in subsequent exposure of their families and their vulnerable patients. Nevertheless, significant numbers of health professionals are not up-to-date for their vaccines. The majority of health professionals report that they have been vaccinated against Hepatitis B, but particularly low percentages are reported for other diseases (<20% have been vaccinated for chickenpox, measles, rubella and mumps). A relatively low percentage - particularly from Greece- is also recorded for seasonal flu vaccination among health professionals.
A very interesting finding of our survey was that a significant majority (about 66%) of health professionals who participated in the survey – especially physicians – believe that certain vaccines should be mandatory for health professionals with clinical work.

The educational and informational toolkit for the promotion of recommended vaccines, which was developed in the framework of the Program in consideration of the above findings, will be presented at the conference. This educational toolkit includes a database of recommendations for vaccination in European countries, newsletters concerning vaccines, presentations and communication tools, such as posters. The finalized material will be translated into seven languages spoken in the EU and will be available for use by public health professionals from all countries.

Representatives from international organizations and national public health institutions will participate in the meeting, as well as representatives from medical and nursing organizations and health professionals from 15 countries.

The Prolepsis Institute is the project coordinator for HproImmune, which is co-funded by the 2nd Public Health Program 2008-2013 of the European Union, Directorate General for Health and Consumers (DG-SANCO). Project partners represent universities and public health agencies from Italy, Germany, Romania, Lithuania, Poland and Cyprus.

The event agenda is attached. For more information, please visit the program websites:

HProImmune website: http://www.hproimmune.eu/

Prolepsis Institute – HproImmune Program: http://www.prolepsis.gr/new/gr/Projects/35/Promotion-of-Immunization-for-Health-Professionals-in-Europe--HProImmune.html

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For further information, please contact Ioannis Koutelidas by phone at 210-6255700 or 6936-631702, or by email: i.koutelidas@prolepsis.gr.
The HProImmune toolkit: the piloting experience in Italy

Maria Cristina Rota, Valeria Alfonsi
Reparto Epidemiologia delle Malattie Infettive
CNESPS/ISS
Italy
Influenza
Vaccini per proteggere te stesso e i pazienti

Campagna per la promozione della vaccinazione antinfluenzale negli operatori sanitari

Ogni anno il 5-10% della popolazione italiana si ammala di infezione

La vaccinazione del personale sanitario permette di prevenire l'influenza e le sue complicanze e limitare la diffusione del virus

Chi dovrebbe essere vaccinato?
Tutti i personale sanitario e di assistenza diretta a contatto con i pazienti: medici, infermieri, personale paramedico, studenti e tirocinanti; personale amministrativo e di servizio con i pazienti, assistenti al piano, farmacisti.

Perché è necessario vaccinarsi?
Chiusure per controllare l'influenza. Una persona infetta può trasmettere il virus molto facilmente prima ancora che appariri i sintomi, con un semplice colpo di tosse, uno starnuto o una strizzata di mano. Vaccinandot compagni di tiro che aiutano i pazienti, specialmente quelli a maggior rischio di sviluppare le complicanze associate con l'influenza.

Quando vaccinarsi?
La vaccinazione dovrebbe essere effettuata ogni anno, prima dell'inizio della stagione influenzale, in Italia, a partire da metà ottobre.

La vaccinazione è lo strumento di prevenzione più efficace

Gruppi a rischio
Tutti contano il rischio di contrarre il virus dell'influenza ma alcune categorie sono più vulnerabili di altre. I gruppi a rischio comprendono le persone anziane e quelle con patologie croniche come:

- asma grave e altre patologie respiratorie
- diabete e altre malattie endocrine
- malattie cardiocirculatorie
- malattie renali croniche
- malattie epatiche croniche
- tumori
- malattie metaboliche
- malattie muscolari e neurologiche che colpiscono la funzione respiratoria
- malattie degli organi emopoietici e emopoietopatia
- pazienti con immunocompromissione congenita o acquisita

Rischi associati...

...all'infezione
Sintomi più comuni
- febbre, mal di gola, naso chiuso, tosse secca, stanchezza, mal di testa e dolori muscolari
- nel bambini vomito, diarrea, irritabilità, pianto e inappetenza

Complicanze comuni
- polmonite
- infeczione dell'orecchio
- miocardite
- pericardite
- peggioramento di malattie croniche preesistenti

Complicanze rare
- sedicemia
- eeeofatia
- sindrome di Guillain-Barré
- morte

...alla vaccinazione
Eventi avversi comuni (1/100)
- dolore/indolenzimento, arrossamento e/o gonfiore intorno al sito di iniezione
- febbre di breve durata (1-2 giorni), che può essere elevata (37,5°C)
- nelle bimbe e bambini
- stanchezza (1-2 giorni)
- dolori muscolari (1-2 giorni)
- le reazioni avverse sono più comuni nel bambini, precedentemente non esposti al vaccino o all'infezione naturale, rispetto agli adulti

Eventi avversi rari (1/1000)
- orticaria, angioedema
- asma allergica

Eventi avversi molto rari (1/10.000)
- shock anafilattico
- parestesie
- sindrome di Guillain-Barré

Proteggi con il vaccino antinfluenzale per un inverno senza influenza insieme ai tuoi cari, ai colleghi e ai pazienti
Influenza
Vaccinati per proteggere te stesso e i pazienti

Campagna per la promozione della vaccinazione antifluenzale negli operatori sanitari

Influenza
Vaccinati per proteggere te stesso e i pazienti

Campagna per la promozione della vaccinazione antifluenzale negli operatori sanitari
EFFECTIVENESS OF THE FLU VACCINATION CAMPAIGN 2013-2014 IN ITALY PILOTING THE INFLUENZA TOOLKIT

• **Study design**
  Survey poster intervention

• **Study population**
  - Hospital HCWs (physicians, nurses, students and allied health personnel)
  
  Paediatric Hospital “Bambino Gesù” – Rome: 3th level hospital, 574 beds
  Latina hospital - 3th level hospital, 459 beds
  - random sample of non-critical inpatient units and all intensive care units

• **Data collection**
  - December 2013. Anonymous self-administered standardized questionnaire
  - questionnaire validated in a convenience sample of 20 HCWs
Results

- A total of 354 HCWs completed the questionnaire
- Of these, 36.4% had received influenza vaccination in 2013 season
- 62% received influenza vaccination for the first time in the period 2008 - 2011; 36% received one shot every year, 56% never revaccinated after the first time.
- 48% of HCWs immunized were nurses
- 60% of immunized HCWs have been employed for more than 10 years
- Considering influenza not a serious disease was the main (40%) reason for refusing immunization
- Avoiding getting sick was the main (31%) reason for getting vaccinated
- Overall, 71% saw at least one communication tool and, of these, 61% found the information useful.
- “Effectiveness” : HCWs who received influenza vaccination for the first time in 2013: 2.3%
PILOTING THE TOOLKIT FOR THE 5 PRIORITY VACCINES

The leaflet

Varicella
MPR
Influenza
Hepatitis B
Dtp

Myth Busters

Other information:
References
Italian National Vaccination Plan
Posters

**SCEGLI A FAVORE DELLA SALUTE**

- Vaccino
- Morbilli
- Pertosse
- Tetano
- Varicella
- Hepatite B
- Influenza
- MPR
- Td o Tdap

Non lasciare niente al caso

**SCEGLI L’ARMA MIGLIORE**

- Informati
- Vaccinati
- Proteggi

E’ importante che gli operatori sanitari siano vaccinati contro:

- Epatite B
- Influenza
- MPR
- Td o Tdap
- Varicella

HProImmune

www.hproimmune.eu
IN QUALE FETTA DELLA TORTA STAI?

INFORMATI - VACCINATI - PROTEGGITI

E' importante che gli operatori sanitari siano vaccinati contro:

- EPATITE B
- INFLUENZA
- MPR
- Td o Tdap
- VARICELLA
Materials for hospital administrators/policy makers

- Guidelines for planning a vaccination campaign in a hospital setting
- Declination form
- Invitation letter
- Questionnaires
- References
PILOT STUDY

- **Study design**
  - Educational event addressing trainers
  - Survey pre and post intervention

- **Study population**
  - Hospital HCWs (physicians, nurses, students and allied health personnel)
    - Rizzoli Hospital-Bologna 2nd level hospital, 300 beds
    - Grosseto Hospital 2nd level hospital, 350 beds

- **Data collection**
  - May 2014
  - Questionnaire pre-post intervention (previously piloted on a sample of 20 HCWs)

- **Data analysis**
  - On going
Training of trainers

• A meeting with hospital administrators, nurses and doctors of the 2 hospitals was convened in April 014 to explain the project and the objectives of the pilot action.

• One sister and one MD for each hospital Unit were trained through an educational presentation, followed by discussion, in April 2014.

• They were asked to train their colleagues at the beginning of May and to distribute the pre questionnaires.

• The posters were hanged in several hospital wards and leaflets distributed.

• An e-mail message, with information material (facts sheet) attached was sent to all hospital staff inviting them to get vaccines.

1 month AFTER the intervention

POST- questionnaire send by e-mail to those who compiled the pre Questionnaires
- Demographic variables (age, gender, years of practice, professional category)
- Attitude towards vaccination and reasons for missed vaccination
- Awareness of VPDs and of the importance of immunization
- Degree of agreement/disagreement (Likert scale) with a set of statements regarding vaccination
- Features of the toolkit (fact sheets, posters, etc.)
### Characteristics of the study population (N=107)

<table>
<thead>
<tr>
<th>Professional category</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>7</td>
<td>6.5</td>
</tr>
<tr>
<td>Nurses</td>
<td>86</td>
<td>80.4</td>
</tr>
<tr>
<td>Other allied health personnel</td>
<td>14</td>
<td>13.1</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>N</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>20-29</td>
<td>6</td>
<td>5.6</td>
</tr>
<tr>
<td>30-39</td>
<td>27</td>
<td>25.2</td>
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<td>40-49</td>
<td>39</td>
<td>36.4</td>
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<tr>
<td>50-59</td>
<td>35</td>
<td>32.7</td>
</tr>
<tr>
<td>&gt;60</td>
<td>1</td>
<td>0.9</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>24</td>
<td>22.4</td>
</tr>
<tr>
<td>Female</td>
<td>83</td>
<td>77.6</td>
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</table>

<table>
<thead>
<tr>
<th>Speciality</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical unit</td>
<td>50</td>
<td>46.7</td>
</tr>
<tr>
<td>Surgical unit</td>
<td>41</td>
<td>38.3</td>
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<tr>
<td>Intensive care</td>
<td>5</td>
<td>4.6</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>8.4</td>
</tr>
</tbody>
</table>

**Years of practice** range 1-37; median 10
Percentage of hospital HCWs reporting to be immunized

- Influenza: 20%
- Varicella: 15%
- MMR: 19%
- Hepatitis B: 80%
- Tdap/Td: 54%
I believe that immunization amongst HCWs is a... 

Indispensable requirement to work in a health care setting 

Duty because HCWs should represent a model for their patients
I don’t believe to be at risk for infectious diseases

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>No opinion</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre</strong></td>
<td>1</td>
<td>1,9</td>
<td>4,8</td>
<td>41,2</td>
<td>46,1</td>
</tr>
<tr>
<td><strong>Post</strong></td>
<td>1</td>
<td>1,9</td>
<td>4,8</td>
<td>35,3</td>
<td>42,8</td>
</tr>
</tbody>
</table>
Easier said than done...

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Considered</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Varicella</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>MMR</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>22</td>
<td>-</td>
</tr>
<tr>
<td>Td/Tdap</td>
<td>14</td>
<td>7</td>
</tr>
</tbody>
</table>
To what extent do you agree that the information provided in the fact sheets are accurate

<table>
<thead>
<tr>
<th></th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seasonal influenza</strong></td>
<td>1.1</td>
<td>22.8</td>
<td>68.5</td>
<td>7.6</td>
</tr>
<tr>
<td><strong>Varicella</strong></td>
<td>3.3</td>
<td>20.6</td>
<td>69.6</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>MMR</strong></td>
<td>2.2</td>
<td>20.9</td>
<td>71.4</td>
<td>5.5</td>
</tr>
<tr>
<td><strong>Hepatitis B</strong></td>
<td>1.1</td>
<td>16.5</td>
<td>72.5</td>
<td>9.9</td>
</tr>
<tr>
<td><strong>Td / Tdap</strong></td>
<td>1.1</td>
<td>22.2</td>
<td>70.0</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Myth busters</strong></td>
<td>9.1</td>
<td>18.2</td>
<td>45.5</td>
<td>27.2</td>
</tr>
</tbody>
</table>
How would you rate the features of the HPROImmune factsheets?

- Influenza: 63
- Varicella: 63
- MMR: 67
- Hepatitis B: 72
- Td/Tdap: 61
How would you rate the following features of the HProImmune posters?

**GRAFIC/DESIGN**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Poster 1 (sword)</th>
<th>Poster 2 (statistics)</th>
<th>Poster 3 (wheel of fortune)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Fair</td>
<td>30</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>Good</td>
<td>40</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Excellent</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>No opinion</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

**MESSAGE**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Poster 1 (sword)</th>
<th>Poster 2 (statistics)</th>
<th>Poster 3 (wheel of fortune)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>5</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Fair</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Good</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Excellent</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>No opinion</td>
<td>10</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>
The HProImmune Toolkit materials provided enough information about:

- Importance of HCWs immunization
- Rationale behind HCWs immunization
- Recommended vaccines (adverse events, schedule)
- VPD of interest for HCWs
On the all, do you consider the content of the educational event as being:

<table>
<thead>
<tr>
<th></th>
<th>Useless</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevant</td>
<td>13.9</td>
<td>19.4</td>
<td>36.1</td>
<td>19.4</td>
<td>11.2</td>
</tr>
<tr>
<td>Persuasive</td>
<td>21.1</td>
<td>26.3</td>
<td>23.7</td>
<td>21.0</td>
<td>7.9</td>
</tr>
</tbody>
</table>
CONCLUSIONS (1)

- Vaccination coverage estimated in the two hospitals is low, well below the recommended coverage, except for hepatitis B
- Compliance to vaccination is strongly influenced by several factors such as: risk perception, fear of adverse events, distrust, competing priorities, availability of vaccine, etc.
- Vaccination campaigns only based on information are not effective in increasing vaccination coverage
CONCLUSIONS (2)

Combination of different strategies and approaches can improve vaccination coverage among HCWs. In particular:

- Dissemination of tailored information
- Availability of vaccine free of charge
- Personnel dedicated to immunization
- Peer vaccination promotion
- Economic incentives/disincentives
- Declination form
- Obligation for HCWs?

Need to strengthen the toolkit component addressing policy makers and hospital administrators?
Thank you for your attention
Results of the HProImmune on-line survey

Athanassios Petralias, PhD
General Director of Research, Prolepsis Institute

EU Information Day
Athens, 8 June, 2014
On-line HProImmune survey

http://www.hproimmune.eu/index.php/hproimmune/survey

- Basic aim: Identify barriers towards immunization for HCWs in Europe
- Participating countries outside partnership as well
- Designed by the partnership and consulted by the Advisory Board of the project
- Running from October 2012
- Translated in 10 languages (EN, EL, IT, ES, PO, RO, DE, SE, LT, FR)
Contents of on-line survey

- Q1-Q14
- Q1-Q7: Demographics [gender, age, country of work, education, specialty, work setting, years of experience]
- Q8-Q14: Behavior towards vaccines
  - Risk perception of HCWs (diseases)
  - Which vaccines they have received in the past 10yr
    - Why have they being immunized
    - Why have they not being immunized
  - Attitude towards obligatory vaccination

Diseases examined
Influenza (flu)
Tuberculosis
Measles
Mumps
Rubella (German measles)
Meningitis
Varicella (chickenpox)
Hepatitis A
Hepatitis B
Pneumococcal disease
Tetanus
Diphtheria
Pertussis (whooping cough)
## Participants

<table>
<thead>
<tr>
<th>Country</th>
<th>No. of questionnaires</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>2945</td>
<td>53.03</td>
</tr>
<tr>
<td>Greece</td>
<td>563</td>
<td>10.14</td>
</tr>
<tr>
<td>Lithuania</td>
<td>436</td>
<td>7.85</td>
</tr>
<tr>
<td>Finland</td>
<td>307</td>
<td>5.53</td>
</tr>
<tr>
<td>Italy</td>
<td>251</td>
<td>4.52</td>
</tr>
<tr>
<td>Germany</td>
<td>233</td>
<td>4.20</td>
</tr>
<tr>
<td>Malta</td>
<td>217</td>
<td>3.91</td>
</tr>
<tr>
<td>Romania</td>
<td>110</td>
<td>1.98</td>
</tr>
<tr>
<td>Slovenia</td>
<td>100</td>
<td>1.80</td>
</tr>
<tr>
<td>Spain</td>
<td>93</td>
<td>1.67</td>
</tr>
<tr>
<td>Poland</td>
<td>63</td>
<td>1.13</td>
</tr>
<tr>
<td>UK</td>
<td>59</td>
<td>1.06</td>
</tr>
<tr>
<td>Cyprus</td>
<td>25</td>
<td>0.45</td>
</tr>
<tr>
<td>Ireland</td>
<td>22</td>
<td>0.40</td>
</tr>
<tr>
<td>Other countries</td>
<td>123</td>
<td>2.22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5553</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

From 38 countries!
<table>
<thead>
<tr>
<th>Medical doctors (of total)</th>
<th>% 24.6</th>
<th>Nurses (of total)</th>
<th>% 42.7</th>
<th>Allied health professionals (of total)</th>
<th>% 32.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Practice, family medicine</td>
<td>42.0</td>
<td>Hospital nurse</td>
<td>28.0</td>
<td>Assistants / Aides (home health aides, orderlies)</td>
<td>33.5</td>
</tr>
<tr>
<td>Internal medicine specialty</td>
<td>19.4</td>
<td>Primary health care nurse</td>
<td>19.5</td>
<td>Administrative health care service personnel</td>
<td>20.9</td>
</tr>
<tr>
<td>Pediatric specialty</td>
<td>16.1</td>
<td>Nurse in other settings (home, outpatient clinic)</td>
<td>14.8</td>
<td>Physical, Occupational, Respiratory therapists</td>
<td>13.9</td>
</tr>
<tr>
<td>Surgical specialty</td>
<td>15.9</td>
<td>Public health nurse</td>
<td>13.3</td>
<td>Psychologists</td>
<td>5.6</td>
</tr>
<tr>
<td>Laboratory</td>
<td>6.6</td>
<td>Maternal health or school health nurse</td>
<td>8.4</td>
<td>Hospital epidemiologists</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Infection control nurse</td>
<td>6.1</td>
<td>Social workers</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Midwife or maternal health nurse</td>
<td>5.0</td>
<td>Laboratory Technicians</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emergency department nurse</td>
<td>4.8</td>
<td>Support personnel (Food services, maintenance)</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pharmacist</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ambulance personnel</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dental Hygienists</td>
<td>2.3</td>
</tr>
</tbody>
</table>
Participants - III

Gender

- 80.74% (Female)
- 19.26% (Male)

Age distribution

- 21.8% (18-24)
- 17.5% (25-34)
- 22.9% (35-44)
- 29.3% (45-54)
- 26.1% (55-64)
- 2.1% (>65)

59% with postgraduate degree and 67% with 10 years or more experience
Methodology

- large number of questionnaires from Sweden
- general asymmetry in the distribution among countries and profession categories
- Adjusted sample was obtained as follows:
  - WHO database of Health Care workers, by country and profession category (physicians, nurses, dentists, pharmacists)
  - Countries having less than 10 responses were omitted from the adjusted sample
- We then built the weights for each country and, within each country, by profession, so as for the observed frequencies with respect to these variables (country and profession), to correspond to those reported in the WHO database
Distribution by country

Unadjusted Sample

- Sweden: 53.8%
- Greece: 10.3%
- Poland: 2.0%
- Italy: 4.0%
- Finland: 5.6%
- Germany: 4.3%
- Malta: 4.0%
- Lithuania: 8.0%
- Romania: 2.0%
- Slovenia: 1.8%
- Spain: 1.7%
- Denmark: 1.2%
- UK: 1.1%
- Norway: 0.5%
- Cyprus: 0.5%
- Ireland: 0.4%
- Other country: 0.9%

Adjusted Sample

- Germany: 30.0%
- Sweden: 3.6%
- Greece: 3.1%
- Finland: 3.4%
- Italy: 15.0%
- Poland: 7.6%
- Spain: 10.1%
- Cyprus: 0.2%
- Lithuania: 0.9%
- Romania: 4.4%
- Slovenia: 0.5%
- UK: 19.1%
- Other country: 2.0%

Cases weighted by weights
Which of the following statements do you feel that best reflects your personal view about vaccines?

- I believe vaccines are important for reducing or eliminating serious diseases 2,27%
- I believe that vaccines are useful in particular settings for example in the developing world 2,03%
- Not sure 6,73%
- I believe in challenging natural immunity by contracting the disease rather than getting vaccinated 86,70%
- I don't believe in vaccinations, I believe that they do more harm than good
Which of the following statements do you feel that best reflects your personal view about vaccines:

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

Logistic regression analyses:
- The odds of not believing in vaccination for nurses are about 7 times the odds for medical doctors (OR=7.47, p-value<0.001).
- The odds of not believing in vaccination for allied health professionals are almost 3 times the corresponding odds for medical doctors (OR=2.93, p-value=0.003)
Which of the following diseases do you believe that HCWs are more at risk of contracting due to the nature of their work?

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

- Influenza
- Measles
- Hepatitis B
- Tuberculosis
- Mumps
- Rubella
- Varicella
- Hepatitis A
- Meningitis
- Tetanus
- Diphtheria
- Pertussis
- Other
Are you required by your hospital/organization to prove immunity against any of the following Vaccine Preventable Diseases (VPDs) before you begin to work?

- Measles: 39.7%
- Mumps: 36.9%
- Rubella (German measles): 40.8%
- Varicella (chickenpox): 27.9%
- Hepatitis B: 93.6%
- Pertussis (whooping cough): 17.4%
- Other: 11.7%
Percentage of HCWs who have received vaccination against VPDs in the last 10 years (by disease)

- Seasonal influenza (flu) vaccine: 56.2%
- Pandemic influenza (swine flu) vaccine: 34.4%
- MMR (measles-rubella vaccine): 23.3%
- Varicella (chickenpox) vaccine: 8.4%
- Hepatitis B vaccine: 62.9%
- Td (adult tetanus vaccine) or Tdap (adult tetanus, diphtheria and pertussis vaccine): 52.6%
### Percentage of HCWs who have not received vaccination against VPDs in the last 10 years (by country and disease)

<table>
<thead>
<tr>
<th>Country</th>
<th>Seasonal influenza (flu) vaccine</th>
<th>Pandemic influenza (swine flu) vaccine</th>
<th>MMR (mumps-measles-rubella vaccine)</th>
<th>Varicella (chickenpox) vaccine</th>
<th>Hepatitis B vaccine</th>
<th>Td or Tdap (adult tetanus, diphtheria and pertussis vaccine)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>63.9%</td>
<td>34.9%</td>
<td>84.4%</td>
<td>96.4%</td>
<td>48.4%</td>
<td>61.5%</td>
</tr>
<tr>
<td>Greece</td>
<td>57.5%</td>
<td>73.7%</td>
<td>82.6%</td>
<td>87.4%</td>
<td>48.5%</td>
<td>59.9%</td>
</tr>
<tr>
<td>Finland</td>
<td>34.1%</td>
<td>31.9%</td>
<td>69.2%</td>
<td>92.9%</td>
<td>37.4%</td>
<td>20.9%</td>
</tr>
<tr>
<td>Italy</td>
<td>53.3%</td>
<td><strong>76.6%</strong></td>
<td>90.6%</td>
<td>92.5%</td>
<td>50.8%</td>
<td>55.9%</td>
</tr>
<tr>
<td>Germany</td>
<td>45.2%</td>
<td>70.1%</td>
<td>60.9%</td>
<td>82.8%</td>
<td>24.2%</td>
<td>21.0%</td>
</tr>
<tr>
<td>Malta</td>
<td>40.0%</td>
<td>50.0%</td>
<td><strong>80.0%</strong></td>
<td>100.0%</td>
<td>50.0%</td>
<td>66.7%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>52.0%</td>
<td><strong>89.8%</strong></td>
<td>94.0%</td>
<td>98.0%</td>
<td>70.0%</td>
<td>71.4%</td>
</tr>
<tr>
<td>Romania</td>
<td>43.0%</td>
<td>54.5%</td>
<td>95.3%</td>
<td>98.3%</td>
<td>48.5%</td>
<td><strong>89.4%</strong></td>
</tr>
<tr>
<td>Slovenia</td>
<td><strong>79.3%</strong></td>
<td>85.7%</td>
<td>96.6%</td>
<td>100.0%</td>
<td>64.3%</td>
<td><strong>82.8%</strong></td>
</tr>
<tr>
<td>Spain</td>
<td>49.5%</td>
<td>79.1%</td>
<td>76.6%</td>
<td>91.0%</td>
<td>47.3%</td>
<td>46.5%</td>
</tr>
<tr>
<td>Poland</td>
<td>35.0%</td>
<td><strong>82.4%</strong></td>
<td>93.9%</td>
<td>98.8%</td>
<td>25.4%</td>
<td>74.6%</td>
</tr>
<tr>
<td>UK</td>
<td>29.5%</td>
<td>51.6%</td>
<td>77.1%</td>
<td>99.0%</td>
<td>35.8%</td>
<td>56.8%</td>
</tr>
<tr>
<td>Cyprus</td>
<td>75.0%</td>
<td><strong>87.5%</strong></td>
<td>77.8%</td>
<td>88.9%</td>
<td>62.5%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Ireland</td>
<td>40.6%</td>
<td>24.5%</td>
<td>77.4%</td>
<td>100.0%</td>
<td>43.4%</td>
<td><strong>78.3%</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43.8%</strong></td>
<td><strong>65.6%</strong></td>
<td><strong>76.7%</strong></td>
<td><strong>91.6%</strong></td>
<td><strong>37.1%</strong></td>
<td><strong>47.4%</strong></td>
</tr>
</tbody>
</table>
## Percentage of HCWs who have **not** received vaccination against VPDs in the last 10 years (by profession and disease)

<table>
<thead>
<tr>
<th>Profession category / Disease</th>
<th>Medical doctor</th>
<th>Nurse</th>
<th>Allied health professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seasonal influenza (flu) vaccine</td>
<td>34.8%</td>
<td>46.3%</td>
<td>53.5%</td>
</tr>
<tr>
<td>Pandemic influenza (swine flu) vaccine</td>
<td>56.9%</td>
<td>69.3%</td>
<td>67.6%</td>
</tr>
<tr>
<td>MMR (mumps-measles-rubella vaccine)</td>
<td>76.3%</td>
<td>75.3%</td>
<td>78.1%</td>
</tr>
<tr>
<td>Varicella (chickenpox) vaccine</td>
<td>92.5%</td>
<td>90.6%</td>
<td>91.5%</td>
</tr>
<tr>
<td>Hepatitis B vaccine</td>
<td>34.5%</td>
<td>35.1%</td>
<td>44.6%</td>
</tr>
<tr>
<td>Td or Tdap (adult tetanus, diphtheria and pertussis vaccine)</td>
<td>46.3%</td>
<td>46.8%</td>
<td>48.4%</td>
</tr>
</tbody>
</table>
Reasons for receiving Hepatitis B during the last 10 years

- I believe in the protection that vaccines offer: 57.2%
- I believe I am at risk of acquiring the disease: 44.4%
- I was afraid of contracting the disease: 30.4%
- It was available in my workplace: 31.2%
- It was offered free of charge: 27.5%
- I was required by my employer to be vaccinated: 30%
- I felt pressured by my colleagues/friends/family: 8%
- Any other reason: 4.6%
Recommended Vaccine 1: Hepatitis B

Reasons for not receiving Hepatitis B during the last 10 years:

- I don't know where to obtain a vaccination: 0.17
- My employer/insurance does not cover vaccination costs: 1.56
- I don't have time to get a vaccine: 0.77
- I have to go out of my way to get the vaccine: 0.38
- I am skeptical about the long-term health effects of vaccines: 2.38
- I am afraid of needles: 0.16
- I am concerned that the vaccine will not work: 0.3
- I am concerned about becoming ill after receiving the vaccine: 1.56
- I am concerned about vaccine side effects: 4.18
- I don't believe I am at risk for any of those diseases: 6.98
- I believe in challenging natural immunity by contracting the disease rather than getting vaccinated: 0.39
- My religious beliefs are against vaccinations: 1.35
- I have experienced side effects from a previous vaccine dose: 1.54
- I have already received this vaccination in the past: 16.41
- I have contracted this disease in the past: 3.57
Reasons for receiving flu vaccine during the last 10 years

- 60.2% I believe in the protection that vaccines offer
- 43.9% I do not wish to transmit any disease to the patients I come into contact with
- 41.8% It was available in my workplace
- 32.3% It was offered free of charge
- 4.7% I was required by my employer to be vaccinated
- 2% I felt pressured by my colleagues/friends/family
- 5.8% Any other reason
- 27.1% I was afraid of contracting the disease
- 43.1% I believe I am at risk of acquiring the disease
Reasons for not receiving flu vaccine during the last 10 years

- Any other reason: 11.18%
- I don't know where to obtain a vaccination: 0.58%
- My employer/insurance does not cover vaccination costs: 5.01%
- I don't have time to get a vaccine: 2.28%
- I have to go out of my way to get the vaccine: 1.79%
- I am skeptical about the long-term health effects of vaccines: 11.45%
- I am afraid of needles: 1.33%
- I am concerned that the vaccine will not work: 4.58%
- I am concerned about becoming ill after receiving the vaccine: 8.96%
- I am concerned about vaccine side effects: 14.82%
- I don't believe I am at risk for any of those diseases: 11.12%
- I believe in challenging natural immunity by contracting the disease rather than getting ...: 19.53%
- My religious beliefs are against vaccinations: 1.14%
- I have experienced side effects from a previous vaccine dose: 5.28%
- I have already received this vaccination in the past: 0.31%
- I have contracted this disease in the past: 3.41%
Do you think that it should be mandatory for HCWs who come in regular contact with patients to be vaccinated against VPDs?
Do you think that it should be mandatory for HCWs who come in regular contact with patients to be vaccinated against VPDs?

<table>
<thead>
<tr>
<th>Country</th>
<th>Agree</th>
<th>Not sure</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>47.1%</td>
<td>31.2%</td>
<td>21.7%</td>
</tr>
<tr>
<td>Greece</td>
<td>77.8%</td>
<td>15.6%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Finland</td>
<td>54.0%</td>
<td>36.2%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Italy</td>
<td>66.9%</td>
<td>18.9%</td>
<td>14.2%</td>
</tr>
<tr>
<td>Germany</td>
<td>62.1%</td>
<td>10.5%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Malta</td>
<td>80.0%</td>
<td>20.0%</td>
<td>.0%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>77.6%</td>
<td>10.2%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Romania</td>
<td>79.1%</td>
<td>5.1%</td>
<td>15.7%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>27.6%</td>
<td>13.8%</td>
<td>58.6%</td>
</tr>
<tr>
<td>Spain</td>
<td>64.2%</td>
<td>13.7%</td>
<td>22.1%</td>
</tr>
<tr>
<td>Poland</td>
<td>89.2%</td>
<td>3.2%</td>
<td>7.6%</td>
</tr>
<tr>
<td>UK</td>
<td>59.1%</td>
<td>21.5%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Cyprus</td>
<td>77.8%</td>
<td>11.1%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Ireland</td>
<td>95.3%</td>
<td>2.8%</td>
<td>1.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>65.6%</td>
<td>15.0%</td>
<td>19.4%</td>
</tr>
</tbody>
</table>
Conclusions

- The majority of health care workers believe vaccines are important for reducing or eliminating serious diseases (86.7%)

- Physicians believe in higher percentages that vaccines are important for reducing or eliminating serious diseases (96.1% versus 82.0% for nurses and 83.3% for allied health professionals)

- More than half of HCWs (51.9%) did not need to prove immunity against vaccine preventable diseases.

- The majority of HCWs did not receive vaccination against MMR, varicella or pandemic flue during the last 10 years. The percentages for tetanus and seasonal flue were 52-56%, and for Hepatitis B 63%.
Conclusions

• The majority of medical doctors (76.8%) believe that vaccination should be mandatory, whereas, the corresponding percentages are lower for nurses and other allied categories (60.9% and 63.2%)

• There are considerable differences among countries, professions and work settings.

• The survey report has much more detailed results concerning specific sub-categories of HCWs, work settings and analysis on basis of demographic and occupational characteristics.

• We have much to learn based on this unique database.
Thank you for your attention

Questions?

www.hproimmune.eu
Tailoring Seasonal Influenza Immunization Programmes for Healthcare Workers in Montenegro

a case study

P Jorgensen, N Kavaric, N Terzic, M Grbovic, M Brajovic, N Likhite
Background

- Influenza vaccination uptake among HCWs in many countries low, despite recommendations
- Multiple barriers to vaccination among HCWs
- Can we use the Tailoring Immunization Programmes (TIP) approach to increase influenza vaccine uptake in healthcare workers?
What is TIP?

- Step-by-step approach grounded in behavioural science and social marketing theories
- Assist health authorities and decision-makers in tailoring services to close “immunity gaps”

1. Identify and prioritize target groups
2. Diagnose demand- and supply-side barriers and enablers to vaccination
3. Design evidence-informed responses
TIP Flu Montenegro

1. Examine available information
2. SWOT of vaccination programme
3. Research on motivators and barriers to flu vaccination
4. Describe, segment and prioritize HCW target groups

Design evidence-informed responses

5. Develop conceptual map
6. Set objectives
7. Design interventions
8. Monitor and evaluate

Identify target groups

Diagnose barriers and enablers to vaccination
TIP Flu Montenegro

1. Examine available information
2. SWOT of vaccination programme
3. Research on motivators and barriers to flu vaccination
4. Describe, segment and prioritize HCW target groups
5. Develop conceptual map
6. Set objectives
7. Design interventions
8. Monitor and evaluate
Research

To identify HCWs’ perceptions regarding influenza and influenza vaccination in Montenegro

- **Quantitative (adapted from HProImmune)**
  - Self-administered questionnaire (400 HCWs)

- **Qualitative**
  - Semi-structured interviews (23 HCWs and managers)
Vaccination uptake

1 in 5 vaccinated against seasonal influenza

- Generally, low levels of vaccination among both doctors and nurses
- Similar across departments, gender, seniority, education etc.
Barriers to vaccination

“I have been working for almost 30 years. So far, I have not caught influenza. I think my immune system is good”
(nurse, not vaccinated, age 44)

“Because I think I am in good shape, in good health”
(doctor, not vaccinated, age 40)
**Motivation for vaccination**

- **36%** 55-65 yrs vaccinated
- **8%** 18-24 yrs vaccinated

"I suffered from flu, that’s the first reason why I get vaccinated. I work with infected patients and am exposed to the risk every day. Also I’ve heart problems and influenza could deteriorate my health.”

(nurse, vaccinated, age unknown)
Drivers for vaccination

- Make it mandatory
  
  “If the order comes from the Ministry, then HCWs will be vaccinated” (nurse, not vaccinated, age 51)

- Vaccination triggered by perceived or real & immediate threat
Conceptual map on barriers and motivators

I suffer from diabetes

It’s my duty as chief surgeon to get vaccinated

Influenza is not severe

Where do I get the flu shot?

I am afraid of needles

My colleagues don’t get vaccinated

Immunity through infection is better than the vaccine

Vaccines are unsafe

I am way too busy

I suffer from diabetes

Where do I get the flu shot?
Conceptual determinants map

- Categorize each determinant as a “environmental” or “social/community” or “personal” factor
- Identify determinants as barriers or motivators
- Facilitates identification of determinants that courage or discourage vaccination in a given context
- Helps identify what the programme should focus on to trigger positive behaviour change
Influenza vaccination barriers and enablers in Montenegro

Environmental (outside control of the individual)
- Occupational health important to MoH
- Established annual SIV campaign
- Vaccines available, timely and free
- SIV is low on Public Health priority list
- HCWs are busy

Social/community (influence of networks)
- Aware of SIV risk groups
- General positive vaccination attitude
- Know where & when of SIV
- General disinterest
- Distrust fuelled by A(H1N1) and media
- No “push” for SIV, no administrative incentives
- Low SIV uptake: not a normative behaviour
- Misconceptions re SI

Personal (perceptions, beliefs)
- Intention to vaccinate when threat of disease
- Intention to vaccinate with age/chronic disease
- Low perceived personal susceptibility
- Low perceived severity
- Lack of trust, concerns with VE
- Passive immunization & sense of strength thru exposure to infection
Next steps

Set objective

Design evidence-informed strategies

Monitor & evaluate
Many thanks to

- Doctors and nurses at the Primary Health Centre, Podgorica and hospital clinics in Podgorica
- Ministry of Health, Montenegro
- Institute of Public Health, Montenegro
- Agoritsa Baka, Pania Karnaki, Greece
- CEED consulting, Montenegro
Extra slides
Mix of strategies - preliminary

- Promote influenza vaccination as a professional norm
  - Call upon the sense of duty HCWs have in protecting and caring for patients and *doing no harm*
- Use existing management structures to recommend and motivate HCWs
- Competition between departments to reach the highest coverage
- Frame influenza vaccination as a preventive measure for HCWs themselves
- Employ a variety of formats to educate HCWs about influenza and vaccination
- Storytelling emphasizing the importance of vaccination
  - Make it real: *personalize the threat; tell the story of its consequences*
Montenegro, quick facts

- Population: 625,266, of which 156,169 live in Podgorica
- Healthcare system predominantly public
- Primary Health Care Centre of Podgorica has ~400 HCWs and serves 1/3 of the population
## Situation analysis – SWOT

### Strengths
- Well-working mandatory immunization system
- SIV guidelines, with defined risk groups
- Well-respected IPH, leading annual SIV programme
- Well-functioning system for SIV procurement and distribution
- SIV free of cost
- MOH attention and response to media rumours

### Weaknesses
- Very low uptake of SIV among HCWs
- Low interest in SIV (not a priority)
- Need for clarification of SI and SIV
- Lack of “push” at the facility level
- Medical staff are busy

### Opportunities
- NIC status for IPH influenza lab in progress
- EC interest in HCW vaccination (including SIV) and occupational health
- No strong barrier to SIV among HCWs
- Decisive role of HCW in SIV uptake among risk groups

### Threats
- Potential for outbreaks
- Presence of anti-vaccine voice in media and distrust after A(H1N1)pdm09
- Low perception of benefits of SIV among HCWs
- Low sense of importance in HCW role in transmitting SI

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World Health Organization
Regional Office for Europe