

## D2.3

### Report on Health Care Professional Communication Requirements

1st Reporting period  
WP2 New challenges and new methods for outbreak  
communication

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**D2.3 “Report on Health Care Professional Communication Requirements”**

Task: **2.3**

Leader: **UEMO** – Other contributor: **BMJ, NDLSF, CSSC**

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## EXECUTIVE SUMMARY

### Background, objectives

The aim of the work package 2 was to identify new challenges and new methods concerning outbreak communication by addressing, in the frame of the subtask 2.3 the communication requirements of health care professionals (HCP), who are one of the most important groups involved in contacting and communicating with at-risk patients.

The specific objective of the research was to identify and describe both positive and negative opinions and experiences of GPs about the handling of the 2009 H1N1 pandemic at local and international level, as well as asking them for their suggestions and proposals for solutions. Key objectives of the research were:

- (1) to understand the views and perceptions of the GPs about communication requirements in case of outbreak communication;
- (2) to investigate reasons of mistrust or poor compliance with vaccination programmes in 2009 pandemic.

### Methods

A series of focus group discussions, one-to-one interviews and online questionnaires were performed among GPs from Europe and the United States of America. Researchers intended to have a representation from the different regions of Europe: Anglo Saxon (United Kingdom UK), German- French (Belgium-B), Mediterranean (Italy-I), Balkan (Romania-R) Central-East Europe (Hungary-H), Scandinavian-Nordic countries (Denmark-D). The selection criteria were for GPs to have been practising during the pandemic in 2009/2010. The discussions/interviews addressed questions regarding the opinion of the GPs about how the pandemic situation was handled in general, in their own practice and by other health care professionals, the attitudes towards own vaccination, the differences among different patient groups, requirements, thoughts about a future similar situation. The summaries of the transcribed discussions/interviews were processed by the thematic analysis.

### Results

Participating GPs felt in general that national and local health authorities would have to handle the pandemic situation differently in the future. Misleading media communication was one of the main problems during the 2009/2010 pandemic flu. Patients were alarmed and GPs did not have enough information and tools to handle "hysteria": doubts of the population about the pandemic situation and about the real need for vaccination. GPs from Eastern-European countries complained about communication gap (health authorities informed them delayed), in contrast British GPs felt that the communication overload in the UK from different sources was overwhelming at times. In the United States non-vaccine preventative recommendations were widely adopted, but following the release of vaccines, mixed feeling regarding the handling of vaccinations was registered by respondents.

GPs experienced many problems in the field of coordination among health care professionals (e.g. midwives, gynecologists and general physicians). Lack of cooperation or not very effective collaboration between different levels of PHC system, health authorities (national - regional – local) and between health authorities and GPs was also mentioned as well as organization, and logistics (supply and distribution of the vaccine and protective wear).

GPs had fewer problems with patients who took flu vaccines in previous years, and patient at risk (access of risk groups were quiet successful). Vaccination of pregnant women was often difficult (due to lack of unified directives and position papers), furthermore African and Asians patients (UK) and patients belonging to Roma minority were identified as 'problematic groups', mainly because of cultural differences

(in Hungary and Romania). In the States vaccine uptake depended more on local policy than individual acceptance.

### **Conclusions and recommendations**

GPs have a crucial role in preventative activities during pandemics. They possess high accessibility by the population and hold high levels of credibility and trust from the public. GPs serve in health prevention and thanks to often a personalised relationship with patients, they are able to target communication to at-risk groups who require a vaccination during a pandemic.

Recommendations for GPs focused on three main topics:

- Communication (improve external communication regarding media campaigns and at the GP-patient relationship level; improve internal communication between different health professionals, and between health authorities and health professionals)
- Collaboration (improve coordination between national and regional health government and GPs; improve coordination among health care professionals)
- Organization, logistics and others (e.g. timely shipment of vaccines, separate, reimbursed office hours to GPs for vaccination; weekend clinics for well patients; improve access to flu lines, widen the target of those who get vaccine free; cheaper vaccine to people not belonging to a target group; clear legislation or legal support).

## 1. Introduction

The overall aim of the TELL ME project is to answer three distinct research questions:

- a) How can the general population be persuaded through public health communication to take effective preventative actions (e.g., vaccination, antiviral therapy, hygienic norms, etc.)?
- b) What are the most appropriate communication methods to deal with complexity, uncertainty, ignorance, information asymmetries, overwhelming information, biased information, misinformation and malicious information?
- c) What are the best communication strategies to support vaccine uptake, and to assist health professionals and agencies to engage with vaccine-resistant groups? (TELL ME DoW 2011)

The actual task (2.3) was performed in order to contribute to answer the last question of the overall project, how health care professionals could be involved in the communication channel in order to contribute to effective preventative activities during outbreaks.

According to the European Commission's, Assessment Report on EU-wide pandemic vaccine strategies, , *"Pandemic planners need to find a way to get health care professionals more actively engaged so their valuable knowledge and experiences can be considered in the planning process. Without their engagement and support, the effectiveness of vaccine communications is inhibited. Such involvement is key to building support among this vital group for the proposed pandemic policies and strategies"*. (EC 2010)

The aim of the work package 2 was to identify new challenges and new methods concerning outbreak communication by addressing, in the frame of the subtask 2.3 the communication requirements of health care professionals (HCP), who are one of the most important groups involved in contacting and communicating with at-risk patients. Considered a regular and trusted provider at the entry point of health care (WHO 2008), being highly accessible for a large population, general practitioners/family physicians play a key role alongside other health care professionals. We tried to find answers to the questions, such as: How can HCP be mobilized to become active partners rather than passive (and often critical) participant in the communication process? What are the communication channels most trusted by family doctors? How can HCP be supported in reaching out to different patient groups? The research aims to provide information which would support a closer involvement of general practice in the decision-review process of pandemic strategies, so that feedback from live experience can better inform the process and provide valuable GP perspective on the anticipated impact of any proposed changes. (Eizenberg 2009)

The specific objective of the research was to identify and describe opinions – positive or negative – experiences of GPs about the handling of the pandemic, including their suggestions and proposals for solutions. Key objectives of this research were:

- (1) to understand the views and perceptions of the GPs about communication requirements in case of outbreak communication;
- (2) to investigate reasons of mistrust or poor compliance with vaccination in 2009 pandemic.

## 2 Methods

In order to fulfil the aims of the study and understand the attitudes and perceptions of GPs during the pandemic period, methods of qualitative research were applied. Qualitative research is a good way to study a particular subject in depth. Qualitative research methods are designed to help researchers understand people and what they say and do. They are designed to help researchers understand the social and cultural context within which people live. Qualitative research is ideal for exploratory research, when the particular topic is new. One of the key benefits of qualitative research is that allows a researcher to see and understand the context within which decisions and actions take place.

### 2.1. Sample

As presented in the introduction GPs have a crucial role during an outbreak situation. Information about other health care professionals were obtained through the perception of GPs during patient interactions. In order to ensure that the different social and cultural environmental factors are going to be represented in the survey, GPs from United States and different regions of Europe were included: Anglo Saxon (United Kingdom UK), German- French (Belgium-B), Mediterranean (Italy\_I), Balkan (Romania-R) Central-East Europe (Hungary-H), Scandinavian-Nordic countries (Denmark-D) (see Figure 1.) Regional diversity aimed to compare for similarities / differences taking into consideration not only factors, such as cultural background, but also the extent to which some regions of Europe were hit by the pandemic H1N1, and connections/emerging patterns from GP responses about communication requirements. During invitation to the focus groups/interviews we tried to include GPs of different ages, gender, place of practice (urban/rural). The only strict criteria was that GPs needed to be practising during the H1N1 pandemic 2009/2010.

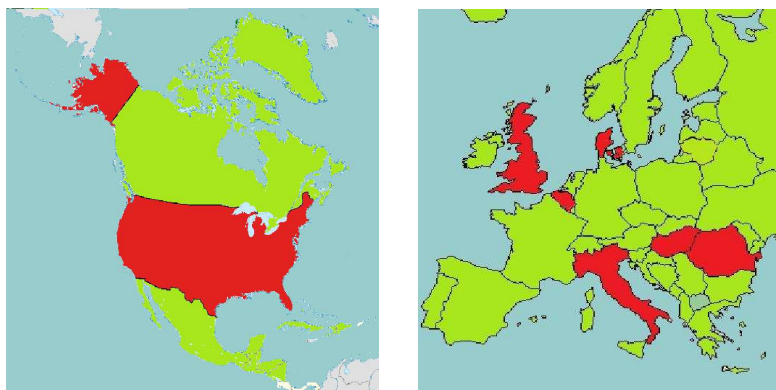


Figure 1 Survey diversity - Investigated countries (in red)

### 2.2. Design

As an often used qualitative research method, the focus group technique was applied in the study, as well as one-to-one interviews and online questionnaires. All three methods have their advantages. Focus groups facilitated free discussion; participants inspired each other to reveal past experiences, helped each other to express their views and catch the core content. One-to-one interviews were used in parallel with the focus group in each country, except Denmark, where only online questionnaire were used. The interviews

allowed a deeper analysis of a specific issue of the pandemic topic, in some case, time-consuming but flexible enough to fit into the agenda of the interviewed GPs. Family doctors in Denmark were approached by online questionnaire with the help of BMJ Group, a consortium partner of the TELL ME project. NDLSF performed one-to-one telephone interviews in the United States.

### 2.3. Tools

One of the main tools was the questionnaire which contained questions to be addressed during dialogue and discussions. The questionnaire was developed in two phases. The first version was set by UEMO Board members and circulated among consortium partners. After that a pilot focus group discussion was organized in Hungary (M4) and the experiences were discussed during the UEMO meeting in Madrid (M5) by the Preventive Activities working group when the final version was put together.

Open questions were used in order to facilitate responders to explain their views without being biased by a directed question.

The questions addressed 9 topics:

The first set of question aimed to get into the topic of pandemics and reveal the general opinion of the GPs:

- 1. What is your general opinion about how the pandemic flu of 2009/2010 was managed?*
- 2. What is your opinion about the preventative activities done during the 2009/2010 pandemic-flu in general?*

Then the restriction of experience to the own practice followed:

- 3. How successful were the preventative/vaccination activities in your own practice during the pandemic flu period?*
- 4. What information did you tell your patients to help them decide whether to be vaccinated or not? What information / communication would support GPs' discussion with their patients whether to be vaccinated or not? What works well in public communication campaigns that support GPs in pandemic outbreaks?*

Experiences regarding other health care professionals were assessed through the eyes of GPs:

- 5. Which health provider groups were more successful in delivering vaccination? What do you think and why?*

The attitude towards GP's own vaccination was assessed:

- 6. Did you get vaccinated during the pandemic period? Did your family members at risk get vaccinated? If not, why not? What factors influenced you, your family and your patients whether to be vaccinated or not?*

The variation among different patient groups:

- 7. Was there any variation in the uptake by different patient groups? (e.g. ethnic minorities, vulnerable patients or those of low socio-economic status, etc.)*

Requirements, thoughts in case of a future similar situation:



8. *What practice would you continue or change in future flu outbreaks regarding vaccination?*

9. *How do you think your patients would respond in a future pandemic? More willing or less willing?*

Sub questions supported the facilitator/interviewer to get back to the topic from another perspective and make the discussion more open.

Selection of the sample of GPs was done by local member organizations of UEMO, who delegated the responsibility to a trained facilitator to run the focus groups and the interviews. Facilitators had experience in running group discussions and were trained not to influence the opinion of the group and interviewers respectively. Focus group discussions were video or audio recorded. The one-to one interviews were transcribed during the dialogue. The online method needed an e-mail database (BMJ Group/doc2doc database) and an electronic version of the questionnaire.

## 2.4. Procedure

As mentioned a pilot focus group discussion was performed in Hungary (M4) before finalizing the method. UEMO Preventive activities working group has finalized the method during its meeting in Madrid (M5). Experts, members of the working group, performed the research in their home country during period M8-M11). They selected GPs from their database, GPs were recruited on a voluntary basis and they were not remunerated.

Focus group discussions were run by a facilitator, with experience in facilitating group discussions, with the responsibility for the correct application of the group work techniques. The facilitator did not act as an expert on the topic. His or her role was to stimulate and support the discussion. An assistant managed the technical equipment during focus group discussions. Discussions/interviews were verbatim transcribed, than summarized at the level of country. See Figure 2.

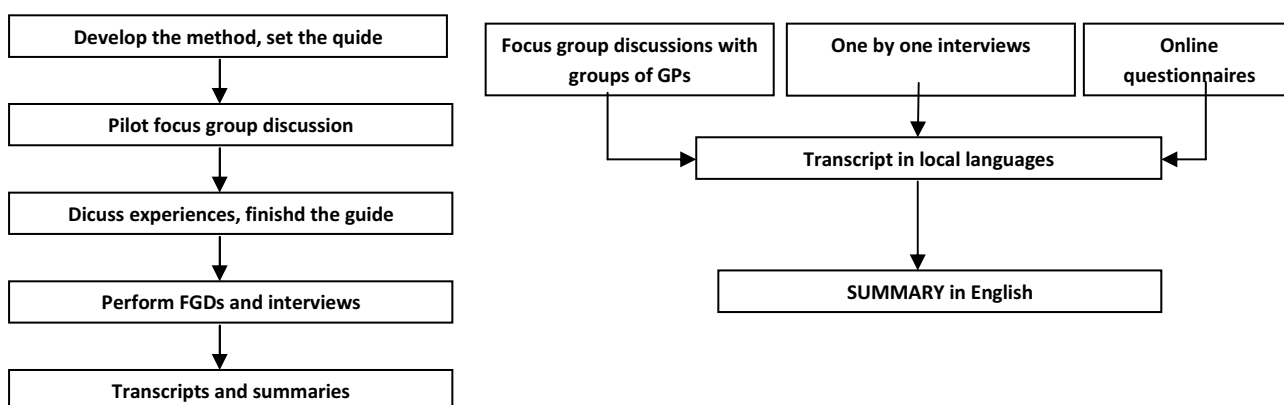


Figure 2 Flow of activities and process of the fieldwork

## 2.5. Analysis

Processing the data, ‘thematic analysis’ was the chosen analytical approach, because provides systematic procedure of analyzing large amounts of qualitative data. (Taylor 1984)

Main phases of thematic analysis were the following:

- a. General overview of interview transcripts (identifying characteristic patterns and even possible categories among the data)
- b. Generating initial codes (coding important features of the data in a systematic way and collating data relevant to each code)

- c. Searching for themes (collating codes into potential themes, grouping all data relevant to potential theme)
- d. Reviewing, defining and naming themes (checking if themes work in relation to the coded extracts, and the entire data set; ongoing analysis to refine the characteristics of each theme, and generating unequivocal definitions and names for each theme)
- e. Producing the report (final analysis of selected extracts relating to main themes / questions and selection of specific examples. (Braun, 2006)

## **2.6. Ethical considerations**

Participants were informed that they may decline without prejudice to answer any questions with which they were not comfortable answering; that they may leave at any time; that their identity and responses will be kept confidential; that any identifying information will be removed from the written transcripts; and that reports of the research will not identify participants or anyone mentioned during the discussion. It was reassuring to the participants that their confidentiality was assured and formally acknowledged. Researchers had an obligation to ensure that the research process, as affirmed in the Helsinki Declaration, does not harm focus group/interview participants physically or psychologically. Out of the four principles within the framework of research ethics (respect for autonomy, beneficence, justice and nonmalificence), the fourth principle, nonmalificence — allowing no harm to come to participants — is the major influence in this context. Participation was voluntary, presence at the focus group discussion/interview of the questionnaire implied consent for study participation.

### 3. Results of the focus group discussions, one by one interviews, and online questionnaires in Europe<sup>1</sup>

158 GPs took part in TELL ME Qualitative Research from more than six countries:

- 32 GPs from Hungary,
- 29 GPs from the UK,
- 29 GPs from Italy,
- 25 GPs from Romania
- 20 GPs from Belgium and
- 23 GPs from Denmark.

62 participants took part in focus group discussions in the period M8-M9. Individual interviews for 73 GPs were undertaken during the period (M9-M11) and 23 online questionnaires were processed in the period M11-M12. (Participant by country is presented by Table2.)

**Table 2 Participants by country**

	Focus group discussion	One by one interview	Online questionnaires	Total
Hungary	11	21		32
Italy	0	29		29
Romania	20	5		25
United Kingdom	16	13		29
Belgium	15	5		20
Denmark			23	
<b>Total</b>	<b>62</b>	<b>73</b>	<b>23</b>	<b>158</b>

One-to-one interviews, the focus group discussions and the online questionnaires investigated nine themes:

1. GP's general opinion about how the pandemic flu of 2009/2010 was managed
2. GP's opinion about the preventative activities during the 2009/2010 pandemic-flu
3. Success of flu vaccine uptake and preventative activities in their own practice
4. Information and communication
5. Delivery of vaccine
6. Flu vaccine uptake in GPs, their families and their patients
7. Flu vaccine uptake in different patient groups
8. Practices regarding vaccination in case of flu outbreaks in future
9. Willingness of vaccine uptake in case a future pandemic

Processing the data, 'thematic analysis' was the chosen analytical approach<sup>2</sup> (details see in Methods chapter). Presentation of results follow unified structure:

- Investigated theme (question)
- Results by countries
- Comparison of countries

<sup>1</sup> This section presents the summarised results from the focus groups discussions, interviews and questionnaires. The responsible partner for this report, UEMO, has in its ownership all the raw data and transcribed interviews.

<sup>2</sup> Except for Danish/Scandinavian GPs who filled online questionnaire. Their data are presented in the relevant chapters.

- Key results

### 3.1. GP's general opinion about how the pandemic flu of 2009/2010 was managed

The 1<sup>st</sup> question (theme) of the research was: *"What is your general opinion about how the pandemic flu of 2009/2010 was managed?"*

#### **Results by countries**

During the pandemic, vaccination against flu was subject to controversial discussions in all investigated countries. Problems related to mass media were common experiences of respondents. The mass-media sensationalise and exaggerate the facts, and there were lots of worrying reports about safety of vaccines in tabloid newspapers that scared people: main topic of the debate in the media and among health experts (and 'self-proclaimed experts') was vaccine safety and effectiveness, and concern that there were too little data on the new vaccines available. Due to uncertainty, ignorance and misinformation many false and malicious information became associated with the vaccine. This is extremely important issue because major reason for not being vaccinated was the perception that vaccination was not safe.

The overall feeling of **British** GPs was that the outbreak was well managed nationally and locally. *"I think it was well managed in that information was cascaded and it was plentiful."* (UK1)

A significant number of practitioners found the "flu Tsar" Dr Maureen Baker's weekly bulletins invaluable. *"One person of high standing made all the difference".* (UK9)

Despite the mainly positive experiences, there were a few areas of concern. Information about pandemic and preventive possibilities in some instances reached patients via media and public health campaigns before the doctors were fully informed.

*"Nationally some misleading and worrying info in tabloid stories, which scared people."* (UK2)

Doctors also reported that there were too many communication channels (DMs, meetings, e-mails) with overwhelming information from which was difficult to extract the main messages. It was sometimes felt that there was an overload of detailed emails, with links to websites which didn't always provide relevant information, so the fact that one person was pulling together the important bullet points, each week, became vital.. Locum doctors didn't always feel fully informed unless they received the Royal College of General Practice (RCGP) e-mail alerts or had the practice forward relevant information to them. Part-time GPs found it difficult to get up to speed with the ever changing messages which update and change on a daily basis.

*"The quantity of info and complexity of documents was at times overwhelming. We became insensible to the information in the end. I am only in the practice 2 days a week so it was hard to keep up to date."* (UK9)

Delays in delivery of masks and suits in some practices, as well as stocks of vaccine and Tamiflu were mentioned by GPs. A delay in setting up a flu line resulted in an overload of the out of hours services with calls for a while.

**Italian** GPs had firstly negative and 'mixed' experiences related to the handling of pandemic flu. Many negative remarks were used to describe the situation e.g. *"disaster"* (I23), *"blunder"* (I4), *"unjustified alarmism"* (I5), *"handling has been as a terror attack"* (I10).

According to some participants the potential impact of the pandemic was overestimated in all dimensions and dramatized by health organizations and the media.

*“There has been a huge advertising campaign and it became more a media pandemic than a real problem.”*  
(I11)

Several participants complained about inadequate preparation of the staff who handled the issue and also found that information communicated by the health authorities informed was delayed.

Some physicians had positive experiences e.g. in the field of information and the role of GPs.

*“As far as my opinion is concerned I think that this issue was handled very well by the Health Ministry, as well as by the Regional Health Office regarding our territory.”* (I20)

*“I think they found in the GPs a person able to reassure and to give the necessary information.”* (I22)

‘Mixed’, partly good, partly bad and partly neutral views were received from **Hungarian** GPs. According to Hungarian doctors, there were delays in communications from the Health Authorities towards them, which often occurred after the media and public health campaigns. Like doctors from the other countries, negative media influence was also mentioned by Hungarian GPs. Due to uncertainty, ignorance and misinformation many false and malicious information was associated with the vaccine (e.g. urban legends about chip and exterminate of retirees – details see next chapters). A lot of patients were very frightened and GPs had no professional, specific information or tools to handle this “hysteria”. The general necessity of vaccination in view of the relative mildness of the pandemic influenza disease was also called into question. Biased information also contributed to the mistrust. In addition, another issue was also raised. The pandemic flu of 2009/2010 was one year after the bird flu which did not affect Hungary and a part of the population were apathetic.

GPs observed many problems in the field of cooperation between health professionals. For example different opinions from different health professionals and different recommendations within the country also caused many problems for doctors. GPs would have required more information about the disease (size of epidemic, ways on prevention, side effects of preventative activities, what happens in case of no prevention etc.), and they would require unified directives, referrals, position paper as well. GPs would have need persuasive evidence-based information about vaccines (e.g. clinical studies, comparative studies) too. They emphasized that all health professionals should act with one voice.

Communication channels were also mentioned as a problem by some doctor. In order to communicate with the public more effectively, must also use appropriate communication methods. *“The 21st century must to use the 21st century communication channels.”* (H24)

In Hungary – reported by GPs – many aspects of the campaign (including the objectives, tools, logistic, financing, responsibility etc.) were not clear from the start. A few doctors also complained that the flu lines were often very busy.

According to **Romanian** GPs, handling of the pandemic flu of 2009/2010 was poor, below the expected level. They experienced strong media influence, and misleading information from mass media caused a lot of difficulties in some situations.

Romanian reported delays in receiving information from the Health Authorities, often after the media and public health campaigns. They complained about lack of information materials and delayed supply of the vaccine.

Only one participant mentioned that handling of the pandemic flu was adequate for the given circumstances.

**Belgian** GPs had mainly negative experiences related to the handling of the pandemic flu 2009/2010 and many critical comments were mentioned by them e.g. the pandemic was dramatized by WHO; there was too much alarm; pandemic was generated by pharmaceutical industry etc. Some Belgian participants evaluated the campaign positively (needed carefulness, people became aware of danger).

**Danish/Scandinavian** physician's opinion was that the pandemic was adequately managed but there were few problems (confusion and exaggeration of the risk, lack of scientific evidence about vaccine). GPs surveyed broadly felt that the response by The Danish National Board of Health was appropriate. There was also consensus that a strong lead of the National Board of Health was successful in minimising the panic created in the media.

### **Comparison of countries**

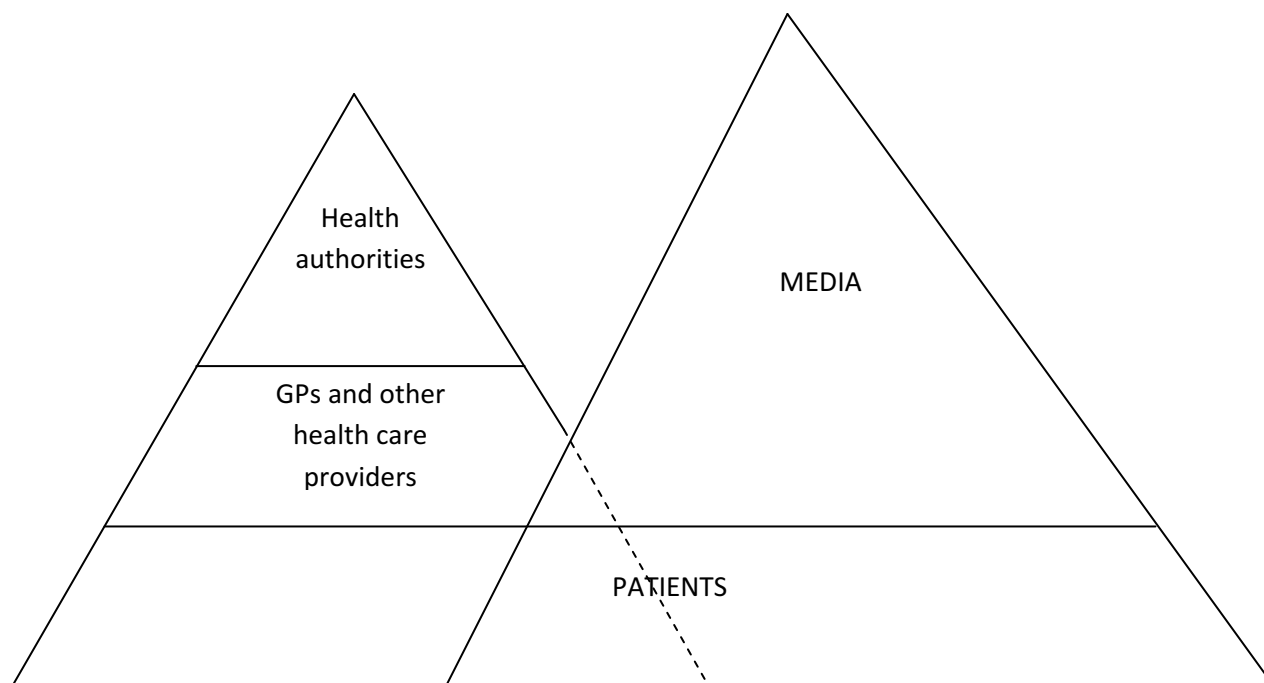
According to most of the participants, health authorities and health organizations would have to handle the pandemic flu of 2009/2010 (they seemed more reactive than proactive) better in the future. The overall feeling of British and Danish/Scandinavian GPs was that the outbreak was well managed (but in the UK the GP's often felt overwhelmed by the quantity of information from different sources). Italian GPs and doctors from Romania reported on their (mostly) negative experiences and inadequate handling of the pandemic, but we received a number of critical comments from Belgium and Hungary related to this question. Many respondents had 'mixed' opinions (partly good and partly bad views), and just very few participant (primarily from the UK) reported on absolute positive experiences.

**Table 3 GP's general opinion about how the pandemic flu of 2009/2010 was managed**

<b>United Kingdom</b>	<b>Italy</b>	<b>Hungary</b>	<b>Romania</b>	<b>Belgium</b>
Mostly positive but there were a few areas of concern	Firstly negative and 'mixed' experiences	'Mixed', partly good, partly bad and partly neutral views	Strongly negative, bad experiences	Mainly negative and critical comments
<b>Danish/Scandinavian</b>				
Pandemic was adequately managed				

**Key results: Pyramid of communication, Positive experiences, The most important problems**

Hungarian, Italian and Romanian GPs received information from their respective Health Authorities, after the media and public health campaigns. Figure 3 illustrates the pyramid of communication as seen by GPs.



**Figure 3 Pyramid of communication as seen by GPs**

**Table 4 Positive experiences. The most important problems**

**Positive experiences:**

- Effective communication between health authorities and GPs (UK, I)
- The role of GPs (transmission of information) (I)
- Media campaign (people became aware of danger) (B)
- Strong lead of the National Board of Health (D)

**The most important problems:**

- Mishandling of the pandemic (I, H, RO)
- Too much alarm; the pandemic was overestimated and dramatized by health organizations and the media (I, H, R, B)
- Negative media communication (misinformation, malicious information, biased information, panic, negative influences) (all countries investigated)
- GPs had no tools to handle “hysteria” (H)
- Lack of correct information and official communication – in time – towards GPs (mainly at the start) (R, H)
- Lack of credibility and complexity in the field of public information, information asymmetries (H, R)
- Communication channels (UK, H)
- Fragmented PHC system (UK)
- Problems in the field of cooperation between health professionals (H, R)



- In many cases there were delays in health professionals receiving official information from the authorities often after the media campaign) (I, H, R)
- Some aspects of the campaign – including the objectives, tools, logistic, financing, responsibility etc. was not clear (mainly at the start) (H)
- Lack of information materials (H, R)
- Inadequate information and inadequate preparation of the staff who handled the issue (I)
- Too much information for GPs (UK)
- Different recommendations within a country (UK)
- The flu line was very busy (UK, H)

### 3.2. GP's opinion about the preventative activities during the 2009/2010 pandemic-flu

The 2<sup>nd</sup> question of the research was the following: *“What is your opinion about the preventative activities carried out during the 2009/2010 pandemic-flu in general?”*

#### **Results by countries**

**In the UK** most practices were able to move quickly on sourcing the swine flu vaccine and Tamiflu (but the vaccine, preventative suits and masks was a bit delayed in some regions) and the vaccine programmes worked well.

*“We got enough stock of vaccine very quickly and info about who to vaccinate. Less fear around vaccination. (UK2)*

In a few areas such as Plymouth, Devon, discussions with the Primary Care Trust (PCT) were quite advanced on how to deliver the vaccine if the epidemic escalated, with the University and local football ground identified as locations for a mass vaccination campaign, if needed.

Some GPs found the masks and suits frightened some patients who were already worried by media reports. Other doctors said the impracticality of visiting everyone with a reported upper respiratory tract infection and that the demand for containment was unrealistic and impossible to achieve.

*“Being issued with masks and white suits seemed like overkill. Patients were surprised to see us wearing some of this gear and there was also an increase in out of hours calls from people who didn't need to [a house] call.” (UK1)*

Separating people who might have swine flu from those who didn't was another problem in many surgeries. Saturday immunisation surgeries, appreciated by patients, worked well (they were open after working hours, patients were among healthy people).

*“We did our own clinics with GPs and nurses giving the jabs and we also had Saturday morning clinics which were successful.” (UK5)*

A flu helpline was available too which was good and worked in spite of regional variations in advice were also reported (e.g. Welsh and English flu call centres had different policies and therefore gave different advice). According to some participants poster and TV campaigns about washing hands were also useful preventative tools. In a few areas / districts – due to ethnic diversity of the population – information leaflets didn't work as effectively because many of these patients did not read English.

*“The flu line took a long time to set up which wasn't useful and we saw a strain on the out of hours service - so many calls and we were way behind.” (UK3)*

*“Tamiflu worked well - info leaflets didn't work so well. Large proportion of our patients don't read English well if at all.” (UK7)*

**Italian** participants had 'mixed experiences', there were more and less successful aspects of the campaign.

Some Italian doctors said the preventative activities and campaign was quite successful and useful at the national level (e.g. placards provided were found useful). The cooperation between the parties (Health Department and the GPs) mostly worked well.

*“I think that the prevention has been very efficient and useful on a national scale if we consider for example how the public spaces such as airports, train stations etc. have been handled, where on a daily base many people stay together. The prevention worked well, especially for those coming to Italy from other countries.” (I2)*

*“I think it was handled well on all different levels, on a national, regional and most of all local level, with a good communication towards the patients. We, as GPs tried to give the best support with information to our patients. I furthermore think that the distribution of the responsibility from the Health Ministry to the Regions and from there to the territory worked very well.” (I20)*

One of the participants mentioned the preparation of the doctors was very useful and effective.

*“There have been different courses and activities in order to prepare the GPs in the most proper way to the pandemic and in order to make sure that the information was given to the patients in the most detailed and complete way. I think that it would have been efficient (at least on the paper) if the pandemic would have really shown up.” (I19)*

Despite this, GPs experienced many problems, e.g. sometimes had difficulties in communication with local Health Office; vaccination of old people, patients with certain chronic medical conditions, the younger population (without motivation); some GPs were not convinced / they did not trust the vaccine.

*“The information on the national base has been correct. On a local base we have noticed the impossibility to communicate between the Health Office and the GPs.” (I14)*

*“During this period of time myself, as well as my colleagues, didn’t believe too much in it. If I remember well we did not have the vaccines for the A virus, but had to address the patients to the local health care institute. I was not very active in this as I was not too much convinced.” (I4)*

Some doctors had mostly negative experiences in many aspects e.g. negative effect of mass media, lack of vaccine, incomplete and contradictory information.

*“I have to point out again that there has been a huge alarmism caused by the mass media...” (I1)*

*“If I remember well we did not have the vaccines for the A virus...” (I4)*

*“The information that was given to the GP and to the patients has been partially, fragmentary and contradictory. Often they came out of simple newsletters that some colleagues did not even read.” (I17)*

Several GPs pointed out that flu prevention was made through vaccination primarily, and other preventive measures like individual hygiene, disinfection and isolation were not highlighted enough.

In **Hungary** overall, a lack of correct information and a lack of unified directives about risk and possible side effects from high credibility resources seemed to be a major problem. There was a general communication problem too, which resulted in delayed flow of information, uncertainty regarding side effects both amongst health care professionals and the public. There were distinct referral pathways published by different health authorities, organisations and professional associations (WHO-national-local, gynaecologists, immunologists etc.) especially in the beginning so the doctors missed unified directives and position papers.

Hungarian respondents experienced no or very little support from the authorities in their attempt to deal with the situation as an emergency.

*“Doctors cannot be left alone in outbreaks! They should get very clear tasks and answers who to vaccinate who not, what are the features of the vaccine.” (H 21)*

There were several aspects of this problem. GPs were frustrated and they were under pressure from patients who wished to get protected without taking any risk and the authorities who pushed for higher rates of vaccination. Doctors had to make important and serious decisions every day, while the responsibility for certain patient groups was not sufficiently clarified (e.g. pregnant women, institutionalized children). Notwithstanding this, GPs emphasized that the preventative activities were quite successful in these counties.

The role of mass media was also mentioned by doctors in connection with this question. The negative and misleading media communication had a negative influence on vaccine uptake. For example in Hungary widespread rumours (urban legends) were that the vaccine contained a chip which could monitor the public and fears that the vaccine would kill older, retired people. Other views (e.g. campaign was generated by the pharmaceutical industry, specifically those that manufactured the H1N1 vaccines) also instilled a lack of public confidence. Some of the population was apathetic because lost their faith in the service. Communication channels also were mentioned as a problem by doctors (details see in previous section).

Many Hungarian GPs emphasized the importance of correct evaluation and scientific evidence.

*“Need for parallel study showing the percentage of the patients got in flu and complication among those vaccinated and those not vaccinated.” ((H 15)*

Likewise other colleagues, some Hungarian GPs also mentioned that individual hygiene, disinfection and isolation were not emphasized enough.

According to **Romanian** GPs it was a general communication problem which resulted in delayed flow of information, uncertainty regarding side effects both amongst health care professionals and the public. The participants agreed that they had no or very little support from the authorities in their attempt to deal with the situation as an emergency, they only received emails but not a constant flow of supportive and reassuring information. They received more warnings than clear information to help deal with the pressure from the patients and authorities. They were not sure how to proceed, despite the request from the health authorities to administer the vaccine. There was no clear information about possible side effects.

However, in particular situations, for instance dealing with institutionalized children, there was no clear guidance which made it difficult to decide as no one would assume responsibility for them. One participant mentioned that preventive measures like individual hygiene, disinfection and isolation were not highlighted enough.

Romanian GPs agreed that an initiative of collaboration between health authorities, schools and local health providers was launched especially in rural areas which proved to be beneficial.

**Belgian** respondents' had 'mixed' experiences; positive and negative opinions were balanced. The good collaboration between national level, local level and GPs was mentioned by Belgian respondents. GPs were able to control the problems. Vaccine uptake was successful in cities.

Vaccination against influenza was inaccurately covered by the public media which had a negative impact on influenza vaccine uptake. There were different position papers and referrals and the influence supposed of pharmaceutical industry also reduced public confidence.

Generally, the preventative activities of the Danish government were considered to be appropriate by **Danish/Scandinavian** GPs. However, there were some comments that the use of Tamiflu was probably not called for and that there were some problems with the distribution of the vaccine.

### ***Comparison of countries***

The assessment of the campaign was different depending on the country. "The campaign was successful and efficient" – said one group of GPs. "The campaign was greater than the real problem" – said another group. With the exception of Romania, participants had 'mixed' opinion about the preventative activities in their countries. GPs reported on negative and positive experiences as well. British and Danish/Scandinavian physicians were the most satisfied and Romanian GPs were the least satisfied with the preventative activities in their own country.

GPs played an important role in preventative activities during the 2009/2010 pandemic-flu. They have overcome the difficulties and most of them could manage the problem well. That was a common experience of surveyed physicians.

In spite of several problems, there was unanimous agreement among GPs from all countries that the preventative activities were overall quite successful and efficient.

**Table 5 GP's opinion about the preventative activities during the 2009/2010 pandemic-flu**

United Kingdom	Italy	Hungary	Romania	Belgium
"Mixed" experiences, there were more and less successful aspects	"Mixed" experiences, there were more and less successful aspects	"Mixed" experiences, there were more and less successful aspects	Mainly negative (communication problems)	"Mixed", positive and negative opinions were balanced

**Danish/  
Scandinavian**

Mainly positive

**Key results: Positive mentions and the most important problems**

**Table 6 Positive mentions and the most important problems**

**Positive mentions:**

- GPs could manage the problem well
- Most practices were able to move quickly on sourcing the vaccine (UK)
- Saturday immunisation surgeries (UK)
- Good collaboration between health authorities and health professionals (not in all countries)
- Washing hands and TV campaigns about this were useful (UK)
- In some areas in the UK the preparation for pandemic was very thorough (UK)
- Flu lines (UK)
- Placards (I)

**The most important problems:**

- Lack of unified directives about risk and side effects of the vaccine (I, H, R, UK)
- Communication problem: delayed and poor quality information regarding side effects for both health care professionals and the public; communication channels (I, H, R)
- The campaign was greater than the real problem
- Negative media influence (panic, misleading information, rumours) (H)
- Lack of information / materials for GPs (H, I, R)
- Lack of information materials for patients (in different languages for minorities) (UK)
- Delayed delivery of vaccine, preventative suits and masks in a few places (UK, R)
- Distribution of the vaccine (D)
- GPs were frustrated that they were left alone in outbreaks (H, R)
- Flu prevention meant practically vaccination, other preventive measures were not highlighted (I, H, R)

### 3.3. Success of flu vaccine uptake and preventative activities in the GP's own practice

The 3<sup>rd</sup> question (theme) of the research was: *“How successful were the preventative/vaccination activities in your own practice during the pandemic flu period?”*

#### **Results by countries**

In the **UK** uptake was generally around the seasonal average / higher in some practices, although patients were often nervous about having the swine flu jab because of negative media reports. *“We usually hit our flu targets - there was a lot of panic around the swine flu.” (UK10)*

Doctors experienced some other problems too. As previously mentioned by UK GPs (and Hungarian GPs) most practices were not able to provide a separate area to keep patients with flu symptoms separate from other patients with only a couple of surgeries able to find a suitable space. Most GPs said they set up extra flu clinics (network of vaccination points in Hungary) during evenings or on Saturday mornings which were well attended. The majority of British doctors told us that they found it tiring and impractical to visit all those reporting symptoms of respiratory tract infections in their homes and would want a better system in place for a future outbreak.

*“One of the things about separating people who might have swine flu from those who didn't was a real issue...” (UK21)*

*“Initially there was so much panic for doctors about it, that GPs were expected to do things that were completely impractical. I mean one of the things that sticks in my mind is being expected to go and visit people with upper respiratory infections. We did this for about 24 hours and then decided to disregard that bit of advice.” (UK22)*

Some British GPs mentioned that certain health professional groups such as midwives or nurses wouldn't vaccinate, despite the fact they were visiting and seeing at risk groups. It was suggested that in future pandemic planning, perhaps in the contracting process, these groups should be required to give vaccines. Hungarian doctors had similar experiences: some gynaecologists despite official recommendations, were against the vaccination of pregnant women.

*“Can I just mention about the midwives because we couldn't get the midwives to give the vaccine even though it's a perfectly straight forward vaccine to give. They were all going "oh its very dangerous I couldn't possibly give it"— it wasn't that they didn't think it shouldn't happen they wouldn't stick a needle in, even though there were clinics full of pregnant women so we all had to try and catch them in the antenatal clinic when we were trying to do everything else-the midwives were really a weak link I think.” (UK14)*

According to the **Italian** respondents, the preventative / vaccination activities were successful and effective. Thanks to the prevention, the number of flu patients in their own practices was not higher than in previous years. Physicians paid a lot of attention to risk groups, but *“people outside the risk category were forgotten” (I14)* – said one of them.

*“I tried to vaccinate as much patients as possible that show a risk.” (I23)*

*“Considering that there has been no infection in my consulting room, I think that the prevention job has been very efficient.” (I21)*

Many Italian GPs mentioned as a problem that older people with chronic disease get free vaccine only over 75 years. Several doctors experienced that patients between the age of 65 and 74 are more interested in the vaccination than people over 75.

*“It’s my opinion that the patients between the age of 65 and 74 are more interested in the vaccination, while the over 75 years old people, who might have never done the vaccination before, are not so interested in any type of campaign.” (I4)*

Access to certain patients group was not equally successful. From the investigated practices, serious side effects after the vaccine uptake were not raised (that was the experience Hungarian doctors as well), and GPs experienced less complications (e.g. pneumonia) among people with chronic diseases as well as old people since they started vaccination. Many GPs mentioned the importance of the other preventative activities (e.g. hand washing, isolation, avoiding the crowd and the risk groups), because these measures had contributed to the success. Some doctors thought there was no need for vaccination – in general and / nor in their own practice – because *“there was no real risk of pandemic”*. (It was one of the reasons that many vaccines were not used.)

Like their colleagues in other countries, the vaccine uptake in Hungary was mainly good (or at least acceptable) in their own practices. *“Vaccination activities were successful, many patients - especially older patients - came and the vaccines were available. People accepted the necessity of vaccination.” (H2)* But several doctors in Hungarian remarked that ‘success’ in this case is not an objective category. One of them raised the question: *“Effectiveness – what does it mean?”*. *“What is the real effectiveness: no flu patients?”* – put the question to another doctor. *“It is subjective: we feel that we would have liked to vaccinate more patients than we did.” (H)*

According to the recommendations, Hungarian GPs focused primarily on target groups (who received the vaccine free of charge). The doctors felt they did their best for this success. Hungarian physicians had negative experiences e.g. some aspects of the campaign (logistic, financing, responsibility) was not clear, access to patients outside target groups was difficult with the lack of public confidence. One doctor said: *“I suggested vaccine uptake for everyone. National Public Health and Medical Officer Service (NPHMOS).made a really strong campaign. They called us regularly and demanded progress report on vaccine uptake. We were under pressure. I felt that vaccinations should be compulsory.” (H7)*

In **Romania**, after initial good compliance and increased interest to get vaccinated, for different reasons the population became apprehensive and refused the vaccine. Romanian GPs reported on information and legislation gaps. Patients expected clear advice and reassurance from the health care professionals, but in the given circumstances this became difficult. Also, a clear legal base was not available (responsibility was not clarified), and the participants felt that their responsibility was beyond the level they were prepared to have. Also, contradictory information from the media had a negative impact and participants felt that the media had more influence than health care professionals. The participants reported that they did preventive activities as much as they could, explaining to patients about the importance of prevention in the community but they let them decide whether they want to be vaccinated or not. Due to delayed delivery, people bought the vaccine from neighbouring countries.



In one half of **Belgian** GPs’ practices, vaccine uptake was rather good or acceptable, in the other half it was bad or could have been better.

The majority of **Danish/Scandinavian** GPs said the vaccination rate of at risk patients in their local area was good or excellent. Some respondents reported it was acceptable or could have been better, and just a few said it was bad.

**Comparison of countries**

In the UK uptake was generally about the seasonal average (yearly vaccines against seasonal flu) and higher in some practices. According to the Italian respondents, the preventative and vaccination activities were successful and effective in their own practices. Like their colleagues in other countries, according to the Hungarian GPs, vaccine uptake was mainly good (or at least acceptable) in their own area. In Romania after initially good compliance and an increase in interest to get vaccinated, for different reasons the population became apprehensive and refused the vaccine. In half of Belgian GPs’ practices, vaccine uptake was good or acceptable, in the other half it was bad or could have been better. Vaccine uptake of at risk patients in Danish/Scandinavian GPs’ local areas was good or acceptable.

**Table 7 Success of flu vaccine uptake and preventative activities in their own practice**

United Kingdom	Italy	Hungary	Romania	Belgium
Take-up was generally about the seasonal average or higher	The preventative / vaccination activities were successful and effective	Preventative and the vaccination activities were successful	Initially was successful, then less	In one half was good or acceptable, in the other half was bad or could have been better.

**Danish/Scandinavian**

Vaccine uptake of risk patients was good or acceptable

**Key results: The most important positive and negative aspects mentioned by GPs**

**Table 8 The most important positive and negative aspects mentioned by GPs**

**The most important positive mentions:**

- GPs played an important role in preventing the flu outbreak (many doctors felt they did their best for and contributed to the success of the campaign )
- In most practices, preventative / vaccination activities were successful and effective (thanks to the prevention, the number of flu patients in their own practices was not higher than in previous years)
- Vaccination centers (flu clinics, network of vaccination points etc.) were necessary and useful

- Access to at risk groups was successful

**The most important problems:**

- Negative media influence
- Most practices were not able to provide a separate area to keep patients separate with flu symptoms
  
- To visit all those reporting respiratory tract infections in their homes was tiring and impractical
- Certain health professional groups, despite official recommendations were against vaccination and wouldn't vaccinate
- Information and legislation gaps
- Some aspects of the campaign – logistic, financing, responsibility etc. – was not clear
- Delayed delivery of vaccines
- Lack of public confidence
- Need for dedicated office hours for immunization
- Free of charge vaccines for extended age groups

### 3.4. Information and communication

Three questions belonged to the fourth theme: *“What information did you tell your patients to help them decide whether to be vaccinated or not? What information / communication would support GPs’ discussion with their patients whether to be vaccinated or not? What works well in public communication campaigns that support GPs in pandemic outbreaks?”*

#### **Results by countries**

Most **British** GPs found that either the Chief Medical Officer's advice, or the Royal College of GP's regular e-mail updates were the most useful in providing the information they needed to persuade the public to have the vaccine, along with the personal message that they themselves, as doctors, had been vaccinated which was an important persuasive tool. Being able to hand a patient a simply written leaflet was useful in many cases, although a couple of GP's were concerned that there were no leaflets available in other languages in surgeries serving high numbers of mixed ethnic populations. The media coverage and TV and radio advertisements were a "double edged sword" according to many GPs interviewed, as they informed but also increased anxiety and panic. It was thought that a more managed media campaign where newspapers, TV and other media outlets worked more closely with public health departments to deliver a consistent message would be a good idea.

*“The kind of patients I was seeing were already ill so wasn't directly advising on vaccination but managing their illnesses. I felt well informed on tamiflu and could warn people it might make them sick. I remember Royal college of GP e- mails from Maureen Baker which were really useful - one person of high standing made all the difference. The media didn't totally help - a double edged sword as it led to panic among people with sniffles.” (UK9)*

In the last 3 years, social networking sites have become very popular particularly amongst younger people. It was suggested that now Twitter and Facebook etc could be used to spread the word that the vaccine and treatment are safe. One suggestion was to use a storyline in a soap opera to educate the public, although it's unclear whether this might be achievable.

*“You need a new Twitter account called @justhavethevaccine.” (UK15)*

*“We knew all the info - maybe helpful to have had a simple leaflet to give out to patients. TV ads reach a wide audience - story lines in soap operas are a really good way of getting a message across. Mass mailings aren't always helpful and patients in a deprived area tend not to access this kind of info by mail.” (UK8)*

GPs in **Italy** informed their patients about seasonal flu virus, H1N1 virus and the means of infection. Doctors told them of the advantages and disadvantages of vaccination, including risk and side effects of the vaccine and the possible complications of a flu infection as well.

*“I explain first of all in a clear way the problems they might have to face by getting sick with the flu. Newspaper articles are for sure also of great help.” (I7)*

*“The information I gave was that, according to what I had found as written information, a certain population took benefit from the vaccination. I explain to the patient that the risk by getting the flu is higher*

*than the risk of the vaccination and that it is therefore justified to get the vaccination. The more people get the vaccination the more the risk will be reduced.” (I9)*

Many GPs informed their patients about other preventative activities (e.g. hand washing, isolation, avoiding the crowd and the risk groups). Most physicians paid a lot of attention to at risk groups (the free vaccine for target groups was an incentive). One Italian participant suggested a meeting where doctors and patients can discuss the topic of vaccines.

*“The patients got the information on how to behave in order to avoid the infection. What was done on a national basis and therefore on a big scale I think was quite successful. Crowded places such as airports, subways had the information on how to wash for example the hands, to avoid contact with possible patients that are at risk etc.” (I22)*

A number of Italian participants mentioned that thanks to the media campaign, their patients knew the most important information about the virus, prevention and vaccination. Patients at risk visited them without any request and took up the vaccine. In Italy, posters provided were found to be successful. Posters about vaccination, antiviral therapy, and hygienic norms were used in GP waiting rooms and crowded public places. Because of their visual information, messages on placards were easy to understand.

**Hungarian** respondents lacked correct, unequivocal information from the health authorities and health organizations (in time!). GPs involved said on many occasions they did not have enough information materials and time to inform patients during the pandemic. Hungarian (and Romanian) doctors mentioned that clear legislation or legal support is needed to avoid a highly defensive approach.

Like other participants, Hungarian doctors also emphasized the role of mass media and suggested that misleading information has to be corrected by the “official” media straight away.

*“The media, clearly.” (H5)*

*“Correct accurate information is needed.” (H9)*

According to Hungarian respondents (and almost all doctors agreed) GPs have a crucial role in preventative activities during pandemics. They possess high accessibility by the population and have high credibility in the public’s eyes. Most participants agreed that patients are keen to receive information from their GP, they are usually confident with the health care professional’s advice. Patients placed more trust in the GPs, much more than in communications by the government, which meant that the public relied upon GPs to advise on whether to get vaccinated or not.

Thanks to the personal relationship and length of relationship, GPs could perform personalized communication (GPs know the health- and family conditions of their patients). (A couple of GPs said the level of trust and the quality of relationship are essentials.) No less important than GPs serve as positive example in attitude to health prevention (the self vaccination was found important in persuading patients).

*“My opinion is important, but patients listen to the media. But often ask my opinion.” (H6)*

*“The personal conviction and persuasion is the key. The connection should be so good that patients accept the doctor's suggestion. But it is a heavy work for many years.” (H2)*

Good communication skills were also mentioned by GPs from Hungary. *“In my mind, communication is my strength. I found the most effective key word and key sentences: vaccines protects also patients’ families, not only the patient won’t be ill, but nor the family members e.g. their grandchild, husband and family members with chronic disease.”(H20)*

The **Romanian** participants agreed that patients are keen to receive information from their GP, they are usually confident with the health care professional’s advice. However, they ask reassurance and want clear messages that the vaccine is safe and that they will have no significant side effects. “The best way to prevent infection is by getting vaccinated and the benefits of the vaccination are higher than the side effects.” and “Go to your GP to get prevention” were the main messages for the media campaign suggested by GPs.

GPs need correct information from the media and health authorities, because they are in the frontline and a backup has to be always available to empower primary care physicians. GPs missed having clear messages, leaflets for patients, written information from well known and evidence-based resources. Doctors concluded that they need very well documented information and materials to support their work- it can be internet based or distributed by public health authorities. The media is very powerful and the population reacts immediately to information delivered by the media, therefore it would be good to ensure that correct and accurate information gets broadcasted on the local or national media. Romanian GPs said that doctors should have been better supported by an information campaign.

Teamwork was mentioned as a tool to increase credibility, efficiency and gain compliance in the population. Collaboration between schools, local authorities seems to be beneficial. A clear legislation or legal support is needed to avoid a highly defensive approach. GPs in Romania experienced low activities from the public organizations.

**Belgian** GPs also used official information materials to inform their patients (e.g. risk and side effects), but some of them gathered information from the press and media. A few doctors mentioned inappropriate governmental communication too. Like their colleagues from other countries, Belgian GPs would like timely precise information (in relation to the vaccine etc.). Good communication skills of doctors were mentioned by Belgian GPs also.

The majority of **Danish/Scandinavian** GPs surveyed used the guidelines and recommendations given by the Danish National Health Board. Most vaccinations were initiated by GP practices. Some physicians advertised in local newspapers and made communications (powerpoint slides) in own waiting room and on the website of the practice. GPs also communicated the risk of infection and the potential complications that could arise to at-risk groups.

### ***Comparison of countries***

GPs primarily used the official information materials (e.g. website of the national / local health authorities, leaflets) to inform their patients. In the UK, official information provided was useful to persuade the public to have the vaccine. In other countries GPs were less satisfied with the official information (both the

volume and content). Some Danish/Scandinavian GPs advertised in local newspapers and used their own websites.

The media coverage and TV and radio advertisements were a "double edged sword" according to many GPs interviewed, as they informed but also increased anxiety and panic. Participants suggested that misleading information has to be corrected by the "official" media straightaway.

According to GPs, correct and unequivocal information -along with the personal message that they themselves as doctors had been vaccinated- was an important persuasive tool, because these factors influence willingness of vaccine uptake. Taking into consideration previous experiences, GPs expressed their needs for communication and other support. It was thought that more managed media campaigns where newspapers, TV and other media outlets worked more closely with public health departments to deliver a consistent message would be a good idea.

***Key results: Information and other supporting factors,***

**Table 9 Information and other supporting factors**

**Information and other supporting factors:**

- The Chief Medical Officer's advice, The Royal College of GP's regular e-mail updates (UK)
- Media campaign (but "double edged sword")
- Understandable leaflets for patients (in different languages for minorities)
- High credibility of GPs, patients trust in GPs
- GPs attitude to health prevention (including self-vaccination)
- Good communication skills
- Placard campaign (in Italy)

**Table 10 Needs for support**

**Needs for support:**

- More managed media campaign
- Correct information for the media and public
- Involve professionals into media campaign
- Misleading information has to be corrected by the "official" media straightaway
- Evidence based information about vaccines for GPs (clinical studies, comparative studies)
- Clear legislation or legal support (Romania, Hungary)
- Doctor-patient meeting
- New communication channels (social media, soap operas etc.)

### 3.5. Delivery of vaccine

The 5<sup>th</sup> question (theme) of the research was: *“Which health provider groups were more successful in delivering vaccination? What do you think and why?”*

#### **Results by countries**

In the **UK** almost exclusively, all GPs involved said that they delivered all their own vaccinations and antivirals with the aid of practice nurses and health care assistants. In one case, district nurses had been able to vaccinate some patients at home. Public health was within the PCT 3 years ago and community nursing was still part of it. Now community nursing is in its own trust (organisation), and public health has gone to local authorities, and they are all fragmented. This fragmentation causes many problems in the field of cooperation. They raised the issue of how health care professionals might work together in a future outbreak, with what he described as the fragmentation of the health service. Saturday immunisation surgeries played an important role in vaccination during the pandemic.

*“...public health was within the PCT at this time and community nursing was still part of it, so still had close links and it was easy to shift people around. Now community nursing is in its own trust and public health has gone to local authority and they are all fragmented so would we get everyone to drop things and do the right thing if there were to be another pandemic? With lots of different trusts to deal with, how much will they all work together?” (UK6)*

In **Italy**, GPs played the most important role in vaccination, and were the most successful comparing to other health care professionals. Personal relationship, credibility, high level of trust were mentioned by participants as reasons. They said Health Office vaccinated against pandemic flu, but in their district just a few patients made use of these opportunities. GPs assumed the vaccination campaign of the Health Organization in the bigger cities was more successful than in rural areas. Their patients complained about disorganization (they had to wait a lot). It was another reason that a lot of vaccines had not been used, wasting millions of Euros.

*“Many vaccines had not been used, wasting millions of Euro. This could have been avoided if the vaccines would have been given to the GPs and much more vaccinations could have been done.” (I23)*

Patients had access to vaccines in **Hungary** via their GPs (target groups free of charge), in vaccination centers (called network of vaccination points) and pharmacies (with prescription). Free vaccine for target groups (Fluval) was provided by National Public Health and Medical Officer Service (NPHMOS). Lots of GPs almost exclusively used Fluval for both target groups and other patients (it was also sold in pharmacies). Pharmacies provided other vaccines too and many GPs used those as well. Related to health provider groups one of Hungarian GPs said: *“Those health provider groups were more successful, who provided vaccines for free.” (H4)*

In Hungary many aspects of logistics –the delivery of the vaccine- was not clear. GPs got contradictory information about the shipment to practices. In spite of official information doctors had to go to take the vaccines from NPHMOS (extra time, extra cost).

GPs experienced delays in delivery of vaccines in all investigated countries mainly at the start or restricted to a small geographical areas. Due to delayed delivery, **Romanian** patients bought the vaccine from neighbouring countries. In Romania, GPs were mostly approached and more successful, because they possess high accessibility by the population and have high credibility in patients' eyes. One of the Romanian respondents suggested: *“Team work is needed to ensure sustainability and to improve effectiveness by better cooperation among local authorities, schools, health authorities, community leaders.”* (R)

**Belgian** participants experienced too that among different health provider groups GPs were the most successful in delivering vaccination.

The majority of **Danish/Scandinavian** doctors confirmed that GPs were best at administering the flu vaccination of at risk patients. This was largely attributed to the fact that GPs know their patients well and could identify and proactively contact at risk patients. The GPs also attributed this to patients and the public having a high level of trust in their GPs.

### ***Comparison of countries***

GPs experienced delay in delivery of vaccines in all investigated countries mainly at the start or restricted to small geographical areas. In the UK almost exclusively, all GPs involved said they delivered all their own vaccinations and anti-virals with the aid of practice nurses and health care assistants. In Italy and Denmark GPs played the most important role in vaccination and they were more successful. Patients had access to vaccines in Hungary via their GPs, in vaccination centers and pharmacies. Free vaccines for target groups was provided by National Public Health and Medical Officer Service (NPHMOS). Delay in the delivery of vaccines was mentioned by Romanian doctors. Belgian participants experienced this also and among different health provider groups GPs were the most successful in delivering vaccination.

### ***Key results: The most important problems mentioned by GPs***

**Table 11 The most important problems mentioned by GPs**

#### **The most important problems mentioned by GPs:**

- Fragmented primary health care system (UK)
- Disorganization in vaccination campaign / Health Office Delay in delivery of vaccines (I)
- Delayed delivery of vaccines
- Contradictory information about shipment (H)



### 3.6. Flu vaccine uptake in GPs, their families and their patients

Four questions belonged to the 6<sup>th</sup> theme: *“Did you get vaccinated during the pandemic period? Did your family members at risk get vaccinated? If not, why not? What factors influenced you, your family and your patients whether to be vaccinated or not?”*

#### **Results by countries**

The vast majority of **British** GPs surveyed decided to be vaccinated against the swine flu, with the few who didn't, who felt they could cope with the illness if they caught it. *“I didn't get vaccinated because I could see the other doctors feeling unwell having had the jab, but I would do in the future.”* (UK23) – said a doctor. Many had their partners, children and vulnerable family members vaccinated too, citing a sense of civic duty and a more persuasive argument for patients as their main reasons for being vaccinated themselves. In one case, where practice staff was reluctant to have the jab, GPs lined up to receive it in front of them.

*“I was vaccinated so I could say to my patients I was done and was also not at risk of infecting vulnerable - everyone in the practice was done.”* (UK1)

*“Yes I got the jab and had a bit of a fever for 24 hours but not too bad. There was pressure not to go off sick at this time and I felt it was my civic duty and didn't want to give it to my partner.”* (UK3)

Only a small number of the **Italian** participants (and their family members) took up the vaccine. Almost all respondents who were not vaccinated agreed only the high at risk group should be vaccinated and acted in this way because in their case, the benefits of the vaccination are higher than the side effects. The most common factors which influenced GPs to be vaccinated were immunity; to protect their relatives, patients and other people; avoid infection (they have to work); persuasive argument for patients; relatives at risk.

*“Yes, I did the vaccination as well as my family members. The reason why is that we have to work and be productive.”* (I15)

*“Yes, I did the vaccination as well as my family members that are at risk. The facts that brought to this decision are linked to the risk and the opportunity not to transmit the infection to other people who might be at risk.”* (I9)

Reasons against having the vaccine from doctors included: only the high risk groups should be vaccinated; no real risk or low risk of infection; fear of possible side effects; they didn't belong to an at risk group; lack of evidence based information about vaccine, too much confusion; the percentage of difficult cases shown was very rare; very aggressive marketing campaign by the pharmaceutical industry. One Italian GP said that he vaccinated his family members, even though they were not risk-patients, another doctor said they tried to avoid infection with other preventive activities.

*“No, me and my family have not been vaccinated as there was no clinical indication.”* (I1)

*“I never did the vaccination. Not for that flu nor for any other. I have good health and I never felt the need. My family is in the same condition.”* (I24)

*“Personally I did not and also my relatives did not do the vaccination. I thought it was not necessary as in Sicily we never had an increase.” (I18)*

Most **Hungarian** respondents took up the vaccine, and had their family members vaccinated too. By taking the vaccine, doctors set patients a good example. Old family members and relatives at risk were important factors as well. There was a doctor who took up the vaccine, but her husband refused it. Good immune system was the most often mentioned reason against vaccination. *“I worked in an isolation (flu) ward in a hospital and I didn't become infected...I was sick only once, 40 years ago.” (H6)* - said one of them. Several participants pointed out GPs receive “active immunization”. They meet daily 50-60 patients so they have contact with the virus before the start of the vaccination campaign.

Despite Hungarian GPs, only a few **Romanian** participants declared that they and their family members did not get vaccinated. Some of them argued the doctor's personal example can be relevant for the patients however other GPs identified many factors of non-compliance e.g. possible adverse effects, little information available or low risk of infection in an isolated community.

The majority of **Belgian** respondent and their family members were not vaccinated. Participants on the side of vaccination mentioned following reasons: to protect their patients, fear of loss work. Against vaccination they listed: good immune system, fear of side effect, less pandemic than predicted, personal negative opinion about marketing.

Most of the Danish/Scandinavian GPs vaccinated themselves against the H1N1 and vaccinated their family members at risk too. Reasons behind vaccination were the protection of at risk patients, ease of access to the vaccine and they wanted to be able to work. The main reason of not getting vaccinated was uncertainty about the risks.

### **Comparison of countries**

The vast majority of British GPs surveyed decided to be vaccinated against the swine flu. Most Hungarian and **Danish/Scandinavian** respondents also took up the vaccine, and had their family members vaccinated too. Only a smaller number of the Italian, Romanian and Belgian participants (and their family members) were vaccinated.

### **Key results: Reasons behind and against vaccination**

**Table 12 Reasons behind and against vaccination**

**Reasons behind vaccination:**

- Immunization
- Civic duty (protect other people)
- Protect their family members and relatives (at risk)
- Protect patients at risk
- Persuasive argument for patients
- Avoid infection because they had to work
- Trust in vaccination

**Reasons against vaccination:**

- Good immune system
- Fear of possible adverse effects / side effect
- No real risk (or low risk of infection)
- Less pandemic than predicted (in their area)
- Only the high risk group should be vaccinated
- They didn't belong in risk group (no clinical indication)
- Lack of evidence based information about vaccine, too much confusion
- The percentage of difficult cases shown was very rare
- Very aggressive marketing by pharmaceutical industry
- Other preventative activities (preventative activities are more important than vaccination)

### 3.7. Flu vaccine uptake in different patient groups

The 7<sup>th</sup> question (theme) of the research was: *“Was there any variation in the uptake by different patient groups? (e.g. ethnic minorities, vulnerable patients or those of low socio-economic status, etc.)”*

Trust in vaccines is highly variable and building trust depends on understanding information and perceptions of vaccines (including vaccine risks), socioeconomic status, literacy, previous experiences, ethnic affiliations, religious and philosophical convictions etc.

Annual vaccination against seasonal and pandemic influenza was recommended for certain target groups (different countries have slightly different recommendations) in 2009/2010. General experience was that GPs had fewer problems with those patients who took vaccines in previous years, but people who have never shown interest in the vaccination are difficult to involve or continued to refuse.<sup>3</sup> Patient at risk due to their job were quite easy to persuade (travellers, people working in communities).

#### **Results by countries**

In the **UK** the most common hard-to-reach group of patients were pregnant women who were concerned about the danger of the vaccine to themselves and their unborn babies despite being a group who were at risk of being seriously affected by swine flu. Many doctors claimed midwives weren't supporting the vaccination campaign which made it doubly hard to persuade pregnant patients. One GP suggested that information leaflets tailored for individual vulnerable groups such as pregnant women would be a useful tool for future campaigns. Another GP said that the more educated and informed the pregnant patient is, the less likely they were to have the vaccine. African and Asians patients were also found to be another difficult group to persuade as, according to one doctor, *“they are often hard to reach with all our preventative work. They haven't experience of prevention - it is alien to them.”* (UK7)

*“Bangladeshi and African patients were the hardest to reach but are often hard to reach with all our preventative work. They haven't experience of prevention- it is alien to them. Pregnant women had moderate uptake - the most common reason for not having it were that it was a hastily tested vaccine which they believed could damage the unborn foetus.”* (UK7)

People with lower socio-economic status were the most frequently mentioned problematic group by **Italian** GPs. Patients with lower socio-economic status were harder to persuade due to negative media influence. But some GPs told that a few scared patients with lower socio-economic status asked for the vaccine even though they did not belong to target group. For the same reason (“media hysteria”) vaccination was refused by some patients at risk. Highly qualified people who had lower trust in vaccines and patients who

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<sup>3</sup> This relationship is verified by scientific research e.g. in Germany (Böhmer et al. BMC Public Health 2012, 12:938) “Having received a seasonal influenza shot in the pre-pandemic season was the strongest predictor for receiving pandemic influenza vaccination in our study. The high correlation between seasonal and pandemic influenza vaccine uptake highlights the significance of habitual behaviour with regard to influenza vaccination decisions. In addition and independent from this factor, persons belonging to at least one of the recommended target groups for seasonal influenza vaccination were significantly more likely to receive a pandemic influenza vaccination than persons not belonging to a target group.” Böhmer, M., Walter, D., Falkenhorst, G., Müters, S., Krause, G., Wichmann, O. (2012): Barriers to pandemic influenza vaccination and uptake of seasonal influenza vaccine in the post-pandemic season in Germany. BMC Public Health 2012, 12:938 (<http://www.biomedcentral.com/1471-2458/12/938>)

used alternative and homeopathic drugs rather refused vaccination. Tailored, face-to-face GP-patient communication was suggested.

*“I can say that the patients with a lower social level have been more sensitive to the influence from the media.” (I11)*

*“It’s true that there has been a lot of confusion and disinformation, especially for the less wealthy population who visited the consulting rooms of the GPs and some of them asked to receive the vaccination, even if they were not listed as patients with risk and showed no need. Others belonged to the patients “with risk” who refused the vaccination due to the risk of the side effects.” (I19)*

*“The patients who use alternative and homeopathic drugs and the ones that are sceptic towards the vaccination.” (I21)*

According to the respondents younger people and pregnant women were the most problematic target groups in **Hungary**. Some GPs mentioned hesitation to vaccinate -patients with mercury or egg allergy. Vaccination of patients at risk (old people, chronic patients) was successful because of their risk and the fact that the vaccines were free of charge. People not belonging to a target group had to pay for the vaccine therefore many patients were not vaccinated. Several Hungarian physicians experienced that highly qualified people had lower trust in vaccines (they demanded correct and evidence-based information about the vaccine and its side effects). GPs perceived two extremities regarding Roma minority: low trust in administration, but by getting scared easily, Roma people turn to their doctor for immediate help.

**Romanian** GPs though partly similar in the case of Roma minority: *“They have no interest or generally much lower interest in preventive activities than the average population, are very reluctant and they do not want to be vaccinated, even with the other campaigns in the national vaccination schedule their compliance is very reduced and is hard work to educate them or to convince them to attend. They often have different beliefs about the illness due to cultural differences.” (R)* Use of Roma health mediators was suggested.

Pregnant women were mentioned as a problematic patient group by **Belgian** GPs too. They experienced that lower educated people were easier to convince, while one group of health workers (nurses) refused vaccination.

The majority of **Danish/Scandinavian** GPs said their patients at risk were mostly vaccinated. They experienced moderate uptake among patients with lower socio-economic status and poor uptake among ethnic minorities.

### **Comparison of countries**

In the UK the most common hard-to-reach group of patients were pregnant women, and African and Asians patients were also found to be another difficult group to persuade. Pregnant women were identified as problematic group in other three countries too (Italy, Hungary, and Belgium). People with lower socio-economic status were the most frequently mentioned problematic patients by Italian and Danish/Scandinavian GPs. People belonging to Roma minority were also mentioned in Hungary and Romania.

**Key results: 'Problematic' groups, Patients who well accepted vaccine, Suggestions**

**Table 13 Problematic' groups, patients who well accepted vaccine, suggestions**

**'Problematic' groups:**

- Pregnant women (UK, B, I, H)
- Educated and informed patients (UK, H)
- African and Asians patients (UK)
- Roma minority (R, H)
- Nurses (B)
- People with lower socio-economic status (I, D)
- Highly qualified people (UK, I, H)
- Foreign patients (I)
- Patients who use alternative and homeopathic drugs (I)
- Patients with Hg or egg allergy (H)
- Low-income people (H)

**Patients who well accepted vaccine:**

- People at risk (in all countries)
- People are more interested in vaccination (in all countries)

**Suggestions:**

- Information leaflets tailored for individual vulnerable groups (UK)
- Use of Roma health mediators
- Tailored, face-to-face GP-patient communication (I)

### 3.8. Practices regarding vaccination in case of flu outbreaks in future

The 8<sup>th</sup> question (theme) of the research was: *“What practice would you continue or change in future flu outbreaks regarding vaccination?”*

#### **Results by countries**

Most of the **British** GPs surveyed said they would continue with the practices they put in place last time, and welcomed information materials like the symptom flow charts. Even so there were several suggestions as to how they might better be supported in a future outbreak:

- Weekend clinics for well patients who want to be vaccinated (would help separate them from ill patients in the surgery during the week.)
- More agreed collaboration between different health professionals
- More tailored information leaflets for different patient groups
- Agreed protocols with community nurses and midwives
- Quicker access to masks , suits etc - there was one suggestion that to achieve this, there should be a central procurement system for protective wear
- Shorter training on flu which could be delivered quickly;
- Fewer but more targeted information emails for doctors delivered to their personal e-mail addresses

Most **Italian** GPs said they would make many changes. Their suggestions were related to many aspects of handling a future flu outbreak:

- Correct media campaign (avoid misleading information and panic)
- Unified information from health authorities
- Misleading information has to be corrected by the “official” media straightaway
- Need for unified directives about risk and side effects of the vaccine for public
- Evidence based information about vaccines for GPs (clinical studies, comparative studies)
- Improve coordination and information flow between national and regional health government and GPs  
(good coordination and cooperation from the start)
- Improve coordination among health care professionals (good coordination and cooperation from the start)
- Improve shipment of vaccines
- Need for vaccination centers
- Free vaccine for under 75, e.g. people aged between 50 and 65 (higher activity, higher risk to infection)
- Involve GPs in a more effective way e.g. “anti-crisis-risk group”
- Inform children in school about flu and preventative activities (convince parents through their children)

One half of the **Hungarian** GPs would continue their previous activity (who vaccinated their patients or recommended it for them would act in the same way in the future), another half would change a few things. They also mentioned the importance of evidence-based information and correct media campaign (e.g. infectologist could make a statement to the journalist). One of them said: “Go to your GP for information - it could be the main messages.” A few participants mentioned that extra, reimbursed office

hours would be needed for vaccination, and would enlarge as the target of those who get the vaccine for free. Cheaper vaccine also would be required.

*“What to do better? Enlarge the target of those who get it for free. Poor people who did not get it for free, they might get less vaccinated. Price should be below 1000 HUF (3.4 EUR).” (H6)*

Mentions:

- Correct media campaign (avoid misleading information and panic)
- More intensive campaigns in their own practice (e.g. placards, leaflets etc.)
- Extra, reimbursed office hours would be needed for vaccination
- Enlarge the target of those who get vaccine free
- Cheaper vaccine

Likewise, **Romanian** physicians listed many suggestions primarily related to communication. In their view need to improve communication at different levels:

- Involve patients’ organizations and parents groups; organize information meetings for them
- Provide evidence-based information to doctors and health care professionals. They need for relevant information to convince their patients (avoid controversial information).
- Provide continuously available helpline or a direct contact person/body for assistance
- Use media in order to communicate correct information related to health and preventative activities, and encourage people to use the internet (propose reliable websites)
- More information materials (leaflets, posters, brochures, ads) e.g. about benefits of the vaccination because visual materials are more effective
- Make risk and contingency plans.

Although, many **Belgian** GPs would continue their previous activities in a similar situation, the majority of them would make a change to their practices: they would be less trustful of authorities and official information, and they would be more critical of politicians’ statements. In total these GPs would be less convinced.

**Danish/Scandinavian** GPs mentioned various suggestions. A recurring suggestion was that they would be more proactive in order to identify and reach at risk patients. Social media and Facebook groups were also offered as one idea to keep patients up to date with advice. One GP said that in Denmark they have mandatory data collection and it would be used to contact at risk patients quite easily.

### ***Comparison of countries***

Most British GPs surveyed, said they would continue with the practices they put in place last time. Most Italian GPs said they would make many changes. One half of the Hungarian GPs would continue their previous activity; another half would change a few things. Romanian and Danish/Scandinavian physicians listed many suggestions - primarily related to communication. Many Belgian GPs would continue their previous activities in a similar situation, the majority of them would make changes to their practices.



### 3.9. Willingness of vaccine uptake in case a future pandemic

The 9<sup>th</sup> question (theme) of the research was: *“How do you think your patients would respond in a future pandemic? More willing or less willing?”*

#### **Results by countries**

Most of the **British** GPs believed patients would be just as willing, if not more so, to come forward for vaccination in a future outbreak. However some felt this could only be achieved with a properly thought-through media campaign which didn't scaremonger too much. A few doctors felt that there may be more cynicism as it was "the pandemic which never really happened" and that you could end up with a "cry wolf" scenario if not careful.

*“I think patients would be more willing because concerns have been allayed about vaccine safety, but more would be willing if we had a more targeted public campaign.” (UK5)*

*“I think people will be more laid back in a future pandemic but worry that could be a cry wolf situation. It is hard for health department to get it right. Would like more evidence on Tamiflu's efficacy for next time though.” (UK3)*

Most **Italian** GPs believed patients would be more willing to increase vaccine uptake. One of them said: *“They are interested in vaccination. It became a ‘habit’. Patients usually request the vaccine already in early October.” (I1)* Thanks to the ‘alarmist’ frightened people would be more willing to accept the vaccine. Improving organization and vaccine delivery were mentioned by doctors.

Many **Hungarian** GPs experienced that trust in vaccines increased after the pandemic. But some of them said that controversial discussions and the negative media communication about pandemic influenza vaccination may have contributed to people became more apathetic after 2009/2010. An correct and accurate media campaign was suggested.

A group of Romanian GPs said that people are more interested in vaccination, others experienced that people are more sceptic. They identified possible factors which will influence the population: the information provided number of cases identified, media, education, health care professionals.

**Belgian** GPs strongly suggested improving collaboration between national and local health authorities and GPs in order to increase level of vaccination.

The relatively largest group of **Danish/Scandinavian** GPs said that their patients would be more willing to be vaccinated in the future, but is not much smaller the group of GPs who said that their patients would be less willing. The other participants said that their patients' willingness would be at the same level as last time.

***Comparison of countries***

Most of British, Italian and Danish/Scandinavian GPs believed patients would be more willing to take up the vaccine. Many Hungarian GPs experienced trust in vaccines increased after the pandemic. Romanian and Belgian participants did not concur with this.

## 4. Results of the one by one interviews performed in the United States

### 4.1. GP's general opinion about how the pandemic flu of 2009/2010 was managed and GP's opinion about the preventative activities during the 2009/2010 pandemic-flu

This part of the report contains analysis of the answers to the first two questions: What is your general opinion about how the pandemic flu of 2009/10 was managed? What is your opinion about the preventative activities done during the 2009/10 pandemic flu in general?

Overall, providers felt that the pandemic flu of 2009/10 was well managed, especially during the lag period prior to the availability of the vaccine. Practitioners were particularly impressed with the adoption of recommended preventative actions by the general public.

*"CDC communications were clear and consistent."*

*"Bottles of hand sanitizer seemed to be everywhere, and everyone seemed to use it."*

*"People were very conscious of not exposing others or being exposed."*

Following the release of the vaccine there was a definite mixed feeling regarding the handling of vaccinations and there were many concerns registered by respondents.

*"We tried to follow the CDC guidelines, but many people who wanted the vaccine were denied and often we didn't use the vaccine we had."*

*"I didn't know if our practice was eligible to receive the vaccine."*

*"I know for a fact that different states followed different guidelines."*

### 4.2. Success of flu vaccine uptake and preventative activities in their GP's own practice; information and communication

This part of the report contains analysis of the answers to the questions: How successful were the preventative/vaccination activities in your own practice during the pandemic flu period? What information did you tell your patients to help them decide whether to be vaccinated or not? What information/communication would support GP's discussion with their patients whether to be vaccinated or not? What works well in public communication campaigns that support GPs in pandemic outbreaks?

As noted above, non-vaccine preventative recommendations were widely adopted, most especially hand washing. However, the perceptions of success varied widely as to vaccination activities. Also the overlap with seasonal influenza seemed to influence this.

*"Our practice didn't use all of the vaccine."*

*"Some patients wanted only H1N1 vaccination, some only seasonal, and some both."*

The biggest concerns about vaccination had to do with the safety of the H1N1 vaccine and the wisdom and need to be protected against H1N1 and seasonal flu.

*“Patients often did not believe in the safety of the new vaccine.”*

*“Many were afraid of Guillain-Barre.”*

The respondents felt the communication to the public on vaccine safety and effectiveness was not consistent because of variance between CDC communications versus public media communications.

*“Patients often showed up already convinced there were safety problems with the vaccine because of the media sensationalizing the news.”*

#### **4.3. Delivery of vaccine and flu vaccine uptake in GPs, their families and their patients**

This part of the report contains analysis of the answers to the questions: Which health provider groups were more successful in delivering vaccination? What do you think and why? Did you get vaccinated during the pandemic period? Did your family members at risk get vaccinated? If not, why not? What factors influenced you, your family and your patients whether to be vaccinated or not?

Respondents felt that the most successful vaccination sites were public health clinics and pharmacies and they felt this was so because of the adopted strategies and CDC recommendation supporting these sites. Individual practitioners felt they could not be cost effective if they had to order the minimum amount received.

*“We really didn’t need 100 doses.”*

As to self-vaccination and that of family members of practitioners, the responses were variable but indicated that overall acceptance, especially for their children, was high. In terms of influencing factors, fear of disease and duty to others were stressed as important motivations.

*“This is important for the community.”*

#### **4.4. Flu vaccine uptake in different patient groups, practices regarding vaccination in case of flu outbreaks in future, willingness of vaccine uptake in case a future pandemic**

This part of the report contains analysis of the answers to the questions: Was there any variation in the uptake by different patient groups? (e.g. ethnic minorities, vulnerable patients, or those of low socioeconomic status, etc) What practice would you continue or change in the future flu outbreaks regarding vaccination? How do you think your patients would respond in a future pandemic? More or less willing?

Unfortunately, there was no input received on variations in vaccine uptake for H1N1 or seasonal vaccines among different population segments. Respondents did feel that as many non-priority group individuals sought vaccination as those from priority groups and uptake depended more on local policy than individual acceptance.

As to proposed changes in future outbreaks, most reflected a strong desire for “simplification” at the vaccine administration level. Specific individual recommendations were:

*“no priority groups”*

*“make it mandatory for elementary schools”*

*“make supplies readily available to all”*

*“need to work with the media”*

*“need to get the right message out to the public”*

As to perceptions on vaccine in a future epidemic, again, this information was not directly assessed. However, from overall responses, we believe that the public perception of communications and vaccine strategies were overall positive as compared to previous campaigns and this was in all likelihood a consequence of the intense support of H5N1.

## 5. Conclusions and recommendations

GPs felt that national and local health authorities would have to handle the pandemic situation better in the future. Misleading media communication, focusing on sensationalism over science was (one of) the main problems during the 2009/2010 pandemic flu (having a negative influence on vaccine uptake). GPs found that health authorities informed them after the big media campaigns. Patients were alarmed and GPs had no professional, specific information or tools to handle the "hysteria". GPs needed specific information about the disease, size of the epidemic, ways of prevention, side effects of preventative activities (including who takes the responsibility) and what happens in case of no prevention. In the United States in terms of communication by the media, there was a general consensus that events were sensationalized and did more to confuse than to allay doubt. Some felt that many media reports generated anxiety and fear, often without a substantiated basis, which led to an overly heightened concern early in the evolution of H1N1 and a subsequent lack of sufficient concern when H1N1 turned out to be less dangerous than feared. The core perception was that the overall media effect undermined the more consistent official and public communications leading to increased confusion and second-guessing of governmental efforts. When respondents were asked if they felt this contributed to the poor vaccine uptake, there was almost universal agreement that this was the case.

GPs from Eastern-European countries complained about communication gap from the authorities at the same time they felt under pressure from authorities), British GPs felt that the communication in the UK was too overwhelming, and they found it difficult to extract the main messages. There were too many communication channels e.g. direct mails, meetings, e-mails with lots of links. The same problem was mentioned in the States too: there was the multitude of available websites covering the H1N1 pandemic and subsequent official recommendations. Almost all professional associations and societies covered H1N1, either through a link to CDC, creating their own content, or both. One area that was perceived somewhat differently among providers was the nature of the CDC recommendations. The majority interpreted them as guidelines, but others felt that they could not or should not deviate from them. The area that caused the most confusion was on recommendations addressing school closures.

GPs experienced many problems in the field of coordination among professionals. Different health care professionals had different opinions about risk and side effects of the vaccine, vaccination of pregnant women etc. In the UK changes of the PHC system could lead to fragmented services and could damage this kind of coordination proposed. Lack of cooperation or not very effective collaboration between different levels of health authorities (national - regional – local) and between health authorities and GPs was also mentioned as well as organization, and logistics (see Table 14). A simpler vaccination plan, which is clearly communicated and consistent in regards to both providers and the public would be required by the American GPs too.

**Table 14 Views of GPs about the problems during preventive activities pandemic 2009/2010**

<p><b>COMMUNICATION</b></p> <p><b>Media</b></p> <ul style="list-style-type: none"><li>• Negative media communication (misinformation, malicious information, biased information, panic, negative influences)</li><li>• Lack of credibility and complexity in the field of public information, information asymmetries</li><li>• Communication channels (conventional media vs. social media)</li></ul> <p><b>Health authorities – GPs</b></p> <ul style="list-style-type: none"><li>• Lack of correct information and official communication – in time, before the media campaign – towards GPs (mainly at the start)</li><li>• Lack of unified recommendations and directives about risk and side effects of the vaccine</li><li>• Lack of specific information (size of the epidemic, ways of prevention, preventative activities)</li><li>• Lack of a simple vaccination plan</li><li>• Lack of clear information about priority groups</li><li>• Overwhelming information from health authorities toward GPs</li><li>• Delayed and inadequate information from health authorities</li><li>• Communication channels (too many)</li></ul> <p><b>GPs – patients</b></p> <ul style="list-style-type: none"><li>• GPs and ‘problematic’ patients groups (language problems, socio-cultural differences)</li></ul> <p><b>COLLABORATION</b></p> <p>Lack of cooperation or not very effective collaboration between</p> <ul style="list-style-type: none"><li>• different levels of health authorities (national - regional – local) health authorities</li><li>• health authorities and GPs</li><li>• health professionals (e.g. midwives, nurses refused to vaccinate pregnant women)</li><li>• different levels of the public health care system</li></ul> <p><b>ORGANIZATION, LOGISTICS AND OTHER PROBLEMS</b></p> <ul style="list-style-type: none"><li>• Delayed delivery of vaccine, preventative suits and masks</li><li>• Contradictory information about shipment of vaccines</li><li>• Flu lines were overloaded</li><li>• Most practices were not able to provide a separate area to keep patients with flu symptoms away from other patients</li><li>• To visit all those reporting respiratory tract infections in their homes was tiring and impractical</li><li>• Some aspects of the campaign – financing, responsibility etc. – was not clear (mainly at the start)</li></ul>
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GPs had fewer problems with those patients who took vaccines in previous years: older patients with chronic disease get vaccines for free.<sup>4</sup> Patients at risk due to their job were quite easy to persuade (travelers, people working in communities: teachers). Vaccination of pregnant women was found to be difficult (reasons: no uniform communication by other health care professionally meeting these patients; patient information leaflet of the vaccines contains contraindication in pregnancy). Highly qualified people

<sup>4</sup> Italian GPs consider a limitation that only patients over 75 years are included in this group.

had lower trust in vaccines (reported mainly in Hungary). In the UK, African and Asians patients were found to be a difficult group to persuade. Romanian and Hungarian GPs thought the same in the case of the Roma minority, but Hungarian GPs perceived two extremities regarding Roma minority: low trust in administration, in doctors, but getting scared easily and coming to doctor for help.

**Table 15 ‘Problematic’ patients groups**

<p><b>HEALTH REASONS</b> Pregnant women Patients with mercury or egg allergy Cancer patients</p> <p><b>LEGAL REASONS</b> Institutionalized children</p> <p><b>SOCIO-CULTURAL DIFFERENCES</b> Ethnic groups: Roma minority, African and Asians patients Immigrants Highly qualified people People with lower socio-economic status</p>
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GPs have a crucial role in preventative activities during pandemics. They possess high accessibility by the population and have high credibility in the public’s view. Patients put trust in their GPs (higher trust than in governmental communication). GPs serve as example in attitude to health prevention (the self vaccination was found important in persuading patients). Thanks to the personal relationship and length of relationship, GPs could perform further personalized communications (GPs know the health- and family conditions of their patients).

Recommendations of GPs focused on three main topics: communication, collaboration and organization and logistics.

### **Communication**

#### ***External communication:***

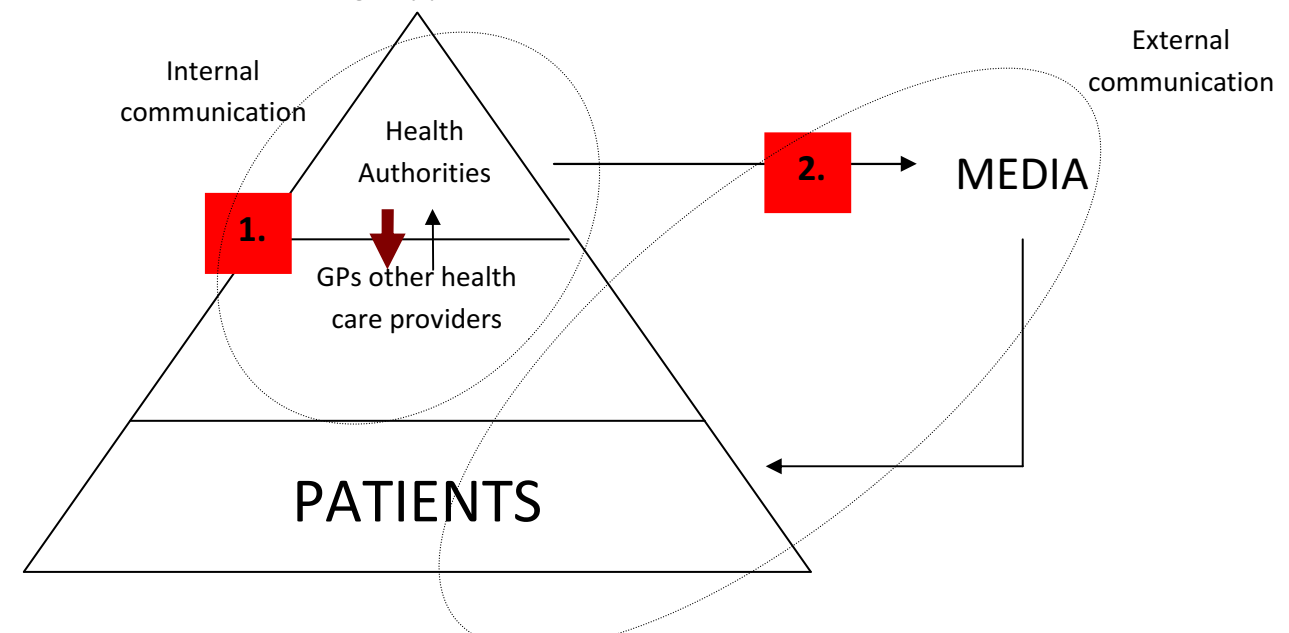
- Recommendation to improve media campaign:
  - Do it on a professional basis
  - Involve professionals
  - Evidence-based, correct and convincing information from the health authorities and health professionals towards media (and public)
  - Need for opinion leader professionals who also have good communication skills.
  - Involve trusted spokesperson(s) able to convince the public
  - One of the main messages: tell patients to go to their GPs to get prevention or find out more
  - Misleading information has to be corrected by the “official” media straightway
  - Avoid panic – “cry wolf”
  - Use social media



- Recommendation to improve GPs – patients communication:
  - Specific approaches to improve immunisation uptake in “hard to reach” groups
  - Tailored, face-to-face GP-patient communication
  - More tailored information leaflets for different patient groups
  - Involve patients’ organizations and parents groups; organize information meetings for them
  - Need to inform children in the school about flu and preventative activities (convince parents through their children)

**Internal communication:**

- Communication towards professionals should be carried out first, before the media campaign and should be harmonized.
- Correct information and official communication – in time – towards GPs
- GPs need evidence-based information about vaccines (clinical studies, comparative studies)
- Unified directives about risk and possible side effects
- Communication between different health professionals. All health professionals should act with one voice
- Shorter training on flu which could be delivered quickly
- Fewer but more targeted information emails for doctors delivered to their personal e-mail addresses
- Make risk and contingency plans.



**Figure 4 Communication flow Suggested by GPs**

**Collaboration**

- More agreed collaboration between GP practices
- Improve coordination between national and regional health government and GPs (good coordination and cooperation from the start)
- Improve coordination among health care professionals (good coordination and cooperation from the start)

**Organization, logistics and others**

- Logistics, timely shipment of vaccines and of preventative suits and masks (UK)
- Separate, reimbursed office hours to GPs for vaccination (too much workload during regular office hours, healthy patients do not want to wait together with sick patients)
- Weekend clinics for well patients who want to be vaccinated
- Improve access to special flu telephone lines
- Have a clear vaccination plan
- Set clear priority groups
- Enlarge the target of those who have access to free vaccination
- Cheaper vaccine to people not belonging to a target group (who get free vaccination)
- Clear legislation or legal support

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