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Report on the Conference on childhood immunisation: progress, challenges and priorities for further action

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Commission européenne, 2920 Luxembourg, LUXEMBOURG - SANCO-IMMUNISATION@ec.europa.eu

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EXECUTIVE SUMMARY

The 'Conference on childhood immunisation: progress, challenges and priorities for further action'[1] presented an opportunity to take stock of the recent initiatives on childhood immunisation taken by the EU, including the follow-up to the Council conclusions on childhood immunisation[2] adopted in June 2011. In addition, the conference provided a platform to discuss priority areas for future EU-level action on childhood immunisation with a wide range of stakeholders.

The EU has recently seen very large outbreaks of measles. Notwithstanding this, it was stressed that, if Member States are really committed, reaching the measles elimination goal by 2015 is feasible! The potential severe consequences of a measles infection were explained by a parent whose son developed subacute sclerosing panencephalitis (SSPE) years after having been infected with measles at an age where he was too young to be vaccinated. This illustrates that parents are not only responsible for their own children: their decision to vaccinate their child or not may have a significant impact on others.

The Commission, together with the European Centre for Disease Prevention and Control (ECDC) and the European Medicines Agency (EMA), have taken various actions in follow-up of the Council Conclusions on childhood immunisation. Participants were reminded that the aim of the conference was to receive input in defining the future priority areas for EU level action on childhood immunisation.

Measles vaccination is called a 'no brainer' in health economics: it is not only cost-effective, it is cost-*saving*. Notwithstanding this, 4.9 million people in the birth cohorts 1998-2008 alone in the EU did not receive the first dose of a measles containing vaccine! Various options for improving the vaccination offer were discussed. There was a consensus that offering free vaccination regardless of legal or health insurance status contributes to improving vaccination uptake, particular in underserved groups. It should be made as easy as possible for healthcare professionals to offer vaccination, but financial incentives should be avoided. It was felt that immunisation checks can be useful and should be done as early as possible, e.g. at the crèche. Vaccination should also be made as easy as possible for parents, e.g. by offering vaccination at convenient locations. In addition, there is a need to support studies to provide evidence on what supplementary measures intended to improve access are effective in improving vaccination coverage.

With regard to advocating vaccination to the public, it was flagged that information may motivate individuals, but is not sufficient in itself since it does not provide the opportunity or ability to get vaccinated. When there is a vaccine related crisis due to safety issues, health authorities should communicate rapidly; failure to do so will lead to anti-vaccine groups filling the communication gap. The need was also identified to better profile susceptible populations to better target and tailor communication efforts. Various strategies for improving awareness and trust in the public were discussed, such as monitoring and engaging in discussions on the web.

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1 Programme, presentations and video recordings available at:
http://ec.europa.eu/health/vaccination/events/ev_20121016_en.htm

2 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:202:0004:0006:EN:PDF

It was emphasised that web noise should be put into context and care should be taken not to give it too much weight. To be successful in social media, there is a need to build influence through networking and to provide regularly updated content. Infotainment programs and documentaries can be powerful in normalising behaviour and making people replicating other people's behaviour. It was concluded that communication should focus on positive messages such as the protection given by the vaccine, rather than communicating fear or focusing on the safety of the vaccine.

Healthcare professionals have a key role in advocating immunisation, since they are regarded by the public as the most trusted source of medical information. It is essential to also involve primary care workers such as nurses and social workers. As a healthcare professional, it is important to listen to the questions parents have, not to judge, to match with the family profile, to interpret resistance as feedback, and to be open to discuss adverse events. The healthcare professionals present at the conference expressed a preference for e-tools for professional training and guidance on vaccination.

To improve access to vaccination for underserved populations, the Promovax project (co-funded by the EU Health Programme) illustrated a healthcare worker toolkit and educational material for migrant populations it had developed. It was stressed that access to immunisations and vaccines should be free for migrants. In addition, immunisation programs should take into account the cultural diversity of migrant populations. An NGO presented how effective partnerships were built between Roma communities and local authorities to improve access to childhood immunisation. It is essential to involve Roma leaders in such partnerships to build trust. Insufficient immunisation coverage in migrant populations is not an isolated issue but a consequence and the underlying reasons (poverty, social exclusion, …) have to be eliminated.

To facilitate information exchange between vaccine service providers across the EU, it was suggested that standardised vaccination cards could be developed. A standard EU vaccination record could also support the introduction of electronic records across the EU. ECDC is developing various web based vaccination resources for healthcare professionals and the public, including a website on vaccination, an interactive database on vaccines, and a vaccination schedule platform allowing comparison of vaccination schedules across countries. The Eudrapharm database developed by EMA contains information on 301 vaccines for childhood immunisation. Once the entry and validation of data will be complete, the database will be publicly accessible. EMA urged the Member States to help EMA's Paediatric Committee to identify a small number of 'best schedules' in order to simplify and optimise the development of vaccines and to avoid exposing children to unnecessary trials, which is unethical.

1. INTRODUCTION

Former Commissioner John Dalli opened the conference via video message. In his message, the former Commissioner stressed the need to take urgent and determined action to eliminate measles and rubella in Europe by 2015. The former Commissioner stressed that the participation of all major European associations of doctors and paediatricians at the conference sends a strong signal of their commitment to help achieve and maintain high vaccination coverage. Finally, he explained that the outcome of the discussions at the conference will help guide the Commission and the Member States in defining the future priority areas for achieving added-value through co-ordinated EU level action on childhood immunisation.

Karin Kadenbach, Member of the European Parliament moderated the introduction session and welcomed the participants. She emphasised the importance of immunisation and gave an overview of the conference programme and the aims of the conference.

Marc Sprenger, Director of the European Centre for Disease Prevention and Control (ECDC), explained the paradox of preventing infections: when infection prevention is efficient, people will no longer be confronted with the disease and become complacent about continuing efforts on infection prevention. He raised that EU Member States are suffering from the highest burden of measles in the developed world and that ECDC has made measles elimination a priority. Reasons for insufficient vaccination coverage include failing to vaccinate underserved populations, parents not vaccinating their children because they are more afraid of adverse events than of the disease, and parents that don't get around to vaccinate their children. He emphasised the crucial role of health professionals as the most trusted source of medical information. Actions that are needed to eliminate measles include reinforcing immunisation programmes and catch-up campaigns and demonstrating that they are cost-effective, strengthening communication to reinforce trust and targeted measures to improve vaccination in underserved populations. Marc Sprenger stressed that, if Member States are really committed, reaching the measles elimination goal by 2015 is feasible.

Rüdiger Schönbohm, an engineer and father of two children, presented a moving account about how his youngest son developed subacute sclerosing panencephalitis (SSPE) years after having been infected with measles at an age where he was too young to be vaccinated. He emphasised that parents are not only responsible for their own children: their decision to vaccinate their child or not may have a significant impact on others. He felt it was a shame that measles is still an issue in his country and reminded that in some other parts of the world had been successful in fighting measles.

John-F Ryan, acting director of the Directorate Public Health in the European Commission, recalled the Council Conclusions on childhood immunisation adopted in June 2011 during the Hungarian Presidency. He gave an overview of the various actions taken by the Commission, ECDC and EMA in follow-up of the Council Conclusions. The actions focused on improving coverage (including monitoring and assessing coverage), advocacy on immunisation to the public and healthcare professionals, web based information resources on vaccination, and increasing

access to vaccination for underserved populations. Mr Ryan concluded that a lot had been achieved since the adoption of the Council Conclusions. However, improving childhood immunisation is a long term challenge, and a lot still needs to be done. He reminded participants that the aim of the conference was to receive input in defining the future priority areas for EU level action on childhood immunisation.

Take home messages:

- If Member States are really committed and take urgent and determined action, the goal to eliminate measles and rubella in Europe by 2015 is feasible.
- Health professionals have a key role in advocating immunisation, since they are regarded by the public as the most trusted source of medical information.
- Parents are not only responsible for their own children: their decision to vaccinate their child or not, may have devastating consequences for others.

2. STRENGTHENING AND MONITORING IMMUNISATION PROGRAMMES

Mark Jit, a mathematical modeller and health economist at the UK's Health Protection Agency, explained that in health economics the value of different public health interventions is weighed against each other. In calculating costs, provider costs, direct and indirect societal costs, quality and length of life and the macroeconomic impact need to be taken into account. He emphasised that vaccines are among the most cost-effective public health interventions available. He also stressed that to obtain full economic benefits, equitable vaccination coverage is needed. In the specific case of measles vaccination, this intervention is not only cost-effective, but is cost-saving. Mr Jit acknowledged that reaching the last remaining percentages of the population (e.g. to achieve 95% coverage for both doses of a measles containing vaccine) becomes increasingly expensive. However, he remarked that the case for reaching such high coverage is elimination, and subsequently, eradication. Once the disease is eradicated, cost-savings are infinite since vaccination against that disease can be stopped.

Pier-Luigi Lopalco, head of the vaccine preventable disease programme at ECDC, presented the components of vaccination programme monitoring and stressed the importance of using available tools (e.g. surveillance, immunisation registries, sero-surveys, behavioural science, …) to improve vaccination programme monitoring. On the basis of WHO coverage estimates for the first doses of a measles containing vaccine (MCV1), he had calculated that there are 4.9 million unvaccinated people in the birth cohorts 1998-2008. The coverage for the second dose (MCV2) is lower than for the first doses of a measles containing vaccine, suggestion problems with the vaccination offer in terms of providing vaccination opportunities and/or reminding people. He illustrated the Japanese strategy to immunise susceptible groups to measles, in which problematic age groups were identified through a sero-survey. Subsequently, one age group was targeted each year by a catch-up campaign. Mr Lopalco concluded that monitoring should be improved towards the elimination goal, both at national and EU level.

Fortunato Paolo D'Ancona, an epidemiologist at the Istituto Superiore di Sanità (Italy), emphasised the importance of exchanging data on immunisation programmes between Member States. This is achieved through the Vaccine European New Integrated Collaboration Effort (VENICE) network, which covers all EU Member States, Norway and Iceland. The VENICE network conducts surveys with its national gatekeepers to collect information on immunisation. In the last three years, 16 reports were produced. The VENICE network is currently studying the feasibility of data collection on vaccination coverage at national and sub-national level. A web based tool (EVACO) has been established to collect vaccination coverage data from the Member States. The tool was piloted with seven countries last year and will now be enlarged to all Member States.

Dina Pfeifer, programme manager of the Vaccine-preventable Diseases and Immunization programme at the WHO Regional Office for Europe, reported that substantial progress towards the 2010 regional elimination goal for measles and rubella had been achieved, particularly during the period 2005-2008 during which a large number of supplementary immunisation activities were carried out. Still, over 50% of the WHO Euro Member States (representing 70% of the population) would have not reached elimination by 2010, hence the target date was shifted to 2015. In the period 2007-2009, there was a period of low incidence of measles; had more efforts been done during this period, measles elimination could have been achieved. Mrs Pfeifer explained that, in preparation of the 2015 target, the verification process was started in 2011, a Regional Verification Commission was set up in 2012 and National Verification Commissions are being set up. Indicators used are vaccination coverage of MCV1, MCV2, and rubella containing vaccine (target: ≥ 95%), and measles and rubella incidence (target: < 1 measles/rubella case per million population, excluding imported cases). She emphasised that case based reporting is critical for elimination; whereas it is in place in most countries for measles, many countries still need to implement it for rubella. Mrs Pfeifer flagged that verification of measles and rubella elimination is done independently from each other and that process is intended to confirm elimination in the WHO Euro region, not in individual countries. Finally she showed a video illustrating all cases of measles in the last 7 years in the WHO European Region.

Kåre Mølbak, State Epidemiologist for Infectious Diseases in Denmark, presented some examples on strengthening Denmark's immunisation programme. From April 2012, free measles vaccination is provided to individuals of more than 18 years old with no record of measles vaccination. Free HPV vaccination had been introduced in 2009, with catch-up campaigns in birth cohorts 1993-1995; in August 2012, the catch-up campaign was extended to birth cohorts 1985-1992. As an example of communication, an illustrated book on how vaccination is like a super power shield against bugs was developed and given to children attending child care. Mr Mølbak also illustrated the Danish electronic vaccination registry from which families and doctors can retrieve information. It serves also as a tool for decision support, surveillance and research. He flagged that there is room for improvement for the seasonal influenza vaccination coverage in persons above 65 in Denmark, ranging from 27-57% depending on the municipality. He emphasised that surveillance data should not just sit in a database, but are data for action. With regard to research, he stressed the need to develop better seasonal influenza vaccines, the need to understand better the effectiveness of immunisation programmes and the need for social and behavioural research on barriers for vaccine uptake.

Take home messages:

- Measles vaccination is called a 'no brainer' in health economics: it is not only cost-effective, it is cost-*saving*.
- In the birth cohorts 1998-2008 in the EU, 4.9 million people did not receive the first dose of a measles containing vaccine.
- Case based reporting is a tool of critical importance in achieving measles and rubella elimination. Many countries did not yet implement it for rubella.
- Surveillance data should not just sit in databases; these are data for action.

PANEL DISCUSSION: 'HOW TO IMPROVE THE VACCINATION OFFER?

The three discussion topics that had received the highest number of votes were (1) offer immunisations as part of the routine schedule free of charge regardless of legal or sickness insurance status, (2) require informed opt-out from childhood vaccinations; immunisation check upon entry to kindergarten and school entry, and (3) make vaccination more accessible, i.e. offer immunisation opportunities/days/campaigns out of office hours and/or in convenient locations.

There was a general agreement in the panel that it is important to offer vaccinations free of charge (including the doctor visit) and that it contributes to improving vaccination uptake, in particular in underserved populations. A panellist suggested avoiding using the word 'free' as it may be associated to low value, but rather say that it is paid by the healthcare system. It was also recommended to make it as easy as possible for health professionals to vaccinate; the example of the Vaccinnet system in Flanders (Belgium) was given, where the vaccine stock of participating doctors is automatically replenished when the doctor administers a vaccine and registers the administration in Vaccinnet. Offering financial incentives to healthcare professionals for administering vaccines should be considered with care: this can be criticised by anti-vaccine groups.

It was felt that opt-out from childhood immunisation may work in some countries but not in others, depending on the historical and cultural background. There also needs to be some kind of obligation before requiring opt-out, e.g. the obligation to be fully vaccinated before school entry. Such an obligation raises however the question whether it is ethical to link vaccination to education. Regarding immunisation checks, it was generally felt that such checks could be useful but should take place as early as possible, i.e. at the crèche, rather than at the kindergarten or school. If anonymised data on vaccination coverage of children in a crèche/kindergarten were available, parents could take this into account when choosing a crèche/kindergarten.

Vaccination at convenient locations (e.g. at crèche, kindergarten, school) can help increasing vaccination uptake. No evidence is available on whether offering vaccination during out of office hours would help in increasing coverage. It was

recommended that the Commission would support studies to provide evidence on what measures intended to improve access do increase coverage. As a final note, it was found important to make vaccination as easy as possible for parents, i.e. a 'one-stop-shop' instead of making parents get a prescription, then buy the vaccine at the pharmacy, and then return to the doctor to have the vaccine administered

Take home messages:

- Offering free vaccination regardless of legal or health insurance status contributes to improving vaccination uptake, particular in underserved groups.
- Make it as easy as possible for healthcare professionals to offer vaccination, but avoid using financial incentives.
- Requiring parents to opt-out of vaccination is only possible if there is some sort of obligation to be vaccinated. Such concept may work in some countries but not in others.
- Immunisation checks can be useful and should be done as early as possible, e.g. at the crèche.
- Vaccination should be made as easy as possible for parents, e.g. by using a 1-step process, by offering vaccination at convenient locations.
- There is a need to support studies to provide evidence on what measures intended to improve access do improve vaccination coverage.

CLOSING REMARKS DAY 1

Mars di Bartolomeo, Health Minister of Luxembourg, kindly made closing remarks at the end of the first day of the conference. He emphasised that vaccination campaigns are among the most efficient health measures. In times where vaccination is sometimes questioned, he stressed the need to address doubts. He also drew the attention to the importance of European countries assuring own production and research on vaccination, without being too much reliant from less secure providers. He concluded by wishing the participants a successful conference, hoping that it will provide good arguments to maintain efforts and to convince those that are not yet convinced that vaccination is a very efficient and rather cheap way to fight illnesses.

3. ADVOCACY ON VACCINATION: THE PUBLIC

Robb Butler, behaviour change and advocacy officer of the Vaccine-preventable Diseases and Immunization Programme at the WHO Regional Office for Europe, highlighted that there had been 100,000 cases of measles in the WHO European Region during the last 2.5 years. Mr Butler presented three behavioural determinants: opportunity, ability and motivation. He acknowledged the usefulness of information and awareness campaigns but alerted that informed individuals are not necessarily behaviourally responsive. Information may motivate individuals, but does not provide the opportunity or ability to get vaccinated. Looking from a different angle, he argued that 90% of the reasons for not getting vaccinated, fall within the categories of complacency, convenience and confidence. Complacency is caused by people no longer being confronted with the disease and people considering that they are not at risk of catching the disease. Loss of confidence is caused by people not always trusting that vaccines are safe or not trusting health authorities / healthcare providers. Health authorities tend to display an inability to communicate rapidly during a crisis, thereby leaving a communication gap which anti-vaccine groups are eager to fill. Improving convenience is important since people are busy and driven by time. Mr Butler raised that the use of non-traditional service points for vaccination is vastly underexplored. He concluded by flagging that parents and caregivers should not bear the full responsibility of our expectations. There is also a need to better profile susceptible populations to better tailor responses. Last, but not least, he emphasised that there is a need to ramp up political advocacy and commitment.

Ülla-Karin Nurm, a senior expert and head of the Public Health Development section at the ECDC, presented ECDC's activities on evidence-based information on behaviour change and health communication, on promoting health communication skills and building capacity, and on providing tools/ applications for behaviour change activities. She explained that the aim of these activities is to build a bridge between behavioural science and disease prevention. Best practices for promotional communications included that education and training interventions for healthcare workers can increase vaccine uptake and that input from communication experts improves effectiveness of promotional communications. Promotional communications be extended / strengthened by social diffusion strategies (e.g. visibility of credible champions, proof of positive impact may improve public acceptance and positive perceptions) and by health care worker advocacy. Indeed, healthcare professionals remain the public's most trusted source of credible health information. In terms of providing tools/ applications for behaviour change activities, Mrs Nurm elaborated on recent ECDC guidance for health care providers to enhance childhood vaccination uptake. Key overall messages were to make vaccine communication more of a two-way information exchange, to keep the focus of discussions on the benefits of getting protected and protecting, and to make the setting and systems in which people obtain vaccinations simpler and more accessible. In terms of promoting health communication skills and building capacity, ECDC is developing a training course (ready by Q2 2013) on risk communication focusing on vaccine preventable diseases and measles in particular.

Take home messages:

- Information may motivate individuals, but is not sufficient in itself since it does not provide the opportunity or ability to get vaccinated.
- 90% of the reasons why people are not getting vaccinated fall within the categories of complacency, convenience and confidence.
- Communicate rapidly during a vaccine related crisis; failure to do so will lead to anti-vaccine groups filling the communication gap.
- There is a need to better profile susceptible populations to better target and tailor efforts.
- ECDC has developed and is developing various guidance documents, reviews and a training course with the aim to build a bridge between behavioural science and disease prevention.

PANEL DISCUSSION: 'STRATEGIES FOR IMPROVING AWARENESS AND TRUST IN THE PUBLIC'

The three discussion topics that had received the highest number of votes were (1) monitor the web/social media to understand concerns/allegations on vaccination, (2) use social media as a low cost way to run awareness campaigns, and (3) sponsor infotainment programs and documentaries on immunisation.

In terms of monitoring the web/social media, it was stressed that these are tools among many others. These tools should be put in context and care must be taken not to give too much weight to what is being discussed in fora and social media. In engaging in discussions, it is important not to create battle fronts: healthcare authorities, healthcare professionals and parents are all on the same side in striving to protect children from harm.

Social media are a form of two way communication and one needs to get familiar with where the main conversations on immunisation take place: it is of no use to talk in an empty room. Communication should be adapted to the target audience: there are the 'overserved' (happy to benefit from herd immunity but not taking the risk of vaccination), 'middle users' (require adequate and objective information) and the 'underserved'. To be successful in social media, one needs to build influence through networking and one needs to provide regularly updated content. Communication should focus on positive messages and experiences. Take care with communicating fear: it may give people that already have a problem (e.g. doubts on the safety of a vaccine) a second problem to worry about.

Infotainment programs and documentaries are a form of one way communication. These tools can be powerful in normalising behaviour and making people replicate other people's behaviour; examples include the telenovelas in South-America and programs in which celebrities have their children vaccinated. The message should be focused on the protection provided by vaccination, rather than focusing on the safety of vaccines (the angle used by anti-vaccine groups).

Take home messages:

- Put web noise into context and be careful not to give it too much weight.
- To be successful in social media, there's a need to build influence through networking and to provide regularly updated content.
- Infotainment programs and documentaries can be powerful in normalising behaviour and making people replicating other people's behaviour.
- Focus on positive messages such as the protection given by the vaccine, rather than communicating fear or focusing on the safety of the vaccine.

4. ADVOCACY ON VACCINATION: HEALTHCARE PROFESSIONALS

Alberto Tozzi, a pediatrician and an epidemiologist at the Bambino Gesù Hospital, Rome (Italy), explained that parents coming to a paediatrician are sometimes very concerned by stories they have heard/read about side effects caused by vaccines. Common statements by (grand)parents are: *"I'm scared"*; *"We had never any infections in our family, it suffices to be hygienic"*; *"I'm 70y old, was never vaccinated and I'm fine"*; *"Children are overimmunised"*; *"Vaccines contain harmful substances such as preservatives and adjuvants"*. Parents also ask the paediatrician whether he/she had his/her children immunised. Uninformed parents are for a paediatrician the easiest to deal with as he can provide them with the facts. Misinformed parents require much more time since the paediatrician needs to reaffirm the facts and refute the wrong information. Mr Tozzi urged not to be tempted to talk to parents about the wider public health benefits of vaccination; parents are only interested in the health of their child. He recommended listening, not judging, not trying and appearing smart or right, matching with the family profile and interpreting resistance as feedback, and to be open to discuss adverse events. He concluded by stating that it is important to engage parents and make them participate in the immunisation discussion.

PANEL DISCUSSION: 'HOW TO STRENGTHEN THE ROLE OF HEALTHCARE PROFESSIONALS ON ADVOCATING VACCINATION'

The three discussion topics that had received the highest number of votes were (1) develop an information package on immunisations for parents to receive when mother and child go home from the delivery ward, (2) reinforce training of healthcare professionals on vaccinology, and (3) develop e-tools to guide healthcare professionals in deciding which vaccination to be given according to age, underlying conditions and past disease and vaccination history.

Information packages for parents should be tailored to the profile of the parents (e.g. well-educated, underserved, …) and the context of the delivery (hospital, home deliveries, …). The information should focus on protection and efficacy but also be transparent about safety. The information should also be regularly updated to take

account of new vaccines, changes in the vaccination schedule, new findings about safety and efficacy of the vaccine, etc. The timing to provide the information should be defined, e.g. during pregnancy, after birth, school education.

In terms of knowledge of healthcare professionals on vaccinology, it was acknowledged that this might vary across healthcare workers and countries. It was stressed that primary care workers (nurses, social workers, …) should be targeted as well. It was found important to take your time and enter into a conversation with parents. In the conversation with parents, the healthcare worker should talk about immunisation but not about commercial products and there should not be any financial link to commercial products.

E-tools were regarded as a preferred option for training of healthcare workers. It is a good instrument to provide easy accessible, up to date information on recommendations, guidelines, and information on the vaccination schedule and vaccines used (including information on vaccines and schedules used in other Member States). It was emphasised that continuous updating of such e-tools is required to take account of the latest information.

Take home messages:

- As a healthcare professional, listen to the questions parents have, do not judge, don't try and appear smart or right, match with the family profile and interpret resistance as feedback, and be open to discuss adverse events.
- Information packages for parents should be tailored to the profile of the parents (e.g. well-educated, underserved, …) and the context of the delivery (hospital, home deliveries, …), and should be regularly updated.
- It is very important to also involve primary care workers (nurses, social workers, …) so that they can advocate immunisation as well.
- E-tools are a preferred option for training and guiding healthcare professionals. It is a good instrument to provide easy accessible, up to date information.

5. INCREASING ACCESS TO VACCINATION FOR UNDERSERVED POPULATIONS

Pania Karnaki, a health scientist at the Institute of Preventive Medicine Environmental and Occupational Health in Greece, presented the activities of the Promovax project (funded by the EU Health Programme) which aims at promoting vaccination among migrant populations in Europe. In a first step migrant groups in consortium countries were identified and the existing situation was mapped. It was found that most of the partner countries have neither specific legislation and regulations concerning migrant immunisations nor specific immunisation requirements for working migrants based on field of occupation. In a second step, best practices were identified and evaluated, and recommendations were developed. Recommendations include that immunisation programs should take into account cultural diversity and use cultural mediators. In addition, access to immunisations and vaccines should be free for migrants. In a third step, a healthcare

worker toolkit (including step by step guidance and tools to be used when assessing and addressing immunization needs of migrant populations) and educational material for migrant populations (providing general lay immunisation information and addressing misconceptions in order to dispel common anti-vaccination myths) were developed. Immunisation barriers are the migrant level included issues related to socio-cultural and socio-economic situation, education, healthcare utilisation and migration. Immunisation barriers are the healthcare provider level included issues related to limitations of the healthcare system, lack of knowledge on health rights of immigrants, lack of training on cultural diversity, difficulties in diagnosing and treating uncommon diseases, and the lack of translated information and education material.

Zoran Bikovski, a programme coordinator at the NGO 'Kham' (FYR of Macedonia), presented how the NGO is building effective partnerships between Roma communities and local authorities to improve access to childhood immunisation. He emphasised the necessity to include the community authorities in the debate. Roma leaders and health professionals should advocate the importance of immunisation. This approach has led to the vaccination rate at the Roma community increasing to about 90% and to 100% for the HPV vaccine in girls. A long term influence and a regular vaccination habit have been acquired and the confidence of the community toward the health institutions has improved. Mr Bikovski stressed that insufficient immunisation coverage is a consequence and the reasons (poverty, social exclusion, …) have to be eliminated.

Take home messages:

- Immunisation programs should take into account cultural diversity of migrant populations and use cultural mediators (e.g. Roma leaders).
- Access to immunisations and vaccines should be free for migrants.
- Insufficient immunisation coverage in migrant populations is not an isolated issue but a consequence and the underlying reasons (poverty, social exclusion, …) have to be eliminated.

6. FACILITATING INFORMATION EXCHANGE BETWEEN VACCINE SERVICE PROVIDERS

Niklas Danielsson, a senior expert on communicable and vaccine preventable diseases at the ECDC, recalled the Council Conclusions on childhood immunisation which invite the Member States and the Commission to propose a non-exhaustive list of elements for inclusion in national and sub-national immunisation cards. There is a diversity of vaccination schedules, vaccines used and vaccination cards in the EU. When moving to another country, barriers to transition from one national schedule to another may impact negatively on a child's individual protection and herd immunity in the EU. Standardised vaccination cards could contribute to lowering language, cultural and socio-economic barriers to vaccines. He made reference to the EU pet passport which has improved the quality of pet vaccination documentation, improved communication between service providers across the EU, and has facilitated travel and migration for pet owners. A standard EU vaccination record could support the introduction of electronic records across the EU. As next

steps, Mr Danielsson proposed to consult stakeholders on the parameters to be included in a standard EU vaccination card, to agree on a language approach, to develop a mock-up card, to conduct end-user consultations with parents and vaccination providers, to explore the possibilities of printing cards/booklets directly from electronic registries, and finally to review the findings and experiences and make recommendations.

Tarik Derrough, an expert for vaccine preventable diseases at ECDC, recalled the Council Conclusions on childhood immunisation inviting the Commission, to examine with the ECDC and EMA, the options to develop multilingual EU vaccination resources for health care professionals and the public with the aim to provide objective, easily accessible and evidence-based information on vaccines and immunisation schedules including vaccines used in the Member States. He presented the ECDC website on vaccination to be developed in 2013 and aiming to promote safe and responsible vaccination services, to provide a comprehensive package of reliable and useful information on vaccines in several EU languages, and to support public health professionals and health care workers with tools for effective communication towards the general public. Another initiative is to create an interactive database on vaccines providing information on all vaccines licensed in the EU/EEA countries. It is aimed to launch this database online at the ECDC website by end October 2012. Finally he presented ECDC's plans to create a vaccination schedule platform that will allow comparison of vaccination schedules across countries according to age and disease. The current ECDC web page on vaccination schedules is the most-clicked page on the ECDC website, but does not allow easy updates, display and comparison between countries. There will also be a link between the vaccination schedule platform and the vaccine database for information on vaccines indicated at a specific age in a specific country. ECDC's vision for future developments also includes the development of expert systems for healthcare professionals to be informed on vaccine schemes of individuals according to several characteristics (including past vaccine and disease history, underlying medical conditions, occupation), and the development of vaccination resources to be linked to electronic vaccination registers shared between healthcare professionals and individual patients.

Agnès Saint-Raymond, Head of Sector for Special Areas (which includes Pediatric Medicines, Orphan Medicines, Scientific Advice, the Small-Medium sized Enterprises Office, and Scientific Support & Projects) at EMA, presented the information available in the Eudrapharm database. As of 9 October 2012, the database contains data on 301 vaccines for childhood immunisation with information on the trade name and Marketing Authorisation Holder, active substance (… adjuvant if any), dose, route of administration, pack size, therapeutic area and indication, marketing authorisation status and an electronic version of the Summary of Product Characteristics. The database is not yet available to the public since information is still being submitted and the data are not yet validated. She also explained that the 'Paediatric Regulation' (EC) No 1901/2006 requires agreement of Paediatric Investigation Plans for any new medicinal product to be authorised and that for vaccines both the plan and compliance with the plan are mandatory. Mrs Saint-Raymond regretted that, currently, children are included in multiple trials (up to 40!) for the purpose of studying the different vaccine schedules in the Member States. She urged the Member States to help EMA's Paediatric Committee to identify the ‘best schedules’ in order to simplify and optimise the development of vaccines and to avoid exposing children to unnecessary trials, which is unethical.

Take home messages:

- EU standardised vaccination cards could contribute to lowering language, cultural and socio-economic barriers to vaccines. A standard EU vaccination record could support the introduction of electronic records across the EU.

- ECDC is developing various web based vaccination resources for healthcare professionals and the public: a website on vaccination, an interactive database on vaccines, and a vaccination schedule platform.

- The Eudrapharm database developed by EMA contains information on 301 vaccines for childhood immunisation. Once the entry and validation of data will be complete, the database will be publicly accessible.

- There is a need to identify a small number of 'best vaccination schedules' in order to simplify and optimise the development of vaccines and to avoid exposing children to unnecessary trials, which is unethical.