EXCELLENCE IN PEDIATRICS INSTITUTE

Improving Child Health Globally

MEETING REPORT

# UPDATES FROM THE EU COMMISSION, THE WORLD HEALTH ORGANISATION AND THE VACCINE CONFIDENCE PROJECT

## Policy Focus Group Meeting

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## Initiative History, Purpose and Work Within the EU Coalition on Vaccination

Since 2015 the Excellence in Pediatrics Institute (EIP) has worked with European and global partners to help overcome the many remaining barriers to vaccination uptake. By connecting working with colleagues across Adolescent Medicine, General Practice, Pharmacy and Nursing, and uniting behind the **EU Commission's Coalition on Vaccination**, EIP's goals is to promote a LifeCourse approach to vaccines.

Most notably, EIP believes that the following barriers remain: 1) **Policy discrepancies** - Heterogeneous national vaccination policies. Differences in approach, prioritisation and decision making processes. 2) **Overarching barriers** - Lack of policies to increase vaccines confidence, counteract misinformation, increase awareness and mobilise medical communities, and 3) **Failure to adopt a LifeCourse approach** - Prevention Policies not adapted to demographic changes and an increasingly ageing population. Disease prevention in all stages of life is not yet a priority.

As part of EIP's work within the **EU Coalition on Vaccination**, 8 Stakeholder Working Groups, as well as this EU Commission, WHO and Vaccine Confidence Project Plenary briefing, that took place at the 11th EIP Annual Conference in Copenhagen in December 2019.

The 3 organizations were asked to present the current global status of vaccinations among different population groups, the coverage rates and the confidence of vaccines, as well as report and comment on the reasons for vaccination hesitancy or refusal and propose possible solutions. The following report summarises the plenary **WHO, EU Commission and Vaccine Confidence Project** briefings, as well as the subsequent expert Working Group discussions, and proposed action plans that were debated.

# EU COMMISSION

## Vaccination for all in need - vaccination for all ages

Dr Martine Ingvorsen (*Policy Officer, European Commission, Belgium*) opened the plenary session by analyzing the EU Commission's recent work and priorities regarding vaccinations, as well as emphasizing the importance of a LifeCourse vaccination approach. Dr Ingvorsen argued that the reasons that this has now rightly been brought to the top of the political agendas worldwide is that the statistical data indicates there were 140,000 vaccine-preventable deaths in 2018 worldwide and 13,331 measles cases in EU/EEA countries from 1st of October 2018 to 30th of September 2019, including 11 deaths. Dr Ingvorsen noted that this should not be happening as we have had for many years sufficient vaccines that are both cheap and safe. Nonetheless, vaccination coverage rates are too low, below 95% in most EU and EEA countries for both doses of measles vaccination for example – with the second dose being a particular challenge for many countries – thus not achieving Herd immunity to prevent the disease from spreading.

**Subsequently, Dr Ingvorsen pointed at the possible reasons for low vaccination uptake, including 1) shortages of vaccines which is often caused by complex forecasting, 2) planning procedures and fragmented research, 3) inadequate or poor organization services that may fail to reach disadvantageous groups or make it too troublesome for some people to get the vaccines they need, 4) complacency that makes people underestimate the importance of vaccination and the severity of the associated diseases and 5) the waning confidence in vaccines mostly due to misinformation, in particular on social media platforms.**

Dr Ingvorsen underlined that in order to fight preventable diseases we need to increase vaccination coverage rates, by taking all these challenges and even more into account. Furthermore, Dr Ingvorsen explained the coordinating and complementary role of the EU Commission on vaccinations, a role that is to support Member States in maintaining or increasing high vaccination rates and to assist them in coordinating their vaccination policies. **However, Dr Ingvorsen clarified the fact that the European Union has a limited mandate in the area of health, including vaccination, and that means that the design of the vaccination programs, the organization of vaccine services as well as the legislation on vaccination are in the jurisdiction of the EU Member States.**

Dr Ingvorsen then moved on to describe an important policy paper that has been adopted by EU Health Ministers and is currently being implemented by the Commission together with EU Member States, international organizations and other stakeholders, a milestone in the 10-year EU efforts to fight infectious diseases. Recent developments are based on the Council's Recommendations on strengthened cooperation against vaccine-preventable diseases (2018) - that followed important policies as, the Recommendation on seasonal influenza vaccination (2009), the Conclusions on childhood immunization (2011) and the Conclusions on vaccination as an effective tool in public health (2014). This highlights, and includes, a large number of individual actions at the EU level to fight vaccination-preventable diseases.

Dr Ingvorsen then referred to several other actions and planning underway, including:

1. **a feasibility study for physical stockpiling of vaccines and exchange mechanism for vaccine supplies to avoid shortages** of vaccines in case of outbreaks,

2. **a feasibility study for a common EU vaccination card** to guarantee that children won't miss any vaccines when they move between Member States and empowering people to get the needed vaccination,

3. **the set-up of a Coalition for Vaccination of healthcare professionals' and student's associations** to provide accurate information about vaccines and combat misinformation,

4. **the launch of a European Vaccination Information Sharing System (EVIS)** by the European Centre for Disease Prevention & Control (ECDC) to share vaccination data among countries,

5. **the launch of a European Vaccination Information Portal (EVIP)** by ECDC to provide trustable information regarding vaccination to the public,

6. **the set-up of a National Immunization Technical Advisory Group (NITAG)** by ECDC to provide scientific evidence to the Ministers of Health,

7. **the establishment of the European Immunization Week by ECDC** to promote communication and raise awareness and finally the organization of a Global Vaccination Summit in collaboration with the WHO that created visibility and called for worldwide political commitment for years to come.

Dr Ingvorsen then emphasized that the ultimate goal is to increase the uptake of vaccines and underlined that vaccination was a health priority on the Commission's agenda and will continue under the new Commission too in 2020 and beyond. Moreover, Dr Ingvorsen described two more important initiatives to the Working Group, the first is the **European Joint Action on Vaccination (EU-JAV)** that brings together 20 EU and non-EU countries, and a large range of stakeholders and the second is **Horizon Europe** - the new EU research & innovation program which takes over from Horizon 2020 – that could further boost investment and R&D in the field of vaccines.

Dr Ingvorsen was then asked to analyze the importance of childhood vaccination in conjunction with a LifeCourse approach to vaccinations, presenting some examples of the EU Commission's actions, reflecting the **new Council Recommendation that calls for EU Member States to adopt a life-course vaccination approach to vaccination with frequent checkups of vaccination status and catch-up vaccination at every opportunity**. The Council's recommendation on seasonal influenza sets a goal for 75% coverage for the elderly and there is currently a pilot project on confidence in vaccines taking place among people suffering from chronic diseases. Referring to childhood vaccination, Dr Ingvorsen described the traditional childhood vaccines that are essential for a strong, reliable and sustainable health system and for a long time saved the lives of children all over the world (e.g. diphtheria, polio and MMR vaccine). In addition, there are now LifeCourse vaccines that are new, clever tools to tackle challenges ahead,

like cancer, chronic diseases and ageing societies (e.g. influenza, pneumococcal, HPV, pertussis and hepatitis B vaccine).

*In conclusion, Dr Ingvorsen pointed out that vaccines for all in need are also vaccines for all ages and that a LifeCourse approach to vaccination offers us new opportunities for longer and healthier lives.*

**Prof Sir Terence Stephenson** commented that important and respected people that promote vaccination can be a big symbol and help a lot on the vaccination campaign. **Dr Hanna Nohynek** expressed her concern over the interpretation of the General Data Protection Regulation (GDPR) which prohibits many countries from actually accessing the real-world data in a way they should so they could monitor diseases and vaccination coverage. **Professor Simon de Lusignan** noted that it would be extremely helpful if there was a formalization of a categorization when there is classification of vaccination barriers in order to make comparisons easier and have a better analysis of factors, adding that he would also like to include as a very important barrier the **disparities in healthcare (e.g. disparities by deprivation and ethnicity factors)**. Finally, **Prof David Salisbury** asked about physical stockpiling of vaccines, mentioning that it's hard to move the vaccines to other countries and also if they are never called on it would be a huge waste of money. Dr Ingvorsen replied that the EU Commission is working on a feasibility study that is towards the direction of a **virtual stockpiling concept as they begin to understand that the physical concept is maybe a little bit outdated and in order to avoid waste or moving around they are changing their ideas (reconsidering their options) at the moment.**

## WORLD HEALTH ORGANISATION

### Immunization in the WHO European Region Now and Looking into Post-2020

Dr Siddhartha Datta *(Programme Manager Vaccine-preventable Diseases and Immunization Division of Health Emergencies and Communicable Diseases, WHO, Denmark)* opened his briefing to the Working Group by described the immunization performance in the WHO European Region which encompasses 53 Member States and presented the future vaccination plans of WHO.

Initially, Dr Datta referred to the **European Vaccine Action Plan (EVAP 2015-2020)** that was adopted from all European Member States in 2014, with the commitment to have a European Region free of vaccine-preventable diseases and where all countries would provide equitable access to high-quality, safe, affordable vaccines and immunization services throughout the LifeCourse. EVAP was aligned with other region challenges and commitments, encompassing all the basic principles of **Health 2020 (Health System, Childhood/Adolescent Commitments and LifeCourse)**, and had six major goals: three Disease-Specific goals (sustain polio-free status, eliminate measles & rubella and control hepatitis B) and another three Coverage and Health System goals (meet vaccination coverage targets, adopt evidence-based decisions for new vaccines intro and achieve financial sustainability). Dr Datta then expressed the belief that pretty much all the goals will be achieved by the end of 2020, bar the measles and rubella goal which they definitely know it won't.

Dr Datta then noted that coverage has greatly improved from 1980 to 2018 but has now reached a plateau and additional effort is needed by each one of the Member States in order to further be improved and underlined **a paradox that the WHO are observing, that even though national coverage is reaching 95% the number of measles cases still reported is high.**

Moreover, Dr Datta pointed out the importance of political commitment by Member States and partnerships – European Commission, European CDC as well as US CDC and other global partners - that proved vital in achieving the immunization goals that were set since 1980. Going on to emphasize that it is high time to engage not only with the traditional immunization partners but also with non-traditional in order to achieve our goals, giving the example of measles cases that are increasing in the last years and that's a clear indication that there is an embedded fragility in the system, so you cannot take success for granted.

Subsequently, Dr Datta explained the reasons for the increased measles cases in the whole European Region in 2018 and 2019, while the cases were at a minimum level in 2016. Highlighting that the problem lies in the sub-national coverage level, as within the last five years the number of countries which had more than 10% of districts with less than 90% coverage has doubled. This underlined that sub-national level vaccine shortage, unequal access in vaccination services between high-income and middle-income countries, and vaccine acceptance issues were the key-factors for this trend.

Furthermore, Dr Datta introduced the Working Group to the new framework of action that the WHO are developing to promote vaccination and underlined the importance of immunisation as a core function of primary health care systems. Continuing that immunisation is central to achieving Universal Health Coverage (UHC) and Sustainable

Development Goals (SDGs). Dr Datta then referred to the structure of the immunization framework that has three stages: 1) the Global Vision and Strategy for vaccines and immunization (**Immunization Agenda 2030**) which is developed by WHO HQ in consultation with global partners and agencies, 2) the **2030 European Regional Immunization Agenda** which outlines the strategic focus areas to be developed by Member States and regional partners/agencies and 3) the **National Vaccine Action Plan** which is focused on accomplishing national priorities.

In particular, Dr Datta noted that the 2030 Regional Immunization Agenda will help each country to integrate their own Action Plan and this will be achieved by asking each of the 53 Member States to provide to the WHO information about their top five priorities in the immunization program. The WHO will then combine these priorities to shape the immunization focus areas of the European Region for the next decade. Dr Datta also added that the letter being sent from their Regional Director is requesting Member States to involve the national level stakeholders (paediatric associations, midwife associations, nursing associations and academia). In addition, Dr Datta pointed to the key facets of the 2030 Regional Immunization Agenda – people and countries at the centre, cross-sector partnerships, integration and coordination, data and evidence and flexible, responsible systems – that will be aligned to broader regional and national strategies and promote National Health programs and systems.

Dr Datta acknowledged that due to the uncertainty for the future that we have, the immunization program needs to be able to respond and be flexible in this entire 10-year period and thus will be based on available data at every level of evidence, and that's why scientific communities in the WHO European Region will play a strategic role. Moreover, Dr Datta briefly described the Guiding Principle of the 2030 Regional Immunization Agenda that will be equity-based, people-focused, country-owned, and data-enabled. It will also be partnership-based, innovation and research-driven, and Primary Health Care (PHC)-based emphasizing the importance of the cooperation of three different groups of professionals – Immunization partners, non-immunization and non-traditional partners, and Academic Institutions and professional organizations. It's essential that all need to come together and help on the development of the next decade's agenda which will consist of a Monitoring & Evaluation framework (including milestones) and an Advocacy framework.

Lastly, Dr Datta referred to **European Immunization Week**, the flagship program for the European Region, and underlined that the engagement with all the different partners is extremely valuable for moving into 2020 and beyond, and he also highlighted a study by GAVI[1] that showed that **1 dollar invested in an immunization program, just by saving healthcare costs and productivity, or by increasing productivity, can give back 16 dollars and if we add the broader economic benefit it can reach a 44 dollars return**.

In conclusion, Dr Datta summarized that regional vaccination strategies and policies are sound, but that ownership and political commitment that will turn into actions will be the key to success. **In particular, targeted actions will be needed in order to achieve and maintain high vaccination coverage, immunity gaps must be closed through innovative and locally tailored approaches, we must ensure high-quality vaccine-preventable disease surveillance, along with a better understanding of barriers to vaccination in underserved population pockets.**

**Professor Timo Vesikari** *(Professor Emeritus of Virology and Paediatrics, Director of Vaccine Research Center, Finland)* commented that judging from his experience while working for the WHO, most countries were sceptical when asked about taking the initiative to propose actions regarding vaccination. Instead, they often prefer WHO to decide for them about the vaccination priorities and help them achieve these goals. Prof Vesikari added that the WHO, especially in the European Region, should act drastically in order to achieve the desired goals, like for example eliminating Measles. In addition, **Prof David Salisbury** *(Associate Fellow, Centre on Global Health Security, Royal Institute of International Affairs, United Kingdom)* commented that the right time to run measles campaign was in 2017 as it wasn't hard to see that measles was going to come back, serum-epidemiology and plenty of evidence that there were coverage gaps, and also underlined that the time to run campaigns is not when you have measles cases but before that, the hard part was not to see that is going to come but getting the will to do it. **Dr Datta** replied that indeed the entire European Region should have started doing something about measles in 2017 but one major issue is that the supplementary immunization activities in the European Region are not seen as one of the best models of containment. **Dr Datta** also noted that **if measles is happening then there is something wrong in the health system and this is why they are moving the focus now from national level to sub-national level coverage**, concluding that it is a real shame that we are still talking about measles deaths in 2020.

[1] Ozawa, S., et al., *Return On Investment From Childhood Immunization In Low- And Middle-Income Countries, 2011-20.* Health Aff (Millwood), 2016. **35**(2): p. 199-207.

## VACCINE CONFIDENCE PROJECT

### Current Vaccine Confidence Levels and the Reasons for Vaccine Hesitancy

Dr Pauline Paterson *(Co-Director of The Vaccine Confidence Project. Assistant Professor in the Department of Infectious Disease Epidemiology at the London School of Hygiene & Tropical Medicine (LSHTM), United Kingdom)* was then invited to brief the Working Group about the current vaccine confidence levels and the reasons for vaccine hesitancy.

Dr Paterson stated, vaccinations are the most effective public health interventions for saving lives and promoting good health, and although most people vaccinate, there are groups of individuals that either delay or refuse to vaccinate. **Apart from pro-vaccine and anti-vaccine groups, there is also a grey area of vaccine hesitancy that includes people that question the vaccine efficacy or are afraid that vaccines may not be safe.** Thus, there is a group of people who unquestioningly vaccinate because their GPs told them so, there are people who vaccinate but they do have some concerns about it, there are these who are hesitant and might look into the benefits and the risks, there are also people who delay some vaccines and finally, there are individuals who refuse all vaccinations.

The WHO defines vaccine hesitancy as a delay of acceptance, or refusal, of the vaccine, despite availability of vaccination services, and research has shown that it is a complex phenomenon and varies across time, place, vaccines and populations. Vaccine hesitancy depends on many factors, such as complacency, lack of perceived need or value for vaccine or convenience in terms of access, but also on the economic cost, if it is too expensive.

Dr Paterson, as a member of Health Protection Immunization Unit (HPIU), mentioned that they conducted a study in partnership with Public Health England in order to investigate the reasons why parents would not accept the flu vaccine for their child. In 2013, the annual influenza immunization program was extended to children, because children are the carriers of the disease, and the vaccine uptake was found to be sub-optimal, reaching up to 53%. **Regarding the 47% of parents who did not vaccinate their children, when asked about their reasons, one of the main answers was the lack of perceived need to vaccinate.** Among other reasons was the idea that it is better to build the immune system with the disease, or that they were concerned about its safety, with 5% not giving any specific reason. In addition, there were religious issues, such as the fact that flu vaccines may contain pork components that are unacceptable for some religions and of course, the matter of efficacy. **Stating that flu vaccine is only 33% effective may cause people to mostly focus on its safety and the possible side effects, rather than its benefits**[2].

Dr Paterson then mentioned the impact of Andrew Wakefield's study on the MMR vaccine uptake. Back in 1999, Andrew Wakefield and his colleagues published an article in Lancet suggesting that the MMR vaccine was linked to Autism, triggering a lot of media publicity against the MMR vaccine and eventually, lack of support by the health authorities on the safety of the vaccine. Although, the article was later fully retracted, the media showed a lot of studies showing the vaccine was safe and did not cause autism, and campaigns were made to support MMR vaccine, **the damage was done**. **The MMR coverage in England in 2019 was 90.3%, which is still below the herd immunity community protection threshold.**

Dr Paterson then referenced a survey conducted by the Vaccine Confidence Project in 67 different countries in 2015 in order to investigate the world vaccine confidence[3]. The highest negative responses for vaccine importance, safety and effectiveness was observed in Europe, and more specifically, in France, 40% of respondents do not think that vaccines are safe. In 2018, another survey for the European Commission was conducted and 28 Member States with over 28 thousand individuals participated[4]. Dr Paterson said that 90% of the public agreed vaccines are important, 82.8% that vaccines are safe, 87.8% that vaccines are effective and 78.5% that vaccines are compatible with religious beliefs.

In addition, it was observed that young adults are less confident in regards to the safety and importance of vaccines than older adults and countries with GP's with high confidence in vaccines, have a larger portion of the public expressing positive vaccination beliefs. Regarding specific vaccines, such as the MMR and the Influenza vaccines, 83.6% of the public thought that the MMR vaccine is important, whereas only 65.2% of them that the flu vaccine is also important. Regarding safety, only 81.7% of the public believe that the MMR vaccine is safe.

Dr Paterson then focused on **the key determinants of vaccine decision-making and stated that these are education, recommendations and media**. Information can be translated to a subjective representation of risk, the risk of infection, the

[2] Paterson, P., T. Chantler, and H.J. Larson, *Reasons for non-vaccination: Parental vaccine hesitancy and the childhood influenza vaccination school pilot programme in England.* Vaccine, 2018. **36**(36): p. 5397-5401.

[3] Larson, H.J., et al., *The State of Vaccine Confidence 2016: Global Insights Through a 67-Country Survey.* EBioMedicine, 2016. **12**: p. 295-301.

[4] Larson, H.J., *The state of vaccine confidence.* Lancet, 2018. **392**(10161): p. 2244-2246.

risk of vaccine, and adverse events and these can be influenced by various modifying factors, such as attitude, identity, what do other people do etc. Dr Paterson highlighted the power of habit in people, doing what other people do, or what they think they should do, and that **if people have vaccinated more in the past, they are more likely to vaccinate in the future**[5].

Dr Paterson posed the question on how members of the public perceive risks. For instance, shark attacks tend to be perceived as one of the most common high risks, even though one is unlikely to be attacked. In the US, although people were very worried about Ebola, they were more at risk from influenza. On the other hand, driving a car or not getting their child vaccinated are perceived as low risks. Although the risks of influenza infections are well known, people do not think that it is dangerous and therefore, it is perceived as a low risk. **The difference between experts and the general public on the way of perceiving risks is that experts judge the risks by the fatality of the number of morbidities, whereas general public mainly by feelings.** In addition, there is an uncertainty about real vaccine risks, because although experts tend to say that vaccines are safe, there are indeed some risks, such as in the case of the Polio vaccine. **Dr Paterson underlined that there is less risk tolerance with vaccines, because it is a medicine taken when someone is actually healthy.**

Continuing, Dr Paterson mentioned that there is a tension between individual rights and the wider societal rights. If someone does not see the disease, then they think that it is not important and therefore there is no reason to take action and protect themselves from it. On the other hand, **the Nocebo Effect is also observed among people and it is the phenomenon when someone is more likely to present a negative reaction to a vaccine, when they read about it.**

Dr Paterson then went on to discuss the admission, selective confirmation and emotional bias in decision making regarding vaccination. Regarding the admission bias, it was suggested that parents would feel worse if they vaccinated their child and that they then became ill, than if they did not vaccinate them at all, because it was the action that they did to create a harmful situation. Regarding selective confirmation bias, there is a tendency where people choose to ignore or disagree with information that does not suit their personal views and therefore, they do not take into consideration the whole picture. As far as emotional biases are concerned, people tend to trust more their friends and family, rather than text on a screen or information in a leaflet.

Having mentioned all the above concerns on vaccination, Dr Paterson proposed possible solutions to them. To begin with, **healthcare professionals should first identify regions with low vaccination coverage, investigate the reasons for vaccine hesitancy and vaccination refusal, and then address those underlying issues.**

For this reason, **WHO has developed a tool named Tailoring Immunization Program, which can guide countries to identify susceptible population groups and those who are not vaccinating, to diagnose the drivers and barriers to immunization and to design evidence-based interventions to tailor the service of the needs of that group.**

Dr Paterson then mentioned, another useful tool is the media and the promotion of the hashtag "#VaccinesWork" might draw some positive attention to the matter. Results from a study conducted in 6 different countries show that people trust their GPs and pharmacists more than the internet and that healthcare providers remain the most trusted advisors and influencers of vaccine decisions[6]. People are more likely to vaccinate if their healthcare provider has recommended vaccination and vaccinated healthcare providers are more likely to recommend vaccinations. **On the other hand, healthcare providers need to be stronger supported when they are about to address public questioning and be provided with the right answers for common concern questions. Regarding addressing misconceptions, Dr Paterson underlined that one should use careful and strong language**[7].

Concluding, Dr Pauline Paterson highlighted the **three main components for a successful immunization; a) a healthcare professional should be trained, supported and satisfied, b) an immunization system should make vaccines available, safe and effective, in a timely and equitable manner and c) a family that should be aware of the vaccine, perceive the need to vaccinate and trust the vaccine provider and policy.**

Following Dr Paterson's briefing, several comments and questions were put forward. Among these, it was asked how much should someone focus on the extent of negative perceptions of vaccines influence the vaccine uptake. Dr Paterson said that scientific research has shown that it is difficult to address myths therefore, we do need more studies and specifically, more local studies showing the benefits of vaccinations. Another comment made was the effect of migrating and traveling people in transmitting diseases that would be avoided if people were vaccinated in the first place. Dr Paterson commented that in England there is an ongoing project where they are studying sub-population groups that

[5] Betsch, C., R. Böhm, and G.B. Chapman, *Using Behavioral Insights to Increase Vaccination Policy Effectiveness.* Policy Insights from the Behavioral and Brain Sciences, 2015. **2**(1): p. 61-73.

[6] Bouder, F., et al., *Transparency in Europe: A Quantitative Study.* Risk Analysis, 2015. **35**(7): p. 1210-1229.

[7] Paterson, P., et al., *Vaccine hesitancy and healthcare providers.* Vaccine, 2016. **34**(52): p. 6700-6706.

may have travelled and brought in measles from other countries, in an effort to understand this phenomenon and the reason for not vaccinating. Regarding social media, it was commented that one should pay real attention to the content and the source behind it, and that strong messages should be promoted. Finally, it was commented that healthcare professionals should be more individualized in their approach to carefully access in a dialogue, and then try and figure out if the patient needs a firm assessment or they are on the right track with their decision.

## CONCLUSIONS

During the plenary session all Focus Group and Working Group members received an update from representatives from the EU Commission, the WHO and the Vaccine Confidence Project on the latest on the vaccination status in Europe and Globally in 2019, as well as current planned projects for 2020 and beyond.

- Specifically, **Dr Martine Ingvorsen**, who represented the **EU Commission**, shared the work being conducted on vaccination, and highlighted the importance of LifeCourse vaccination and the reasons that it must be brought to the top of the political agendas worldwide. Dr Ingvorsen pointed out the importance of childhood vaccination in conjunction with a LifeCourse approach and finally, explained the coordinating and complimentary role of the EU Commission in vaccination, which is to support Member States in maintaining or increasing high vaccination rates and to assist them in coordinating their vaccination policies.

- Dr **Siddhartha Datta**, who represented the **World Health Organization**, described the immunization performance in the WHO European Region and highlighted the European Vaccine Action Plan (EVAP 2015-2020). In addition, Dr Datta shared the new framework of actions that the WHO are pursuing to promote vaccination and underlined the importance of immunization as a core function of primary health care systems and central to achieving Universal Health Coverage and Sustainable Development Goals. Finally, Dr Datta referred to the three stages structure of this immunization framework; the Global Vision and Strategy for vaccines and immunization (Immunization Agenda 2030), the 2030 European Regional Immunization Agenda and the National Vaccine Action Plan.

- Dr **Pauline Paterson**, who represented the **Vaccine Confidence Project**, referred to the current vaccine confidence and the reasons for vaccine hesitancy. Dr Paterson mentioned that although vaccinations are the most effective public health interventions for saving lives and promoting good health, and most people vaccinate, there are groups of individuals that either delay or refuse to vaccinate. One of the main reasons that parents choose not to vaccinate their children is the lack of perceived need to vaccinate. Dr Paterson pointed out that during a global survey, the highest negative responses for vaccine importance, safety and effectiveness were observed in Europe. Finally, Dr Paterson highlighted that the three key points for a successful immunization are a trained, supported and satisfied healthcare professional, an immunization system that makes vaccines available, safe and effective, in a timely and equitable manner, and a family that is aware of the vaccine, perceives the need to vaccinate and trusts the vaccine provider and policy.