

RESEARCH ARTICLE

## Life course immunization approach across Europe: Focus on Hungary, Poland and Spain

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**Abstract:** In April 2019, the Italian NGO Cittadinanzattiva, through its international branch Active Citizenship Network (ACN) launched, during the European immunization week, a new project called “European Active Citizens for Vaccination”. The aim was to improve the awareness on the importance of vaccination across Europe: the scientific evidence is clear, vaccination is an essential public health tool and helps to guarantee our fundamental rights as a European citizen. ACN realized a social media communication campaign supporting and spreading awareness on the topic of life-course vaccination: videos were made in all the national languages of the involved countries (Italy, Hungary, Poland, Ireland and Spain) and then produced, shared and customized for each country. Moreover, an informative leaflet in different languages has been produced. Civic consultations on the National Immunization Plan in the countries involved were held in: Hungary, Poland and Spain. The focus group meetings took place in Budapest, Warsaw and Madrid between November and December 2019. This article describes the main results of the three focus group on the topic of vaccination and its related policies. It also includes some advises, opinions, recommendations on how to remove those barriers to a life-long immunization approach in the national vaccination plans. These recommendations are offered to the policy makers and to the stakeholders as a contribution from the civil society engaged in the safeguard of health as a common good.

**Keywords:** life-course vaccination, immunization, vaccination policy, civic activism, Poland, Hungary, Spain

### 1 Introduction

Most vaccination programmes focus on discrete life stages such as childhood, but evidence supports a life-course approach, meaning vaccination given through all phases of life.

The life-course approach to immunization recognizes the role of immunization as a strategy to prevent disease and maximize health over one’s entire life, regardless of an individual’s age; it requires that immunization schedules and access to vaccination respond to an individual’s stage in life.

A life-course approach has been advocated by the World Health Organization (WHO) as a model of health-

care provision that would benefit both individuals and healthcare systems. It involves looking at health as a continuum through life: a dynamic and interconnected process, as opposed to rigid life stages. It moves away from traditional approaches, where one develops and delivers vaccines in response to immediate threats for discrete age groups. Instead, investments in vaccination strategies should be based on their potential to strengthen individuals’ ability to maintain good health over the course of their lives, and their impact on the prevention of other pathogens and comorbidities over time<sup>[1]</sup>.

Cittadinanzattiva (Active Citizenship Network) is deeply committed to contribute to raise awareness about the importance of vaccination in Italy and across Europe<sup>[2]</sup>: immunization is vital to prevent diseases and protect life. Our commitment has been appreciated by the European Center for Disease Prevention and Control (ECDC), the Agency of the European Union aimed at strengthening Europe’s defense against infectious diseases that, in 2016, has decided to officially include Cittadinanzattiva in the ECDC Technical Advisory Group for Increasing Vaccine Coverage. As members of this Advisory Group we feel a great responsibility to commit ourselves to this issue: we believe that a widespread vaccination culture is necessary, particularly to overcome

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the idea that we only get vaccinated when we are young and, instead, to shift to a common knowledge linked to a life-course vaccination approach which prevents a series of diseases even during adulthood.

In April 2019, ACN launched, during the European immunization week, a new project called “European Active Citizens for Vaccination”<sup>[3]</sup>. The aim was to improve the awareness on the importance of vaccination across Europe: the scientific evidence is clear, vaccination is an essential public health tool and helps to guarantee our fundamental rights as a European citizen.

## 2 Materials and methods

For the success of the project, ACN established and managed a “Steering Committee” composed of professionals, experts, and representatives of civic and patients’ associations to define the messages of the social media communication campaign and the main contents of the civic evaluation. The meeting of the Steering Committee of the project was realized in Brussels at the beginning of July 2019. The members were listed in [Table 1](#).

During the implementation of the project, ACN, realized a social media campaign and a civic consultations.

### 2.1 Social media campaign

It was realized a social media communication campaign (on Facebook, Twitter and Instagram) throughout a Video that supports and spreads this core message: “Together, as active and aware citizens, we can protect ourselves, become the champion of your future!”, sending a unified, clear and strong message on the importance of vaccination directly from citizens to citizens. Videos were made in all the national languages of the involved countries (Italy, Hungary, Poland, Ireland and Spain) and then produced, shared and customized for each country. Moreover, an informative leaflet in different languages has been produced<sup>[4]</sup>. ([Figure 1](#) and [Figure 2](#))

### 2.2 Civic evaluation

A civic evaluation of the national immunization plans has been done throughout the realization of three fo-

cus groups (in Spain, Hungary and Poland) on the specific theme of the life-course immunization approach: thanks to the work and cooperation of our constituency of national citizens’ organizations, we brought together around the table leaders of civic and patients association, healthcare professionals, policymakers and other stakeholders involved in each country in the administration of vaccines. The aims were to find together proposals and gather impressions, suggestions, advices and provide institutional and health care stakeholders with: the strengths/weaknesses of national policies and plans about their approach to life-course immunization approach; the common elements or specificities that affect a greater or lower success of this approach. The first countries involved were Hungary, Poland, Spain with the respective associations: Vedem Civilian for Vaccination<sup>[5]</sup>, Institute of Patients’ Rights and Health Education<sup>[6]</sup>, Foro Español de Pacientes<sup>[7]</sup> and the Asociacin Española contra la Meningitis<sup>[8]</sup>. ([Figure 3](#))

ACN worked on the creation of a questionnaire (with both closed and open questions) on the specific theme of life-course immunization approach in the national immunization plan that was handed out to each participant in order to be used as a base of discussion during the focus group.

Different people were involved, such as: leaders of civic and patient’s associations, healthcare professionals, policymakers and other stakeholders implicated in the administration of vaccines. Each focus group was led by a moderator and lasted between one and a half to three hours, depending on the number of participants. The discussions were recorded in order to be better summarized. Each participant was given two sheets with the written questions that the moderator had to ask during the discussion so that they could always see them and write down their answers in a completely anonymous way. During the debate they were given post-its of different colours to indicate their answer to the questions in a poster in the middle of the table, from which the moderator got inspiration to guide the next discussion.

The questions were divided into two blocks, A and B:

**Table 1** The members of the Steering Committee that established and managed by ACN

Name	Affiliation
George Griffin	Federation of European Academies of Medicine (FEAM)
Professor Alberto Tozzi and Dr. Sara Ciampini	Epidemiologist and Chief Innovation Officer, Bambino Gesù Childrens Hospital, Italy. Leader of the Vaccine Safety Net Web Analytics project.
Elena Moya	Confederation of Meningitis Organizations (CoMO)
Dafne Holt and Malcom Taylor	Coalition for Life-course Immunization
Silvia Romeo	ThinkYoung
Gary Finnegan (Moderator of the discussion and media partner)	Vaccines Today
Mariano Votta, Daniela Quaggia, Alessandro Cossu, Andrea Falzarano	Cittadinanzattiva Active Citizenship Network

in part A, the more general, all participants were asked to answer how they evaluated the awareness and support for life-course immunization approach in their Country, among different subjects, and how much vaccination plan in their country is designed to help maximize the individuals' ability to protect themselves from infection over the course of their lives.

In part B, the questions regarded five key policy elements that characterize effective life-course immunization strategies (according to the IFPMA Report<sup>[9]</sup>): Comprehensive immunization program that supports vaccine availability, Public demand for immunization, Engaged healthcare professionals, Multidisciplinary and cross-sectoral coordination and Robust data informing policies and programs. (Figure 4)

### 3 Results and discussion

The meetings took place in Budapest, Hungary; Warsaw, Poland and Madrid, Spain between November and December 2019. The main results of these consultations will be explained in the below paragraphs.

#### 3.1 Hungary

The Hungarian Focus Group took place in Budapest, on 9th of December 2019. The meeting was organized by

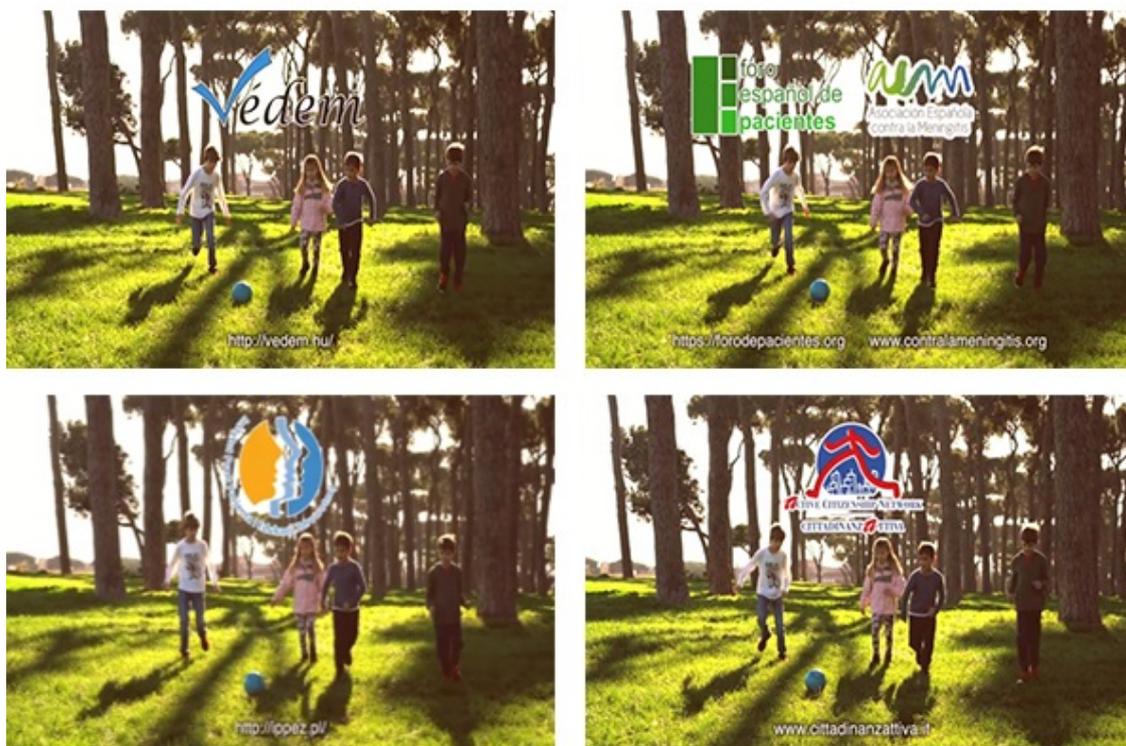
**Table 2** The participants of the Hungarian Focus Group

Name	Affiliation
Máté Jankovics	VÉDEM Association
Dr. Istvánné Jankovics	AMMY Ltd
Zita Dobiné Jankovics	VÉDEM Association
Hajnalka Rostásné Szabó	District nurse
Erzsébet Trepinszki	District nurse
Dr. Agnes Hasitz	Family doctor
Krisztina H. Völgyes	National Stroke League
Dr. Zsuzsa Jelenik	Pediatrician, infectious diseases specialist, Buda Health Center
Dávid Kuti	president, "VÉDEM" Association
Dr. Kálmán Bartha	Vaccinologist
Dr. István Jankovics	Virologist
Dr. Gábor Pogány	National Patient Forum
Prof. Dr. Kristóf Nékám	President, Hungarian Allergy Association (he was not present at the meeting. But he completed the questionnaire and wrote suggestions.)
Daniela Quaggia	Active Citizenship Network

Vedem - Civillian For Vaccination together with Active Citizenship Network. The participants were listed in Table 2.

Most of the participants believe that the vaccination discipline in Hungary is excellent, with vaccination coverage of over 95% concerning childhood.

Positive elements that provides an opportunity to make the life-long vaccination system more efficient in Hungary emerged were:



**Figure 1** A frame from each video realized <http://www.activecitizenship.net/patients-rights/projects/294-european-active-citizens-for-vaccination-2019.html>



**Figure 2** Hashtag of the campaign and the logos of the organization involved

(1) There is already a mandatory (free of charge) vaccine schedule for age 0-13 years old.

(2) Existence of a family-oriented social environment: the use of vaccines for families with children is considered important. Enough time and energy are spent to attend regular health counseling and children receive the right vaccinations at the right time.

(3) The professionalism and commitment of pediatricians, GPs and nurses in the use of vaccines are excellent.

(4) The organizations that protect the rights of chronic patients are actively involved in promoting the use of vaccines: there are many mandatory and recommended vaccines associated with chronic diseases such as diabetes, kidney disease and allergy.

However, some issues were raised too:

(1) There is a wide social layer who cannot afford the necessary vaccinations: mandatory vaccinations provided to children are free of charge, however, only few vaccines for adults (flu, rabies, tetanus) are financed by the government. In addition, the general 50% support rate has dropped in recent years, so the poorer people cannot fund their vaccinations.

(2) There is not enough clear information for citizens about the effects of the vaccines: the lack of appropriate information and positive campaign also hinders the widespread use of the vaccine. For example, influenza vaccination for chronic patients is free of charge, but only half of the amount that can be used is administered.

(3) Fake news is repeatedly spread, often supported by the media.

(4) The available non-official recommendation for adults in Hungary reaches only few. Patient rights organizations and non-governmental organizations must be involved in communicating them properly.

Some suggestions were offered:

(1) Make an official recommendation on adults vaccination that can be widely distributed. The professional



**Figure 3** Glimpses of the focus groups



**Figure 4** Image from the IFPMA report

organizations should be made aware of the importance of lifelong vaccination, and they should help to formulate a new proposal by providing them with accurate information.

(2) Feasibility studies should be conducted based on the available data for the individual patients. Professional decision-makers should make recommendations in the light of these studies.

(3) To get national/international funding to finance this policy.

Finally the conclusions of the focus group were that there is a well-operating vaccination system for children, but there is not enough clear information for adult citizens about immunization, there should be more support for information campaigns that should also be organized by civic associations with strong support of healthcare professionals and politicians. The vaccine uptake monitoring data should be fully digitalized. The lifetime immunization approach should be integrated to the national education plan for elementary school students. The main problem in Hungary is financial based, it would be great to increase the funding of immunization.

### 3.2 Poland

The Polish Focus group took place in Warsaw, in the National Aids Centre, on 12th December 2019. The meet-

ing was organized by the Institute of Patients' Rights and Health Education together with Active Citizenship Network. The participants were listed in Table 3.

The elements emerged from the debate showed that the vaccination system in Poland is generally evaluated as good, but not very good.

The advantages of the Polish system mentioned in the discussion, among others, were:

(1) The State budget covering expenses for vaccinations making them accessible independently of the patient's financial situation;

(2) Mandatory vaccination for children & immunization card (increasingly required in schools) which is stored at the general practitioner's office and used to monitor progress through the immunization schedule;

(3) Activities of some of the local governments, including information campaigns and financing of vaccinations that are not refunded (*e.g.* for children and seniors);

(4) The large and growing role of non-governmental organizations in promoting vaccination.

On the other hand, the challenges highlighted were:

(1) Vaccinations in Poland are mainly associated with the childhood period, there is no comprehensive life-long vaccinations information or programmes;

(2) Insufficient attention to vaccines for adults, including immunization against influenza, tetanus, tuberculosis, *etc.*; these are not given the same focus as vaccination of children, even though, especially in seniors, infectious diseases can be life-threatening;

(3) Too few vaccines are reimbursed: defining some vaccines as recommended (meaning not reimbursed) means that patients and their relatives often misinterpret them as less needed, and therefore to be omitted;

(4) Public media are not enough involved in the promotion of vaccinations;

In addition, considerations and advices about funds and economic incentives were made:

(1) Adopting an adequate resolution of the Council of Ministers, the National Program for Preventing Infectious Diseases, which would ensure a stable funding and expand the scope of free vaccinations.

(2) Changes in vaccines funding have been proposed. Now vaccinations are carried out as part of primary healthcare and physicians are remunerated with a capitalization rate, a specific amount for the entire year, independently of the number of services performed or the cost of medical exams. One action that could increase the vaccination rate, especially for adults, is to separate vaccinations funding from the service rendered.

(3) Provide incentives for employers to invest in employees who get vaccinated.

(4) Create a special fund, that has been discussed and

**Table 3** The participants of Polish Focus group

Name	Affiliation
Grzegorz Błażewicz	Deputy Patient Ombudsman
Dr Marek Posobkiewicz	Chief Sanitary Inspector of the Ministry of the Interior and Administration, former Chief Sanitary Inspector of the country
Andrzej Kuczara	President of Aby y Foundation
Beata Zawada	Pediatrician
Jerzy Gryglewicz	Lazarski University, Public Health expert
Igor Grzesiak	Institute for Patient Rights and Health Education (Fundacja Instytut Praw Pacjenta i Edukacji Zdrowotnej)
Marta Kulpa	Institute for Patient Rights and Health Education (Fundacja Instytut Praw Pacjenta i Edukacji Zdrowotnej)
Patrycja Rzucidło-Zajac	Institute for Patient Rights and Health Education (Fundacja Instytut Praw Pacjenta i Edukacji Zdrowotnej)
Aleksandra Kurowska (Chairman)	Medical journalist, editor-in-chief of the portal about the healthcare system
Daniela Quaggia (observer)	Active Citizenship Network

**Table 4** The participants of Spanish Focus Group

Name	Affiliation
Elena Moya Pendería	Vice-president of AEM
Dr. Jose Luis Baquero	Director and scientific coordinator of FEP
Dr. Pilar Campos Esteban	General Directorate of Public Health of the MSCBS
Dr. Aurora Limia Sánchez	General Directorate of Public Health of the MSCBS
Dr. Angel Gil de Miguel	Royal Academy of Medicine and Professor of Preventive Medicine at the King Juan Carlos University of Madrid
Dr. Mariló Las Heras Carbajo	Ministry of Health of the Community of Madrid
Dr. Carlos Mateos	director of ComSalud
Dr. Jesús Ruiz Contreras	Preventive Medicine Service of the Doce de Octubre Hospital
Dr. Isabel Jimeno Sanz	Madrid Health Service, SERMAS
Inmaculada Cuesta Esteve	National Vaccine and Nursing Association, ANENVAC
Santiago García Blanco	Health Council of Cantabria
Alejandro Cremades	Community Nursing Association
David Cantarero	Economy and Health, University of Cantabria
Javier Moreno Alemán	Legal expert in Health, LEXMOR
Mariano Votta	Active Citizenship Network

announced a long time ago, to be used to finance assistance for people who had a vaccine adverse reaction (patients would benefit from this, and furthermore offering help and admitting that vaccine adverse reactions, though very rarely, but do occur could increase confidence in vaccines, combating conspiracy theories about them).

Finally, other options discussed were about development of vaccines that do not require injection (now available against rotaviruses and for children against influenza), as less anxious for people due to less invasiveness and therefore potentially feasible, for example, by the patients themselves. A wide campaign on vaccinations that involves celebrities, using social media was also suggested.

### 3.3 Spain

The Spanish Focus Group took place in Madrid at the Royal Academy of Medicine, on the 26th November 2019. The meeting was organized by the Spanish Association against Meningitis (AEM) with the collaboration of the Spanish Patients' Forum (FEP) together with Active Citizenship Network. The participants were listed in [Table 4](#).

The elements emerged from the debate showed that the vaccination system in Spain is generally evaluated as good.

Positive elements emerged were:

Child vaccination is a success in the country with a coverage above 95%, thanks to the action of both government and health professionals.

Issues raised during the consultation were:

(1) From adolescence and into adulthood, vaccination rates are lower. In any case, both in childhood, adolescence and adulthood, there are possibilities for improvement.

(2) Inequality of the vaccination schedule in Spain in the different Autonomous Communities.

(3) Anti-vaccination movements spreading.

Suggestions made were:

(1) The importance of patient associations is underlined as a strong asset for improving adult vaccination.

(2) The use of emotional arguments through personal stories is also suggested.

Finally, it is widely felt that the vaccination plan in Spain is designed to help maximize people's ability to protect themselves from infection throughout their lives, with the immunization schedule being considered either well-developed or in development, in equal parts.

## 4 Ethic statement

The authors have worked in full compliance with the Code of Conduct of Cittadinanzattiva APS<sup>[10]</sup>.

**Table 5** The answers given to the questionnaires used during the focus group

Questions	General attitude			Overall Perception
	Spain	Hungary	Poland	
A1. Perception of the awareness and support on life-course immunization approach among citizens				Weakness
A2. Awareness and support among health professionals				To be improved
A3. Awareness and support among health authorities				heterogeneous situation
A4. Policy maker’s awareness and support				Weakness
A5. Awareness and support among civic and patients’ associations				Strenght for Spain and Poland. Weakness for Hungary
B1. The vaccinations plan and its capacity to maximize the individuals’ ability to protect themselves from infection over the course of their lives				Strenght
B2. Immunization schedule that covers whole life course	 & 			To be improved
B3. Existence of recommendations in the national immunisation programme for patients with specific chronic conditions				Strenght
B4. Awareness campaigns encouraging vaccine uptake across the life course				To be improved
B5. Involvement of Active Civil society organizations in vaccine promotion				To be improved
B6. Health care professionals’ education and training about benefits of immunization across the life course				To be improved
B7. Support activated to facilitate Health Care professionals to be vaccinated				To be improved
B8. Immunization integrated into healthy ageing policies				To be improved
B9. Vaccine delivery in non-clinical settings	 & 			Weakness
B10. Existence of a definition of coverage targets for vaccines in all groups across the life course				To be improved
B11. Timely and accurate data on vaccine uptake				To be improved

## 5 Results

We gathered all the answers given to the questionnaires used during the focus group in the chart below using emoticons to describe the general attitude of the majority of the participants towards the topics presented. In order to get an idea on how these topics are considered, we summarized the overall perception of each topic identifying strengths and weaknesses.

Important areas were confronted during these consultations, between them one was the perception of awareness and support of the approach to life-long immunization between the different stakeholders in the three countries involved. Among the other aspects investigated there were immunization schedules, the awareness campaigns,

the involvement of different players and the access to vaccination *etc.* (Table 5)

### 5.1 Strengths

The first positive aspect that emerges in all three countries, indirectly linked to the application of an approach to immunization throughout life is the existence of recommendations, in the national immunization programs, for patients with specific chronic conditions.

Moreover, in Spain and Poland the awareness and the support to life course immunization among civic and patients associations is considered well developed. And these subjects should be better involved for a more effective development of this policy.

## 5.2 Weaknesses

One negative common aspect emerged in all the three countries is that policy maker's awareness and support on life-course immunization approach is considerate not enough appropriate and this is probably linked to the fact that also awareness and support among citizens is not considered enough developed.

Furthermore, vaccination between the general over aged population does not seem to be very common in all the three countries. Some elements hinder it such as the cost of immunization both for the governments and for the people and a not so good awareness on the topic. Additionally the increase of no vax campaigns do not help either.

Finally, vaccine delivery in non-clinical setting is not yet implemented.

## 5.3 Recommendations

All countries believe that they have a well-thought-out vaccination plan but the main issue remains implementation in all ages and spreading awareness.

In addition, suggestions were made about cooperation with public media in order to help raise awareness towards long-life vaccination, also through a wide campaign involving celebrities.

They all believe immunization should be widely promoted as a healthy ageing policy.

Also, vaccine delivery in non-clinical settings and the use of an electronic database should be implemented.

Finally, many suggestions were made to find funds to guarantee free vaccines also for the over aged population.

In addition to the recommendations collected, the authors of this article, that have published it during the Covid pandemy, would like to underline the importance in this period of the vaccines delivery in non-clinical settings, especially in view of a possible overload of vaccine requests in the following months (in autumn for flu and pneumococcal vaccination campaign that probably will have an increase in demands especially in Italy as it has become mandatory for people aged over 65) regardless the discovery and commercialization of the COVID-19 vaccine.

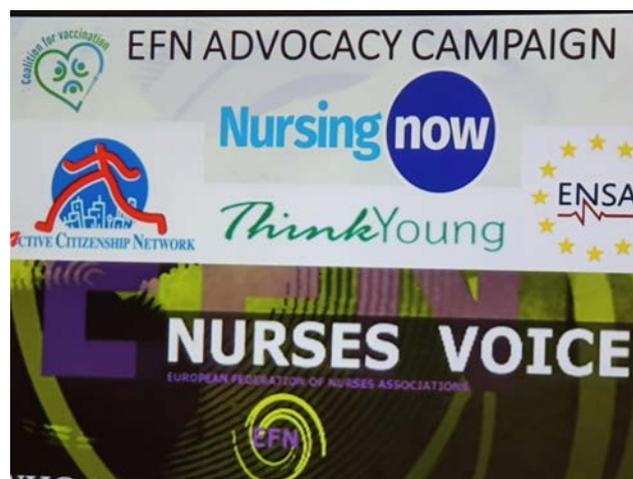
## 6 Conclusion

The experience and the main outputs of the research-project suggest how relevant it is, in the field of vaccination, to promote awareness among people and improving the communication between institutions and citizens on the importance of a lifelong immunization. Even though child immunization is seen as well organized in all the countries interviewed, it is shown how vaccination in

adulthood is not very common. Furthermore, the project shows the importance of the role of awareness campaigns in the media and within the associations to prevent anti vaccination disinformation from spreading. The roles of institutions is essential in creating a policy that supports over aged in obtaining free/affordable and timely access to vaccines.

Active Citizenship Network, through this project, is committed to improve and increment awareness and spreading information about life course vaccinations and will continue to encourage the citizen involvement on the topic. About it, we are proud for having persuaded the European Institutions and relevant stakeholders in involving citizens organizations in the Coalition for Vaccination: EU Commission & Coalition members decided that non-HCPs' associations can be associated to the

Coalition during the last meeting held on March 9th 2020 and, of course, Active Citizenship Network has been immediately invited to join the Coalition. We are also proud to have brought this topic inside the European Parliament realizing in 2018, 2019 and 2020, within the framework of our MEPs Interest Group on "European Patients' Rights & Cross-Border Healthcare", threemulti stakeholders event on vaccination<sup>[11-13]</sup>. (Figure 5)



**Figure 5** Coalition for Vaccination Annual Meeting, Bruxelles, 9 March 2020

## Conflict of interest and funding

The European Active Citizens for Vaccination 2019 has been realized thanks to the support of MSD.

## References

- [1] [https://www.ifpma.org/wpcontent/uploads/2019/08/IFPMA\\_HPP\\_Life\\_Course\\_Immunization\\_Full\\_Report.pdf](https://www.ifpma.org/wpcontent/uploads/2019/08/IFPMA_HPP_Life_Course_Immunization_Full_Report.pdf)

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- [2] <http://www.activecitizenship.net/patients-rights/projects/278-the-engagement-of-cittadinanzattiva-on-vaccination.html>
- [3] <http://www.activecitizenship.net/patients-rights/projects/294-european-active-citizens-for-vaccination-2019.html>
- [4] All the materials are available on [www.activecitizenship.net/patients-rights/projects/294-european-active-citizens-for-vaccination-2019.html](http://www.activecitizenship.net/patients-rights/projects/294-european-active-citizens-for-vaccination-2019.html)
- [5] [https://www.ifpma.org/wp-content/uploads/2019/08/IFPMA\\_HPP\\_Life\\_Course\\_Immunization\\_Full\\_Report.pdf](https://www.ifpma.org/wp-content/uploads/2019/08/IFPMA_HPP_Life_Course_Immunization_Full_Report.pdf)
- [6] <https://vedem.hu/>
- [7] <http://ippe.z.pl/>
- [8] <https://forodepacientes.org/>
- [9] <https://www.contralameningitis.org/la-asociacion/>
- [10] <http://www.cittadinanzattiva.it/files/corporate/istituzionale/documentiidentita/codicecondottaca.pdf>
- [11] The challenges of life-course vaccination to enhance public health protection in Europe: a multi-stakeholder approach, at the European Parliament on 28 February 2018.
- [12] <http://www.interestgroup.activecitizenship.net/132-active-citizens-in-europe-advocate-for-vaccination-7th-november.html>
- [13] <http://interestgroup.activecitizenship.net/134-meps-interest-group-european-patients-rights-and-cross-border-healthcare-official-launch-2019-2024-term.html>