

11 Communication on Immunisation and the Hesitancy Challenge

A vaccine is 0% effective if it remains in the vial. In recent years, there has been increasing recognition⁴⁴ of the importance of vaccine hesitancy as a cause of suboptimal immunisation rates⁴⁵. 'Immunisation hesitancy' is considered to be a new concept and a growing area of study by teams of experts across disciplines. Interest in this area is developing as countries and communities are faced with reluctance (or delay) in accepting the recommended national vaccination offering⁴⁶.

Vaccine hesitancy potentially leads to disease outbreaks. A survey conducted in 2008 – 09 found that up to 20% of parents from five EU countries reported doubts about having their child vaccinated⁴⁷. Since 2010, the EU has seen a series of measles and rubella outbreaks, notably in the UK, France, Italy, Spain, Belgium, Romania, Bulgaria, and, more recently, Germany. The ECDC reported more than 4,000 cases of measles between July 2014 and July 2015⁴⁸. The European Commission reported that only half of all EU countries have achieved the 95% coverage target for two doses of the measles vaccine⁴⁹. Since the 2009 H1N1 pandemic experience, a decline in vaccination against seasonal flu has been reported for key target groups⁵⁰. All but two EU countries are falling short of the 75% coverage target set by the Council⁵¹, leaving 60 million vulnerable adults unvaccinated every year⁵².

Vaccine hesitancy, the human side of vaccination, is a complex and fluid challenge with myriad possible demographic or socio-psychological root causes, which change with context and over time^{53 54}.

Studies of national promotional campaigns and other interventions have shown that almost nothing currently being done to address this problem is actually working^{55 56 57}. Understanding and addressing this challenge requires a multidisciplinary approach that should implicate the social, cognitive, communications and public engagement sciences⁵⁸.

This challenge is indeed a question of vaccine hesitancy, not vaccine refusal. It is the "fence-sitters", where hesitancy can have its root in specific questions with regards to certain vaccines that present the most important challenge. Hesitancy may arise from cognitive influences such as beliefs or heuristics or due to broader societal circumstances. These include factors such as "increasingly 'crowded' vaccination schedules, lower prevalence of vaccine-preventable diseases and thus complacency towards disease risks, greater access to and more rapid dissemination of, vaccine-critical messages via digital networks, hyper-vigilance of parents in relation to children and risk, and an increasingly consumerist orientation to healthcare"⁵⁹.

In alignment with other EU and international initiatives (e.g. the work conducted by the WHO SAGE Working Group dealing with vaccine hesitancy), the IPROVE consultation focused on the latter above-described category of individuals, who are looking for answers to their questions, and who therefore need support to make the right public and individual health decisions. Targeted communication tailored to the needs of this group is considered to be a priority and needs to be informed by stronger evidence on the drivers and determinants of such hesitancy⁶⁰.

Echoing the words of former EU Commissioner for Research Geoghegan-Quinn, "the best vaccine in the world is worth nothing if people don't use it - be it because the vaccines don't reach them, because they are too expensive, because the health system doesn't reach out to the most vulnerable populations, or because people believe rumours about potential side effects"⁶¹.

⁴⁴ Hickler B et al. (2015) Vaccine Special Issue on Vaccine Hesitancy. *Vaccine*; 33(34):4155-6

⁴⁵ ECDC (2012). Systematic literature review of the evidence for effective national immunisation schedule promotional communications. Technical Report

⁴⁶ Dubé E et al. (2015). Vaccine hesitancy, vaccine refusal and the anti-vaccine movement: influence, impact and implications. *Expert Rev Vaccines*; 14(1): 99-117

⁴⁷ Stefanoff, P. et al. (2010). Tracking parental attitudes on vaccination across European countries: The Vaccine Safety, Attitudes, Training and Communication Project (VACSATC). *Vaccine* 28, 5731-5737

⁴⁸ ECDC (2015). Measles and Rubella Monitoring, July 2015. Available online at <http://ecdc.europa.eu/en/publications/Publications/measles-rubella-quarterly-surveillance-july-2015.pdf>

⁴⁹ DG SANCO (2012). Europe's got measles. Presentation to the EU Health Policy Forum. Available at: http://ec.europa.eu/health/interest_groups/docs/ev_20120510_co04_en.pdf

⁵⁰ European Commission (2014). SWD (2014) 8 final. State of Play on the Implementation of the 2009 Council Recommendation on seasonal influenza vaccination.

http://ec.europa.eu/health/vaccination/docs/seasonflu_staffwd2014_en.pdf

⁵¹ Council Recommendation (2009/1019/EU).

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ.L:2009:348:0071:0072:EN:PDF>

⁵² Preaud E et al. (2014) Vaccines Europe influenza working group. Annual public health and economic benefits of seasonal influenza vaccination: a European estimate. *BMC Public Health*. 14:813

⁵³ Eskola J et al. (2015) SAGE Working Group on Vaccine Hesitancy. How to deal with vaccine hesitancy? *Vaccine* 33(34):4215-7

⁵⁴ Wheelock A et al. (2013) Social and psychological factors underlying adult vaccination behaviour: lessons from seasonal influenza vaccination in the US and the UK. *Expert Rev Vaccines* 12:893-901

⁵⁵ Cairns G et al. (2012) Systematic literature review of the evidence for effective national immunisation schedule promotional communications. Stockholm; ECDC

⁵⁶ Dubé E et al. (2015) SAGE Working Group on Vaccine Hesitancy. Strategies intended to address vaccine hesitancy: Review of published reviews. *Vaccine*. 33(34):4191-203

⁵⁷ Sadaf A et al. (2013) A systematic review of interventions for reducing parental vaccine refusal and vaccine hesitancy. *Vaccine*. 31(40):4293-304

⁵⁸ Larson H et al. (2013) A Multidisciplinary Research Agenda for Understanding Vaccine-Related Decisions. *Vaccines*. 1(3):293-304

⁵⁹ Leask J et al. (2014). The big picture in addressing vaccine hesitancy. *Human Vaccines & Immunotherapeutics* 10:9, 2600-2602

⁶⁰ Leask J (2011). Target the fence sitters. *Nature* Vol. 473, 443-445

⁶¹ Commissioner Geoghegan-Quinn (2014). Presented on the 2nd day of the Conference on New Horizons for Vaccine Research and Innovation, Brussels 13 March 2014

Driving innovation and science into new vaccines does not happen in isolation from other factors, such as creating the appropriate conditions to ensure that the vaccines are used and achieve their intended public health, economic, and societal objectives. Re-thinking the way communication on vaccines has been approached so far is instrumental in this regard and justifies the need to build a real EU research agenda on this fundamental discipline, with a view to establishing the necessary tools and metrics to build effective communications.

GAPS AND CHALLENGES

The 'stakeholder consultation exercise' first endeavoured to list and prioritise the main challenges and gaps that exist in Europe to implement effective communication programmes that can help tackle the issue of vaccine hesitancy. Such gaps have already been largely recognised by the expert community and the scientific literature published on the subject, and the IPROVE stakeholder consultation helped to confirm those findings.

A first fundamental challenge is the heterogeneous nature of the target population. Immunisation programmes target a very broad scope in terms of populations, sub-populations but also vaccinations and immunisation settings. Since a 'one-size fits all' approach does not lend itself to immunisation⁶², there is a need to better capture and study the true nature of individuals' particular vaccine and/or vaccination concerns⁶³. This should start by building a tool for the effective monitoring of attitudes and sentiment behind vaccination, as well as the psychological and social dimensions impacting it, thereby truly enabling researchers to breakdown and analyse the scope of hesitancy.

The segmentation of such populations drawing from social marketing frameworks⁶⁴ is considered to be a first critical step to understand the type and nature of concerns that exist, and direct communication resources more efficiently and in a more targeted manner⁶⁵ than is the case today.

Although the existing literature published on the subject has shown that a set of different and combined channels and methods of communications are deployed to promote vaccination, the consultation highlighted three main issues:

- ▶ Communications are often not sufficiently evidence-based, i.e. with limited information on how these should be designed and implemented to maximise impact and success of interventions. The generation of communications thus tends to be more 'assumption-based' rather than 'evidence-based', often with the risk of rolling out counter-productive approaches
- ▶ Mid-term and ex-post evaluations of communications efforts remain weak, with limited understanding of the return on investment, as well as limited opportunity to re-direct resources or target interventions in a different manner
- ▶ Traditional tools remain the standard way of communicating on vaccines. These methods tend to rely on a one-dimensional or mechanistic approach to disseminating messages⁶⁶. Uptake or adaptation to new and digital tools is low despite the fact that online media are a primary source of information for a large share of the public looking for answers on the topic of vaccination

This latter point is crucial as promotional campaigns are not the only source of information. A wealth of information and misinformation is increasingly available through online and broadcast media from different sources, be it through personal stories or through organised networks. In particular, the viral and wide-reaching effect of social media is to be noted. When online misinformation becomes the primary source of information, hesitant behaviour can quickly be exacerbated⁶⁷.

The approach to risk communication also needs to be better tailored. Risk communication messages often fail to reach the intended targets, particularly those at most risk, due to inconsistency and incoherence of messaging. In addition, the public's diverse levels of knowledge, understanding and perception of risk, is based on cultural and/or environmental sensitivities⁶⁸.

⁶² Weinrich (1999). Targeting the general public is like using scattershot ammunition to try to hit a bull's eye. It is possible, but not very efficient

⁶⁴ WHO SAGE working group dealing with vaccine hesitancy (2014). Strategies for addressing vaccine hesitancy – A systematic review

⁶⁵ Nowak G et al (2015). Addressing vaccine hesitancy: The potential value of commercial and social marketing principles and practices, *Vaccine* 2015, <http://dx.doi.org/10.1016/j.vaccine.2015.04.039>

⁶⁶ WHO Europe (2013). The Guide to Tailoring Immunisation Programmes

⁶⁷ European Commission (2014). SWD (2014) 8 final. State of Play on the Implementation of the 2009 Council Recommendation on seasonal influenza vaccination, http://ec.europa.eu/health/vaccination/docs/seasonflu_staffwd2014_en.pdf

⁶⁸ ECDC (2012). Systematic literature review of the evidence for effective national immunisation schedule promotional communications, Technical Report

⁶⁹ Larson H. (2014). Measuring the Vaccine Confidence Gap, Presentation to the ECDC available at <http://ecdc.europa.eu/en/press/events/Documents/Vaccine-confidence-Heidi-Larson.pdf>

Advance planning efforts through needs assessment and public engagement plans still need further development through cooperation at EU level. Instead of emergency ad-hoc responses to crises, contingency plans and effective risk communication should be conducted well before a crisis occurs⁶⁹.

A broader challenge highlighted by the expert community during the consultation is that communication in public health tends to be regarded as the 'elephant in the room'⁷⁰.

The approach to communications across the public health discipline is insufficiently integrated and often does not constitute a systematic part of the implementation of vaccination programmes.

For instance, some of the experts consulted pointed to the low level of communications training across the public health function and immunisation managers, beyond the low general spending on vaccination campaigns or external communications activities directly targeting the 'vaccinees'.

This represents a missed opportunity. Spending on the purchase of the vaccines and the infrastructures necessary to deliver them is often unable to reach the target populations in an optimal way, due, inter alia, to gaps in communications. As much as a rigorous science is applied and underpins the development of novel vaccines, there is a need for a similar level of commitment to invest in identifying the right strategy that can address hesitancy and bridge the communications gap.

Relevant engagement with civil society, the health community and media were also considered a key current gap. Besides the generally low number of global advocates for vaccination, representatives from the NGO community expressed the fact that they lack sufficient funding and support to partner in promoting immunisation and raising awareness on preventable diseases and their risks. It was also considered that public authorities and health facilities should better engage at the grassroots level long before a new vaccine is introduced. This would help to build awareness and appropriate partnerships to mobilise the necessary critical mass that can contribute to a successful implementation campaign, once the vaccine becomes available and the vaccination programme is rolled out.

The well-known challenges of healthcare workers' own vaccination rates, as well as the recognised gaps in training on how to engage with vaccine-hesitant individuals, were also raised during the consultation. Previous reviews found that while interventions aiming to improve knowledge levels among the general public did not necessarily result in increased vaccine uptake or intention to be vaccinated, interventions aimed to improve knowledge levels among healthcare workers did report, to some extent, evidence of success in this regard. The IPROVE consulted experts thus considered that investments and a real drive for change should take account of these findings.

Last but not least, the consulted panel pointed to the general gap in actual implementation and testing of innovative approaches to understand and implement tools to address the phenomenon of 'immunisation hesitancy'. Recognising the need for further research on how to tackle existing gaps, specifically in the EU context, it has been raised that a wealth of evidence on innovative approaches is already available and should be tapped. This body of knowledge must be put into practice through programmes and pilots that can foster a progressive shift in the overall approach to communications on public health, and specifically, vaccination.

RECOMMENDATIONS FOR EU LEVEL ACTION

As many of the challenges identified are to be addressed at the national level, through the appropriate leadership and ownership by the stakeholders concerned, the IPROVE consultation focused on the development of recommendations that are relevant for EU level action, which demand a certain degree of European cooperation. These are the following:

- ▶ Devise and establish a tool that is capable of enabling a detailed and stratified monitoring of acceptance attitudes, baseline levels of risk awareness, as well as sentiments towards specific vaccines and vaccination programmes at EU level. This should help to support the appropriate measurement of the scope and extent of 'vaccine hesitancy'. Such tool should act as a sentinel or mechanism enabling an active and on-going monitoring of acceptance over time and across tools, using reliable measures capable of capturing sufficiently large datasets to enable the formulation of target group or vaccine-specific conclusions:

⁶⁹ ECDC (2013). A literature review on effective risk communication for the prevention and control of communicable diseases in Europe, Technical Report

⁷⁰ Odugleh-Kolev A. (2014). Building national communication capacity for public health, IPROVE workshop on communications and acceptance, 28 October 2014

- + A monitoring tool of this kind should enable the capturing and extraction of online conversations across countries and languages, and should be used to inform the development of national communications strategies on immunisation to be implemented at country level
- + It is thought that such an undertaking would best be coordinated and funded at EU level, pooling expertise across leading centres of excellence and building upon previous research. The involvement and leadership of bodies such as the European Centre for Disease Prevention and Control (ECDC) and the WHO Europe Regional Office are considered essential to help Member States in their efforts, while respecting individual data privacy
- Invest in the creation and support of multi-disciplinary networks of expertise, including social and behavioural sciences, social marketing, neuroscience, communication sciences, health education and communications, and social media analysts, that can both research and develop evidence-based communications strategies at both an EU and national level. This should include:
 - + Research to develop instruments⁷¹ that can determine and weigh the relative importance of social and behavioural determinants of vaccination acceptance in different contexts, and develop metrics to allow tracking of vaccination acceptance over time and monitoring and evaluation of interventions⁷²
 - + Implementational research to design and pilot interventions aimed at increasing vaccination acceptance and uptake
 - + On-going monitoring of vaccination acceptance at national and EU levels. This would include routine monitoring of the public conversation in mainstream and social media, and of vaccination acceptance at population level
 - + Regional and national immunisation advisory groups should add vaccine hesitancy to their remit and incorporate these tools to better understand and monitor vaccine hesitancy
- EU institutions to support a European initiative to mobilise and federate researchers and practitioners through meetings and other platforms, to facilitate collaborative projects, knowledge sharing, and the formation of a European Community of Practice on vaccination uptake
- Encourage and implement innovative shifts in the training and curricula offerings of the key stakeholders at the core

of the implementation of immunisation programmes. In particular, target the following:

- + R&D to develop evidence-based approaches and tools to enable healthcare workers to understand the importance of vaccinating, and to effectively discuss vaccination with the public. This should focus on healthcare workers who vaccinate or have discussions on vaccination with parents, adolescents and adults. Efforts should not be limited to general practitioners, but also nurses, carers, mid-wives, specialists dealing with older people or patients with chronic conditions, as well as pharmacists in countries where they play an active role in vaccination
- + Fund vocational and on-the-job training programmes aimed at public health staff and immunisation programme managers on the discipline of communications, and the extent to which this supports the achievement of operational public health goals, as well as how to specifically approach the discipline in the context of immunisation
- + Introduce basic infectious diseases, immunology, vaccination and public health training in young children's school curricula to educate future generations against complacency towards the risks of diseases they no longer see and 'institutionalise' the role of vaccination as a cornerstone of public health
- Build partnerships and allocate appropriate funding to collaborate with key civil society organisations, recognising their fundamental role in building awareness, disseminating and creating knowledge on vaccination needs. In addition, educate both the general public and policy makers on the value of vaccination, and how this contributes to multiple 'wins' in public health, economic, and societal terms in the short and longer terms.

⁷¹ Wheelock A et al. (2014) Socio-Psychological Factors Driving Adult Vaccination: A Qualitative Study. PLoS ONE 9(12); Brown KF et al. (2011) Attitudinal and demographic predictors of measles, mumps and rubella (MMR) vaccine acceptance: development and validation of an evidence-based measurement instrument. *Vaccine*. 29(8):1700-9

⁷² Leask J et al. (2014) The big picture in addressing vaccine hesitancy. *Hum Vaccin Immunother*; 10:2600-2602

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GAPS & CHALLENGES	Recommendations
<p>Heterogeneous nature of the target population: lack of segmentation along vaccination concerns</p>	<p>➤ Implement stratified monitoring of acceptance attitudes and sentiments towards vaccination</p> <ul style="list-style-type: none"> + Establish a tool capable of detailed and stratified monitoring of acceptance attitudes, risk awareness, sentiments towards vaccines and vaccination programmes at EU level + Develop metrics of vaccination acceptance + Design and pilot interventions
<p>Gaps in the combined communication channels & methods used:</p> <ul style="list-style-type: none"> ➤ Not enough evidence-based ➤ Mid-term & ex-post evaluation <p>Risk communication not tailored enough</p> <p>Communication insufficiently integrated to vaccination programmes implementation</p> <p>Lack of engagement with civil society, health community & media</p>	<p>➤ Invest in the creation and support of multi-disciplinary networks of expertise that can both research and develop evidence-based communications strategies at both an EU and national level:</p> <ul style="list-style-type: none"> + Support regional and national immunisation advisory groups with regards to vaccine hesitancy + EU institutions to facilitate the formation of a European community of practice on vaccination uptake + Bring together experts from social and behavioural science, neuroscience, social marketing, communication and health education
<p>Gaps in training healthcare workers to engage vaccine hesitant individuals</p>	<p>➤ Make healthcare professionals and public health stakeholders effective advocates of vaccination</p> <ul style="list-style-type: none"> + Implement innovative shifts in the curricula offerings for healthcare workers to equip them with the right skills and confidence to appropriately assess vaccination needs and effectively communicate on vaccination + Fund vocational and on-the-job communication training programmes for public health staff and immunisation programme managers + Educate future generations about basic infectious diseases, immunology and public health, e.g. through school-based educational programmes, with a view to institutionalising the role of vaccination as a cornerstone of public health
<p>Lack of implementation & testing of innovative approaches</p>	<p>➤ Engage with civil society organisations</p> <ul style="list-style-type: none"> + Provide appropriate funding and build partnerships to collaborate with such organisations to help building awareness, disseminating and creating knowledge on vaccination needs