

REPORT

Strategies to increase vaccine acceptance and uptake



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Executive Summary

The meeting on strategies to increase vaccine acceptance and uptake focused on the sharing of best practices on the development and evaluation of effective strategies to improve vaccination coverage by closing the gap between intention and action. During two days, 72 experts from 19 countries participated in this meeting.

The tone of the meeting was set by the excellent keynote address delivered by Tara Haelle who talked about the power of narratives or stories in all aspects of life, including countering vaccine hesitancy. With her captivating presentation she showed how stories allow humans to relate to and understand each other which can then create trust and how relating personal experiences compassionately can help others understand better why vaccines are important and why vaccines are safe. This theme of story-telling was emphasised in several presentations during the workshop.

During the workshop there was agreement that vaccine hesitancy is context-specific and vaccine-specific. The importance of being aware of the different reasons for vaccine hesitancy and how these reasons can differ geographically, culturally and even between individuals was discussed. The role of story-telling in the strategies to improve vaccination uptake was highlighted. It was agreed that all stakeholders should be included in the development of strategies and that active listening should be used to determine their concerns, rather than just asking questions. To improve vaccination uptake, strategies must enhance trust, trust in vaccines, in the healthcare system and in vaccine manufacturers, with the aim of changing behaviour not beliefs. A diverse array of studies was presented during the meeting and the need to evaluate the impact of these studies was highlighted, so that they can become the building blocks that may be assembled into future evidence-based multifaceted interventions. The lively discussions concluded that there is no ‘one-size fits-all’ solution and that multicomponent strategies will have to be customized to address the specific concerns of different vaccine hesitant populations for different vaccines.



Top-line summary

- Variation and synergy are important for communication strategies to increase vaccine acceptance and vaccine uptake.
- There is no one-size-fits-all solution and communication strategies need to be customised to the individuals targeted and their context and adequate for the type of communication.
- Story telling plays an important role in communication strategies and we need to tailor them to the audience
- Narratives are more effective than providing numbers.
- Need to listen and to understand the target's needs to know what story should be told, therefore need a repertoire of stories.
- Locally-derived stories have more leverage, but need to tell the right story to the right person by the right person at the right time, if not can do more harm than good.
- Stories need appropriate visuals, not stock photographs.
- The words used matter and it was emphasised that their definitions needs to be agreed, so that we know we are all talking about the same thing.
- The synergy from different expertise was demonstrated and by continuing to work with different disciplines we can achieve much more than by trying to work alone.
- Interventions should be evidence-based but we need to know how to ensure that evaluations of interventions provide good evidence, that we know where to find the evidence and understand it so that it can be efficiently implemented.
- Although some interventions are very target and context specific and not transferable to other settings, the development process could be.
- Public advocacy, for example Vaccines Today and ECBT, are important and they have shown that they can evolve to meet needs
- Attitudes and values can be measured in different ways and their various dimensions taken into consideration for informing and refining interventions
- People are amenable to nudges
- Trust is a major issue and involves trust in many different areas; interventions should



aim at increasing trust

- Attitudes to vaccination are not global, they are vaccine-specific
- Measurement of impact difficult at the population level since the methodology is onerous
- The presentations suggest that discussion needs to go beyond belief and attitudes, to values; this should be built upon for future directions
- There are a robust array of methods available that can provide science-based insights which can be used to inform and develop new policies for multifactorial interventions
- The audience is evolving, so we need to remain open and reactive to the evolution
- Some methods have been evaluated enough to allow us to go to implementation, i.e. motivation interviewing, so that we can assess if they can be extrapolated in a real-world setting
- Customisation of communication is essential to target individuals - no approach will be globally applicable
- We need to develop and share best practice in communication; the tools used need to be validated so that their use will provide good quality evidence which can be used to improve the implementation of tools, i.e. translation into the real world
- It is important to involve all stakeholders in the development of tools, even active deferrers should be invited to participate
- The sample populations tested vary, being opportunistic rather than representative, but the aim is to reach out to everyone, although it is recognised that this aim will be difficult to achieve
- Need to remember that the aim of improving vaccination uptake is to save lives and to improve quality of life
- Communication needed to improve vaccination uptake can be different, for example parents vs. HCP where the differences include vaccination for protection of patients vs. self-protection
- Vaccination uptake can be affected by multiple factors beyond individual factors, such as access issues and context
- There is a need for hard endpoints for evaluating the impact of the various strategies to improve vaccine uptake → these are difficult to identify but we need to be creative,



innovative, rigorous and passionate

- Parents' narratives are credible
- The involvement of parents is important
- Not much information on Internet to say 'nothing happened' after vaccination.
- Narratives about risk of infection can be counterproductive
- Information needs to be easy to find and needs to be listed first in a Google search (so need to design site taking into consideration how Google finds sites)
- Vaccine hesitant parents living in 'alternative' communities identify with their own community, not 'the' community and feel less social responsibility for the community
- They consider community immunity can come from the 'others' and this is their free choice, they do not consider they are free-riding
- 'Persuasion' (social marketing) is a strategy that could help them to understand communal responsibility but may not be adaptable for all communities
- Cohesion can work: e.g. in the US states with less stringent vaccination policies, vaccine uptake is lower
- In two Australian states where certain child benefits (tax and childcare allowances) have been linked to being up-to-date with vaccinations, an increase in uptake has been seen
- Pregnant women can be grouped into three groups based on the attitudes to influenza and pertussis vaccination during pregnancy; these women have different information needs and relationship with their healthcare providers (paternalistic, shared decision-making and informed choice)
- Pregnant women are often motivated to vaccinate to protect their child rather than to protect themselves
- Strategies to overcome vaccine hesitancy do not attempt to change values, but aim to improve vaccine uptake
- Cognitively-based intervention for Tdap and influenza vaccination in pregnant women improved perinatal Tdap vaccine uptake more than an emotionally-based intervention; no effect seen on influenza vaccine uptake → need vaccine-specific interventions tailored to address the concerns for the individual vaccine
- The five vaccine acceptance categories identified by Gust correlate well with the



scores from the PACV short scale, which is easier to use to classify parental vaccine hesitancy for designing tailored interventions

- The Gust vaccine hesitancy categories have different underlying moral matrices, based on different values, which can be used for designing tailored interventions
- In studies it is easy to measure ‘attitudes’ to vaccines or ‘intention’ to vaccinate, but it is important to remember that the aim of the interventions is to improve vaccine uptake and therefore have an impact on public health
- When asking if an intervention works, it is important to ask if it is the intervention as designed, which will probably be true in a study setting, or the intervention as delivered, which is probably different from the intervention designed, particularly in a real world setting (after implementation)
- Interventions for vaccine hesitancy are complex; need to identify which elements are essential for the transition from study to real world
- Implementation science can close the gap between research and the real world; the transfer of knowledge from the research setting to routine use is not straightforward
- Implementation science can be defined as ‘the scientific study of methods to promote the uptake of research findings into routine healthcare in clinical, organisational or policy contexts’
- Social marketing can be defined as an ‘active interventional approach that seeks to integrate marketing concepts with other approaches to influence behaviour that benefits individuals and communities for social good’
- Behaviour is influenced by information/knowledge, values/attitudes/beliefs, and other factors, such as time/cost, effort/convenience, social consequences and competing behaviour
- Social marketing involves listening to all stakeholders, matching interventions to determinants (tailoring) and contextualisation of interventions to ensure sustainability which involves stakeholder engagement and policy advocacy → ECDC have produced guidelines for adaptation at regional/national levels
- Need to ‘unbundle’ research and develop vaccine-specific interventions since the determinants of vaccine hesitancy can vary for different vaccines within the same individual



Summary of session 1: Rapid fire talks

This first session consisted of 11 ‘rapid fire’ (10-minute) presentations that covered projects aimed at understanding the targets for communication on vaccination, on-line vaccine information tools, administrative communication for influenza vaccination in 5 EU countries, the role of translation and cultural adaptation in vaccine communication and one strategy to improve childhood vaccination uptake in India.

Angus Thomson presented his team’s work on a predictive tool kit for influenza vaccine that was tested in the general public and healthcare professionals in five countries. They developed an ‘acceptance index’ which could also be called a ‘trust index’. The results showed that the determinants varied between countries, with UK and Mexico showing more trust than the US and France and China showing less trust. In the UK severity of influenza and vaccine safety were predictors of self-reported vaccination for healthcare professionals, whereas the general public, who had a ‘coping’ attitude to influenza vaccination based on factors such as their age (>65 years), presence of a risk factor or a scary health experience as a child. Healthcare professionals who were trustful and confident about influenza vaccination were significantly more likely to be vaccinated and to advise their patients to get vaccinated. In the general public, those aged 60+ were more likely to be vaccinated if they were classified as ‘trustful’ using the acceptance index whereas for those aged 18+ this was not such a strong predictor. These results showed that understanding what matters to people is important for developing effective communication to reduce vaccine hesitancy.

This importance of tailoring message (personalisation) to different profiles was illustrated by Nicolas Fieulaine with examples from a French national influenza vaccination communication campaign and a local general vaccination communication campaign. The impact of two waves of the influenza vaccination national campaign was assessed in a sample of 183 people aged >65 years. The campaign communicated the future benefits of influenza vaccination only. Using dedicated tools, the participants were classified as future or present orientated. It was found that over the two waves the intention to be vaccinated for the future orientated participants increased slightly, whereas for the present orientated participants, it decreased, showing that the same message can have a dissuasive effect depending on ‘receptor’s’ profile.



be measured. Vaccine acceptance needs to be considered in context, as while most people are hesitant for specific vaccines, not globally, others are mistrustful for all vaccines. This differential hesitancy needs to be taken into consideration in communication interventions. Behavioural insights (sometimes called behavioural economics), such as nudges have been used to examine the intention to implementation gap. These interventions aim to alter the architecture of available choices, thereby changing their behaviour, not attempting to alter their beliefs.

Two speakers presented their work on how to design tailored communication interventions to increase vaccine uptake in two different settings. Cath Jackson presented the results from a study of attitudes and uptake for general vaccination in various traveller communities in the UK and Rachel Démolis presented the results from an anthropological assessment for oral cholera vaccine acceptability and uptake in Mozambique.

The difficulties for ensuring that traveller communities have adequate vaccine uptake are different from the general community. Their nomadic life style and their cultural differences present specific difficulties and differences exist also between traveller communities. The results from their three-phase qualitative study based on a social ecological model involved interviews with travellers, focused on childhood and adult vaccination and interviews with healthcare providers. This was followed by workshops during which the travellers and service providers initially worked separately to rank interventions by potential impact, and then they came together to agree on the top five interventions that were the most acceptable and feasible. If an intervention was considered to have a high potential impact but could be challenging to implement the groups were encouraged to discuss how these difficulties could be overcome. The importance of this approach to identify interventions is that it was driven by the views of the communities and healthcare providers concerned by the problem.

Rachel Démolis presented the results from a pilot anthropological field study, VaxiChol, that examined the cultural barriers and health-seeking behaviours concerning the uptake of an oral cholera vaccine, with the aim of providing data to decision makers. Access to the 'field' involved a difficult, long process that was recorded in a field diary. The results showed that many individuals had no confidence in vaccines, but also they had no confidence in the healthcare system or the political system. For example, many asked why a vaccine rather than water purification interventions to prevent cholera outbreaks. The results showed the



them. They found that personal stories, illustrated with photos were more positively received by their users.

Vaccines Today is an online discussion platform and an information source for vaccines and vaccination. It provides an interactive forum for informed debate on issues around vaccination and brings together various stakeholders to share their views. The content of Vaccines Today is produced through interviews with experts from academia, patient groups and industry, and also reports based on scientific literature and conferences. The articles are written in a journalistic, factual style, without being always 'emotional'. Gary said that blogs seem to attract users, particularly one entitled 'how measles can change a life' that shared the story of a father whose son developed subacute sclerosing panencephalitis, a rare, but always fatal, late complication of an early age measles disease. Among the videos that have been published to explain various concepts in vaccines and vaccinology, the video on herd immunity is the most popular.

Sebrina Cecconi works with the ECDC to translate vaccination communication guides for healthcare professionals. The ECDC provides the guides for 28 countries that have different languages and different cultures. She said that although good translation is important, it is also important to adapt the translation culturally. She has adapted a five-step method that has been used for shorter documents, such as quality of life assessment tools. This involves having a country-based team with representatives of all stakeholders with coordinators who have a good local network. The translation should be done by a local person, not a multi-language agency, and the translator must be pro-vaccination. Back-translation is used to control the quality of shorter documents, but this is not possible with longer documents, therefore the quality is controlled by content experts who speak English and the local language. The ease of comprehension, which is a key step in the process, is assessed using focus groups and interviews with end-users and other stakeholders.

Ruchit Nagar presented a project called Khushi Baby, (Khushi means Happy in Hindu). Every year 500,000 children aged <5 years die from vaccine-preventable diseases in India. In rural communities, where the literacy rates are often <20%, vaccination clinics are organised but mothers are often unaware of the importance of vaccination and which vaccines their children should have. In addition, there is a lack of data about the children's vaccination history which is usually recorded on a 'vaccination card' kept by the mother who may forget to bring it with



them to clinic. The project developed a digital health card in the form of a necklace on a black string which motivates mothers and stores the data that can be read and updated by a hand-held device. This necklace was developed with input from the community and has been found to be well accepted by mothers; the black thread is a cultural symbol for protection against the evil eye. The system can be used to send a voice mail appointment reminder in the mother's dialect. A small pilot trial in which 214 children were randomised to the necklace group or standard care control group showed that the necklace was 5.4-times less likely to be lost by the third vaccination the vaccination card. Vaccine uptake was similar in both groups, but the trial was not sized to test for a difference in vaccine uptake. Currently a larger-scale trial is being organised that should be able to show a difference. The necklace has been shown to be safe and can be removed when the child sleeps. The mothers receive the necklace during their antenatal follow-up and their data is also stored on necklace.

Summary of session 2: Provider-based interventions

This second session consisted of three presentations on provider-based interventions. Two of these presentations focused on tools that can be used by healthcare providers (HCPs) when talking with parents about childhood vaccination and the third presented results with a tool, MoVac-flu, used to identify clusters of HCPs based on their risk perception and vaccination behaviour. All three presentations explored the role of motivational interviewing in countering vaccination hesitancy. Motivational interviewing involves addressing a person's uncertainties to understand what could motivate them to change using a collaborative, goal-oriented style of communication, with particular attention to the language of change.

Julie Leask presented SARAH (Support And Resources to Assist Health professions) a tool that is being developed in Australia with the aim of providing help HCPs to identify where parents are on the vaccine hesitancy continuum and provide communication strategies that correspond with the degree of hesitancy and type of the parents' concerns. The development process involved 26 interviews with GPs and nurses and 11 focus groups of parents with



accepting, cautiously accepting, hesitating and selective/delaying attitudes to vaccination. The results from the interviews showed that the HCPs wanted straightforward interactions with accepting parents and to avoid cueing hesitancy in the cautiously accepting parents. They also highlighted a need for better, time-efficient resources for communication with hesitant parents. Declining parents were reported to challenge their professional identity. The results from the focus groups clearly showed that the patients' information needs varied in relation to where they were on the hesitancy scale. Based on this, SARAH has been developed to enable HCPs to carry out motivational interviewing and tailored communication (not content but how it is presented). SARAH is based on five knowledge tools and will be available in an electronic version. It will be complemented with training in communication with declining parents to use motivational interviewing for declining parents to identify if they are concerning about specific vaccine(s) or disease(s). There are a series of open questions that are designed to focus the conversation, using moderated language and the tool includes recommendations. This project will continue with feasibility and pilot testing of SARAH from January 2017 to June 2018.

During the discussion it was suggested that communication with HCPs outside the academic setting might be difficult, and that while training graduates/post-graduates would be possible, the most effective might be to train the Australian GP registrars. In Australia, childhood vaccine uptake is generally very good, so it might be necessary to target specific areas of Australia where uptake is lower to be able to assess the efficacy of SARAH for decliners. Arnaud Gagneur then presented the PROMOVAC concept and the studies that are based on this. PROMOVAC explores the use of motivational interviewing combined with Prochaska's transtheoretical model, which describes the process from thinking about an action to doing the action in the context of the decision to vaccinate: pre-contemplation (not yet ready), contemplation (ready), preparation and action (ready). The current strategies of education and information do not seem to be optimal in promoting acceptable uptake of childhood vaccines. Since vaccination starts at 2 months of age, it was decided that intervention is required at birth. The possible interventions for each of the Prochaska's steps were identified and have been or are being tested in a series of studies: the PROMOVAC studies. The first feasibility and acceptability study in Sherbrooke University hospital nursery showed that 97% of parents who participated would recommend the intervention to other parents. There was a 15%



important to ensure accessibility to vaccination for all staff irrespective of when they work (day/night, week/weekends). In the US, influenza vaccination is mandatory for healthcare workers in many states and although this was badly accepted initially, it now generally well accepted. The strategy has been associated with lower absenteeism, lower risk of infection, and the need for fewer agency staff, and therefore saves money. In Europe, some countries do not have recommendations for healthcare workers and consider that there is insufficient evidence for efficacy, so mandatory vaccination would be difficult. It was suggested that if patients could refuse to be treated by an unvaccinated healthcare worker, it could increase vaccination uptake.

Summary of session 3: Public engagement approaches

The third session included three presentations on how strategies aimed at the public to improve vaccine uptake. Cornelia Betsch started by reminded us that the stories we heard during childhood taught us to look out for risk and the ‘bad guys’. During the 2015 measles outbreak in Germany, using Google Trends, it was found that the public searched for information on vaccine side effects which took them to anti-vaccination sites since side effects is a major component of the message on these types of sites. Even only 5 to 10 minutes exposure to biased misinformation on these sites is a threat as it increases the perception of the risk of vaccination and decreases the perception of the risk of not vaccinating and therefore decreases the intention to vaccinate. The public search for information about how adverse events occur, not about the likelihood that it will occur; we are generally not good at processing statistics such as risk information. Cornelia’s group performed a study using a fictitious disease and associated base rates of adverse events with vaccination. Narratives were found to have the strongest effect on risk perception. Both emotional and un-emotional narratives had similar effects on the perception and intention to vaccinate and the length of the narrative did not have an impact. In addition, unexpectedly, the level of infection risk for the fictitious disease (low or high) did not influence either risk



policy changes to child benefit in Australia which link certain payments to parents (child tax reallowance and childcare payments) to the obligation to be up-to-date with their vaccination schedule. Only children with medical exemptions do not have to be vaccinated, so conscientious objection is not considered as a reason for non-vaccination. Since this change the vaccination rates have increased to coverage rates have now reached 93% at 1- and 5-years for the first time (compared with 91.2% and 91.5% in 2012-2013). How far this 'loss of freedom of choice' can only be taken is dependent on the limits of political acceptability. During the discussion it was suggested that 'fear' narratives could improve vaccine uptake, if they were backed by evidence, in the right context. In the US, it would not be possible to link payments to parents to being up-to-date with vaccination because, although certain, poorer, parents receive food coupons, it would be not be politically acceptable to refuse to give them to parents who children who were not up-to-date with vaccination. In two Australian states (Victoria and Queensland) there is a no-job no-play policy whereby official childcare facilities receive additional subsidies if they only accept vaccinated children, and during an outbreak, unvaccinated children are excluded from the official childcare facilities in all states. Kerrie Wiley then went on to talk about their MumVacc study in Australia to understand vaccine hesitancy and improve uptake of influenza and pertussis vaccination in pregnant women. This was a mixed methods study involving 815 women who were surveyed, 20 semi-structured qualitative interviews. In Australia, for antenatal care, pregnant women can be followed by their GP combined with specific visits to a hospital antenatal clinic; vaccines are available in their GP office. Alternatively, women can go to a hospital antenatal clinic (some of which offer vaccination) or to a midwife-led birth centre (where vaccines are generally not available). They found that women were 20-times more likely to be vaccinated if their carer recommended it, but GPs were not confident about their knowledge and they need more information. Many women were motivated by the disease risk for their infant, not their own risk. They found three main types of women going from quiescent, active and proactive with different information seeking and vaccination behaviours and different ways of interacting with their doctor. Based on this analysis, tools have been developed for use during antenatal visits to provide information and help decision making for influenza and pertussis vaccination. These tools are also linked to evidence-based information about the risks of the diseases and the benefits/risks of vaccination. They are currently paper-based but it is planned



to develop electronic versions. A feasibility study is ongoing with healthcare providers and a pilot study is being planned. It is planned to assess the tools in different ethnic groups in Australia. During the discussion it was suggested that midwives should be partners in the strategy and that they could present vaccination as a ‘natural’ process to engage the mothers more.

Summary of session 4: Behavioural insights

In this session three presentations discussed how different aspects of behavioural science could help to improve vaccine uptake. Saad Omer started by showing the relationship between values, attitudes, intention and action. Strategies to overcome vaccine hesitancy do not attempt to change values. He went on to show that we can use cognitively-based, affectively-based or a combination of approaches to selling things like cars and this can be adapted for vaccine hesitancy. Results from a study in pregnant women comparing a cognitively-based iPad app with an affectively-based video shown on an iPad in the gynaecologist’s waiting room showed that 50% of the women from the iPad group received perinatal Tdap vaccination, compared with 29% in the video group. Provider recommendation enhanced the uptake in both groups, but was higher in the video group. More women in the video group said they felt engaged and could understand and relate to the video, compared with the iPad app, although about 90% in both groups said they learnt something about vaccines. No effect was seen on influenza vaccine uptake, suggesting a vaccine-specific effect and therefore the need for vaccine-specific interventions, as has been seen in other studies. The study was performed in December/January at the end of the influenza vaccination programme and the pregnant women had not been vaccinated, making them a difficult target group, as they had probably already decided to be vaccinated against influenza. In another study comparing the parent attitudes about childhood vaccines (PACV) short scale (5 items) and the five categories of vaccine acceptance identified by Gust, it was shown that there is good correlation between the tools and since the PACV scale is easier to administer, this



could be used to classify parental vaccine hesitancy and then to design tailored interventions, based on these classifications, to address their specific needs. Saad then went on to present the concept of the moral matrix, based on values, which are both hard-wired and acquired. These moral matrices for the Gust categories of vaccine hesitancy are different suggesting that we need to have different communication strategies. He showed that authority was significantly associated with low vaccine hesitancy (as defined on the PACV5 scale) and liberty and purity were significantly associated with high vaccine hesitancy. People are generally not good at understanding statistics and are influenced by recent information they relate to. This was illustrated with the situation of polio vaccination in Nigeria where the stories told by the population showed that they thought they were being given medicine for a disease that they do not see and the rather give vaccines to children, the money should be spent on sick people at the hospital who cannot afford treatment. Listening to these stories can help us understand some of the barriers to the complete eradication of polio by the vaccination programme. During the discussion it was said that using ‘attitudes’ as the outcome when assessing interventions because they are ‘easy’ to measure, but in the end it is important to measure vaccine uptake to assess the public health benefit.

Nick Sevdalis talked about implementation science and its role in evaluating strategies to improve vaccine uptake. When asking the question ‘does my intervention actually work’, particularly for behavioural interventions, we need to know if it is the intervention as designed or the intervention as delivered and the level of fidelity. In trials, scientists generally deliver the intervention with high fidelity, but when the intervention is being implemented in the real world, it may be adapted to correspond to local constraints. The types of interventions used for vaccine hesitance are complex and have multiple moving parts, so need to identify which are essential. The evaluation of these interventions require knowing who it should work for, how, in what context and any unintended consequences from the implementation outside the trial setting. Knowledge transfer is not a straightforward transfer from evidence to delivery in routine settings (i.e. implementation). There is a gap between research and the real world, partly explained by the different aims. For example, in a clinical trial we maximise the chances that the intervention will work, in contrast to the real world where we are more interested in the sustainability. In clinical trials the participants are highly selected, whereas in the real world we want wide-spread adoption and, unlike in clinical trials, the staff



rational, logical, systematic approach, based on behavioural theories, which is flexible and adaptable for the real world setting, similar to commercial marketing. He defined health literacy as the ability to access, understand and use health information. Although the objectives of social and commercial marketing are different, the approaches used are similar. The first step involves listening, which should allow us to understand the target and their behaviour to gain insights to be used to tailor the strategy. The recent Ebola outbreak shows that we are not good at listening; the message sent to those infected was go to an 'isolation' centre - not go to a 'treatment' centre. The next step is the matching of interventions to the determinants of vaccine hesitancy and vaccine uptake. Based on a literature review, interventions were classified as control, inform, design, educate and support. These were used to produce a matrix of interventions and determinants. Lack of recommendation and inconsistent advice from health care professionals, an important determinant, was investigated in a study commissioned by ECDC with health care professionals from four countries. They said that their concerns included that there were too many vaccines, the prevented diseases are no longer around, they were uncomfortable talking with patients about their concerns and side effects and safety are perceived to be the doctor's fault. The next step is the sustainability of interventions which requires contextualisation. This requires putting the insights / intelligence / evidence into meaningful and real contexts where they can be applied to create social good, health and wellbeing. It is equivalent to testing, enabling, learning and acting from a social marketing perspective. Stakeholder engagement is important. Since ECDC does not have a remit to act directly in the individual countries, they have produced a guide presenting a 5-step approach to translation and adaptation for use in the countries. Contextualisation also requires public engagement and policy advocacy. There could be a role for intermediaries for overcoming vaccine hesitancy, similar to the role played by doula in childbirth. Also it is important to 'unbundle' the research so that we have evidence for individual vaccines since vaccine hesitancy is generally not for all vaccines, and the reasons could be different for different vaccines, and therefore tailored interventions are needed. In general, we need to look more at the grey literature with the aim of improving visibility and integration of our research. During the discussion, it was suggested that during the market research phase, the fact that information will be processed differently if the person is depressed or is a substance abuser is not taken into consideration sufficiently. Franklin suggested that in group discussion it would



be possible to ask 'how are you today' and correlate the response with the output. Researchers are not necessarily trained for this type of research, and not all those trained for motivational interviewing perform the interviews in the same way, so it is important to develop quality standards for researchers.

