Symposium on Public Confidence in Vaccines: Building Trust, Managing Risk
Meeting Report

London, UK
25 April 2014
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Executive summary

This one-day symposium, organised by the London School of Hygiene & Tropical Medicine and the Network for Education and Support in Immunisation (NESI), University of Antwerp, brought together nearly 100 international vaccination and risk experts to discuss “Public confidence in vaccines: Building trust, managing risk”.

The objective was to discuss vaccine confidence issues in the context of broader principles of risk communication and risk management. The meeting consisted of presentations followed by discussion sessions, which are summarised in this report.

A historical perspective on public trust in vaccines

- Vaccination opposition started with the first vaccine: smallpox
- Many of the main reasons for vaccine opposition in the 19th Century still apply today:
  - Principles were not well understood
  - Vaccination perceived as ineffective
  - Vaccination perceived as not safe
  - Religious and philosophical concerns
  - Resistance to compulsory vaccination
  - Demand is influenced by the perceived severity of the disease

- The challenge for the next generation of vaccines, will be to develop strategies that emphasize the overall public health benefit as well as individual protection.

- The power and challenge of vaccines is that they not only eliminate disease, but also the memory of the disease.

Vaccine confidence: A global overview

- Peoples’ feelings and perceptions of risk are highly varied and important when considering vaccine hesitancy. Risk drivers vary between individuals and cultures, so it is important to understand these influences at a local level.

- The internet has fuelled the ability of like-minded individuals and groups to share common sentiments, both for and against vaccines, at unprecedented speed and reach.

- The published literature on strategies to address vaccine hesitancy is limited, especially from regions where the majority of the world’s children live.

- Vaccine hesitancy causes and impacts are complex and context-specific. Politics and local issues need to be understood.

- Public forums, balanced dialogue, and increased awareness about the process are important when discussing vaccination with stakeholders. A top-down approach needs to be avoided when communicating about vaccination.

- Public education needs to include a more long-term perspective on vaccination.

- Healthcare workers need education and support.

- Journalists also need regular updates on new vaccines and new research findings as they evolve.
## Risk and decision making in the world today: The context for vaccine confidence

- Risk communication is challenging for a variety of reasons: Social amplification/attenuation; narrative; deliberation; optimistic bias; trust/no trust.
- The vaccine community needs more trusted third parties who should be nurtured through dialogue and trust building.
- Vaccination needs to be administered by trusted local individuals.
- Gatekeepers can block vaccination and therefore they need to be identified and worked with as part of broader communication and vaccine delivery strategies.
- Risk communication should focus on actual figures and absolute risk, bearing in mind that these are often based on estimates and models, which are less sensitive to change. The key is to bring numbers and data to life and translate them in a meaningful way.
- There is a need to focus on how to “unscare the scared”. People fall on a continuum of awareness and acceptance, and therefore different approaches need to be developed for different people.
Agenda

The agenda for the meeting is provided below.

**Opening plenary**

9:00  Welcome

9:15  **A historical perspective on public trust in vaccines**

    José Esparza, Bill & Melinda Gates Foundation

9:45  **Vaccine confidence: A global overview**

    Heidi Larson, Director, The Vaccine Confidence Project, London School of Hygiene & Tropical Medicine

10:15  **Q&A/Discussion**

10:45-11:15  **Risk and decision-making in the world today: The context for vaccine confidence**

    Ragnar Löfstedt, Director, King’s Centre for Risk Management, Kings College London

    Glen Nowak, Professor and Director of Center for Health & Risk Communication, University of Georgia, USA

    Fred Were, Department of Paediatrics and Child Health, University of Nairobi, Adjunct Professor and Head of Newborn Services, Aga Khan University, Nairobi

11:15  **Q&A/Discussion**  Moderator: Nick Perkins, Director of SciDev.net

12:00  **Lunch**

13:30  **PANEL: Multiple perceptions of risk and trust**

    Adam Finn, Professor of Paediatrics, Institute of Child Life & Health, University of Bristol

    Xavier Kurz, Pharmacovigilence, European Medicines Agency (EMA)

    Dan Salmon, Deputy Director, Institute for Vaccine Safety, Johns Hopkins University

    **Perception of risk in times of insecurity: Syria and Pakistan**

    Najwa Khuri-Bulos, Professor and Chairman Pediatrics Department, Jordan University Hospital, Jordan

    Sherine Guirguis, UNICEF, Senior Communications Manager, Polio Eradication, UNICEF

    **Industry perspective on public confidence in vaccines**

    François Meurice, GSK Vaccines, Vice President Global Medical Affairs - Scientific Affairs and Medical Education

    Angus Thompson, Senior Director, Vaccination Policy & Advocacy, Sanofi Pasteur

12:30  **Q&A/Discussion**

13:15pm  **Tea/coffee**

3:15pm  **PANEL: Strategies moving forward**

3:45pm  **Building trust, managing risk: What works?**

    Alfred Pach, Senior Research Scientist, International Vaccine Institute, S Korea

    Carine Dochez, NESI, University of Antwerp

5:00  **Meeting concludes**
Introduction

Dr Heidi Larson, London School of Hygiene and Tropical Medicine (LSHTM), opened the symposium by welcoming the delegates and highlighting that the objective of the day was to discuss the broader aspects of vaccine confidence outside of specific vaccine and immunisation issues. The meeting was organised in conjunction with the annual meeting of the Oversight Committee of the Network for Education and Support in Immunisation (NESI). It was also considered appropriate to discuss vaccine confidence, given the work that is being conducted at LSHTM, and the fact that it was the start of World Immunization Week 2014 (24–30 April). Dr. Larson highlighted the importance of communication in this era being dialogue-based rather than instruction-driven. She noted that the World Immunization Week themes: “Know, Check, Protect” and “Are you up-to-date?” should also include understanding: “Do you want to be?”

To make the symposium more widely accessible live streaming was available at http://new.livestream.com/accounts/719701/events/2946158 and people could post comments on Twitter at #sopciv.

A historical perspective on public trust in vaccines

Dr. José Esparza, then at the Bill & Melinda Gates Foundation, noted that some of the lessons from the past could be applied to the present and future. He provided a brief overview of the evolution of the immunization concept, focusing on the inoculation of the smallpox (variolation) and the development of the inoculation of the cowpox (vaccination). He then described the opposition to smallpox vaccination in 19th Century England and concluded with a discussion on the power of vaccines.

The smallpox vaccine was developed by Edward Jenner in 1976 and the First UK Vaccination Act of 1840 provided for free vaccination for the poor. The first anti-vaccination responses in England were observed in 1853 after the passing of the second Vaccination Act, with rioting in response to compulsory vaccination for the first three months of life and punishment for those parents who failed to comply. There was large-scale popular resistance after the third Vaccination Act of 1867.

Six reasons for opposition to vaccination in the 19th Century, the majority of which, mutatis mutandi, still apply today, were as follows:

1. Principles were not well understood (especially after the Age of Enlightenment)
2. Competition with variolation (which legally coexisted with vaccination until 1840)
3. Vaccination is ineffective
4. Vaccination is not safe
5. Religious and philosophical concerns
6. Resistance to compulsory vaccination.

Dr. Esparza concluded his presentation by stating that the power and challenge of vaccines is that they not only can eradicate disease, but also the memory of the disease.

Discussion/Comments

Q. Is there any information on the differential development of memory, given that people who do not remember the disease are opposed to vaccination, and also there is opposition in those patients who do know the disease?
A. Evidence from risk/benefit publications show that there is a decline in vaccination until there is an outbreak, when the public demand tends to increase. The challenge is to create a "market" for vaccines before the epidemic occurs. Demand also depends on the perceived severity of the disease.

Q. Risk communication is challenging given that vaccines are not 100% safe or effective. Would you like to comment?

A. The next generation of vaccines may have a lower level of efficacy than some of the existing vaccines, and the challenge will be to develop a strategy to convey that there is not only the benefit of individual protection, but also an overall public health benefit, but also that the individual is protected.

Q. Are there any analogies or ways that we can reframe our communications, given that vaccines may be only 50% effective in the future?

A. At least some of the future vaccines (such as malaria, dengue or HIV) will have their major benefit when used in combination with other prevention interventions.

Q. Is there any historical documentation on how vaccination moved to other countries outside Europe?

A. Vaccination rapidly spread to Europe and, from there, to the rest of the world. For example, Charles IV of Spain sent an expedition to vaccinate his colonies around the world. Because the vaccine was conserved during the long trip by sequential vaccination of children, this approach has been referred to as the “warm chain”.

Vaccine confidence: A global overview

Dr Larson stated that the perceptions of vaccine risks are global and highly varied. Also the influences on risk perceptions – such as religious and ethical beliefs, alternative notions of the immune system and naturopathy vaccine safety concerns, and conspiracy theories – vary between and within countries, as well as varying over time and by vaccine. It is important to understand these influences from both communication and management perspectives.

Perceptions are also about motives including government control. No other health intervention is regulated and managed by governments for entire populations to the same extent as vaccines. If individuals or sub-populations have trust issues with government, this can affect confidence in vaccines. Drivers of public trust in vaccines can be swell beyond the scope of an immunisation programme. Partners outside the health domain are needed to support and understand risk management. The AIDS movement is a remarkable example of a multidisciplinary approach. Dr Larson highlighted the role of social media in the amplification of risk. The internet has fuelled the ability of like-minded individuals and groups to share common sentiments, both for and against vaccines, at unprecedented speed and reach. In 2013 the World Economic Forum highlighted “digital wildfires in a hyper-connected world” and “the dangers of hubris on human health” as dominant global risks, which when considered together captures the current vulnerable state of vaccination confidence.


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Vaccine Confidence: Building Trust, Managing Risk

(Figure 1). The map can be used by countries to identify their local issues and ensure appropriate communication.

Figure 1. Determinants of vaccine hesitancy (source: Larson et al. Vaccine 2014; 32:2150–9)

Vaccination hesitancy is just one of the many reasons for non- or under-vaccination. The causes and impacts of vaccine hesitancy are complex and context-specific. There is no single cause of hesitancy that can be easily addressed by a simple intervention or activity. Dr Larson concluded by referring the work of P Slovic² who talks about risk as feelings (fast, instinct, emotional), risk as analysis (logic, reason, scientific) and risk as politics. The immunisation community has excelled at the scientific analysis of risk but has a long way to go with understanding and addressing the domains of feelings and politics.

Discussion/Comments

In a US survey, conducted in 1955, polio was ranked second as a concern after an atomic attack. However, a few months later when a vaccine was available, people were less concerned about polio disease. This highlights the importance of feelings and fears. The fact that polio is no longer perceived as a serious disease risk is a challenge to the polio eradication initiative

People have different perceptions of risk and these vary depending on the environment. The impact of people embracing their human rights to decline vaccination had not been anticipated.

**Q.** What mechanisms would you use to incorporate non-expert stakeholders in early deliberations about vaccines?

**A.** Some groups want public forums and more awareness about the process. You also need to take into account local issues.

While negative information can spread through peer-to-peer networks, there are examples of networks spreading positive information people are influenced by what their peers are saying. We need to get away from the top-down approach when communicating about vaccination.

**Q.** How can we modify risk perception when the disease is invisible? How can we make the risk more salient?

**A.** We need to bring back long-termism into public education. There is a need to put vaccination into perspective that it is not just for now; a historical life perspective needs to be encouraged.

Healthcare workers need more support to help build their confidence and develop their dialogue in response to questions about vaccination and addressing different risk perceptions such as the number of injections that pregnant women are prepared to tolerate.

Some vaccination campaigns, such as the polio eradication initiative has been a victim of politics and non-expert media coverage. There is a need to understand the local politics in many situations. The worst situation is when safety issues are confused with politics, which aggravates the issue.

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**Risk and decision-making in the world today: The context for vaccine confidence**

**Moderator:** Nick Perkins, *SciDev.net*

**Risk communication in the 21st century**

Professor Ragnar Löfstedt, *Kings College London*, noted that risks are viewed differently. He introduced the spectrum of determinants of risk tolerance drawing from Sandman’s model of determinants of risk tolerance from issues influencing higher-to-lower tolerance for risk:

- Natural – Technological/unnatural
  - Voluntary – Involuntary
  - Familiar – Non-familiar
  - In control – Not in control
  - Treated fairly – Unfairly

He also discussed risk perceptions and risk communication challenges in situations where there is high frequency/low consequence versus low frequency/high consequence, such as during the 2009 H1N1 pandemic.

Risk communication is challenging for a number of reasons: tendency for social amplification or attenuation of risk perceptions; need for narrative, e.g. people remember human stories and anecdotes more than numbers; deliberation; optimistic bias; other influences determining
trust/no trust. Other challenges include the media amplifying risks and reported adverse events. There is also a “scale-effect”, i.e. when many individuals are vaccinated at the same time there is higher visibility of any side effects that may occur.

Going forward Professor Löfstedt offered some possible solutions:

- Promote media communication guidelines
- Find neutral, trusted parties to speak on the sector’s behalf
- Help regulators and policy makers become better communicators
- Ensure that scientists themselves become more honest communicators
- Promote the establishment of a genuine European Academy of Sciences
- Help pharmaceutical regulators, such as the EMA and MHRA, establish independent risk communication advisory boards, such as the one that the FDA already has in place
- Help ensure that pharmaceutical regulators and other bodies pre-test their communication messages regarding vaccines
- Support the establishment of a formal working group on risk in the European Parliament
- Ensure that a communication director within a regulatory agency is part of the executive function

**Vaccine confidence: Challenges, progress and possibilities**

Professor Glen Nowak, *University of Georgia*, highlighted the current vaccine landscape, the implications of more vaccines, and the expectations and assumptions. A lot of progress has been made in building public confidence in vaccines over recent years; however, it is important to recognise that people fall along a continuum of awareness and acceptance and vary when it comes to interventions (Figure 2). Different approaches are needed for each group of people.

![Figure 2. Continuum of awareness and acceptance of vaccines.](image)

Varying levels of confidence and sometimes hesitancy are precursors to vaccine acceptance. Confidence has multiple influences: recommendations regarding the vaccine; those implementing the recommendation; vaccine safety, efficacy and value; and, the vaccination schedule. Assessment, monitoring and fostering of confidence is also important. Professor
Nowak highlighted the global efforts by the SAGE Working Group on Vaccine Hesitancy and the LSHTM Vaccine Confidence Project, and the Centers for Disease Control and Prevention’s efforts, including the recent human papillomavirus (HPV) vaccination campaign.

**SAGE Working Group and Eastern Africa experience**

Professor Fred Were, *University of Nairobi*, summarised the role of the SAGE Working Group in addressing vaccine hesitancy. The Group has been charged with a number of responsibilities including: creating a definition that is globally acceptable for vaccine hesitancy; define the landscape and the drivers of vaccine hesitancy; and, identify indicators for monitoring vaccine hesitancy.

In Eastern Africa levels of vaccine hesitancy have been explored not only among individuals but also in communities, and among healthcare providers and politicians. In his presentation Professor Were highlighted that Rwanda was the best performing country in terms of tetanus vaccination; however, immunisation coverage is still only 81%. There have also been problems with acceptance of the HPV vaccine in Uganda and Kenya as parents have associated it with sexual activity rather than prevention of cervical cancer. Patients also wait for the healthcare providers to go to them, rather than attending a clinic.

Professor Were noted the Kenyan public’s misconception that introduction of a pneumococcal vaccine would remove pneumonia from the top three causes of death within one year.

**Discussion/Comments**

**Q.** How confident can we be, when reaching out to trusted third parties and organisations, that they are neutral rather than biased?

**A.** The vaccine community needs more friends outside the health community. Trusted third parties need to be identified and nurtured by communicating with them proactively and establishing their trust.

In terms of fostering quality media, it is important to work with them, keep them up to date and help them get the story right/accurate. Once a relationship is built they will call when they need expert advice. If the media gets a story wrong it is important to call and correct them.

**Q.** What do we need to be doing to have an open dialogue about risk through social media that is beneficial?

**A.** It is hard for government agencies to use social media, and therefore it is important to partner with organisations that do use social media. There is also a need for health information materials to be accessible and user friendly.

**Q.** Can you comment on the use of relative risk versus absolute risk in communicating comparisons?

**A.** The relative risk gets lost when talking about the contribution to the decrease in mortality. It is easier to talk about the actual figures and absolute risk.

As communicators we need to tell people that vaccination is going to have an impact. However, it is often overlooked that numbers are based on estimates and models, which are less sensitive to change. We need to be mindful of the assumptions of the public, media and healthcare providers and how these can be managed.

Examples of where engaging with the media has worked include: using a respected local journalist to talk to the community as they speak a different, more accessible language than

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3 Available at: [http://www.cdc.gov/vaccines/who/teens/products/print-materials.html](http://www.cdc.gov/vaccines/who/teens/products/print-materials.html)

and tips for health care providers on talking to parents about HPV vaccine

Available at: [http://www.cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html](http://www.cdc.gov/vaccines/who/teens/for-hcp/hpv-resources.html)
most medical professionals; inviting the media to prepare stories and have them reviewed by medical professionals who can also mentor the journalists; in Uganda UNICEF are using short message service technology (U-report) to ask people questions about a range of issues including vaccination and also to build up their trust; in the Ukraine UNICEF invited the media to off the record sessions which changed stories.

Coming back to the role of the authorities in the social media conversation. A major activity is information seeking and information sharing. A colleague has mapped global Twitter conversations about vaccination over a six-month period in 2013 and identified the following: negative re-tweets are in the minority; the majority of re-tweets are from the US Government; and, in the UK, the NHS has a strong presence. This demonstrates that there is a role for the provision of information, and social media can be used to disseminate the information.

Q. With regards to communication and the use of anecdotes, is there any experience in Europe or the US of how to do this, being mindful of political correctness?

A. You need to use comparisons that compare like with like. Also, don’t just use anecdotes. When communicating you need to be authoritative, put forward your messages and try to use some examples.

The key is to bring numbers and data to life and translate them in a meaningful way. Empathy is also needed and examples used to bring discussion to life. Also, in the US you can direct people to an organisation for people who have been affected by vaccine preventable diseases.

Q. Could analysing an effective anti-vaccination strategy be helpful for developing a counter strategy?

A. Some organisations clearly have a strategy and the common core messages are known. They are also always looking for publicity opportunities; however, as a pro-vaccination organisation it is often more appropriate not to react.

When developing a strategy it is important to bring in allies who can be trusted.

Q. Social norms have a huge impact on behaviour, and it is argued that we need to be careful to not to bring attention to media articles on people who refuse vaccination. Are you aware of the impact of negative findings from a communication perspective?

A. There is a lot of effort put into highlighting social norms in vaccination, with the emphasis on the fact that vaccination is being done by the vast majority of people.

There is some level of negativity about every vaccine and what we need to focus on it how to “unscar the scared”.

Three PANELS on Multiple perceptions of risk and trust

Panel One: Scientific assessment of risk and benefit

Moderator: Dan Salmon, Johns Hopkins University

The role of clinical academics and research in generating and maintaining public trust

Professor Adam Finn, University of Bristol, presented a two-dimensional scheme that maps social behaviour. The north to south axis represents the well informed to the badly informed, whilst the west to east axis represents the independent autonomous to copying social behaviours (Figure 3).
Figure 3. Two-dimensional scheme for social behaviour.

In science we believe that choices are based on independent, well-informed behaviour (top left-hand corner of the diagram); however, a lot of decisions are made based on badly informed copying behaviour (bottom right-hand corner). There is more than one strategic option to move corner to the top really know about immunised because makes the situation have a big effect. group polarisation time educating educated. This is education has to extend to the concept that immunisation is contributing to an activity in the population which will result in less illness. People have to understand the bigger picture. Professor Finn referred to a talk in which he describes how vaccines work and why we all have a role in ensuring that they are effective\(^4\). This is an example of what clinical academics can do to generate and maintain public trust in vaccines.

**Discussion/Comments**

**Q.** You stated that the messaging should explain the public health impact; however, the messages around travel vaccination are about protecting an individual. How should this mixed messaging be addressed?

**A.** If you explain things to most people in their own terms/values they will understand. Most people have a sense of common good.

\(^4\) [http://www.youtube.com/watch?v=55wOg9fe_Ms](http://www.youtube.com/watch?v=55wOg9fe_Ms)
Benefit-risk monitoring of vaccines: The Accelerated Development of VAccine beNEfit-risk Collaboration in Europe (ADVANCE)

Dr Xavier Kurz, European Medicines Agency, presented details of ADVANCE, a 5-year project, which was initiated in October 2013 in response to the need to develop an efficient and sustainable system for rapid and integrated post-approval monitoring of vaccines in Europe. ADVANCE is developing best practice and code of conduct for benefit-risk monitoring of vaccines. Part of this project involves guidance on communication about vaccine benefit-risk to the public, which is being led by Dr Larson (LSHTM).

Panel Two: Perception of risk in times of insecurity: Syria and Pakistan

Moderator: Dr Raj Kumar, GAVI Alliance

Perception of risk in times of insecurity and social instability: Syria and Jordan

Professor Najwa Khuri-Bulos, Jordon University Hospital, highlighted the increased vulnerability and dependence of refugees. This is accompanied by a decreased trust of the "system" or authority and a publics more open to rumours and manipulation. The rate of Syrians escaping their country has rapidly escalated; more than 1 million people fled in the first five months of 2013 alone.

Currently the only vaccines given to all refugees in Syria are DTP and measles containing vaccine. There is a need to intensify the vaccination agenda to include polio, hepatitis A and possibly rotavirus.

Trust is central for a successful vaccination on a wide scale. Vaccines prevent disease; disease. Vaccination is sound can disrupt the vaccines and vaccination used for political gain, for polio outbreak by the anti-tax is in vaccines is during times of messenger should be and refugee population; provided to the refugees that are used for the rest of the population.

The risk communication strategy should be: sensitive, sincere, credible, knowledgeable and prepared. Proper pre-emptive strategies should be made to help deflect any attacks that may happen due to mass vaccination. Professor Khuri-Bulos concluded that in times of insecurity there is room for increasing the profile of vaccines to be perceived as agents of good -- an opportunity that should not be missed.

Vaccination is like a symphony. Any odd sound can disrupt the music.
Perceptions of risk and support for polio vaccination in Pakistan’s Accessible High Risk Areas

Pakistan, along with Nigeria and Afghanistan, has never eradicated polio. There has also been a ban on polio vaccination in two districts of Federally Administered Tribal Areas (FATA) for the last two years. Sherine Guirguis, UNICEF, highlighted the reality in Pakistan, which is that vaccination teams have to go door-to-door accompanied by armed guards. Which will change how vaccination is perceived. The biggest challenges for the vaccination programme are where social dynamics, politico-religious dynamics and insecurity converge. The fake hepatitis vaccination, used to confirm Osama bin Laden’s location, has thrown the competency, morality, honesty, and genuine concern for children of healthcare workers into question. Building trust in the programme, the vaccine and the frontline workers can unlock the final doors to eradication.

Sherine Guirguis then presented the results of a Harvard Opinion Research project that set out to measure the effects of building trust among 3,400 respondents in high-risk areas of Pakistan. It was found that the 98% of respondents in non-FATA were supportive of oral polio vaccination (OPV) and over 95% took the vaccine if it was brought to their door. However, there are challenges with 30% of the caregivers thinking that polio was curable, and 17% not at all concerned that their child would get sick with polio this year. Challenges in FATA regions include belief in at least one rumour (33%) and trust in the vaccinators (26%). A total of 21% thought that international organisations were responsible for organising polio vaccination, and 30% did not trust them in FATA. A total of 30% of children were at risk of missing polio vaccination.

Sherine Guirguis concluded her presentation by outlining the strategies for going forward:

- Maintain momentum in areas where people do not see polio and raising risk perception among all stakeholders
- Reach those who may be invisible to efforts
- Mitigate destructive rumour circulation
- Build trust beyond communication
- Build public relations for public health system
- Consider how realistic it is to expect demand for OPV 10 times/year.

Discussion/Comments

Discussion on variety of trust issues and trust-building approaches:

In Jordan vaccination is administered to the Syrian refugees by people they trust and not people from international organisations.

In Nigeria the problem was with the gatekeepers blocking vaccination.

In Nigeria and Pakistan the programme has focused on networks of social mobilisers and finding the gatekeepers in order to shift communication towards them.

In a recent survey of reported vaccine coverage of three regions in Ethiopia, the reported vaccination rate was checked against the actual vaccination rate. In those regions furthest away from the central organisation, actual vaccination rates were about half those reported.

Ten years ago during routine polio vaccination in India it was identified that the women had a genuine fear about the safety of vaccination, whilst the men were open to negotiation.

In Pakistan both women and men in the FATA regions held the same beliefs. Both sexes also stated that they made the decision to vaccinate their children.
Local in-depth studies on who decides whether a child should be vaccinated needs to be conducted.

Panel Three: Industry perspective on public confidence in vaccines
Moderator: Jed Beitler, Sudler & Hennessey

From vaccine hesitancy to confidence
Dr François Meurice, GSK Vaccines, presented the results from a recent internal survey of GSK worldwide affiliates, which show that vaccine hesitancy is a behaviour influenced by:

- Issues of confidence (do not trust vaccine or provider)
- Complacency (do not perceive a need for a vaccine, do not value the vaccine)
- Lack of convenience (physical access, cost, crowded schedules)
- A mixture of all three

Level of confidence, in terms of trust, safety and effectiveness, was consistently the highest impact factor in vaccine hesitancy. Efficacy or lack of perception on the risk linked to vaccine preventable diseases and safety were the most cited reasons for vaccine hesitancy in the survey.

Communication and collaboration among public health stakeholders is key. It is a complex field and we need to increase our understanding of the issues involved. The global public health community has to work together to further public confidence and trust in vaccines.

Vaccine advocacy
Dr Angus Thompson, Sanofi Pasteur, outlined some principles of good vaccination advocacy:

- Listen, Understand, Engage
- Intersection of shared values
- Give structure to complexity
- Evidence based, not assumption based
- Understand the human part of the solution
- You cannot change what you do not measure: Monitor and evaluate.

Dr Thompson briefly outlined two projects: the VaxiTrends Attitudinal Barometer and the 5As Vaccination Coverage Root Cause Framework.

The objective of the VaxiTrends Attitudinal Barometer is to generate a validated tool that can: measure attitudes and perceptions, and how they turn into behaviours; understand drivers and barriers to adult vaccination. This is in partnership with Imperial College London. The qualitative phase has just finished in six countries (France, UK, USA, Brazil, China, India), and data is coming through from the quantitative phase. The tool will be available as Open Access.

The second project, the 5As (Access, Affordability, Awareness, Acceptance, Activation) Vaccination Coverage Root Cause Framework, is based on the understanding that acceptance cannot be looked at in isolation, and is looking at the possible reasons for the gap between target and actual coverage. The idea is to devise an intuitive way of quickly focusing people’s thinking on where the problems lie.

Robust and authoritative hubs of information, which are engaging and use lay language, are needed to provide vaccines information to the public via the social media. A strategy is also needed to enable people to find the sources and share them. VaccinesToday 6 is an initiative

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6 http://www.vaccinestoday.eu/
started four years ago by Vaccines Europe, and has one of the most active vaccination sites within Europe. The aim is to provide people with the information that would help them make vaccination decisions.

Concluding his presentation Dr Thompson demonstrated how Twitter mapping could be used to identify influencers and build a positive share of voice.

**Discussion/Comments**

**Q.** Do you think there is a special role for those manufacturers who have the ability to innovate, for example, in terms of education?

**A.** Yes. We are devoting resources to the types of programmes that have been shown today as examples for others. We can also partner with other industries to encourage education.

The manufacturers in the developing countries could be encouraged to do more in terms of research and development.

PATH is an international, non-profit organisation that is supporting, for example, Chinese manufacturers with the development of Japanese encephalitis vaccine. This is an example of an important initiative for encouraging further capacity in developing countries.

**PANEL: Strategies moving forward**

**Building trust, managing risk: What works?**

**Multi-level communications and dialogue in vaccination programmes: Typhoid fever vaccination in Nepal**

Dr Alfred Pach, *International Vaccine Institute*, highlighted that communication on vaccines often does not take into account public concerns and the need for information in vaccine decision-making, particularly in developing countries. They also do not account for the multiple determinants or the array of perceptions and attitudes about vaccines. Effective health communication is crucial to public confidence in vaccination programmes.

Communication models include the vaccine acceptance model, which shows the levels of influence on vaccine use. Another model is the Communication for Development (CD4) framework (UNICEF, other agencies) which aims to facilitate communication and dialogue within and across multiple levels of influence in programme implementation and health decision-making for individuals and communities.

Dr Pach presented an example of qualitative research into the effect of communication on implementation of a typhoid vaccination project in Nepal, conducted in 77,765 school-aged children between September 2011 and January 2012. Multiple levels of communication were identified as being important: national, regional, district, community, and family/household.

End-user perceptions and responses to vaccination were also key. Parents involved in direct, interpersonal communication with individuals in the community/institution and diverse social networks were most likely to allow their children to be vaccinated.

Dr Pach concluded:

- Support and credibility for vaccination was served by engaging multiple organizations and actors at policy, institutional and societal levels
- Importance of community settings and interpersonal communication in public perceptions and decisions regarding vaccination

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• Need evidence-based and diverse forms of health communication that are sensitive to diverse publics
• ICT/social media is an opportunity for inclusive, interactive and dialog about vaccinations; engage and train at local level for education and health provider staff

Public confidence in vaccines – training of healthcare workers

Carine Dochez, NESI, University of Antwerp, noted the following issues:

• The general public has low tolerance to adverse events as vaccines are usually given to healthy people
• Expectation of safety standard is higher with vaccines compared to medicines for sick people
• Diseases against which vaccines protect are often no longer visible, so risk perception is low, and focus might be more on potential adverse events following immunisation
• Low public tolerance can lead to lower vaccination coverage.

A national immunisation programme relies on the support of well-trained medical and nursing staff. Healthcare workers have a central role in maintaining public trust in vaccination through direct communication with the vaccinated person or the caregiver. They also require good communication and dialogue skills.

The understanding and beliefs held by healthcare workers/nurses about the necessity, safety and effectiveness of vaccines not only affects their own immunisation behaviour, but also the vaccine practices of others. Confidence of healthcare providers in vaccines should be reinforced by improved scientific and public health training on vaccines during their studies.

Dr Dochez provided a brief overview of the WHO Regional Office for Africa mid-level training management course, which includes “Communication and community involvement for immunisation programmes” as one of its modules. This training programme has been shown to increase the performance of trained staff in the African Region8. WHO, NESI and GAVI Alliance have produced training videos on licensed PCV, rotavirus and HPV vaccines, and the WHO, UNICEF, USAID, NESI and GAVI Alliance have also produced a prototype curricular on immunisation for medical and nursing/midwifery schools in the WHO African region.

Discussion/Comments

There is a need to bring the vaccine developers and implementers together to prevent miscommunication. Collectively we are not speaking with one voice; a coordinated approach is needed.

The use of public service broadcasts has not been leveraged enough as a route for immunisation campaigns. There are examples of such media campaigns in Poland, Jordan and India.

Vaccine confidence is an important issue; however, the vast majority of available resources are spent on supply more than demand issues. Until we convince funding organisations to address this complex problem it is not going to be fixed. If we lose public confidence in vaccines we risk losing their confidence in public health in general. It is a complex issue and there is no simple solution.

Summing up

Dr Larson concluded that even though we have new and emerging challenges around public trust and vaccine decision-making at both public and political levels, we still need to ensure

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the provision of scientifically accurate and up-to-date information on all vaccines in accessible languages and media as a minimum. Support is needed for those on the front lines in health centres and vaccination points around the world who are faced with questions that need answers. Even that is inadequate.

It is important to keep our dialogue going; there have been a lot of valuable exchanges today and it is clear a number of people are trying to understand these issues better. In order to make a bigger leap in our understanding we need to pull our efforts together. We need a consortium of researchers and implementers to build a new body of evidence and modes of trust-building to get ahead of the trend of waning confidence.

Let’s not rest on our laurels that “the majority of people still accept vaccines” and wait for the tipping point to take concerted action.

The investment in the development and delivery of vaccines is highly disproportionate to the investment needed to ensure the acceptance of one of the most treasured public health tools.