

Underlying issues are key to dispelling vaccine doubts

Why is the same vaccine accepted in one part of the world and rejected in another? Heidi Larson tells Fiona Fleck why communicating the benefits versus the risks of vaccination is just part of the battle to gain public confidence in vaccines.

Q: How did you become interested in the public response to vaccines?

A: When I was leading communications for global immunization at UNICEF and chairing the advocacy taskforce for GAVI, the focus of my work was initially strategic communication, but I ended up spending more time than expected going out to countries that were facing challenges with vaccine acceptance. Most acute was the boycott of the polio vaccine in northern Nigeria 10 years ago, but there were other instances never reported by the media in which communities – and even governments – questioned certain vaccines. As an anthropologist, my job is to understand the social, cultural or political drivers of health behaviours – such as vaccine reluctance or rejection surrounding vaccination – and then to sit down with local vaccination teams and representatives from health ministries to discuss how best to communicate the need for the vaccine and, where necessary, strategies to prevent too much of a drop in vaccine acceptance.

Q: Would you agree with the assessment of the recent Report of the International Monitoring Board (IMB) of the Global Polio Eradication Initiative last year that the campaign requires more focus on communications?

A: Communications can't fix a problem you don't understand. I had a sign saying this on my desk at UNICEF, because people tend to think that when there is a lack of public acceptance of a vaccine, you just need to explain the risks and the benefits to them. But sometimes the lack of confidence in vaccines is not just about communicating more effectively, but about delivery issues or different belief systems or, for example in the case of polio, needing security and diplomacy strategies, which the IMB also recognizes.

Q: How can medical anthropologists help?

A: As anthropologists, we seek to understand what drives human behaviour and the method of study we most commonly use is “participant observation”, that is embedding yourself in the community often during the course of field work. Sometimes it's about paying



Courtesy of Heidi Larson

Heidi Larson

Heidi Larson is an anthropologist who has devoted the last two decades to bridging the gap between health providers and the public. In the last decade, her work has focused on increasing public confidence in vaccines. She leads the Vaccine Confidence Project at the London School of Hygiene & Tropical Medicine and is a member of the Vaccine Hesitancy Working Group of the Strategic Advisory Group of Experts (SAGE) on Immunization. She is also an associate professor in the Department of Global Health at the University of Washington, Seattle. From 2000 to 2005, she was head of communications for global immunization at the United Nations Children's Fund (UNICEF), in particular supporting the introduction of new vaccines and chairing the advocacy taskforce for the GAVI Alliance.

attention to small details that can reveal the underlying issues that are generating concerns.

Q: For example?

A: Before the polio vaccine boycott in northern Nigeria, we already saw pockets of resistance to the oral polio vaccine in Uttar Pradesh in northern India, although there was never a state-wide political boycott. Rumours were circulating in the Indian state that vaccines sterilize recipients, but when we sat down and talked with the women from these communities, we found that their concerns were different. They didn't want their children to be vaccinated by people from Delhi or other places outside their region because if there was a problem they wouldn't know who to turn to and they didn't want their children vaccinated by men. You can have all the communications in the world about the vaccine safety, but these will never change such concerns and, ultimately, people's behaviour. When you launch a vaccination campaign, communities already have their own approach to health care and we need to understand this because, in a sense, we are trying to displace it.

Q: How did you get involved in the SAGE Working Group on Vaccine Hesitancy?

A: The group was formed in 2012. It's a positive step in response to an issue that has been brewing over the last de-

cade. The biggest game changer was the polio vaccination boycott in northern Nigeria in 2003. After that, more serious consideration was given in the public health community to what had been thought of as marginal and alternative views on vaccination.

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Q: What is the significance of the new SAGE working group?

A: There used to be a polarized view that people were either pro- or anti-vaccine. Most people are in favour of vaccines, and, depending on the type of vaccine, nearly nine in 10 of them accept vaccines. Some groups are absolute vaccine refusers and are never going to change their minds, usually because they have held an alternative belief system about health, usually for a very long time. But recently more people have started to mistrust vaccines. We are seeing increasing reluctance to be vaccinated and some of these people are tipping over into becoming outright vaccine refusers. The creation of the SAGE group marks a recognition of these developments and recognizes that there

is a significant population that is not opposed to vaccines, but may need more confidence and support to decide to vaccinate themselves or their children.

Q: What does the SAGE group do?

A: The working group is preparing the background material for a SAGE review of the problem. That includes defining vaccine hesitancy and its scope and it includes doing a systematic review of all the available literature on vaccine hesitancy and, based on this, preparing an analysis of the main determinants. The working group has also been asked by SAGE to identify and evaluate existing activities and strategies aimed at addressing vaccine hesitancy. The working group draws on the expertise of its 10 members as well as other relevant experts and people who have been faced with vaccine refusal. The terms of reference are quite similar to the goals of the Vaccine Confidence Project at the London School of Hygiene & Tropical Medicine that started in 2010.

Q: And what are the determinants of vaccine hesitancy and refusal?

A: There are three main groups. First, the individual reasons related to personal belief systems or community-level belief systems. These may include everything from religious to philosophical notions, and are held primarily by people who reject artificial means of triggering an immune response or believe in alternative forms of medicine, such as homeopathy. Second, there are contextual factors, such as wars, conflicts and other external circumstances that make vaccine refusal more likely. Third, there are vaccine-specific issues, for example public concerns over an adverse event or a piece of research – sometimes faulty research, such as on the measles, mumps and rubella (MMR) vaccine by Andrew Wakefield in the United Kingdom – or over research that has been misunderstood.

Q: For example?

A: In the 1980s, a research article on a contraceptive vaccine containing tetanus toxoid as a protein carrier was misinterpreted by a Catholic pro-life network, which sent a message to Catholic communities in 60 countries telling them that the tetanus vaccine sterilized its recipients. Tetanus vaccine coverage fell around the world from Mexico and

the United Republic of Tanzania to the Philippines, where the mayor of Manila halted tetanus vaccination – a move that led to a 45% drop in coverage. WHO officials even held a meeting at the Vatican to set the record straight and engage leaders of the Catholic Church to help dispel the rumours. Similar approaches were taken to resolve the polio vaccination boycott in Nigeria when meetings were convened between WHO officials and the Organization of Islamic States.

Q: So is convincing religious groups key to gaining public confidence?

A: To an extent. Religious groups are trusted social networks through which perceptions can spread and be mutually supported by like-minded people. Last year there was a measles outbreak in the Orthodox Jewish community in Brooklyn, New York, where cases were traced to the Orthodox Jewish community in north London. These networks of people, who travel and interact, may not be ideologically opposed to vaccines but because of the tight-knit nature of that community some members may more readily accept alternative views of other members, while close contact between them allows for the spread of infectious diseases, such as measles.

Q: Vaccines can have side-effects and varying levels of efficacy, which is affected by the timing of their delivery, so questioning vaccines can be a reasonable thing to do. How do you decide which vaccines should be universally accepted?

A: Countries take several factors into account when they are considering which vaccines to include in their national immunization programmes. At a global level, the primary concerns are safety and efficacy. At a national level, the main considerations are mainly the disease burden and the cost. For instance, the meningitis vaccine is extremely important in Africa's "meningitis belt", where meningitis represents a large disease burden. When vaccines reduce the disease burden, the rationale for continued vaccination is to maintain the lower burden. For example, we have been largely successful in reducing measles incidence through vaccine protection, but unless vaccination coverage is adequately sustained, we will continue to see outbreaks such as those seen last year in countries all over the world

due to pockets of under-vaccination. Another factor that countries consider is feasibility. Is it feasible to introduce a particular vaccine given the existing infrastructure? Finally there is the important issue of acceptability. Will the vaccine be acceptable to the health professionals, who will administer it, or to the public receiving it? For example, in some parts of the world there are sensitivities around the age at which to give the human papillomavirus (HPV) vaccine to adolescent girls because it is for a sexually transmitted infection, and some parents fear girls will become uninhibited about having sex.

Q: Has the Internet become a determinant for vaccine refusal over the last decade?

A: Some people say anti-vaccine movements and vaccine hesitancy are because of the Internet. But we've had these challenges before. What's changed thanks to the Internet is the scale of the challenges, the speed with which rumours travel and the potential for worldwide dissemination. The Internet has become a massive archive of positive and negative things, so the ease with which someone with an alternative belief can build their case and disseminate this all over the world has changed dramatically in recent years. The dossier of materials that the Kano state governor in northern Nigeria put together to justify to UNICEF its decision to boycott the polio vaccine included everything from UN population control studies of the 1960s to the reports of the tetanus vaccine sterilization scare.

Q: There have been relatively few cases of polio in Nigeria over the last six months, although August to December represent the high season, most of the 51 cases in 2013 occurred in the first half of that year. What has made the difference?

A: Communication has contributed to this success, as well as a mix of political commitment, local engagement, identification of gaps and strengthened local vaccination programmes. Insecurity is still a risk, but at least there is no state-wide boycott. Keeping up the momentum of this progress in Nigeria is essential, before there are new challenges. August this year will mark one decade since the 2003–2004 boycott ended in Kano State. The best anniversary celebration would be to have no further cases in 2014. ■