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The Importance of Long-term Confidence in Vaccines and Immunization Programs: A Conversation with Dr. Lance Rodewald

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Abstract

How can health communication sustain public vaccine confidence and adapt global frameworks to local social realities? On July 18, 2026, during the MHM2026 conference at Peking University, we interviewed Dr. Lance Rodewald, Senior Advisor for National Immunization Programs at China CDC. Drawing on decades of experience at the U.S. CDC, WHO China Office and China's national immunization program, Dr. Rodewald identifies confidence as the core of the 3C model and holds that two-way listening outweighs one-way advocacy in effective health communication. In this exclusive interview, he discusses China's immunization communication strengths, non-program vaccine uptake, misinformation responses, and research advice for young scholars.

Keywords: vaccine confidence; health communication; 3C model; national immunization program; vaccine hesitancy; social listening

Introduction

"Vaccines don't save lives. Vaccinations save lives." This quote comes from the first supervisor of Dr. Lance Rodewald at the U.S. Centers for Disease Control and Prevention, Dr. Walter Orenstein, who often goes on to say, "a vaccine that stays inside a vial has zero effectiveness" (Orenstein, 2019).

The 9th Medicine, Humanity and Media International Conference on Health Communication (MHM2026) opened on July 18 at the School of Journalism and Communication, Peking University. Dr. Lance Rodewald[1], Senior Advisor for National Immunization Programs at the Chinese Center for Disease Control and Prevention, delivered a keynote speech titled Vaccine Confidence: Challenges and Opportunities. He previously served as Director of the Immunization Services Division at the U.S. CDC and Team Lead of the Expanded Programme on Immunization at the WHO China Office. He has advised China's national immunization programme since 2018 and received the Chinese Government Friendship Award in 2023.

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Following his keynote address, we conducted a nearly 40-minute dialogue with Dr. Rodewald[2]. We raised questions collected from ourselves and conference attendees. He highlighted China's remarkable achievement of high and equitable immunization coverage. He explained why he prioritizes confidence over hesitancy within the 3C model. He also discussed why fear-based communication rarely works and shared the origin of the statement that a vaccine in a bottle has no effectiveness. His advice for early-career researchers is straightforward. Communication works both ways. Listening is often more important than speaking.

Strengths, Enduring Challenges, and 3C Model Application in China's Vaccine Communication

Q1: You've worked in immunization communication across US CDC, WHO, and China CDC for decades. From your perspective, what are the most unique strengths of China's local vaccine communication work, and what is the biggest ongoing challenge?

A: From my perspective, the signature achievement of China's immunization program is its ability to maintain very high and relatively uniform coverage for vaccines included in the national program. That is more than a communication success. Communication matters, of course, but what really stands out is that the program itself works to make vaccines convenient, accessible, and available to the public. Because of that, coverage has remained relatively even across both wealthier and poorer regions. To me, that is one of the most important achievements of the program.

At the same time, the ongoing challenge is how to maintain public confidence — confidence in the vaccines, confidence in the program, and confidence in the way the system operates. If you look at vaccines outside the program, coverage is much lower and varies more by socioeconomic conditions. Although I have always felt that hesitancy matters, but hesitancy is often temporary, while confidence has to be maintained for all time.

Q2: I once heard Director Lixin Hao say that China uses social listening and the 3C model to address vaccine hesitancy. How well do these two tools work in real domestic practice?

A: I think the 3C model absolutely applies in China. The three Cs are Confidence, Convenience, and Complacency. Confidence is very important because you want people to be confident in the vaccines themselves, in the program, and in the way vaccines are delivered and monitored. Convenience matters as well, because parents have to invest a great deal of time and effort to bring their children for vaccination, especially during infancy when there are so many visits. Then there is complacency, which comes in when people begin to think, "I've never seen measles, I've never seen polio, so why does my child still need these vaccines?"

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These three factors interact and shape parents' decisions. But if you ask which one I focus on most, it is confidence, because hesitancy may be short-term, while confidence has to be sustained over time. As for social listening, I think effective communication is not simply about telling people that vaccines are safe and effective and that they should go get vaccinated. It is much better to listen first, to understand what parents are thinking and what they are worried about, and then address any questions that they raise with accurate answers. Communication is never just talking; it is also very much about listening.

Local Adaptation of Global Health Communication Frameworks and Public Attitudes Toward Non-National Immunization Program Vaccines

Q3: This conference focuses on localizing international health communication experience. When we adapt mature overseas communication frameworks to China, what is the hardest part to match with our local social context?

A: I think the hardest part is not translating a framework or importing a method in the abstract sense. The hardest part is that social context, public perceptions, institutional arrangements, and vaccination attitudes can differ from country to country. Perceptions of vaccination vary a great deal, and they are deeply local. Programs operate differently in different countries, and sometimes even the vaccines used are different, so local information is extremely important.

Immunization programs are national programs, which means communication has to fit the realities of the society in which the program operates. If a country wants the program to work well, it has to engage with society, engage with stakeholders, and especially engage with parents in thinking through what the program should look like, what it should do, what it should protect against, and how convenient it should be. What really matters is not forcing an international framework onto a local setting, but making sure the communication approach truly fits the local social context.

Q4: Many popular parenting influencers online recommend only free program vaccines and advise parents against optional self-paid vaccines. What is your opinion on this trend?

A: I would say this is not just a communication issue. Program vaccines have much more behind them than simply being free. They come with government recommendations, financing support, and a complete public health delivery system. They are officially recommended, free, and readily available, so naturally they achieve much higher coverage. Non-program vaccines are different. Parents are not necessarily uninterested in them; rather, these vaccines often require out-of-pocket payment, are not usually covered by insurance, and are more affected by cost and convenience.

This kind of hesitancy is often tied to practical realities such as payment and convenience, rather than attitude alone. That is also why, in China, one of the most effective ways to raise coverage for a vaccine is to bring it into the national program. China is already moving in that direction step by step through its national advisory mechanisms, using evidence on safety, effectiveness, burden of disease, cost-effectiveness, and supply security to decide which vaccines should be added to the national program.

Long-Term Risk Perception and Making Macro Numbers Meaningful

Q5: You mentioned in your speech that "immunization will be important forever". As new pathogens keep emerging, how can health communication help the public build long-term, rational views on health risks? How do we strike a good balance between reminding people of risks and avoiding unnecessary public panic?

A: I do think immunization will be important forever — because these pathogens aren't going away, and new ones will keep emerging. One of the keys is maintaining public confidence: confidence in the vaccines themselves, in the immunization program, and in the evidence-based recommendations that determine which vaccines are included. People need to understand that this is a program that is fundamentally good for children's health.

I like to compare it to universal education. In China, for example, there are nine years of compulsory schooling. People may debate whether the curriculum has too much science or math, or whether it should include more of this or that — but no one seriously argues that children don't need to be educated. Immunization is very similar.

These diseases aren't disappearing; we'll likely need to vaccinate indefinitely. The goal is for people to understand why vaccines matter, what they can and cannot do, and what could happen if children aren't vaccinated. Fundamentally, we want families to understand why vaccination is good — not just for their own child, but for all children. Communication plays a central role here.

Education systems are also part of that communication. Schools reach students from a young age and can teach them, over time, why immunization matters, so that by the time they become adults, this understanding is second nature.

Another crucial form of communication is engaging society more broadly: talking with parents and all key stakeholders about what the program should look like, which vaccines are most important, and how to prioritize them. Long-term, sustainable programs depend on ongoing dialogue with the people they serve.

At the same time, a fair amount of research suggests that fear-based messaging rarely works. Take COVID-19: at the beginning, we simply didn't know enough to give precise risk estimates. With familiar diseases — like influenza, measles, or polio — we have decades of data and can

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speak more confidently about likely outcomes. But scaring parents is almost never an effective strategy. People respond better to realistic, balanced information.

For example, many people in my generation had measles as children and survived. But the reality is that today, about 1 in 1,000 children who get measles will die from it(Centers for Disease Control and Prevention, 2025). We shouldn't tell parents “your child might die,” but we should be honest: measles can lead to pneumonia or other serious complications. Most children recover, but we can't predict who will have the worst outcome. That's exactly why understanding the stakes — and acting on them — is so important.

Q6: You've shared the huge public health gains of China's 50-year Expanded Programme on Immunization — it prevented hundreds of millions of illnesses and millions of deaths. How can we turn these big macro statistics into relatable stories and values that ordinary families can truly understand?

A: That's a great question — and very much a communication challenge. How do you make enormous numbers meaningful?

Some examples are relatively easy to explain. Take measles: before the vaccine, essentially every child got measles. Today, almost no one does. That contrast is straightforward.

Hepatitis B is another compelling case. For decades, around 10% of the population here had chronic hepatitis B infection(Cui et al., 2017). When the vaccine was introduced in the early 1990s — with a strong focus on the birth dose to prevent mother-to-child transmission — everything changed(Cui et al., 2017). Among children under five, chronic hepatitis B prevalence has dropped to about 0.3%. That's a 97% reduction, and protection lasts decades, likely a lifetime(Zheng et al., 2024, of which Dr. Rodewald is a co-author). That's a story people can grasp.

On the other hand, concepts like “millions of disability-adjusted life years saved” are harder to convey. Economists understand DALYs, and you can explain what they mean — but it's difficult for most people to truly feel what that represents. In contrast, “seven million vaccine-preventable child deaths averted” (Wang et al., 2025)is something parents can relate to much more directly. Big numbers only become powerful when they're anchored in human experiences.

Why “Vaccines Don't Save Lives, Vaccinations Do” Resonates

Q7: Why do you think the line “Vaccines don't save lives. Vaccinations save lives.” carries such powerful communication impact?

A: That line — “Vaccines don't save lives. Vaccinations save lives.” — was coined by Walter Orenstein, who was my first boss at the U.S. CDC. I've always loved it.

Those of us working in immunization tend to say, “Vaccines save lives,” almost reflexively. But Dr. Orenstein corrected that. He pointed out: if a vaccine just sits in the vial, it saves no one. A vaccine in the bottle has zero effectiveness. The real impact only happens when it actually gets into people's arms.

The power of the phrasing comes from the surprise factor. The first sentence catches you off guard; the second makes immediate sense. It's clever, memorable, and it reframes the conversation — from the product itself to the act of vaccination. That's why it sticks.

Talking with Hesitant Parents and Countering Online Misinformation

Q8: You pointed out vaccine hesitancy is uncertainty, not just outright refusal. How should health communication adjust its mindset to better connect with hesitant parents?

A: Vaccine hesitancy isn't just outright refusal — it's a state of uncertainty. It's normal for parents to have questions, but we don't want that hesitation to delay or prevent vaccination altogether.

Hesitancy often stems from gaps in understanding: parents may not know how serious the disease is, whether the vaccine is well-managed, what side effects might occur, or even whether the vaccine is necessary in the first place.

Overcoming hesitancy means having real conversations — with parents, with patients. Ask: “What questions do you have about this vaccine?” Acknowledge their concerns: “I understand you're worried about vaccinating your child.” Then listen, and provide clear, factual information in response.

Simply saying “all vaccines are safe and effective, just do it” doesn't work nearly as well as listening first, understanding what people are thinking, and addressing their specific worries.

Q9: Vaccine-related online discussion has grown far more complicated in the social media era. Why do unproven false messages spread so fast online, and what should health communicators do to respond?

A: There's a lot of good information online — and a lot of misinformation. Even for experts, it can be hard to tell the difference in real time.

One essential step is for trustworthy institutions — the immunization program itself, among others — to consistently provide accurate, accessible information, so the public has a reliable benchmark for what's real.

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In the longer term, integrating vaccine science into school curricula should help. If people grow up understanding how vaccines work, they're better equipped to distinguish credible information from falsehoods later in life.

I'm also encouraged by the concept of "prebunking"(Roozenbeek et al., 2022) — getting ahead of misinformation by proactively sharing the facts before a false narrative spreads. The challenge, of course, is that this often turns into a tug-of-war between those spreading misinformation and those defending the truth.

My sense is, first, that you want to be on the right side of the argument — in other words, you want to be on the side of truth and accuracy when you communicate. Second, some people are better at communicating than others, and trusted sources are very helpful. Survey after survey shows that doctors and nurses remain the most trusted sources of vaccine information (Vaccine Administration Law, 2019) — far more than celebrities or influencers. People trust clinicians because they're seen as knowledgeable and acting in patients' best interests.

From Institutional Reform to Trust People Can Feel

Q10: Past vaccine incidents pushed China to launch major institutional reforms, including expert advisory panels and full vaccine regulatory laws. How can these improved systems translate into real public trust that people can feel?

A: When something goes wrong — such as the earlier vaccine incident, where vaccines were illegally purchased and improperly stored — the priority is to acknowledge it, investigate it, and change systems so it doesn't happen again. Whenever an event occurs that shouldn't have, the key is to identify it and then do something to make sure it doesn't recur.

I think that led to the development of the 2019 Vaccine Administration Law(Vaccine Administration Law of the People's Republic of China, 2019).

What's notable about that law is how it was developed: through extensive public engagement. Over more than a year, policymakers listened to parents, older adults, regulators, manufacturers, program managers, doctors, nurses — everyone. They asked: "What do you want this law to achieve? How should the system work?"

The resulting law is comprehensive. It covers the entire lifecycle of a vaccine: from research and clinical trials, to testing, manufacturing, regulation, approval, recommendation, distribution, administration, and post-marketing monitoring. It clearly defines responsibilities — for government, for manufacturers, for health workers, and for parents.

One powerful provision is traceability: every vaccine can now be tracked from the manufacturer all the way to a child's arm. Each batch is tested by regulators before release and carries a unique lot number. That traceability builds confidence — you know the cold chain was maintained, and that what's in the vial is exactly what it's supposed to be.

It also enables digital immunization registries, which support safety monitoring and effectiveness studies. During COVID-19, this digitization accelerated dramatically — many

people accessed their vaccination records via their phones, and that system has remained in place. Today, big-data systems can link medical records with immunization data, allowing for proactive safety surveillance. These structural improvements are what strengthen the program.

Advice for Young Researchers and Future of Health Communication

Q11: For young students and researchers studying health communication today, which topics do you believe deserve our top research attention in the future?

A: The communication landscape is changing fast — especially with the rise of social media. One priority is figuring out how authoritative sources can effectively reach parents and the public amid all the noise.

We need more research on how to communicate accurate information in ways people will absorb. A long lecture on vaccine benefits may not work if people aren't motivated to listen. So: how do we sustain high levels of accurate knowledge in communities over time? That's a major challenge.

Countering misinformation is another unsolved problem. We're still learning how to do it well.

And then there's AI. At today's meeting, it felt like every presentation touched on artificial intelligence — I realized how much I have to catch up! But I do think developing authoritative, evidence-based AI tools could be transformative. If we can ensure those tools deliver accurate, trustworthy information, they could significantly boost public confidence. Understanding the role of AI in health communication is a task for the next generation of researchers — and it's a very promising one.

Q12: If you could leave one key piece of advice for young health communication researchers, what would it be?

A: My key piece of advice is simple: communication is a two-way street.

We need to listen to understand what people want to know, what they need to know, and what they care about. Only then can we help them make informed decisions that support a healthy, successful life.

It's not just about talking; it's about listening — often even more than talking. I love these conversations with you all. I enjoy listening during panel discussions or Q&A sessions, because the questions tell you what's really on people's minds.

Listening is a core part of communication, and it's what makes knowledge transfer truly effective.

Closing Message for MHM2026

Q: What message would you like to share with the participants of MHM2026, and what are your hopes for the future of health communication?

A: A lot of this conference, I think, was about the science of communication and about improving communication. My own talk was about a program that needs good communication in order to be effective and to build confidence. So one of my messages for the people here and for everyone at the conference is that immunization would be a very good object of research and of communication — research into how to keep people confident, and what the best ways to do that are.

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Competing interests

The author(s) declared no competing interests.

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Notes

1. Dr. Lance E. Rodewald is Senior Advisor to the National Immunization Program at the Chinese Center for Disease Control and Prevention. Before joining China CDC, he worked for many years in immunization services at the U.S. Centers for Disease Control and Prevention, serving as Director of the Immunization Services Division from 2000 to 2012. From 2012 to 2017 he was Team Lead of the Expanded Programme on Immunization at the WHO Representative Office in China, and he has served as Senior Advisor to China's national immunization program since 2018. His work focuses on immunization service delivery,

evidence-informed immunization policy, vaccine confidence, and public health communication. He received the Chinese Government Friendship Award in 2023.

2. This article is based on an interview with Dr. Rodewald conducted on July 18, 2026, at Peking University, following his keynote address at the 9th "Medicine, Humanity and Media" International Conference on Health Communication (MHM2026), titled "Vaccine Confidence: Challenges and Opportunities." The transcript has been edited for length and clarity and was reviewed and approved by Dr. Rodewald.

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